

**FINAL**  
**Beaverdam Mitigation Project**  
**Harnett County, North Carolina**

**Cape Fear River Basin No. 03030004**  
**DENR-EEP Contract No. D06029-B**

**Year 2 Monitoring Report**



**Prepared for**  
Environmental Banc and Exchange, LLC  
909 Capability Drive, Suite 3100  
Raleigh, NC 27606

**Prepared by**  
WK Dickson and Co., Inc.  
720 Corporate Center Drive  
Raleigh, NC 27607  
(919) 782-0495

**December 2009**

## **Table of Contents**

1.0	SUMMARY.....	1
2.0	INTRODUCTION.....	2
2.1	Project Description .....	2
2.2	Project Purpose .....	2
2.3	Project History & Schedule .....	5
3.0	HYDROLOGY .....	6
3.1	Hydrologic Success Criteria .....	6
3.2	Description of Hydrology Monitoring Efforts .....	6
3.3	Results of Hydrology Monitoring.....	10
3.3.1	Site Data.....	10
3.3.2	Reference Data.....	13
3.3.3	Climate Data .....	13
3.4	Hydrologic Conclusions .....	14
4.0	VEGETATION.....	14
4.1	Vegetation Success Criteria .....	14
4.2	Description of Species and Vegetation Monitoring.....	15
4.3	Results of Vegetation Monitoring.....	15
4.4	Vegetation Observations & Conclusions .....	18
5.0	STREAM MONITORING .....	18
5.1	Stream Success Criteria .....	18
5.2	Stream Morphology Monitoring Plan.....	19
5.2.1	Cross Sections.....	19
5.2.2	Longitudinal Profile.....	19
5.2.3	Hydrology .....	19
5.2.4	Photo Reference Stations .....	19
5.3	Stream Morphology Monitoring Results .....	20
5.3.1	Cross Sections.....	20
5.3.2	Longitudinal Profile.....	20
5.3.3	Hydrology .....	23
5.5	Stream Conclusions .....	24
6.0	CONCLUSIONS AND RECOMMENDATIONS .....	26

**List of Figures**

Figure 1. Vicinity Map .....	3
Figure 2. USGS Map .....	4
Figure 3. Monitoring Summary Map.....	8
Figure 4. Groundwater Hydrographs.....	11
Figure 5. 2009 Precipitation for Beaverdam Swamp Site .....	14
Figure 6. Stream Problem Areas .....	21

**List of Tables**

Table 1. Project Mitigation Structure and Objectives .....	5
Table 2. Project Activity and Reporting History .....	5
Table 3. Project Contacts.....	6
Table 4. Hydrologic Monitoring Results.....	10
Table 5. Hydroperiod Depths for Unsuccessful Gauges .....	10
Table 6. Comparison of Normal Rainfall to 2009 Observed Rainfall.....	13
Table 7. Planted Tree Species .....	15
Table 8. Results of 2009 Vegetation Monitoring by Plot.....	16
Table 9. Summary of Vegetation Monitoring Results – Year 2.....	16
Table 10. Estimated Herbaceous Total Percent Cover .....	17
Table 11. Volunteer Tree Species .....	18
Table 12. Stream Areas Requiring Observation.....	23
Table 13. Crest Gauge Data.....	23
Table 14. Summary of Morphologic Monitoring Parameter .....	25

**APPENDICES**

Appendix A	As-Built Survey
Appendix B	2009 Profile and Cross Section Data
Appendix C	2009 Gauge Data
Appendix D	2009 Site Photos
Appendix E	Morphologic Monitoring Parameters

## **1.0 SUMMARY**

This Annual Report details the monitoring activities during the 2009 growing season on the Beaverdam Swamp Mitigation Site. Construction of the site, including planting of trees, was completed in February 2008. The 2009 data represents results from the second year of hydrology and vegetation monitoring for both wetlands and streams.

The design for the Beaverdam Swamp property involved stream restoration, riverine wetland restoration, and wetland enhancement. After construction, it was determined that the project generated 10,406 linear feet of stream restoration, 9.90 acres of wetland restoration, and 2.04 acres of wetland enhancement. The As-Built survey is included as **Appendix A**.

This Annual Report presents the data from eight automated hydrology monitoring stations, 14 vegetation monitoring plots, three crest gauges, one tipping bucket rain gauge, one funnel rain gauge, 20 cross sections, approximately 3,455 linear feet of profile survey, and photographic reference locations. Data were also collected from three reference automated hydrology monitoring stations.

In 2009, data collected from the groundwater monitoring gauges on the Beaverdam Mitigation Site indicate that seven of the eight hydrology monitoring stations at the mitigation site recorded hydroperiods of at least 10 percent of the growing season. The remaining gauge (BDAW4) experienced a hydroperiod below five percent. All three of the reference gauges had hydroperiods greater than 10 percent.

Weather station data from the Dunn Weather Station were used in conjunction with the rain gauges located on the site to document precipitation amounts. The onsite gauges are used to validate observations made at the automated station. The on-site rainfall was within or below the normal range during the months of March, April, May, June, and September. Rainfall amounts in July, August, and October were above the normal limits on-site, yet the Dunn weather station showed rainfall amounts well within the acceptable limits.

This Annual Monitoring Report documents vegetation survival on 14 vegetation-monitoring plots. Cattle damaged areas and areas of high mortality were re-planted in early 2009. The vegetation monitoring documented surviving planted stem density between 340 and 640 stems per acre. All vegetation plots are on track to meet or exceed the interim vegetation success criteria of 320 trees per acre. Herbaceous vegetation has improved and is now estimated at over 90 percent cover across the site. Volunteer woody species are present but do not pose a threat to the target natural community. No remedial actions are recommended.

During the 2009 monitoring season, five bankfull events were recorded at the site. The restored stream channel is generally stable and is providing the intended habitat and hydrologic functions. All monitored cross sections and longitudinal profile for 2009 show little adjustment in stream dimension.



## **2.0 INTRODUCTION**

### **2.1 PROJECT DESCRIPTION**

The Beaverdam Swamp Stream and Wetland Mitigation project is in Harnett County, North Carolina, approximately 3 miles southwest of Erwin (**Figure 1**). The property is on an old floodplain terrace to either side of Bunnlevel Erwin Road (SR 1779). Access is directly from Bunnlevel Erwin Road through pasture and agricultural fields. Construction at the site was completed in February 2008. Groundwater, surface water, and rain gauges were functional beginning in February 2008. This report details the results of the 2009 monitoring season, and represents Year 2 of monitoring for the site.

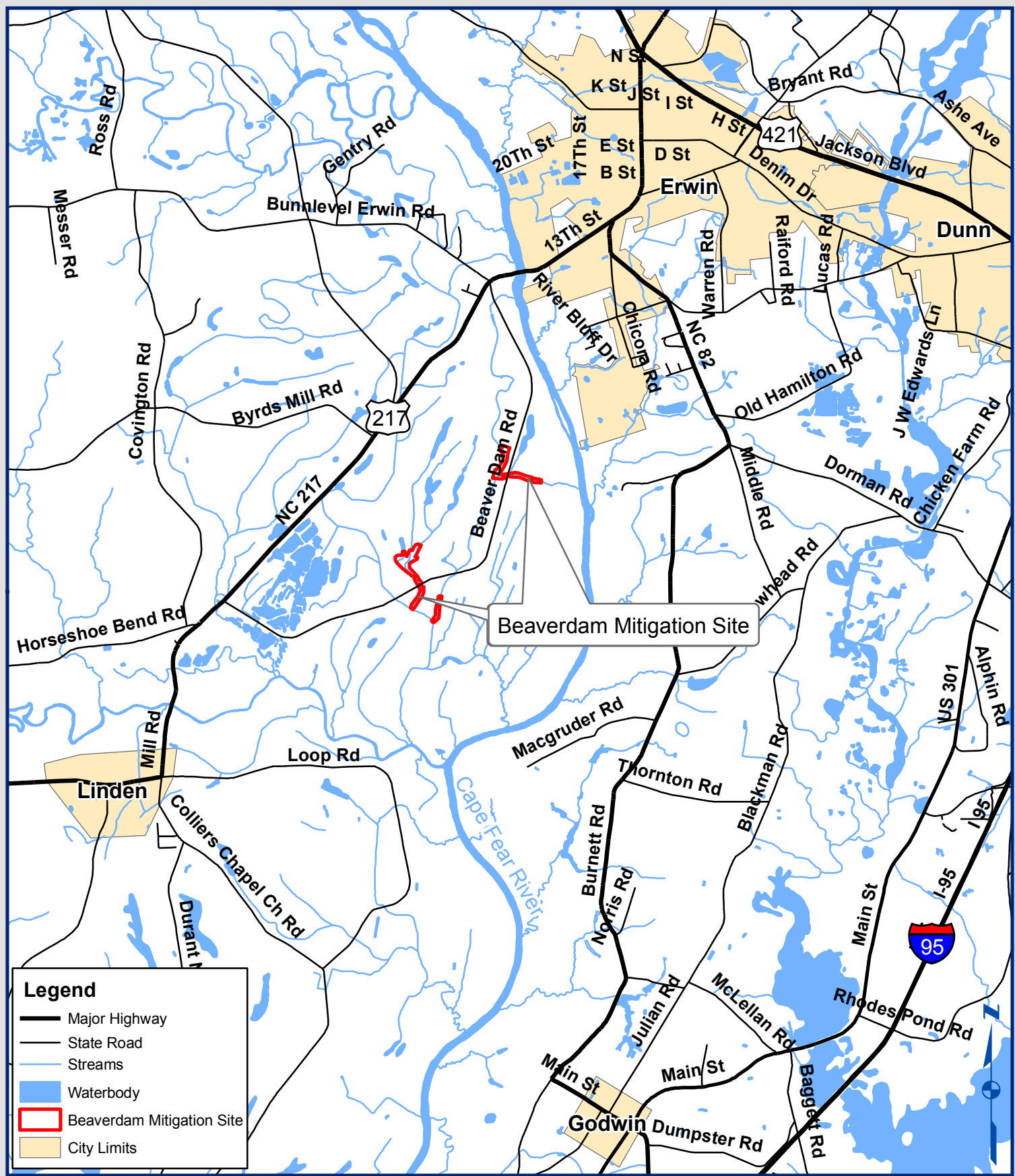
The mitigation site consists of three stream systems and associated riparian wetlands along the floodplain. The three distinct unnamed tributaries (UT) are identified as UT1, UT2, and UT3. The USGS Erwin, NC topographic quadrangle (**Figure 2**) shows UT 1 and UT 2 drain into Beaverdam Swamp and UT3 discharges directly into the Cape Fear River. UT1 has a drainage area of 602 acres (0.94 mi<sup>2</sup>), UT2 has a drainage area of 147 acres (0.23 mi<sup>2</sup>), and UT3 has a drainage area of 262 acres (0.41 mi<sup>2</sup>). Surrounding land use consists of existing forest, open pasture, and agricultural fields. On-site topography, soils, and existing wetland areas demonstrate that the site historically supported riverine wetlands. A conservation easement protects the restoration and preservation areas (**Figure 3**).

The pre-restoration altered conditions of the stream and the riparian buffer reduced water quality and impaired habitat. Livestock access resulted in the direct input of nutrients and biochemical oxygen demand (BOD) into the stream and wetlands. Hoof-shear created bank instability resulting in heavy sedimentation. Water quality was also diminished due to raised turbidity from bank erosion and elevated water temperatures caused by the lack of tree shading. Habitat was reduced by the diminished water quality and loss of physical habitat such as bed features, woody debris, and a well developed vegetative community. Migrating head-cuts had incised the channels and drained wetlands. There are two wetland restoration areas (WR) associated with UT3 and three wetland enhancement areas (WE) associated with UT1.

### **2.2 PROJECT PURPOSE**

The objective of this project is to provide 10,200 stream mitigation units (SMU) and 9 wetland mitigation units (WMU) to the North Carolina Ecosystem Enhancement Program (EEP) through the full delivery process in the Cape Fear River Basin 03030004110020 hydrologic unit, and to improve riparian and aquatic habitats and water quality through ecological restoration practices. Stream mitigation was provided through restoration and enhancement on three stream systems that are tributaries to Beaverdam Swamp. Riverine wetland mitigation was provided through enhancement and restoration. The site was identified and developed by Environmental Banc and Exchange, LLC (EBX) through the EEP full delivery mitigation process.

Monitoring of the Beaverdam Swamp Site is required to demonstrate successful mitigation based on criteria in the Restoration Plan and through a comparison to reference site conditions. The success criteria components adhere to EEP and USACE guidelines. Hydrology, vegetation, and stream monitoring are conducted on an annual basis. This Annual Monitoring Report details the results of the monitoring efforts for 2009 (Year 2) at the Beaverdam Swamp Mitigation Site.

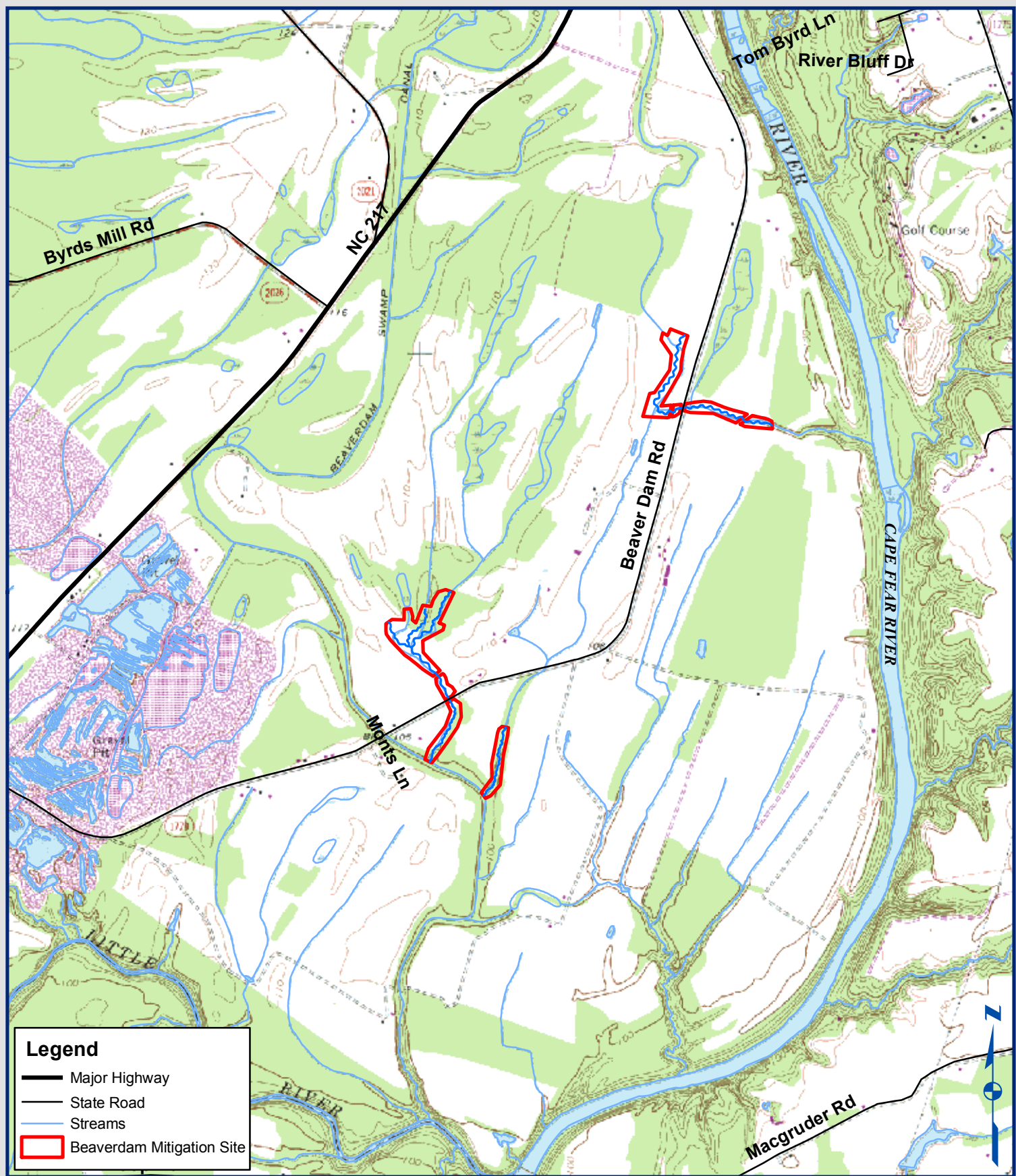


**Legend**

- Major Highway
- State Road
- Streams
- Waterbody
- Beaverdam Mitigation Site
- City Limits

**Figure 1.**  
**Beaverdam Creek Mitigation Site**  
**Project Vicinity Map**





**Figure 2.**  
**Beaverdam Creek Mitigation Site**  
**USGS Map**

SOURCE: USGS,  
 Erwin, NC Quadrangle, 1973

0 1,000 2,000 4,000  
 Feet



The Beaverdam Swamp Mitigation Report (May 2008) documented 10,114 linear feet of stream restoration, 292 linear feet of stream enhancement Level II, 9.90 acres of wetland restoration, and 2.04 acres of wetland enhancement, resulting in 10,231 SMUs and 10.9 WMUs for the project (**Table 1**). The raised streambed elevation will provide the hydrology for restoring the wetlands. The wetland and stream restoration will provide multiple ecological and water quality benefits within the Cape Fear River Basin. Benefits include nutrient removal, sediment and BOD reduction, water storage, improved groundwater recharge, improved in-stream and riparian habitat, and restored wetland habitat.

**Table 1. Project Mitigation Structure and Objectives**

<b>Reach Name</b>	<b>As-Built Length (ft)</b>	<b>Wetland (ac)</b>	<b>SMU/WMU</b>	<b>Restoration Approach</b>
UT1-A/B/C	3,403		3,403	Restoration
UT1-D	829		829	Restoration
UT1-E (Valley)	556		556	Restoration
UT1-F	583		583	Restoration
UT2	1,264		1,264	Restoration
UT3-A/B	3,479		3,479	Restoration
UT3-C	292		117	Enhancement
WR-A		3.70	3.70	Restoration
WR-B		6.20	6.20	Restoration
WE-A		0.80	0.40	Enhancement
WE-B		0.70	0.35	Enhancement
WE-C		0.14	0.07	Enhancement
WE-D		0.40	0.20	Enhancement
<b>Total</b>	10,406	11.94	---	

### 2.3 PROJECT HISTORY & SCHEDULE

The project was constructed in the fall and winter of 2007/2008, and the five year monitoring is expected to be completed in the fall of 2012 (**Table 2**). **Table 3** lists the project contacts.

**Table 2. Project Activity and Reporting History**

<b>Month</b>	<b>Activity</b>
February 2008	Construction Completed
February 2008	Planting Completed
February 2008	Post Construction Monitoring Gauges Installed
May 2008	As-Built Report Submitted
November 2008	1st Annual Monitoring Report
November 2009	2nd Annual Monitoring Report
November 2010	3rd Annual Monitoring Report (Scheduled)
November 2011	4th Annual Monitoring Report (Scheduled)
November 2012	5th Annual Monitoring Report (Scheduled)

**Table 3. Project Contacts**

Contact	Firm Information
<b>Project Manager</b> Norton Webster	Environmental Banc & Exchange , LLC (919) 608-9688
<b>Designer</b> Todd St. John, PE	Kimley-Horn and Associates (919) 653-2950
<b>Monitoring Contractor</b> Daniel Ingram	WK Dickson and Co., Inc (919) 782-0495

### **3.0 HYDROLOGY**

#### **3.1 HYDROLOGIC SUCCESS CRITERIA**

As stated in the Restoration Plan, the hydrology success criterion for the site is to restore wetland hydrology at the site so that water table will remain within 12 inches of the soil surface continuously for at least 10 percent of the growing season (approximately 24 days). The growing season is from March 16 to November 11. Based on daily minimum temperatures greater than 28 degrees Fahrenheit occurring in 5 of 10 years, the growing season for Harnett County is 240 days long. Gauge data will be compared to gauge data from a reference wetland in growing seasons with less than normal rainfall. In periods of low rainfall, if a restoration gauge hydroperiod exceeds the reference gauge hydroperiods, and both exceed five percent of the growing season, then the gauge will be deemed successful. The results of hydrology monitoring across the wetland restoration site is presented in this annual monitoring report.

#### **3.2 DESCRIPTION OF HYDROLOGY MONITORING EFFORTS**

Eight automated HOBO groundwater gauges, one tipping bucket rain gauge, and one funnel rain gauge were installed prior to the beginning of the first growing season (**Figure 3**). Three additional automated groundwater gauges were installed in a reference wetland. Groundwater gauges are installed to a minimum depth of 40 inches below the ground surface. The monitoring protocol for the site specifies that automated monitoring stations will be downloaded and checked for malfunctions on a monthly basis. During monthly site visits, manual groundwater gauges are read, crest gauge readings are taken, and cumulative rainfall totals are collected from the on-site rain gauges. During the 2009 growing season, seven of the eight automated loggers performed well with no periods of missing data. Gauge BDAW7 malfunctioned from February to May, but was relaunched in early May and has functioned properly since. Assumptions were made for the missing data of BDAW7 based on monthly readings, prior performance, and its proximity to other wells.

##### *Automated Gauges*

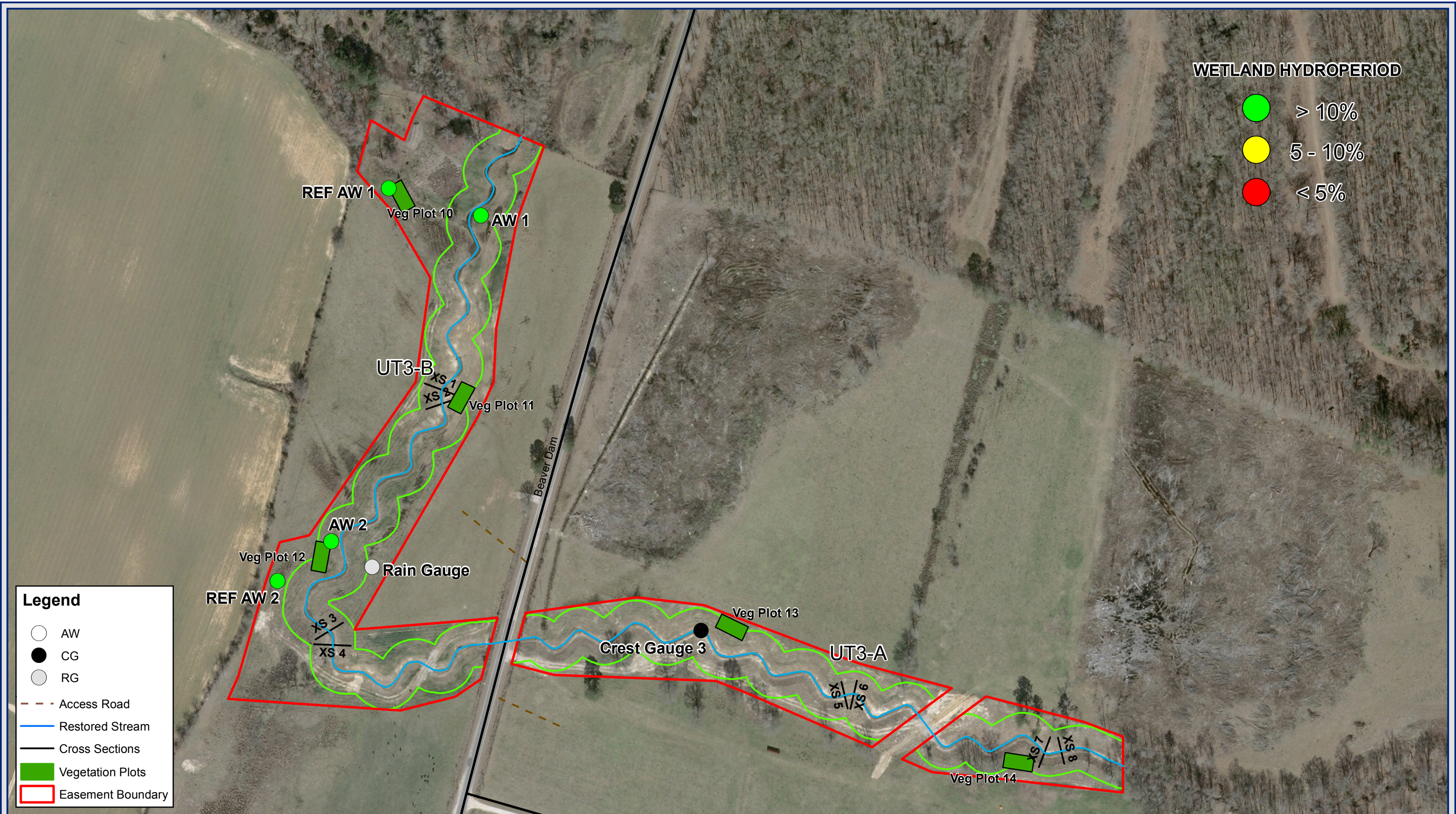
HOBO automatic groundwater gauges record water table elevations four times daily at 06:00, 12:00, 18:00, and 24:00. These automatic gauges employ pressure sensors that record water elevation above the bottom of the sensor (with atmospheric pressure compensation). The calibration water table depth is recorded at monthly downloads. To determine wetland hydroperiods, the automatically recorded data are compared to the calibration data to determine a standard correction factor between the calibration gauge and the automatic gauge for each location. The standard correction factor is applied to correct daily readings. The corrected daily readings are used to determine wetland hydroperiods.

##### *Data Interpretation*

Wetland hydroperiods are calculated for four daily water table depth elevations. A hydroperiod is calculated if the water table is equal to or less than 12 inches below ground surface for at least 24 hours. If a gauge falls below -12 inches for four consecutive readings (24 hours) then the

hydroperiod ends at the last reading within 12 inches of the ground surface. If a gauge falls below -12 inches for only three readings then maintains a reading above -12 inches for a minimum of 24 hours, the hydroperiod is calculated continuously. This methodology accounts for minor technical malfunctions experienced by the automatic gauges.





**WETLAND HYDROPERIOD**

- > 10%
- 5 - 10%
- < 5%

**Legend**

- AW
- CG
- RG
- Access Road
- Restored Stream
- Cross Sections
- Vegetation Plots
- Easement Boundary

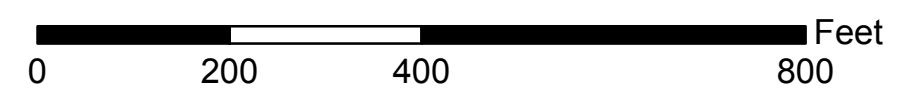
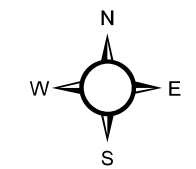


Figure 3a  
Beaverdam  
2009 Monitoring Site Map







**WETLAND HYDROPERIOD**

- > 10%
- 5 - 10%
- < 5%

**Legend**

- AW
- CG
- RG
- Access Road
- Restored Stream
- Cross Sections
- Vegetation Plots
- Easement Boundary

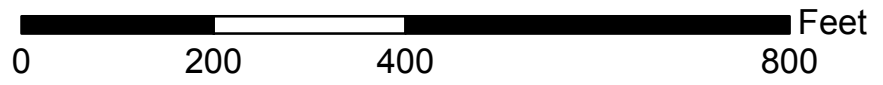
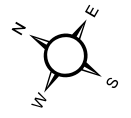


Figure 3b  
Beaverdam  
2009 Monitoring Site Map





### 3.3 RESULTS OF HYDROLOGY MONITORING

The following hydroperiod statistics were calculated for each monitoring station during the growing season: 1) period of most consecutive days and percent of growing season that the water table was within twelve inches of the surface; 2) cumulative number of days and percent of growing season that the water table was within twelve inches of the soil surface; and 3) number of times that the water table rose to within twelve inches of the soil surface (**Table 4**). Raw hydrograph data collected from the monitoring gauges are provided in **Appendix C**.

**Table 4. Hydrologic Monitoring Results**

<b>2009 Max Hydroperiod (Growing Season 16-Mar through 11-Nov, 240 days)</b>					
<b>Gauge</b>	<b>Consecutive</b>		<b>Cumulative</b>		<b>Occurrences</b>
	<b>Days</b>	<b>Percent of growing Season</b>	<b>Days</b>	<b>Percent of growing Season</b>	
AW1	75	31	126	52	5
AW2	25	10	68	28	13
AW3	240	100	240	100	1
AW4	7	3	11	4	5
AW5	50	21	150	63	8
AW6	23	10	58	24	10
AW7	38	16	47	20	3
AW8	58	24	98	41	8
REFAW1	78	32	148	62	7
REFAW2	34	14	92	38	10
REFAW3	50	21	93	39	5

The site was designed to re-integrate the streams with the drained wetlands, restoring stream and wetland habitat features, and re-establishing a native, forested hardwood wetland ecosystem. Hydrology in the riparian areas is driven primarily by high groundwater and overbank flooding. The growing season data collected for the 2009 Year 2 monitoring period indicate that the site is on track to meet the success criteria as outlined in the Mitigation Plan.

**Table 5** lists the minimum depth at which the under performing gauge achieved a 10 percent hydroperiod. These data demonstrate that all of the wetland areas had a water table within 14 inches of the surface for considerable portions of the growing season.

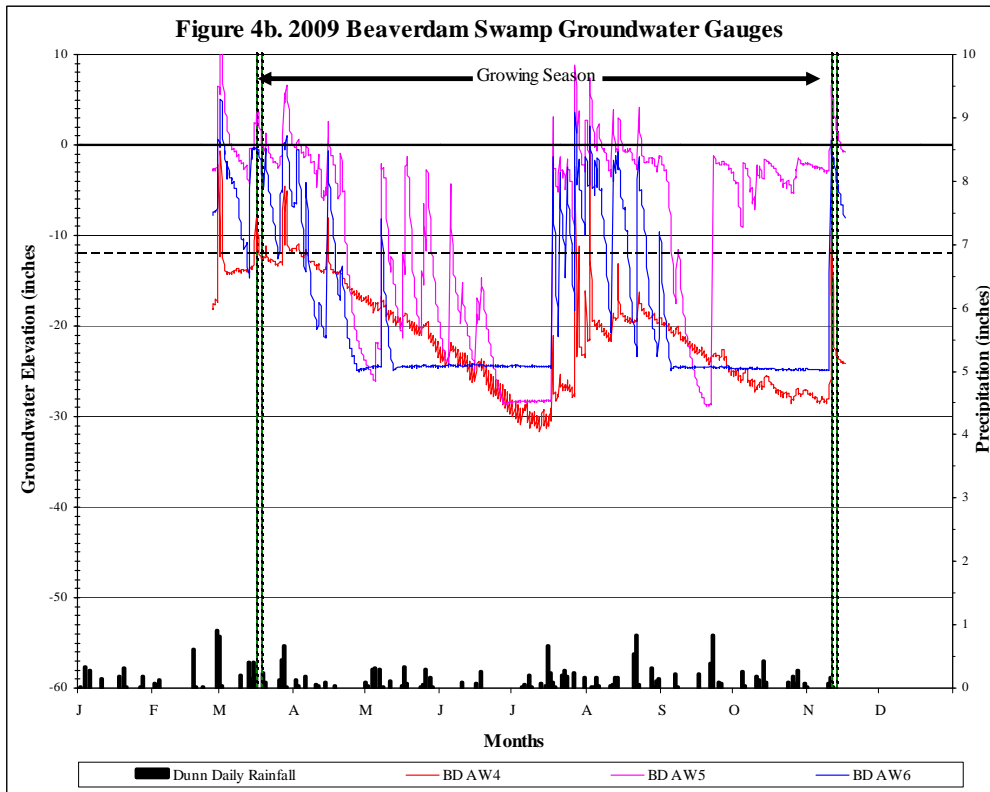
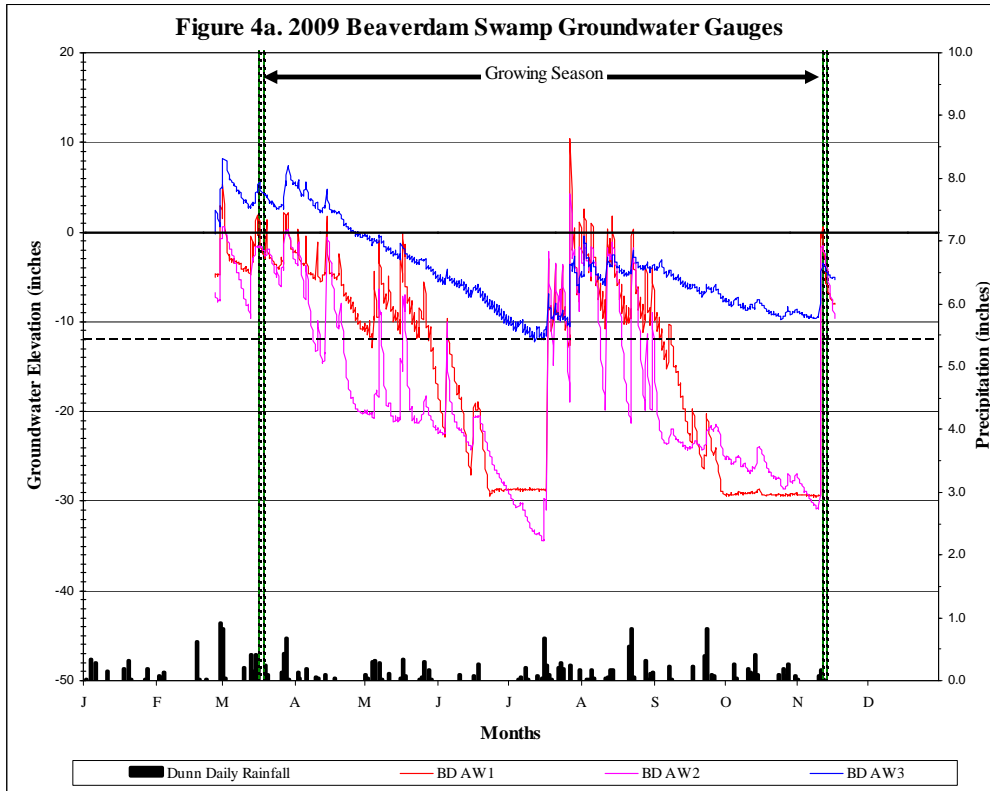
**Table 5. Hydroperiod Depths for Unsuccessful Gauges**

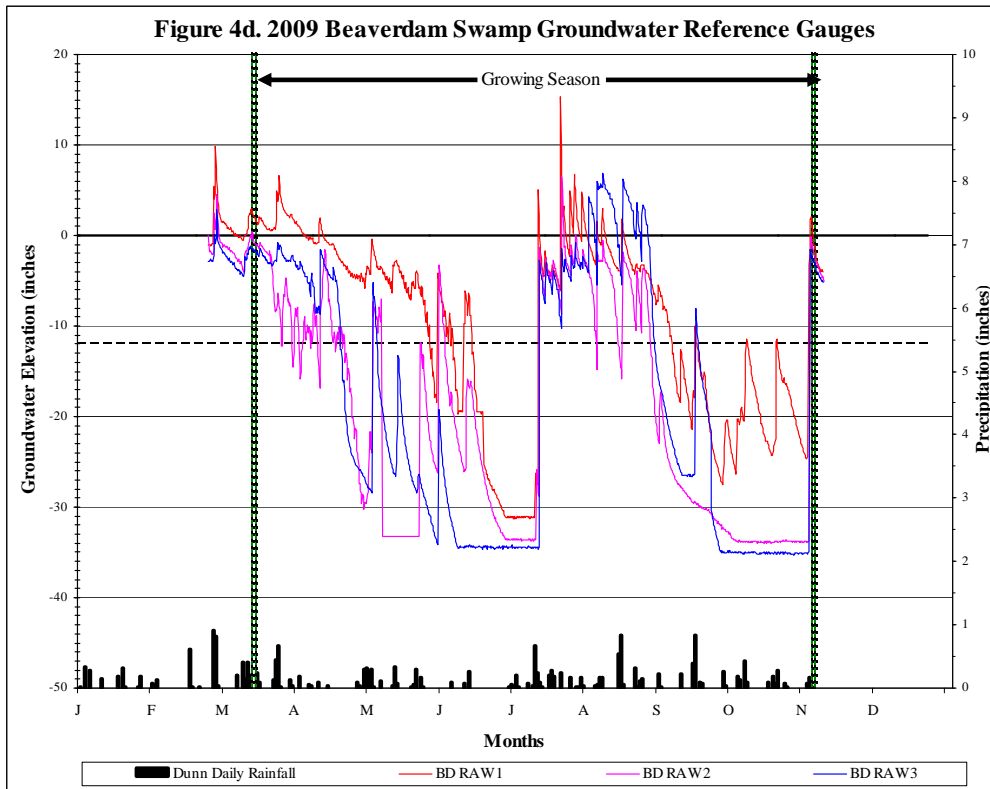
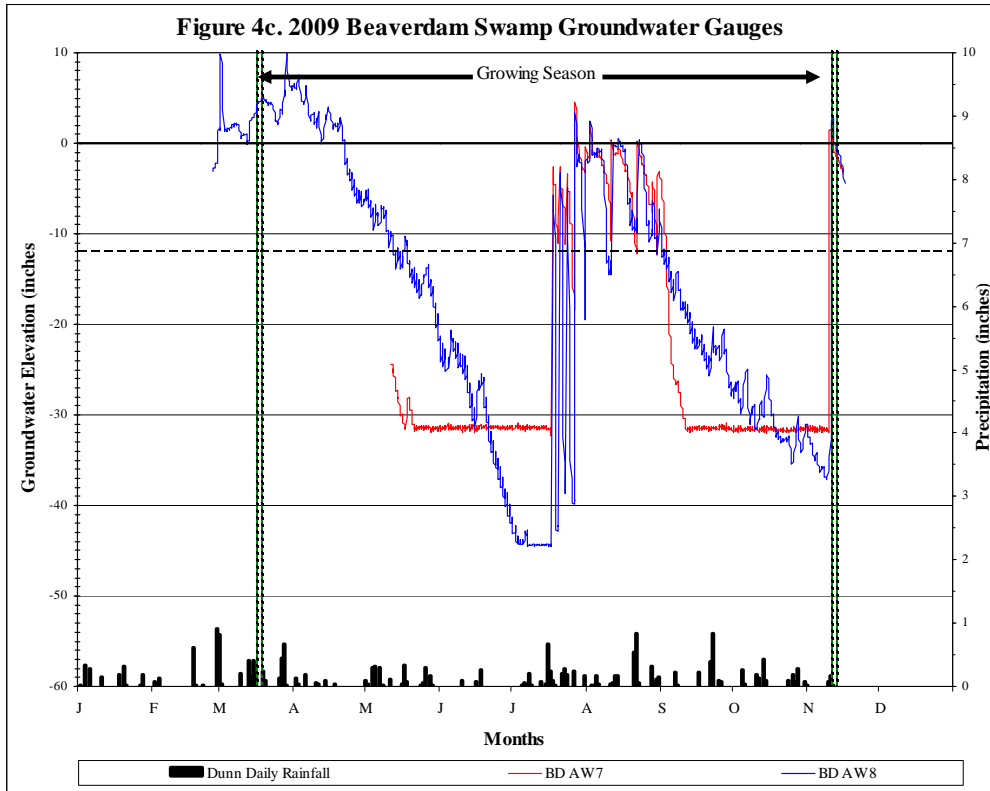
<b>Gauge</b>	<b>10 Percent Hydroperiod Depth</b>
AW4	-13.32

#### 3.3.1 Site Data

Depth of groundwater for each of the monitoring gauges is shown in a graph with precipitation (**Figure 4**). This hydrograph demonstrates the reaction at each monitoring location of the groundwater level to specific rainfall events. Raw hydrograph data collected from the monitoring gauges is provided in **Appendix C**.

Figure 4. Groundwater Hydrographs





### 3.3.2 Reference Data

The approved Mitigation Plan provides that if the rainfall data for any given year during the monitoring period is not normal, the reference wetland data can be assessed to determine if there is a positive correlation between the performance of the restoration site and the natural hydrology of the reference site. The three reference gauges had hydroperiods ranging from 14 to 32 percent of the growing season.

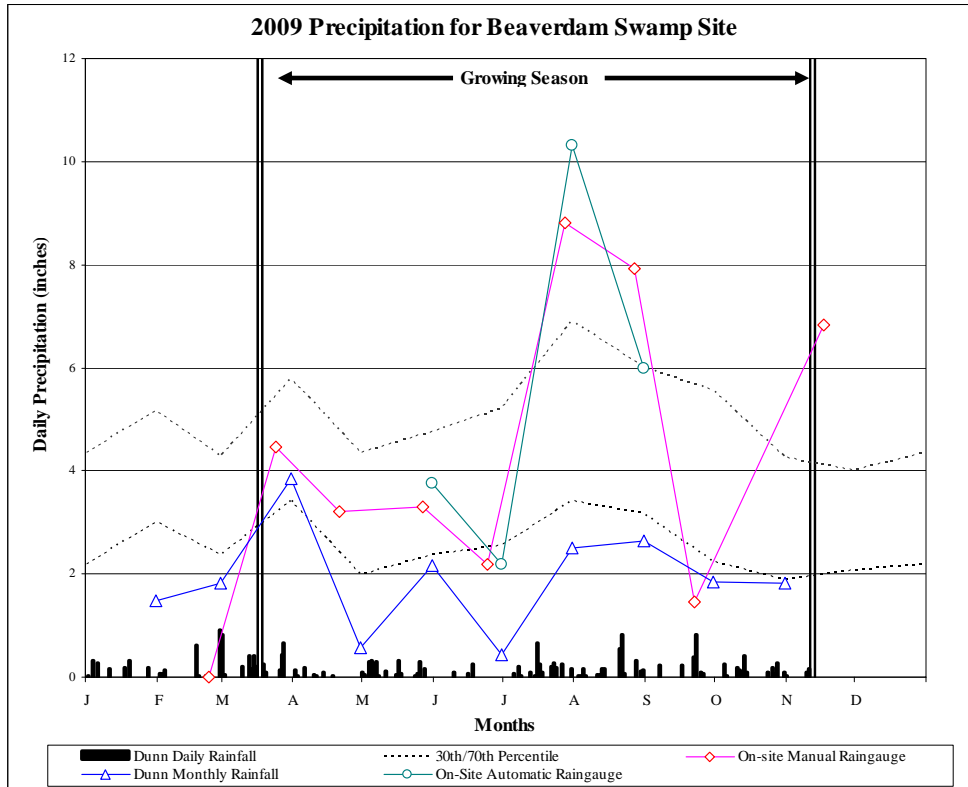
### 3.3.3 Climate Data

Monthly rainfall for 2009 was compared to historical precipitation for Harnett County (**Table 6** and **Figure 5**). Observed precipitation data were collected from an automated weather station in Dunn (Harnett County). The Dunn weather station data for 2009 was within normal limits for the growing season. Rainfall amounts during the months of March through May were at or slightly below the annual averages. Rainfall was below normal limits in June; but exceeded normal limits in July and August. Monthly rainfall data for the site in September through December was not available at the time this report was compiled.

**Table 6. Comparison of Normal Rainfall to 2009 Observed Rainfall**

Month	Average	Normal Limits		Dunn Precipitation	On-Site Manual RG	On-Site Automatic RG
		30 Percent	70 Percent			
January	4.12	3.00	5.18	1.48	---	---
February	3.59	2.36	4.27	1.83	---	---
March	4.71	3.42	5.78	3.84	4.47	---
April	3.25	1.99	4.34	0.56	3.22	---
May	3.82	2.37	4.75	2.17	3.30	3.75
June	4.50	2.56	5.22	0.43	2.18	2.19
July	5.64	3.42	6.89	2.50	8.82	10.31
August	4.86	3.17	6.02	2.65	7.92	5.99
September	4.50	2.24	5.56	1.84	1.46	0.47
October	3.16	1.89	4.26	1.83	---	2.05
November	3.08	2.07	4.01	---	6.83	3.70
December	3.57	2.18	4.35	---	---	---
Annual	---	42.45	51.56	19.13	38.20	28.46
Total	48.80	---	---	---	---	---

**Figure 5. 2009 Precipitation for Beaverdam Swamp Site**



### 3.4 HYDROLOGIC CONCLUSIONS

Data collected from the groundwater monitoring gauges on the Beaverdam Mitigation Site in 2009 indicate that seven of the eight hydrology monitoring stations recorded hydroperiods of at least 10 percent of the growing season and meet the hydrologic success criterion for 2009. One well recorded a water table depth within 12 inches of the surface for the entire growing season. One gauge experienced a hydroperiod of less than 5 percent, but achieved a 10 percent hydroperiod at a depth of no greater than 14 inches below the soil surface. All three of the reference gauges had hydroperiods greater than 10 percent.

Dunn weather station rainfall data indicates that the 2009 growing season rainfall amounts were well below normal for most of the growing season, except for March, when rainfall levels were within the normal range.

## 4.0 VEGETATION

### 4.1 VEGETATION SUCCESS CRITERIA

Successful establishment of vegetation in wetland restoration and riparian areas will be the survival of 260-planted stems following Year 5 monitoring. The site must also meet the interim success criterion of the survival of at least 320 planted stems per acre at the end of the Year 3 monitoring period. Up to 20 percent of the species composition may be comprised of volunteers. Remedial action may be required should volunteers present a problem or exceed 20 percent composition.

A digital image photo log will be used to subjectively evaluate the restoration site over time. A series of images over the five-year monitoring period should demonstrate maturation of planted vegetation and volunteer hydrophytic species.

#### **4.2 DESCRIPTION OF SPECIES AND VEGETATION MONITORING**

Fourteen vegetation sampling plots were established within the planted restoration areas to monitor the success of planted vegetation. The vegetation plots are 0.05 acres in size. The vegetation plots are distributed across the site, but the precise location and orientation of the plots was random (see locations on as-built drawings in **Appendix A**). The plots cover approximately two percent of the planted area. Twelve tree species were planted on the site (**Table 7**).

**Table 7. Planted Tree Species**

<b>Common Name</b>	<b>Scientific Name</b>	<b>FAC Status</b>
River Birch	<i>Betula nigra</i>	FACW
Pignut Hickory	<i>Carya glabra</i>	FACU
Green Ash	<i>Fraxinus pennsylvanica</i>	FACW
Black Walnut	<i>Juglans nigra</i>	FACU
Tulip Poplar	<i>Liquidambar styraciflua</i>	FAC+
Swamp Tupelo	<i>Nyssa biflora</i>	OBL
Overcup Oak	<i>Quercus lyrata</i>	OBL
Swamp Chestnut Oak	<i>Quercus michauxii</i>	FACW-
Coastal Willow Oak	<i>Quercus phellos</i>	FACW-
Northern Red Oak	<i>Quercus rubra</i>	FACU
Bald Cypress	<i>Taxodium distichum</i>	OBL
Slippery Elm	<i>Ulmus rubra</i>	FAC

Planted stems inside each plot were flagged with orange or pink flagging to help in locating them in the future. Each stem is tagged with a sequentially numbered aluminum tag.

#### **4.3 RESULTS OF VEGETATION MONITORING**

Stem counts for each of the 14 vegetation-monitoring plots were recorded by species (**Table 8**). Most of the planted stems appeared healthy and have recent growth. During Year 1 (2008), a number of the plots were located in areas where livestock accidentally accessed the restoration area and damaged many stems. The access points have since been secured. The damage increased mortality in a number of the plots. Because of previous mortality in some plots during the first year, areas of the site were supplemented with additional trees. The planted stems in the monitoring plots ranged from 340 to 640 stems per acre with an average of 508 stems per acre (**Table 9**). A few of the numbered tags have been lost or damaged. This may be due to tags being swept over small stems during early flooding or small animal theft.

**Table 8. Results of 2009 Vegetation Monitoring by Plot**

Species	VP 1	VP 2	VP 3	VP 4	VP 5	VP 6	VP 7	VP 8	VP 9	VP 10	VP 11	VP 12	VP 13	VP 14
Black gum	3	10	2	4	7	6		5	3	12	9	10		
Black walnut			1		1							1		
Cypress	4	2	3	3			1		4	10	2	3		
Green ash	14	7	3	2	5	5	4	7	3		2	7		
Hickory					1						2	6		
Northern red oak				1			2				2		12	18
Overcup oak	2	6	8	8	5		12	4		7				
River birch		4	2	6	6	8	8	2	3	1	3			
Slippery elm							3				1		13	5
Swamp chestnut oak								2	4			3		
Tulip poplar	2			2				2			1			
Willow oak	2		2					5				2	2	1

**Table 9. Summary of Vegetation Monitoring Results – Year 2**

Plot Number	Stems Planted	2009 Stems	Stem per Acre							
			As-Built	2008	2009	2010	2011	2012		
				Year 1	Year 2	Year 3	Year 4	Year 5		
1	35	27	620	360	540					
2	40	29	640	420	580					
3	37	21	600	340	420					
4	41	26	640	340	520					
5	41	25	620	260	500					
6	35	19	660	360	380					
7	43	30	620	360	600					
8	33	27	660	560	540					
9	26	17	400	340	340					
10	32	30	460	420	600					
11	38	22	760	480	440					
12	35	32	700	640	640					
13	34	27	680	500	540					
14	33	24	660	480	480					

Average Stems per Acre: 508

Range of Stems per Acre: 340-640

A plan view drawing of the vegetation plots is provided in **Figures 6a** and **6b**. The drawing includes the appropriate information pertaining to vegetation monitoring of the project. The drawing also shows the locations of the following features:

- Vegetation monitoring plots
- Locations of any vegetation problem areas
- Symbology to represent vegetative problem types (if appropriate)

An estimate of herbaceous vegetation cover is provided to assess the overall stability of the site (**Table 10**). The herbaceous vegetation coverage at the site is over 90 percent and is variable in composition, as would be expected in a natural riparian system. In most plots, the vegetation shows vigorous growth and diversity. Previous areas observed to have bare soil are well

vegetated. The areas lacking vegetative cover are typically shallow depressions with signs of frequent and long term inundation typical of wetlands and riparian areas. Plot 7 is along the edge of a mature forested buffer. The areas lacking coverage have scattered individual plants but have not filled in. Bare soil also exists in portions of this plot. Plot 14 is elevated above the channel floodplain and appears to be drier. Diversity in all plots is good. No remedial action is recommended at this time.

**Table 10. Estimated Herbaceous Total Percent Cover**

<b>Plot Number</b>	<b>Estimated Percent Cover</b>
1	99%
2	97%
3	88%
4	97%
5	98%
6	95%
7	70%
8	100%
9	95%
10	92%
11	93%
12	97%
13	85%
14	70%

The herbaceous cover is typically dense across most of the site and a number of weeds typical of pasture and disturbed land are present. The most common herbaceous species across the site (occurrence in at least 50 percent of the plots) are beaked panic grass (*Panicum anceps*), Canada goldenrod (*Solidago canadensis*), common rush (*Juncus effusus*), dog fennel (*Eupatorium capillifolium*), swamp sunflower (*Helianthus angustifolius*), and tall fescue (*Schedonorus phoenix*). A number of different sedges (*Carex* sp) were recorded in greater than 50 percent of the plots. Overall diversity appears to have increased across the site and weedy species have decreased in dominance.

Commonly found woody volunteer species are also monitored throughout the five-year monitoring period (**Table 11**). The volunteer species are not always obvious due to germination after construction and planting. Vigor and survival due to the earlier drought may also have affected the volunteer species. In some areas, dense herbaceous cover also obscures smaller volunteer individuals.



**Table 11. Volunteer Tree Species**

Common Name	Scientific Name	Indicator Status
Red Maple	<i>Acer rubrum</i>	FAC
Eastern Baccharis	<i>Baccharis halimifolia</i>	FAC
River Birch	<i>Betula nigra</i>	FACW
American Hornbeam	<i>Carpinus caroliniana</i>	FAC
Common Buttonbush	<i>Cephalanthus occidentalis</i>	OBL
Hawthorn	<i>Crataegus</i>	FAC
Persimmon	<i>Diospyros virginiana</i>	FAC
Green Ash	<i>Fraxinus pennsylvanica</i>	FACW
Privet	<i>Ligustrum sinense</i>	FAC
Sweetgum	<i>Liquidambar styraciflua</i>	FAC+
Tuliptree	<i>Liriodendron tulipifera</i>	FAC
Black Gum	<i>Nyssa sylvatica</i>	FAC
Overcup oak	<i>Quercus lyrata</i>	OBL
Swamp Chestnut Oak	<i>Quercus michauxii</i>	FACW-
Winged Sumac	<i>Rhus copallinum</i>	NI
Silky Willow	<i>Salix sericea</i>	OBL
American Black Elderberry	<i>Sambucus nigra</i> . ssp. <i>canadensis</i>	FACW-
Winged Elm	<i>Ulmus alata</i>	FACU+
Slippery Elm	<i>Ulmus rubra</i>	FAC

#### 4.4 VEGETATION OBSERVATIONS & CONCLUSIONS

In general, the live stems were healthy and most exhibited significant new growth. In the past, a number of incidents where cattle entered the planted easement area were recorded. This has been corrected and the site appears to have recovered with healthy vegetative growth across the site. Because of low survival in the initial planting, areas with low survival were replanted during the winter/spring of 2009. The replanted trees appear healthy with new growth. All plots are on track to meet or exceed the interim success criteria of 320 stems per acres after three years.

Herbaceous vegetation appears good and is improving over time. Both hydrophytic and non-hydrophytic herbaceous vegetation is found across the site. The most common herbaceous species across the site (occurrence in at least 50 percent of the plots) are beaked panic grass (*Panicum anceps*), Canada goldenrod (*Solidago canadensis*), common rush (*Juncus effusus*), dog fennel (*Eupatorium capillifolium*), swamp sunflower (*Helianthus angustifolius*), and tall fescue (*Schedonorus phoenix*). In addition to common hydrophytic species of common rush and swamp sunflower, arrowleaf tearthumb (*Polygonum sagittatum*), deer tongue (*Dichanthelium clandestinum*) and crimson-eyed rosemallow (*Hibiscus moscheutos*), primrose-willow (*Ludwigia* sp.), trumpet creeper (*Campsis radicans*), Woolgrass (*Scirpus cyperinus*) and are present.

For the 2009 monitoring year, the average number of stems per acre on site is 508 and plots range from 340 to 640 stems per acre. No remedial actions are recommended.

## 5.0 STREAM MONITORING

### 5.1 STREAM SUCCESS CRITERIA

As stated in the approved Mitigation Plan, the stream restoration success criteria for the site includes the following:

- *Bankfull Events:* Two bankfull flow events must be documented within the five-year monitoring period.
- *Cross-Sections:* There should be little change in as-built cross sections. Cross sections shall be classified using the Rosgen stream classification method and all monitored cross-sections should fall within the quantitative parameters defined for "E" or "C" type channels.
- *Longitudinal Profiles:* The longitudinal profiles should show that the bedform features are remaining stable, e.g. they are not aggrading or degrading. Bedforms observed should be consistent with those observed in "E" and "C" type channels.
- *Photo Reference Stations:* Photographs will be used to subjectively evaluate channel aggradation or degradation, bank erosion, success of riparian vegetation and effectiveness of erosion control measures.
- *Benthic Macroinvertebrates:* Sampling of benthic macroinvertebrates within the restored stream channel shall be conducted for the first three years of post-restoration monitoring.

## **5.2 STREAM MORPHOLOGY MONITORING PLAN**

The stream monitoring program will be implemented to document system development and progress toward achieving the success criteria. The monitoring program will be undertaken for 5 years or until the final success criteria are achieved, whichever is longer.

### **5.2.1 Cross Sections**

Two permanent cross sections will be installed per 1,000 linear feet of stream restoration work, with one located at a riffle and one located at a pool. Each cross section will be marked on both banks with permanent pins to establish the exact transect used. A common benchmark will be used for cross sections to facilitate easy comparison of year-to-year data. The annual cross-section survey will include points measured at all breaks in slope, including top of bank, bankfull, inner berm, edge of water, and thalweg, if the features are present. Riffle cross sections will be classified using the Rosgen stream classification system.

### **5.2.2 Longitudinal Profile**

A longitudinal profile will be measured annually throughout the five-year monitoring period. The profile will be measured along a representative length of restored channel. Measurements will include thalweg, water surface, bankfull, and top of low bank. Each of these measurements will be taken at the head of each feature, for example, shallow, pool, and the max pool depth. The survey will be tied to a permanent benchmark.

### **5.2.3 Hydrology**

The occurrence of bankfull events within the monitoring period will be documented by the use of a crest gauge and photographs. The two crest gauges will record the highest watermark between site visits, and the gauge will be checked monthly to document high flows. Digital images will be used to document the occurrence of debris lines and sediment deposition on the floodplain during monitoring site visits.

### **5.2.4 Photo Reference Stations**

Photographs will be used to subjectively evaluate channel aggradation or degradation, bank erosion, success of riparian vegetation and effectiveness of erosion control measures.

### **5.3 STREAM MORPHOLOGY MONITORING RESULTS**

#### **5.3.1 Cross Sections**

The cross sections were surveyed during the monitoring set-up and in July 2009 for Year 2. The baseline data has been compared with the Year 1 and Year 2 monitoring data in **Appendix B**. Compared to the documented baseline data, the Year 2 channel cross sections showed that overall stream dimensions remained stable during this first growing season. There is very little difference between the baseline cross sections and the Year 2 cross sections.

#### **5.3.2 Longitudinal Profile**

A longitudinal profile survey was conducted along six separate reaches of the restoration project, totaling approximately 3,455 linear feet. Survey was conducted in reach UT1-B Upper from STA 112+72 to STA 119+20, in reach UT1-C from STA 107+00 to STA 112+72, in reach UT1-D from STA 154+00 to STA 158+30, in reach UT1-F from STA 182+80 to STA 185+80, in UT3-A from STA 239+00 to STA 335+00, and in reach UT3-B from STA 307+00 to STA 315+20. The longitudinal profile information documents the elevations and locations of known streambed features and in-stream grade control structures according to the As-Built survey plans, as shown in **Appendix A**. The profile and cross sections show that there has been very little adjustment to stream dimension since construction. **Table 12** summarizes stream areas requiring observation. **Figure 6** shows the locations of the stream areas that require observation.





Figure 6a  
 Beaverdam Mitigation Project  
 2009 Stream Current Conditions Map

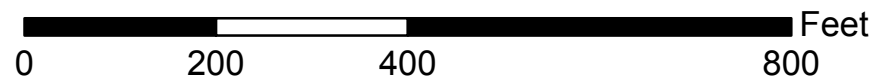
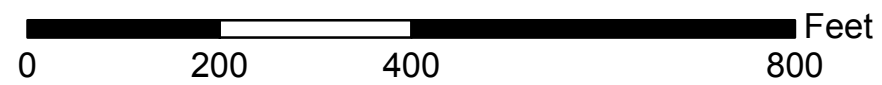






Figure 6b  
 Beaverdam Mitigation Project  
 2009 Stream Current Conditions Map





**Table 12. Stream Areas Requiring Observation**

SPA	Feature	STA	Description
SPA1	Right Bank	UT1-C 107+15	Rills and heavy erosion on right bank, will continue to monitor
SPA2	Rock A-vane	UT1-A 133+40	Slight piping around header rock, will continue to monitor
SPA3	Rock A-vane	UT1-A 134+40	Slight piping around header rock, will continue to monitor
SPA4	Rock A-vane	UT2 211+00	Slight piping around header rock, repair is recommended
SPA5	Rock A-vane	UT2 211+30	Slight piping around header rock, will continue to monitor
SPA6	Right bank	UT3 329+50	Rills and heavy erosion on left bank, will continue to monitor
SPA7	Left bank	UT3 330+50	Rills and heavy erosion on left bank, will continue to monitor
SPA8	Left bank	UT3 334+00	Rills and heavy erosion on left bank, will continue to monitor

### 5.3.3 Hydrology

During 2009, three crest gauges were monitored to determine if there were any out-of-bank events in the Beaverdam stream channel (**Table 13**). A total of seven bankfull events were documented between February and August. CG1 (UT1-A) and CG2 2 (UT2) each had one bankfull event in July. CG3 (UT3-A) had five bankfull events in 2009. The largest stream flow documented for Year 2 by the onsite crest gauges was a flow that occurred during July.

**Table 13. Crest Gauge Data**

Month Recorded	CG1	CG2	CG3
January	---	---	---
February	---	---	0.4
March	---	---	0.65
April	---	---	0.3
May	---	---	---
June	---	---	---
July	0.25	0.2	1.4
August	---	---	0.5
September	---	---	---
October	---	---	---
November	---	---	---
December	---	---	---

## **5.5 STREAM CONCLUSIONS**

In-stream structures installed within the channel include cross vanes, log vanes, rock vanes, log weirs, and step-pools. Visual observations of structures throughout the 2009 growing season indicated that most structures are functioning as designed. One log weir in UT3-B was set too high causing deposition and vegetation growth in the channel upstream of the structure. This structure has since been notched to allow for lower flows. In UT2 erosion was occurring behind the header rock of one rock A-vane, and the header rock of one rock cross vane was set too high, allowing water to flow around the header rocks of both structures. Header rocks of three rock A-vanes in UT1-A were set too high. No major areas of bank erosion or stability issues were observed. The banks and structures will be monitored to ensure that they remain stable. **Table 14** summarizes the morphologic parameters; a more detailed morphologic parameters table is provided in **Appendix E**.

**Table 14. Summary of Morphologic Monitoring Parameter**

Parameter	Reach UT1-A			Reach UT1-B Upper			Reach UT1-C			Reach UT1-D			Reach UT1-F			Reach UT2			Reach UT3-A			Reach UT3-B Upper		
	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2	As-Built	Year 1	Year 2
Bankfull Xsec Area, Abkf (sq ft)	9.6	7.5	7.9	5.8	4.6	4.4	18.4	16.5	15.8	6.8	9	8.7	5.4	4.8	5.2	9.5	9.1	8.9	4.7	4.9	4.8	14.9	13.9	12.2
Avg. Bankfull Width, Wbkf (ft)	7.6	7.4	7.1	9.9	9	9.1	16.4	15.1	16.1	9.8	11.8	11.5	9	9.2	9.9	10.5	10.4	10.4	6.0	7.4	8.2	24.1	23.6	23.8
Bankfull W/D	6.1	7.3	6.5	16.9	17.5	18.8	14.6	13.7	16.3	14	15.4	15.1	15.1	17.4	18.7	11.6	11.9	12.1	11.1	11.2	14.4	39.8	40.7	46.8
Bankfull Mean Depth, Dbkf (ft)	1.3	1	1.1	0.6	0.5	0.5	1.1	1.1	1.0	0.7	0.8	0.8	0.6	0.5	0.5	0.9	0.9	0.9	0.7	0.7	0.6	0.6	0.6	0.5
Bankfull Max Depth, Dmax (ft)	1.9	1.7	1.8	1.1	0.9	0.9	2.5	2.1	2.1	1.3	1.5	1.5	1.2	1	1	1.7	1.6	1.6	1.2	1.4	1.3	1.4	1.3	1.3

Note: The data presented here are averages of the cross section data for each stream reach. Variations in the data are due to channel adjustment and changes in bankfull elevation.



## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

- Seven of the eight hydrology monitoring stations recorded hydroperiods of at least 10 percent of the growing season and meet the hydrologic success criterion for 2009. The remaining gauge experienced a hydroperiod below five percent. This gauge (BDAW4) recorded a 10 percent hydroperiod within 14 inches of the soil surface. All three reference gauges had hydroperiods greater than 10 percent.

Dunn weather station rainfall data indicates that the 2009 growing season rainfall amounts were well below normal for most of the growing season, except for March, when rainfall levels were within the normal range.

- Vegetation monitoring efforts have calculated the average number of stems per acre on site to be 508 for the 2009 monitoring year, with the range of stem density being 340 to 640 stems per acre. In general, the live stems were healthy and most exhibited significant new growth. In the past, a number of incidents where cattle accidentally entered the planted easement area were recorded. This has been corrected and the site appears to have recovered with healthy vegetative growth across the site. Because of low survival in the initial planting, areas with low survival were replanted during the winter/spring of 2009. The replanted trees appeared healthy with new growth. All plots are above the minimum criteria of 320 stems per acres after three years, and no remedial actions are recommended.
- Data collected during monitoring Year 2 and observations of conditions at the site indicate that the project continues to be successful. The stream morphology is generally stable. A few in-stream structures seem to have been installed improperly, with minor occurrences of erosion and deposition. Several structures were stable, although not functioning as designed. It was concluded that the site continues to be on track to achieve the stream success criteria specified in the Restoration Plan.
- Vegetation, hydrologic, and stream monitoring will continue through 2012.

# **APPENDIX A**

## **As-Built Survey**

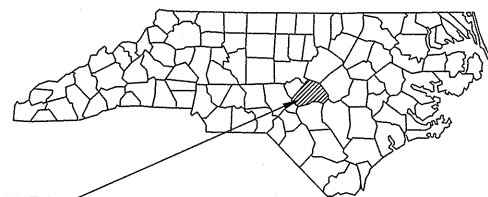
April 26, 2008 - 3:41pm By: jmkimble

# RECORD SET FOR

# BEAVERDAM SWAMP

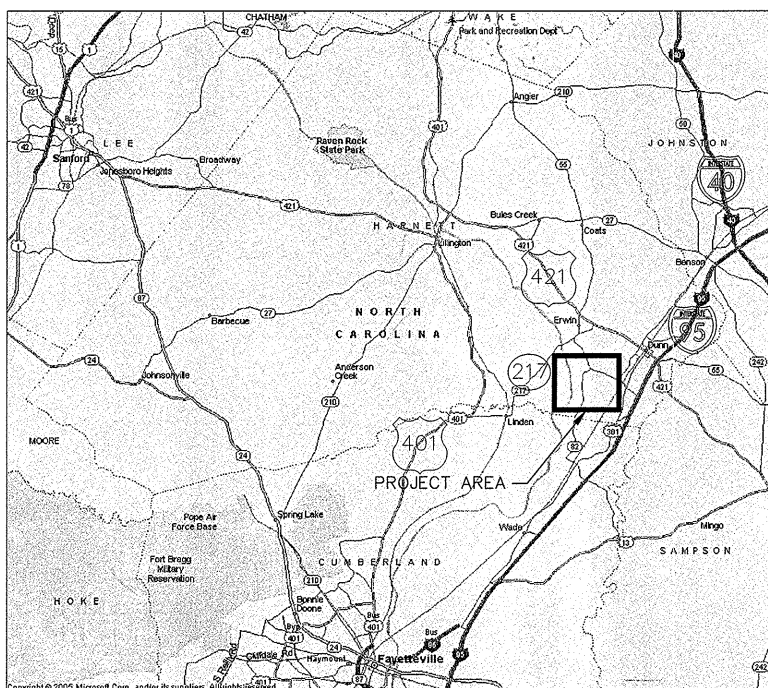
## STREAM AND WETLAND RESTORATION PROJECT

### EBX NEUSE I, LLC

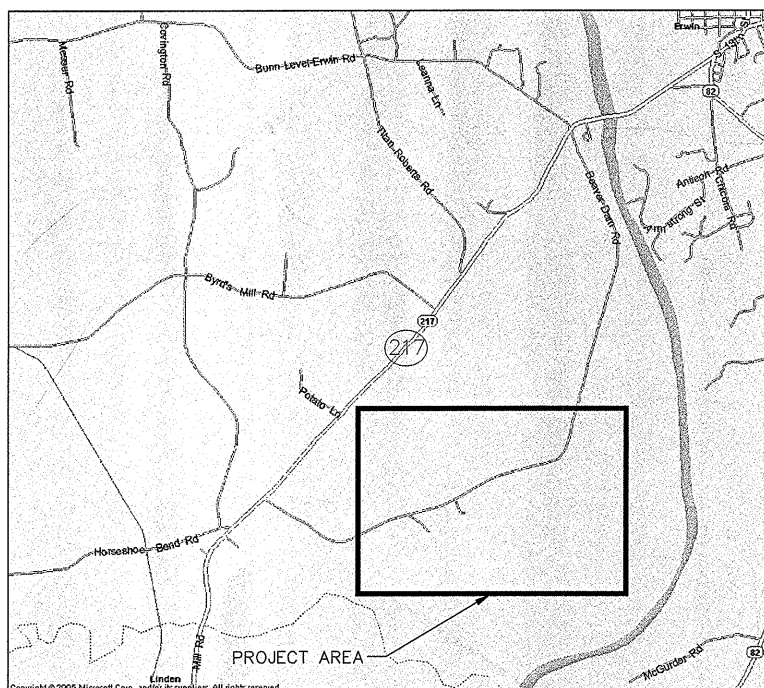


HARNETT COUNTY STATE OF NORTH CAROLINA

HARNETT COUNTY, NORTH CAROLINA  
STATE PROJECT NO: D06029-B



VICINITY MAP



LOCATION MAP

### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	LEGENDS AND SYMBOLS
4-19	GRADING PLAN AND PROFILE
20-23	TYPICAL CROSS SECTIONS
24-39	PLANTING PLAN

*The record drawings represent the construction plans with adjustments made to represent constructed conditions.*

SURVEY PREPARED BY:

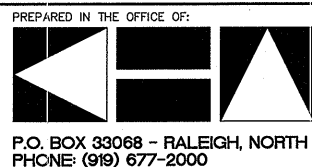


906 N. QUEEN ST., SUITE A  
KINSTON, NC 28501  
TEL: 252-522-2500 FAX: 252-522-4747  
EMAIL: MATRIXEAST@EARTHLINK.NET

NC-EEP CONTACT: GUY PEARCE (919) 715-1656  
KIMLEY-HORN AND ASSOCIATES CONTACT: TODD ST. JOHN, P.E. (919) 653-2950  
ENVIRONMENTAL BANC & EXCHANGE CONTACT: NORTON WEBSTER (919) 829-9909  
DISTURBED AREA: 33.4 ACRES

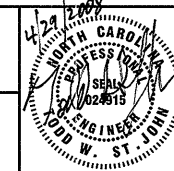
REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JKK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008



PREPARED IN THE OFFICE OF:  
**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM  
TITLE: TITLE SHEET

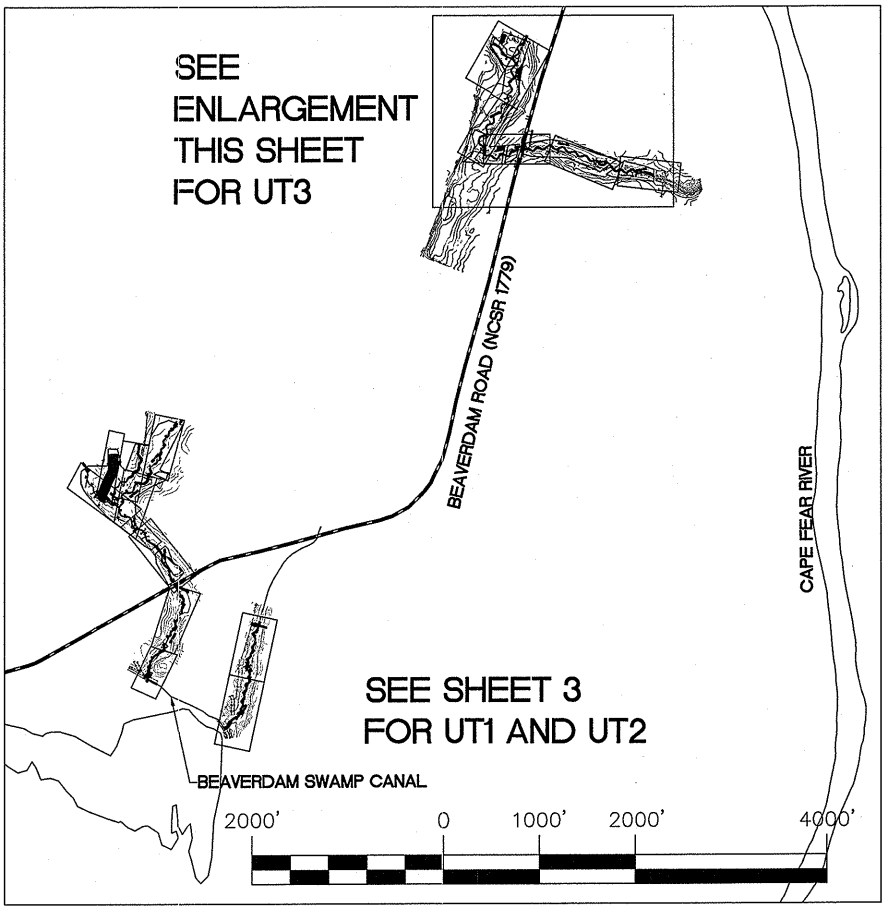


DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ  
PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC  
The record drawings represent the construction plans with adjustments made to represent constructed conditions.  
JOB NUMBER: 012620010 SHEET NUMBER: 1

T:\Jan\012620010 Beaverdam Swamp Restoration\0101\_LDD\Draws\RECORD SET\_04-10-08\01-COVER.dwg

April 28, 2008 - 3:41pm By: jmkimble

T:\env\012620010\_Beaverdam\_Swamp\_Restoration\0010\_LDD\env\RECORD\_SET\_04-10-08\02-REV.dwg

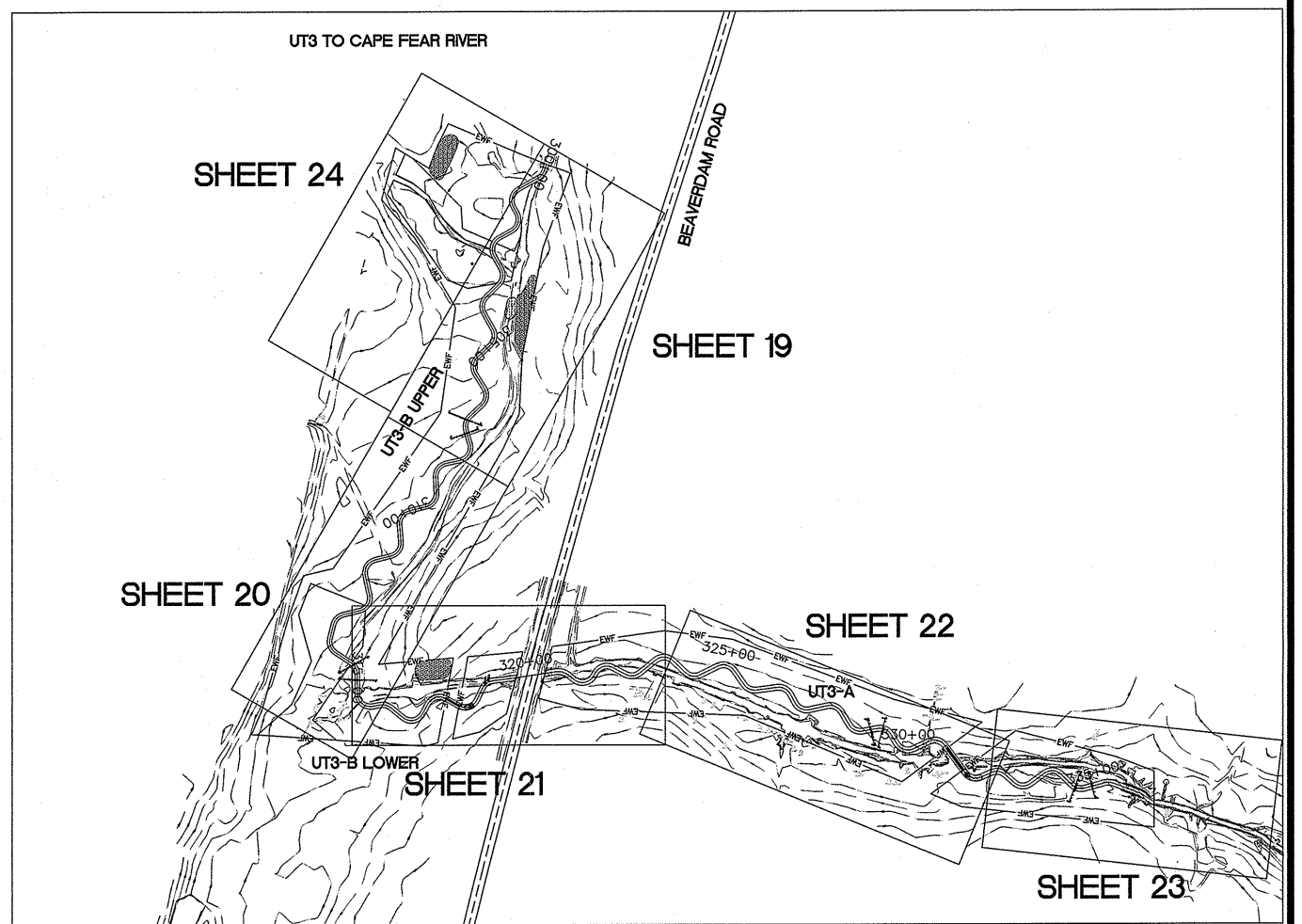


**SURVEY LEGEND**

	PROPERTY LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	STREAM CENTERLINE
	TREELINE
	EXISTING WETLAND

**LEGEND**

	PROPOSED BANK FULL		ROCK CROSS VANE		LOG SILL
	PROPOSED CREEK		ROCK A-VANE		LOG VANE
	PERMANENT CONSERVATION EASEMENT		ROCK VANE		LOG CROSS VANE
	STREAM PLUG		STEP POOL		
	CHANNEL BACKFILL				
	WETLAND ENHANCEMENT				
	WETLAND RESTORATION				



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT.

**BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949**

REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: LEGENDS AND SYMBOLS

DATE: 02/25/08

DESIGNED BY: JIK

CHECKED BY: TJSJ

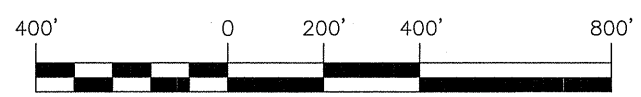
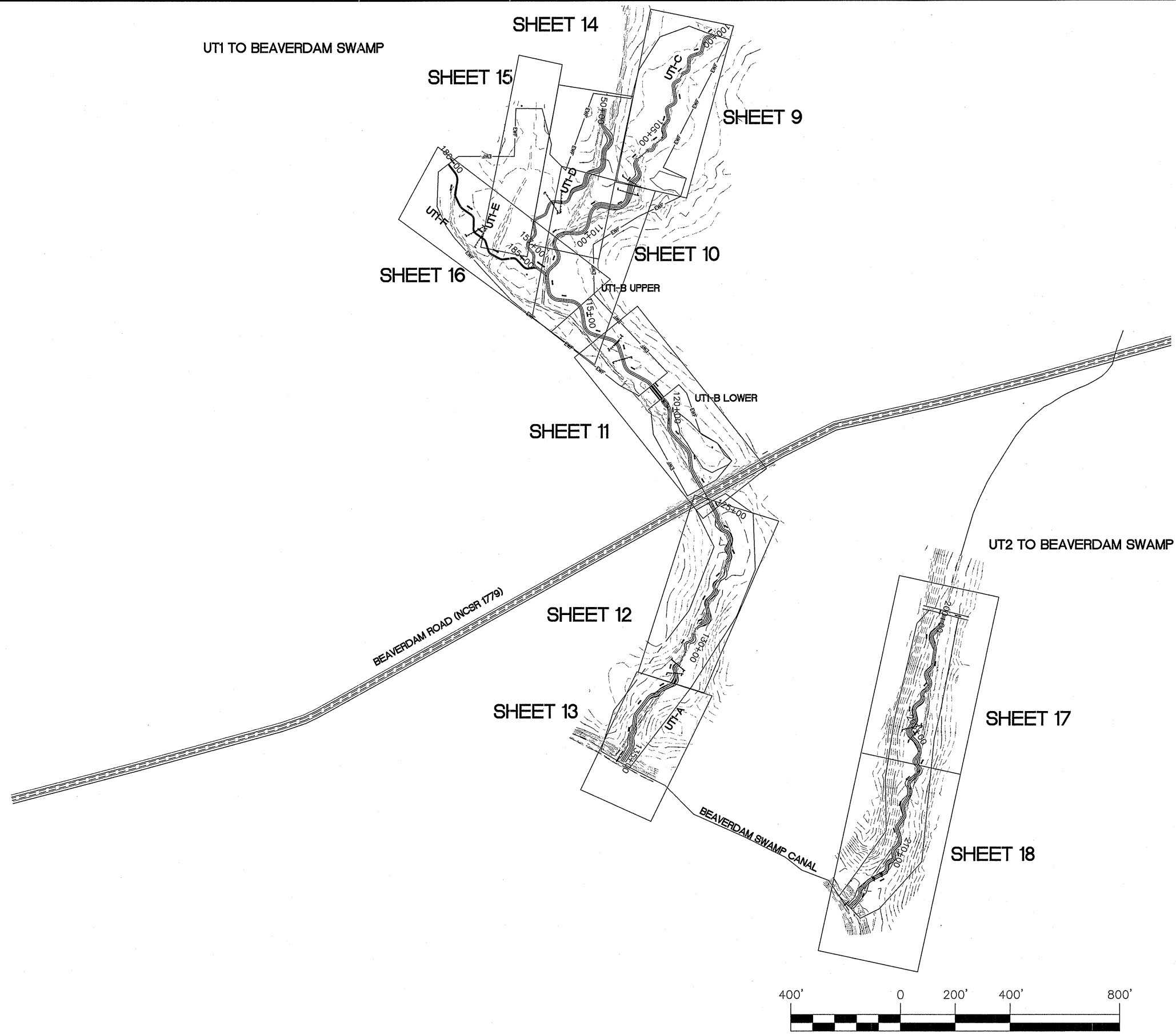
PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 2

April 28, 2008 - 3:42pm By: jml:tomble

T:\proj\012620010 Beaverdam Swamp Restoration\01010\_LDD.dwg\RECORD SET 04-10-08\02-KEY.dwg



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

PREPARED IN THE OFFICE OF:




**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: LEGENDS AND SYMBOLS

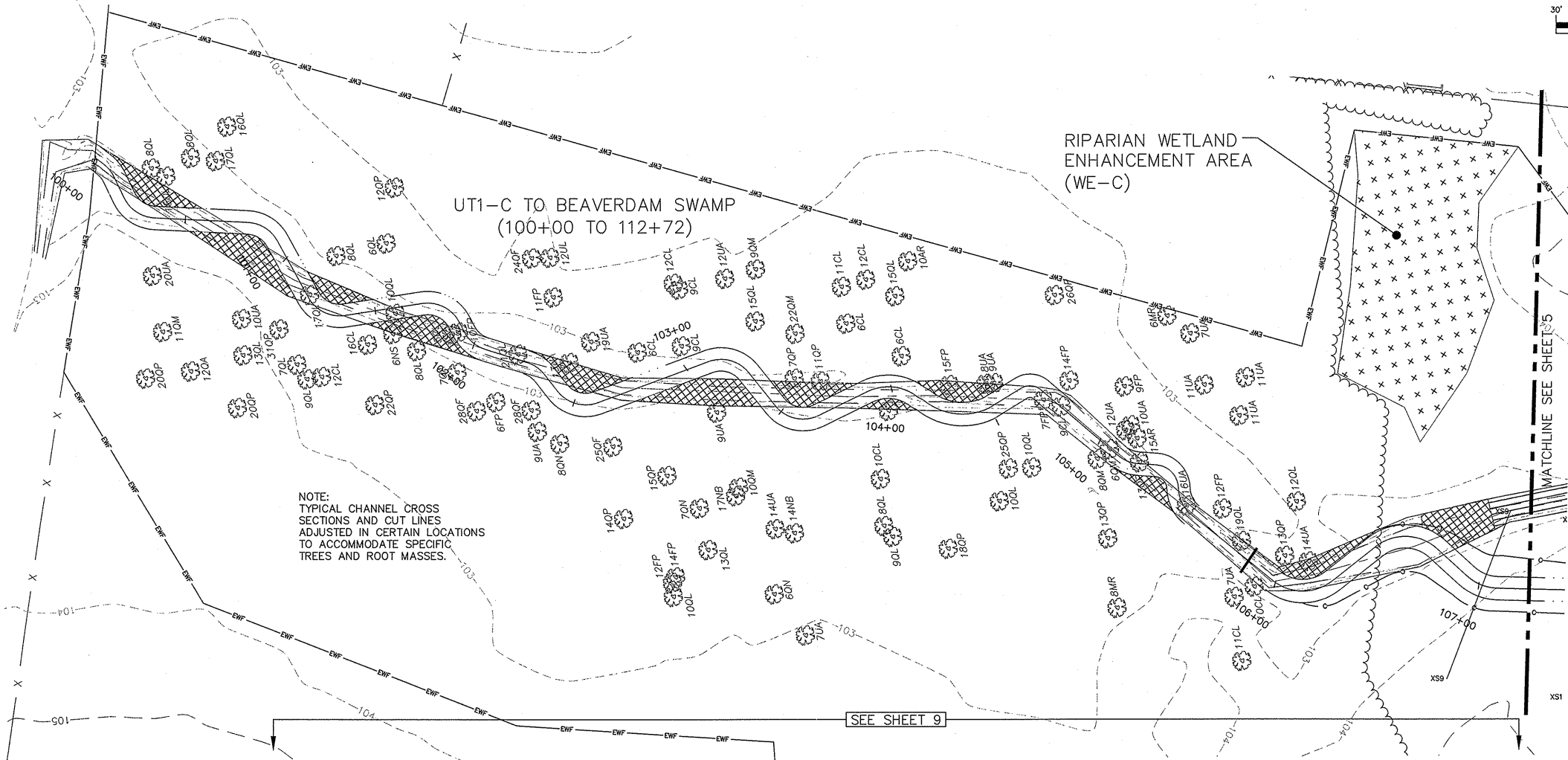
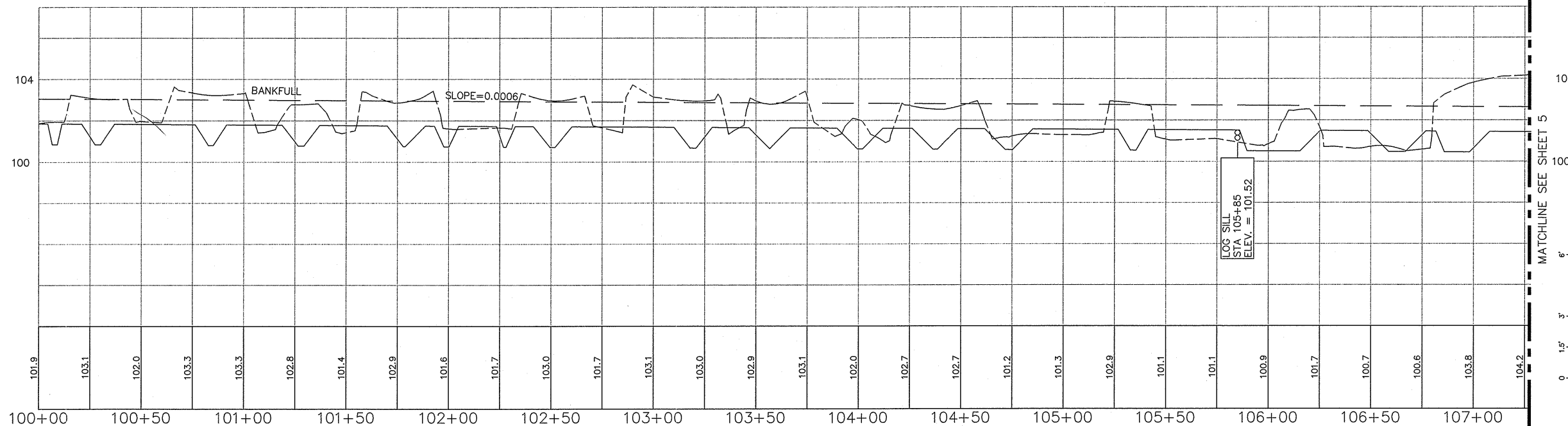


DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 3



**PROFILE LEGEND**

- PROPOSED TOP OF BANK
- Q OF NEW CHANNEL
- EXISTING GROUND-CENTER
- LOG CROSS VANE
- LOG SILL
- ROCK CROSS VANE
- A-VANE

**LEGEND**

- 10+00 PROPOSED BANK FULL
- Q PROPOSED CREEK
- E PERMANENT CONSERVATION EASEMENT
- EWF PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- C CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- ▨ STREAM PLUG
- ▨ CHANNEL BACKFILL
- ▨ WETLAND ENHANCEMENT
- ROCK CROSS VANE
- ROCK A-VANE
- ROCK VANE
- LOG CROSS VANE
- WETLAND RESTORATION
- STREAM VALLEY RESTORATION
- LOG SILL
- LOG VANE

**SURVEY LEGEND**

- PROPERTY LINE
- MAJOR CONTOURS
- MINOR CONTOURS
- STREAM CENTERLINE
- TREELINE
- EXISTING WETLAND

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949**

REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

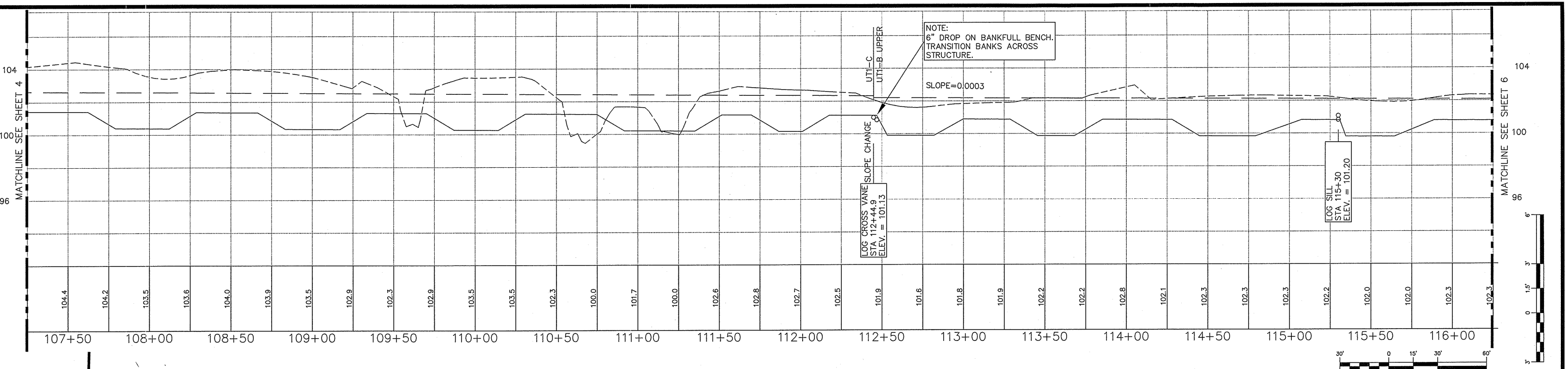
PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 4

April 28, 2008 - 3:43pm By: jmkimble

T:\va\012820010 Beaverdam Swamp Restoration\010\_LDD\dwg\RECORD SET 04-10-08\05-PLANS.dwg



**PROFILE LEGEND**

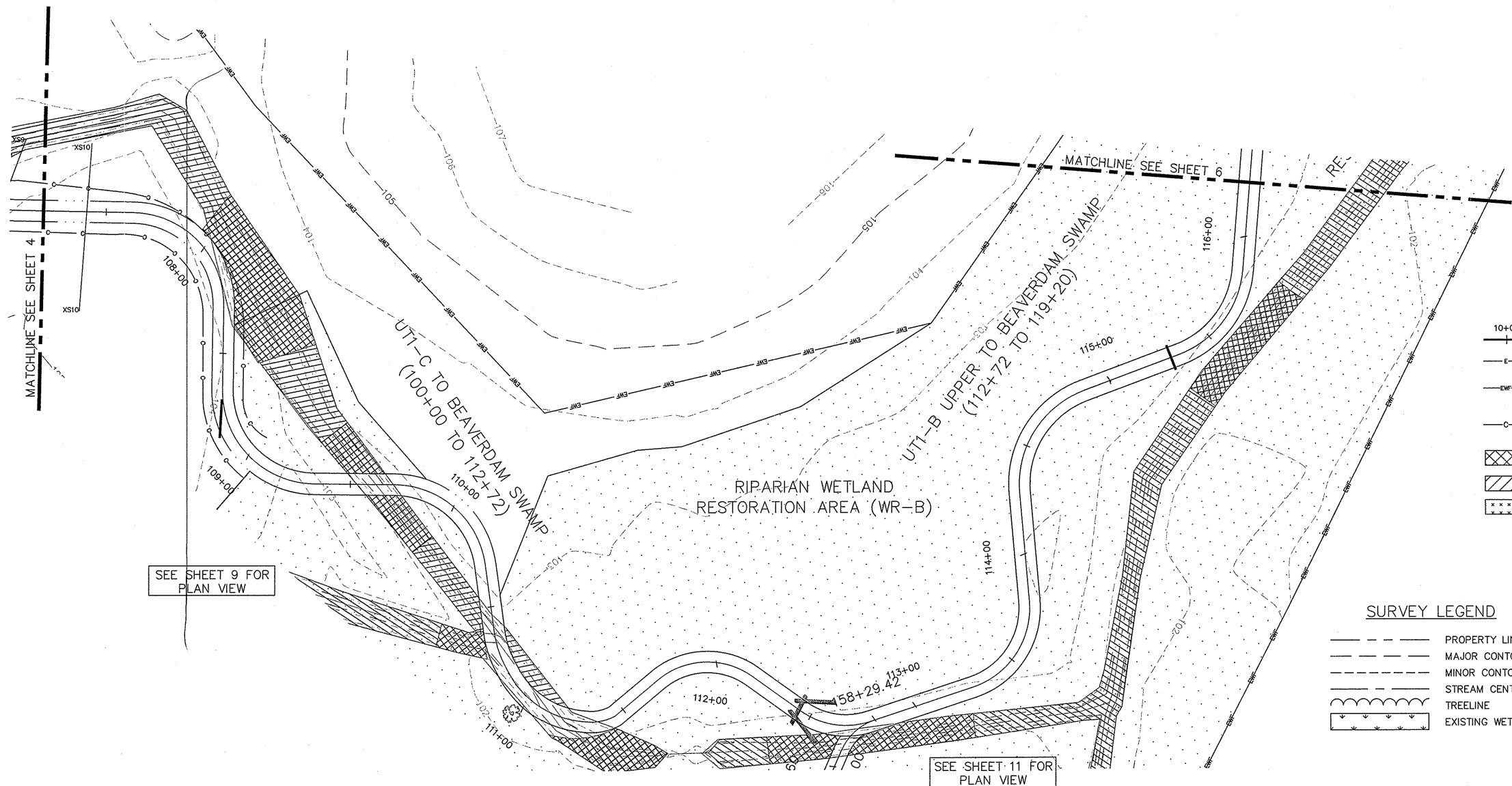
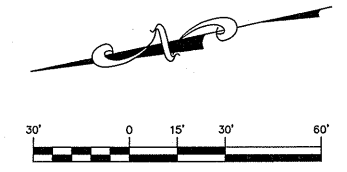
- PROPOSED TOP OF BANK
- Q OF NEW CHANNEL
- ... EXISTING GROUND-CENTER
- LOG CROSS VANE
- LOG SILL
- ROCK CROSS VANE
- A-VANE

**LEGEND**

- 10+00 PROPOSED BANK FULL
- Q OF PROPOSED CREEK
- PERMANENT CONSERVATION EASEMENT
- PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- ▨ STREAM PLUG
- ▨ CHANNEL BACKFILL
- ▨ WETLAND ENHANCEMENT
- ROCK CROSS VANE
- ROCK A-VANE
- ROCK VANE
- LOG CROSS VANE
- ▨ WETLAND RESTORATION
- ▨ STREAM VALLEY RESTORATION
- LOG SILL
- LOG VANE

**SURVEY LEGEND**

- PROPERTY LINE
- MAJOR CONTOURS
- MINOR CONTOURS
- STREAM CENTERLINE
- TREETLINE
- ▨ EXISTING WETLAND



REV. NO.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE



DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

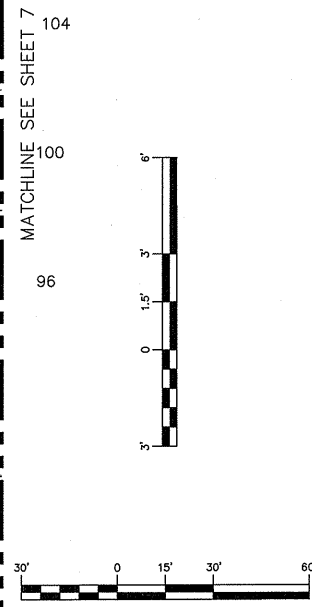
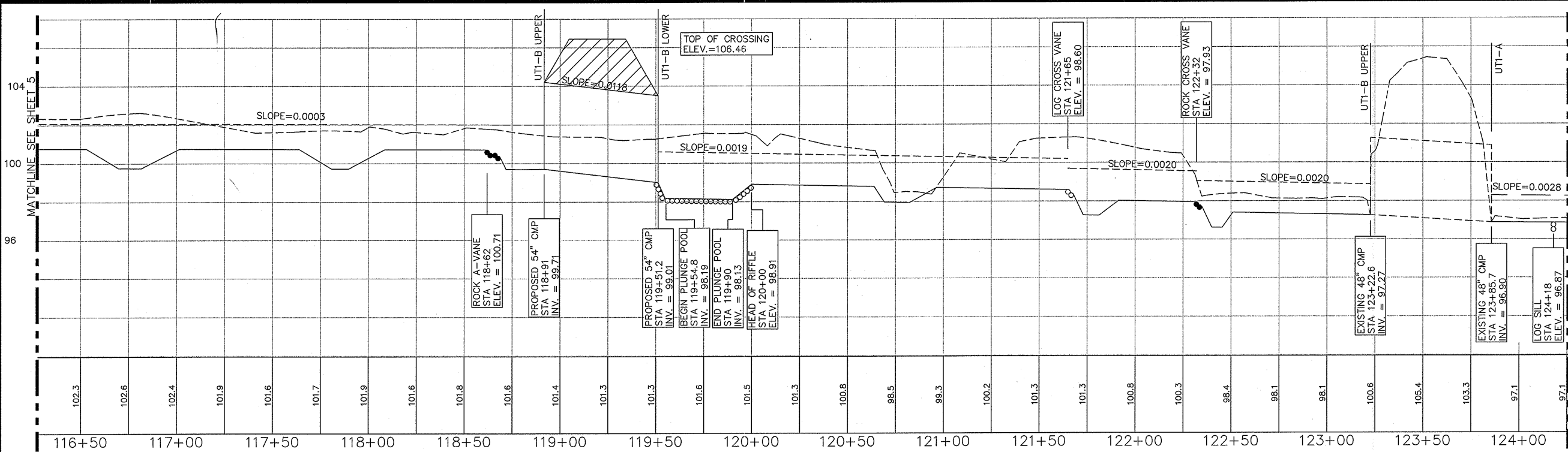
The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 5



April 28, 2008 - 3:43pm By: jml/mb

T:\m\01262010 Beaverdam Swamp Restoration\010\_LDD\dwg\RECORD SET 04-10-08\05-PLANS.dwg



PROFILE LEGEND

- PROPOSED TOP OF BANK
- - - - - Q OF NEW CHANNEL
- - - - - EXISTING GROUND-CENTER
- ○ ○ ○ ○ LOG CROSS VANE
- ○ ○ ○ ○ LOG SILL
- ● ● ● ● ROCK CROSS VANE
- ▲ ▲ ▲ ▲ ▲ A-VANE

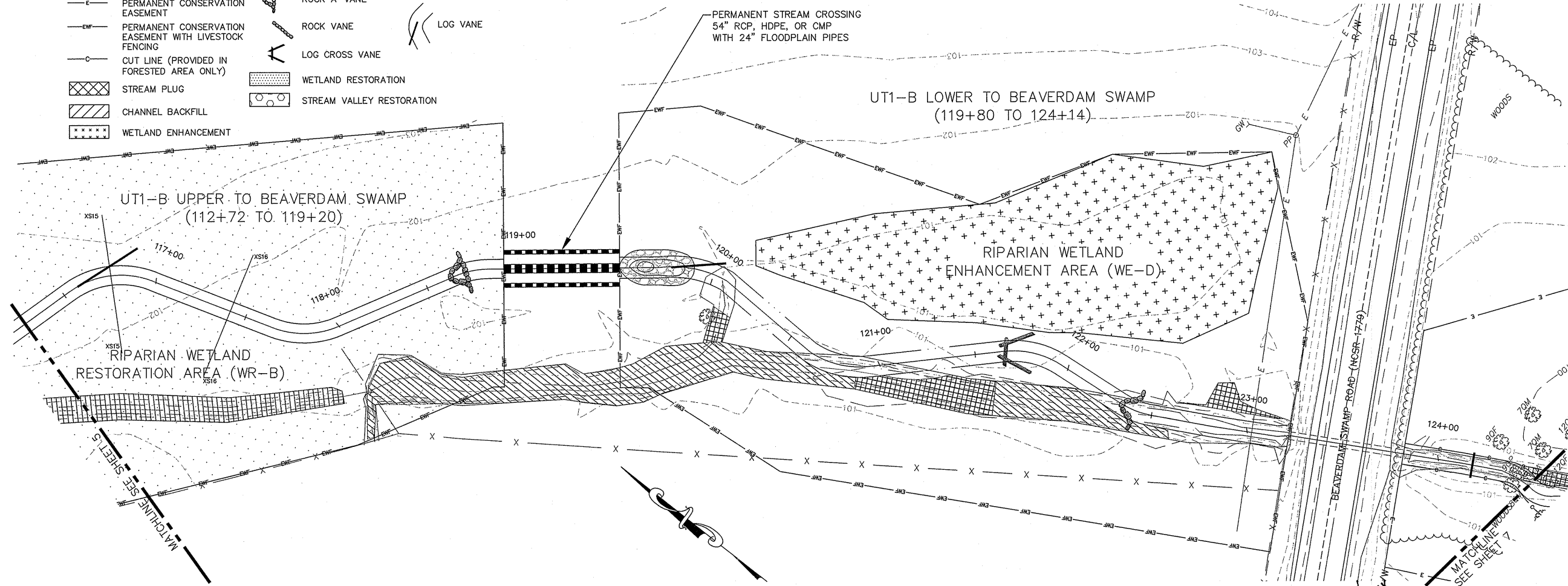
SURVEY LEGEND

- PROPERTY LINE
- - - - - MAJOR CONTOURS
- - - - - MINOR CONTOURS
- - - - - STREAM CENTERLINE
- ~ ~ ~ ~ ~ TRELLINE
- ▨ ▨ ▨ ▨ ▨ EXISTING WETLAND

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949**

- 10+00 PROPOSED BANK FULL
- ⊕ PROPOSED CREEK
- PERMANENT CONSERVATION EASEMENT
- PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- ▨ STREAM PLUG
- ▨ CHANNEL BACKFILL
- ▨ WETLAND ENHANCEMENT
- ▲ ROCK CROSS VANE
- ▲ ROCK A-VANE
- ▲ ROCK VANE
- LOG CROSS VANE
- LOG SILL
- LOG VANE
- ▨ WETLAND RESTORATION
- ○ ○ ○ ○ STREAM VALLEY RESTORATION



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE



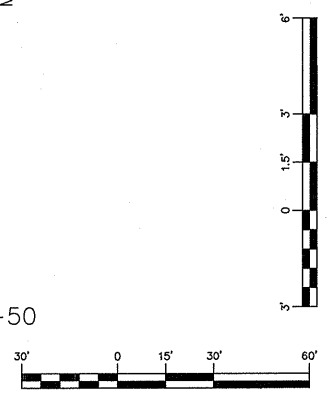
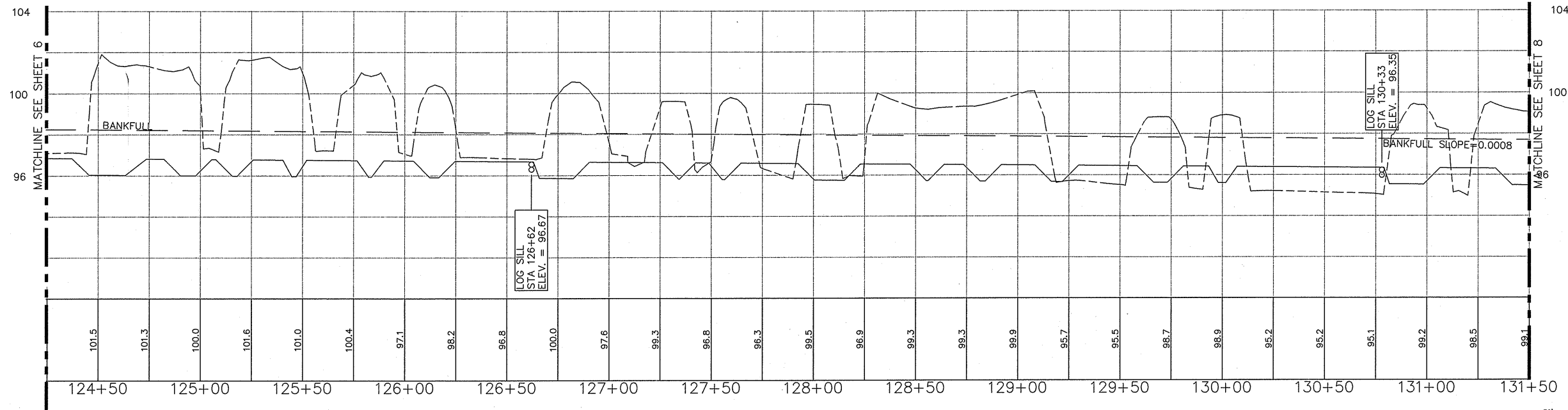
DATE: 02/25/08 PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 6

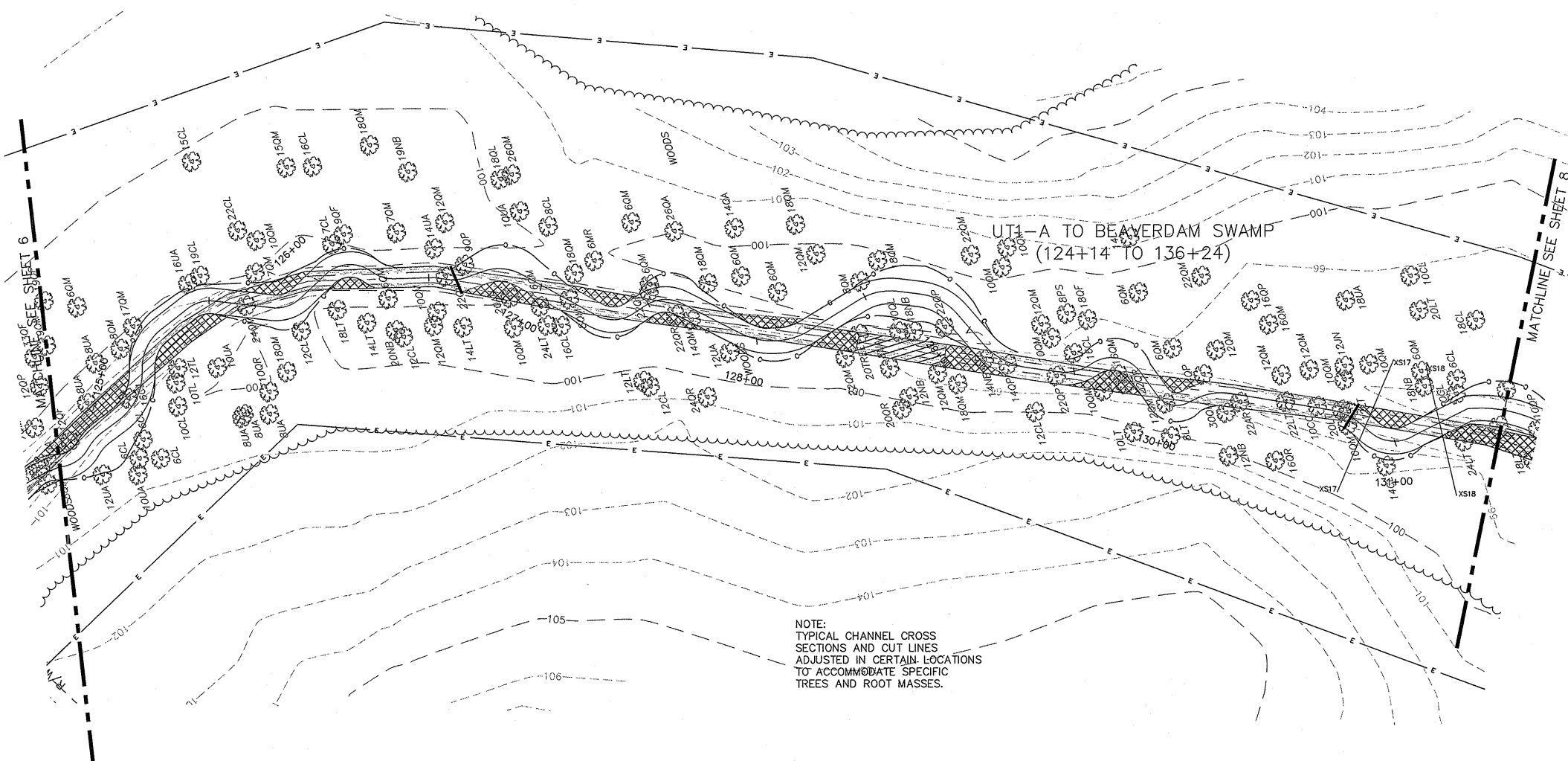




- PROFILE LEGEND**
- PROPOSED TOP OF BANK
  - Q OF NEW CHANNEL
  - - - EXISTING GROUND-CENTER
  - LOG CROSS VANE
  - LOG SILL
  - ROCK CROSS VANE
  - A-VANE

- LEGEND**
- 10+00 PROPOSED BANK FULL
  - Q PROPOSED CREEK
  - E PERMANENT CONSERVATION EASEMENT
  - EWF PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
  - C CUT LINE (PROVIDED IN FORESTED AREA ONLY)
  - ▨ STREAM PLUG
  - ▨ CHANNEL BACKFILL
  - ▨ WETLAND ENHANCEMENT
  - ROCK CROSS VANE
  - ROCK A-VANE
  - ROCK VANE
  - LOG CROSS VANE
  - LOG SILL
  - LOG VANE
  - ▨ WETLAND RESTORATION
  - STREAM VALLEY RESTORATION

- SURVEY LEGEND**
- PROPERTY LINE
  - MAJOR CONTOURS
  - MINOR CONTOURS
  - STREAM CENTERLINE
  - TREELINE
  - ▨ EXISTING WETLAND



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG! CONTACT ONE-CALL CENTER 1-800-632-4949**

1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JJK	TWS
REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08

PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC

DESIGNED BY: JJK  
CHECKED BY: TSJ

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 7

**PROFILE LEGEND**

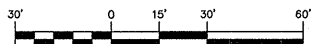
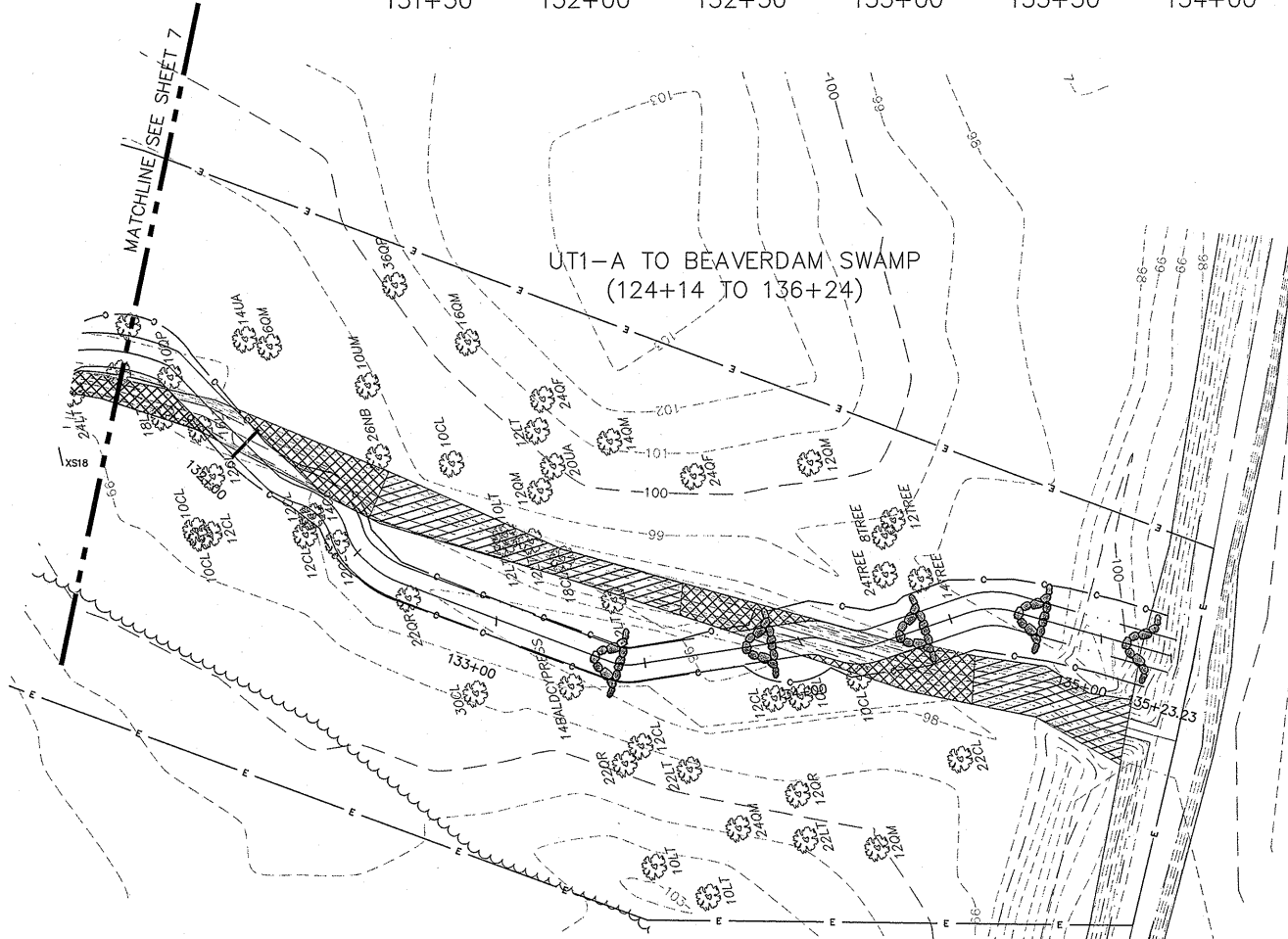
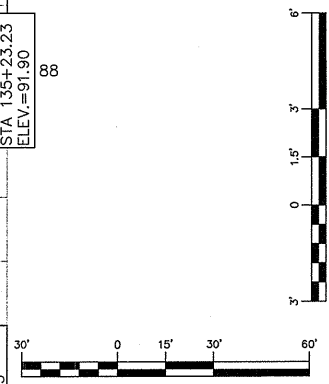
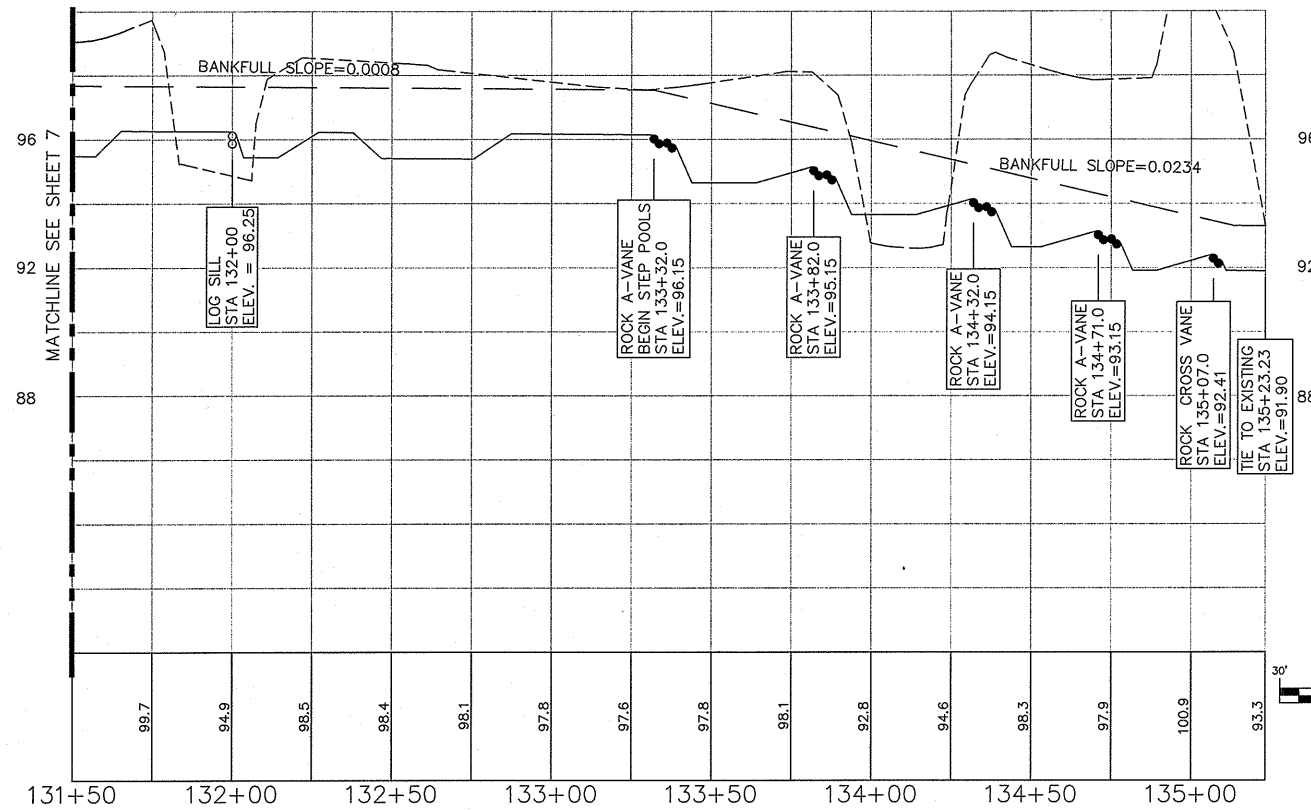
- PROPOSED TOP OF BANK
- C OF NEW CHANNEL
- EXISTING GROUND-CENTER
- LOG CROSS VANE
- LOG SILL
- ROCK CROSS VANE
- A-VANE

**LEGEND**

- 10+00 --- PROPOSED BANK FULL
- C OF PROPOSED CREEK
- PERMANENT CONSERVATION EASEMENT
- PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- ▨ STREAM PLUG
- ▨ CHANNEL BACKFILL
- ▨ WETLAND ENHANCEMENT
- ROCK CROSS VANE
- ROCK A-VANE
- ROCK VANE
- LOG CROSS VANE
- ▨ WETLAND RESTORATION
- STREAM VALLEY RESTORATION
- LOG SILL
- LOG VANE

**SURVEY LEGEND**

- PROPERTY LINE
- MAJOR CONTOURS
- MINOR CONTOURS
- STREAM CENTERLINE
- TREELINE
- EXISTING WETLAND



NOTE:  
TYPICAL CHANNEL CROSS SECTIONS AND CUT LINES ADJUSTED IN CERTAIN LOCATIONS TO ACCOMMODATE SPECIFIC TREES AND ROOT MASSES.



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JJK	TWS

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08  
DRAWN BY: JJK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

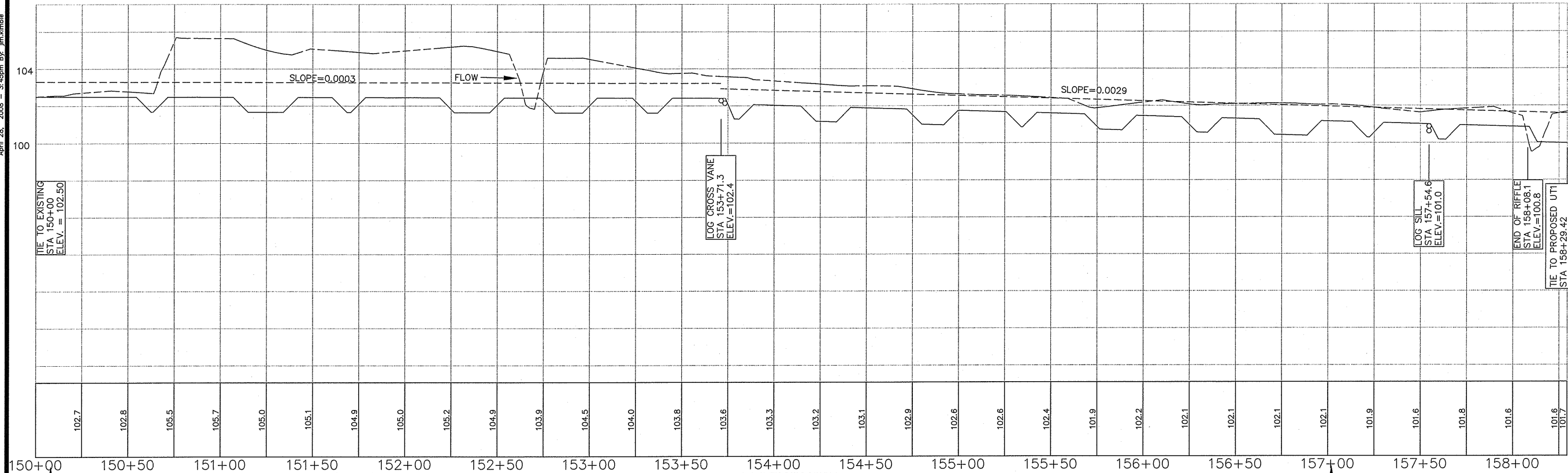
PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

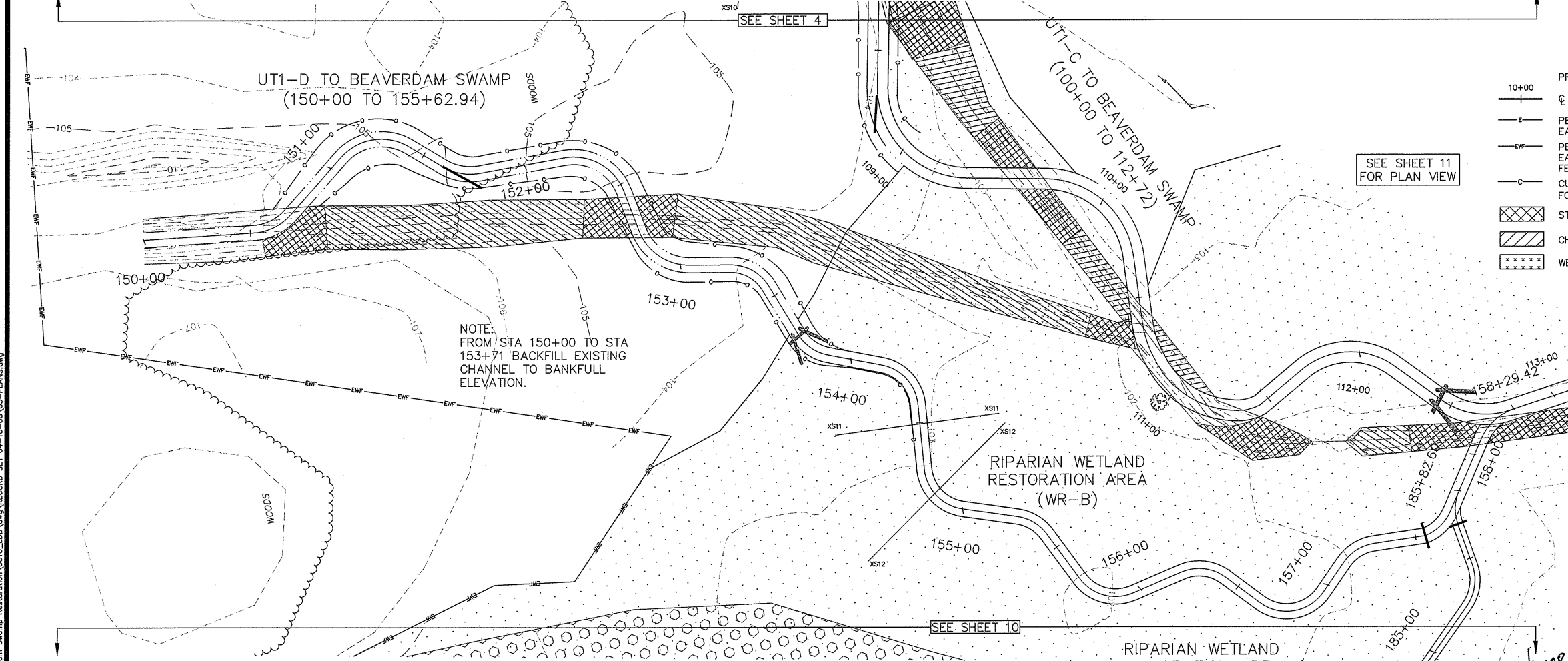
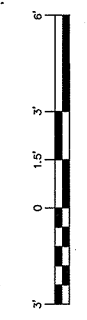
JOB NUMBER: 012620010 SHEET NUMBER: 8

April 28, 2008 - 3:45pm By: Jm.kimble

TIE TO EXISTING  
STA 150+00  
ELEV. = 102.50



- PROFILE LEGEND**
- PROPOSED TOP OF BANK
  - @ OF NEW CHANNEL
  - - - EXISTING GROUND-CENTER
  - LOG CROSS VANE
  - LOG SILL
  - ROCK CROSS VANE
  - A-VANE



30' 0' 15' 30' 60'

- LEGEND**
- 10+00 PROPOSED BANK FULL
  - @ PROPOSED CREEK
  - PERMANENT CONSERVATION EASEMENT
  - EWF PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
  - C CUT LINE (PROVIDED IN FORESTED AREA ONLY)
  - ▨ STREAM PLUG
  - ▨ CHANNEL BACKFILL
  - ▨ WETLAND ENHANCEMENT
  - ROCK CROSS VANE
  - ROCK A-VANE
  - ROCK VANE
  - LOG CROSS VANE
  - ▨ WETLAND RESTORATION
  - STREAM VALLEY RESTORATION
  - ▨ LOG SILL
  - ▨ LOG VANE

- SURVEY LEGEND**
- PROPERTY LINE
  - MAJOR CONTOURS
  - MINOR CONTOURS
  - STREAM CENTERLINE
  - TREELINE
  - EXISTING WETLAND



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949**

30' 0' 15' 30' 60'

T:\012620010 Beaverdam Swamp Restoration\0101\_LDD\DWG\RECORD SET 04-10-08\05-PLANS.dwg

REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE

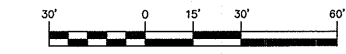
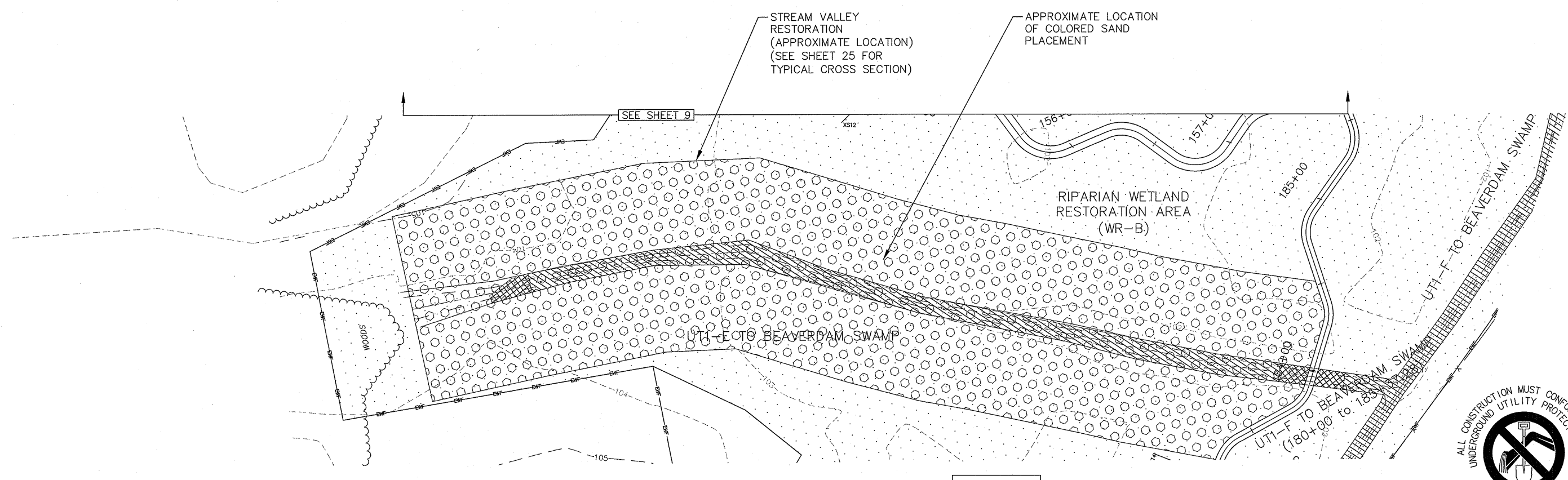
DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 9

- |   |  |   |  |   |  |
|---|--|---|--|---|--|
| <p><b>LEGEND</b></p> <p>10+00 PROPOSED BANK FULL</p> <p>⊕ PROPOSED CREEK</p> <p>—E— PERMANENT CONSERVATION EASEMENT</p> <p>—EW— PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING</p> <p>—C— CUT LINE (PROVIDED IN FORESTED AREA ONLY)</p> <p>▨ STREAM PLUG</p> <p>▧ CHANNEL BACKFILL</p> <p>▩ WETLAND ENHANCEMENT</p> |  | <p><b>SURVEY LEGEND</b></p> <p>— — — — — PROPERTY LINE</p> <p>— — — — — MAJOR CONTOURS</p> <p>— — — — — MINOR CONTOURS</p> <p>— — — — — STREAM CENTERLINE</p> <p>— — — — — TREELINE</p> <p>▭ EXISTING WETLAND</p> |  | <p><b>PROFILE LEGEND</b></p> <p>— — — — — PROPOSED TOP OF BANK</p> <p>⊕ OF NEW CHANNEL</p> <p>— — — — — EXISTING GROUND-CENTER</p> <p>○ LOG CROSS VANE</p> <p>● LOG SILL</p> <p>● ROCK CROSS VANE</p> <p>● A-VANE</p> |  |
| <p>⊕ ROCK CROSS VANE</p> <p>⊕ ROCK A-VANE</p> <p>⊕ ROCK VANE</p> <p>⊕ LOG CROSS VANE</p> <p>▨ WETLAND RESTORATION</p> <p>▨ STREAM VALLEY RESTORATION</p>  |  | <p>⊕ LOG SILL</p> <p>⊕ LOG VANE</p>   |  |   |  |



<p>REV. No.: 1 REVISION: REVISED PER EROSION CONTROL REVIEW DATE: 08/23/07 DRAWN BY: JIK CHECKED BY: TWS</p>				<p>PREPARED IN THE OFFICE OF:</p> <p><b>Kimley-Horn and Associates, Inc.</b></p> <p>P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068 PHONE: (919) 677-2000 FAX: (919) 677-2050</p>		<p>CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM</p> <p>TITLE: GRADING PLAN AND PROFILE</p>		<p>DATE: 02/25/08 PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC</p> <p>DRAWN BY: JIK DESIGNED BY: RTL CHECKED BY: TSJ</p>		<p>THE RECORD DRAWINGS REPRESENT THE CONSTRUCTION PLANS WITH ADJUSTMENTS MADE TO REPRESENT CONSTRUCTED CONDITIONS.</p> <p>JOB NUMBER: 012620010 SHEET NUMBER: 10</p>	
--	--	--	--	---	--	---	--	--	--	--	--

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PROFILE LEGEND

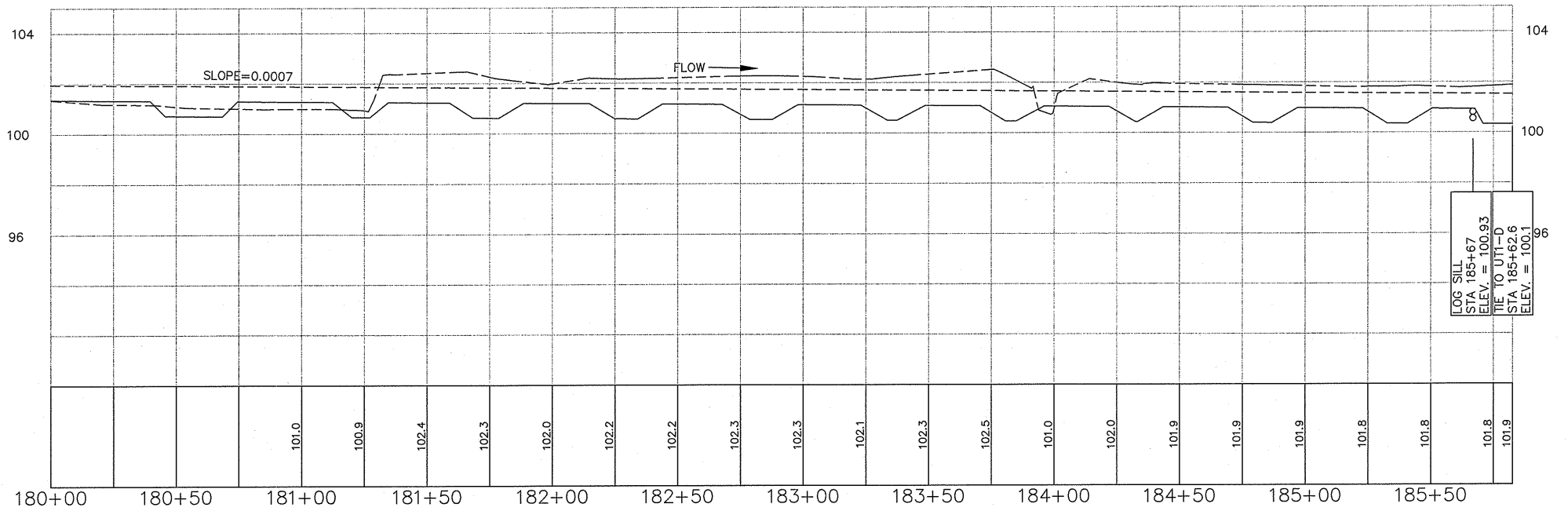
- PROPOSED TOP OF BANK
- Q OF NEW CHANNEL
- EXISTING GROUND-CENTER
- LOG CROSS VANE
- LOG SILL
- ROCK CROSS VANE
- A-VANE

LEGEND

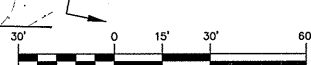
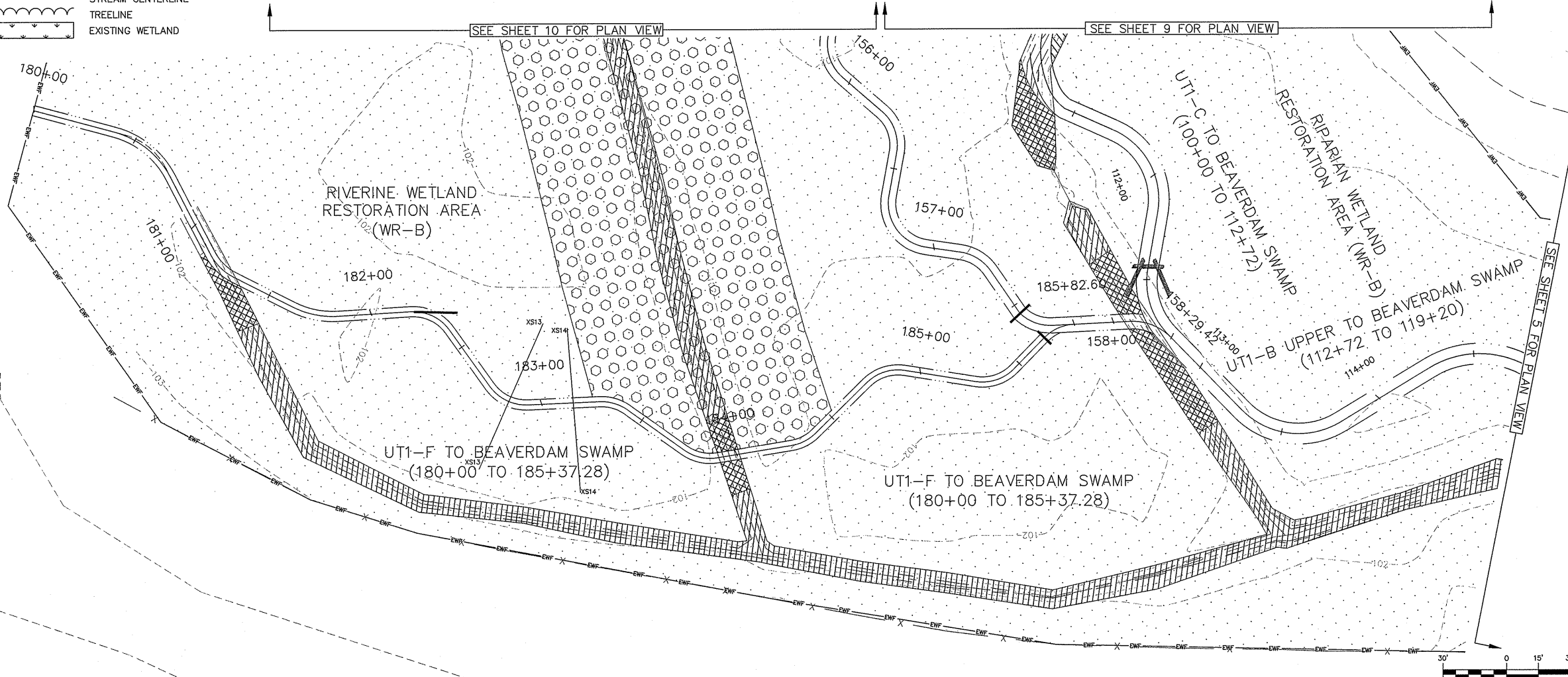
- 10+00
- PROPOSED BANK FULL
- Q PROPOSED CREEK
- PERMANENT CONSERVATION EASEMENT
- PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- ▨ STREAM PLUG
- ▨ CHANNEL BACKFILL
- ▨ WETLAND ENHANCEMENT
- ROCK CROSS VANE
- ROCK A-VANE
- ROCK VANE
- LOG CROSS VANE
- ▨ WETLAND RESTORATION
- ▨ STREAM VALLEY RESTORATION
- LOG SILL
- LOG VANE

SURVEY LEGEND

- PROPERTY LINE
- MAJOR CONTOURS
- MINOR CONTOURS
- STREAM CENTERLINE
- TREELINE
- EXISTING WETLAND



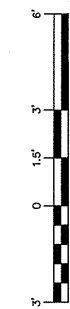
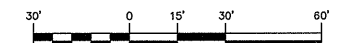
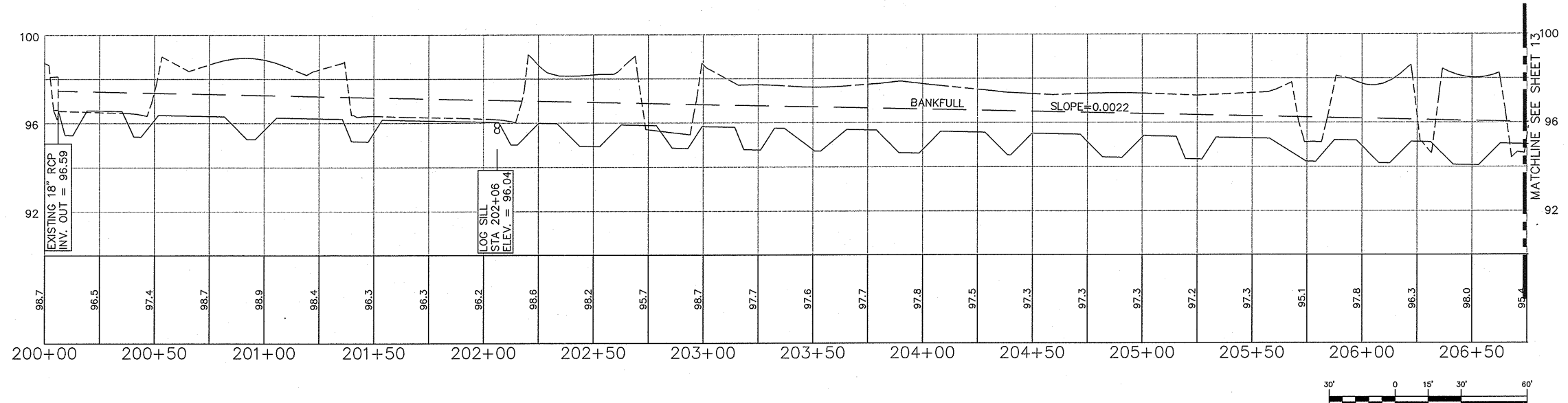
LOG SILL  
STA 185+67  
ELEV. = 100.93  
TIE TO UTI-D  
STA 185+62.6  
ELEV. = 100.1



I:\proj\012620010 Beaverdam Swamp Restoration\010\_LDD\Draw\RECORD SET 04-16-08\05-PLANS.dwg

<p>REV. No. 1 REVISION: REVISED PER EROSION CONTROL REVIEW DATE: 08/23/07 DRAWN BY: JIK CHECKED BY: TWS</p>	<p>PREPARED IN THE OFFICE OF:</p> <p><b>Kimley-Horn and Associates, Inc.</b> P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068 PHONE: (919) 677-2000 FAX: (919) 677-2050</p>	<p>CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM</p> <p>TITLE: GRADING PLAN AND PROFILE</p>	<p>DATE: 02/25/08 DRAWN BY: JIK DESIGNED BY: RTL CHECKED BY: TSJ</p>	<p>PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC</p>	<p>The record drawings represent the construction plans with adjustments made to represent constructed conditions.</p> <p>JOB NUMBER: 012620010 SHEET NUMBER: 11</p>
---	--	---	--	---	--





**PROFILE LEGEND**

- PROPOSED TOP OF BANK
- @ OF NEW CHANNEL
- EXISTING GROUND-CENTER
- o LOG CROSS VANE
- o LOG SILL
- o ROCK CROSS VANE
- o A-VANE

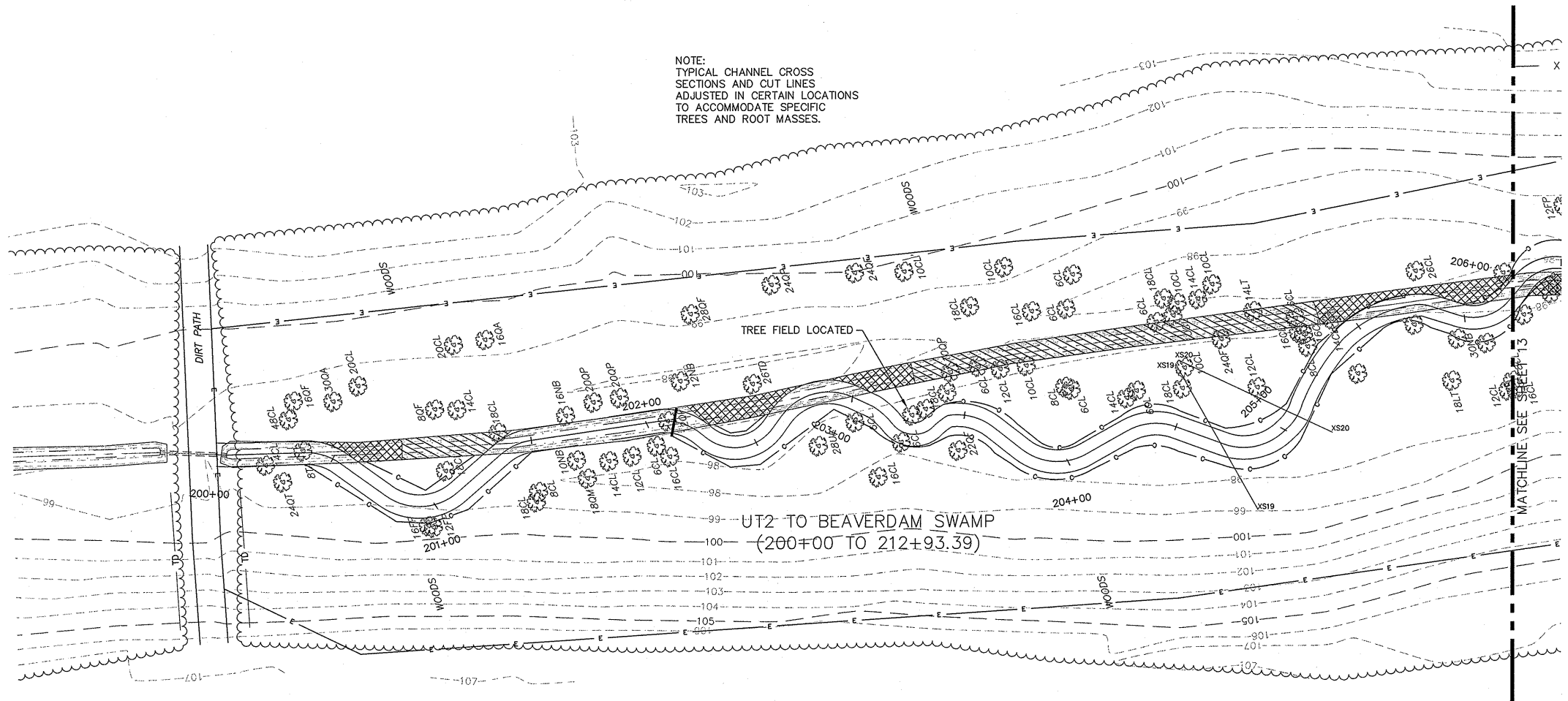
**LEGEND**

- 10+00 PROPOSED BANK FULL
- @ PROPOSED CREEK
- E PERMANENT CONSERVATION EASEMENT
- EW PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- C CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- STREAM PLUG
- CHANNEL BACKFILL
- WETLAND ENHANCEMENT
- o ROCK CROSS VANE
- o ROCK A-VANE
- o ROCK VANE
- o LOG CROSS VANE
- o LOG SILL
- o LOG VANE
- WETLAND RESTORATION
- o STREAM VALLEY RESTORATION

**SURVEY LEGEND**

- PROPERTY LINE
- MAJOR CONTOURS
- MINOR CONTOURS
- STREAM CENTERLINE
- TREELINE
- EXISTING WETLAND

NOTE:  
TYPICAL CHANNEL CROSS SECTIONS AND CUT LINES ADJUSTED IN CERTAIN LOCATIONS TO ACCOMMODATE SPECIFIC TREES AND ROOT MASSES.

