ALABAMA DEPARTMENT OF TRANSPORTATION

Bureau of Materials & Tests – Geotechnical Section
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Robert Bentley
Governor

John Cooper
Transportation Director

May 10, 2011

Ms. Kristy Wright
Land Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Al., 36110

Re: Coliseum Boulevard Plume
Kilby Ditch / Low-Lying Area Corrective Measures Implementation

Dear Ms. Wright,

Attached you will find one written copy and one CD of the above referenced report. This report documents the corrective measures constructed at the Kilby Ditch / Low-Lying Area in accordance with ALDOT's Kilby Ditch / Low-Lying Area corrective measures implementation plan (CMIP) for the Coliseum Boulevard Plume.

Should you have questions, please feel free to contact this office.

Yours very truly,

B. E. Cox, Jr., P. E.
Test and Materials – Bureau Chief

ACE:bec

Attachment

cc: Alabama Department of Public Health – Dr. John Guarisco (1-CD)
City of Montgomery - Chamberlain (1-CD)
Alabama Department of Transportation - Ippolito/Gathings (2-CDs)
Nix,Holtsford,Gilliland,Higgins and Hitson, P.C. - Gilliland (1-Hardcopy, 2-CDs)
Malcolm Pirnie - Eversull (1-Hardcopy, 3-CDs)
Montgomery Public Library - Public Repository (1-Hardcopy)
ACESS - Cousins (1-Hardcopy)
Dr. Tola Moffet (1-CD)

Kilby Ditch / Low-Lying Area
Corrective Measures Implementation

April 2011

Kilby Ditch / Low-Lying Area Corrective Measures Implementation

Coliseum Boulevard Plume Site
Montgomery, Alabama

Submitted By:

Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama

April 2011

Kilby Ditch / Low-Lying Area Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA

SUBMITTED BY:

ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, ALABAMA

April 2011

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1. Introduction

The Alabama Department of Transportation (ALDOT), under the direction of the Alabama Department of Environmental Management (ADEM), has worked since 1999 to assess, evaluate and mitigate dissolved concentrations of trichloroethylene (TCE) in the groundwater and surface water in an area of the City of Montgomery referred to as the Coliseum Boulevard Plume (CBP) (Figure 1). This report documents the completion of corrective measures in the northeast portion of the CBP identified as the Kilby Ditch / Low-Lying Area. Assessment, evaluation and corrective measure recommendations for this area were presented in the report "Site-Wide Corrective Measures Evaluation" dated July 2008. Subsequent to ADEM's approval of proposed corrective measures, ALDOT prepared and submitted the "Kilby Ditch / Low-Lying Area Corrective Measures Implementation Plan" dated December 2008.

This Report presents a summary of activities completed to meet the objectives for capturing groundwater and controlling and mitigating dissolved TCE concentrations in the surface water in the northeast portion of the CBP (e.g., Kilby Ditch / Low-Lying Area; Upper Kilby and Lower Kilby Ditch). Due to the size of the CBP site (approximately 1,200 acres) and complex groundwater movement of the CBP, multiple corrective measures are required to manage the CBP. Numerous reports and documents have been developed to address the CBP site. Figure 2 provides a listing of Reports developed by the ALDOT.

Photographs included with this Report document the activities at each construction area. The number provided with each photograph corresponds with the approximate location of the photograph on Figure 3.

Sections 3 through 7 of this report include pre- and post-construction photos of the Kilby Ditch / Low-Lying Area corrective measures for specific locations. This report documents that the ALDOT has completed the activities as presented in the 2008 Kilby Ditch / Low-Lying Area Corrective Measures Implementation Plan as approved by the ADEM in July 2009. Sections 6 and 7 document that the work to implement the corrective measures was performed in accordance with the construction management plan and post construction monitoring activities are in effect for this area.

2. Construction

2.1. Construction Dates

Construction activities for the Kilby Ditch / Low-Lying Area began in August 2009 and the majority of work was completed in July 2010. Due to an unacceptable quantity of vegetation survival, vegetation replanting was performed in March 2011 in the Kilby Ditch area. Vegetation survival monitoring is on-going.

2.2. Construction Areas

Construction areas include:

- West Kilby Ditch
- Main Kilby Ditch
- Low-Lying Area (Lower Kilby Ditch)

For each of these areas, engineering controls were designed and constructed to treat TCE and restrict or minimize potential contact with water that contains TCE. Construction areas are discussed in detail in the "Kilby Ditch / Low-Lying Area Corrective Measures Implementation Plan" dated December 2008 and summarized in Sections 2.2.1 through 2.2.3 below (see Figure 3).

2.2.1. West Kilby Ditch

The fence around the West Kilby Ditch was removed. The West Kilby Ditch between Coliseum Boulevard and the Main Kilby Ditch was converted from an open channel to two (2) 7 foot (ft.) by 6 ft. precast concrete box culverts. The area above the box culverts was backfilled and stabilized with vegetative cover. A topographic swale was constructed above the box culverts to assist with surface water runoff towards the Main Kilby Ditch.

2.2.2. Main Kilby Ditch

Engineering controls were implemented from the confluence of the Main Kilby Ditch with West Kilby Ditch to North Boulevard.

- The Main Kilby Ditch channel was lined with rip-rap from the confluence with West Kilby Ditch to the North Boulevard. Sections of the Main Kilby Ditch channel were realigned to reduce sedimentation in the two 8 ft. by 10 ft. concrete

box culverts beneath North Boulevard. Geotextile fabric was placed along the channel side-walls to stabilize the banks and reduce bank erosion and in-stream sedimentation. Rip-rap was placed in the channel to a minimum thickness of 2 ft. and the channel slope was graded to prevent pooling in the channel. Groundwater seeps into the Main Kilby Ditch channel beneath the rip-rap.

- A landscape berm was constructed and planted with Holly's east of the Main Kilby Ditch to provide a visual barrier.

- A chain-link security fence surrounds the Main Kilby Ditch from the confluence of West Kilby to North Boulevard. The fence has gates with locks and signage that states "State Property – No Trespassing". Signs are placed at each gate and along the length of fence surrounding the Main Kilby Ditch.

2.2.3. Low-Lying Area

The Lower Kilby Ditch was stabilized to improve the channel cross-section and profile at high potential scour locations by placing structures to prolong the channel's configuration and enhancing its overall biological, ecological and physical functions. Improvements within the Low-Lying Area consisted of channel and floodplain enhancement; construction of a wetland treatment system, protection of existing wetlands, and a groundwater interceptor trench. A chain-link security fence surrounds the Low-Lying Area between the CSX railroad, North Boulevard, Three Mile Branch, and immediately west of Lower Kilby Ditch. The fence also has signs posted. The Low-Lying Area was planted with grasses, shrubs, wetland vegetation, and live stakes.

3. West Kilby Ditch

3.1. Box Culverts

The West Kilby Ditch between Coliseum Boulevard and the Main Kilby Ditch was converted from an open channel to precast concrete box culverts. The area above the box culverts was backfilled and stabilized with vegetative cover and landscaped.

Photograph Location 1A

West Kilby Ditch prior to construction.

Photograph Location 1B

Construction and installation of precast concrete box culverts; during construction.

Photograph Location 1C

Post Construction grassing of Topographic Swale above box culverts.

3.2. Topographic Swale

A topographic swale was constructed on the ground surface above the underground box culverts. The topographic swale prevents ponding of storm water at West Kilby Ditch and channels storm water to Main Kilby Ditch. The swale was covered with topsoil and grassed.

3.3. Relocation of Water Line

The relocation of an existing water line, which is located at the intersection of Coliseum Boulevard and West Kilby Ditch, was required in order to complete the West Kilby Ditch corrective measure. The water line was moved so that it would not be located underneath the newly constructed culverts. The Montgomery Water Works and Sanitary Sewer Board oversaw relocation of the water line.

4. Main Kilby Ditch

4.1. Realignment and Rip-Rap

The Main Kilby Ditch channel was realigned to reduce sedimentation in the box culverts beneath North Boulevard. A geotextile fabric was placed along the channel side-walls to stabilize the banks, reduce bank erosion and minimize in-stream sedimentation.

Rip-rap was placed in the channel to a minimum thickness of 2 ft. and the channel slope was graded. The channel bottom and side-walls (up to the groundwater seepage interface) was covered in riprap to restrict direct access to base flow (e.g., surface water resulting from groundwater seepage into the open channel) in the channel.

Photograph Location 2A

Main Kilby Ditch prior to construction.

Photograph Location 2B

Installation of geotextile fabric and rip-rap in Main Kilby Ditch; during construction.

Photograph Location 3

Main Kilby Ditch channel and Culverts at North Boulevard; post-construction.

4.2. Fencing

A secured and permanent chain-link fence was constructed to surround the Main Kilby Ditch from the confluence of West Kilby to North Boulevard. The areas permanently surrounded by chain-link fence are shown on Figure 3.

A chain-link swing gate was installed in the Main Kilby Ditch south of the confluence with the West Kilby Ditch. During high-flow precipitation events, the swing gate opens with stormwater flow to allow passage of objects or debris in the West Kilby Ditch.

Photograph Location 4

Permanent fence at Main Kilby Ditch; post construction.

Photograph Location 5

View of swing gate at Main Kilby Ditch; post construction.

4.3. Access Roads

Two gravel access roads were constructed along the Main Kilby Ditch. These roads allow ALDOT personnel to maintain and inspect the Main Kilby Ditch areas.

4.4. Earthen Berm

A 6 ft high earthen berm was constructed east of the Main Kilby Ditch. Vegetation was planted on the berm to provide a visual barrier.

5. Low-Lying Area

5.1. Lower-Kilby Ditch

5.1.1. Realignment

Lower Kilby Ditch is the section of Kilby Ditch between North Boulevard and its discharge to Three Mile Branch. Channel realignment in the Lower Kilby Ditch was performed to improve channel conditions. Prior to construction, channel conditions that existed in the Lower Kilby Ditch included:

- Excessive channel down-cutting (i.e., incision);
- Excessive aggradation (deposition);
- Bank failure/sloughing, and;
- Channel blockage and corresponding floodplain aggradation.

The Lower Kilby Ditch was realigned to improve the channel cross-section and profile at high potential scour locations by placing structures to prolong the channel's configuration and enhance its overall biological, ecological and physical functions.

Photograph Location 5

Excessive channel blockage; pre-construction.

Photograph Location 6

Channel realignment, sloping, vegetative replanting, and structure placement in Lower Kilby Ditch; post-construction.

5.1.2. In-stream Structures

Steep banks were sloped to provide a "bankfull bench" allowing higher flow events to overflow the Lower Kilby Ditch channel and spread out on a flat and wide vegetated floodplain; thus, reducing in-channel sheer and scour during higher flow events. Floodplain restoration included application of appropriate seed mixes, rolling and keying-in mats from the toe of channels to the top of bank on the floodplain, and shrub plantings.

Grade control structures and bank stabilization features were installed at key locations. Stabilization included armoring some riffles and high sheer stress outer meanders and installing step pools, rock cross vanes, J-hooks and root wads within the channel. These structures reduce bed erosion, direct stream flow toward the center of the channel (away from the banks), provide vertical energy dissipation, and increase TCE volatilization in steeper portions of the channel.

Photograph Location 7

View of cross-vane structure and vegetative plantings; post construction.

Photograph Location 8

View of J-hook bank stabilization structure and vegetative plantings; post construction.

Photograph Location 9

View of modified rip-rap cross-vane bank stabilization, in-stream structures, and vegetative plantings.

5.1.3. Outlet Protection at Three Mile Branch

Rip-rap slope and outlet protection were constructed at the outlet of Lower Kilby Ditch into Three Mile Branch by placing rip-rap over the soil surface on slopes and below the outlet. Rip-rap used as slope protection protects against erosion and dissipates the energy of discharge into Three Mile Branch. Outlet protection also reduces the speed of flows, thereby reducing erosion or scouring at the outlet. In addition, outlet protection lowers the potential for downstream erosion in Three Mile Branch.

Photograph Location 10

Outlet protection at Lower Kilby Ditch flow into Three Mile Branch; post-construction.

5.1.4. Access Road

An access road was constructed within the Lower Kilby Ditch to allow for continued maintenance, environmental monitoring, and inspections. The road is accessed from a locked gate near the intersection of the CSX rail line and Alabama River Parkway.

Photograph Location 11

View of Lower Kilby Ditch access road; post construction.

5.1.5. Replanting of Trees and Vegetation

The Lower Kilby Ditch area was replanted in March 2011 with appropriate trees and native grasses.

5.2. Constructed Wetland

5.2.1. Protection of Natural Wetland

A natural wetland area was delineated in the Low-Lying Area prior to construction. The area was flagged to protect the wetland during construction activities. All construction activities in the Low-Lying Area were performed around the natural wetland area.

5.2.2. Excavation for Constructed Wetland

The constructed wetland is in the southeastern portion of the Low-Lying Area. This corrective measure was designed to treat TCE during base flow conditions of the Kilby Ditch system. A cross-vane structure in the Lower Kilby Ditch was installed to a designed elevation to divert the base flow into the constructed wetland inlet. An outlet structure was designed to control retention time and discharge from the constructed wetland.

Installation of the constructed wetland required excavation and grading to construct the structural elements that are part of the treatment process. Structure elements include: a diversion channel with inlet steps (cross-vanes); high marsh; low marsh; deep pools; and outlet steps (cross-vanes). The purpose and function of each structural element is provided in the Kilby Ditch / Low-Lying Area Corrective Measures Implementation Plan" December, 2008.

Photograph Location 12

Excavation of constructed wetland; during construction.

Photograph Location 13

Cross-vane to divert base flow into the constructed wetland; post construction

Photograph Location 14

View of constructed wetlands and wetland vegetation; post construction.

Photograph Location 15

View of outlet structure from constructed wetland during construction. Photograph taken prior to vegetative plantings.

5.3. Interceptor Trench

5.3.1. Excavation

A groundwater interceptor trench was constructed along the northern portion of the Low-Lying Area. The groundwater interceptor trench intercepts shallow groundwater and cuts off flow to the north. The dissolved TCE in groundwater within the Low-Lying Area is flowing to the north/northeast and within several inches to approximately 4 ft. beneath ground surface. Groundwater entering the interceptor trench is conveyed as surface water to the Lower Kilby Ditch.

The trench channel was excavated and graded so that water flows to the Lower Kilby Ditch. Typical cross-section of the ditch is trapezoidal with a base width of approximately 10 ft. with 3 to 1 (horizontal to vertical) side-slopes. The trench is approximately 1,200 feet long. A pond was excavated at the west end of the trench to maintain a permanent pool.

5.3.2. Planting of Vegetation

The pond was planted with rooted aquatic plants and the trench was planted with other hydrophytic (water-loving) herbaceous and woody vegetation. Selected vegetation maximizes reductive dechlorination associated with the root/soil interface in saturated conditions and anoxic muds. In addition, plant uptake results in the removal of TCE from groundwater (e.g., phytoremediation). The trench and side slopes were planted with appropriate seed mixes, and biodegradable fiber stabilization blanket was rolled and keyed-in from the toe of the trench to the top of bank. Plantings also included live stakes and shrubs.

Photograph Location 16

View of Riprap, biodegradable fiber stabilization blanket, plantings at groundwater interceptor trench; during construction.

Photograph Location 17

View of groundwater interceptor trench; post construction.

5.3.3. Slope Stability and Rip-rap

Riprap was placed on portions of the slopes and within the pond to aid in stabilization of the trench banks. Riprap was also placed to restrict direct access to base flow in trench. The fabric will reduce bank erosion thereby reducing in-stream sedimentation. Biodegradable fiber blanket was used to stabilize banks during construction and allowed a substrate for vegetative growth.

Photograph Location 18A

View of pond at west end of groundwater interceptor trench; during construction.

Photograph Location 18B

View of pond at west end of groundwater interceptor trench; post construction.

5.4. Fencing

A chain-link security fence surrounds Lower Kilby Ditch and the Low-Lying Area between the CSX railroad, North Boulevard, Three Mile Branch, and immediately west of Lower Kilby Ditch (Figure 3).

Photograph Location 19

View of security fence at Lower Kilby Ditch and Low-Lying Area; post construction.

6. Environmental Compliance

6.1. Stormwater

An Erosion and Sediment Control (ESC) plan for all phases of construction in the West Kilby Ditch, Main Kilby Ditch, and Low-Lying Area was implemented for storm water and sediment control. The ESC plan used sequencing of construction activities and best management practices to minimize disturbed areas. Stormwater permit violations, or other enforcement actions such as Notice of Violation or Warning Letters, were not incurred during the completion of this project. Copies of the stormwater permit issuance and termination are provided in Appendix D. A copy of the United States Army Corps of Engineers permit is also provided in Appendix D.

6.2. Dust Control

Airborne dust and dust on roadways were managed during construction. The following procedures resulted in minimization of dust during the project:

- Haul routes or drives were watered as necessary to minimize dust nuisance. Routes were stabilized (e.g., compacted) and trucks were washed to reduce off site transport of soil.
- Gravel and stone were placed on haul routes, minimizing exposed sediment.
- Wheel washing equipment was provided at site entrances and exits. Washing and spraying were conducted in designated areas.

6.3. Contractor Health & Safety Program

McDonald Construction Company developed a Health and Safety program for the project. Air monitoring was performed during excavation work in the West and Main Kilby Ditch areas. Air monitoring equipment included a Mine Safety Appliances Company (MSA) Sirius Multi-gas Detector calibrated to TCE with an exposure alarm and Gastec passive dosimeter tubes. A summary of the environmental report from McDonald Construction's Health and Safety officer is included as an Appendix (Appendix A).

6.4. Soil and Waste Characterization and Management

A Materials Management Plan (MMP) was developed for the West and Main Kilby Ditches and the Low-Lying Area (see Appendix C, Kilby Ditch / Low-Lying Area

Corrective Measures Implementation Plan, December 2008). The MMP documented procedures for material handling and management of soil, water, and debris generated during corrective measure construction. Hazardous or solid waste was not encountered during management of construction soils.

6.5. Construction of Containment and Equipment Decontamination Area

A 50 foot (ft) by 300 ft containment area was constructed for the soil dewatering and water treatment operations. This area was constructed with a berm wall surrounding the roll-off boxes and graded such that any water in this area was directed to a sump and pumped to the on-site frac tank, treated with activated carbon, tested and discharge to the sanitary sewer.

An equipment decontamination area was constructed to allow for washing and collection of rinse water before equipment left the project area. All rinse water was pumped to the on-site frac tank, treated with activated carbon, tested and discharged to the sanitary sewer.

Photograph Location 20

View of roll-off boxes in the equipment containment area.

Photograph Location 21

View of dump truck cleaning at the equipment decontamination area.

6.6. Soil Dewatering

All saturated soil excavated during construction of the West and Main Kilby Ditches was placed into filter-lined roll-off boxes for dewatering. The roll-off boxes had a lower compartment where water was collected before it was pumped into the water management system. De-watered soil was stockpiled on the project site as described in the project work plan.

6.7. Water Management

Water generated from construction activities, equipment decontamination, and soil dewatering was treated for sediment and volatile organics prior to discharge. The treatment involved a batch process where water was:

- Collected in a pre-treatment 21,000 gallon frac tank;
- Pumped from the frac-tank through a sand filter;
- Pumped from the sand filter through two (2) carbon filters;
- Pumped from the carbon filtration to a "Treated" frac tank for sampling; and,
- Discharged to the City of Montgomery sewer system if sample results were below the project defined treatment limits of 0.0035 mg/l TCE and 50 ntu turbidity.

All monitored constituents in all samples collected from the water treatment system effluent were below allowable limits in treated water during the completion of the project. This process was described and submitted to ADEM in the "1st Quarter 2010

Status Report, Coliseum Boulevard Plume Investigation". Treated water quantity and laboratory results are included in Appendix B. Also, documentation for testing, shipping and regenerating the activated carbon used during water treatment is included in Appendix B.

7. Post Construction Monitoring

7.1. Surface Water Monitoring

Samples are being collected within the Low-Lying Area to monitor the effectiveness of the treatment system and reduction of TCE concentrations. A total of eleven sample points, LLA-1 through LLA-11, are collected to evaluate TCE concentration in the surface water. Eight sample points, LLA-1 through LLA-8, were originally identified for monthly sample collections; however, three sample points (LLA-9, LLA-10, and LLA-11) were added to the original eight points to document TCE concentrations in the unnamed tributary entering the Lower-Kilby Ditch. During construction, samples were also collected for Total Suspended Solids (TSS). Samples are no longer collected for TSS since construction is completed and the construction stormwater permit has been terminated.

These surface water samples will be monitored on a monthly basis for one year following construction completion to evaluate surface water quality throughout the Low-Lying Area (see Long-Term Monitoring Plan, September 2008 and the ADEM-ALDOT Agreement currently being drafted). A compliance sample, designated as Kilby Ditch Compliance Point (CP), is also collected on a monthly basis at the confluence of Three Mile Branch and Lower Kilby Ditch. Three surface water samples are also collected monthly from Three Mile Branch (TMB-1, TMB-2, and TMB-3). All surface water sample locations are shown on Figure 4.

Water quality samples will no longer be collected from the West and Main Kilby Ditches. Base flow is no longer accessible in West Kilby Ditch due to enclosure within box culverts and base flow in Main Kilby Ditch is below the top of the riprap channel (Long-Term Monitoring Plan, September 2008).

7.2. Vegetation Monitoring

Vegetation monitoring will be conducted by ALDOT's Vegetation Management Section within the ALDOT Maintenance Bureau. ALDOT will provide recommendations as needed to maintain the vegetation in the Treatment System.

7.3. Structure Monitoring

Structures are currently inspected for signs of excessive erosion, deposition and structural integrity each month. A copy of the checklist used for monthly inspections is included with Appendix C.

7.4. Groundwater Interceptor Trench Monitoring

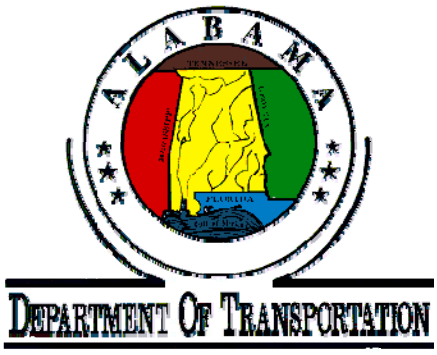
Vegetative monitoring associated with the groundwater interceptor trench will include a percent-area coverage including the interceptor pond and along the trench. The groundwater interceptor trench will be monitored during the monthly inspections of the Kilby Ditch area.

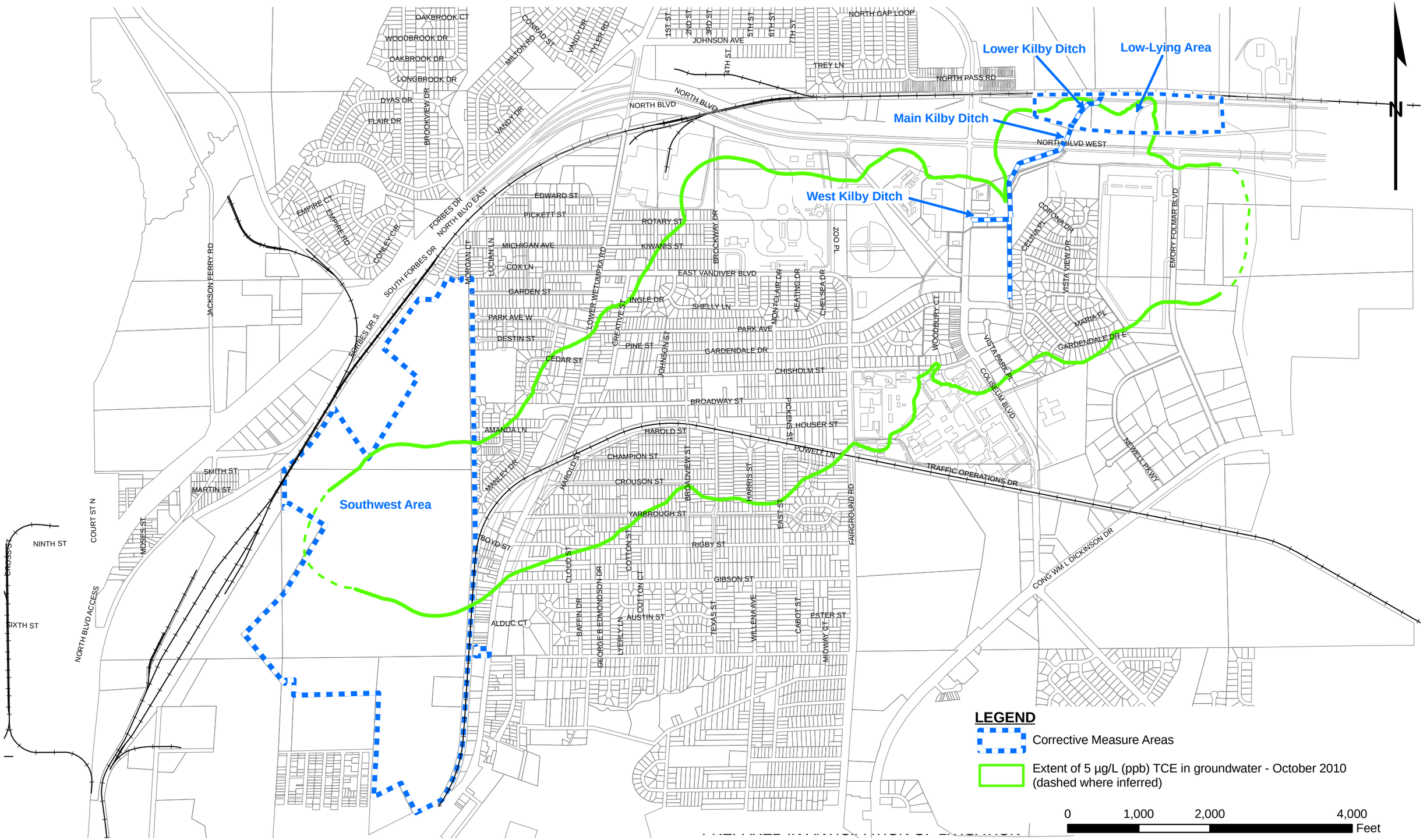
7.5. Post Construction Surveying

An as-built channel survey of the channel profile was performed following construction completion and provided to the ALDOT 6th Division to document compliance with the proposed channel modifications in the bid documents. Post-construction cross sections are provided on a disk as Appendix E.

Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA



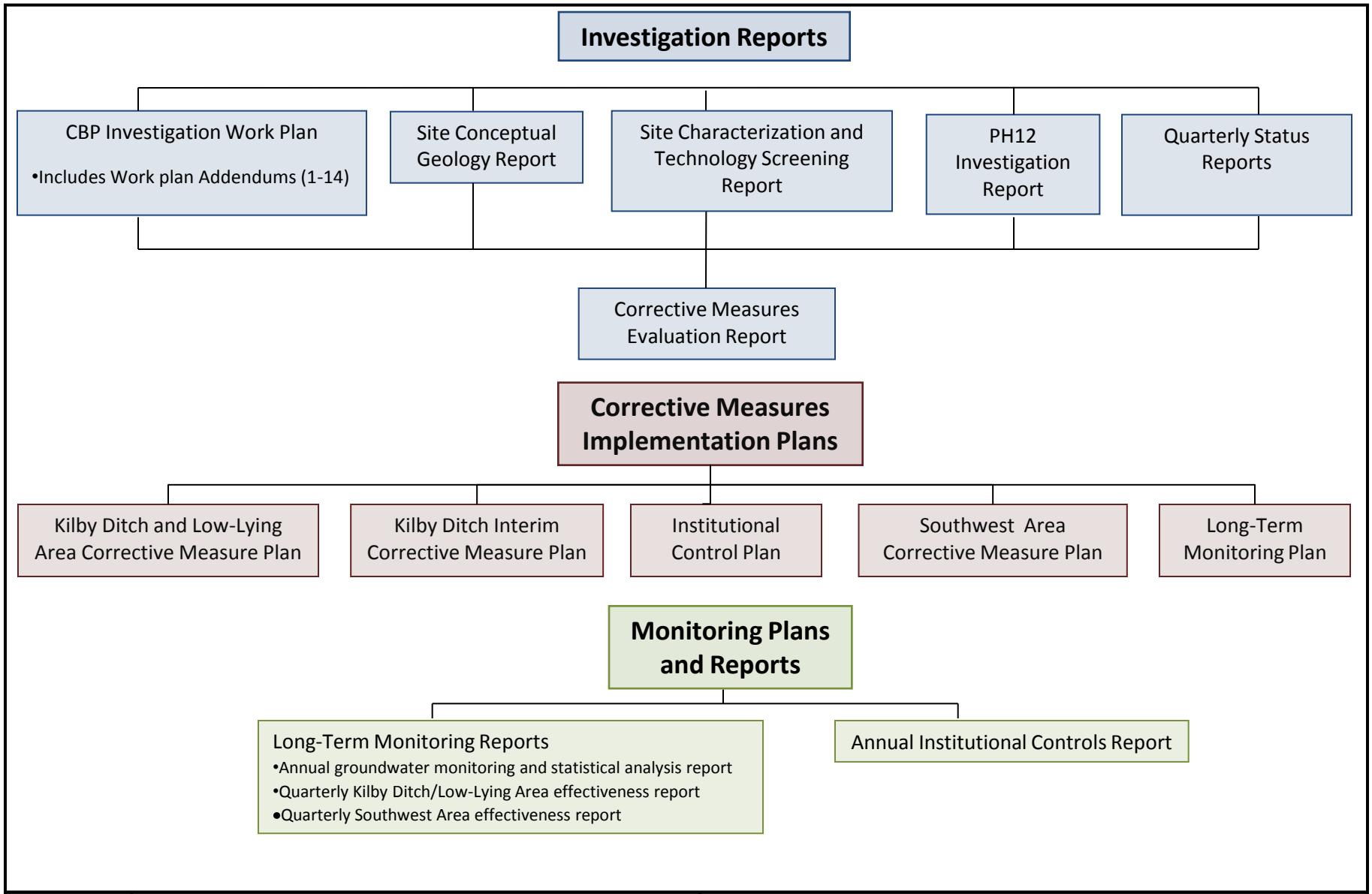


ALABAMA DEPARTMENT OF TRANSPORTATION
COLISEUM BOULEVARD PLUME

COLISEUM BOULEVARD PLUME CORRECTIVE MEASURE AREAS

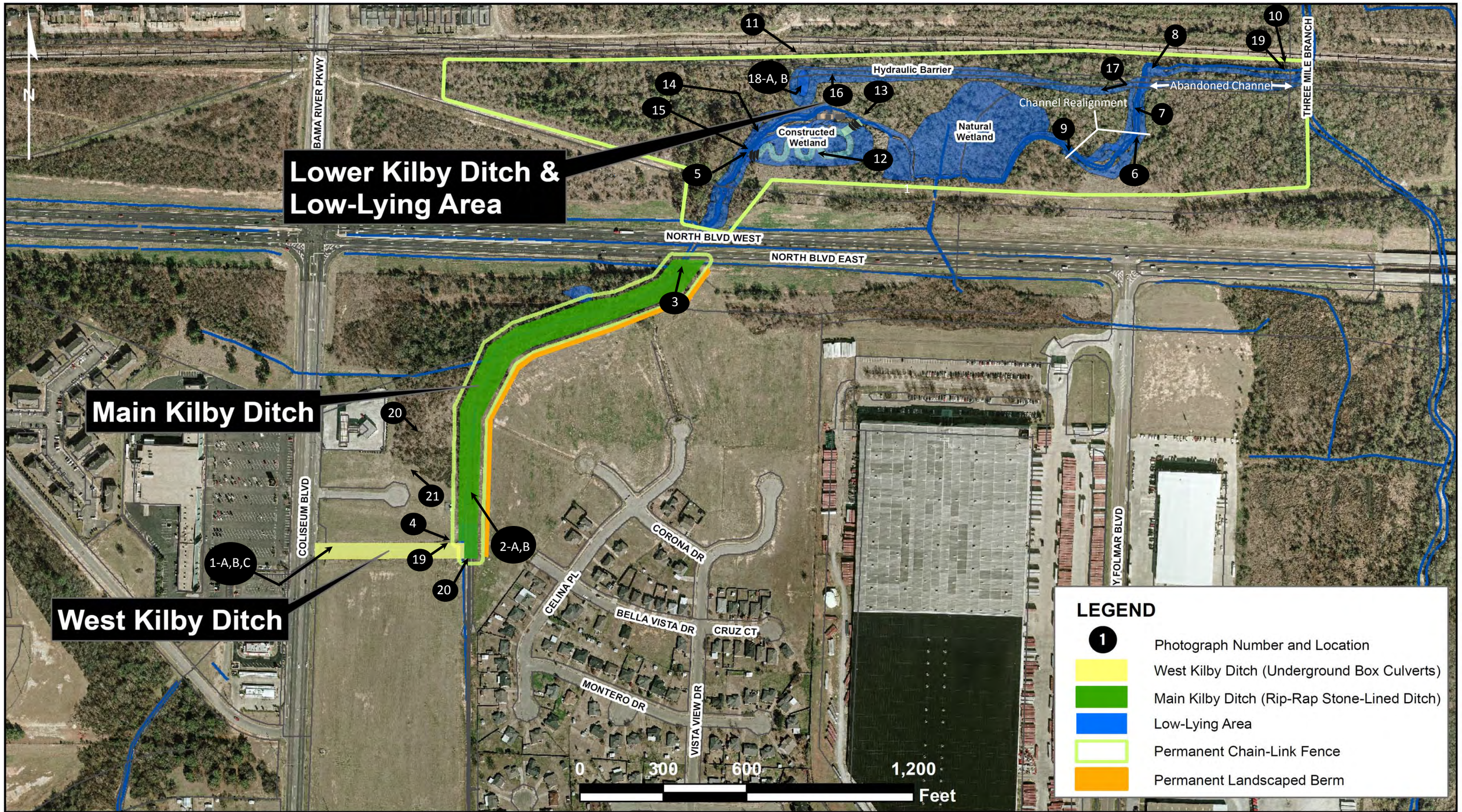
FIGURE 1

APRIL 2011



ALABAMA DEPARTMENT OF TRANSPORTATION
COLISEUM BOULEVARD PLUME

FIGURE 2
Overview of Reports and Monitoring Plans



ALABAMA DEPARTMENT OF TRANSPORTATION
COLISEUM BOULEVARD PLUME

KILBY DITCH CONSTRUCTION AREAS AND PHOTOGRAPH LOCATIONS

FIGURE 3

APRIL 2011

N

Hydraulic Barrier Pond

LLA-5

Hydraulic Barrier Channel Before Confluence with Lower Kilby Ditch

LLA-6

Lower Kilby Ditch

Three Mile Branch Sample Point

TMB-3

CP

Three Mile Branch Compliance Point

LLA-7

After Hydraulic Barrier Channel Confluence with Lower Kilby Ditch and Prior To Compliance Point

Lower Kilby Ditch

Discharge Point From Wetland

LLA-2

LLA-3

Internal Constructed Wetland

LLA-8

Existing Wetland

Three Mile Branch

LLA-1

Upstream of Constructed Wetland

LLA-4

Small Tributary South of Existing Wetland

NORTH BLVD WEST

NORTH BLVD EAST

LLA-10

LLA-9

Unnamed Tributary Sample Points

LLA-11

Three Mile Branch Sample Point

TMB-2

EMORY FOLMAR BLVD

Three Mile Branch Sample Point

TMB-1

Legend

- Lower Kilby Ditch and Low-Lying Area Surface Water Monitoring Points
- Surface Water or Drainage Feature
- Railroad

0 125 250 500 Feet

ALABAMA DEPARTMENT OF TRANSPORTATION
COLISEUM BOULEVARD PLUME

LOW-LYING AREA SURFACE WATER MONITORING LOCATIONS

FIGURE 4

APRIL 2011

Appendix A

Summary of Health and Safety Reports

Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA

ALABAMA
DEPARTMENT OF TRANSPORTATION

McDonald Construction Company, Inc.

Ref: Kilby Project
Passive dosimeter sampling

21 April 2010

The Gastec passive dosimeter tubes have been used for personnel monitoring and detection of Trichloroethylene in the air of excavation areas for measuring environmental atmospheric conditions at the Kilby project site. The TWA of 10ppm for a 7-8 hour period was used along with the threshold short term exposure limit of 25ppm within 15 minutes.

During personal sampling of the passive dosimeter usage from October 21, 2009 through March 23, 2010 there were no positive readings of Trichloroethylene detected at any time. At the same time during any excavation performed by McDonald Construction Company the MSA Sirius Multi-Gas detectors were used for dangerous and hazardous volatile gases, no concentrations or alarms of TCE detection were observed with the air monitoring at both the upper and lower Kilby sites.

The only positive detection of Trichloroethylene amounts were found in the ground water samples taken by P.R.E. out of Birmingham, Alabama and have been documented in the laboratory results forwarded as Kilby Treated laboratory results of the de-watering/treated ground water. All treated ground water that has been discharged had levels less than 0.000ppm.

Respectfully Submitted,

Raymond G. Fowler
Kilby Project Administrator/Safety Director
ALDOT ST 051-000-024
CELL (334) 850-1036
Office (334) 270-0063
Fax (334) 270-0155
safetyraze@yahoo.com

McDonald Construction Company, Inc.
Kilby Project: 2040 Coliseum Boulevard,
Montgomery, Alabama 36109

Ref:
Revision of Kilby Project Health and Safety Plan
Air Monitoring Exposure Levels, Section 3.0 Table 3.1a

It has been brought to my attention, and upon future review of McDonald Construction Company's Health and Safety Plan that the aforementioned table in the plan stated for the P.I.D. air monitoring action levels have been noted incorrectly.

The correct "Stop work" limits should be >100 ppmv, in lieu of >25 ppmv as noted in the plan in Section 3.0 and are amended as such. The occupational and environmental air concentration standard used was for STEL limits of >25 ppmv were for 15-minute averaging times within an 8-hour workday.

There were no detectable TCE (TL3ECL) Trichloroethylene vapors during the air monitoring performed by McDonald Construction Company at both the Upper and Lower Kilby project.
As stated previously in our weekly coordination meetings, all PID exposure alarms were due to Sirius pump faults, sensor failures and the employees allowing water and dirt to enter the intake opening of the Sirius during monitoring.
All instances of PID detected alarms were followed by employees leaving the area immediately, notifying myself and upon further investigation of the Sirius PID monitor it was noted to be PID tube or sensor failures that had caused the alarms.
The only TCE detected was in the ground water samples taken from the west Kilby ditch during the initial sampling process.

Raymond G. Fowler
Safety Director
McDonald Construction Company, Inc.
Kilby Project
Montgomery, Alabama

Tel (334) 270-0063 Fax (334) 270-0155

McDonald Construction Company, Inc.
Kilby Project; 2040 Coliseum Boulevard,
Montgomery, Alabama 36109

Ref: Explanation
Kilby Air Monitoring Discrepancy Results

The lower limits for the volatile organic compound of TCE (CL3ETL) that are noted on the Periodic Air Monitoring Reports have a programmed lower detectable preset limit of >10 ppmv on the Sirius PID monitors. The report reflect the limits set at >50 ppmv, this is preset in the software during calibration of the Sirius units by the MSA Galaxy during the daily calibration process and the most recent calibration session notes this lower limit as being correct.

The Period Session Reports do not reflect any average volatile organic compound recordings as this was also preset in the Sirius software and was not selected during initial programming of the units at the factory. The peak volatile organic compound readings are noted and are not averaged.

As stated previously in our weekly coordination meetings, all PID exposure alarms were due to Sirius pump faults, sensor failures and the employees allowing water and dirt to enter the intake opening of the Sirius during monitoring process (dropping meter).

All instances of PID detected alarms were followed by employees leaving the area immediately, notifying myself and upon further investigation of the alarms, it was noted to be PID tube, sensor or pump failures due to debris in pump inlet that had caused the alarms.

Raymond G. Fowler
Safety Director
McDonald Construction Company, Inc.
Kilby Project
Montgomery, Alabama

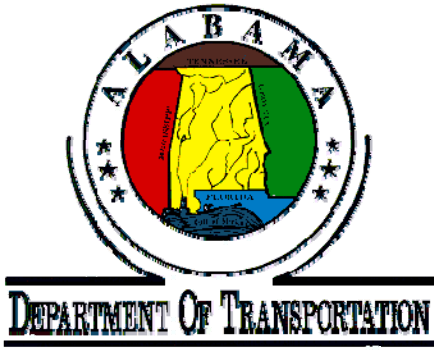
Tel (334) 270-0063 Fax (334) 270-0155

Appendix B

Water Treatment Quantities and Results

Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA



The following information is excerpted from the 1st Quarter 2010 Status Report, Coliseum Boulevard Plume Investigation submitted by the ALDOT to ADEM in April 2010.

Kilby Ditch Construction Project

On August 24, 2009, McDonald Construction began work in the Kilby Ditch Area. The Corrective Measures Implementation Plan requires:

Upper Kilby Ditch

- Cover West Kilby Ditch and slope stabilization of the northern section of Main Kilby Ditch
- Retain or reposition security fencing along Main Kilby Ditch

Lower Kilby Ditch

- Construct a Wetland Treatment System and perimeter security fencing in the Low-Lying Area
- Construct grade-control structures to protect the stream banks and control water flow in the stream channel.

During Construction in the Upper Kilby area, all saturated soil excavated was placed in dewatering containers until the soil passed a paint filter test. A total of 2,110.29 cubic yards of soil were dewatered. Water that was removed from the soil in the dewatering process was pumped into one of the two pre-treatment frac tanks until the tank was full. Water was also pumped from the Kilby Ditch during construction and an excavation for relocation of a water line during the project. All water pumped during the project was pumped into a pre-treatment frac tank. Once full, the water in the tank was "batch treated" and placed into a frac tank for storage of "Treated" water until laboratory results were reviewed for authorization of discharge. At the beginning of the project, 2 pre-treatment samples from frac tanks, 2 samples from the "Ditch" and 2 samples from the culverts beneath Coliseum Boulevard ("Pipe") were collected to determine treatment requirements to meet the discharge limitations of 0.0035 mg/l TCE and 50 ntu Turbidity. Results of pre-treatment samples are in Table 11a. Treatment began on October 22, 2009 and results of "treated" water samples are in Table 11b. During construction, a total of 22 Batches of water have been treated, totaling 431,300 gallons of water. See table 12. All water discharged during the project was less than the project discharge limitations established for construction.

Table 11b. Kilby Ditch Project; Batch Water Treatment Process Treated Results

Date	Sample Source	TCE (mg/L)	Turbidity (NTU)
	Discharge Limit	**0.0035**	**50**
10/22/09	Batch 1 Treated	<0.001	1.3
10/29/09	Batch 2 Treated	<0.001	1.9
11/04/09	Batch 3 Treated	<0.001	2.40
11/05/09	Batch 4 Treated	<0.001	5.95
11/06/09	Batch 5 Treated	<0.001	2.31
11/09/09	Batch 6 Treated	<0.001	8.28
11/12/09	Batch 7 Treated	<0.001	15.9
11/16/09	Batch 8 Treated	<0.001	13.7
11/19/09	Batch 9 Treated	<0.001	13.3
11/20/09	Batch 10 Treated	<0.001	5.76
11/24/09	Batch 11 Treated	<0.001	5.01
12/01/09	Batch 12 Treated	<0.001	1.57
12/03/09	Batch 13 Treated	<0.001	1.75
12/07/09	Batch 14 Treated	<0.001	8.04
12/17/09	Batch 15 Treated	<0.001	2.79
12/22/09	Batch 16 Treated	<0.001	45.5
12/29/09	Batch 16 Re-Treated*[1]	<0.001	4.31
1/05/10	Batch 17 Treated	<0.001	4.63
2/25/10	Batch 18 Treated	<0.001	8.66
2/26/10	Batch 19 Treated	<0.001	1.16
3/04/10	Batch 20 Treated	<0.001	5.38
3/17/10	Batch 21 Treated	<0.001	7.48
3/17/10	Batch 22 Treated	<0.001	5.16

*[1] Retreated because close to turbidity limit

Table 12. Kilby Ditch Project; Batch Water Treatment Process, Discharge Summary

Month	Date	Batch Number	Discharge Volume (gal)	Total Discharge Volume (gal)
October	23	1T	15,700	36,700
	29	2T	21,000	
November	4	3T	21,000	172,000
	5	4T	21,000	
	6	5T	21,000	
	9	6T	10,000	
	12	7T	21,000	
	19	8T	15,000	
		9T	21,000	
	20	10T	21,000	
	24	11T	21,000	
December	1	12T	21,000	94,400
		13T	21,000	
	10	14T	21,000	
	17	15T	15,700	
	22	16T	NA*	
	30	16T re-test	15,700	
January 2010	6	17T	15,700	15,700
February 2010	23	18T	22,500	22,500
March 2010	1	19T	22,500	90,000
	4	20T	22,500	
	16	21T	22,500	
		22T	22,500	

During the period October 23, 2009 – March 16, 2010 approximately 431,300 gallons of water were collected and treated.

* Batch 16T failed the turbidity test and was subsequently re-treated therefore there was no discharge on this date

Table 13. Kilby Ditch Project Rainfall

Kilby Ditch Project Rainfall	
August 2009	6.5 inches
September 2009	7.83 inches
October 2009	5.55 inches
November 2009	5.11 inches
December 2009	10.07 inches
January 2010	7.07 inches
February 2010	4.33 inches
March 2010	4.26 inches
Total Rainfall:	50.72 inches

Siemens Water Technologies

Arizona Facility: 2523 Mutahar Street • P.O. Box 3308 • Parker, AZ 85344
(928) 669-5758 • FAX (928) 669-5775 EPA ID: AZD 982 441 263
California Facility: 11711 Reading Road • Red Bluff, CA 96080
(530) 527-2664 • FAX (530) 527-0544 EPA ID: CAR 000 058 784

SPENT CARBON PROFILE FORM

GENERATOR INFORMATION

1. a) Generator: McDonald Construction Co., Inc. (NOTE: SEE PAGE 3)
   Mailing Address: 10790 Highway 82
   Union Springs, AL 36089
   b) Site: Kilby Ditch
   Address: East Side of Coliseum Blvd &
   Eastern Bypass
   Montgomery, AL
   c) Contact Name: Mr. Chuck Pickett
   d) EPA ID#: N/A
   e) Phone No: (334) 738-8800
   f) Fax No:

CONSULTANT INFORMATION

2. a) Consultant: PRE, Inc.
   Mailing Address: 124 Summit Parkway
   Birmingham, AL 35209
   b) Contact: Bill Simmons
   c) Phone: (205) 942-6293
   d) Fax: (205) 942-1459
   e) Email: was@preincorporated.com

PROPERTIES AND COMPOSITION OF THE SPENT CARBON

3. Provide a specific description of the process generating the spent carbon including constituents being treated. *(Please note if application is for potable water or food processing)*
Carbon used for groundwater remediation project. Constituents of conern are benzene and TCE.

4. If this is a Renewal, Provide the Existing Profile Approval Number: N/A

5. Type of Spent Carbon: ☑ Aqueous ☐ Vapor 6. Foreign Material: ☐ Yes ☑ No (rocks, dirt, sand, etc.)

7. Handling: ☐ Bulk ☐ Drum ☑ Adsorber ☐ Bulk Bag ☐ Other

8. Free Liquid Range: ☐ 0 ☑ 1 – 15% 9. Liquid Flashpoint: ☐< 140°F ☑ >140°F ☐ N/A Vapor

10. pH Range: ☐ <2 ☐ 2-4 ☑ 4.1-10.5 ☐ >10.5

11. Strong Odor? ☐ Yes ☑ No If yes, please Describe

12. Is spent carbon generated from a Superfund Site? ☐ Yes ☑ No

13. Is the Spent Carbon generated from any activity at a chemical manufacturing plant, petroleum refinery or coke by-product recovery plant, i.e., a facility subject to Subpart FF (the Benzene Waste NESHAP)? ☐ Yes ☑ No
If yes, complete BWON Addendum.

14. DOES THE SPENT CARBON CONTAIN ANY OF THE FOLLOWING

A. Polychlorinated Biphenyls (PCBs)	☐ Yes	☑ No
B. Dioxins and/or Furans	☐ Yes	☑ No
C. Dibromochloropropane (DBCP)	☐ Yes	☑ No
D. Sulfide or Cyanide	☐ Yes	☑ No
E. Explosive, Pyrophoric and/or Radioactive material	☐ Yes	☑ No
F. Infectious material	☐ Yes	☑ No
G. Shock Sensitive material	☐ Yes	☑ No
H. Oxidizer	☐ Yes	☑ No
I. Heavy Metals	☐ Yes	☑ No

GENERATOR CLASSIFICATION

15. Is the Spent Carbon a **RCRA** Hazardous Waste? ☐ Yes ☑ No
If yes, list waste code(s) below:
RCRA Hazardous Waste requires "11 RCRA" Analysis

_____ _____ _____ _____

_____ _____ _____ _____

16. Is the Spent Carbon a **State** Hazardous Waste? ☐ Yes ☑ No
If yes, list waste code(s) below:

_____ _____ _____ _____

_____ _____ _____ _____

17. Is this Waste Subject to the Land Disposal Restriction Notification? ☐ Yes ☑ No

18. Estimated Annual Carbon Usage: 4,000 lbs

GENERATOR CERTIFICATION

I hereby certify that all information on this and all attached documents are true and that this information accurately describes the subject spent carbon. I further certify that all samples and analyses submitted are representative of the subject spent carbon in accordance with the procedures established in 40 CFR 261 Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize Siemens Water Technologies to obtain a sample from any waste shipment for purposes of confirmation or further investigation. If I am a consultant signing on behalf of the generator, I have their proper approval.

William A. Simmons-Agent for McDonald Construction Co., Inc. _____
Printed Name **Signature**

Vice President - PRE, Inc. 4/7/10
Title **Date**

For Internal Use Only:

W100081AC
Profile Approval Number

Valid Through

* Note: The generator of the carbon and adsorbed compounds was produced during water treatment operated by McDonald Construction by contract with the Alabama Department of Transportation (ALDOT). The responsible party for the TCE portion of the waste is the Alabama Department of Transportation (ALDOT). ALDOT is not considered to be the generator of the TCE portion of the waste but is the responsible party for the TCE portion of the waste.

Agent for McDonald Construction Co, Inc.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID Spent Carbon | Collected: 01/22/2010 12:41 | SPL Sample ID: 10020080-01

Site: ~~Whistler, AL~~ KIRBY PITCH

Analytes/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
TCLP VOLATILE ORGANICS					MCL	SW8260B	Units: ug/L		
Benzene	53			10	500	10	02/05/10 9:38	LT	5389640
Trichloroethene	ND			10	500	10	02/05/10 9:38	LT	5389640
Surr: 1,2-Dichloroethane-d4	92.6		%	70-130		10	02/05/10 9:38	LT	5389640
Surr: 4-Bromofluorobenzene	106		%	74-125		10	02/05/10 9:38	LT	5389640
Surr: Toluene-d8	86.0		%	82-118		10	02/05/10 9:38	LT	5389640

Leach Method	Leachate Date	Leach Initials
SW1311	02/03/2010	691

Analytes/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B					MCL	SW8260B	Units: ug/kg		
Benzene	ND			250		50	02/04/10 15:10	LU_L	5388254
Trichloroethene	1400			250		50	02/04/10 15:10	LU_L	5388254
Surr: 1,2-Dichloroethane-d4	83.8		%	78-116		50	02/04/10 15:10	LU_L	5388254
Surr: 4-Bromofluorobenzene	98.1		%	74-125		50	02/04/10 15:10	LU_L	5388254
Surr: Toluene-d8	96.5		%	82-118		50	02/04/10 15:10	LU_L	5388254

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	02/03/2010 16:58	XML	1.00

BENZENE = 20 x 53 = 1060 ppb = 1.1 mg/kg

TCE = 1400 ppb = 1.4 mg/kg

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
*- Surrogate Recovery Outside Allowable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
6880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Siemens Water Technologies Corporation

Certificate of Analysis Number:

10020080

Report To:	Siemens Water Technologies Corporation Clark Fleming 6175 World Houston Parkway Suite 150 Houston TX 77032- ph (281) 227-2824 fax: (713) 671-0842	**Project Name:**	Rain For Rent
		Site:	Whittier, AK Kitty Dock
		Site Address:	
		PO Number:	4512641
		State:	Texas
		State Cert. No.:	T104704205-09-TX
Fax To:		**Date Reported:**	2/5/2010

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
Spent Carbon	10020080-01	Solid	1/22/2010 12:41:00 PM	2/3/2010 9:30:00 AM		☐

Alisha C. Rodriguez
Project Manager

2/5/2010
Date

Kesavalu M. Begawandoss Ph.D., J.D.
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Siemens Water Technologies Corporation

Certificate of Analysis Number:

10020080

Report To:		Project Name:	Rain For Rent
Siemens Water Technologies Corporation		Site:	Whistler, AL — Lil By Direct
Clark Fleming		Site Address:	
3175 World Houston Parkway Suite 150			
Houston		PO Number:	4812641
TX		State:	Texas
77032-		State Cert. No.:	T104704205-09-TX
ph (281) 227-2824	fax:	Date Reported:	2/5/2010

The collection date and time on the containers and chain of custody do not match. Per your request via email on February 4, 2010 we used the date and time from the container.

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II. ANALYSIS AND EXCEPTIONS:

No exceptions noted.

III. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg/kg-dry " or " ug/kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

Alisha C. Rodriguez

Alisha C. Rodriguez
Project Manager

Test results meet all requirements of NELAC, unless specified in the narrative.

2/5/2010
Date

HOUSTON LABORATORY
9880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Siemens Water Technologies Corporation

Certificate of Analysis Number:

10020080

Report To:	**Project Name:** Rate For Rent
Siemens Water Technologies Corporation	**Site:** ~~Whistler, BC~~ Kirby Dock
Clark Fleming	**Site Address:**
9175 World Houston Parkway Suite 150	
Houston	**PO Number:** 4812841
TX	**State:** Texas
77032-	**State Cert. No.:** T104704203-09-TX
ph (281) 227-2824 fax:	**Date Reported:** 2/8/2010

This Report Contains A Total Of 10 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

2/5/2010

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

G2G TRUCKING

ORIGINAL

22026 Rustic Shores Ln.
Katy, TX 77450
Phone:281-492-6737 Fax:281-599-9645
Email: g2gtrucking@sbcglobal.net

DATE 4-30-[illegible]

CONTROL NO. 4674

SHIPPER		CONSIGNEE	
NO.		NO.	4599707
NAME	McDonald Const. Co.	NAME	Siemens Water Tech
ADDRESS	[illegible] Blvd	ADDRESS	5175 World Hou[illegible]
CITY	Montgomery, AL	CITY	Hou TX 77032
ATTENTION OR RM. NO.		ATTENTION OR RM. NO.	

