STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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November 14, 2014

US Army Corps of Engineers
Regulatory Field Office
2407 West 5th Street
Washington, NC 27889

NC Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557

Attention: Mr. Tom Steffens
NCDOT Coordinator

Mr. Stephen Lane
NCDOT Coordinator

Dear Sirs:

Subject: **Application for USACE Individual Permit, Section 401 Water Quality Certification, Neuse Riparian Buffer Authorization and CAMA Major Development Permit** for the proposed improvement of US 17 from south of Belgrade at SR 1330/SR 1439 to the New Bern Bypass, in Onslow, Jones and Craven Counties. TIP No. R-2514B, C & D. Debit $570.00 from WBS 34442.1.3.

The North Carolina Department of Transportation (NCDOT), Division of Highways, proposes to improve US 17 from SR 1330/SR 1439 south of Belgrade to the New Bern Bypass. The purpose of this letter is to request project approval from the US Army Corps of Engineers for a CWA Section 404 Individual Permit and authorization under Section 10 of the Rivers and Harbors Act. By copy of this information, NCDOT is also requesting project approval from the N.C. Department of Environment and Natural Resources under CWA Section 401 Water Quality Certification, Neuse Riparian Buffer Authorization and Coastal Area Management Act Major Development Permit. In addition to the cover letter, this application package includes the following for R-2514B, C & D: ENG Form 4345, stormwater management plan, permit drawings, utility drawings, roadway plans, CAMA MP forms, and 4B/4C merger meeting minutes.

1.0 Purpose and Need

The primary purposes for this project, as identified in the Final Environmental Impact Statement (FEIS), are to:

- Improve capability of US 17 to meet its mandated objectives as part of the Intrastate System, the North Carolina Strategic Corridors System, and the Federal Strategic Highway Corridor Network;

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- Improve traffic flow along the US 17 corridor in the project study area; and

- Relieve congestion on US 17 in Onslow and Jones Counties, thereby improving safety and reducing the number of crashes.

2.0 Project Description

The NCDOT proposes to improve a 16-mile portion of US 17 between Deppe Loop Road (SR 1330)/Springhill Road (SR 1439) south of Belgrade and the New Bern Bypass near the Jones/Craven County Line, south of New Bern. Proposed improvements include a combination of widening on the existing alignment and constructing new segments west of the existing route. The proposed facility would widen US 17 to a divided four-lane facility with bypasses of Maysville and Pollocksville on new location.

3.0 Summary of Impacts

Permanent Impacts: Proposed permanent impacts for R-2514 B, C & D include fill, excavation, and mechanized clearing in 46.91 acres of wetlands, including 6.8 acres of riparian wetlands, and 40.11 acres of non-riparian wetlands. Proposed permanent impacts to jurisdictional streams are 4,281 linear feet, including 279 feet of bank stabilization. Impacts due to utility work involve minimal fill in wetlands.

Temporary Impacts: There will be 379 linear feet of temporary impacts to jurisdictional streams due to culvert installations, and 112 feet of temporary impacts due to bank stabilization.

Hand-Clearing: There will be 0.13 acres of hand-clearing in jurisdictional wetlands due to project construction and 2.61 acres of hand-clearing for utility relocations.

Buffer Impacts
R-2514C and D occur in the Neuse River basin, and are subject to Riparian Buffer Rules. R-2514C has 10,131 sq. ft. of allowable buffer impacts (6,426 in zone 1 and 3,705 in zone 2). It also has 33,486 sq. ft. of mitigable impacts (21,305 in zone 1 and 12,181 in zone 2). R-2514D has 81,090 sq. ft. of allowable buffer impacts (52,837 in zone 1 and 28,253 in zone 2). It also has 174,583 sq. ft. of mitigable impacts (105,716 in zone 1 and 68,867 in zone 2). At these buffer impact sites, there are 82,334 sq. ft. of wetlands in zone 1 and 36,317 sq. ft.in zone 2.

4.0 Summary of Mitigation

The proposed construction of R-2514 B, C &D will impact 6.8 acres of riparian wetlands and 40.11 acre of non-riparian wetlands that will require mitigation. The project will impact 4,281 linear feet of jurisdictional stream that will require mitigation. In addition, the project will have unavoidable mitigable impacts to 148,206 square feet of riparian buffers, including 86,156 sq. ft. in Zone 1 and 62,050 sq. ft. in Zone 2 in the Neuse River Basin.

5.0 Project Schedule

Currently, R-2514B, C & D is scheduled to let June 16, 2015, and will be available for construction shortly thereafter. The let date, however, may advance as additional funds become available.

6.0 NEPA Document Status

The NCDOT completed the Final Environmental Impact Statement (FEIS) on June 23, 2011 in compliance with the SEPA guidelines. The FEIS explains the purpose and need for the project, provides a description of the alternatives considered, and characterizes the social, economic, and environmental effects. The FEIS was approved and circulated to federal, state, and local agencies. The Record of Decision (ROD) was completed on June 25, 2012 and distributed to the agencies. Both documents are posted on the NCDOT website at https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx, under *Quick Links > Environmental Documents*.

6.1 Independent Utility

R-2514B, C & D meets the criteria for independent utility as discussed below:

- The project has logical termini and independent utility and is of sufficient length to address environmental matters on a broad scope;
- The project is usable and a reasonable expenditure of funds, even if no additional transportation improvements are made in the area; and
- The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

7.0 Resource Status

The project is located in the White Oak River Basin (Hydrologic Unit 03020301) and the Neuse River Basin (Hydrologic Unit 03020204). This is within the Middle Atlantic Coastal Plain eco-region. The project crosses the White Oak River, the Trent River, Goshen Branch, Deep Gully, and numerous unnamed tributaries to waters of the U.S., and multiple wetlands. Wetland and surface waters within the study area were initially field delineated in 2000. The jurisdictional delineation was reviewed and approved by the USACE during site visits in May and August 2000. This analysis was described in the 2001 Natural Systems Report, which was updated in a 2003 Wetlands Report. During a March 2007 Merger Process Field Meeting, USACE observed wetlands and streams that were not shown in the August 2000 Jurisdictional Determination. During the summer of 2007, additional field work and additional documentation were completed, including a *Reverification of Jurisdictional Area and Neuse River Buffer Impacts Evaluation* report. The USACE issued a Notice of Approved Jurisdictional Determination in November 2009. Design changes were discussed during the Avoidance and Minimization Concurrence Meetings for the Preferred Alternative, and the Corps of Engineers recommended that these changes be incorporated into a new Jurisdictional Determination. This updated JD was approved by the Corps on March 19, 2012.

7.1 Wetland Delineations

A wetland identification and preliminary assessment analysis for the study area was included in the FEIS. The wetlands within the study area were delineated based on the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.

7.2 Stream Delineations

The stream channels within the project study area were identified, evaluated, and classified using the NCDWR stream identification form and the Cowardin classification system. Water quality information for the streams within the project study area was derived from available sources provided through the NCDENR.

7.3 R-2514: Characterization of Jurisdictional Sites

7.3.1 Wetlands

There are four wetland types found within the project study area based on the Cowardin classification: Palustrine Forested (PFO), Palustrine scrub-shrub (PSS), and Palustrine emergent (PEM), and the Palustrine unconsolidated bottom (PUBH) More detailed information about these wetlands can be found in the 2001 Natural Systems Report and FEIS, which includes figures showing the wetlands within the project area.

7.3.2 Streams

The White Oak River and its tributaries all carry best use classifications of C within the study area. The Trent River and its associated tributaries all carry best use classifications of C Sw NSW within the project area. Details for the jurisdictional streams within the project area are provided in the FEIS and Natural Systems Report.

There are no waters within the project vicinity classified as High Quality Waters (HQW). Neither Water Supplies (WS-I: undeveloped watersheds or WS-II: predominately undeveloped watersheds), nor Outstanding Resource Waters (ORW) occur within 1.0 mile of the project area. Streams within the R-2514B, C & D project area are not designated as North Carolina Natural or Scenic Rivers, or as National Wild and Scenic Rivers. Additionally, these waters are not listed on the 2014 303(d) list of impaired waters due to sedimentation or turbidity.

7.4 Impacts to Jurisdictional Resources

Impacts to jurisdictional wetlands, surface waters and riparian buffers for R-2514B, C & D are summarized below in Tables 1, 2 and 3 respectively.

Table 1. R-2514 B, C & D Wetland Impacts

Permit Drawing Site Number	Map Label in FEIS (2011)	Type	Permanent Impacts* (ac.)	Temporary Impacts (ac.)	Mitigation Required (2:1)
R-2514B					
1	241	Non-riparian	0.4		Yes
2	242	Non-riparian	0.19		Yes
3	32	Non-riparian	<0.01		Yes
4	31	Non-riparian	0.01		Yes
5	27	Non-riparian	2.31		Yes
6	26	Riparian	1.2		Yes
7	24	Non-riparian	0.14		Yes
8	22	Non-riparian	0.07		Yes
9	245	Agricultural ditch	0.04		No
10	44, 45, W9	Riparian	3.70	0.06	Yes
11	42	Riparian	0.19		Yes
12	W8, 46	Riparian	0.01	0.01	Yes
14	48	Non-riparian	0.07		Yes
15	49	Non-riparian	1.22		Yes
16	W22, 250	Riparian	0.07		Yes
		R-2514B Riparian:	**5.17**	**0.07**	
		R-2514B Non-riparian:	**4.42**	**0.0**	
		R-2514B Subtotal:	**9.63**	**0.07**	
R-2514C					
1	49 & 65	Non-riparian	4.05	<0.01	Yes
2	49 & 65	Non-riparian	0.13		Yes
3	49	Non-riparian	0.07		Yes
4	67 (west side), 65, 68 &75 (east)	Non-riparian	8.25	<0.01	Yes
5	69 & 70	Non-riparian	0.25		Yes
6	71 &72	Non-riparian	0.04	<0.01	Yes
7	74	Non-riparian	0.36		Yes*
8	75	Non-riparian	0.73		Yes
9	77 west, 76 east	Non-riparian	1.06		Yes
10	79 & 80	Non-riparian	1.10		Yes
11	78	Non-riparian	0.04		Yes
12	82 & 83	Non-riparian	0.50		Yes
13	West 85 & 86, east 84	Non-riparian	0.46		Yes
14	88	Non-riparian	1.93		Yes
15	89, 90, 91	Non-riparian	0.29		Yes
16	West 92, east 93	Non-riparian	0.73		Yes

Permit Drawing Site Number	Map Label in FEIS (2011)	Type	Permanent Impacts* (ac.)	Temporary Impacts (ac.)	Mitigation Required (2:1)
17	94, G1	Riparian	0.03		Yes
20	100	Non-riparian	1.78		Yes
21	98	Non-riparian	0.25		Yes
23	65 & 63	Non-riparian	0.03		Yes
		R-2514C Riparian:	**0.03**	**0.0**	
		R-2514C Non-riparian:	**22.05**	**<0.01**	
		R-2514C Subtotal:	**22.08**	**<0.01**	
R-2514D					
2	114	Non-riparian	2.54		Yes
3	131	Riparian	0.18	<0.01	Yes
4	132 & 135	Riparian	0.74	0.06	Yes
4	141	Non-riparian	0.20		Yes
5	166	Non-riparian	0.91		Yes
6	167	Non-riparian	1.73		Yes
7	175	Non-riparian	0.02		Yes
8	177	Non-riparian	0.25		Yes
9	181	Riparian	0.60		Yes
10	182	Non-riparian	0.40		Yes
11	184	Non-riparian	1.05		Yes
12	186	Non-riparian	0.37		Yes
13	246	Riparian	0.02		Yes
14	196	Non-riparian	0.34		Yes
15	229	Non-riparian	0.05		Yes
17	201	Non-riparian	1.55		Yes
18	202	Non-riparian	0.68		Yes
19	226	Non-riparian	1.55		Yes
20	225	Non-riparian	0.36		Yes
21	211	Non-riparian	1.62		Yes
22	See note**	Non-riparian	0.02		Yes
23	D1, 217	Riparian	0.06		Yes
		R-2415D Riparian:	**1.6**	**0.06**	
		R-2514D Non-riparian:	**13.64**	**<0.01**	
		R-2514D Subtotal:	**15.24**		
R-2514 B, C & D Total		**Riparian:**	**6.8**	**0.13**	
		Non-riparian:	**40.11**	**<0.01**	
		Grand Total:	**46.91**	**0.13**	

* R-2514C Site 7 includes an additional 0.06 acres of unimpacted wetlands counted as a total take. This will be mitigated at a 1:1 ratio.

** Site 22 is a non-riparian wetland site identified during construction of R-2301A (New Bern Bypass) that had not been accounted for during the permit for that project. It was decided to include this site on the permit application for R-2514B, C & D to obtain after-the-fact authorization and provide mitigation.

Table 2. R-2514 Surface Water Impacts

Permit Drawing Site Number	Waterbody Labeled in FEIS	Permanent (ft)	Permanent (ac.)	Temporary (ft)	Temporary (ac.)	USACE Mitigation Required (2:1)
R-2514B						
6	W5	130	0.02	6	<0.01	Yes
6	W5	356	0.07	14	<0.01	Yes
6*	W5	25	<0.01	10	<0.01	No
6*	W5	25	<0.01	10	<0.01	No
13	W21	1151	0.60	60	0.04	Yes
13*	W21	27	0.01	7	<0.01	No
13*	W21	29	0.01	7	<0.01	No
13*	W21	87	0.05	0	0	No
16	W22	120	0.04	25	0.01	Yes
R-2514B Total:		**1,949**	**0.81**	**139**	**0.06**	
R-2514C						
17	G1	109	0.01			Yes
18	G1	132	0.02			Yes
18*	G1			20	<0.01	No
19	G2	106	0.01			Yes
19*	G2			58	<0.01	No
22	W21	32	0.02			Yes
22	W21			10	0.01	No
R-2514C Total:		**379**	**0.06**	**88**	**0.01**	
R-2514D						
1	B5	218	0.01	31	<0.01	Yes
1*	B5	16				No
3	131	5	<0.01	50	0.01	Yes
6	167		0.03			No
9	S18	196	0.05	20	<0.01	Yes
9	S18			20	<0.01	No
9*	S18	18				No
13	S14	230	0.01	21	<0.01	Yes
13	S14			21	<0.01	No
13*	S14	12				No
15	S9	292	0.06	27	<0.01	Yes
15	S9			27	<0.01	No
15*	S9	26				No
16	S17	282	0.01			Yes
16	S17			21	<0.01	No
16*	S17	14				No
21	D2	644	0.06			Yes
R-2514 D Total:		**1,953**	**0.23**	**170**	**0.02**	
R-2514B, C & D Total		**4,281**	**1.1**	**397**	**0.09**	

*Denotes bank stabilization; when necessary, mitigation required by the USACE exceeds the amount required by NCDWR. The table indicates 279 feet of permanent impacts and 112 feet of temporary impacts due to bank stabilization.

Table 3. R-2514 C&D Riparian Buffer Impacts

Buffer Drawing Site Number		Allowable			Mitigable		
		Zone 1 (sq. ft.)	Zone 2 (sq. ft.)	Total (sq. ft.)	Zone 1 (sq. ft.)	Zone 2 (sq. ft.)	Total (sq. ft.)
R-2514C							
1		6,426	3,705	10,131			
2					11,389	7,568	18,957
3					9,916	4,613	14,529
R-2514C Subtotal		6,426	3,705	10,131	21,305	12,181	33,486
R-2514D							
1					18,124	11,612	29,736
2		13,921	9,058	22,979		26	26
3		31,209	12,501	43,710			
4					14,017	9,383	23,400
5					15,142	9,677	24,819
6					20,266	12,665	32,931
7					38,167	25,504	63,671
8		7,707	6,694	14,401			
R-2514D Subtotal		52,837	28,253	81,090	105,716	68,867	174,583
R-2514 C&D Total:		**59,263**	**31,958**	**91,221**	**127,021**	**81,048**	**208,069**

8.0 Protected Species

The United States Fish and Wildlife Service (USFWS) list 17 federally protected species for Onslow (1/24/14 list), Jones (9/22/2014 List) and Craven (9/22/14 list) Counties (Table 4).

Table 4. Federally Protected Species in Onslow, Jones and Craven Counties

Common Name	Scientific Name	Habitat	Federal Status	Biological Conclusion
American alligator	*Alligator mississippiensis*	Yes	T (S/A)	N/A
Atlantic sturgeon	*Acipenser oxyrinchus oxyrinchus*	No	E	No Effect
Bald Eagle	*Haliaeetus leucocephalus*	No	BGPA	N/A
Cooley's meadowrue	*Thalictrum cooleyii*	No	E	No Effect
Golden sedge	*Carex lutrea*	No	E	No Effect
Green sea turtle	*Chelonia mydas*	No	T	No Effect
Leatherback sea turtle	*Dermochelys coriacea*	No	E	No Effect
Loggerhead sea turtle	*Caretta caretta*	No	T	No Effect
Northern long-eared bat	*Myotis septentrionalis*	Yes	P	Not Required
Piping plover	*Charadrius melodus*	No	T	No Effect

Pondberry*	*Lindera melissifolia*	No	E	No Effect
Red-cockaded woodpecker	*Picoides borealis*	Yes	E	No Effect
Red knot	*Calidris canutus rufa*	No	P	Not Required
Rough-leaved loosestrife	*Lysimachia asperulaefolia*	No	E	No Effect
Seabeach amaranth	*Amaranthus pumilus*	No	T	No Effect
Sensitive joint vetch	*Aeschynomene virginica*	No	T	No Effect
Shortnose sturgeon	*Acipenser brevirostrum*	No	E	No Effect
West Indian manatee	*Trichechus manatus*	No	E	No Effect

Notes: E Endangered
T Threatened
T S/A Threatened (Similarity of Appearance)
P Proposed
*Historic record

A US Fish and Wildlife Service proposal for listing the northern long-eared bat (*Myotis septentrionalis*) as an Endangered species was published in the Federal Register in October 2013. The listing may become effective as soon as April 2015. This species is included in USFWS's current list of protected species for Craven and Jones Counties. NCDOT is working closely with the USFWS to understand how this proposed listing may impact NCDOT projects.

Northern Long-eared Bat (NLEB) surveys were recently conducted on the west side of Croatan National Forest (CNF) in conjunction with the proposed project. The acoustic survey results (from 39 acoustic monitoring nights) were analyzed by two software programs. A total of nine calls were identified as NLEBs from both automated identification programs, BCID and EchoClass. Multiple calls were also identified as Indiana bats and gray bats by BCID and EchoClass, although neither species' range extends into central or eastern North Carolina; the results were false positives.

Manual analysis was conducted to select calls with the most NLEB characteristics. This subset of calls was sent to two acoustic experts (Chris Corben, Titley Scientific, and Dr. Joy O'Keefe, Indiana State University) for further analysis. Neither expert saw conclusive evidence that NLEB were present; most of the calls were determined to be Southeastern Bats (*Myotis austroriparius*). According to the experts, six calls had potential to be from NLEBs.
As a follow-up to the acoustic surveys, 14 nights of mist-netting were conducted for the US 17 project, but no NLEBs were captured. In addition to the negative mist-netting results for US 17, the following negative surveys results were also obtained in and adjacent to CNF:

- Six nights of mist-netting in CNF along the proposed Havelock bypass corridor in 2005 (NCDOT);
- Five nights of mist-netting adjacent to CNF at the NCDOT Croatan mitigation bank from 2007-2010 (NCDOT);
- One night of mist-netting in Carteret County at the southern edge of CNF in 2009 (NCDOT); and
- Acoustic driving transects conducted on CNF by USFS staff and analyzed by University of North Carolina-Greensboro staff (Matina Kalcounis-Rueppell, personal communication).

Based on the negative mist-netting results obtained in and around CNF, NLEBs do not appear to be present and will not be affected by the project. NCDOT will continue to coordinate appropriately with USFWS to determine if this project will incur potential effects to the Northern long-eared bat, and how to address these potential effects, if necessary.

8.1 Bald and Golden Eagle Protection Act (BGPA)

In the July 9, 2007 Federal Register (72:37346-37372), the bald eagle was declared recovered, and removed (de-listed) from the Federal List of Threatened and Endangered wildlife. This delisting took effect August 8, 2007. After delisting, the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668d) became the primary law protecting bald eagles. Nesting and foraging habitat are not present in the project area, nor have bald eagle nests or individuals been seen within a 660-foot radius of the project area.

8.2 Moratoria

The Trent River is designated as an anadromous fish spawning area, prohibiting in-stream work in the Trent River from February 15 through July 15. Tributaries to the Trent River north of US 17) and Mill Creek (south of US 17) are also designated as anadromous fish spawning areas and are subject to the same restriction. The White Oak River is designated as an Inland Primary Nursery Area, prohibiting in-stream work in the White Oak River from February 15 through September 30.

9.0 Cultural Resources

As documented in the project ROD, A Memorandum of Agreement (MOA) for historic resources was developed in accordance with section 106 of the National Historic Preservation Act of 1966 to address the adverse effect of the proposed project on an archaeological site in the project vicinity. NCDOT has developed and implemented an Archaeological Data Recovery Plan for Site 31JN128**, a property determined eligible for listing on the National Register of Historic Places.

In the Fall of 2009, an intensive archaeological investigation and site evaluation of the Area of Potential Effects (APE) was conducted for the proposed improvements to US 17 in Jones and Onslow counties from SR 1330 (Deppe Loop Road) near the City of Jacksonville north to the Jones/Craven county line outside the City of New Bern (TIP# R-2514B, C, D). This investigation was conducted by Environmental Services, Inc. (ESI) of Raleigh, North Carolina, on behalf of the North Carolina Department of Transportation (NCDOT) to fulfill the requirements of Section 106 of the National Historic Preservation Act (NHPA 1966, as amended), and complies with the guidelines issued by the Advisory Council on Historic Preservation (ACHP) in consultation with the North Carolina Office of State Archaeology (OSA) and NCDOT.

Twenty-nine (29) archaeological sites were documented as a result of these investigations (31ON1762**-31ON1765** and 31JN122**-31JN146**). Of the 29 archaeological sites, 26 have been recommended as not eligible for the National Register of Historic Places (NRHP). Two of the sites (31JN137** and 31JN143**) were not assessed based on their location outside

of the project corridor; both of these sites are early to late 20th century cemeteries and will be avoided by the proposed project. The one remaining archaeological site (31JN128**) was recommended as eligible for the NRHP per Criterion D.

Archaeological investigations at Site 31JN128** documented a domestic occupation dating to the late 18th and early 19th centuries that has been recommended eligible for the NRHP per Criterion D for its potential to yield significant information pertaining to Middling Planters and Farm Sites in Jones County (and historic Craven County) during the Federal and early Antebellum periods, especially related to site structure and foodways. Spatial patterning of artifacts is present, with defined architectural, activity, and disposal areas. Research reveals that the family of Nicholas Adams and Elizabeth Wickliffe Bray, Middling Planters, lived on the property from the 1790s to the 1810s, contemporaneous with the diagnostic artifacts recovered. Avoidance of the site was recommended, but not possible. Therefore, once ROW was acquired and a temporary easement placed around Site 31JN128**, archaeological data recovery investigations were conducted relative to a signed 2011 Memorandum of Agreement (MOA) and Scope of Work prepared by the NCDOT. Data recovery efforts took place at the site between June and September 2014.

ESI completed a preliminary management summary for the data recovery at Site 31JN128** in September 2014. All fieldwork is completed and it is recommended that the proposed project be granted clearance to proceed without concern for impacts to significant cultural resources.

10.0 FEMA Compliance

The project has been coordinated with appropriate state and local officials and the Federal Emergency Management Agency (FEMA) to assure compliance with FEMA, state, and local floodway regulations.

11.0 Mitigation Options

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts, and to provide full compensatory mitigation of all remaining, unavoidable jurisdictional impacts. Avoidance measures were taken during the planning and NEPA compliance stages; minimization measures were incorporated as part of the project design.

11.1 Avoidance and Minimization

All jurisdictional features were delineated, field verified and surveyed within the corridor for R-2514B, C & D. Using these surveyed features, preliminary designs were adjusted to avoid and/or minimize impacts to jurisdictional areas. During step 4A of the Interagency Merger process, the Merger Team concurred that jurisdictional impacts have been avoided and minimized to the maximum extent practicable through the use of alignment shifts, vertical adjustments, a 46-foot median width, perpendicular stream crossings, bridging Goshen Branch, the Trent River, the White Oak River, and a tributary to White Oak River, utilizing equalizer pipes between bisected wetland features, paralleling the existing power transmission easement in

the northern portion of the project, locating service roads and turnarounds in non-jurisdictional areas, utilization of existing US 17 as a service road, and elimination of proposed interchanges at the northern and southern termini.

NCDOT employs many strategies to avoid and minimize impacts to jurisdictional areas in all of its designs. Many of these strategies have been incorporated into BMP documents that have been reviewed and approved by the resource agencies and which will be followed throughout construction. Construction-related impacts associated with the proposed action will be minimized by adhering to applicable rules, regulations and permit conditions and by NCDOT's Best Management Practices for the Protection of Surface Waters. All wetland areas not affected by the project will be protected from unnecessary encroachment. Individual avoidance and minimization items are as follows:

- No staging of construction equipment or storage of construction supplies will be allowed in wetlands or near surface waters.
- The project was designed to avoid or minimize disturbance to aquatic life movements.
- NCDOT and its contractors will not excavate, fill, or perform land clearing activities within Waters of the U.S. or any areas under the jurisdiction of the USACE, except as authorized by the USACE. To ensure that all borrow and waste activities occur on high ground, except as authorized by permit, the NCDOT shall require its contractors to identify all areas to be used to borrow material, or to dispose of dredged, fill or waste material. Documentation of the location and characteristics of all borrow and disposal sites associated with the project will be available to the USACE on request.
- Grass swale treatments have been incorporated in areas where flat slopes can be maintained.
- Proposed culverts will be buried 1 ft. to provide for fish passage.
- Cross pipes in jurisdictional streams will be buried 1ft.
- All wetlands will receive diffused flow.
- Special Sediment Control Fence will be used were applicable.
- The use of hand clearing rather than mechanized clearing where possible.
- Bank stabilization at outlets of culverts will not impact the stream bed.
- Considering environmental, hydraulic, and roadway perspectives, 3:1 slopes are proposed within the wetlands where most practical.

11.2 Compensation

The NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent practicable as described above. However, due to the extent of wetlands and surface waters in the study area, complete avoidance is not possible. Compensatory mitigation is recommended for all unavoidable jurisdictional impacts.

The impacts for R-2514B, C & D occur in two HUC's: 03020204 and 03020106. R-2514B is located entirely in 03020106. R-2514C is split between the two HUC's with the dividing line falling across wetland sites 14 and 15, splitting them between the HUC's. Sites 1 through 13 are in 03020106, as are Sites 22 and 23. Sites 16 through 21, and part of 14 and 15 are in 03020204. Tables 5 and 6 break down the project impacts by HUC.

Table 5. Wetland Impacts by HUC

		HUC 03020106		HUC 03020204	
Project Section	**Impact Sites**	**Riparian**	**Non-riparian**	**Riparian**	**Non-riparian**
R-2514 B	All sites	5.17	4.42	0	
R-2514 C	Sites 1-13, 22 & 23	0	17.07	0	
	Site 14	0	1.31	0	0.62
	Site 15	0	0.17	0	0.12
	Sites 16 - 21	0	0	0.03	2.76
R-2514 D	All sites	0	0	1.6	13.64
Total impacts by HUC		**5.17**	**22.97**	**1.63**	**17.14**

The stream impacts in Table 6 are summarized from those detailed in Table 2, less the bank stabilization impacts.

Table 6. Stream Impacts by HUC

Project Section	**Impact Sites**	**HUC 03020106**	**HUC 03020204**
R-2514 B	All sites	1,756	0
R-2514 C	Sites 1-13, 22 & 23	32	0
	Site 14	0	0
	Site 15	0	0
	Sites 16 - 21	0	347
R-2514 D	All sites	0	1,867
Total impacts by HUC		**1,788**	**2,224**

In a May 9, 2014 memorandum, NCDOT proposed that the unavoidable impacts to Waters of the U.S. will be offset by compensatory mitigation provided at the Croatan Mitigation Bank for the B and C sections of the project, which are partially located in a different HUC than the mitigation bank. The Corps approved the use of Croatan Wetland Mitigation Bank "as the source for all stream, riparian wetland and non-riparian wetland credits to offset the unavoidable impacts associated with R-2514 B&C" in a letter dated May 20, 2014.

NCDOT is also proposing that all impacts from R-2514D will be provided by Croatan Wetland Mitigation Bank. The stream and wetland credits generated by the CWMB are valid in HUC 03020204, where all of the R-2514D impacts occur.

NCDOT has requested an acceptance letter from EEP to provide compensatory stream and wetland mitigation from the Croatan Wetland Mitigation Bank. As of the date of this application, such acceptance letter has not been issued.

Buffer impacts

All riparian buffer impacts occur in HUC 03020204. Table 7 accounts for the overlap of buffers and wetlands on R-2514D to determine mitigation requirements. Since Site 4 through 7 occur in wetlands, the buffer acreage must be deducted to avoid double-counting the impacts. This

reduces the amount of buffer impacts calculated in Table 3 for R-2514D, resulting in a revised total of 64,851 sq. ft. of buffers Zone 1 and 49,869 sq. ft. in Zone 2, for a revised total of 114,720 sq. ft. for R-2514D. Adding in the impacts for R-2514C, the total mitigable project impacts are 86,156 sq. ft. in Zone 1, 62,050 in Zone 2, and 148,206 sq. ft. total.

Compensatory mitigation for impacts to riparian buffers will be provided by EEP.

Table 7. R-2514 D Riparian Buffers in Wetlands

		Mitigable		
Buffer Drawing Site Number		**Zone 1 (sq. ft.)**	**Zone 2 (sq. ft.)**	**Total (sq. ft.)**
R-2514D				
4	Impacts	14,017	9,383	23,400
	Less buffers in wetlands	-12,324	-6,294	-18,618
	Subtotal	**1,693**	**3,089**	**4,782**
5	Impacts	15,142	9,677	24,819
	Less buffers in wetlands	-433	-0	-433
	Subtotal	**14,709**	**9,677**	**24,386**
6	Impacts	20,266	12,665	32,931
	Less buffers in wetlands	-0	1,432	-1,432
	Subtotal	**20,266**	**11,233**	**31,499**
7	Impacts	38,167	25,504	63,671
	Less buffers in wetlands	-28,108	-11,272	-39,380
	Subtotal	**10,059**	**14,232**	**24,291**
Remaining buffer impact requiring mitigation		**46,727**	**38,231**	**84,958**

12.0 Indirect and Cumulative Effects

NCDOT completed an Indirect and Cumulative Effects Report on September 22, 2010 during preparation of the 2011 FEIS. As discussed in the FEIS, project construction is not expected to induce extensive development within the study area. It is expected that complementary land development, such as highway oriented businesses will develop at a small scale near the site of the proposed interchange and at the intersection of NC 58 and US 17. Based on the analysis contained within the FEIS, very little development activity has taken place or is expected to occur within the forseeable future, TIP Project R-2514 will not likely result in cumulative effects on notable features of the human and/or natural environment.

13.0 Essential Fish Habitat

The Trent River is listed as Essential Fish Habitat to its existing crossing of US 17, downstream of the project. The White Oak River is listed as Essential Fish Habitat to SR 1101 in Stella, also downstream of the project. Consequently, the project will not impact any essential fish habitat afforded protection under the Magnuson-Stevens Act of 1996 (16 U.S.C 1801 et seq.).

14.0 Regulatory Approvals

Section 404: Application is hereby made for a USACE Individual 404 Permit as required for the above-described activities.

Section 10: Application is hereby made for USACE authorization under Section 10 of the Rivers and Harbors Act as required for the above-described activities

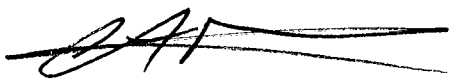
Section 401: We are requesting a Section 401 Water Quality Certification and Neuse Riparian Buffer Authorization from NCDWR. We are providing this application to the NCDWR, for their approval.

N.C. Coastal Area Management Act: A CAMA Major Development Permit is also required for the section of the project in Craven County, specifically the crossing of the White Oak River due to impacts to Public Trust Area and Public Trust Shoreline Areas of Environmental Concern. Authorization to debit the $475 Permit Application Fee from WBS Element 34442.1.3 is hereby given.

A copy of this permit application and its distribution list will be posted on the NCDOT website at: https://connect.ncdot.gov/resources/Environmental/

If you have any questions or need additional information, please contact Gordon Cashin at 919-707-6107 or gcashin@ncdot.gov.

Sincerely,



for Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

cc:

NCDOT Permit Application Standard Distribution List.

U.S. ARMY CORPS OF ENGINEERS

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 31-AUGUST-2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Richard Middle - W. Last - Hancock, P.E.	First - Middle - Last -
Company - NCDOT - PDEA	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS:	**9. AGENT'S ADDRESS:**
Address- 1598 Mail Service Center	Address-
City - Raleigh State - NC Zip - 27699 Country - USA	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	**10. AGENTS PHONE NOs. w/AREA CODE**
a. Residence b. Business 919-707-6107 c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

R-2514 B, C & D

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
White Oak River, Goshen Branch, Trent River, Deep Gully & tribs.	Address N/A
15. LOCATION OF PROJECT Latitude: ◦N 34.906092 Longitude: ◦W -77.231402	City - State- Zip-

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE
See attached cover letter

18. Nature of Activity (Description of project, include all features)
US 17 improvements from Belgrade to New Bern Bypass. See attached cover letter.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)
See attached cover letter.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge
Land clearing, grading, filling and utility relocations due to road and bridge construction.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
See attached cover letter & permit drawings		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)
Acres See attached cover letter & permit drawings
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)
See attached cover letter

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See list provided via email

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
for RICHARD. W. HANCOCK, PE	11-3-2014		

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

DCM MP-1

APPLICATION for Major Development Permit

(last revised 12/27/06)

North Carolina DIVISION OF COASTAL MANAGEMENT

1. Primary Applicant/ Landowner Information

Business Name: North Carolina Department Of Transportation		Project Name (if applicable): R-2514B	
Applicant 1: First Name: Richard	MI: W.	Last Name: Hancock, PE	
Applicant 2: First Name:	MI:	Last Name:	
If additional applicants, please attach an additional page(s) with names listed.			
Mailing Address: NCDOT-PDEA, 1548 Mail Service Center		PO Box:	City: Raleigh / State: NC
ZIP: 27699 1548	Country:	Phone No.: 919 - 707 - 6107 ext.	FAX No.: - -
Street Address *(if different from above)*		City:	State: / ZIP: -
Email: gcashin@ncdot.gov			

2. Agent/Contractor Information

Business Name:			
Agent/ Contractor 1: First Name:	MI:	Last Name:	
Agent/ Contractor 2: First Name:	MI:	Last Name:	
Mailing Address:		PO Box:	City: / State:
ZIP:		Phone No. 1: - - ext.	Phone No. 2: - - ext.
FAX No.:		Contractor #:	
Street Address *(if different from above)*		City:	State: / ZIP: -
Email:			

<Form continues on back>

3. Project Location

County (can be multiple)	Street Address	State Rd. #
Onslow Jones		US 17

Subdivision Name	City	State	Zip
			-

Phone No.	Lot No.(s) *(if many, attach additional page with list)*
- - ext.	, , , ,

a. In which NC river basin is the project located?	b. Name of body of water nearest to proposed project
White Oak	White Oak River
c. Is the water body identified in (b) above, natural or manmade? ☒Natural ☐Manmade ☐Unknown	d. Name the closest major water body to the proposed project site. White Oak River
e. Is proposed work within city limits or planning jurisdiction? ☐Yes ☒No	f. If applicable, list the planning jurisdiction or city limit the proposed work falls within.

4. Site Description

a. Total length of shoreline on the tract (ft.)	b. Size of entire tract (sq.ft.)
400	300,000
c. Size of individual lot(s) N/A, , , *(If many lot sizes, please attach additional page with a list)*	d. Approximate elevation of tract above NHW *(normal high water)* or NWL *(normal water level)* 7' ☐NHW or ☒NWL

e. Vegetation on tract
Forested: red maple, royal fern, cinnamon fern, lizard's tail

f. Man-made features and uses now on tract
N/A

g. Identify and describe the existing land uses <u>adjacent</u> to the proposed project site.
Forested

h. How does local government zone the tract?	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable) ☐Yes ☐No ☒NA
Onslow County: Rural agriculture; Jones County: Agriculture-Residential & Rural Conservation	

j. Is the proposed activity part of an urban waterfront redevelopment proposal? ☐Yes ☒No

k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. ☒Yes ☐No ☐NA

If yes, by whom? NCDOT, ESI

l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? ☐Yes ☒No ☐NA

<Form continues on next page>

m. (i) Are there wetlands on the site?	☒Yes ☐No
(ii) Are there coastal wetlands on the site?	☐Yes ☒No
(iii) If yes to either (i) or (ii) above, has a delineation been conducted? *(Attach documentation, if available)*	☒Yes ☐No
n. Describe existing wastewater treatment facilities. N/A	
o. Describe existing drinking water supply source. N/A	
p. Describe existing storm water management or treatment systems. N/A	

5. Activities and Impacts

a. Will the project be for commercial, public, or private use?	☐Commercial ☒Public/Government ☐Private/Community
b. Give a brief description of purpose, use, and daily operations of the project when complete. To maintain and improve public transportation.	
c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored. Heavy highway construction equipment.	
d. List all development activities you propose. Land clearing, grading & filling, road & bridge construction	
e. Are the proposed activities maintenance of an existing project, new work, or both?	New Work
f. What is the approximate total disturbed land area resulting from the proposed project?	120 ☐Sq.Ft or ☒Acres
g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of?	☒Yes ☐No ☐NA
h. Describe location and type of existing and proposed discharges to waters of the state. See attached permit drawings	
i. Will wastewater or stormwater be discharged into a wetland?	☒Yes ☐No ☐NA
If yes, will this discharged water be of the same salinity as the receiving water?	☐Yes ☐No ☐NA
j. Is there any mitigation proposed? If yes, attach a mitigation proposal.	☒Yes ☐No ☐NA

<Form continues on back>

6. Additional Information

In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.

a. A project narrative.

b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.

c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.

d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.

e. The appropriate application fee. Check or money order made payable to DENR.

f. A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail. Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management.

Name See attached landowner letters Phone No.

Address

Name Phone No.

Address

Name Phone No.

Address

g. A list of previous state or federal permits issued for work on the project tract. Include permit numbers, permittee, and issuing dates.

N/A

h. Signed consultant or agent authorization form, if applicable.

i. Wetland delineation, if necessary.

j. A signed AEC hazard notice for projects in oceanfront and inlet areas. *(Must be signed by property owner)*

k. A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A 1-10), if necessary. If the project involves expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

7. Certification and Permission to Enter on Land

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to the conditions and restrictions contained in the permit.

I certify that I am authorized to grant, and do in fact grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

Date 11-3-2014 for Print Name RICHARD W. HANCOCK

Signature

Please indicate application attachments pertaining to your proposed project.

☒DCM MP-2 Excavation and Fill Information ☒DCM MP-5 Bridges and Culverts

☐DCM MP-3 Upland Development

☐DCM MP-4 Structures Information

Form DCM MP-2

EXCAVATION and FILL

(Except for bridges and culverts)

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

Describe below the purpose of proposed excavation and/or fill activities. **All values should be given in feet.**

	Access Channel (NLW or NWL)	Canal	Boat Basin	Boat Ramp	Rock Groin	Rock Breakwater	Other (excluding shoreline stabilization)
Length							
Width							
Avg. Existing Depth					NA	NA	
Final Project Depth					NA	NA	

1. *EXCAVATION*

☒ *This section not applicable*

a. Amount of material to be excavated from below NHW or NWL in cubic yards. _____

b. Type of material to be excavated. _____

c. (i) Does the area to be excavated include coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☐WL _____ ☐None

(ii) Describe the purpose of the excavation in these areas: _____

d. High-ground excavation in cubic yards. _____

2. *DISPOSAL OF EXCAVATED MATERIAL*

☒ *This section not applicable*

a. Location of disposal area. _____

b. Dimensions of disposal area. _____

c. (i) Do you claim title to disposal area?

☐Yes ☐No ☐NA

(ii) If no, attach a letter granting permission from the owner.

d. (i) Will a disposal area be available for future maintenance?

☐Yes ☐No ☐NA

(ii) If yes, where? _____

e. (i) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☐WL _____ ☐None

(ii) ~~Describe the purpose of disposal in these areas:~~ _____

f. (i) Does the disposal include any area in the water?

☐Yes ☐No ☐NA

~~(ii) If yes, how much water area is affected?~~ _____

3. SHORELINE STABILIZATION

☐ *This section not applicable*

(If development is a wood groin, use MP-4 – Structures)

a. Type of shoreline stabilization:
☐Bulkhead ☒Riprap ☐Breakwater/Sill ☐Other: _____

b. Length: 118 ft.
Width: _____

c. Average distance waterward of NHW or NWL: 2 ft.

d. Maximum distance waterward of NHW or NWL:

e. Type of stabilization material:
Class II Rip Rap

f. (i) Has there been shoreline erosion during preceding 12 months?
☐Yes ☐No ☒NA
(ii) If yes, state amount of erosion and source of erosion amount information.

g. Number of square feet of fill to be placed below water level.
Bulkhead backfill _____ Riprap _____
Breakwater/Sill _____ Other _____

h. Type of fill material.

i. Source of fill material.
To be determined by contractor

4. OTHER FILL ACTIVITIES

☒ *This section not applicable*

(Excluding Shoreline Stabilization)

a. (i) Will fill material be brought to the site? ☐Yes ☐No ☐NA
If yes,
(ii) Amount of material to be placed in the water _____
(iii) Dimensions of fill area _____
(iv) Purpose of fill

b. (i) Will fill material be placed in coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.
☐CW _____ ☐SAV _____ ☐SB _____
☐WL _____ ☐None
(ii) Describe the purpose of the fill in these areas:

5. GENERAL

a. How will excavated or fill material be kept on site and erosion controlled?

b. What type of construction equipment will be used (e.g., dragline, backhoe, or hydraulic dredge)?

c. (i) Will navigational aids be required as a result of the project?
☐Yes ☐No ☐NA
(ii) If yes, explain what type and how they will be implemented.

d. (i) Will wetlands be crossed in transporting equipment to project site? ☐Yes ☐No ☐NA
(ii) If yes, explain steps that will be taken to avoid or minimize environmental impacts.

11-3-2014
Date

for RICHARD W. HANCOCK
Applicant Name

Applicant Signature

R-2514B
Project Name

Form DCM MP-5

BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

1. BRIDGES

☐ *This section not applicable*

a. Is the proposed bridge:
☐Commercial ☒Public/Government ☐Private/Community

b. Water body to be crossed by bridge:
White Oak River (1160 ft.)

c. Type of bridge (construction material):
Prestressed Concrete Girders

d. Water depth at the proposed crossing at NLW or NWL:
4.1 ft. (White Oak River)

e. (i) Will proposed bridge replace an existing bridge? ☐Yes ☒No
If yes,
(ii) Length of existing bridge: _____
(iii) Width of existing bridge: _____
(iv) Navigation clearance underneath existing bridge: _____
(v) Will all, or a part of, the existing bridge be removed? (Explain)

f. (i) Will proposed bridge replace an existing culvert? ☐Yes ☒No
If yes,
(ii) Length of existing culvert: _____
(iii) Width of existing culvert: _____
(iv) Height of the top of the existing culvert above the NHW or NWL: _____
(v) Will all, or a part of, the existing culvert be removed? (Explain)

g. Length of proposed bridge: 1160 ft.

h. Width of proposed bridge: 2@38 ft.

i. Will the proposed bridge affect existing water flow? ☒Yes ☐No
If yes, explain: As water surface rises with large storm events, bents will be in the water. Approximately 1850' of fill is in the 100 year floodplain.

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ☐Yes ☒No
If yes, explain:

k. Navigation clearance underneath proposed bridge: 15.7 ft.

l. Have you contacted the U.S. Coast Guard concerning their approval? ☒Yes ☐No
If yes, explain: A request for Advance Approval was submitted on October 8, 2014

m. Will the proposed bridge cross wetlands containing no navigable waters? ☐Yes ☒No
If yes, explain:

n. Height of proposed bridge above wetlands: 13.7 ft.

2. CULVERTS

☒ *This section not applicable*

a. Number of culverts proposed: _____

b. Water body in which the culvert is to be placed:

< Form continues on back>

c. Type of culvert (construction material):

_____

d. (i) Will proposed culvert replace an existing bridge? ☐Yes ☐No

If yes,

(ii) Length of existing bridge: _____

(iii) Width of existing bridge: _____

(iv) Navigation clearance underneath existing bridge: _____

(v) Will all, or a part of, the existing bridge be removed?

(Explain) _____

_____

_____

e. (i) Will proposed culvert replace an existing culvert? ☐Yes ☐No

If yes,

(ii) Length of existing culvert(s): _____

(iii) Width of existing culvert(s): _____

(iv) Height of the top of the existing culvert above the NHW or NWL: _____

(v) Will all, or a part of, the existing culvert be removed?

(Explain) _____

_____

_____

f. Length of proposed culvert: _____

g. Width of proposed culvert: _____

h. Height of the top of the proposed culvert above the NHW or NWL.

_____

i. Depth of culvert to be buried below existing bottom contour.

_____

j. Will the proposed culvert affect navigation by reducing or increasing the existing navigable opening? ☐Yes ☐No

If yes, explain: _____

_____

_____

k. Will the proposed culvert affect existing water flow? ☐Yes ☐No

If yes, explain: _____

_____

_____

3. EXCAVATION and FILL

☐*This section not applicable*

a. (i) Will the placement of the proposed bridge or culvert require any excavation below the NHW or NWL? ☐Yes ☒No

If yes,

(ii) Avg. length of area to be excavated: _____

(iii) Avg. width of area to be excavated: _____

(iv) Avg. depth of area to be excavated: _____

(v) Amount of material to be excavated in cubic yards: _____

b. (i) Will the placement of the proposed bridge or culvert require any excavation within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☐WL _____ ☐None

(ii) Describe the purpose of the excavation in these areas: _____

_____

_____

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be excavated: 28 ft

(iii) Avg. width of area to be excavated: 100 ft.

(iv) Avg. depth of area to be excavated: 2 ft.

(v) Amount of material to be excavated in cubic yards: 396 cy

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: To be determined by contractor

(ii) Dimensions of the spoil disposal area: N/A

(iii) Do you claim title to the disposal area? ☐Yes ☐No *(If no, attach a letter granting permission from the owner.)*

(iv) Will the disposal area be available for future maintenance? ☐Yes ☐No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

☐CW ☐SAV ☐WL ☐SB ☐None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL? ? ☐Yes ☐No

If yes, give dimensions if different from (ii) above.

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed below NHW or NWL? ☐Yes ☒No

If yes,

(ii) Avg. length of area to be filled: _____

(iii) Avg. width of area to be filled: _____

(iv) Purpose of fill:

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB _____

☒WL 872 ☐None

(ii) Describe the purpose of the excavation in these areas:

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item **d** above) to be placed on high-ground? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be filled: 1850 ft.

(iii) Avg. width of area to be filled: 180 ft.

(iv) Purpose of fill: Proposed Roadway

4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines? ☒Yes ☐No

If yes, explain: See attached utility narrative

b. Will the proposed project require the construction of any temporary detour structures? ☐Yes ☒No

If yes, explain:

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

< Form continues on back>

c. Will the proposed project require any work channels?

☐Yes ☒No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

Use of Standard NCDOT Best Management Practices and erosion control measures.

e. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?

Heavy highway construction equipment.

f. Will wetlands be crossed in transporting equipment to project site?

☒Yes ☐No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

Temporary work bridges.

g. Will the placement of the proposed bridge or culvert require any shoreline stabilization? ☐Yes ☒No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

Date 11-3-2014

Project Name R-2514B

Applicant Name for RICHARD W. HANCOCK

Applicant Signature

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

November 19, 2012

To: Thomas Steffens, Travis Wilson, Steve Sollod, Jim Speer, Ed Eatmon, Omar Azizi, David Harris, Gary Jordan, Chris Militscher, David Wainwright, Jackson Provost, Chris Rivenbark, Brian Yamamoto

From: Paul Atkinson, PE
Project Manager – TIP East

Subject: **Minutes of the Interagency Hydraulic Design Review "4B" Meeting for R-2514B**: US 17 From South of Belgrade at SR 1330/SR 1439 to North of Maysville.

The "4B" Meeting for R-2514B was held on October 11, 2012 from 9:00 AM to 10:00 AM in the NCDOT Structure Design Conference Room C, at the Century Center Complex in Raleigh, NC. The following were in attendance:

Participants:

Team Members
Paul Atkinson, NCDOT Hydraulics (Present)
Thomas Steffens, USACE (Present)
Gary Jordan, USFWS (Present)
Travis Wilson, NCWRC (Absent)
Chris Militscher, EPA (Absent)
Steve Sollod, NCDCM (Present)
David Wainwright, DWQ (Present)

Support Staff
Jim Speer, Roadway Design (Present)
Jackson Provost, Division 3 (Present)
Ed Eatmon, Division 2 (Present)
Chris Rivenbark, PDEA-NES (Present)
Omar Azizi, Structures (Absent)
Brian Yamamoto, PDEA (Absent)
David Harris, Roadside (Absent)

Other Attendees
Mark Pierce, PDEA (Present)
Mark Staley, NCDOT-REU (Present)
Gordon Cashin, NCDOT-NES (Present)
Tim Coggins, Structures (Present)
Christopher Lewis, Hydraulics (Present)
Stonewall Mathis, Division 3 (Present-Phone

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LOCATION:
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BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC

The 4B meeting began with Paul Atkinson (NCDOT) giving a brief overview of the project and that he would go through the project sheet by sheet.

Sheet 4:

Wetland 241: There is a small portion of wetland impacted by the proposed fill slope at approximately -L- Sta. 23+00 RT. Hydraulics is proposing ending a ditch at the wetland boundary without any additional impacts to the wetland. There were no comments associated with this wetland.

Sheet 5:

Wetland 241: The edge of this wetland is being impacted by the proposed fill slope in the wetland from -L- Sta. 23+00 to 28+50 RT. Hydraulics is proposing ending a ditch at the wetland boundary without any additional impacts to the wetland. There were no comments associated with this wetland. This site is a continuation of the previous sheet.

Wetland 242: This is a total take of this wetland due to fill from the -L- alignment. There were no comments associated with this wetland.

Sheet 6:

Wetland 2: There were no comments associated with this wetland and no impacts are anticipated.

Sheet 7:

Wetland 30: No impacts are anticipated with this wetland.

Wetland 31: Division 2 asked whether the proposed ditch should end at the wetland boundary. Hydraulics stated that the proposed ditch is tying into an existing ditch that goes through the wetland currently.

Wetland 32: USACE requested that Hydraulics avoid ditching through this wetland which is surrounded by the new -L- and -Y1- alignments and the existing US 17. Hydraulics will investigate ending the ditch at the wetland boundary.