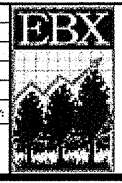


MATCHLINE SEE SHEET 13



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

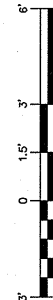
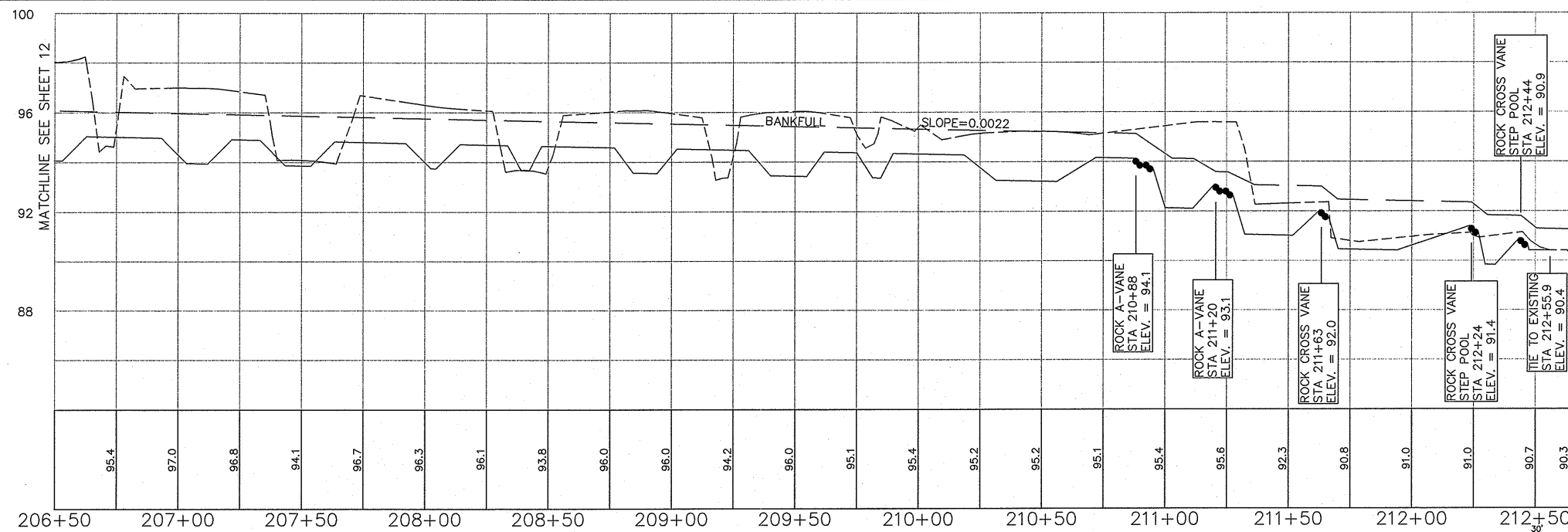


PREPARED IN THE OFFICE OF:  
**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM  
TITLE: GRADING PLAN AND PROFILE

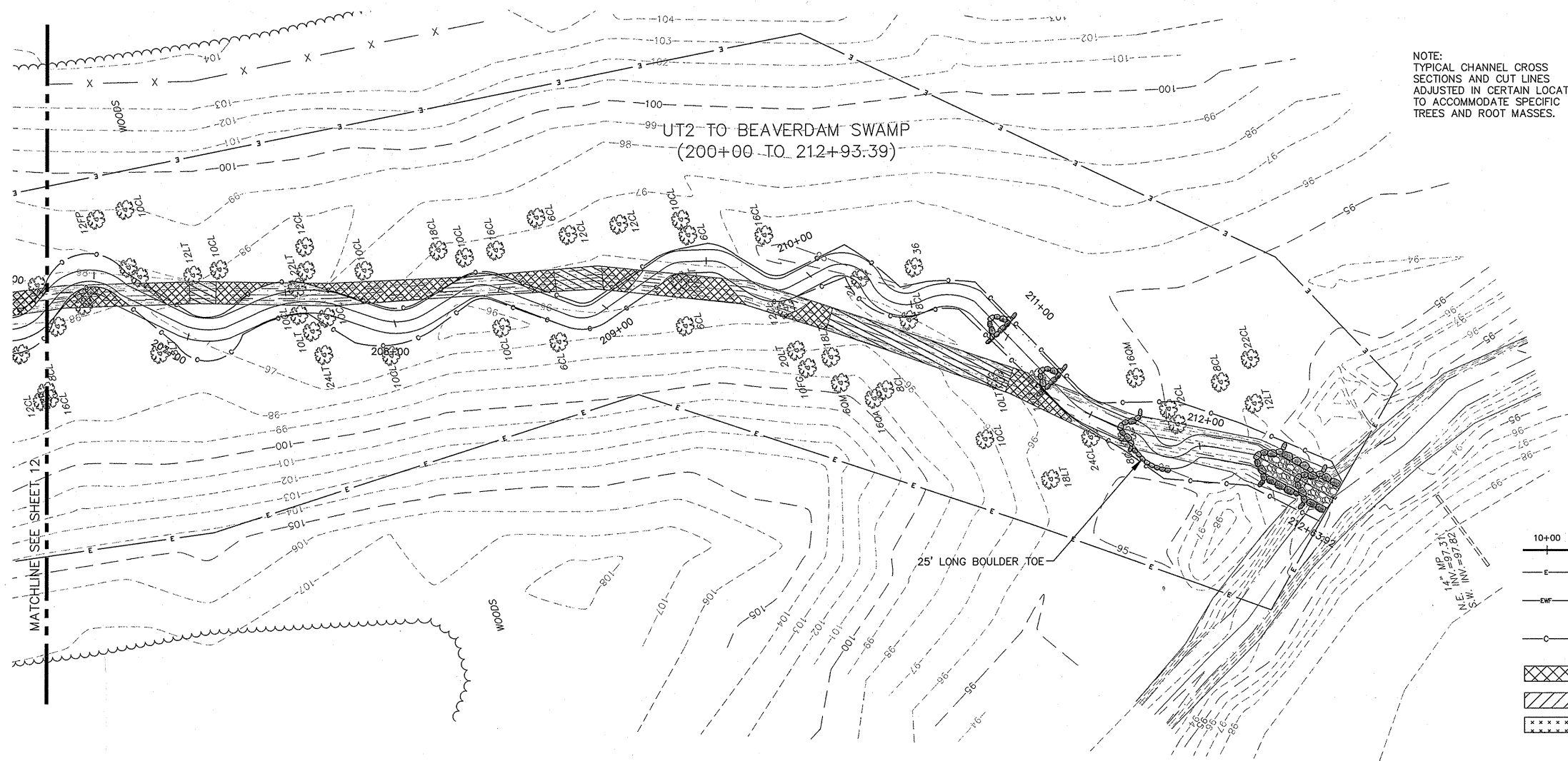


DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ  
PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC  
The record drawings represent the construction plans with adjustments made to represent constructed conditions.  
JOB NUMBER: 012620010 SHEET NUMBER: 12



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG! CONTACT ONE-CALL CENTER 1-800-632-4949**



NOTE: TYPICAL CHANNEL CROSS SECTIONS AND CUT LINES ADJUSTED IN CERTAIN LOCATIONS TO ACCOMMODATE SPECIFIC TREES AND ROOT MASSES.

**PROFILE LEGEND**

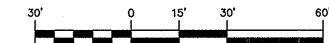
- PROPOSED TOP OF BANK
- C OF NEW CHANNEL
- EXISTING GROUND-CENTER
- LOG CROSS VANE
- LOG SILL
- ROCK CROSS VANE
- A-VANE

**SURVEY LEGEND**

- PROPERTY LINE
- MAJOR CONTOURS
- MINOR CONTOURS
- STREAM CENTERLINE
- TREELINE
- EXISTING WETLAND

**LEGEND**

- 10+00 PROPOSED BANK FULL
- C PROPOSED CREEK
- PERMANENT CONSERVATION EASEMENT
- PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
- CUT LINE (PROVIDED IN FORESTED AREA ONLY)
- STREAM PLUG
- CHANNEL BACKFILL
- WETLAND ENHANCEMENT
- ROCK CROSS VANE
- ROCK A-VANE
- ROCK VANE
- LOG CROSS VANE
- WETLAND RESTORATION
- STREAM VALLEY RESTORATION
- LOG SILL
- LOG VANE



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE



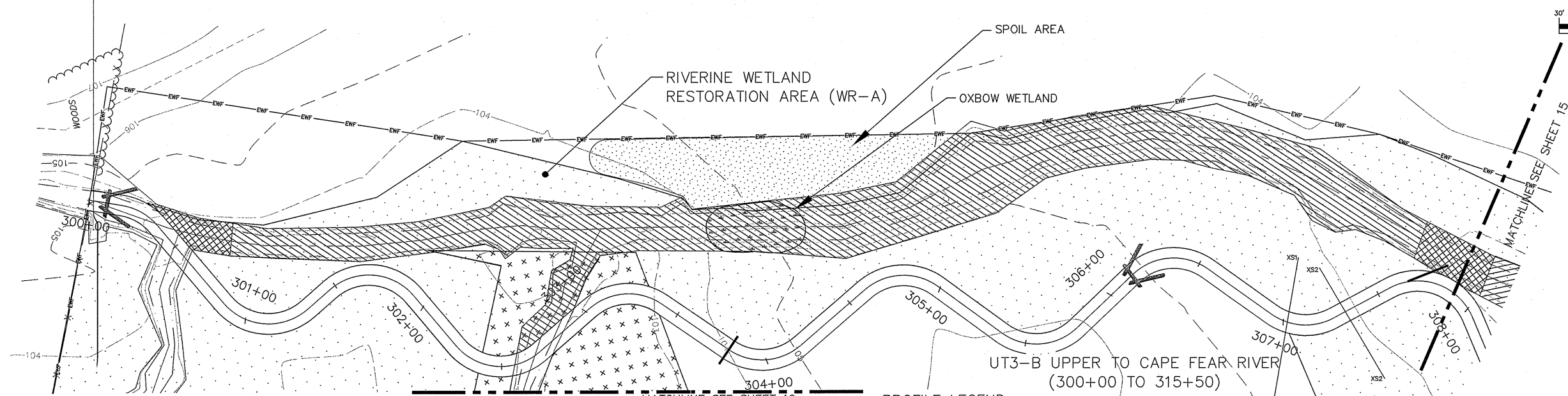
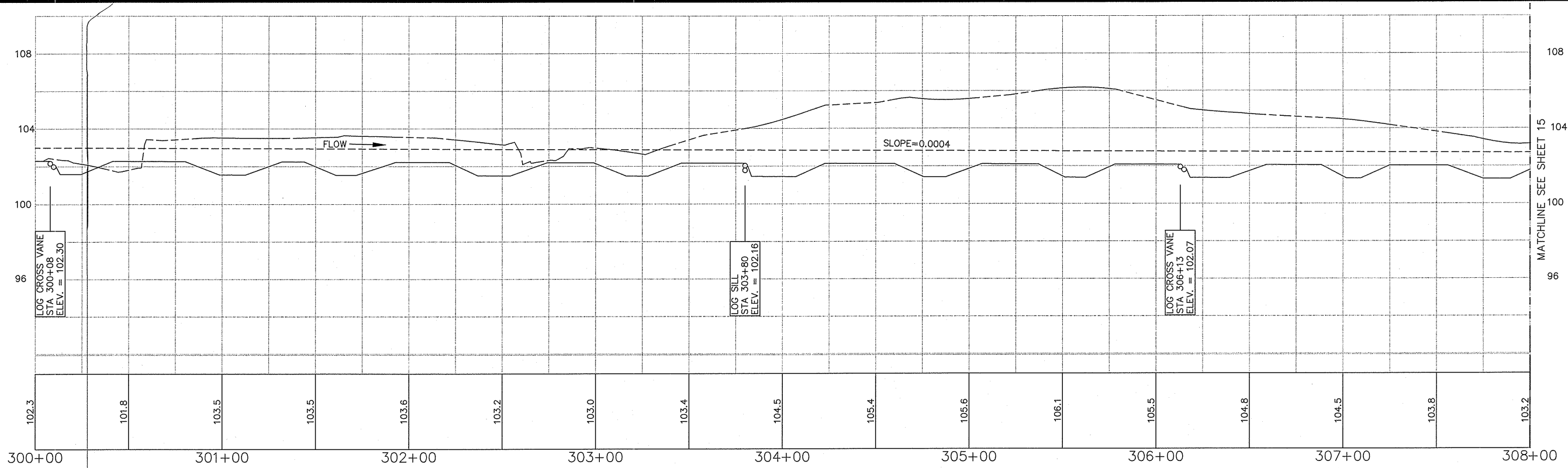
DATE: 02/25/08 PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION

DESIGNED BY: JIK  
CHECKED BY: RTSJ

EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

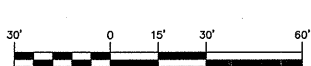
JOB NUMBER: 012620010 SHEET NUMBER: 13



- LEGEND**
- 10+00
  - PROPOSED BANK FULL
  - PROPOSED CREEK
  - PERMANENT CONSERVATION EASEMENT
  - PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
  - CUT LINE (PROVIDED IN FORESTED AREA ONLY)
  - STREAM PLUG
  - CHANNEL BACKFILL
  - WETLAND ENHANCEMENT
  - ROCK CROSS VANE
  - ROCK A-VANE
  - ROCK VANE
  - LOG CROSS VANE
  - WETLAND RESTORATION
  - STREAM VALLEY RESTORATION
  - LOG SILL
  - LOG VANE
  - SPOIL AREA

- SURVEY LEGEND**
- PROPERTY LINE
  - MAJOR CONTOURS
  - MINOR CONTOURS
  - STREAM CENTERLINE
  - TREELINE
  - EXISTING WETLAND

- PROFILE LEGEND**
- PROPOSED TOP OF BANK
  - NEW CHANNEL
  - EXISTING GROUND-CENTER
  - LOG CROSS VANE
  - LOG SILL
  - ROCK CROSS VANE
  - A-VANE



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM  
 TITLE: GRADING PLAN AND PROFILE

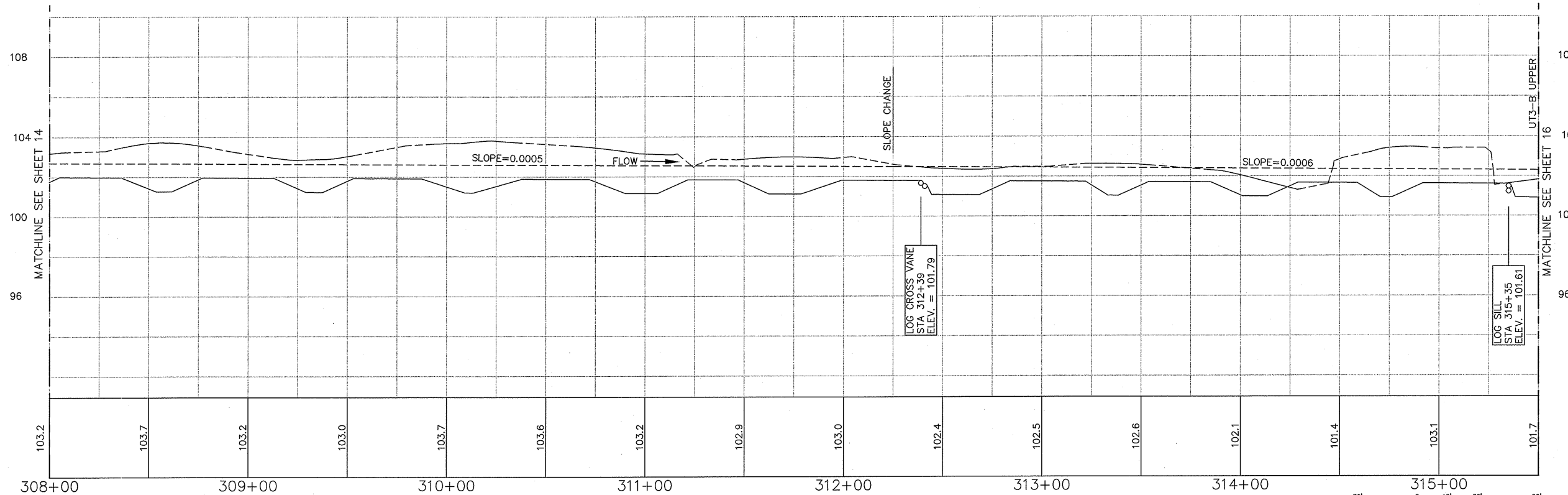
DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 14





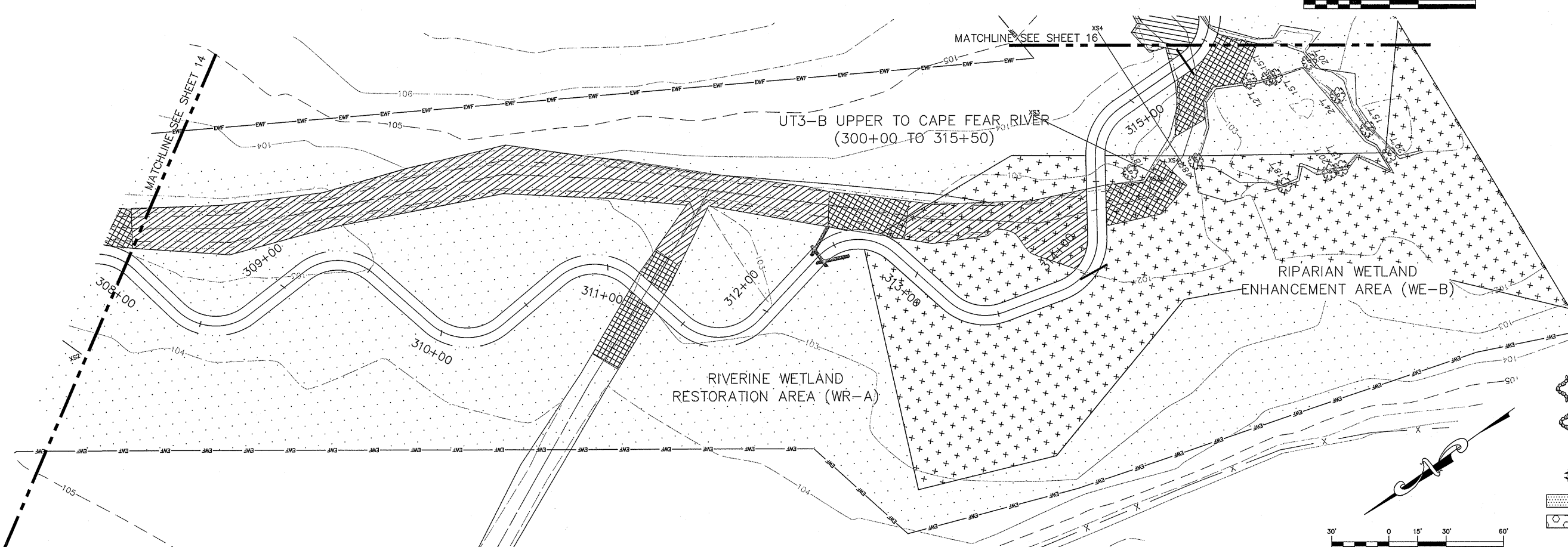
- PROFILE LEGEND**
- PROPOSED TOP OF BANK
  - &#246; OF NEW CHANNEL
  - - - EXISTING GROUND-CENTER
  - o o LOG CROSS VANE
  - o o LOG SILL
  - o o ROCK CROSS VANE
  - o o A-VANE

- SURVEY LEGEND**
- PROPERTY LINE
  - MAJOR CONTOURS
  - - - MINOR CONTOURS
  - - - STREAM CENTERLINE
  - ~ ~ ~ TREELINE
  - EXISTING WETLAND



- LEGEND**
- 10+00 PROPOSED BANK FULL
  - &#246; PROPOSED CREEK
  - - - PERMANENT CONSERVATION EASEMENT
  - - - PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
  - - - CUT LINE (PROVIDED IN FORESTED AREA ONLY)
  - STREAM PLUG
  - CHANNEL BACKFILL
  - WETLAND ENHANCEMENT

- o o ROCK CROSS VANE
- o o LOG SILL
- o o ROCK A-VANE
- o o LOG VANE
- o o LOG CROSS VANE
- WETLAND RESTORATION
- STREAM VALLEY RESTORATION



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JKK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

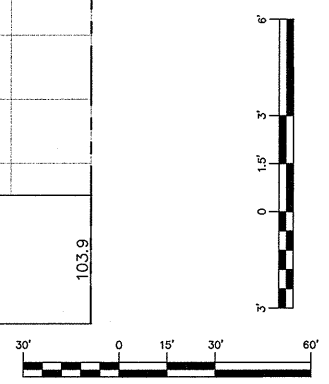
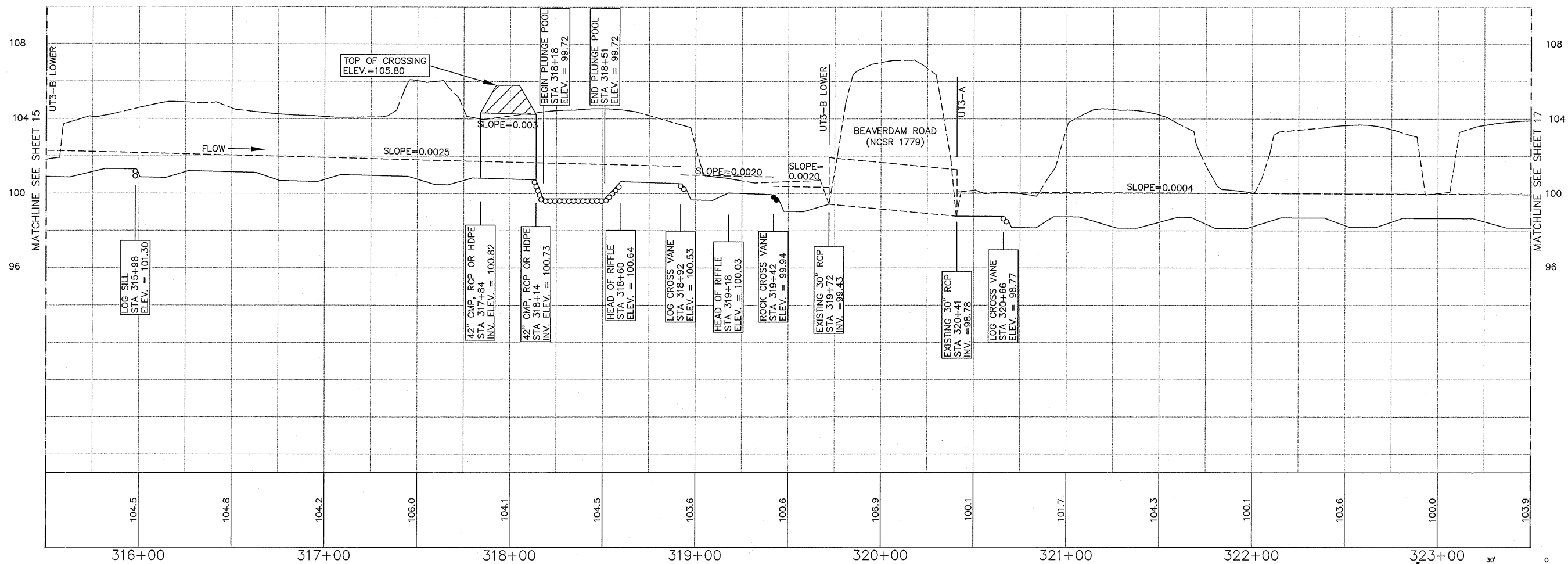
TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08  
 PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

DESIGNED BY: JIK  
 CHECKED BY: TSJ

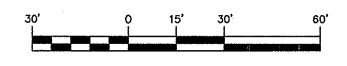
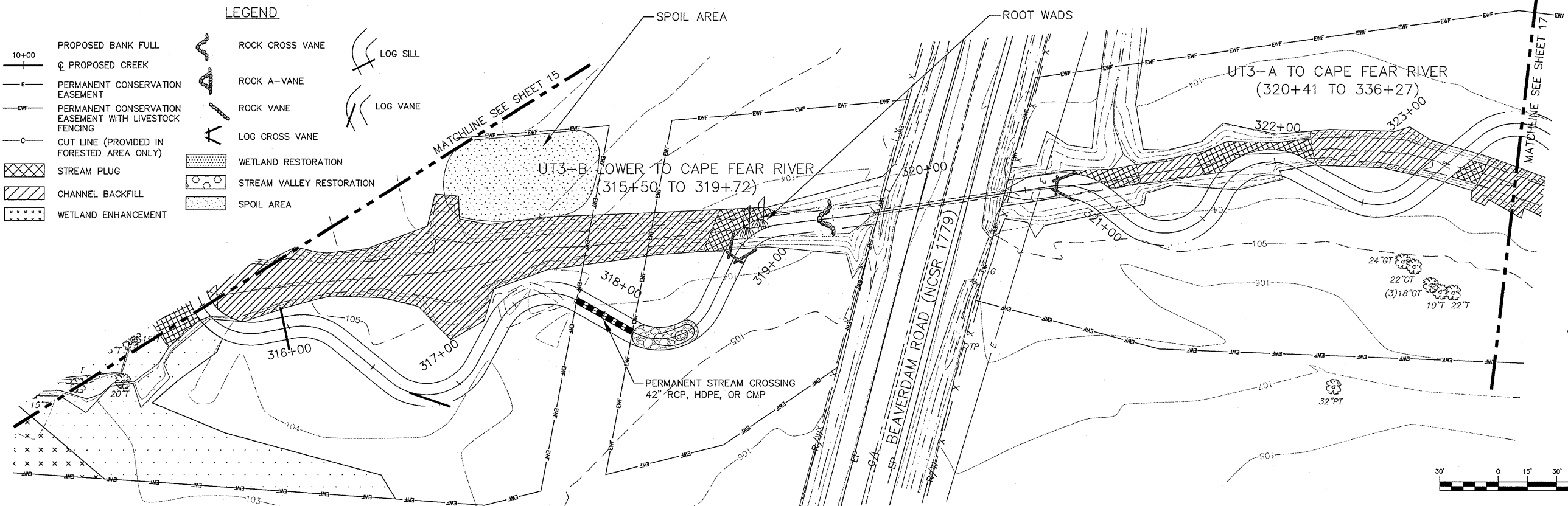
The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 15



- LEGEND**
- 10+00 PROPOSED BANK FULL
  - ⊕ PROPOSED CREEK
  - PERMANENT CONSERVATION EASEMENT
  - PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
  - CUT LINE (PROVIDED IN FORESTED AREA ONLY)
  - ▨ STREAM PLUG
  - ▨ CHANNEL BACKFILL
  - ▨ WETLAND ENHANCEMENT
  - ROCK CROSS VANE
  - ROCK A-VANE
  - ROCK VANE
  - LOG CROSS VANE
  - ▨ WETLAND RESTORATION
  - ▨ STREAM VALLEY RESTORATION
  - ▨ SPOIL AREA
  - LOG SILL
  - LOG VANE

- PROFILE LEGEND**
- PROPOSED TOP OF BANK
  - ⊕ OF NEW CHANNEL
  - EXISTING GROUND-CENTER
  - ⊕ LOG CROSS VANE
  - ⊕ LOG SILL
  - ⊕ ROCK CROSS VANE
  - ⊕ A-VANE
- SURVEY LEGEND**
- PROPERTY LINE
  - MAJOR CONTOURS
  - MINOR CONTOURS
  - STREAM CENTERLINE
  - TREELINE
  - EXISTING WETLAND



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949**

REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JJK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

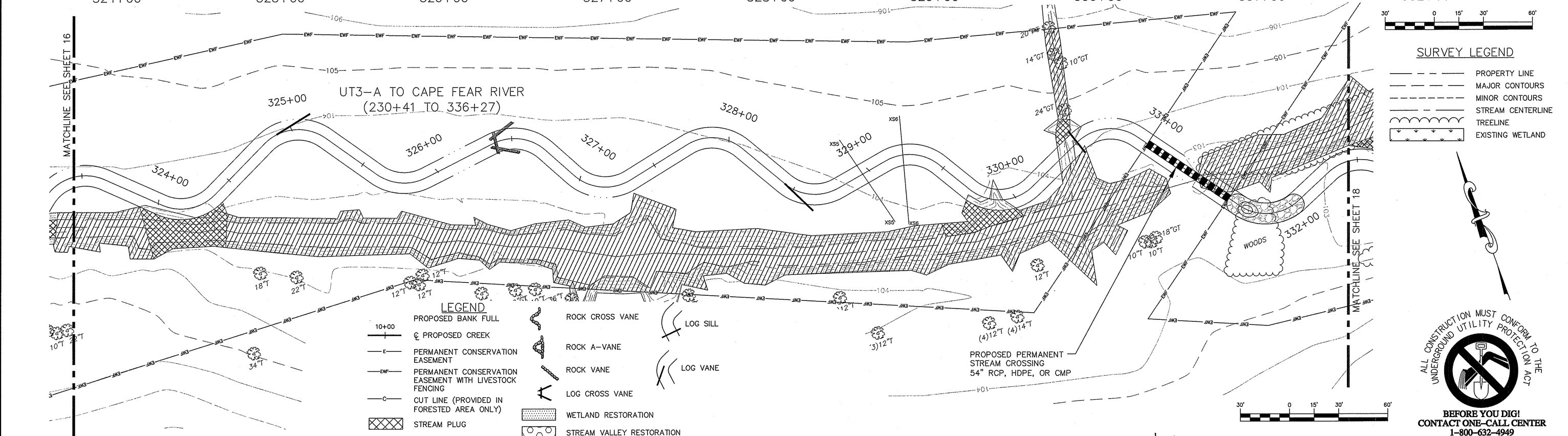
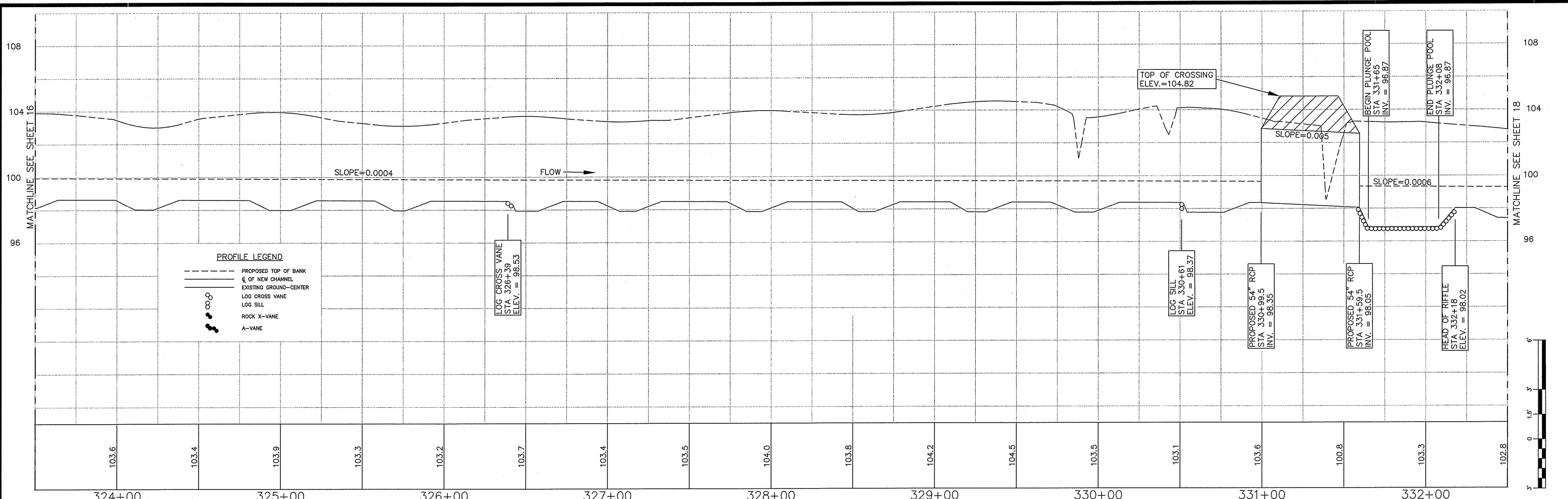
TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08  
DRAWN BY: JJK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 16



<p>1 REVISED PER EROSION CONTROL REVIEW</p>		<p>08/23/07</p>	<p>JKK</p>	<p>TWS</p>
<p>REV. No.</p>	<p>REVISION</p>	<p>DATE</p>	<p>DRAWN BY</p>	<p>CHECKED BY</p>

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08

DRAWN BY: JJK

DESIGNED BY: RTL

CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

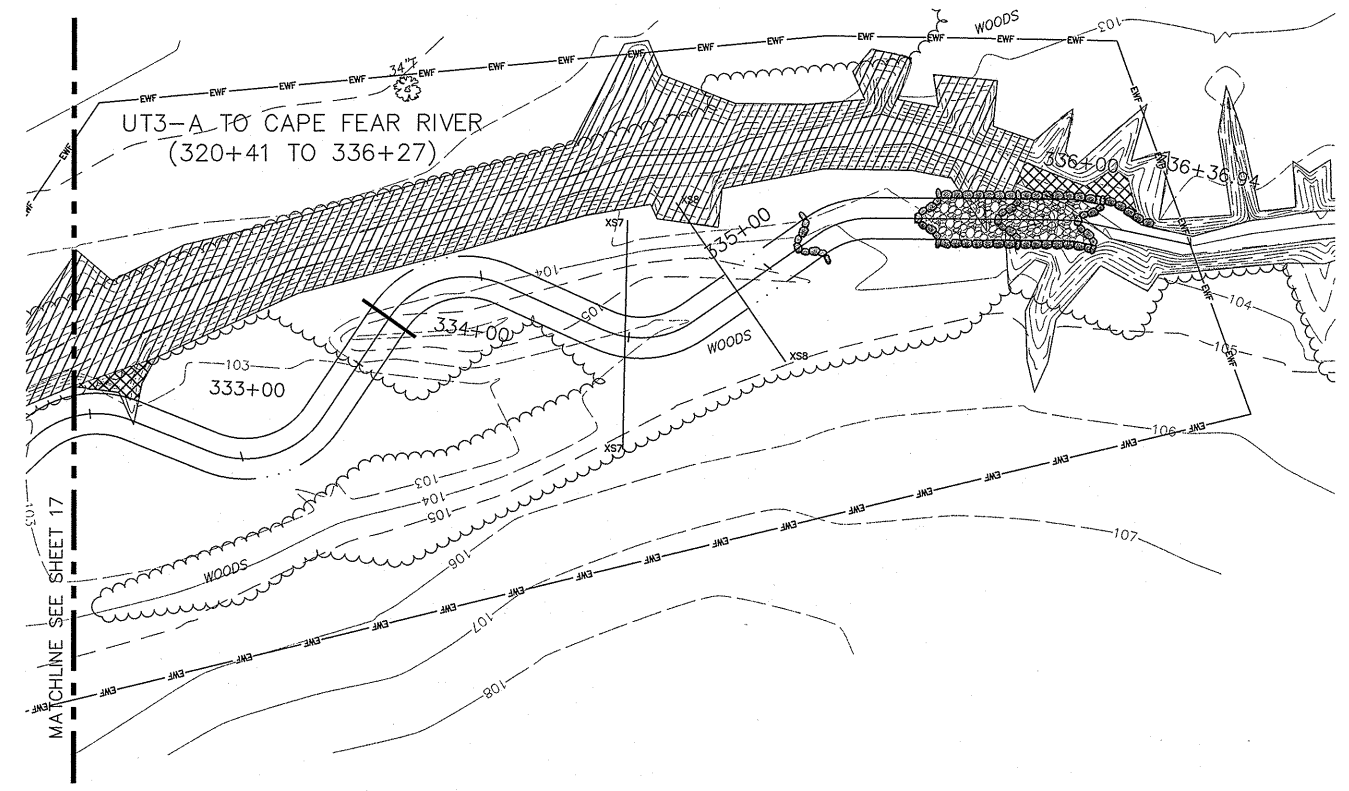
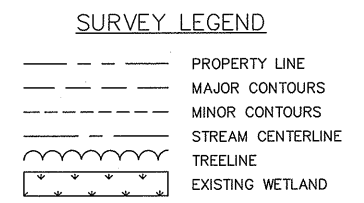
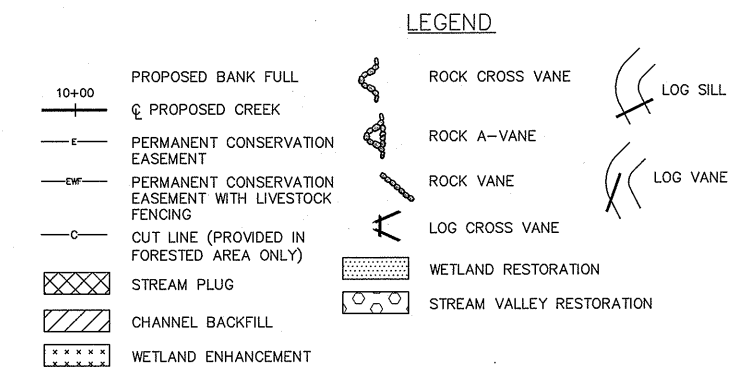
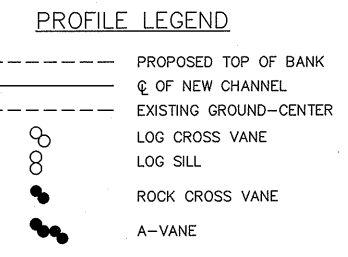
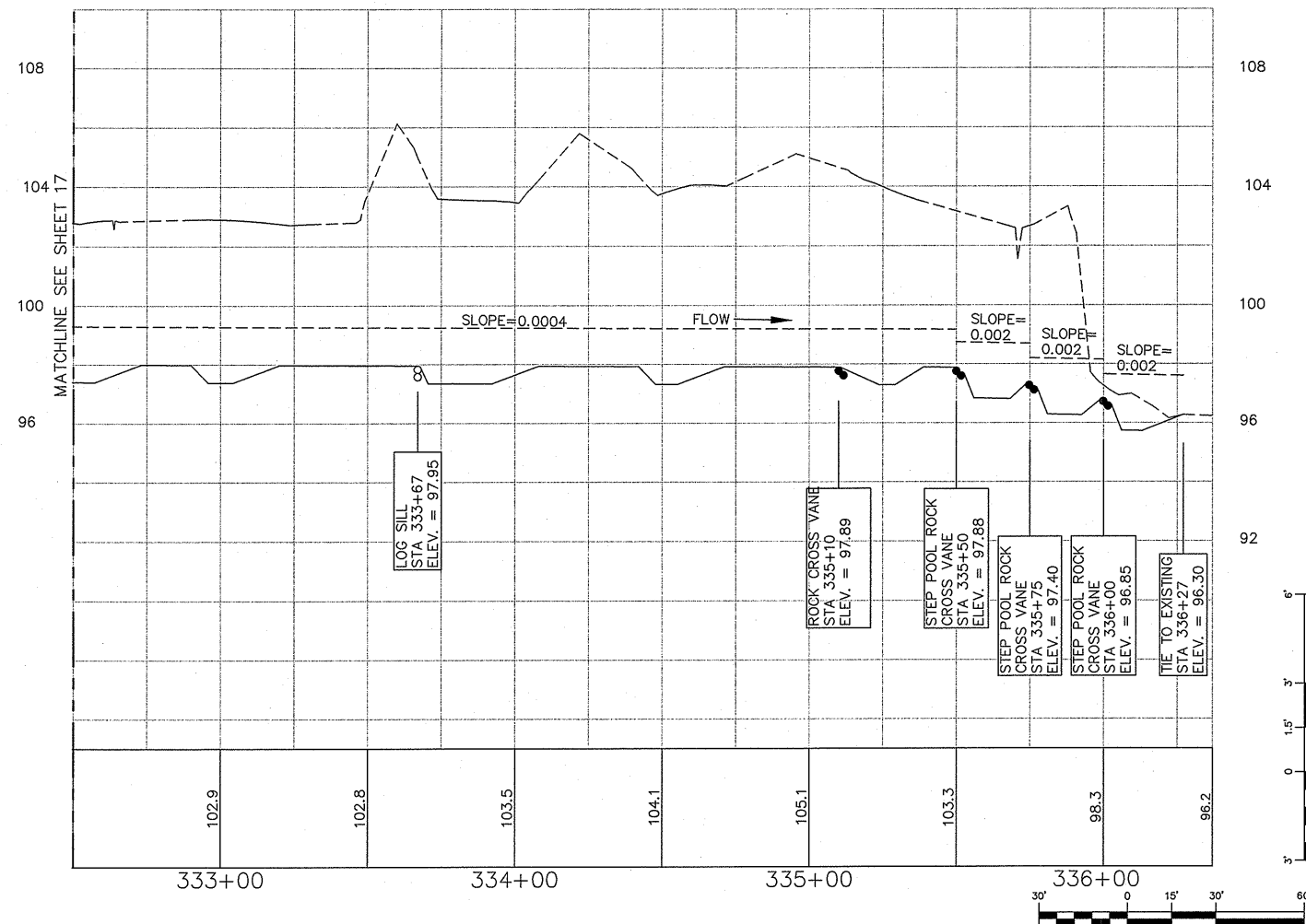
THE RECORD DRAWINGS REPRESENT THE CONSTRUCTION PLANS WITH ADJUSTMENTS MADE TO REPRESENT CONSTRUCTED CONDITIONS.

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

BEFORE YOU DIG! CONTACT ONE-CALL CENTER 1-800-632-4949

JOB NUMBER: 012620010 SHEET NUMBER: 17





REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: GRADING PLAN AND PROFILE



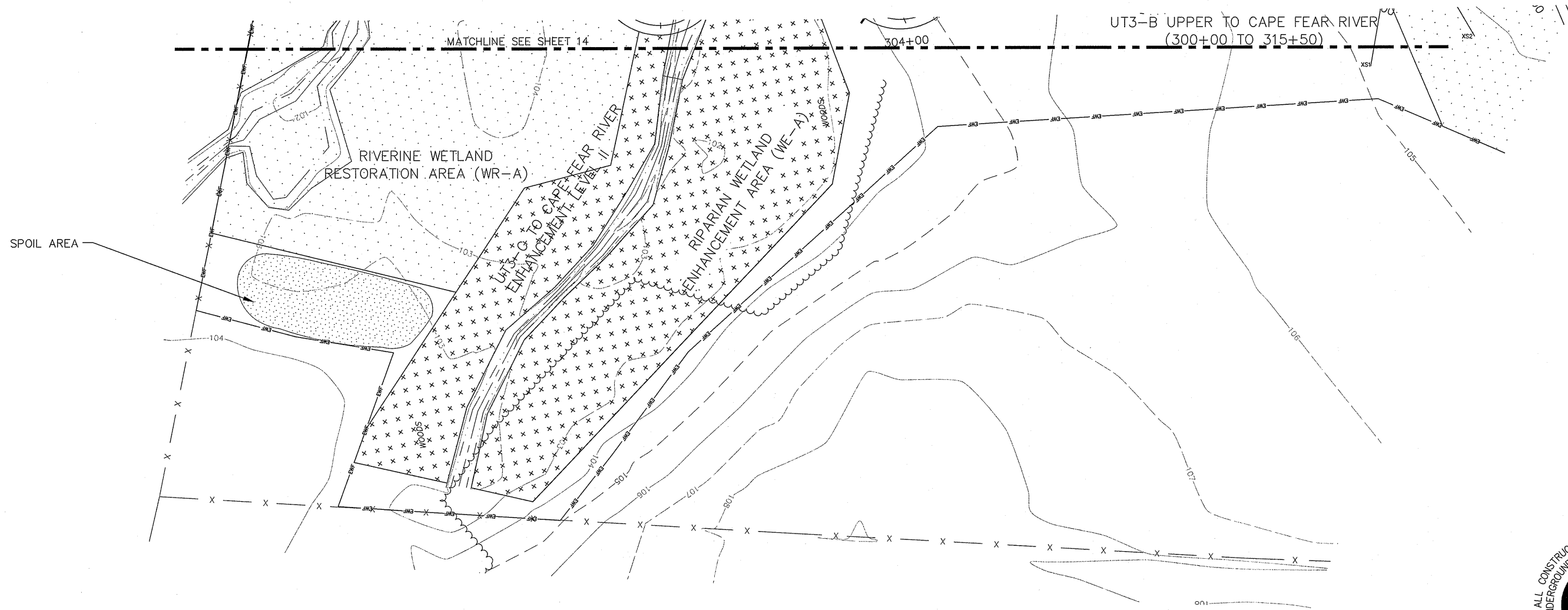
DATE: 02/25/08 PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

DESIGNED BY: JIK  
 CHECKED BY: RTL  
 TSJ

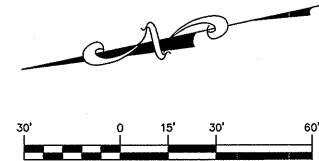
The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 18

- |       |  |                           |          |                   |
|-------|--|---------------------------|----------|-------------------|
| 10+00 | PROPOSED BANK FULL                                     | ROCK CROSS VANE           | LOG SILL | PROPERTY LINE     |
| ⊕     | PROPOSED CREEK   | ROCK A-VANE               | LOG VANE | MAJOR CONTOURS    |
| —E—   | PERMANENT CONSERVATION EASEMENT                        | ROCK VANE                 |          | MINOR CONTOURS    |
| —EW—  | PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING | LOG CROSS VANE            |          | STREAM CENTERLINE |
| —C—   | CUT LINE (PROVIDED IN FORESTED AREA ONLY)              | WETLAND RESTORATION       |          | TREELINE          |
| XXXX  | STREAM PLUG  | STREAM VALLEY RESTORATION |          | EXISTING WETLAND  |
| ////  | CHANNEL BACKFILL                                       | SPOIL AREA                |          |                   |
| XXXX  | WETLAND ENHANCEMENT                                    |                           |          |                   |



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT  
**BEFORE YOU DIG!**  
 CONTACT ONE-CALL CENTER  
 1-800-632-4949



1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS
REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

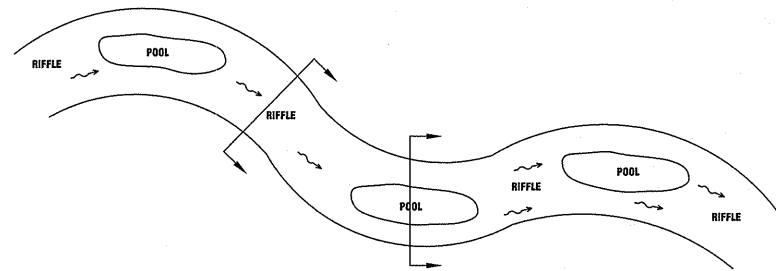
CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM  
 TITLE: GRADING PLAN AND PROFILE

DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 19



**TYPICAL PLAN VIEW SCHEMATIC**

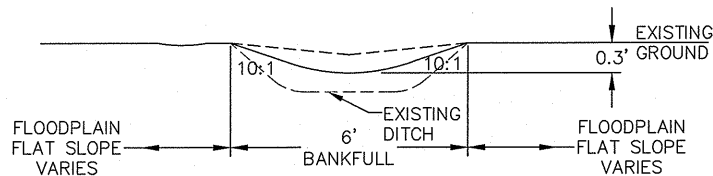
NOTES:

TYPICAL SECTIONS ARE PROVIDED TO GIVE THE GENERAL DIMENSIONS OF THE CHANNEL. FINAL GRADING WILL GIVE THE CHANNEL A MORE "NATURAL" APPEARANCE AND ALLOW A SMOOTH TRANSITION FROM EXISTING CHANNEL TO NEW CHANNEL.

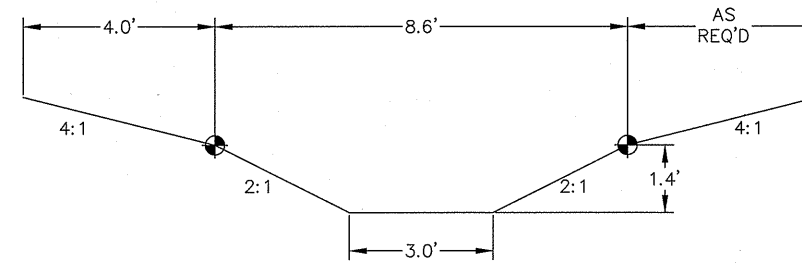
ALL POOLS SHALL BE OVERDUG 1' TO ACCOUNT FOR SEDIMENTATION.

LEGEND:

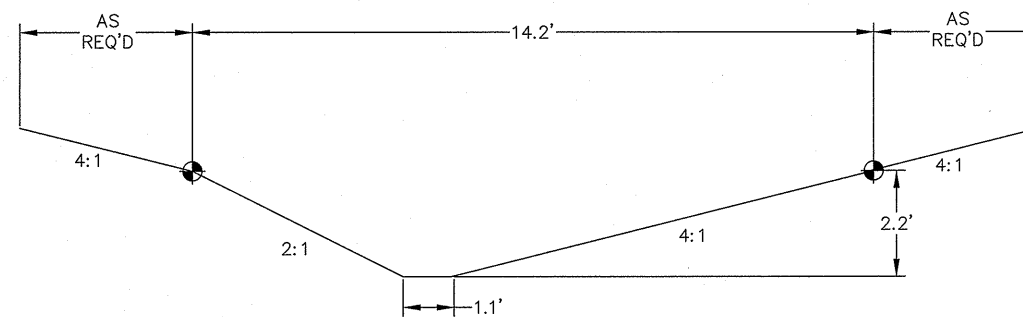
● BANKFULL ELEVATION TO ACT AS VERTICAL CONTROL POINT. POINT SHOULD BE VERIFIED BY DESIGNER BEFORE EARTHWORK BEGINS.



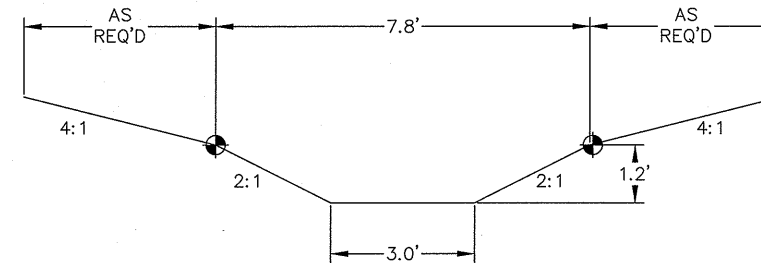
**UT1-E VALLEY**



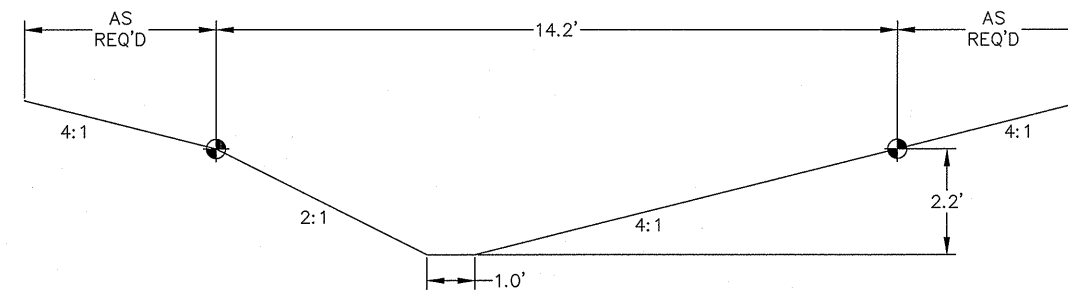
**UT1-A RIFFLE  
STA 123+82 TO 135+23**



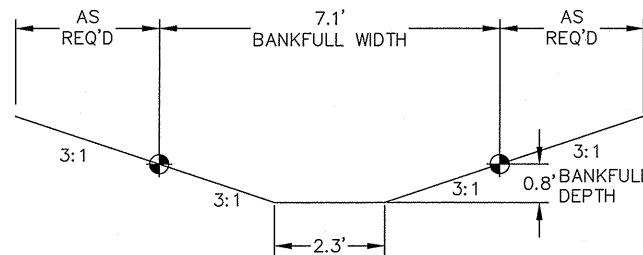
**UT1-A POOL  
STA 123+82 TO 135+23**



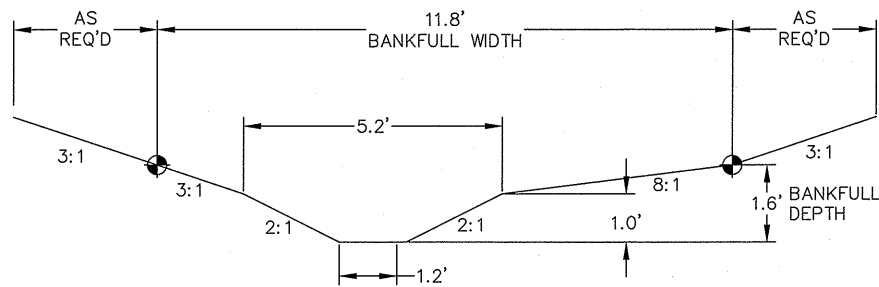
**UT1-C RIFFLE  
STA 100+00 TO 112+63**



**UT1-C POOL  
STA 100+00 TO 112+63**



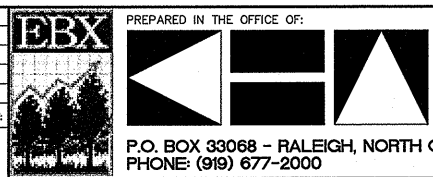
**UT1-D RIFFLE  
STA 150+00 TO 155+63**



**UT1-D POOL  
STA 150+00 TO 155+63**

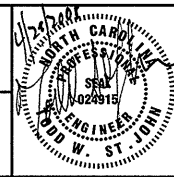
REV. NO.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008.



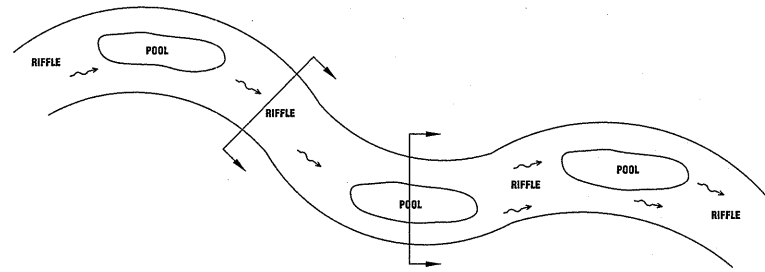
PREPARED IN THE OFFICE OF:  
**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: **STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM**  
TITLE: **TYPICAL CROSS SECTIONS**



DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ  
PROJECT: **BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION**  
EBX NEUSE I, LLC  
JOB NUMBER: 012620010 SHEET NUMBER: 20





**TYPICAL PLAN VIEW SCHEMATIC**

NTS

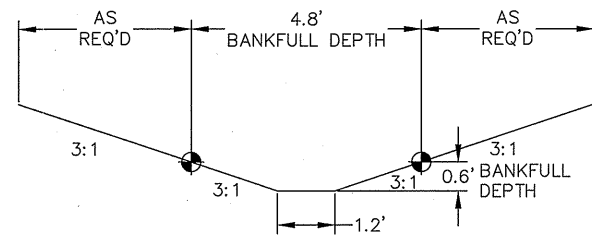
**NOTES:**

TYPICAL SECTIONS ARE PROVIDED TO GIVE THE GENERAL DIMENSIONS OF THE CHANNEL. FINAL GRADING WILL GIVE THE CHANNEL A MORE "NATURAL" APPEARANCE AND ALLOW A SMOOTH TRANSITION FROM EXISTING CHANNEL TO NEW CHANNEL.

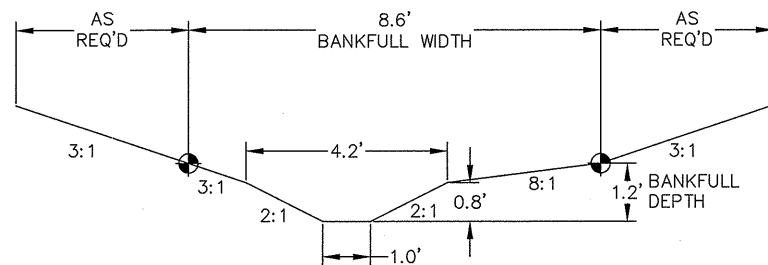
ALL POOLS SHALL BE OVERDUG 1' TO ACCOUNT FOR SEDIMENTATION.

**LEGEND:**

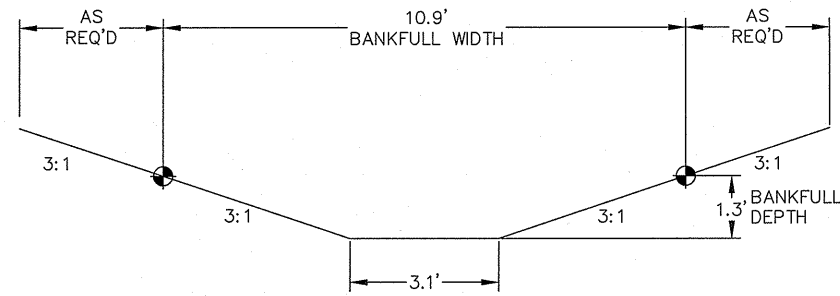
◆ BANKFULL ELEVATION TO ACT AS VERTICAL CONTROL POINT. POINT SHOULD BE VERIFIED BY DESIGNER BEFORE EARTHWORK BEGINS.



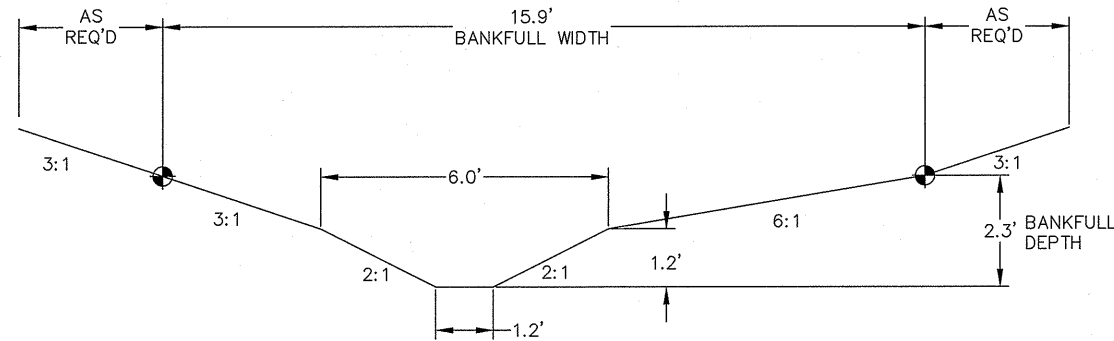
**UT1-F RIFFLE**  
STA 180+00 TO 186+31



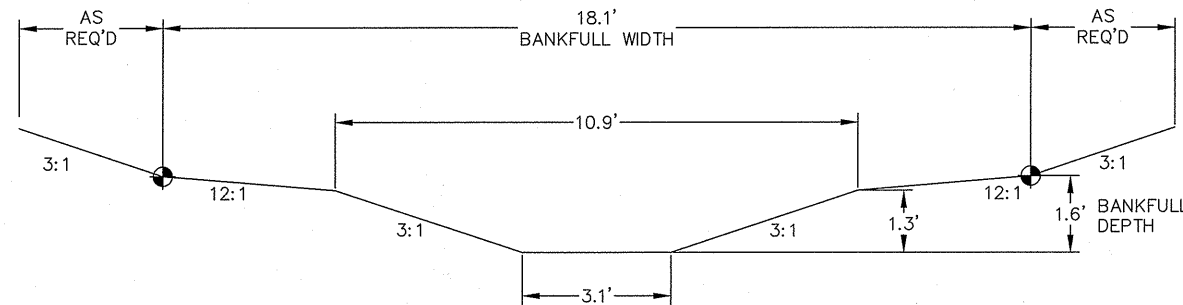
**UT1-F POOL**  
STA 180+00 TO 186+31



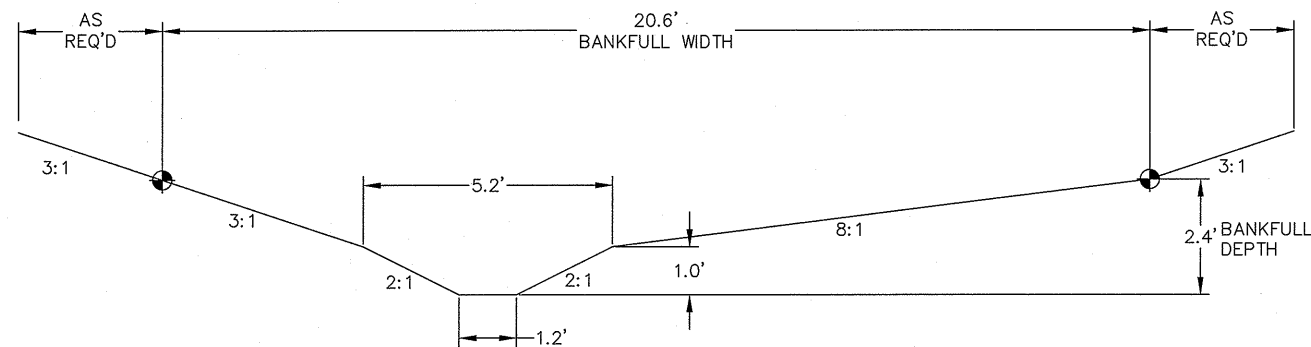
**UT1-B UPPER RIFFLE**  
STA 112+63 TO 118+91



**UT1-B UPPER POOL**  
STA 112+63 TO 118+91



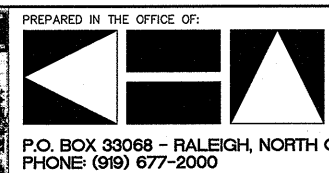
**UT1-B LOWER RIFFLE**  
STA 119+01 TO 123+22



**UT1-B LOWER POOL**  
STA 119+01 TO 123+22

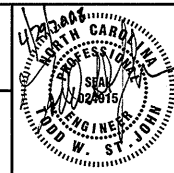
REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JKK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

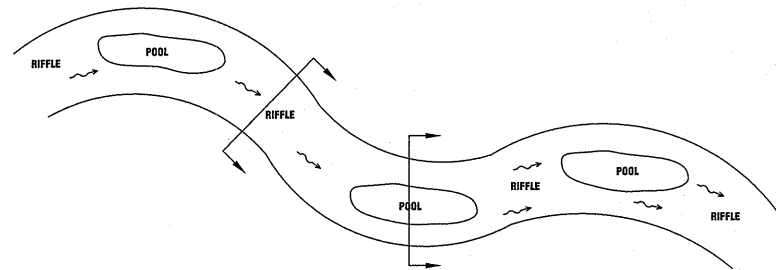


**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM  
TITLE: TYPICAL CROSS SECTIONS



DATE: 02/25/08  
DRAWN BY: JJK  
DESIGNED BY: RTL  
CHECKED BY: TSJ  
PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC  
JOB NUMBER: 012620010 SHEET NUMBER: 21



**TYPICAL PLAN VIEW SCHEMATIC**

NTS

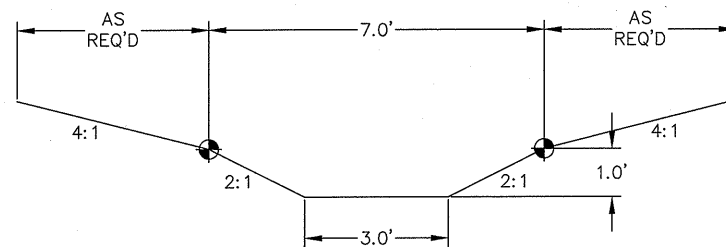
**NOTES:**

TYPICAL SECTIONS ARE PROVIDED TO GIVE THE GENERAL DIMENSIONS OF THE CHANNEL. FINAL GRADING WILL GIVE THE CHANNEL A MORE "NATURAL" APPEARANCE AND ALLOW A SMOOTH TRANSITION FROM EXISTING CHANNEL TO NEW CHANNEL.

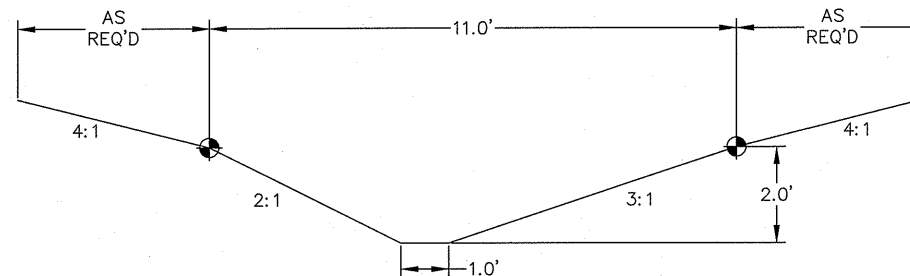
ALL POOLS SHALL BE OVERDUG 1' TO ACCOUNT FOR SEDIMENTATION.

**LEGEND:**

◆ BANKFULL ELEVATION TO ACT AS VERTICAL CONTROL POINT. POINT SHOULD BE VERIFIED BY DESIGNER BEFORE EARTHWORK BEGINS.



**UT2 RIFFLE**  
STA 200+00 TO 212+63.92



**UT2 POOL**  
STA 200+00 TO 212+62.94

REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

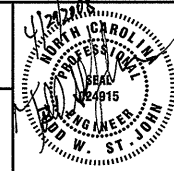


PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: TYPICAL CROSS SECTIONS

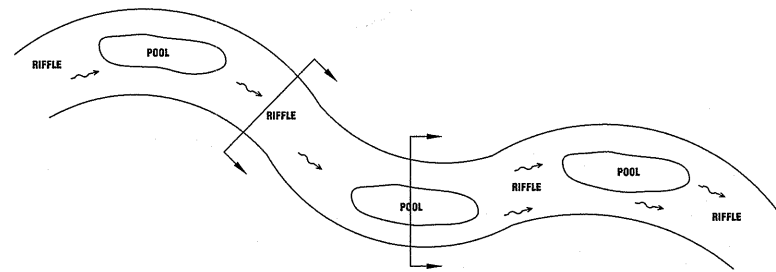


DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 22



**TYPICAL PLAN VIEW SCHEMATIC**

NTS

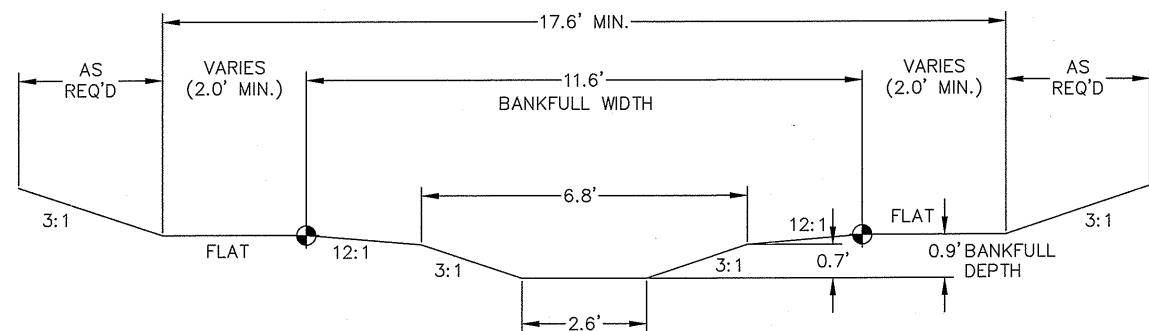
**NOTES:**

TYPICAL SECTIONS ARE PROVIDED TO GIVE THE GENERAL DIMENSIONS OF THE CHANNEL. FINAL GRADING WILL GIVE THE CHANNEL A MORE "NATURAL" APPEARANCE AND ALLOW A SMOOTH TRANSITION FROM EXISTING CHANNEL TO NEW CHANNEL.

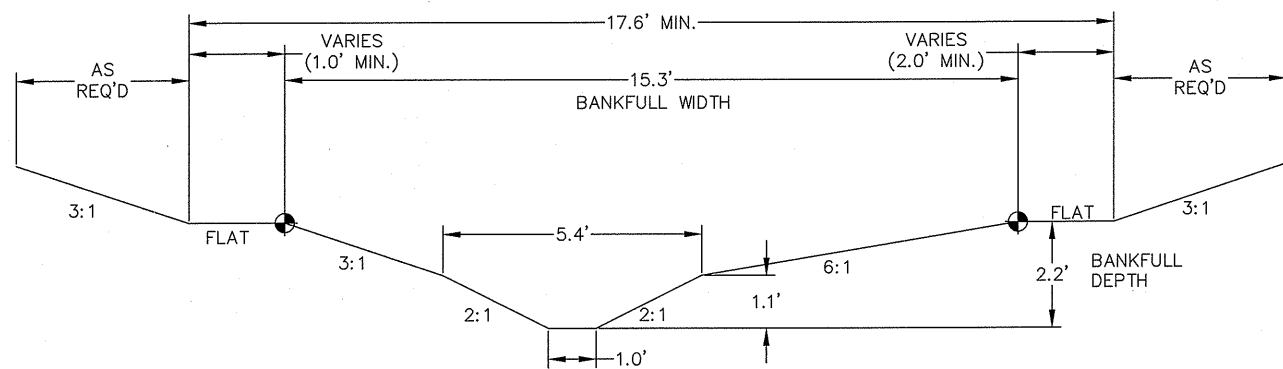
ALL POOLS SHALL BE OVERDUG 1' TO ACCOUNT FOR SEDIMENTATION.

**LEGEND:**

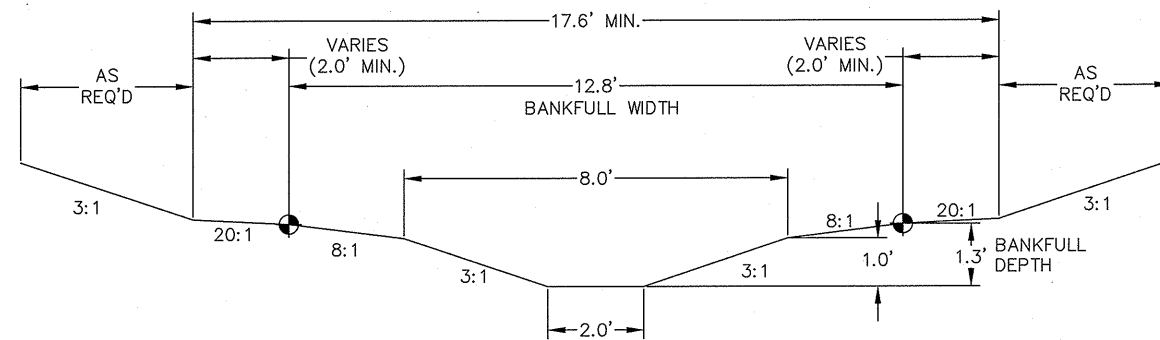
● BANKFULL ELEVATION TO ACT AS VERTICAL CONTROL POINT. POINT SHOULD BE VERIFIED BY DESIGNER BEFORE EARTHWORK BEGINS.