DELIVERY CHARGES: ☐ PREPAID ☐ COLLECT ☐ BILL TO

BUS/AIRLINE CHARGES: ☐ PREPAID ☐ COLLECT

☐ C.O.D.

TYPE OF DELIVERY: ☐ REGULAR ☐ HOT SHOT ☐ DIRECT

NO.PCS.	DESCRIPTION AND REMARKS	WEIGHT	DO NOT WRITE IN THIS SPACE
2	PV 2000 Sport	17,000	
	Profile # W1010081AC		
	EXP 4/7/12		

NOT RESPONSIBLE FOR FREIGHT CLAIMS AFTER 72 HOURS NOT RESPONSIBLE FOR CONCEALED DAMAGE	$ 50 DECLARED VALUE UNLESS SPECIFIED HERE $	WEEKEND/NIGHT	C.O.D. AMOUNT
TIME P/U:10/7 10/8	TIME DEL: 10/7 10/8		BUS/AIR BILL CHARGES
DRIVER Sam [illegible]	RECEIVED BY		
DRIVER			TOTAL CHARGES

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SIGNATURE

EMERGENCY RESPONSE NUMBER

SIEMENS

Siemens Water
2523 Mutahar Street - Box
Parker, AZ 85344

Telephone: (928) 669-5758
Facsimile: (928) 669-5775

May 10, 2010

McDonald Construction Co. Inc
124 Summit Parkway
Birmingham, AL 35209-

This is to certify the following spent carbon received at U.S. Filter/Westates Carbon Reactivation facility was reactivated in accordance with 40 CFR Part 265 and Part 61 regulations:

Site Address:	Kilby Ditch East Side of Coliseum
Profile Number:	W100081AC
Manifest Document Number:	4399707
Date Of Receipt:	May 6, 2010
Container Quantity - Type:	2 - PV2000
Reactivation Date:	5/8/2010

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations, I verify the information contained above is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification this information is true, accurate and complete.

Siemens Water Technologies Corp.
EPA ID No. AZD 982 441 263

Sincerely,

Monte McCue
Plant Manager

SIEMENS

UNIFORM STRAIGHT BILL OF LADING

BOL#: 4399707
DATE: 4/30/2010
CARRIER: G2G Trucking

REFERENCE: RMA # R003311

SHIPPER	CONSIGNEE
Mc Donald Construction Co., Inc. East Side of Coliseum Blvd & Eastern Bypass Montgomery, AL USA	Siemens Water Technologies Corp. 5175 World Houston Pkwy Houston, TX 77032 USA
BILL TO	**SPECIAL INSTRUCTIONS**
Siemens Water Technologies Corp. 5175 World Houston Pkwy Houston, TX 77032 USA	Mr. Manly 334-850-3694

PIECES	HM	DESCRIPTION	WEIGHT (LBS)
2		PV2000 Spent Activated Carbon Profile # W100081AC Expires: 4/9/12	10,000

Total weight of spent PV2000 is 5,000 lbs. (4K wet carbon and 1K actual tank)

Certificate of reactivation will show 2,000 lbs received per PV2000

2 ,00

REMIT	Siemens Water Technologies	COD AMT:	FREIGHT CHARGES ARE PREPAID UNLESS COLLECT BOX IS CHECKED
COD TO	5175 World Houston Pkwy	COD FEE:	
ADDRESS	HOUSTON, TX 77032	CUSTOMER'S CHECK IS NOT ACCEPTABLE	CHECK BOX IF COLLECT ☑

DECLARE VALUE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. If the value is omitted, the shipment will be subject to the lowest actual or released value in ICC NMF 100 series. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

PER

FOR FREIGHT COLLECT SHIPMENTS: If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier may decline to make deliver of this shipment without payment of freight and all other lawful charges.

SHIPPER

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper on request. The property described above, in apparent good order, except as noted (contents and conditions to contents of package unknown), marked, consigned, and destined as shown above, which said carrier agrees to carry to destination, if on its route, or otherwise deliver to another carrier on the route to designation. Every service to be performed hereunder shall be subject to a bill of lading terms and conditions in the governing classification on the date the shipment. Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agrees to b the shipper and accepted for himself and his assigns.

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER: McDonald Construction Co., Inc.

CARRIER: G2G Trucking

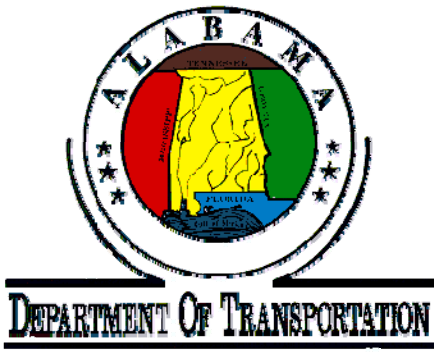
DRIVER	PCS	DATE
	(2)	4/30/10

Appendix C

Kilby Ditch Monthly Checklist

Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA



Kilby Ditch – Overview of Corrective Measures and Inspections

To ensure continued effectiveness of the corrective measures, an inspection plan and a checklist of inspection points, identified as item numbers on both the checklist and checklist figure, were developed for routine assessment and monitoring of the Upper Kilby Ditch and Lower Kilby Ditch and each of the referenced corrective measure components presented herein.

Three primary corrective measures were implemented in accordance with the Kilby Ditch / Low-Lying Area Corrective Measures Implementation Plan (the "Plan") adopted in July 2010, for ALDOT's management of the Coliseum Boulevard Plume (CBP) project. The primary corrective measures are:

- Engineering Controls
- TCE Treatment and Reduction
- Groundwater Interception

The components are summarized below:

1. Engineering Controls were implemented to prevent access to surface water that contains dissolved trichloroethylene (TCE) in the Upper Kilby Ditch and Lower Kilby Ditch. The Engineering Controls includes:
    a. Modification of West Kilby Ditch from an open channel ditch to an underground storm drain.
    b. Installation of a ground surface swale along the top of the West Kilby culverts to divert storm water flow from Coliseum Boulevard to the Upper Kilby Ditch during high rainfall events to meet the no-rise storm water drainage condition in the Plan.
    c. Modification of Upper Kilby Ditch to include channel side slope stabilization and placement of rip-rap above the base flow elevation.
    d. Installation of fencing, gates and no-trespassing signs to deter unauthorized access to Upper Kilby Ditch and Lower Kilby Ditch.
2. TCE Treatment and Reduction is achieved through the collective effects of:
    a. Installation of Cross-Vane 1 to direct base flow in the Lower Kilby Ditch into the Constructed Wetland.
    b. Biological processes in the Constructed Wetland and in the Groundwater Interceptor Trench using aquatic plants and trees.
    c. Installation of in-stream structures that serve to direct stream flow throughout the Lower Kilby Ditch and prevent side bank erosion of the hydraulic features.
    d. Volatilization and photoionization of TCE as the surface water flows across in-stream structures (i.e., cross-vanes, J-hooks and riffle pools) in the Lower Kilby Ditch.
3. Groundwater Flow Interception is accomplished by the Hydraulic Interceptor Trench (Trench). The western portion of the Trench is excavated approximately two to three feet into the groundwater and the eastern portion of the Trench is excavated approximately one foot into the groundwater table. The groundwater seepage face along the western portion of the Trench is designed to direct groundwater flow into the trench and through the eastern portion of the Trench to the Lower Kilby Ditch.

Kilby Ditch Inspection Form

Date:_____
Time:_____

Inspection type: Monthly ☐ Other ☐ _____

Inspector Name/Organization: _____

Contact Information: _____

Upper Kilby Ditch Area

Item #	(Item # locations are shown on the attached checklist figure)	Yes	No
1	West Kilby swale is maintained for stormwater flow	☐	☐
2	Swing Gate in Kilby Ditch functional	☐	☐
3	Entry gates and locks functional	☐	☐
4	West Access Road in acceptable condition	☐	☐
5	Rip-Rap in channel covers base flow	☐	☐
6	North Boulevard Box Culverts are free of obstruction	☐	☐
7	Lateral culverts are free of obstruction	☐	☐
8	Landscape berm in acceptable condition	☐	☐
9	West Kilby outlet is free of obstruction	☐	☐
10	Channel banks are in acceptable condition	☐	☐
11	East Access Road in acceptable condition	☐	☐
12	No Trespassing signs present on fence	☐	☐
13	Perimeter fencing in acceptable condition	☐	☐

Observations in the Upper Kilby Ditch Area that may require follow-up actions:

_____

	Are Separate pages or photos attached with this form	☐	☐

Lower Kilby Ditch Area

Item #		Yes	No
14	Perimeter fencing in acceptable condition	☐	☐
15	No Trespassing signs present on fence	☐	☐
16	Entry gates and locks functional	☐	☐

In-stream Structures functional and in acceptable condition:

Item #		Yes	No	Item #		Yes	No
17	Riffle 1	☐	☐	26	J-Hook 5	☐	☐
18	Cross-vane 1	☐	☐	27	J-Hook 6	☐	☐
19	J-Hook 1	☐	☐	28	J-Hook 7	☐	☐
20	J-Hook 2	☐	☐	29	Cross-vane 2	☐	☐
21	J-Hook 3	☐	☐	30	Cross-vane 3	☐	☐
22	Root-Wad 1	☐	☐	31	J-Hook 8	☐	☐
23	Constructed Wetland Inlet	☐	☐	32	J-Hook 9	☐	☐
24	Construction Wetland Outlet	☐	☐	33	Riffle 2	☐	☐
25	J-Hook 4	☐	☐	34	Cross-vane 4	☐	☐

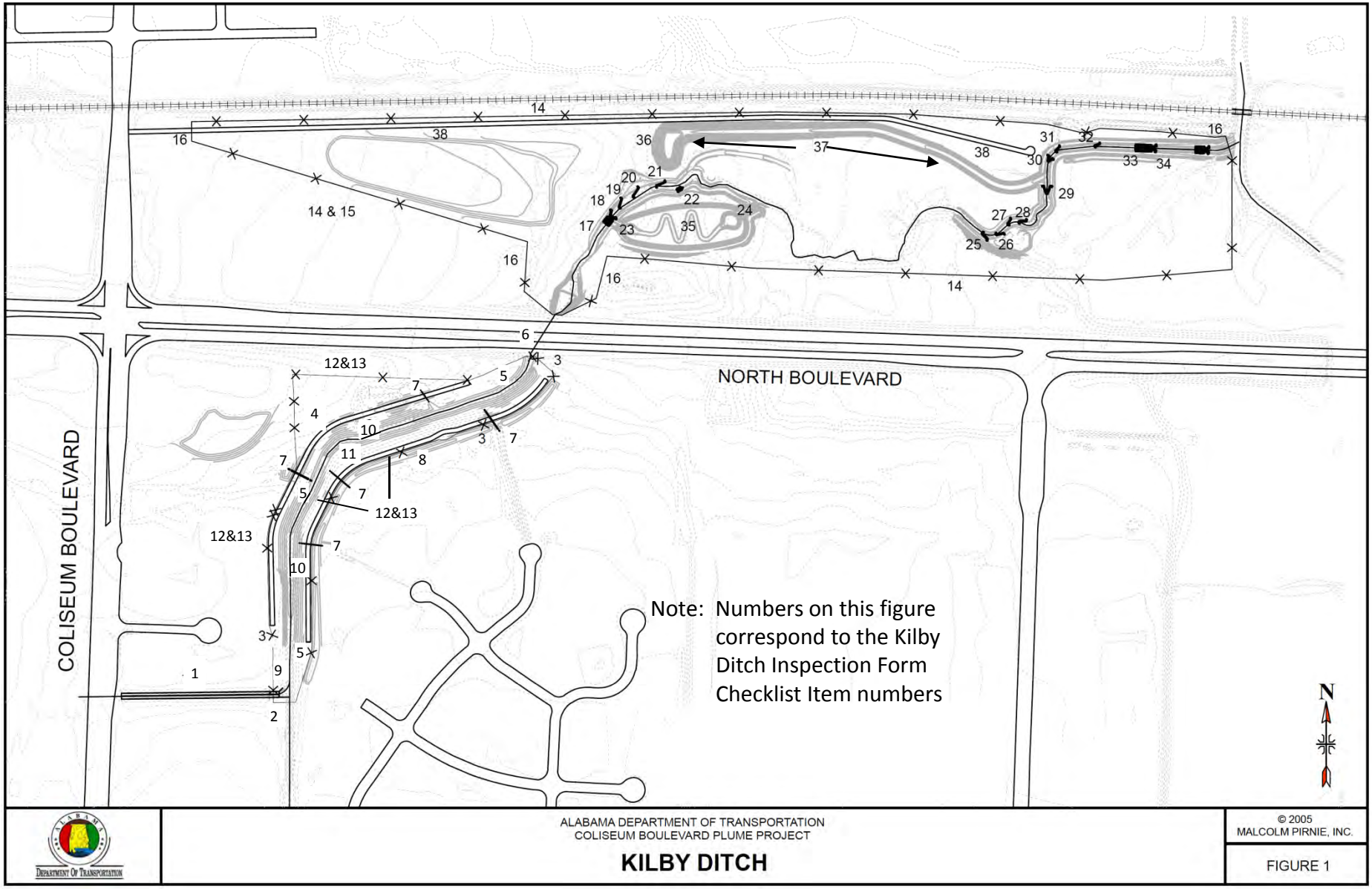
35	Constructed Wetland is vegetated and functional	☐	☐
36	Hydraulic Interceptor Pool slopes are stable; water present	☐	☐
37	Hydraulic Interceptor Trench is vegetated	☐	☐
38	Access road in acceptable condition	☐	☐

Observations in the Lower Kilby Ditch Area that may require follow-up actions:

_____

	Are Separate pages or photos attached with this form	☐	☐

Signatures:_____



ALABAMA DEPARTMENT OF TRANSPORTATION
COLISEUM BOULEVARD PLUME PROJECT

KILBY DITCH

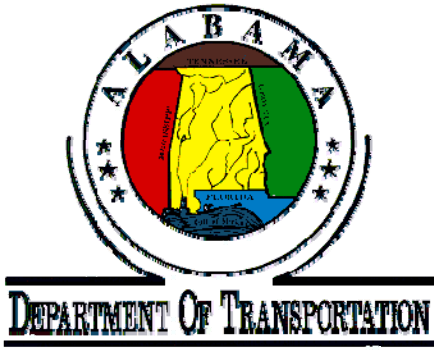
FIGURE 1

Appendix D

Storm Water and US Army Corps of Engineers Permits

Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA



LANCE R. LEFLEUR
DIRECTOR

BOB RILEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

December 6, 2010

REQUEST FOR TERMINATION OF REGISTRATION (TOR) RECEIVED

TOR Rec Date: December 2, 2010 TOR Complete: December 2, 2010 County: Montgomery (101)

NPDES #: ALR16EDGY Expiration Date: May 3, 2011 Disturbed Acres Registered: 28.9

Registrant: Alabama Department of Transportation Facility/Site: ST-051-000-024 PS971 By: Heather Griffin HMG

This is to acknowledge receipt of the request for Termination of Registration (TOR) under ADEM Administrative Code Ch. 335-6-12 for discharge of treated stormwater from regulated construction, noncoal mining, construction materials management, and related activity, for the above-referenced facility which was received on the date indicated above.

From the termination request, it is our understanding that (1) the registrant no longer has operational control of the facility or legal responsibility for the site and the registrant has notified the responsible owner/operator of applicable registration requirements, or (2) that disturbance activity regulated under ADEM Administrative Code Ch. 335-6-12 has been completed, all disturbed areas have been stabilized/reclaimed or effective stormwater quality remediation achieved, and stormwater discharges from regulated activities has permanently ceased, or (3) that NPDES individual permit coverage has been granted by ADEM for regulated activities at this site.

Should the site/activity not remain in compliance with all applicable provisions of ADEM Admin. Code Ch. 335-6-12, or should an inspection or complaint reveal significant noncompliance, an environmental problem related to the discharge of construction or noncoal mining stormwater from the site, or that incorrect/incomplete information has been provided, implementation of remedial measures may be required, to include re-registration and immediate correction of any deficiencies to provide for the protection of water quality.

It remains the responsibility of the operator to ensure that information submitted in the TOR, including any attachments, is true, complete, and accurate. The registrant shall submit to, and verify receipt by ADEM, any corrected or additional information required by ADEM. Failure to submit required information may result in denial of the request for termination of registration.

Please be advised that the registrant, operator, owner, developer, contractors, home builders, property owners association, etc., separately or collectively, must retain registration all regulated disturbance activity is complete. Please be advised that continued implementation and regular maintenance of effective management practices, including measures to ensure survival of permanent vegetative cover, is required if needed to ensure the protection of water quality. Termination of registration neither precludes nor negates an operator's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.

Information regarding construction and small noncoal, nonmetallic mining and mineral dry processing sites (ADEM Admin. Code Ch. 335-6-12, forms, and other helpful information) is available for download in WORD or PDF format on the ADEM webpage at http://www.adem.state.al.us/programs/water/constructionstormwater.cnt

If you have any questions concerning your registration, please contact the Montgomery office at 334-271-7700.

File:NOT/303

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S. W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

ADEM – NPDES CONSTRUCTION, AND NONCOAL MINING LESS THAN 5 ACRES STORMWATER REGISTRATION TERMINATION REQUEST AND CERTIFICATION

RESPOND WITH "N/A" AS APPROPRIATE. FORMS WITH INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL BE RETURNED AND MAY RESULT IN APPROPRIATE COMPLIANCE ACTION BY THE DEPARTMENT. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. PLEASE TYPE OR PRINT IN INK.

Complete this form, attach additional information as necessary, and send report to the ADEM Montgomery office.

Item I.

Registrant Name		Facility/Site Name		
Alabama Department of Transportation		ST-051-000-024		
NPDES Registration Number ALR16EDGY	County Montgomery	Facility Contact and Title Rex Knight - Project Manager		
Facility Latitude & Longitude (decimal or deg, min, sec) 32deg. 25 min. 27 sec. Latitude and -86 deg. 15 min.25 sec. Longitude		Facility Street Address or Location Description TCE Remediation, Floodplain Restoration and Stream Restoration		
Township(s), Range(s), Section(s) T-17-N, R-18-E , Section,28		City Montgomery	State AL	Zip 36110
Registrant Mailing Address (city, state, zip) 1525 Coliseum Blvd. Montgomery Al. 36110		Registrant Phone Number 334-241-8520	Registrant Email Address benderj@dot.state.al.us	

Item II.

☒ Yes ☐ No required inspections/monitoring have been performed and records retained. If "No", explain:

☒ Yes ☐ No required inspections/monitoring were performed by a QCI, QCP, or qualified person under the direct supervision of a QCP. If "No", attach required Continuing Education Greenfield Fee, and explain:

RECEIVED
2010 DEC 23 PM 4 46
STORMWATER MANAGEMENT

Item III.

1. ☒ Yes ☐ No Has all regulated activity authorized by this registration at this facility been completed? (i.e. construction/industrial objects removed; solid waste/debris properly disposed; all disturbed areas have been fully reclaimed, permanently stabilized, or perennial vegetative cover established; and stormwater discharges do not represent an adverse impact to water quality.)

If "Yes", please attach Inspection Report(s)/Summary and BMP Certification [and if conducted, any photographs or monitoring results].
If "No", in order for this termination request to be granted, the Name, Phone Number, and Address of the succeeding responsible operator(s) must be listed and the succeeding responsible operator must obtain coverage:

2. ☐ Yes ☒ No Has the Permittee lost operational control of the facility/site?
3. ☐ Yes ☒ No Has the Permittee lost legal responsibility for the facility/site?
4. ☐ Yes ☒ No Does this registration only provide coverage for a part of a phased project or a part of a larger common plan of development or sale?

If "Yes" to any or all of questions 2, 3, or 4, in order for this termination request to be granted, the Name, Phone Number, and Address of the succeeding responsible operator(s) must be listed and the succeeding responsible operator must obtain coverage:

If "No" to any or all of questions 2, 3 or 4, please attach Inspection Report(s)/Summary and BMP Certification [and if conducted, any photographs or monitoring results]. See attached photos.

"I understand that discharging pollutants in storm water associated with regulated activity to waters of the State that is not authorized by NPDES registration coverage is a violation of State law. I also understand that the submittal of this request for termination does not release the operator from liability for any violations of this registration, ADEM Administrative Code Chapter 335-6-12, or other ADEM rules until a complete and correct request for termination of the registration is received by the Department. I understand that the registrant, operator, owner, developer, contractors, home builder(s), property owners association, etc., separately or collectively, must retain coverage for subdivision developments or other phased developments until all disturbance activity, including individual home construction, is substantially complete. Coverage for mines or borrow pits must be retained until all disturbance activity is reclaimed or protection of water quality is assured. I understand that should an inspection or complaint reveal significant noncompliance with ADEM rules, an environmental problem related to the discharge of stormwater from the site or that incorrect information has inadvertently been provided, implementation of remedial measures may be required, to include resubmittal of the NOR and subsequent re-registration in order to correct any deficiencies, comply with federal stormwater permitting requirements, and provide for the protection of water quality. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Name & Designation of QCP	Signature	Date
David Bohannon, P.E., Division Construction Engineer		11/30/10
Name & Title of Registrant Responsible Official	Signature	Date
John E. Lorentson, P.E., Division Engineer		11/30/2010

ADEM FIELD OPERATIONS DIVISION – NPDES CONSTRUCTION, AND NONCOAL MINING LESS THAN 5 ACRES STORMWATER INSPECTION REPORT AND BMP CERTIFICATION

RESPOND WITH "N/A" AS APPROPRIATE. FORMS WITH INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL BE RETURNED AND MAY RESULT IN APPROPRIATE COMPLIANCE ACTION BY THE DEPARTMENT. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. PLEASE TYPE OR PRINT IN INK.

Complete this form, attach additional information as necessary, and send report to the nearest ADEM office.

Item I.

Registrant Name **Alabama Department of Transportation**		Facility/Site Name ST-051-000-024		
NPDES ALR16EDGY	County Montgomery	Facility Contact and Title Rex Knight, Project Manager		
Facility Latitude & Longitude (decimal or deg,min,sec) 32deg. 25 min. 27 sec. Latitude and -86 deg. 15 min.25 sec. Longitude		Facility Street Address or Location Description TCE Remediation, Floodplain Restoration and Stream Restoration		
Township(s), Range(s), Section(s) T-17-N, R-18-E , Section,28		City Montgomery	State AL	Zip 36110
Phone Number 334-241-8520	Fax Number 334-241-8507	E-Mail Address benderj@dot.state.al.us		

Item II.

List name of current ultimate receiving water(s) (indicate if through MS4) and the number of disturbed acres which drain through each treatment system or BMP:

Receiving Water	Disturbed Acres	Receiving Water	Disturbed Acres
Galbraith Mill Creek	1		

Item III.

☐ Any Discharge Sampling Data Attached. ☐ Any Instream Sampling Data Attached. ☒ Any Photographs attached.

☒ Based on this site evaluation which a QCI, QCP, or a qualified person under the direct supervision of a QCP conducted, discharge and/or instream sampling is not necessary to properly evaluate the effectiveness of BMP implementation to ensure compliance with this registration. I understand that it is the responsibility of the registrant to know and effectively evaluate the quality of the stormwater being discharged. Lack of knowledge regarding the requirements of ADEM Administrative Code Chapter 335-6-12, stormwater discharge or instream water quality, shall not constitute a valid defense with regard to deficiencies in BMP implementation and maintenance, or negative impacts to water quality.

Item IV.

INSPECTION RESULTS: (Describe current activities, deficiencies, proposed corrective action(s) and compliance schedule, etc.)

"Based upon the inspection of (date & time) 11/29/2010 at 10:00A.M. by the QCP, QCI, or a qualified person

(list: Jeffery A. Bender under the direct supervision of the QCP identified below conducted, the QCI or QCP identified below certifies that effective structural and non-structural BMPs have been fully implemented and regularly maintained to the maximum extent practicable for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff, **except for those deficiencies noted above**, in accordance with the facility's CBMPP, good sediment, erosion, and other pollution control practices, and the requirements of ADEM Administrative Code Chapter 335-6-12. I certify that discharges have been tested or evaluated for the presence of non-stormwater and non-authorized process wastewaters. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Name & Designation of QCI or QCP	Signature	Date
David Bohannon, P.E., Division Construction Engineer	David Bohannon	11/30/10

Name & Title of Registrant Responsible Official	Signature	Date
John E. Lorentson, P.E., Division Engineer	John E. Lorentson	11/30/2010

11.29.2010 01:02

11.29.2010 00:59

11:29:2010 00:24

11.29.2010 00:22

ALABAMA DEPARTMENT OF TRANSPORTATION

Design Bureau
1409 Coliseum Boulevard, Montgomery, Alabama 36110
P. O. Box 303050, Montgomery, Alabama 36130-3050
Phone: 334-242-6178 *FAX: 334-269-0826*

Bob Riley
Governor

Joe McInnes
Transportation Director

December 1, 2010

Mr. Lance R. LeFleur, Director
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2059

ATTN: Mrs. Jennifer Klepac Passineau, Chief
South Stormwater Section
Stormwater Management Branch
Water Division

STORMWATER MANAGEMENT
RECEIVED
2010 DEC 2 PM 4 45

Re: **Termination Request**
Project No.: ST-051-000-024
Registration No.: **ALR16**EDGY
Montgomery County

Dear Mr. LeFleur,

Please find enclosed the Request for Termination for the above referenced project. Construction work has been completed. ALDOT Weekly Reports/BMP Certification has been transmitted electronically and signed originals are on file. We therefore request written Notice of Termination of this permit.

If you should have any questions concerning this information, please contact Mr. John Ammons, Stormwater Permit Coordinator, at 242-6105 in the Design Bureau.

Very Truly Yours,

William F. Adams, P.E.
State Design Engineer

By: Joseph C. Blankenship
Joseph C. Blankenship, P.E.
Roadway Design Engineer

WFA/JCB/ja
Attachments
cc: File

LANCE R. LEFLEUR
DIRECTOR

BOB RILEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2059 ♦ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700
FAX (334) 271-7950

April 27, 2010

NOTICE OF RE-REGISTRATION (NOR) RECEIVED

NOR Rec: April 19, 2010 NOR Complete: April 19, 2010 By: Tessa Maines County: Montgomery (101)

NPDES #: ALR16EDGY **Expiration Date: May 3, 2011** Disturbed Acres Registered: 28.9

Registrant: Alabama Department of Transportation Facility/Site: ST-051-000-024 PS971

This is to acknowledge receipt of the Notice of Registration (NOR) requesting National Pollutant Discharge Elimination System (NPDES) re-registration under ADEM Admin. Code Ch. 335-6-12 for discharge of treated stormwater from regulated construction, nonmetallic, noncoal mining, dry processing, and related activity, for the above-referenced facility which was received by ADEM on the date indicated above.

It remains the responsibility of the operator to ensure that information submitted in the NOR, including any attachments, is true, complete, and accurate in order for the re-registration to remain in effect. Failure to ensure that the site/activity remains in full compliance with all provisions of the rules may result in suspension, termination, and/or subsequent denial of the request for re-registration. Please be advised that the registrant, operator, owner, developer, home builder(s), property owners association, etc., separately or collectively, must retain registration until all regulated disturbance activity is complete. The rules, forms 498, 499, 500, & 501, re-registration fee schedule, the *Alabama Handbook* BMP document, example site identification sign, qualified credentialed inspection program (QCIP) description, and other helpful information can be viewed or downloaded from the ADEM WebPage at http://www.adem.state.al.us/programs/water/constructionstormwater.cnt

Re-registration does not authorize the discharge of any pollutant or wastewater to a receiving water not specifically identified in the rules or in the submitted NOR. Should a need for the registration of an additional discharge(s) or increased acreage under the rules occur, the registrant must submit a complete NOR to ADEM requesting modification of the registration prior to the commencement of additional disturbance or discharge(s). Required inspections must begin immediately following commencement of activity authorized under this re-registration and continue until registration is properly terminated. Results from the required inspections should be reported on ADEM Form 500. A copy of Form 500 is attached for your convenience.