Sheet 8:

Wetland 27: This is a large wetland that is being divided by the -L- alignment. Hydraulics is proposing two 36" RCP Equalizer Pipes without headwalls that are not to be buried to allow water to flow freely between the wetlands. USACE requested that Hydraulics include the rip rap at the median drainage outlet in the wetland at -L- Sta. 74+27 RT as permanent impacts.

Sheet 9:

No impacts/comments.

Sheet 10:

Wetland 26: This wetland is crossed by both the -L- and -Y2A- alignments. Hydraulics proposed the use of toe protection in the wetland at approximately -Y2A- Sta. 30+50 to 31+40 RT. and -L- Sta. 99+50 to 101+25 LT. USACE requested for ditches to end before reaching the wetlands instead of ditching through the wetland as Hydraulics had proposed. USACE asked for bank stabilization at bend in Cotman's Branch at outlet of 60" RCP cross pipe under -Y2A- Sta. 31+50.

Sheet 11:

No impacts/comments.

Sheet 12:

Wetland 22: This wetland site is being impacted by fill from the new alignment of -Y2D-. There were no comments associated with this wetland site.

Wetland 24: This wetland site is impacted by the cut from the -L- alignment and the fill from the -Y2D- alignment. Hydraulics is proposing ending a ditch at the wetland boundary with no additional impacts. USACE requested that the wetland would be a total take between the two alignments. It was agreed that these impacts would be reflected as a total take of the sliver between the two alignments at -L- Sta. 129+00 RT.

Sheet 13:

Wetland 44: This is a wetland site that is being impacted by fill from the -L- alignment. There were no comments associated with these impacts.

Wetland 245: This wetland is a drainage ditch that is crossed by the -L- alignment. Hydraulics is proposing a cross pipe at this location. Hydraulics has also proposed ending a ditch at the wetland boundary, but not causing any additional impacts. There were no comments associated with this wetland site.

Sheet 14:

Wetland 45: This site involves Higgin's Branch which is jurisdictional. The stream is being spanned with a bridge of yet to be determined length. The impacts will be due to the piers and rip rap at the end abutments of the proposed bridge. This large wetland is crossed three times by the proposed alignment. Hydraulics is proposing two 36" RCP equalizer pipes to be installed. USACE and Division 2/3 requested that equalizer pipes not be buried and that the equalizer pipe at -L- centerline Sta. 158+00 have a reduced skew. Division 3 also mentioned there being a safety issue with pipes extending out beyond the fill. Hydraulics will reexamine the skew angle of the equalizer pipes.

Sheet 15:

Wetland 42: This wetland site is being impacted by the fill from the proposed alignment at Sta. 163+00 RT. Hydraulics is proposing day-lighting two ditches into this wetland from either side. There were no comments associated with this wetland.

Wetland 45: This site is continued from the previous sheet.

Wetland 46: This site involves the White Oak River which is jurisdictional. The river will be spanned with a bridge of yet to be determined length. The impacts will be due to the piers and possibly the rip rap at the abutments of the proposed bridge. USACE asked if lengthening the bridge would affect the roadway grade, which Roadway stated that it would not have an effect. PDEA stated that the proposed bridge is already 30' longer than the previously-agreed length.

Sheet 16:

Wetland 46: This site continues from the previous sheet. DWQ asked about bridge drainage to which Hydraulics said that deck drains would not discharge directly into the water.

Sheet 17:

No impacts/comments.

Sheet 18:

Stream W21: This stream is a large jurisdictional stream that is crossed several times by the proposed alignment. Hydraulics is proposing realigning the stream where it is impacted by the proposed fill slope. Where the alignment of -Y3A- crosses the stream, Hydraulics is proposing a cross pipe at this location. There will be rip rap protection at the outlet of the cross pipe. USACE requested that headwalls be placed on the cross pipe no matter the size. DWQ was concerned with the slope of the stream realignment. Hydraulics will design the slopes to match existing conditions where possible.

Sheet 19:

Stream W21: This is a continuation of the site from the previous sheet. On this portion of W21, the proposed roadway alignment completely covers the stream requiring realignment. DWQ asked that the cross pipe at -L- centerline Sta. 220+00 have the skew improved to prevent an abrupt angle into the ditch at the outlet. USACE asked about the size of the cross pipe. Hydraulics has yet to determine the size of the cross pipe, and will also investigate the possibility of improving the skew of the pipe. Hydraulics also proposed rip rap at the toe of fill in the channel, -L- Sta. 215+50, to stabilize the banks where the existing channel is being filled and the new channel ties back in to the existing.

Sheet 20:

Stream W21: This is a continuation of the site from the previous sheets.
Wetland 49: This wetland is being crossed by the proposed alignment. There are no hydraulic structures involved with this site on this project which adjoins R-2514C. There were no comments associated with this site.

Sheet 21:

No impacts/comments.

Sheet 22:

Wetland 26: This site is the continuation of a site from sheet 10. This site involves a jurisdictional stream. The stream and wetland are being impacted by the fill from the proposed alignment. Hydraulics is proposing a realignment of the stream where it is cut off by the proposed roadway fill. USACE requested that Hydraulics armor the bank of the stream at the location of fill, to which Hydraulics noted that the armor had gotten erased during revisions and rip rap was added to the plans at the meeting.

Sheet 23:

USACE noted that there is a conflict with flow arrows located in a non-jurisdictional stream. Hydraulics will investigate further.

General Comments:

USACE requested a copy of the Hydraulics proposed drainage plans used during the 4B meeting. Copies were provided to participants by email on 10/12/12.
DWQ asked for grass lined ditches to be used if possible.

PA/crl

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 27, 2014

To: Thomas Steffens, Travis Wilson, Steve Sollod, Jim Speer, Ed Eatmon, Brian Yamamoto, David Harris, Gary Jordan, Chris Militscher, David Wainwright, Jackson Provost, Chris Rivenbark, Ron Lucas, Stephen Lane

From: Paul Atkinson, PE
Project Manager – TIP East

Subject: **Final Meeting Minutes of the Permit Drawing Review "4C" Meeting for R-2514B:** US 17 from South of Belgrade at SR 1330/SR 1439 to North Maysville.

The "4C" Meeting for R-2514B was held on February 20, 2014 from1:00 PM to 2:00 PM in the NCDOT Hydraulic Design Conference Room at the Century Center Complex in Raleigh, NC. The following were in attendance.

Participants:

Team Members
Paul Atkinson, NCDOT Hydraulics (Present)
Thomas Steffens, USACE (Present)
Gary Jordan, USFWS (Present)
Travis Wilson, NCWRC (Present)
Steve Sollod, NCDCM (Present)
David Wainwright, NCDWR (Present)
Chris Militscher, EPA (Absent)
Stephen Lane, NCDCM (Present)
Ron Lucas, FHWA (Absent)

Support Staff
Jim Speer, Roadway Design (Present)
Jackson Provost, Division 3 (Present)
Ed Eatmon, Division 2 (Present)
Chris Rivenbark, PDEA-NES (Present)
David Harris, NCDOT-REU (Absent)
Brian Yamamoto, PDEA (Present)

Other Attendees
John Lansford, Roadway Design (Present)
Sonia Carrillo, NCDWR (Present)
Paul Harris, NCDOT-NES (Present)
Erik Seiler, NCDOT Hydraulics (Present)
Christopher Lewis, NCDOT Hydraulics (Present)
Gordon Cashin, PDEA-NES (Present)
Terry Clelland, NCDOT-SMU (Present)
Mark Staley, NCDOT-REU (Present)
David Candela, Division 3 (Present)

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LOCATION:
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RALEIGH NC

The 4C meeting began with Paul Atkinson (NCDOT-Hydraulics) giving a brief introduction of the project and handing out permit sheets that had changed since the original drawings had been posted, including the showing of work bridges. Paul went through the permit drawings, discussing each permit site by plan sheet. Specific comments are listed below by roadway plan sheet number.

Sheet 4-6:

No comments

Sheet 7:

Paul Atkinson stated that Site 3 in the 4B meeting was originally planned to have a ditch through the wetlands and it was asked if the ditch could be moved. Paul confirmed that the ditch was shifted outside of the wetlands and no longer runs through it. In addition, Site 4 also had a ditch that originally ran through the wetlands in the 4B plans and Paul confirmed that the ditch was also shifted outside of the wetlands.

Sheet 10:

Paul Atkinson stated, for Site 6, there were two ditches that originally were shown running through the wetlands in the 4B meeting to which USACE requested that Hydraulics avoid ditching through the wetlands. Hydraulics replaced the ditches with toe protection to prevent erosion of the fill material in the final design. In addition, Paul mentioned that bank stabilization was added to both ends of the pipes.

Sheet 12:

No comments

Sheet 13:

Paul Atkinson stated, for Site 9, the pipe is not buried 1' because it is not in a jurisdictional stream. Tom Steffens (USACE) asked if impacts were calculated to include inlet and outlet structures on the 48" pipe. Paul Atkinson said that the rip rap pad was counted as permanent and some temporary impacts beyond that.

Sheet 14:

David Wainwright (NCDWR) asked what the difference was for Site 10 in the updated drawings compared to what was in the original drawing. Christopher Lewis (NCDOT-Hydraulics) said that the only change was that the updated drawing shows the temporary work bridge. Steve Sollod (NCDCM) asked if that could be updated online as well. Paul Atkinson said that the permit package would be updated online and everyone would be notified when the changes are available.

Sheet 15 & 16:

Paul Atkinson stated that in the 4B meeting, Hydraulics anticipated the need for deck drains, but was able to eliminate the need for deck drains during final design for the bridges over the White Oak River and Higgins' Branch.

Sheet 18:

Paul Atkinson asked if the drawing showing "Permanent Surface Water Impacts" is correct for Site 13 as shown. Tom Steffens said to call it permanent impacts due to the amount of work being done. There was then a group discussion about the relocation of the canal at Site 13. A conclusion was drawn that where there is pipe or rip rap permanent impacts should be shown and if there is no pipe or rip rap , and the new channel has similar geometry to the existing, those impacts should be counted as relocation in a note on the Wetland Impact Summary Sheet.

Sheet 19

David Wainwright asked if the 18" and 84" pipes that meet at the ditch at Site 14 have high velocities and if so, would that be a cause of concern for scour. Chris Lewis said that there should not be any issues with the velocities at the outlets of the pipes. The 18" pipe is replacing an existing 15" Corrugated Metal Pipe which currently trickles out water. In addition, the 84" pipes are laid extremely flat and function more for water storage.

Sheet 20-21:

No comments

Sheet 22:

Chris Rivenbark (PDEA-NES) posed the question to the group about counting impacts at Site 16 as relocation. It was decided that the impacts should be counted as permanent impacts due to one bank being lined with rip rap.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

June 28, 2012

To:
Brian Yamamoto
Chris Militscher
Chris Rivenbark
David Wainwright
David Harris
Ed Eatmon
Gary Jordan
Jim Speer
Omar Azizi
Ron Lucas
Steve Sollod
Travis Wilson
Thomas Steffens

From: John W. Twisdale, Jr., PE
Assistant State Hydraulics Engineer - TIP

Subject: **Draft Minutes from the Hydraulic Design Review "4B" Meeting** for R-2514C: US 17 from North of Maysville to South of NC 58 in Jones County.

The "4B" Meeting for R-2514C was held on June 20, 2012 from 11:00 AM to 12:30 PM at the NCDOT Hydraulics Unit Conference Room at the Century Center Complex in Raleigh, NC. The following were in attendance:

Team Members:
Thomas Steffens, USACE (PRESENT)
Gary Jordan, USFWS (PRESENT)
Travis Wilson, NCWRC (PRESENT)
Steve Sollod, NCDCM (PRESENT)
David Wainwright, NCDWQ (PRESENT)
Chris Militscher, EPA (PRESENT)
Ron Lucas, FHWA (ABSENT)
Jay Twisdale, NCDOT Hydraulics (PRESENT)

Support Staff:
David Harris, NCDOT REU (ABSENT)
Jim Speer, NCDOT Roadway (PRESENT)
Omar Azizi, NCDOT Structures (PRESENT)
Brian Yamamoto, NCDOT PDEA (ABSENT)
Chris Rivenbark, NCDOT NES (PRESENT)
Ed Eatmon, NCDOT Division (PRESENT)

Participants:
Amy Simes, NCDENR (PRESENT)
Karen Compton, USFS (PRESENT)
Art McMillan, NCDOT Hydraulics (PRESENT)
Brook Anderson, NCDOT Hydraulics (PRESENT)
Rachel Evans, NCDOT Hydraulics (PRESENT)
Danny Gardner, NCDOT Roadway (PRESENT)
Travis Potts, NCDOT Roadway (PRESENT)
Gordon Cashin, NCDOT NES (PRESENT)
Mark Pierce, NCDOT PDEA (PRESENT)
Mark Staley, NCDOT REU (PRESENT)

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Meeting Minutes

The meeting was conducted by Jay Twisdale, NCDOT Hydraulics Unit. He began the meeting with introductions and a brief overview of the project. He stated that the design is at 30% completeness and that the conceptual drainage design has been reflected with a lateral 3 foot base ditch that has a 5 foot berm. Jay continued the meeting by discussing the drainage layout on each plan sheet with an emphasis on jurisdictional sites and wetland areas. Below are the specific comments and discussions for each plan sheet.

Sheet 4-8

Jay Twisdale stated that the intent of the drainage design is to maintain existing drainage patterns and to minimize wetland impacts. He noted that this section of the project has a conceptual design reflected as a lateral 3 foot base ditch with a 5 foot berm on the western side of the project in order to reestablish the existing drainage pattern in that area. He also noted that the Croatan National Forest is directly adjacent to the eastern side of the project at this section of the project. He stated that there are no proposed ditches along the eastern side to minimize wetland impacts.

Sheet 9

Jay Twisdale stated that this plan sheet is similar to the previous five plan sheets. He mentioned that there was a transition in this area to a v ditch. He also stated that there are no proposed ditches on the eastern side of the project to minimize impacts to the wetlands that are part of the Croatan National Forest. He also mentioned that there will be some proposed ditch work on the western side of the project at the tie-in for –DRV2A- in order to maintain existing drainage flows of those ditches associated with the privately owned drive.

Tom Steffens asked if the ditches on the western side would really be causing the impacts as represented on the plans. Jay Twisdale responded that the design has not been completed and that he anticipates that wetland impacts will be less. It was agreed that the actual wetland impacts will be reviewed during the permit review.

Travis Wilson expressed his concerns over the controlled access and animal fence limits. He stated that the current fence schematic could cause animals to be trapped on the roadway due to the western side fencing being shorter than the eastern side. He stated that he wants both sides to be the same length and in line with each other. Travis Wilson recommended that for safety reasons the eastern side fencing be shortened to match the proposed western side fencing length. Karen Compton agreed with him that this was the best option considering that the western side could not be extended.

Sheet 10

Jay Twisdale stated that there are no proposed ditches on either side of the road to minimize wetland impacts in this area. He also stated that the existing privately owned road on the western side of the project has roadside ditches that are functioning and flowing away from the project fill.

Someone posed a question concerning access for the fill slope which is shown outside of the proposed right of way and control access fence at the Croatan National Forest. Mark Pierce responded that he was certain that we have access to the fill slope. Karen Compton agreed.

Sheet 11

Jay Twisdale stated that there are no proposed ditches on the eastern side of the project in order to minimize wetland impacts. He also stated that proposed ditches will be picked up again on the western side in order to maintain existing drainage patterns.

Mark Pierce requested that Omar Azizi discuss the wildlife crossing. Mark also stated that he believes that what has been designed far exceeds the original commitment. Omar Azizi stated

that the crossing will be 120 feet in length from fill face to fill face and exceeds the minimum 60 foot requirement from toe of fill to toe of fill. Mark Pierce added that the actual toe of fill to toe of fill distance will be approximately 75-80 feet. Jay Twisdale asked what the vertical clearance of the structure will be. Omar Azizi responded that it will be 10 feet.

Sheet 12

Jay Twisdale stated that this plan sheet was similar to previous. He stated that there are no proposed ditches on the eastern side of the project in order to minimize wetland impacts. He also stated that proposed ditches will be continued on the western side in order to maintain existing drainage patterns. He mentioned that this is where the completed design begins and that details are shown for clarification.

Travis Wilson had same comment for fences and recommended that the eastern side fencing be shortened to match the proposed western side fencing length.

David Wainwright asked why the 36" RCP was being buried 0.5 feet especially since it was not in a jurisdictional area. Steve Sollod made the comment that this was not a CAMA county. Brook Anderson responded that it was designed to be buried because wetlands were present. There was some discussion over it needing to be buried and Jay Twisdale agreed that the pipe could be raised.

Sheet 13

Jay Twisdale stated that this plan sheet was similar to previous. He stated that there are no proposed ditches on the eastern side of the project in order to minimize wetland impacts. He also stated that proposed ditches will be continued on the western side in order to maintain existing drainage patterns.

Tom Steffens asked about the dimensions and depths of the proposed ditches. Brook Anderson responded that the topography is very flat and that the proposed ditches have similar slope, depth, and capacity of existing ditches. Tom Steffens asked if there will be outlet protection at the ends of pipes. Jay Twisdale responded that there will be rip rap outlet protection.

Sheet 14

Jay Twisdale stated that this plan sheet was similar to previous pages. He stated that proposed ditches will be continued on the western side in order to maintain existing drainage patterns. He also stated that this page is where the wetlands end and proposed ditches would begin on the eastern side of the project at the edge of the Blue Rock Structures property line. Steve Sollod asked if this ditch was tying to an existing ditch. Brook Anderson confirmed that the proposed ditch picks up the existing ditch that runs along the property line and conveys this flow down the proposed ditch which maintains existing drainage flow.

David Wainwright brought up that the drainage divide between the White Oak and the Neuse River basins was located approximately in the middle of this plan sheet.

Sheet 15

Jay Twisdale stated that on this plan sheet proposed ditches will be used to maintain existing drainage patterns. Ditches will not be used in wetlands on the eastern side to minimize wetland impacts. No other comments were made.

Sheet 16

Jay Twisdale stated that on this plan sheet proposed ditches are being used to maintain existing drainage patterns. He stated that there will be a channel change to the jurisdictional stream at approximately station 182+00 right. Tom Steffens was concerned that the pipe located near the

channel change would be capturing the flow of the jurisdictional stream and re-routing it across the roadway to the western side of the project. Jay Twisdale responded that the invert elevations of the pipe are set to prevent that. The pipes inverts allow for positive drainage and prevent backflow from the jurisdictional stream. He also mentioned the pipe at approximately station 181+00 and the one located at approximately 173+00 would work in parallel to convey water to the jurisdictional stream and away from the roadway.

David Wainwright requested that the buffer zones be arched at the beginning of the jurisdictional stream. Brook Anderson commented that we usually stop the buffer zones at the toe of fill. Chris Rivenbark commented that arched buffer zones were done in the past but currently we do not do it; he also stated that even if the buffer zone is arched around the beginning of the jurisdictional stream those areas beyond the toe of fill would be exempt. After some discussion, Jay Twisdale agreed to arch the buffer zone around the end of the jurisdictional stream.

David Wainwright expressed his concerns about the channel relocation of the jurisdictional stream and the rip rap used to line the side slopes. He asked if it was possible to shorten the impacts to this section of the stream. Jay Twisdale responded that this channel change was designed to minimize impacts. The channel change is located 10 feet from the toe of fill.

Sheet 17

Jay Twisdale stated that on this plan sheet proposed ditches are being used to maintain existing drainage patterns. He stated that there is a jurisdictional stream at station 195+00 right that proposed ditches will be impacting. This stream has vertical side slopes due to wooden retaining walls that have been installed from the existing roadside ditches to some distance (it extends 380 feet) downstream. Jay Twisdale stated that the retaining wall structure will be removed within our right of way and a rip rap lined standard base ditch will be used as a tail ditch to tie into the jurisdictional stream.

David Wainwright requested that the buffer zones be arched at the beginning of the jurisdictional stream. Jay Twisdale agreed to arch the buffer zone 50 feet around the end of the jurisdictional stream.

Tom Steffens is concerned about the 24” CMP located just downstream of the 36” RCP located at station 191+34. Jay Twisdale responded that beyond the right of way line it is the downstream property owner’s obligation to convey water. Tom Steffens asked if this implies that more water was being added to this stream. Brook Anderson and Jay Twisdale confirmed that the water being conveyed to the stream matches the existing drainage patterns.

David Wainwright asked what type of lining will be used in the roadside ditches. Jay Twisdale responded that all roadside ditches will be grass lined. David Wainwright approved of this.

Sheet 18

Jay Twisdale verified that there are no jurisdictional streams or wetlands. No other comments were made.

Sheet 19

Jay Twisdale verified that there are no jurisdictional streams or wetlands. No other comments were made.

Sheet 20

Jay Twisdale verified that there are no jurisdictional streams or wetlands.
Tom Steffens expressed his concern that there was no driveway tie for a property owner near station 226+00 left. Danny Gardner confirmed that there is no driveway tie because this area is controlled access. Mark Pierce commented that there was a driveway tie on the plans earlier in

the planning. Jay Twisdale and Ed Eatmon wrapped up the discussion that this is a matter for right of way and that options for this property include buying the property or providing a service road.

Sheet 21

Jay Twisdale verified that there were no jurisdictional streams or wetlands. No other comments were made.

Sheet 22

Jay Twisdale stated that on this plan sheet proposed ditches will be used to maintain existing drainage patterns and that no ditches will be used in wetlands to minimize impacts. He stated that at the site of the proposed equalizer pipe, which is located in the middle of the wetland, that either the ditches need to continue through the wetland or toe protection should be used on the fill slope. Tom Steffens commented that he would prefer the use of toe protection on the fill slope. He also stated that the equalizer pipe should be sized appropriately and that the ditches should end before the wetlands.

Sheet 23

Jay Twisdale stated that on this plan sheet proposed ditches will be used to maintain existing drainage patterns and that ditches will not be used in wetlands to minimize wetland impacts. Tom Steffens expressed his concern about the proposed ditch on the eastern side of the project impacting a wetland (this is at station 269+40 RT). Jay Twisdale stated that the drainage proposed in this section of the project is still conceptual and has not been designed yet. He also commented that the ditch could be shortened so it would not drain the wetland. Jay Twisdale also stated there appears to be a natural crest at station 270+70 RT and it may be possible to put the ditch crest there draining some water back to the wetland. Tom Steffens stated that he would prefer if the ditch crest occur at that location and allow for some water to drain back to the wetland.

Sheet 24

Jay Twisdale verified that there were no jurisdictional streams or wetlands. No other comments were made.

Sheet 25

Tom Steffens asked if a parallel stream located at the end of the project was a jurisdictional stream. Jay Twisdale, Brook Anderson, and Rachel Evans confirmed that this parallel stream was not a jurisdictional stream, but that it would drain to a perpendicular stream that is a jurisdictional stream and which is located at the beginning of R-2514D. No other comments were made.

Sheet 26

Jay Twisdale stated that on this plan sheet proposed ditches will be used to maintain existing drainage patterns and ditches will not be used in wetlands to minimize wetland impacts. Some discussion arose over the purpose of this driveway upgrade which was separate from the rest of the project. Mark Pierce confirmed that this had been secured with the property owners. Karen Compton confirmed that this was to replace access that will be lost when the project cuts off the existing access via Forest Service Road #204 further north on US 17.

Sheet 27

Jay Twisdale verified that there were no jurisdictional streams or wetlands. No other comments were made.

Discussion on Wildlife Crossings

Gary Jordan brought up the topic of the wildlife crossing. He wanted to clarify whether or not animal fencing was proposed for underneath the wildlife crossing. Jim Speer, Danny Gardner, and Mark Pierce clarified that the fencing was shown on the plans and would continue underneath the crossing and tie into the proposed animal fencing on the opposite side of the roadway.

Travis Wilson requested if larger pipes could be used in the area to aid with wildlife crossings at fill embankments. He stated that these pipes should have micro-topography which means they would need to be backfilled and could not use 36" pipes or smaller. Mark Pierce commented that this has been talked about in the past. He thinks that there should be coordination and guidance on this matter. All are in agreement that the grade should not be raised for these additional pipe crossings. Gary Jordan commented that these pipes are very necessary for the crossings of reptiles and amphibians in these areas, especially wetland areas. He mentioned Dennis Herman as a good resource. Someone mentioned that the Oak Island Project has many good examples of this style of wildlife crossing though there are significant differences between the two facilities.

It was also decided that there should be another meeting to focus on the design of these additional wildlife pipe crossings, specifically spacing, sizing, day lighting, climate/moisture, etc. Those that need to be included in this meeting were specified as Jay Twisdale, Karen Compton, Gary Jordan, Travis Wilson, and Dennis Herman. Danny Gardner agreed to provide pdf files to Hydraulics Unit of the subject area. Consensus was reached that a meeting should be scheduled when the participants would already be in town for another meeting. PDFs of the proposed plans in this area of the project have been sent to Karen Compton, Gary Jordan, and Travis Wilson.

cc: Amy Simes
Karen Compton
Art McMillan
Jay Twisdale
Brook Anderson
Rachel Evans
Danny Gardner
Travis Potts
Gordon Cashin
Mark Pierce
Mark Staley

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 26, 2014

To: Thomas Steffens, Travis Wilson, Steve Sollod, Jim Speer, Ed Eatmon, Omar Azizi, David Harris, Gary Jordan, Chris Militscher, David Wainwright, Ron Lucas, Chris Rivenbark, Brian Yamamoto

From: Paul Atkinson, PE
Project Manager – TIP East

Subject: **Final Minutes of the Permit Drawing Review "4C" Meeting for R-2514C:** US 17 from North of Maysville to South of NC 58 near Pollocksville.

The "4C" Meeting for R-2514C was held on February 20, 2014 from 2:30 PM to 3:30 PM in the NCDOT Hydraulic Design Conference Room at the Century Center Complex in Raleigh, NC. The following were in attendance.

Participants:

Team Members
Paul Atkinson, NCDOT Hydraulics (Present)
Thomas Steffens, USACE (Present)
Gary Jordan, USFWS (Present)
Travis Wilson, NCWRC (Present)
Chris Militscher, EPA (Absent)
Steve Sollod, NCDCM (Present)
David Wainwright, NCDWR (Present)
Ron Lucas, FHWA (Absent)

Support Staff
Jim Speer, Roadway Design (Present)
Brian Yamamoto, PDEA (Present)
Ed Eatmon, Division 2 (Present)
Chris Rivenbark, PDEA-NES (Present)
David Harris, Roadside (Absent)

Other Attendees
Brook Anderson, NCDOT Hydraulics (Present)
Erik Seiler, NCDOT Hydraulics (Present)
Mark Staley, NCDOT-REU (Present)
Gordon Cashin, NCDOT-NES (Present)
Vasim Barudawala, Roadway Design (Present)
Karen Compton, USFS (Phone)
Sonia Carrillo, NCDWR (Present)

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
HYDRAULICS UNIT
1590 MAIL SERVICE CENTER
RALEIGH NC 27699-1590

TELEPHONE: 919-707-6700
FAX: 919-250-4108
WEBSITE: WWW.NCDOT.ORG/DOH/

LOCATION:
CENTURY CENTER COMPLEX
BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC

The 4C meeting began with Paul Atkinson (NCDOT) giving a brief introduction of the project. Paul went through the permit drawings, discussing each permit site by plan sheet. Specific comments are listed below by Roadway plan sheet number.

Sheets 4&5:

No comments

Sheet 6:

Ed Eatmon stated that the pond on parcel 20 may need to be filled for utilities or controlled access fencing. Chris Rivenbark said utility plans are not yet complete. David Wainwright said if the pond was filled, the surface water impact would be non-mitigable and to include footnote on summary sheet.

Sheets 7&8:

No comments

Sheet 9:

There was general discussion concerning the wildlife crossing construction and limits of the wildlife crossing fence. Gary Jordan stated woody debris would not be required in the 48" pipes, only in the larger 72" pipes. Ed Eatmon recommended putting a specification in the contract specifying which pipes are to be backfilled and what type of material is to be used.

Sheets 10-15:

No comments

Sheet 16

There was a group discussion about Site 1 and whether the buffer zones should be arced around the beginning of the stream. The buffers are currently shown ending at the edge of existing transportation facility. The discussion ended with David Wainwright stating he would get back to NCDOT Hydraulics on the topic. It was decided after the meeting that the buffer zone lines will be shown arcing around the end of the pipe but impacts will not be shown under the existing roadway facility.

Sheet 17

David Wainwright stated that Site 19, where the retaining wall is being replaced with rip rap, can be shown as temporary impacts. In addition, he said hatching could be removed from areas within the buffer zone that are already impacted due to existing buildings or concrete/asphalt driveways.

Paul Atkinson stated the TDE at Site 19 had been added after the permit drawings had been completed for the meeting. An additional 10ft of temporary surface water impacts will be added and the buffer zone impacts will include this area for the final drawings.

Sheets 22&23:

No comments

Sheet 26:

No comments

General Comments:

Karen Compton asked for a separate Summary Sheet just for Forestry Service impacts. Chris Rivenbark said he could provide one for her.

Draft Minutes of the 30% Hydraulic Design Review (4B) Meeting on June 20, 2012 for R-2514D. US 17 From South of NC 58 to the New Bern Bypass in Jones And Craven Counties.

Participant:

Team Members

Randy Henegar, NCDOT Hydraulics (present)
Thomas Steffens, USACE (present)
Gary Jordan, USFWS (present)
Travis Wilson, NCWRC (present)
David Wainright, NCDWQ (present)
Ron Lucas, FHWA (present)
Chris Militscher, USEPA-Raleigh (present)
Steve Sollod, NCDCM (present)

Support Staff

Brian Yamamoto, PDEA (absent)
Chris Rivenbark, PDEA-NES (present)
David Harris, REU (absent)
Ed Eatmon, Division 2 (present)
Jim Speer, Roadway Design (present)
Omar Azizi, Stuctures Management (present)

Other Attendees

Art McMillan, NCDOT Hydraulics
Gordon Cashin, PDEA-NES
Tim Coggins, Structures Management
Mark Pierce, NCDOT Project Development
Mark Staley, NCDOT-REU
Marc Shown, Hydraulics
Jonathan Moore, Hydraulics
Danny Gardner, Roadway Design

The 4B meeting held on 6-20-12 began with introductions and Randy Henegar (NCDOT) giving a brief overview of the project and that he would go through them sheet by sheet.

Mr. Henegar then started a project review at sheet 4.

Sheet 4:

Site I. There is one buffered jurisdictional stream @ Station 303+00. It will be conveyed with a 48" RCP.

Sheet 5:

Site I continues. No further Impacts.

Sheet 6:

Site II. A wetland is being impacted @ Station 323+00. The drainage at this site has yet to be finalized.

Sheets 7&8:

No Impacts.

Sheet 9:

Site III. Goshen Branch is a buffered jurisdictional stream that will be spanned with a bridge. The bridge length has not been finalized.

Sheets 10&11:

Site IV. This site involves the Trent River which is both buffered and jurisdictional. The river and the adjacent wetlands will be spanned with a bridge of yet to be determined length. The impacts will be due to the piers. There was some question as to the skew of the piers. The pier skew will be addressed and the best fit will be used.

Sheet 12:

No Impacts.

Sheet 13:

Site V. A wetland is being impacted @ Station 432+70. A 36" RCP is proposed at this site.

Sheet 14:

Site VI. This is a wetland site where the wetland is being crossed twice by the proposed alignment. The first crossing @ Station 439+00 is being filled and there is no proposed drainage structure associated with this fill. The second crossing is @ Station 445+00 and has a 36" RCP associated with the fill. Hydraulics will investigate the need to fill in at the inlet to prevent water from ponding against the fill slope.

Sheet 15:

Site VII. There is a small wetland impact @ Station 458+00. It was requested that Hydraulics when reconnecting the ditches maintain a minimum depth and slope in order to not drain the wetlands. Hydraulics will tie to existing ditch elevations and the ditches will have minimal slopes.

Sheet 16:

Site VIII. A wetland is being impacted @ Station 463+00. A 36" RCP equalizer pipe will be installed.

Site IX. This site involves a buffered jurisdictional stream and an adjacent wetland @ Station 474+00. A 54" RCP is being proposed.

Sheet 17:

Site IX. This site is continued from previous sheet.

Site X. A wetland is being impacted @ Station 478+00. A 36" RCP equalizer pipe will be installed. There was discussion as to whether the pipe could be installed perpendicular to the roadway and the two sides connected with a ditch. It was requested that Hydraulics propose the pipe on a skew.

Sheet 18:

Site XI. A wetland is being crossed twice by the proposed alignment. A 36" RCP equalizer pipe will be installed at each location.

Sheet 19:

Site XII. A wetland is being laterally impacted @ Station 505+00. There is no drainage structure associated with this impact.

Sheet 20:

Site XIII. This site involves a jurisdictional stream and an adjacent wetland @ Station 520+00. A 36" RCP is being proposed. NES will determine if the stream is buffered and contact Hydraulics.

Site XIV. There is one buffered jurisdictional stream and an adjacent wetland at this site. The wetland will be a total take and the drainage structure for the stream has yet to be determined.

Sheet 21:

Site XIV. This site is being continued from previous sheet.

Site XV. There is a jurisdictional stream being impacted at this site. The drainage structure has yet to be determined. NES will determine if the stream is buffered and contact Hydraulics.

Sheet 22:

Site XVI. A wetland is being crossed @ Station 550+00. There will be one or more 36" RCP equalizer pipes installed at this site.

Sheet 23:

Site XVII. A wetland is being impacted @ Station 562+50. There is no drainage structure associated with this impact. The wetland remnant between the –L- line and the service road will be considered an impact.

Sheet 24:

No Impacts.

Sheet 25:

Site XVIII. A wetland is being crossed twice at this site by both the –L- line and the service road. At the first crossing two 24" RCP equalizer pipes are proposed under the service road (due to cover) and a

36” RCP equalizer pipe is proposed under the –L- line. At the second crossing 36” RCP equalizer pipes are proposed under the service road and –L- line. The wetland remnant between the service road and –L- line at this crossing will be considered impacted.

Sheet 26:

Site XIX. A buffered jurisdictional stream and an adjacent wetland will be impacted. The drainage structure has yet to be determined.

Site XX. A small wetland is being impacted by –Y10RPA-. It will be a total take.

Sheet 27:

Site XXI. Deep Gully is a buffered jurisdictional stream. There is an adjacent wetland and both will be spanned With a bridge on –Y10RPA-. The only impacts will be due to bridge piers. There is some concern about the condition of a ditch draining to Deep Gully from the southeast. Hydraulics will investigate.

Sheets 28-33:

No Impacts.

Draft Minutes of the Wetland Permit Drawing Review (4C) Meeting on March 13, 2014 for R-2514D. US 17 From South of NC 58 to the New Bern Bypass in Jones And Craven Counties.

Participant:

Team Members

Randy Henegar, NCDOT Hydraulics (present)
Thomas Steffens, USACE (present)
Gary Jordan, USFWS (absent)
Travis Wilson, NCWRC (present)
David Wainright, NCDWQ (present)
Ron Lucas, FHWA (absent)
Chris Militscher, USEPA-Raleigh (absent)
Steve Sollod, NCDCM (absent)

Support Staff

Brian Yamamoto, PDEA (present)
Chris Rivenbark, PDEA-NES (present)
David Harris, REU (absent)
Ed Eatmon, Division 2 (absent)
Jim Speer, Roadway Design (present)
Omar Azizi, Stuctures Management (absent)

Other Attendees

Johnny Metcalfe, NCDOT Division 2
Gordon Cashin, PDEA-NES
Terry Clelland, Structures Management
Chris Underwood, NCDOT -NES
Mark Staley, NCDOT-REU
Marc Shown, Hydraulics
Jonathan Moore, Hydraulics
Danny Gardner, Roadway Design
Colin Mellor, NCDOT-NES
Matthew York, Hydraulics

The 4C meeting held on 3-13-14 began with introductions and Randy Henegar (NCDOT) giving a brief overview of the project. He also noted that on 5/16/13 there was an Informational Meeting at which was discussed the taking the –L- line over SR 1337 (Goshen Road) and the reconfiguration of the bridge over the Trent River in order to get more effective area under the structure. The latter of these revisions included an additional wetland impact. The permit was then reviewed site by site.

Mr. Henegar then started a permit review at Site 1.

Site 1:

Hydraulics will label and provide a detail for the bank stabilization at the end of the 48" RCP. There will be no rip-rap placed in the bottom of the stream. This will be the case at all other locations requiring bank stabilization throughout the permit.

Site 2:

This wetland site will be a total take. It was requested that the areas outside of the impacts not be hatched as fill, but be included in the area shown on the summary sheet. A note will be added to the summary sheet that this wetland is a total take.

Site 3:

It was requested that 5 ft. of mechanized clearing be shown around the proposed piers in the wetland. Hydraulics will add to drawings and revise summary sheet. It was also noted that the two 48" pipes under the soil road to the cemetery would be replaced with a 2@ 8' x 8' RCBC.

Site 4:

It was requested that 5 ft. of mechanized clearing be shown around the proposed piers in the wetland. Hydraulics will add to drawings and revise summary sheet. This is the site where the Trent River bridge has been reconfigured, as previously noted.

Site 5:

This site involves installing a 36" RCP equalizer pipe. Hydraulics indicated that the inverts of this pipe would not be buried. This will be the case for all equalizer pipes in this permit.

Site 6:

No Comments.

Site 7:

No Comments.

Site 8:

A question arose as to why there was not an equalizer pipe at this site. Hydraulics indicated that the runoff in this area drains predominantly away from the proposed roadway. The wetland remnant on the East side of the roadway will be considered a take and the impacts and a note will be added to the summary sheet.

Site 9:

Hydraulics noted that there will be bank stabilization at the outlet of the 54" RCP and that it will be labeled and a detail added.

Site 10:

There was a question about the toe protection on the west side of the roadway between Sites 9 & 10. Hydraulics stated that the toe protection was needed to protect the fill from erosion due to adjacent runoff. The 5' berm has been added to force the runoff toward the respective pipes at the two sites.

Site 11:

No Comments.

Site 12:

Hydraulics noted that the feature being conveyed through the 30" RCP @ STA. 502+00 was not a JS stream. There were no additional comments at this site.

Site 13:

Hydraulics indicated that TDE at the 36" RCP outlet will be removed. NES will advise as to whether or not the stream has buffers.

Site 14:

No Comments.

Site 15:

Hydraulics stated that the TDE at the outlet of the 78" RCP will be removed.

Site 16:

Hydraulics noted that the TDE at the outlet of the 42" RCP will be removed. NES will advise as to whether or not the stream has buffers.

Site 17:

No Comments.

Site 18:

It was requested that the impacts between the –L- line and the service road slope stake be shown as mechanized clearing. Hydraulics will revise the permit drawings and update the summary sheet.

Site19:

It was indicated that the wetland in between the –L- line and service road should not be considered a total take. No additional comments.

Site 20:

It was indicated that the wetland in between the –L- line and service road should not be considered a total take. No additional comments.

Site 21:

It was discussed that all drainage is going to the existing 66" RCP under –Y10RPD-. It was stated that there have been issues in the past at the outlet of this pipe, but that they are currently stabilized. Hydraulics noted that the pipe is properly sized for the drainage area.

Site 22:

No Comments.

Site 23:

This site involves the construction of a new bridge and the widening of the southernmost existing bridge over Deep Gully. Deep Gully is on the Jones-Craven County line with Craven County being to the East.

NES will determine whether the wetlands at this site are CAMA wetlands.

It was requested that some type of energy dissipation be employed at the outlet of the 24" pipe left of STA. 626+50. Hydraulics will investigate and add appropriate dissipation.

Hydraulics will show 5 ft. of mechanized clearing around the proposed pier and update the summary sheet.

Hydraulics will also depict any impact due to construction (i.e. work pads, work bridge, etc.) on the permit drawings and update summary sheet as needed.

The USACE suggested that we briefly get back together to review Site 23 once Hydraulics and Construction has a chance to review how the bridges will be constructed over Deep Gully. Once this review is completed Randy will set up a meeting with the USACE and DWR.

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: R-2514B **County(ies):** Jones Onslow

General Project Information

Project No.:	R-2514B	**Project Type:**	New Location	**Date:**	1/23/2014
NCDOT Contact:	Paul Atkinson, PE	**Contractor / Designer:**			
Address:	1020 Birch Ridge Rd. Raleigh, NC 27610	**Address:**			
Phone:	919-707-6707	**Phone:**			
Email:	patkinson@ncdot.gov	**Email:**			
City/Town:	Maysville	**County(ies):**	Jones	Onslow	
River Basin(s):	White Oak	**CAMA County?**	No	Yes	
Primary Receiving Water:	White Oak River	**NCDWQ Stream Index No.:**	20-(1)		
NCDWQ Surface Water Classification for Primary Receiving Water	**Primary:**	Class C			
	Supplemental:				
Other Stream Classification:					
303(d) Impairments:					
Buffer Rules in Effect	N/A				

Project Description

Project Length (lin. Miles or feet):	4.156 Miles	**Surrounding Land Use:**	Farmland

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	ac.	ac.
Typical Cross Section Description:	Four Lane Divided Highway with 38' grassed median. 4' interior paved shoulder, two 12' travel lanes, and 10' exterior paved shoulder.	Two Lane Highway with two 12' travel lanes and 3' paved shoulders.
Average Daily Traffic (veh/hr/day):	Design/Future: 15,900 (2035)	Existing: 6800 (2015)

General Project Narrative:

R-2514B is the planned new US 17 bypass of Maysville. Two major structures are planned at the crossing of the L Line (US 17 Bypass) with Higgins Branch and the White Oak River. The structure over Higgins Branch is 2@80' 45" Girders for a total length of 160', while the structure over White Oak River is 2@100', 7@110', 1@100', and1@90' 63" MBT for a total length of 1160'. Grass lined ditches are utilized throughout where possible. Any ditches draining to wetlands were daylighted 10' before entering the wetlands to prevent concentrated flow from entering and additional impacts to the wetlands. Rip Rap toe protection was used in areas where this was not possible to maintain non-erosive velocities through the wetlands. 36" RCP-IV Equalizer Pipes were used in areas where the proposed roadway is splitting wetlands: STA. 72+04 -L-, 75+50 -L-, 151+92.61 -L-, 157+27.35 -L- to allow for water to pass freely from one side of the highway to the other allowing for wetlands to remain viable. Storm drain outfalls have been located outside of wetlands where possible.

References

North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: R-2514B **County(ies):** Jones Onslow

Project Environmental Summary

Surface Water Impacts

Sheet No.	Station (From / To)	Feature Impacted	Water / Wetland / Buffer Type	Receiving Surface Water Name	NRTR Map ID	NCDWQ Stream Index	NCDWQ Surface Water Classification	303(d) Impairments	Type of Impact	Existing SCM	Proposed SCM
10	-Y2A- 31+03 31+50	Stream	Perennial	Cotman's Branch	W5	N/A	N/A	None	Culvert	N/A	
10	-L- 99+27 100+97	Stream	Perennial	Cotman's Branch	W5	N/A	N/A	None	Culvert	N/A	
18	-Y3A- 23+40 23+74	Stream	Intermittent	N/A	W21	N/A	N/A	None	Culvert	N/A	
18	-L- 207+00 208+34	Stream	Intermittent	N/A	W21	N/A	N/A	None	Stabilization	N/A	
18	-Y3E- 11+39 12+10	Stream	Intermittent	N/A	W21	N/A	N/A	None	Stabilization	N/A	
19	-L- 213+85 222+00	Stream	Intermittent	N/A	W21	N/A	N/A	None	Fill	N/A	
20	-L- 222+00 223+71	Stream	Intermittent	N/A	W21	N/A	N/A	None	Fill	N/A	
22	-Y2- 30+83 32+00	Stream		Mitchell's Branch	N/A	N/A	N/A	None	Stabilization	N/A	

* List all stream and surface water impact locations regardless of jurisdiction or size.
Equalizer Pipes to be noted as a minimization of impacts.
All proposed SCMs listed must also be listed under Swales, Preformed Sour Holes and other Energy Dissipators, or Other Stormwater Control Measures.

Description of Minimization of Impacts or Mitigation

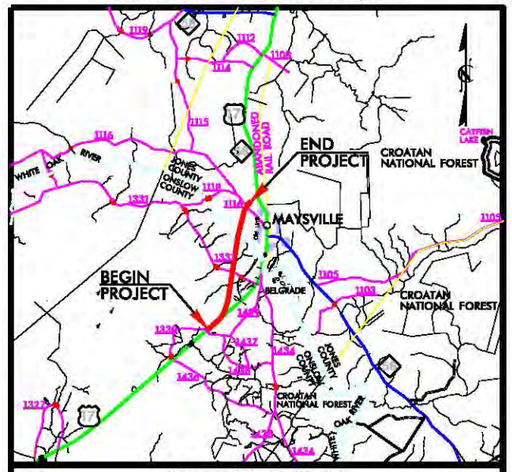
References

09/30/60

TIP PROJECT: R-2514B

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERMIT DRAWING
SHEET 1 OF 62

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.3		PE
34442.2.S3		RIGHT OF WAY

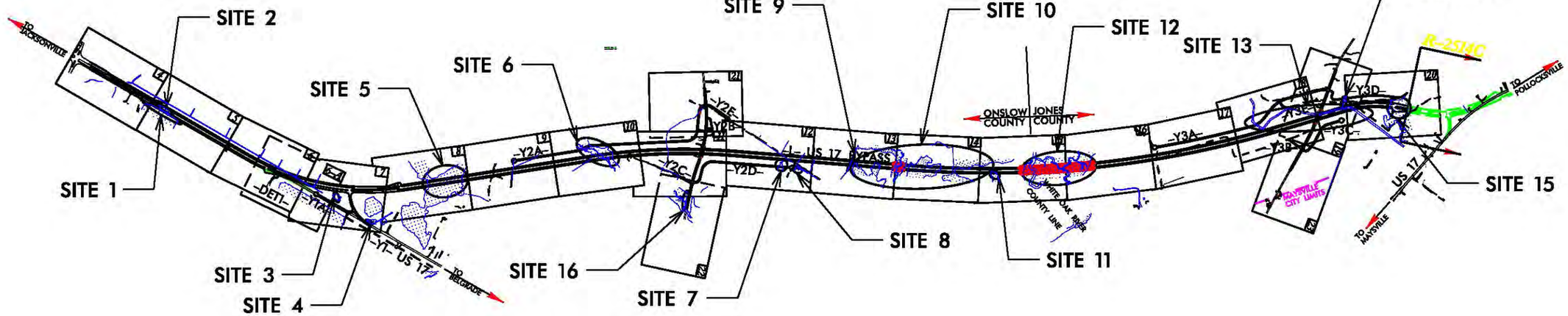
ONSLOW & JONES COUNTIES

LOCATION: US 17 FROM SOUTH OF BELGRADE AT SR 1330/SR 1439 TO NORTH OF MAYSVILLE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

NAD 83/
NSRS 2007



*DESIGN EXCEPTION REQUIRED FOR SAG VERTICAL CURVE K FACTORS AND STOPPING SIGHT DISTANCE (-Y2- & -Y3-)
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A FULL CONTROLLED-ACCESS PROJECT WITH ACCESS AS SHOWN ON PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2015 = 6800 vpd
ADT 2035 = 15900 vpd
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST =4% DUAL =3%
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY OF TIP PROJECT R-2514B = 3.906 MILES

LENGTH STRUCTURE OF TIP PROJECT R-2514B = 0.250 MILES

TOTAL LENGTH OF TIP PROJECT R-2514B = 4.156 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: DECEMBER 17, 2013

LETTING DATE: JUNE 16, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

JOHN LANSFORD, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$DGNS$$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 2 OF 62

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

SITE 1

NAD 83/NSRS 2007

REVISIONS 8/17/99

SR 1430 (DEPPE LOOP RD)

SR 1439 (SPRINGHILL RD)

US 17 27' BST

EXISTING R/W

48" WM ISBW

INNERDUCT

MEDIAN 'V' DITCH SEE DETAIL AA

TIE SLOPE TO TOP OF PIPE

SPECIAL LATERAL 'V' DITCH SEE DETAIL A

TIE TO EX. DITCH

1" BK ISW

RETAIN

REMOVE

18" RCP

24" RCP

36" RCP

15" RCP

COLLAR

RIP RAP

48" CHL

LOB R/W TO PK

LATERAL 'V' DITCH SEE DETAIL B

GTD

REBAR

ISBKD

DECK

36" CONC

BST

PK

1 WEYERHAEUSER CO.

2 UNKNOWN

3 RONNIE L. ADAMS

4 JONATHAN MORTON

5 WEYERHAEUSER CO.

MATCHLINE SHEET 5 -L- STA. 23+00.00

100' 0' 100'

1"=100'

$$$$$$$SYSTIME$$$$$
$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 3 OF 62

8/17/99

REVISIONS

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

SITE 1

NAD 83/NSRS 2007

10 15 20

SR 1530 (DEPPE LOOP RD)

SR 1439 (SPRINGHILL RD)

EXISTING R/W

48" CHL

48" RW ISRW

INNERDUCT

TIE SLOPE TO TOP OF PIPE

SPECIAL LATERAL 'V' DITCH SEE DETAIL A

TIE TO EX. DITCH

11" PK USE

MEDIAN 'V' DITCH SEE DETAIL AA

US 17 27' BST

RETAIN

REMOVE

24" RCP

36" RCP

42" RCP

COLLAR

RIP RAP

1.68' R/W TO PK

LATERAL 'V' DITCH SEE DETAIL B

GTD

REBAR

PK

BST

36" CONC

ISBKD

DECK

1 WEYERHAEUSER CO.

2 UNKNOWN

3 RONNIE L. ADAMS

4 JONATHAN MORTON

MATCHLINE SHEET 5 –L– STA. 23+00.00

100' 0' 100'

1"=100'

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$
$$$$$$$$MISCENAME$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 4 OF 62

8/17/99

REVISIONS

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 2

NAD 83/NSRS 2007

25 30 35

1 WEYERHAEUSER CO.

TREE FARM

STANDARD 'V' DITCH SEE DETAIL F

LATERAL 4' BASE DITCH SEE DETAIL D

TIE TO EX. DITCH

PUE

EXISTING R/W

48" WW ISBW

18" RCP REMOVE

US 17 27" BST

3GI

ABANDONED RR BED CSX

Q_P=23 CFS
V_P=1.2 FPS

WEYERHAEUSER CO.