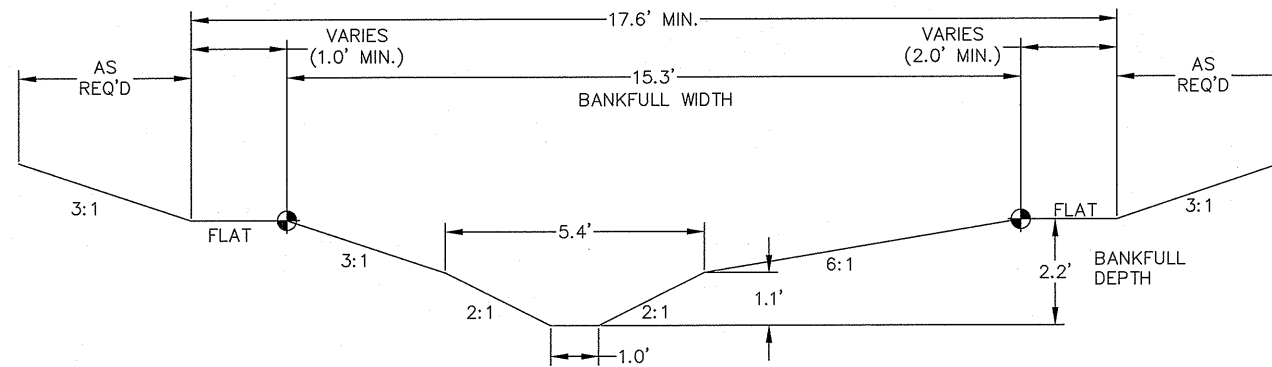
**UT3-B LOWER RIFFLE**  
STA 315+50 TO 319+72



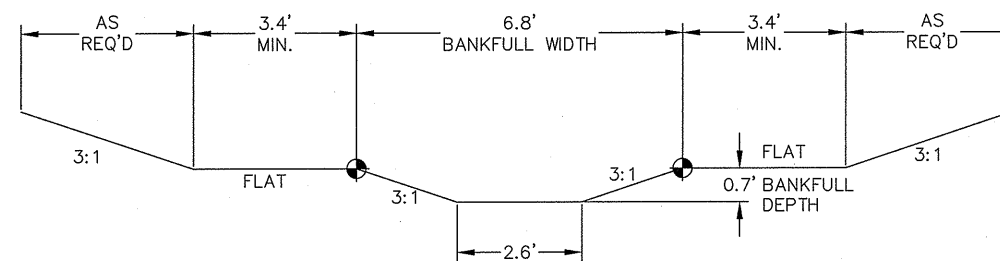
**UT3-B LOWER POOL**  
STA 315+50 TO 319+72



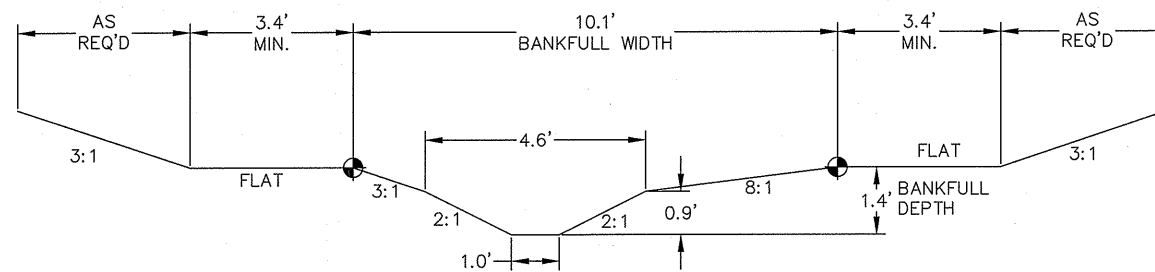
**UT3-A RIFFLE**  
STA 320+41 TO 336+27



**UT3-A POOL**  
STA 320+41 TO 336+27



**UT3-B UPPER RIFFLE**  
STA 300+00 TO 315+50



**UT3-B UPPER POOL**  
STA 300+00 TO 315+50

1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS
REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: TYPICAL CROSS SECTIONS

DATE: 02/25/08  
PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

DESIGNED BY: JIK  
CHECKED BY: RTL  
TSJ

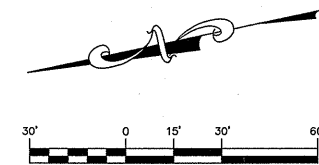
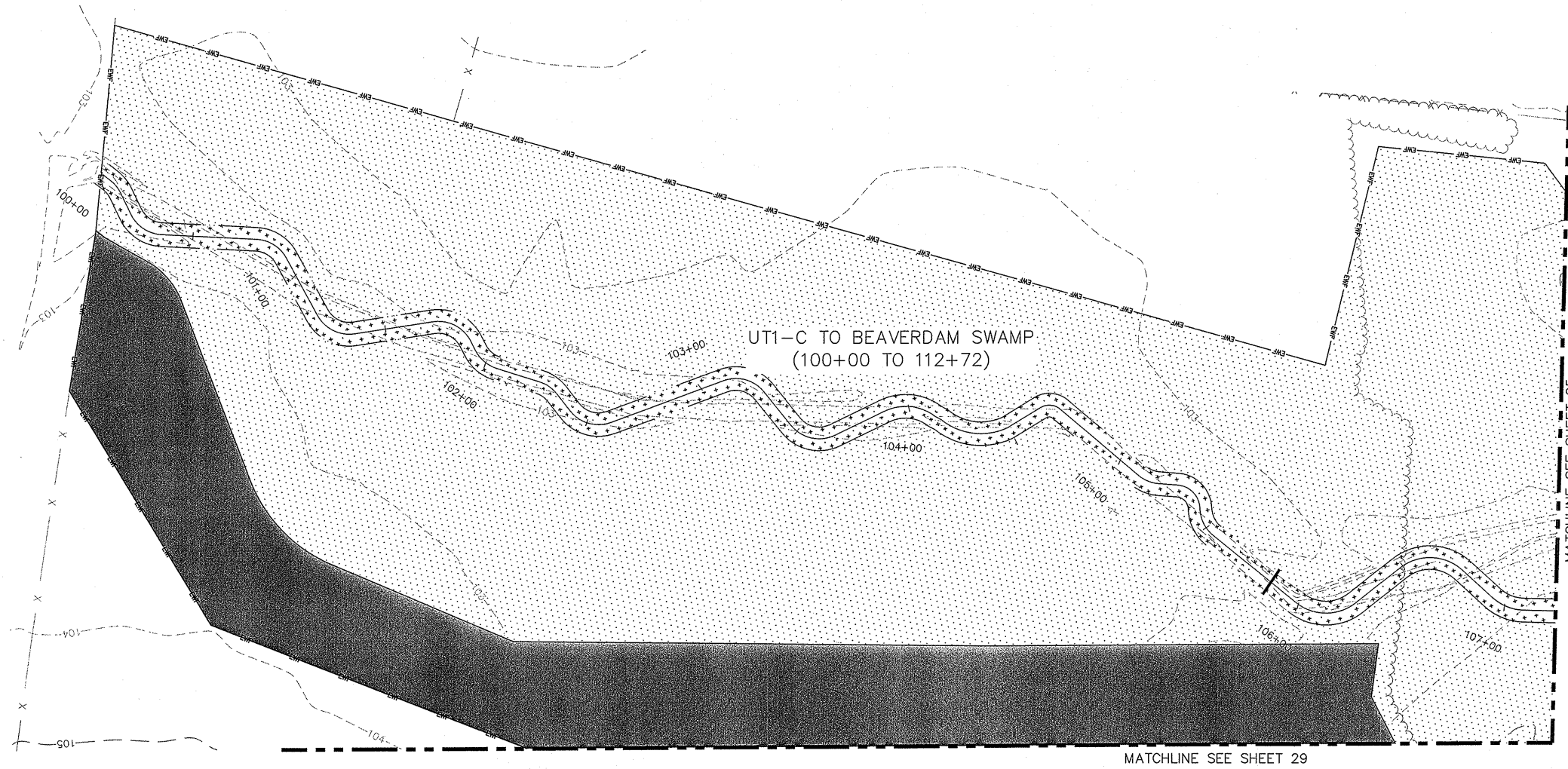
The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 23



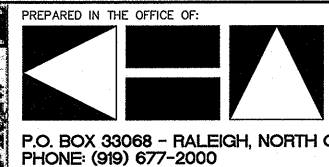
- |  |  |  |  |
|--|--|--|--|
| <p>10+00</p> PROPOSED BANK FULL<br>PROPOSED CREEK<br>PERMANENT CONSERVATION EASEMENT<br>PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING | <p><b>LEGEND</b></p> ROCK CROSS VANE<br>ROCK A-VANE<br>ROCK VANE<br>LOG CROSS VANE | <p><b>SURVEY LEGEND</b></p> PROPERTY LINE<br>MAJOR CONTOURS<br>MINOR CONTOURS<br>STREAM CENTERLINE<br>TREELINE<br>EXISTING WETLAND | <p><b>PLANTING LEGEND</b></p> <p>ZONE 1  STREAM BANKS<br/>         ZONE 2  RIPARIAN<br/>         ZONE 3  UPLAND<br/>         ZONE 4  TO REMAIN</p> |
|  | LOG SILL<br>LOG VANE   |  |  |

NOTE:  
 UT1-C DOWN TO STA 106+50 TO RECEIVE INVASIVE REMOVAL TREATMENT AND SUPPLEMENTAL PLANTING ONLY WITHIN THE FORESTED AREA. FORESTED AREA SHALL NOT BE RIPPED.



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008



PREPARED IN THE OFFICE OF:  
**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

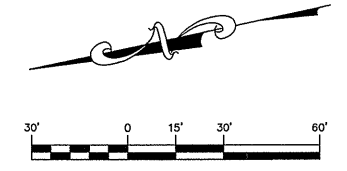
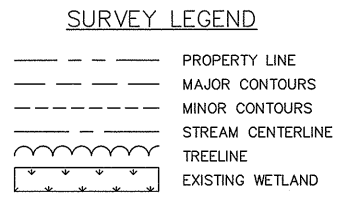
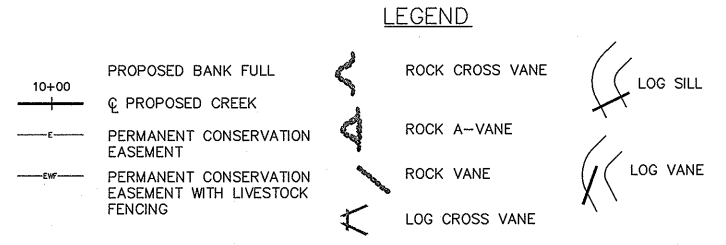
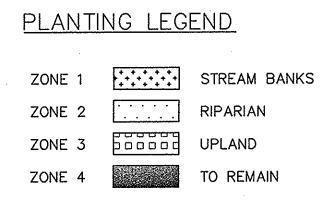
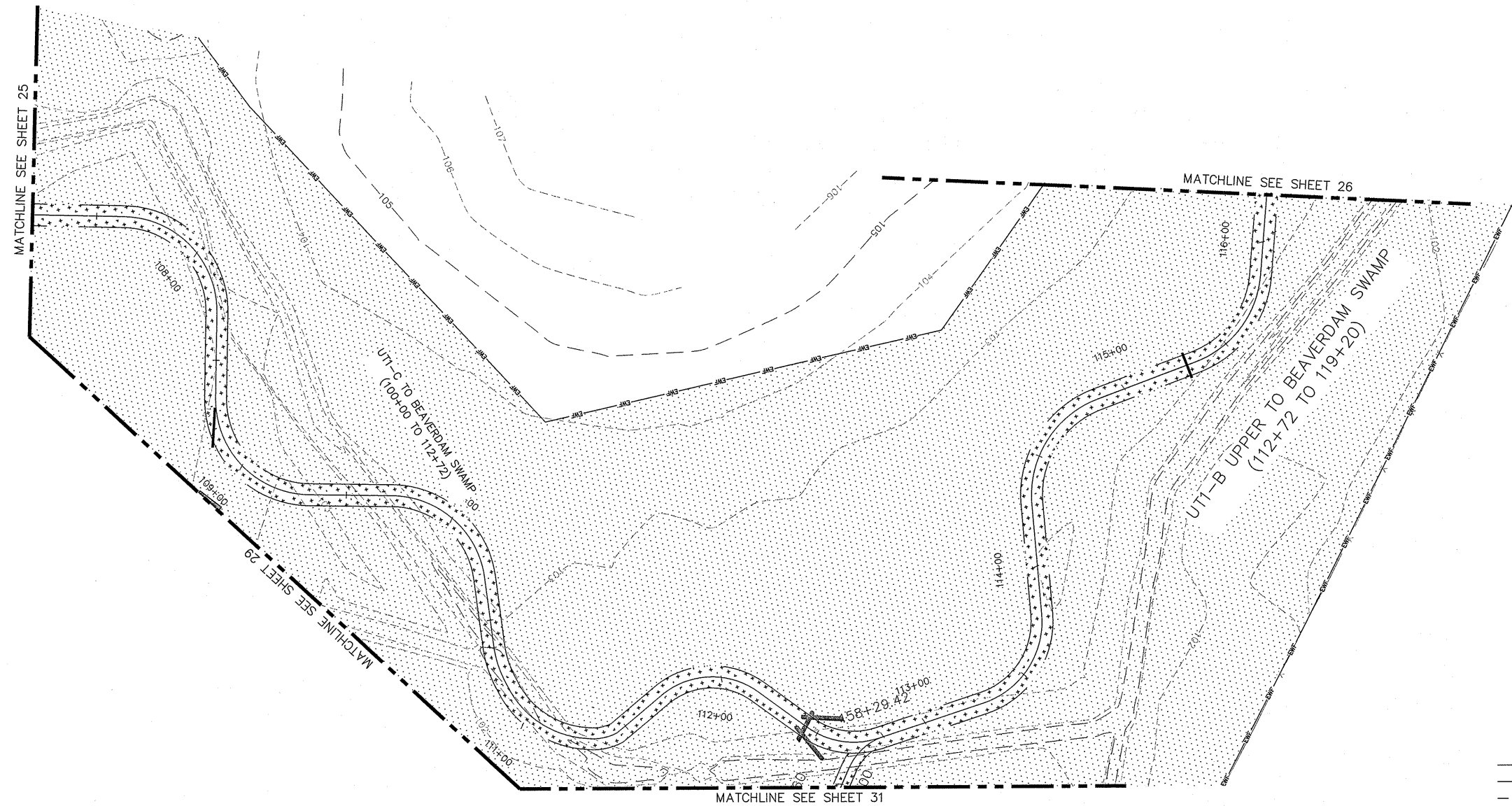
CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM  
 TITLE: PLANTING PLAN



DATE: 02/25/08	PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC
DRAWN BY: JIK	
DESIGNED BY: RTL	
CHECKED BY: TSJ	
The record drawings represent the construction plans with adjustments made to represent constructed conditions.	JOB NUMBER: 012620010 SHEET NUMBER: 24

April 28, 2008 - 3:51pm By: Jm.Kimble

T:\n\012620010 Beaverdam Swamp Restoration\010\_LDD\dwg\RECORD SET\_04-10-08\08-VEG-PLANS.dwg



REV. No.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: **PLANTING PLAN**



DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

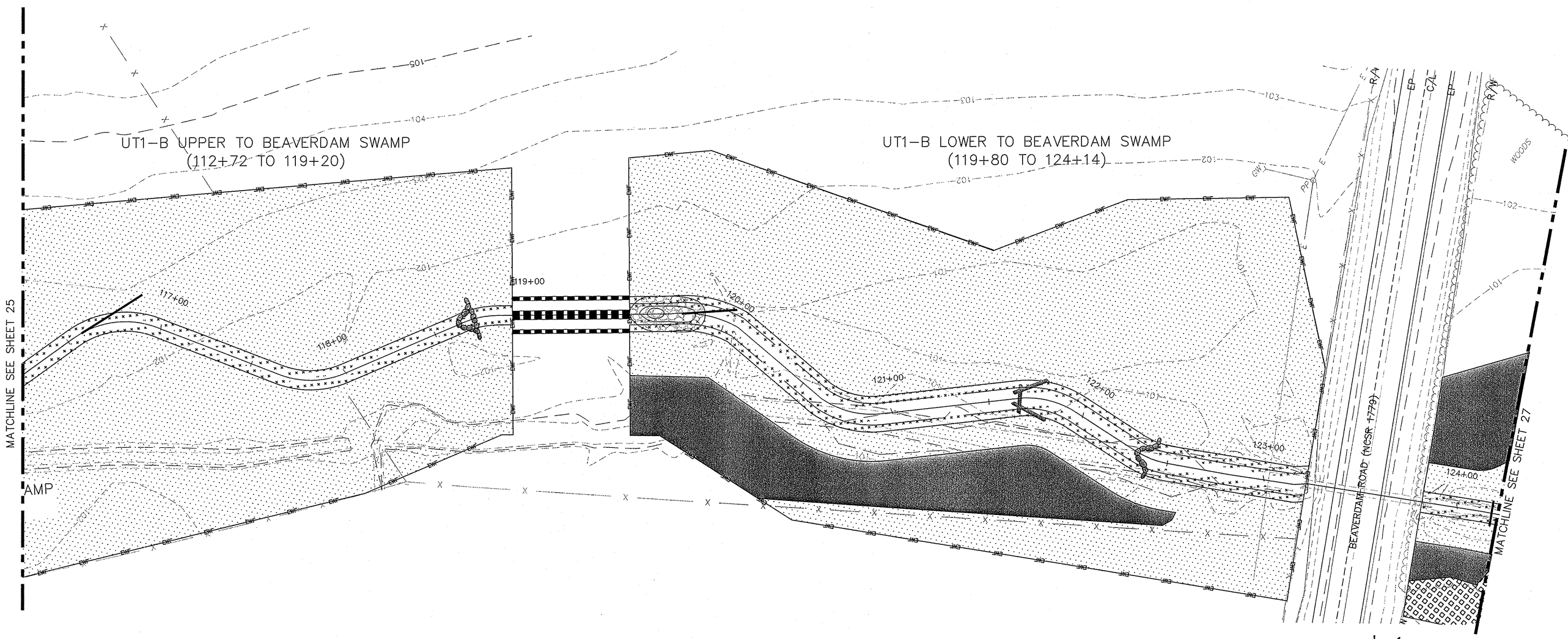
PROJECT: **BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION**  
**EBX NEUSE I, LLC**

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 25

April 28, 2008 - 3:51pm By: jmkimble

<p>10+00</p> PROPOSED BANK FULL PROPOSED CREEK PERMANENT CONSERVATION EASEMENT PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING		<p><b>LEGEND</b></p> ROCK CROSS VANE ROCK A-VANE ROCK VANE LOG CROSS VANE		<p><b>SURVEY LEGEND</b></p> PROPERTY LINE MAJOR CONTOURS MINOR CONTOURS STREAM CENTERLINE TREELINE EXISTING WETLAND		<p><b>PLANTING LEGEND</b></p> <p>ZONE 1  STREAM BANKS          ZONE 2  RIPARIAN          ZONE 3  UPLAND          ZONE 4  TO REMAIN</p>	
--	--	--	--	--	--	--	--



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949

REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN

DATE: 02/25/08  
 DRAWN BY: JJK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

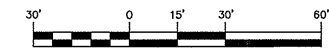
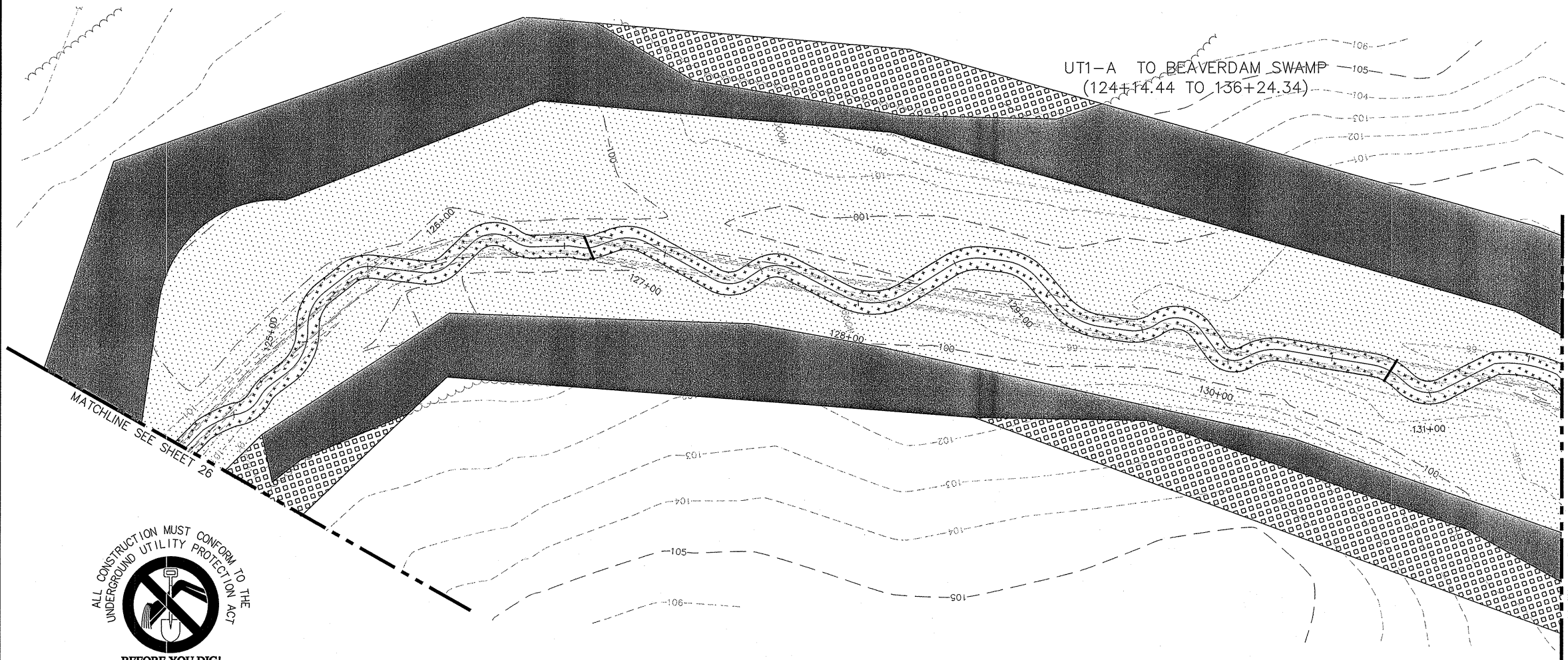
The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 26



- |  |  |  |  |
|--|--|--|--|
| <p>10+00</p> PROPOSED BANK FULL<br>PROPOSED CREEK<br>PERMANENT CONSERVATION EASEMENT<br>PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING | <p><b>LEGEND</b></p> ROCK CROSS VANE<br>ROCK A-VANE<br>ROCK VANE<br>LOG CROSS VANE | <p><b>SURVEY LEGEND</b></p> PROPERTY LINE<br>MAJOR CONTOURS<br>MINOR CONTOURS<br>STREAM CENTERLINE<br>TREELINE<br>EXISTING WETLAND | <p><b>PLANTING LEGEND</b></p> <p>ZONE 1  STREAM BANKS<br/>                 ZONE 2  RIPARIAN<br/>                 ZONE 3  UPLAND<br/>                 ZONE 4  TO REMAIN</p> |
|--|--|--|--|

NOTE:  
 UT1-A BELOW BEAVERDAM ROAD TO RECEIVE  
 INVASIVE REMOVAL TREATMENT AND SUPPLEMENTAL  
 PLANTING ONLY WITHIN THE FORESTED AREA.  
 FORESTED AREA SHALL NOT BE RIPPED.



ALL CONSTRUCTION MUST CONFORM TO THE  
 UNDERGROUND UTILITY PROTECTION ACT  
**BEFORE YOU DIG!**  
 CONTACT ONE-CALL CENTER  
 1-800-632-4949

REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM  
 TITLE: PLANTING PLAN





DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC











The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 27







**PLANTING LEGEND**

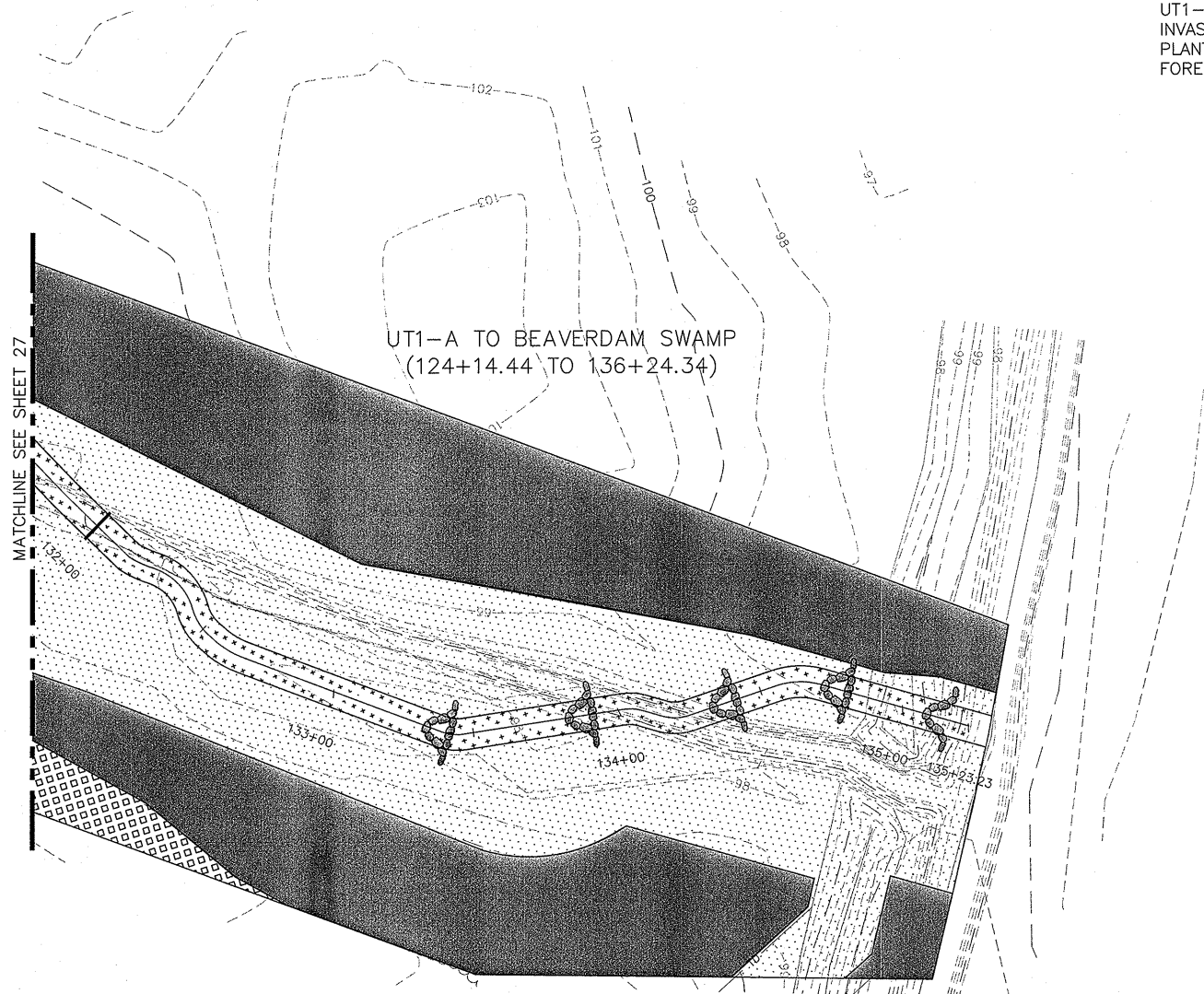
- ZONE 1  STREAM BANKS
- ZONE 2  RIPARIAN
- ZONE 3  UPLAND
- ZONE 4  TO REMAIN

**LEGEND**

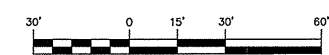
-  10+00
-  PROPOSED CREEK
-  PERMANENT CONSERVATION EASEMENT
-  PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
-  ROCK CROSS VANE
-  ROCK A-VANE
-  ROCK VANE
-  LOG CROSS VANE
-  LOG SILL
-  LOG VANE

**SURVEY LEGEND**

-  PROPERTY LINE
-  MAJOR CONTOURS
-  MINOR CONTOURS
-  STREAM CENTERLINE
-  TREELINE
-  EXISTING WETLAND



NOTE:  
UT1-A BELOW BEAVERDAM ROAD TO RECEIVE  
INVASIVE REMOVAL TREATMENT AND SUPPLEMENTAL  
PLANTING ONLY WITHIN THE FORESTED AREA.  
FORESTED AREA SHALL NOT BE RIPPED.



REV. NO.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JKK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

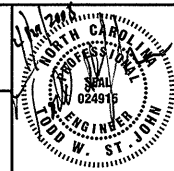
PREPARED IN THE OFFICE OF:




**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN







DATE: 02/25/08  
DRAWN BY: JJK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC











The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 28


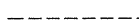
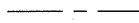
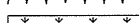
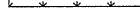

**PLANTING LEGEND**

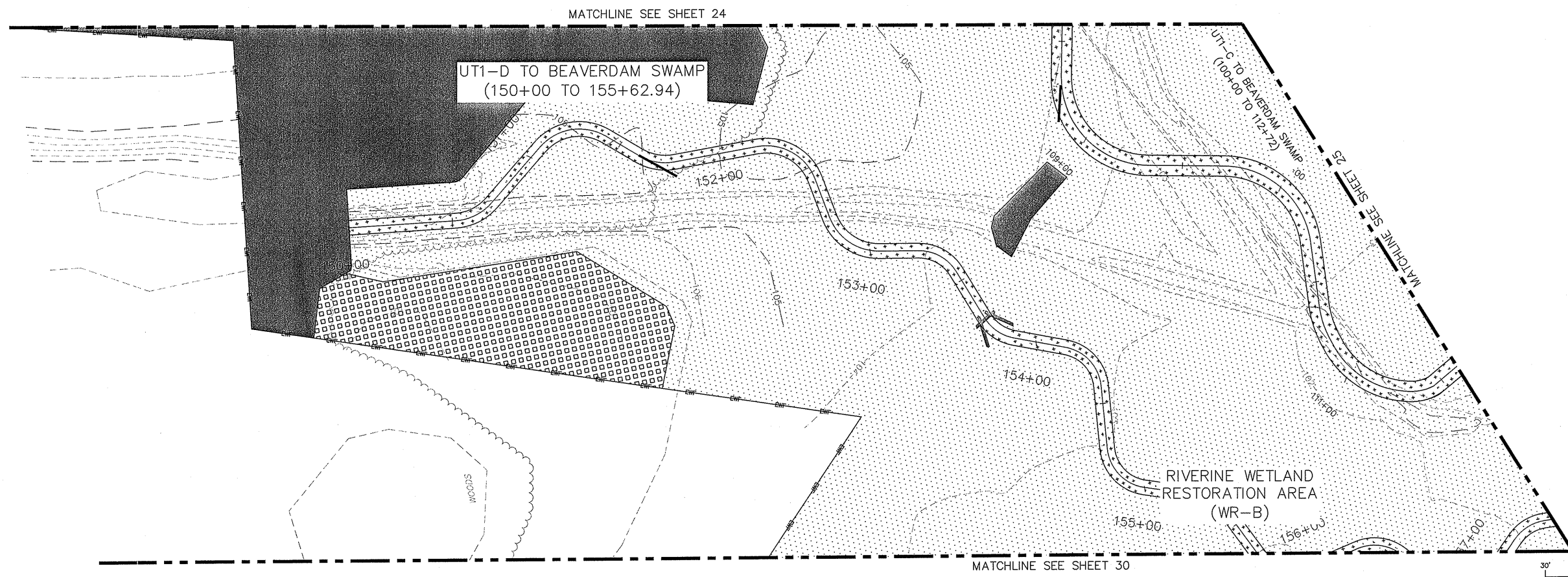
- ZONE 1  STREAM BANKS
- ZONE 2  RIPARIAN
- ZONE 3  UPLAND
- ZONE 4  TO REMAIN

**LEGEND**

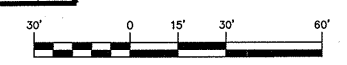
-  10+00
-  PROPOSED CREEK
-  PERMANENT CONSERVATION EASEMENT
-  PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
-  ROCK CROSS VANE
-  ROCK A-VANE
-  ROCK VANE
-  LOG CROSS VANE
-  LOG SILL
-  LOG VANE

**SURVEY LEGEND**

-  PROPERTY LINE
-  MAJOR CONTOURS
-  MINOR CONTOURS
-  STREAM CENTERLINE
-  TREELINE
-  EXISTING WETLAND



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT  
**BEFORE YOU DIG!**  
 CONTACT ONE-CALL CENTER  
 1-800-632-4949



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

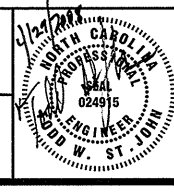
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:




**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM  
 TITLE: PLANTING PLAN



DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

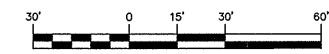
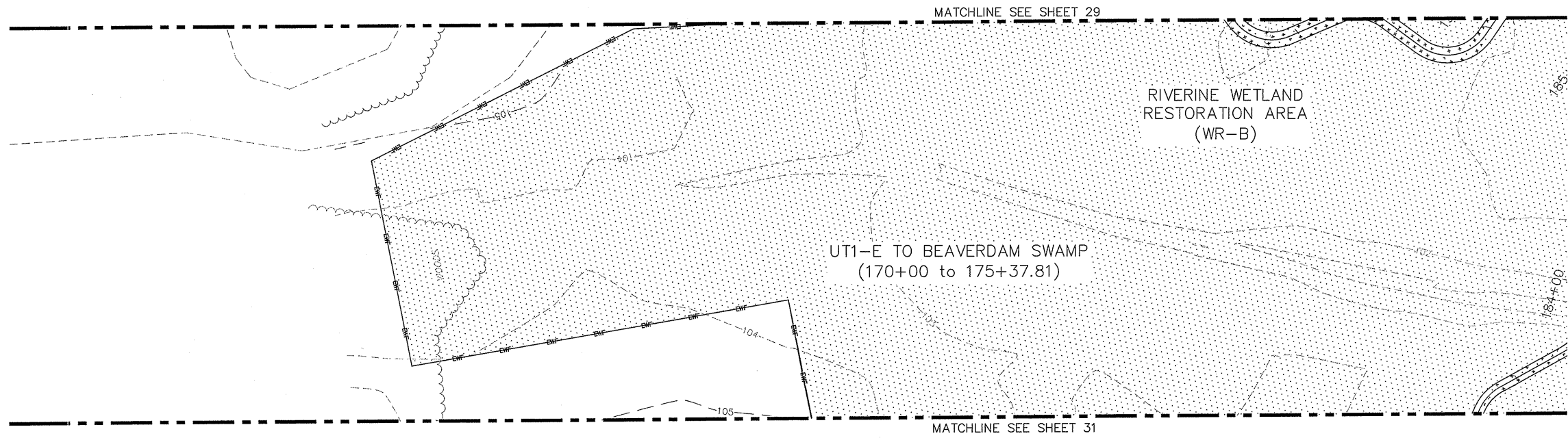
PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 29



LEGEND		SURVEY LEGEND		PLANTING LEGEND	
10+00	PROPOSED BANK FULL	ROCK CROSS VANE	PROPERTY LINE	ZONE 1	STREAM BANKS
⊕	PROPOSED CREEK	ROCK A-VANE	MAJOR CONTOURS	ZONE 2	RIPARIAN
---	PERMANENT CONSERVATION EASEMENT	ROCK VANE	MINOR CONTOURS	ZONE 3	UPLAND
---	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING	LOG CROSS VANE	STREAM CENTERLINE	ZONE 4	TO REMAIN
		LOG SILL	TREELINE		
		LOG VANE	EXISTING WETLAND		



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN

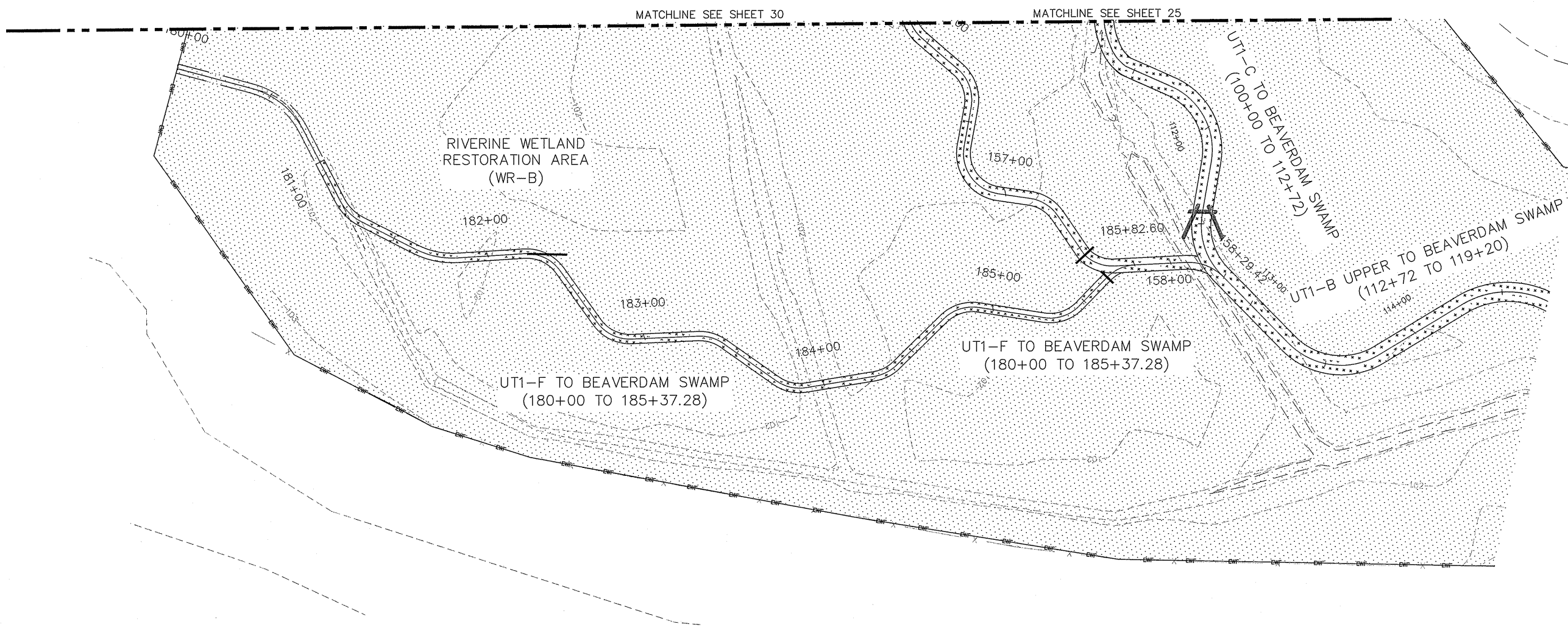
DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

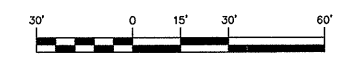
JOB NUMBER: 012620010 SHEET NUMBER: 30

<b>LEGEND</b>		<b>SURVEY LEGEND</b>		<b>PLANTING LEGEND</b>	
10+00	PROPOSED BANK FULL		ROCK CROSS VANE		PROPERTY LINE
	PROPOSED CREEK		LOG SILL		MAJOR CONTOURS
	PERMANENT CONSERVATION EASEMENT		ROCK A-VANE		MINOR CONTOURS
	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING		ROCK VANE		STREAM CENTERLINE
			LOG CROSS VANE		TREELINE
					EXISTING WETLAND
				ZONE 1	STREAM BANKS
				ZONE 2	RIPARIAN
				ZONE 3	UPLAND
				ZONE 4	TO REMAIN



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949



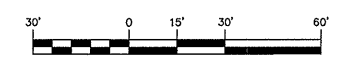
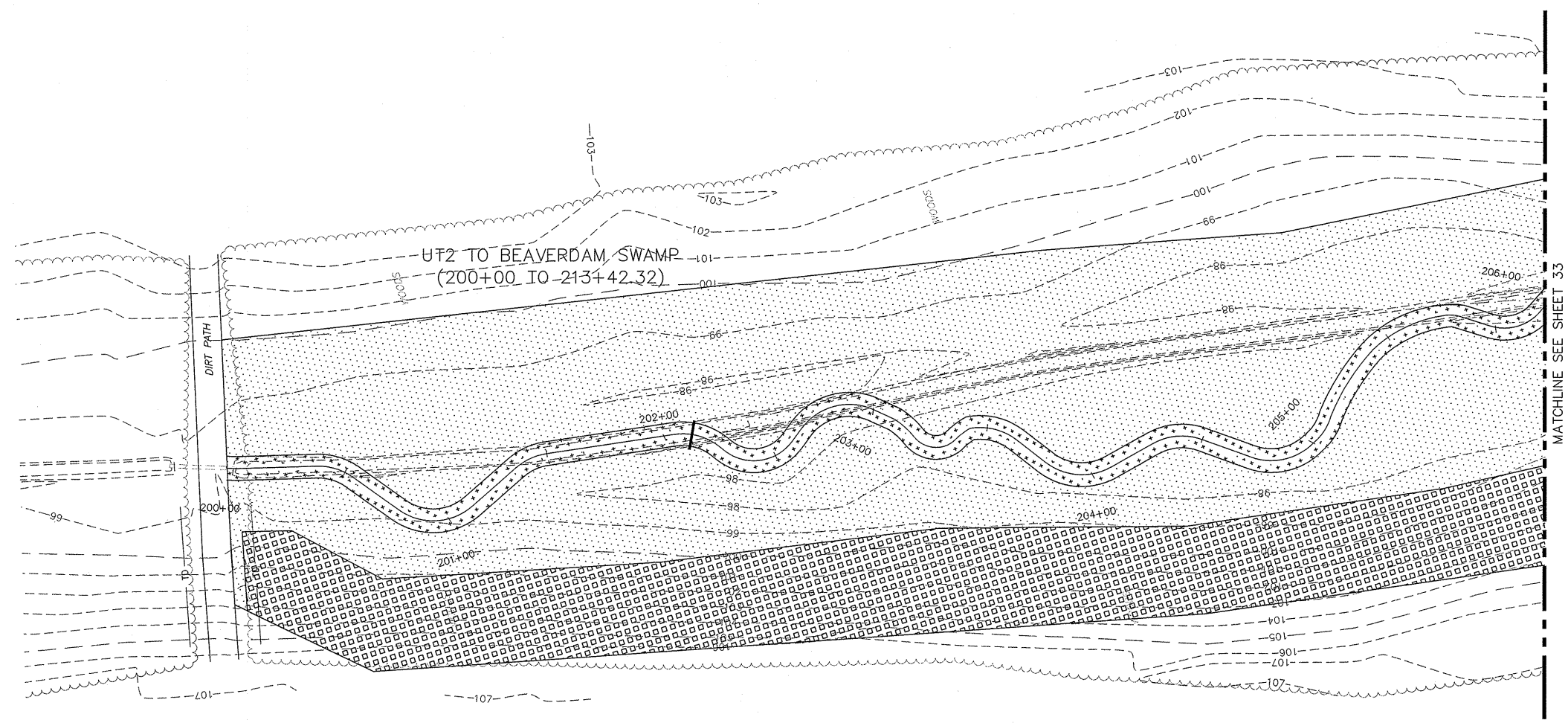
		PREPARED IN THE OFFICE OF: 		CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM		DATE: 02/25/08 PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC	
1 REVISED PER EROSION CONTROL REVIEW		08/23/07 JIK TWS		TITLE: PLANTING PLAN		DRAWN BY: JIK DESIGNED BY: RTL CHECKED BY: TSJ	
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068 PHONE: (919) 677-2000		Kimley-Horn and Associates, Inc. P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068 PHONE: (919) 677-2000				The record drawings represent the construction plans with adjustments made to represent constructed conditions.	
						JOB NUMBER: 012620010 SHEET NUMBER: 31	

LEGEND	
10+00	PROPOSED BANK FULL
⊙	PROPOSED CREEK
— —	PERMANENT CONSERVATION EASEMENT
— —	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
~	ROCK CROSS VANE
~	ROCK A-VANE
~	ROCK VANE
~	LOG CROSS VANE
⌋	LOG SILL
⌋	LOG VANE

SURVEY LEGEND	
---	PROPERTY LINE
---	MAJOR CONTOURS
---	MINOR CONTOURS
---	STREAM CENTERLINE
~	TREELINE
⊙	EXISTING WETLAND

PLANTING LEGEND	
ZONE 1	STREAM BANKS
ZONE 2	RIPARIAN
ZONE 3	UPLAND
ZONE 4	TO REMAIN

NOTE:  
FORESTED AREA TO RECEIVE INVASIVE REMOVAL TREATMENT AND SUPPLEMENTAL PLANTING ONLY. FORESTED AREA SHALL NOT BE RIPPED.



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008.

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN



DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 32



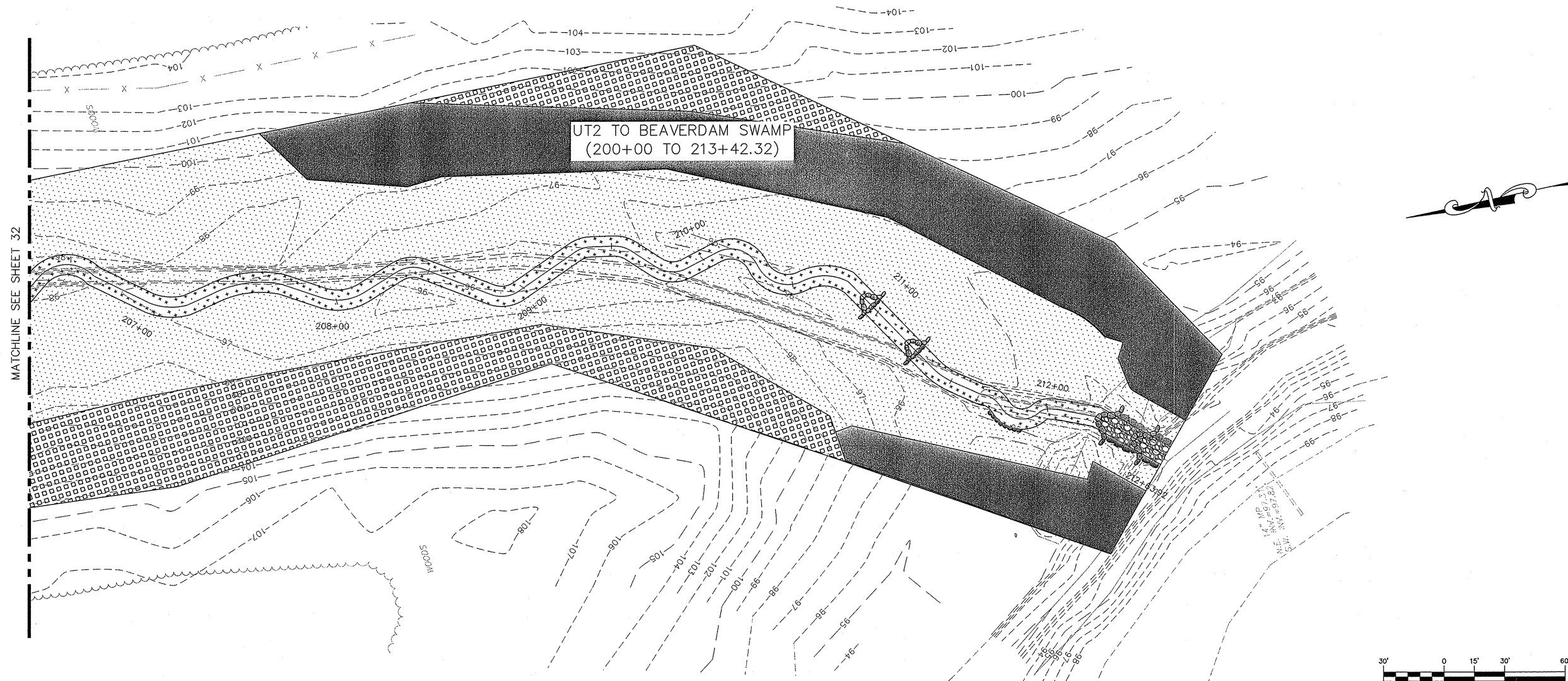
LEGEND	
	PROPOSED BANK FULL
	PROPOSED CREEK
	PERMANENT CONSERVATION EASEMENT
	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
	ROCK CROSS VANE
	ROCK A-VANE
	ROCK VANE
	LOG CROSS VANE
	LOG SILL
	LOG VANE

SURVEY LEGEND	
	PROPERTY LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	STREAM CENTERLINE
	TREELINE
	EXISTING WETLAND

PLANTING LEGEND	
ZONE 1	STREAM BANKS
ZONE 2	RIPARIAN
ZONE 3	UPLAND
ZONE 4	TO REMAIN



NOTE:  
 FORESTED AREA TO RECEIVE INVASIVE REMOVAL TREATMENT AND SUPPLEMENTAL PLANTING ONLY.  
 FORESTED AREA SHALL NOT BE RIPPED.



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adoption by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN

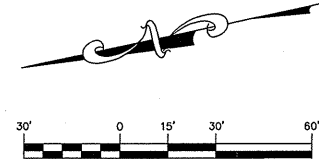
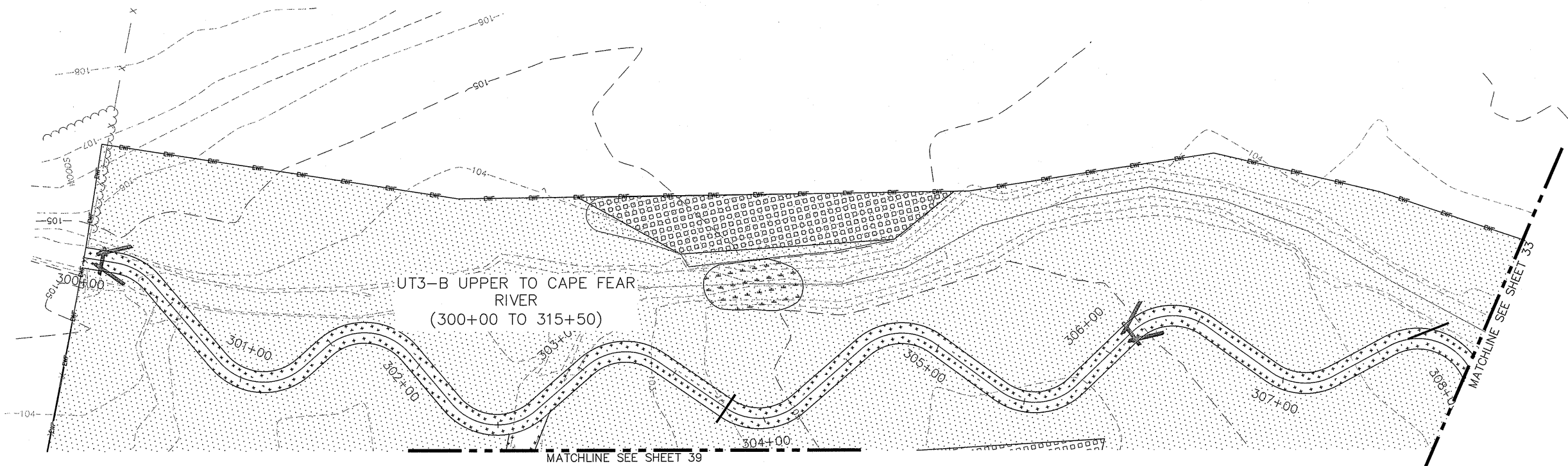
DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 33

<b>LEGEND</b>		<b>SURVEY LEGEND</b>		<b>PLANTING LEGEND</b>	
	PROPOSED BANK FULL		ROCK CROSS VANE		ZONE 1
	PROPOSED CREEK		ROCK A-VANE		ZONE 2
	PERMANENT CONSERVATION EASEMENT		ROCK VANE		ZONE 3
	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING		LOG CROSS VANE		ZONE 4
			LOG SILL		STREAM BANKS
			LOG VANE		RIPARIAN
			PROPERTY LINE		UPLAND
			MAJOR CONTOURS		TO REMAIN
			MINOR CONTOURS		
			STREAM CENTERLINE		
			TREELINE		
			EXISTING WETLAND		



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

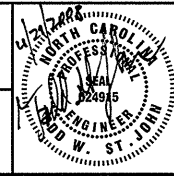
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: **PLANTING PLAN**



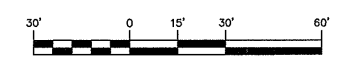
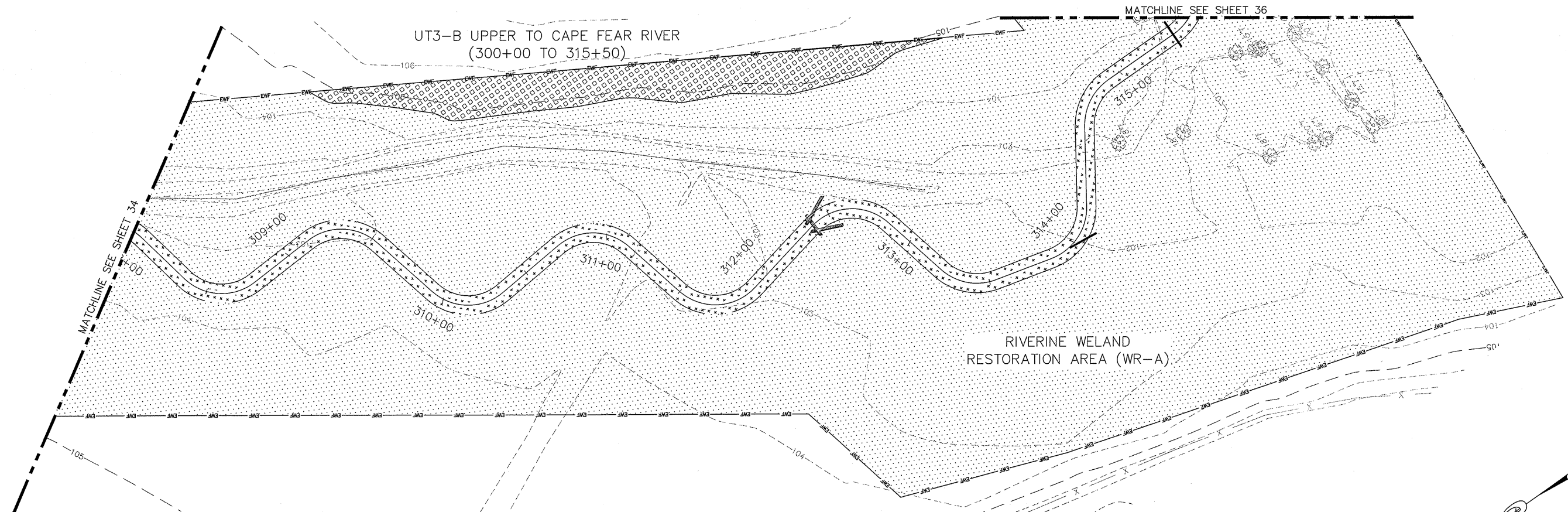
DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: **BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC**

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: **34**

- |   |   |   |  |
|---|---|---|--|
| <p>10+00</p> <p>PROPOSED BANK FULL</p> <p>PROPOSED CREEK</p> <p>PERMANENT CONSERVATION EASEMENT</p> <p>PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING</p> | <p><b>LEGEND</b></p> <p>ROCK CROSS VANE</p> <p>ROCK A-VANE</p> <p>ROCK VANE</p> <p>LOG CROSS VANE</p> | <p><b>SURVEY LEGEND</b></p> <p>PROPERTY LINE</p> <p>MAJOR CONTOURS</p> <p>MINOR CONTOURS</p> <p>STREAM CENTERLINE</p> <p>TREELINE</p> <p>EXISTING WETLAND</p> | <p><b>PLANTING LEGEND</b></p> <p>ZONE 1 STREAM BANKS</p> <p>ZONE 2 RIPARIAN</p> <p>ZONE 3 UPLAND</p> <p>ZONE 4 TO REMAIN</p> |
|---|---|---|--|



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN

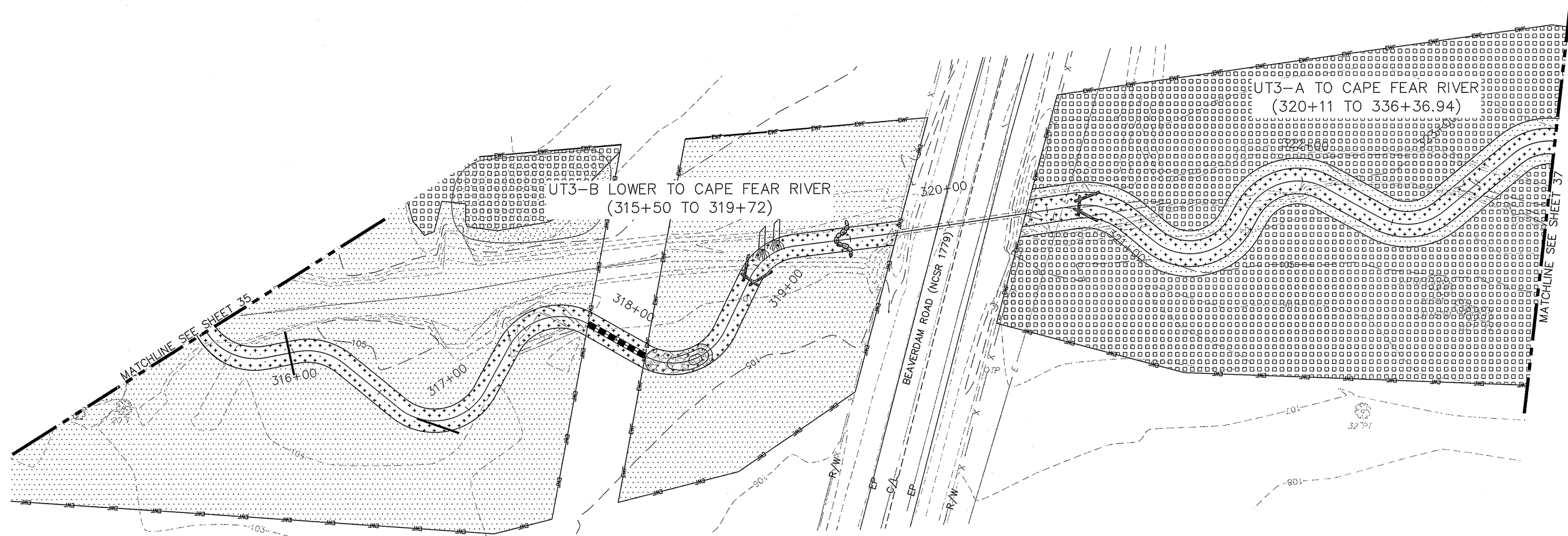


DATE: 02/25/08	PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION
DRAWN BY: JIK	EBX NEUSE I, LLC
DESIGNED BY: RTL	
CHECKED BY: TSJ	
The record drawings represent the construction plans with adjustments made to represent constructed conditions.	JOB NUMBER: 012620010 SHEET NUMBER: 35

LEGEND	
	PROPOSED BANK FULL
	PROPOSED CREEK
	PERMANENT CONSERVATION EASEMENT
	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING
	ROCK CROSS VANE
	ROCK A-VANE
	ROCK VANE
	LOG CROSS VANE
	LOG SILL
	LOG VANE

SURVEY LEGEND	
	PROPERTY LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	STREAM CENTERLINE
	TREELINE
	EXISTING WETLAND

PLANTING LEGEND	
	ZONE 1 STREAM BANKS
	ZONE 2 RIPARIAN
	ZONE 3 UPLAND
	ZONE 4 TO REMAIN



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT



**BEFORE YOU DIG!**  
CONTACT ONE-CALL CENTER  
1-800-632-4949

REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

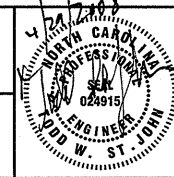
PREPARED IN THE OFFICE OF:




**Kimley-Horn and Associates, Inc.**  
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: **PLANTING PLAN**



DATE: 02/25/08  
DRAWN BY: JIK  
DESIGNED BY: RTL  
CHECKED BY: TSJ

PROJECT: **BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC**

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 36



**LEGEND**

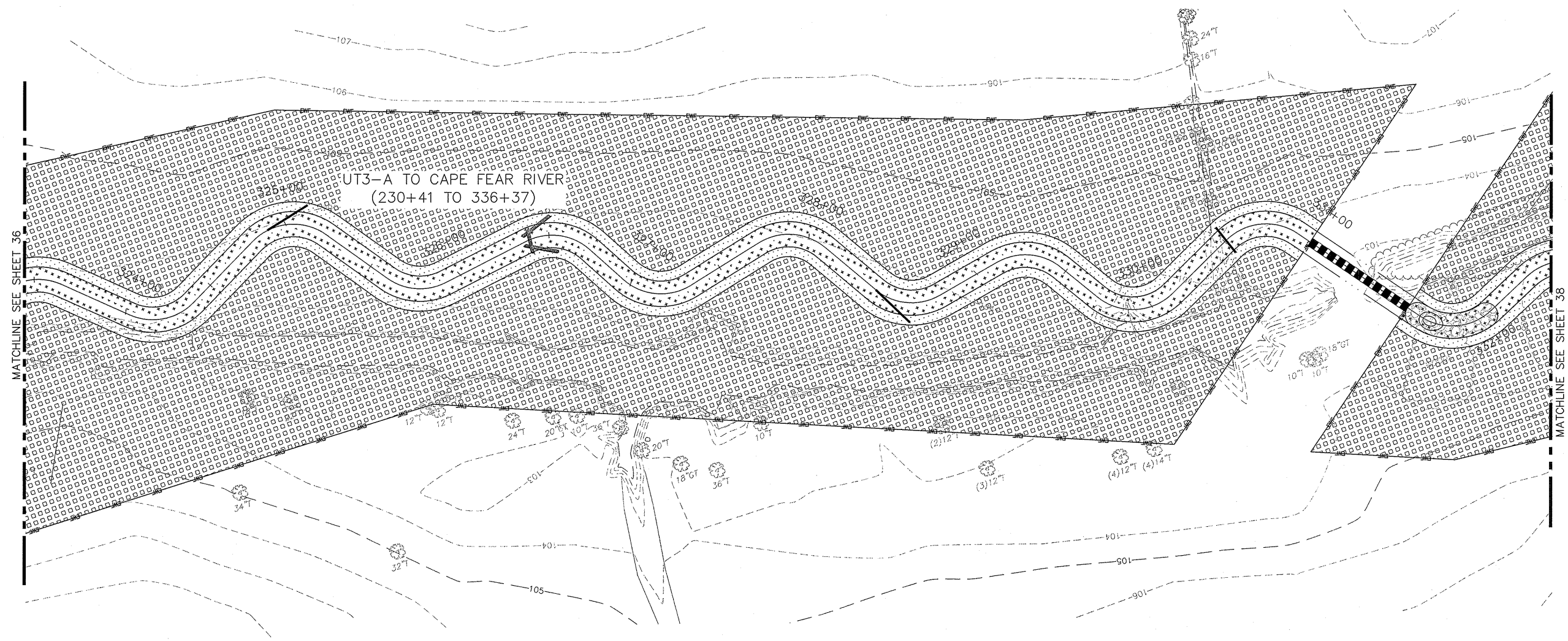
	PROPOSED BANK FULL		ROCK CROSS VANE		LOG SILL
	PROPOSED CREEK		ROCK A-VANE		LOG VANE
	PERMANENT CONSERVATION EASEMENT		ROCK VANE		
	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING		LOG CROSS VANE		

**SURVEY LEGEND**

	PROPERTY LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	STREAM CENTERLINE
	TREELINE
	EXISTING WETLAND

**PLANTING LEGEND**

ZONE 1		STREAM BANKS
ZONE 2		RIPARIAN
ZONE 3		UPLAND
ZONE 4		TO REMAIN



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

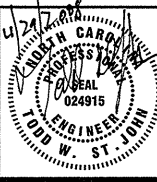
PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN



DATE: 02/25/08

DRAWN BY: JIK








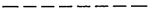








DESIGNED BY: RTL

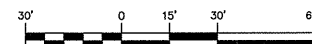
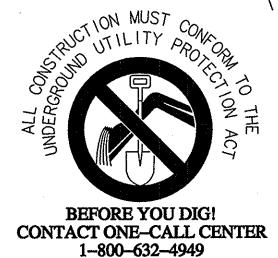
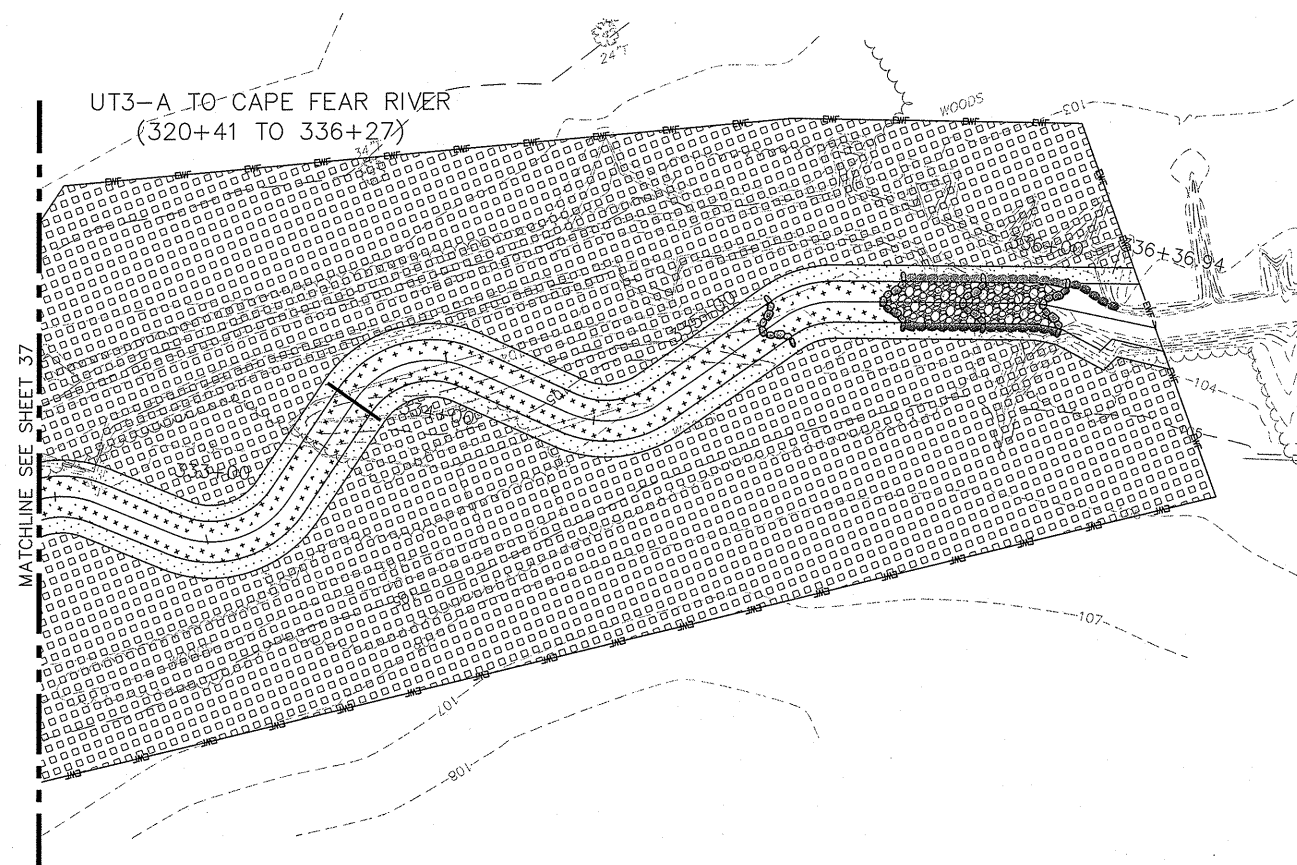
CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP  
STREAM AND WETLAND RESTORATION  
EBX NEUSE I, LLC

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: 37

		<b>LEGEND</b>		<b>SURVEY LEGEND</b>		<b>PLANTING LEGEND</b>		
10+00	PROPOSED BANK FULL		ROCK CROSS VANE		PROPERTY LINE	ZONE 1		STREAM BANKS
C	PROPOSED CREEK		ROCK A-VANE		MAJOR CONTOURS	ZONE 2		RIPARIAN
E	PERMANENT CONSERVATION EASEMENT		ROCK VANE		MINOR CONTOURS	ZONE 3		UPLAND
F	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING		LOG CROSS VANE		STREAM CENTERLINE	ZONE 4		TO REMAIN
			LOG SILL		TREELINE			
			LOG VANE		EXISTING WETLAND			



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JIK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

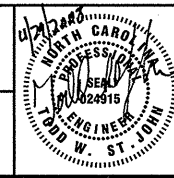
PREPARED IN THE OFFICE OF:



**Kimley-Horn and Associates, Inc.**  
 P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA  
 ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: **PLANTING PLAN**



DATE: 02/25/08  
 DRAWN BY: JIK  
 DESIGNED BY: RTL  
 CHECKED BY: TSJ

PROJECT: **BEAVERDAM SWAMP  
 STREAM AND WETLAND RESTORATION  
 EBX NEUSE I, LLC**

The record drawings represent the construction plans with adjustments made to represent constructed conditions.