Compliance with all provisions of ADEM Admin. Code Ch. 335-6-12 and this re-registration is required, including but not limited to, the full implementation and regular maintenance of effective Best Management Practices (BMPs), prior to and concurrent with the commencement of regulated activities, the submittal of required reports, and the preparation and implementation of a construction best management practices plan (CBMPP) and any other plans as may be required. The required, comprehensive CBMPP shall comply with ADEM Admin. Code r. 335-6-12-.21. An example CBMPP template is located on the ADEM webpage at http://www.adem.state.al.us/programs/water/constructionstormwater.cnt for your convenience.

This re-registration neither precludes nor negates an operator's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals. **Disturbance activity is not authorized by this registration for sites/projects in the Coastal Zone of Baldwin and Mobile counties until coastal consistency certification or permit coverage is obtained, if required by ADEM Admin. Code Div. 335-8.**
If the disturbance activity is/will be located on Indian/historically significant lands, the registrant should contact the Alabama Historical Commission to ascertain applicable requirements.

The Department encourages you to voluntarily consider additional pollution prevention practices/alternatives as part of your implemented best management practices (BMPs) which may assist you to possibly reduce or eliminate pollutant discharges.

If you have any questions concerning your registration, please contact the Montgomery office at (334) 271-7700.

File: NOR/0000000303
Attachment: ADEM Form 500

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (Fax)

Decatur Branch
2715 Sandlin Road, S. W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (Fax)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (Fax)

Mobile - Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (Fax)

R#10-13?

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
FIELD OPERATIONS DIVISION NPDES STORMWATER PROGRAM

NOTICE OF REGISTRATION (NOR) TAM

THIS FORM IS TO BE USED FOR ADEM ADMINISTRATIVE CODE CHAPTER 335-6-12 - NPDES CONSTRUCTION, NONCOAL/NONMETALLIC MINING AND DRY PROCESSING LESS THAN FIVE ACRES, OTHER LAND DISTURBANCE ACTIVITIES, AND AREAS ASSOCIATED WITH THESE ACTIVITIES $780

PLEASE READ THE INSTRUCTIONS BEGINNING ON PAGE 3 OF THIS FORM CAREFULLY BEFORE COMPLETING. COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL DELAY ACCEPTANCE OF REGISTRATION. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. ATTACH CBMPP AND OTHER INFORMATION AS NEEDED. PLEASE TYPE OR PRINT LEGIBLY IN INK.

I. REGISTRANT INFORMATION Registration: ☐ Modification: ☐ Transfer: ☐ Re-Registration: ☒ ALR16EDGY

Registrant Name	Site/Project Name	# of Years Coverage Requested
ALABAMA DEPARTMENT OF TRANSPORTATION	ST-051-000-024 PS971	1

Responsible Owner/Operator or Official, and Title	Site Contact and Title
D. W. Vaughn, Chief Engineer/Deputy Director	John Lorentson, Sixth Division Engineer

Mailing Address of Registrant	Site Street Address or Location Description
1409 COLISEUM BOULEVARD	RECONSTRUCT KILBY DITCH (WITH PART PRECAST CONCRETE CULVERT) AND CONSTRUCT WETLAND TREATMENT SYSTEM FOR COLISEUM BOULEVARD PLUME

City	State	Zip	City	State	Zip
MONTGOMERY	ALABAMA	36110	MONTGOMERY	AL	36110

Business Phone Number	Site Phone Number	Fax Number
(334) 242-6319	(334) 241-8560	(334) 241-8522

Responsible Official (RO) Street/Physical Address	RO Phone Number	Email Address
SAME AS ABOVE	(334) 241-8560	ballardw@dot.state.al.us

(If applicable) Registered Agent Name, Address, and Phone Number NOT KNOWN AT THIS TIME

II. LEGAL STRUCTURE OF REGISTRANT

☐ Corporation ☐ Individual ☐ Single Proprietorship ☐ Partnership ☐ LLC ☐ LLP ☒ Government Agency ☐ Other _____

☒ Yes ☐ No If not an Individual or Single Proprietorship, registrant is properly registered and in good standing with the Alabama Secretary of State's office. If "No", please explain: _____

III. ACTIVITY DESCRIPTION AND INFORMATION

	Township	Range	Section
County(s): MONTGOMERY	17 North	18 East	28

Directions to Site:
RECONSTRUCT KILBY DITCH (WITH PART PRECAST CONCRETE CULVERT) AND CONSTRUCT WETLAND TREATMENT SYSTEM FOR COLISEUM BOULEVARD PLUME

Yes	No	Is/will this site:	Yes	No
(a) ☒	☐	an existing site which currently discharges to State waters	(b) ☐	☒ discharge to waters of or be located in the Coastal Zone?
(c) ☐	☒	a proposed site which will result in a discharge to State waters?	(d) ☐	☒ be located on Indian/historically significant lands?

IV. PROPOSED SCHEDULE - Used to determine potential registration duration and applicable fee amount, considering responses to Item VIII.

Anticipated Activity schedule: Commencement date: 06/26/2009 Completion date: 04/30/2011

Area of the Registered site: Total area in acres: 28.90 Total disturbed area in acres: 28.90

V. VIOLATION HISTORY

Identify every Notice of Violation (NOV), Administrative Order, Directive, or Litigation filed by ADEM or EPA during the three year (36 months) period preceding the date on which this form is signed issued to the operator, owner, registrant, partner, parent corporation, subsidiary LLP, or LLC Member. Indicate the date of issuances, briefly descibe alleged violations, list actions (if any) to abate alleged violations, and indicate date of final resolution:

SEE ATTACHED

VI. MAP SUBMITTAL

☒ Yes ☐ No A 7.5 minute series USGS topographics map(w) or equivalent map(s) is attached according to the instructions beginning on Page 3. **If "No" explain:**

VII. PROPOSED ACTIVITY(S) TO BE CONDUCTED

If Non-Coal, Non-Metallic Mining, Recovery, or Construction Material Management Site: ☐ Dirt-Chert ☐ Sand-Gravel ☐ Shale-Clay ☐ Crushed-Dimension Stone ☐ Other

☐ Other ☑ Other DITCH IMPROVEMENTS

Primary SIC Code 1629 Brief Description Construction, Noncoal Mining, or Materials Management Activity:

HIGHWAY CONSTRUCTION

DRAINAGE CORRECTION

VIII. RECEIVING WATERS

List name of receiving water(s), latitude and longitude (decimal or deg,min,sec) of location(s) that run-off enters the receiving water, total number of disturbed acres, the total number of drainage acres which will drain through each treatment system or BMP, and the waterbody classification. **If receiving water is designated as ONRW and/or Tier 1 waterbody, attach/submit copy of CBMPP.**

Receiving Water	Latitude	Longitude	Disturbed Acres	Drainage Acres	Waterbody Classification	ONRW Y or N	TIER 1 Y or N
1 . UT Galbraith Mill Creek	32 25 27.00	86 15 24.99	28.90	50.60	F&W	N	N

IX.MODIFICATION & RE-REGISTRATION - CONTINUING EDUCATION AND INSPECTION INFORMATION

☒ Yes ☐ No Required inspections/monitoring by QCP/QCI have been performed and records retained. **If "No", explain:**

List name(s) and designation/certification #s of QCPs/QCIs that performed required inspections/monitoring:

Justin Fancher	T1572
Rex Knight	32122
Rex Knight	T1726
Wesley G. Ballard, P.E.	PE25710

X. QUALIFIED CREDENTIALED PROFESSIONAL (QCP) CERTIFICATION

"I certify under penalty of law that a comprehensive Construction Best Management Practices Plan (CBMPP) for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this site/activity, and associated regulated areas/activities, utilizing effective BMPs from the Alabama Handbook For Erosion Control, Sediment Control, And Stormwater Management On Constructions Sites And Urban Areas, Alabama Soil and Water Conservation Committee, as amended (ASWCC). If the CBMPP is properly implemented and maintained by the registrant, discharges of pollutants in stormwater runoff can reasonably be expected to be effectively minimized to the maximum extent practicable according to the requirements of ADEM Administrative Code Chapter 335-6-12. The CBMPP describes the pollution abatement/prevention management and effective structural & nonstructural BMPs that must be fully implemented and regularly maintained as needed at the registered site in accordance with sound sediment and erosion practices to ensure the protection of water quality."

QCP Designation/Description: Rex F. Bush, Assistant Chief Engineer

Address 1409 COLISEUM BOULEVARD Registration/Certification 12996E

Name and Title (type or print) Rex F. Bush, Assistant Chief Engineer Phone Number (334) 242-6750

Signature [signature] Date Signed 4-16-10

XI. OPERATOR - RESPONSIBLE OFFICIAL SIGNATURE

Pursuant to ADEM Administrative Code Rule 335-6-6-.09, this NOR must be signed by a Responsible Official of the registrant who is the operator, owner, the sole proprietor of a sole proprietorship, a general/controlling member or partner, a ranking elected official or other duly authorized representative for a unit of government; or an executive officer of at least the level of vice-president for a corporation, having overall responsibility and decision making for the site/activity. I certify under penalty of law that this form, the CBMPP, and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the qualified credentialed professional (QCP) and other person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, correct, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations. I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form. I further certify that the proposed discharges described in this registration have been evaluated for the presence of any non-construction and/or coal/mineral mining stormwater, or process wastewaters have been fully identified.

Name (type or print) D. W. Vaughn Official Title Chief Engineer/Deputy Director

Signature [signature] Date Signed 4/19/10

ADEM FIELD OPERATIONS DIVISION – NPDES CONSTRUCTION, AND NONCOAL MINING LESS THAN 5 ACRES STORMWATER INSPECTION REPORT AND BMP CERTIFICATION

RESPOND WITH "N/A" AS APPROPRIATE. FORMS WITH INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL BE RETURNED AND MAY RESULT IN APPROPRIATE COMPLIANCE ACTION BY THE DEPARTMENT. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. PLEASE TYPE OR PRINT IN INK.

Complete this form, attach additional information as necessary, and send report to the nearest ADEM office.

Item I.

Registrant Name **Alabama Department of Transportation**		Facility/Site Name ST-051-000-024		
NPDES ALR 16EDGY	County Montgomery	Facility Contact and Title Rex Knight, Project Manager		
Facility Latitude & Longitude (decimal or deg,min,sec) 32deg. 25 min. 27 sec. Latitude and -86 deg. 15 min.24 sec. Longitude		Facility Street Address or Location Description TCE Remediation, Floodplain Restoration and Stream Restoration		
Township(s), Range(s), Section(s) T-17-N, R-18-E , Section,28		City Montgomery	State AL	Zip 36110
Phone Number 334-270-8666	Fax Number NA	E-Mail Address knightr@dot.state.al.us		

Item II.

List name of current ultimate receiving water(s) (indicate if through MS4) and the number of disturbed acres which drain through each treatment system or BMP:

Receiving Water	Disturbed Acres	Receiving Water	Disturbed Acres
Galbraith Mill Creek	1		

Item III.

☐ Any Discharge Sampling Data Attached. ☐ Any Instream Sampling Data Attached. ☐ Any Photographs attached.

☒ Based on this site evaluation which a QCI, QCP, or a qualified person under the direct supervision of a QCP conducted, discharge and/or instream sampling is not necessary to properly evaluate the effectiveness of BMP implementation to ensure compliance with this registration. I understand that it is the responsibility of the registrant to know and effectively evaluate the quality of the stormwater being discharged. Lack of knowledge regarding the requirements of ADEM Administrative Code Chapter 335-6-12, stormwater discharge or instream water quality, shall not constitute a valid defense with regard to deficiencies in BMP implementation and maintenance, or negative impacts to water quality.

Item IV.

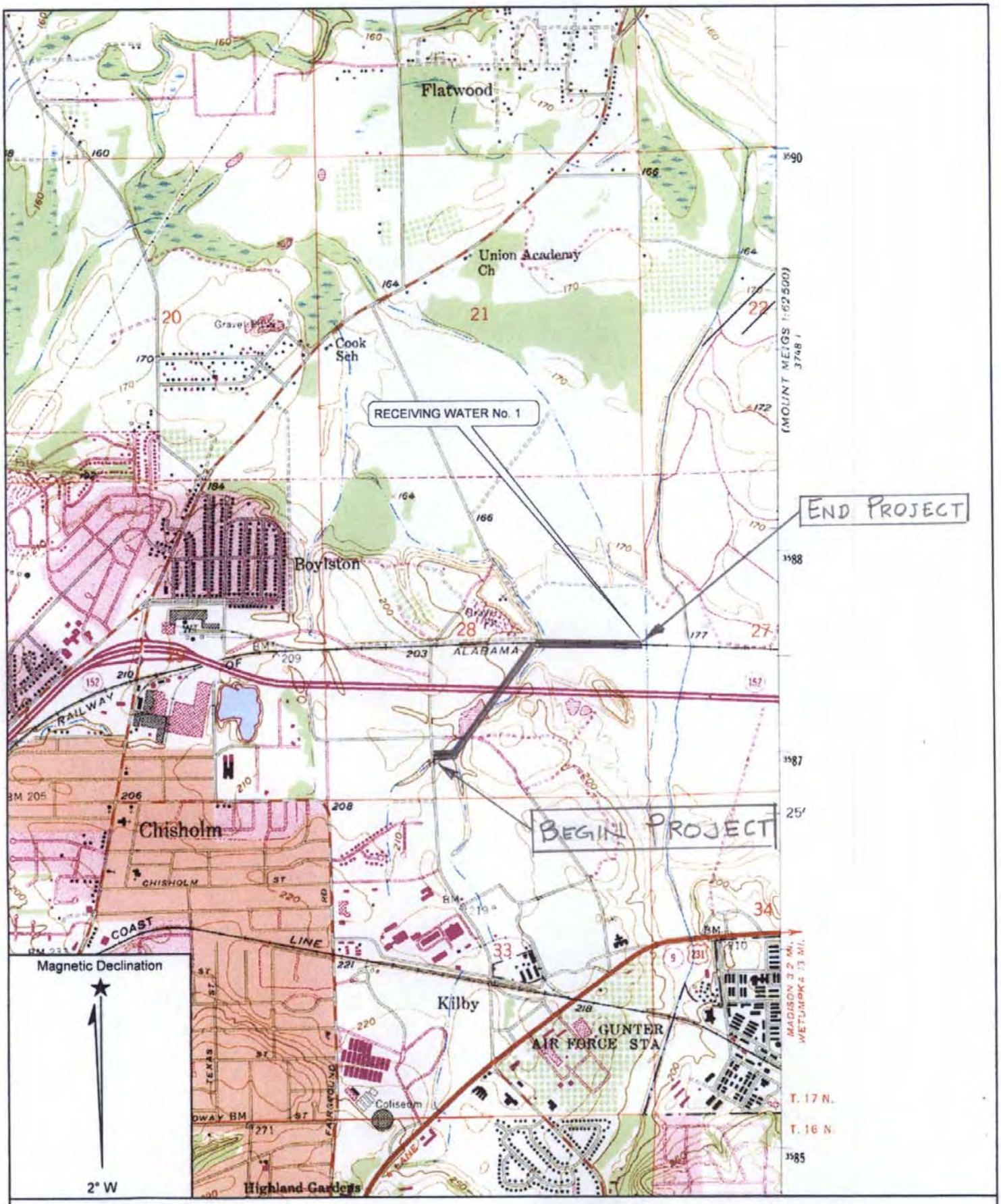
INSPECTION RESULTS: (Describe current activities, deficiencies, proposed corrective action(s) and compliance schedule, etc.)

NA

"Based upon the inspection of (date & time) NA by the QCP, QCI, or a qualified person (list: Jeffery A. Bender under the direct supervision of the QCP identified below conducted, the QCI or QCP identified below certifies that effective structural and non-structural BMPs have been fully implemented and regularly maintained to the maximum extent practicable for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff, **except for those deficiencies noted above**, in accordance with the facility's CBMPP, good sediment, erosion, and other pollution control practices, and the requirements of ADEM Administrative Code Chapter 335-6-12. I certify that discharges have been tested or evaluated for the presence of non-stormwater and non-authorized process wastewaters. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Name & Designation of QCI or QCP	Signature	Date
Jeffery A. Bender.	Jeffery A. Bender	4-12-10

Name & Title of Registrant Responsible Official	Signature	Date
John E. Lorentson, P.E.	John E Lorentson	4/12/2010



Name: MONTGOMERY NORTH
Date: 5/4/2009
Scale: 1 inch equals 2000 feet

Location: 032° 25' 34.26" N 086° 15' 53.34" W NAD 27
Caption: ALDOT
PROJECT ST-051-000-024
RECONSTRUCT KILBY DITCH - Map 1 of 1

Alabama Department of Transportation

Storm Water Permit Violation History

MGF-0012(508)	N.O.V. 01/11/2005	ALR165394
County:	COVINGTON	
Project Description:	Additional Lanes on US-84 from CR-67 at Sanford to CR-77 at Babbie.	
Violation Description:	BMP's not fully implemented and maintained.	
Action Taken:	Problem areas were addressed and a letter written February 14, 2005 stating corrections made and detailing request for follow-up inspection. TOR requested May 10, 2006; TOR completed by ADEM on May 10, 2006.	
Resolution Date:		

BR-0229(500)	N.O.V. 12/07/2006	ALR167533
County:	ELMORE	
Project Description:	Tallapoosa River bridge replacement on SR-229.	
Violation Description:	BMP's not fully implemented and maintained.	
Action Taken:	Problems areas were addressed and a letter written December 19, 2006 stating corrections made. TOR requested May 19, 2008.	
Resolution Date:		

NHF-0042(501)	N.O.V. 10/03/2007	ALR169758
County:	MOBILE	
Project Description:	US-98 from the Mississippi line to 0.5 miles east of CR-576.	
Violation Description:	BMP's not fully implemented and maintained. Offsite sediment found. Turbidity samples taken by ADEM violated water quality standards.	
Action Taken:	Problem areas have been addressed. This project is on going and additional measures to ensure future compliance have been adopted.	
Resolution Date:		

BRF-0008 (517)(518)&(519)	N.O.V. 06/17/2005	ALR164065
County:	MACON	
Project Description:	US-80 Bridge Replacement at Chewacla Creek and Relief Locations	
Violation Description:	BMP's not fully implemented and maintained.	
Action Taken:	Problem areas have been and continue to be addressed. Letter fo August 16, 2005 state problems being addressed. This project is nearing completion. TOR requested August 23, 2006; TOR completed by ADEM on October 26, 2006	
Resolution Date:		

STPHV-4500(212)	N.O.V. 12/06/2007	ALR16D762
County:	MADISON	
Project Description:	Gillespie Rd. Extension. Grade, Drain, Base & Pave	
Violation Description:	BMP's not fully implemented and maintained.	
Action Taken:	Problem areas have been and continue to be addressed. This is still an active site. TOR requested June 30, 2008.	
Resolution Date:		

NHF-0012(509)	N.O.V. 02/07/2008	ALR167186
County:	COFFEE	
Project Description:	US-84 from E of CR-507 to E Double Bridges Creek. Base & Pave.	
Violation Description:	BMP's not fully implemented nad maintained.	
Action Taken:	Problems areas have been addressed. This is an active site nearing completion.	
Resolution Date:		

NHF-0012(519)	N.O.V. 02/07/2008	ALR16C174
County:	COVINGTON	
Project Description:	Add lanes, Base, Pave, Signing and Partial Grade and Drain. US-84 from E of CR-67 at Sanford to CR-77 at Opp.	
Violation Description:	BMP's not fully implemented and maintained.	
Action Taken:	Problems areas have been addressed. This is still an active site nearing completion. TOR requested October 15, 2007; TOR completed by ADEM on June 24, 2008.	
Resolution Date:		

ALABAMA DEPARTMENT OF TRANSPORTATION

Design Bureau
1409 Coliseum Boulevard, Montgomery, Alabama 36110
P. O. Box 303050, Montgomery, Alabama 36130-3050
Phone: 334-242-6178 FAX: 334-269-0826

Bob Riley
Governor

Joe McInnes
Transportation Director

April 19, 2010

Mr. John P. Hagood, Acting Director
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Al. 36110-2059

ATTN: Mr. Dale Mapp, Chief
Construction Stormwater/General Permit Group
Water Division

Re: **Re-Registration**
Project No.: **ST-051-000-024**
Registration No.: **ALR16EDGY**
Montgomery County

Dear Mr. Hagood,

Please find attached the new Notice of Re-Registration for the above noted project, submitted to you pursuant to ADEM Admin. Code R. 335-6-12-.07(3)(w). The Project Management System generated Annual Report has been transmitted electronically. The signed original is on file. This project is ongoing at this time.

If you should have any questions concerning this information, please contact Mr. John Ammons, Stormwater Permit Coordinator, at 242-6105 in the Design Bureau.

Very Truly Yours,

William F. Adams, P.E.
State Design Engineer

By: Joseph C. Blankenship, P.E.
Roadway Design Engineer

WFA/JCB/ja
Attachments
cc: File

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, MOBILE DISTRICT
CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

August 23, 2008

Inland Branch
Regulatory Division

SUBJECT: Nationwide Permit Authorization - Permit Number SAM-2008-00352-CJH, Kilby Ditch Restoration, Montgomery, Alabama

Alabama Department of Transportation
Attention: Mr. Mark McElroy
3700 Fairground Road
Montgomery, Alabama 36110

Dear Mr. McElroy:

This letter is in response to your August 5, 2008 notification of revision to the Kilby ditch restoration project submitted in February of 2008. The request is for a Nationwide Permit 38 to conduct a remediation project on property located at Latitude 32.4238° and Longitude 86.26125° in Montgomery County, Alabama.

Department of the Army authorization is necessary because your project will involve the placement of fill material into jurisdictional waters of the United States, regulated under Section 404 of the Clean Water Act.

Based upon the information and plans you provided, we hereby verify that the work described above, which would be performed in accordance with the received drawings, is authorized by Nationwide Permits (NWP) 12 in accordance with 33 CFR Part 330 of our regulations. This NWP and its associated Regional and General Conditions can be viewed at our website www.sam.usace.army.mil/RD/reg. You must comply with all of the special and general conditions and any project specific conditions of this authorization or you may be subject to enforcement action. In the event you have not completed construction of your project within the specified time limit, a separate application or re-verification may be required. This verification is valid for **two years** from the date of this document. The following special conditions shall be followed:

1. The project shall be constructed and managed such that no significant increases I turbidity

or sedimentation occurs down-flow of the project site. Normal stream hydrology must be maintained during and post construction.

2. The permittee will contact the Alabama Department of Environmental Management upon commencement of work.

This letter of authorization does not obviate the necessity to obtain any other Federal, State, or local permits, which may be required. Please note you are also required to submit a signed certification regarding the completed work and completion of any required mitigation. The attached Compliance Certification form, must be completed and returned to the letterhead address within 60 days of completion of the work authorized.

Please contact me at 205-290-9096 if you have any questions. For additional information about our Regulatory Program, visit our web site at www.sam.usace.army.mil/RE/reg, and please take a moment to complete our customer satisfaction survey while you are there. Your responses are appreciated and will allow us to improve our services.

Sincerely,

CJ House-Pearson

Cindy J. House-Pearson
Field Office Manager
Regulatory Division

Enclosures

COMPLIANCE CERTIFICATION

US Army Corps of Engineers
Mobile District

Permit Number: SAM-2008-00352-CJH

Name of Permittee: Alabama Department of Transportation

Date of Issuance: August 23, 2008

Upon completion of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Regulatory Division
Birmingham Field Office
218 Summit Parkway Suite 222
Homewood, Alabama 35209

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and the required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee Date

COMPLIANCE CERTIFICATION

US Army Corps of Engineers
Mobile District

Permit Number: SAM-2008-00352-CJH

Name of Permittee: Alabama Department of Transportation

Date of Issuance: August 23, 2008

Upon commencement of the activity authorized by this permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Mobile District
Regulatory Division
Birmingham Field Office
218 Summit Parkway Suite 222
Homewood, Alabama 35209

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

_____ _____

Signature of Permittee Date work began

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: ALDOT	File Number: SAM-2008-00352-CJH	Date: August 9, 2008

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
HOWARD LADNER
CESAM-RD-I-N
U.S. ARMY CORPS OF ENGINEERS
218 SUMMIT PARKWAY
SUITE 222
HOMEWOOD, AL 35209
(205) 690-9096

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

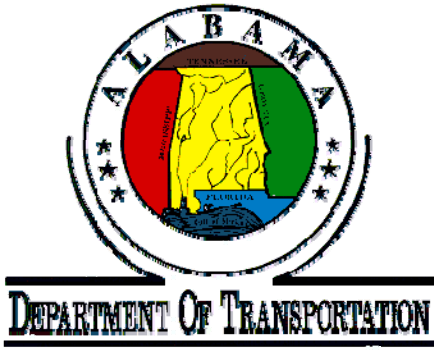
	Date:	Telephone number:
_____ Signature of appellant or agent.		