LATERAL 3' BASE DITCH SEE DETAIL E

12" SOIL/ABANDONED RR BED CSX

MATCHLINE SHEET 4 -L- STA. 23+00.00

MATCHLINE SHEET 6 -L- STA. 37+00.00

SITE 1

100' 0' 100'
1"=100'

SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 5 OF 62

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 2

NAD 83/NSRS 2007

25 30 35

MATCHLINE SHEET 4 -L- STA. 23+00.00

MATCHLINE SHEET 6 -L- STA. 37+00.00

WEYERHAEUSER CO. (1)

TREE FARM

STANDARD "V" DITCH SEE DETAIL F

LATERAL 4' BASE DITCH SEE DETAIL D

TIE TO EX. DITCH

PUE

EXISTING R/W

48" WW ISRW

18" RCP

REMOVE

US 17 27" BST

ABANDONED RR BED CSX

Q=23 CFS
V=1.2 FPS

LATERAL 3' BASE DITCH SEE DETAIL E

12" SOIL/ABANDONED RR BED CSX

SITE 1

100' 0' 100'
1"=100'

SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

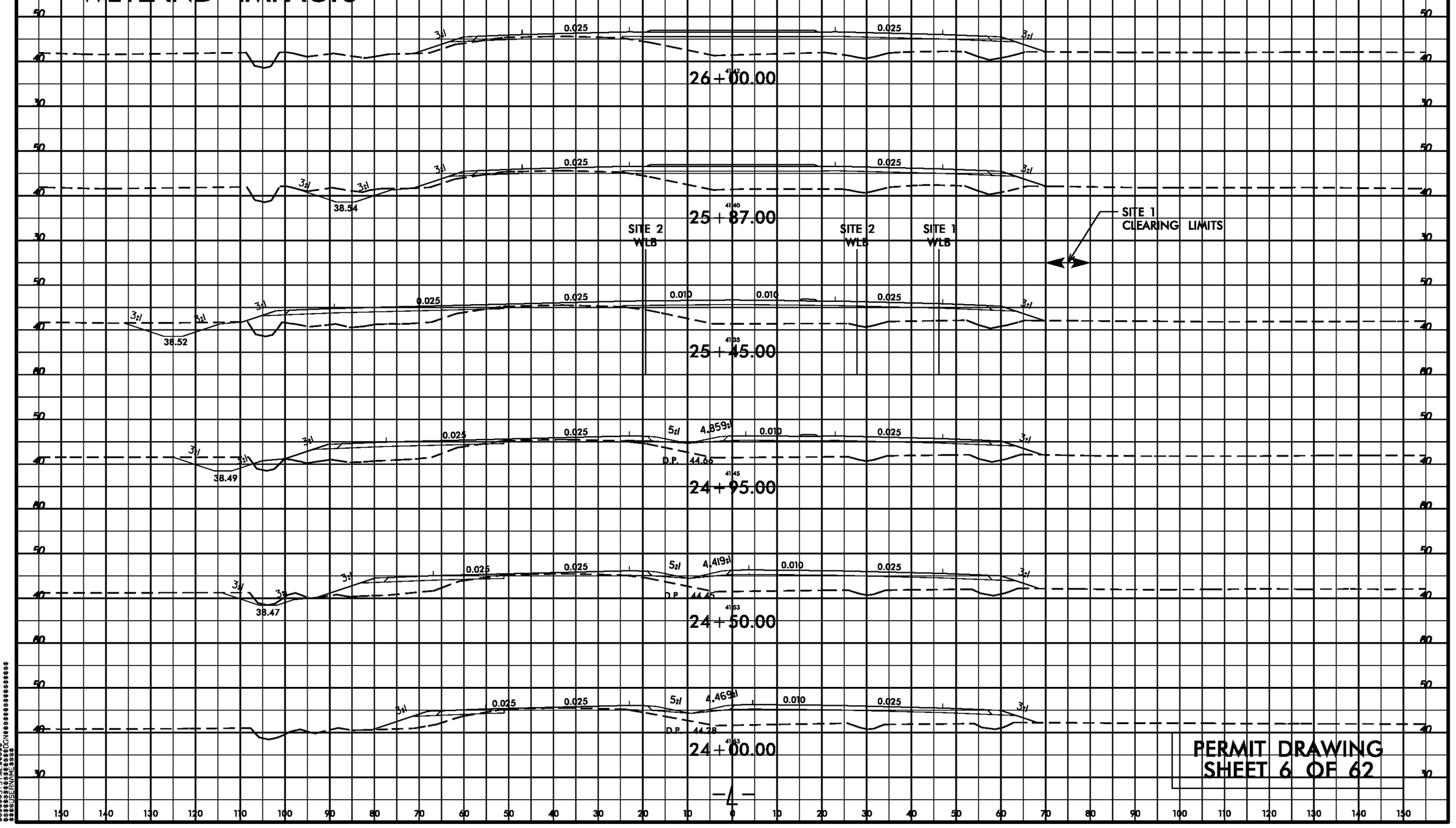
$$$$$$$SYSTIMES$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$USERNAME$$$$$

8/23/99

PROJ. REFERENCE NO. R-2514B

SHEET NO. X-7

SITES 1 & 2
WETLAND IMPACTS



PERMIT DRAWING
SHEET 6 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$$$SFILENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 7 OF 62

SITE 3

DENOTES MECHANIZED CLEARING

100' 0' 100'
1"=100'

NAD 83/NSRS 2007

REVISIONS 8.17.99

SAS TIME\$\$\$\$\$ DGN\$\$\$\$\$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 8 OF 62

8/17/99

REVISIONS

DENOTES MECHANIZED CLEARING

100' 0' 100'
1"=100'

SITE 3

NAD 83/NSRS 2007

-L- POC STA.58+77.28
-Y1- POT Sta. 10+00.00

-L- STA. 50+50.00 MATCHLINE SHEET 6

-L- STA. 63+50.00 MATCHLINE SHEET 8

LATERAL 4' BASE DITCH SEE DETAIL D

TIE TO EX. DITCH

PUE

TREE FARM

REMOVED RR BED CSX

OBLITERATE EX. DITCH

-Y1A- POT Sta. 18+46.89

BEGIN WIDENING AND RESURFACING
-Y1A- POT Sta. 16+40.00
(C/L Cul-de-Sac at 17+00.00 -Y1A-)

OBLITERATE EX. DITCH

6 OWEN JONES HEIRS, ET AL
MABELLINE MATTOCKS

END GRADE
BEGIN RESURFACING
-Y1A- POT Sta. 13+50.00

TIE TO EX. DITCH

ABANDONED RR BED CSX

15" RCP

ISF ABANDONED

7 TODD DEXTER WILLIAMS

-Y1A- PT Sta. 11+42.04

STANDARD "Y" DITCH SEE DETAIL F

-Y1- PC Sta. 10+17.20

1 WEYERHAEUSER CO.

REMOVE

-Y1- POC Sta. 13+56.81
-Y1A- POT Sta. 10+00.00

-Y1- PT Sta. 16+67.64
END CONST.
-Y1- POT Sta. 17+35.00

-Y1A- PC Sta. 10+39.01

8 WEYERHAEUSER CO.

CLEAN OUT

24" RCP

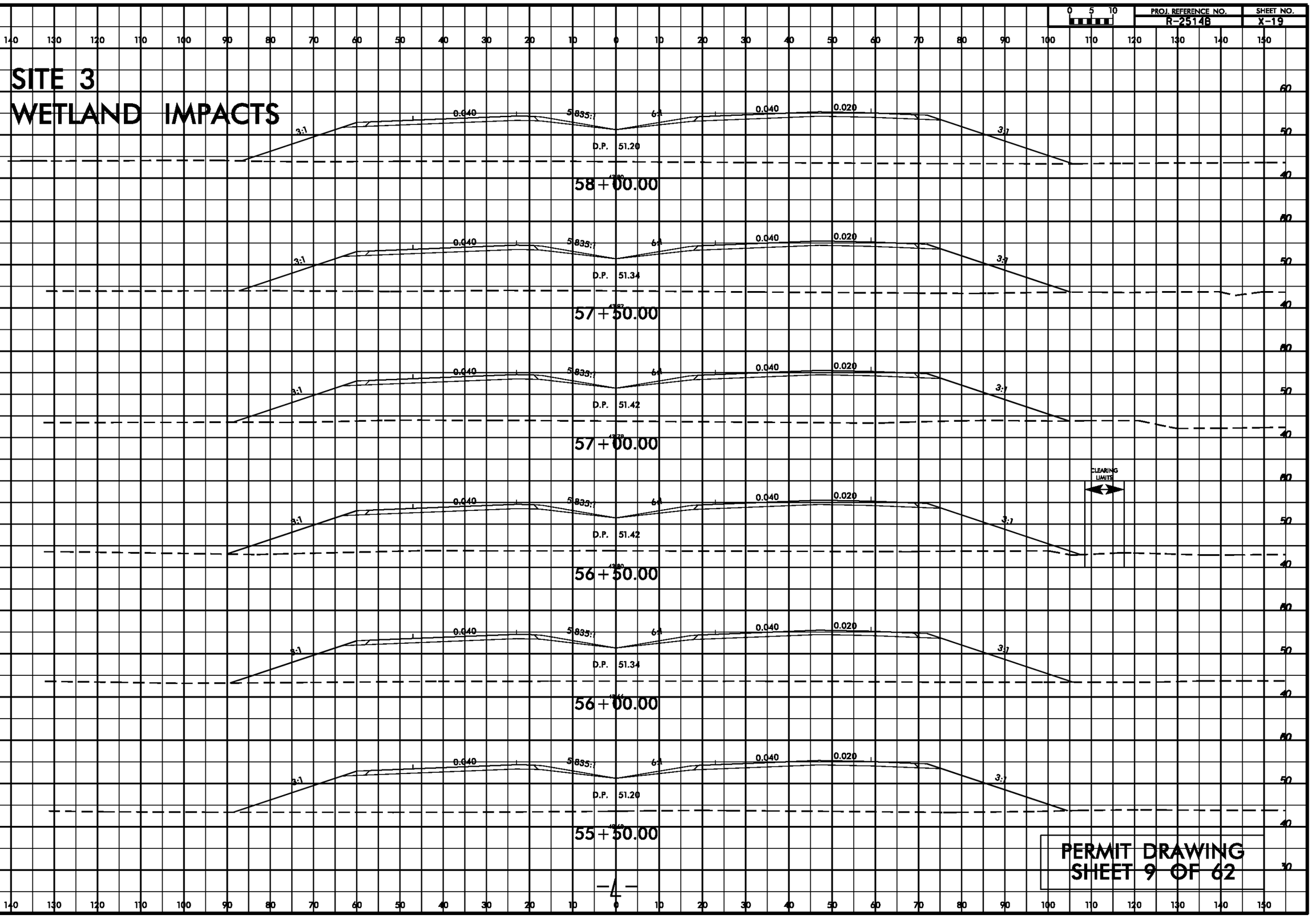
12' SOIL/ISB

SITE 4

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-19

SITE 3
WETLAND IMPACTS



PERMIT DRAWING
SHEET 9 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$SLENAME$$$$

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-90

SITE 4
WETLAND IMPACTS

43.03
17+50.00

3:1 0.020 0.020 4:1

S.S. 40.09

43.07

37.90 3:1

17+25.00

WLB

CLEARING LIMITS

3:1 0.020 0.020 4:1

S.S. 39.10

43.17

37.97 3:1

17+00.00

3:1 0.020 0.005 4:1

S.S. 40.27

43.29

38.07 3:1

16+67.64

-Y1-

PERMIT DRAWING
SHEET 10 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$SELNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 11 OF 62

SITE 5

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

NAD 83/NSRS 2007

65 70 75

100' 0' 100'
1"=100'

REVISIONS 8/17/99

MATCHLINE SHEET 7 -L- STA. 63+50.00

MATCHLINE SHEET 9 -L- STA. 77+50.00

1 WEYERHAEUSER CO.

TREE FARM

1 WEYERHAEUSER CO.

TREE FARM

1 WEYERHAEUSER CO.

10 GORDON F. MYERS

9 WILLIAM A. PARKS & ASSOCIATES, INC.

HTR

WD DK

GR

48" RW

20' SAW CUT

DI

ZGI

ZGI-D

FS

54" RCP

54" RCP-AY EQUALIZER PIPE

54" RCP EQUALIZER PIPE

Q_F=3.7 CFS
V_F=1.0 FPS

$$$$$$$SYSTIMES$$$$$$$
$$$$$$$ON$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SITE 5

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

NAD 83/NSRS 2007

PERMIT DRAWING
SHEET 12 OF 62

100' 0' 100'
1"=100'

65 70 75

MATCHLINE SHEET 7 -L- STA. 63+50.00

MATCHLINE SHEET 9 -L- STA. 77+50.00

1 WEYERHAEUSER CO.

TREE FARM

2GI-D

DI

2GI

24" RCP

18" RCP

24" RCP

30" RCP

24" SCP

24" RCP

24" SCP

24" RCP

24" SCP

24

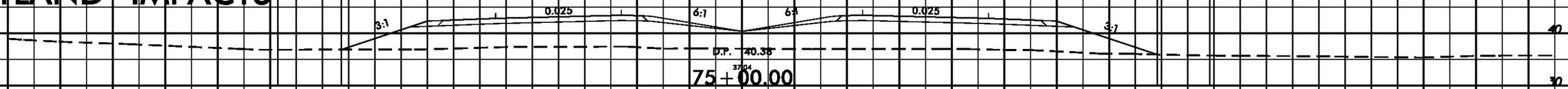
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-26

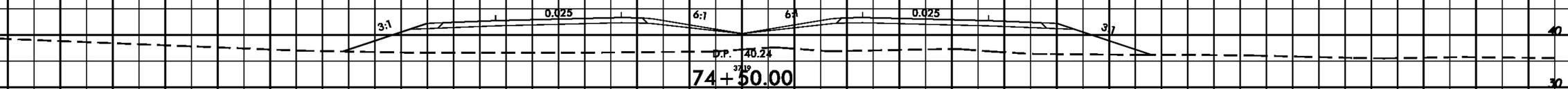
SITE 5
WETLAND IMPACTS

CLEARING LIMITS

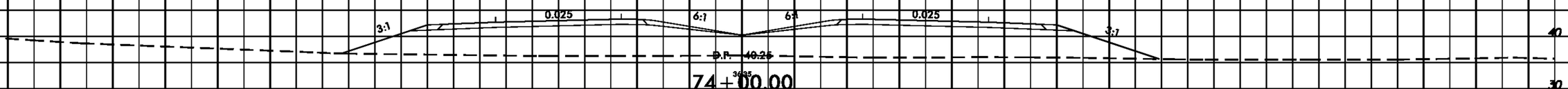
CLEARING LIMITS



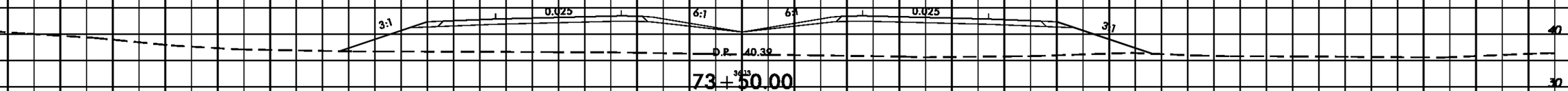
75+00.00 (3704)



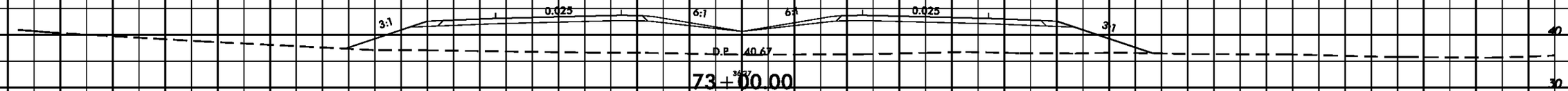
74+50.00 (3719)



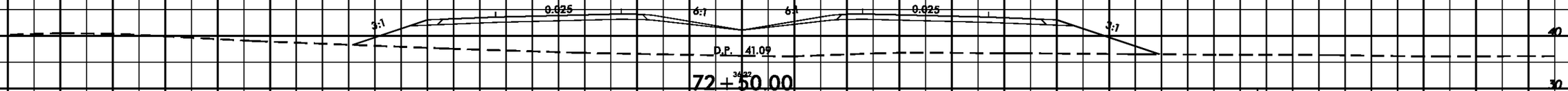
74+00.00 (3685)



73+50.00 (3613)



73+00.00 (3627)



72+50.00 (3622)

PERMIT DRAWING
SHEET 13 OF 62

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$SELNAME$$$$

SITE 6

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 14 OF 62

NAD 83/NSRS 2007

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

(11) LARRY RIGGS, ET UX
DB 856 PG 869
MB 30 PG 83
SLIDE C-271

(12) DUSTIN J. CANESTORP, ET UX

(13) ROBERT LEROY & JOYCE R I

MATCHLINE SHEET 9
-Y2A- STA. 39+81.00

MATCHLINE SHEET 9
-L- STA. 91+50.00

MATCHLINE SHEET 11
-Y2A- STA. 25+58.00

MATCHLINE SHEET 11
-L- STA. 105+50.00

SEE ENLARGEMENT SHEET 16

SEE ENLARGEMENT SHEET 17

TOE PROTECTION SEE DETAIL I

BANK STABILIZATION SEE DETAIL J

BURY 1'

PDE

E

Q_p=20 CFS V_p=2.0 FPS

Q_p=1.1 CFS V_p=1.9 FPS

Q_p=5.2 CFS V_p=2.0 FPS

Q_p=2.7 CFS V_p=0.8 FPS

Q_p=15 CFS V_p=1.9 FPS

Q_p=7.2 CFS V_p=0.9 FPS

2GI

3GI

DETAIL J
BANK STABILIZATION
(Not to Scale)

Natural Ground — Bank Slope — Ground — d=2.5 FT. — Channel Bed Modified

Length = 24 FT.
D=2.5 FT

-L- STA. 100+97 RT.
-Y2A- STA. 31+40 LT.

DETAIL I
TOE PROTECTION
(Not to Scale)

Natural Ground — b — 3:1 or Flatter Fill Slope — d — Geotextile

d=1.5 FT.
b=5 FT.

Type of Liner= CL B RIP RAP

-L- STA. 99+33 TO 103+00 LT.
-L- STA. 100+72 TO 100+90 RT.
-Y2A- STA. 33+00 TO 34+04 RT.
-Y2A- STA. 34+12 TO 35+00 RT.
-Y2A- STA. 34+03 TO 34+25 LT.

100' 0' 100'
1"=100'

REVISIONS

R/W Revision 5/1/14 JCL Realigned -Y2A- and Adjusted Proposed R/W, Permanent Drainage and Temporary Construction Easements on Parcels 11,12 and 13.

8/17/99

$$$$$$$$SYSTIME$$$$$
$$$$$$$$USERNAME$$$$

SITE 6

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 15 OF 62

F/F DENOTES FILL IN WETLAND

S/S DENOTES IMPACTS IN SURFACE WATER

TS/TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

NAD 83/NSRS 2007

DETAIL J
BANK STABILIZATION
(Not to Scale)

-L- STA. 100+97 RT.
-Y2A- STA. 31+40 LT.

11 LARRY RIGGS, ET UX
DB 856 PG 869
MB 30 PG 85
SLIDE C-271

12 DUSTIN J. CARESTORP, ET UX

13 ROBERT LEROY & JOYCE R I

SEE ENLARGEMENT SHEET 16

SEE ENLARGEMENT SHEET 17

TOE PROTECTION SEE DETAIL I

BANK STABILIZATION SEE DETAIL J

BURY 1'

MATCHLINE SHEET 9 -Y2A- STA. 39+81.00

MATCHLINE SHEET 9 -L- STA. 91+50.00

MATCHLINE SHEET 11 -Y2A- STA. 25+58.00

MATCHLINE SHEET 11 -L- STA. 105+50.00

DETAIL I
TOE PROTECTION
(Not to Scale)

-L- STA. 99+33 TO 103+00 LT.
-L- STA. 100+72 TO 100+90 RT.
-Y2A- STA. 33+00 TO 34+04 RT.
-Y2A- STA. 34+12 TO 35+00 RT.
-Y2A- STA. 34+03 TO 34+23 LT.

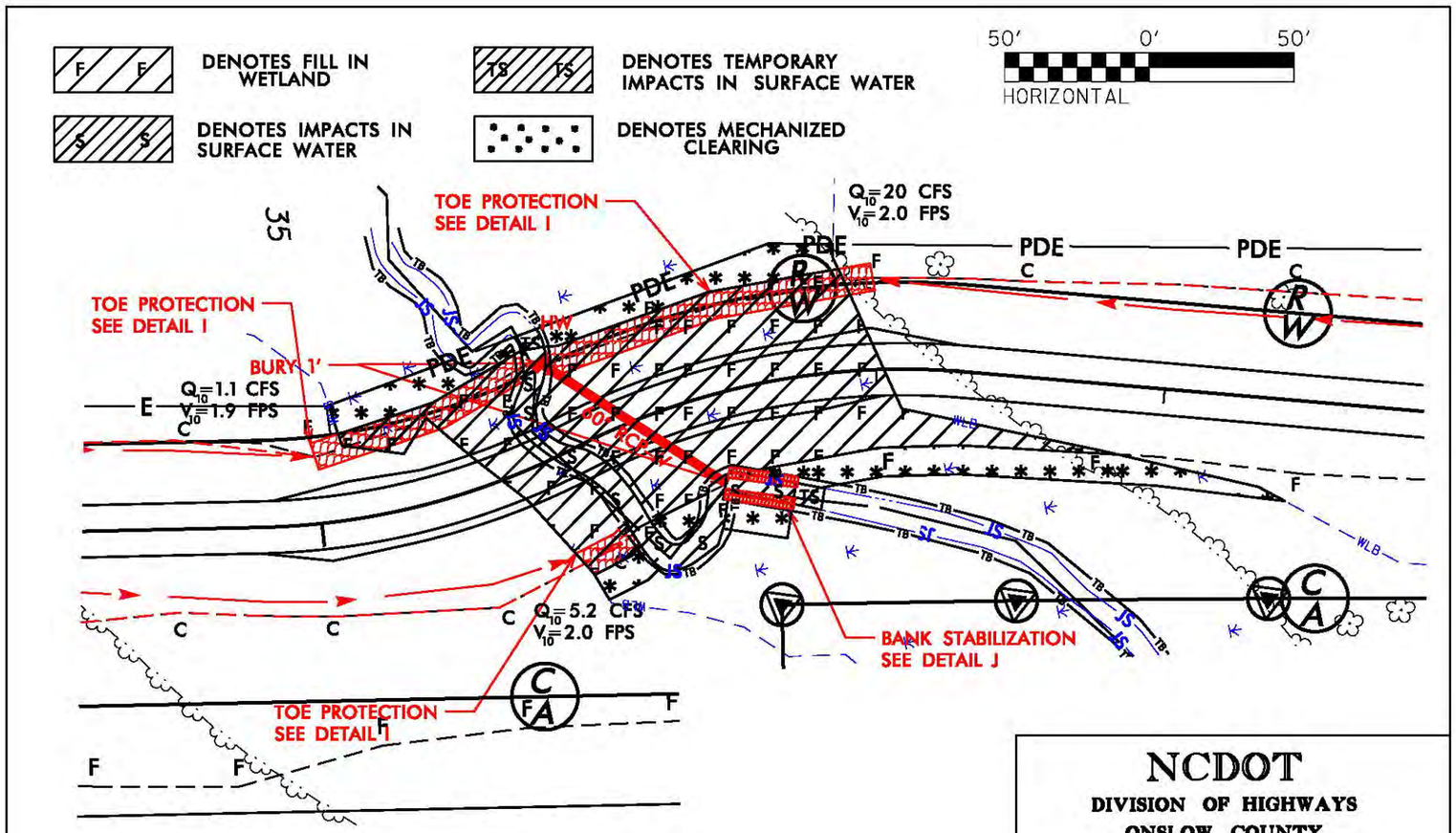
100' 0' 100'
1"=100'

REVISIONS

R/W Revision 5/1/14 JCL Realigned -Y2A- and Adjusted Proposed R/W, Permanent Drainage and Temporary Construction Easements on Parcels 11,12 and 13.

8/17/99

$$$$$$$SYSTIME$$$$$$
$$$$$$$



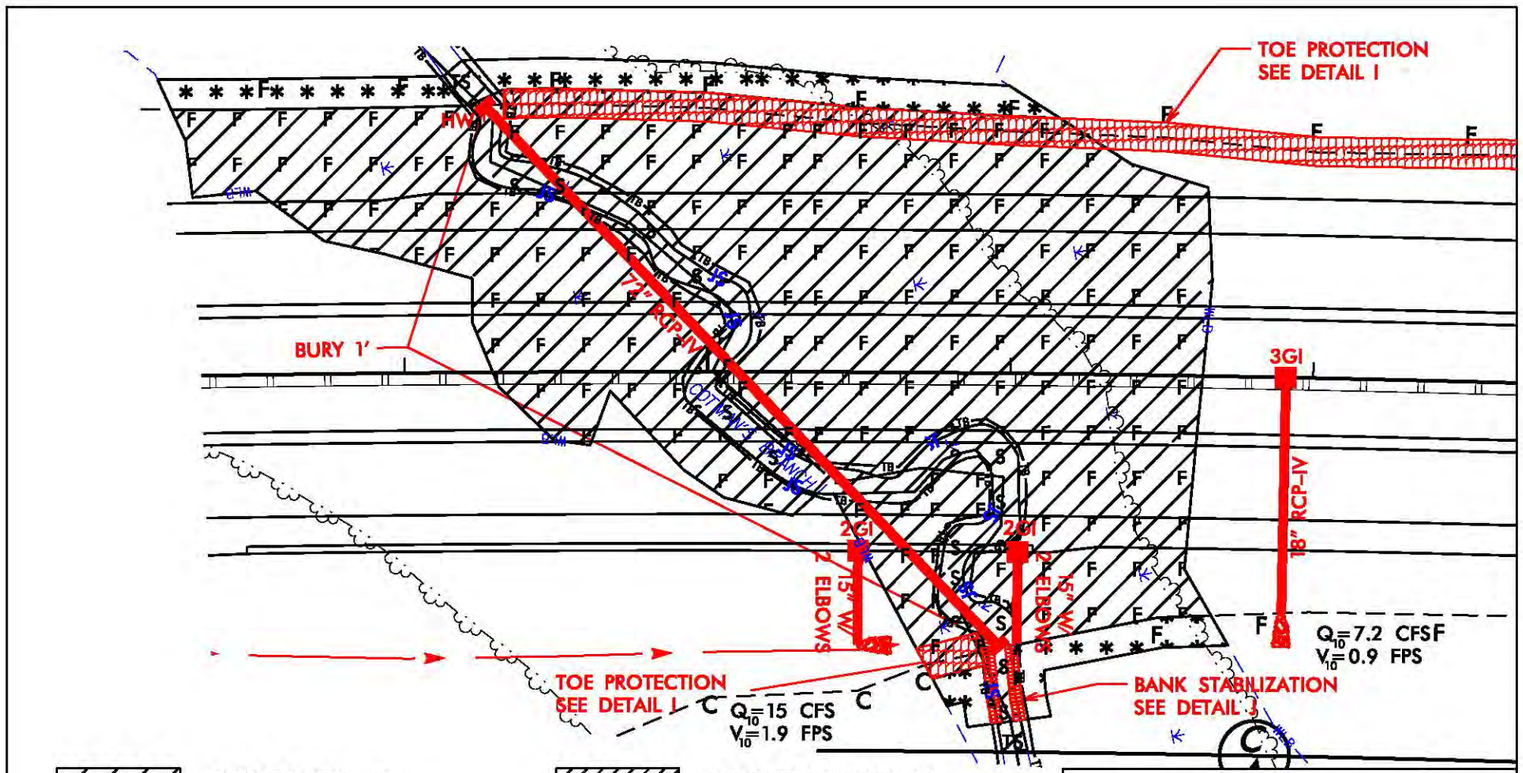
PLAN VIEW

SITE 6

NCDOT

DIVISION OF HIGHWAYS
ONSLOW COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330/SR 1439 TO
NORTH OF MAYSVILLE

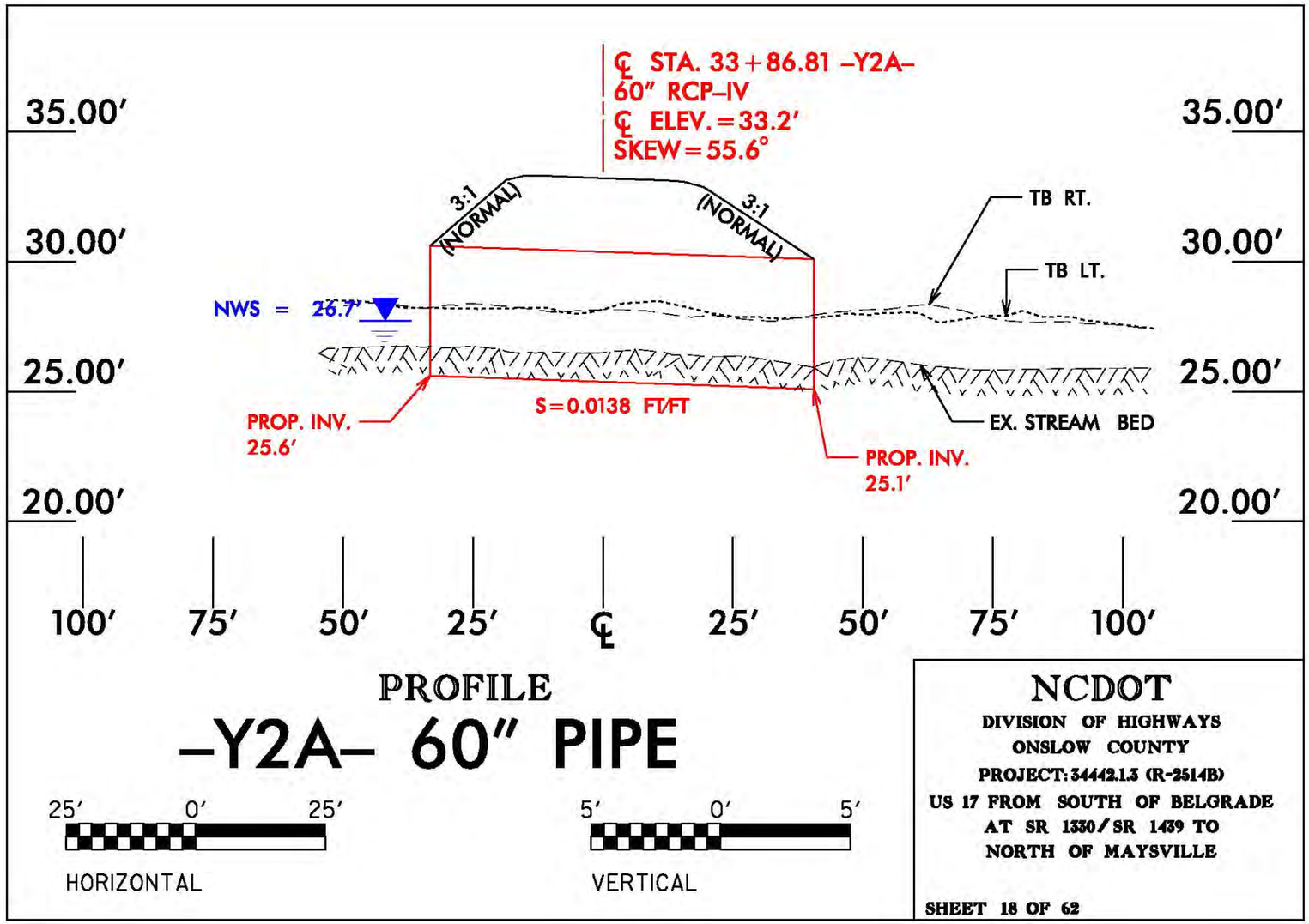
SHEET 16 OF 62



PLAN VIEW
SITE 6

NCDOT
DIVISION OF HIGHWAYS
ONSLOW COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330 / SR 1439 TO
NORTH OF MAYSVILLE

SHEET 17 OF 62



PROFILE

–Y2A– 60" PIPE

25' 0' 25'

HORIZONTAL

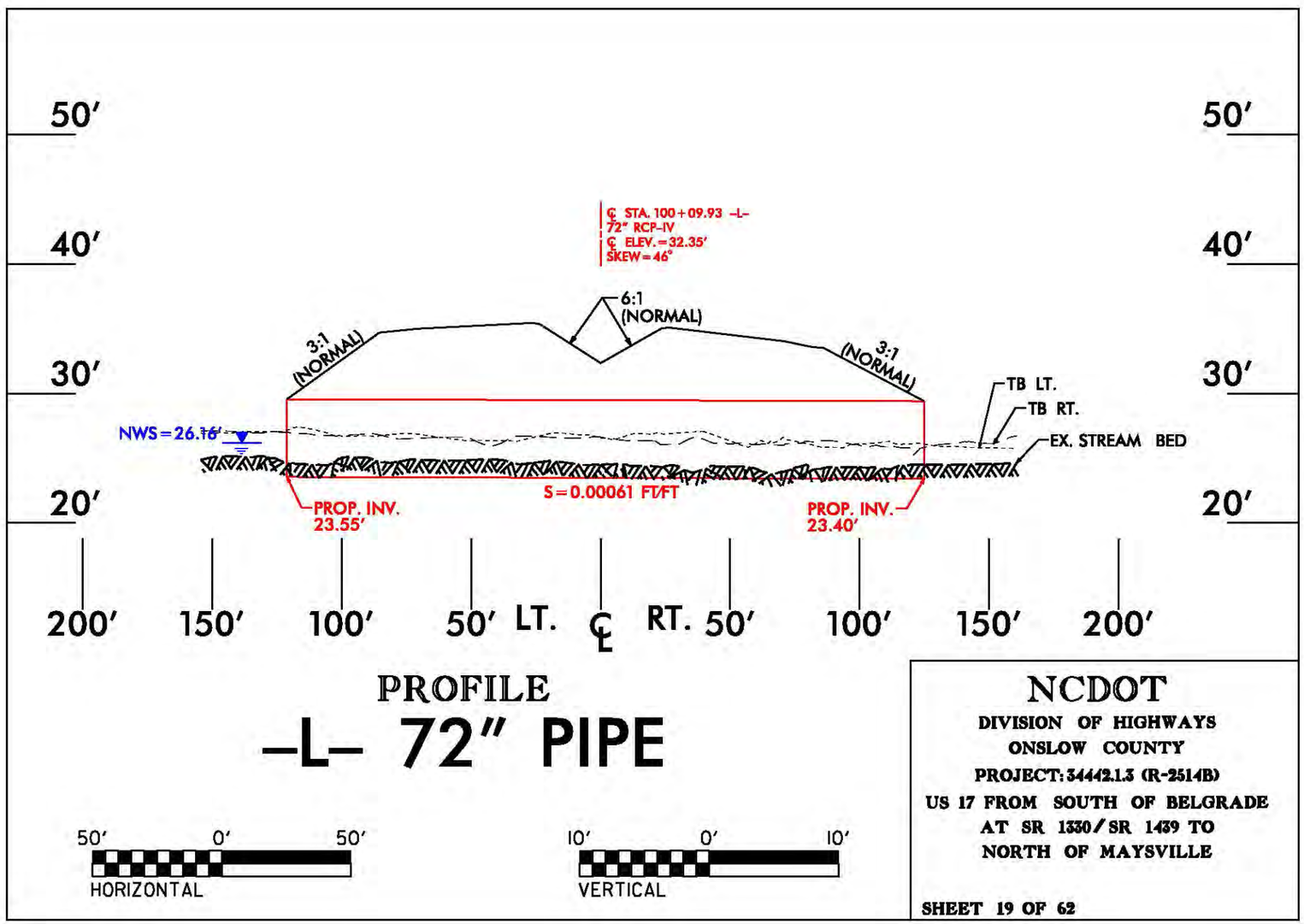
5' 0' 5'

VERTICAL

NCDOT

DIVISION OF HIGHWAYS
ONSLOW COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330 / SR 1439 TO
NORTH OF MAYSVILLE

SHEET 18 OF 62



PROFILE
–L– 72″ PIPE

NCDOT
DIVISION OF HIGHWAYS
ONSLOW COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330 / SR 1439 TO
NORTH OF MAYSVILLE

SHEET 19 OF 62

5/28/99

PERMIT DRAWING
SHEET 20 OF 62

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH - - -
RIGHT DITCH - - -

PIPE HYDRAULIC DATA
-L- Sta.100+10

DRAINAGE AREA	=	435 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	410 CFS
DESIGN HW ELEVATION	=	306 FT
100 YEAR DISCHARGE	=	610 CFS
100 YEAR HW ELEVATION	=	312 FT
OVERTOPPING FREQUENCY	=	500+/- YRS
OVERTOPPING DISCHARGE	=	880 CFS
OVERTOPPING ELEVATION	=	343 FT

BM 50 ELEVATION = 30.16'
N 416479 E 2525138
BL2 STATION 50+86, 198' RIGHT
-L- STATION 101+17, 196' RIGHT
BB SPIKE IN 24" GUM TREE

PI = 94+25.00
EL = 46.30'
VC = 445'
K = 248

PI = 100+85.00
EL = 32.49'
VC = 550'
K = 182

PI = 108+00.00
EL = 39.14'
VC = 350'
K = 253

(-)12.0924%
(+)10.9301%
-3.3000%
-3.3000%
-1.5000%
+1.8200%
+1.8200%
+1.8200%
(+)10.9301%

72" PIPE @ INVERT = 23.48'

BEGIN SPECIAL CUT DITCH -L- STA. 96+50 RT. ELEV. 36.82'
SPECIAL CUT DITCH -L- STA. 97+50 RT. ELEV. 32.49'
END SPECIAL CUT DITCH BEGIN SPECIAL LATERAL "V" DITCH -L- STA. 99+00 LT. ELEV. 27.84'
END SPECIAL LATERAL "V" DITCH -L- STA. 99+68 RT. ELEV. 26.70'
BEGIN SPECIAL LATERAL "V" DITCH -L- STA. 103+50 LT. ELEV. 30.99'
END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -L- STA. 105+50 LT. ELEV. 33.22'
END SPECIAL CUT DITCH -L- STA. 106+40 LT. ELEV. 38.48'

94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

70 60 50 40 30 20 10 0 -10

PIPE HYDRAULIC DATA
-L- Sta.110+50

DRAINAGE AREA	=	27.8 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	69 CFS
DESIGN HW ELEVATION	=	33.8 FT
100 YEAR DISCHARGE	=	105 CFS
100 YEAR HW ELEVATION	=	34.9 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	160 CFS
OVERTOPPING ELEVATION	=	36.8 FT

-Y2- OVERPASS

PI = 108+00.00
EL = 39.14'
VC = 350'
K = 253

(-)10.4554%
(+)10.4554%
+0.9000%
+0.9000%
+1.8500%
+0.9200%
-4.1732%
-3.2259%
-0.5000%
-0.5000%

48" PIPE @ INVERT = 27.49'

BEGIN LATERAL "V" DITCH -L- STA. 110+40 LT. ELEV. 29.80'
BEGIN LATERAL "V" DITCH -L- STA. 110+58 RT. ELEV. 26.74'
END SPECIAL CUT DITCH BEGIN SPECIAL CUT DITCH -L- STA. 111+51 LT. ELEV. 30.29'
END LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -L- STA. 111+60 RT. ELEV. 28.37'
END SPECIAL CUT DITCH -L- STA. 114+00 RT. ELEV. 32.87'
END SPECIAL CUT DITCH -L- STA. 115+50 LT. ELEV. 33.09'
BEGIN SPECIAL CUT DITCH -L- STA. 117+50 RT. ELEV. 31.73'
BEGIN SPECIAL CUT 3' BASE DITCH -L- STA. 117+59 LT. ELEV. 29.28'
SPECIAL CUT 3' BASE DITCH -L- STA. 119+00 LT. ELEV. 26.79'
SPECIAL CUT DITCH -L- STA. 119+00 RT. ELEV. 26.82'
SPECIAL CUT 3' BASE DITCH -L- STA. 122+00 LT. ELEV. 29.28'
SPECIAL CUT DITCH -L- STA. 122+40 RT. ELEV. 29.28'

108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00

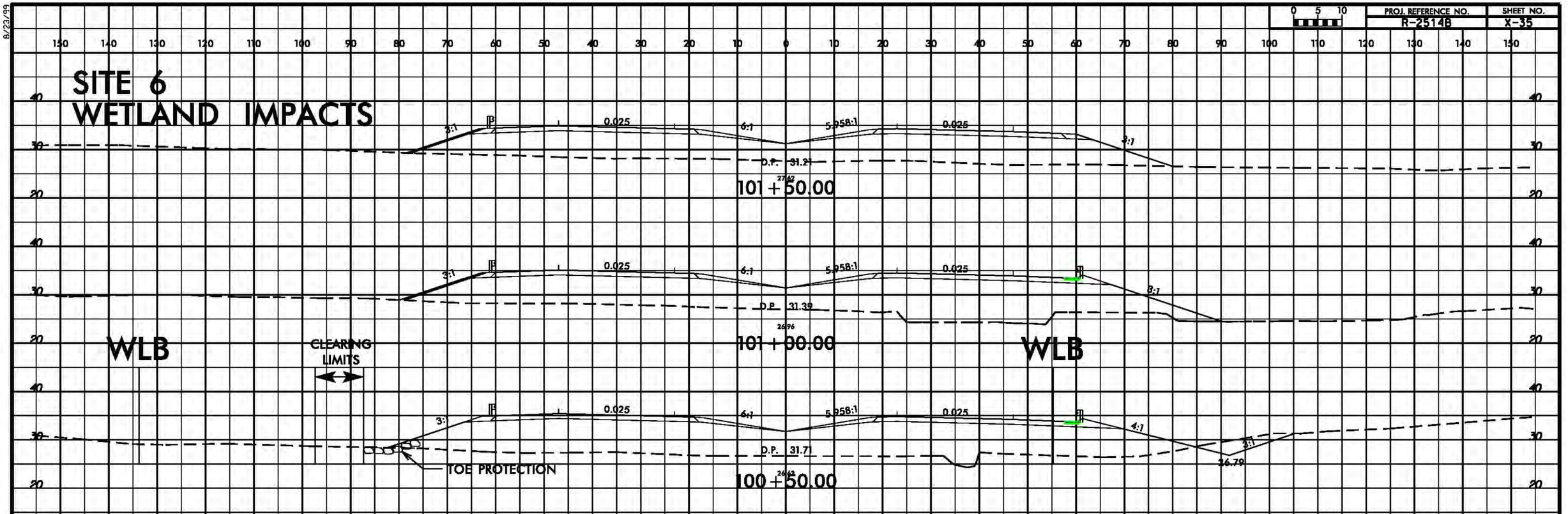
70 60 50 40 30 20 10 0 -10

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-35

SITE 6
WETLAND IMPACTS



PERMIT DRAWING
SHEET 21 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 22 OF 62

8/17/99

REVISIONS

NAD 83/NSRS 2007

SITE 8

MATCHLINE SHEET 11 -L- STA. 119+50.00

MATCHLINE SHEET 11 -Y2D- STA. 17+00.00

MATCHLINE SHEET 13 -L- STA. 133+50.00

17 SETH O. MILLS

15 SLEEPY CREEK FARMS, INC.

18 DENNIS W. SAULTER

STANDARD 'V' DITCH SEE DETAIL F

REMOVE

SEE ENLARGEMENT SHEET 24

SPECIAL CUT DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL N

1201 2GI FS

1202 2GI FS

1203 2GI FS

1204 2GI FS

1205 2GI FS

1206 2GI FS

1207 2GI FS

120 125 130 20 25

15 SLEEPY CREEK FARMS, INC.

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 7

100' 0' 100'
1"=100'

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 23 OF 62

8/17/99

REVISIONS

NAD 83/NSRS 2007

SITE 8

MATCHLINE SHEET 11 -L- STA. 119+50.00

MATCHLINE SHEET 13 -L- STA. 133+50.00

MATCHLINE SHEET 11 -Y2D- STA. 17+00.00

17 SETH O. MILLS

15 SLEEPY CREEK FARMS, INC.

18 DENNIS W. SAULTER

STANDARD 'V' DITCH SEE DETAIL F

REMOVE

SEE ENLARGEMENT SHEET 24

SPECIAL CUT DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL N

REMOVE

15 SLEEPY CREEK FARMS, INC.

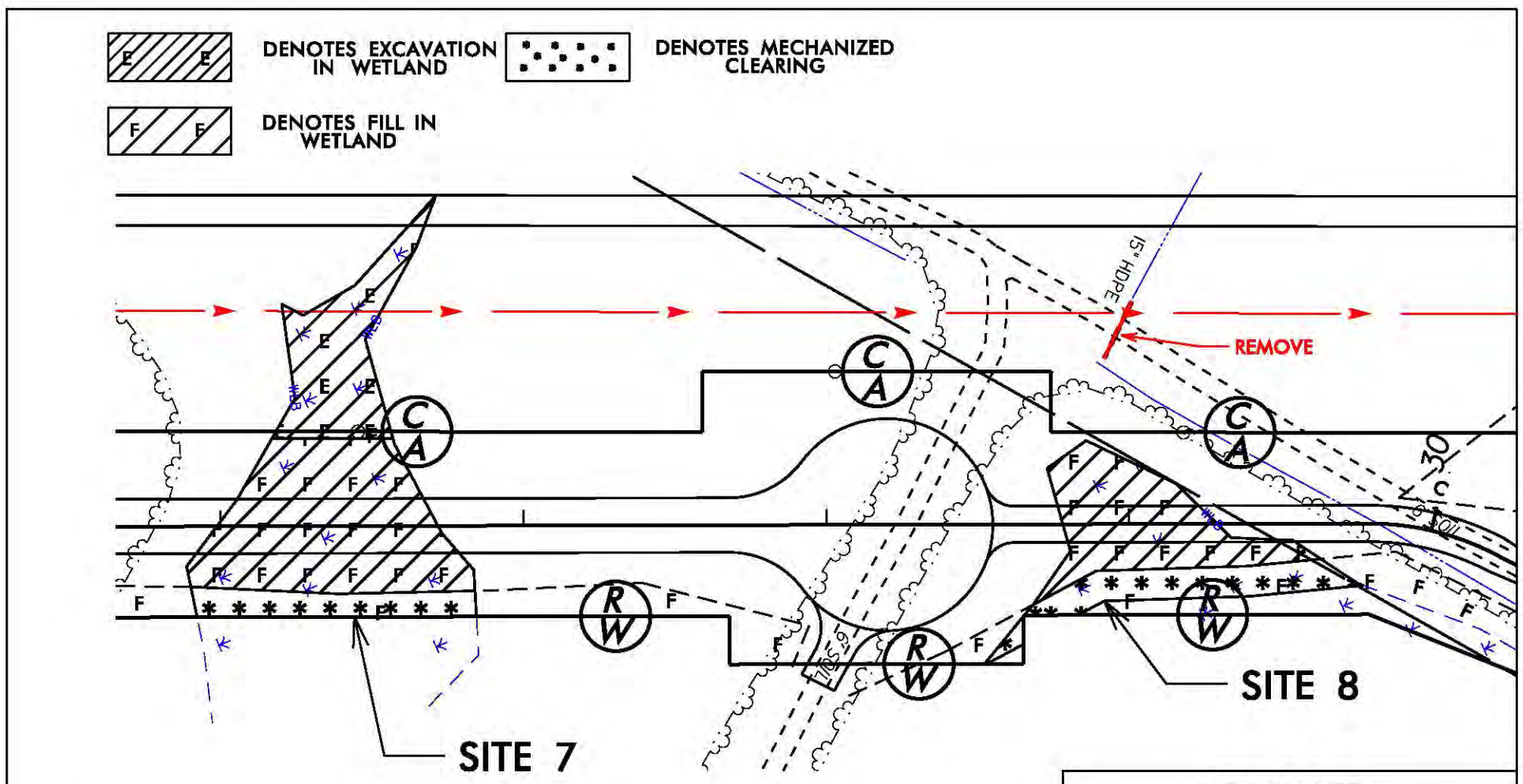
E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 7

100' 0' 100'
1"=100'



PLAN VIEW

SITE 7 & 8

NCDOT
DIVISION OF HIGHWAYS
ONSLOW COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330 / SR 1439 TO
NORTH OF MAYSVILLE

SHEET 24 OF 62

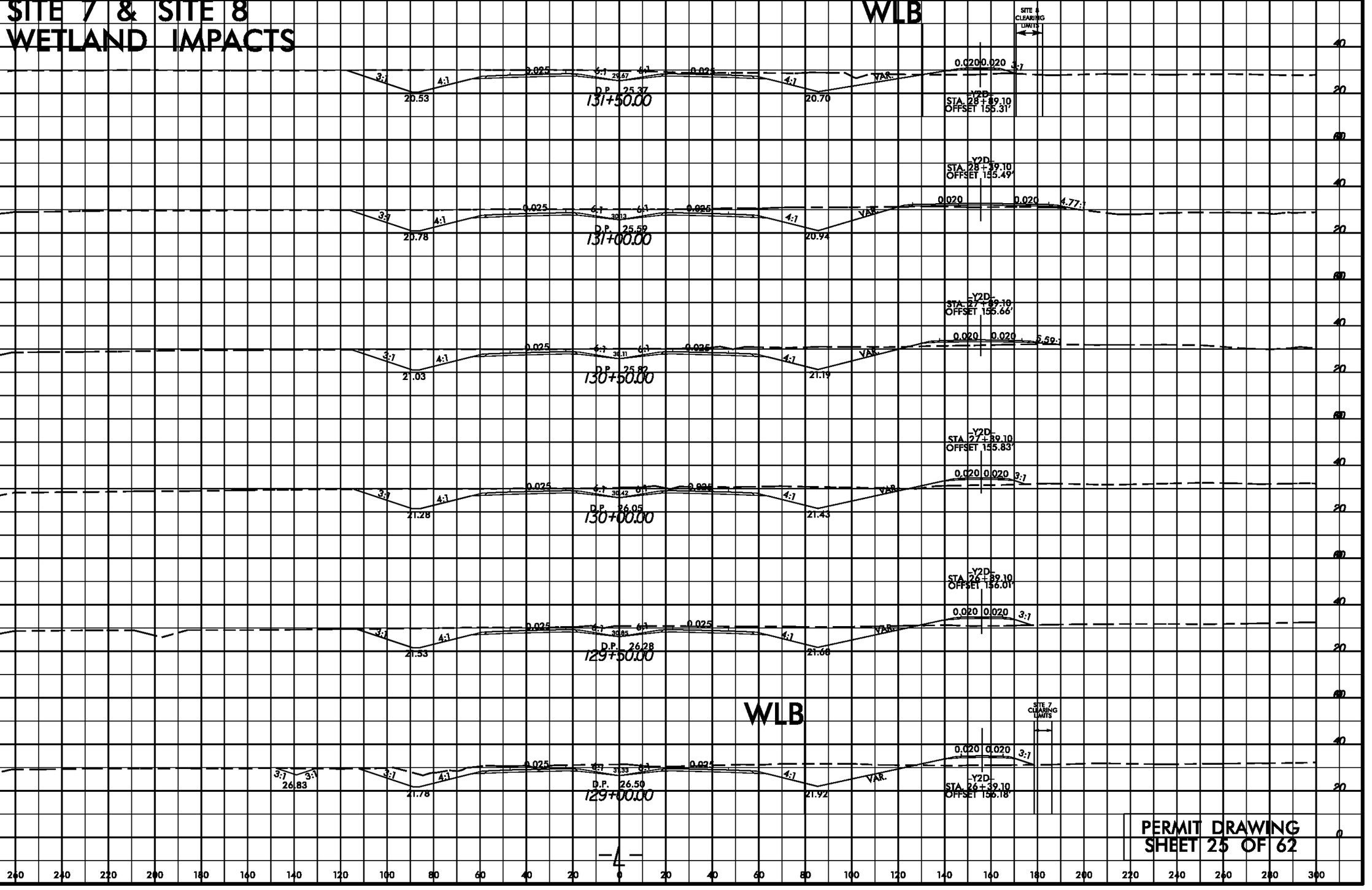
8/23/99

0 10 20

PROJ. REFERENCE NO.	SHEET NO.
R-2514B	X-45

SITE 7 & SITE 8 WETLAND IMPACTS

WLB



PERMIT DRAWING
SHEET 25 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$$$SFILENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 26 OF 62

8/17/99

REVISIONS

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 9

NAD 83/NSRS 2007

135 140 145

(19) MARTHA O. BYNUM

(18) DENNIS W. SAULTER

SPECIAL CUT 3' BASE DITCH SEE DETAIL M

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL O

-BL2- 15

Q=50 CFS
V=1.8 FPS

STA. 133+50.00

MATCHLINE SHEET 12 -L- STA. 133+50.00

STA. 146+50.00

MATCHLINE SHEET 14 -L- STA. 146+50.00

15" RCP-IV

2 BARRELS

2GI

3GI

15" RCP

HW

LATERAL 'V' DITCH SEE DETAIL L

SPECIAL CUT DITCH SEE DETAIL N

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL O

15" RCP

RETAIN

(18) DENNIS W. SAULTER

(15) SLEEPY CREEK FARMS, INC.