JOB NUMBER: 012620010 SHEET NUMBER: **38**

April 28, 2008 - 3:55pm By: jmk/mbt

T:\env\02282010\Beaverdam\_Swamp\_Restoration\0210\_LDD.dwg\RECORD SET 04-10-08\03-LEG PLANS.dwg

**LEGEND**

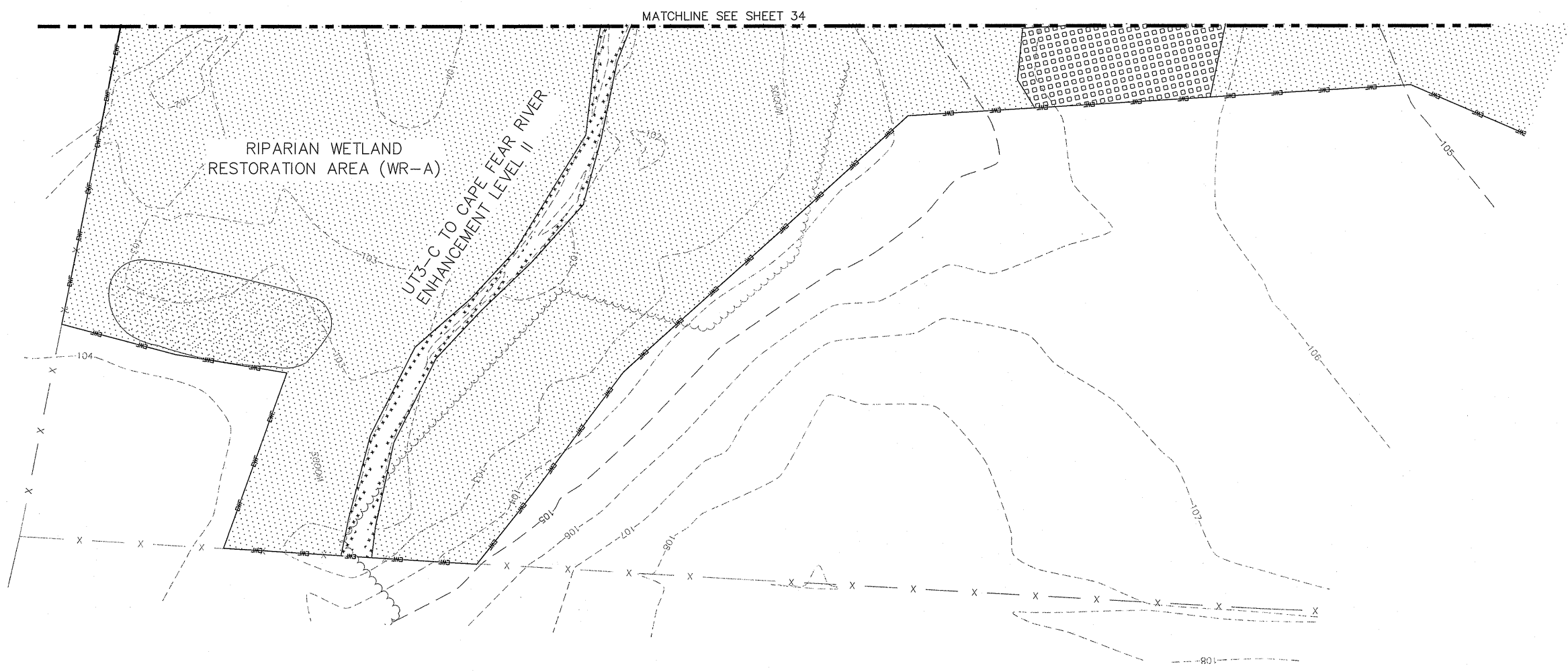
10+00	PROPOSED BANK FULL	ROCK CROSS VANE	LOG SILL
⊕	PROPOSED CREEK	ROCK A-VANE	LOG VANE
—	PERMANENT CONSERVATION EASEMENT	ROCK VANE	
—	PERMANENT CONSERVATION EASEMENT WITH LIVESTOCK FENCING	LOG CROSS VANE	

**SURVEY LEGEND**

---	PROPERTY LINE
---	MAJOR CONTOURS
---	MINOR CONTOURS
---	STREAM CENTERLINE
---	TREELINE
---	EXISTING WETLAND

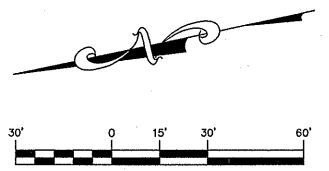
**PLANTING LEGEND**

ZONE 1	STREAM BANKS
ZONE 2	RIPARIAN
ZONE 3	UPLAND
ZONE 4	TO REMAIN



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

**BEFORE YOU DIG! CONTACT ONE-CALL CENTER 1-800-632-4949**



REV. No.	REVISION	DATE	DRAWN BY	CHECKED BY
1	REVISED PER EROSION CONTROL REVIEW	08/23/07	JK	TWS

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adoption by Kimley-Horn and Associates, Inc., shall be without liability to Kimley-Horn and Associates, Inc. Copyright Kimley-Horn and Associates, Inc., 2008

PREPARED IN THE OFFICE OF:

**Kimley-Horn and Associates, Inc.**

P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068  
 PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: STATE OF NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

TITLE: PLANTING PLAN



DATE: 02/25/08

DRAWN BY: JIK

DESIGNED BY: RTL

CHECKED BY: TSJ

PROJECT: BEAVERDAM SWAMP STREAM AND WETLAND RESTORATION EBX NEUSE I, LLC

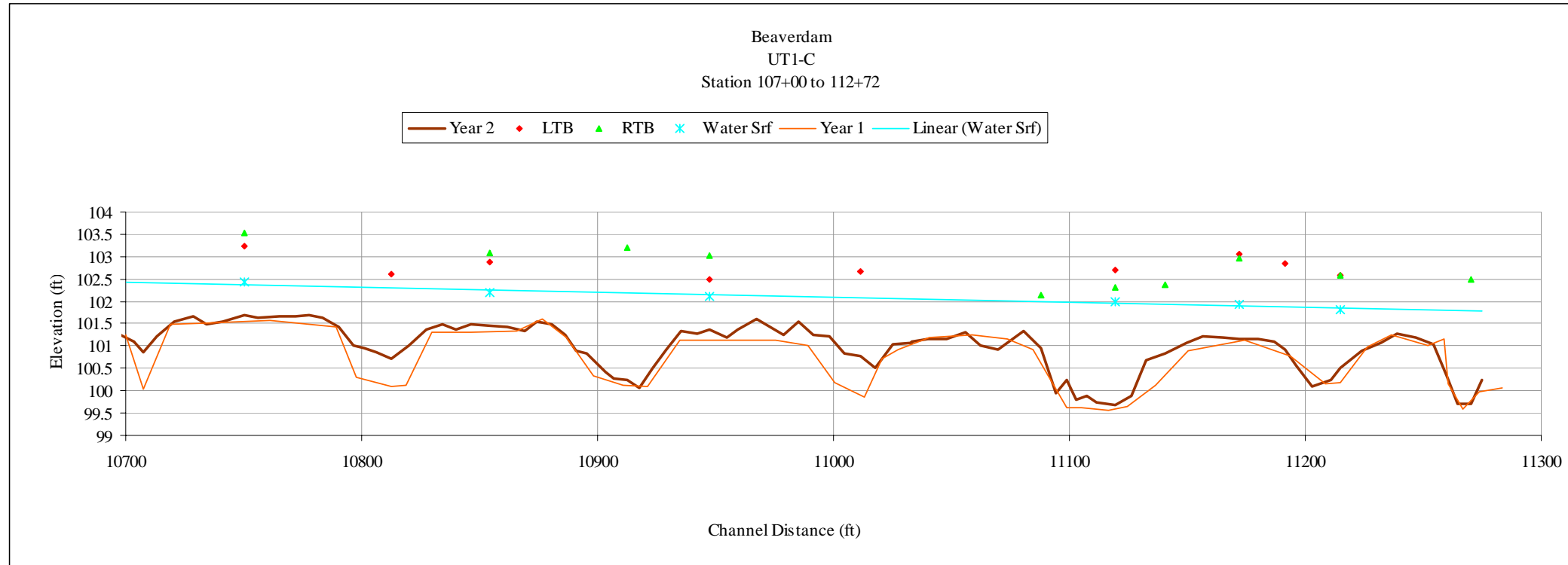
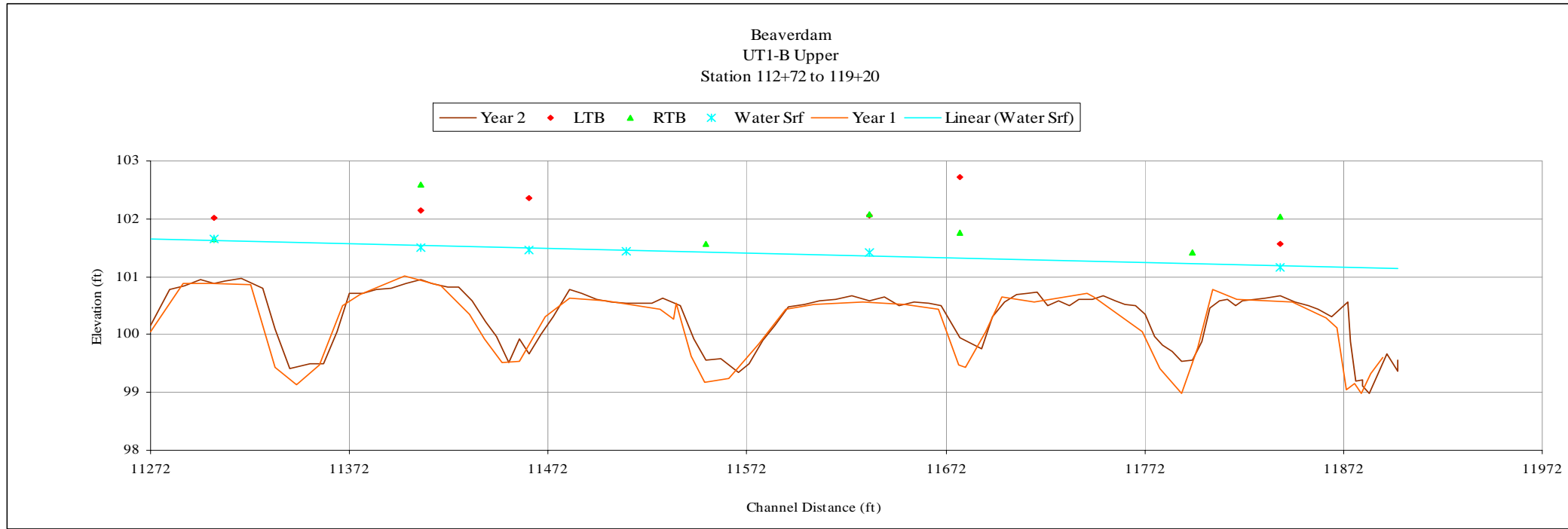
The record drawings represent the construction plans with adjustments made to represent constructed conditions.

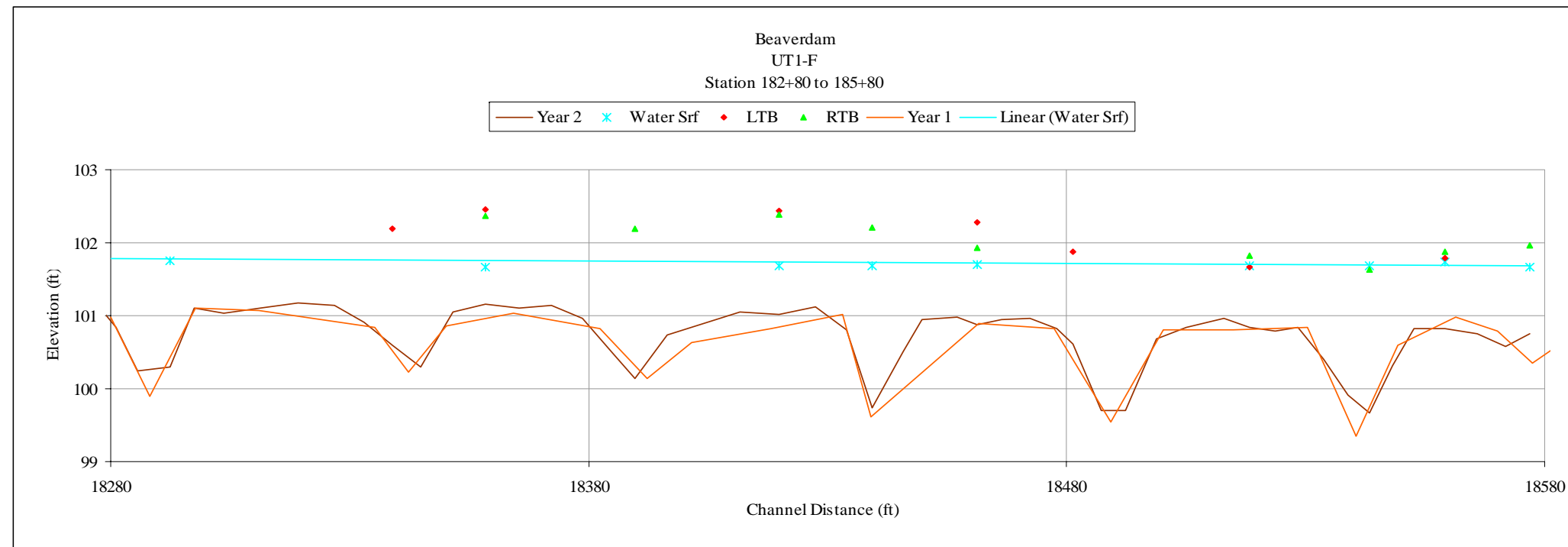
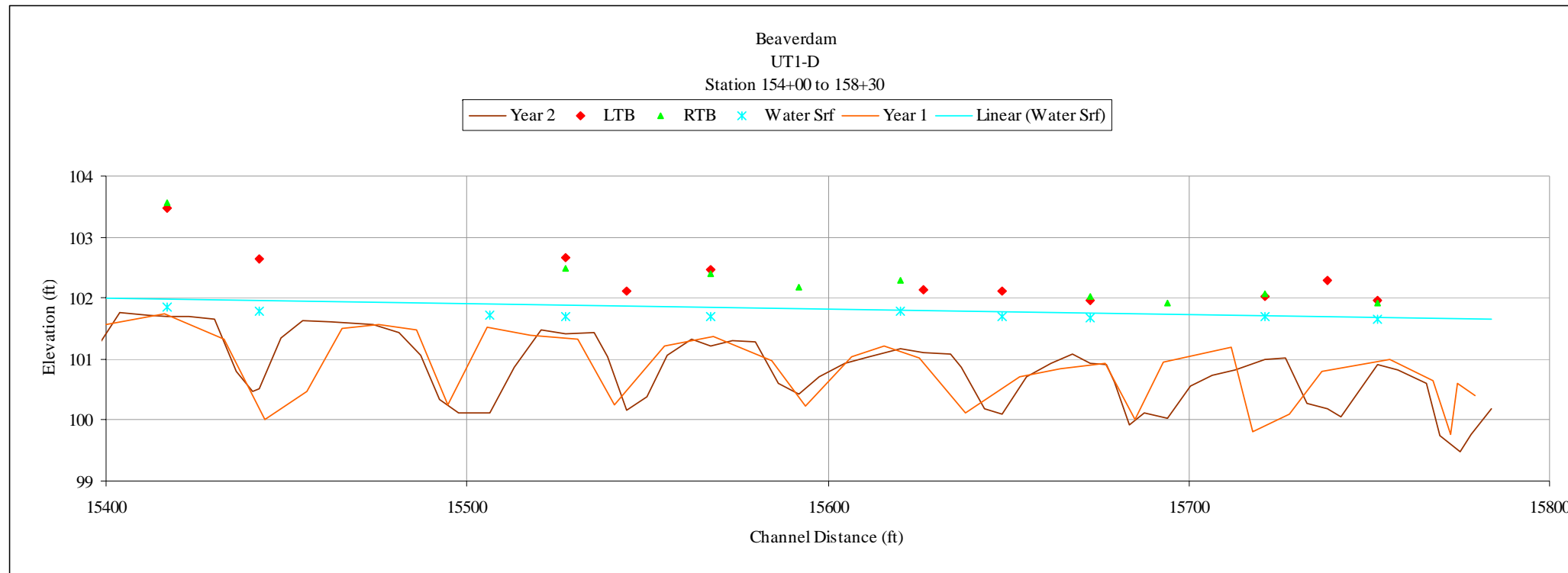
JOB NUMBER: 012620010 SHEET NUMBER: 39

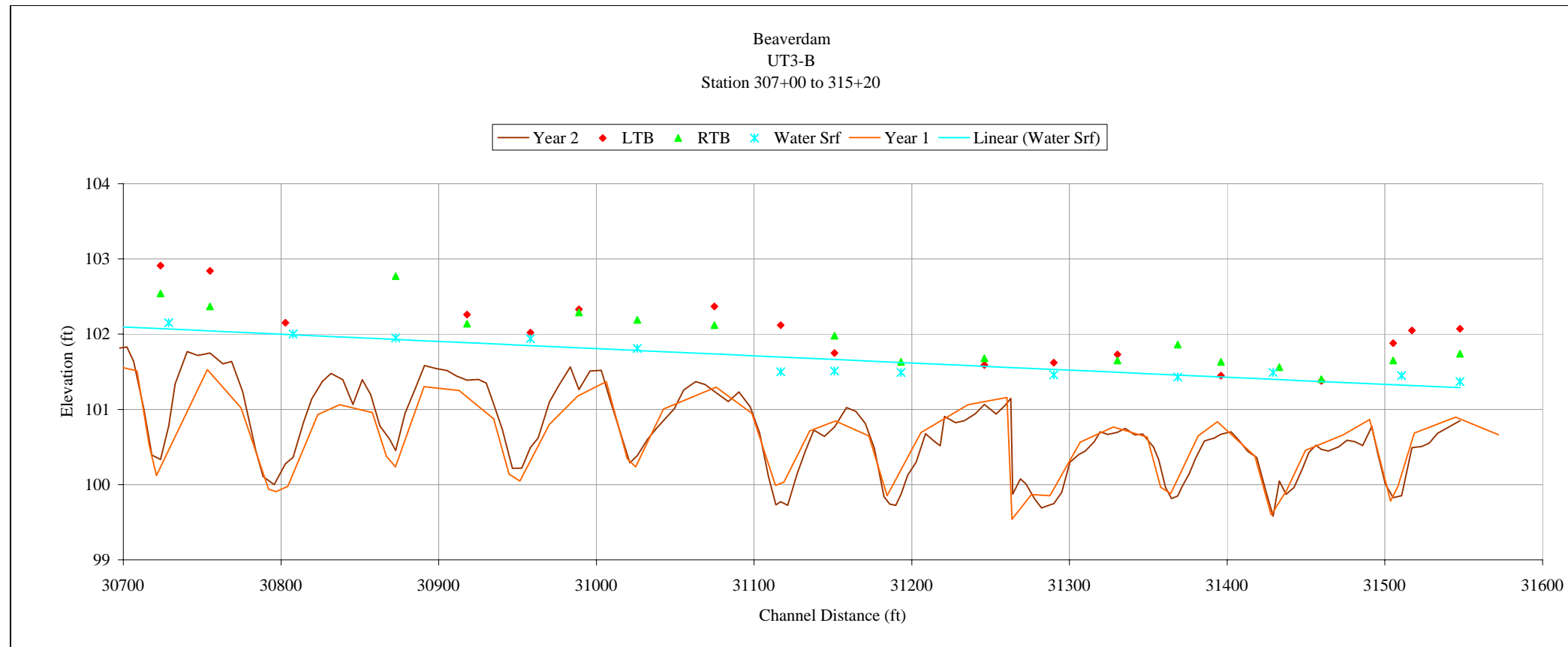
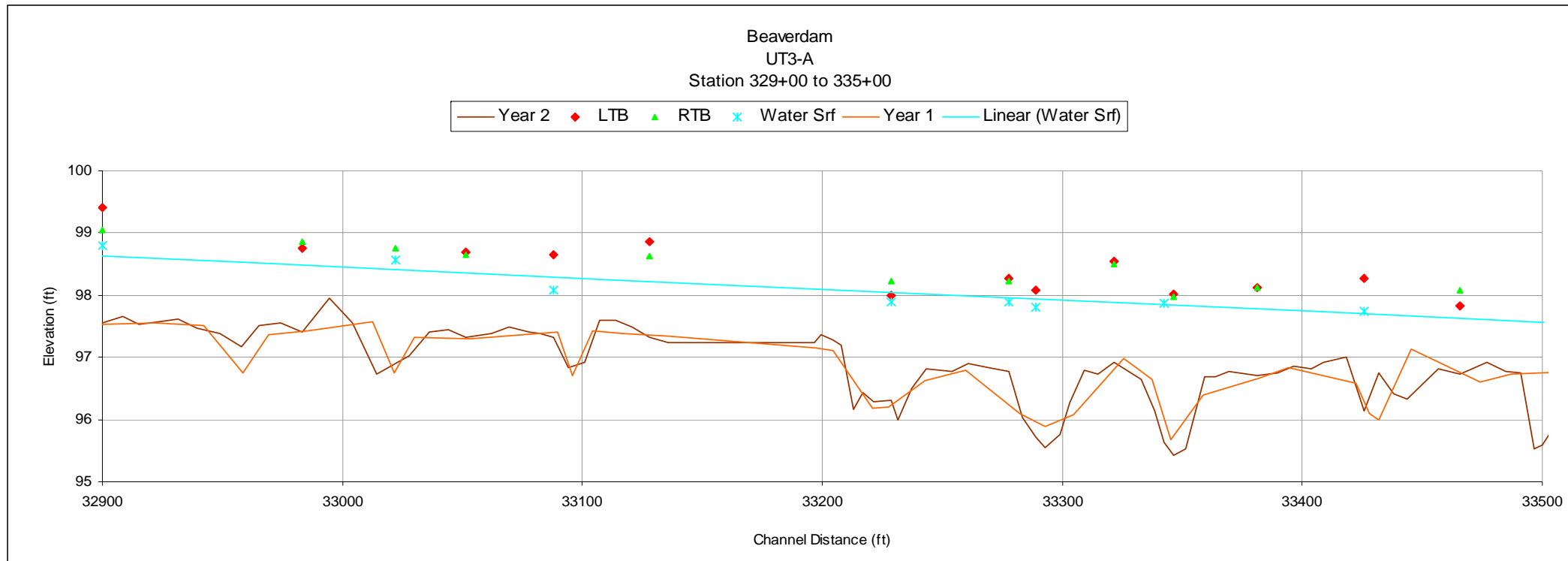
# **APPENDIX B**

## **2009 Profile and Cross Section Data**

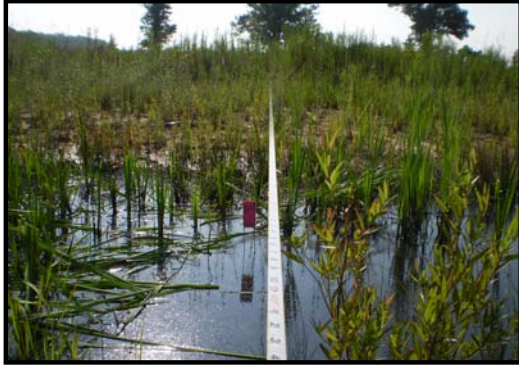




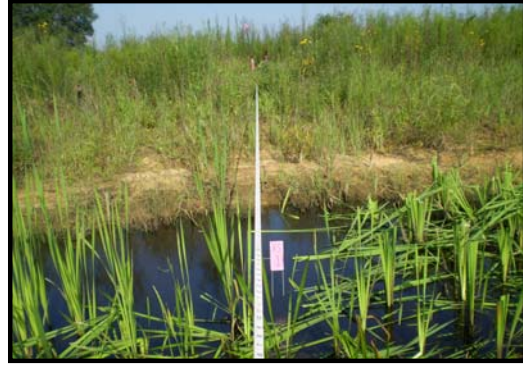




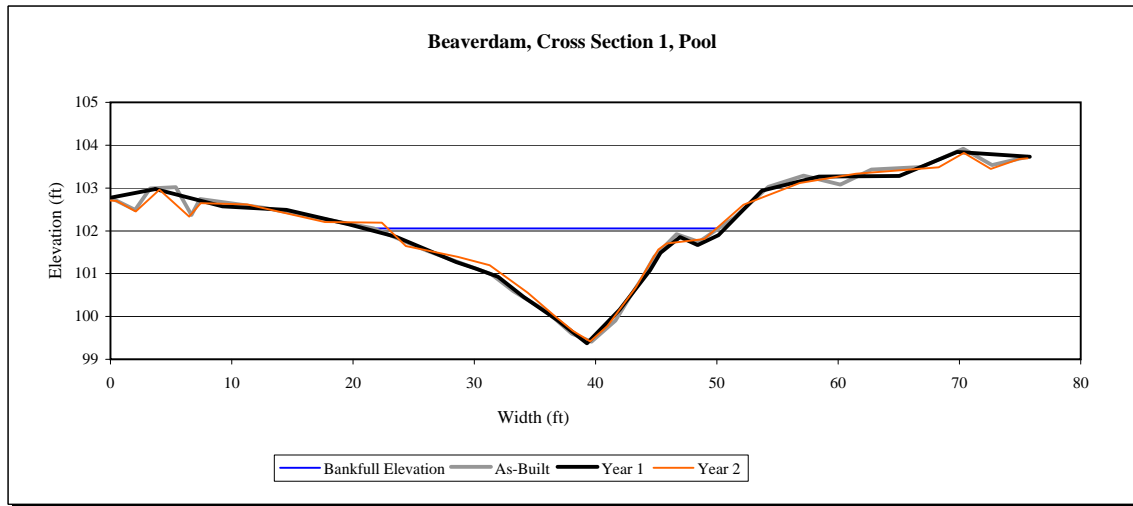
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank

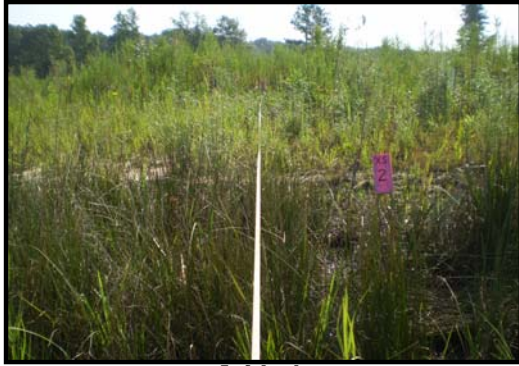


Right bank





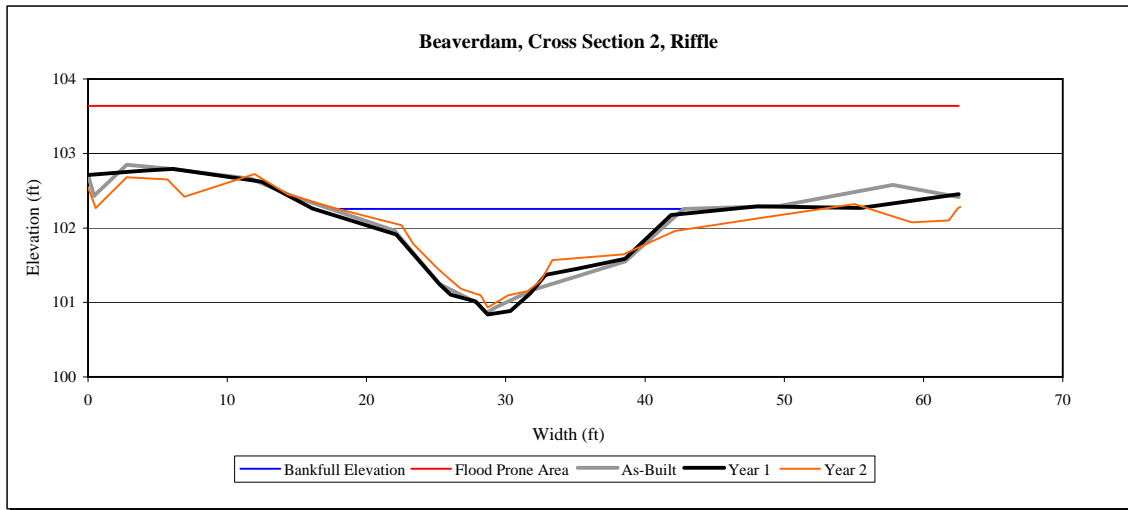
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



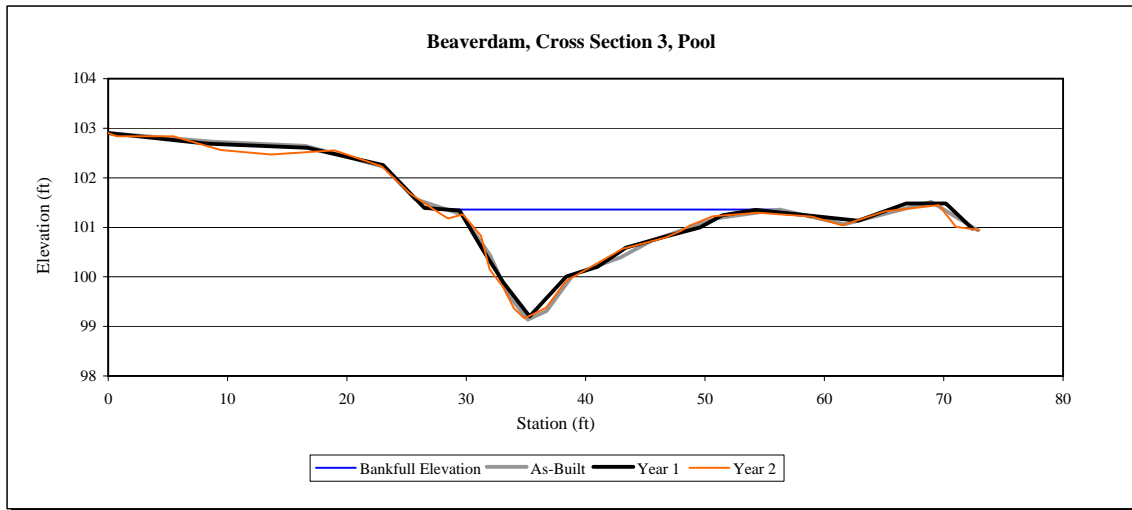
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



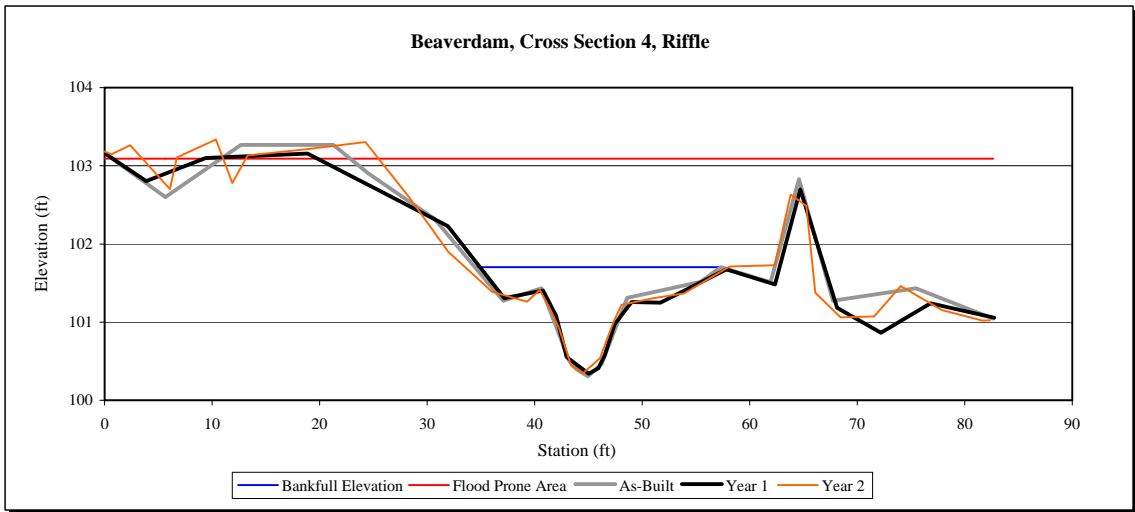
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



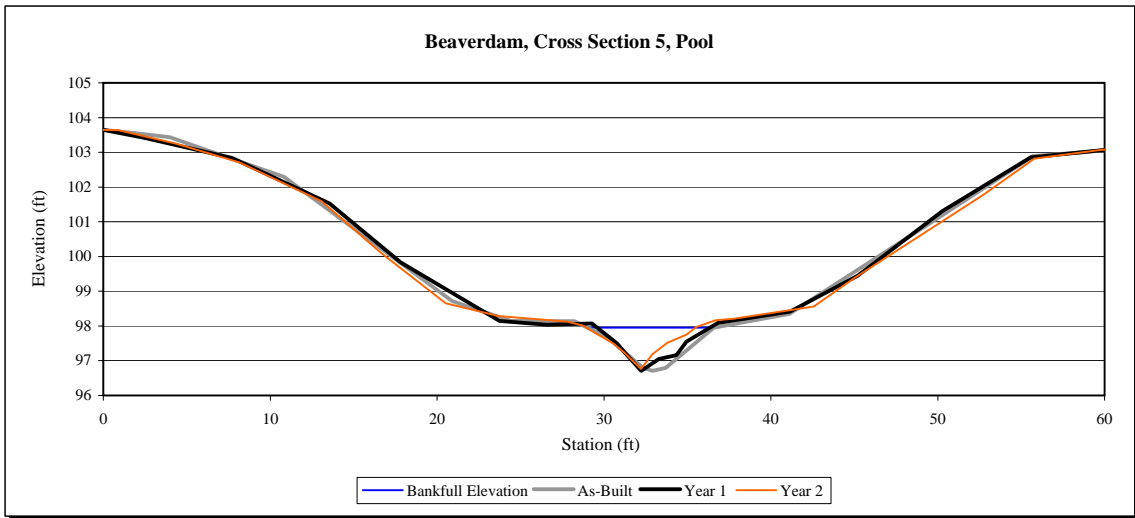
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank





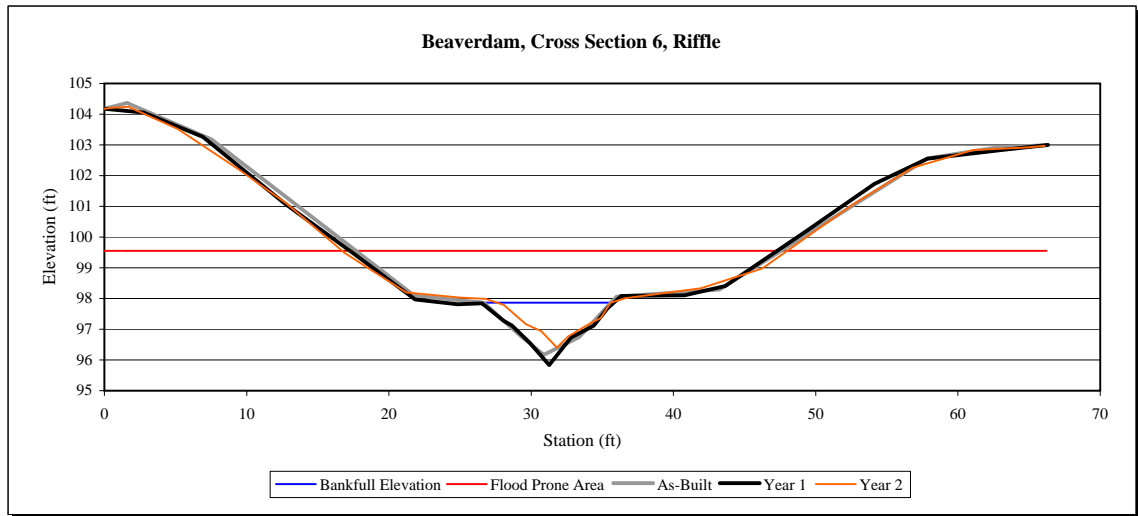
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



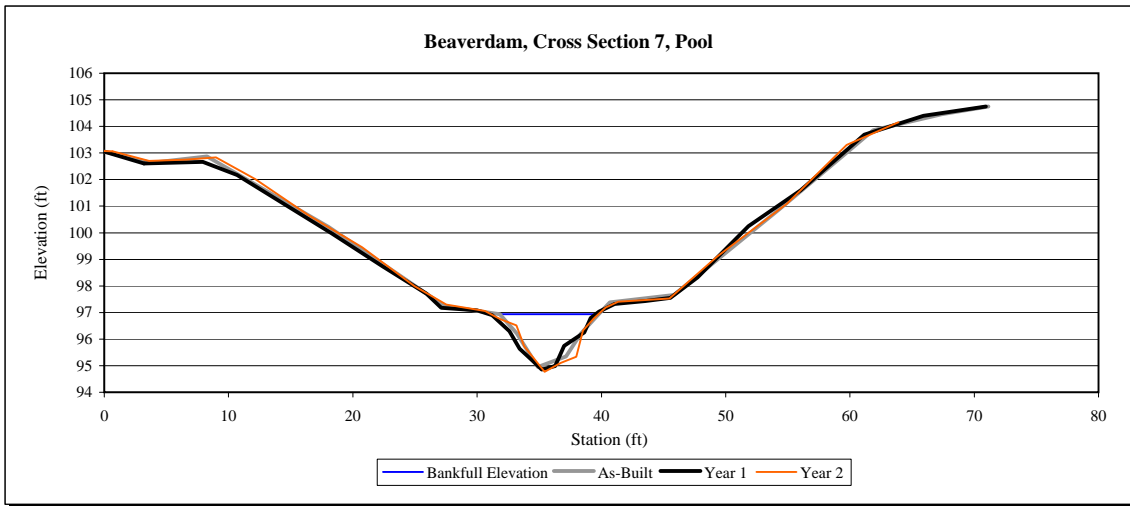
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



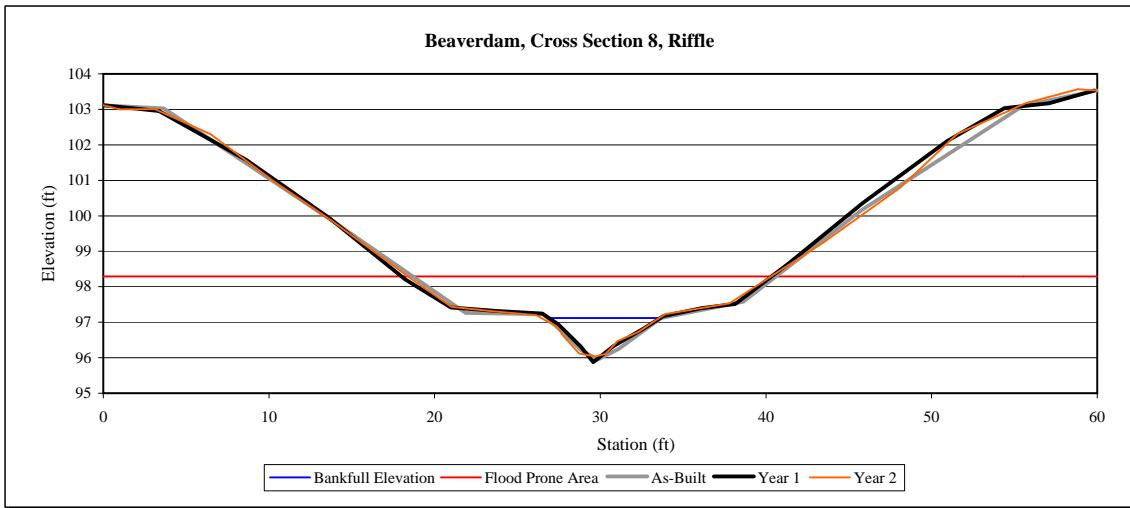
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



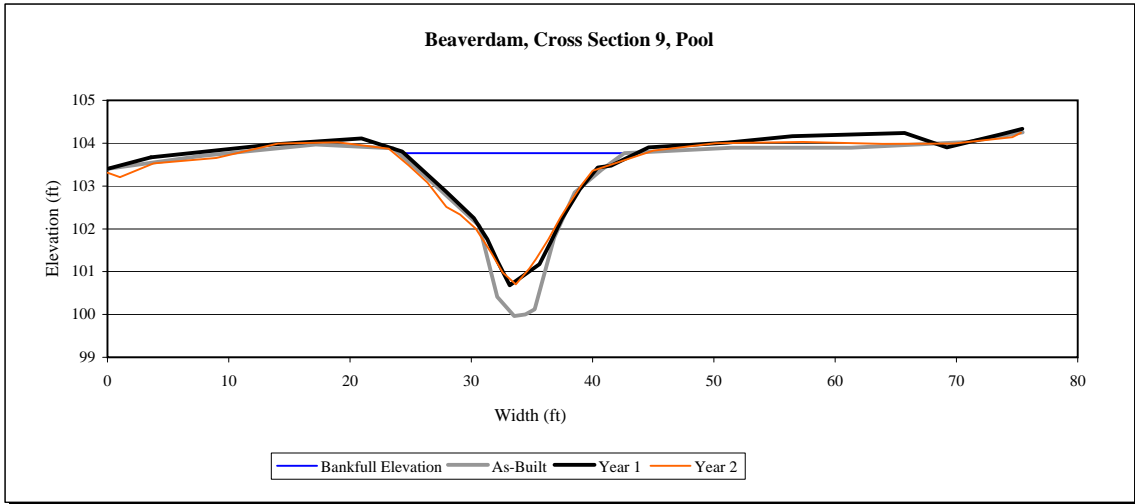
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank





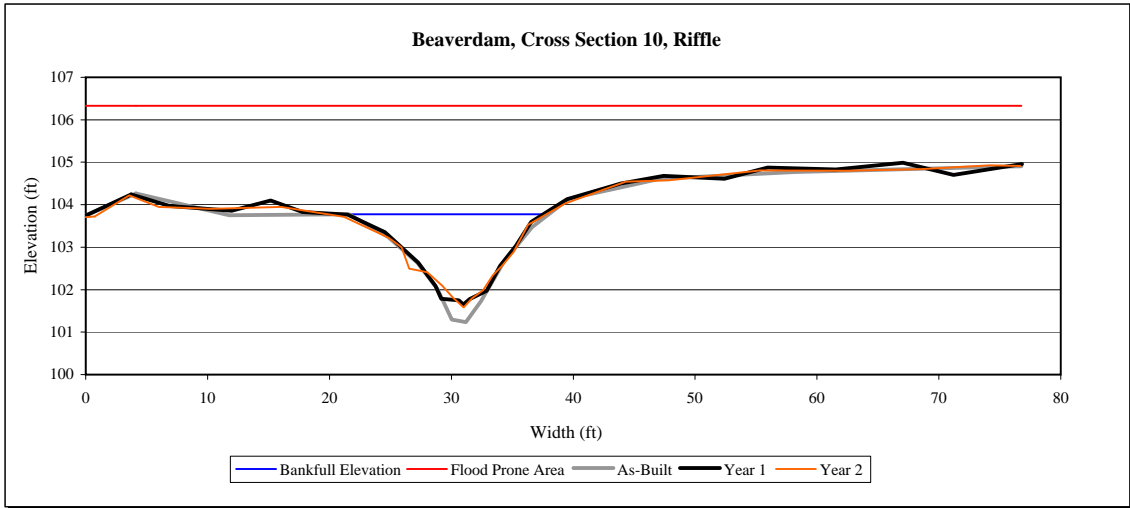
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



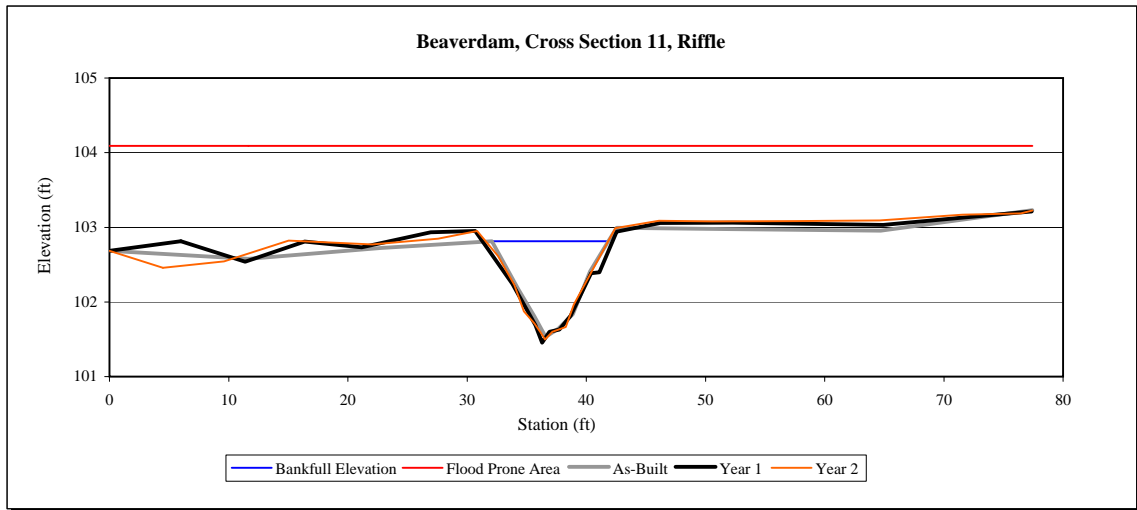
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



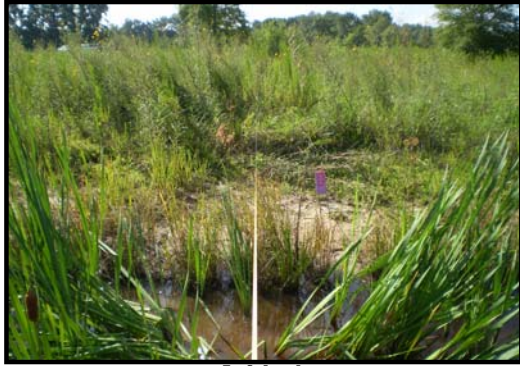
Left bank



Right bank



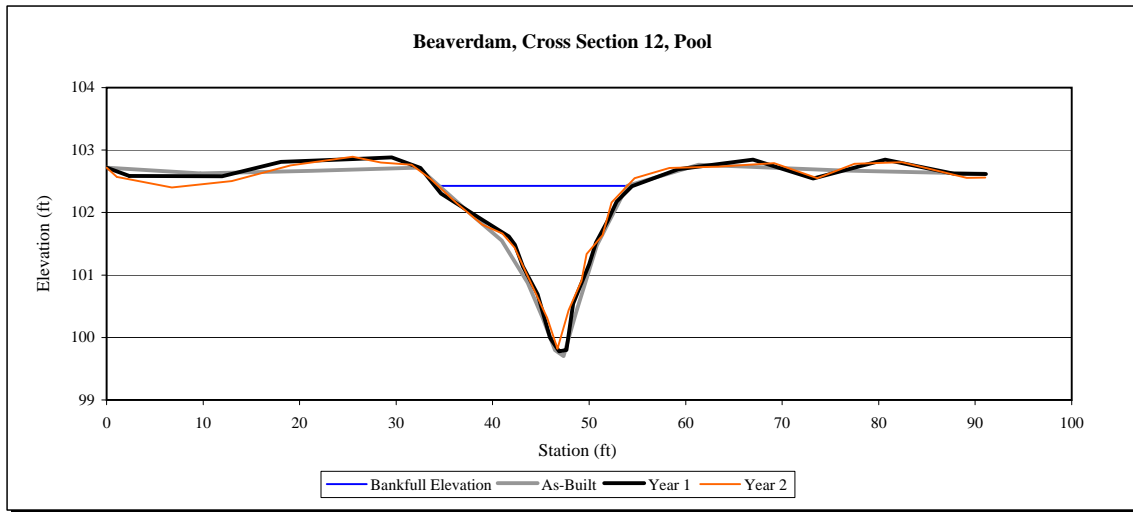
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



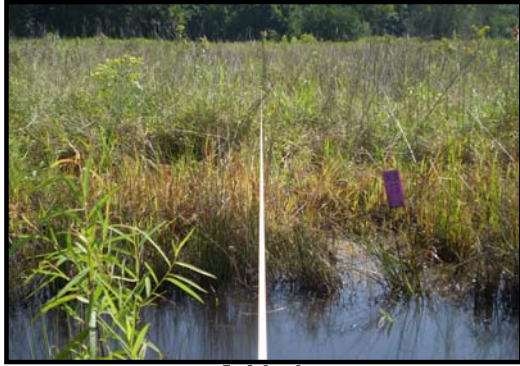
Left bank



Right bank



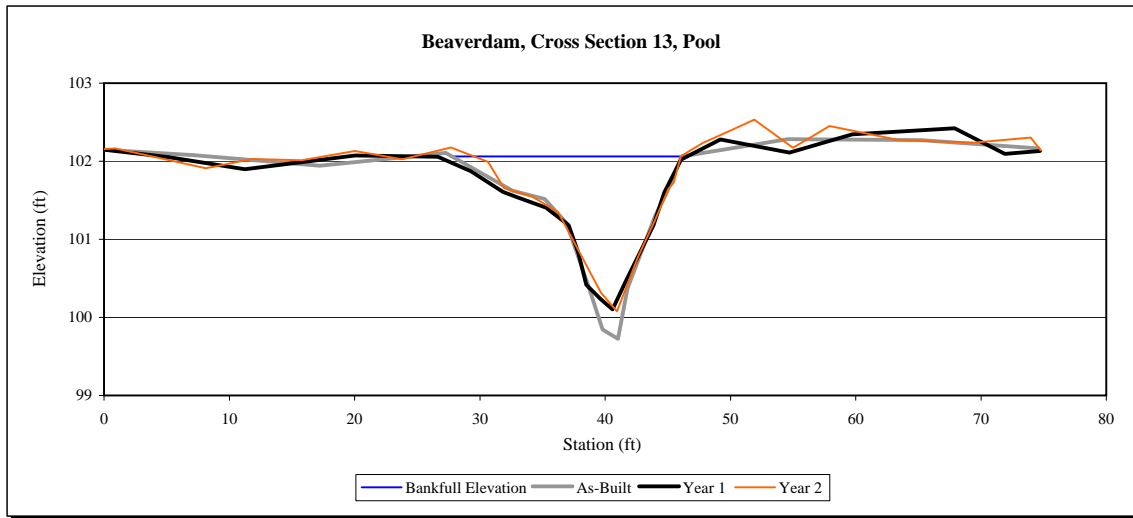
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank

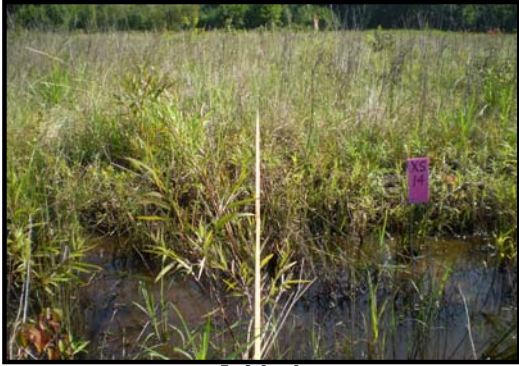


Right bank

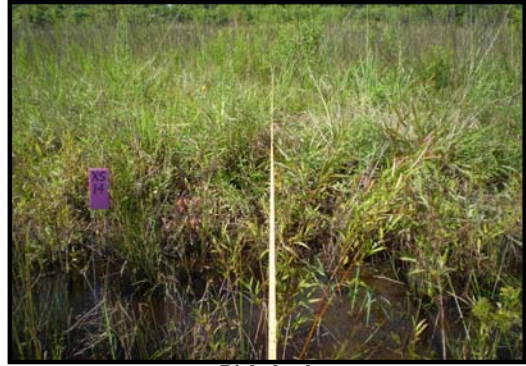




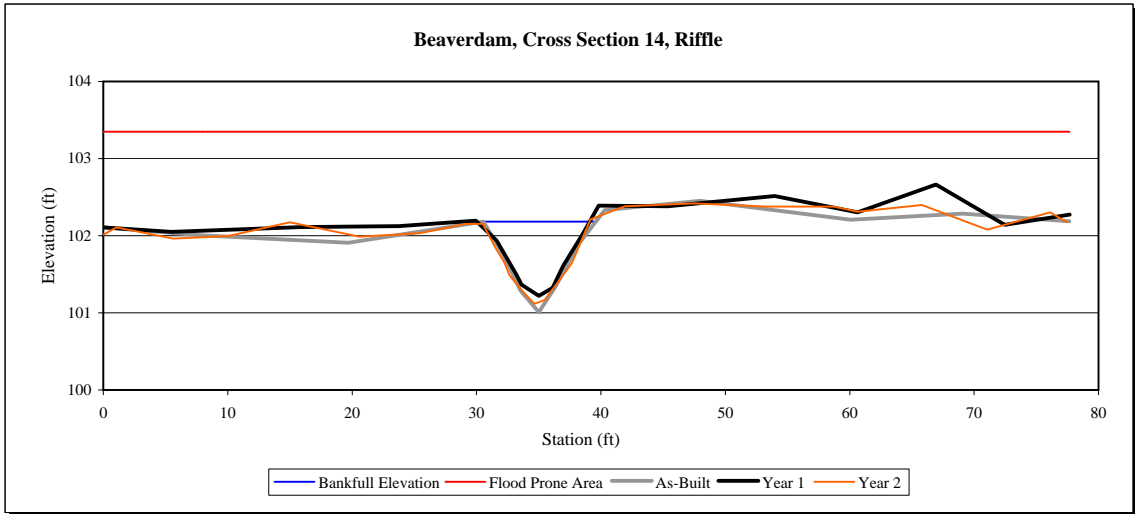
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



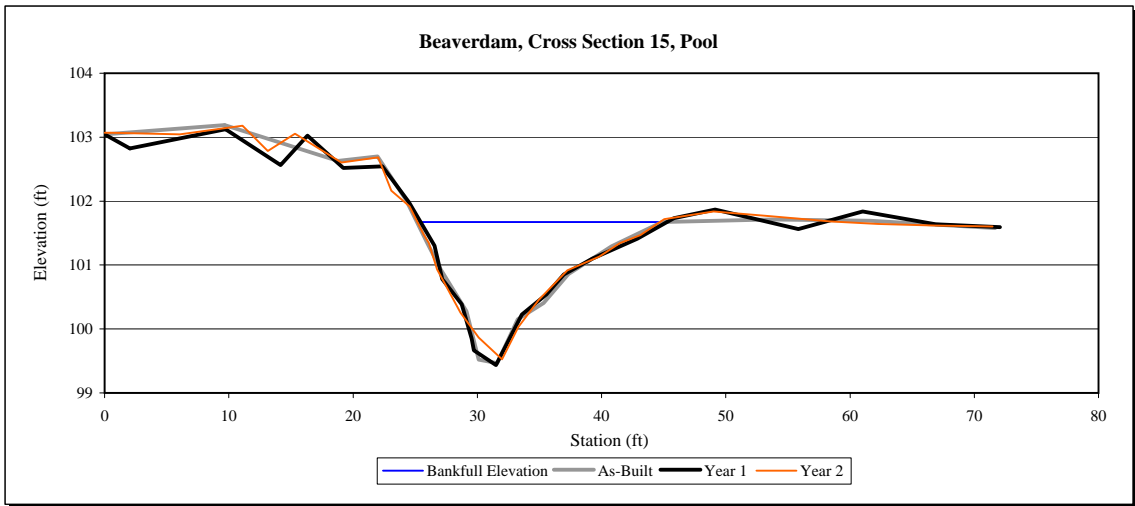
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



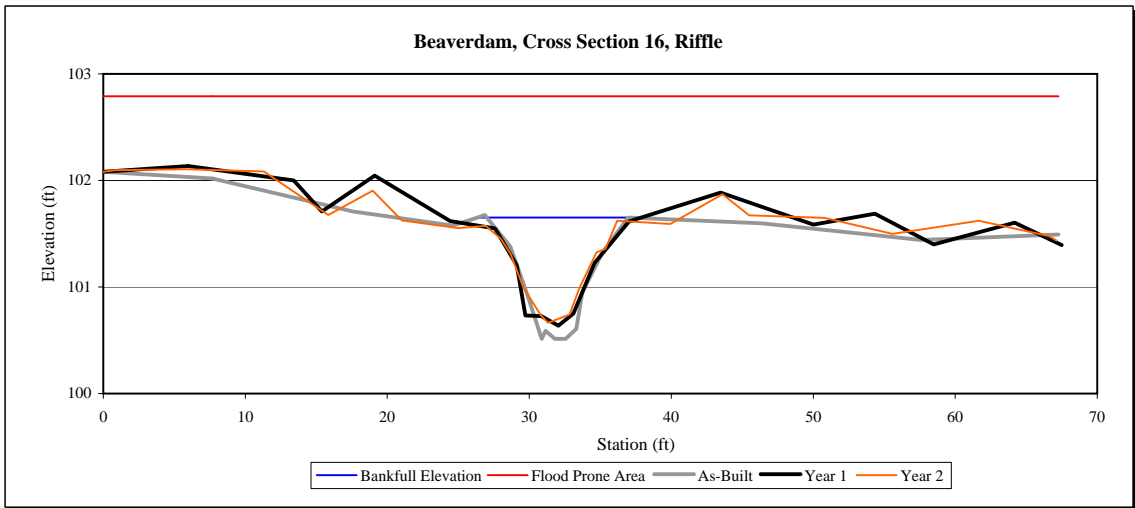
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



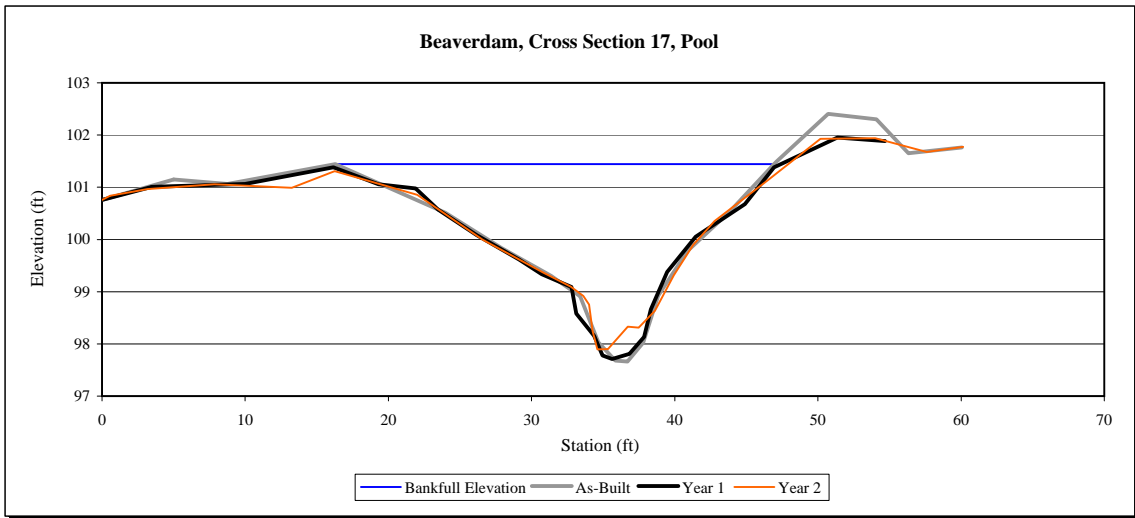
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank





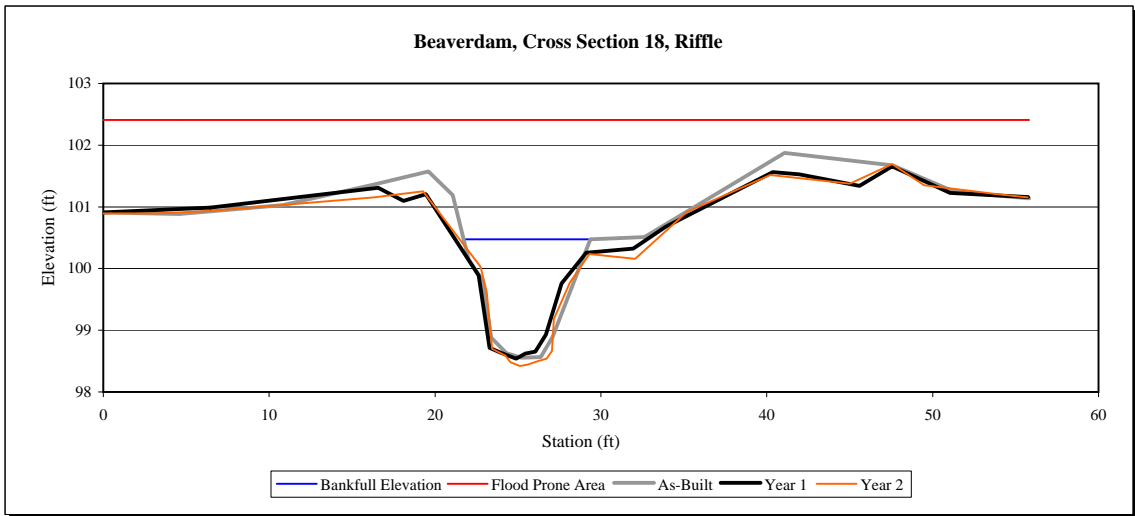
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



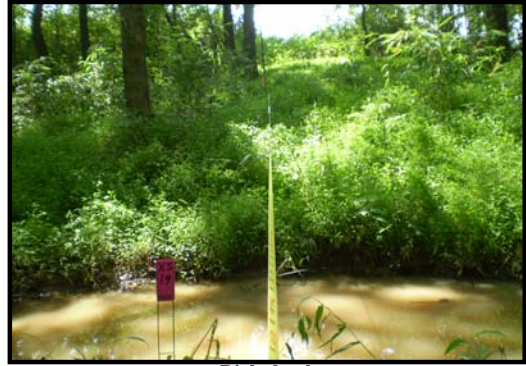
Right bank



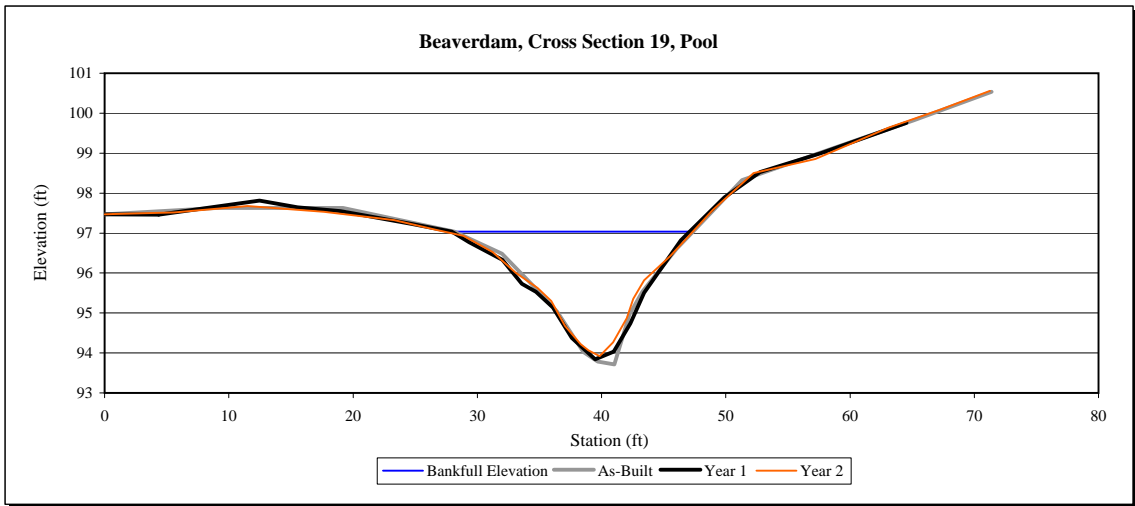
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



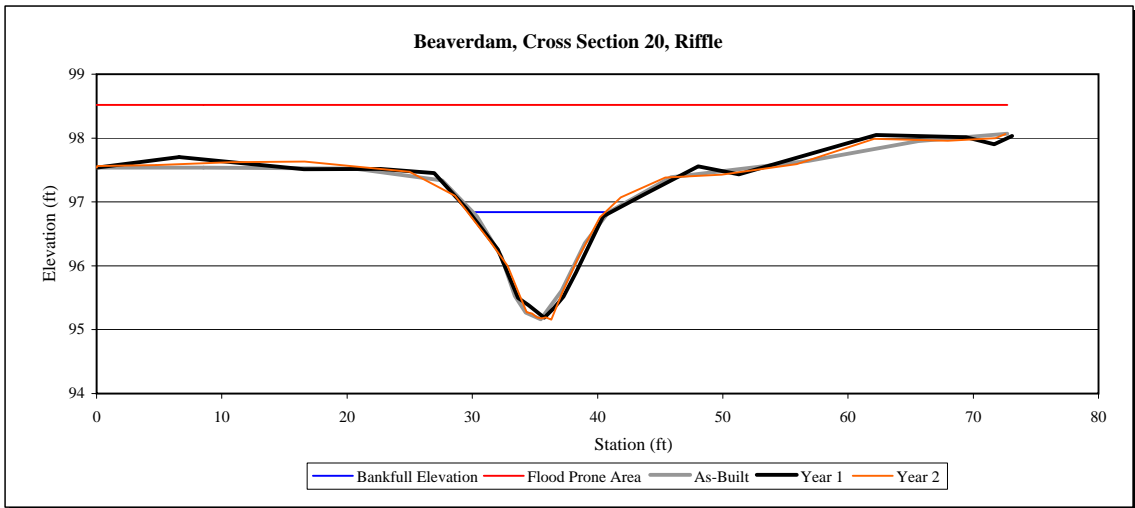
Beaverdam Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)



Left bank



Right bank



# **APPENDIX C**

## **2009 Gauge Data**



Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
1-Jan-2009	06:00:00									
1-Jan-2009	12:00:00									
1-Jan-2009	18:00:00									
1-Jan-2009	24:00:00									
2-Jan-2009	06:00:00									
2-Jan-2009	12:00:00									
2-Jan-2009	18:00:00									
2-Jan-2009	24:00:00									
3-Jan-2009	06:00:00									
3-Jan-2009	12:00:00									
3-Jan-2009	18:00:00									
3-Jan-2009	24:00:00									
4-Jan-2009	06:00:00									
4-Jan-2009	12:00:00									
4-Jan-2009	18:00:00									
4-Jan-2009	24:00:00									
5-Jan-2009	06:00:00									
5-Jan-2009	12:00:00									
5-Jan-2009	18:00:00									
5-Jan-2009	24:00:00									
6-Jan-2009	06:00:00									
6-Jan-2009	12:00:00									
6-Jan-2009	18:00:00									
6-Jan-2009	24:00:00									
7-Jan-2009	06:00:00									
7-Jan-2009	12:00:00									
7-Jan-2009	18:00:00									
7-Jan-2009	24:00:00									
8-Jan-2009	06:00:00									
8-Jan-2009	12:00:00									
8-Jan-2009	18:00:00									
8-Jan-2009	24:00:00									
9-Jan-2009	06:00:00									
9-Jan-2009	12:00:00									
9-Jan-2009	18:00:00									
9-Jan-2009	24:00:00									
10-Jan-2009	06:00:00									
10-Jan-2009	12:00:00									
10-Jan-2009	18:00:00									
10-Jan-2009	24:00:00									
11-Jan-2009	06:00:00									
11-Jan-2009	12:00:00									
11-Jan-2009	18:00:00									
11-Jan-2009	24:00:00									
12-Jan-2009	06:00:00									
12-Jan-2009	12:00:00									
12-Jan-2009	18:00:00									
12-Jan-2009	24:00:00									
13-Jan-2009	06:00:00									
13-Jan-2009	12:00:00									
13-Jan-2009	18:00:00									
13-Jan-2009	24:00:00									
14-Jan-2009	06:00:00									
14-Jan-2009	12:00:00									
14-Jan-2009	18:00:00									
14-Jan-2009	24:00:00									
15-Jan-2009	06:00:00									
15-Jan-2009	12:00:00									
15-Jan-2009	18:00:00									
15-Jan-2009	24:00:00									
16-Jan-2009	06:00:00									
16-Jan-2009	12:00:00									
16-Jan-2009	18:00:00									
16-Jan-2009	24:00:00									
17-Jan-2009	06:00:00									
17-Jan-2009	12:00:00									
17-Jan-2009	18:00:00									
17-Jan-2009	24:00:00									
18-Jan-2009	06:00:00									
18-Jan-2009	12:00:00									

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
18-Jan-2009	18:00:00									
18-Jan-2009	24:00:00									
19-Jan-2009	06:00:00									
19-Jan-2009	12:00:00									
19-Jan-2009	18:00:00									
19-Jan-2009	24:00:00									
20-Jan-2009	06:00:00									
20-Jan-2009	12:00:00									
20-Jan-2009	18:00:00									
20-Jan-2009	24:00:00									
21-Jan-2009	06:00:00									
21-Jan-2009	12:00:00									
21-Jan-2009	18:00:00									
21-Jan-2009	24:00:00									
22-Jan-2009	06:00:00									
22-Jan-2009	12:00:00									
22-Jan-2009	18:00:00									
22-Jan-2009	24:00:00									
23-Jan-2009	06:00:00									
23-Jan-2009	12:00:00									
23-Jan-2009	18:00:00									
23-Jan-2009	24:00:00									
24-Jan-2009	06:00:00									
24-Jan-2009	12:00:00									
24-Jan-2009	18:00:00									
24-Jan-2009	24:00:00									
25-Jan-2009	06:00:00									
25-Jan-2009	12:00:00									
25-Jan-2009	18:00:00									
25-Jan-2009	24:00:00									
26-Jan-2009	06:00:00									
26-Jan-2009	12:00:00									
26-Jan-2009	18:00:00									
26-Jan-2009	24:00:00									
27-Jan-2009	06:00:00									
27-Jan-2009	12:00:00									
27-Jan-2009	18:00:00									
27-Jan-2009	24:00:00									
28-Jan-2009	06:00:00									
28-Jan-2009	12:00:00									
28-Jan-2009	18:00:00									
28-Jan-2009	24:00:00									
29-Jan-2009	06:00:00									
29-Jan-2009	12:00:00									
29-Jan-2009	18:00:00									
29-Jan-2009	24:00:00									
30-Jan-2009	06:00:00									
30-Jan-2009	12:00:00									
30-Jan-2009	18:00:00									
30-Jan-2009	24:00:00									
31-Jan-2009	06:00:00									
31-Jan-2009	12:00:00									
31-Jan-2009	18:00:00									
31-Jan-2009	24:00:00									
1-Feb-2009	06:00:00									
1-Feb-2009	12:00:00									
1-Feb-2009	18:00:00									
1-Feb-2009	24:00:00									
2-Feb-2009	06:00:00									
2-Feb-2009	12:00:00									
2-Feb-2009	18:00:00									
2-Feb-2009	24:00:00									
3-Feb-2009	06:00:00									
3-Feb-2009	12:00:00									
3-Feb-2009	18:00:00									
3-Feb-2009	24:00:00									
4-Feb-2009	06:00:00									
4-Feb-2009	12:00:00									
4-Feb-2009	18:00:00									
4-Feb-2009	24:00:00									

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
5-Feb-2009	06:00:00									
5-Feb-2009	12:00:00									
5-Feb-2009	18:00:00									
5-Feb-2009	24:00:00									
6-Feb-2009	06:00:00									
6-Feb-2009	12:00:00									
6-Feb-2009	18:00:00									
6-Feb-2009	24:00:00									
7-Feb-2009	06:00:00									
7-Feb-2009	12:00:00									
7-Feb-2009	18:00:00									
7-Feb-2009	24:00:00									
8-Feb-2009	06:00:00									
8-Feb-2009	12:00:00									
8-Feb-2009	18:00:00									
8-Feb-2009	24:00:00									
9-Feb-2009	06:00:00									
9-Feb-2009	12:00:00									
9-Feb-2009	18:00:00									
9-Feb-2009	24:00:00									
10-Feb-2009	06:00:00									
10-Feb-2009	12:00:00									
10-Feb-2009	18:00:00									
10-Feb-2009	24:00:00									
11-Feb-2009	06:00:00									
11-Feb-2009	12:00:00									
11-Feb-2009	18:00:00									
11-Feb-2009	24:00:00									
12-Feb-2009	06:00:00									
12-Feb-2009	12:00:00									
12-Feb-2009	18:00:00									
12-Feb-2009	24:00:00									
13-Feb-2009	06:00:00									
13-Feb-2009	12:00:00									
13-Feb-2009	18:00:00									
13-Feb-2009	24:00:00									
14-Feb-2009	06:00:00									
14-Feb-2009	12:00:00									
14-Feb-2009	18:00:00									
14-Feb-2009	24:00:00									
15-Feb-2009	06:00:00									
15-Feb-2009	12:00:00									
15-Feb-2009	18:00:00									
15-Feb-2009	24:00:00									
16-Feb-2009	06:00:00									
16-Feb-2009	12:00:00									
16-Feb-2009	18:00:00									
16-Feb-2009	24:00:00									
17-Feb-2009	06:00:00									
17-Feb-2009	12:00:00									
17-Feb-2009	18:00:00									
17-Feb-2009	24:00:00									
18-Feb-2009	06:00:00									
18-Feb-2009	12:00:00									
18-Feb-2009	18:00:00									
18-Feb-2009	24:00:00									
19-Feb-2009	06:00:00									
19-Feb-2009	12:00:00									
19-Feb-2009	18:00:00									
19-Feb-2009	24:00:00									
20-Feb-2009	06:00:00									
20-Feb-2009	12:00:00									
20-Feb-2009	18:00:00									
20-Feb-2009	24:00:00									
21-Feb-2009	06:00:00									
21-Feb-2009	12:00:00									
21-Feb-2009	18:00:00									
21-Feb-2009	24:00:00									
22-Feb-2009	06:00:00									
22-Feb-2009	12:00:00									