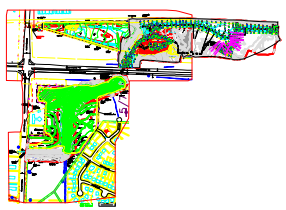
Appendix E

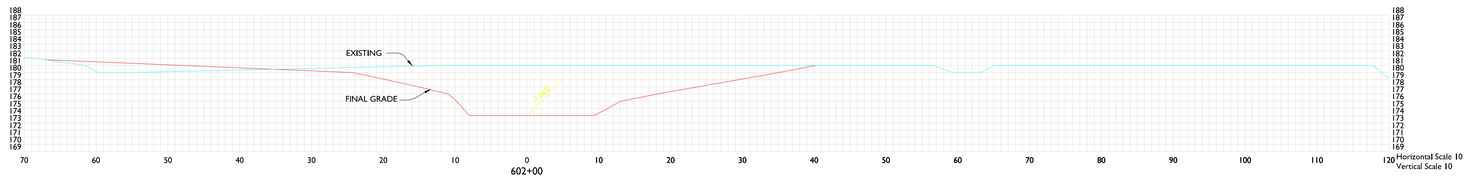
Post Construction Survey
(provided in attached CD)

Corrective Measures Implementation

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA







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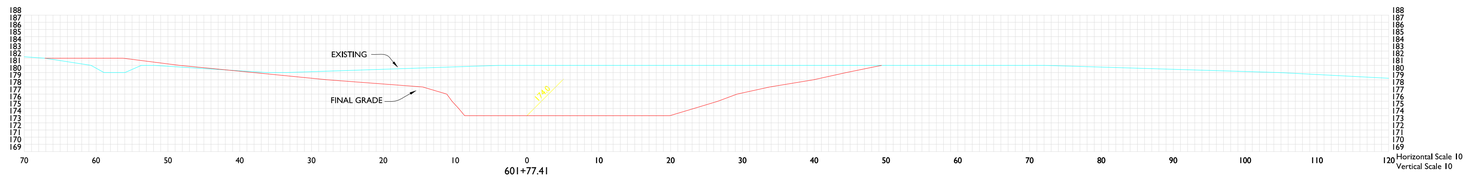

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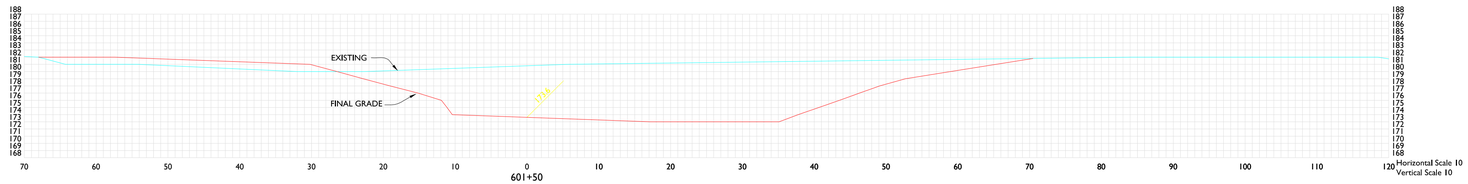

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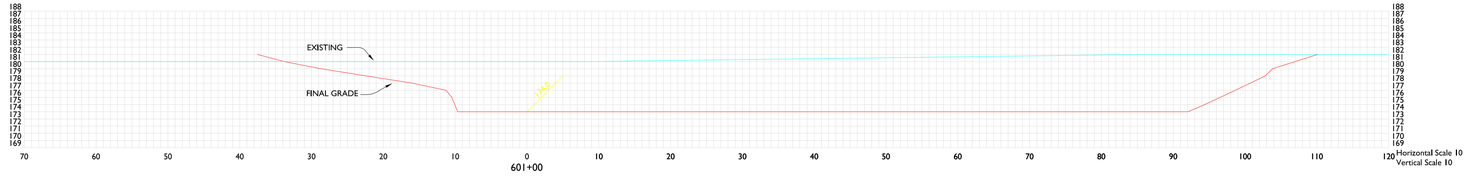

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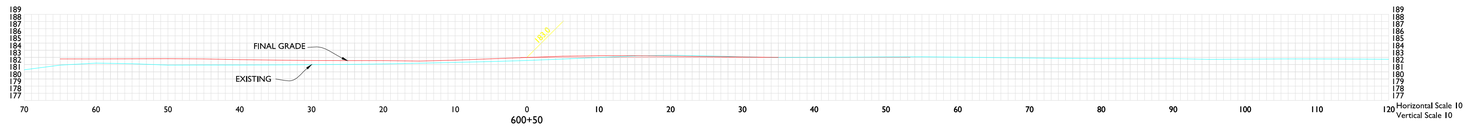

600+50

HYDRAULIC BARRIER
BEGIN WORK
STA 600+50

Calculate Section Volumes Fri Jul 23 21:39:16 2010

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Total Fill: 5970.159 C.F., 221.117 C.Y.

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600+50.000	0.000	62.277			
			50.000	812.969	89.439
601+00.000	878.006	34.318			
			50.000	1282.820	66.030
601+50.000	507.440	36.995			
			27.410	434.225	27.794
601+77.410	348.020	17.762			
			22.590	255.242	16.898
602+00.000	262.121	22.632			
			50.000	510.962	20.956

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 1 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

Calculate Section Volumes Fri Jul 23 21:39:16 2010

Processing 602+50.000 to 604+50.000
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Total Fill: 4657.905 C.F., 172.515 C.Y.

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			0.000	516.140	32.240
603+00.000	267.713	34.820			
			50.000	473.288	86.258
603+50.000	243.438	58.339			
			50.000	439.552	54.017
604+00.000	231.279	0.000			
			47.470	408.911	0.000
604+47.470	233.882	0.000			
			2.530	20.498	0.000
604+50.000	203.635	0.000			
			50.000	388.822	0.000

0' 10' 20' 30'
SCALE: 1" = 10'

604+50

604+47.47

604+00

603+50

603+00

602+50

Calculate Section Volumes Fri Jul 23 21:39:16 2010

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			50.000	371.816	39.401
605+50.000	185.269	42.554			
			50.000	356.907	39.401
606+00.000	200.190	0.000			
			50.000	336.398	47.887
606+50.000	163.119	51.718			
			50.000	291.878	47.887
607+00.000	152.109	0.000			
			19.205	107.749	0.000
607+19.205	150.857	0.000			
			30.795	171.786	0.374

0' 10' 20' 30'
SCALE: 1" = 10'

607+19.205

607+00

606+50

606+00

605+50

605+00

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 7 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC

Calculate Section Volumes Fri Jul 23 21:39:16 2010

Processing 607+50.000 to 609+50.000
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Total Fill: 3476.574 C.F., 128.762 C.Y.

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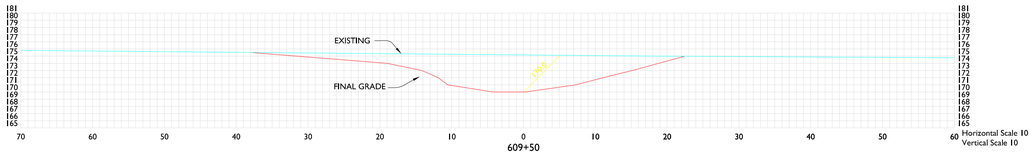
			50.000	277.010	7.048
608+00.000	148.795	6.956			
			7.496	40.734	2.780
608+07.496	144.649	13.070			
			42.504	228.660	10.288
608+50.000	145.856	0.000			
			50.000	268.235	54.323
609+00.000	143.838	58.669			
			50.000	271.879	54.323
609+50.000	149.792	0.000			
			2.698	15.121	0.000

0' 10' 20' 30'

SCALE: 1" = 10'



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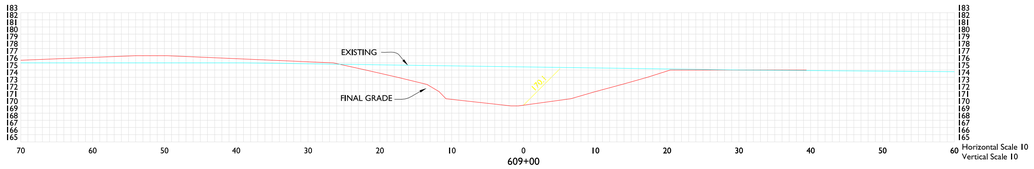
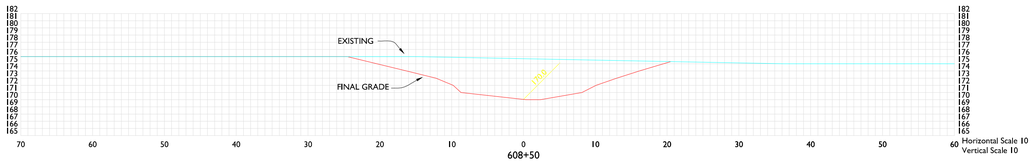
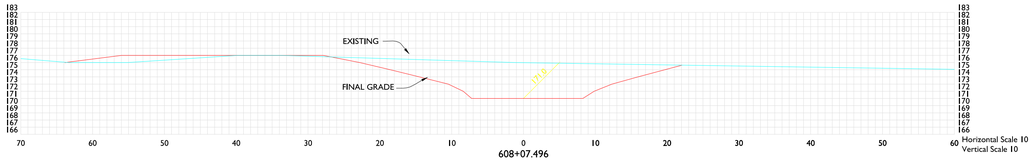


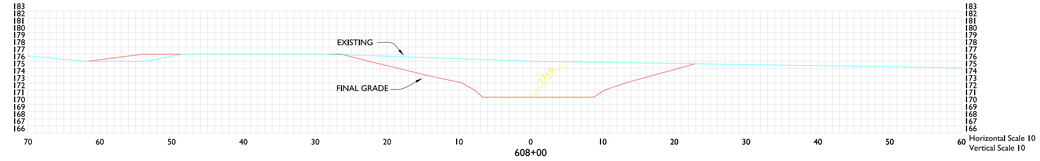
609+00



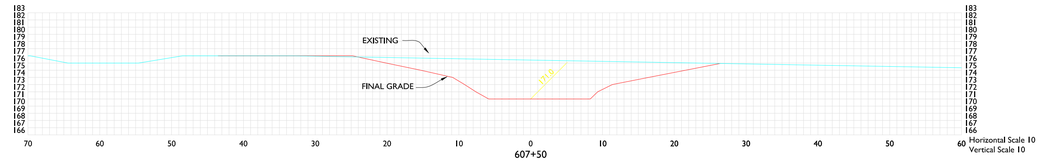
608+50



608+07.496



608+00



607+50

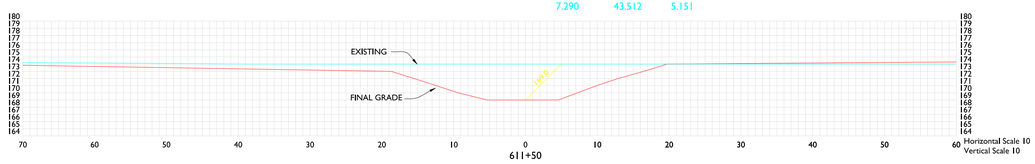
Calculate Section Volumes Fri Jul 23 21:39:16 2010

Processing 609+52.698 to 611+50.000
Total Cut : 34030.503 C.F., 1260.389 C.Y.
Total Fill: 1092.987 C.F., 40.481 C.Y.

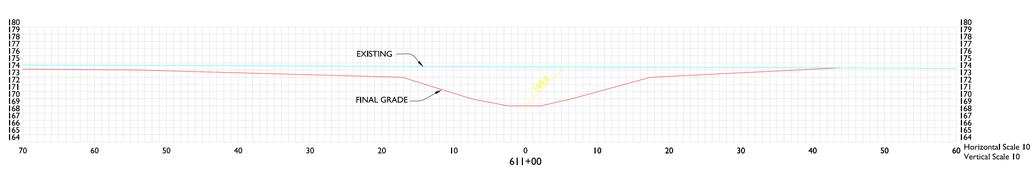
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
609+52.698	152.850	0.000			
			47.302	271.322	0.000
610+00.000	156.891	0.000			
			48.102	275.215	0.000
610+48.102	152.069	0.000			
			1.898	10.664	0.000
610+50.000	151.340	0.000			
			50.000	325.678	0.000
611+00.000	200.392	0.000			
			50.000	333.998	35.330
611+50.000	160.326	38.156			
			7.290	43.512	5.151

0' 10' 20' 30'

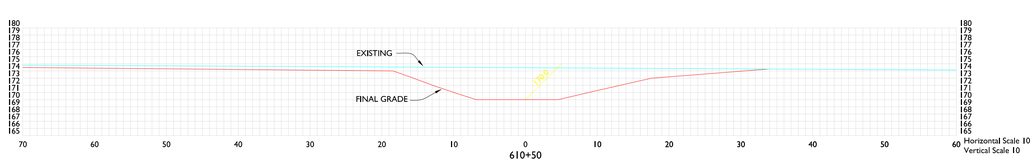
SCALE: 1" = 10'



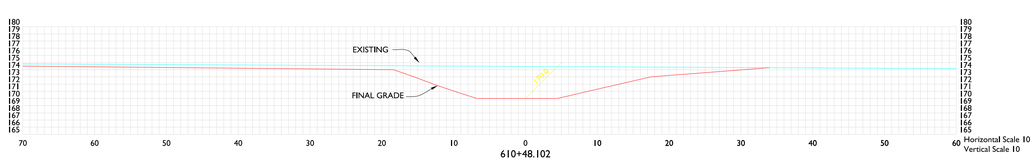
611+50



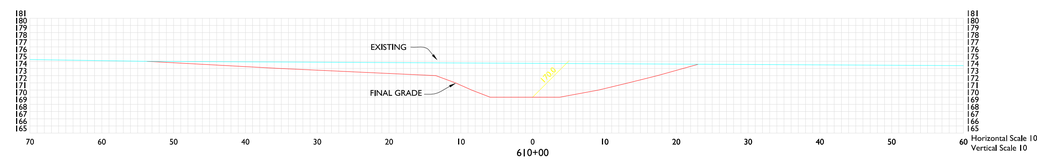
611+00



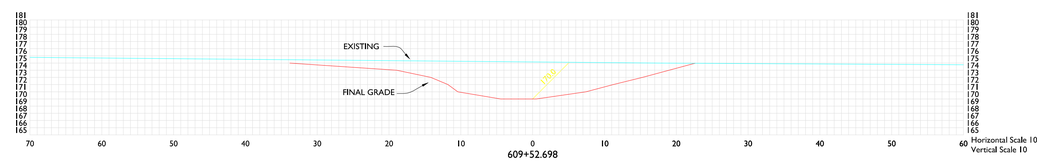
610+50



610+48.102



610+00



609+52.698

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 3 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985 www.smweng.com

SMW ENGINEERING GROUP, INC.

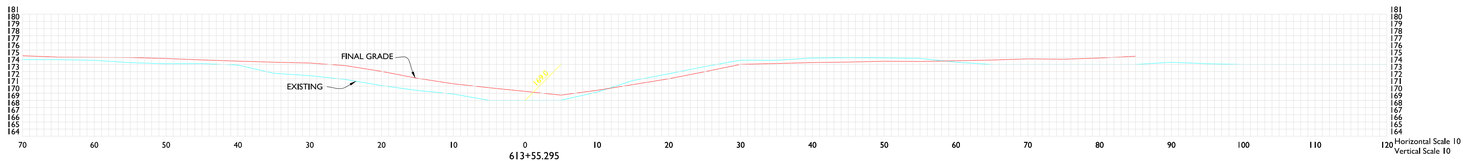
Calculate Section Volumes Fri Jul 23 21:39:16 2010

Processing 611+57.27 to 613+55.295
Total Cut : 28253.637 C.F., 1046.431 C.Y.
Total Fill: 6865.992 C.F., 254.296 C.Y.

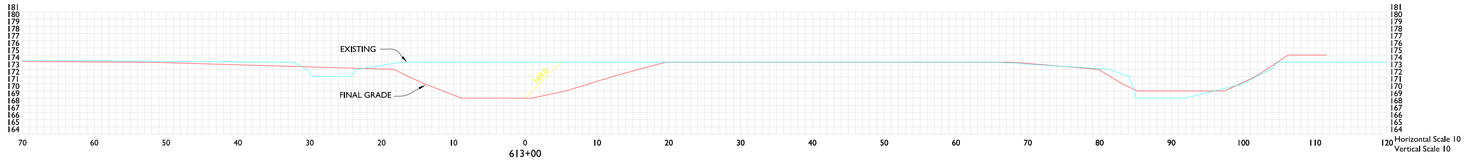
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
611+57.290	161.988	0.000			
			42.710	312.830	2.873
612+00.000	233.537	3.632			
			50.000	340.676	12.451
612+50.000	134.393	9.815			
			46.710	239.371	36.822
612+96.710	142.336	32.754			
			3.290	17.425	4.020
613+00.000	143.672	33.226			
			50.000	133.236	170.885
613+50.000	0.223	151.330			
			5.295	2.893	27.245
613+55.295	29.283	126.524			

0' 10' 20' 30'

SCALE: 1" = 10'

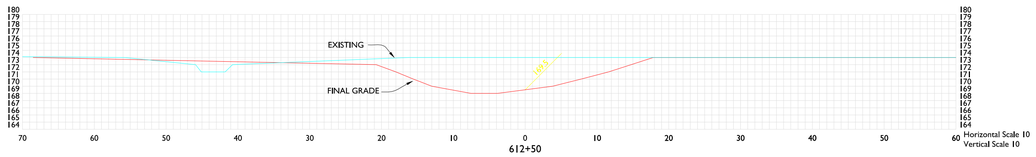


613+55.295

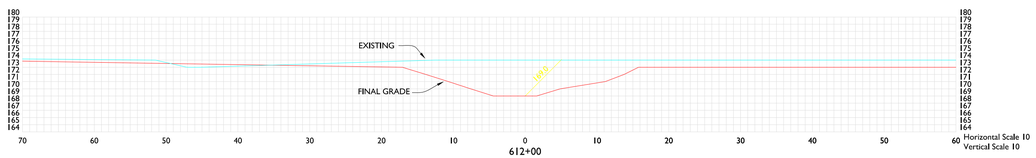


613+00

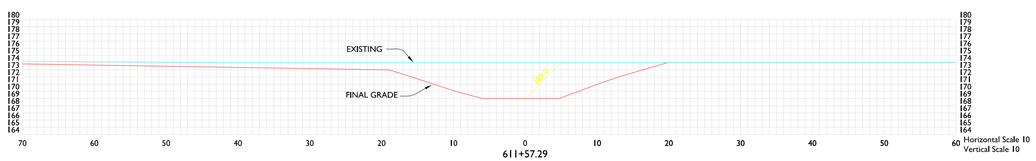
612+96.71



612+50



612+00



611+57.29

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 4 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

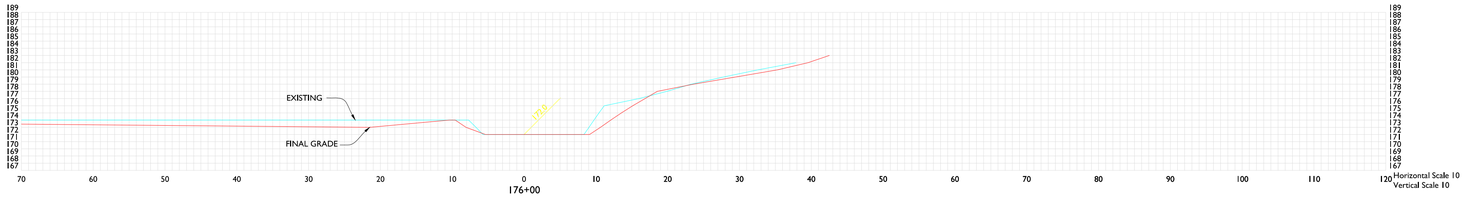
Calculate Section Volumes Fri Jul 23 21:38:41 2010

Processing 175+25.000 to 176+00.000
Total Cut : 4528.872 C.F., 167.736 C.Y.
Total Fill: 5882.193 C.F., 217.859 C.Y.

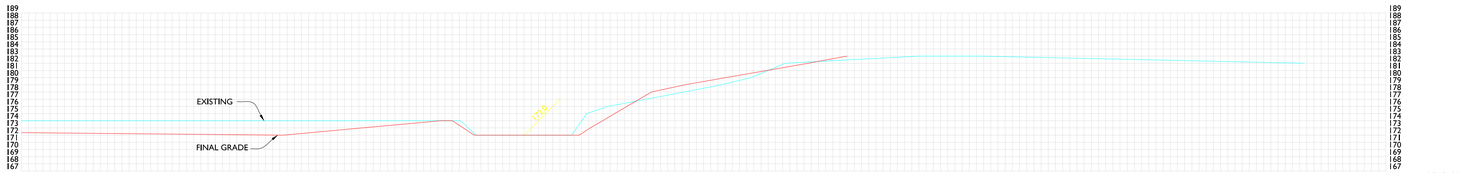
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
175+25.000	0.000	0.000			
			12.012	5.353	26.687
175+37.012	24.062	119.973			
			12.988	11.440	63.163
175+50.000	23.500	142.640			
			32.559	76.537	110.335
175+82.559	103.439	40.354			
			17.441	53.979	13.360
176+00.000	63.690	1.009			
			8.964	20.427	4.314

0' 10' 20' 30'

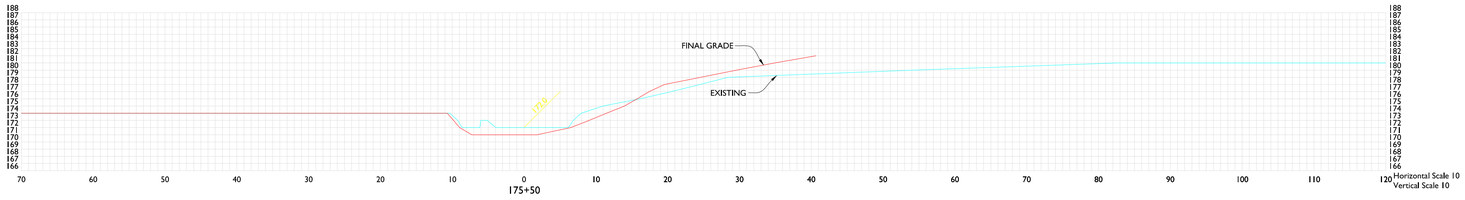
SCALE: 1" = 10'



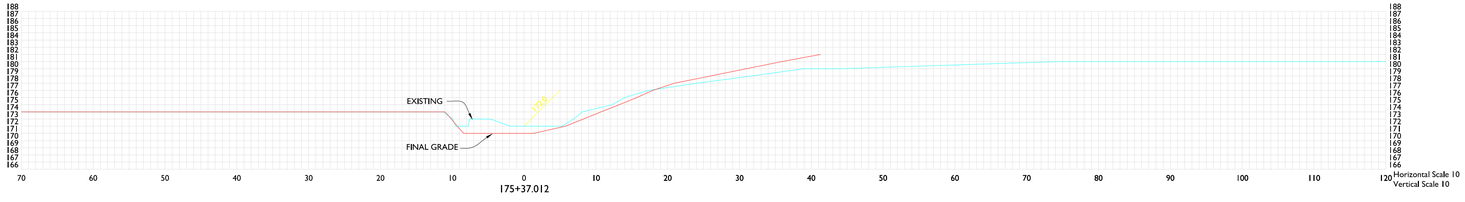
176+00



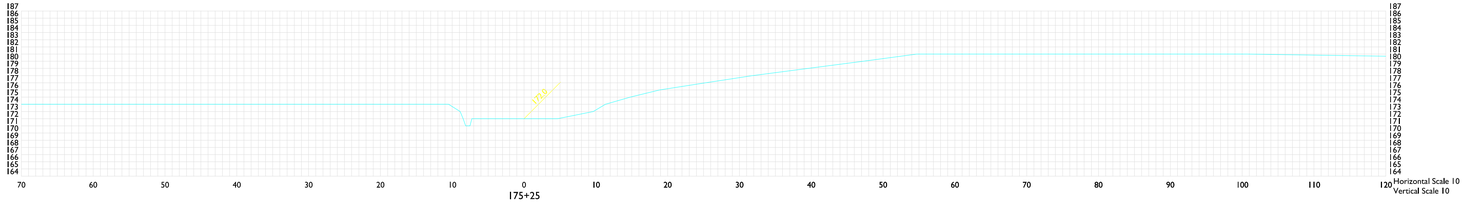
175+82.559



175+50



175+37.012



175+25

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 5 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

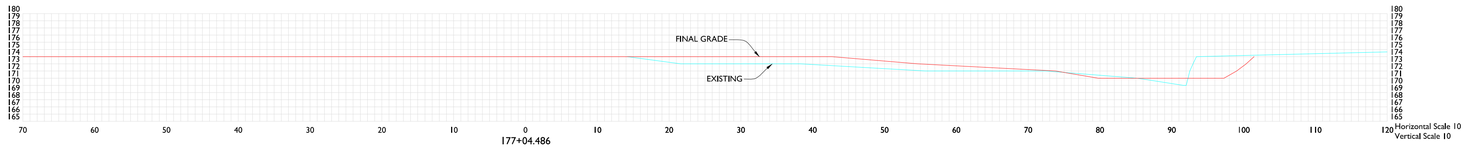
0' 10' 20' 30'

SCALE: 1" = 10'

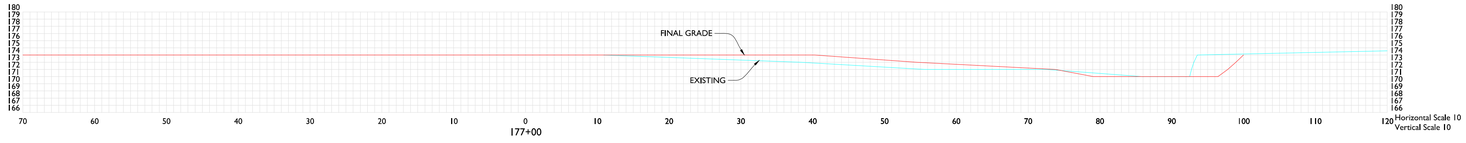
Calculate Section Volumes Fri Jul 23 21:38:41 2010

Processing 176+08.964 to 177+04.486
Total Cut: : 7804.728 C.F., 289.064 C.Y.
Total Fill: 3808.458 C.F., 141.054 C.Y.

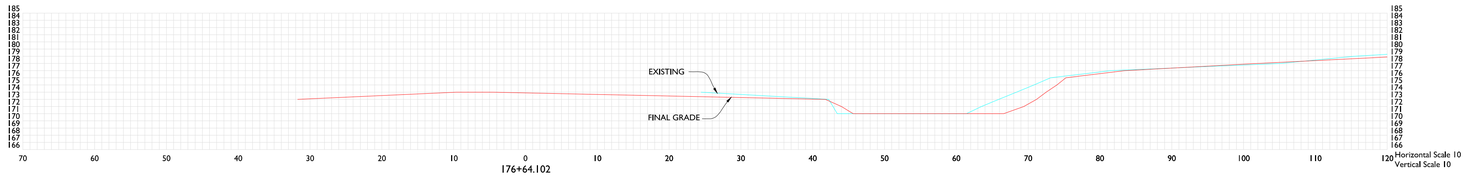
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
176+08.964	59.364	24.980			
			41.036	123.182	26.689
176+50.000	102.732	10.141			
			14.102	40.742	3.580
176+64.102	53.281	3.566			
			35.898	48.329	28.950
177+00.000	19.418	39.982			
			4.486	3.562	7.626
177+04.486	23.461	51.817			
			45.514	73.249	74.209



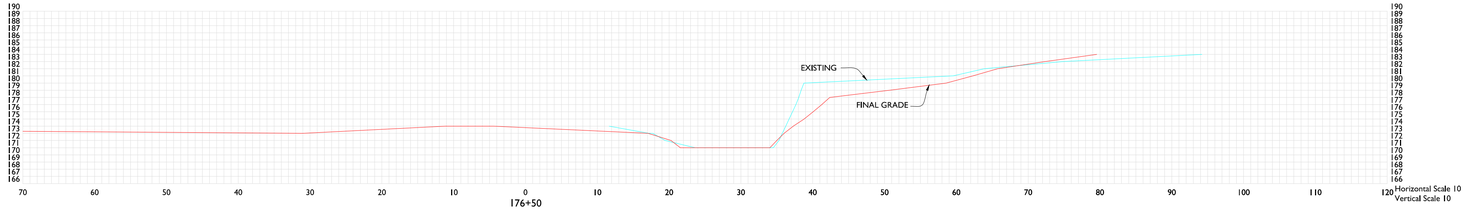
177+04.486



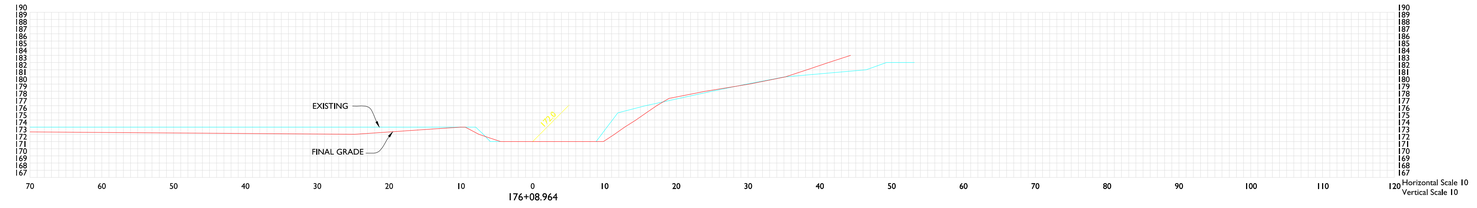
177+00



176+64.102



176+50



176+08.964

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 6 OF 25

CROSS SECTIONS

FOR:
THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

SCALE: 1" = 10'

Calculate Section Volumes Fri Jul 23 21:38:41 2010

Processing 177+50.000 to 178+06.937
Total Cut : 1828.251 C.F., 67.713 C.Y.
Total Fill: 4133.646 C.F., 153.098 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
177+50.000	63.445	36.229			
			7.600	13.442	14.933
177+57.600	32.061	69.872			
			0.976	1.086	2.448
177+58.576	28.017	65.544			
			39.615	30.192	66.893
177+98.191	13.138	25.640			
			1.809	1.075	1.785
178+00.000	18.946	27.658			
			6.937	9.009	26.704
178+06.937	51.186	180.214			
			7.123	8.909	40.335

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 7 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

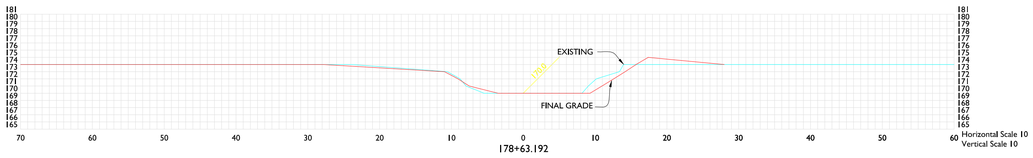
Calculate Section Volumes Fri Jul 23 21:38:41 2010

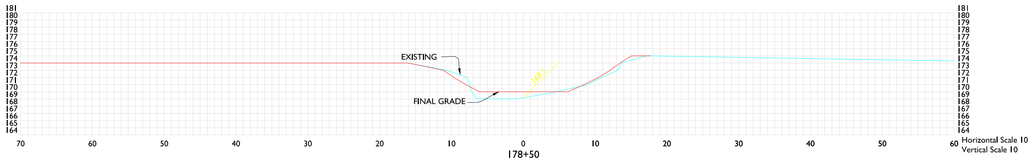
Processing 178+14.060 to 178+63.192
Total Cut : 627.885 C.F., 23.255 C.Y.
Total Fill: 4988.034 C.F., 184.742 C.Y.