(15) SLEEPY CREEK FARMS, INC.

SITE 10

100' 0' 100'

1"=100'

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 27 OF 62

8/17/99

REVISIONS

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 9

NAD 83/NSRS 2007

19 MARTHA D. BYNUM

18 DENNIS R. SAULTER

15 SLEEPY CREEK FARMS, INC.

135 140 145

-BL2- 15

Q_{10}=50 CFS
V_c=1.88 FPS

SPECIAL CUT 3' BASE DITCH
SEE DETAIL M

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL O

SPECIAL CUT DITCH
SEE DETAIL N

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL O

LATERAL 'V' DITCH
SEE DETAIL L

RETAIN

15" RCP-IV

2GI

3GI

MATCHLINE SHEET 12 -L- STA. 133+50.00

MATCHLINE SHEET 14 -L- STA. 146+50.00

SITE 10

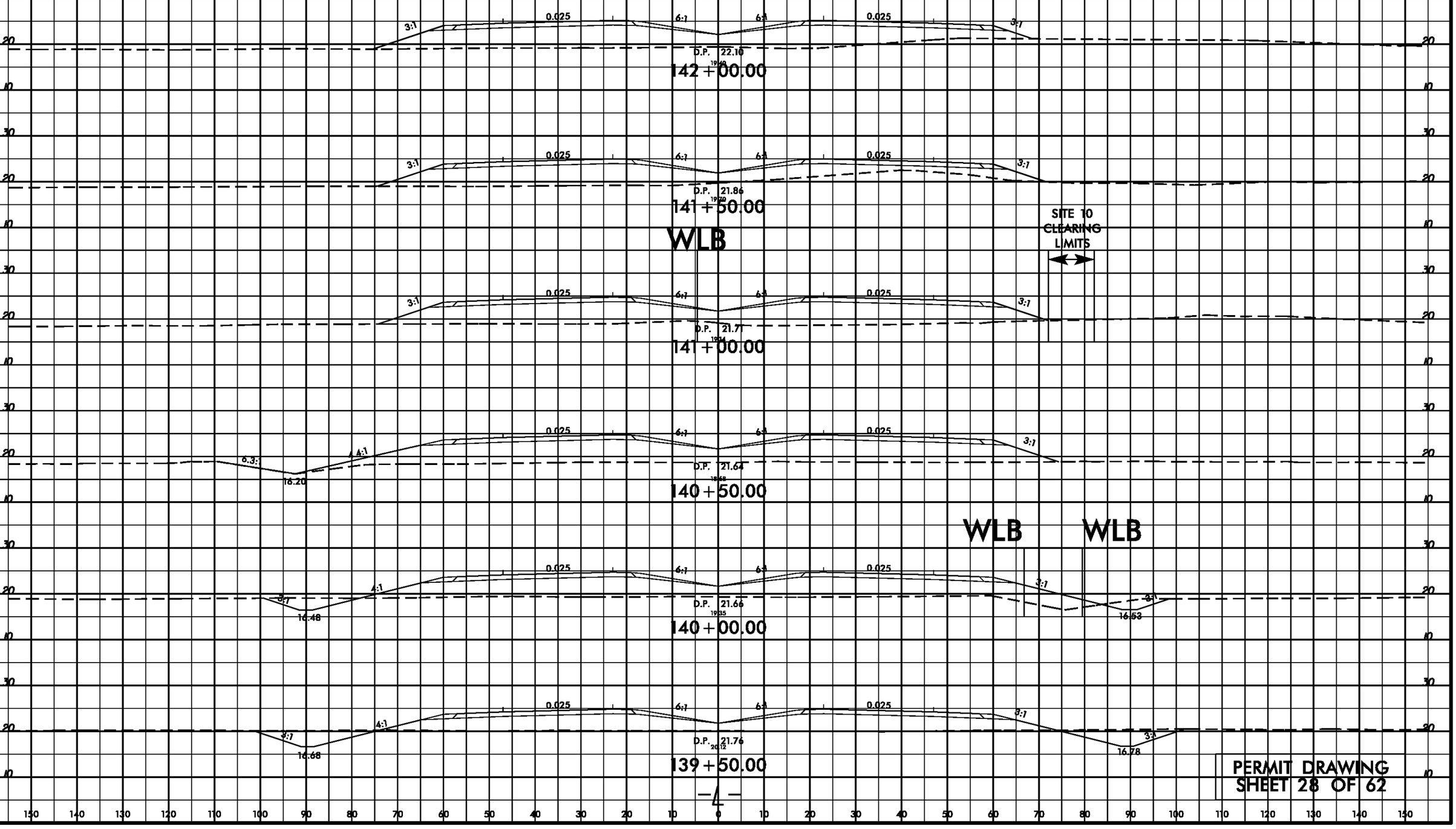
100' 0' 100'
1"=100'

$$$$$$$SYSTIMES$$$$$$$
$$$$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-49

SITE 9 & SITE 10 WETLAND IMPACTS



PERMIT DRAWING
SHEET 28 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$SFILENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 29 OF 62

8/17/99

REVISIONS

NAD 83/NSRS 2007

150 155 160

18 DENNIS W. SAULTER

15 SLEEPY CREEK FARMS, INC.

TEMPORARY WORK BRIDGE

SEE ENLARGEMENT SHEET 31

-BL2- 16 -BL2- 17 -BL2- 18

MATCHLINE SHEET 13 -L- STA. 146+50.00

MATCHLINE SHEET 15 -L- STA. 160+50.00

Q_{10} 2.6 CFS
V_{10} 3.9 FPS

36" RCP-IV EQUALIZER PIPE

15" RCP-IV

2GI

15" W ELBOWS

2 ELBOWS

HEIGHT TO CATCH

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENTS FOR CLARITY.

E E	DENOTES EXCAVATION IN WETLAND
F F	DENOTES FILL IN WETLAND
HC HC	DENOTES HAND CLEARING
	DENOTES MECHANIZED CLEARING
T T	DENOTES TEMPORARY FILL IN WETLAND

SITE 10

100' 0' 100'
1"=100'

$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 30 OF 62

8/17/99

REVISIONS

NAD 83/NSRS 2007

150 155 160

TEMPORARY WORK BRIDGE

18 DENNIS W. SAULTER

SEE ENLARGEMENT SHEET 7

-BL2- 16 -BL2- 17 -BL2- 18

15 SLEEPY CREEK FARMS, INC.

Q_{10}= 2.6 CFS
V_{10}= 3.9 FPS

MATCHLINE SHEET 13 -L- STA. 146+50.00

MATCHLINE SHEET 15 -L- STA. 160+50.00

36" RCP-IV EQUALIZER PIPE

15" W ELBOWS

16" RCP-IV

15" RCP-IV

2GI

HOWARD BRANCH

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENTS FOR CLARITY.

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

T T DENOTES TEMPORARY FILL IN WETLAND

SITE 10

100' 0' 100'
1"=100'

$$$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$

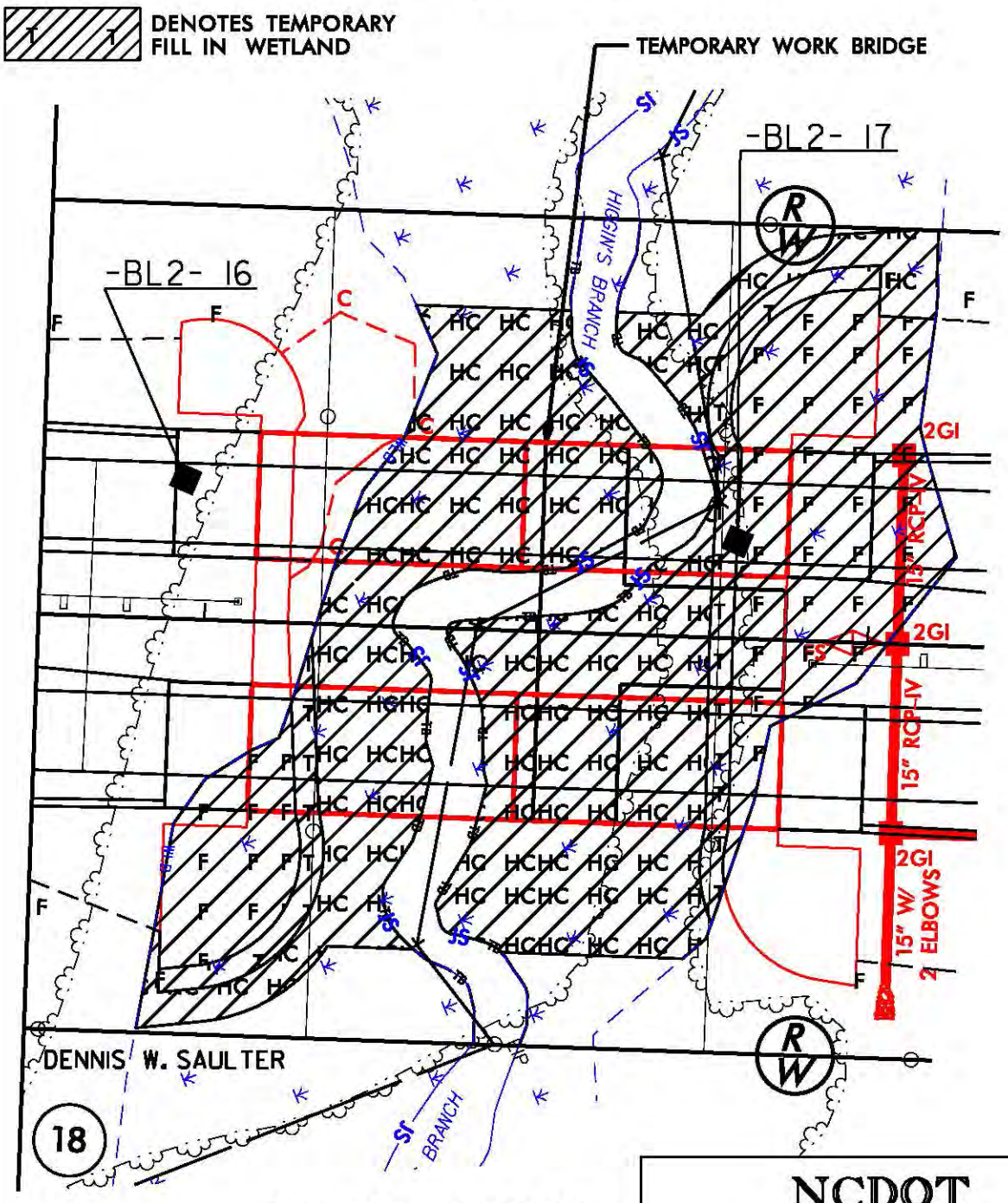
E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

T T DENOTES TEMPORARY FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING



PLAN VIEW
SITE 10

50′ 0′ 50′

HORIZONTAL

NCDOT

DIVISION OF HIGHWAYS

ONSLOW COUNTY

PROJECT: 34442.1.3 (R-2514B)

US 17 FROM SOUTH OF BELGRADE AT SR 1330 / SR 1439 TO NORTH OF MAYSVILLE

SHEET 31 OF 62

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 32 OF 62

LEFT DITCH
RIGHT DITCH

SPECIAL CUT DITCH
-L- STA. 122+00 RT.
ELEV. 23.35'

SPECIAL CUT 3' BASE DITCH
-L- STA. 122+40 LT.
ELEV. 21.28'

BEGIN SPECIAL STANDARD "V" DITCH
-L- STA. 127+19 LT.
ELEV. 23.97'

END SPECIAL STANDARD "V" DITCH
-L- STA. 129+21 LT.
ELEV. 24.48'

SPECIAL CUT DITCH
-L- STA. 136+00 RT.
ELEV. 18.97'

SPECIAL CUT 3' BASE DITCH
-L- STA. 136+00 RT.
ELEV. 18.82'

(-)0.4554%

(-)1.5190%

-0.4000%
-0.5000%

(+)0.4554%

122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00

70 60 50 40 30 20 10 0 -10

SPECIAL CUT 3' BASE DITCH
-L- STA. 136+00 LT.
ELEV. 18.49'

SPECIAL CUT DITCH
BEGIN SPECIAL LATERAL 3' BASE DITCH
-L- STA. 139+00 RT.
ELEV. 17.31'

SPECIAL CUT 3' BASE DITCH
-L- STA. 138+00 LT.
ELEV. 17.28'

END SPECIAL LATERAL 3' BASE DITCH
BEGIN SPECIAL LATERAL 3' BASE DITCH
-L- STA. 139+00 RT.
ELEV. 17.18'

SPECIAL LATERAL 3' BASE DITCH
-L- STA. 140+00 LT.
ELEV. 16.49'

END SPECIAL LATERAL 3' BASE DITCH
-L- STA. 140+50 LT.
ELEV. 16.40'

END SPECIAL LATERAL "Y" DITCH
BEGIN LATERAL "Y" DITCH
-L- STA. 140+00 RT.
ELEV. 16.32'

END LATERAL "Y" DITCH
-L- STA. 140+95.88 RT.
ELEV. 16.72'

PI = 140+50.00
EL = 24.34'
VC = 300'
K = 298

(-)0.4554%

(+)0.5529%

+0.7000%

-0.4000%
-0.5000%

48" PIPE
INVERT = 16.17'

PIPE HYDRAULIC DATA
-L- Sta.140+22

DRAINAGE AREA	=	17.63 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	80 CFS
DESIGN HW ELEVATION	=	19.9 FT
100 YEAR DISCHARGE	=	85 CFS
100 YEAR HW ELEVATION	=	20.4 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	165 CFS
OVERTOPPING ELEVATION	=	24.7 FT

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5590 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	7,580 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	20.32 FT
OVERTOPPING DISCHARGE	=	14,800 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

BM 53 ELEVATION = 20.01
N 420521 E 2526727
BL2 STATION 95+01, 259' RIGHT
-L- STATION 145+10, 22' RIGHT
RR SPIKE IN 18" GUM TREE

PI = 150+05.00
EL = 29.62'
VC = 245'
K = 250

℄ -L- STA. 147+93
2@80' 45" PSCG
℄ ELEV. = 26.46'
SKEW = 90°

BEGIN BRIDGE
-L- STA. 147+15.00

END BRIDGE
-L- STA. 148+75.00

(+)0.5529%

CL. II RIP RAP
SEE STRUCTURE PLANS

CL. II RIP RAP
SEE STRUCTURE PLANS

NWS=13.0'

FINAL WORK BRIDGE GRADE TO BE SET BY CONTRACTOR. MIN. LOW CHORD = 15.0' (2' ABOVE NORMAL HIGH WATER)

136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00

50 40 30 20 10 0 -10 -20 -30

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 33 OF 62

8/17/99

REVISIONS

SITE 10

NAD 83/NSRS 2007

19 MARTHA D. BYNUM

15 SLEEPY CREEK FARMS, INC.

MHC PROPERTIES LLC

SITE 12

15 SLEEPY CREEK FARMS, INC.

TEMPORARY WORK BRIDGE

21 ALENE W. WETHERINGTON

MATCHLINE SHEET 14 -L- STA. 160+50.00

MATCHLINE SHEET 16 -L- STA. 174+50.00

CLASS II RIP RAP

15" W 2 BARREL RCP-IV

2GI 2GI 2GI

3GI

15" RCP-IV

2GI

15" RCP-IV 2 BARREL 2GI

15" W 2 BARREL 2GI

Q_{10}=7.1 CFS
V_{10}=1.5 FPS

SPECIAL LATERAL "V" DITCH SEE DETAIL A

WHITE OAK RIVER

TEMPORARY WORK BRIDGE

15 SLEEPY CREEK FARMS, INC.

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENT FOR CLARITY.

22 DORA W. WETHERINGTON

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

SITE 11

100' 0' 100'
1"=100'

$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 34 OF 62

8/17/99

REVISIONS

SITE 10

NAD 83/NSRS 2007

19 MARTHA D. BYNUM

15 SLEEPY CREEK FARMS, INC.

MHC PROPERTIES LLC

SITE 12

15 SLEEPY CREEK FARMS, INC.

TEMPORARY WORK BRIDGE

21 ALENE W. WETHERINGTON

MATCHLINE SHEET 14 -L- STA. 160+50.00

MATCHLINE SHEET 16 -L- STA. 174+50.00

CLASS II RIP RAP

15" W 2 BARREL

15" RCP-IV

2GI 2GI 2GI

3GI

18" RCP-IV

2GI

15" RCP-IV

2GI

15" W 2 BARREL

2GI

Q_{10}=7.1 CFS
V_{10}=1.5 FPS

SPECIAL LATERAL "V" DITCH SEE DETAIL A

15 SLEEPY CREEK FARMS, INC.

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENT FOR CLARITY.

TEMPORARY WORK BRIDGE

22 DORA W. WETHERINGTON

WHITE OAK RIVER

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

SITE 11

100' 0' 100'
1"=100'

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH - - -
RIGHT DITCH - - -

PI = 150+05.00
EL = 29.52'
VC = 245'
K = 250

(-)0.4258%

36" EQUALIZER PIPE ℄
INVERT = 14.18'

36" EQUALIZER PIPE ℄
INVERT = 14.18'

PI = 162+85.00
EL = 24.11'
VC = 295'
K = 183

(-)0.4258%

(+)1.1827%

℄ DITCH

BEGIN SPECIAL LATERAL 'V' DITCH
℄ -L- STA. 160+50 RT.
ELEV. 15.88'

END SPECIAL LATERAL 'V' DITCH
℄ -L- STA. 162+99 RT.
ELEV. 14.88'

150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00

50 40 30 20 10 0 -10 -20 -30

PI = 162+85.00
EL = 24.11'
VC = 295'
K = 183

BEGIN BRIDGE
-L- 167+74.73 RIGHT
-L- 167+73.10 LEFT

BM 84 ELEVATION = 14.49'
N 4922935 E 2527612
BL2 STATION 120+57, 201' RIGHT
℄ STAGN 170+56, 190' RIGHT
RR SPIKE IN 20" GUM TREE

℄ -L- STA. 173+55
2@100', 7@110', 1@100',
1@90' 63" MBT
℄ ELEV. = 36.82'
SKEW = 90°

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5,310 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	7,520 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	20.32 FT
OVERTOPPING DISCHARGE	=	14,880 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

(+)1.1827%

MAX. GRADE ON WORK BRIDGE = 5%

CL. II RIP RAP
SEE STRUCTURE PLANS

NWS = 9.70'

FINAL WORK BRIDGE GRADE TO BE SET BY CONTRACTOR. MIN. LOW CHORD = 11.7' (3' ABOVE NORMAL WATER SURFACE).

PERMIT DRAWING
SHEET 35 OF 62

164+00 165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00

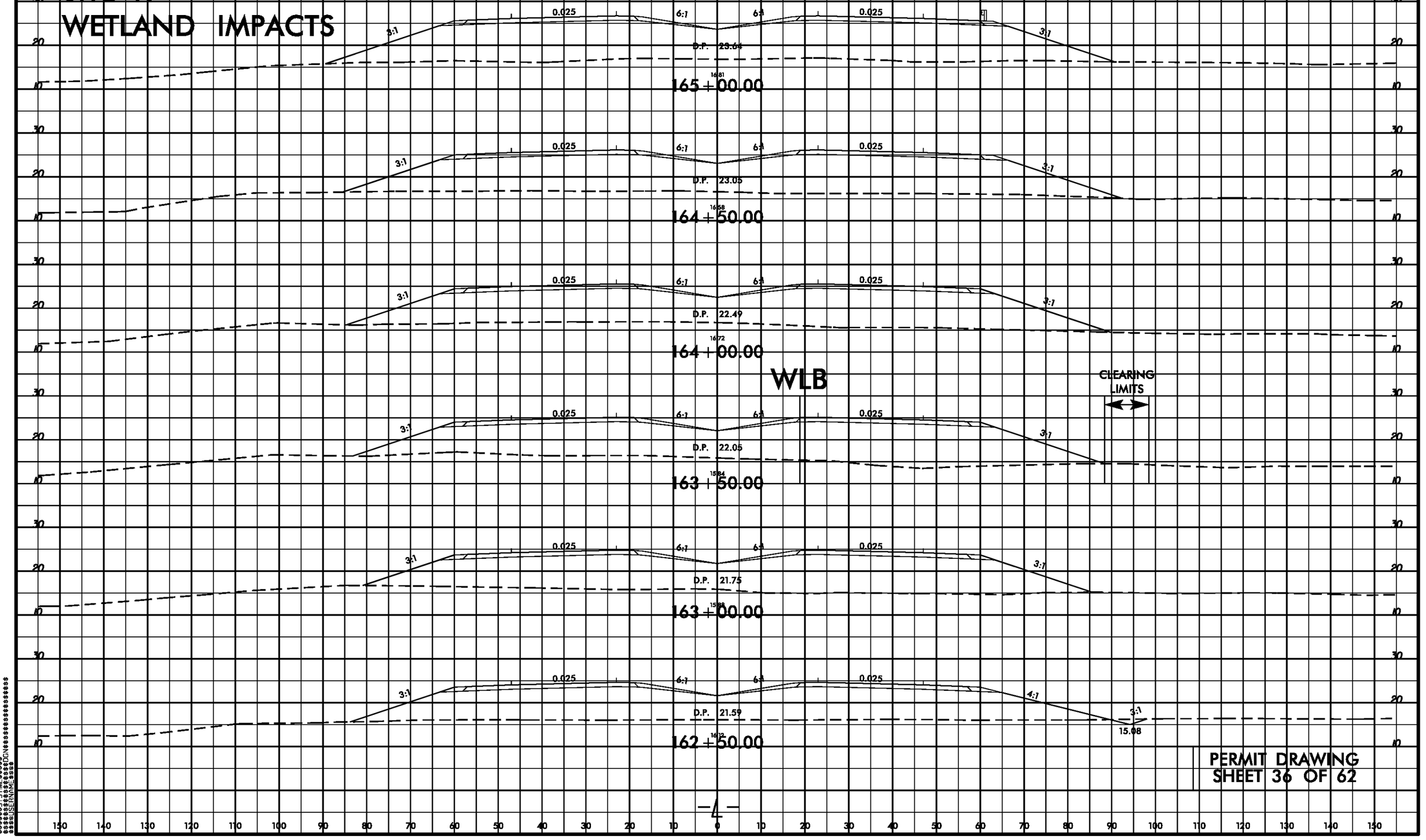
60 50 40 30 20 10 0 -10 -20

$$$$SYSTIME$$$$
$$$$USERNAME$$$$
$$$$DGN$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-58

SITE 11
WETLAND IMPACTS



PERMIT DRAWING
SHEET 36 OF 62

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$SENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 37 OF 62

NAD 83/NSRS 2007

SITE 12

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

T T DENOTES TEMPORARY FILL IN WETLAND

20 MHC PROPERTIES LLC

24 TOWN OF MAYSVILLE

REBAR

175

180

185

21 ALENE W. WETHERINGTON

TEMPORARY WORK BRIDGE

SEE ENLARGEMENT SHEET 39

MATCHLINE SHEET 15 -L- STA. 174+50.00

LATERAL 'A' DITCH SEE DETAIL L

23 MHC PROPERTIES, LLC

MATCHLINE SHEET 17 -L- STA. 188+50.00

LATERAL 3' BASE DITCH SEE DETAIL E

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENT FOR CLARITY.

22 DORA W. WETHERINGTON

20' INGRESS, EGRESS EASEMENT

MAYSVILLE CITY LIMITS

100' 0' 100'
1"=100'

REVISIONS 8/17/99

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 38 OF 62

NAD 83/NSRS 2007

SITE 12

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

T T DENOTES TEMPORARY FILL IN WETLAND

REVISIONS 8/17/99

20 MHC PROPERTIES LLC

24 TOWN OF MAYSVILLE

5/8" REBAR

REBAR

175

180

185

21 ALENE W. WETHERINGTON

TEMPORARY WORK BRIDGE

SEE ENLARGEMENT SHEET 39

MATCHLINE SHEET 15 -L- STA. 174+50.00

23 MHC PROPERTIES, LLC

LATERAL 'V' DITCH
SEE DETAIL L

MATCHLINE SHEET 17 -L- STA. 188+50.00

LATERAL 3' BASE DITCH
SEE DETAIL E

ALENE W. WETHERINGTON

TEMPORARY WORK BRIDGE

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENT FOR CLARITY.

22 DORA W. WETHERINGTON

20' INGRESS, EGRESS EASEMENT

20' INGRESS, EGRESS EASEMENT

23 MHC PROPERTIES, LLC

MAYSVILLE CITY LIMITS

EP

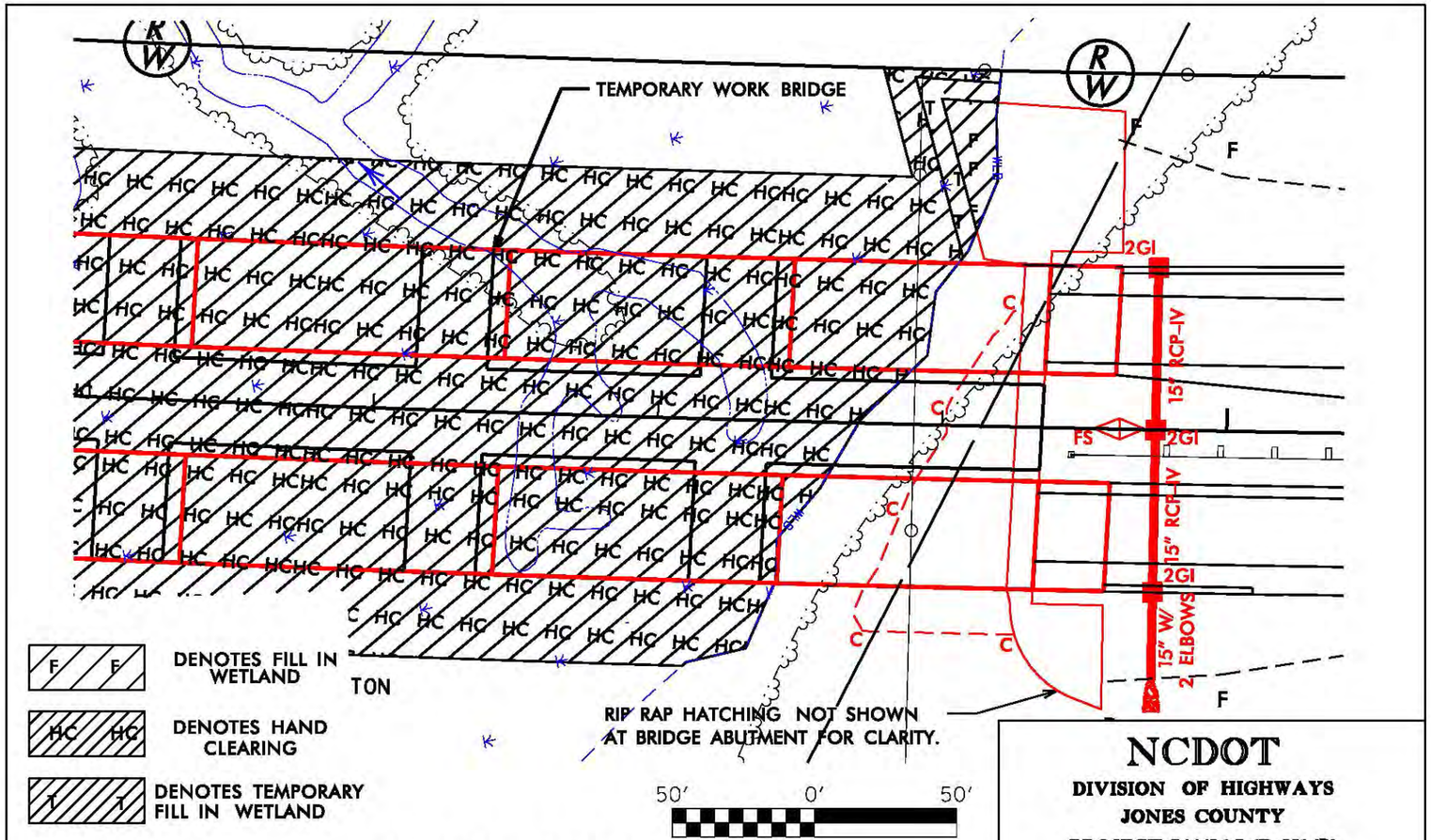
CM

5/8" REBAR

100' 0' 100'

1"=100'

SYSTIME
SYSTEMNAME



PLAN VIEW

SITE 12

NCDOT

DIVISION OF HIGHWAYS

JONES COUNTY

PROJECT: 34442.1.3 (R-2514B)

US 17 FROM SOUTH OF BELGRADE AT SR 1330 / SR 1439 TO NORTH OF MAYSVILLE

SHEET 39 OF 62

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	30

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH
RIGHT DITCH
STRUCTURE EXCAVATION

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5,310 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	7,520 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	20.52 FT
OVERTOPPING DISCHARGE	=	14,200 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

END BRIDGE
-L- 179+34.19 RIGHT
-L- 179+35.81 LEFT

MAX. GRADE OF WORK BRIDGE = 6%

CL II RIP RAP
SEE STRUCTURE PLANS

EXCAVATE TO ELEV. OF 31'

FINAL WORK BRIDGE GRADE TO BE SET BY CONTRACTOR MIN. LOW CHORD = 31.7' (2' ABOVE NORMAL WATER SURFACE)

BM 55 ELEVATION = 38.17'
N 423693 E 2527782
BL2 STATION 128+23. 16.3' RIGHT
-L- STATION 178+84. 16.7' RIGHT
RR SPIKE IN 20" HARDWOOD

PI = 181+30.00
EL = 45.99'
VC = 560'
K = 249

(+)1.1827%
(-)1.0655%
(-)1.0655%
(+)0.3000%
-2.3000%
-0.3000%

PIPE HYDRAULIC DATA
-L- Sta. 188+08

DRAINAGE AREA	=	17.4 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	82 CFS
DESIGN HW ELEVATION	=	33.6 FT
100 YEAR DISCHARGE	=	93 CFS
100 YEAR HW ELEVATION	=	33.7 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	27 CFS
OVERTOPPING ELEVATION	=	35.6 FT

PI = 187+10.00
EL = 39.8'
VC = 350'
K = 256

24" PIPE @ INVERT = 31.50'

BEGIN LATERAL 3' BASE DITCH -L- STA. 188+00 RT. ELEV. 31.42'

END/BEGIN LATERAL 3' BASE DITCH -L- STA. 189+00 RT. ELEV. 30.97'

BEGIN LATERAL "V" DITCH -L- STA. 190+00 LT. ELEV. 31.80'

LATERAL 3' BASE DITCH -L- STA. 192+00 RT. ELEV. 32.82'

BEGIN LATERAL "V" DITCH -L- STA. 182+20 LT. ELEV. 49.12'

LATERAL "V" DITCH -L- STA. 184+50 LT. ELEV. 46.12'

LATERAL "V" DITCH -L- STA. 186+00 LT. ELEV. 39.87'

LATERAL "V" DITCH -L- STA. 187+50 LT. ELEV. 31.92'

END LATERAL "V" DITCH -L- STA. 188+00 LT. ELEV. 31.79'

BM 39 ELEVATION = 37.28'
N 424814 E 2528274
BL STATION 201+48. 168' RIGHT
-L- STATION 190+00. 426' RIGHT
RR SPIKE IN BASE OF 15" PINE

LATERAL "V" DITCH -L- STA. 192+00 LT. ELEV. 32.82'

178+00	179+00	180+00	181+00	182+00	183+00	184+00	185+00	186+00	187+00	188+00	189+00	190+00	191+00	192+00

LATERAL 3' BASE DITCH -L- STA. 192+00 RT. ELEV. 32.82'

END LATERAL 3' BASE DITCH -L- STA. 197+50 RT. ELEV. 34.48'

PI = 198+35.00
EL = 43.16'
VC = 234'
K = 249

(+)0.3000%
(-)0.6413%

PIPE HYDRAULIC DATA
-L- Sta. 205+42

DRAINAGE AREA	=	11.4 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	40 CFS
DESIGN HW ELEVATION	=	32.4 FT
100 YEAR DISCHARGE	=	45 CFS
100 YEAR HW ELEVATION	=	32.5 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	100 CFS
OVERTOPPING ELEVATION	=	32.3 FT

PI = 201+50.00
EL = 41.16'
VC = 170'
K = 68

(-)0.6413%
(-)0.9779%

BEGIN LATERAL "V" DITCH -L- STA. 202+50 RT. ELEV. 30.16'

PI = 205+40.00
EL = 37.58'
VC = 120'
K = 182

(-)0.9779%
(+)0.8444%

-1.3400%
-0.3900%

36" PIPE @ INVERT = 28.33'

LATERAL 3' BASE DITCH -L- STA. 205+42 RT. ELEV. 29.41'

END LATERAL "V" DITCH -L- STA. 192+00 LT. ELEV. 32.82'

BEGIN LATERAL 4' BASE DITCH -L- STA. 194+90 LT. ELEV. 30.69'

END LATERAL "V" DITCH -L- STA. 197+50 LT. ELEV. 34.48'

END LATERAL "V" DITCH -L- STA. 202+50 LT. ELEV. 30.16'

END LATERAL 4' BASE DITCH -L- STA. 205+42 RT. ELEV. 29.31'

LATERAL 4' BASE DITCH -L- STA. 206+00 LT. ELEV. 27.00'

PERMIT DRAWING
SHEET 40 OF 62

192+00	193+00	194+00	195+00	196+00	197+00	198+00	199+00	200+00	201+00	202+00	203+00	204+00	205+00	206+00

$$$$$$$SYSTIME$$$$$$
$$$$$$$

8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-2514B	X-65

SITE 12
WETLAND IMPACTS

0.025

0.025

178+00.00

0.025

0.025

177+50.00

HAND CLEARING

0.025

0.025

177+00.00

PERMIT DRAWING
SHEET 41 OF 62

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$SELNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

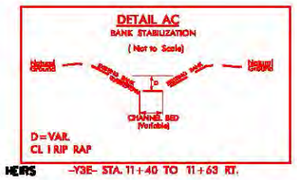
NAD 83/NSRS 2007

DETAIL AB
BANK STABILIZATION
(Not to Scale)

CL I RIP RAP
EST. = 20 TONS
GEOTEXTILE
EST. = 40 SY
Length = 24 FT.
D = VAR.

-Y3A- STA. 23+74 RT.

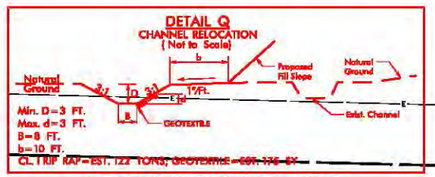
DETAIL AC
BANK STABILIZATION
(Not to Scale)



D = VAR.
CL I RIP RAP

-Y3E- STA. 11+40 TO 11+63 RT.

DETAIL Q
CHANNEL RELOCATION
(Not to Scale)



Min. D = 3 FT.
Max. d = 3 FT.
B = 8 FT.
b = 10 FT.
CL I RIP RAP = EST. 122 TONS, GEOTEXTILE = EST. 178 SY

-L- STA. 207+25 TO 208+11 LT., DDE = 336 CY

J. C. LARODUE HEIRS

JAMES E. HARRIS

J. C. LARODUE HEIRS

DAVID NELSON JOHNSON
JOYCE J. McALLISTER

DAVID NELSON JOHNSON
JEREMY LEN JOHNSON

DAVID NELSON JOHNSON

MATCHLINE SHEET 17
-Y3A- STA. 27+75.00

MATCHLINE SHEET 17
-L- STA. 202+50.00

MATCHLINE SHEET 19
-Y3A- STA. 14+50.00

MATCHLINE SHEET 19
-L- STA. 214+00.00

MATCHLINE SHEET 19

SPECIAL LATERAL 'V' DITCH SEE DETAIL A

SPECIAL LATERAL 'V' DITCH SEE DETAIL A

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL CUT DITCH SEE DETAIL H

BANK STABILIZATION SEE DETAIL AB

BURY 1'

BANK STABILIZATION SEE DETAIL AC

TIE TO EXISTING CHANNEL

CHANNEL RELOCATION SEE DETAIL Q

TIE TO EXISTING CHANNEL

BACKFILL EX. CHANNEL

LATERAL 4' BASE DITCH SEE DETAIL AF

LATERAL 'V' DITCH SEE DETAIL L

LATERAL 2' BASE DITCH SEE DETAIL R

REMOVE

40' INGRESS, EGRESS EASEMENT

30' INGRESS, EGRESS EASEMENT

12" BLK W/3 GRAVES

48" RCSW

12" SW

DECK

CONC

PUE

PDE

205

210

215

25

29

30

31

27

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
1"=100'

SITE 13

PERMIT DRAWING
SHEET 42 OF 62

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

DETAIL AB
BANK STABILIZATION
(Not to Scale)

CL I RIP RAP
EST. = 20 TONS
GEOTEXTILE
EST. = 40 SY
Length = 24 FT.
D = VAR.

-Y3A- STA. 23+74 RT.

DETAIL AC
BANK STABILIZATION
(Not to Scale)

D = VAR.
CL I RIP RAP

-Y3B- STA. 11+40 TO 11+68 RT.

DETAIL Q
CHANNEL RELOCATION
(Not to Scale)

Min. D = 3 FT.
Max. d = 3 FT.
B = 8 FT.
b = 10 FT.
CL I RIP RAP = EST. 122 TONS, GEOTEXTILE = 264 SY

-L- STA. 207+25 TO 208+11 LT., DDE = 336 CY

MATCHLINE SHEET 17
-Y3A- STA. 27+75.00

MATCHLINE SHEET 17
-L- STA. 202+50.00

MATCHLINE SHEET 19
-Y3A- STA. 14+50.00

MATCHLINE SHEET 19
-L- STA. 214+00.00

MATCHLINE SHEET 19

JAMES E. HARRIS
J. C. LARODUE HEIRS
DAVID NELSON JOHNSON
JOYCE J. MCALLISTER
DAVID NELSON JOHNSON
JEREMY LEE JOHNSON

SPECIAL LATERAL 'V' DITCH SEE DETAIL A
SPECIAL LATERAL 'V' DITCH SEE DETAIL
SPECIAL CUT DITCH SEE DETAIL H
BANK STABILIZATION SEE DETAIL AB
BANK STABILIZATION SEE DETAIL AC
BURY 1'
TIE TO EXISTING CHANNEL
CHANNEL RELOCATION SEE DETAIL Q
BACKFILL EX. CHANNEL
LATERAL 4' BASE DITCH SEE DETAIL AF
LATERAL 'V' DITCH SEE DETAIL L
LATERAL 2' BASE DITCH SEE DETAIL R
REMOVE
40' INGRESS, EGRESS EASEMENT
30' INGRESS, EGRESS EASEMENT
PUE
PDE
DECK
CONC
12' BLK W/3 GRAVES

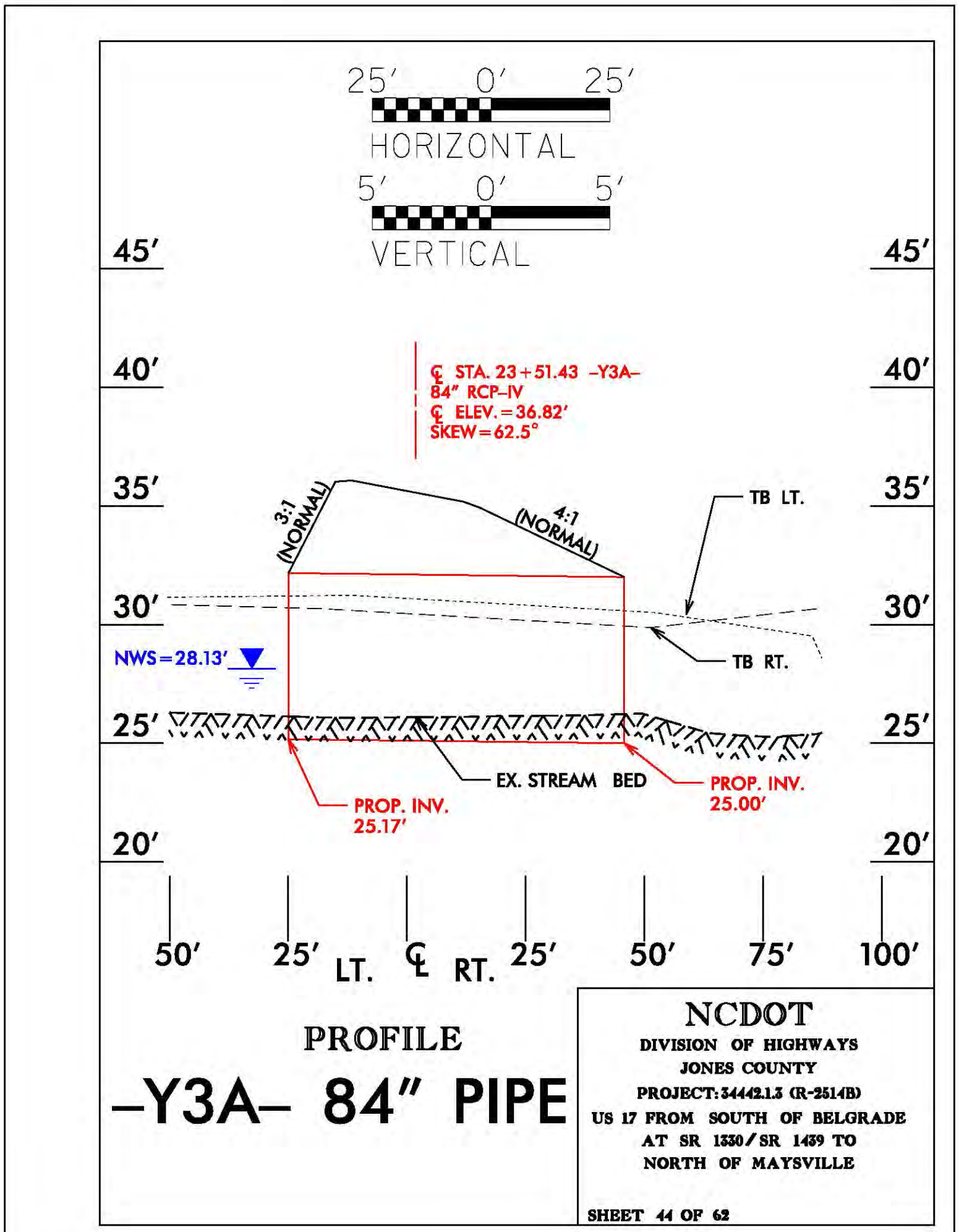
DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
1"=100'

SITE 13

PERMIT DRAWING
SHEET 43 OF 62



PROFILE

–Y3A– 84″ PIPE

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330/SR 1439 TO
NORTH OF MAYSVILLE

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 45 OF 62

-Y3-

LEFT DITCH
RIGHT DITCH

END GRADE -Y3- STA 28+00.00
EL. = 39.50

PI = 25+80.00
FL = 40.65'
VC = 340'
K = 80

BEGIN SPECIAL CUT DITCH -Y3- STA. 24+50 LT. ELEV. 37.64'

END SPECIAL CUT DITCH -Y3- STA. 28+00 RT. ELEV. 37.28'

(-)4.55%

(-)0.3000%

+0.5000%

+0.5000%

-0.4000%

BEGIN SPECIAL LATERAL "V" DITCH -Y3- STA. 24+46 RT. ELEV. 35.87'

END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -Y3- STA. 24+00 RT. ELEV. 36.59'

END SPECIAL CUT DITCH -Y3- STA. 28+00 RT. ELEV. 37.59'

24+00 25+00 26+00 27+00 28+00

0 10 20 30 40 50 60 70

-Y3A-

PIPE HYDRAULIC DATA
-Y3A- Sta.10+70

DRAINAGE AREA	=	370 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	322 FT
100 YEAR DISCHARGE	=	# CFS
100 YEAR HW ELEVATION	=	324 FT.
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	35 CFS
OVERTOPPING ELEVATION	=	328 FT.

PIPE HYDRAULIC DATA
-Y3A- Sta.23+51

DRAINAGE AREA	=	380 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	90 CFS
DESIGN HW ELEVATION	=	307 FT
100 YEAR DISCHARGE	=	130 CFS
100 YEAR HW ELEVATION	=	310 FT
OVERTOPPING FREQUENCY	=	500+/- YRS
OVERTOPPING DISCHARGE	=	150 CFS
OVERTOPPING ELEVATION	=	316 FT @ SAG

BEGIN GRADE -Y3A- STA.10+12.00
EL. = 44.55

PI = 11+50.00
EL = 41.82'
VC = 150'
K = 105

4.55

(-)1.9783%

(-)0.5200%

-0.5000%

-0.6000%

24" PIPE ℄
INVERT = 30.15'

84" PIPE ℄
INVERT = 25.10'

BEGIN SPECIAL LATERAL "V" DITCH -Y3A- STA. 11+50 LT. ELEV. 33.03'

BEGIN SPECIAL LATERAL "V" DITCH -Y3A- STA. 12+50 RT. ELEV. 33.09'

SPECIAL LATERAL "V" DITCH -Y3A- STA. 14+50 RT. ELEV. 33.09'

SPECIAL LATERAL "V" DITCH -Y3A- STA. 16+00 LT. ELEV. 34.68'

END SPECIAL LATERAL "V" DITCH -Y3A- STA. 17+25 LT. ELEV. 35.08'

END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -Y3A- STA. 11+50 RT. ELEV. 31.56'

BEGIN SPECIAL CUT DITCH -Y3A- STA. 23+51 LT. ELEV. 44.84'

END SPECIAL CUT DITCH -Y3A- STA. 23+51 RT. ELEV. 39.56'

SPECIAL CUT DITCH -Y3A- STA. 24+00 RT. ELEV. 38.86'

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

0 10 20 30 40 50 60 70

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$

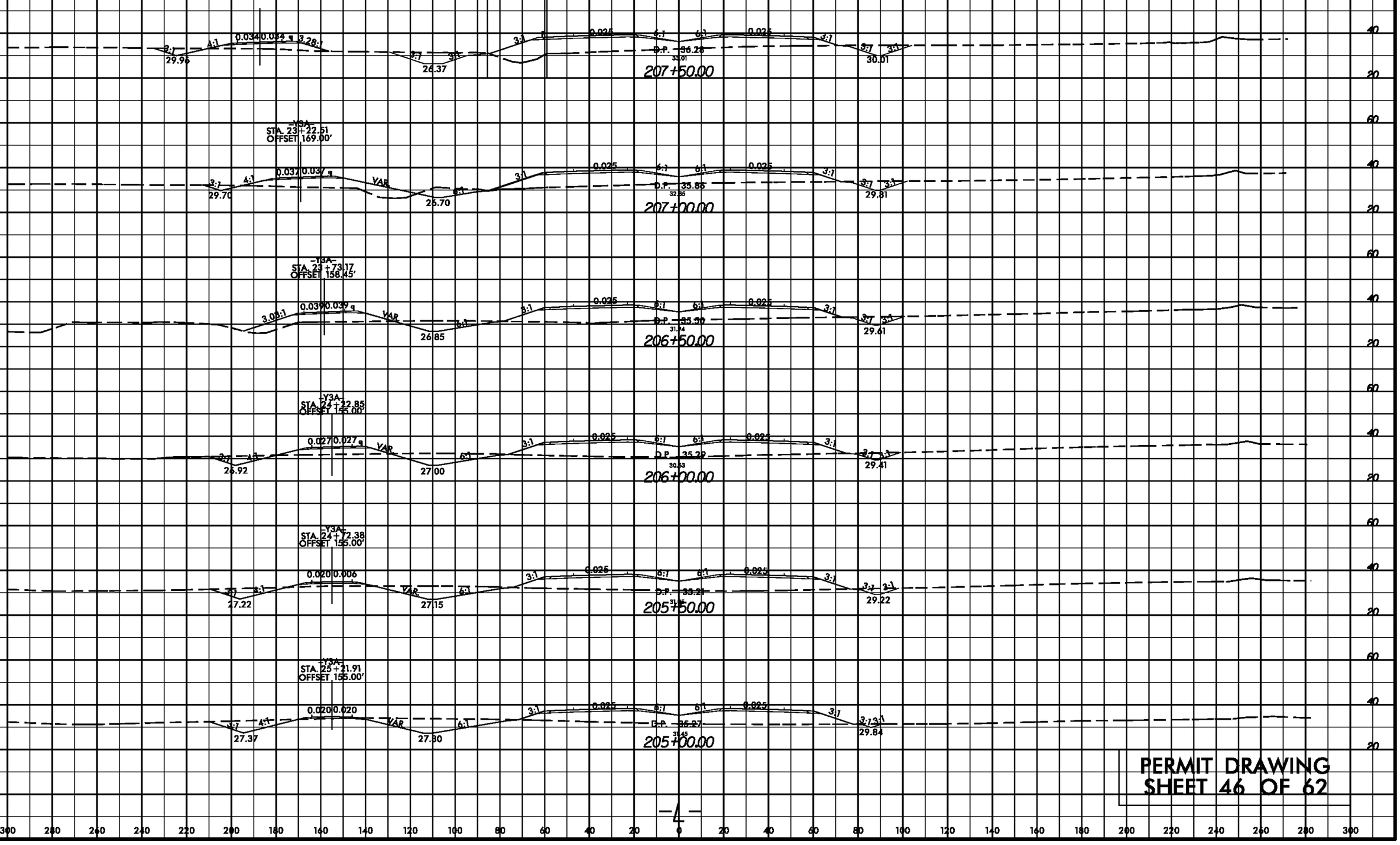
8/23/99

0 10 20

PROJ. REFERENCE NO.	SHEET NO.
R-2514B	X-76

SITE 13
SURFACE WATER IMPACTS

JS JS



PERMIT DRAWING
SHEET 46 OF 62

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$SELNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 47 OF 62

SITE 14

SITE 13

NAD 83/NSRS 2007

- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

8/17/99 R/W Revision 4/9/14 JCL Revised Property Owner Name and Deed Book Information for Parcel 33

MATCHLINE SHEET 20 -L- STA. 222+00.00

MATCHLINE SHEET 23 -Y3- STA. 22+00.00

MATCHLINE SHEET 18 -L- STA. 214+00.00

MATCHLINE SHEET 18 -Y3A- STA. 14+50.00

SEE ENLARGEMENT SHEET 49

INC. WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP

J. C. LAROQUE, HEIRS

ALTON ODELL HUDGINS, ET UX

MICHAEL A. KIRK

REGINA LEE HANSLEY

LESTER L. HANSLEY, ET UX

MYRTLE M. HANSLEY AND LINDA H. HUFFMAN AS TRUSTEES OF WHITE OAK TRINITY BAPTIST CHURCH

SALLY H. MORTON

BOBBY LEE HANSLEY JR.