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
22-Feb-2009	18:00:00									
22-Feb-2009	24:00:00									
23-Feb-2009	06:00:00									
23-Feb-2009	12:00:00									
23-Feb-2009	18:00:00									
23-Feb-2009	24:00:00									
24-Feb-2009	06:00:00									
24-Feb-2009	12:00:00									
24-Feb-2009	18:00:00									
24-Feb-2009	24:00:00									
25-Feb-2009	06:00:00									
25-Feb-2009	12:00:00									
25-Feb-2009	18:00:00									
25-Feb-2009	24:00:00									
26-Feb-2009	06:00:00	-4.99	-6.68	-0.07	-18.14	-2.67	-7.77			-3.06
26-Feb-2009	12:00:00	-5.02	-6.97	-0.14	-18.04	-2.85	-7.84			-3.09
26-Feb-2009	18:00:00	-4.84	-7.18	-0.18	-18.12	-2.70	-7.71			-3.11
26-Feb-2009	24:00:00	-4.63	-7.22	2.50	-17.57	-2.58	-7.44			-2.74
27-Feb-2009	06:00:00	-4.72	-7.35	2.08	-17.66	-2.71	-7.35			-2.72
27-Feb-2009	12:00:00	-4.84	-7.59	1.78	-17.52	-2.66	-7.40			-2.74
27-Feb-2009	18:00:00	-4.80	-7.74	1.45	-17.31	-2.85	-7.30			-2.76
27-Feb-2009	24:00:00	-4.59	-7.60	1.45	-17.03	-2.56	-7.35			-2.24
28-Feb-2009	06:00:00	-4.82	-7.56	1.06	-17.26	-2.49	-7.01			-2.21
28-Feb-2009	12:00:00	-4.33	-7.66	0.66	-17.40	-1.40	-6.72			-1.56
28-Feb-2009	18:00:00	2.31	-2.10	1.04	-14.12	0.77	0.16			-0.57
28-Feb-2009	24:00:00	2.94	-0.78	4.78	-2.12	6.46	0.60			1.40
1-Mar-2009	06:00:00	2.48	-0.67	5.10	-9.15	6.39	0.27			1.75
1-Mar-2009	12:00:00	1.49	-0.76	4.87	-12.32	5.64	-0.26			1.36
1-Mar-2009	18:00:00	2.98	-0.76	6.06	-4.54	6.36	0.50			2.06
1-Mar-2009	24:00:00	5.26	0.64	8.16	-0.71	10.94	5.05			9.84
2-Mar-2009	06:00:00	3.12	0.54	8.14	-4.08	10.59	4.85			8.80
2-Mar-2009	12:00:00	2.26	0.33	8.14	-7.55	9.10	3.36			6.85
2-Mar-2009	18:00:00	1.56	0.09	8.08	-10.72	7.78	1.87			4.92
2-Mar-2009	24:00:00	0.50	-0.10	8.09	-12.44	6.78	0.66			3.58
3-Mar-2009	06:00:00	-0.74	-0.36	8.00	-13.19	5.69	-0.08			1.64
3-Mar-2009	12:00:00	-1.66	-0.55	7.45	-13.66	4.72	-0.98			1.41
3-Mar-2009	18:00:00	-1.94	-0.85	6.96	-13.89	3.86	-0.71			1.30
3-Mar-2009	24:00:00	-2.32	-0.96	6.83	-13.85	3.60	-1.55			1.62
4-Mar-2009	06:00:00	-2.71	-1.17	6.42	-14.04	3.14	-2.24			1.48
4-Mar-2009	12:00:00	-3.21	-1.50	6.01	-14.20	2.15	-3.80			1.24
4-Mar-2009	18:00:00	-2.54	-1.72	5.89	-14.31	1.72	-1.78			1.36
4-Mar-2009	24:00:00	-2.92	-1.92	6.01	-14.07	1.52	-2.20			1.69
5-Mar-2009	06:00:00	-3.06	-1.92	5.66	-14.13	1.22	-2.86			1.62
5-Mar-2009	12:00:00	-3.28	-1.98	5.59	-14.28	0.63	-3.36			1.38
5-Mar-2009	18:00:00	-2.90	-2.32	5.59	-14.24	0.17	-3.02			1.62
5-Mar-2009	24:00:00	-3.12	-2.61	5.63	-14.21	0.03	-3.69			1.74
6-Mar-2009	06:00:00	-3.12	-2.62	5.40	-14.19	0.09	-3.62			1.83
6-Mar-2009	12:00:00	-3.42	-2.85	5.18	-14.24	-0.08	-3.84			1.74
6-Mar-2009	18:00:00	-2.94	-3.25	5.30	-14.18	-0.26	-3.60			1.92
6-Mar-2009	24:00:00	-3.27	-3.49	5.15	-14.04	-0.46	-4.30			2.08
7-Mar-2009	06:00:00	-3.26	-3.51	4.99	-13.85	-0.33	-4.01			2.10
7-Mar-2009	12:00:00	-3.48	-3.70	4.70	-14.06	-0.48	-4.31			1.87
7-Mar-2009	18:00:00	-3.30	-4.28	4.49	-14.10	-0.78	-4.35			1.96
7-Mar-2009	24:00:00	-3.43	-4.50	4.69	-13.88	-0.72	-4.78			2.16
8-Mar-2009	06:00:00	-3.37	-4.53	4.61	-13.83	-0.64	-4.82			2.11
8-Mar-2009	12:00:00	-3.49	-4.53	4.57	-13.91	-0.64	-4.84			2.18
8-Mar-2009	18:00:00	-3.43	-5.07	4.31	-13.79	-1.11	-5.10			1.89
8-Mar-2009	24:00:00	-3.58	-5.24	4.48	-13.67	-1.24	-5.73			2.04
9-Mar-2009	06:00:00	-3.44	-5.25	4.46	-13.65	-1.08	-5.96			2.10
9-Mar-2009	12:00:00	-3.76	-5.47	4.10	-13.79	-1.12	-6.00			1.81
9-Mar-2009	18:00:00	-3.94	-6.08	3.92	-14.01	-1.63	-6.65			1.48
9-Mar-2009	24:00:00	-4.17	-6.20	3.89	-13.91	-1.81	-8.00			1.36
10-Mar-2009	06:00:00	-4.10	-6.37	3.60	-13.85	-1.63	-8.62			1.12
10-Mar-2009	12:00:00	-4.40	-6.82	3.19	-14.12	-1.83	-9.22			0.70
10-Mar-2009	18:00:00	-4.17	-7.05	3.30	-13.96	-1.96	-9.58			0.52
10-Mar-2009	24:00:00	-4.15	-7.39	3.48	-13.83	-2.12	-10.42			0.76
11-Mar-2009	06:00:00	-3.90	-7.50	3.58	-13.72	-1.94	-10.48			0.92
11-Mar-2009	12:00:00	-3.97	-7.69	3.35	-13.88	-1.93	-10.44			1.08
11-Mar-2009	18:00:00	-3.88	-7.86	3.49	-13.77	-2.14	-10.34			0.99
11-Mar-2009	24:00:00	-4.39	-8.18	3.37	-13.90	-2.70	-11.52			0.92



Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
12-Mar-2009	06:00:00	-4.08	-8.16	3.05	-13.82	-2.14	-10.86		0.98	
12-Mar-2009	12:00:00	-4.36	-8.08	2.93	-13.91	-2.53	-10.84		0.34	
12-Mar-2009	18:00:00	-4.51	-8.46	2.68	-14.00	-3.24	-12.23		-0.08	
12-Mar-2009	24:00:00	-4.51	-8.73	2.96	-13.92	-3.72	-13.47		0.24	
13-Mar-2009	06:00:00	-4.63	-9.14	2.76	-14.12	-4.09	-14.30		0.21	
13-Mar-2009	12:00:00	-4.71	-9.31	2.83	-13.96	-4.32	-14.62		0.43	
13-Mar-2009	18:00:00	-3.98	-9.66	2.64	-14.14	-3.00	-14.50		1.26	
13-Mar-2009	24:00:00	-0.46	-4.87	3.02	-13.80	-0.36	-4.74		2.48	
14-Mar-2009	06:00:00	-1.16	-2.96	3.32	-13.43	-0.42	-0.56		2.61	
14-Mar-2009	12:00:00	-3.02	-3.09	2.99	-13.76	-0.56	-1.19		2.64	
14-Mar-2009	18:00:00	-3.30	-3.14	2.98	-13.72	-0.58	-1.50		2.61	
14-Mar-2009	24:00:00	-1.09	-2.83	3.24	-13.52	-0.39	-0.45		2.85	
15-Mar-2009	06:00:00	-1.69	-2.53	3.18	-13.28	-0.24	-0.50		2.89	
15-Mar-2009	12:00:00	-1.38	-2.26	3.29	-13.30	-0.21	-0.40		2.98	
15-Mar-2009	18:00:00	1.08	-1.86	3.53	-11.66	0.17	-0.24		3.02	
15-Mar-2009	24:00:00	1.19	-1.68	4.37	-10.59	2.42	-0.58		3.22	
16-Mar-2009	06:00:00	1.85	-1.57	4.50	-8.03	2.38	-0.20		3.33	
16-Mar-2009	12:00:00	0.65	-1.52	4.72	-10.78	2.88	-0.58		3.63	
16-Mar-2009	18:00:00	-0.30	-1.47	4.37	-11.73	2.18	-0.38		3.55	
16-Mar-2009	24:00:00	1.52	-1.72	5.38	-9.23	3.46	-0.54		4.29	
17-Mar-2009	06:00:00	1.30	-1.51	5.64	-10.24	3.69	-0.46		4.48	
17-Mar-2009	12:00:00	0.23	-1.45	5.32	-11.08	3.33	-0.53		4.58	
17-Mar-2009	18:00:00	-1.11	-1.70	4.82	-11.86	2.55	-0.98		4.50	
17-Mar-2009	24:00:00	-1.60	-1.63	4.62	-12.10	1.97	-1.30		4.51	
18-Mar-2009	06:00:00	-2.00	-1.66	4.44	-12.28	1.54	-1.70		4.65	
18-Mar-2009	12:00:00	-2.11	-1.59	4.39	-12.41	0.99	-2.01		4.77	
18-Mar-2009	18:00:00	-2.14	-1.82	4.38	-12.52	0.24	-2.22		4.77	
18-Mar-2009	24:00:00	-2.41	-2.07	4.44	-12.56	-0.07	-3.23		4.99	
19-Mar-2009	06:00:00	-2.55	-1.99	4.31	-12.48	-0.14	-3.45		4.93	
19-Mar-2009	12:00:00	-2.71	-2.19	4.16	-12.54	-0.40	-3.71		5.04	
19-Mar-2009	18:00:00	-2.56	-2.48	4.20	-12.47	-0.61	-3.76		5.11	
19-Mar-2009	24:00:00	-2.90	-2.71	4.22	-12.38	-0.79	-4.68		4.98	
20-Mar-2009	06:00:00	1.41	-2.58	3.90	-12.51	-0.12	-0.36		4.52	
20-Mar-2009	12:00:00	0.28	-1.87	4.20	-11.13	1.30	-0.65		4.83	
20-Mar-2009	18:00:00	-1.42	-1.88	3.90	-11.92	0.72	-1.28		4.63	
20-Mar-2009	24:00:00	-2.13	-1.94	3.89	-12.15	0.21	-2.69		4.63	
21-Mar-2009	06:00:00	-2.52	-1.88	3.52	-12.51	-0.14	-3.35		4.34	
21-Mar-2009	12:00:00	-2.88	-2.14	3.19	-12.82	-0.50	-3.93		4.35	
21-Mar-2009	18:00:00	-2.90	-2.34	3.16	-12.89	-0.78	-4.48		4.20	
21-Mar-2009	24:00:00	-2.79	-2.41	3.49	-12.65	-0.80	-5.12		4.50	
22-Mar-2009	06:00:00	-2.96	-2.70	3.12	-12.94	-0.99	-5.50		4.22	
22-Mar-2009	12:00:00	-3.12	-2.80	3.07	-12.90	-1.00	-5.63		4.28	
22-Mar-2009	18:00:00	-3.04	-3.19	3.08	-12.81	-1.30	-5.92		4.27	
22-Mar-2009	24:00:00	-3.08	-3.50	3.47	-12.60	-1.36	-6.69		4.51	
23-Mar-2009	06:00:00	-3.30	-3.67	3.08	-12.75	-1.40	-7.07		4.12	
23-Mar-2009	12:00:00	-3.36	-3.86	3.04	-12.80	-1.52	-7.20		4.09	
23-Mar-2009	18:00:00	-3.48	-4.29	2.81	-12.84	-1.78	-7.43		3.75	
23-Mar-2009	24:00:00	-3.54	-4.56	3.05	-12.87	-1.89	-8.48		3.76	
24-Mar-2009	06:00:00	-3.54	-4.76	2.74	-12.92	-1.80	-8.91		3.38	
24-Mar-2009	12:00:00	-3.68	-5.00	2.62	-13.04	-1.82	-9.28		3.24	
24-Mar-2009	18:00:00	-3.92	-3.88	2.52	-13.20	-1.80	-9.20		2.47	
24-Mar-2009	24:00:00	-4.00	-4.38	2.70	-13.12	-2.00	-10.35		2.60	
25-Mar-2009	06:00:00	-4.02	-4.91	2.53	-13.28	-2.08	-11.31		2.26	
25-Mar-2009	12:00:00	-4.02	-5.37	2.62	-13.32	-2.25	-11.78		2.30	
25-Mar-2009	18:00:00	-4.09	-5.70	2.56	-13.31	-2.64	-12.39		2.13	
25-Mar-2009	24:00:00	-3.91	-5.87	2.77	-13.11	-2.56	-12.60		2.41	
26-Mar-2009	06:00:00	-3.64	-6.05	2.83	-13.05	-2.16	-11.74		2.83	
26-Mar-2009	12:00:00	-2.84	-5.51	2.98	-13.05	-1.26	-9.65		3.50	
26-Mar-2009	18:00:00	-2.89	-4.34	2.90	-13.04	-1.26	-6.83		3.50	
26-Mar-2009	24:00:00	-3.13	-4.00	3.10	-12.82	-1.26	-5.50		3.79	
27-Mar-2009	06:00:00	-3.31	-3.88	2.92	-12.94	-1.16	-5.00		3.62	
27-Mar-2009	12:00:00	-3.52	-3.99	2.77	-13.06	-1.26	-5.06		3.39	
27-Mar-2009	18:00:00	-3.55	-4.23	2.57	-13.30	-1.29	-5.21		3.28	
27-Mar-2009	24:00:00	2.13	-1.41	3.83	-7.20	1.19	0.05		4.46	
28-Mar-2009	06:00:00	1.91	0.21	5.75	-4.56	5.73	0.32		5.48	
28-Mar-2009	12:00:00	1.11	-0.10	5.57	-9.98	5.51	-0.28		5.78	
28-Mar-2009	18:00:00	0.23	-0.24	5.12	-11.07	4.68	-0.56		5.19	
28-Mar-2009	24:00:00	1.83	0.07	6.36	-7.40	5.55	-0.04		7.23	
29-Mar-2009	06:00:00	2.14	0.39	7.43	-5.13	6.68	1.09		9.70	
29-Mar-2009	12:00:00	1.43	-0.03	7.37	-9.30	6.64	0.95		9.96	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
29-Mar-2009	18:00:00	0.87	-0.16	7.27	-10.43	5.84	0.00		9.20	
29-Mar-2009	24:00:00	-0.07	-0.38	7.09	-11.03	4.95	-1.19		8.10	
30-Mar-2009	06:00:00	-0.99	-0.74	6.22	-11.40	3.88	-1.92		6.80	
30-Mar-2009	12:00:00	-1.29	-0.90	6.05	-11.56	2.87	-2.43		6.74	
30-Mar-2009	18:00:00	-1.59	-1.20	5.86	-11.70	2.12	-3.51		6.56	
30-Mar-2009	24:00:00	-1.87	-1.60	5.81	-11.66	1.50	-4.86		6.42	
31-Mar-2009	06:00:00	-1.90	-1.82	5.70	-11.58	1.13	-5.24		6.12	
31-Mar-2009	12:00:00	-2.23	-2.14	5.40	-11.70	0.64	-5.69		6.09	
31-Mar-2009	18:00:00	-2.34	-2.56	5.27	-11.82	0.15	-6.12		5.90	
31-Mar-2009	24:00:00	-2.25	-2.93	5.50	-11.44	0.00	-6.80		6.40	
1-Apr-2009	06:00:00	-2.22	-3.05	5.39	-11.48	-0.04	-6.90		6.20	
1-Apr-2009	12:00:00	-2.05	-3.22	5.54	-11.40	0.03	-6.58		6.61	
1-Apr-2009	18:00:00	-2.24	-3.40	5.20	-11.49	-0.21	-6.33		6.16	
1-Apr-2009	24:00:00	-2.34	-3.45	5.21	-11.44	-0.25	-6.45		6.16	
2-Apr-2009	06:00:00	-2.31	-3.53	5.17	-11.44	-0.20	-6.40		6.15	
2-Apr-2009	12:00:00	-2.50	-3.69	4.88	-11.68	-0.32	-6.52		6.03	
2-Apr-2009	18:00:00	-2.08	-3.62	5.03	-11.46	-0.34	-5.49		6.08	
2-Apr-2009	24:00:00	0.39	-1.32	5.50	-11.19	0.29	-0.52		6.68	
3-Apr-2009	06:00:00	-0.92	-1.20	5.83	-10.90	0.69	-0.47		7.09	
3-Apr-2009	12:00:00	-1.51	-1.17	5.84	-11.00	0.70	-0.81		7.52	
3-Apr-2009	18:00:00	-2.35	-1.68	5.16	-11.38	0.23	-1.70		7.02	
3-Apr-2009	24:00:00	-2.96	-2.48	4.87	-11.62	-0.06	-4.16		6.32	
4-Apr-2009	06:00:00	-3.32	-2.92	4.21	-12.06	-0.13	-4.96		5.38	
4-Apr-2009	12:00:00	-3.48	-3.44	3.97	-12.26	-0.32	-5.63		4.90	
4-Apr-2009	18:00:00	-3.46	-3.98	4.14	-12.30	-0.56	-6.60		4.63	
4-Apr-2009	24:00:00	-3.60	-4.73	4.27	-12.29	-0.85	-8.46		4.66	
5-Apr-2009	06:00:00	-3.43	-5.40	4.07	-12.28	-0.76	-9.34		4.57	
5-Apr-2009	12:00:00	-3.66	-5.72	4.04	-12.42	-0.78	-10.22		4.32	
5-Apr-2009	18:00:00	-3.68	-6.32	4.15	-12.36	-1.22	-11.33		4.36	
5-Apr-2009	24:00:00	-3.79	-7.29	4.62	-12.26	-1.42	-13.40		4.41	
6-Apr-2009	06:00:00	-3.33	-7.58	4.84	-12.12	-1.18	-14.07		5.02	
6-Apr-2009	12:00:00	-2.88	-7.23	5.26	-11.78	-0.99	-13.73		5.90	
6-Apr-2009	18:00:00	-0.43	-3.77	5.57	-11.56	-0.26	-4.19		6.33	
6-Apr-2009	24:00:00	-3.30	-4.31	4.88	-11.81	-0.13	-5.64		5.46	
7-Apr-2009	06:00:00	-3.91	-5.24	4.34	-12.29	-0.40	-7.32		4.28	
7-Apr-2009	12:00:00	-4.04	-5.98	4.16	-12.38	-0.42	-8.61		4.18	
7-Apr-2009	18:00:00	-4.38	-6.90	3.95	-12.50	-0.73	-10.43		3.67	
7-Apr-2009	24:00:00	-4.60	-7.94	3.73	-12.68	-1.11	-12.90		3.13	
8-Apr-2009	06:00:00	-4.69	-8.88	3.48	-12.94	-1.10	-14.21		2.55	
8-Apr-2009	12:00:00	-4.69	-9.45	3.46	-12.95	-1.27	-15.04		2.58	
8-Apr-2009	18:00:00	-4.50	-10.01	3.60	-12.90	-1.69	-15.72		2.47	
8-Apr-2009	24:00:00	-4.72	-10.43	3.78	-12.81	-1.95	-16.43		3.13	
9-Apr-2009	06:00:00	-4.65	-10.92	3.46	-12.88	-1.83	-17.26		3.27	
9-Apr-2009	12:00:00	-4.84	-11.08	3.25	-13.12	-1.86	-17.56		3.44	
9-Apr-2009	18:00:00	-5.19	-11.64	3.10	-13.28	-2.44	-18.28		2.07	
9-Apr-2009	24:00:00	-5.19	-12.12	3.02	-13.22	-3.06	-18.88		2.29	
10-Apr-2009	06:00:00	-5.05	-12.53	2.95	-13.32	-3.19	-19.40		2.34	
10-Apr-2009	12:00:00	-4.83	-12.70	2.99	-13.29	-2.91	-19.68		2.73	
10-Apr-2009	18:00:00	-5.35	-13.10	2.76	-13.73	-3.87	-20.34		1.74	
10-Apr-2009	24:00:00	-4.89	-13.30	3.26	-13.24	-4.65	-20.40		2.34	
11-Apr-2009	06:00:00	-1.16	-13.20	3.34	-13.22	-1.08	-19.82		3.48	
11-Apr-2009	12:00:00	-2.96	-10.18	3.36	-13.11	-1.27	-18.47		3.54	
11-Apr-2009	18:00:00	-4.23	-9.89	3.04	-13.43	-1.95	-17.78		2.80	
11-Apr-2009	24:00:00	-4.84	-10.55	2.60	-13.73	-2.61	-17.39		1.78	
12-Apr-2009	06:00:00	-5.17	-11.44	2.40	-13.91	-2.77	-17.84		0.94	
12-Apr-2009	12:00:00	-5.20	-11.99	2.41	-14.02	-2.92	-18.38		0.69	
12-Apr-2009	18:00:00	-5.52	-12.89	2.20	-13.92	-4.16	-19.13		0.08	
12-Apr-2009	24:00:00	-5.60	-13.64	2.48	-14.00	-5.74	-19.88		0.25	
13-Apr-2009	06:00:00	-5.49	-14.18	2.28	-13.94	-5.91	-20.30		0.54	
13-Apr-2009	12:00:00	-5.40	-14.50	2.22	-14.16	-6.07	-20.74		0.69	
13-Apr-2009	18:00:00	-4.96	-14.58	2.46	-13.94	-5.01	-21.09		1.32	
13-Apr-2009	24:00:00	-4.83	-14.49	2.69	-13.76	-5.74	-21.12		1.75	
14-Apr-2009	06:00:00	-4.80	-14.33	2.78	-13.71	-5.44	-21.24		2.41	
14-Apr-2009	12:00:00	-4.57	-13.62	2.98	-13.49	-4.78	-21.10		3.12	
14-Apr-2009	18:00:00	-4.64	-13.46	2.75	-13.72	-4.74	-21.36		2.74	
14-Apr-2009	24:00:00	-4.64	-13.53	2.81	-13.64	-5.55	-21.30		2.62	
15-Apr-2009	06:00:00	1.78	-0.65	4.75	-8.08	1.04	-0.70		4.06	
15-Apr-2009	12:00:00	0.59	-0.63	4.52	-10.67	2.55	-1.22		3.93	
15-Apr-2009	18:00:00	-1.54	-0.82	4.06	-12.17	1.18	-2.62		3.67	
15-Apr-2009	24:00:00	-2.48	-0.84	3.64	-12.84	0.18	-4.11		3.68	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
16-Apr-2009	06:00:00	-3.44	-1.17	3.04	-13.26	-0.33	-4.78		3.21	
16-Apr-2009	12:00:00	-3.73	-1.49	2.77	-13.50	-0.43	-5.20		3.02	
16-Apr-2009	18:00:00	-4.14	-2.01	2.81	-13.50	-0.66	-5.80		2.90	
16-Apr-2009	24:00:00	-4.62	-3.03	2.58	-13.83	-1.23	-7.18		2.56	
17-Apr-2009	06:00:00	-4.50	-3.41	2.47	-13.74	-1.16	-8.18		2.19	
17-Apr-2009	12:00:00	-4.74	-3.95	2.22	-14.13	-1.44	-8.94		1.87	
17-Apr-2009	18:00:00	-4.84	-4.62	2.26	-14.09	-1.74	-9.21		1.62	
17-Apr-2009	24:00:00	-4.77	-5.79	2.47	-13.97	-2.25	-10.18		1.95	
18-Apr-2009	06:00:00	-4.70	-6.39	2.27	-14.00	-2.24	-10.85		2.07	
18-Apr-2009	12:00:00	-4.76	-6.75	2.36	-13.96	-2.28	-11.78		2.17	
18-Apr-2009	18:00:00	-5.06	-7.43	2.22	-14.10	-3.04	-13.07		1.98	
18-Apr-2009	24:00:00	-5.16	-8.60	2.41	-14.07	-4.12	-13.96		1.86	
19-Apr-2009	06:00:00	-5.05	-9.27	2.21	-14.09	-4.34	-14.92		1.95	
19-Apr-2009	12:00:00	-5.01	-9.38	2.16	-14.02	-4.47	-15.56		2.17	
19-Apr-2009	18:00:00	-5.29	-9.80	1.99	-14.32	-5.02	-16.20		1.47	
19-Apr-2009	24:00:00	-5.01	-10.58	2.14	-14.14	-6.00	-16.43		1.30	
20-Apr-2009	06:00:00	-4.81	-10.79	2.11	-14.08	-5.49	-16.80		2.00	
20-Apr-2009	12:00:00	-4.64	-10.43	2.28	-13.96	-5.12	-16.94		2.74	
20-Apr-2009	18:00:00	-4.77	-10.52	2.14	-14.12	-4.74	-17.20		2.24	
20-Apr-2009	24:00:00	-2.36	-9.33	2.17	-14.18	-0.87	-14.10		2.83	
21-Apr-2009	06:00:00	-4.23	-7.95	1.96	-14.26	-1.77	-13.43		1.88	
21-Apr-2009	12:00:00	-4.86	-8.19	1.88	-14.42	-2.20	-13.50		1.69	
21-Apr-2009	18:00:00	-5.16	-8.72	1.85	-14.52	-2.85	-14.25		1.17	
21-Apr-2009	24:00:00	-5.91	-10.17	1.57	-14.69	-5.14	-15.46		0.28	
22-Apr-2009	06:00:00	-5.83	-11.07	1.43	-14.74	-5.07	-16.29		0.45	
22-Apr-2009	12:00:00	-6.08	-11.48	1.30	-14.91	-5.52	-17.01		0.12	
22-Apr-2009	18:00:00	-6.85	-12.28	0.91	-15.11	-7.84	-18.15		-1.46	
22-Apr-2009	24:00:00	-7.14	-13.46	0.78	-15.38	-10.64	-18.96		-2.32	
23-Apr-2009	06:00:00	-6.74	-14.40	0.97	-15.29	-11.08	-19.32		-2.00	
23-Apr-2009	12:00:00	-6.86	-15.09	0.96	-15.29	-11.37	-19.92		-1.73	
23-Apr-2009	18:00:00	-7.51	-15.60	0.66	-15.59	-12.37	-20.66		-3.20	
23-Apr-2009	24:00:00	-7.68	-16.17	0.62	-15.80	-14.23	-21.29		-3.56	
24-Apr-2009	06:00:00	-7.20	-16.62	0.60	-15.59	-14.38	-21.42		-3.22	
24-Apr-2009	12:00:00	-7.30	-16.85	0.66	-15.62	-14.61	-21.58		-2.91	
24-Apr-2009	18:00:00	-7.78	-17.30	0.35	-15.92	-15.28	-22.19		-3.81	
24-Apr-2009	24:00:00	-7.92	-17.55	0.42	-16.00	-16.16	-22.42		-4.12	
25-Apr-2009	06:00:00	-7.45	-17.80	0.40	-15.92	-16.70	-22.48		-3.89	
25-Apr-2009	12:00:00	-7.28	-17.82	0.41	-15.82	-16.89	-22.50		-3.27	
25-Apr-2009	18:00:00	-8.31	-18.16	0.12	-16.19	-17.56	-23.09		-4.64	
25-Apr-2009	24:00:00	-8.59	-18.48	0.04	-16.44	-18.42	-23.33		-5.15	
26-Apr-2009	06:00:00	-7.82	-18.47	0.19	-16.06	-18.79	-23.21		-4.49	
26-Apr-2009	12:00:00	-7.89	-18.60	0.23	-16.07	-19.26	-23.34		-3.99	
26-Apr-2009	18:00:00	-8.77	-18.80	-0.01	-16.48	-19.87	-23.79		-5.30	
26-Apr-2009	24:00:00	-9.03	-19.08	-0.10	-16.66	-20.31	-24.14		-5.85	
27-Apr-2009	06:00:00	-8.58	-19.17	0.05	-16.34	-20.49	-24.15		-5.45	
27-Apr-2009	12:00:00	-8.44	-19.16	0.05	-16.16	-20.76	-24.18		-4.90	
27-Apr-2009	18:00:00	-9.54	-19.50	-0.47	-16.72	-21.28	-24.83		-6.14	
27-Apr-2009	24:00:00	-9.88	-19.67	-0.31	-17.03	-21.58	-24.88		-6.69	
28-Apr-2009	06:00:00	-9.32	-19.76	-0.17	-16.49	-21.73	-24.86		-6.03	
28-Apr-2009	12:00:00	-9.10	-19.71	0.06	-16.35	-21.86	-24.76		-5.22	
28-Apr-2009	18:00:00	-10.17	-19.94	-0.42	-17.01	-22.34	-25.02		-6.24	
28-Apr-2009	24:00:00	-10.32	-20.01	-0.32	-17.13	-22.46	-24.84		-6.69	
29-Apr-2009	06:00:00	-9.87	-20.03	-0.18	-16.60	-22.51	-24.74		-5.76	
29-Apr-2009	12:00:00	-9.92	-19.97	-0.26	-16.67	-22.70	-24.81		-5.34	
29-Apr-2009	18:00:00	-10.64	-20.04	-0.49	-17.08	-23.00	-24.88		-6.18	
29-Apr-2009	24:00:00	-10.83	-20.15	-0.53	-17.33	-23.02	-24.70		-6.96	
30-Apr-2009	06:00:00	-10.76	-20.26	-0.55	-17.08	-23.30	-24.76		-6.80	
30-Apr-2009	12:00:00	-10.48	-20.19	-0.31	-16.84	-23.44	-24.74		-6.21	
30-Apr-2009	18:00:00	-10.50	-20.08	-0.42	-16.86	-23.58	-24.88		-6.41	
30-Apr-2009	24:00:00	-11.00	-20.19	-0.40	-17.15	-23.78	-24.74		-6.56	
1-May-2009	06:00:00	-10.47	-20.16	-0.32	-16.78	-23.74	-24.75		-5.90	
1-May-2009	12:00:00	-10.11	-19.84	-0.17	-16.72	-23.82	-24.69		-5.26	
1-May-2009	18:00:00	-11.13	-19.90	-0.47	-17.02	-24.20	-24.59		-5.98	
1-May-2009	24:00:00	-10.77	-20.13	-0.42	-17.38	-24.24	-24.60		-6.39	
2-May-2009	06:00:00	-10.63	-20.19	-0.41	-16.96	-24.42	-24.70		-5.91	
2-May-2009	12:00:00	-10.41	-19.95	-0.32	-16.68	-24.42	-24.62		-5.08	
2-May-2009	18:00:00	-11.07	-19.86	-0.62	-17.24	-24.73	-24.53		-6.09	
2-May-2009	24:00:00	-11.50	-20.28	-0.80	-17.63	-24.79	-24.59		-7.19	
3-May-2009	06:00:00	-10.41	-20.33	-0.56	-17.21	-24.81	-24.56		-6.59	
3-May-2009	12:00:00	-9.90	-20.08	-0.50	-17.07	-24.88	-24.50		-6.32	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
3-May-2009	18:00:00	-10.71	-20.10	-0.94	-17.63	-25.23	-24.59		-7.24	
3-May-2009	24:00:00	-11.71	-20.28	-0.91	-17.84	-25.33	-24.48		-8.14	
4-May-2009	06:00:00	-11.54	-20.31	-0.79	-17.52	-25.34	-24.47		-7.66	
4-May-2009	12:00:00	-11.32	-20.16	-0.73	-17.34	-25.57	-24.38		-7.12	
4-May-2009	18:00:00	-12.37	-20.39	-1.44	-18.30	-25.93	-24.62		-8.92	
4-May-2009	24:00:00	-12.92	-20.61	-1.34	-18.54	-26.01	-24.44		-9.57	
5-May-2009	06:00:00	-9.40	-20.72	-1.01	-17.81	-25.94	-24.44		-8.58	
5-May-2009	12:00:00	-9.80	-20.30	-1.00	-17.63	-26.05	-24.50		-8.08	
5-May-2009	18:00:00	-4.36	-19.30	-0.74	-17.45	-22.47	-24.68		-6.80	
5-May-2009	24:00:00	-6.34	-18.14	-0.86	-17.58	-21.87	-24.41		-7.67	
6-May-2009	06:00:00	-7.65	-17.88	-1.08	-17.49	-22.00	-24.50		-8.08	
6-May-2009	12:00:00	-7.86	-17.63	-0.88	-17.36	-21.85	-24.33		-7.62	
6-May-2009	18:00:00	-8.77	-17.92	-1.15	-17.98	-22.26	-24.52		-8.61	
6-May-2009	24:00:00	-9.50	-18.20	-1.26	-18.36	-22.42	-24.42		-9.11	
7-May-2009	06:00:00	-9.49	-18.42	-1.12	-17.96	-22.64	-24.48		-8.66	
7-May-2009	12:00:00	-2.86	-18.39	-0.98	-17.73	-22.17	-24.44		-7.89	
7-May-2009	18:00:00	-0.91	-6.32	-0.35	-16.80	-2.02	-8.14		-6.88	
7-May-2009	24:00:00	-3.45	-8.46	-0.59	-17.34	-2.70	-10.00		-7.24	
8-May-2009	06:00:00	-3.99	-9.21	-0.48	-17.18	-2.52	-11.85		-7.16	
8-May-2009	12:00:00	-4.00	-8.94	-0.62	-17.20	-2.44	-13.31		-6.98	
8-May-2009	18:00:00	-5.13	-10.68	-1.00	-17.66	-2.97	-14.74		-7.66	
8-May-2009	24:00:00	-5.80	-12.69	-1.19	-17.98	-3.62	-16.08		-8.27	
9-May-2009	06:00:00	-5.65	-13.61	-0.98	-17.61	-3.68	-16.60		-7.61	
9-May-2009	12:00:00	-5.76	-14.21	-1.15	-17.73	-3.90	-17.24		-7.43	
9-May-2009	18:00:00	-7.15	-15.56	-1.66	-18.45	-5.37	-18.46		-8.88	
9-May-2009	24:00:00	-7.95	-17.14	-1.68	-18.90	-8.18	-19.38		-9.74	
10-May-2009	06:00:00	-6.93	-17.67	-1.60	-18.42	-9.40	-20.14		-9.57	
10-May-2009	12:00:00	-7.14	-17.99	-1.64	-18.36	-10.33	-20.56		-9.64	
10-May-2009	18:00:00	-7.70	-18.54	-2.04	-18.98	-11.40	-21.30		-10.91	
10-May-2009	24:00:00	-8.56	-19.36	-2.11	-19.38	-12.75	-22.22		-11.57	
11-May-2009	06:00:00	-7.50	-19.40	-1.60	-18.47	-13.50	-22.55		-10.55	
11-May-2009	12:00:00	-7.32	-19.40	-1.70	-18.34	-14.02	-22.88		-9.76	
11-May-2009	18:00:00	-4.95	-19.25	-1.72	-18.38	-13.32	-23.19		-9.74	
11-May-2009	24:00:00	-6.31	-19.11	-1.98	-18.72	-12.32	-23.66	-24.39	-10.26	
12-May-2009	06:00:00	-6.80	-19.11	-1.79	-18.47	-12.75	-24.11	-24.47	-10.19	
12-May-2009	12:00:00	-7.23	-19.25	-2.03	-18.66	-13.64	-24.65	-25.28	-10.34	
12-May-2009	18:00:00	-7.96	-19.55	-2.29	-19.05	-14.52	-24.95	-24.96	-11.36	
12-May-2009	24:00:00	-8.88	-20.44	-2.40	-19.60	-15.37	-24.95	-25.68	-12.34	
13-May-2009	06:00:00	-8.46	-20.50	-2.16	-19.08	-15.40	-24.66	-25.79	-12.34	
13-May-2009	12:00:00	-8.31	-20.44	-2.15	-18.95	-16.05	-24.70	-26.51	-11.86	
13-May-2009	18:00:00	-9.44	-20.74	-2.71	-19.77	-16.84	-24.75	-26.51	-13.32	
13-May-2009	24:00:00	-9.99	-21.17	-2.74	-20.06	-17.70	-24.70	-27.35	-13.88	
14-May-2009	06:00:00	-9.01	-21.05	-2.32	-19.20	-18.03	-24.53	-27.33	-12.92	
14-May-2009	12:00:00	-8.66	-20.61	-2.08	-18.92	-18.34	-24.59	-28.20	-11.58	
14-May-2009	18:00:00	-9.22	-20.55	-2.48	-19.16	-18.85	-24.48	-28.01	-12.36	
14-May-2009	24:00:00	-9.93	-21.03	-2.54	-19.58	-19.35	-24.56	-28.61	-13.04	
15-May-2009	06:00:00	-9.31	-20.91	-2.36	-19.25	-19.65	-24.53	-28.91	-12.45	
15-May-2009	12:00:00	-8.98	-20.57	-2.42	-19.05	-19.76	-24.51	-29.26	-11.97	
15-May-2009	18:00:00	-10.34	-20.73	-2.82	-19.71	-20.18	-24.57	-29.37	-12.81	
15-May-2009	24:00:00	-10.88	-21.17	-2.88	-20.31	-20.48	-24.54	-30.12	-13.91	
16-May-2009	06:00:00	-9.98	-20.87	-2.47	-19.41	-20.47	-24.46	-29.87	-13.16	
16-May-2009	12:00:00	-9.75	-20.62	-2.35	-19.25	-20.76	-24.44	-30.45	-12.47	
16-May-2009	18:00:00	-11.36	-20.90	-3.08	-20.16	-21.28	-24.57	-30.69	-13.77	
16-May-2009	24:00:00	-2.66	-14.09	-1.30	-18.93	-11.95	-24.40	-30.95	-11.88	
17-May-2009	06:00:00	-4.68	-14.72	-1.67	-18.87	-13.60	-24.42	-31.07	-11.70	
17-May-2009	12:00:00	-5.55	-15.47	-1.62	-18.75	-14.35	-24.41	-31.56	-11.10	
17-May-2009	18:00:00	-0.22	-13.56	-1.63	-18.54	-5.82	-24.51	-31.40	-10.71	
17-May-2009	24:00:00	-0.74	-7.08	-1.74	-18.63	-2.35	-24.52	-31.56	-10.31	
18-May-2009	06:00:00	-2.67	-8.90	-1.96	-18.71	-2.23	-24.53	-30.22	-11.28	
18-May-2009	12:00:00	-1.34	-6.99	-1.86	-18.77	-1.27	-24.47	-30.06	-10.74	
18-May-2009	18:00:00	-4.34	-8.09	-2.24	-19.19	-2.66	-24.57	-28.43	-11.93	
18-May-2009	24:00:00	-6.03	-10.96	-2.44	-19.64	-3.36	-24.59	-28.24	-13.31	
19-May-2009	06:00:00	-6.10	-12.20	-2.39	-19.34	-3.69	-24.59	-28.05	-13.38	
19-May-2009	12:00:00	-6.36	-13.07	-2.44	-19.34	-3.90	-24.42	-28.62	-13.04	
19-May-2009	18:00:00	-7.32	-14.93	-2.82	-19.80	-5.36	-24.56	-28.72	-14.25	
19-May-2009	24:00:00	-7.98	-17.07	-2.88	-20.21	-7.74	-24.50	-29.49	-14.75	
20-May-2009	06:00:00	-7.32	-17.55	-2.60	-19.54	-9.40	-24.26	-29.51	-14.19	
20-May-2009	12:00:00	-7.39	-17.93	-2.64	-19.54	-10.68	-24.42	-30.21	-13.89	
20-May-2009	18:00:00	-8.44	-18.83	-2.99	-20.07	-11.97	-24.65	-30.47	-14.69	
20-May-2009	24:00:00	-9.14	-19.85	-3.02	-20.50	-13.95	-24.57	-31.06	-15.42	



Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
21-May-2009	06:00:00	-7.92	-19.59	-2.68	-19.67	-14.62	-24.42	-31.02	-14.26	
21-May-2009	12:00:00	-7.72	-19.44	-2.76	-19.67	-15.18	-24.42	-31.62	-13.72	
21-May-2009	18:00:00	-9.66	-20.18	-3.35	-20.56	-16.11	-24.58	-31.31	-15.42	
21-May-2009	24:00:00	-10.29	-21.05	-3.35	-20.87	-16.78	-24.46	-31.78	-15.95	
22-May-2009	06:00:00	-9.08	-20.57	-2.84	-19.89	-16.98	-24.29	-31.13	-14.93	
22-May-2009	12:00:00	-8.98	-20.44	-2.93	-19.98	-17.71	-24.51	-31.67	-14.45	
22-May-2009	18:00:00	-10.62	-20.92	-3.47	-20.66	-18.37	-24.62	-31.41	-15.64	
22-May-2009	24:00:00	-11.08	-21.30	-3.43	-20.88	-18.75	-24.46	-31.60	-16.43	
23-May-2009	06:00:00	-10.12	-21.10	-3.17	-20.27	-19.10	-24.44	-31.29	-15.96	
23-May-2009	12:00:00	-9.87	-20.80	-3.05	-20.07	-19.29	-24.40	-31.59	-15.11	
23-May-2009	18:00:00	-11.08	-21.11	-3.56	-20.80	-19.80	-24.53	-31.30	-16.26	
23-May-2009	24:00:00	-11.84	-21.34	-3.49	-21.08	-20.05	-24.38	-31.61	-17.08	
24-May-2009	06:00:00	-11.07	-21.30	-3.35	-20.45	-20.30	-24.48	-31.18	-16.58	
24-May-2009	12:00:00	-10.69	-21.12	-3.30	-20.28	-20.60	-24.52	-31.59	-15.74	
24-May-2009	18:00:00	-11.74	-21.14	-3.65	-20.98	-20.95	-24.45	-31.49	-16.74	
24-May-2009	24:00:00	-8.42	-21.12	-3.13	-20.31	-13.95	-24.40	-31.60	-15.62	
25-May-2009	06:00:00	-8.90	-20.88	-3.12	-20.19	-14.86	-24.34	-31.16	-15.44	
25-May-2009	12:00:00	-9.13	-20.51	-3.06	-20.01	-15.49	-24.41	-31.62	-14.68	
25-May-2009	18:00:00	-9.16	-20.33	-2.98	-19.91	-6.49	-24.35	-31.35	-14.84	
25-May-2009	24:00:00	-9.64	-20.37	-3.10	-20.06	-8.80	-24.32	-31.64	-14.58	
26-May-2009	06:00:00	-9.79	-20.19	-3.16	-19.84	-10.74	-24.33	-31.16	-14.55	
26-May-2009	12:00:00	-9.63	-20.01	-3.11	-19.79	-11.62	-24.36	-31.59	-14.22	
26-May-2009	18:00:00	-5.98	-19.55	-3.26	-19.90	-8.88	-24.39	-31.31	-14.32	
26-May-2009	24:00:00	-5.61	-18.93	-3.19	-19.76	-2.67	-24.50	-31.55	-13.79	
27-May-2009	06:00:00	-6.85	-18.44	-2.98	-19.53	-3.10	-24.35	-31.11	-13.83	
27-May-2009	12:00:00	-7.52	-18.27	-3.06	-19.61	-3.56	-24.35	-31.54	-13.42	
27-May-2009	18:00:00	-8.85	-18.74	-3.76	-20.58	-5.02	-24.50	-31.24	-14.86	
27-May-2009	24:00:00	-10.74	-19.52	-4.06	-21.41	-6.93	-24.54	-31.36	-15.99	
28-May-2009	06:00:00	-10.41	-19.59	-3.74	-20.82	-8.13	-24.45	-31.46	-15.38	
28-May-2009	12:00:00	-10.40	-19.68	-3.73	-20.85	-9.08	-24.47	-31.65	-15.08	
28-May-2009	18:00:00	-11.41	-19.86	-4.15	-21.28	-10.32	-24.51	-31.55	-16.22	
28-May-2009	24:00:00	-12.15	-20.39	-4.16	-21.77	-11.95	-24.35	-31.89	-16.84	
29-May-2009	06:00:00	-10.59	-20.49	-3.90	-21.11	-12.37	-24.34	-31.29	-16.37	
29-May-2009	12:00:00	-10.63	-20.49	-3.95	-21.06	-12.46	-24.51	-31.58	-15.80	
29-May-2009	18:00:00	-11.80	-20.52	-4.27	-21.53	-13.33	-24.40	-31.29	-16.76	
29-May-2009	24:00:00	-13.24	-20.86	-4.36	-22.22	-14.46	-24.36	-31.83	-18.02	
30-May-2009	06:00:00	-12.99	-21.06	-4.16	-21.58	-15.16	-24.29	-31.28	-18.16	
30-May-2009	12:00:00	-12.92	-21.16	-4.10	-21.47	-15.81	-24.39	-31.61	-17.63	
30-May-2009	18:00:00	-14.13	-21.38	-4.79	-22.32	-16.71	-24.57	-31.30	-19.23	
30-May-2009	24:00:00	-15.20	-21.69	-4.84	-22.85	-17.50	-24.45	-31.55	-20.43	
31-May-2009	06:00:00	-15.09	-21.76	-4.44	-21.94	-17.90	-24.40	-31.28	-19.82	
31-May-2009	12:00:00	-14.95	-21.59	-4.37	-21.72	-18.42	-24.45	-31.76	-18.82	
31-May-2009	18:00:00	-15.90	-21.78	-5.15	-22.95	-19.09	-24.63	-31.43	-20.37	
31-May-2009	24:00:00	-16.81	-22.06	-5.15	-23.46	-19.50	-24.42	-31.64	-21.86	
1-Jun-2009	06:00:00	-16.90	-21.96	-4.75	-22.49	-19.66	-24.40	-31.16	-21.60	
1-Jun-2009	12:00:00	-17.04	-21.80	-4.72	-22.31	-20.07	-24.36	-31.44	-21.29	
1-Jun-2009	18:00:00	-17.72	-22.19	-5.45	-23.56	-20.76	-24.54	-31.17	-22.90	
1-Jun-2009	24:00:00	-18.51	-22.47	-5.54	-24.04	-21.28	-24.51	-31.78	-24.20	
2-Jun-2009	06:00:00	-18.76	-22.22	-5.02	-22.85	-21.46	-24.35	-31.29	-23.33	
2-Jun-2009	12:00:00	-18.79	-22.08	-4.81	-22.47	-21.67	-24.35	-31.59	-22.10	
2-Jun-2009	18:00:00	-19.35	-22.26	-5.53	-23.72	-22.34	-24.53	-31.38	-23.31	
2-Jun-2009	24:00:00	-20.04	-22.35	-5.50	-23.86	-22.54	-24.41	-31.53	-24.70	
3-Jun-2009	06:00:00	-20.24	-22.36	-5.15	-23.07	-22.71	-24.44	-31.30	-23.82	
3-Jun-2009	12:00:00	-20.49	-22.30	-5.09	-22.84	-23.05	-24.46	-31.59	-22.68	
3-Jun-2009	18:00:00	-20.90	-22.31	-5.82	-23.99	-23.44	-24.51	-31.19	-23.85	
3-Jun-2009	24:00:00	-21.67	-22.59	-5.80	-24.59	-23.71	-24.45	-31.72	-25.25	
4-Jun-2009	06:00:00	-21.94	-22.38	-5.23	-23.32	-23.83	-24.30	-30.94	-24.75	
4-Jun-2009	12:00:00	-22.34	-22.48	-5.23	-23.07	-24.18	-24.44	-31.50	-23.58	
4-Jun-2009	18:00:00	-22.53	-22.47	-5.88	-24.08	-24.52	-24.35	-31.28	-24.20	
4-Jun-2009	24:00:00	-22.87	-22.29	-5.51	-23.67	-24.39	-24.16	-31.65	-24.78	
5-Jun-2009	06:00:00	-11.07	-10.07	-4.16	-22.18	-4.29	-24.29	-31.06	-22.47	
5-Jun-2009	12:00:00	-9.61	-11.56	-4.27	-21.87	-4.58	-24.28	-31.53	-20.84	
5-Jun-2009	18:00:00	-10.36	-13.72	-4.79	-22.13	-6.33	-24.42	-31.20	-20.62	
5-Jun-2009	24:00:00	-11.66	-15.46	-5.14	-22.77	-9.14	-24.34	-31.67	-21.52	
6-Jun-2009	06:00:00	-12.37	-16.52	-5.05	-22.42	-10.98	-24.38	-31.34	-21.95	
6-Jun-2009	12:00:00	-12.33	-17.26	-4.94	-22.20	-12.01	-24.30	-31.55	-21.54	
6-Jun-2009	18:00:00	-13.03	-18.11	-5.39	-22.68	-13.39	-24.41	-31.40	-22.53	
6-Jun-2009	24:00:00	-13.60	-18.83	-5.48	-22.91	-14.26	-24.42	-31.65	-22.96	
7-Jun-2009	06:00:00	-13.69	-19.06	-5.17	-22.42	-14.64	-24.28	-31.32	-22.55	
7-Jun-2009	12:00:00	-13.78	-19.30	-5.11	-22.40	-15.07	-24.35	-31.50	-21.99	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
7-Jun-2009	18:00:00	-14.26	-19.79	-5.51	-22.88	-15.63	-24.45	-31.25	-22.61	
7-Jun-2009	24:00:00	-14.95	-20.24	-5.66	-23.52	-16.29	-24.48	-31.53	-23.72	
8-Jun-2009	06:00:00	-15.18	-20.36	-5.28	-22.78	-16.64	-24.44	-31.17	-23.13	
8-Jun-2009	12:00:00	-15.21	-20.43	-5.12	-22.64	-17.05	-24.33	-31.47	-22.12	
8-Jun-2009	18:00:00	-15.74	-20.73	-5.88	-23.48	-17.72	-24.48	-31.23	-23.21	
8-Jun-2009	24:00:00	-16.59	-21.17	-5.94	-24.23	-18.22	-24.42	-31.62	-24.78	
9-Jun-2009	06:00:00	-16.92	-21.21	-5.48	-23.30	-18.52	-24.29	-31.12	-24.22	
9-Jun-2009	12:00:00	-17.14	-21.24	-5.39	-22.98	-18.80	-24.21	-31.49	-23.22	
9-Jun-2009	18:00:00	-17.84	-21.68	-6.12	-24.15	-19.47	-24.41	-31.42	-24.63	
9-Jun-2009	24:00:00	-18.09	-21.86	-5.80	-23.66	-19.80	-24.44	-31.56	-24.74	
10-Jun-2009	06:00:00	-17.86	-21.95	-5.64	-23.44	-15.20	-24.45	-31.79	-24.56	
10-Jun-2009	12:00:00	-17.11	-21.78	-5.46	-23.01	-15.88	-24.35	-31.90	-23.36	
10-Jun-2009	18:00:00	-17.37	-21.87	-5.75	-23.38	-16.56	-24.39	-31.19	-23.55	
10-Jun-2009	24:00:00	-18.57	-22.11	-6.22	-24.46	-17.47	-24.51	-31.58	-25.44	
11-Jun-2009	06:00:00	-18.67	-22.10	-5.65	-23.33	-17.92	-24.46	-31.19	-24.68	
11-Jun-2009	12:00:00	-18.36	-21.90	-5.34	-22.92	-18.34	-24.30	-31.46	-23.50	
11-Jun-2009	18:00:00	-19.00	-22.12	-5.89	-23.69	-18.97	-24.35	-31.23	-24.47	
11-Jun-2009	24:00:00	-19.71	-22.30	-6.00	-24.46	-19.40	-24.38	-31.83	-26.04	
12-Jun-2009	06:00:00	-20.23	-22.31	-5.80	-23.66	-19.86	-24.39	-31.34	-25.58	
12-Jun-2009	12:00:00	-20.41	-22.28	-5.59	-23.27	-20.08	-24.30	-31.44	-24.56	
12-Jun-2009	18:00:00	-21.13	-22.61	-6.38	-24.68	-20.68	-24.42	-31.34	-25.91	
12-Jun-2009	24:00:00	-21.97	-22.74	-6.46	-25.10	-21.03	-24.23	-31.52	-27.57	
13-Jun-2009	06:00:00	-22.63	-22.67	-5.95	-24.11	-21.19	-24.23	-31.02	-27.50	
13-Jun-2009	12:00:00	-22.96	-22.79	-5.86	-23.87	-21.55	-24.35	-31.52	-26.46	
13-Jun-2009	18:00:00	-23.55	-22.94	-6.72	-25.17	-22.16	-24.28	-31.40	-27.46	
13-Jun-2009	24:00:00	-24.38	-23.33	-6.92	-25.94	-22.51	-24.44	-31.83	-29.24	
14-Jun-2009	06:00:00	-24.73	-23.33	-6.35	-24.63	-22.68	-24.36	-31.02	-29.01	
14-Jun-2009	12:00:00	-24.88	-23.34	-6.19	-24.29	-22.95	-24.17	-31.50	-27.63	
14-Jun-2009	18:00:00	-25.45	-23.64	-7.09	-25.74	-23.41	-24.35	-31.13	-29.01	
14-Jun-2009	24:00:00	-26.05	-23.76	-7.26	-26.21	-23.70	-24.26	-31.48	-30.65	
15-Jun-2009	06:00:00	-26.42	-23.80	-6.67	-24.96	-23.96	-24.22	-31.10	-30.35	
15-Jun-2009	12:00:00	-26.76	-24.00	-6.54	-24.75	-24.31	-24.29	-31.49	-29.28	
15-Jun-2009	18:00:00	-27.10	-24.12	-7.21	-25.98	-24.61	-24.33	-31.41	-29.84	
15-Jun-2009	24:00:00	-26.38	-24.24	-7.24	-26.14	-24.97	-24.28	-31.98	-31.49	
16-Jun-2009	06:00:00	-22.71	-23.50	-6.31	-24.89	-18.74	-24.28	-31.16	-30.26	
16-Jun-2009	12:00:00	-22.46	-23.18	-6.30	-24.50	-19.32	-24.30	-31.68	-28.70	
16-Jun-2009	18:00:00	-21.97	-22.92	-6.16	-24.34	-19.71	-24.29	-31.38	-28.00	
16-Jun-2009	24:00:00	-19.60	-20.68	-6.16	-24.15	-16.89	-24.33	-31.79	-27.38	
17-Jun-2009	06:00:00	-19.11	-20.61	-6.04	-23.96	-17.49	-24.27	-31.37	-26.96	
17-Jun-2009	12:00:00	-19.21	-20.44	-5.95	-23.84	-18.06	-24.23	-31.59	-26.26	
17-Jun-2009	18:00:00	-19.46	-20.63	-6.53	-24.32	-18.87	-24.42	-31.14	-26.57	
17-Jun-2009	24:00:00	-19.81	-20.67	-6.53	-24.54	-19.33	-24.34	-31.29	-27.27	
18-Jun-2009	06:00:00	-19.90	-20.51	-6.07	-23.80	-15.74	-24.27	-31.04	-26.56	
18-Jun-2009	12:00:00	-19.52	-20.64	-5.84	-23.69	-16.04	-24.51	-31.35	-25.61	
18-Jun-2009	18:00:00	-18.97	-20.60	-6.19	-23.94	-14.73	-24.47	-31.26	-25.41	
18-Jun-2009	24:00:00	-19.44	-20.55	-6.70	-24.99	-15.58	-24.34	-31.52	-26.70	
19-Jun-2009	06:00:00	-19.83	-20.50	-6.23	-24.00	-16.16	-24.34	-31.11	-26.28	
19-Jun-2009	12:00:00	-20.43	-20.75	-6.26	-23.91	-16.86	-24.45	-31.44	-25.89	
19-Jun-2009	18:00:00	-21.27	-20.97	-7.09	-25.29	-17.58	-24.39	-31.35	-27.20	
19-Jun-2009	24:00:00	-21.92	-21.26	-7.21	-25.64	-18.16	-24.38	-31.41	-29.20	
20-Jun-2009	06:00:00	-22.45	-21.46	-6.73	-24.77	-18.67	-24.38	-31.08	-29.10	
20-Jun-2009	12:00:00	-22.77	-21.59	-6.64	-24.34	-19.14	-24.45	-31.48	-28.02	
20-Jun-2009	18:00:00	-23.28	-21.86	-7.39	-25.70	-19.68	-24.56	-31.40	-28.73	
20-Jun-2009	24:00:00	-24.19	-22.22	-7.67	-26.55	-20.24	-24.50	-31.70	-30.80	
21-Jun-2009	06:00:00	-24.63	-22.26	-7.13	-25.44	-20.35	-24.29	-31.31	-30.94	
21-Jun-2009	12:00:00	-24.86	-22.42	-6.85	-24.99	-20.72	-24.27	-31.44	-30.10	
21-Jun-2009	18:00:00	-25.54	-22.83	-7.94	-26.68	-21.38	-24.41	-31.35	-31.14	
21-Jun-2009	24:00:00	-26.42	-23.24	-7.97	-27.15	-21.75	-24.36	-31.46	-32.86	
22-Jun-2009	06:00:00	-27.09	-23.56	-7.55	-25.98	-22.14	-24.41	-31.16	-33.09	
22-Jun-2009	12:00:00	-27.42	-23.61	-7.16	-25.29	-22.40	-24.23	-31.38	-31.79	
22-Jun-2009	18:00:00	-27.84	-23.96	-8.06	-26.75	-22.83	-24.45	-31.34	-32.31	
22-Jun-2009	24:00:00	-28.46	-24.27	-8.30	-27.56	-23.22	-24.47	-31.58	-34.12	
23-Jun-2009	06:00:00	-28.83	-24.46	-7.69	-26.18	-23.55	-24.30	-31.22	-34.01	
23-Jun-2009	12:00:00	-29.17	-24.54	-7.49	-25.61	-23.88	-24.42	-31.43	-32.84	
23-Jun-2009	18:00:00	-29.42	-24.81	-8.48	-27.12	-24.38	-24.57	-31.34	-33.69	
23-Jun-2009	24:00:00	-29.17	-24.95	-8.57	-27.77	-24.64	-24.46	-31.54	-35.38	
24-Jun-2009	06:00:00	-29.12	-25.13	-8.00	-26.64	-24.79	-24.35	-31.18	-35.56	
24-Jun-2009	12:00:00	-29.06	-25.26	-7.68	-25.91	-25.04	-24.28	-31.40	-34.42	
24-Jun-2009	18:00:00	-29.00	-25.72	-8.48	-27.17	-25.59	-24.53	-31.44	-34.08	
24-Jun-2009	24:00:00	-28.82	-25.82	-8.63	-27.72	-25.80	-24.51	-31.49	-35.91	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
25-Jun-2009	06:00:00	-28.89	-25.97	-8.09	-26.52	-26.12	-24.35	-31.13	-36.00	
25-Jun-2009	12:00:00	-28.88	-26.04	-7.75	-25.95	-26.41	-24.34	-31.43	-34.83	
25-Jun-2009	18:00:00	-29.01	-26.34	-8.81	-27.62	-26.77	-24.56	-31.34	-35.52	
25-Jun-2009	24:00:00	-28.77	-26.52	-8.92	-28.04	-26.86	-24.41	-31.50	-37.11	
26-Jun-2009	06:00:00	-28.63	-26.55	-8.34	-26.78	-27.12	-24.39	-31.38	-36.95	
26-Jun-2009	12:00:00	-28.70	-26.64	-8.02	-26.32	-27.31	-24.45	-31.50	-35.69	
26-Jun-2009	18:00:00	-28.78	-26.86	-9.02	-27.89	-27.64	-24.57	-31.26	-36.34	
26-Jun-2009	24:00:00	-28.64	-26.94	-9.25	-28.34	-27.92	-24.45	-31.71	-38.03	
27-Jun-2009	06:00:00	-28.63	-26.94	-8.50	-27.02	-27.94	-24.33	-31.23	-37.95	
27-Jun-2009	12:00:00	-28.68	-27.09	-8.22	-26.52	-28.17	-24.34	-31.44	-36.89	
27-Jun-2009	18:00:00	-28.83	-27.28	-9.32	-28.24	-28.54	-24.52	-31.35	-37.34	
27-Jun-2009	24:00:00	-28.66	-27.30	-9.42	-28.68	-28.42	-24.45	-31.52	-38.99	
28-Jun-2009	06:00:00	-28.60	-27.56	-8.98	-27.58	-28.39	-24.42	-31.26	-39.16	
28-Jun-2009	12:00:00	-28.65	-27.64	-8.54	-26.98	-28.51	-24.41	-31.41	-38.15	
28-Jun-2009	18:00:00	-28.81	-27.78	-9.61	-28.70	-28.58	-24.59	-31.41	-38.62	
28-Jun-2009	24:00:00	-28.74	-27.90	-9.77	-29.13	-28.53	-24.46	-31.67	-40.07	
29-Jun-2009	06:00:00	-28.88	-28.07	-9.22	-27.88	-28.64	-24.58	-31.35	-39.87	
29-Jun-2009	12:00:00	-28.70	-27.86	-8.80	-27.27	-28.52	-24.45	-31.53	-38.62	
29-Jun-2009	18:00:00	-28.70	-28.07	-9.85	-28.90	-28.47	-24.45	-31.19	-39.50	
29-Jun-2009	24:00:00	-28.80	-28.30	-10.18	-29.54	-28.52	-24.52	-31.73	-41.12	
30-Jun-2009	06:00:00	-28.63	-28.29	-9.37	-28.12	-28.36	-24.35	-31.17	-41.16	
30-Jun-2009	12:00:00	-28.63	-28.38	-9.17	-27.58	-28.42	-24.36	-31.41	-39.83	
30-Jun-2009	18:00:00	-28.75	-28.62	-10.08	-29.09	-28.44	-24.42	-31.32	-40.47	
30-Jun-2009	24:00:00	-28.72	-28.78	-10.26	-29.72	-28.42	-24.44	-31.52	-42.00	
1-Jul-2009	06:00:00	-28.63	-28.71	-9.61	-28.54	-28.34	-24.34	-31.11	-41.97	
1-Jul-2009	12:00:00	-28.71	-28.84	-9.40	-28.12	-28.36	-24.33	-31.43	-41.30	
1-Jul-2009	18:00:00	-28.80	-29.13	-10.44	-29.52	-28.54	-24.48	-31.19	-41.91	
1-Jul-2009	24:00:00	-28.72	-29.20	-10.45	-30.05	-28.42	-24.41	-31.74	-43.06	
2-Jul-2009	06:00:00	-28.66	-29.26	-9.82	-28.90	-28.33	-24.29	-31.42	-43.02	
2-Jul-2009	12:00:00	-28.63	-29.37	-9.43	-28.37	-28.35	-24.33	-31.38	-42.20	
2-Jul-2009	18:00:00	-28.75	-29.62	-10.46	-29.75	-28.46	-24.51	-31.22	-43.01	
2-Jul-2009	24:00:00	-28.72	-29.70	-10.45	-30.24	-28.35	-24.32	-31.28	-43.97	
3-Jul-2009	06:00:00	-28.64	-29.87	-10.18	-29.22	-28.33	-24.29	-31.20	-44.10	
3-Jul-2009	12:00:00	-28.66	-29.90	-9.89	-28.71	-28.34	-24.38	-31.48	-43.35	
3-Jul-2009	18:00:00	-28.69	-30.10	-10.73	-30.16	-28.41	-24.39	-30.96	-44.20	
3-Jul-2009	24:00:00	-28.59	-30.30	-10.87	-30.65	-28.36	-24.35	-31.59	-44.30	
4-Jul-2009	06:00:00	-28.63	-30.45	-10.36	-29.51	-28.23	-24.35	-31.16	-44.30	
4-Jul-2009	12:00:00	-28.63	-30.46	-10.00	-29.10	-28.35	-24.50	-31.35	-43.79	
4-Jul-2009	18:00:00	-28.68	-30.60	-10.81	-30.15	-28.39	-24.44	-31.23	-43.98	
4-Jul-2009	24:00:00	-28.77	-30.72	-11.11	-30.84	-28.38	-24.39	-31.70	-44.31	
5-Jul-2009	06:00:00	-28.54	-30.66	-10.25	-29.58	-28.32	-24.36	-31.13	-44.27	
5-Jul-2009	12:00:00	-28.66	-30.60	-9.96	-29.04	-28.28	-24.38	-31.49	-43.85	
5-Jul-2009	18:00:00	-28.65	-30.59	-10.45	-29.54	-28.30	-24.45	-31.19	-43.74	
5-Jul-2009	24:00:00	-28.75	-30.60	-10.50	-29.64	-28.32	-24.46	-31.66	-44.25	
6-Jul-2009	06:00:00	-28.66	-30.44	-10.18	-29.02	-28.33	-24.47	-31.29	-43.91	
6-Jul-2009	12:00:00	-28.63	-30.22	-9.91	-28.67	-28.23	-24.38	-31.54	-43.07	
6-Jul-2009	18:00:00	-28.90	-30.38	-10.00	-28.66	-28.41	-24.54	-31.28	-42.92	
6-Jul-2009	24:00:00	-28.60	-30.23	-10.21	-29.32	-28.35	-24.57	-31.78	-42.96	
7-Jul-2009	06:00:00	-28.70	-30.35	-9.91	-28.50	-28.41	-24.47	-31.05	-43.34	
7-Jul-2009	12:00:00	-28.66	-30.21	-9.70	-28.24	-28.35	-24.42	-31.52	-42.69	
7-Jul-2009	18:00:00	-28.84	-30.59	-10.80	-29.94	-28.42	-24.59	-31.23	-43.67	
7-Jul-2009	24:00:00	-28.76	-30.99	-11.21	-30.71	-28.40	-24.50	-31.56	-44.55	
8-Jul-2009	06:00:00	-28.68	-31.05	-10.61	-29.62	-28.20	-24.45	-31.17	-44.33	
8-Jul-2009	12:00:00	-28.64	-31.12	-10.34	-29.44	-28.38	-24.47	-31.41	-44.40	
8-Jul-2009	18:00:00	-28.78	-31.38	-11.29	-30.78	-28.46	-24.48	-31.28	-44.45	
8-Jul-2009	24:00:00	-28.69	-31.66	-11.51	-31.30	-28.41	-24.50	-31.70	-44.48	
9-Jul-2009	06:00:00	-28.76	-31.79	-10.79	-30.09	-28.32	-24.45	-31.28	-44.44	
9-Jul-2009	12:00:00	-28.70	-31.86	-10.54	-29.66	-28.24	-24.32	-31.47	-44.33	
9-Jul-2009	18:00:00	-28.70	-32.00	-10.96	-30.32	-28.38	-24.48	-31.25	-44.33	
9-Jul-2009	24:00:00	-28.72	-32.14	-11.30	-30.81	-28.30	-24.45	-31.48	-44.33	
10-Jul-2009	06:00:00	-28.60	-32.39	-10.94	-29.79	-28.26	-24.39	-31.23	-44.22	
10-Jul-2009	12:00:00	-28.56	-32.52	-10.72	-29.46	-28.26	-24.46	-31.40	-44.28	
10-Jul-2009	18:00:00	-28.82	-32.88	-11.71	-30.76	-28.41	-24.60	-31.35	-44.51	
10-Jul-2009	24:00:00	-28.63	-32.91	-11.71	-30.99	-28.24	-24.40	-31.38	-44.37	
11-Jul-2009	06:00:00	-28.70	-33.05	-11.41	-30.33	-28.40	-24.42	-31.28	-44.34	
11-Jul-2009	12:00:00	-28.64	-33.05	-11.04	-29.86	-28.29	-24.44	-31.52	-44.32	
11-Jul-2009	18:00:00	-28.66	-33.22	-11.64	-30.70	-28.30	-24.50	-31.41	-44.36	
11-Jul-2009	24:00:00	-28.74	-33.33	-11.96	-31.29	-28.32	-24.48	-31.70	-44.38	
12-Jul-2009	06:00:00	-28.64	-33.30	-11.33	-30.32	-28.24	-24.36	-31.36	-44.34	
12-Jul-2009	12:00:00	-28.69	-33.27	-11.18	-29.94	-28.34	-24.41	-31.56	-44.37	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
12-Jul-2009	18:00:00	-28.78	-33.48	-12.13	-31.34	-28.38	-24.52	-31.36	-44.36	
12-Jul-2009	24:00:00	-28.77	-33.66	-12.26	-31.70	-28.38	-24.48	-31.66	-44.37	
13-Jul-2009	06:00:00	-28.69	-33.78	-11.75	-30.88	-28.32	-24.39	-31.36	-44.36	
13-Jul-2009	12:00:00	-28.65	-33.77	-11.51	-30.34	-28.27	-24.40	-31.22	-44.38	
13-Jul-2009	18:00:00	-28.66	-33.62	-10.61	-29.90	-28.21	-24.39	-31.12	-44.28	
13-Jul-2009	24:00:00	-28.69	-33.64	-10.75	-29.62	-28.33	-24.58	-31.56	-44.36	
14-Jul-2009	06:00:00	-28.69	-33.56	-10.61	-29.38	-28.33	-24.47	-31.20	-44.34	
14-Jul-2009	12:00:00	-28.71	-33.42	-10.49	-29.16	-28.22	-24.45	-31.44	-44.31	
14-Jul-2009	18:00:00	-28.86	-33.66	-11.47	-30.36	-28.41	-24.58	-31.29	-44.44	
14-Jul-2009	24:00:00	-28.76	-33.81	-11.77	-31.01	-28.32	-24.54	-31.61	-44.38	
15-Jul-2009	06:00:00	-28.69	-33.92	-11.18	-30.06	-28.15	-24.46	-31.22	-44.30	
15-Jul-2009	12:00:00	-28.75	-34.11	-11.14	-29.75	-28.21	-24.45	-31.43	-44.30	
15-Jul-2009	18:00:00	-28.81	-34.26	-11.88	-30.71	-28.29	-24.60	-31.25	-44.42	
15-Jul-2009	24:00:00	-28.81	-34.34	-12.04	-31.28	-28.14	-24.56	-31.72	-44.32	
16-Jul-2009	06:00:00	-28.69	-34.35	-11.53	-30.42	-28.17	-24.39	-31.37	-44.27	
16-Jul-2009	12:00:00	-28.66	-34.28	-11.28	-30.05	-28.16	-24.39	-31.56	-44.30	
16-Jul-2009	18:00:00	-28.78	-34.42	-11.99	-30.99	-28.35	-24.59	-31.50	-44.51	
16-Jul-2009	24:00:00	-28.70	-29.62	-10.91	-30.03	-28.24	-24.45	-31.70	-44.43	
17-Jul-2009	06:00:00	-28.71	-29.97	-10.79	-29.46	-28.28	-24.40	-31.48	-44.31	
17-Jul-2009	12:00:00	-28.66	-30.32	-10.51	-29.10	-28.21	-24.42	-31.47	-44.34	
17-Jul-2009	18:00:00	-28.84	-30.66	-11.17	-29.79	-28.36	-24.66	-31.43	-44.54	
17-Jul-2009	24:00:00	-28.69	-31.04	-11.60	-30.48	-28.33	-24.51	-32.33	-44.40	
18-Jul-2009	06:00:00	-2.88	-2.14	-6.85	-21.05	3.10	-1.30	-2.55	-5.70	
18-Jul-2009	12:00:00	-4.56	-3.03	-7.21	-25.98	0.56	-4.10	-2.69	-5.79	
18-Jul-2009	18:00:00	-6.88	-4.14	-8.03	-26.99	-1.74	-5.97	-3.21	-6.35	
18-Jul-2009	24:00:00	-8.76	-5.72	-8.50	-27.56	-2.54	-8.70	-4.54	-7.50	
19-Jul-2009	06:00:00	-8.13	-6.45	-8.47	-27.23	-2.59	-9.78	-4.60	-10.56	
19-Jul-2009	12:00:00	-8.41	-7.47	-8.63	-27.29	-3.06	-11.43	-5.43	-27.35	
19-Jul-2009	18:00:00	-10.30	-8.91	-9.56	-28.19	-3.67	-13.85	-6.41	-38.00	
19-Jul-2009	24:00:00	-11.07	-11.00	-9.66	-28.26	-4.56	-16.64	-8.88	-42.74	
20-Jul-2009	06:00:00	-9.92	-12.60	-9.46	-27.80	-4.71	-17.92	-9.66	-42.82	
20-Jul-2009	12:00:00	-9.57	-13.71	-9.30	-27.54	-4.86	-18.94	-10.60	-42.26	
20-Jul-2009	18:00:00	-9.91	-14.74	-9.58	-27.62	-5.24	-20.28	-11.09	-42.18	
20-Jul-2009	24:00:00	-9.70	-14.91	-9.70	-27.74	-3.27	-21.17	-8.34	-42.36	
21-Jul-2009	06:00:00	-3.66	-3.52	-7.93	-25.32	-1.28	-2.98	-2.56	-3.60	
21-Jul-2009	12:00:00	-5.65	-4.19	-8.40	-25.79	-1.71	-3.83	-3.46	-3.30	
21-Jul-2009	18:00:00	-7.21	-5.13	-8.92	-26.28	-2.17	-4.95	-3.77	-3.36	
21-Jul-2009	24:00:00	-9.04	-6.45	-9.17	-26.80	-2.84	-7.04	-4.90	-4.76	
22-Jul-2009	06:00:00	-8.41	-7.10	-8.93	-26.43	-2.77	-7.80	-5.02	-6.95	
22-Jul-2009	12:00:00	-8.34	-7.76	-9.06	-26.56	-2.96	-8.40	-5.58	-12.50	
22-Jul-2009	18:00:00	-9.81	-8.85	-9.78	-27.16	-3.66	-9.35	-6.05	-22.66	
22-Jul-2009	24:00:00	-8.23	-8.02	-9.31	-26.79	-2.91	-10.24	-6.93	-32.43	
23-Jul-2009	06:00:00	-6.39	-6.42	-9.37	-26.73	-3.32	-11.20	-7.08	-35.36	
23-Jul-2009	12:00:00	-7.30	-7.16	-9.30	-26.48	-3.39	-11.97	-7.83	-36.54	
23-Jul-2009	18:00:00	-9.14	-8.20	-9.85	-27.16	-4.46	-13.37	-8.67	-37.83	
23-Jul-2009	24:00:00	-9.74	-10.04	-9.66	-27.11	-4.96	-14.72	-11.20	-38.76	
24-Jul-2009	06:00:00	-3.74	-3.54	-8.84	-26.32	-1.75	-2.79	-3.36	-7.23	
24-Jul-2009	12:00:00	-4.96	-3.80	-8.70	-25.96	-1.58	-2.52	-3.54	-4.96	
24-Jul-2009	18:00:00	-7.54	-4.70	-9.46	-26.46	-2.17	-4.43	-4.00	-5.44	
24-Jul-2009	24:00:00	-9.57	-6.09	-9.70	-27.10	-2.76	-6.53	-5.31	-10.64	
25-Jul-2009	06:00:00	-8.56	-6.70	-9.34	-26.51	-2.70	-7.11	-5.36	-18.28	
25-Jul-2009	12:00:00	-8.36	-7.14	-9.30	-26.48	-2.83	-7.71	-6.09	-25.78	
25-Jul-2009	18:00:00	-10.08	-7.92	-9.77	-26.96	-3.46	-8.44	-6.47	-30.50	
25-Jul-2009	24:00:00	-10.96	-9.81	-9.88	-27.23	-4.05	-9.77	-8.87	-35.06	
26-Jul-2009	06:00:00	-9.81	-10.74	-9.44	-26.80	-4.08	-10.92	-8.96	-36.95	
26-Jul-2009	12:00:00	-9.63	-11.55	-9.52	-26.86	-4.38	-12.14	-9.95	-37.48	
26-Jul-2009	18:00:00	-11.56	-12.98	-10.22	-27.58	-5.70	-13.73	-11.45	-38.36	
26-Jul-2009	24:00:00	-12.86	-15.53	-10.39	-27.96	-7.88	-15.47	-15.90	-39.75	
27-Jul-2009	06:00:00	-11.98	-16.89	-10.04	-27.44	-8.95	-16.31	-16.77	-39.86	
27-Jul-2009	12:00:00	-11.46	-18.02	-10.01	-27.44	-9.66	-17.25	-17.79	-39.30	
27-Jul-2009	18:00:00	-12.67	-18.93	-10.55	-27.76	-10.68	-18.27	-18.41	-39.42	
27-Jul-2009	24:00:00	10.48	4.28	-3.61	-2.33	8.87	3.69	4.59	3.40	
28-Jul-2009	06:00:00	4.68	2.04	-3.72	-14.52	6.56	1.15	3.80	2.04	
28-Jul-2009	12:00:00	1.48	-0.23	-3.47	-21.86	4.80	-0.81	1.50	-0.88	
28-Jul-2009	18:00:00	0.03	-2.08	-4.02	-22.83	2.88	-2.56	-1.11	-2.03	
28-Jul-2009	24:00:00	-2.08	-2.96	-4.43	-23.43	1.34	-4.47	0.61	-2.61	
29-Jul-2009	06:00:00	0.42	-1.91	-2.71	-11.21	3.76	-1.60	-0.68	-1.20	
29-Jul-2009	12:00:00	-0.62	-2.26	-3.20	-19.73	2.44	-2.39	-0.90	-1.48	
29-Jul-2009	18:00:00	-2.56	-2.93	-4.12	-21.80	1.12	-3.47	-1.94	-1.78	
29-Jul-2009	24:00:00	-3.87	-3.81	-4.51	-22.40	-0.38	-4.95	-1.37	-2.08	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
30-Jul-2009	06:00:00	-4.03	-4.06	-4.52	-22.28	-1.08	-5.12	-1.80	-2.22	
30-Jul-2009	12:00:00	-4.40	-4.49	-4.96	-22.50	-1.42	-5.08	-2.14	-2.78	
30-Jul-2009	18:00:00	-5.96	-5.43	-5.66	-23.13	-1.87	-6.26	-2.98	-3.83	
30-Jul-2009	24:00:00	-6.96	-6.72	-5.95	-23.30	-2.26	-8.03	-2.58	-7.30	
31-Jul-2009	06:00:00	-6.09	-7.17	-5.88	-23.06	-2.20	-8.90	-3.11	-11.60	
31-Jul-2009	12:00:00	-5.95	-7.40	-5.99	-23.07	-2.30	-9.22	-3.22	-14.07	
31-Jul-2009	18:00:00	-7.76	-8.84	-6.70	-23.49	-3.03	-9.96	-0.57	-19.52	
31-Jul-2009	24:00:00	1.18	-1.56	-5.18	-16.12	2.67	-1.34	-0.38	-1.90	
1-Aug-2009	06:00:00	0.51	-1.96	-4.36	-20.25	2.74	-1.83	-1.20	-1.73	
1-Aug-2009	12:00:00	-0.16	-2.26	-4.37	-20.80	1.83	-2.43	-1.10	-1.85	
1-Aug-2009	18:00:00	-1.62	-2.73	-4.75	-21.15	0.60	-3.20	-1.53	-2.13	
1-Aug-2009	24:00:00	-1.99	-3.45	-4.98	-21.65	-0.55	-4.58	-1.41	-2.27	
2-Aug-2009	06:00:00	-2.58	-3.45	-4.82	-21.46	-1.05	-4.38	-1.73	-1.96	
2-Aug-2009	12:00:00	-3.04	-3.69	-4.96	-21.56	-1.34	-4.30	-0.18	-1.92	
2-Aug-2009	18:00:00	2.57	-1.25	-0.46	-0.10	7.36	2.13	2.26	1.82	
2-Aug-2009	24:00:00	1.66	-1.80	-1.28	-12.78	5.60	-0.40	1.70	2.43	
3-Aug-2009	06:00:00	1.28	-1.76	-1.30	-14.87	4.91	-0.98	0.49	1.63	
3-Aug-2009	12:00:00	0.57	-1.89	-1.60	-18.22	4.02	-1.44	-0.20	-0.18	
3-Aug-2009	18:00:00	-0.93	-2.44	-2.53	-19.01	2.94	-2.93	-1.34	-1.29	
3-Aug-2009	24:00:00	-2.72	-3.16	-2.92	-19.50	2.07	-4.77	-0.81	-1.32	
4-Aug-2009	06:00:00	-2.41	-3.24	-2.83	-19.38	1.29	-4.55	-1.34	-1.12	
4-Aug-2009	12:00:00	-2.86	-3.38	-2.98	-19.48	0.51	-4.44	-1.31	-1.04	
4-Aug-2009	18:00:00	-4.48	-4.25	-3.85	-20.04	-0.22	-5.54	-1.32	-1.61	
4-Aug-2009	24:00:00	-2.77	-3.38	-3.76	-20.00	-0.08	-1.70	-1.10	-1.14	
5-Aug-2009	06:00:00	-3.42	-3.76	-3.54	-19.68	-0.19	-2.67	-1.40	-1.06	
5-Aug-2009	12:00:00	-3.94	-4.04	-3.56	-19.83	-0.44	-3.23	-1.52	-1.04	
5-Aug-2009	18:00:00	-5.37	-4.90	-4.40	-20.34	-0.70	-4.64	-0.70	-1.46	
5-Aug-2009	24:00:00	1.01	-1.68	-3.66	-19.78	1.79	-1.43	-0.62	-0.51	
6-Aug-2009	06:00:00	0.64	-1.85	-3.29	-19.41	2.36	-1.74	-1.02	-0.62	
6-Aug-2009	12:00:00	0.04	-2.14	-3.18	-19.34	2.14	-2.18	-0.88	-0.59	
6-Aug-2009	18:00:00	-1.17	-2.43	-3.55	-19.49	1.53	-3.15	-1.60	-0.81	
6-Aug-2009	24:00:00	-2.79	-3.41	-3.83	-20.07	0.74	-5.00	-1.30	-1.05	
7-Aug-2009	06:00:00	-2.80	-3.39	-3.79	-19.77	0.26	-5.01	-1.86	-0.72	
7-Aug-2009	12:00:00	-3.18	-3.58	-3.94	-20.07	0.06	-4.80	-1.80	-0.65	
7-Aug-2009	18:00:00	-4.84	-4.34	-4.73	-20.56	-0.19	-5.76	-2.40	-1.07	
7-Aug-2009	24:00:00	-6.02	-5.60	-4.82	-20.67	-0.30	-7.70	-2.33	-1.67	
8-Aug-2009	06:00:00	-5.01	-6.34	-4.74	-20.52	-0.62	-8.33	-2.62	-2.00	
8-Aug-2009	12:00:00	-4.82	-6.70	-4.63	-20.28	-0.33	-8.51	-2.55	-2.03	
8-Aug-2009	18:00:00	-6.54	-7.79	-5.32	-20.81	-0.51	-9.21	-3.22	-3.18	
8-Aug-2009	24:00:00	-7.53	-9.99	-5.24	-21.05	-0.78	-10.12	-3.10	-5.66	
9-Aug-2009	06:00:00	-6.06	-10.70	-4.90	-20.61	-0.90	-11.00	-3.56	-7.32	
9-Aug-2009	12:00:00	-5.76	-11.56	-4.76	-20.50	-0.93	-12.00	-3.62	-7.91	
9-Aug-2009	18:00:00	-7.80	-12.66	-5.44	-20.99	-1.38	-13.29	-4.46	-10.53	
9-Aug-2009	24:00:00	-8.74	-14.22	-5.44	-21.29	-1.69	-14.44	-4.26	-13.30	
10-Aug-2009	06:00:00	-7.09	-15.12	-5.17	-20.90	-1.69	-15.28	-4.49	-12.80	
10-Aug-2009	12:00:00	-6.63	-15.93	-5.11	-20.79	-1.83	-16.19	-4.84	-12.48	
10-Aug-2009	18:00:00	-8.66	-16.77	-5.83	-21.34	-2.46	-17.30	-6.18	-13.36	
10-Aug-2009	24:00:00	-9.63	-17.54	-5.64	-21.64	-2.84	-17.99	-6.22	-14.49	
11-Aug-2009	06:00:00	-8.20	-18.17	-5.24	-21.08	-2.74	-18.71	-6.71	-13.70	
11-Aug-2009	12:00:00	-7.48	-18.75	-5.17	-20.96	-2.80	-19.28	-7.50	-12.94	
11-Aug-2009	18:00:00	-9.55	-19.40	-5.96	-21.63	-3.46	-20.45	-10.76	-14.09	
11-Aug-2009	24:00:00	-10.76	-19.83	-5.59	-21.47	-1.51	-20.84	0.36	-14.52	
12-Aug-2009	06:00:00	0.10	-1.73	-2.96	-18.57	3.90	-2.24	-0.87	0.04	
12-Aug-2009	12:00:00	0.29	-1.80	-2.86	-18.74	2.91	-2.64	-0.98	-0.20	
12-Aug-2009	18:00:00	-2.52	-2.58	-3.55	-19.13	1.88	-4.06	-1.35	-0.59	
12-Aug-2009	24:00:00	-1.32	-2.44	-3.26	-19.07	1.17	-1.74	-1.11	-0.28	
13-Aug-2009	06:00:00	-2.98	-2.82	-3.44	-19.11	0.16	-3.11	-1.29	-0.30	
13-Aug-2009	12:00:00	-3.34	-3.09	-3.55	-19.30	-0.39	-3.04	-1.13	-0.35	
13-Aug-2009	18:00:00	-0.78	-2.51	-3.83	-19.40	-0.73	-1.23	-1.12	-0.34	
13-Aug-2009	24:00:00	-2.04	-2.48	-3.65	-19.18	-0.45	-1.58	-1.00	-0.34	
14-Aug-2009	06:00:00	-3.40	-2.86	-3.79	-19.14	-0.54	-2.56	-1.18	-0.44	
14-Aug-2009	12:00:00	-3.85	-3.12	-3.88	-19.14	-0.72	-2.78	-0.54	-0.38	
14-Aug-2009	18:00:00	1.77	-1.06	-3.16	-13.13	0.92	-0.77	-0.71	0.56	
14-Aug-2009	24:00:00	0.06	-1.60	-2.52	-17.20	3.03	-2.39	-0.53	0.48	
15-Aug-2009	06:00:00	-0.82	-1.86	-2.53	-17.68	2.68	-2.92	-0.83	0.06	
15-Aug-2009	12:00:00	-1.81	-2.19	-2.64	-17.87	2.14	-3.11	-0.86	0.07	
15-Aug-2009	18:00:00	-3.48	-2.80	-3.19	-18.22	1.36	-4.23	-1.32	-0.16	
15-Aug-2009	24:00:00	-5.04	-3.60	-3.32	-18.71	0.71	-5.76	-1.24	-0.44	
16-Aug-2009	06:00:00	-4.39	-3.82	-3.29	-18.53	0.06	-6.15	-1.78	-0.30	
16-Aug-2009	12:00:00	-4.66	-4.16	-3.50	-18.71	-0.36	-6.11	-1.78	-0.20	



Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
16-Aug-2009	18:00:00	-6.00	-4.77	-3.94	-19.01	-0.58	-6.58	-2.12	-0.57	
16-Aug-2009	24:00:00	-6.01	-5.38	-3.88	-19.00	-0.70	-7.00	-2.16	-0.92	
17-Aug-2009	06:00:00	-5.58	-5.80	-3.97	-18.96	-0.73	-7.13	-2.51	-0.90	
17-Aug-2009	12:00:00	-5.24	-6.05	-3.78	-18.86	-0.51	-6.86	-2.32	-0.69	
17-Aug-2009	18:00:00	-6.87	-7.05	-4.51	-19.47	-0.67	-7.84	-3.08	-1.48	
17-Aug-2009	24:00:00	-7.58	-8.82	-4.33	-19.30	-0.72	-9.29	-2.97	-2.24	
18-Aug-2009	06:00:00	-6.55	-9.47	-4.21	-19.17	-0.75	-9.68	-3.17	-2.49	
18-Aug-2009	12:00:00	-5.88	-9.76	-4.10	-18.93	-0.45	-9.47	-3.18	-2.68	
18-Aug-2009	18:00:00	-8.04	-10.88	-4.64	-19.38	-0.52	-10.06	-3.87	-4.40	
18-Aug-2009	24:00:00	-9.04	-12.58	-4.61	-19.58	-0.72	-12.38	-3.80	-6.78	
19-Aug-2009	06:00:00	-7.78	-13.60	-4.38	-19.22	-0.55	-13.67	-4.28	-6.53	
19-Aug-2009	12:00:00	-7.18	-14.30	-4.24	-19.08	-0.39	-14.68	-4.24	-6.11	
19-Aug-2009	18:00:00	-8.97	-15.16	-4.82	-19.50	-0.50	-15.82	-5.30	-7.66	
19-Aug-2009	24:00:00	-10.23	-16.28	-4.85	-19.76	-0.68	-16.74	-5.31	-9.06	
20-Aug-2009	06:00:00	-8.84	-17.01	-4.57	-19.37	-0.88	-17.34	-5.96	-8.19	
20-Aug-2009	12:00:00	-8.17	-17.64	-4.55	-19.30	-1.06	-17.97	-5.50	-7.47	
20-Aug-2009	18:00:00	-8.52	-18.08	-4.69	-19.26	-1.41	-18.57	-7.47	-8.48	
20-Aug-2009	24:00:00	-10.34	-18.82	-4.85	-19.58	-1.64	-19.32	-7.53	-9.68	
21-Aug-2009	06:00:00	-9.25	-19.19	-4.56	-19.49	-1.59	-20.02	-8.34	-9.08	
21-Aug-2009	12:00:00	-8.49	-19.52	-4.44	-19.37	-1.76	-20.66	-8.44	-8.38	
21-Aug-2009	18:00:00	-9.72	-20.06	-4.78	-19.59	-1.95	-21.34	-10.41	-9.72	
21-Aug-2009	24:00:00	-10.09	-20.39	-4.56	-19.42	-2.10	-21.76	-11.04	-9.77	
22-Aug-2009	06:00:00	-9.24	-20.78	-4.45	-19.35	-2.20	-22.32	-11.63	-9.04	
22-Aug-2009	12:00:00	-8.58	-20.98	-4.28	-19.23	-2.24	-22.80	-12.17	-8.36	
22-Aug-2009	18:00:00	-9.63	-21.35	-4.67	-19.54	-2.68	-23.40	-2.60	-9.88	
22-Aug-2009	24:00:00	-0.44	-6.88	-3.97	-19.08	-1.11	-3.77	0.30	-6.11	
23-Aug-2009	06:00:00	0.38	-1.71	-1.97	-16.25	4.10	-1.29	-0.82	0.44	
23-Aug-2009	12:00:00	-0.31	-2.02	-2.24	-16.80	2.94	-2.08	-0.83	0.06	
23-Aug-2009	18:00:00	-2.19	-2.46	-2.57	-17.26	2.21	-3.33	-1.34	-0.09	
23-Aug-2009	24:00:00	-4.14	-3.36	-2.75	-17.54	1.43	-5.02	-1.13	-0.16	
24-Aug-2009	06:00:00	-4.21	-3.63	-2.75	-17.52	0.66	-4.88	-1.64	-0.03	
24-Aug-2009	12:00:00	-4.57	-4.11	-2.84	-17.79	-0.08	-4.89	-1.47	-0.11	
24-Aug-2009	18:00:00	-5.26	-4.62	-3.16	-17.88	-0.78	-5.16	-2.30	-0.34	
24-Aug-2009	24:00:00	-6.84	-5.82	-3.46	-18.32	-1.15	-6.57	-2.22	-1.08	
25-Aug-2009	06:00:00	-6.06	-6.57	-3.36	-18.08	-1.26	-7.11	-2.54	-1.44	
25-Aug-2009	12:00:00	-6.03	-7.22	-3.44	-18.16	-1.39	-7.28	-2.48	-1.58	
25-Aug-2009	18:00:00	-7.59	-8.14	-3.85	-18.57	-1.69	-7.90	-3.35	-2.38	
25-Aug-2009	24:00:00	-8.72	-10.37	-3.98	-18.72	-1.94	-9.36	-3.20	-5.00	
26-Aug-2009	06:00:00	-7.56	-11.13	-3.77	-18.46	-1.95	-10.17	-3.58	-5.39	
26-Aug-2009	12:00:00	-7.23	-11.99	-3.80	-18.44	-1.89	-10.76	-3.51	-5.57	
26-Aug-2009	18:00:00	-8.35	-12.64	-3.88	-18.47	-1.96	-11.46	-4.53	-6.77	
26-Aug-2009	24:00:00	-9.68	-14.22	-4.12	-18.94	-1.86	-13.49	-4.54	-9.14	
27-Aug-2009	06:00:00	-8.60	-15.44	-4.00	-18.82	-1.92	-14.87	-4.76	-9.02	
27-Aug-2009	12:00:00	-8.01	-16.13	-3.77	-18.50	-1.62	-15.87	-6.26	-8.55	
27-Aug-2009	18:00:00	-10.00	-17.08	-4.19	-19.13	-1.51	-16.89	-6.18	-10.20	
27-Aug-2009	24:00:00	-11.19	-18.16	-4.20	-19.20	-1.47	-17.62	-6.75	-10.94	
28-Aug-2009	06:00:00	-9.88	-18.83	-3.88	-18.92	-1.40	-18.28	-6.70	-9.94	
28-Aug-2009	12:00:00	-9.18	-19.28	-3.72	-18.80	-1.63	-19.01	-7.60	-9.53	
28-Aug-2009	18:00:00	-9.79	-19.83	-4.07	-18.99	-2.08	-19.79	-4.31	-10.13	
28-Aug-2009	24:00:00	-3.85	-14.85	-3.90	-18.95	-1.42	-20.31	-4.77	-6.36	
29-Aug-2009	06:00:00	-4.59	-11.38	-3.44	-18.53	-1.54	-20.34	-5.21	-7.01	
29-Aug-2009	12:00:00	-5.70	-12.52	-3.31	-18.54	-1.64	-20.43	-7.14	-7.62	
29-Aug-2009	18:00:00	-7.52	-14.39	-4.03	-19.01	-2.16	-21.15	-7.53	-9.16	
29-Aug-2009	24:00:00	-8.96	-16.11	-4.02	-19.35	-2.31	-21.45	-8.25	-10.52	
30-Aug-2009	06:00:00	-8.60	-17.21	-3.94	-19.25	-2.35	-21.99	-9.11	-10.41	
30-Aug-2009	12:00:00	-8.50	-18.14	-3.83	-19.23	-2.30	-22.48	-11.92	-10.32	
30-Aug-2009	18:00:00	-9.88	-18.96	-4.45	-19.76	-2.98	-23.18	-12.28	-11.78	
30-Aug-2009	24:00:00	-10.35	-19.73	-4.07	-19.72	-2.91	-23.36	-3.69	-12.17	
31-Aug-2009	06:00:00	-5.84	-19.90	-3.98	-19.58	-1.21	-21.35	-3.11	-9.58	
31-Aug-2009	12:00:00	-3.93	-8.97	-3.77	-19.44	-1.41	-9.57	-3.30	-7.34	
31-Aug-2009	18:00:00	-4.63	-9.60	-3.67	-19.20	-1.24	-9.93	-3.32	-7.84	
31-Aug-2009	24:00:00	-5.70	-10.86	-3.67	-19.12	-1.23	-10.06	-3.76	-8.57	
1-Sep-2009	06:00:00	-6.45	-11.96	-3.60	-19.13	-1.34	-10.84	-3.96	-9.35	
1-Sep-2009	12:00:00	-6.91	-12.80	-3.62	-19.24	-1.42	-12.06	-5.28	-9.66	
1-Sep-2009	18:00:00	-8.17	-14.43	-4.00	-19.61	-1.77	-13.54	-5.46	-10.95	
1-Sep-2009	24:00:00	-9.91	-16.73	-4.22	-19.92	-2.22	-15.22	-6.14	-12.54	
2-Sep-2009	06:00:00	-9.25	-17.92	-3.98	-19.70	-2.24	-16.43	-6.45	-12.30	
2-Sep-2009	12:00:00	-8.95	-18.56	-3.80	-19.59	-2.26	-17.22	-8.66	-11.73	
2-Sep-2009	18:00:00	-10.26	-19.36	-4.27	-19.94	-2.72	-18.22	-9.36	-12.87	
2-Sep-2009	24:00:00	-11.01	-20.31	-4.15	-20.00	-2.85	-18.74	-9.86	-13.42	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
3-Sep-2009	06:00:00	-10.00	-20.97	-3.90	-19.66	-2.77	-19.42	-10.26	-12.60	
3-Sep-2009	12:00:00	-9.55	-21.34	-3.78	-19.49	-2.91	-20.02	-13.52	-11.91	
3-Sep-2009	18:00:00	-10.82	-21.76	-3.72	-19.78	-3.33	-20.73	-14.67	-12.87	
3-Sep-2009	24:00:00	-11.92	-22.13	-3.46	-20.13	-3.85	-21.32	-15.71	-13.91	
4-Sep-2009	06:00:00	-11.16	-22.40	-3.13	-19.92	-4.18	-21.98	-16.35	-13.19	
4-Sep-2009	12:00:00	-10.76	-22.66	-3.13	-19.80	-4.52	-22.44	-18.71	-12.63	
4-Sep-2009	18:00:00	-12.14	-22.91	-3.82	-20.31	-5.68	-23.16	-19.85	-14.13	
4-Sep-2009	24:00:00	-13.14	-22.98	-3.88	-20.55	-6.93	-23.57	-20.98	-15.30	
5-Sep-2009	06:00:00	-12.38	-23.22	-3.96	-20.21	-7.82	-24.14	-21.48	-14.64	
5-Sep-2009	12:00:00	-12.19	-23.30	-3.95	-20.19	-8.79	-24.59	-22.65	-14.21	
5-Sep-2009	18:00:00	-13.30	-23.51	-4.69	-20.67	-10.11	-24.90	-23.24	-15.57	
5-Sep-2009	24:00:00	-14.17	-23.46	-4.67	-20.84	-11.84	-24.63	-24.26	-16.50	
6-Sep-2009	06:00:00	-13.42	-23.46	-4.43	-20.58	-13.26	-24.65	-24.57	-15.70	
6-Sep-2009	12:00:00	-13.15	-23.48	-4.42	-20.48	-13.98	-24.54	-25.11	-15.02	
6-Sep-2009	18:00:00	-14.17	-23.72	-4.98	-21.02	-15.04	-24.65	-25.43	-16.16	
6-Sep-2009	24:00:00	-15.25	-23.63	-5.09	-21.17	-16.38	-24.51	-26.01	-17.37	
7-Sep-2009	06:00:00	-14.48	-23.51	-4.67	-20.72	-17.01	-24.44	-26.20	-16.36	
7-Sep-2009	12:00:00	-13.84	-23.38	-4.34	-20.31	-17.28	-24.35	-26.66	-15.21	
7-Sep-2009	18:00:00	-13.75	-23.39	-4.48	-20.40	-17.59	-24.53	-26.50	-15.17	
7-Sep-2009	24:00:00	-10.26	-22.94	-4.26	-20.20	-13.72	-24.58	-26.57	-14.42	
8-Sep-2009	06:00:00	-10.47	-22.48	-4.27	-20.04	-12.14	-24.56	-26.24	-14.16	
8-Sep-2009	12:00:00	-10.82	-22.18	-4.28	-20.18	-11.58	-24.57	-26.92	-14.19	
8-Sep-2009	18:00:00	-11.32	-22.06	-4.43	-20.36	-11.52	-24.66	-26.86	-14.91	
8-Sep-2009	24:00:00	-12.57	-21.96	-4.85	-20.92	-12.04	-24.65	-27.51	-16.25	
9-Sep-2009	06:00:00	-12.82	-21.95	-4.69	-20.70	-12.69	-24.54	-27.56	-16.28	
9-Sep-2009	12:00:00	-12.92	-21.99	-4.61	-20.70	-13.39	-24.45	-28.10	-16.17	
9-Sep-2009	18:00:00	-13.71	-22.44	-5.23	-21.21	-14.38	-24.65	-28.29	-17.42	
9-Sep-2009	24:00:00	-14.97	-22.55	-5.36	-21.56	-15.90	-24.50	-28.98	-18.44	
10-Sep-2009	06:00:00	-15.00	-22.92	-5.08	-21.39	-16.83	-24.59	-29.32	-18.06	
10-Sep-2009	12:00:00	-14.86	-22.88	-4.99	-21.17	-17.34	-24.46	-29.76	-17.57	
10-Sep-2009	18:00:00	-15.42	-23.12	-5.28	-21.42	-18.20	-24.54	-29.93	-18.29	
10-Sep-2009	24:00:00	-15.62	-23.06	-5.14	-21.70	-18.55	-24.52	-30.38	-18.46	
11-Sep-2009	06:00:00	-15.46	-23.22	-4.87	-21.17	-19.10	-24.42	-30.41	-17.99	
11-Sep-2009	12:00:00	-15.50	-23.13	-4.78	-21.16	-19.63	-24.50	-31.02	-17.55	
11-Sep-2009	18:00:00	-16.17	-23.31	-5.18	-21.46	-20.19	-24.62	-31.05	-18.36	
11-Sep-2009	24:00:00	-17.14	-23.37	-5.42	-21.89	-20.82	-24.52	-31.53	-19.32	
12-Sep-2009	06:00:00	-17.00	-23.38	-5.10	-21.39	-21.12	-24.53	-31.68	-18.41	
12-Sep-2009	12:00:00	-16.87	-23.39	-4.98	-21.32	-21.38	-24.58	-31.77	-17.76	
12-Sep-2009	18:00:00	-17.43	-23.40	-5.52	-21.65	-21.87	-24.63	-31.43	-18.59	
12-Sep-2009	24:00:00	-18.34	-23.51	-5.76	-22.20	-22.15	-24.65	-31.67	-19.91	
13-Sep-2009	06:00:00	-18.30	-23.45	-5.47	-21.70	-22.35	-24.54	-31.34	-19.19	
13-Sep-2009	12:00:00	-18.50	-23.58	-5.40	-21.75	-22.63	-24.54	-31.92	-18.76	
13-Sep-2009	18:00:00	-19.05	-23.85	-5.92	-22.18	-23.08	-24.64	-31.43	-20.07	
13-Sep-2009	24:00:00	-19.76	-23.78	-6.04	-22.48	-23.42	-24.64	-31.66	-20.98	
14-Sep-2009	06:00:00	-19.76	-23.80	-5.57	-22.00	-23.66	-24.54	-31.58	-20.32	
14-Sep-2009	12:00:00	-20.05	-24.06	-5.63	-22.10	-24.12	-24.64	-31.76	-19.80	
14-Sep-2009	18:00:00	-20.48	-24.18	-6.17	-22.73	-24.63	-24.72	-31.36	-21.03	
14-Sep-2009	24:00:00	-21.06	-23.91	-6.22	-22.71	-24.67	-24.52	-31.44	-22.10	
15-Sep-2009	06:00:00	-21.20	-24.04	-5.84	-22.37	-24.96	-24.53	-31.41	-21.34	
15-Sep-2009	12:00:00	-21.22	-24.00	-5.65	-22.08	-25.17	-24.46	-31.60	-20.54	
15-Sep-2009	18:00:00	-21.78	-24.27	-6.32	-22.89	-25.64	-24.66	-31.34	-21.78	
15-Sep-2009	24:00:00	-22.36	-24.06	-6.31	-23.03	-25.64	-24.58	-31.56	-22.78	
16-Sep-2009	06:00:00	-22.58	-24.09	-6.06	-22.64	-25.93	-24.58	-31.35	-22.13	
16-Sep-2009	12:00:00	-22.53	-23.96	-5.84	-22.37	-26.08	-24.53	-31.70	-21.42	
16-Sep-2009	18:00:00	-22.72	-24.14	-6.07	-22.64	-26.41	-24.59	-31.48	-21.72	
16-Sep-2009	24:00:00	-23.26	-24.05	-6.29	-23.12	-26.43	-24.51	-31.49	-22.79	
17-Sep-2009	06:00:00	-23.47	-24.06	-6.19	-22.84	-26.76	-24.58	-31.17	-22.38	
17-Sep-2009	12:00:00	-20.84	-24.00	-5.92	-22.61	-26.95	-24.60	-31.66	-21.83	
17-Sep-2009	18:00:00	-19.69	-23.86	-5.84	-22.58	-27.08	-24.53	-31.40	-21.70	
17-Sep-2009	24:00:00	-19.95	-23.70	-6.01	-22.79	-27.24	-24.52	-31.54	-22.12	
18-Sep-2009	06:00:00	-20.44	-23.54	-5.86	-22.54	-27.36	-24.58	-31.37	-21.66	
18-Sep-2009	12:00:00	-20.61	-23.42	-5.78	-22.38	-27.52	-24.59	-31.72	-21.21	
18-Sep-2009	18:00:00	-21.04	-23.37	-6.05	-22.78	-27.72	-24.56	-31.34	-22.01	
18-Sep-2009	24:00:00	-21.68	-23.27	-6.18	-23.19	-27.86	-24.57	-31.59	-23.32	
19-Sep-2009	06:00:00	-22.16	-23.31	-6.06	-22.71	-27.98	-24.53	-31.23	-22.66	
19-Sep-2009	12:00:00	-22.58	-23.38	-6.06	-22.71	-28.21	-24.53	-31.59	-22.19	
19-Sep-2009	18:00:00	-23.11	-23.42	-6.49	-23.27	-28.52	-24.63	-31.41	-23.25	
19-Sep-2009	24:00:00	-23.50	-23.60	-6.58	-23.48	-28.60	-24.58	-31.54	-24.08	
20-Sep-2009	06:00:00	-24.08	-23.64	-6.43	-23.16	-28.71	-24.52	-31.31	-23.76	
20-Sep-2009	12:00:00	-24.19	-23.62	-6.25	-23.06	-28.70	-24.50	-31.55	-23.18	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
20-Sep-2009	18:00:00	-24.45	-23.88	-6.80	-23.61	-28.77	-24.59	-31.34	-24.21	
20-Sep-2009	24:00:00	-24.66	-23.80	-6.83	-23.90	-28.68	-24.57	-31.59	-24.93	
21-Sep-2009	06:00:00	-25.26	-23.99	-6.70	-23.55	-28.75	-24.60	-31.40	-24.30	
21-Sep-2009	12:00:00	-25.51	-24.11	-6.56	-23.45	-28.84	-24.56	-31.77	-23.46	
21-Sep-2009	18:00:00	-25.66	-24.30	-7.16	-24.15	-28.76	-24.57	-31.32	-24.51	
21-Sep-2009	24:00:00	-26.12	-24.29	-7.20	-24.29	-28.70	-24.48	-31.58	-25.67	
22-Sep-2009	06:00:00	-26.36	-24.14	-6.73	-23.67	-28.59	-24.39	-31.66	-24.76	
22-Sep-2009	12:00:00	-26.41	-24.22	-6.59	-23.45	-28.68	-24.54	-31.44	-23.79	
22-Sep-2009	18:00:00	-24.88	-23.86	-6.65	-23.87	-28.00	-24.57	-31.68	-24.00	
22-Sep-2009	24:00:00	-24.78	-23.79	-6.82	-23.42	-24.40	-24.58	-31.30	-23.38	
23-Sep-2009	06:00:00	-24.94	-23.66	-6.58	-23.21	-1.48	-24.56	-31.55	-20.31	
23-Sep-2009	12:00:00	-20.66	-23.27	-5.87	-23.19	-1.16	-24.66	-31.38	-22.08	
23-Sep-2009	18:00:00	-20.20	-22.77	-6.18	-23.37	-1.17	-24.57	-31.37	-23.13	
23-Sep-2009	24:00:00	-20.74	-22.23	-6.40	-23.06	-1.22	-24.45	-31.31	-22.64	
24-Sep-2009	06:00:00	-21.10	-22.00	-6.10	-22.96	-1.59	-24.64	-31.71	-22.38	
24-Sep-2009	12:00:00	-21.48	-22.04	-6.25	-23.16	-1.86	-24.71	-31.32	-22.60	
24-Sep-2009	18:00:00	-21.87	-21.98	-6.29	-23.44	-1.94	-24.51	-31.61	-23.40	
24-Sep-2009	24:00:00	-22.52	-21.78	-6.41	-23.20	-2.02	-24.62	-31.44	-22.84	
25-Sep-2009	06:00:00	-22.94	-21.68	-6.35	-23.19	-1.95	-24.51	-31.66	-22.30	
25-Sep-2009	12:00:00	-23.17	-21.62	-6.17	-23.52	-2.22	-24.69	-31.19	-23.14	
25-Sep-2009	18:00:00	-23.70	-21.88	-6.55	-23.70	-2.18	-24.52	-31.46	-23.98	
25-Sep-2009	24:00:00	-24.36	-21.90	-6.73	-23.48	-2.22	-24.60	-31.04	-24.03	
26-Sep-2009	06:00:00	-24.70	-22.10	-6.55	-23.36	-2.14	-24.47	-31.61	-23.51	
26-Sep-2009	12:00:00	-24.81	-22.07	-6.40	-23.25	-2.06	-24.54	-30.99	-23.24	
26-Sep-2009	18:00:00	-24.76	-22.25	-6.37	-22.91	-1.86	-24.58	-31.52	-22.46	
26-Sep-2009	24:00:00	-24.82	-21.94	-6.19	-22.56	-1.77	-24.54	-31.05	-21.33	
27-Sep-2009	06:00:00	-24.13	-21.70	-5.86	-22.62	-1.87	-24.57	-31.73	-20.48	
27-Sep-2009	12:00:00	-24.09	-21.48	-5.87	-22.90	-2.07	-24.63	-31.20	-21.10	
27-Sep-2009	18:00:00	-24.39	-21.54	-6.01	-23.74	-2.16	-24.52	-31.32	-23.25	
27-Sep-2009	24:00:00	-25.41	-21.62	-6.50	-23.55	-2.12	-24.59	-31.22	-23.14	
28-Sep-2009	06:00:00	-26.00	-21.76	-6.32	-23.39	-2.04	-24.57	-31.76	-22.78	
28-Sep-2009	12:00:00	-26.28	-22.04	-6.35	-23.70	-2.23	-24.70	-30.94	-23.73	
28-Sep-2009	18:00:00	-26.38	-22.20	-6.64	-23.96	-2.14	-24.46	-31.52	-24.40	
28-Sep-2009	24:00:00	-26.66	-22.13	-6.82	-24.29	-2.16	-24.60	-31.29	-25.19	
29-Sep-2009	06:00:00	-27.64	-22.65	-6.92	-24.35	-2.23	-24.59	-31.72	-25.70	
29-Sep-2009	12:00:00	-28.14	-23.08	-6.91	-24.76	-2.53	-24.75	-31.35	-26.31	
29-Sep-2009	18:00:00	-28.32	-23.50	-7.32	-25.08	-2.68	-24.47	-31.50	-27.04	
29-Sep-2009	24:00:00	-28.83	-23.74	-7.34	-24.75	-2.59	-24.62	-31.40	-26.99	
30-Sep-2009	06:00:00	-28.95	-24.21	-7.22	-24.48	-2.61	-24.62	-31.74	-26.36	
30-Sep-2009	12:00:00	-28.96	-24.41	-7.10	-25.11	-3.09	-24.70	-31.43	-27.22	
30-Sep-2009	18:00:00	-29.19	-24.74	-7.56	-25.50	-3.16	-24.70	-31.61	-27.95	
30-Sep-2009	24:00:00	-29.17	-24.83	-7.78	-25.10	-3.16	-24.69	-31.50	-27.54	
1-Oct-2009	06:00:00	-29.23	-25.06	-7.50	-24.94	-3.02	-24.71	-31.91	-26.96	
1-Oct-2009	12:00:00	-29.23	-25.11	-7.39	-25.34	-3.39	-24.69	-31.17	-27.48	
1-Oct-2009	18:00:00	-29.31	-25.30	-7.67	-25.62	-3.70	-24.65	-31.74	-28.12	
1-Oct-2009	24:00:00	-29.28	-25.17	-7.84	-25.01	-3.87	-24.66	-31.71	-27.44	
2-Oct-2009	06:00:00	-29.28	-25.25	-7.45	-24.95	-4.00	-24.76	-31.85	-26.43	
2-Oct-2009	12:00:00	-29.31	-25.35	-7.42	-25.35	-4.34	-24.86	-31.50	-26.96	
2-Oct-2009	18:00:00	-29.46	-25.42	-7.78	-25.42	-4.27	-24.62	-31.70	-27.38	
2-Oct-2009	24:00:00	-29.18	-25.02	-7.82	-25.01	-4.11	-24.72	-31.49	-26.94	
3-Oct-2009	06:00:00	-29.31	-25.08	-7.63	-24.82	-4.21	-24.70	-31.98	-26.19	
3-Oct-2009	12:00:00	-29.36	-25.11	-7.49	-25.56	-4.99	-24.89	-31.49	-27.23	
3-Oct-2009	18:00:00	-29.40	-25.38	-7.97	-26.01	-6.24	-24.68	-31.73	-28.67	
3-Oct-2009	24:00:00	-29.25	-25.28	-8.18	-25.65	-6.72	-24.76	-31.19	-28.66	
4-Oct-2009	06:00:00	-29.28	-25.32	-8.00	-25.48	-6.99	-24.60	-31.66	-28.20	
4-Oct-2009	12:00:00	-29.08	-25.44	-7.76	-26.07	-7.56	-24.77	-31.23	-29.16	
4-Oct-2009	18:00:00	-29.31	-25.94	-8.18	-26.25	-8.36	-24.69	-31.85	-29.87	
4-Oct-2009	24:00:00	-29.26	-25.73	-8.35	-25.95	-8.94	-24.65	-31.38	-29.55	
5-Oct-2009	06:00:00	-29.26	-25.82	-8.11	-25.96	-9.03	-24.71	-31.79	-29.15	
5-Oct-2009	12:00:00	-29.32	-25.86	-7.96	-25.71	-3.44	-24.76	-31.58	-28.54	
5-Oct-2009	18:00:00	-29.32	-25.83	-7.84	-25.38	-3.12	-24.71	-31.73	-27.51	
5-Oct-2009	24:00:00	-29.26	-25.65	-7.62	-25.20	-1.90	-24.71	-31.67	-26.76	
6-Oct-2009	06:00:00	-29.14	-25.65	-7.44	-25.16	-2.12	-24.74	-31.60	-26.00	
6-Oct-2009	12:00:00	-29.14	-25.55	-7.43	-25.16	-2.54	-24.78	-31.44	-25.83	
6-Oct-2009	18:00:00	-29.23	-25.42	-7.46	-25.14	-2.65	-24.68	-31.76	-25.70	
6-Oct-2009	24:00:00	-29.20	-25.11	-7.40	-24.83	-2.61	-24.65	-31.37	-25.38	
7-Oct-2009	06:00:00	-29.13	-25.11	-7.30	-24.75	-2.66	-24.74	-31.72	-24.90	
7-Oct-2009	12:00:00	-29.05	-24.96	-7.21	-25.48	-3.12	-24.83	-31.36	-25.91	
7-Oct-2009	18:00:00	-29.24	-25.08	-7.73	-26.21	-3.39	-24.66	-31.65	-28.24	
7-Oct-2009	24:00:00	-28.92	-24.94	-8.16	-26.01	-3.37	-24.62	-31.24	-29.26	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
8-Oct-2009	06:00:00	-29.05	-25.22	-8.02	-26.07	-3.57	-24.64	-31.71	-29.96	
8-Oct-2009	12:00:00	-29.13	-25.72	-8.22	-26.49	-4.24	-24.68	-31.36	-30.47	
8-Oct-2009	18:00:00	-29.19	-26.06	-8.39	-26.67	-5.16	-24.59	-31.76	-31.08	
8-Oct-2009	24:00:00	-29.08	-26.12	-8.47	-26.08	-4.95	-24.69	-31.52	-30.57	
9-Oct-2009	06:00:00	-29.11	-26.18	-8.26	-25.82	-4.65	-24.59	-31.73	-29.16	
9-Oct-2009	12:00:00	-29.08	-26.02	-7.91	-26.32	-5.40	-24.83	-31.32	-29.14	
9-Oct-2009	18:00:00	-29.23	-26.10	-8.44	-26.67	-6.54	-24.74	-31.65	-29.81	
9-Oct-2009	24:00:00	-29.19	-25.88	-8.56	-26.21	-6.26	-24.75	-31.50	-29.38	
10-Oct-2009	06:00:00	-29.17	-25.80	-8.35	-25.97	-5.72	-24.64	-31.83	-28.78	
10-Oct-2009	12:00:00	-28.98	-25.79	-8.21	-26.91	-6.30	-24.72	-31.61	-29.68	
10-Oct-2009	18:00:00	-29.16	-26.07	-8.54	-27.33	-6.96	-24.76	-31.74	-30.96	
10-Oct-2009	24:00:00	-29.12	-26.13	-8.76	-27.09	-7.18	-24.74	-31.26	-31.56	
11-Oct-2009	06:00:00	-29.12	-26.42	-8.65	-26.90	-2.26	-24.86	-31.68	-31.59	
11-Oct-2009	12:00:00	-29.17	-26.56	-8.52	-26.76	-2.98	-24.74	-31.41	-31.37	
11-Oct-2009	18:00:00	-29.17	-26.68	-8.48	-26.98	-3.19	-24.60	-31.42	-31.30	
11-Oct-2009	24:00:00	-29.01	-26.56	-8.52	-26.60	-3.34	-24.72	-31.58	-31.02	
12-Oct-2009	06:00:00	-29.11	-26.76	-8.48	-26.40	-3.42	-24.68	-31.96	-30.40	
12-Oct-2009	12:00:00	-29.04	-26.79	-8.26	-26.75	-3.57	-24.86	-31.64	-30.52	
12-Oct-2009	18:00:00	-29.16	-26.92	-8.60	-26.36	-2.31	-24.70	-31.58	-29.58	
12-Oct-2009	24:00:00	-29.05	-26.52	-8.11	-26.19	-2.61	-24.71	-31.46	-28.97	
13-Oct-2009	06:00:00	-28.95	-26.63	-8.11	-26.12	-2.84	-24.81	-31.80	-28.44	
13-Oct-2009	12:00:00	-29.08	-26.51	-8.12	-26.32	-3.32	-24.80	-31.50	-28.64	
13-Oct-2009	18:00:00	-29.16	-26.51	-8.28	-26.98	-3.61	-24.69	-31.70	-29.97	
13-Oct-2009	24:00:00	-29.05	-26.14	-8.51	-26.62	-3.62	-24.71	-31.30	-30.02	
14-Oct-2009	06:00:00	-29.13	-26.38	-8.45	-26.72	-3.76	-24.81	-31.91	-30.24	
14-Oct-2009	12:00:00	-29.10	-26.46	-8.56	-26.55	-3.24	-24.77	-31.36	-30.20	
14-Oct-2009	18:00:00	-29.06	-26.43	-8.46	-26.13	-1.58	-24.72	-31.71	-29.20	
14-Oct-2009	24:00:00	-29.08	-26.33	-7.96	-25.77	-1.62	-24.66	-31.23	-28.20	
15-Oct-2009	06:00:00	-28.95	-25.72	-7.75	-25.48	-1.66	-24.70	-32.09	-27.14	
15-Oct-2009	12:00:00	-29.04	-25.13	-7.57	-25.53	-1.75	-24.70	-31.54	-26.43	
15-Oct-2009	18:00:00	-28.94	-24.54	-7.57	-25.48	-1.76	-24.77	-31.80	-25.56	
15-Oct-2009	24:00:00	-28.81	-24.09	-7.51	-25.53	-1.78	-24.74	-31.16	-25.78	
16-Oct-2009	06:00:00	-28.57	-23.96	-7.55	-25.64	-1.88	-24.77	-31.61	-25.96	
16-Oct-2009	12:00:00	-28.62	-24.02	-7.70	-25.76	-1.95	-24.80	-31.54	-26.79	
16-Oct-2009	18:00:00	-28.77	-24.06	-7.82	-26.12	-2.02	-24.65	-31.68	-27.68	
16-Oct-2009	24:00:00	-28.77	-23.99	-7.93	-26.14	-2.01	-24.69	-31.48	-28.14	
17-Oct-2009	06:00:00	-29.12	-24.28	-7.92	-26.18	-2.10	-24.71	-31.56	-28.38	
17-Oct-2009	12:00:00	-29.17	-24.38	-7.91	-26.46	-2.23	-24.76	-31.31	-29.22	
17-Oct-2009	18:00:00	-29.25	-24.58	-8.16	-26.51	-2.32	-24.76	-31.73	-29.78	
17-Oct-2009	24:00:00	-29.30	-24.72	-8.24	-26.43	-2.29	-24.64	-31.34	-30.10	
18-Oct-2009	06:00:00	-29.26	-24.93	-8.24	-26.44	-2.35	-24.65	-31.79	-29.88	
18-Oct-2009	12:00:00	-29.29	-25.14	-8.30	-26.57	-2.50	-24.62	-31.42	-30.32	
18-Oct-2009	18:00:00	-29.30	-25.38	-8.39	-26.84	-2.53	-24.71	-31.77	-30.74	
18-Oct-2009	24:00:00	-29.26	-25.47	-8.45	-26.76	-2.59	-24.74	-31.31	-31.24	
19-Oct-2009	06:00:00	-29.38	-25.70	-8.54	-26.92	-2.66	-24.82	-31.85	-31.46	
19-Oct-2009	12:00:00	-29.40	-26.04	-8.71	-27.20	-2.91	-24.88	-31.59	-32.03	
19-Oct-2009	18:00:00	-29.44	-26.32	-8.90	-27.39	-2.97	-24.77	-31.88	-32.46	
19-Oct-2009	24:00:00	-29.35	-26.26	-8.90	-27.10	-2.95	-24.83	-31.53	-32.37	
20-Oct-2009	06:00:00	-29.34	-26.44	-8.80	-27.02	-3.08	-24.78	-31.88	-31.88	
20-Oct-2009	12:00:00	-29.34	-26.57	-8.71	-27.15	-3.34	-24.92	-31.52	-31.98	
20-Oct-2009	18:00:00	-29.31	-26.84	-8.88	-27.53	-3.42	-24.83	-31.59	-32.73	
20-Oct-2009	24:00:00	-29.24	-26.72	-9.04	-27.12	-3.31	-24.77	-31.50	-32.62	
21-Oct-2009	06:00:00	-29.16	-26.78	-8.81	-27.12	-3.37	-24.86	-31.84	-32.38	
21-Oct-2009	12:00:00	-29.26	-26.98	-8.84	-27.20	-3.79	-24.80	-31.55	-32.48	
21-Oct-2009	18:00:00	-29.30	-27.15	-8.99	-27.74	-3.97	-24.81	-31.71	-33.14	
21-Oct-2009	24:00:00	-29.26	-27.15	-9.18	-27.30	-3.94	-24.86	-31.50	-33.15	
22-Oct-2009	06:00:00	-29.25	-27.18	-9.08	-27.21	-3.81	-24.68	-31.94	-32.56	
22-Oct-2009	12:00:00	-29.26	-27.26	-8.86	-27.52	-4.44	-24.94	-31.47	-32.73	
22-Oct-2009	18:00:00	-29.34	-27.50	-9.17	-27.88	-4.63	-24.82	-31.84	-32.94	
22-Oct-2009	24:00:00	-29.23	-27.23	-9.20	-27.52	-4.28	-24.80	-31.61	-33.02	
23-Oct-2009	06:00:00	-29.24	-27.30	-9.14	-27.28	-4.18	-24.84	-31.95	-32.45	
23-Oct-2009	12:00:00	-29.32	-27.41	-9.07	-27.69	-4.69	-24.94	-31.49	-32.42	
23-Oct-2009	18:00:00	-29.44	-27.57	-9.25	-27.95	-4.86	-24.77	-31.78	-32.91	
23-Oct-2009	24:00:00	-29.30	-27.39	-9.38	-27.59	-4.08	-24.80	-31.49	-33.00	
24-Oct-2009	06:00:00	-29.30	-27.50	-9.24	-27.34	-3.90	-24.80	-31.91	-32.46	
24-Oct-2009	12:00:00	-29.31	-27.42	-9.06	-27.48	-3.85	-24.80	-31.66	-32.32	
24-Oct-2009	18:00:00	-29.30	-27.51	-9.20	-27.82	-4.35	-24.65	-31.73	-32.63	
24-Oct-2009	24:00:00	-29.12	-27.33	-9.35	-27.75	-4.36	-24.76	-31.65	-33.29	
25-Oct-2009	06:00:00	-29.24	-27.57	-9.42	-27.75	-4.46	-24.86	-31.79	-33.83	
25-Oct-2009	12:00:00	-29.29	-27.84	-9.36	-28.35	-4.95	-24.95	-31.41	-34.78	

Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
25-Oct-2009	18:00:00	-29.47	-28.11	-9.76	-28.52	-5.35	-24.82	-31.62	-35.16	
25-Oct-2009	24:00:00	-29.31	-28.19	-9.74	-28.23	-5.26	-24.76	-31.52	-35.48	
26-Oct-2009	06:00:00	-29.32	-28.47	-9.68	-28.01	-5.23	-24.88	-31.83	-35.21	
26-Oct-2009	12:00:00	-29.36	-28.64	-9.56	-28.16	-5.34	-24.82	-31.60	-35.03	
26-Oct-2009	18:00:00	-29.32	-28.70	-9.49	-27.94	-4.22	-24.94	-31.76	-34.71	
26-Oct-2009	24:00:00	-29.34	-28.66	-9.40	-27.80	-3.88	-24.92	-31.30	-34.17	
27-Oct-2009	06:00:00	-29.40	-28.65	-9.37	-27.62	-3.55	-24.74	-31.77	-33.38	
27-Oct-2009	12:00:00	-29.28	-28.43	-9.02	-27.41	-3.60	-24.83	-31.55	-33.06	
27-Oct-2009	18:00:00	-29.18	-28.41	-8.99	-27.36	-2.73	-24.82	-31.96	-32.67	
27-Oct-2009	24:00:00	-29.22	-28.38	-9.02	-27.04	-2.88	-24.86	-31.50	-31.73	
28-Oct-2009	06:00:00	-29.31	-28.20	-8.84	-26.93	-1.45	-24.96	-31.86	-30.17	
28-Oct-2009	12:00:00	-29.41	-26.96	-8.35	-27.30	-1.53	-24.92	-31.52	-31.01	
28-Oct-2009	18:00:00	-29.31	-26.88	-8.65	-27.58	-1.56	-24.77	-31.70	-32.13	
28-Oct-2009	24:00:00	-29.28	-26.90	-8.84	-27.41	-1.62	-24.69	-31.28	-32.79	
29-Oct-2009	06:00:00	-29.31	-27.22	-8.81	-27.56	-1.66	-24.68	-31.82	-33.17	
29-Oct-2009	12:00:00	-29.26	-27.48	-8.84	-27.72	-1.96	-24.94	-31.54	-33.80	
29-Oct-2009	18:00:00	-29.42	-27.81	-9.19	-27.80	-2.10	-24.80	-31.70	-34.04	
29-Oct-2009	24:00:00	-29.20	-27.84	-9.23	-27.57	-2.06	-24.80	-31.29	-34.13	
30-Oct-2009	06:00:00	-29.22	-27.78	-9.13	-27.57	-2.04	-24.75	-31.73	-33.75	
30-Oct-2009	12:00:00	-29.30	-27.92	-9.00	-27.41	-2.23	-24.84	-31.47	-33.59	
30-Oct-2009	18:00:00	-29.32	-27.93	-9.01	-27.27	-2.08	-24.74	-31.71	-32.97	
30-Oct-2009	24:00:00	-29.12	-27.76	-8.87	-27.18	-2.19	-24.90	-31.46	-32.72	
31-Oct-2009	06:00:00	-29.35	-27.77	-8.94	-27.08	-2.04	-24.90	-31.70	-31.89	
31-Oct-2009	12:00:00	-29.26	-27.54	-8.69	-26.99	-2.00	-24.82	-31.35	-31.32	
31-Oct-2009	18:00:00	-29.23	-27.47	-8.69	-27.14	-1.95	-24.70	-31.76	-31.23	
31-Oct-2009	24:00:00	-29.13	-27.16	-8.66	-26.97	-1.96	-24.65	-31.10	-31.08	
1-Nov-2009	06:00:00	-29.00	-26.99	-8.60	-27.09	-2.16	-24.72	-31.67	-31.01	
1-Nov-2009	12:00:00	-29.26	-27.06	-8.72	-27.32	-2.01	-24.75	-31.36	-31.62	
1-Nov-2009	18:00:00	-29.20	-27.22	-8.93	-27.53	-2.04	-24.76	-31.84	-32.02	
1-Nov-2009	24:00:00	-29.28	-27.35	-8.94	-27.47	-2.11	-24.76	-31.35	-32.49	
2-Nov-2009	06:00:00	-29.31	-27.63	-8.89	-27.54	-2.12	-24.75	-31.88	-32.52	
2-Nov-2009	12:00:00	-29.28	-27.87	-9.00	-27.39	-2.22	-24.76	-31.68	-32.74	
2-Nov-2009	18:00:00	-29.29	-27.84	-8.93	-27.68	-2.24	-24.83	-31.73	-33.00	
2-Nov-2009	24:00:00	-29.31	-27.95	-9.05	-27.50	-2.23	-24.78	-31.17	-33.22	
3-Nov-2009	06:00:00	-29.34	-28.07	-9.00	-27.53	-2.24	-24.78	-31.77	-33.06	
3-Nov-2009	12:00:00	-29.31	-28.24	-9.04	-27.44	-2.42	-24.82	-31.42	-33.24	
3-Nov-2009	18:00:00	-29.28	-28.28	-8.99	-27.92	-2.41	-24.82	-31.68	-33.70	
3-Nov-2009	24:00:00	-29.32	-28.28	-9.24	-27.92	-2.47	-24.84	-31.18	-34.36	
4-Nov-2009	06:00:00	-29.32	-28.53	-9.26	-27.93	-2.35	-24.77	-31.90	-34.67	
4-Nov-2009	12:00:00	-29.29	-28.74	-9.28	-28.02	-2.55	-24.87	-31.48	-35.07	
4-Nov-2009	18:00:00	-29.34	-29.01	-9.46	-28.08	-2.42	-24.80	-31.80	-34.91	
4-Nov-2009	24:00:00	-29.25	-28.84	-9.29	-27.82	-2.32	-24.83	-31.31	-34.54	
5-Nov-2009	06:00:00	-29.23	-28.88	-9.19	-27.89	-2.32	-24.87	-31.91	-34.11	
5-Nov-2009	12:00:00	-29.34	-28.95	-9.31	-28.00	-2.50	-24.81	-31.49	-34.22	
5-Nov-2009	18:00:00	-29.42	-29.14	-9.29	-28.46	-2.55	-24.78	-31.77	-34.80	
5-Nov-2009	24:00:00	-29.31	-29.12	-9.48	-28.26	-2.43	-24.78	-31.38	-35.39	
6-Nov-2009	06:00:00	-29.31	-29.34	-9.38	-28.36	-2.46	-24.80	-31.80	-35.66	
6-Nov-2009	12:00:00	-29.36	-29.60	-9.48	-28.42	-2.70	-24.89	-31.56	-35.96	
6-Nov-2009	18:00:00	-29.41	-29.74	-9.58	-28.54	-2.58	-24.77	-31.71	-36.11	
6-Nov-2009	24:00:00	-29.28	-29.70	-9.44	-28.38	-2.56	-24.88	-31.23	-36.38	
7-Nov-2009	06:00:00	-29.40	-29.84	-9.50	-27.99	-2.48	-24.86	-31.78	-35.93	
7-Nov-2009	12:00:00	-29.37	-29.99	-9.44	-27.80	-2.56	-24.84	-31.66	-35.78	
7-Nov-2009	18:00:00	-29.38	-30.12	-9.29	-28.04	-2.62	-24.94	-31.94	-35.82	
7-Nov-2009	24:00:00	-29.31	-30.06	-9.52	-28.04	-2.66	-24.87	-31.34	-35.94	
8-Nov-2009	06:00:00	-29.37	-30.15	-9.56	-28.08	-2.70	-24.96	-31.79	-35.70	
8-Nov-2009	12:00:00	-29.29	-30.33	-9.53	-28.30	-2.98	-24.92	-31.48	-35.98	
8-Nov-2009	18:00:00	-29.54	-30.50	-9.61	-28.40	-2.82	-24.84	-31.64	-36.56	
8-Nov-2009	24:00:00	-29.30	-30.38	-9.61	-28.34	-2.79	-24.83	-31.43	-36.94	
9-Nov-2009	06:00:00	-29.40	-30.51	-9.60	-28.37	-2.88	-24.92	-31.82	-36.94	
9-Nov-2009	12:00:00	-29.41	-30.75	-9.60	-28.32	-3.08	-24.99	-31.41	-36.92	
9-Nov-2009	18:00:00	-29.52	-30.84	-9.64	-28.55	-2.98	-24.88	-31.80	-37.08	
9-Nov-2009	24:00:00	-29.43	-30.82	-9.64	-28.04	-2.85	-24.82	-31.38	-36.86	
10-Nov-2009	06:00:00	-29.37	-30.74	-9.37	-28.08	-2.88	-24.99	-31.90	-36.18	
10-Nov-2009	12:00:00	-29.42	-30.80	-9.49	-28.02	-2.89	-25.00	-31.42	-35.79	
10-Nov-2009	18:00:00	-29.42	-30.75	-9.52	-27.98	-1.50	-24.78	-7.74	-35.31	
10-Nov-2009	24:00:00	-29.35	-30.46	-9.29	-26.54	-0.62	-14.18	1.46	-34.70	
11-Nov-2009	06:00:00	-29.44	-29.27	-7.93	-25.89	0.12	-2.55	1.54	-32.79	
11-Nov-2009	12:00:00	-23.01	-20.33	-7.52	-9.47	6.57	0.49	1.28	1.30	
11-Nov-2009	18:00:00	-0.16	-3.72	-5.38	-16.68	5.74	-1.08	1.08	2.34	
11-Nov-2009	24:00:00	-0.67	-1.80	-4.32	-11.48	5.27	-1.05	0.64	2.50	



Date	Time	Water Level (inches)								
		BD AW1	BD AW2	BD AW3	BD AW4	BD AW5	BD AW6	BD AW7	BD AW8	Ambient
12-Nov-2009	06:00:00	0.63	-1.48	-3.89	-15.58	5.10	-1.37	-0.06	2.67	
12-Nov-2009	12:00:00	-0.52	-1.71	-3.58	-20.84	4.20	-2.10	-0.44	1.90	
12-Nov-2009	18:00:00	-2.20	-1.98	-3.49	-22.20	3.64	-1.40	-0.74	1.05	
12-Nov-2009	24:00:00	-2.05	-2.10	-3.55	-22.38	3.20	-2.13	-0.86	0.10	
13-Nov-2009	06:00:00	-3.15	-2.46	-3.80	-22.77	2.91	-2.82	-1.20	-0.29	
13-Nov-2009	12:00:00	-4.24	-2.81	-3.95	-22.96	2.52	-3.23	-1.42	-0.69	
13-Nov-2009	18:00:00	-5.18	-3.29	-4.19	-23.14	2.06	-3.75	-1.38	-0.81	
13-Nov-2009	24:00:00	-5.64	-3.69	-4.42	-23.31	1.71	-4.05	-1.28	-0.93	
14-Nov-2009	06:00:00	-5.98	-4.16	-4.45	-23.48	1.31	-4.38	-1.89	-0.99	
14-Nov-2009	12:00:00	-6.39	-4.71	-4.76	-23.54	1.05	-4.66	-1.85	-1.01	
14-Nov-2009	18:00:00	-6.50	-4.97	-4.74	-23.58	0.76	-5.06	-1.89	-1.02	
14-Nov-2009	24:00:00	-6.79	-5.50	-4.79	-23.63	0.51	-5.24	-1.82	-1.22	
15-Nov-2009	06:00:00	-6.88	-5.90	-4.80	-23.76	0.26	-5.49	-2.56	-1.38	
15-Nov-2009	12:00:00	-7.12	-6.27	-4.88	-23.87	-0.07	-5.69	-2.50	-1.48	
15-Nov-2009	18:00:00	-7.30	-6.69	-5.00	-24.02	-0.21	-6.04	-2.73	-1.92	
15-Nov-2009	24:00:00	-7.44	-7.10	-5.10	-24.05	-0.42	-6.59	-2.50	-2.25	
16-Nov-2009	06:00:00	-7.60	-7.56	-5.18	-23.94	-0.61	-6.66	-3.10	-2.58	
16-Nov-2009	12:00:00	-7.54	-7.97	-5.12	-24.14	-0.80	-6.94	-2.92	-2.94	
16-Nov-2009	18:00:00	-7.88	-8.39	-5.15	-24.04	-0.58	-7.28	-3.42	-3.42	
16-Nov-2009	24:00:00	-8.01	-8.74	-5.04	-24.03	-0.61	-7.64		-3.83	
17-Nov-2009	06:00:00	-7.90	-9.06	-5.03	-24.17	-0.81	-8.08		-4.43	
17-Nov-2009	12:00:00	-8.06	-9.58	-5.26						
17-Nov-2009	18:00:00									
17-Nov-2009	24:00:00									
18-Nov-2009	06:00:00									
18-Nov-2009	12:00:00									
18-Nov-2009	18:00:00									
18-Nov-2009	24:00:00									
19-Nov-2009	06:00:00									
19-Nov-2009	12:00:00									
19-Nov-2009	18:00:00									
19-Nov-2009	24:00:00									
20-Nov-2009	06:00:00									
20-Nov-2009	12:00:00									
20-Nov-2009	18:00:00									
20-Nov-2009	24:00:00									
21-Nov-2009	06:00:00									
21-Nov-2009	12:00:00									
21-Nov-2009	18:00:00									
21-Nov-2009	24:00:00									
22-Nov-2009	06:00:00									
22-Nov-2009	12:00:00									
22-Nov-2009	18:00:00									
22-Nov-2009	24:00:00									
23-Nov-2009	06:00:00									
23-Nov-2009	12:00:00									
23-Nov-2009	18:00:00									
23-Nov-2009	24:00:00									
24-Nov-2009	06:00:00									
24-Nov-2009	12:00:00									
24-Nov-2009	18:00:00									
24-Nov-2009	24:00:00									
25-Nov-2009	06:00:00									
25-Nov-2009	12:00:00									
25-Nov-2009	18:00:00									
25-Nov-2009	24:00:00									
26-Nov-2009	06:00:00									
26-Nov-2009	12:00:00									
26-Nov-2009	18:00:00									
26-Nov-2009	24:00:00									
27-Nov-2009	06:00:00									
27-Nov-2009	12:00:00									
27-Nov-2009	18:00:00									
27-Nov-2009	24:00:00									
28-Nov-2009	06:00:00									
28-Nov-2009	12:00:00									
28-Nov-2009	18:00:00									
28-Nov-2009	24:00:00									
29-Nov-2009	06:00:00									
29-Nov-2009	12:00:00									

										Weather Station Rainfall Data	
Date							On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Dunn Daily Rainfall	Dunn Monthly Rainfall
dd-mmm-yyyy	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3					
1-Jan-2009											
1-Jan-2009											
1-Jan-2009											
1-Jan-2009											
2-Jan-2009										0.02	
2-Jan-2009											
2-Jan-2009											
2-Jan-2009											
3-Jan-2009											
3-Jan-2009											
3-Jan-2009											
3-Jan-2009											
4-Jan-2009										0.33	
4-Jan-2009											
4-Jan-2009											
5-Jan-2009											
5-Jan-2009											
5-Jan-2009											
5-Jan-2009											
6-Jan-2009										0.28	
6-Jan-2009											
6-Jan-2009											
6-Jan-2009											
7-Jan-2009											
7-Jan-2009											
7-Jan-2009											
7-Jan-2009											
8-Jan-2009											
8-Jan-2009											
8-Jan-2009											
8-Jan-2009											
9-Jan-2009											
9-Jan-2009											
9-Jan-2009											
9-Jan-2009											
10-Jan-2009											
10-Jan-2009											
10-Jan-2009											
10-Jan-2009											
11-Jan-2009										0.15	
11-Jan-2009											
11-Jan-2009											
11-Jan-2009											
12-Jan-2009											
12-Jan-2009											
12-Jan-2009											
12-Jan-2009											
13-Jan-2009											
13-Jan-2009											
13-Jan-2009											
13-Jan-2009											
14-Jan-2009											
14-Jan-2009											
14-Jan-2009											
14-Jan-2009											
15-Jan-2009											
15-Jan-2009											
15-Jan-2009											
15-Jan-2009											
16-Jan-2009											
16-Jan-2009											
16-Jan-2009											
16-Jan-2009											
17-Jan-2009											
17-Jan-2009											
17-Jan-2009											
17-Jan-2009											
18-Jan-2009										0.18	
18-Jan-2009											

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
18-Jan-2009											
18-Jan-2009											
19-Jan-2009											
19-Jan-2009											
19-Jan-2009											
19-Jan-2009											
20-Jan-2009										0.32	
20-Jan-2009											
20-Jan-2009											
20-Jan-2009											
21-Jan-2009										0.01	
21-Jan-2009											
21-Jan-2009											
21-Jan-2009											
22-Jan-2009											
22-Jan-2009											
22-Jan-2009											
22-Jan-2009											
23-Jan-2009											
23-Jan-2009											
23-Jan-2009											
23-Jan-2009											
24-Jan-2009											
24-Jan-2009											
24-Jan-2009											
24-Jan-2009											
25-Jan-2009											
25-Jan-2009											
25-Jan-2009											
26-Jan-2009											
26-Jan-2009											
26-Jan-2009											
26-Jan-2009											
27-Jan-2009										0.01	
27-Jan-2009											
27-Jan-2009											
27-Jan-2009											
28-Jan-2009										0.18	
28-Jan-2009											
28-Jan-2009											
28-Jan-2009											
29-Jan-2009											
29-Jan-2009											
29-Jan-2009											
29-Jan-2009											
30-Jan-2009											
30-Jan-2009											
30-Jan-2009											
30-Jan-2009											
31-Jan-2009											
31-Jan-2009											
31-Jan-2009											
31-Jan-2009											1.48
1-Feb-2009											
1-Feb-2009											
1-Feb-2009											
1-Feb-2009											
2-Feb-2009										0.07	
2-Feb-2009											
2-Feb-2009											
2-Feb-2009											
3-Feb-2009										0.06	
3-Feb-2009											
3-Feb-2009											
3-Feb-2009											
4-Feb-2009										0.13	
4-Feb-2009											
4-Feb-2009											
4-Feb-2009											

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
5-Feb-2009											
5-Feb-2009											
5-Feb-2009											
5-Feb-2009											
6-Feb-2009											
6-Feb-2009											
6-Feb-2009											
6-Feb-2009											
7-Feb-2009											
7-Feb-2009											
7-Feb-2009											
7-Feb-2009											
8-Feb-2009											
8-Feb-2009											
8-Feb-2009											
8-Feb-2009											
9-Feb-2009											
9-Feb-2009											
9-Feb-2009											
9-Feb-2009											
10-Feb-2009											
10-Feb-2009											
10-Feb-2009											
10-Feb-2009											
11-Feb-2009											
11-Feb-2009											
11-Feb-2009											
11-Feb-2009											
12-Feb-2009											
12-Feb-2009											
12-Feb-2009											
12-Feb-2009											
13-Feb-2009											
13-Feb-2009											
13-Feb-2009											
13-Feb-2009											
14-Feb-2009											
14-Feb-2009											
14-Feb-2009											
14-Feb-2009											
15-Feb-2009											
15-Feb-2009											
15-Feb-2009											
15-Feb-2009											
16-Feb-2009											
16-Feb-2009											
16-Feb-2009											
16-Feb-2009											
17-Feb-2009											
17-Feb-2009											
17-Feb-2009											
17-Feb-2009											
18-Feb-2009										0.62	
18-Feb-2009											
18-Feb-2009											
18-Feb-2009											
19-Feb-2009										0.02	
19-Feb-2009											
19-Feb-2009											
19-Feb-2009											
20-Feb-2009											
20-Feb-2009											
20-Feb-2009											
20-Feb-2009											
21-Feb-2009											
21-Feb-2009											
21-Feb-2009											
21-Feb-2009											
22-Feb-2009										0.02	
22-Feb-2009											

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
22-Feb-2009											
22-Feb-2009											
23-Feb-2009				0.00	0.00	0.40	---				
23-Feb-2009											
23-Feb-2009											
24-Feb-2009											
24-Feb-2009											
24-Feb-2009											
24-Feb-2009											
25-Feb-2009											
25-Feb-2009											
25-Feb-2009											
25-Feb-2009											
26-Feb-2009	-0.98	0.00	-2.81								
26-Feb-2009	-0.99	-1.75	-2.80								
26-Feb-2009	-0.98	-1.85	-2.83								
26-Feb-2009	-1.05	-1.75	-2.62								
27-Feb-2009	-1.13	-1.87	-2.71								
27-Feb-2009	-1.10	-1.99	-2.77								
27-Feb-2009	-0.92	-2.12	-2.88								
27-Feb-2009	-0.92	-2.11	-2.81								
28-Feb-2009	-0.14	-2.01	-2.68							0.91	
28-Feb-2009	5.40	-1.71	-2.17								
28-Feb-2009	5.46	-0.57	-0.66								
28-Feb-2009	4.07	2.46	0.17								1.83
1-Mar-2009	4.56	1.49	-0.49							0.82	
1-Mar-2009	9.82	0.59	-0.91								
1-Mar-2009	7.47	1.97	-0.25								
1-Mar-2009	6.22	4.60	2.91								
2-Mar-2009	4.93	3.12	1.55							0.04	
2-Mar-2009	3.91	1.80	-0.54								
2-Mar-2009	3.19	0.66	-0.90								
2-Mar-2009	2.55	-0.01	-0.95								
3-Mar-2009	2.26	-0.49	-1.17								
3-Mar-2009	2.03	-0.77	-1.26								
3-Mar-2009	1.71	-0.81	-1.38								
3-Mar-2009	1.61	-0.84	-1.43								
4-Mar-2009	1.48	-0.96	-1.66								
4-Mar-2009	1.51	-1.26	-1.92								
4-Mar-2009	1.60	-1.20	-1.85								
4-Mar-2009	1.49	-1.07	-1.91								
5-Mar-2009	1.43	-1.09	-1.99								
5-Mar-2009	1.35	-1.13	-2.04								
5-Mar-2009	1.35	-1.26	-2.17								
5-Mar-2009	1.19	-1.34	-2.31								
6-Mar-2009	1.02	-1.21	-2.37								
6-Mar-2009	0.82	-1.26	-2.46								
6-Mar-2009	0.94	-1.43	-2.61								
6-Mar-2009	0.81	-1.52	-2.68								
7-Mar-2009	0.65	-1.34	-2.52								
7-Mar-2009	0.65	-1.51	-2.73								
7-Mar-2009	0.72	-1.79	-2.99								
7-Mar-2009	0.85	-1.71	-2.92								
8-Mar-2009	0.58	-1.71	-2.92								
8-Mar-2009	0.42	-1.64	-2.83								
8-Mar-2009	0.58	-1.98	-3.30								
8-Mar-2009	0.48	-1.99	-3.25								
9-Mar-2009	0.04	-1.95	-3.01								
9-Mar-2009	0.04	-2.00	-3.06								
9-Mar-2009	0.21	-2.36	-3.59								
9-Mar-2009	0.06	-2.43	-3.67								
10-Mar-2009	0.10	-2.41	-3.58							0.21	
10-Mar-2009	-0.01	-2.48	-3.73								
10-Mar-2009	0.06	-2.70	-3.78								
10-Mar-2009	-0.13	-2.89	-3.91								
11-Mar-2009	-0.14	-2.66	-3.81								
11-Mar-2009	-0.30	-2.83	-3.84								
11-Mar-2009	-0.06	-2.89	-3.93								
11-Mar-2009	-0.13	-3.17	-4.33								



Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
12-Mar-2009	-0.32	-2.84	-3.96								
12-Mar-2009	-0.29	-3.02	-4.00								
12-Mar-2009	-0.51	-3.45	-4.31								
12-Mar-2009	-0.49	-3.72	-4.38								
13-Mar-2009	-0.55	-3.91	-4.49							0.41	
13-Mar-2009	-0.23	-3.98	-4.53								
13-Mar-2009	0.03	-3.24	-3.91								
13-Mar-2009	-0.05	-2.09	-2.29								
14-Mar-2009	-0.05	-1.65	-2.47							0.15	
14-Mar-2009	0.12	-1.77	-2.73								
14-Mar-2009	0.22	-1.73	-2.65								
14-Mar-2009	0.52	-1.51	-1.95								
15-Mar-2009	0.84	-1.21	-2.04							0.41	
15-Mar-2009	2.11	-0.95	-1.73								
15-Mar-2009	2.32	-0.61	-1.32								
15-Mar-2009	2.47	-0.57	-1.54								
16-Mar-2009	2.34	-0.05	-1.20							0.21	
16-Mar-2009	2.87	-0.03	-1.42								
16-Mar-2009	2.99	-0.39	-1.45								
16-Mar-2009	2.77	0.40	-1.41								
17-Mar-2009	2.39	0.20	-1.37								
17-Mar-2009	2.21	-0.24	-1.39								
17-Mar-2009	2.14	-0.75	-1.68								
17-Mar-2009	2.02	-0.93	-1.75								
18-Mar-2009	1.81	-0.87	-1.56								
18-Mar-2009	1.57	-0.90	-1.67								
18-Mar-2009	1.62	-1.04	-1.81								
18-Mar-2009	1.56	-1.20	-2.07								
19-Mar-2009	1.30	-1.10	-1.95							0.24	
19-Mar-2009	1.17	-1.20	-2.07								
19-Mar-2009	1.45	-1.29	-2.28								
19-Mar-2009	2.14	-1.37	-2.38								
20-Mar-2009	1.96	-0.86	-1.37							0.10	
20-Mar-2009	1.83	-0.84	-1.39								
20-Mar-2009	1.90	-1.15	-1.63								
20-Mar-2009	1.74	-1.17	-1.83								
21-Mar-2009	1.56	-1.15	-1.93								
21-Mar-2009	1.63	-1.35	-2.19								
21-Mar-2009	1.32	-1.39	-2.29								
21-Mar-2009	1.31	-1.44	-2.16								
22-Mar-2009	1.06	-1.63	-2.49								
22-Mar-2009	1.03	-1.67	-2.37								
22-Mar-2009	1.00	-1.80	-2.67								
22-Mar-2009	0.91	-1.77	-2.63								
23-Mar-2009	0.69	-1.86	-2.76								
23-Mar-2009	0.66	-1.95	-2.86								
23-Mar-2009	0.71	-2.12	-3.09								
23-Mar-2009	0.67	-2.12	-3.00								
24-Mar-2009	0.81	-2.19	-3.12	0.00	0.00	0.65	4.47				
24-Mar-2009	0.76	-2.17	-3.04								
24-Mar-2009	0.71	-1.69	-3.03								
24-Mar-2009	0.54	-2.87	-3.01								
25-Mar-2009	0.51	-2.13	-3.06								
25-Mar-2009	0.65	-2.83	-3.12								
25-Mar-2009	0.57	-3.53	-3.39								
25-Mar-2009	0.66	-4.47	-3.28								
26-Mar-2009	0.60	-5.43	-3.21							0.13	
26-Mar-2009	0.72	-6.47	-2.80								
26-Mar-2009	0.88	-7.27	-2.81								
26-Mar-2009	0.75	-8.48	-2.79								
27-Mar-2009	0.65	-8.23	-2.70							0.44	
27-Mar-2009	1.67	-8.30	-2.77								
27-Mar-2009	4.89	-8.23	-2.83								
27-Mar-2009	4.53	-7.34	-0.79								
28-Mar-2009	3.72	-6.39	-0.79							0.67	
28-Mar-2009	4.75	-7.27	-1.32								
28-Mar-2009	6.65	-7.75	-1.60								
28-Mar-2009	5.41	-8.19	-1.08								
29-Mar-2009	4.56	-8.73	-1.19							0.01	
29-Mar-2009	3.99	-10.43	-1.32								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
29-Mar-2009	3.58	-12.23	-1.73								
29-Mar-2009	3.52	-12.24	-2.08								
30-Mar-2009	3.23	-8.75	-2.21								
30-Mar-2009	2.94	-7.16	-2.20								
30-Mar-2009	2.87	-6.47	-2.33								
30-Mar-2009	2.70	-6.69	-2.56								
31-Mar-2009	2.53	-5.70	-2.46								
31-Mar-2009	2.45	-5.04	-2.65								
31-Mar-2009	2.43	-4.70	-2.92								
31-Mar-2009	2.39	-6.03	-2.81								3.84
1-Apr-2009	2.21	-6.21	-2.71								
1-Apr-2009	2.16	-7.39	-2.76								
1-Apr-2009	2.21	-7.05	-2.80								
1-Apr-2009	2.03	-7.80	-2.76								
2-Apr-2009	1.99	-7.46	-2.68							0.13	
2-Apr-2009	2.28	-7.87	-2.88								
2-Apr-2009	2.28	-8.37	-2.63								
2-Apr-2009	2.31	-10.22	-2.19								
3-Apr-2009	2.05	-12.31	-2.16							0.03	
3-Apr-2009	1.86	-14.52	-2.22								
3-Apr-2009	1.80	-14.22	-2.61								
3-Apr-2009	1.72	-13.04	-2.83								
4-Apr-2009	1.61	-9.89	-2.82								
4-Apr-2009	1.32	-8.35	-2.86								
4-Apr-2009	1.39	-8.05	-3.19								
4-Apr-2009	1.51	-8.97	-3.47								
5-Apr-2009	1.24	-8.24	-3.30								
5-Apr-2009	1.18	-7.91	-3.36								
5-Apr-2009	1.07	-8.94	-3.71								
5-Apr-2009	1.00	-10.77	-3.82								
6-Apr-2009	0.99	-11.79	-3.67							0.19	
6-Apr-2009	0.88	-14.52	-3.67								
6-Apr-2009	0.77	-15.91	-2.89								
6-Apr-2009	0.70	-15.03	-3.27								
7-Apr-2009	0.46	-12.86	-3.36								
7-Apr-2009	0.31	-12.43	-3.40								
7-Apr-2009	0.30	-11.95	-3.79								
7-Apr-2009	0.25	-11.47	-4.01								
8-Apr-2009	-0.02	-9.63	-4.12								
8-Apr-2009	0.07	-8.94	-4.12								
8-Apr-2009	-0.05	-9.81	-4.50								
8-Apr-2009	-0.02	-11.58	-4.54								
9-Apr-2009	-0.24	-10.95	-4.59								
9-Apr-2009	-0.24	-10.56	-4.61								
9-Apr-2009	-0.31	-9.85	-5.04								
9-Apr-2009	-0.25	-10.81	-5.29								
10-Apr-2009	-0.48	-10.08	-5.31							0.05	
10-Apr-2009	-0.45	-10.11	-5.22								
10-Apr-2009	-0.19	-10.08	-6.00								
10-Apr-2009	-0.09	-12.47	-6.70								
11-Apr-2009	-0.39	-10.51	-5.33							0.03	
11-Apr-2009	-0.38	-11.54	-4.14								
11-Apr-2009	-0.44	-11.79	-4.86								
11-Apr-2009	-0.32	-10.92	-5.39								
12-Apr-2009	-0.62	-8.75	-5.56								
12-Apr-2009	-0.85	-7.55	-5.69								
12-Apr-2009	-0.75	-7.91	-6.63								
12-Apr-2009	-0.80	-10.04	-8.49								
13-Apr-2009	-0.86	-9.12	-8.62								
13-Apr-2009	-0.90	-8.87	-8.63								
13-Apr-2009	-0.95	-9.71	-7.95								
13-Apr-2009	-0.72	-12.09	-8.59								
14-Apr-2009	-0.79	-13.27	-8.27							0.10	
14-Apr-2009	-0.77	-14.55	-7.74								
14-Apr-2009	1.24	-14.78	-8.02								
14-Apr-2009	1.95	-16.91	-8.65								
15-Apr-2009	1.43	-8.69	-1.60								
15-Apr-2009	1.11	-7.55	-1.71								
15-Apr-2009	0.70	-7.46	-2.11								
15-Apr-2009	0.51	-6.77	-2.22								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
16-Apr-2009	0.24	-4.79	-2.46								
16-Apr-2009	-0.03	-3.57	-2.56								
16-Apr-2009	-0.09	-3.20	-2.81								
16-Apr-2009	-0.29	-3.35	-3.18								
17-Apr-2009	-0.43	-2.47	-3.22								
17-Apr-2009	-0.51	-1.58	-3.41								
17-Apr-2009	-0.57	-2.10	-3.64								
17-Apr-2009	-0.53	-3.86	-3.69								
18-Apr-2009	-0.72	-3.72	-3.71							0.03	
18-Apr-2009	-0.80	-4.41	-3.72								
18-Apr-2009	-0.84	-5.34	-4.11								
18-Apr-2009	-0.83	-7.21	-4.32								
19-Apr-2009	-1.04	-6.96	-4.38								
19-Apr-2009	-1.07	-7.35	-4.32								
19-Apr-2009	-1.01	-8.17	-4.65								
19-Apr-2009	-0.99	-9.26	-4.69								
20-Apr-2009	-1.02	-9.53	-4.69								
20-Apr-2009	-0.97	-10.88	-4.69								
20-Apr-2009	-0.86	-11.81	-4.91								
20-Apr-2009	-0.92	-11.88	-3.45								
21-Apr-2009	-1.15	-10.67	-4.08	0.00	0.00	0.30	3.22				
21-Apr-2009	-1.51	-10.70	-4.24								
21-Apr-2009	-1.39	-11.81	-4.59								
21-Apr-2009	-1.53	-12.91	-5.04								
22-Apr-2009	-1.88	-11.88	-4.95								
22-Apr-2009	-2.03	-11.22	-5.22								
22-Apr-2009	-2.07	-10.70	-6.03								
22-Apr-2009	-2.18	-11.51	-7.29								
23-Apr-2009	-2.52	-10.59	-7.67								
23-Apr-2009	-2.64	-10.15	-7.79								
23-Apr-2009	-2.55	-10.67	-9.48								
23-Apr-2009	-2.69	-12.21	-12.59								
24-Apr-2009	-2.91	-10.81	-12.65								
24-Apr-2009	-2.97	-10.11	-12.71								
24-Apr-2009	-2.96	-10.97	-13.75								
24-Apr-2009	-2.87	-12.47	-16.00								
25-Apr-2009	-3.21	-11.15	-16.29								
25-Apr-2009	-3.44	-10.97	-15.95								
25-Apr-2009	-3.21	-11.77	-17.13								
25-Apr-2009	-3.23	-14.01	-19.25								
26-Apr-2009	-3.48	-13.02	-19.90								
26-Apr-2009	-3.83	-12.95	-20.43								
26-Apr-2009	-3.56	-13.91	-20.98								
26-Apr-2009	-3.39	-15.92	-21.84								
27-Apr-2009	-3.99	-14.85	-22.31								
27-Apr-2009	-4.19	-14.64	-22.66								
27-Apr-2009	-3.97	-15.41	-23.10								
27-Apr-2009	-3.86	-17.28	-23.22								
28-Apr-2009	-4.47	-16.88	-23.53								
28-Apr-2009	-4.52	-17.24	-23.85								
28-Apr-2009	-4.27	-17.99	-24.29								
28-Apr-2009	-4.16	-20.07	-24.28								
29-Apr-2009	-4.65	-20.18	-24.45								
29-Apr-2009	-4.62	-20.23	-24.60								
29-Apr-2009	-4.41	-21.21	-24.85								
29-Apr-2009	-4.34	-22.44	-24.91								
30-Apr-2009	-4.49	-21.29	-25.15								
30-Apr-2009	-4.79	-21.25	-25.36								
30-Apr-2009	-4.49	-21.55	-25.50								
30-Apr-2009	-4.33	-23.79	-25.49								0.56
1-May-2009	-4.87	-24.13	-25.55							0.09	
1-May-2009	-4.67	-24.53	-25.63								
1-May-2009	-4.45	-25.45	-25.83								
1-May-2009	-4.40	-27.39	-25.89								
2-May-2009	-4.75	-27.43	-25.95							0.04	
2-May-2009	-5.05	-28.16	-25.89								
2-May-2009	-4.20	-28.43	-26.08								
2-May-2009	-4.25	-29.57	-26.20					0.04			
3-May-2009	-4.75	-29.01	-26.23								
3-May-2009	-5.12	-28.61	-26.44								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
3-May-2009	-4.76	-28.87	-26.58								
3-May-2009	-4.64	-30.23	-26.64					0.04			
4-May-2009	-5.67	-29.53	-26.80							0.30	
4-May-2009	-5.84	-29.60	-26.87								
4-May-2009	-4.16	-29.53	-27.36								
4-May-2009	-4.23	-29.57	-27.46					0.11			
5-May-2009	-3.32	-28.83	-27.47							0.32	
5-May-2009	-3.47	-28.69	-27.64								
5-May-2009	-3.63	-28.28	-27.90								
5-May-2009	-3.54	-26.77	-27.83					0.36			
6-May-2009	-3.98	-23.06	-28.01								
6-May-2009	-4.27	-21.63	-27.90								
6-May-2009	-4.27	-21.74	-28.19								
6-May-2009	-3.02	-23.69	-28.21								
7-May-2009	-0.42	-23.58	-28.36							0.29	
7-May-2009	-0.87	-23.99	-28.41								
7-May-2009	-1.13	-7.32	-5.25								
7-May-2009	-1.38	-8.94	-6.53					1.12			
8-May-2009	-1.88	-8.31	-7.01							0.02	
8-May-2009	-2.16	-7.92	-6.79								
8-May-2009	-2.36	-8.35	-8.02								
8-May-2009	-2.60	-9.31	-9.77					0.06			
9-May-2009	-3.05	-8.97	-10.53								
9-May-2009	-3.48	-8.90	-11.13								
9-May-2009	-3.33	-9.53	-12.79								
9-May-2009	-3.43	-10.79	-14.38					0.02			
10-May-2009	-3.62	-9.60	-15.22								
10-May-2009	-3.83	-8.54	-15.93								
10-May-2009	-3.67	-7.91	-16.71								
10-May-2009	-3.81	-9.20	-17.35								
11-May-2009	-3.32	-9.31	-17.75							0.11	
11-May-2009	-3.56	-9.65	-18.23								
11-May-2009	-3.49	-7.03	-18.73								
11-May-2009	-3.83	-33.21	-19.03					0.15			
12-May-2009	-4.11	-33.21	-19.38								
12-May-2009	-4.34	-33.21	-20.04								
12-May-2009	-4.09	-33.21	-20.40								
12-May-2009	-4.16	-33.21	-21.03								
13-May-2009	-4.59	-33.21	-21.43								
13-May-2009	-4.98	-33.21	-21.84								
13-May-2009	-4.58	-33.21	-22.41								
13-May-2009	-4.59	-33.21	-22.85								
14-May-2009	-4.68	-33.21	-23.11								
14-May-2009	-5.28	-33.21	-23.51								
14-May-2009	-4.89	-33.21	-23.74								
14-May-2009	-4.73	-33.21	-24.18								
15-May-2009	-5.34	-33.21	-24.46								
15-May-2009	-5.82	-33.21	-24.77								
15-May-2009	-5.25	-33.21	-25.02								
15-May-2009	-5.11	-33.21	-25.38								
16-May-2009	-6.33	-33.21	-25.61							0.04	
16-May-2009	-3.23	-33.21	-25.80								
16-May-2009	-3.39	-33.21	-26.21								
16-May-2009	-3.42	-33.21	-26.27					0.64			
17-May-2009	-2.93	-33.21	-26.33							0.33	
17-May-2009	-2.79	-33.21	-26.39								
17-May-2009	-2.85	-33.21	-26.57								
17-May-2009	-2.76	-33.21	-25.02					0.45			
18-May-2009	-3.05	-33.21	-23.11							0.07	
18-May-2009	-3.27	-33.21	-20.80								
18-May-2009	-3.36	-33.21	-13.29								
18-May-2009	-3.36	-33.21	-13.61					0.13			
19-May-2009	-3.74	-33.21	-15.07								
19-May-2009	-4.13	-33.21	-16.15								
19-May-2009	-3.85	-33.21	-17.45								
19-May-2009	-3.98	-33.21	-18.72								
20-May-2009	-4.55	-33.21	-19.48								
20-May-2009	-4.82	-33.21	-20.16								
20-May-2009	-4.47	-33.21	-20.83								
20-May-2009	-4.35	-33.21	-21.47								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
21-May-2009	-5.23	-33.21	-21.90								
21-May-2009	-5.82	-33.21	-22.29								
21-May-2009	-5.21	-33.21	-22.97								
21-May-2009	-5.23	-33.21	-23.38								
22-May-2009	-6.11	-33.21	-23.59								
22-May-2009	-6.37	-33.21	-24.12								
22-May-2009	-5.91	-33.21	-24.57								
22-May-2009	-5.76	-33.21	-24.82								
23-May-2009	-6.57	-33.21	-25.14								
23-May-2009	-7.07	-33.21	-25.42								
23-May-2009	-6.65	-33.21	-25.86								
23-May-2009	-6.44	-33.21	-26.14								
24-May-2009	-7.10	-33.21	-26.49							0.02	
24-May-2009	-5.15	-33.21	-26.75								
24-May-2009	-5.41	-33.21	-27.12								
24-May-2009	-5.51	-33.21	-27.21					0.18			
25-May-2009	-5.00	-33.21	-27.39							0.06	
25-May-2009	-5.84	-33.21	-27.70								
25-May-2009	-5.85	-33.21	-27.77								
25-May-2009	-5.78	-33.21	-27.87					0.06			
26-May-2009	-4.10	-33.21	-28.03							0.30	
26-May-2009	-3.90	-33.21	-28.29								
26-May-2009	-4.04	-33.21	-28.43								
26-May-2009	-4.25	-33.21	-27.91					0.31			
27-May-2009	-5.03	-33.21	-26.63	0.00	0.00	0.00	3.30				
27-May-2009	-5.89	-33.21	-26.33								
27-May-2009	-5.77	-33.21	-26.40								
27-May-2009	-5.73	-11.85	-26.89								
28-May-2009	-6.33	-11.78	-27.22							0.17	
28-May-2009	-6.73	-11.96	-27.51								
28-May-2009	-5.61	-13.27	-27.87								
28-May-2009	-5.90	-14.66	-28.03					0.07			
29-May-2009	-6.66	-13.17	-28.14							0.01	
29-May-2009	-7.63	-13.41	-28.59								
29-May-2009	-7.28	-14.64	-28.89								
29-May-2009	-7.20	-16.61	-28.92					0.01			
30-May-2009	-8.59	-16.97	-29.13								
30-May-2009	-9.55	-17.27	-29.39								
30-May-2009	-8.84	-18.32	-29.79								
30-May-2009	-8.47	-19.85	-29.93								
31-May-2009	-10.14	-20.40	-30.09								
31-May-2009	-11.18	-20.75	-30.40								
31-May-2009	-10.13	-21.43	-30.78								
31-May-2009	-9.91	-22.26	-30.83						3.75	2.17	
1-Jun-2009	-11.96	-22.53	-30.95								
1-Jun-2009	-13.61	-22.79	-31.09								
1-Jun-2009	-12.69	-23.43	-31.66								
1-Jun-2009	-12.48	-23.94	-31.86								
2-Jun-2009	-14.22	-24.06	-31.99								
2-Jun-2009	-15.65	-24.26	-32.13								
2-Jun-2009	-15.31	-24.66	-32.49								
2-Jun-2009	-15.11	-24.90	-32.62								
3-Jun-2009	-16.34	-25.03	-32.80								
3-Jun-2009	-17.94	-25.21	-33.09								
3-Jun-2009	-17.65	-25.51	-33.33								
3-Jun-2009	-17.57	-25.69	-33.40								
4-Jun-2009	-18.17	-25.73	-33.67								
4-Jun-2009	-18.48	-26.03	-33.90								
4-Jun-2009	-4.17	-26.18	-34.15								
4-Jun-2009	-4.49	-26.16	-34.17					0.99			
5-Jun-2009	-5.09	-3.29	-19.21								
5-Jun-2009	-5.91	-3.48	-19.67								
5-Jun-2009	-6.30	-4.31	-20.79								
5-Jun-2009	-6.33	-5.37	-21.83					0.01			
6-Jun-2009	-6.92	-6.01	-22.87								
6-Jun-2009	-7.46	-6.49	-23.71								
6-Jun-2009	-7.28	-7.87	-24.70								
6-Jun-2009	-7.28	-9.67	-25.33								
7-Jun-2009	-8.01	-9.93	-25.83								
7-Jun-2009	-9.00	-10.26	-26.46								



Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
7-Jun-2009	-8.52	-11.25	-27.04								
7-Jun-2009	-8.36	-13.41	-27.69								
8-Jun-2009	-9.57	-13.74	-27.93								
8-Jun-2009	-11.15	-14.07	-28.35								
8-Jun-2009	-10.28	-14.90	-29.09								
8-Jun-2009	-10.08	-16.26	-29.45								
9-Jun-2009	-11.83	-16.74	-29.70								
9-Jun-2009	-11.21	-17.12	-30.01								
9-Jun-2009	-8.61	-18.08	-30.67								
9-Jun-2009	-8.84	-18.81	-30.93					0.13			
10-Jun-2009	-9.98	-18.39	-31.33							0.10	
10-Jun-2009	-12.25	-17.23	-31.48								
10-Jun-2009	-10.83	-17.69	-31.69								
10-Jun-2009	-10.25	-19.19	-32.11					0.03			
11-Jun-2009	-11.51	-19.61	-32.20								
11-Jun-2009	-13.76	-19.63	-32.52								
11-Jun-2009	-13.51	-19.97	-32.83								
11-Jun-2009	-13.45	-20.59	-33.28					0.06			
12-Jun-2009	-15.25	-21.01	-33.47								
12-Jun-2009	-17.12	-21.21	-33.75								
12-Jun-2009	-16.99	-21.75	-34.09								
12-Jun-2009	-16.97	-22.34	-34.31								
13-Jun-2009	-18.03	-22.51	-34.37								
13-Jun-2009	-19.77	-22.83	-34.57								
13-Jun-2009	-19.38	-23.28	-34.54								
13-Jun-2009	-19.39	-23.75	-34.59								
14-Jun-2009	-19.43	-23.93	-34.33								
14-Jun-2009	-19.38	-24.00	-34.38								
14-Jun-2009	-19.37	-24.56	-34.47								
14-Jun-2009	-19.45	-24.97	-34.42								
15-Jun-2009	-19.52	-25.15	-34.41								
15-Jun-2009	-19.44	-25.38	-34.43								
15-Jun-2009	-10.92	-25.75	-34.43								
15-Jun-2009	-9.73	-26.11	-34.50					0.51			
16-Jun-2009	-9.71	-25.89	-34.29							0.07	
16-Jun-2009	-6.11	-25.97	-34.41								
16-Jun-2009	-6.60	-25.68	-34.37								
16-Jun-2009	-6.92	-17.96	-34.30					0.32			
17-Jun-2009	-7.61	-16.21	-34.27								
17-Jun-2009	-8.84	-15.89	-34.29								
17-Jun-2009	-7.38	-16.14	-34.43								
17-Jun-2009	-6.42	-16.58	-34.30					0.08			
18-Jun-2009	-6.83	-16.82	-34.19							0.26	
18-Jun-2009	-8.89	-16.81	-34.32								
18-Jun-2009	-8.87	-16.10	-34.41								
18-Jun-2009	-9.27	-16.45	-34.27					0.01			
19-Jun-2009	-11.06	-16.81	-34.24								
19-Jun-2009	-13.11	-17.46	-34.38								
19-Jun-2009	-12.91	-18.25	-34.43								
19-Jun-2009	-13.05	-19.05	-34.33								
20-Jun-2009	-14.58	-19.50	-34.37								
20-Jun-2009	-17.06	-19.93	-34.41								
20-Jun-2009	-17.10	-20.54	-34.50								
20-Jun-2009	-17.15	-21.25	-34.48								
21-Jun-2009	-18.23	-21.56	-34.39								
21-Jun-2009	-19.47	-21.81	-34.38								
21-Jun-2009	-19.50	-22.49	-34.43								
21-Jun-2009	-19.46	-23.05	-34.37								
22-Jun-2009	-19.55	-23.31	-34.35								
22-Jun-2009	-19.55	-23.59	-34.26								
22-Jun-2009	-19.50	-24.14	-34.43								
22-Jun-2009	-19.50	-24.62	-34.39								
23-Jun-2009	-19.75	-24.98	-34.37								
23-Jun-2009	-19.55	-25.23	-34.41								
23-Jun-2009	-19.46	-25.68	-34.62								
23-Jun-2009	-19.53	-25.98	-34.47					0.05			
24-Jun-2009	-24.79	-26.17	-34.33	0.00	0.00	0.00	2.18				
24-Jun-2009	-25.27	-26.49	-34.38								
24-Jun-2009	-25.54	-26.97	-34.42								
24-Jun-2009	-25.71	-27.38	-34.33								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
25-Jun-2009	-26.00	-27.67	-34.27								
25-Jun-2009	-26.36	-27.90	-34.43								
25-Jun-2009	-26.35	-28.23	-34.63								
25-Jun-2009	-26.53	-28.50	-34.44								
26-Jun-2009	-26.76	-28.52	-34.29								
26-Jun-2009	-27.02	-28.79	-34.38								
26-Jun-2009	-26.91	-29.13	-34.43								
26-Jun-2009	-27.13	-29.36	-34.45								
27-Jun-2009	-27.44	-29.39	-34.38								
27-Jun-2009	-27.62	-29.67	-34.35								
27-Jun-2009	-27.67	-30.01	-34.49								
27-Jun-2009	-27.70	-30.12	-34.48								
28-Jun-2009	-28.05	-30.36	-34.38								
28-Jun-2009	-28.15	-30.62	-34.43								
28-Jun-2009	-28.10	-30.97	-34.61								
28-Jun-2009	-28.02	-31.02	-34.51								
29-Jun-2009	-28.32	-31.31	-34.73								
29-Jun-2009	-28.59	-31.19	-34.51								
29-Jun-2009	-28.56	-31.50	-34.51								
29-Jun-2009	-28.64	-31.67	-34.48								
30-Jun-2009	-28.95	-31.70	-34.39								
30-Jun-2009	-29.13	-31.92	-34.48								
30-Jun-2009	-29.05	-32.11	-34.59								
30-Jun-2009	-29.32	-32.16	-34.41						2.19		0.43
1-Jul-2009	-29.48	-32.18	-34.32								
1-Jul-2009	-29.74	-32.45	-34.54								
1-Jul-2009	-29.84	-32.70	-34.56								
1-Jul-2009	-29.84	-32.81	-34.47								
2-Jul-2009	-30.19	-32.79	-34.43								
2-Jul-2009	-30.34	-32.87	-34.32								
2-Jul-2009	-30.37	-33.18	-34.62								
2-Jul-2009	-30.36	-33.15	-34.36								
3-Jul-2009	-30.74	-33.21	-34.30								
3-Jul-2009	-31.05	-33.38	-34.36								
3-Jul-2009	-31.09	-33.51	-34.36								
3-Jul-2009	-31.17	-33.61	-34.42								
4-Jul-2009	-31.12	-33.49	-34.33								
4-Jul-2009	-31.12	-33.50	-34.39								
4-Jul-2009	-31.08	-33.60	-34.50								
4-Jul-2009	-31.09	-33.60	-34.49								
5-Jul-2009	-31.20	-33.51	-34.39							0.01	
5-Jul-2009	-31.16	-33.59	-34.44								
5-Jul-2009	-31.09	-33.61	-34.44								
5-Jul-2009	-31.00	-33.60	-34.45								
6-Jul-2009	-31.22	-33.57	-34.47							0.06	
6-Jul-2009	-31.08	-33.50	-34.21								
6-Jul-2009	-31.15	-33.67	-34.49								
6-Jul-2009	-31.10	-33.61	-34.41					0.05			
7-Jul-2009	-31.27	-33.51	-34.38								
7-Jul-2009	-31.29	-33.53	-34.38								
7-Jul-2009	-31.04	-33.66	-34.54								
7-Jul-2009	-31.16	-33.68	-34.54								
8-Jul-2009	-31.24	-33.45	-34.42							0.21	
8-Jul-2009	-31.17	-33.56	-34.45								
8-Jul-2009	-31.09	-33.68	-34.44								
8-Jul-2009	-31.05	-33.60	-34.50					0.07			
9-Jul-2009	-31.15	-33.53	-34.47							0.02	
9-Jul-2009	-31.16	-33.57	-34.41								
9-Jul-2009	-31.10	-33.66	-34.43								
9-Jul-2009	-31.12	-33.57	-34.45					0.01			
10-Jul-2009	-31.18	-33.53	-34.39								
10-Jul-2009	-30.98	-33.51	-34.36								
10-Jul-2009	-31.11	-33.74	-34.57								
10-Jul-2009	-31.08	-33.65	-34.48								
11-Jul-2009	-31.22	-33.59	-34.48								
11-Jul-2009	-31.20	-33.61	-34.48								
11-Jul-2009	-31.08	-33.65	-34.48								
11-Jul-2009	-31.09	-33.67	-34.45								
12-Jul-2009	-31.15	-33.57	-34.48								
12-Jul-2009	-31.04	-33.60	-34.49								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
12-Jul-2009	-31.08	-33.66	-34.54								
12-Jul-2009	-31.09	-33.63	-34.50								
13-Jul-2009	-31.08	-33.63	-34.44							0.08	
13-Jul-2009	-31.17	-33.67	-34.35								
13-Jul-2009	-31.10	-33.53	-34.37								
13-Jul-2009	-31.20	-33.66	-34.48					0.56			
14-Jul-2009	-31.29	-33.56	-34.48								
14-Jul-2009	-31.16	-33.60	-34.43								
14-Jul-2009	-31.05	-33.78	-34.54								
14-Jul-2009	-31.12	-33.69	-34.55					0.01			
15-Jul-2009	-31.14	-33.49	-34.36							0.03	
15-Jul-2009	-31.12	-33.66	-34.45								
15-Jul-2009	-31.06	-33.81	-34.56								
15-Jul-2009	-31.06	-33.61	-34.47								
16-Jul-2009	-31.21	-33.56	-34.44							0.67	
16-Jul-2009	-26.29	-33.62	-34.42								
16-Jul-2009	-26.24	-33.68	-34.56								
16-Jul-2009	-26.41	-25.86	-34.48					0.84			
17-Jul-2009	-26.95	-27.03	-34.43							0.25	
17-Jul-2009	-27.51	-27.69	-34.39								
17-Jul-2009	5.13	-28.46	-34.66								
17-Jul-2009	2.27	-28.79	-34.43					2.34			
18-Jul-2009	0.23	-1.26	-2.79							0.10	
18-Jul-2009	-1.12	-2.39	-3.51								
18-Jul-2009	-1.87	-3.06	-4.05								
18-Jul-2009	-2.59	-3.60	-4.57					0.28			
19-Jul-2009	-3.43	-3.77	-4.74							0.01	
19-Jul-2009	-3.70	-4.23	-5.10								
19-Jul-2009	-4.06	-4.97	-5.75								
19-Jul-2009	-4.14	-5.69	-6.41					0.02			
20-Jul-2009	-4.38	-5.97	-6.76								
20-Jul-2009	-4.53	-6.20	-6.99								
20-Jul-2009	-1.66	-6.62	-7.54								
20-Jul-2009	-2.12	-6.07	-5.83					0.75			
21-Jul-2009	-2.60	-2.53	-3.03								
21-Jul-2009	-3.02	-2.89	-3.57								
21-Jul-2009	-3.28	-3.36	-3.97								
21-Jul-2009	-3.63	-3.81	-4.44								
22-Jul-2009	-4.11	-3.92	-4.42							0.20	
22-Jul-2009	-3.94	-4.20	-4.73								
22-Jul-2009	-4.09	-4.79	-5.26								
22-Jul-2009	-4.14	-4.22	-4.83					0.20			
23-Jul-2009	-4.52	-4.05	-5.51							0.28	
23-Jul-2009	-4.50	-4.19	-5.53								
23-Jul-2009	-3.38	-4.70	-6.19								
23-Jul-2009	-3.31	-4.98	-6.47					0.43			
24-Jul-2009	-3.61	-2.72	-3.99							0.18	
24-Jul-2009	-3.93	-2.88	-3.84								
24-Jul-2009	-3.90	-3.20	-4.61								
24-Jul-2009	-3.98	-3.60	-4.86					0.03			
25-Jul-2009	-4.41	-3.66	-4.87								
25-Jul-2009	-4.56	-3.86	-5.05								
25-Jul-2009	-4.42	-4.35	-5.67								
25-Jul-2009	-4.65	-4.81	-5.98								
26-Jul-2009	-5.23	-4.79	-5.92								
26-Jul-2009	-5.56	-4.99	-6.28								
26-Jul-2009	-5.52	-5.87	-7.14								
26-Jul-2009	-5.67	-7.02	-8.88								
27-Jul-2009	-6.13	-7.20	-8.93							0.24	
27-Jul-2009	15.28	-7.62	-9.17								
27-Jul-2009	9.34	-8.69	-10.23								
27-Jul-2009	6.06	6.44	-1.48					2.97			
28-Jul-2009	3.71	4.97	-2.94	0.25	0.20	1.40	8.82				
28-Jul-2009	2.12	2.72	-3.30								
28-Jul-2009	3.28	0.20	-3.75								
28-Jul-2009	2.36	-1.33	-4.02					0.58			
29-Jul-2009	1.32	-1.15	-2.58								
29-Jul-2009	0.48	-2.03	-3.16								
29-Jul-2009	-0.02	-2.67	-3.37								
29-Jul-2009	-0.43	-3.11	-3.70								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
30-Jul-2009	-1.00	-3.12	-3.82								
30-Jul-2009	-1.41	-3.30	-3.94								
30-Jul-2009	-1.52	-3.51	-4.35								
30-Jul-2009	-1.95	-3.75	-4.61								
31-Jul-2009	-2.37	-3.85	-4.61							0.16	
31-Jul-2009	4.94	-3.95	-4.54								
31-Jul-2009	4.07	-4.40	-5.05								
31-Jul-2009	2.92	-1.08	-2.25					1.17	10.31		2.50
1-Aug-2009	1.85	-1.86	-2.76								
1-Aug-2009	1.19	-2.25	-3.15								
1-Aug-2009	0.80	-2.73	-3.33								
1-Aug-2009	0.26	-3.11	-3.65					0.03			
2-Aug-2009	6.70	-2.93	-3.43								
2-Aug-2009	5.52	-3.09	-3.54								
2-Aug-2009	5.12	0.16	-0.73								
2-Aug-2009	3.88	-0.19	-2.44					1.28			
3-Aug-2009	2.86	-0.35	-2.61							0.02	
3-Aug-2009	1.88	-1.13	-2.74								
3-Aug-2009	1.49	-1.82	-3.21								
3-Aug-2009	1.06	-2.49	-3.28								
4-Aug-2009	0.38	-2.60	-3.31							0.02	
4-Aug-2009	0.30	-2.79	-3.28								
4-Aug-2009	0.02	-3.26	-3.76								
4-Aug-2009	-0.04	-3.15	-3.01					0.13			
5-Aug-2009	-0.63	-3.07	-3.00							0.16	
5-Aug-2009	4.79	-3.14	-3.10								
5-Aug-2009	4.10	-3.61	-3.67								
5-Aug-2009	3.29	-1.56	-2.32					0.76			
6-Aug-2009	2.44	-2.22	-2.67							0.03	
6-Aug-2009	1.71	-2.46	-2.69								
6-Aug-2009	1.28	-2.76	-2.93								
6-Aug-2009	0.93	-3.06	-3.35					0.01			
7-Aug-2009	0.39	-2.95	-3.33								
7-Aug-2009	0.11	-3.05	-3.31								
7-Aug-2009	-0.04	-3.45	-3.84								
7-Aug-2009	-0.24	-3.72	-3.97								
8-Aug-2009	-0.72	-3.72	-4.11								
8-Aug-2009	-0.94	-3.80	4.29								
8-Aug-2009	-0.98	-4.40	3.77								
8-Aug-2009	-1.17	-4.73	3.62								
9-Aug-2009	-1.62	-4.69	3.66								
9-Aug-2009	-1.74	-4.81	3.54								
9-Aug-2009	-1.86	-5.67	2.95								
9-Aug-2009	-2.05	-6.37	2.35								
10-Aug-2009	-2.49	-6.49	2.46								
10-Aug-2009	-2.73	-6.74	2.30								
10-Aug-2009	-2.68	-8.28	1.23								
10-Aug-2009	-2.86	-10.55	-0.76								
11-Aug-2009	-3.27	-10.57	-0.40							0.04	
11-Aug-2009	-3.31	-10.86	-0.33								
11-Aug-2009	1.59	-12.50	-2.55								
11-Aug-2009	1.05	-14.81	-5.47					1.37			
12-Aug-2009	0.21	-1.77	6.01							0.05	
12-Aug-2009	0.02	-2.22	5.72								
12-Aug-2009	-0.30	-2.82	5.07								
12-Aug-2009	-0.64	-2.72	5.48					0.18			
13-Aug-2009	-0.84	-2.81	5.18							0.16	
13-Aug-2009	-0.79	-2.91	5.27								
13-Aug-2009	-1.00	-2.78	5.67								
13-Aug-2009	-1.09	-2.76	5.49					0.18			
14-Aug-2009	1.14	-2.79	5.36							0.16	
14-Aug-2009	2.99	-2.90	5.37								
14-Aug-2009	2.03	-0.54	6.84								
14-Aug-2009	1.32	-1.71	5.97					0.73			
15-Aug-2009	0.68	-2.29	5.71								
15-Aug-2009	0.21	-2.54	5.61								
15-Aug-2009	-0.09	-2.84	5.22								
15-Aug-2009	-0.44	-3.06	5.01								
16-Aug-2009	-0.80	-3.01	5.03								
16-Aug-2009	-1.08	-3.23	4.95								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
16-Aug-2009	-1.09	-3.44	4.77								
16-Aug-2009	-1.24	-3.59	4.56								
17-Aug-2009	-1.48	-3.62	4.62								
17-Aug-2009	-1.59	-3.66	4.63								
17-Aug-2009	-1.76	-4.03	4.07								
17-Aug-2009	-1.82	-4.33	4.08								
18-Aug-2009	-2.23	-4.37	4.05								
18-Aug-2009	-2.35	-4.38	3.97								
18-Aug-2009	-2.43	-4.97	3.47								
18-Aug-2009	-2.67	-5.55	3.24								
19-Aug-2009	-2.96	-5.66	3.13								
19-Aug-2009	-3.12	-5.91	2.96								
19-Aug-2009	-3.26	-6.83	2.13								
19-Aug-2009	-3.37	-8.53	1.28								
20-Aug-2009	-3.42	-8.81	1.38								
20-Aug-2009	-3.64	-9.15	1.31								
20-Aug-2009	-3.49	-9.75	0.96								
20-Aug-2009	-3.62	-11.91	-1.31								
21-Aug-2009	-3.88	-12.05	-1.08							0.54	
21-Aug-2009	-3.96	-12.32	-1.09								
21-Aug-2009	-3.93	-13.17	-2.56								
21-Aug-2009	-3.90	-14.24	-4.08								
22-Aug-2009	-4.24	-14.58	-4.38							0.83	
22-Aug-2009	-2.55	-14.82	-4.51								
22-Aug-2009	1.80	-15.79	-5.45								
22-Aug-2009	1.36	-3.97	3.98					1.24			
23-Aug-2009	0.65	-1.77	6.25							0.06	
23-Aug-2009	0.09	-2.46	5.81								
23-Aug-2009	-0.26	-2.84	5.41								
23-Aug-2009	-0.61	-3.05	5.07					0.08			
24-Aug-2009	-0.92	-3.03	5.10								
24-Aug-2009	-1.22	-3.17	4.99								
24-Aug-2009	-1.32	-3.42	4.68								
24-Aug-2009	-1.74	-3.66	4.45								
25-Aug-2009	-2.01	-3.59	4.35								
25-Aug-2009	-2.28	-3.84	4.28								
25-Aug-2009	-2.41	-4.11	3.87								
25-Aug-2009	-2.66	-4.65	3.61								
26-Aug-2009	-2.85	-4.74	3.68								
26-Aug-2009	-3.06	-4.82	3.53								
26-Aug-2009	-3.21	-5.31	3.11								
26-Aug-2009	-3.19	-6.07	2.77								
27-Aug-2009	-3.76	-6.36	2.70	0.00	0.00	0.50	7.92				
27-Aug-2009	-3.87	-6.57	2.70								
27-Aug-2009	-3.81	-7.16	1.35								
27-Aug-2009	-3.99	-9.15	0.18								
28-Aug-2009	-4.26	-9.41	0.51							0.32	
28-Aug-2009	-3.25	-9.71	0.32								
28-Aug-2009	-3.25	-10.46	-0.41								
28-Aug-2009	-3.13	-3.93	3.63								
29-Aug-2009	-3.55	-4.57	2.85							0.01	
29-Aug-2009	-3.62	-4.76	2.58								
29-Aug-2009	-3.58	-5.79	1.45								
29-Aug-2009	-3.64	-6.86	0.53								
30-Aug-2009	-3.94	-7.25	0.42							0.11	
30-Aug-2009	-4.00	-7.65	0.33								
30-Aug-2009	-3.32	-9.53	-1.20								
30-Aug-2009	-3.19	-10.75	-2.89								
31-Aug-2009	-3.21	-5.19	2.24							0.14	
31-Aug-2009	-3.21	-3.59	3.26								
31-Aug-2009	-3.19	-3.59	3.38								
31-Aug-2009	-3.30	-3.68	3.17						5.99		2.65
1-Sep-2009	-3.45	-3.80	3.00								
1-Sep-2009	-3.87	-3.93	2.84								
1-Sep-2009	-3.90	-4.62	2.22								
1-Sep-2009	-3.87	-5.65	1.27								
2-Sep-2009	-4.16	-5.82	1.22								
2-Sep-2009	-4.21	-6.06	1.15								
2-Sep-2009	-4.21	-7.39	0.35								
2-Sep-2009	-4.27	-9.23	-1.00								



Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
3-Sep-2009	-4.52	-9.43	-1.09								
3-Sep-2009	-4.77	-9.74	-1.24								
3-Sep-2009	-4.88	-11.11	-2.20								
3-Sep-2009	-4.77	-13.01	-5.28								
4-Sep-2009	-5.34	-13.23	-6.21								
4-Sep-2009	-5.48	-13.49	-6.76								
4-Sep-2009	-5.44	-14.81	-7.67								
4-Sep-2009	-5.58	-16.61	-8.94								
5-Sep-2009	-6.28	-16.98	-10.06								
5-Sep-2009	-6.55	-17.36	-10.99								
5-Sep-2009	-6.40	-18.12	-11.86								
5-Sep-2009	-6.34	-19.63	-12.48								
6-Sep-2009	-7.11	-20.15	-13.31								
6-Sep-2009	-7.72	-20.60	-13.89								
6-Sep-2009	-7.32	-21.06	-14.69								
6-Sep-2009	-7.17	-21.75	-14.97								
7-Sep-2009	-7.22	-22.27	-15.36							0.22	
7-Sep-2009	-5.52	-22.61	-15.76								
7-Sep-2009	-5.88	-23.05	-16.21								
7-Sep-2009	-6.07	-19.16	-16.55								
8-Sep-2009	-6.21	-17.37	-16.71							0.01	
8-Sep-2009	-6.70	-17.34	-16.84								
8-Sep-2009	-6.64	-17.77	-17.23								
8-Sep-2009	-6.68	-19.07	-17.40								
9-Sep-2009	-7.52	-19.74	-17.65								
9-Sep-2009	-8.14	-20.28	-18.09								
9-Sep-2009	-7.89	-21.00	-18.49								
9-Sep-2009	-7.81	-21.93	-18.69								
10-Sep-2009	-8.14	-22.77	-19.12								
10-Sep-2009	-8.29	-23.15	-19.36								
10-Sep-2009	-8.16	-23.66	-19.78								
10-Sep-2009	-8.24	-23.96	-20.16								
11-Sep-2009	-9.00	-24.21	-20.45								
11-Sep-2009	-9.67	-24.49	-20.75								
11-Sep-2009	-9.52	-24.81	-21.16								
11-Sep-2009	-9.45	-24.99	-21.35								
12-Sep-2009	-10.44	-25.25	-21.66								
12-Sep-2009	-11.11	-25.50	-21.90								
12-Sep-2009	-10.99	-25.70	-22.27								
12-Sep-2009	-10.99	-25.82	-22.42								
13-Sep-2009	-12.14	-25.94	-22.67								
13-Sep-2009	-13.10	-26.09	-23.01								
13-Sep-2009	-13.04	-26.41	-23.40								
13-Sep-2009	-13.45	-26.42	-23.43								
14-Sep-2009	-14.50	-26.61	-23.67								
14-Sep-2009	-15.57	-26.88	-24.15								
14-Sep-2009	-15.68	-27.06	-24.40								
14-Sep-2009	-15.86	-27.01	-24.52								
15-Sep-2009	-16.71	-27.14	-24.64								
15-Sep-2009	-17.42	-27.23	-25.01								
15-Sep-2009	-17.56	-27.53	-25.35								
15-Sep-2009	-17.73	-27.43	-25.24								
16-Sep-2009	-17.96	-27.54	-25.57								
16-Sep-2009	-18.34	-27.57	-25.69								
16-Sep-2009	-18.46	-27.74	-25.96								
16-Sep-2009	-12.62	-27.71	-26.14								
17-Sep-2009	-12.93	-27.87	-26.28							0.22	
17-Sep-2009	-13.65	-27.98	-26.52								
17-Sep-2009	-13.96	-27.97	-26.46								
17-Sep-2009	-14.19	-28.15	-26.47								
18-Sep-2009	-14.84	-28.19	-26.53								
18-Sep-2009	-15.82	-28.22	-26.46								
18-Sep-2009	-15.91	-28.39	-26.55								
18-Sep-2009	-16.29	-28.40	-26.53								
19-Sep-2009	-16.90	-28.50	-26.47								
19-Sep-2009	-17.31	-28.59	-26.51								
19-Sep-2009	-17.52	-28.74	-26.63								
19-Sep-2009	-17.58	-28.83	-26.55								
20-Sep-2009	-18.44	-28.79	-26.41								
20-Sep-2009	-19.35	-28.79	-26.34								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
20-Sep-2009	-19.59	-29.05	-26.61								
20-Sep-2009	-19.84	-29.01	-26.35								
21-Sep-2009	-20.46	-29.24	-26.59								
21-Sep-2009	-21.34	-29.31	-26.63								
21-Sep-2009	-21.46	-29.49	-26.59								
21-Sep-2009	-18.56	-29.45	-26.45								
22-Sep-2009	-17.14	-29.47	-26.39							0.39	
22-Sep-2009	-17.76	-29.58	-26.46								
22-Sep-2009	-17.94	-29.34	-26.43								
22-Sep-2009	-9.99	-29.46	-26.43	0.00	0.00	0.00	1.46				
23-Sep-2009	-10.77	-29.47	-8.04					0.39		0.83	
23-Sep-2009	-11.84	-29.55	-8.85								
23-Sep-2009	-11.92	-29.70	-9.93								
23-Sep-2009	-12.25	-29.67	-10.75								
24-Sep-2009	-12.73	-29.63	-11.71								
24-Sep-2009	-13.84	-29.71	-12.49								
24-Sep-2009	-14.08	-29.97	-13.01								
24-Sep-2009	-14.24	-29.88	-13.68								
25-Sep-2009	-14.96	-29.95	-14.25							0.10	
25-Sep-2009	-15.51	-29.90	-14.99								
25-Sep-2009	-15.67	-30.07	-15.36								
25-Sep-2009	-15.72	-30.03	-15.87								
26-Sep-2009	-15.96	-30.14	-16.24					0.07		0.07	
26-Sep-2009	-15.96	-30.11	-16.81								
26-Sep-2009	-15.24	-30.20	-17.13								
26-Sep-2009	-15.13	-30.26	-17.33								
27-Sep-2009	-15.52	-30.20	-17.73					0.01			
27-Sep-2009	-16.87	-30.18	-18.01								
27-Sep-2009	-17.07	-30.21	-18.31								
27-Sep-2009	-17.30	-30.17	-18.71								
28-Sep-2009	-17.98	-30.25	-19.08								
28-Sep-2009	-18.93	-30.39	-19.42								
28-Sep-2009	-19.29	-30.35	-19.49								
28-Sep-2009	-19.65	-30.23	-19.99								
29-Sep-2009	-20.37	-30.35	-20.47								
29-Sep-2009	-21.34	-30.59	-20.93								
29-Sep-2009	-21.73	-30.61	-21.17								
29-Sep-2009	-21.84	-30.66	-21.59								
30-Sep-2009	-22.50	-30.78	-30.41								
30-Sep-2009	-23.20	-30.85	-30.82								
30-Sep-2009	-23.50	-31.04	-31.18								
30-Sep-2009	-23.73	-31.10	-31.57						0.47		1.84
1-Oct-2009	-23.94	-31.27	-31.89								
1-Oct-2009	-24.45	-31.29	-32.21								
1-Oct-2009	-24.63	-31.38	-32.51								
1-Oct-2009	-24.92	-31.37	-32.73								
2-Oct-2009	-25.08	-31.46	-32.99								
2-Oct-2009	-25.39	-31.57	-33.51								
2-Oct-2009	-25.51	-31.76	-33.55								
2-Oct-2009	-25.65	-31.61	-33.83								
3-Oct-2009	-25.99	-31.76	-34.20								
3-Oct-2009	-26.36	-31.88	-34.43								
3-Oct-2009	-26.55	-31.97	-34.66								
3-Oct-2009	-26.73	-31.97	-34.97								
4-Oct-2009	-27.19	-32.03	-34.74								
4-Oct-2009	-27.28	-32.00	-35.01								
4-Oct-2009	-27.31	-32.43	-34.85								
4-Oct-2009	-27.57	-32.25	-34.87								
5-Oct-2009	-26.60	-32.35	-35.10					0.31		0.26	
5-Oct-2009	-25.21	-32.52	-34.92								
5-Oct-2009	-23.43	-32.49	-35.01								
5-Oct-2009	-21.60	-32.52	-35.05								
6-Oct-2009	-20.83	-32.61	-35.01					0.06		0.03	
6-Oct-2009	-20.52	-32.69	-35.05								
6-Oct-2009	-20.36	-32.77	-35.09								
6-Oct-2009	-20.36	-32.77	-34.95								
7-Oct-2009	-20.82	-32.77	-34.85								
7-Oct-2009	-21.67	-32.77	-35.10								
7-Oct-2009	-22.12	-33.02	-34.83								
7-Oct-2009	-22.53	-32.91	-34.79								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
8-Oct-2009	-23.04	-33.03	-34.93								
8-Oct-2009	-23.71	-33.24	-35.05								
8-Oct-2009	-24.02	-33.39	-35.03								
8-Oct-2009	-24.12	-33.45	-34.96								
9-Oct-2009	-24.46	-33.50	-34.93								
9-Oct-2009	-25.10	-33.47	-35.07								
9-Oct-2009	-25.24	-33.65	-35.07								
9-Oct-2009	-25.45	-33.57	-34.98								
10-Oct-2009	-25.70	-33.61	-34.89								
10-Oct-2009	-26.12	-33.66	-35.02								
10-Oct-2009	-26.36	-33.81	-34.95								
10-Oct-2009	-22.27	-33.77	-35.07								
11-Oct-2009	-20.23	-33.80	-35.02					0.34		0.19	
11-Oct-2009	-20.23	-33.84	-35.02								
11-Oct-2009	-20.53	-33.78	-34.90								
11-Oct-2009	-20.68	-33.66	-34.92								
12-Oct-2009	-20.86	-33.72	-34.91					0.12		0.13	
12-Oct-2009	-20.07	-33.75	-35.08								
12-Oct-2009	-19.18	-33.89	-34.90								
12-Oct-2009	-18.98	-33.74	-35.09								
13-Oct-2009	-19.27	-33.77	-35.10								
13-Oct-2009	-20.01	-33.87	-35.15								
13-Oct-2009	-20.34	-33.90	-35.04								
13-Oct-2009	-20.53	-33.72	-35.15								
14-Oct-2009	-20.49	-33.83	-35.05					0.42		0.42	
14-Oct-2009	-16.84	-33.90	-34.97								
14-Oct-2009	-13.17	-33.86	-35.01								
14-Oct-2009	-11.73	-33.79	-35.01								
15-Oct-2009	-11.37	-33.79	-35.04					0.08		0.10	
15-Oct-2009	-11.89	-33.84	-35.08								
15-Oct-2009	-12.24	-33.89	-35.05								
15-Oct-2009	-12.78	-33.80	-34.91								
16-Oct-2009	-13.17	-33.84	-35.07					0.01			
16-Oct-2009	-13.83	-33.85	-35.02								
16-Oct-2009	-14.25	-33.85	-35.03								
16-Oct-2009	-14.48	-33.74	-34.99								
17-Oct-2009	-15.22	-33.87	-34.97								
17-Oct-2009	-15.78	-33.83	-35.03								
17-Oct-2009	-16.04	-33.91	-34.91								
17-Oct-2009	-16.20	-33.83	-35.03								
18-Oct-2009	-16.50	-33.77	-34.97								
18-Oct-2009	-16.77	-33.71	-34.90								
18-Oct-2009	-16.88	-33.83	-34.98								
18-Oct-2009	-17.28	-33.74	-35.10								
19-Oct-2009	-17.64	-33.81	-35.10								
19-Oct-2009	-18.12	-33.92	-35.16								
19-Oct-2009	-18.44	-33.97	-35.23								
19-Oct-2009	-18.58	-33.81	-35.23								
20-Oct-2009	-19.05	-33.87	-35.14								
20-Oct-2009	-19.57	-33.92	-35.14								
20-Oct-2009	-19.65	-33.93	-35.10								
20-Oct-2009	-19.77	-33.87	-35.03								
21-Oct-2009	-20.24	-33.72	-35.14								
21-Oct-2009	-20.76	-33.84	-35.17								
21-Oct-2009	-20.82	-33.91	-35.04								
21-Oct-2009	-20.94	-33.85	-35.11								
22-Oct-2009	-21.33	-33.84	-35.10								
22-Oct-2009	-21.85	-33.85	-35.11								
22-Oct-2009	-22.00	-33.97	-34.99								
22-Oct-2009	-22.03	-33.81	-35.05								
23-Oct-2009	-22.34	-33.84	-35.11					0.02			
23-Oct-2009	-22.68	-33.83	-35.19								
23-Oct-2009	-22.76	-33.97	-34.97								
23-Oct-2009	-22.66	-33.80	-35.13								
24-Oct-2009	-22.72	-33.81	-35.15					0.01		0.09	
24-Oct-2009	-23.01	-33.85	-35.04								
24-Oct-2009	-23.16	-33.86	-34.87								
24-Oct-2009	-23.56	-33.79	-35.07								
25-Oct-2009	-23.78	-33.81	-35.04					0.01			
25-Oct-2009	-23.89	-33.86	-35.17								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
25-Oct-2009	-24.08	-33.99	-35.08								
25-Oct-2009	-24.34	-33.85	-35.13								
26-Oct-2009	-24.27	-33.92	-35.13					0.05		0.19	
26-Oct-2009	-24.18	-33.93	-35.05								
26-Oct-2009	-23.82	-33.85	-35.15								
26-Oct-2009	-23.26	-33.92	-35.14								
27-Oct-2009	-23.02	-33.93	-34.96					0.06		0.07	
27-Oct-2009	-22.88	-33.83	-34.98								
27-Oct-2009	-22.41	-33.77	-35.09								
27-Oct-2009	-11.62	-33.78	-35.14								
28-Oct-2009	-11.44	-33.83	-35.21					0.51		0.27	
28-Oct-2009	-12.37	-33.92	-35.09								
28-Oct-2009	-12.91	-33.89	-34.92								
28-Oct-2009	-13.28	-33.84	-35.02								
29-Oct-2009	-14.18	-33.77	-35.01								
29-Oct-2009	-14.64	-33.72	-35.20								
29-Oct-2009	-14.89	-33.87	-35.03								
29-Oct-2009	-15.14	-33.75	-34.97								
30-Oct-2009	-15.49	-33.72	-35.10								
30-Oct-2009	-15.98	-33.80	-35.07								
30-Oct-2009	-16.15	-33.79	-34.99								
30-Oct-2009	-16.18	-33.66	-35.19								
31-Oct-2009	-15.73	-33.79	-35.17					0.05		0.08	
31-Oct-2009	-16.18	-33.79	-35.07								
31-Oct-2009	-16.30	-33.83	-34.97								
31-Oct-2009	-16.56	-33.68	-35.02						2.05		1.83
1-Nov-2009	-16.36	-33.65	-35.10					0.04		0.02	
1-Nov-2009	-16.63	-33.75	-35.08								
1-Nov-2009	-16.78	-33.72	-35.16								
1-Nov-2009	-16.99	-33.78	-35.01								
2-Nov-2009	-17.08	-33.73	-35.07								
2-Nov-2009	-17.54	-33.81	-35.13								
2-Nov-2009	-17.62	-33.72	-35.10								
2-Nov-2009	-17.82	-33.73	-35.14								
3-Nov-2009	-18.15	-33.72	-35.17								
3-Nov-2009	-18.70	-33.77	-35.17								
3-Nov-2009	-19.04	-33.86	-35.21								
3-Nov-2009	-19.06	-33.73	-35.14								
4-Nov-2009	-19.53	-33.78	-35.17								
4-Nov-2009	-19.81	-33.81	-35.27								
4-Nov-2009	-19.93	-33.86	-35.14								
4-Nov-2009	-20.14	-33.83	-35.04								
5-Nov-2009	-20.42	-33.83	-35.11								
5-Nov-2009	-20.95	-33.86	-35.09								
5-Nov-2009	-21.13	-33.81	-35.07								
5-Nov-2009	-21.27	-33.75	-35.02								
6-Nov-2009	-21.63	-33.74	-35.14								
6-Nov-2009	-21.84	-33.80	-35.23								
6-Nov-2009	-22.22	-33.92	-35.10								
6-Nov-2009	-22.28	-33.81	-35.10								
7-Nov-2009	-22.47	-33.87	-35.11								
7-Nov-2009	-22.96	-33.79	-35.11								
7-Nov-2009	-23.16	-33.79	-35.11								
7-Nov-2009	-23.22	-33.89	-35.22								
8-Nov-2009	-23.52	-33.87	-35.23								
8-Nov-2009	-23.78	-33.87	-35.22								
8-Nov-2009	-24.00	-33.93	-35.05								
8-Nov-2009	-24.04	-33.73	-35.09								
9-Nov-2009	-24.34	-33.81	-35.11								
9-Nov-2009	-24.52	-33.80	-35.11								
9-Nov-2009	-24.69	-33.84	-35.09								
9-Nov-2009	-24.73	-33.75	-35.09								
10-Nov-2009	-24.48	-33.85	-35.15					0.94		0.08	
10-Nov-2009	-23.82	-33.84	-35.10								
10-Nov-2009	-4.17	-33.83	-34.99								
10-Nov-2009	-3.22	-33.77	-29.74								
11-Nov-2009	-1.88	-7.98	-3.85					2.34		0.16	
11-Nov-2009	1.80	-3.17	-1.50								
11-Nov-2009	1.83	-0.14	-2.35								
11-Nov-2009	2.08	-0.98	-2.16								

Date	BD RAW1	BD RAW2	BD RAW3	CG1	CG2	CG3	On-site Manual Raingauge	On-site Auto Raingauge	On-site Auto RG Totals	Weather Station Rainfall Data	
										Dunn Daily Rainfall	Dunn Monthly Rainfall
12-Nov-2009	1.10	-0.96	-2.52					0.37		0.01	
12-Nov-2009	0.36	-1.16	-2.70								
12-Nov-2009	-0.37	-1.85	-2.69								
12-Nov-2009	-0.85	-2.06	-2.97								
13-Nov-2009	-1.26	-2.30	-3.05					0.01			
13-Nov-2009	-1.59	-2.41	-3.27								
13-Nov-2009	-1.98	-2.67	-3.45								
13-Nov-2009	-2.40	-2.83	-3.52								
14-Nov-2009	-2.64	-2.97	-3.85								
14-Nov-2009	-2.79	-3.18	-4.03								
14-Nov-2009	-3.03	-3.38	-4.07								
14-Nov-2009	-3.22	-3.44	-4.15								
15-Nov-2009	-3.43	-3.60	-4.31								
15-Nov-2009	-3.55	-3.75	-4.51								
15-Nov-2009	-3.69	-3.98	-4.62								
15-Nov-2009	-3.79	-4.10	-4.73								
16-Nov-2009	-4.00	-4.33	-4.79								
16-Nov-2009	-3.85	-4.43	-5.03								
16-Nov-2009	-3.81	-4.67	-4.99								
16-Nov-2009	-4.06	-4.57	-5.04								
17-Nov-2009		-4.65	-5.17								
17-Nov-2009		-5.07		0.00	0.00	0.00	6.83				
17-Nov-2009											
17-Nov-2009											
18-Nov-2009											
18-Nov-2009											
18-Nov-2009											
18-Nov-2009											
19-Nov-2009											
19-Nov-2009											
19-Nov-2009											
19-Nov-2009											
20-Nov-2009											
20-Nov-2009											
20-Nov-2009											
20-Nov-2009											
21-Nov-2009											
21-Nov-2009											
21-Nov-2009											
21-Nov-2009											
22-Nov-2009											
22-Nov-2009											
22-Nov-2009											
22-Nov-2009											
23-Nov-2009											
23-Nov-2009											
23-Nov-2009											
23-Nov-2009											
24-Nov-2009											
24-Nov-2009											
24-Nov-2009											
24-Nov-2009											
25-Nov-2009											
25-Nov-2009											
25-Nov-2009											
25-Nov-2009											
26-Nov-2009											
26-Nov-2009											
26-Nov-2009											
26-Nov-2009											
27-Nov-2009											
27-Nov-2009											
27-Nov-2009											
27-Nov-2009											
28-Nov-2009											
28-Nov-2009											
28-Nov-2009											
28-Nov-2009											
29-Nov-2009											
29-Nov-2009											



# **APPENDIX D**

## **2009 Site Photos**



SPA1 – Erosion on right bank @ station 107+15 (UT1-C)



SPA2 – Piping around header rock on rock A-vane @ station 133+40 (UT1-A)





SPA3 – Piping around header rock on rock A-vane @ station 134+40 (UT1-A)



SPA4 – Piping around header rock on rock A-vane @ station 211+00 (UT2)





SPA5 – Piping around header rock on rock A-vane @ station 211+30 (UT2)



SPA6 – Erosion on left bank @ station 329+50 (UT3)





SPA7 – Erosion on left bank @ station 330+50 (UT3)



SPA8 – Erosion on left bank @ station 334+00 (UT3)





Log Cross Vane (typical)



Pool (typical)





Riffle (typical)



Log weir (typical)





Root wad (typical)



Rock cross vane (typical)





Vegetatoin Plot #1



Vegetatoin Plot #2



Vegetation Plot #3



Vegetation Plot #4





Vegetation Plot #5



Vegetation Plot #6





Vegetation Plot #7



Vegetation Plot #8





Vegetation Plot #9



Vegetation Plot #10



Vegetation Plot #11



Vegetation Plot #12





Vegetation Plot #13

# **APPENDIX E**

## **2009 Morphologic Monitoring Parameters**



Parameter	Cross Section 1 Pool						Cross Section 2 Riffle						Cross Section 3 Pool						Cross Section 4 Riffle					
Dimension	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	28.4	26.4	25.0				25.3	24.4	22.8				26.6	21.8	20.8				22.8	22.8	24.8			
Floodprone Width (ft)	75.6	75.8	75.6				62.5	62.5	62.7				72.9	72.4	73.0				70.0	68.4	62.8			
BF Cross Sectional Area (ft <sup>2</sup> )	31.7	26.4	23.4				18.1	16.2	11.4				22.8	19.2	19.0				11.7	11.6	12.9			
BF Mean Depth (ft)	1.1	1.0	0.9				0.7	0.7	0.5				0.9	0.9	0.9				0.5	0.5	0.5			
BF Max Depth (ft)	2.6	2.5	2.4				1.4	1.3	1.1				2.2	2.0	2.1				1.4	1.3	1.4			
Width/Depth Ratio	25.5	26.2	26.8				35.2	36.6	45.9				31.0	24.7	22.7				44.4	44.8	47.7			
Entrenchment Ratio	2.7	2.9	3.0				2.5	2.6	2.7				2.7	3.3	3.5				3.1	3.0	2.5			
Wetted Perimeter(ft)	29.1	26.9	25.7				25.5	24.6	23.0				27.2	22.3	21.4				23.2	23.1	25.2			
Hydraulic radius (ft)	1.1	1.0	0.9				0.7	0.7	0.5				0.8	0.9	0.9				0.5	0.5	0.5			
Parameter	Cross Section 5 Riffle						Cross Section 6 Pool						Cross Section 7 Pool						Cross Section 8 Riffle					
Dimension	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	7.6	7.5	8.7				9.0	9.2	9.7				7.9	9.8	9.4				6.9	7.3	7.7			
Floodprone Width (ft)	24.4	26.0	27.1				29.9	31.9	31.3				27.0	29.3	29.0				21.9	24.0	22.4			
BF Cross Sectional Area (ft <sup>2</sup> )	5.0	5.0	4.7				8.4	8.7	6.9				8.7	10.7	10.6				4.4	4.7	4.8			
BF Mean Depth (ft)	0.7	0.7	0.5				0.9	0.9	0.7				1.1	1.1	1.1				0.6	0.6	0.6			
BF Max Depth (ft)	1.2	1.4	1.4				1.7	2.0	1.6				2.0	2.2	2.3				1.2	1.4	1.2			
Width/Depth Ratio	11.4	11.1	16.3				9.5	9.8	13.6				7.2	9.0	8.3				10.7	11.3	12.4			
Entrenchment Ratio	3.2	3.5	27.1				3.3	3.5	3.2				3.4	3.0	3.1				3.2	3.3	2.9			
Wetted Perimeter(ft)	8.0	8.0	9.2				9.6	10.1	10.3				9.0	11.0	10.9				7.3	7.8	8.1			
Hydraulic radius (ft)	0.6	0.6	0.5				0.9	0.9	0.7				1.0	1.0	1.0				0.6	0.6	0.6			
Parameter	Cross Section 9 Pool						Cross Section 10 Riffle						Cross Section 11 Riffle						Cross Section 12 Pool					
Dimension	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	18.5	19.7	19.9				16.4	15.1	16.1				9.8	11.8	11.5				19.5	19.8	18.8			
Floodprone Width (ft)	75.5	75.4	75.3				76.8	76.8	76.7				77.4	77.4	77.4				90.9	91.1	91.1			
BF Cross Sectional Area (ft <sup>2</sup> )	29.3	25.9	25.0				18.4	16.5	15.8				6.8	9.0	8.7				22.2	20.4	18.5			
BF Mean Depth (ft)	1.6	1.3	1.3				1.1	1.1	1.0				0.7	0.8	0.8				1.1	1.0	1.0			
BF Max Depth (ft)	3.8	3.1	3.0				2.5	2.1	2.1				1.3	1.5	1.5				2.7	2.6	2.5			
Width/Depth Ratio	11.8	14.9	15.8				14.6	13.7	16.3				14.0	15.4	15.1				17.2	19.2	19.7			
Entrenchment Ratio	4.1	3.8	3.8				4.7	5.1	4.8				7.9	6.6	6.7				4.7	4.6	4.8			
Wetted Perimeter(ft)	20.7	20.9	20.9				17.3	15.8	16.8				10.1	12.2	11.9				20.4	20.8	19.1			
Hydraulic radius (ft)	1.4	1.2	1.2				1.1	1.0	0.9				0.7	0.7	0.7				1.1	1.0	0.9			

Parameter	Cross Section 13 Pool						Cross Section 14 Riffle						Cross Section 15 Pool						Cross Section 16 Riffle					
	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	18.3	19.4	19.5				9.0	9.2	9.9				19.7	24.2	24.3				9.9	9.0	9.1			
Floodprone Width (ft)	74.6	74.7	74.8				77.7	77.7	77.5				71.7	72.1	71.5				67.3	67.5	67.1			
BF Cross Sectional Area (ft <sup>2</sup> )	15.8	15.3	16.3				5.4	4.8	5.2				18.8	23.0	22.2				5.8	4.6	4.4			
BF Mean Depth (ft)	0.9	0.8	0.8				0.6	0.5	0.5				1.0	1.0	0.9				0.6	0.5	0.5			
BF Max Depth (ft)	2.3	2.0	2.1				1.2	1.0	1.0				2.2	2.4	2.3				1.1	0.9	0.9			
Width/Depth Ratio	21.3	24.6	23.2				15.1	17.4	18.7				20.7	25.4	26.5				16.9	17.5	18.8			
Entrenchment Ratio	4.1	3.9	3.8				8.6	8.5	7.8				3.6	3.0	2.9				6.8	7.5	7.4			
Wetted Perimeter(ft)	19.2	20.0	20.1				9.3	9.4	10.2				20.5	25.0	24.9				10.3	9.3	9.4			
Hydraulic radius (ft)	0.8	0.8	0.8				0.6	0.5	0.5				0.9	0.9	0.9				0.6	0.5	0.5			
Parameter	Cross Section 17 Pool						Cross Section 18 Riffle						Cross Section 19 Pool						Cross Section 20 Riffle					
	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	30.6	30.7	31.3				7.6	7.4	7.1				19.2	18.5	20.5				10.5	10.4	10.4			
Floodprone Width (ft)	60.1	54.7	60.1				55.8	55.7	55.7				69.9	64.6	71.3				72.7	73.1	72.6			
BF Cross Sectional Area (ft <sup>2</sup> )	46.3	45.8	44.6				9.6	7.5	7.9				28.2	28.9	27.4				9.5	9.1	8.9			
BF Mean Depth (ft)	1.5	1.5	1.4				1.3	1.0	1.1				1.5	1.6	1.3				0.9	0.9	0.9			
BF Max Depth (ft)	3.7	3.7	3.5				1.9	1.7	1.8				3.3	3.2	3.1				1.7	1.6	1.6			
Width/Depth Ratio	19.7	20.6	22.0				6.1	7.3	6.5				13.1	11.8	15.3				11.6	11.9	12.1			
Entrenchment Ratio	2.0	1.8	1.9				7.3	7.6	7.8				3.6	3.5	3.5				6.9	7.0	7.0			
Wetted Perimeter(ft)	31.5	32.2	32.6				9.0	8.6	8.7				20.7	19.7	21.7				11.1	11.0	11.0			
Hydraulic radius (ft)	1.5	1.4	1.4				1.1	0.9	0.9				1.4	1.5	1.3				0.9	0.8	0.8			













**Reach UT3-B Lower**

<b>Parameter</b>	<b>Baseline<sup>3</sup></b>			<b>MY1</b>			<b>MY2</b>			<b>MY3</b>			<b>MY4</b>			<b>MY5</b>		
<b>Pattern</b>	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
Channel Beltwidth (ft)	49.6	55.6	52.6															
Radius of Curvature (ft)	29.0	34.0	31.5															
Meander Wavelength (ft)	116.8	124.4	120.6															
Meander Width ratio	10.1	10.7	10.4															
<b>Profile</b>																		
Riffle length (ft)																		
Riffle slope (ft/ft)	0.0035	0.0046	0.0040															
Pool length (ft)																		
Pool spacing (ft)	60.4	79.0	69.7															
<b>Additional Reach Parameters</b>																		
Valley Length (ft)																		
Channel Length (ft)		422																
Sinuosity		1.19																
Water Surface Slope (ft/ft)																		
BF slope (ft/ft)																		
Rosgen Classification		C																

**Reach UT3-C**

<b>Parameter</b>	<b>Baseline</b>			<b>MY1</b>			<b>MY2</b>			<b>MY3</b>			<b>MY4</b>			<b>MY5</b>		
<b>Pattern</b>	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
Channel Beltwidth (ft)																		
Radius of Curvature (ft)																		
Meander Wavelength (ft)																		
Meander Width ratio																		
<b>Profile</b>																		
Riffle length (ft)																		
Riffle slope (ft/ft)																		
Pool length (ft)																		
Pool spacing (ft)																		
<b>Additional Reach Parameters</b>																		
Valley Length (ft)																		
Channel Length (ft)																		
Sinuosity																		
Water Surface Slope (ft/ft)																		
BF slope (ft/ft)																		
Rosgen Classification																		

1 – All values except Channel Length include both UT1-B Upper and UT1-B Lower

2 – All values except Channel Length include both UT1-E and UT1-F

3 – All values except Channel Length include both UT3-B Upper and UT3-B Lower

4 – Baseline Profile data derived from **Stream and Wetland Restoration Plan for Beaverdam Swamp Site** report provided by Kimley-Horn and Associates, Inc. (March 28, 2007)