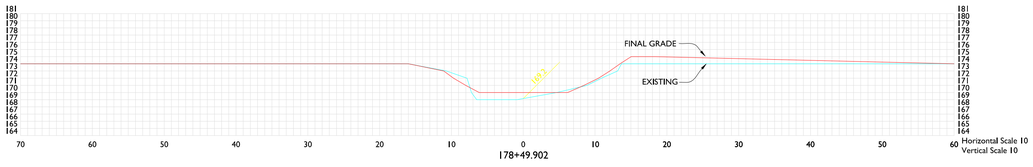
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
178+14.060	16.351	125.566			
			6.943	3.156	31.383
178+21.003	8.194	118.522			
			7.682	3.703	19.457
178+28.685	17.839	18.251			
			21.217	8.261	53.031
178+49.902	3.186	116.720			
			0.098	0.012	0.366
178+50.000	3.222	84.900			
			13.192	3.026	46.337
178+63.192	9.166	104.774			
			9.207	5.097	34.168

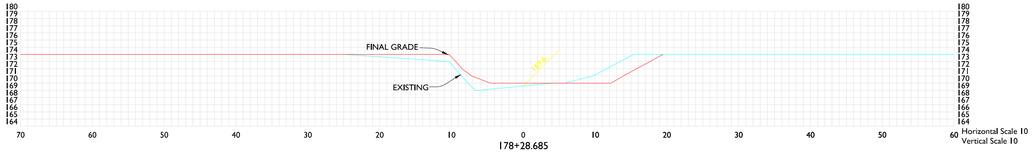
0' 10' 20' 30'

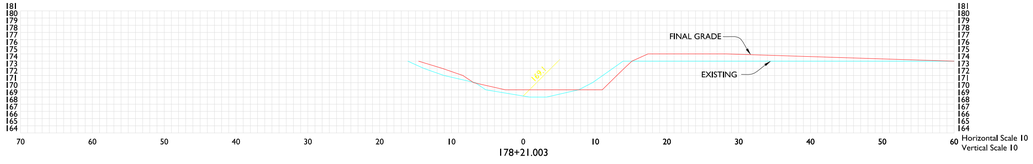
SCALE: 1" = 10'

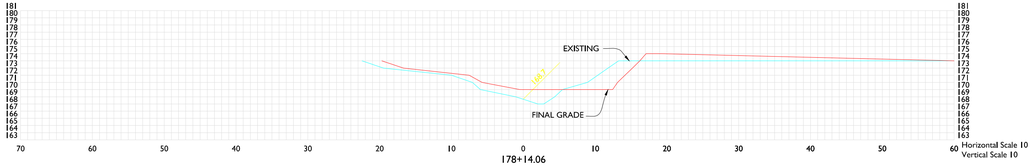












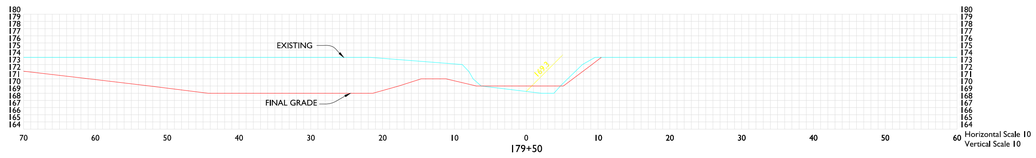
Calculate Section Volumes Fri Jul 23 21:38:41 2010

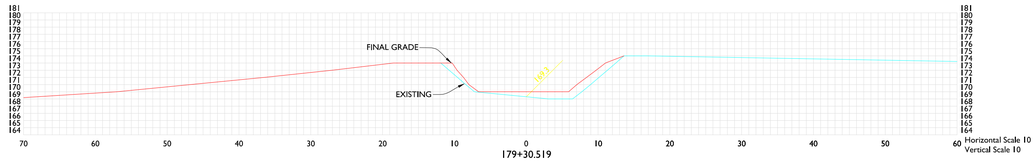
Processing 178+72.399 to 179+50.000
Total Cut : 5896.017 C.F., 218.371 C.Y.
Total Fill: 4405.779 C.F., 163.177 C.Y.

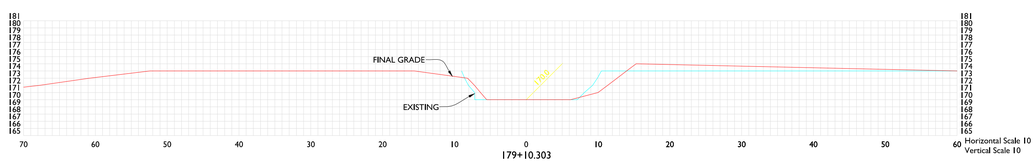
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
178+72.399	20.729	95.627			
			7.513	8.774	26.471
178+79.912	42.336	94.633			
			20.088	25.187	37.117
179+00.000	25.371	5.143			
			10.303	10.684	21.629
179+10.303	30.628	108.216			
			20.216	23.351	47.799
179+30.519	31.746	19.463			
			19.481	101.221	9.325
179+50.000	248.832	6.385			
			10.579	49.154	20.836

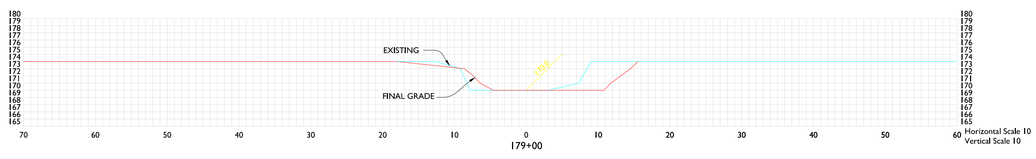
0' 10' 20' 30'

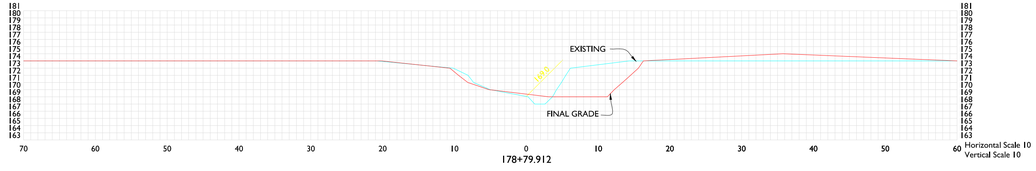
SCALE: 1" = 10'

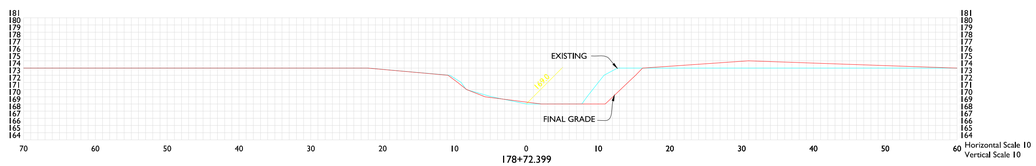












NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 8 OF 25

CROSS SECTIONS

FOR:

THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

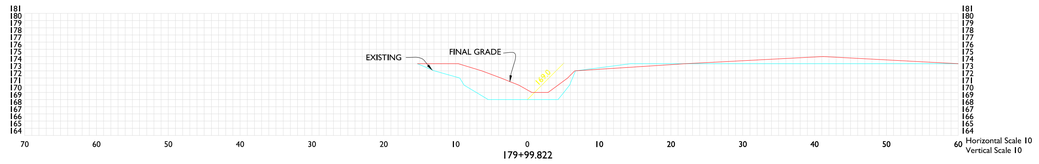
0' 10' 20' 30'

SCALE: 1" = 10'

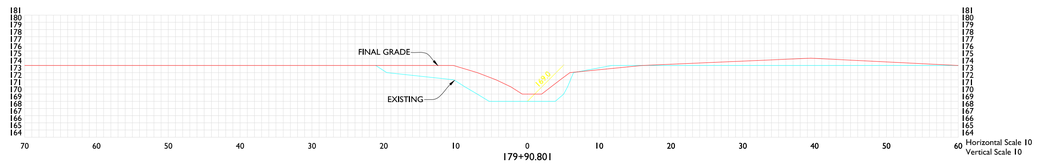
Calculate Section Volumes Fri Jul 23 21:38:41 2010

Processing 179+60.579 to 179+99.822
Total Cut : 20663.090 C.F., 765.300 C.Y.
Total Fill: 27027.565 C.F., 1001.021 C.Y.

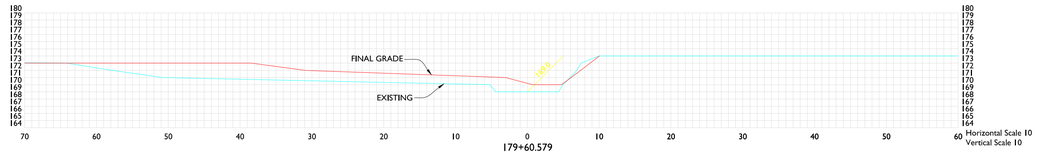
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
179+60.579	2.070	99.974			
			30.222	2.219	110.589
179+90.801	1.895	97.624			
			9.021	0.943	30.501
179+99.822	3.749	84.956			



179+99.822



179+90.801



179+60.579

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 9 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

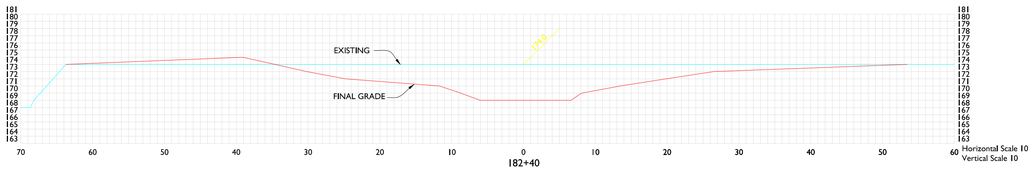
SMW ENGINEERING GROUP, INC.

Calculate Section Volumes Fri Jul 23 21:37:54 2010

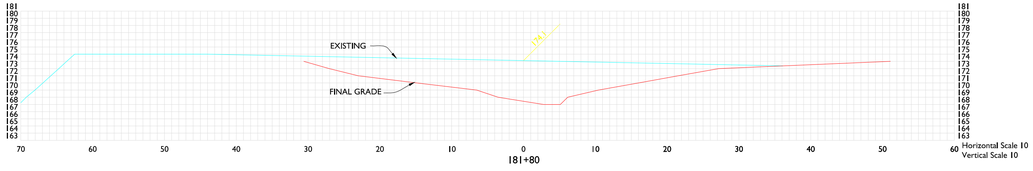
Processing 180+62.000 to 182+40.000
Total Cut : 40563.585 C.F., 1502.355 C.Y.
Total Fill: 9384.039 C.F., 347.557 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
180+62.000	32.691	97.631			
			58.000	210.161	139.138
181+20.000	162.976	31.911			
			37.996	241.359	22.454
181+57.996	180.043	0.000			
			13.510	95.322	0.000
181+71.506	200.961	0.000			
			8.494	62.779	0.000
181+80.000	198.153	0.000			
			60.000	435.376	61.097
182+40.000	193.686	54.988			
			60.000	457.358	124.868

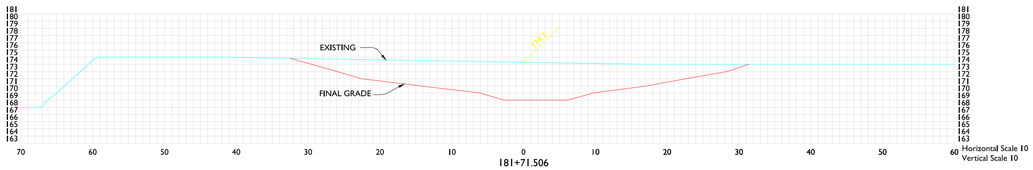
0' 10' 20' 30'
SCALE: 1" = 10'



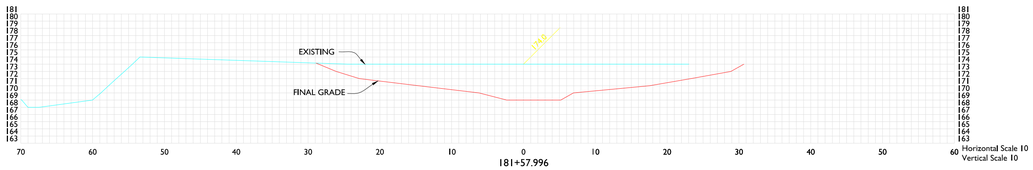
182+40



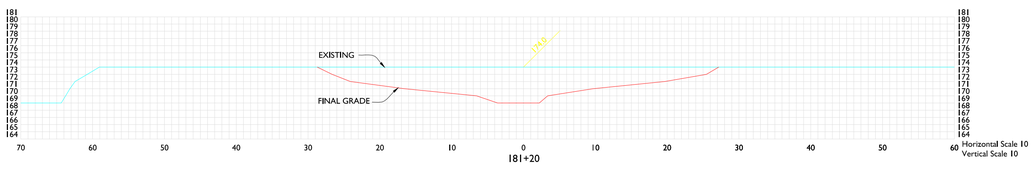
181+80



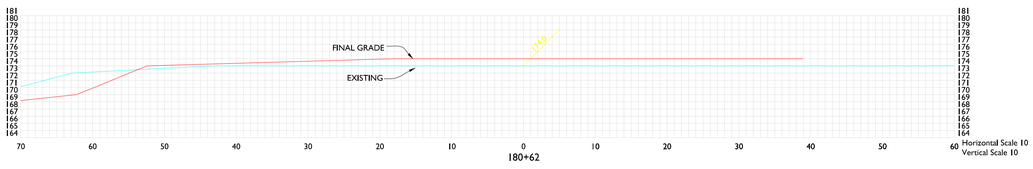
181+71.506



181+57.996



181+20



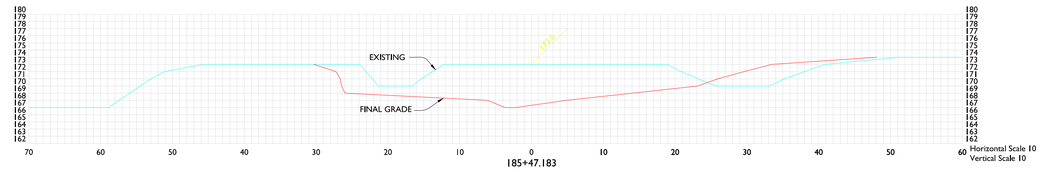
180+62

Calculate Section Volumes Fri Jul 23 21:37:54 2010

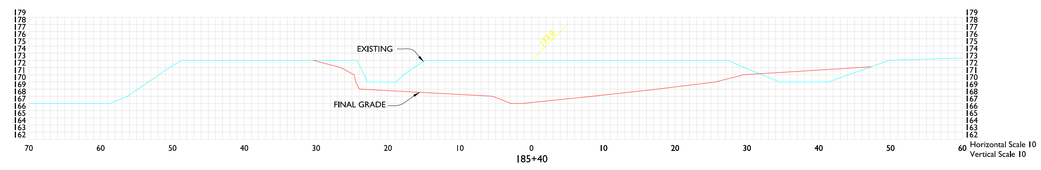
Processing 183+00.000 to 185+47.183
Total Cut : 65565.990 C.F., 2428.370 C.Y.
Total Fill: 4408.641 C.F., 163.283 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
183+00.000	217.937	57.394			
			60.000	502.705	63.771
183+60.000	234.498	0.000			
			60.000	474.017	0.746
184+20.000	192.118	0.671			
			60.000	443.656	22.092
184+80.000	207.173	19.211			
			60.000	482.674	40.679
185+40.000	227.234	17.400			
			7.183	56.873	6.451
185+47.183	200.323	31.098			
			49.334	468.445	29.544

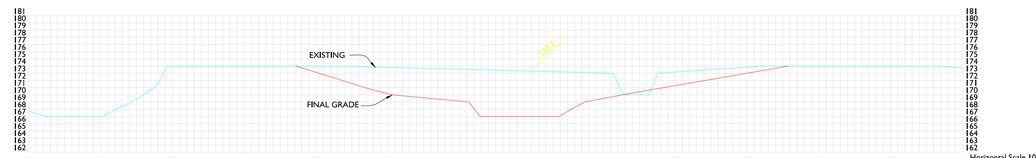
0' 10' 20' 30'
SCALE: 1" = 10'



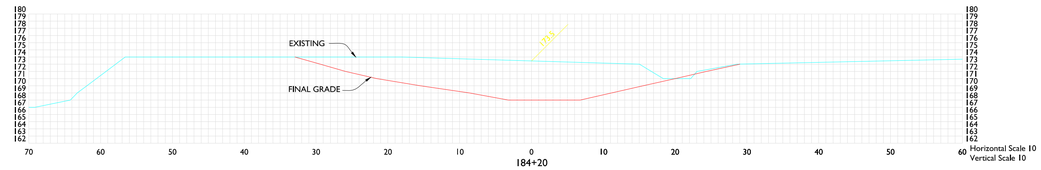
185+47.183



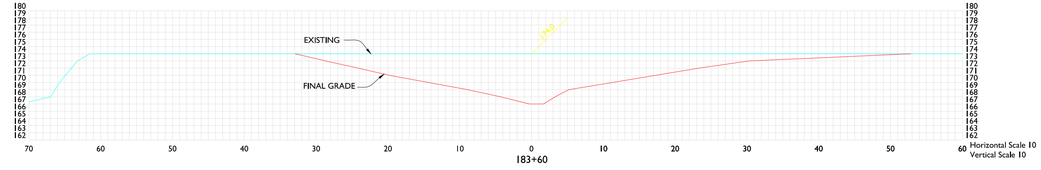
185+40



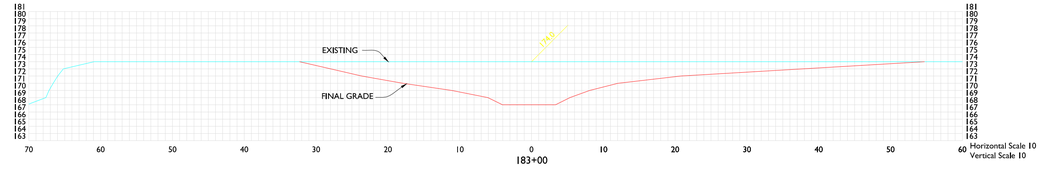
184+80



184+20



183+60



183+00

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 10 OF 25

CROSS SECTIONS

FOR:
THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

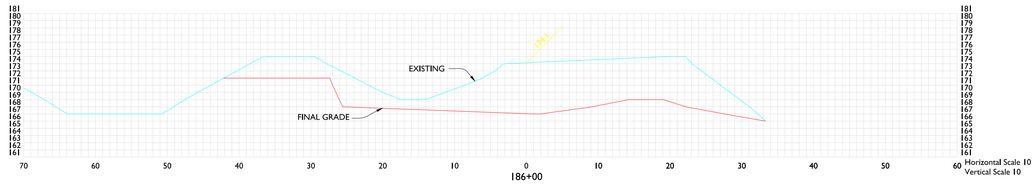
0' 10' 20' 30'

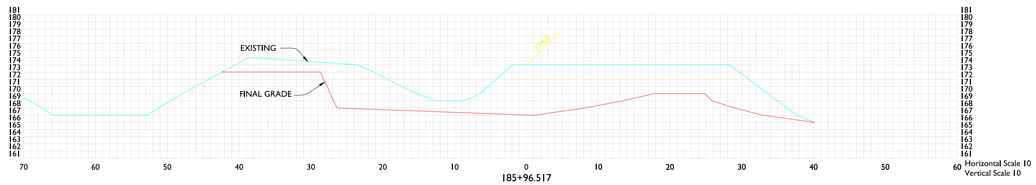
SCALE: 1" = 10'

Calculate Section Volumes Fri Jul 23 21:37:54 2010

Processing 185+96.517 to 186+00.000
Total Cut: 1029.294 C.F., 38.122 C.Y.
Total Fill: 3.078 C.F., 0.114 C.Y.

Station	Cut(sf)	Fill(sf)	Interval Cut(cy)	Fill(cy)
185+96.517	312.428	1.240		
		3.483	38.122	0.114
186+00.000	278.616	0.524		





NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 11 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

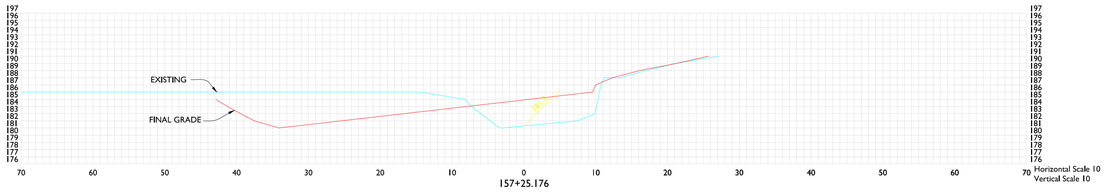
0' 10' 20' 30'

SCALE: 1" = 10'

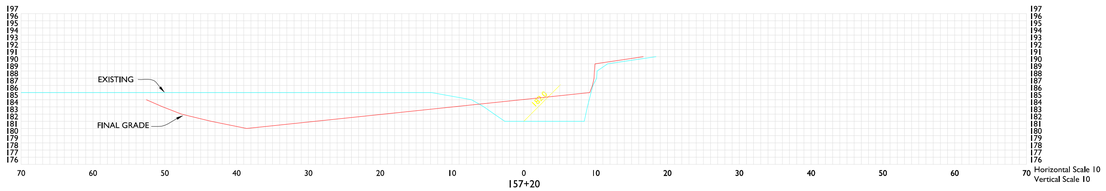
Calculate Section Volumes Tue Jul 27 10:47:30 2010

Processing 157+00.000 to 158+50.000
Total Cut : 38526.692 C.F., 1426.915 C.Y.
Total Fill: 1990.274 C.F., 73.714 C.Y.
Cut to Fill Ratio: 19.36

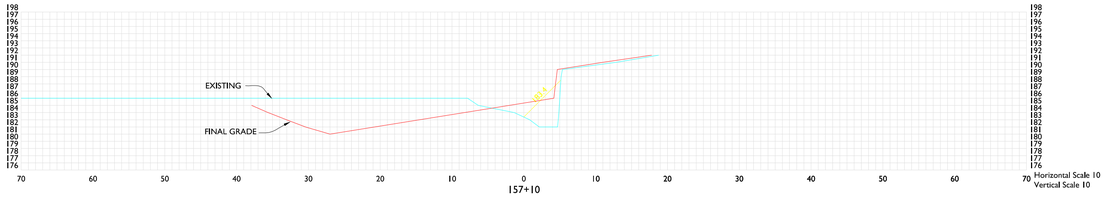
Station	Cut(sf)	Fill(sf)	Interval Cut(cy)	Fill(cy)
157+00.000	0.072	16.395		
			2.139	3.169	0.914
157+02.139	79.936	6.688		
			7.861	26.690	4.723
157+10.000	103.404	25.755		
			10.000	46.831	13.453
157+20.000	149.485	46.892		
			5.176	25.631	10.138
157+25.176	117.917	58.876		
			4.824	23.095	10.272



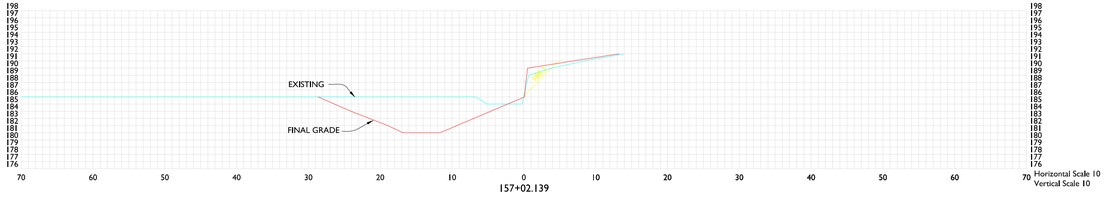
157+25.176



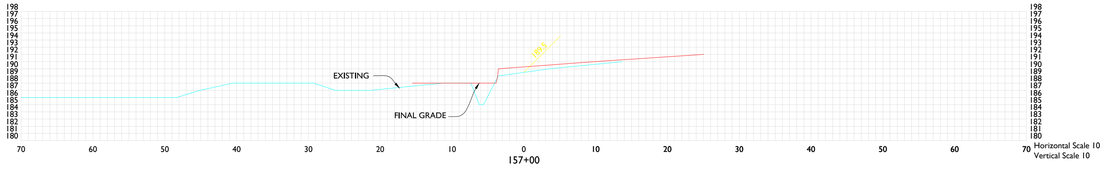
157+20



157+10



157+02.139



157+00

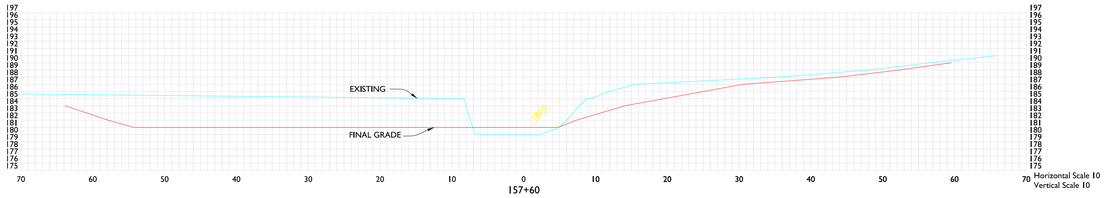
0' 10' 20' 30'

SCALE: 1" = 10'