DAVID NELSON HANSON AND JOYCE J. MCALLISTER

SR 1116 WHITE OAK RIVER RD 20' BST

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL LATERAL "V" DITCH SEE DETAIL A

LATERAL "V" DITCH SEE DETAIL T

STANDARD "V" DITCH SEE DETAIL V

LATERAL 2' BASE DITCH SEE DETAIL R

BANK STABILIZATION SEE DETAIL AD

RIP RAP PAVEMENT SEE DETAIL AF

DETAIL AD
BANK STABILIZATION
(Not to Scale)

CL I RIP RAP EST. =100 TONS
GEOTEXTILE = EST. 190 SY
D=VAR.

-L- STA. 214+25 TO 215+44 LT.

DETAIL S
CHANNEL RELOCATION
(Not to Scale)

Min. D=3 FT.
B=8 FT.
b=10 FT.

-L- STA. 218+78 TO 221+50 LT., DDE=2597 CY

DETAIL V
CHANNEL RELOCATION
(Not to Scale)

Min. D=3 FT.
B=8 FT.

-L- STA. 214+06 TO 216+41 LT., DDE=1775 CY

100' 0' 100'
1"=100'

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 48 OF 62

SITE 14

NAD 83/NSRS 2007

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCHLINE SHEET 20 -L- STA. 222+00.00

MATCHLINE SHEET 23 -Y3- STA. 22+00.00

MATCHLINE SHEET 18 -L- STA. 214+00.00

MATCHLINE SHEET 18 -Y3A- STA. 14+50.00

SEE ENLARGEMENT SHEET 49

INC. WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP

J. C. LAROQUE, HEIRS

ALTON ODELL HUDGINS, ET UX

MICHAEL A. KIRK

REGINA LEE HANSLEY

LESTER L. HANSLEY, ET UX

MYRTLE M. HANSLEY AND LINDA H. HUFFMAN AS TRUSTEES OF WHITE OAK TRINITY BAPTIST CHURCH

SALLY H. MORTON

DAVID NELSON HANSLEY

BOBBY LEE HANSLEY JR.

SR 1116 WHITE OAK RIVER RD 20' BST

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL LATERAL "V" DITCH SEE DETAIL A

LATERAL "V" DITCH SEE DETAIL T

STANDARD "V" DITCH SEE DETAIL

LATERAL 2' BASE DITCH SEE DETAIL R

BANK STABILIZATION SEE DETAIL AD

RIP RAP APRON SEE DETAIL AF

RIP RAP EMBANKMENT SEE DETAIL AF

DETAIL AD
BANK STABILIZATION
(Not to Scale)

CL I RIP RAP EST. =100 TONS
GEOTEXTILE = EST. 190 SY

-L- STA. 214+25 TO 215+44 LT.

DETAIL S
CHANNEL RELOCATION
(Not to Scale)

Min. D=3 FT.
B=8 FT.
b=10 FT.

-L- STA. 218+78 TO 221+50 LT., DDE=2597 CY

DETAIL V
CHANNEL RELOCATION
(Not to Scale)

Min. D=3 FT.
B=8 FT.

-L- STA. 214+06 TO 216+41 LT., DDE=1775 CY

SITE 13

100' 0' 100'
1"=100'

REVISIONS

R/W Revision 4/9/14 JCL Revised Property Owner Name and Deed Book Information for Parcel 33

8/17/99

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$
$$$$$$$$MSCENARIO$$$$$$$$

DENOTES EXCAVATION IN WETLAND

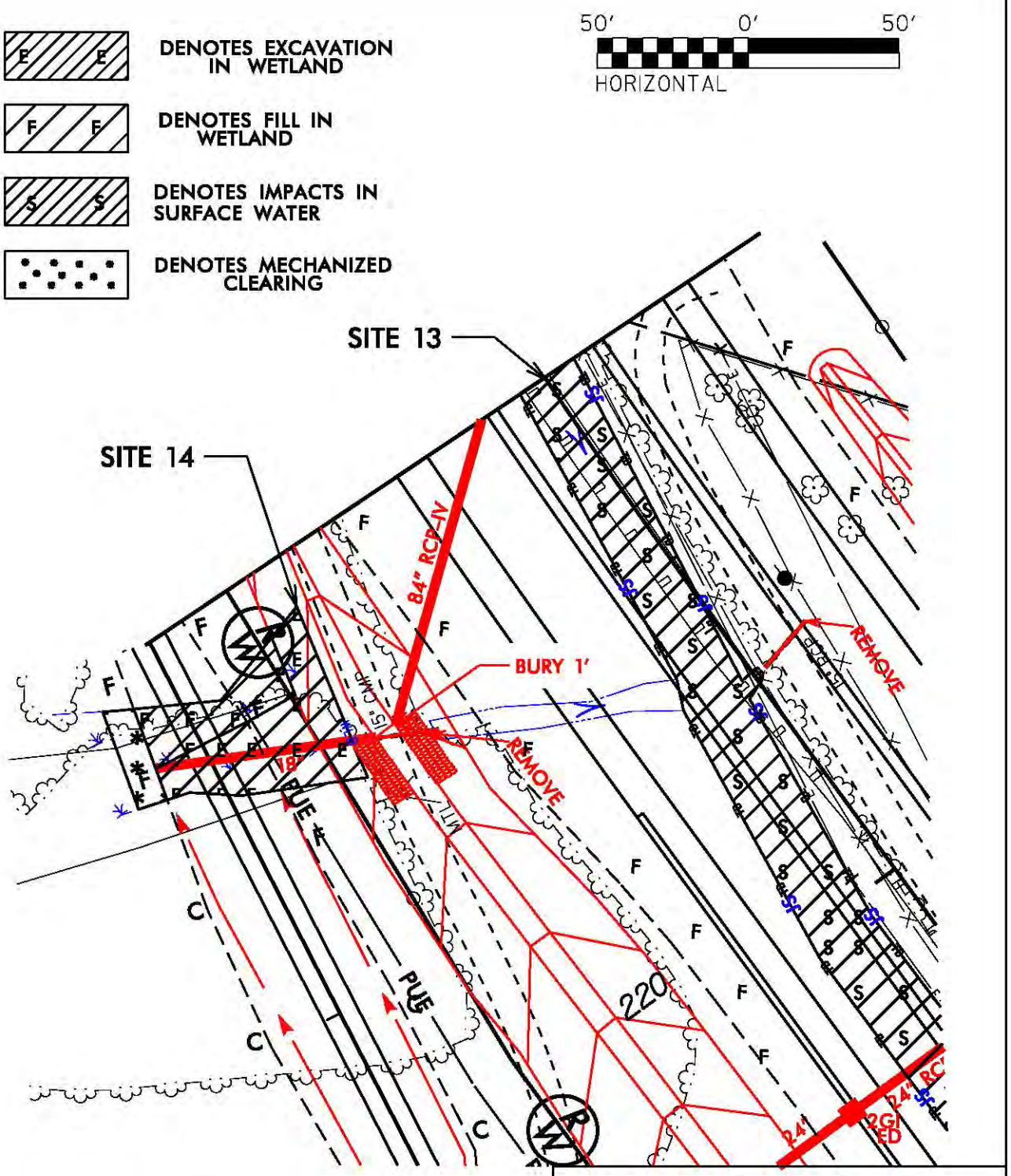
DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

50′ 0′ 50′

HORIZONTAL



PLAN VIEW

SITE 13 & 14

NCDOT

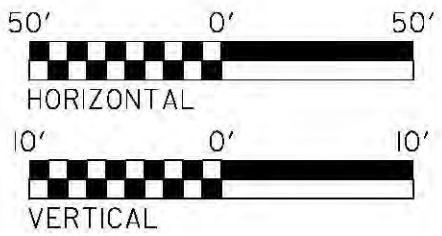
DIVISION OF HIGHWAYS

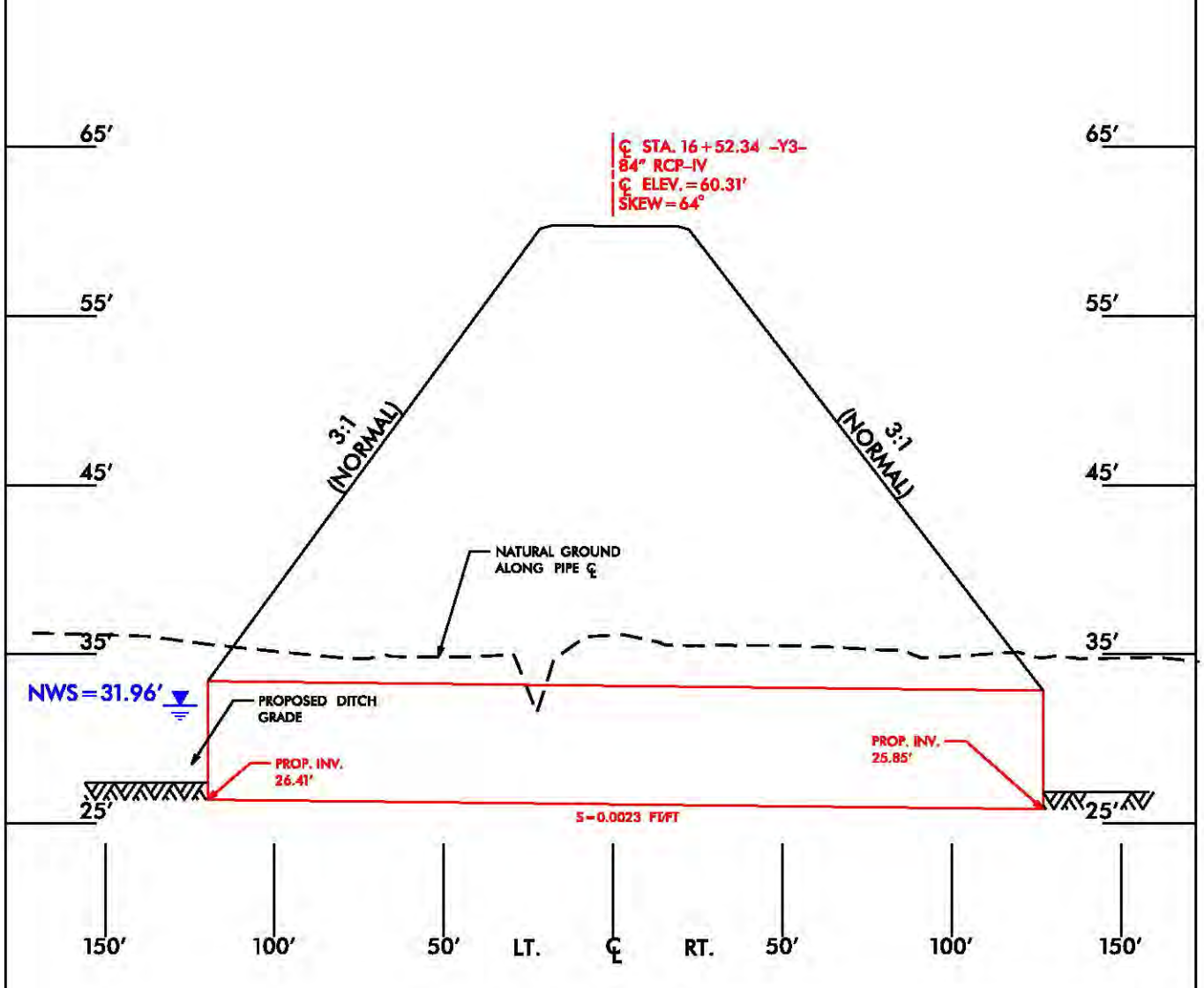
JONES COUNTY

PROJECT: 34442.1.3 (R-2514B)

US 17 FROM SOUTH OF BELGRADE AT SR 1330 / SR 1439 TO NORTH OF MAYSVILLE

SHEET 49 OF 62





PROFILE
–Y3– 84″ PIPE

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE AT SR 1330 / SR 1439 TO NORTH OF MAYSVILLE

SHEET 50 OF 62

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 51 OF 62

-Y2E-

LEFT DITCH - - -
RIGHT DITCH - - -

Begin Grade
Sta.10+12.00 -Y2E-
El.43.27'

PI = 10+50.00
EL = 44.03'
VC = 75'
K = 6

PI = 12+00.00
EL = 40.14'
VC = 150'
K = 41

PI = 13+55.00
EL = 41.81'
VC = 120'
K = 90

End Grade
Sta.14+65.00 -Y2E-
El.41.53'

(+)2.0000%
(-)2.5933%
(+)1.0774%
(-)0.2535%
+0.2400%

BEGIN SPECIAL LATERAL "V" DITCH -Y2E- STA.10+50 LT. ELEV. 37.24'
BEGIN SPECIAL LATERAL "V" DITCH -Y2E- STA.10+50 RT. ELEV. 37.24'
END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -Y2E- STA.11+50 LT. ELEV. 38.06'
END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -Y2E- STA.11+50 RT. ELEV. 39.06'
END SPECIAL CUT DITCH -Y2E- STA.14+50 LT. ELEV. 38.60'
END SPECIAL CUT DITCH -Y2E- STA.14+50 RT. ELEV. 38.60'

-Y3-

* DESIGN EXCEPTION IS REQUIRED FOR SAG V.C. K VALUE AND NIGHTTIME SSD

BEGIN GRADE -Y3- STA.10+00.00
EL. = 32.25

PI = 12+20.00
EL = 36.91'
VC = 425'
* K = 80 (45mph)

BEGIN BRIDGE
-Y3- 12+77.27 +/-

PI = 16+60.00
EL = 72.93'
VC = 630'
K = 62

END BRIDGE
-Y3- 16+77.27 +/-

BM 43 ELEVATION = 40.79'
N 427331.5 E 2528286
BL STATION 227+02.00 20' RIGHT
-Y3- STATION 21+05.25' RIGHT
RR SPIKE IN BASE OF 30" PECAN

(+)2.3000%
(+)5.6281%
(-)1.4554%
-1.0000%
-0.3400%
+0.2300%
+0.2600%
0.0000%
0.4000%

PIPE HYDRAULIC DATA
-Y3- Sta.15+52

DRAINAGE AREA	=	340 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	900 CFS
DESIGN HW ELEVATION	=	346 FT
100 YEAR DISCHARGE	=	820 CFS
100 YEAR HW ELEVATION	=	348 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	930 CFS
OVERTOPPING ELEVATION	=	354 FT @ -Y3D- SAG

84" PIPE @ INVERT = 28.17

BEGIN SPECIAL LATERAL "V" DITCH -Y3- STA.10+00 RT. ELEV. 32.94'
END SPECIAL LATERAL "V" DITCH -Y3- STA.11+00 RT. ELEV. 33.21'
BEGIN SPECIAL LATERAL "V" DITCH -Y3- STA.12+00 RT. ELEV. 33.59'
BEGIN LATERAL "V" DITCH -Y3- STA.12+00 RT. ELEV. 30.87'
END LATERAL "V" DITCH -Y3- STA.13+00 RT. ELEV. 30.66'
END SPECIAL LATERAL "V" DITCH -Y3- STA.13+19 LT. ELEV. 30.46'
BEGIN LATERAL "V" DITCH -Y3- STA.14+28 RT. ELEV. 29.08'
END LATERAL "V" DITCH -Y3- STA.15+85 RT. ELEV. 28.85'
BEGIN LATERAL 2' BASE DITCH -Y3- STA.20+41 RT. ELEV. 34.66'
END LATERAL 2' BASE DITCH -Y3- STA.23+28 RT. ELEV. 37.05'

$$$$$$$SYSTIME$$$$$$
$$$$$$$

8/23/99

SITE 14
WETLAND IMPACT

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2514B	X-155

4:1 0.020 0.020 4:1

35.21
16+00.00

4:1 0.020 0.020 4:1

35.09
15+50.00

4:1 0.020 0.020 4:1

34.95
15+00.00

3:1 0.020 0.020 3:1

S.S. 34.56 S.S. 34.45

34.54
14+50.00

CLEARING LIMITS

3:1 0.020 0.020 3:1

S.S. 32.88 S.S. 33.09

33.06
14+00.00

WLB

0.020 0.020

3:1 4:1 4:1 3:1

33.48 34.36

34.71
13+50.00

-Y3D-

PERMIT DRAWING
SHEET 52 OF 62

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$SELNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 53 OF 62

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 13

SITE 15

NAD 83/NSRS 2007

MATCHLINE SHEET 19 – STA. 222+00.00

LATERAL 'V' DITCH SEE DETAIL T

BURY 1'

34 J. C. LARODIE, HEIRS

35 TIME WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP

36

37

38

100' 0' 100'
1"=100'

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 54 OF 62

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 13

SITE 15

NAD 83/NSRS 2007

MATCHLINE SHEET 19 – STA. 222+00.00

LATERAL 'V' DITCH SEE DETAIL T

BURY 1'

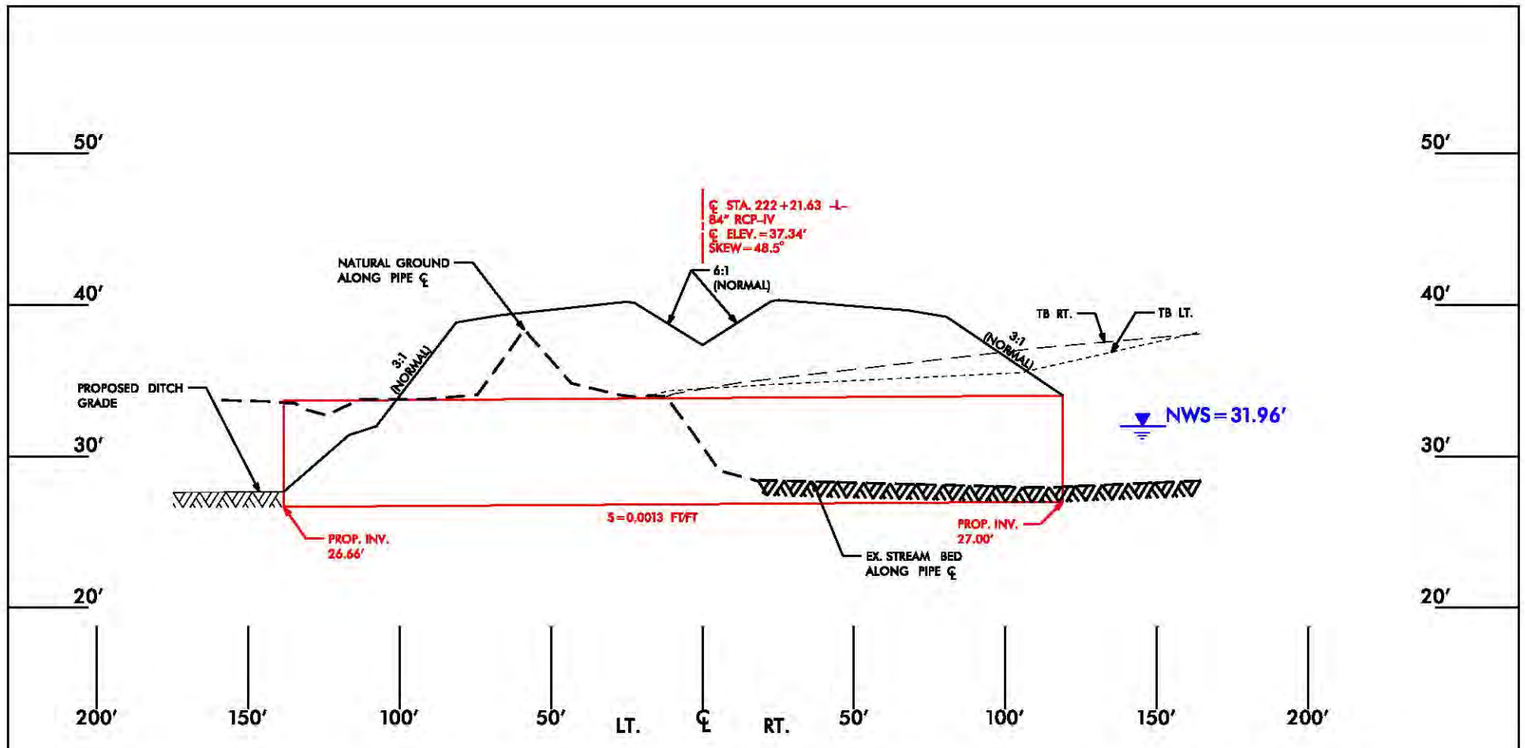
TIME WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP

J. C. LARODIE, HEIRS

REVISIONS

8/17/99

100' 0' 100'
1"=100'



PROFILE
-L- 84" PIPE

50' 0' 50'
HORIZONTAL

10' 0' 10'
VERTICAL

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE AT SR 1330 / SR 1439 TO NORTH OF MAYSVILLE

SHEET 55 OF 62

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PIPE HYDRAULIC DATA
-L- Sta.219+43

DRAINAGE AREA	=	34 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	82 CFS
DESIGN HW ELEVATION	=	329 FT
100 YEAR DISCHARGE	=	117 CFS
100 YEAR HW ELEVATION	=	335 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	45 CFS
OVERTOPPING ELEVATION	=	393 FT

-Y3- OVERPASS

LEFT DITCH
RGHT DITCH

PI = 205+40.00
EL = 37.58'
VC = 320'
K = 182

LATERAL 4' DITCH -L- STA. 204+10 LT. ELEV. 27.00'

END LATERAL 4' DITCH -L- STA. 207+10 LT. ELEV. 26.82'

PI = 213+50.00
EL = 44.42'
VC = 470'
K = 249

PI = 218+75.00
EL = 38.94'
VC = 275'
K = 191'

END LATERAL 3' BASE DITCH BEGIN LATERAL 3' BASE DITCH -L- STA. 219+44 RT. ELEV. 31.00'

(+)0.8444%
(-)1.0438%
(+)0.3500%
(+)0.4000%
(-)0.3000%
(+)0.3300%
(+)0.0200%
(-)0.2400%
(+)1.5000%
(+)0.1000%

24" PIPE @ INVERT=29.35'

LAT. BEG. 3' BASE DITCH -L- STA. 204+10 RT. ELEV. 29.41'

BEGIN CHANNEL RELOCATION -L- STA. 207+25 LT. ELEV. 28.49'

END CHANNEL RELOCATION -L- STA. 208+11 LT. ELEV. 26.57'

END LATERAL 2' BASE DITCH -L- STA. 213+38 RT. ELEV. 33.78'

BEGIN CHANNEL RELOCATION -L- STA. 213+70.58 LT. ELEV. 28.82'

CHANNEL RELOCATION -L- STA. 216+43.50 LT. ELEV. 26.86'

BEGIN LATERAL 3' BASE DITCH -L- STA. 217+50 RT. ELEV. 31.82'

BEGIN CHANNEL RELOCATION -L- STA. 219+78 LT. ELEV. 27.40'

CHANNEL RELOCATION -L- STA. 220+00 LT. ELEV. 27.28'

206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00

70 60 50 40 30 20 10 0 -10

PIPE HYDRAULIC DATA
-L- Sta.222+22

DRAINAGE AREA	=	559 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	70 CFS
DESIGN HW ELEVATION	=	325 FT
100 YEAR DISCHARGE	=	85 CFS
100 YEAR HW ELEVATION	=	324 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	340 CFS
OVERTOPPING ELEVATION	=	365 FT @ NATURAL GROUND

END GRADE R-2514B -L- STA.231+42.77 = R-2514C -L- STA.10+00.00, EL = 43.38'

LATERAL 3' BASE DITCH -L- STA. 219+40 RT. ELEV. 30.10'

END LATERAL 3' BASE DITCH -L- STA. 221+50 RT. ELEV. 34.65'

LATERAL 'V' DITCH -L- STA. 221+40 LT. ELEV. 31.61'

END LATERAL 'V' DITCH -L- STA. 228+00 LT. ELEV. 34.67'

(+)0.3500%
(+)1.5000%
(+)0.1000%
(+)1.9767%
(+)1.1000%
(+)0.5000%
(+)1.1000%
(+)2.2450%

84" PIPE @ INVERT=25.83'

CHANNEL RELOCATION -L- STA. 216+00 LT. ELEV. 27.52'

END CHANNEL RELOCATION BEGIN LATERAL 'V' DITCH -L- STA. 217+50 LT. ELEV. 27.67'

BEGIN SPECIAL CUT DITCH -L- STA. 223+26 RT. ELEV. 29.42'

END SPECIAL CUT DITCH BEGIN LATERAL 'V' DITCH -L- STA. 225+00 RT. ELEV. 31.12'

LATERAL 'V' DITCH -L- STA. 227+00 RT. ELEV. 32.22'

END LATERAL 'V' DITCH -L- STA. 227+40 RT. ELEV. 35.35'

PERMIT DRAWING
SHEET 56 OF 62

220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00

70 60 50 40 30 20 10 0 -10

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$

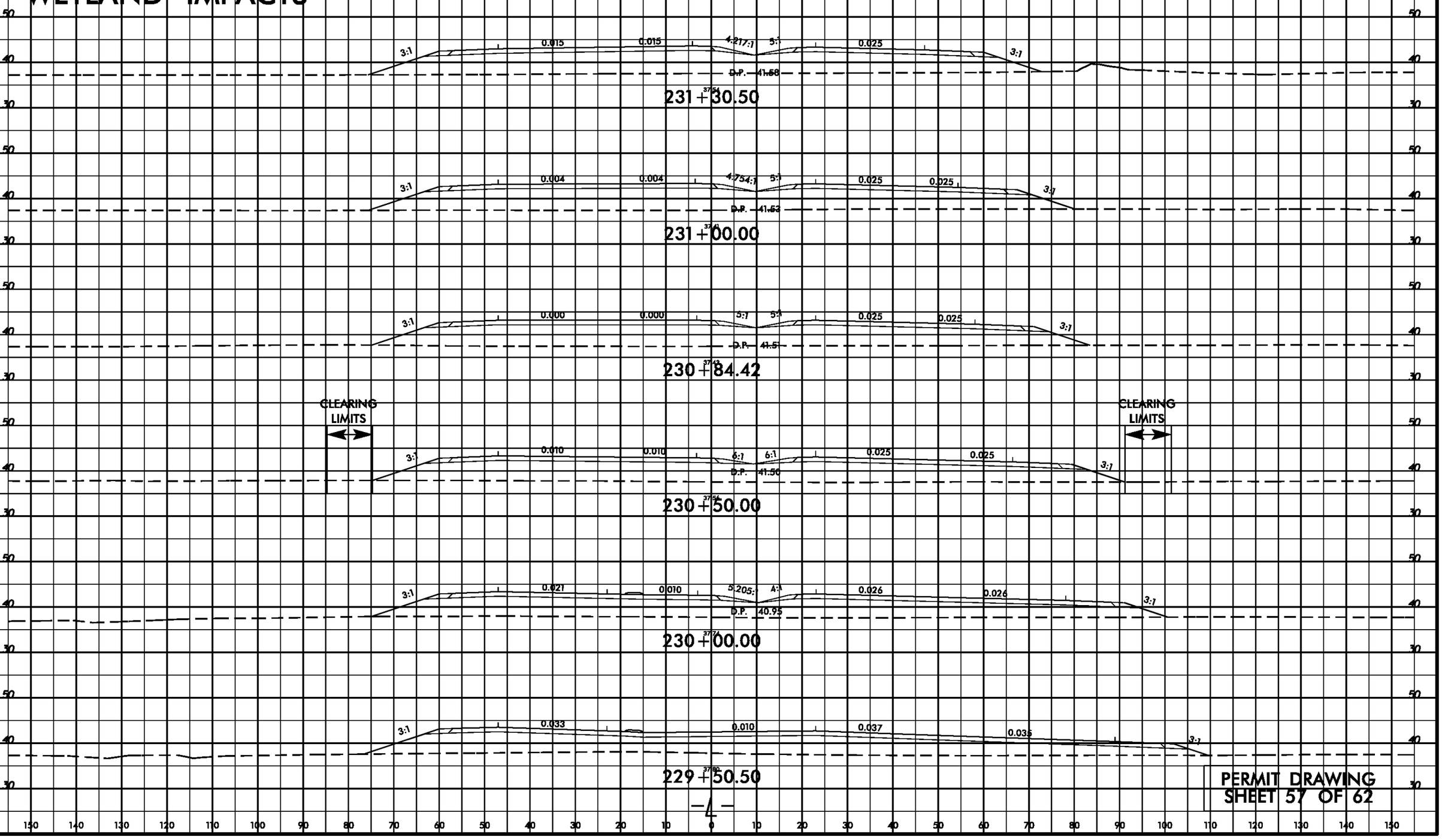
8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-2514B	X-85

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 15
WETLAND IMPACTS



PERMIT DRAWING
SHEET 57 OF 62

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$SENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 58 OF 62

NAD 83/NSRS 2007

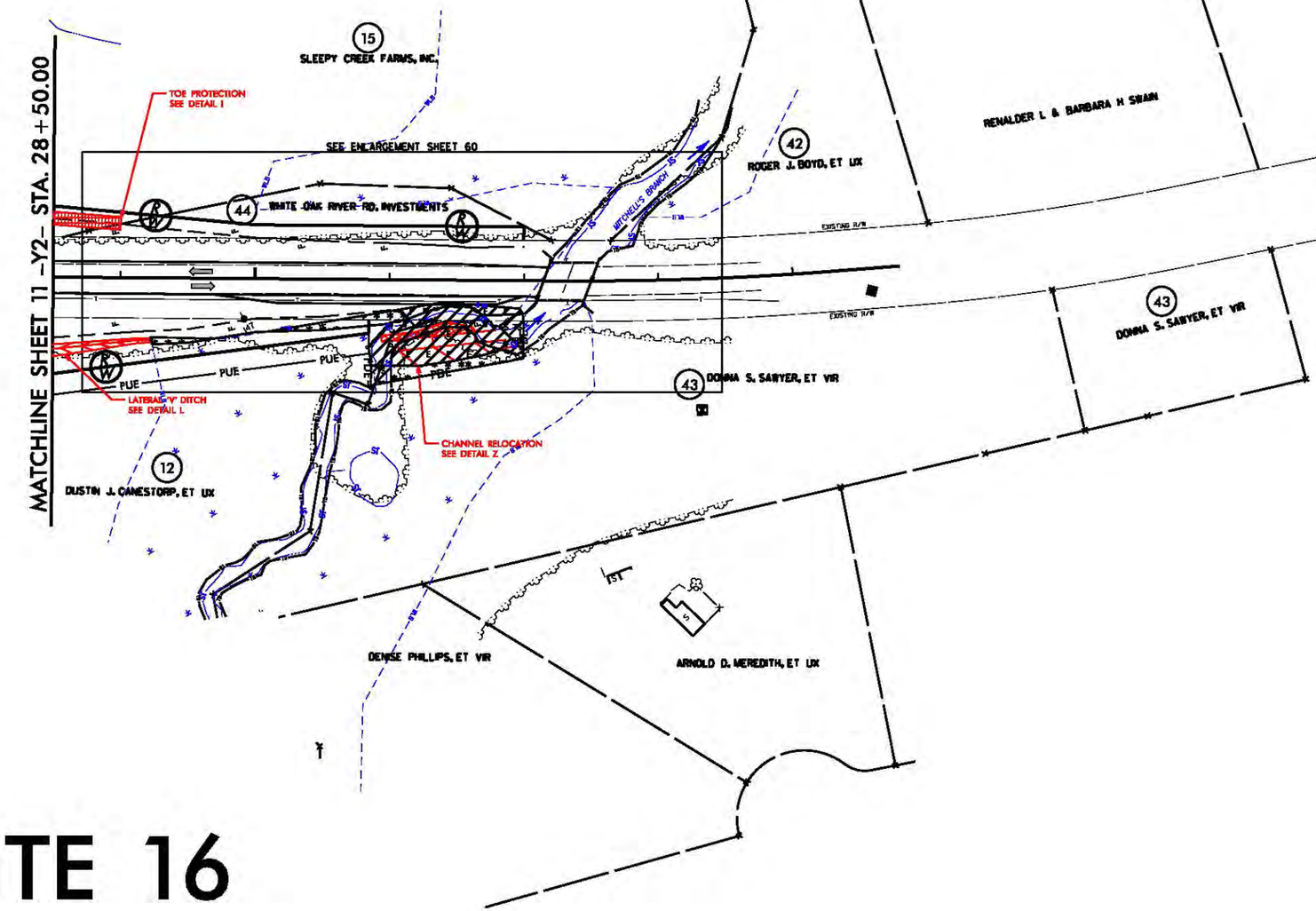
8/17/99

REVISIONS

DETAIL Z
CHANNEL RELOCATION
(Not to Scale)

Min. D=4 FT.
Max. d=5 FT.
B=6 FT.
CL I RIP RAP=EST. 46 TONS; GEOTEXTILE=EST. 65 SY

-Y2- STA. 31+00 TO 31+96 RT., DDE=246 CY



SITE 16

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
1"=100'

SYSTIMES DGN

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 59 OF 62

8/17/99

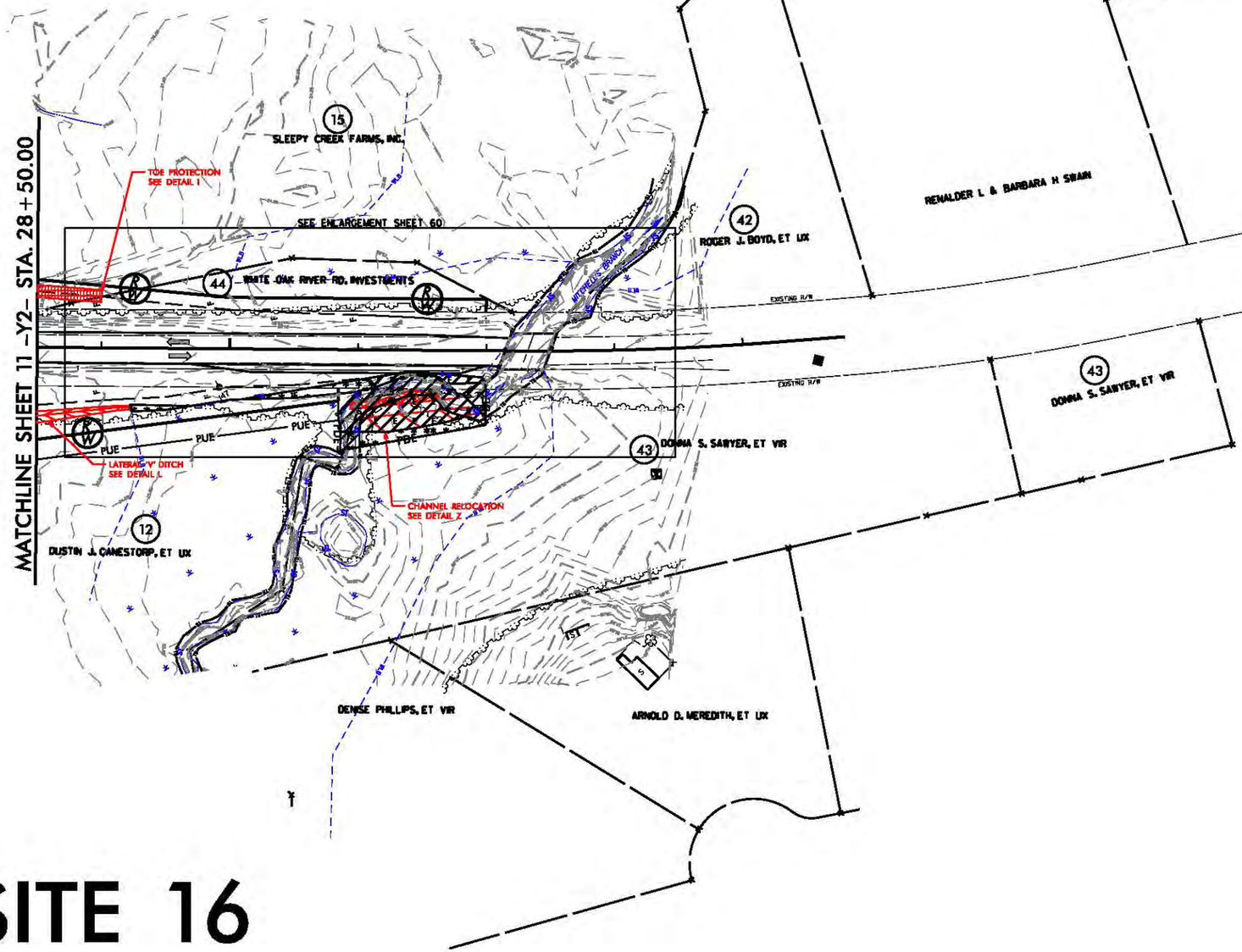
REVISIONS

DETAIL Z
CHANNEL RELOCATION
(Not to Scale)

Min. D=4 FT.
Max. d=5 FT.
B=6 FT.
CL I RIP RAP=EST. 46 TONS; GEOTEXTILE=EST. 65 SY

-Y2- STA. 31+00 TO 31+96 RT., DDE=246 CY

NAD 83/NSRS 2007



SITE 16

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
1"=100'

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNFILENAME$$$$$$$$

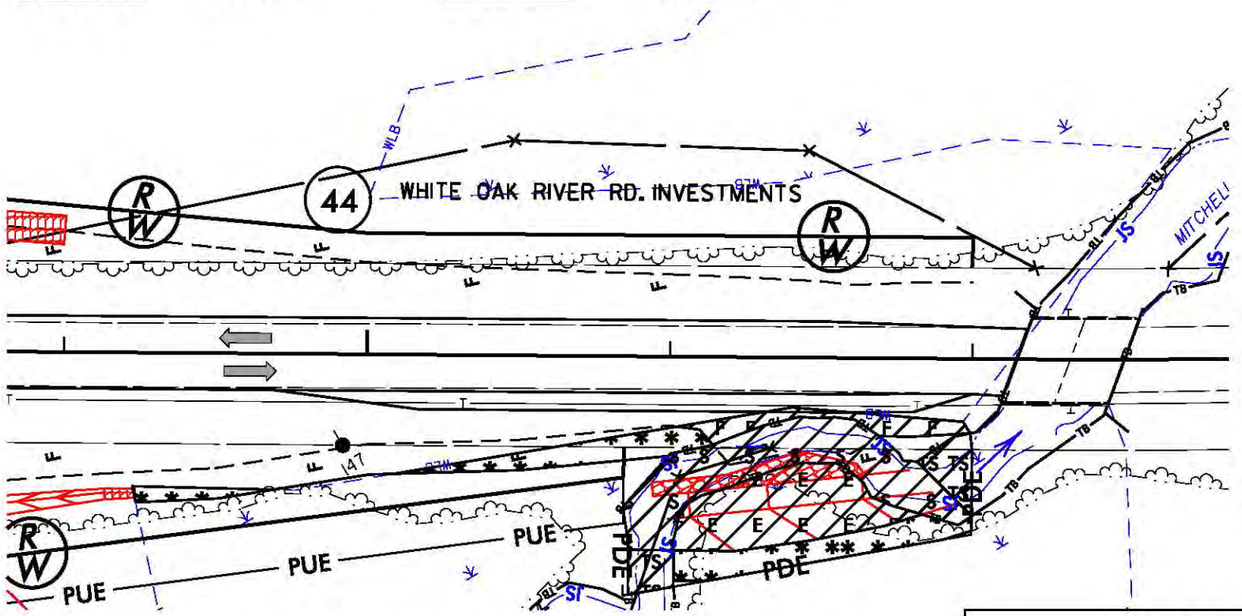
E E DENOTES EXCAVATION IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

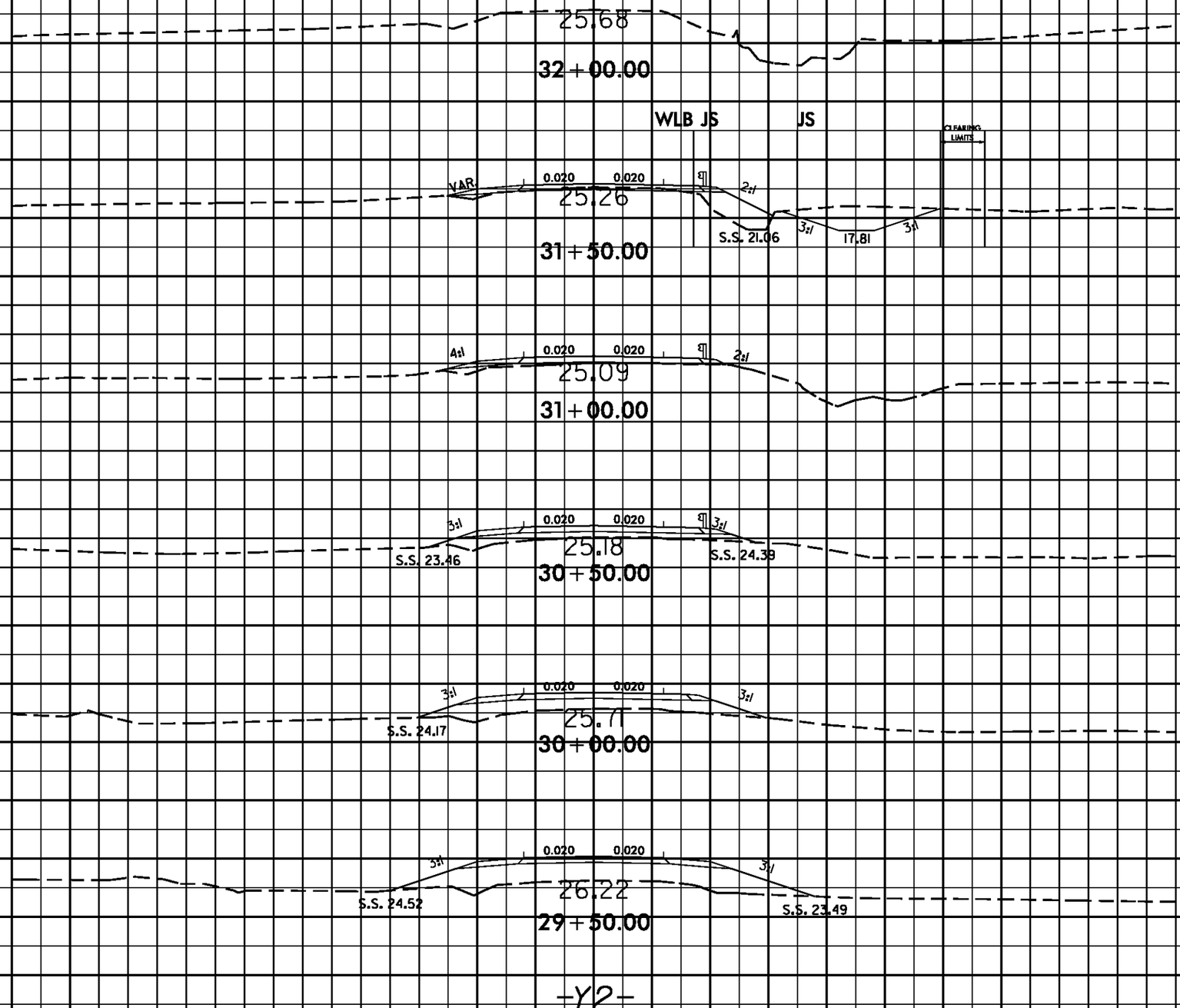

WLB
44
WHITE OAK RIVER RD. INVESTMENTS
RW
RW
RW
E
E
E
E
E
147
PUE
PUE
PUE
PDE
PDE
SW
SW
SW

8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-2514B	X-104

SITE 16
WETLAND IMPACTS



PERMIT DRAWING
SHEET 61 OF 62

-Y2-

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$SENAME$$$$

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	22+67 TO 28+77 -L- RT.		0.27			0.13						
2	24+60 TO 27+00 -L-		0.19									
3	56+35 TO 57+13 -L- RT.					< 0.01						
4	16+26 TO 17+40 -Y1- LT.					0.01						
5	71+09 TO 77+39 -L-		2.06			0.25						
6	27+46 TO 32+33 -Y2A-	60" PIPE	0.22			0.09		0.02	< 0.01	130	6	
6	98+20 TO 101+64 -L-	72" PIPE	0.80			0.09		0.07	< 0.01	356	14	
6	33+61 LT. -Y2A-	BANK STABILIZATION						< 0.01	< 0.01	25	10	
6	100+97 RT. -L-	BANK STABILIZATION						< 0.01	< 0.01	25	10	
7	128+50 TO 129+44 -L- RT.		0.08		0.04	0.02						
8	131+13 TO 132+38 -L- RT.		0.05			0.02						
9	139+81 TO 140+61 -L-	48" PIPE	0.03			< 0.01						
10	140+57 TO 162+27 -L-	160' BRIDGE	3.32	0.06		0.38	0.43					
11	162+83 TO 164+07 -L- RT.		0.17			0.02						
12	168+10 TO 179+18 -L-	1160' BRIDGE	0.01	0.01			4.02					
13	206+10 TO 223+71 -L-	84" PIPE						0.60	0.04	1151	60	
13	23+74 RT. -Y3A-	BANK STABILIZATION						0.01	< 0.01	27	7	
13	11+50 RT. -Y3E-	BANK STABILIZATION						0.01	< 0.01	29	7	
13	214+74 LT. -L-	BANK STABILIZATION						0.05		87		
14	13+65 TO 14+27 -Y3D-	18" PIPE	0.02		0.04	< 0.01						
15	228+39 TO 231+42 -L-		1.08			0.14						
16	29+23 TO 32+00 -Y2- RT.		< 0.01		0.03	0.03		0.04	0.01	120	25	
TOTALS*:			8.29	0.07	0.11	1.21	4.45	0.81	0.06	1949	139	0

*Rounded totals are sum of actual impacts

NOTES:
Site 10: Permanent Impacts due to bents in wetlands: <0.01 Acres--These impacts are not included in the total impacts above.
Site 10: Temporary Impacts due to Temporary Work Bridge bents in wetlands: <0.01 Acres--These impacts are not included in the total impacts above.
Site 12: Permanent Impacts due to bents in wetlands: 0.01 Acres--These impacts are not included in the total impacts above.
Site 12: Temporary Impacts due to Temporary Work Bridge bents in wetlands: 0.03 Acres--These impacts are not included in the total impacts above.
Site 13: 386 LF of Permanent Stream Impacts due to Relocation.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ONSLOW AND JONES COUNTY
WBS - 34442.1.3 (R-2514B)

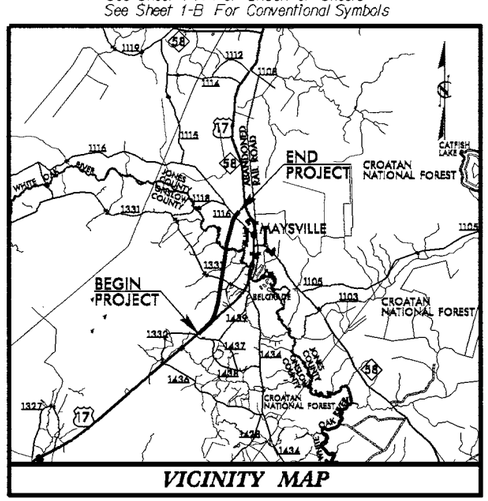
Revised 2013 10 24

09/08/99

TIP PROJECT: R-2514B

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Utility Permit Drawing
Sheet 1 of 9

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514B	UE-01	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.3		PE
34442.2.S3		RIGHT OF WAY

NEU PERMIT DRAWING PLANS

ONSLOW & JONES COUNTIES

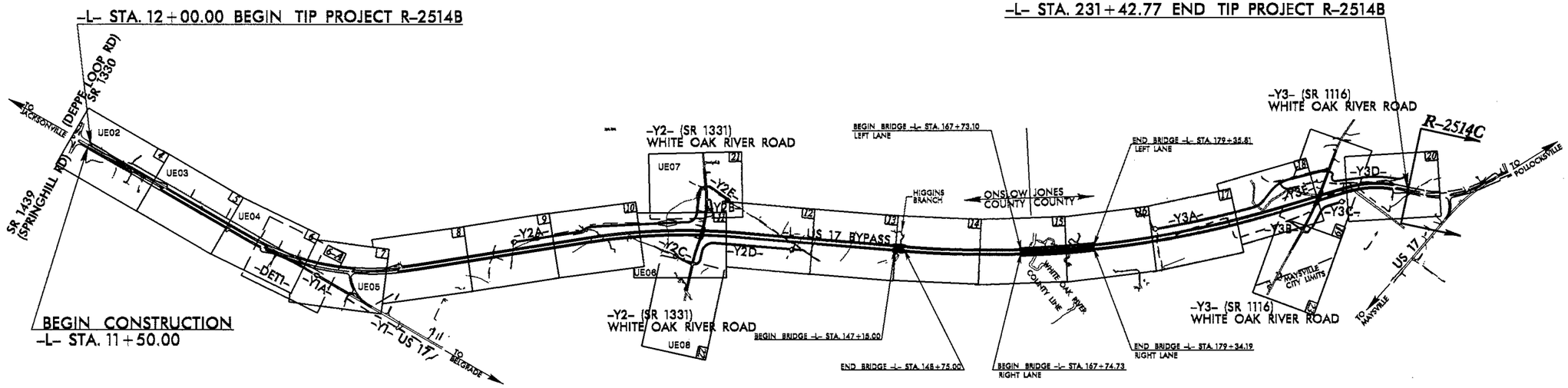
LOCATION: US 17 FROM SOUTH OF BELGRADE AT SR 1330/SR 1439 TO NORTH OF MAYSVILLE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

NAD 83/
NSRS 2007

-L- STA. 12+00.00 BEGIN TIP PROJECT R-2514B

-L- STA. 231+42.77 END TIP PROJECT R-2514B



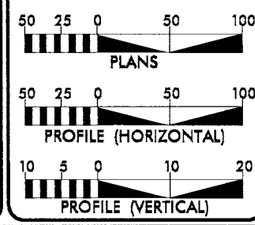
BEGIN CONSTRUCTION
-L- STA. 11+50.00

REVISED 10-13-2014

*DESIGN EXCEPTION REQUIRED FOR SAG VERTICAL CURVE K FACTORS AND STOPPING SIGHT DISTANCE (-Y2- & -Y3-)
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A FULL CONTROLLED-ACCESS PROJECT WITH ACCESS AS SHOWN ON PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2015 = 6800 vpd
ADT 2035 = 15900 vpd
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST =4% DUAL =3%
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY OF TIP PROJECT R-2514B = 3.906 MILES

LENGTH STRUCTURE OF TIP PROJECT R-2514B = 0.250 MILES

TOTAL LENGTH OF TIP PROJECT R-2514B = 4.156 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 17, 2013

LETTING DATE:
JUNE 16, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

JOHN LANSFORD, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

13-OCT-2014 14:41
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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-02
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

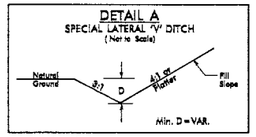
Utility Permit Drawing
Sheet 2 of 9

REVISED 07-15-2014

8/17/99

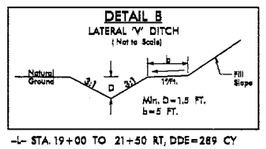
REVISIONS

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



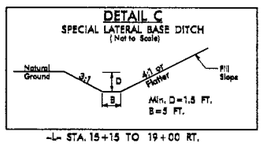
-L- STA. 14+45 TO 17+80 LT

DETAIL B
LATERAL 'V' DITCH
(Not to Scale)



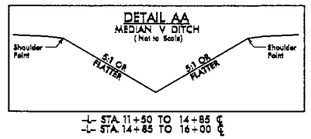
-L- STA. 19+00 TO 21+50 RT, DDE=289 CY

DETAIL C
SPECIAL LATERAL BASE DITCH
(Not to Scale)



-L- STA. 15+15 TO 19+00 RT.