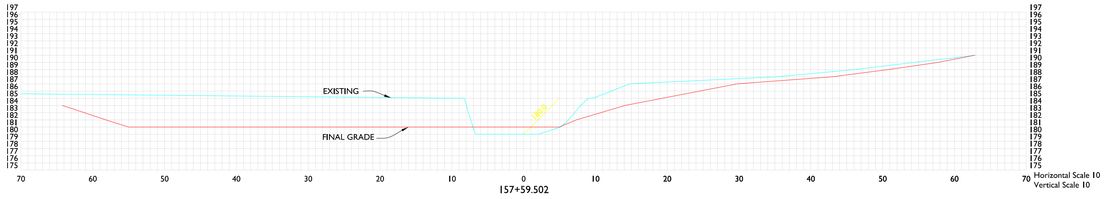
Calculate Section Volumes Tue Jul 27 10:47:30 2010

Processing 157+00.000 to 158+50.000
Total Cut : 38526.692 C.F., 1426.915 C.Y.
Total Fill: 1990.274 C.F., 73.714 C.Y.
Cut to Fill Ratio: 19.36

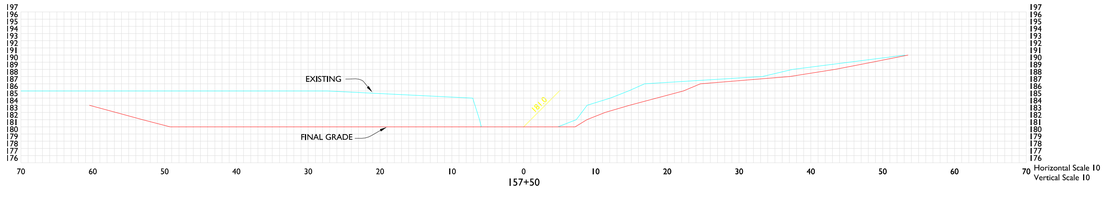
Station	Cut(sf)	Fill(sf)	Interval Cut(cy)	Fill(cy)
157+30.000	140.605	56.108		
			10.000	72.122	10.390
157+40.000	248.853	0.000		
			10.000	99.669	0.000
157+50.000	289.358	0.000		
			9.502	102.350	1.855
157+59.502	292.296	10.541		
			0.498	5.384	0.194
157+60.000	291.517	10.537		
			10.000	113.393	3.869



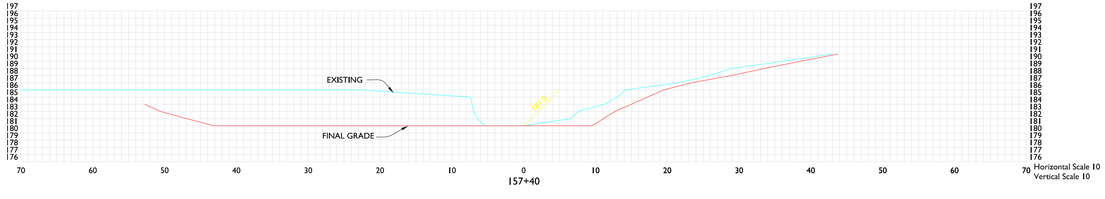
157+60



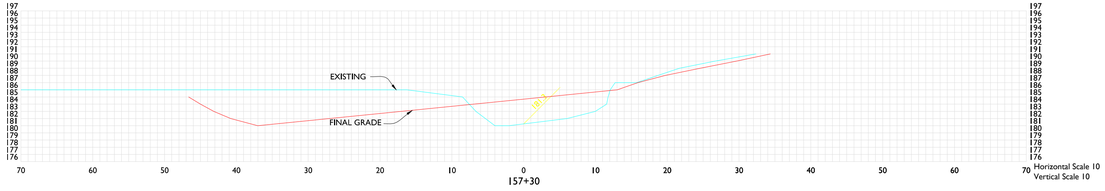
157+59.502



157+50



157+40



157+30

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN

SHEET 12 OF 25

CROSS SECTIONS

FOR:

THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

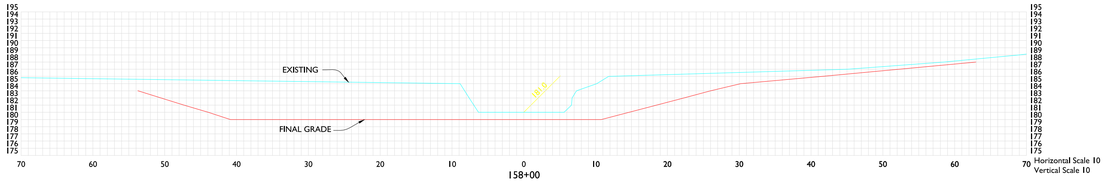
Calculate Section Volumes Tue Jul 27 10:47:30 2010

0' 10' 20' 30'

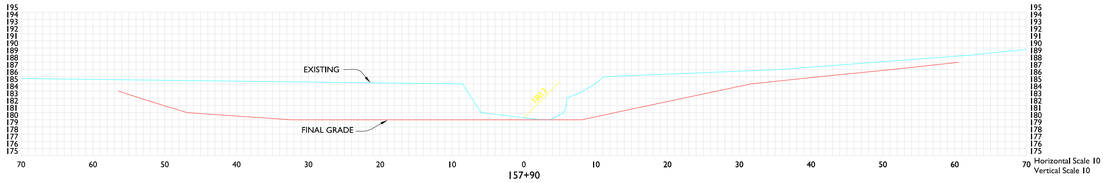
SCALE: 1" = 10'

Processing 157+00.000 to 158+50.000
Total Cut : 38526.692 C.F., 1426.915 C.Y.
Total Fill: 1990.274 C.F., 73.714 C.Y.
Cut to Fill Ratio: 19.36

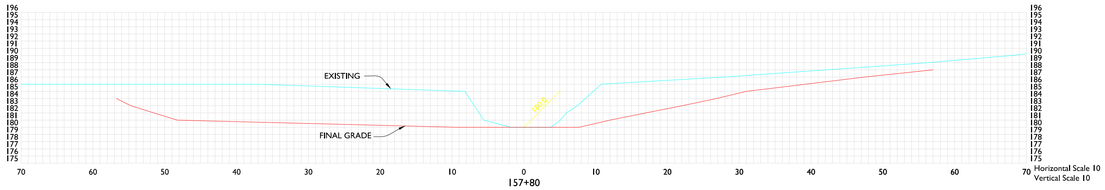
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
157+70.304	323.512	9.507			
		9.696	127.119	1.707	
157+80.000	384.451	0.000			
		10.000	139.404	0.000	
157+90.000	368.328	0.000			
		10.000	132.942	0.000	
158+00.000	349.558	0.000			
		10.000	114.762	0.742	



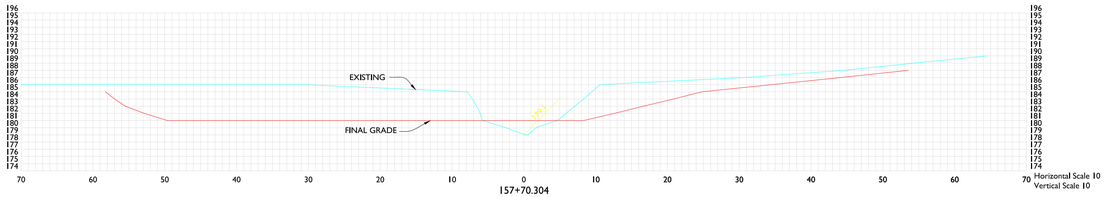
158+00



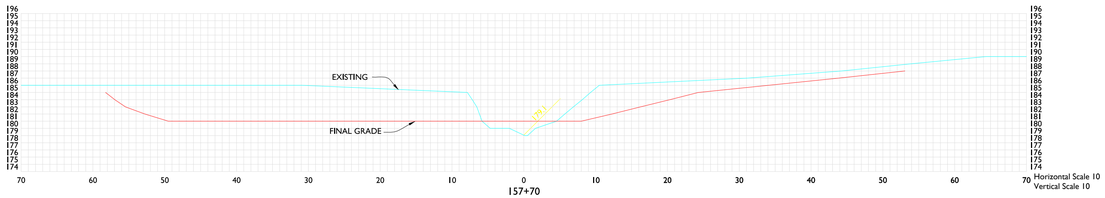
157+90



157+80



157+70.304



157+70

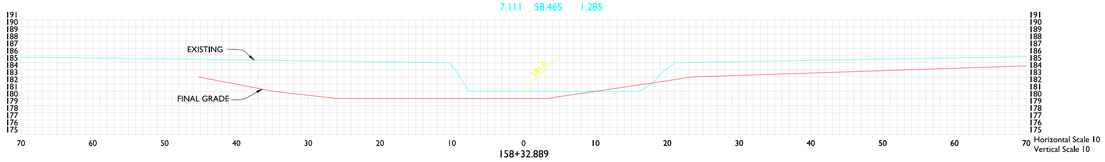
Calculate Section Volumes Tue Jul 27 10:47:30 2010

0' 10' 20' 30'

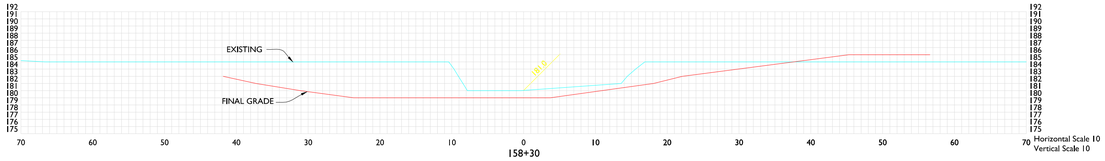
SCALE: 1" = 10'

Processing 157+00.000 to 158+50.000
Total Cut : 38526.692 C.F., 1426.915 C.Y.
Total Fill: 1990.274 C.F., 73.714 C.Y.
Cut to Fill Ratio: 19.36

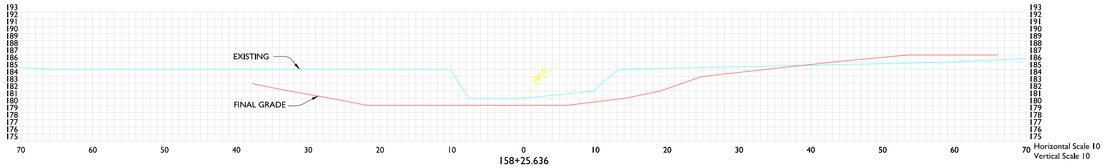
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
158+10.000	270.158	4.004			
		10.000	93.453	3.584	
158+20.000	234.490	15.351			
		5.636	44.893	3.730	
158+25.636	195.642	20.385			
		4.364	31.823	2.874	
158+30.000	198.134	15.172			
		2.889	25.739	1.003	
158+32.889	282.965	3.574			
		7.111	58.465	1.285	



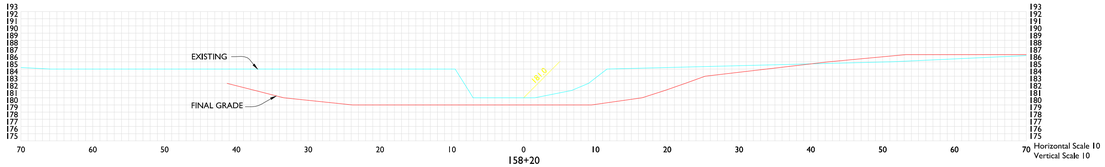
158+32.889



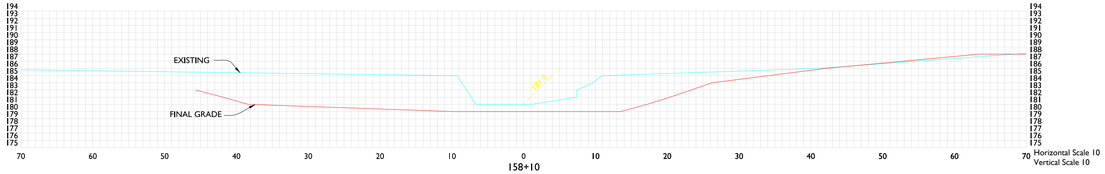
158+30



158+25.636



158+20



158+10

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 13 OF 25

CROSS SECTIONS

FOR:

THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

0' 10' 20' 30'

SCALE: 1" = 10'

Calculate Section Volumes Tue Jul 27 10:47:30 2010

Processing 157+00.000 to 158+50.000
Total Cut : 38526.692 C.F., 1426.915 C.Y.
Total Fill: 1990.274 C.F., 73.714 C.Y.
Cut to Fill Ratio: 19.36

Station	Cut(sf)	Fill(sf)	Interval Cut(cy)	Fill(cy)
158+40.000	161.014	6.186		
		3.301	50.459	0.693
158+43.301	664.435	5.153		
		6.699	85.895	2.176
158+50.000	27.954	12.389		

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 14 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

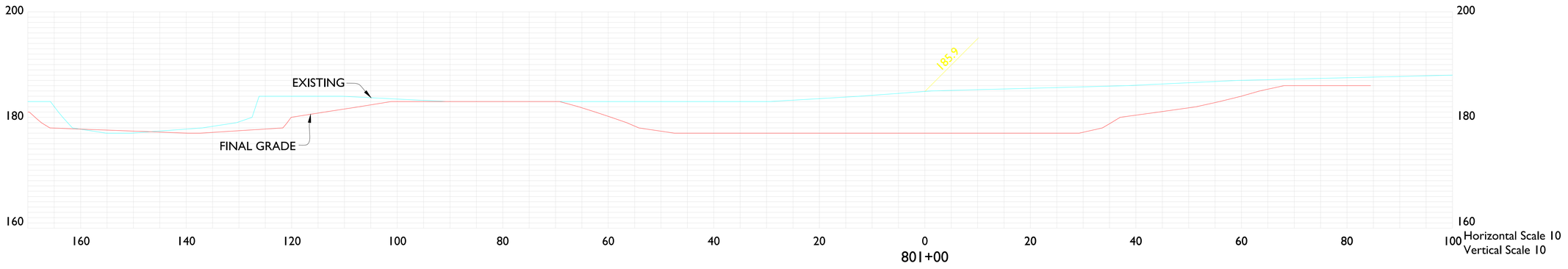
SMW ENGINEERING GROUP, INC.

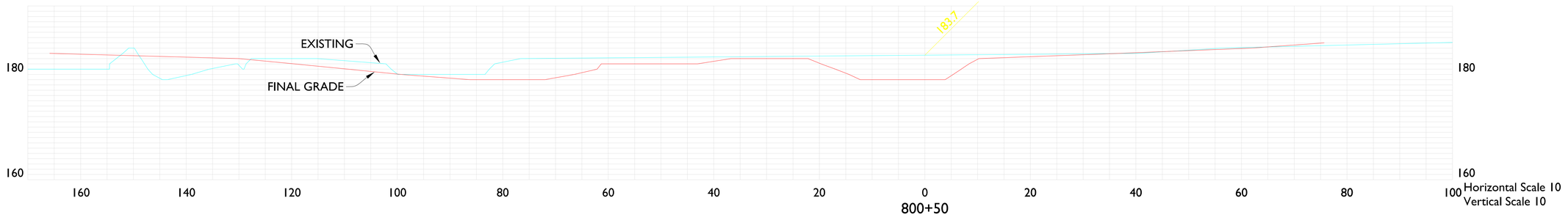
Calculate Section Volumes Tue Jul 27 12:40:05 2010

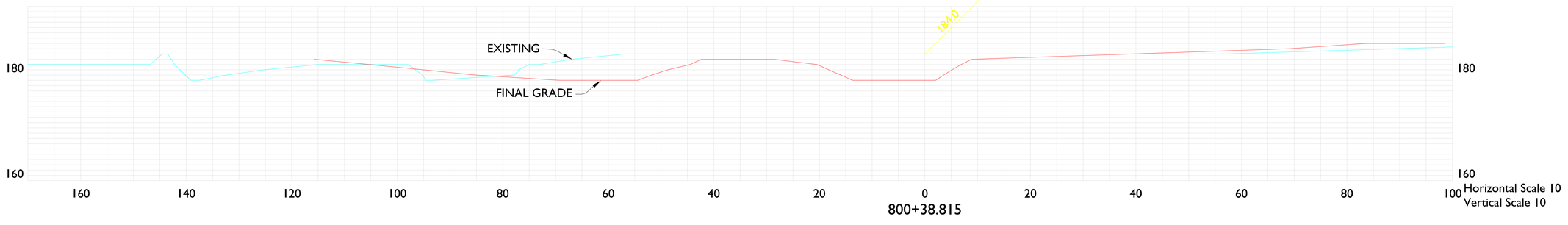
Processing 800+00.000 to 801+00.000
Total Cut : 47875.752 C.F., 1773.176 C.Y.
Total Fill: 10610.325 C.F., 392.975 C.Y.

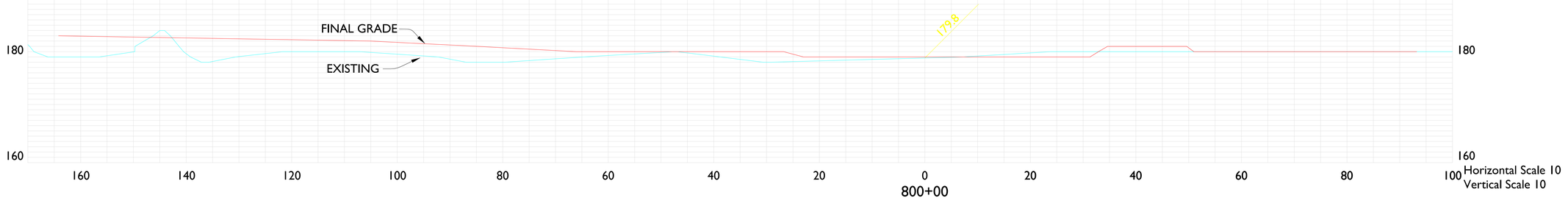
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
800+00.000	19.827	317.598			
			38.815	224.292	270.886
800+38.815	292.211	59.263			
			11.185	118.014	31.172
800+50.000	277.546	91.234			
			50.000	1155.962	88.705
801+00.000	970.893	4.568			
			7.562	274.908	2.212

0' 10' 20' 30'
SCALE: 1" = 10'









NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

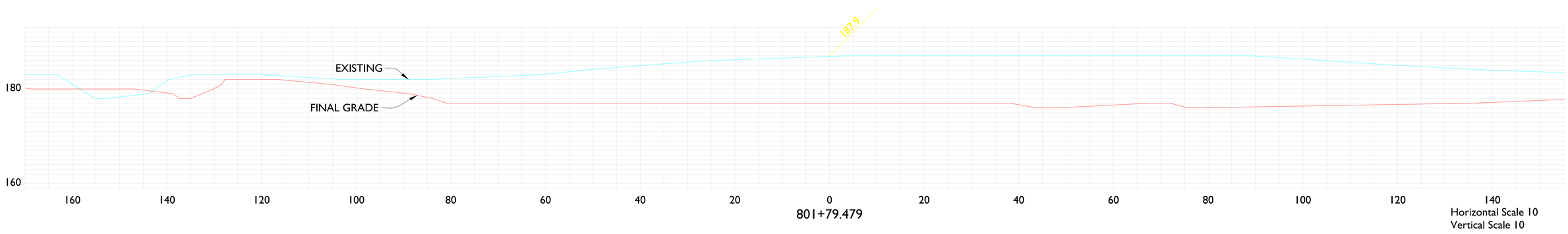
DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 15 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

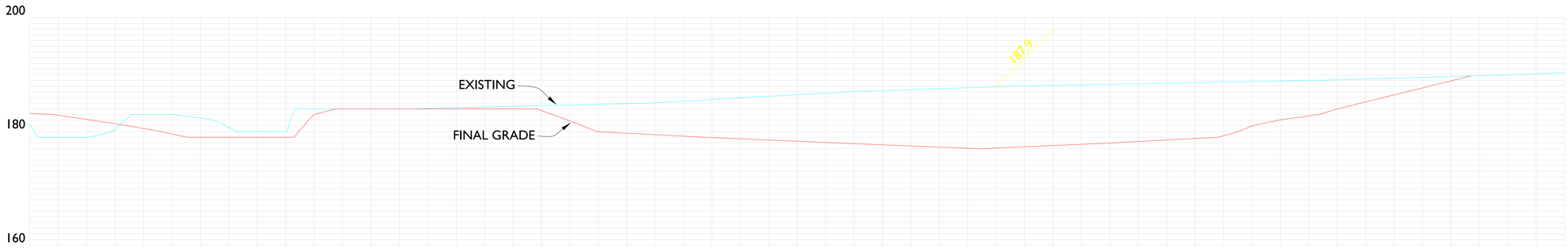
SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.



801+79.479

Horizontal Scale 10
Vertical Scale 10



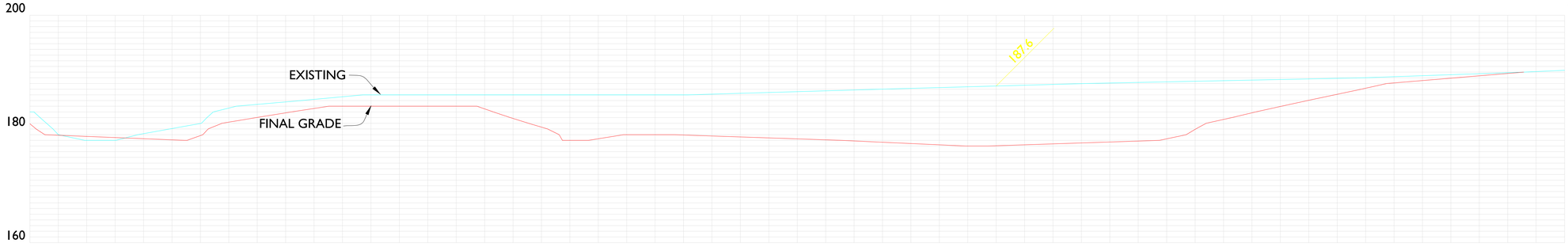
801+50

Horizontal Scale 10
Vertical Scale 10

160

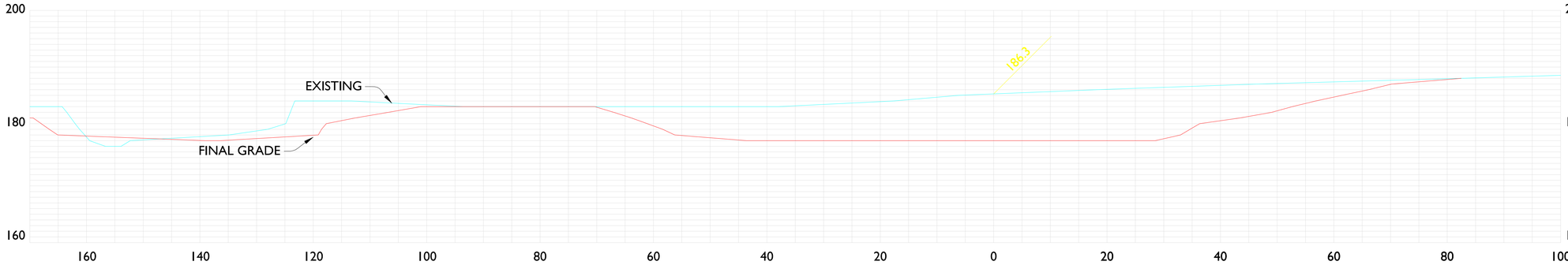
Horizontal Scale 10
Vertical Scale 10

801+79.479



801+37.044

Horizontal Scale 10
Vertical Scale 10



Calculate Section Volumes — Tue Jul 27 12:40:05 2010

Processing 801+07.562 to 801+79.479
Total Cut : 151008.300 C.F., 5592.900 C.Y.
Total Fill: 1822.608 C.F., 67.504 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
801+07.562	992.216	11.227			
			29.482	1283.346	8.945
801+37.044	1358.394	5.158			
			12.956	634.125	12.707
801+50.000	1284.609	47.805			
			29.479	1968.272	37.489
801+79.479	2320.896	20.869			
			20.521	1717.157	8.363

0' 10' 20' 30'

SCALE: 1" = 10'

Horizontal Scale 10
Vertical Scale 10

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN

SHEET 16 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

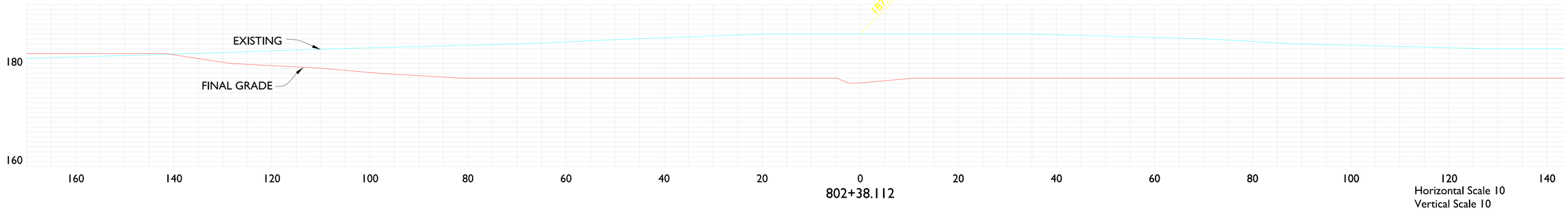
SMW ENGINEERING GROUP, INC.

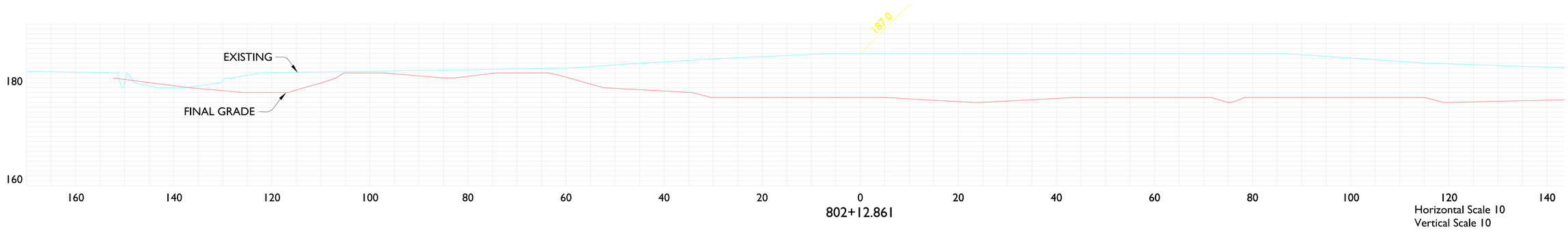
Calculate Section Volumes Tue Jul 27 12:40:05 2010

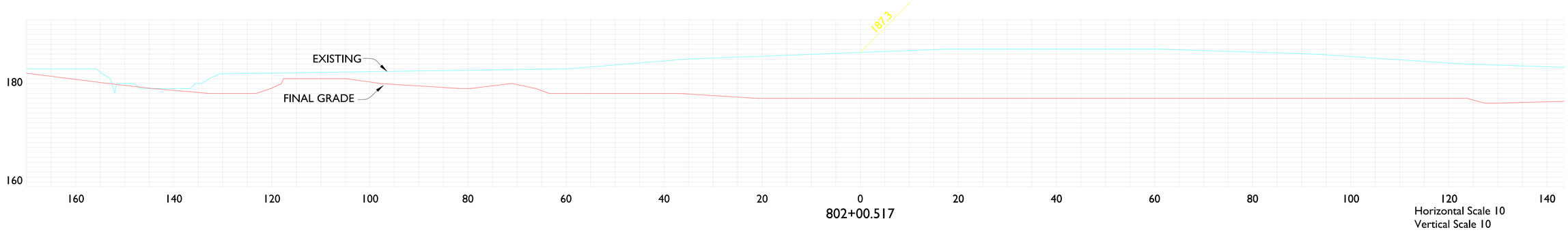
Processing 802+00.000 to 802+38.112
Total Cut : 103525.911 C.F., 3834.293 C.Y.
Total Fill: 440.559 C.F., 16.317 C.Y.

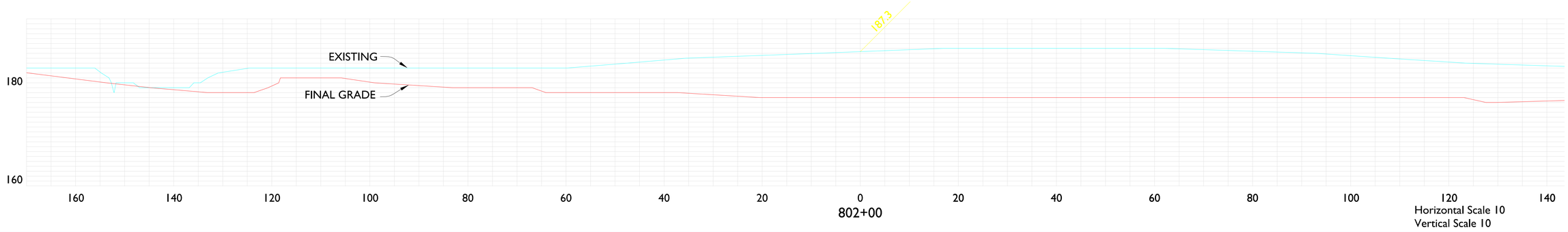
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
802+00.000	2197.718	1.137			
			0.517	41.646	0.023
802+00.517	2152.160	1.257			
			12.344	933.120	1.914
802+12.861	1929.862	7.116			
			25.251	1858.324	10.842
802+38.112	2044.218	16.070			
			11.888	1001.203	3.538

0' 10' 20' 30'
SCALE: 1" = 10'









NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 17 OF 25

CROSS SECTIONS

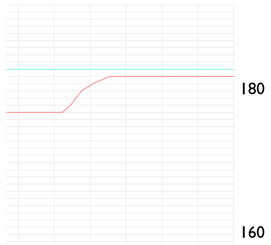
FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

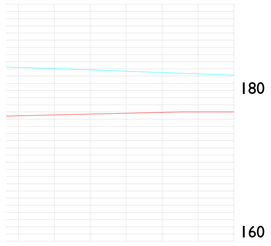
Calculate Section Volumes Tue Jul 27 12:40:05 2

Processing 802+00.000 to 802+38.112
Total Cut : 103525.911 C.F., 3834.293 C.Y.
Total Fill: 440.559 C.F., 16.317 C.Y.

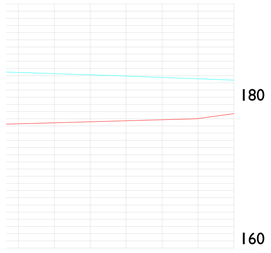
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill
802+00.000	2197.718	1.137			
			0.517	41.646	0.0
802+00.517	2152.160	1.257			
			12.344	933.120	1.9
802+12.861	1929.862	7.116			
			25.251	1858.324	10.3
802+38.112	2044.218	16.070			
			11.888	1001.203	3.5



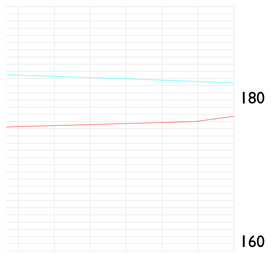
Horizontal Scale 10
Vertical Scale 10
802+38.112



Horizontal Scale 10
Vertical Scale 10
802+12.861



Horizontal Scale 10
Vertical Scale 10
802+00.517



Horizontal Scale 10
Vertical Scale 10
802+00

SCALE: 1" = 10'

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 18 OF 25

CROSS SECTIONS

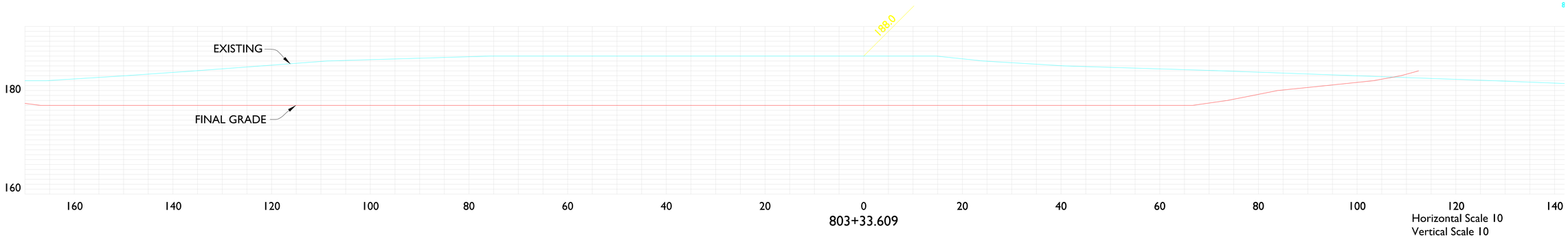
FOR: THOMPSON ENGINEERING

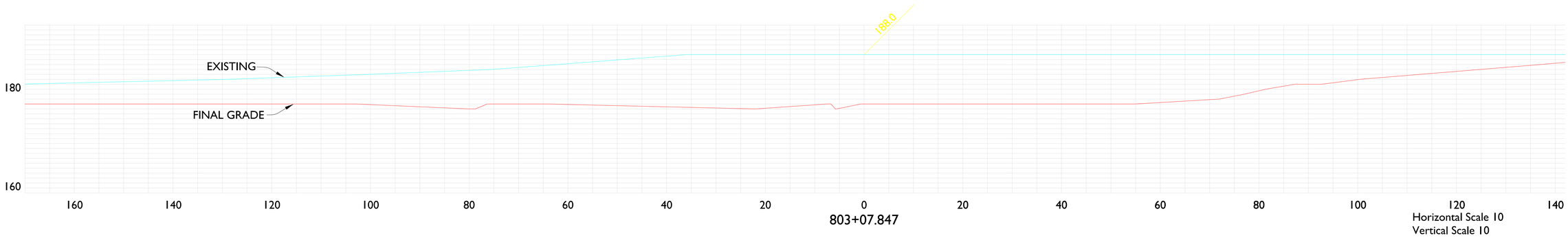
SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

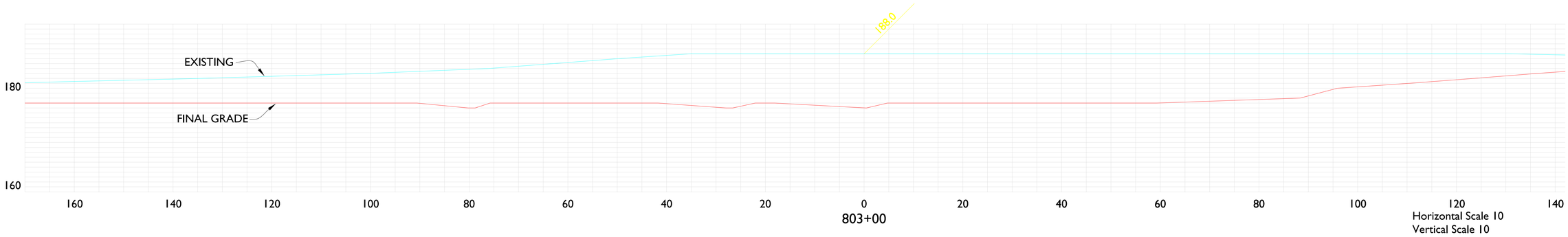
Processing 802+50.000 to 802+33.609
Total Cut : 238448.988 C.F., 8831.444 C.Y.
Total Fill: 123.012 C.F., 4.556 C.Y.

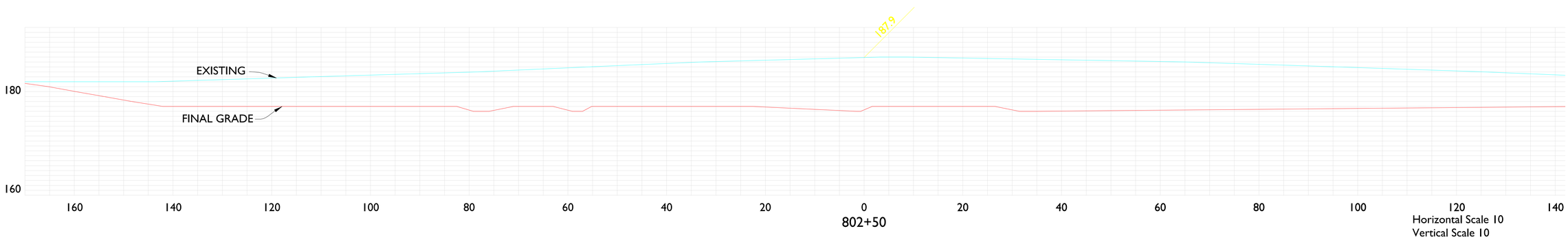
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
802+50.000	2503.643	0.000			
			50.000	4601.648	0.000
803+00.000	2466.137	0.000			
			7.847	693.885	0.000
803+07.847	2308.911	0.000			
			25.762	2151.166	1.658
803+33.609	2200.171	3.476			
			16.391	1384.745	2.898

0' 10' 20' 30'
SCALE: 1" = 10'









NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 19 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

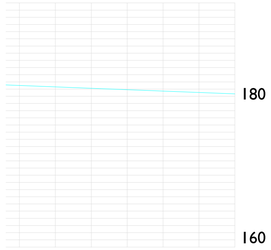
SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

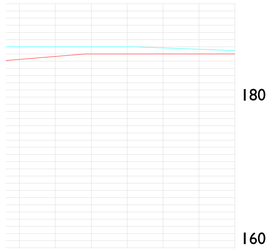
Calculate Section Volumes Tue Jul 27 12:40:05 2010

Processing 802+50.000 to 802+33.609
Total Cut : 238448.988 C.F., 8831.444 C.Y.
Total Fill: 123.012 C.F., 4.556 C.Y.

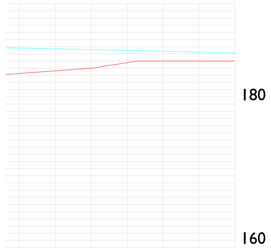
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
802+50.000	2503.643	0.000			
			50.000	4601.648	0.000
803+00.000	2466.137	0.000			
			7.847	693.885	0.000
803+07.847	2308.911	0.000			
			25.762	2151.166	1.658
803+33.609	2200.171	3.476			
			16.391	1384.745	2.898



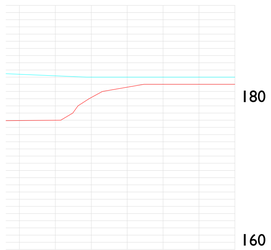
803+33.609



803+07.847



803+00



802+50

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 20 OF 25

CROSS SECTIONS

FOR:
THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

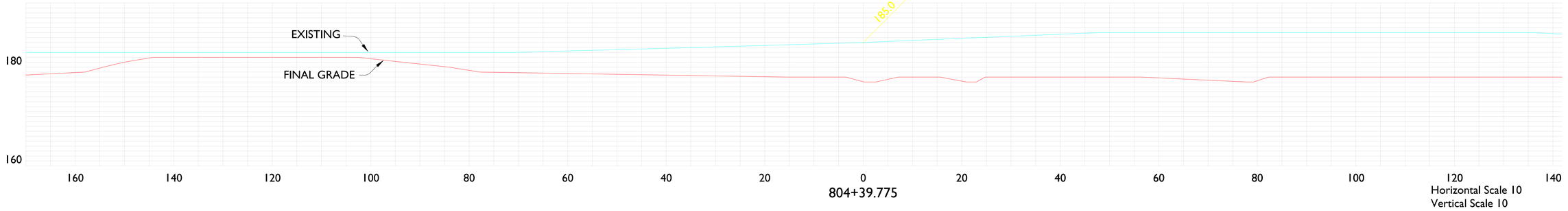
SMW ENGINEERING GROUP, INC.

Calculate Section Volumes Tue Jul 27 12:40:05 2010

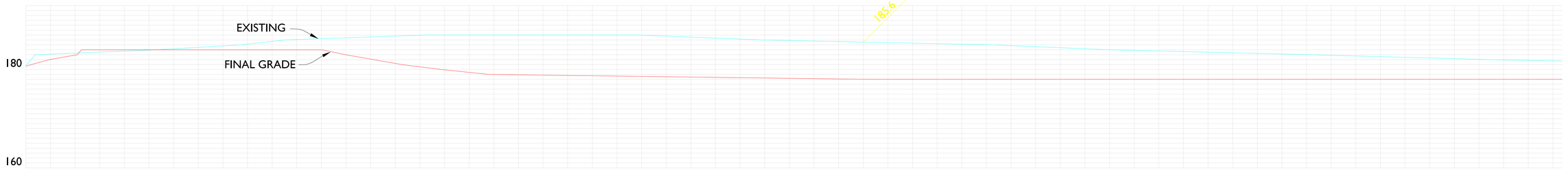
Processing 803+50.000 to 804+39.775
Total Cut : 194654.151 C.F., 7209.413 C.Y.
Total Fill: 569.511 C.F., 21.093 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
803+50.000	2361.859	6.071			
			50.000	3951.770	14.975
804+00.000	1906.052	10.102			
			13.515	910.602	3.748
804+13.515	1732.315	4.874			
			26.260	1860.013	2.370
804+39.775	2092.541	0.000			
			10.225	847.028	0.000

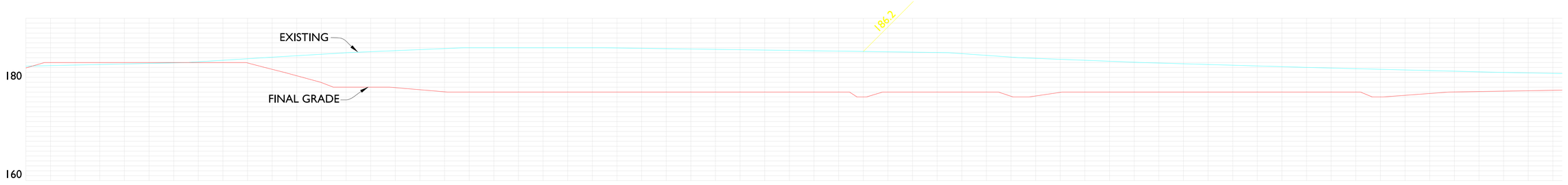
0' 10' 20' 30'
SCALE: 1" = 10'



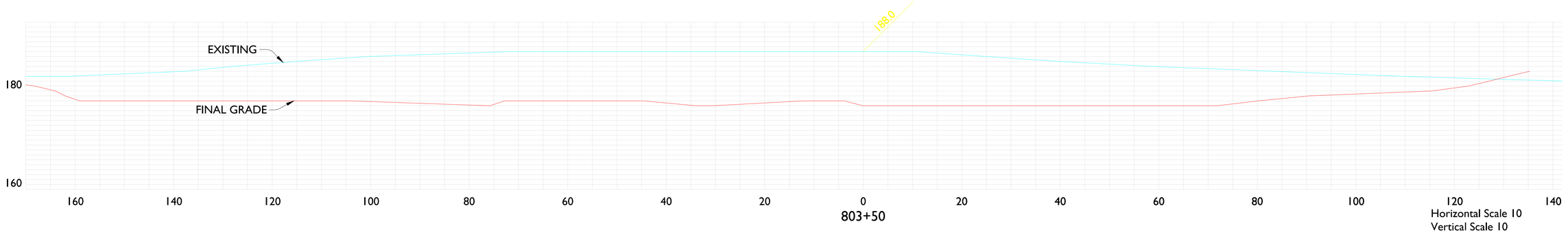
804+39.775
Horizontal Scale 10
Vertical Scale 10



804+13.515
Horizontal Scale 10
Vertical Scale 10



804+00
Horizontal Scale 10
Vertical Scale 10



803+50
Horizontal Scale 10
Vertical Scale 10

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO. 09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 21 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

Calculate Section Volumes Tue Jul 27 12:40:05 2010

Processing 803+50.000 to 804+39.775
Total Cut : 194654.151 C.F., 7209.413 C.Y.
Total Fill: 569.511 C.F., 21.093 C.Y.

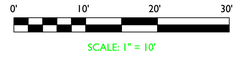
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
803+50.000	2361.859	6.071			
			50.000	3951.770	14.975
804+00.000	1906.052	10.102			
			13.515	910.602	3.748
804+13.515	1732.315	4.874			
			26.260	1860.013	2.370
804+39.775	2092.541	0.000			
			10.225	847.028	0.000

Horizontal Scale 10
Vertical Scale 10
804+39.775

Horizontal Scale 10
Vertical Scale 10
804+13.515

Horizontal Scale 10
Vertical Scale 10
804+00

Horizontal Scale 10
Vertical Scale 10
803+50



SCALE: 1" = 10'

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 22 OF 25

CROSS SECTIONS

FOR:
THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

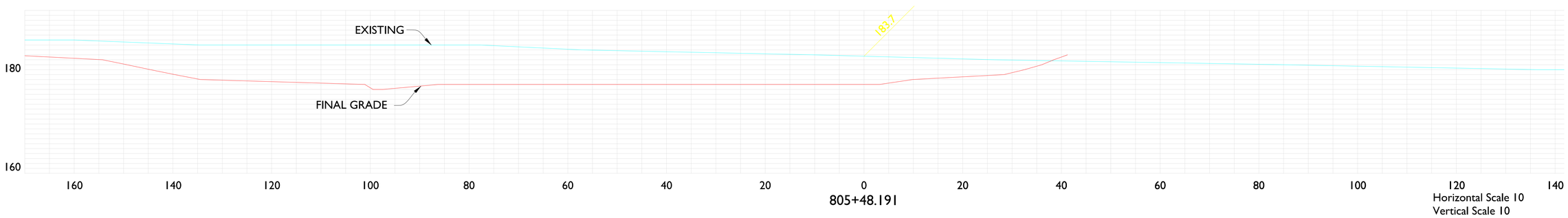
SMW ENGINEERING GROUP, INC.

Calculate Section Volumes Tue Jul 27 12:40:05 2010

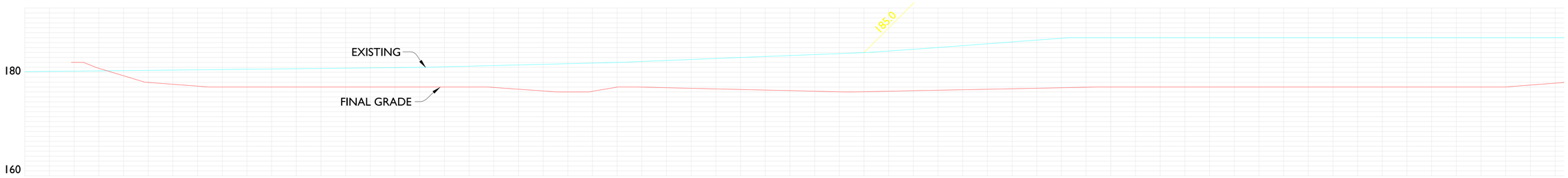
Processing 804+50.000 to 805+48.191
Total Cut : 210136.896 C.F., 7782.848 C.Y.
Total Fill: 351.054 C.F., 13.002 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
804+50.000	2380.762	0.000			
			50.000	4404.987	3.412
805+00.000	2376.624	3.685			
			5.621	486.554	1.250
805+05.621	2297.617	8.319			
			42.570	2807.495	8.195
805+48.191	1263.688	2.076			
			1.809	83.812	0.145

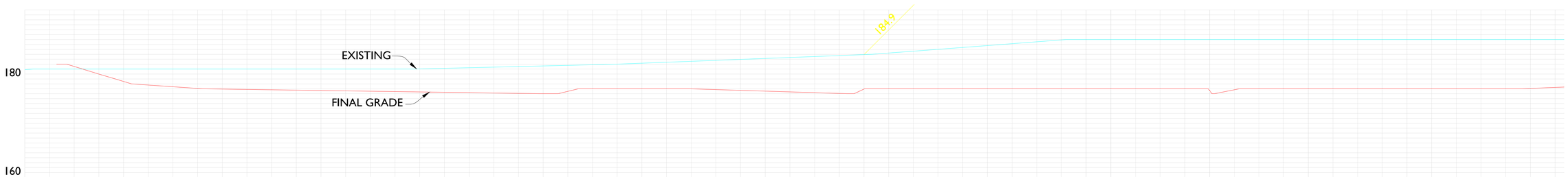
0' 10' 20' 30'
SCALE: 1" = 10'



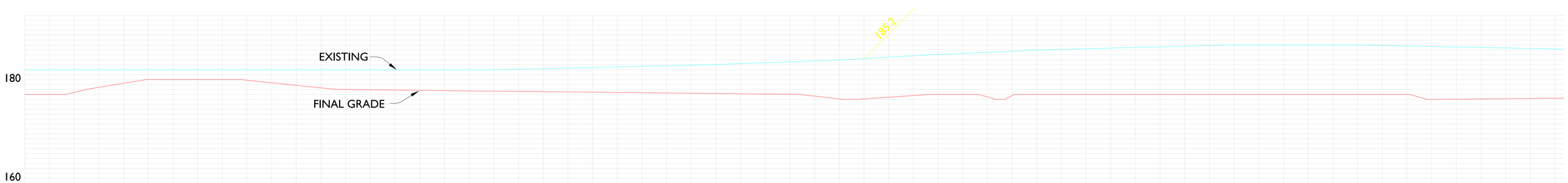
805+48.191
Horizontal Scale 10
Vertical Scale 10



805+05.621
Horizontal Scale 10
Vertical Scale 10



805+00
Horizontal Scale 10
Vertical Scale 10



804+50
Horizontal Scale 10
Vertical Scale 10

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 23 OF 25

CROSS SECTIONS

FOR:
THOMPSON ENGINEERING

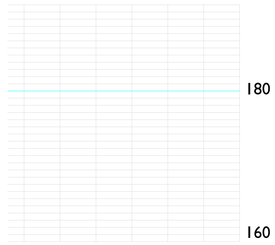
SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

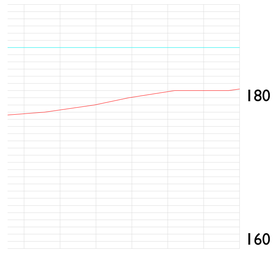
Calculate Section Volumes Tue Jul 27 12:40:05 2010

Processing 804+50.000 to 805+48.191
Total Cut : 210136.896 C.F., 7782.848 C.Y.
Total Fill: 351.054 C.F., 13.002 C.Y.

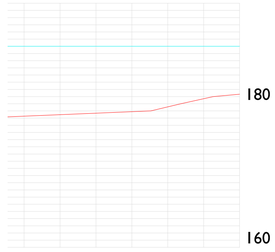
Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
804+50.000	2380.762	0.000			
			50.000	4404.987	3.412
805+00.000	2376.624	3.685			
			5.621	486.554	1.250
805+05.621	2297.617	8.319			
			42.570	2807.495	8.195
805+48.191	1263.688	2.076			
			1.809	83.812	0.145



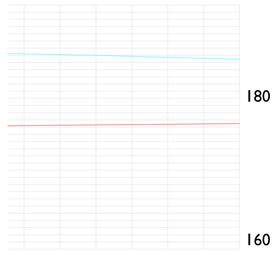
Horizontal Scale 10
Vertical Scale 10
805+48.191



Horizontal Scale 10
Vertical Scale 10
805+05.621



Horizontal Scale 10
Vertical Scale 10
805+00



Horizontal Scale 10
Vertical Scale 10
804+50

SCALE: 1" = 10'

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS-SHOWN
SHEET 24 OF 25

CROSS SECTIONS

FOR:
THOMPSON ENGINEERING

SMW Engineering Group, Inc.
1550 Woods of Riverchase Drive
Suite 100
Hoover, Alabama 35244
Ph: 205-252-6985
www.smweng.com

SMW ENGINEERING GROUP, INC.

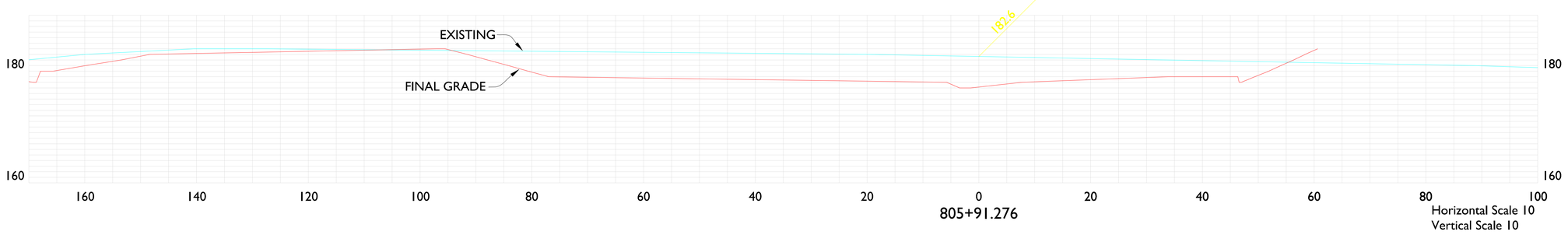
0' 10' 20' 30'

SCALE: 1" = 10'

Calculate Section Volumes Tue Jul 27 12:40:05 2010

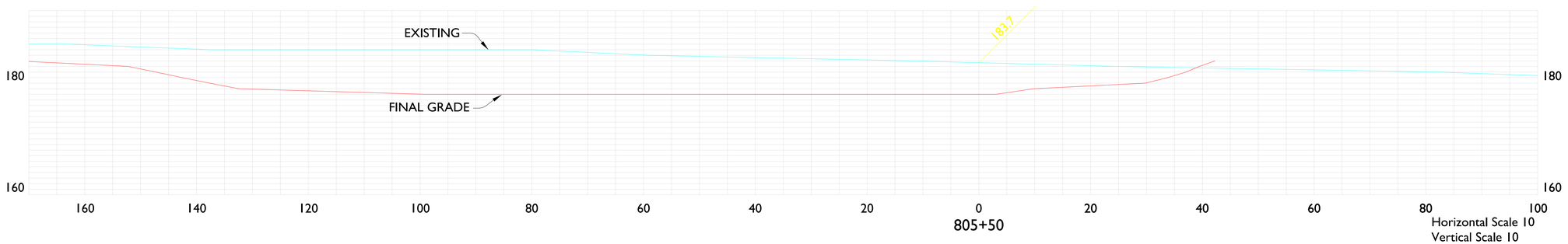
Processing 805+50.000 to 805+91.276
Total Cut : 44463.681 C.F., 1646.803 C.Y.
Total Fill: 270.594 C.F., 10.022 C.Y.

Station	Cut(sf)	Fill(sf)	Interval	Cut(cy)	Fill(cy)
805+50.000	1238.150	2.248			
			41.276	1448.982	8.224
805+91.276	657.504	8.512			
			8.724	197.821	1.798



805+91.276

Horizontal Scale 10
Vertical Scale 10



805+50

Horizontal Scale 10
Vertical Scale 10

NO.	REVISION	DATE	BY

KILBY DITCH

PROJECT NO.
09-0797

DRAWN BY: DM
CHECKED BY: MKD
FIELD CREW: BM
APPROVED BY: DM
DATE: 07/27/10
SCALE: AS SHOWN
SHEET 25 OF 25

CROSS SECTIONS

FOR: THOMPSON ENGINEERING

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SMW ENGINEERING GROUP, INC.