DETAIL AA
MEDIAN V DITCH
(Not to Scale)



-L- STA. 11+50 TO 14+85
-L- STA. 14+85 TO 16+00

NAD 83/NSRS 2007

BEGIN STATE PROJECT R-2514B
-L- POT STA. 12+00.00

-L- POT Sta. 10+00.00

BEGIN GRADE -L- STA.15+45.00

+00.00 -L-
88.15' Lt.

100' TAPER

INNERDUCT

EXISTING R/W

4' PS

MEDIAN 'V' DITCH
SEE DETAIL AA

TO JACKSONVILLE
US 17 27' BST

SR 1330 (DEPPE LOOP RD)

SR 1439 (FAIRHILL RD)

48" WW ISBW

48" CHL

+50.00 -L-
88.13'
98.00' Lt.

+00.00 -L-
88.13'
98.00' Lt.

TIE SLOPE TO TOP OF PIPE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL A

TIE TO EX. DITCH

1
WEYERHAEUSER CO.
DB 30, PG 245
DB 3021 PG 650
MB 2 PG 26

DA=144 ACRES

DA=155 ACRES

+50.00 -L-
88.12'
98.00' Lt.

PROP. U/G TEL. LINE

-BL- 10

Retain EXISTING R/W

10' RS

24'

N 49°09' 35.0" E

100' TAPER

40'

+19.80

MATCHLINE SHEET UE-03 -L- STA. 23+00.00

+50.00

+15.00

NC

.025

.02

.01

REMOVE

10' PS

100' TAPER

PARTIAL RECORD INFORMATION DEPICTED FROM FIELD INVESTIGATION AND UTILITY OWNER CONTACT

+00.00 -L-
97.88' Rt.

Retain EXISTING R/W

TIE SLOPE TO TOP OF PIPE

TIE TO EX. DITCH

SPECIAL LATERAL 5' BASE DITCH
SEE DETAL C

+80.00 -L-
108.21'
115.00' Rt.

TIE TO EX. DITCH

0402 CL B RIP RAP=3 TONS GEOTEXTILE=11 SY

0402 COLLAR

0403 CL 1 RIP RAP=7 TONS GEOTEXTILE=22 SY

0403 COLLAR

0404

+00.00 -L-
108.08'
115.00' Rt.

+178.3
108.25'

EUGENE ADAMS
DB 367, PG 578
2

REMOVE AND RESET APPROX. 120' EXIST FENCE

36" CONC

ISBKD

DECK

BST

224.65'
S 43°56'48" E

LATERAL 'V' DITCH
SEE DETAIL B

JONATHAN MORTON
DB 2384 PG 200
DB 2039 PG 792
NO CLAIM

REBAR

EXIST. ACCESS POINT

Retain EXISTING R/W

WEYERHAEUSER CO.
DB 30, PG 245
DB 3021 PG 650
MB 2 PG 26
1

GTD

PK

N 50°49'09" E
266.64'

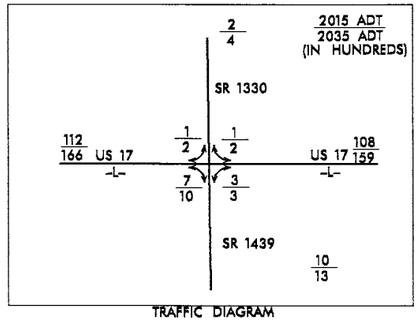
101.92'
S 43°56'33" E

181.17'
S 43°56'33" E

RONNIE L. ADAMS
DB 421 PG 507
DB 754 PG 734
DB 1227 PG 306
DB 2186 PG 646
NO CLAIM

GTD DENOTES "GRADE TO DRAIN"
SEE SHEET 24 FOR -L- PROFILE

BEGIN CONSTRUCTION
-L- POT STA. 11+50.00



TRAFFIC DIAGRAM

13-OCT-2014 12:22
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8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-03
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

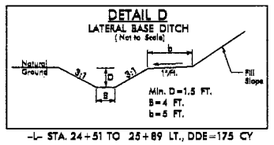
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 3 of 9

NAD 83/NSRS 2007

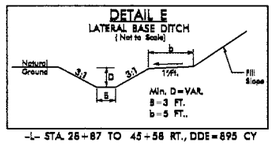
REVISED 07-15-2014

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



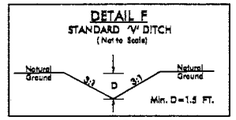
-L- STA. 24+51 TO 25+89 LT., DDE=175 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

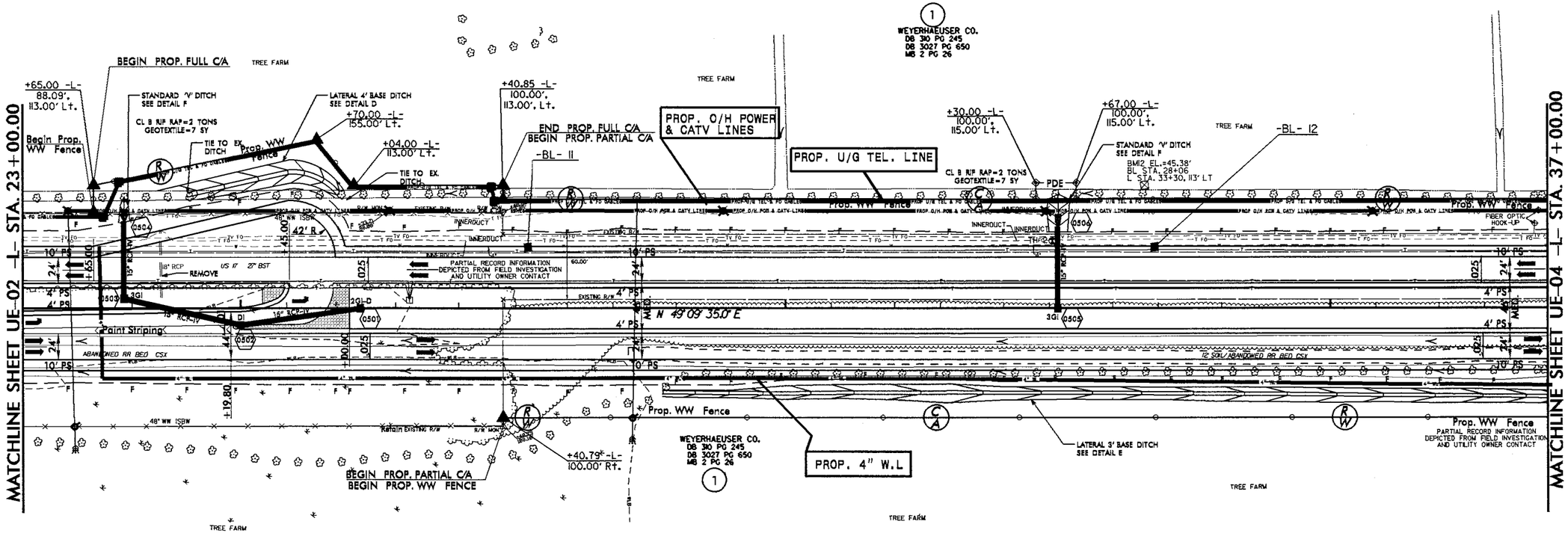


-L- STA. 26+87 TO 45+58 RT., DDE=695 CY

DETAIL F
STANDARD 'V' DITCH
(Not to Scale)



-L- STA. 23+93 LT., DDE=4 CY
-L- STA. 32+50 LT., DDE=31 CY



SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

13-OCT-2014 14:05
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8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

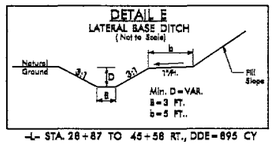
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 4 of 9

NAD 83/NSRS 2007

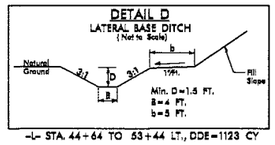
REVISED 07-15-2014

DETAIL E
LATERAL BASE DITCH
(Not to Scale)



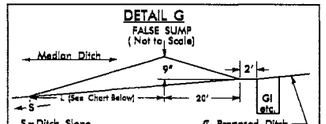
-L- STA. 28+87 TO 45+58 RT., DDE=895 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



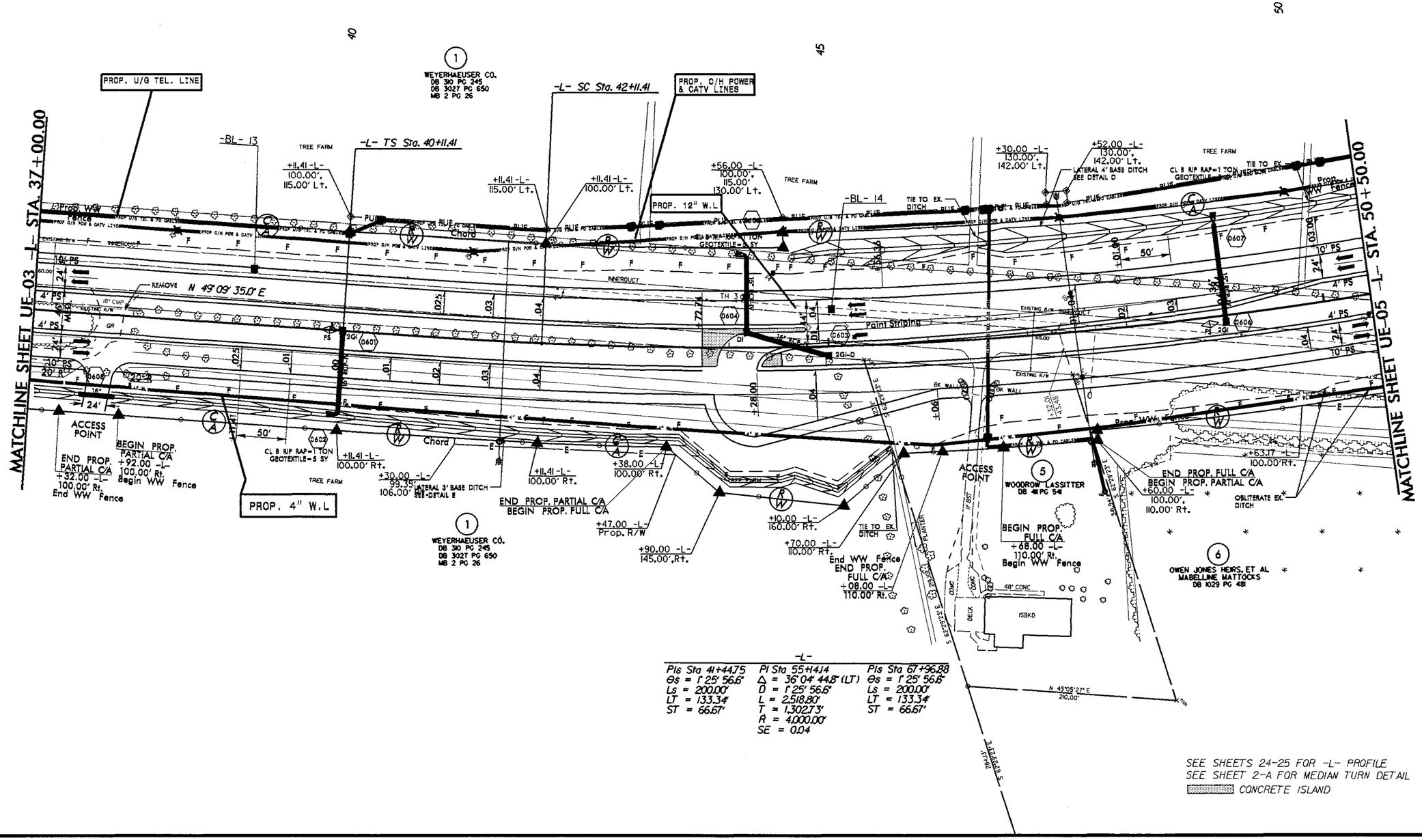
-L- STA. 44+64 TO 53+44 LT., DDE=1123 CY

DETAIL G
FALSE SUMP
(Not to Scale)



S = Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'



SEE SHEETS 24-25 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

13-OCT-2014 14:10
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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 5 of 9

REVISED 07/15/2014

NAD 83/NSRS 2007

8/17/99

REVISIONS

13-OCT-2014 14:14
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DETAIL D
LATERAL BASE DITCH
(Not to Scale)
-L- STA. 44+64 TO 53+44 LT., DDE=1123 CY

DETAIL F
STANDARD 'V' DITCH
(Not to Scale)
Min. D=1.5 FT.
-Y1A- STA. 10+53 TO 16+66 RT., DDE=669 CY

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Min. D=VAR.
-Y1- STA. 14+00 TO 17+34 RT.
-Y1A- STA. 10+85 TO 13+00 LT.

DETAIL G
FALSE SUMP
(Not to Scale)

S=Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

TRAFFIC DIAGRAM
2015 ADT
2035 (IN HUNDREDS)
PROPOSED US 17
EXIST. US 17

BM15 EL.=45.65'
BL STA. 45+33
L STA. 50+66, 2' LT

PROP. O/H POWER & CATV LINES

PROP. U/G TEL. LINE

LATERAL 4' BASE DITCH SEE DETAIL D

CL B RIP RAP=1 TON GEOTEXTILE=5 SY

TIE TO EX. DITCH

-L- PI Sta 55+14.14
Δ = 36° 04' 44.8" (LT)
D = 1° 25' 56.6"
L = 2,518.80'
T = 1,302.73'
R = 4,000.00'
SE = 0.04

WEYERHAEUSER CO.
DB 330 PG 245
DB 3027 PG 650
MB 2 PG 26

-L- POC Sta.58+77.28
-Y1- POT Sta. 10+00.00

NEW AERIAL JONES-ONSLOW EMC POWER

END PARTIAL C/A
BEGIN FULL C/A

Prop. WW Fence

Paint Striping

10' PS

100' TAPER

580' RT TURN LANE

65' R

30' R

Sta.58+12 -L-

Sta.61+75.00 -L-

Sta.62+06.00 -L-

S 49°09'35.0" W 1515.00'

N 49°09'35.0" E

-BL- 15

-BL2- 2

-BL- 17

EXISTING

516.603 SQ FT
= 0.012 ACRES
SITE 4

3782.671 SQ FT
= 0.09 ACRES
SITE 3

OBLITERATE EX. DITCH

PROP. 4" W.L

-Y1A- POT Sta. 18+46.89

BEGIN WIDENING AND RESURFACING
-Y1A- POT Sta. 16+40.00
(C/L Cul-de-Sac at 17+00.00 -Y1A-)

END GRADE
BEGIN RESURFACING
-Y1A- POT Sta. 13+50.00

END CONST.
-Y1- POT Sta. 17+35.00

-Y1- POC Sta. 13+56.81
-Y1A- POT Sta. 10+00.00

-Y1- PT Sta. 16+67.64

-Y1A- PC Sta. 10+39.01

-Y1A- PT Sta. 11+42.04

-Y1A-
PI Sta 10+95.62
Δ = 59° 01' 37.8" (RT)
D = 57° 17' 44.8"
L = 103.02'
T = 56.61'
R = 100.00'
SE = 0.02

-Y1-
PI Sta 13+82.20
Δ = 64° 48' 49.0" (LT)
D = 9° 57' 52.1"
L = 650.45'
T = 365.00'
R = 575.00'
SE = 0.06

1 WEYERHAEUSER CO.
DB 330 PG 245
DB 3027 PG 650
MB 2 PG 26

6 OWEN JONES HEIRS, ET AL
MABELLINE MATTOCKS
DB 1029 PG 481

7 TODD DEXTER WILLIAMS
DB 1190 PG 157
MB 2 PG 26

8 WEYERHAEUSER CO.
DB 330 PG 245
DB 3027 PG 650
MB 2 PG 26

PROP. PAVEMENT REMOVAL

CONCRETE ISLAND

SEE SHEET 25 FOR -L- PROFILE
SEE SHEET 32 FOR -Y1- PROFILE
SEE SHEET 35 FOR -Y1A- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL

PARTIAL RECORD INFORMATION DEPICTED FROM FIELD INVESTIGATION AND UTILITY OWNER CONTACT

TREE FARM

SPECIAL LATERAL 'V' DITCH SEE DETAIL A

CLEAN OUT

MATCHLINE SHEET UE-04 -L- STA. 50+50.00

MATCHLINE SHEET UE-06 -L- STA. 63+50.00

Utility Permit Drawing
Sheet 6 of 9

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISED 07-15-2014

8/17/93

REVISIONS

15-OCT-2014 14:15
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MATCHLINE SHEET 21
-Y2A- STA. 18+50.00

MATCHLINE SHEET UE-07
-Y2- STA. 19+50.00

MATCHLINE SHEET UE-08
-Y2- STA. 28+50.00

-L- STA. 105+50.00

-Y2A- STA. 23+00.00

-L- STA. 119+50.00

-Y2D- STA. 17+00.00

ROBERT LEROY & JOYCE R PARKER
DB 2373 PG 298

ROBERT LEROY PARKER, ET UX
DB 405 PG 52
MB 32 PG 65

SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21PG 201
SLIDE B-229

SETH O. MILLS
DB 709 PG 94

BETTY A. TROTT
DB 357 PG 56
MB 32 PG 65

DUSTIN J. CANESTORP, ET UX
DB 2590 PG 35
MB 49 PG 105
SLIDE L-963

NEW AERIAL
JONES-ONSLOW
EMC POWER

PROP. U/G TEL. LINE

PROP. O/H POWER & CATV LINES

PROP. 12" W.L.

PROP. WW Fence

PROP. GUIDERAIL (DOUBLE FACED)

TIE TO PROPOSED DITCH

SPECIAL CUT DITCH SEE DETAIL H

SPECIAL CUT BASE DITCH SEE DETAIL M

LATERAL 'V' DITCH SEE DETAIL L

SPECIAL LATERAL 'V' DITCH SEE DETAIL A

TOE PROTECTION SEE DETAIL I

CL B RIP RAP=1 TON GEOTEXTILE=5 SY

CL I RIP RAP=17 TONS GEOTEXTILE=28 SY

CL B RIP RAP=3 TONS GEOTEXTILE=16 SY

Single Faced Conc. Barrier

TYPE B-77 ATTENUATOR

20' ANCHOR

Beg. Slab -Y2- Sta. 21+46.18

End Slab -Y2- Sta. 23+45.59

Beg. Bridge -Y2- Sta. 21+55.15

End Bridge -Y2- Sta. 23+31.63

-Y2- POC Sta. 22+43.38
-L- POC Sta. 116+07.49

-Y2- PRC Sta. 23+43.67

POT Sta. 13+51.72 -Y2C-
-L- POC Sta. 111+29.20
351.57' Rt.

-Y2- PT Sta. 20+32.77

-Y2- PC Sta. 12+95.21

-Y2D- PT Sta. 15+42.87

-Y2D- PC Sta. 12+95.21

-Y2D- PT Sta. 11+56.81

POT Sta. 10+00.00 -Y2C-
POC Sta. 27+79.76 -Y2-

-Y2- PT Sta. 28+13.53

-Y2A- PC Sta. 10+16.54 -Y2D-

BM 51 EL=41.48'
-EYA- STA 31+26
-Y2- STA 25+96.72 LT

RETAIN

PI Sta 19+86.38
Δ = 25° 39' 48.5" (RT)
D = 2° 43' 42.2"
L = 940.62'
T = 478.33'
R = 2,100.00'
SE = 0.04
RO = 96'

PI Sta 26+31.42
Δ = 8° 21' 43.8" (LT)
D = 2° 17' 30.6"
L = 364.87'
T = 182.76'
R = 2,500.00'
SE = 0.04
RO = 96'

-L-
PI Sta 109+56.52
Δ = 13° 31' 33.6" (RT)
D = 0° 34' 55.1"
L = 2,324.14'
T = 1,167.50'
R = 9,845.00'
SE = 0.025

-Y2C-
PI Sta 12+90.04
Δ = 49° 49' 32.0" (RT)
D = 76° 23' 39.7"
L = 65.22'
T = 34.83'
R = 75.00'
SE = NC

-Y2A-
PI Sta 16+34.72
Δ = 81° 17' 18.1" (RT)
D = 32° 44' 25.6"
L = 248.28'
T = 150.23'
R = 175.00'
SE = .04
RO = 60'

-Y2D-
PI Sta 11+05.45
Δ = 89° 17' 58.2" (LT)
D = 6° 33' 43.1"
L = 140.27'
T = 88.91'
R = 90.00'
SE = .02
RO = See Plans

-Y2D-
PI Sta 14+44.90
Δ = 81° 05' 10.9" (RT)
D = 32° 44' 25.6"
L = 247.66'
T = 149.69'
R = 175.00'
SE = .04
RO = 60'

DETAIL I
TOE PROTECTION
(Not to Scale)
Natural Ground
3:1 or Flatter Fill Slope
d=1.5 FT.
b=5 FT.
Geotextile
Type of Liner= CL B RIP RAP

DETAIL M
SPECIAL CUT BASE DITCH
(Not to Scale)
Natural Ground
3:1
4:1 or Flatter
Front Ditch Slope
Min. D=2.5 FT.
B=3 FT.
-L- STA. 117+50 TO 138+50 LT.

DETAIL L
LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
3:1
Fill Slope
Min. D=VAR.
b=5 FT.
-L- STA. 110+40 TO 111+50 LT., DDE=299 CY
-L- STA. 110+58 TO 112+00 RT., DDE=401 CY
-Y2- STA. 18+25 TO 21+00 LT., DDE=152 CY
-Y2- STA. 23+72 TO 27+14 RT., DDE=524 CY
-Y2- STA. 16+50 TO 21+41 RT., DDE=563 CY
-Y2- STA. 28+18 TO 29+13 RT., DDE=26 CY
-Y2C- STA. 10+89 TO 11+50 RT., DDE=68 CY

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
3:1
4:1 or Flatter
Front Ditch Slope
Min. D=VAR.
-L- STA. 111+50 TO 115+50 LT.
-L- STA. 112+00 TO 115+00 RT.
-Y2A- STA. 25+00 TO 28+00 RT.
-Y2C- STA. 11+77 TO 12+42 RT.
-Y2D- STA. 10+50 TO 12+00 RT.
-Y2D- STA. 10+69 TO 12+50 LT.

DETAIL N
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
3:1 OR 4:1 FLATTER
Front Ditch Slope
Min. D=VAR.
-L- STA. 117+50 TO 138+00 RT.

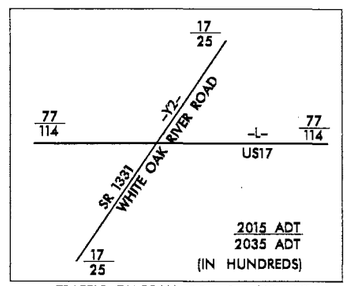
DETAIL K
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground
3:1
4:1 or Flatter
Fill Slope
Min. D=1.5 FT.
B=4 FT.
-Y2A- STA. 17+35 TO 18+86 RT.

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
3:1
4:1 or Flatter
Fill Slope
Min. D=VAR.
-Y2- STA. 27+83 TO 28+50 LT.
-Y2A- STA. 19+00 TO 22+00 RT.
-Y2A- STA. 19+00 TO 22+00 LT.

DETAIL G
FALSE SUMP
(Not to Scale)
Median Ditch
9"
2'
20'
CI etc.
S=Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GTD = GRADE TO DRAIN
SBG = SHOULDER BERM GUTTER
SEE SHEET 27 FOR -L- PROFILE
SEE SHEETS 32-33 FOR -Y2- PROFILE
SEE SHEET 33 FOR -Y2A- PROFILE
SEE SHEET 35 FOR -Y2C- PROFILE
SEE SHEET 36 FOR -Y2D- PROFILE
SEE SHEETS S- THRU S- FOR STRUCTURE PLANS
SEE SHEET 2-G FOR BRIDGE DETAIL



TRAFFIC DIAGRAM FOR -L- AND -Y2-

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-07
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

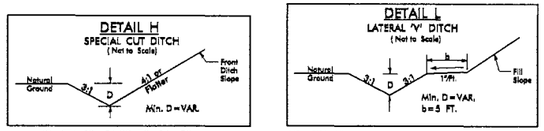
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISED 07-15-2014

Utility Permit Drawing
Sheet 7 of 9

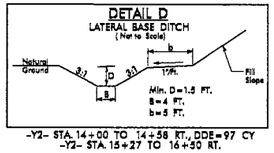
8/17/99

REVISIONS

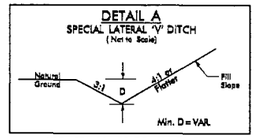


-Y2- STA. 12+86.33 TO 14+50 LT
-Y2A- STA. 11+56.52 TO 13+00 RT
-Y2A- STA. 12+00 TO 12+50 LT.
-Y2E- STA. 11+50 TO 14+50 RT.
-Y2E- STA. 11+50 TO 14+50 LT.

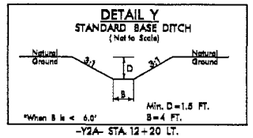
-Y2- STA. 15+28.43 TO 15+50 LT., DDE=11 CY
-Y2- STA. 15+50 TO 16+38 LT., DDE=43 CY
-Y2- STA. 16+50 TO 21+41 RT., DDE=563 CY
-Y2- STA. 18+25 TO 21+00 LT., DDE=182 CY
-Y2B- STA. 10+50 TO 12+50 LT., DDE=103 CY



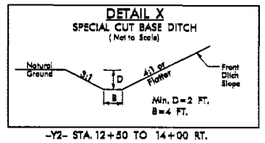
-Y2- STA. 14+00 TO 14+58 RT., DDE=97 CY
-Y2- STA. 15+27 TO 16+30 RT.



-Y2E- STA. 10+50 TO 11+50 RT.
-Y2E- STA. 10+50 TO 11+50 LT.



-Y2A- STA. 12+20 LT.



-Y2- STA. 12+50 TO 14+00 RT.

NAD 83/NSRS 2007

EXISTI...

-Y2- POT Sta. 10+00.00

NO CLAIM
DENNIS W. SAULTER
DB 638 PG 002

39
DENNIS W. SAULTER
ESTATE FILE 03E-154
DB 285 PG 292
DB 288 PG 687

NEW

+00.00 -Y2-
30.00', 55.00', 70.00' Rt.

BEGIN CONST.
-Y2- POT STA.12+00.00

+72.00 -Y2-
70.00' Rt.

AERIAL
JES-ONSLOW
C POWER

CL B RIP RAP=2 TONS
GEOTEXTILE=10 SY

39Z

SPECIAL CUT 4' BASE DITCH
SEE DETAIL X

+90.00 -Y2-
57.00' Rt.

LATERAL 4' BASE DITCH
SEE DETAIL D

-Y2- POT Sta. 10+00.00
-Y2A- POT Sta. 10+00.00
-Y2A- PC Sta. 10+18.10

+53.00 -Y2A-
30.00' Rt.

CL B RIP RAP

13
ROBERT LEROY & JOYCE R PARKER
DB 2373 PG 298

OBLITERATE EXISTING DITCH

-Y2- PC Sta. 15+08.05
-Y2A- PT Sta. 11+56.52

CL B RIP RAP=5 TONS
GEOTEXTILE=45 SY

LATERAL 4' BASE DITCH
SEE DETAIL D

+56.52 -Y2A-
30.00', 40.00' Rt.

NEW AERIAL
JONES-ONSLEY
EMC POWER

PROP. O/H POWER
& CATV LINES

SPECIAL CUT DITCH
SEE DETAIL H

PROP. U/G TEL. LINE

+55.00 -Y2A-
60.00', 75.00' Rt.

NEW

CL B RIP RAP=16 TONS
GEOTEXTILE=32 SY

+60.00 -Y2A-
30.00', 40.00' Rt.

+75.00 -Y2A-
62.00', 77.00' Rt.

RETAIN

POT Sta. 10+00.00 -Y2B-
POC Sta. 17+00.00

NEW

PROP. 12" W.L.

LATERAL 'V' DITCH
SEE DETAIL L

BEGIN SBG
-Y2- Sta. 18+32

NEW AERIAL
JONES-ONSLOW
EMC POWER

CL B RIP RAP=1 TONS
GEOTEXTILE=5 SY

+84.49 -Y2A-
30.00' Rt.

-Y2A- PC Sta. 14+84.49

15
ROBERT LEROY & JOYCE R PARKER
DB 1105 PG 1
MB 32 PG 45

+12.00 -Y2-
Pro...

+95.00 -Y2A-
38.00' Rt

ROBERT LEROY & JOYCE R PARKER
DB 2373 PG 298
13

+50.00 -Y2A-
53.00' Rt.

+00.00 -Y2A-

MATCHLINE SHEET 11
-Y2A- STA. 18+50.00

MATCHLINE SHEET UE-06 -Y2- STA. 19+50.00

N 40°35'04" E
162.56'

SR 1331 WHITE OAK RIVER RD 21.85'

+45.49
30.00' Rt.

N 14°00'14" E
46.05'

25F0

ASPHALT

GR

S 15°52'31" E
69.49'

S

+00.00 -Y2-
30.00', 48.00' Lt.

GRAPEVINE

50' TAPER

REMOVE

2112

2106

2105

ISBKG

CONC

CL B RIP RAP=2 TONS
GEOTEXTILE=10 SY

SPECIAL CUT DITCH
SEE DETAIL H

+38.00 -Y2-
44.98' Lt.

-Y2E- PC Sta. 10+28.15

S 75°48'28.9" E

+40.00 -Y2E-
30.00' Lt.

-Y2E- PT Sta. 10+79.13

+79.00 -Y2E-
47.00' Lt.

+79.13 -Y2E-
30.00' Lt.

DENNIS W. SAULTER
DB 217 PG 523
18

SPECIAL LATERAL 'V' DITCH
SEE DETAIL A

15

SPECIAL CUT DITCH
SEE DETAIL H

+06.00 -Y2E-
38.00' Lt.

-Y2E- PC Sta. 13+70.31

+70.31 -Y2E-
30.00' Lt.

-Y2E- PT Sta. 14+27.14
C/L Cul-De-Sac
-Y2E- POT Sta. 14+62.14
END CONSTRUCTION
-Y2E- POT Sta. 14+86.24
-Y2- POT Sta. 17+56.75=
353.99' Lt.

+03.00 -Y2E-
54.00' Lt.

+25.00 -Y2E-
67.00' Lt.

+54.00 -Y2E-
56.00' Lt.

N 5°30'08" W
17.17'

LATERAL 'V' DITCH
SEE DETAIL L

+20.00 -Y2-
65.00' Lt.

+70.00 -Y2-
65.00' Lt.

PC Sta. 10+37.19 -Y2B-

PT Sta. 10+79.12 -Y2B-

+76.00 -Y2B-
66.00' Lt.

+79.12 -Y2B-
30.00' Lt.

SETH O. MILLS
DB 1086 PG 257
MB 22 PG 152
SLIDE C-30
40

N 19°26'58.8" E

S 64°56'31.5" E

S 85°28'30.4" E

S 80°28'43.1" E

SPECIAL CUT DITCH
SEE DETAIL H

LATERAL 'V' DITCH
SEE DETAIL L

+70.33 -Y2E-
30.00', 39.00' Rt.

+75.00 -Y2E-
42.00' Rt.

+38.00 -Y2-
80.00', 105.00' Lt.

+18.00 -L-
494.00' Lt.

+98.00 -L-
486.00' Lt.

+00.00 -Y2B-
44.00' Lt.
END CONST.
POT Sta. 12+75.00 -Y2B-
POT Sta. 12+86.49 -Y2B-

+11.00 -Y2-
86.87', 126.00' Lt.

LATERAL 'V' DITCH
SEE DETAIL L

17
SETH O. MILLS
DB 709 PG 94

15
SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21 PG 201
SLIDE B-229

-Y2B-
PI Sta 10+62.40
Δ = 80° 05' 18.0" (RT)
D = 190° 59' 09.4"
L = 41.93'
T = 25.21'
R = 30.00'
SE = NC

-Y2E-

PI Sta 10+54.67	PI Sta 14+00.17
Δ = 38° 56' 46.7" (RT)	Δ = 43° 25' 04.0" (RT)
D = 76° 23' 39.7"	D = 76° 23' 39.7"
L = 50.98'	L = 56.83'
T = 26.52'	T = 29.86'
R = 75.00'	R = 75.00'
SE = See Plans	SE = NC

-Y2-

PI Sta 19+86.38
Δ = 25° 39' 48.5" (RT)
D = 2° 43' 42.1"
L = 940.62'
T = 478.33'
R = 2100.00'
SE = 0.04
RO = 96°

-Y2A-

PI Sta 11+01.04	PI Sta 16+34.72
Δ = 79° 08' 02.6" (LT)	Δ = 81° 17' 18.1" (RT)
D = 57° 17' 44.8"	D = 32° 44' 25.6"
L = 138.11'	L = 248.28'
T = 82.63'	T = 150.23'
R = 100.00'	R = 175.00'
SE = 0.02	SE = .04
RO = See Plans	RO = 60°

SBG - SHOULDER BERM GUTTER
SEE SHEET 32 FOR -Y2- PROFILE
SEE SHEET 33 FOR -Y2A- PROFILE
SEE SHEET 35 FOR -Y2B- PROFILE
SEE SHEET 37 FOR -Y2E- PROFILE

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8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

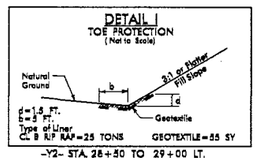
REVISED 07-15-2014

Utility Permit Drawing
Sheet 8 of 9

NAD 83/NSRS 2007

MATCHLINE SHEET UE-06 -Y2- STA. 28+50.00

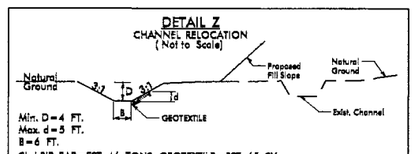
DETAIL I
TOE PROTECTION
(Not to Scale)



d=1.5 FT.
b=5 FT.
Type of Liner
CL B RIP RAP=25 TONS GEOTEXTILE=55 SY

-Y2- STA. 28+50 TO 29+00 LT.

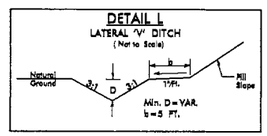
DETAIL Z
CHANNEL RELOCATION
(Not to Scale)



Min. D=4 FT.
Max. d=5 FT.
B=6 FT.
CL I RIP RAP=EST. 46 TONS; GEOTEXTILE=EST. 65 SY

-Y2- STA. 31+00 TO 31+96 RT., DDE=246 CY

DETAIL L
LATERAL 'V' DITCH
(Not to Scale)



Min. D=VAR.
b=5 FT.

-Y2- STA. 28+18 TO 29+13 RT., DDE=26 CY

-Y2-
PI Sta 33+27.72
Δ = 4°54'06.0" (LT)
D = 2°23'14.4"
L = 205.32'
T = 102.72'
R = 2,400.00'

30

END GRADING
BEGIN RESURFACING
POT STA.32+00.00 -Y2-

-Y2- PT Sta. 34+30.32

-Y2- POT Sta. 34+79.79

-Y2- PC Sta. 32+25.00

PAVE TO EX.BRIDGE

PROP. O/H POWER & OATV LINES

PROP. U/G TEL. LINE

STA. 31+00 -Y2-

STA. 32+00 -Y2-

STA. 29+24 -Y2-

+00.00 -Y2-
40.00' Lt.

+00.00 -Y2-
30.00',
40.00' Lt.

+96.00 -Y2-
Exist. R/W,
55.00' Lt.

+18.00 -Y2-
Exist. R/W,
55.00' Lt.

NEW

RETAIN EXIST. STRUCTURE

MITCHELLS BRANCH

15 SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21PG 201
SLIDE R-229

44 WHITE OAK RIVER RD. INVESTMENTS
DB 2485 PG 869

45 ROGER J. BOYD, ET UX
/ DB 1092 PG 734
TRACT 2

RENALDER L & BARBARA H SWAIN
DB 595 PG 287
NO CLAIM

OLD CART AXLE

EXISTING R/W

S 67°24'30.3" E

S 58°30'24.2" E

GRAU 350 TL-2

PUE

END CONST.
POC STA.33+12.00 -Y2-

+67.00 -Y2-
EXIST. R/W,
45.00' Rt.

+60.00 -Y2-
PROP. PUE

43 DONNA S. SAWYER, ET VIR
DB 2243 PG 507

+06.00 -Y2-
44.00' Rt.

DONNA S. SAWYER, ET VIR
DB 2243 PG 507

NEW AERIAL
JONES-ONSLOW
EMC POWER

BM52 EL.=29.23'
-EYA- STA 38+57
-Y2- STA 33+29, 97' RT

43Z NEW

+00.00 -Y2-
30.00'
58.00' Rt.

STA. 32+51 -Y2-

STA. 30+85 -Y2-

CHANNEL RELOCATION
SEE DETAIL Z

+85.00 -Y2-
30.00',
40.00' Rt.

4040/503 SQ FT
= 0.092 ACRES
SITE 1
NEW AERIAL
JONES-ONSLOW
EMC POWER

NEW

+40.00 -Y2-
138.00' Rt.

DUSTIN J. CANESTORP, ET UX Prop. PUE.
DB 12590 PG 35
MB 49 PG 105
SLIDE L-963

STA. 30+38 -Y2-

POWER POLE:
FILL IN WETLAND
< 0.01 ACRES
SITE 1

913,040 SQ FT
= 0.020 ACRES
SITE 2

DENISE PHILLIPS, ET VIR
/ DB 2831 PG 123
MB 51 PG 43 SLIDE L-4380
LOT 18
NO CLAIM

ARNOLD D. MEREDITH, ET UX
DB 2801 PG 804
MB 51 PG 43 SLIDE L-4380
LOT 19
NO CLAIM

S 70°20'41" E
222.33'

S 20°00'41" W
158.15'

S 67°23'47" E
60.11'

N 20°00'41" E
158.15'

S 71°58'08" E
40.00'

S 71°58'08" E
76.09'

S 71°58'08" E
48.30'

N 71°58'08" W
120.88'

S 27°28'08" E
282.78'

S 74°31'29" E
316.20'

-BY- 62

HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

EIS

SEE SHEET 33 FOR -Y2- PROFILE

13-OCT-2014 14:18
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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-Y2-29+24 TO 31+00	Aerial Power& CATV lines					0.09					
	(Sheet UE-08)											
1	-Y2- 30+38	Power pole	<0.01									
	(SHEET UE-08)											
2	-Y2-32+00 TO 32+51	Aerial Power&CATV Lines					0.02					
	(Sheet UE-08)											
3	-L-56+12 TO 57+40	Aerial Power&CATV Lines					0.09					
	(Sheet UE-05)											
4	'-L-61+75 TO 62+06	Aerial Power					0.01					
	(Sheet UE-05)											
TOTALS:			<0.01	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00

Note : 6.25 sq. ft. (Each) = 0.0001 ac (Each) permanent impact in the wetlands from pole installation.
Total = 93.75 sq. ft.
= 0.002 ac
= < 0.01 ac

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ONSLOW COUNTY
TIP PROJECT (R-2514B)

Revised 7/15/2014

ATN Revised 3/31/05

Utility Permit Drawing
Sheet 9 of 9

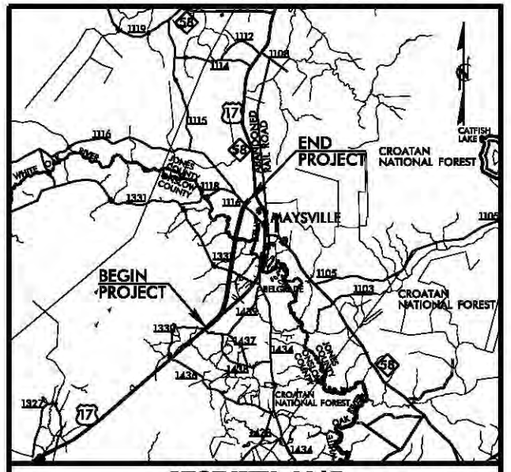
03/08/99

R/W Revision 5/14 JCL –Y2A– Realigned

TIP PROJECT: R-2514B

CONTRACT: _____

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW & JONES COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.3		PE
34442.2.S3		RIGHT OF WAY

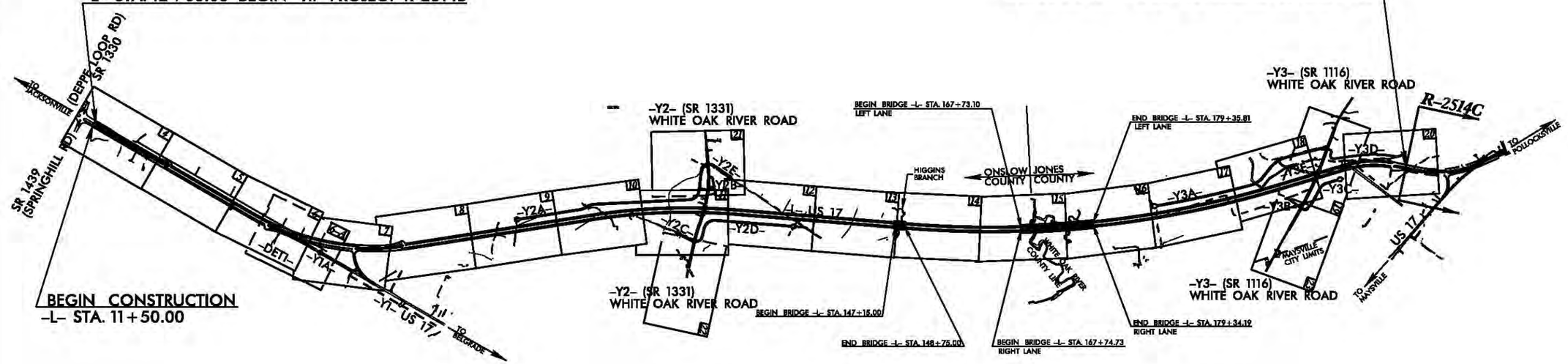
LOCATION: ***US 17 FROM SOUTH OF BELGRADE AT SR 1330/SR 1439 TO NORTH OF MAYSVILLE***

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

NAD 83/
NSRS 2007

–L– STA. 12+00.00 BEGIN TIP PROJECT R-2514B

–L– STA. 231+42.77 END TIP PROJECT R-2514B



*DESIGN EXCEPTION REQUIRED FOR SAG & CREST VERTICAL CURVE K FACTORS AND STOPPING SIGHT DISTANCE (–Y2– & –Y3–)
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A FULL CONTROLLED-ACCESS PROJECT WITH ACCESS AS SHOWN ON PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 10 5 0 10 20

DESIGN DATA

ADT 2015 = 6800 vpd
ADT 2035 = 15900 vpd
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST =4% DUAL =3%
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY OF TIP PROJECT R-2514B = 3.906 MILES

LENGTH STRUCTURE OF TIP PROJECT R-2514B = 0.250 MILES

TOTAL LENGTH OF TIP PROJECT R-2514B = 4.156 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: DECEMBER 17, 2013

LETTING DATE: JUNE 16, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

JOHN LANSFORD, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

28-JUL-2014 13:48
R:\Roadway\TIP\R2514B_Rdy_tsh.dgn
$$$$USERNAME$$$$

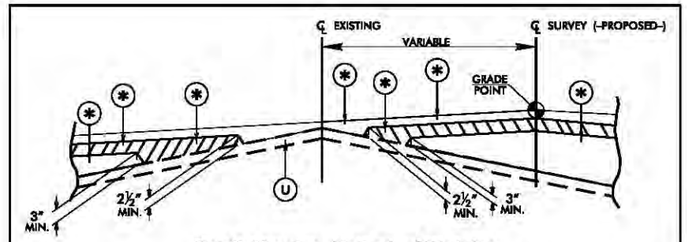
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE
(Preliminary Pavement Design)

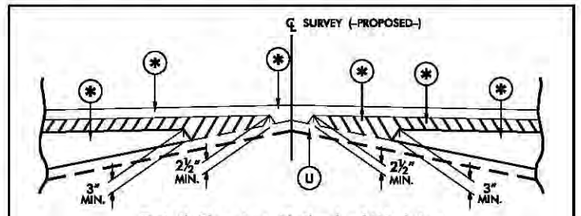
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	J1	PROP. 6" AGGREGATE BASE COURSE
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS	J2	PROP. 8" AGGREGATE BASE COURSE
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR GREATER THAN 2" IN DEPTH.	J3	PROP. VAR. DEPTH AGGREGATE BASE COURSE
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	P	PROP. PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.	R	PROP. SHOULDER BERM GUTTER
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL
E2	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

NOTES: ALL SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



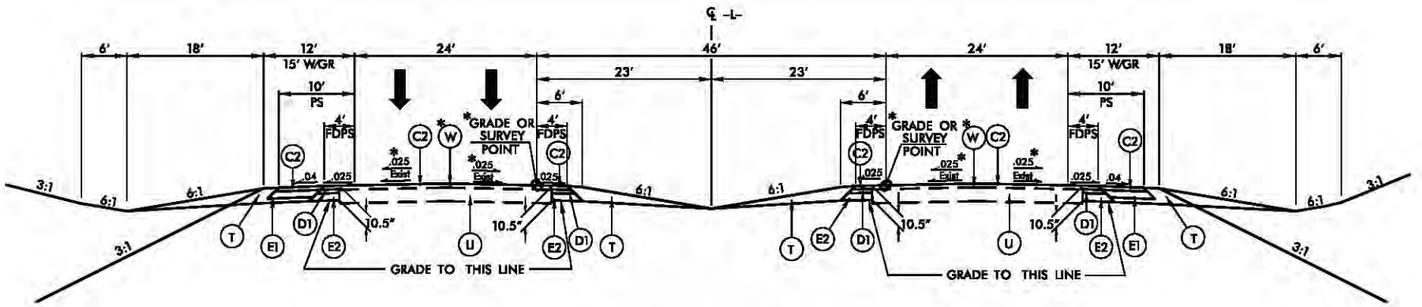
Detail Showing Method of Wedging

* NOTE: FOR PAVEMENT TYPES AND DEPTHS SEE RELEVANT TYPICAL SECTION



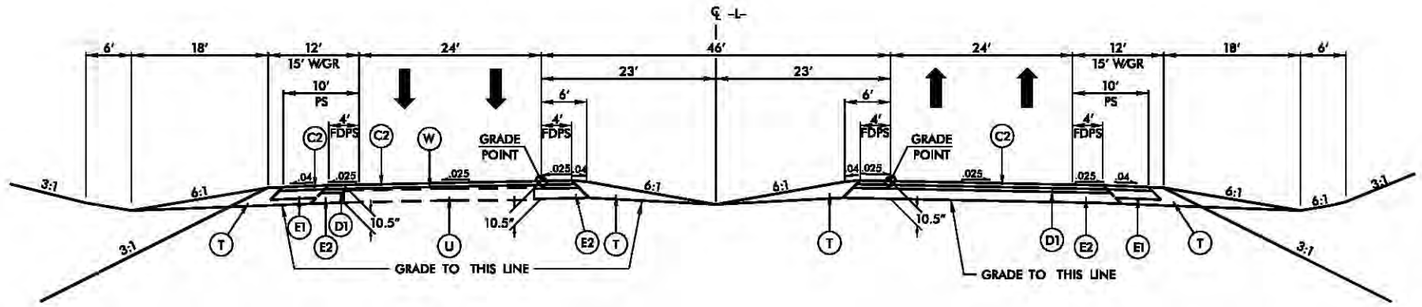
Detail Showing Method of Wedging

* NOTE: FOR PAVEMENT TYPES AND DEPTHS SEE RELEVANT TYPICAL SECTION



USE TYPICAL SECTION NO. 1 FOR:
–L– STA. 12+00.00 TO –L– STA. 15+45.00
–L– STA. 15+45.00 TO –L– STA. 17+50.00

TYPICAL SECTION NO. 1



USE TYPICAL SECTION NO. 2 FOR:
–L– STA. 17+50.00 TO –L– STA. 38+50.00

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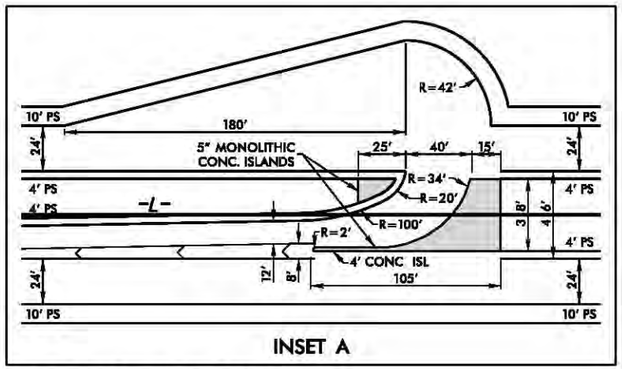
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	2A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

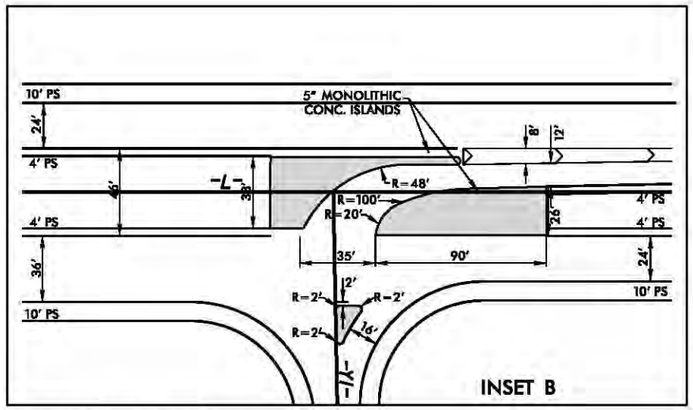
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



INSET A

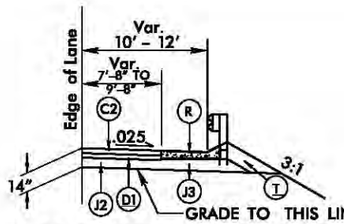
USE WITH TYPICAL SECTION NO. 2, 3 AND 4:

-L- STA. 25+45.00
-L- STA. 39+50.00
-L- STA. 66+69.73
-L- STA. 229+50.50



USE WITH TYPICAL SECTION NO. 4

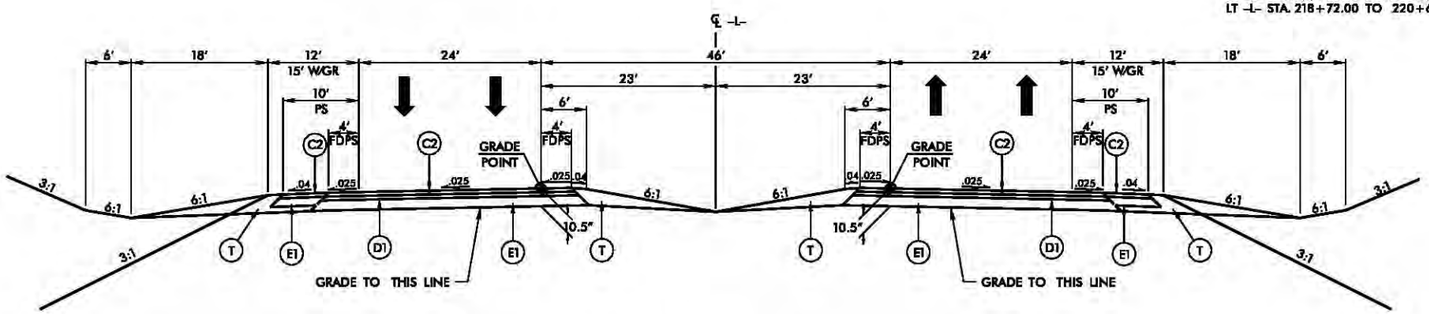
-L- STA. 58+77.28 (-Y1- INTERSECTION)



TYPICAL SECTION OF PAVED SHOULDER AND SHOULDER BERM GUTTER AT GUARDRAIL LOCATIONS

USE WITH TYPICAL SECTION NO. 4

RT -L- STA. 98+47.00 TO 101+08.00
RT -L- STA. 108+08.00 TO 110+70.00
RT -L- STA. 144+63.00 TO 146+90.83 (BEGIN APPR. SLAB)
LT -L- STA. 146+40.00 TO 146+90.83 (BEGIN APPR. SLAB)
RT -L- STA. 148+99.17 (END APPR. SLAB) TO 157+19.00
LT -L- STA. 148+99.17 (END APPR. SLAB) TO 160+19.00
LT -L- STA. 165+08 TO 167+49.07 LEFT LANE (BEGIN APPR. SLAB)
RT -L- STA. 165+08 TO 167+50.76 RIGHT LANE (BEGIN APPR. SLAB)
RT -L- STA. 167+00.00 TO 167+50.76 RIGHT LANE (BEGIN APPR. SLAB)
LT -L- STA. 167+00.00 TO 167+49.07 LEFT LANE (BEGIN APPR. SLAB)
RT -L- STA. 179+58.15 RIGHT LANE (END APPR. SLAB) TO 180+10.00
LT -L- STA. 179+59.85 LEFT LANE (END APPR. SLAB) TO 180+10.00
LT -L- STA. 179+59.85 LEFT LANE (END APPR. SLAB) TO 181+45.00
RT -L- STA. 179+58.15 RIGHT LANE (END APPR. SLAB) TO 181+45.00
LT -L- STA. 218+72.00 TO 220+64.00

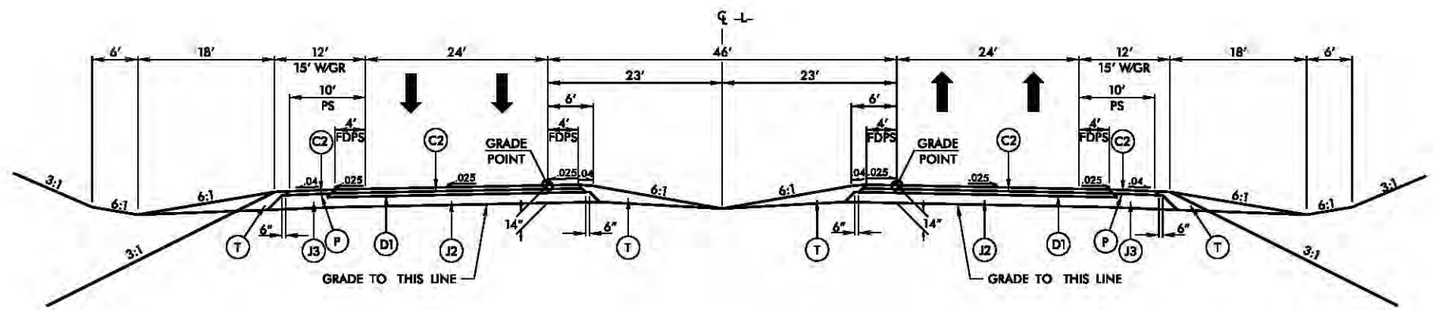


TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 FOR:

-L- STA. 38+50.00 TO -L- STA. 58+00.00

NOTE: USE MILLED RUMBLE STRIPS FOR MEDIAN AND OUTSIDE ASPHALT PAVED SHOULDERS. SEE STD. 665.01



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4 FOR:

-L- STA. 58+00.00 TO -L- STA 147+15.00 (BEGIN BRIDGE)
-L- STA. 148+75.00 (END BRIDGE) TO -L- STA. 167+73.10 LEFT LANE (BEGIN BRIDGE)
-L- STA. 148+75.00 (END BRIDGE) TO -L- STA. 167+74.73 RIGHT LANE (BEGIN BRIDGE)
-L- STA. 179+35.81 LEFT LANE (END BRIDGE) TO -L- STA. 231+42.77
-L- STA. 179+34.19 RIGHT LANE (END BRIDGE) TO -L- STA. 231+42.77

NOTE: USE MILLED RUMBLE STRIPS FOR MEDIAN AND OUTSIDE ASPHALT PAVED SHOULDERS. SEE STD. 665.01

PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	3" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	VAR. B25.0B
J1	6" ABC
J2	8" ABC
J3	VAR. ABC
P	.35 PRIME COAT
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EX. PAVEMENT
W	WEDGING

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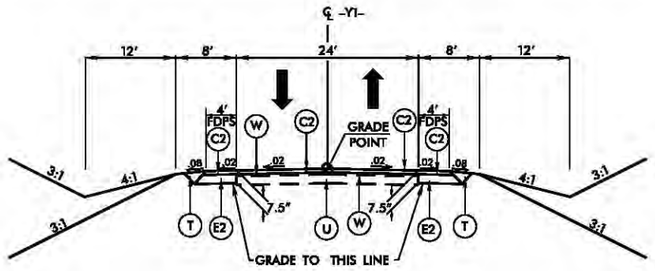
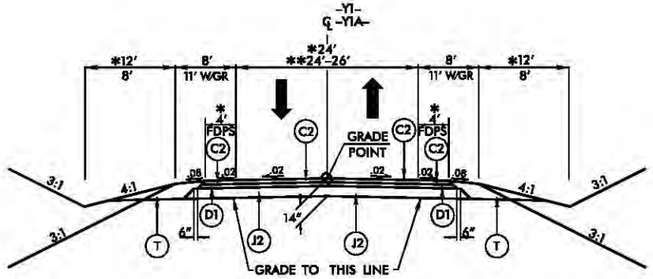
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	2A-3
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



TYPICAL SECTION NO. 5

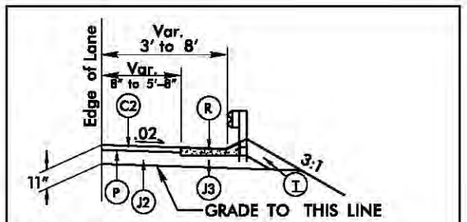
USE TYPICAL SECTION NO. 5 FOR:
-Y1- STA. 15+50.00 to 17+25.00



TYPICAL SECTION NO. 6

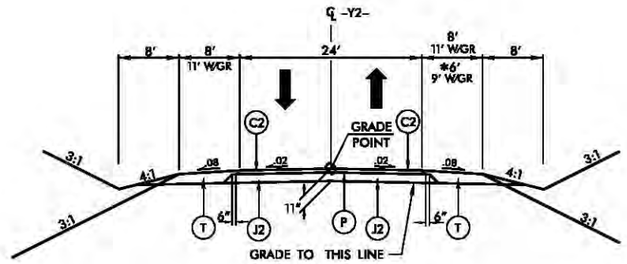
USE TYPICAL SECTION NO. 6 FOR:
* -Y1- STA. 11+26.09 to 15+50.00
** -Y1A- STA. 10+42.22 to 13+50.00 (NO PAVED SHOULDER)

NOTE: RESURFACE -Y1A- WITH (C2) FROM STA. 13+50.00 TO 17+14.00



TYPICAL SECTION OF PAVED SHOULDER AND SHOULDER BERM GUTTER AT GUARDRAIL LOCATIONS

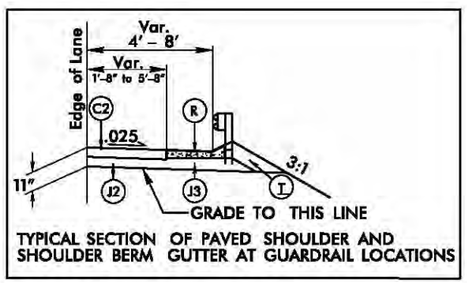
USE WITH TYPICAL SECTION NO. 7
RT -Y2- STA. 18+32.00 TO ##+##.## (BEGIN APPR. SLAB)
RT -Y2- STA. ##+##.## (END APPR. SLAB) TO 23+77.00



TYPICAL SECTION NO. 7

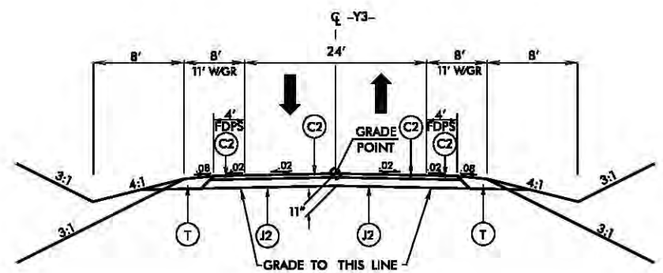
USE TYPICAL SECTION NO. 7 FOR:
-Y2- STA. 12+00.00 to STA. 21+55.13 (BEGIN BRIDGE)
-Y2- STA. 23+31.63 (END BRIDGE) TO STA. 32+00.00
*-Y2- STA. 30+17.00 TO STA. 32+00.00 RT

NOTE: RESURFACE -Y2- WITH (C2) FROM STA. 32+00.00 TO EXISTING BRIDGE



TYPICAL SECTION OF PAVED SHOULDER AND SHOULDER BERM GUTTER AT GUARDRAIL LOCATIONS

USE WITH TYPICAL SECTION NO. 8
RT -Y3- STA. 16+00.00 TO ##+##.## (BEGIN APPR. SLAB)
RT -Y3- STA. ##+##.## (END APPR. SLAB) TO 23+35.00



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8 FOR:
-Y3- STA. 10+00.00 to STA. 17+05.53 (BEGIN BRIDGE)
-Y3- STA. 19+32.53 (END BRIDGE) TO STA. 28+00.00

PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	3" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	VAR. B25.0B
J1	6" ABC
J2	8" ABC
J3	VAR. ABC
P	.35 PRIME COAT
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EX. PAVEMENT
W	WEDGING

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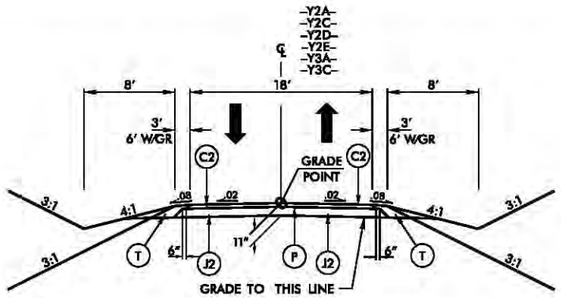
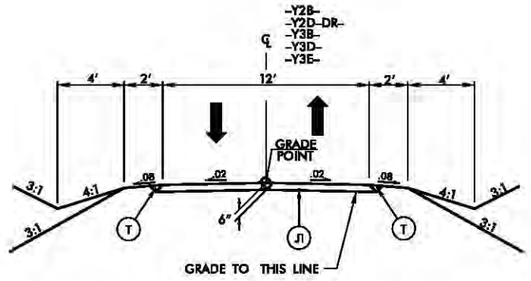


TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9 FOR:

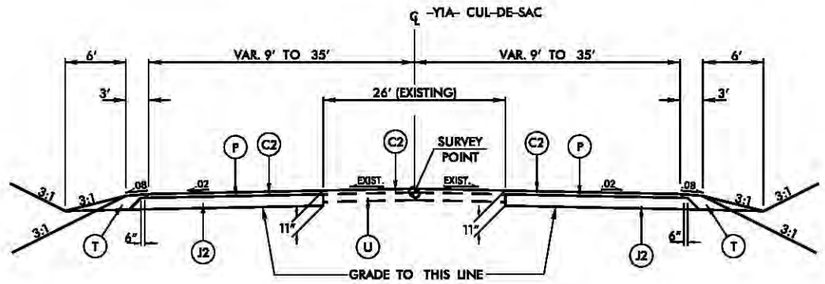
-Y2A- STA. 10+49.39 to STA. 45+06.00
-Y2C- STA. 10+52.84 to STA. 12+48.00
-Y2D- STA. 10+66.05 to STA. 27+68.00
-Y2E- STA. 10+34.37 to STA. 13+55.00
-Y3A- STA. 10+51.27 to STA. 39+75.00
-Y3C- STA. 10+41.87 to STA. 18+15.00



TYPICAL SECTION NO. 10

USE TYPICAL SECTION NO. 10 FOR:

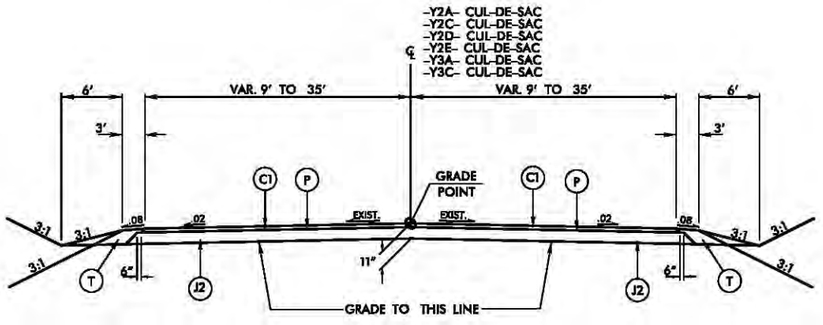
-Y2B- STA. 10+31.84 TO STA. 12+75.00
-Y2D-DR- STA. 28+55.00 TO STA. 30+55.00
-Y3B- STA. 10+35.26 TO STA. 13+10.00
-Y3D- STA. 10+32.00 TO STA. 24+00.00
-Y3E- STA. 10+29.72 TO STA. 13+00.00



TYPICAL SECTION NO. 11

USE TYPICAL SECTION NO. 11 FOR:

-Y1A- STA. 16+40.00 TO STA. 17+00.00



TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12 FOR:

-Y2A- STA. 45+06.00 TO STA. 45+58.91 (CL CUL-DE-SAC)
-Y2C- STA. 12+48.00 TO STA. 13+00.00 (CL CUL-DE-SAC)
-Y2D- STA. 27+68.00 TO STA. 28+20.00 (CL CUL-DE-SAC)
-Y2E- STA. 13+55.00 TO STA. 14+27.14 (CL CUL-DE-SAC)
-Y3A- STA. 39+75.00 TO STA. 40+35.30 (CL CUL-DE-SAC)
-Y3C- STA. 18+15.00 TO STA. 18+70.90 (CL CUL-DE-SAC)

PAVEMENT SCHEDULE

C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	3" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	VAR. B25.0B
J1	6" ABC
J2	8" ABC
J3	VAR. ABC
P	.35 PRIME COAT
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EX. PAVEMENT
W	WEDGING

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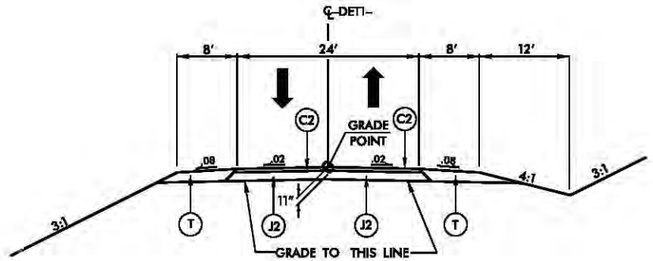
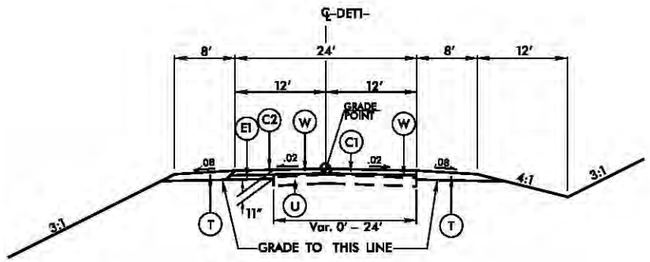
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



TYPICAL SECTION NO. 13

USE TYPICAL SECTION NO. 13 FOR:
-DETI- STA. 10+00.00 TO STA. 15+00.00



TYPICAL SECTION NO. 14

USE TYPICAL SECTION NO. 14 FOR:
-DETI- STA. 15+00.00 TO STA. 19+62.48

PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	3" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	VAR. B25.0B
J1	6" ABC
J2	8" ABC
J3	VAR. ABC
P	.35 PRIME COAT
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EX. PAVEMENT
W	WEDGING

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PROJECT REFERENCE NO.	SHEET NO.

TYPICAL SECTION ON –L–

–L– STA. ???+??.?? (BEGIN BRIDGE) TO STA. ???+??.?? (END BRIDGE)
–L– STA. ???+??.?? (BEGIN BRIDGE) TO STA. ???+??.?? (END BRIDGE)
SEE PLAN SHEETS 14 THRU 16

D = 65 %
DHV = 7 %
TTST = 4 %
DUAL = 3 %
V = 70 MPH

FUNC. CLASS – FREEWAY

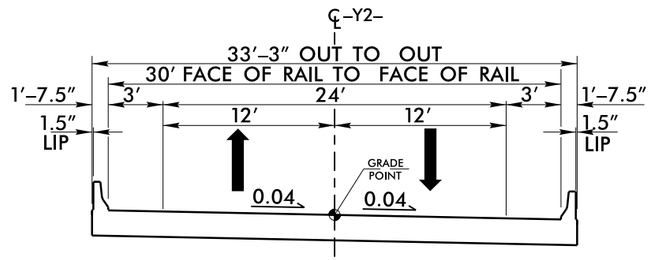
–Y2– SR 1331 (WHITE OAK RIVER ROAD IN ONSLOW COUNTY) BRIDGE OVER –L– (US 17)

PROPOSED GRADE SEPARATION AT –Y2– (SR 1331) WILL BE CONSTRUCTED USING AN OFFSITE DETOUR

DESIGN DATA –Y2–

ADT 2009 = 1500 VPD
ADT 2035 = 2500 VPD
D = 55 %
DHV = 12 %
TTST = 1 %
DUAL = 2 %
V = 50 MPH

FUNC. CLASS – LOCAL
MINIMUM VERTICAL CLEARANCE = 16'–6"

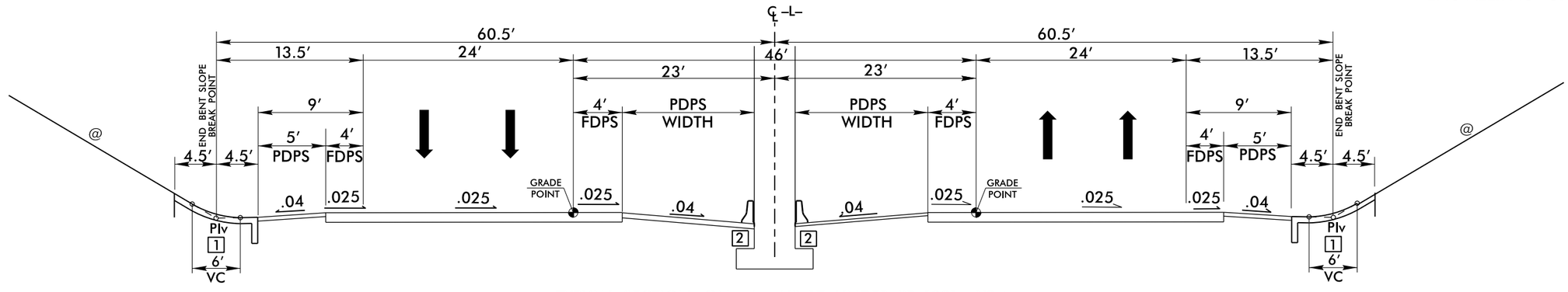


TYPICAL SECTION ON SR 1331 (–Y2–)

–Y2– STA. ??+??.?? (BEGIN BRIDGE) TO STA. ??+??.?? (END BRIDGE)

[1] SEE RDWY. STD. DWG. 610.03

[2] SEE RDWY. STD. DWG 862.01, SHT 1 OF 12
@ SLOPES DETERMINED BY GEOTECHNICAL ENGINEERING UNIT



TYPICAL SECTION ON –L– (US 17) UNDER SR 1331 (–Y2–)
SEE PLAN SHEET 11 FOR SR 1331 (–Y2–)

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STRUCTURE TYPICAL SECTIONS

(NOT TO SCALE)

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	2A-7
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN

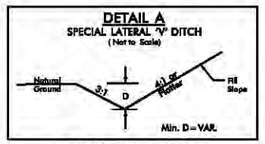
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

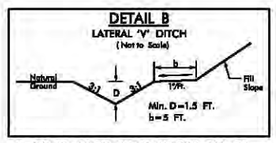
REVISIONS
8/17/99
R/W Revision 4/9/14 JCL Added "No Claim" Note to parcels with no taking, Deleted Parcel #'s 3 and 4, Added Parcel #2 Owner and Deed Book Information

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



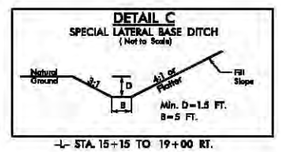
-L- STA. 14+45 TO 17+80 LT

DETAIL B
LATERAL 'V' DITCH
(Not to Scale)



-L- STA. 19+00 TO 21+50 RT, DDE=289 CY

DETAIL C
SPECIAL LATERAL BASE DITCH
(Not to Scale)



-L- STA. 15+15 TO 19+00 RT.

DETAIL AA
MEDIAN 'V' DITCH
(Not to Scale)

-L- STA. 11+50 TO 14+85 ℄
-L- STA. 14+85 TO 16+00 ℄

NAD 83/NSRS 2007

BEGIN STATE PROJECT R-2514B
-L- POT STA. 12+00.00

-L- POT Sta. 10+00.00

BEGIN GRADE -L- STA.15+45.00

SR 1330 (DEEPE LOOP RD)

+00.00 -L-
88.15' Lt.

100' TAPER

INNERDUCT

48" WW ISBW

4' PS

MEDIAN 'V' DITCH
SEE DETAIL AA

TO JACKSONVILLE
US 17 27° BST

+50.00

40'

+00.00 -L-
88.13'
98.00' Lt.

TIE SLOPE TO TOP OF PIPE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL A

TIE TO EX. DITCH

1 WEYERHAEUSER CO.
DB 30 PG 245
DB 5027 PG 680
MB 2 PG 26

+50.00 -L-
88.12'
98.00' Lt.

-BL- 10

Retain EXISTING R/W

INNERDUCT

EX3

EX4

9' BK Lm

10' PS

24'

N 49°09' 35.0" E

EX1

100' TAPER

RETAIN

10' PS

EX2

100' TAPER

PARTIAL RECORD INFORMATION DEPICTED FROM FIELD INVESTIGATION AND UTILITY OWNER CONTACT

+00.00 -L-
97.88' Rt.

Retain EXISTING R/W

TIE SLOPE TO TOP OF PIPE

TIE TO EX. DITCH

SPECIAL LATERAL 5' BASE DITCH
SEE DETAL C

+80.00 -L-
108.21'
115.00' Rt.

TIE TO EX. DITCH

0402 CL B RIP RAP=3 TONS
GEOTEXTILE=11 SY

0401 COLLAR

0403 COLLAR

0404

CL I RIP RAP=7 TONS
GEOTEXTILE=22 SY

+00.00 -L-
108.08'
115.00' Rt.

EUGENE ADAMS
DB 367, PG 578
2

REMOVE AND RESET
APPROX. 120' EXIST FENCE

REMOVE

10' RS

LATERAL 'V' DITCH
SEE DETAIL B

JONATHAN MORTON
DB 2384 PG 200
DB 2039 PG 782
NO CLAIM

EXIST ACCESS POINT

WEYERHAEUSER CO.
DB 30 PG 245
DB 3647 PG 680
MB 2 PG 26

1

MATCHLINE SHEET 5 -L- STA. 23+00.00

36" CONC

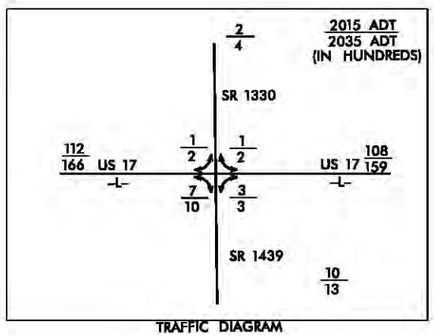
ISBKD

DECK

N 50°49'09" E
266.64'

RONNIE L. ADAMS
DB 421 PG 507
DB 755 PG 734
DB 1227 PG 305
DB 2186 PG 545
NO CLAIM

GTD DENOTES "GRADE TO DRAIN"
SEE SHEET 24 FOR -L- PROFILE



TRAFFIC DIAGRAM

28-JUL-2014 13:49
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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

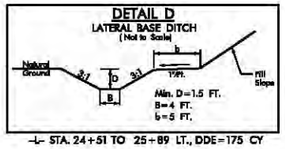
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

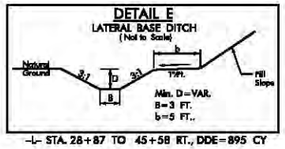
8/17/99 R/W Revision 6/25/14 JCL Removed Permanent Utility Easement (PUE) on Parcel 1

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



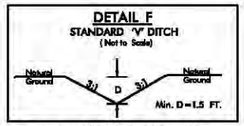
-L- STA. 24+51 TO 25+89 LT., DDE=175 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

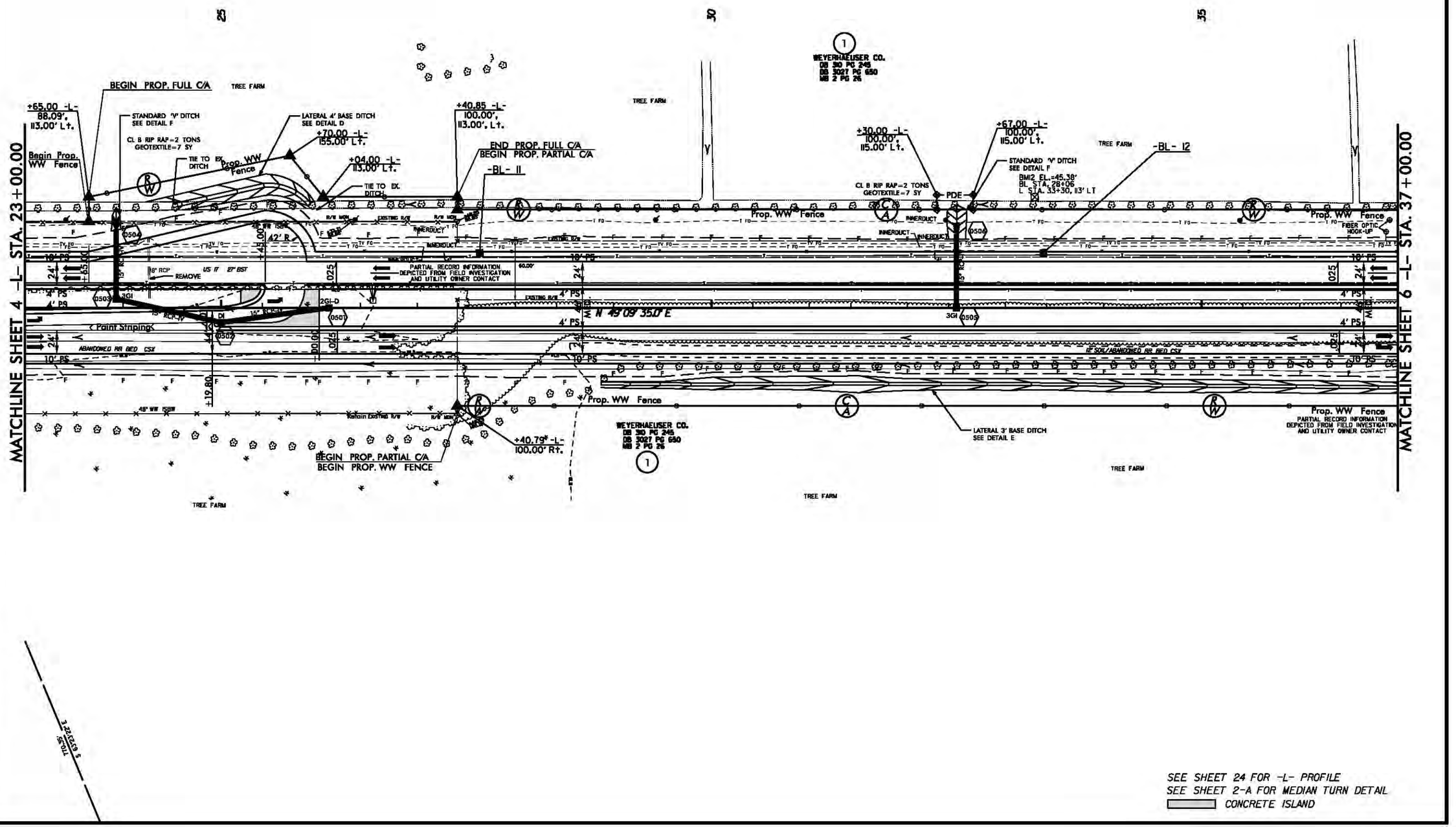


-L- STA. 28+87 TO 45+58 RT., DDE=895 CY

DETAIL F
STANDARD 'V' DITCH
(Not to Scale)



-L- STA. 23+93 LT., DDE=4 CY
-L- STA. 32+50 LT., DDE=31 CY



SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

28-JUL-2014 13:49
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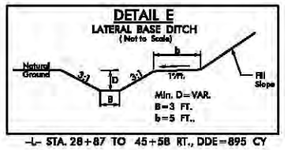
$$USERNAME$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

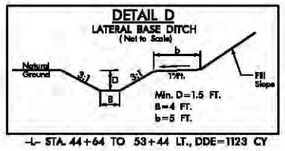
NAD 83/NSRS 2007

DETAIL E
LATERAL BASE DITCH
(Not to Scale)



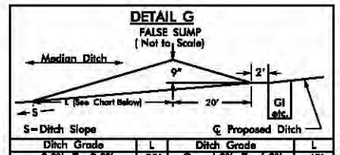
-L- STA. 28+87 TO 45+58 RT., DDE=895 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

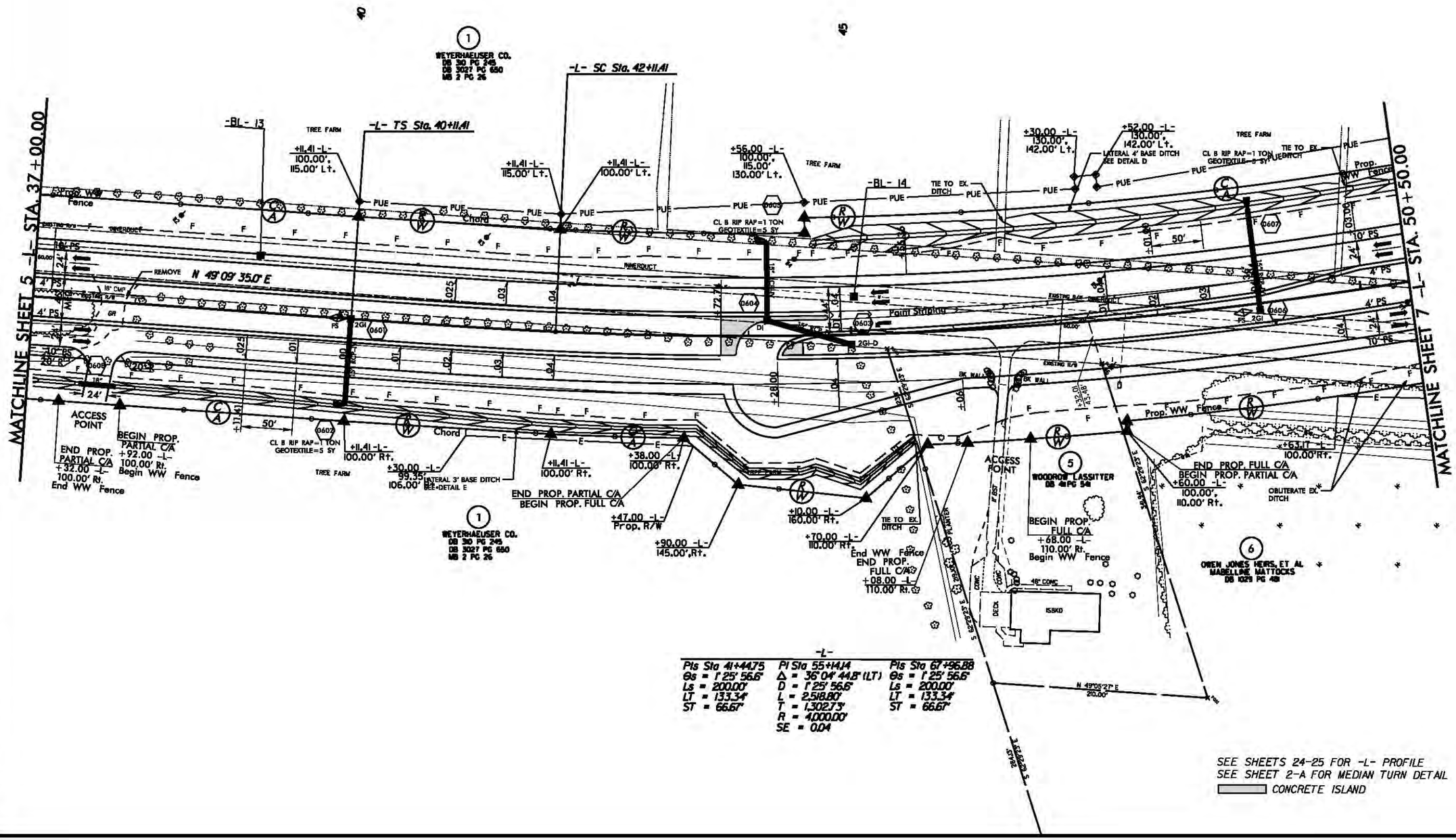


-L- STA. 44+64 TO 53+44 LT., DDE=1123 CY

DETAIL G
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'



SEE SHEETS 24-25 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

REVISIONS
R/W Revision 6/26/14 JCL Revised Existing Permanent Utility Easements (PUE) on Parcel 1

8/17/99

28-JUL-2014 13:49
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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	6-A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

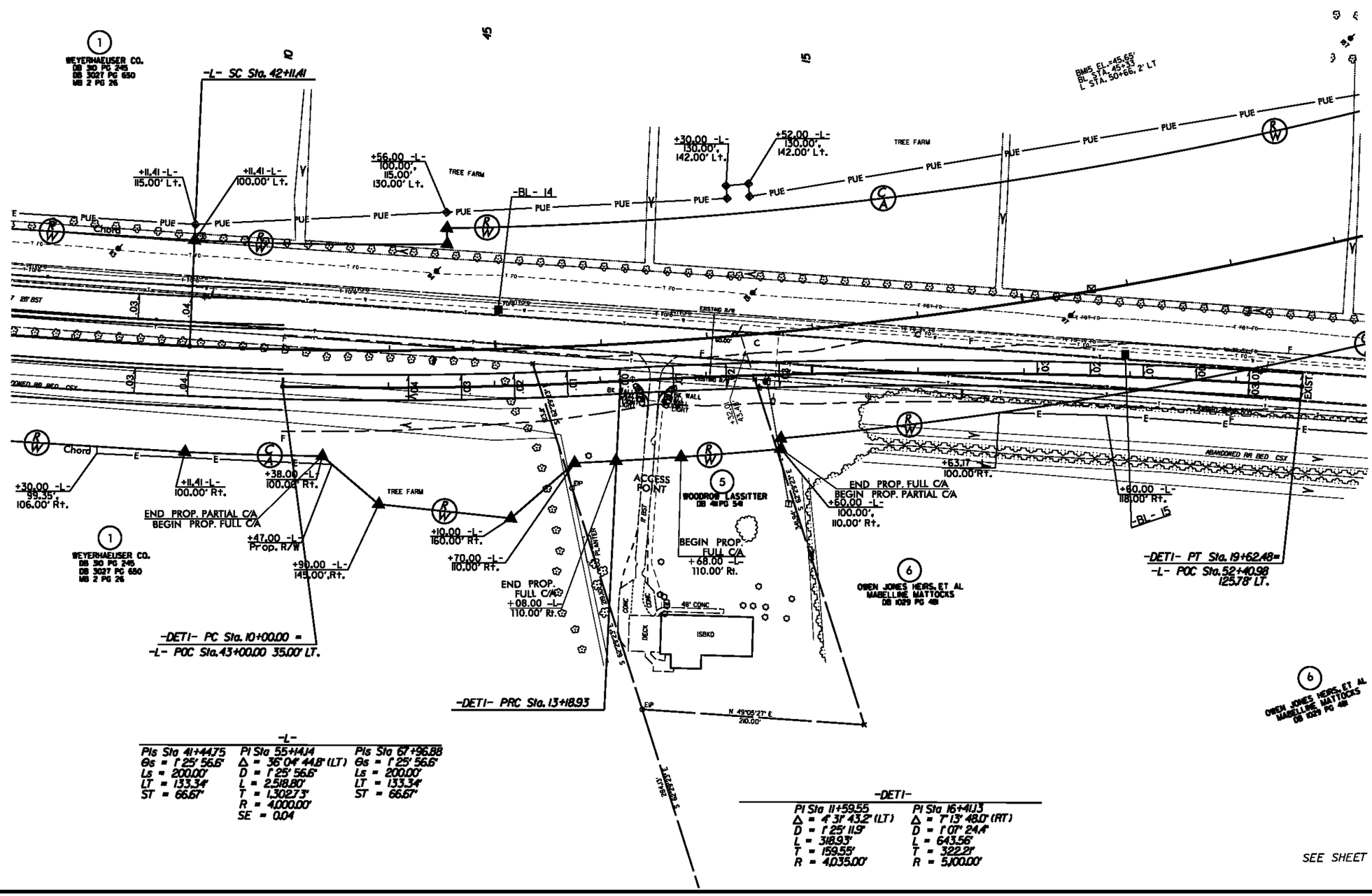
REVISIONS

8/17/99

DETOUR SHEET

NOTE:USE FOR CONSTRUCTION OF DETOUR ONLY

NAD 83/NSRS 2007



-L-

PIs Sta 41+44.75	PI Sta 55+14.14	PIs Sta 67+96.88
Gs = 1° 25' 56.6"	Δ = 36° 04' 44.8" (LT)	Gs = 1° 25' 56.6"
Ls = 200.00'	D = 1° 25' 56.6"	Ls = 200.00'
LT = 133.34'	L = 2,518.80'	LT = 133.34'
ST = 66.67'	T = 1,302.73'	ST = 66.67'
	R = 4,000.00'	
	SE = 0.04	

-DETI-

PI Sta 11+59.55	PI Sta 16+41.13
Δ = 4° 31' 43.2" (LT)	Δ = 7° 13' 48.0" (RT)
D = 1° 25' 11.9"	D = 1° 07' 24.4"
L = 318.93'	L = 643.56'
T = 159.55'	T = 322.21'
R = 4,035.00'	R = 5,100.00'

SEE SHEET 42 FOR -DETI- PROFILE

28-JUL-2014 13:49
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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

8/17/99

REVISIONS

R/W Revision 6/26/14 JCL Revised and Added Permanent Utility Easements (PUE) to Parcel 1 Right -L- Sta.55+85 to 59+33 (PUE) to Parcel 1 Revised TCE on Parcel 1 Right -L- Sta.55+85 to 59+33

28-JUL-2014 13:49
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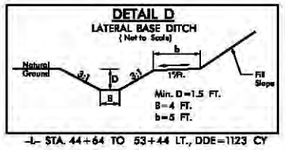
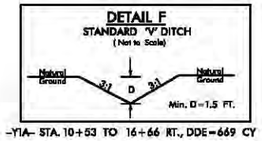
jskillen@ncdot.gov

DETAIL D
LATERAL BASE DITCH
(Not to Scale)



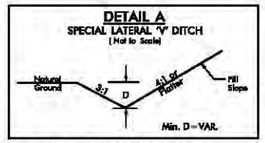
-L- STA. 44+64 TO 53+44 LT., DDE=1123 CY

DETAIL F
STANDARD "V" DITCH
(Not to Scale)



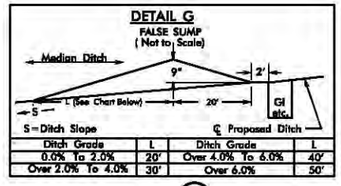
-Y1A- STA. 10+53 TO 16+66 RT., DDE=669 CY

DETAIL A
SPECIAL LATERAL "V" DITCH
(Not to Scale)



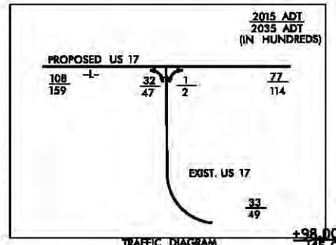
-Y1- STA. 14+00 TO 17+34 RT.
-Y1A- STA. 10+85 TO 13+00 LT.

DETAIL G
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

2015 ADT
2035 ADT
(IN HUNDREDS)



TRAFFIC DIAGRAM

-L- PI Sta 55+14.14
Δ = 36°04'44.8" (LT)
D = 1°25'56.6"
L = 2518.80'
T = 1302.73'
R = 4000.00'
SE = 0.04

-L- POC STA.58+77.28
-Y1- POT Sta. 10+00.00

-Y1- PC Sta. 10+17.20

-Y1- POC Sta. 13+56.81
-Y1A- POT Sta. 10+08.00

-Y1- PT Sta. 16+67.64

END CONST.
-Y1- POT Sta. 17+35.00

-Y1A- PC Sta. 10+39.01

-Y1A- PT Sta. 11+42.04

-Y1A-
PI Sta 10+95.62
Δ = 59°01'37.8" (RT)
D = 57°17'44.8"
L = 103.02'
T = 56.61'
R = 100.00'
SE = 0.02

-Y1-
PI Sta 13+82.20
Δ = 64°48'49.0" (LT)
D = 9°57'52.1"
L = 650.45'
T = 365.00'
R = 575.00'
SE = 0.06

-Y1A- POT Sta. 18+46.89

BEGIN WIDENING AND RESURFACING
-Y1A- POT Sta. 16+40.00
(C/L Cul-de-Sac at 17+00.00 -Y1A-)

END GRADE
BEGIN RESURFACING
-Y1A- POT Sta. 13+50.00

BM15 EL.=45.65'
BL STA. 45+33
L STA. 50+66, 2' LT

MATCHLINE SHEET 6 -L- STA. 50+50.00

MATCHLINE SHEET 8 -L- STA. 63+50.00

-BL- 15

-BL- 16

-BL2- 2

-BL- 17

S 49°09'35.0" E

S 40°09'35.0" W

N 49°09'35.0" E

LATERAL 4' BASE DITCH SEE DETAIL D

TIE TO EX. DITCH

CL B RIP RAP=1 TON GEOTEXTILE=5 SY

CL B RIP RAP=2 TONS GEOTEXTILE=10 SY

Prop. WW Fence

Begin/End WW Fence

Begin C/A
End WW Fence

End C/A
Begin WW Fence

END PARTIAL C/A
BEGIN FULL C/A

580' RT TURN LANE

100' TAPER

50' TAPER

STANDARD "V" DITCH SEE DETAIL F

SPECIAL LATERAL "V" DITCH SEE DETAIL A

OBLITERATE EX. DITCH

REMOVE 15" RCP

18" RCP

24" RCP

CLEAN-OUT

Paint Striping

TREE FARM

Prop. PUE

PARTIAL RECORD INFORMATION DEPICTED FROM FIELD INVESTIGATION AND UTILITY OWNER CONTACT

1 WEYERHAEUSER CO.
DB 30 PG 245
DB 3027 PG 650
MB 2 PG 26

6 OWEN JONES HEIRS, ET AL
MABELLINE MATTOCKS
DB 1029 PG 48

7 TODD DEXTER WILLIAMS
DB 190 PG 157
MB 2 PG 26

8 WEYERHAEUSER CO.
DB 30 PG 245
DB 3027 PG 650
MB 2 PG 26

PROP. PAVEMENT REMOVAL

CONCRETE ISLAND

SEE SHEET 25 FOR -L- PROFILE
SEE SHEET 32 FOR -Y1- PROFILE
SEE SHEET 35 FOR -Y1A- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS 8/17/99

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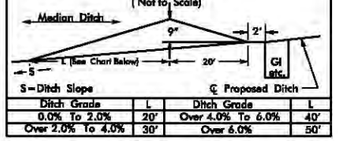
DETAIL G
FALSE SUMP
(Not to Scale)



S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

NAD 83/NSRS 2007

-L-
PI Sta 55+14.14
Δ = 36°04'44.8" (LT)
D = 1°25'56.6"
L = 2,518.80'
T = 1,302.73'
R = 4,000.00'
SE = 0.04

Pis Sta 67+96.88
Θs = 1°25'56.6"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

65 70 75

-L- CS Sta. 67+30.21

-L- ST Sta. 69+30.21

+30.21 -L- 125.00' Lt.

+30.21 -L- 125.00' Rt.

Chord

Prop. WW Fence

100' TAPER

+75.00

+89.73

+25.00

42' R

+69.73

20'

+75.04

+127.65

Paint Striping

ANCHOR

4' PS MED.

10' PS

24'

50'

30.21

CL B RIP RAP=1 TON
GEOTEXTILE=5 SY

N 10° 12' 57.0" E
PROP. GUIDERAIL (DOUBLE FACED)

MAX PIPE SLOPE=0.6%

36" HDPE CULVERT

70' PS

MATCHLINE SHEET 7 -L- STA. 63+50.00

MATCHLINE SHEET 9 -L- STA. 77+50.00

(1) WEYERHAEUSER CO.
DB 30 PG 245
DB 3027 PG 650
MB 2 PG 26

TREE FARM

-BL2- 3

-BL2- 4

(10) GORDON F. MYERS
DB 1335 PG 117

WILLIAM A. PARKS & ASSOCIATES, INC.
DB 220 PG 87
MB 31 PG 87
MB 41 PG 66
MB 42 PG 32
MB 44 PG 12
NO CLAIM

SEE SHEETS 25-26 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

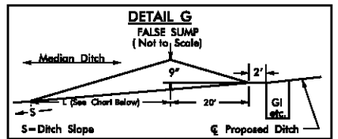
NAD 83/NSRS 2007

REVISIONS

8/17/99

R/W Revision 5/1/14 JCL Realigned -Y2A- and Adjusted Proposed R/W, Permanent Drainage and Temporary Construction Easements on Parcels 10 and 11.

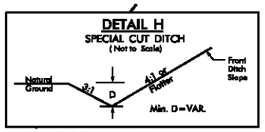
DETAIL G
FALSE SUMP
(Not to Scale)



S=Ditch Slope

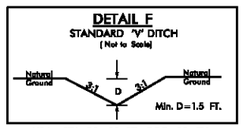
Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)



-Y2A- STA. 41+50 TO 43+00 LT.
-Y2A- STA. 41+50 TO 42+50 RT.

DETAIL F
STANDARD "V" DITCH
(Not to Scale)



-Y2A- STA. 39+19 RT., DDE=10 CY

(1) WEYERHAEUSER CO.
DB 30 PG 249
DB 3027 PG 550
MB 2 PG 26

(10) GORDON F. MYERS
DB 1335 PG 717

(11) LARRY RIGGS, ET UX
DB 1156 PG 89
MB 30 PG 83
SLIDE C-271

-Y2A- POT Sta. 45+58.91
(C/L of Cul-de-Sac)
-L- POT Sta. 85+71.84
OFFSET = 154.20' LT

MATCHLINE SHEET 8 -L- STA. 77+50.00

MATCHLINE SHEET 10 -Y2A- STA. 39+81.00

MATCHLINE SHEET 10 -L- STA. 91+50.00

Prop. WW Fence

+05.00 -L- 95.00', 125.00', 200.00', Lt.

+58.91 -Y2A- 65.00' Rt.

+00.00 -Y2A- 30.00', 38.00', 45.00' Rt.

+03.00 -Y2A- 64.00' Rt.

+18.00 -Y2A- 82.00' Rt.

+30.00 -Y2A- 30.00', 35.00' Rt.

+40.00 -Y2A- 30.00' Rt.

+85.00 -Y2A- 35.55' Rt.

+93.00 -Y2A- 30.00' Rt.

STANDARD "V" DITCH SEE DETAIL F

SPECIAL CUT DITCH SEE DETAIL H

CL B RIP RAP=3 TONS GEOTEXTILE=10 SY

CL B RIP RAP=1 TON GEOTEXTILE=5 SY

CL B RIP RAP=1 TON GEOTEXTILE=8 SY

0902 0903 0904 0905 0906 0907

S 10°08'47.9" W

30'R

TIE INTO PROPOSED DITCH

REMOVE 18" RCP

N 10°12'57.0" E
PROP. GUIDERAIL (DOUBLE FACED)

70' PS 4' PS 4' PS 10' PS 24' .025

15" RCP 18" RCP 2GI-D FS

-BL2- 5

-BL2- 6

WILLIAM A. PARKS & ASSOCIATES, INC.
DB 2201 PG 87
DB 3182 PG 167
DB 3182 PG 171
DB 3182 PG 176
DB 42 PG 32
DB 44 PG 12
NO CLAIM

N 36°39'32" E 300.88'

N 44°39'22" E 367.37'

S 45°20'38" E 107.26'

N 44°39'22" E 367.37'

48" RW

SEE SHEET 26 FOR -L- PROFILE
SEE SHEET 34 FOR -Y2A- PROFILE

28-JUL-2014 13:49
R:\Roadway\Proj\R2514B_rdy_psh9.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

8/17/99

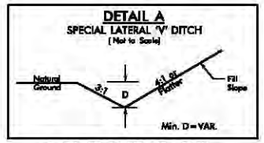
REVISIONS

R/W Revision 5/1/14 JCL Realigned -Y2A- and Adjusted Proposed R/W, Permanent Drainage and Temporary Construction Easements on Parcels 11,12 and 13.

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)

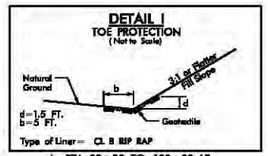
-L- STA. 97+00 TO 99+00 RT.
-L- STA. 104+50 TO 106+00 LT.
-Y2A- STA. 25+00 TO 28+00 RT.
-Y2A- STA. 36+50 TO 39+00 RT.
-Y2A- STA. 35+50 TO 36+00 LT.

DETAIL A
SPECIAL LATERAL "V" DITCH
(Not to Scale)



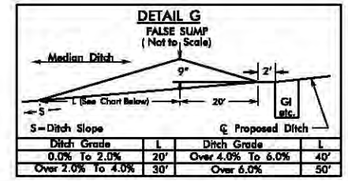
-L- STA. 99+00 TO 100+68 RT.
-L- STA. 103+50 TO 104+50 LT.
-Y2A- STA. 34+08.75 TO 35+50 LT.
-Y2A- STA. 35+00 TO 36+50 RT.
-Y2A- STA. 28+00 TO 33+00 RT.

DETAIL I
TOE PROTECTION
(Not to Scale)



-L- STA. 99+33 TO 103+00 LT.
-L- STA. 100+72 TO 100+90 RT.
-Y2A- STA. 33+00 TO 34+04 RT.
-Y2A- STA. 34+12 TO 35+00 RT.
-Y2A- STA. 34+03 TO 34+25 LT.

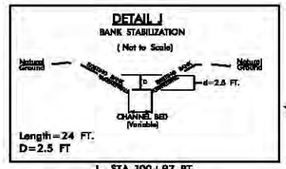
DETAIL G
FALSE SUMP
(Not to Scale)



S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL J
BANK STABILIZATION
(Not to Scale)



Length = 24 FT.
D = 2.5 FT

-L- STA. 100+97 RT.
-Y2A- STA. 31+40 LT.

MATCHLINE SHEET 9
-Y2A- STA. 39+81.00

MATCHLINE SHEET 9
-L- STA. 91+50.00

MATCHLINE SHEET 11
-Y2A- STA. 25+58.00

MATCHLINE SHEET 11
-L- STA. 105+50.00

-Y2A- PRC Sta. 34+08.76
-Y2A- PC Sta. 32+69.25
-Y2A- PT Sta. 35+21.22

-L- PC Sta. 97+89.02

-Y2A-
PI Sta 34+65.96
Δ = 25° 46' 25.1" (RT)
D = 22° 55' 05.9"
L = 112.46'
T = 57.20'
R = 250.00'
SE = .04
RO = 60'

PI Sta 33+40.88
Δ = 31° 58' 23.8" (LT)
D = 22° 55' 05.9"
L = 139.51'
T = 71.62'
R = 250.00'
SE = .04
RO = 60'

-L-
PI Sta 109+56.52
Δ = 13° 31' 33.6" (RT)
D = 0° 34' 55.1"
L = 2,324.14'
T = 1,167.50'
R = 9,845.00'
SE = 0.025
RO = 80'

11 LARRY RIGGS, ET UX
DB 1556 PG 869
MB 30 PG 83
SLIDE C-271

12 DUSTIN J. CANESTORP, ET UX
DB 2590 PG 35
MB 49 PG 105
SLIDE L-963

13 ROBERT LEROY & JOYCE R PARKER
DB 2373 PG 298

SBG = SHOULDER BERM GUTTER
SEE SHEETS 26-27 FOR -L- PROFILE
SEE SHEETS 33-34 FOR -Y2A- PROFILE
SEE SHEETS C-1 THRU C-2 FOR CULVERT PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS
8/17/99
R/W Revision 6/25/14 JCL Revised Permanent Utility Easements (PUE) on Parcels 12 and 14. Added new PUE on Parcel 16.

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MATCHLINE SHEET 10 -Y2A- STA. 25+58.00
MATCHLINE SHEET 10 -L- STA. 105+50.00
MATCHLINE SHEET 21 -Y2- STA. 19+50.00
MATCHLINE SHEET 12 -L- STA. 119+50.00
MATCHLINE SHEET 12 -Y2D- STA. 17+00.00
MATCHLINE SHEET 22 -Y2- STA. 28+50.00

NAD 83/NSRS 2007

ROBERT LEROY & JOYCE R PARKER DB 2373 PG 298 (13)
ROBERT LEROY PARKER, ET UX DB 405 PG 52 MB 32 PG 65 (16)
SLEEPY CREEK FARMS, INC. DB 709 PG 104 MB 28PG 208 SLIDE B-229 (15)
SETH O. DILLS DB 709 PG 94 (17)
BETTY P. TROTT DB 357 PG 564 MB 32 PG 65 (14)
DUSTIN J. CANESTORP, ET UX DB 2990 PG 35 MB 49 PG 105 SLIDE L-963 (12)

DETAIL I
TOE PROTECTION
(Not to Scale)
Natural Ground, b, d, 3:1 or Flatter Fill Slope, Geotextile
d=1.5 FT. b=5 FT.
Type of Liner= CL B RIP RAP
-Y2A- STA. 25+00 TO 25+50 LT.

DETAIL M
SPECIAL CUT BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, B, 4:1 or Flatter, Front Ditch Slope
Min. D=2.5 FT. B=3 FT.
-L- STA. 117+50 TO 138+50 LT.

DETAIL L
LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 3:1, D, 3:1, b, V-Ft., Fill Slope
Min. D=VAR. b=5 FT.
-L- STA. 110+40 TO 111+50 LT., DDE=299 CY
-L- STA. 110+58 TO 112+00 RT., DDE=401 CY
-Y2- STA. 18+25 TO 21+00 LT., DDE=152 CY
-Y2- STA. 23+72 TO 27+14 RT., DDE=524 CY
-Y2- STA. 16+50 TO 21+41 RT., DDE=563 CY
-Y2- STA. 28+18 TO 29+13 RT., DDE=26 CY
-Y2C- STA. 10+89 TO 11+50 RT., DDE=68 CY

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D=VAR.
-L- STA. 111+50 TO 115+50 LT.
-L- STA. 112+00 TO 115+00 RT.
-Y2A- STA. 25+00 TO 28+00 RT.
-Y2C- STA. 11+77 TO 12+42 RT.
-Y2D- STA. 10+50 TO 12+00 RT.
-Y2D- STA. 10+69 TO 12+50 LT.

DETAIL N
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D=VAR.
-L- STA. 117+50 TO 138+00 RT.

DETAIL K
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, B, Fill Slope
Min. D=1.5 FT. B=4 FT.
-Y2A- STA. 17+35 TO 18+86 RT.

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 3:1, D, 4:1 or Flatter, Fill Slope
Min. D=VAR.
-Y2- STA. 27+83 TO 28+50 LT.
-Y2A- STA. 19+00 TO 22+00 RT.
-Y2A- STA. 19+00 TO 22+00 LT.

DETAIL G
FALSE SUMP
(Not to Scale)
Median Ditch, 9", 2', L (See Chart Below), 20', GI etc., 5
S=Ditch Slope, ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

-L-
PI Sta 109+56.52
Δ = 13° 31' 33.6" (RT)
D = 0° 34' 55.1"
L = 2,324.14'
T = 1,167.50'
R = 9,845.00'
SE = 0.025

-Y2C-
PI Sta 12+90.04
Δ = 49° 49' 32.0" (RT)
D = 76° 23' 39.7"
L = 65.22'
T = 34.83'
R = 75.00'
SE = NC

-Y2A-
PI Sta 16+34.72
Δ = 81° 11' 18.1" (RT)
D = 32° 44' 25.6"
L = 248.28'
T = 150.23'
R = 175.00'
SE = .04
RO = 60'

PI Sta 19+86.88
Δ = 25° 39' 48.9" (RT)
D = 2° 43' 42.1"
L = 940.62'
T = 478.33'
R = 2,100.00'
SE = 0.04
RO = 96'

PI Sta 26+31.42
Δ = 8° 21' 43.8" (LT)
D = 2° 11' 30.6"
L = 364.87'
T = 182.76'
R = 2,500.00'
SE = 0.04
RO = 96'

-Y2D-
PI Sta 11+05.45
Δ = 89° 11' 58.2" (LT)
D = 63° 39' 43.5"
L = 140.27'
T = 88.91'
R = 90.00'
SE = .02
RO = See Plans

PI Sta 14+44.90
Δ = 81° 05' 10.9" (RT)
D = 32° 44' 25.6"
L = 247.66'
T = 149.69'
R = 175.00'
SE = .04
RO = 60'

GTD = GRADE TO DRAIN
SBG = SHOULDER BERM GUTTER
SEE SHEET 27 FOR -L- PROFILE
SEE SHEETS 32-33 FOR -Y2- PROFILE
SEE SHEET 33 FOR -Y2A- PROFILE
SEE SHEET 35 FOR -Y2C- PROFILE
SEE SHEET 36 FOR -Y2D- PROFILE
SEE SHEETS S- THRU S- FOR STRUCTURE PLANS
SEE SHEET 2A-8 FOR BRIDGE DETAIL

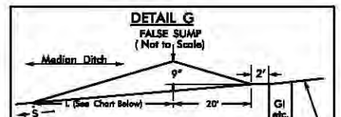
17/25
77/114 -Y2- -L- 77/114
US17
SR 1391 WHITE OAK RIVER ROAD
17/25
2015 ADT
2035 ADT
(IN HUNDREDS)
TRAFFIC DIAGRAM FOR -L- AND -Y2-

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

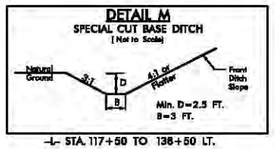
DETAIL G
FALSE SUMP
(Not to Scale)



S=Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL M
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D=2.5 FT.
B=3 FT.

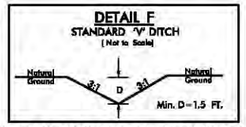
-L- STA. 117+50 TO 138+50 LT.

DETAIL N
SPECIAL CUT DITCH
(Not to Scale)

Min. D=VAR.

-L- STA. 117+50 TO 138+00 RT.
-Y2D- STA. 12+00 TO 20+06 RT.
-Y2D- STA. 20+06 TO 21+00 RT.

DETAIL F
STANDARD "V" DITCH
(Not to Scale)



Min. D=1.5 FT.

-L- STA. 127+13 TO 129+24 LT., DDE=100 CY

REVISIONS
R/W Revision 4/9/14 JCL Converted Temporary Construction Easement (TCE) to Permanent Drainage Easement (PDE) on Parcel 18

8/17/99

MATCHLINE SHEET 11
-L- STA. 119+50.00
-Y2D- STA. 17+00.00

MATCHLINE SHEET 13
-L- STA. 133+50.00

-L-
PI Sta 109+56.52
Δ = 13° 31' 33.6" (RT)
D = 0° 34' 55.1"
L = 2,324.14'
T = 1,167.50'
R = 9,845.00'
SE = 0.025
RO = 80'

-L- PT Sta. 121+13.17

(17) SETH O. MILLS
DB 709 PG 94

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21PG 201
SLIDE B-229

(18) DENNIS W. SAULTER
DB 217 PG 525

+13.17 -L-
152.00' Lt.

+00.00 -L-
125.00',
158.00' Lt.

+25.00 -L-
125.00',
136.00' Lt.

+42.00 -L-
125.00',
158.00' Lt.

Prop. WW Fence

CL I RIP RAP=5 TONS
GEOTEXTILE=7 SY

STANDARD "V" DITCH
SEE DETAIL F

CL I RIP RAP=7 TONS
GEOTEXTILE=10 SY

BACKFILL EXISTING CHANNEL

SPECIAL CUT 3' BASE DITCH
SEE DETAIL M

-BL2- 14

REMOVE

CL B RIP RAP=1 TON
GEOTEXTILE=5 SY

PROP. GUIDERAIL (DOUBLE FACED)

N 25° 44' 30.6" E

10' PS
4' PS
24' MED.

-BL2- 13

CL B RIP RAP=3 TONS
GEOTEXTILE=11 SY

N 23° 32' 36.3" E

+13.17 -L-
125.00' Rt.

+20.00 -L-
105.00',
125.00' Rt.

+35.00 -L-
105.00',
125.00' Rt.

+20.00 -L-
125.00',
180.00' Rt.

30'R

35'R

SPECIAL CUT DITCH
SEE DETAIL N

+05.00 -Y2D-
37.00' Rt.

+08.00 -Y2D-
43.00' Rt.

+90.00 -Y2D-
37.00' Rt.

+50.00 -Y2D-
38.00' Rt.

+67.00 -Y2D-
30.00' Rt.

+55.00 -Y2D-
30.00',
60.00' Rt.

+68.00 -Y2D-
30.00',
46.00' Rt.

+65.00 -Y2D-
30.00',
46.00' Rt.

+80.00 -Y2D-
30.00',
60.00' Rt.

+79.15 -Y2D-
30.00' Rt.

12' GRAVEL DRIVE

-Y2D-DR-
PI Sta 30+01.38
Δ = 27° 44' 17.7" (RT)
D = 63° 39' 43.1"
L = 43.57'
T = 22.22'
R = 90.00'
SE = NC

-Y2D-DR- PC Sta. 29+79.15

-Y2D-DR- PT Sta. 30+22.73

+62.71 -Y2D-
30.00' Rt.

C/L CUL-DE-SAC
-Y2D-DR- POT Sta. 28+20.00

END CONST.
-Y2D-DR- POT Sta. 30+55.00
-L- POT Sta. 133+10.59
OFFSET = 180.12' RT
-Y2D-DR- POT Sta. 30+62.71

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21PG 201
SLIDE B-229

SEE SHEETS 27-28 FOR -L- PROFILE
SEE SHEET 36 FOR -Y2D- PROFILE

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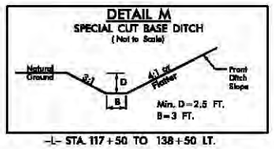
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

DETAIL M
SPECIAL CUT BASE DITCH
(Not to Scale)

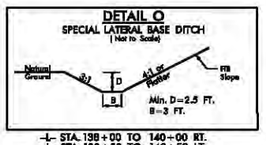


-L- STA. 117+50 TO 138+50 LT.

DETAIL N
SPECIAL CUT DITCH
(Not to Scale)

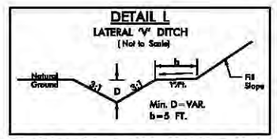
-L- STA. 117+50 TO 138+00 RT.

DETAIL O
SPECIAL LATERAL BASE DITCH
(Not to Scale)



-L- STA. 138+00 TO 140+00 RT.
-L- STA. 138+50 TO 140+50 LT.

DETAIL L
LATERAL "V" DITCH
(Not to Scale)



-L- STA. 140+00 TO 140+35.50 RT., DDE = 18 CY

NAD 83/NSRS 2007

MARTHA D. BYNUM
DB 402 PG 438
TRACT 1
NO CLAIM

PROPERTY LINE ALONG HIGGINS BRANCH

PROPERTY LINE ALONG HIGGINS BRANCH

PROPERTY LINE ALO

18
DENNIS W. SAULTER
DB 217 PG 523

155 140 145

SPECIAL CUT 3' BASE DITCH
SEE DETAIL M

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL O

-BL2- 15

Prop. WW Fence

Prop. WW Fence

Prop. WW Fence

CL B RIP RAP=1 TON
GEOTEXTILE=5 SY
BEGIN SBG
-L- STA. 146+40 LT.

CL I RIP RAP=17 TONS
GEOTEXTILE=28 SY

-L- STA. 133+50.00

-L- STA. 146+50.00

10' PS
24' MED.
4' PS
.025

PROP. GUIDERAL (DOUBLE FACED)

N 23°44'30.6" E

TYPE M350

TYPE B-77

38'

15" RCP-IV

8:1 TAPER

TL-3

CL B RIP RAP=1 TON
GEOTEXTILE=5 SY

LATERAL "V" DITCH
SEE DETAIL L

BEGIN SBGF
-L- STA. 144+63 RT.

CL B RIP RAP=1 TON
GEOTEXTILE=5 SY

Prop. WW Fence

Prop. WW Fence

30' Prop. WW Fence

N 51°16'54.0" E

MATCHLINE SHEET 12

MATCHLINE SHEET 14

SPECIAL CUT DITCH
SEE DETAIL N

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL O

18" RCP

RETAIN

BM53 EL.=20.01'
-BL2- STA 95+01
-L- STA 145+10, 22' RT.

' GRAVEL DRIVE

PC Sta. 29+79.15

PT Sta. 30+22.73

END CONST.
-Y2D-DR- POT Sta. 30+55.40
-L- POT Sta. 133+18.19
OFFSET = 180.27'
-Y2D-DR- POT Sta. 30+62.71

N 53°08'18" E
2600.35'

N 00°24'47" E
985.00'

15
SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21 PG 201
SLIDE B-229

15
SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21 PG 201
SLIDE B-229

CONTROL CORNER

SBG = SHOULDER BERM GUTTER
SEE SHEET 28 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

DETAIL G
FALSE SUMP
(Not to Scale)

S=Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

NAD 83/NSRS 2007

MATCHLINE SHEET 13 -L- STA. 146+50.00

MATCHLINE SHEET 15 -L- STA. 160+50.00

PROPERTY LINE ALONG HIGGINS BRANCH

18 DENNIS W. SAULTER DB 217 PG 523

15 SLEEPY CREEK FARMS, INC. DB 709 PG 104 MB 21PG 201 SLOE B-229

BEGIN SBG LT. -L- PC Sta. 149+26.69

END SBG LT. +35.00 -L- 125.00' Lt.

+55.00 -L- 125.00' Lt.

+26.69 -L- 125.00' Lt.

-BL2- 16

-BL2- 17

-BL2- 18

CLASS II RIP RAP

EXCAVATION TO ELEV. 377.00

CL B RIP RAP=1 TON GEOTEXTILE=5 SY

PROP. GUIDERAIL (DOUBLE FACED)

END SBG -L- STA. 160+19 LT.

END SBG -L- STA. 157+19 RT.

Prop. WW Fence

TYPE B-77

TYPE M350

15" RCP-IV

18" W ELBOWS

2 ELBOWS

CAT-1

10' PS

4' PS

24' MED.

2GI

FS

+79.98 2.56'

23°44'30"

+35.00 -L- 125.00' Rt.

+55.00 -L- 125.00' Rt.

+26.69 -L- 125.00' Rt.

BEGIN SBG RT.

END SBG RT.

HIGGINS BRANCH

-L-
PI Sta 179+99.89
Δ = 21°13'15.0" (LT)
D = 0°20'57.3"
L = 6,075.98'
T = 3,073.20'
R = 16,405.00'
SE = NC

SBG = SHOULDER BERM GUTTER
SEE SHEETS 28-29 FOR -L- PROFILE
SEE SHEETS S- TO S- FOR STRUCTURE PLANS
SEE SHEET 2A-8 FOR BRIDGE DETAIL

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99 R/W REVISION 9/23/14 GM Revised owner of Parcel 22 to Walter B.Wetherington

23-SEP-2014 15:37
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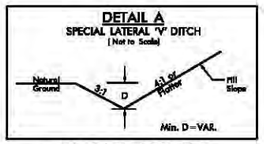
DETAIL A
SPECIAL LATERAL "V" DITCH
(Not to Scale)



-L- STA. 160+50 TO 162+99 RT.

NAD 83/NSRS 2007

Onslow County | Jones County

County Line

MATCHLINE SHEET 14 -L- STA. 160+50.00

MATCHLINE SHEET 16 -L- STA. 174+50.00

(19) MARTHA D. BYNUM
DB 402 PG 438
TRACT 1

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21 PG 201
SLIDE B-229

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21PG 201
SLIDE B-229

(21) ALENE W. WETHERINGTON
DB 239PG 539
PC B SLIDE 299 PG 2

MHC PROPERTIES LLC
DB 265 PG 605
PC B SLIDE 299 PG 2
NO CLAIM

(21) ALENE W. WETHERINGTON
DB 239PG 539
PC B SLIDE 299 PG 2

(22) WALTER B. WETHERINGTON
DB 239PG 539
PC B SLIDE 299 PG 2

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21PG 201
SLIDE B-229

-BL2- 19

-BL2- 20

-BL2- 21

Prop. WW Fence

GRAU 350 TL-3

10' PS

4' PS

24' VAR.

025

PROP. GUIDERAIL (DOUBLE FACED)

3GI (1501)

15" RCP-IV

2GI

(1502) (1503) (1504) (1505) (1506) (1507) (1508) (1509) (1510) (1511)

8:1 TAPER

CL B RIP RAP=1 TON
GEOTEXTILE=5 SY

SPECIAL LATERAL 'V' DITCH
SEE DETAIL A

BEGIN SBG
-L- STA. 165+08 RT.

END SBG LT.

+00.00 -L-
125.00' LT.

15" W
2 ELBOWS

CAT-1

CLASS II RIP RAP

TYPE B-77

ANCHOR

TYPE M350

END SBG RT.

+00.00 -L-
125.00' RT.

+13.50
15.02'

38'

WHITE OAK RIVER

BM54 EL.=14.59'
-BL2- STA 120+57
-L- STA 170+56, 198' RT

-L-
PI Sta 179+99.89
Δ = 21°13' 15.0" (LT)
D = 0°20' 57.3"
L = 6,075.98'
T = 3,073.20'
R = 16,405.00'
SE = NC

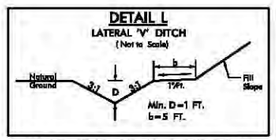
SBG = SHOULDER BERM GUTTER
SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 2A-8 FOR BRIDGE DETAIL
SEE SHEETS S- TO S- FOR STRUCTURE PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

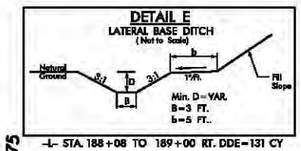
REVISIONS
8/17/99
R/W Revision 6/26/14 JCL Added new Permanent Utility Easement (PUE) to Parcels 23A and 46. Added new Parcel No.46.
R/W Revision 9/23/14 GM Revised owner of Parcel 22 to Walter B.Wetherington.

DETAIL L
LATERAL "V" DITCH
(Not to Scale)



-L- STA. 182+50 TO 188+08 LT., DDE=208 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)



-L- STA. 188+08 TO 189+00 RT. DDE=131 CY

MHC PROPERTIES LLC
DB 265 PG 605
PC B SLIDE 299 PG 2
NO CLAIM

TOWN OF MAYSVILLE
DB 90 PG 66
MAP CABINET "B" SLIDE 299 PG 2
NO CLAIM

NAD 83/NSRS 2007

-L-
PI Sta 179+99.89
Δ = 21° 13' 15.0" (LT)
D = 0° 20' 57.3"
L = 6,075.96'
T = 3,073.20'
R = 16,405.00'
SE = NC

MHC PROPERTIES, LLC

+13.00 -L- 322.00' Lt.

+76.00 -L- 303.00' Lt.

+90.00 -L- 125.00' Lt.

ALENE W. WETHERINGTON
DB 239 PG 539
PC B SLIDE 299 PG 2

CUMBO LIVING TRUST
DB 390 PG 629
PLAT CABINET C SLIDE 36 PG 2

-BL2- 22
-BL2- 24
-BL2- 25

BEGIN SBG LT.
END SBG -L- STA. 181+45 LT.
LATERAL 'V' DITCH SEE DETAIL L
GRAU 350 TL-3 8:1 TAPER
CLASS II RIP RAP
TYPE B-77
TYPE M350
PROP. GUIDERAIL (DOUBLE FACED)
END SBG -L- STA. 180+10 RT.
CL B RIP RAP=1 TON
GEOTEXTILE=5 SY
CL B RIP RAP=5 TON
GEOTEXTILE=16 SY
LATERAL 3' BASE DITCH SEE DETAIL E
EXCAVATION TO ELEV. 31.00'
+90.00 -L- 125.00' RT.
BEGIN SBG RT.
Prop. WW Fence
10' PS
4' PS
24'
38'
PUE

MATCHLINE SHEET 15 -L- STA. 174+50.00

MATCHLINE SHEET 17 -L- STA. 188+50.00

21
ALENE W. WETHERINGTON
DB 239 PG 539
PC B SLIDE 299 PG 2

22
WALTER B. WETHERINGTON
DB 239 PG 539
PC B SLIDE 299 PG 2

23A
CUMBO LIVING TRUST
DB 390 PG 629
PLAT CABINET C SLIDE 36 PG 2

46
MHC PROPERTIES, LLC

BM55 EL.=38.17'
-BL2- STA 128+23
-L- STA 178+24, 167' RT

N 21°26'53" E 844.77'

N 74°40'27" W 575.85'

-BL- 46

N 00°18'14" E 207.85'

SBG = SHOULDER BERM GUTTER
SEE SHEETS 29-30 FOR -L- PROFILE
SEE SHEET 2A-B FOR BRIDGE DETAIL
SEE SHEETS S- THRU S- FOR STRUCTURE PLANS

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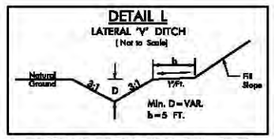
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS
R/W Revision 6/25/14 JCL Added new Permanent Utility Easement No. Added new Parcel No. 46.

DETAIL L
LATERAL 'V' DITCH
(Not to Scale)

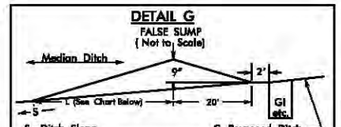


-L- STA. 120+00 TO 194+00 LT., DDE=491 CY

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)

-Y3A- STA. 36+12 TO 40+00 LT.
-Y3A- STA. 23+79 TO 40+00 RT.

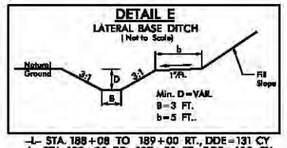
DETAIL G
FALSE SUMP
(Not to Scale)



S=Ditch Slope ℄ Proposed Ditch

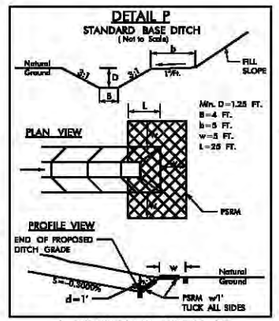
Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL E
LATERAL BASE DITCH
(Not to Scale)



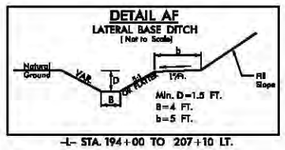
-L- STA. 188+08 TO 189+00 RT., DDE=131 CY
-L- STA. 189+00 TO 197+50 RT., DDE=630 CY

DETAIL P
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 189+00 RT., DDE=385 CY

DETAIL AF
LATERAL BASE DITCH
(Not to Scale)



-L- STA. 194+00 TO 207+10 LT.

NAD 83/NSRS 2007

-Y3A-
PI Sta 32+29.77
Δ = 5°41'06.3" (RT)
D = 0°21'09.3"
L = 1,612.38'
T = 806.85'
R = 16,250.00'
SE = NC

-L-
PI Sta 179+99.89
Δ = 21°13'15.0" (LT)
D = 0°20'57.3"
L = 6,075.98'
T = 3,073.20'
R = 16,405.00'
SE = NC

PI Sta 23+50
Δ = 36°3
D = 16°22
L = 223.62'
T = 115.7
R = 350.00'
SE = 04
RO = 60'

END CONST.
PT Sta. 40+35.30 -Y3A-
POC Sta. 189+72.17 -L-
OFFSET = 155.00' LT
C/L Cul-De-Sac

NO CLAIM
WNC PROPERTIES, LLC

+75.00' -L-
222.00' Lt.

+00.00 -L-
100.00',
125.00'
205.00'
220.00' Lt.

+45.00 -L-
100.00',
135.00' Lt.

+20.00 -Y3A-
65.00' Rt.

+75.00 -Y3A-
65.00' Rt.

+85.00 -L-
125.00' Lt.

-BL2- 27

-BL2- 28

-BL- 41

-BL2- 26

-BL- 39

-BL- 40

+25.00 -L-
125.00' Rt.

+00.00 -L-
125.00' Rt.

+70.00 -L-
125.00' Rt.

+39.00 -L-
352.00' Rt.

+84.00 -L-
357.00' Rt.

MATCHLINE SHEET 16 -L- STA. 188+50.00

MATCHLINE SHEET 18 -Y3A- STA. 27+70.00

MATCHLINE SHEET 18 -L- STA. 200+50.00

SPECIAL CUT DITCH SEE DETAIL H

Prop. WW Fence

CL B RIP RAP= 1 TON GEOTEXTILE=5 SY

LATERAL 'V' DITCH SEE DETAIL L

LATERAL 4' BASE DITCH SEE DETAIL AF

LATERAL 3' BASE DITCH SEE DETAIL E

STANDARD 4' BASE DITCH SEE DETAIL P

SEE DETAIL P

PROP. GUIDERAIL (DOUBLE FACED)

MAYSVILLE CITY LIMITS

N 00°02'45" E 551.44'

S 00°04'05" W 484.06'

N 00°03'47" E 317.43'

N 0°23'57" W 110.30'

2550.9'

S 01°59'35" W

BM39 EL.=37.28'
-BL- STA 201+18
-L- STA 190+00, 426' RT

ELEV. 30.25'

CUMBO LIVING TRUST
DB 350 PG 621
CABINET L SLIDE 36 PG 2

JONES COUNTY BOARD OF EDUCATION
DB 278 PG 663
MC "L" SLIDE 4 PG 6
NO CLAIM

(29) DAVID NELSON JOHNSON
JOYCE L MCALLISTER
DB 83 PG 205
MC "B" SLIDE 9 PG 5

(25) DAVID NELSON JOHNSON
JEREMY LEE JOHNSON
DB 352 PG 545
MC "L" SLIDE 9 PG 5

(27) DAVID NELSON JOHNSON
DB 352 PG 622
MC "L" SLIDE 12 PG 5

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 39 FOR -Y3A- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99 R/W Revision 7/28/14 JCL Added new Parcel #302

28-JUL-2014 13:50
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DETAIL AB
BANK STABILIZATION
(Not to Scale)
CL I RIP RAP
EST.=20 TONS
GEOTEXTILE
EST.=40 SY
Length=24 FT.
D=VAR.
-Y3A- STA. 23+74 RT.

DETAIL AC
BANK STABILIZATION
(Not to Scale)
D=VAR.
CL I RIP RAP
-Y3E- STA. 11+40 TO 11+63 RT.

DETAIL Q
CHANNEL RELOCATION
(Not to Scale)
Min. D=3 FT.
Max. d=3 FT.
B=8 FT.
b=10 FT.
CL I RIP RAP=EST. 122 TONS; GEOTEXTILE=EST. 175 SY
-L- STA. 207+25 TO 208+11 LT., DDE = 336 CY

DETAIL AF
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.5 FT.
B=4 FT.
b=5 FT.
-L- STA. 194+00 TO 207+10 LT.

-Y3A-
PI Sta 23+15.07
Δ = 36° 36' 23.8" (RT)
D = 16° 22' 12.8"
L = 223.62'
T = 115.77'
R = 350.00'
SE = .04
RO = 60'

PI Sta 18+47.39
Δ = 37° 21' 13.2" (LT)
D = 11° 27' 33.0"
L = 325.97'
T = 169.02'
R = 500.00'
SE = .04
RO = 60'

-Y3E-
PI Sta 11+32.98
Δ = 73° 29' 40.9" (LT)
D = 47° 44' 47.5"
L = 153.93'
T = 89.60'
R = 120.00'
SE = NC

MATCHLINE SHEET 17
-Y3A- STA. 27+70.00
-L- STA. 202+50.00

MATCHLINE SHEET 19
-Y3A- STA. 14+50.00

MATCHLINE SHEET 19

MATCHLINE SHEET 23

JAMES E. HARRIS
DB 235 PG 925
NO CLAIM

DAVID NELSON JOHNSON
JOYCE J. MCALLISTER
DB 853 PG 200
MC "B" SLIDE 9 PG 51

J. C. LAROQUE HEIRS
DB 696 PG 990
MC "B" SLIDE 9 PG 51

DAVID NELSON JOHNSON
JEREMY LEE JOHNSON
DB 795 PG 563
MC "B" SLIDE 9 PG 51

PC Sta. 18+78.38 -Y3A-
POT Sta. 10+00.00 -Y3E-
PT Sta. 20+04.35 -Y3A-
PC Sta. 21+99.30 -Y3A-
PCC Sta. 24+22.92 -Y3A-
PC Sta. 10+43.38 -Y3E-
PT Sta. 11+97.31 -Y3E-
POT Sta. 13+65.93 -Y3E-
END CONST. -Y3E- POT Sta. 13+00.00
-L- PT Sta. 210+02.67

PI Sta 179+99.89
Δ = 21° 13' 15.0" (LT)
D = 0° 20' 57.3"
L = 6,075.98'
T = 3,073.20'
R = 16,405.00'
SE = NC

S 32° 47' 44.5" E
N 5° 06' 44.7" E
N 2° 31' 15.6" E

PROP. GUIDERAIL (DOUBLE FACED)

SEAL WELL

DETAIL L
LATERAL 'V' DITCH
(Not to Scale)
Min. D=VAR.
b=5 FT.
-L- STA. 202+50 TO 205+47 RT., DDE=147 CY

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
-Y3A- STA. 12+50 TO 19+50 RT.
-Y3A- STA. 11+50 TO 17+25 LT.

DETAIL R
LATERAL BASE DITCH
(Not to Scale)
Min. D=2 FT.
B=2 FT.
b=5 FT.
-L- STA. 205+47 TO 214+35 RT., DDE=3300 CY

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)
Min. D=VAR.
-Y3A- STA. 19+50 TO 23+50 RT.
-Y3A- STA. 23+79 TO 40+00 RT.
-Y3E- STA. 10+43 TO 11+50 RT.
-Y3E- STA. 10+43 TO 11+43 LT.
-Y3E- STA. 11+50 TO 12+50 RT.
-Y3E- STA. 11+43 TO 12+50 LT.

SEE SHEETS 30-31 FOR -L- PROFILE
SEE SHEETS 38-39 FOR -Y3A- PROFILE
SEE SHEET 40 FOR -Y3E- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y3-
PI Sta 20+20.29
Δ = 9° 18' 42.4" (RT)
D = 1° 08' 45.3"
L = 812.60'
T = 407.20'
R = 5,000.00'
SE = 0.02

-L-
PIs Sta 221+83.84
θs = 4° 11' 32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

-L- TS Sta. 220+23.79

PT Sta. 16+38.61 -Y3C-
PC Sta. 15+00.44 -Y3C-

POT Sta. 18+70.90 -Y3C-
POT Sta. 220+13.10 -L-
Offset 152.78' Lt.

POT Sta. 216+65.63 -L-
POC Sta. 18+17.03 -Y3-

MATCHLINE SHEET 20 -L- STA. 222+00.00

MATCHLINE SHEET 23 -Y3C- STA. 13+00.00

MATCHLINE SHEET 18 -Y3A- STA. 14+50.00

MATCHLINE SHEET 18

MATCHLINE SHEET 23 -Y3C- STA. 22+00.00

NAD 83/NSRS 2007

68/114 — 2009 ADT / 2035 ADT (IN HUNDREDS)
13/22 WHITE OAK RIVER ROAD 13/22
-Y3-
-L- US 17
68/114

TRAFFIC DIAGRAM FOR -L- AND -Y3-

DETAIL U
LATERAL BASE DITCH (Not to Scale)
Min. D=1.5 FT. B=3 FT. b=5 FT.
-L- STA. 217+50 TO 219+43 RT., DDE=574 CY
-L- STA. 219+43 TO 221+50 RT., DDE=530 CY

DETAIL AE
RIP RAP AT EMBANKMENT (Not to Scale)
Type of Liner= 130 TONS, CL I RIP RAP
Geotextile=EST. 180 SY
-L- STA. 216+44 LT.

DETAIL S
CHANNEL RELOCATION (Not to Scale)
Min. D=3 FT. B=8 FT. b=10 FT.
-L- STA. 218+78 TO 221+50 LT., DDE=2597 CY

DETAIL T
LATERAL "V" DITCH (Not to Scale)
Min. D=1.5 FT. b=5 FT.
-Y3- STA. 11+00 TO 13+00 RT., DDE=264 CY
-Y3- STA. 14+28 TO 16+85 RT., DDE=1734 CY
-L- STA. 221+50 TO 228+00 LT., DDE=1158 CY

DETAIL H
SPECIAL CUT DITCH (Not to Scale)
-Y3C- STA. 13+50 TO 16+28 RT.
-Y3C- STA. 16+28 TO 18+50 RT.
-Y3C- STA. 15+30 TO 16+28 LT.
-Y3C- STA. 16+28 TO 18+50 LT.
-Y3D- STA. 11+75 TO 13+90 LT.
-Y3D- STA. 11+75 TO 13+70 RT.

DETAIL AD
BANK STABILIZATION (Not to Scale)
CL I RIP RAP EST. =100 TONS
GEOTEXTILE=EST. 190 SY
D=VAR.
-L- STA. 214+23 TO 215+44 LT.

DETAIL R
LATERAL BASE DITCH (Not to Scale)
Min. D=2 FT. B=2 FT. b=5 FT.
-L- STA. 205+47 TO 214+35 RT., DDE=3300 CY
-Y3- STA. 20+40 TO 23+38 RT., DDE=1122 CY

DETAIL A
SPECIAL LATERAL "V" DITCH (Not to Scale)
Min. D=VAR.
-Y3- STA. 10+00 TO 11+30 LT.
-Y3- STA. 12+20 TO 13+19 LT.
-Y3A- STA. 12+50 TO 19+50 RT.
-Y3A- STA. 11+50 TO 17+25 LT.
-Y3C- STA. 11+88 TO 13+50 RT.

DETAIL V
CHANNEL RELOCATION (Not to Scale)
Min. D=3 FT. B=8 FT.
-L- STA. 214+06 TO 216+41 LT., DDE=1775 CY

DETAIL F
STANDARD "V" DITCH (Not to Scale)
Min. D=1.5 FT.
-L- STA. 217+68 RT., DDE=81 CY

SBG = SHOULDER BERM GUTTER
SEE SHEET 2A-B FOR BRIDGE DETAIL
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 37 FOR -Y3- PROFILE
SEE SHEET 38 FOR -Y3A- PROFILE
SEE SHEET 40 FOR -Y3C- PROFILE
SEE SHEET 41 FOR -Y3D- PROFILE
SEE SHEETS S- THRU S- FOR STRUCTURE PLANS

REVISIONS
8/17/99
R/W Revision 5/26/14 JCL Added new Permanent Utility Easements (PUE) to Parcel 34.

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

R/W Revision 4/9/14 JCL Added "No Claim" Note on parcels with no taking.Extended Proposed R/W Lines Across Parcel 34,Deleted Parcel #'s 36,37 and 38

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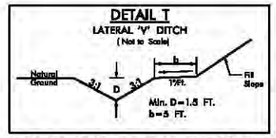
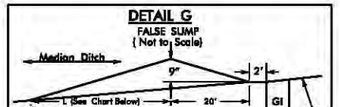
DETAIL T
LATERAL 'V' DITCH
(Not to Scale)



DETAIL H
SPECIAL CUT DITCH
(Not to Scale)

DETAIL G
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

-L- STA. 221+50 TO 228+00 LT., DDE=1158 CY
-L- STA. 225+00 TO 227+40 RT., DDE=360 CY

-L- STA. 223+20 TO 225+00 RT.

-Y3D-
PI Sta 19+31.87
Δ = 17° 43' 25.5" (RT)
D = 2° 51' 53.2"
L = 618.68'
T = 311.83'
R = 2,000.00'
SE = NC

PI Sta 23+11.50
Δ = 52° 56' 03.5" (LT)
D = 38° 58' 36.2"
L = 135.81'
T = 73.19'
R = 147.00'
SE = NC

-L-
Pis Sta 221+83.84
Gs = 4° 11' 32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

PI Sta 225+57.18
Δ = 20° 17' 06.2" (RT)
D = 3° 29' 37.1"
L = 580.63'
T = 293.38'
R = 1,640.00'
SE = 0.06

Pis Sta 229+24.46
Gs = 4° 11' 32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

NAD 83/NSRS 2007

POT Sta. 24+11.45 -Y3D-
END CONST.
POT STA.24+00.00 -Y3D-
POT STA.230+63.56 -L-
OFFSET = 225.50' LT

-L- SC Sta. 222+63.79
PC Sta. 16+20.04 -Y3D-
PT Sta. 23+74.52 -Y3D-
PRC Sta. 22+38.71 -Y3D-

+40.00 -Y3D- 24.00' Lt.
+63.79 -L- 125.00' Lt.
+55.00 -Y3D- 22.00' Lt.
+00.00 -Y3D- 23.00' Lt.
+44.42 -L- 125.00' Lt.
+35.00 -Y3D- 22.00' Lt.
+30.00 -Y3D- 24.00' Lt.
+10.00 -Y3D- 14.00' Lt.
+10.00 -Y3D- 14.00' Rt.
+23.00 -L- 125.00' Lt.
+84.42 -L- 100.00' 125.00' Lt.
+42.77 -L- 100.00' Lt.
+57.80 -L- 100.00' (LT.) SET W/ R-2514B
+97.80 -L- 100.00' (LT.) SET W/ R-2514B

N 11°28' 50.9" E
S 23° 43' 47.1" W
N 31° 11' 26.9" E

END STATE PROJECT R-2514B
-L- POT STA.23+42.77
TIE TO STATE PROJECT R-2514C
-L- POT STA.10+00.00

-L- TS Sta. 10+57.80
-L- SC Sta. 12+97.80

R-2514C

Prop. Line 100.00' (RT.) END C/A FENCE SET W/ R-2514B

To Pollocksville

-BL- 44
-BL- 45
-BL- 106

Prop. WW Fence
Prop. F WW Fence
Chord
ARC
CHORD

LATERAL 'V' DITCH SEE DETAIL T

PROP. GUIDERAIL (DOUBLE FACED)

ANCHOR

CL B RIP RAP=1 TON GEOTEXTILE=5 SY

PAINT STRIPING

SPECIAL CUT DITCH SEE DETAIL H

+00.00 -L- 100.00' Rt.
+14.00 -L- 145.00' Rt.
+63.79 -L- 100.00' Rt.
+44.42 -L- 100.00' 125.00' Rt.
+84.42 -L- 100.00' 125.00' Rt.
+42.77 -L- 100.00' Rt.

-L- CS Sta. 228+44.42
-L- ST Sta. 230+84.42

BURY 1' TIE C/A FENCE TO HW

-L- STA. 222+00.00

MATCHLINE SHEET 19

(35) TIME WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP DB 233 PG 961

(34) J. C. LAROQUE, HEIRS DB 109 PG 559

(34) J. C. LAROQUE, HEIRS DB 109 PG 559

NO CLAIM on R-2514B

NO CLAIM on R-2514B

NO CLAIM on R-2514B

-L-
Pis Sta 12+17.85
Gs = 4° 11' 32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

PI Sta 16+95.31
Δ = 27° 14' 57.6" (LT)
D = 3° 29' 37.1"
L = 779.91'
T = 397.51'
R = 1,640.00'

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

R/W Revision 6/26/14 JCL Added new Permanent Utility Easement (PUE) to Parcels 13,15,18 and 41. Revised PUE on Parcel 39.
R/W Revision 9/23/14 GM Revised owner of Parcel 39 to Dennis W.Saulter and added estate file reference. Revised PUE on Parcel 39. Eliminated PUE on Parcel 18.

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D=VAR.

-Y2- STA. 12+86.33 TO 14+50 LT
-Y2A- STA. 11+56.52 TO 13+00 RT
-Y2A- STA. 12+00 TO 12+50 LT.
-Y2E- STA. 11+50 TO 14+50 RT.
-Y2E- STA. 11+50 TO 14+50 LT.

DETAIL L
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1½ft., Fill Slope
Min. D=VAR.
b=5 FT.

-Y2- STA. 15+28.43 TO 15+50 LT., DDE=11 CY
-Y2- STA. 15+50 TO 16+38 LT., DDE=43 CY
-Y2- STA. 16+50 TO 21+41 RT., DDE=563 CY
-Y2- STA. 18+25 TO 21+00 LT., DDE=152 CY
-Y2B- STA. 10+50 TO 12+50 LT., DDE=103 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1½ft., B, Fill Slope
Min. D=1.5 FT.
B=4 FT.
b=5 FT.

-Y2- STA. 14+00 TO 14+58 RT., DDE=97 CY
-Y2- STA. 15+27 TO 16+50 RT.

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, Fill Slope
Min. D=VAR.

-Y2E- STA. 10+50 TO 11+50 RT.
-Y2E- STA. 10+50 TO 11+50 LT.

DETAIL Y
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground, B
Min. D=1.5 FT.
*When B is < 6.0' B=4 FT.

-Y2A- STA. 12+20 LT.

DETAIL X
SPECIAL CUT BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, B, Front Ditch Slope
Min. D=2 FT.
B=4 FT.

-Y2- STA. 12+50 TO 14+00 RT.

NAD 83/NSRS 2007

-Y2B-
PI Sta 10+62.40
Δ = 80° 05' 18.0" (RT)
D = 190° 59' 09.4"
L = 41.93'
T = 25.21'
R = 30.00'
SE = NC

-Y2-
PI Sta 19+86.38
Δ = 25° 39' 48.5" (RT)
D = 2° 43' 42.1"
L = 940.62'
T = 478.33'
R = 2,100.00'
SE = 0.04
RO = 96'

-Y2A-
PI Sta 11+01.04
Δ = 79° 08' 02.6" (LT)
D = 57° 17' 44.8"
L = 138.11'
T = 82.63'
R = 100.00'
SE = 0.02
RO = See Plans

-Y2A-
PI Sta 16+34.72
Δ = 81° 17' 18.1" (RT)
D = 32° 44' 25.6"
L = 248.28'
T = 150.23'
R = 175.00'
SE = .04
RO = 60'

-Y2E-
PI Sta 10+54.67
Δ = 38° 56' 46.7" (RT)
D = 76° 23' 39.7"
L = 50.98'
T = 26.52'
R = 75.00'
SE = See Plans

-Y2E-
PI Sta 14+00.17
Δ = 43° 25' 04.0" (RT)
D = 76° 23' 39.7"
L = 56.83'
T = 29.86'
R = 75.00'
SE = NC

-Y2- POT Sta. 10+00.00
-Y2E- POT Sta. 10+00.00
-Y2A- POT Sta. 10+00.00
-Y2A- PC Sta. 10+18.40
-Y2- PC Sta. 15+08.05
-Y2A- PT Sta. 11+56.52
-Y2- POT Sta. 14+91.36
-Y2A- POT Sta. 14+84.49
-Y2A- PT Sta. 17+32.77
-Y2- STA. 19+50.00

BEGIN CONST.
-Y2- POT STA.12+00.00

-Y2E- PT Sta. 10+79.13
-Y2E- PC Sta. 10+28.15
-Y2E- PC Sta. 13+70.31
-Y2E- PT Sta. 14+27.14
C/L Cul-De-Sac
-Y2E- POT Sta. 14+62.14
END CONSTRUCTION
-Y2E- POT Sta. 14+86.24
-Y2- POT Sta. 17+56.75=
353.99' Lt.

-Y2B-
PT Sta. 10+79.12 -Y2B-
PC Sta. 10+37.19 -Y2B-
POT Sta. 10+00.00 -Y2B-
POC Sta. 17+00.00 -Y2-
END CONST.
POT Sta. 12+75.00 -Y2B-
POT Sta. 12+86.49 -Y2B-

NO CLAIM
DENNIS W. SAULTER
DB 638 PG 002

(39) DENNIS W. SAULTER ESTATE FILE 03E-154
DB 285 PG 292
DB 288 PG 687

(13) ROBERT LEROY & JOYCE R PARKER
DB 2373 PG 298

(18) DENNIS W. SAULTER
DB 217 PG 523

(40) SETH O. MILLS
DB 1085 PG 257
MB 22 PG 152
SLIDE C-30

(41) RANDY LEE ROY PARKER
DB 1242 PG 347
DB 1242 PG 45

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21 PG 202
SLIDE B-229

(17) SETH O. MILLS
DB 709 PG 94

(16) N/F

ST. /SR WHITE OAK RIVER RD

+00.00 -Y2- TIE TO EX. DITCH
30.00', 55.00', 70.00' Rt.
+72.00 -Y2- 70.00' Rt.
+45.49 30.00'
+00.00 -Y2- 30.00' @ 48.00' Lt.
+38.00 -Y2- 44.98' Lt.
+90.00 -Y2- 57.00' Rt.
+40.00 -Y2E- 30.00' Lt.
+79.00 -Y2E- 47.00' Lt.
+79.13 -Y2E- 30.00' Lt.
+06.00 -Y2E- 38.00' Lt.
+03.00 -Y2E- 54.00' Lt.
+25.00 -Y2E- 67.00' Lt.
+55.00 -Y2A- 60.00', 75.00' Rt.
+60.00 -Y2A- 30.00', 40.00' Rt.
+75.00 -Y2A- 62.00', 77.00' Rt.
+56.52 -Y2A- 30.00', 40.00' Rt.
+84.49 -Y2A- 30.00' Rt.
+20.00 -Y2- 65.00' Lt.
+70.00 -Y2- 65.00' Lt.
+76.00 -Y2B- 66.00' Lt.
+79.12 -Y2B- 30.00' Lt.
+70.33 -Y2E- 30.00', 39.00', 70.00' Rt.
+75.00 -Y2E- 42.00' Rt.
+38.00 -Y2- 80.00', 105.00' Lt.
+00.00 -Y2B- 44.00' Lt.
+11.00 -Y2- 86.87', 126.00' Lt.
+18.00 -L- 494.00' Lt.
+98.00 -L- 486.00' Lt.

CL B RIP RAP=2 TONS GEOTEXTILE=10 SY
CL 1 RIP RAP=15 TONS GEOTEXTILE=30 SY
CL B RIP RAP=3 TONS GEOTEXTILE=11 SY
CL B RIP RAP=2.5 TONS GEOTEXTILE=10 SY
CL B RIP RAP=1 TON GEOTEXTILE=5 SY
RETAIN
OBLITERATE EX. DITCH
REMOVE
SPECIAL CUT DITCH SEE DETAIL H
SPECIAL CUT 4' BASE DITCH SEE DETAIL X
LATERAL 4' BASE DITCH SEE DETAIL D
SPECIAL LATERAL 'V' DITCH SEE DETAIL A
LATERAL 'V' DITCH SEE DETAIL L
STANDARD 4' BASE DITCH SEE DETAIL Y
BEGIN SBG -Y2- STA. 18+38 RT.

S 75°48'28" E 285.62'
N 40°35'04" E 152.56'
N 14°00'16" E 146.08'
S 15°52'56" E 146.08'
N 75°59'25" E 175.00'
S 64°56'31.5" E
N 55°08'17" E
N 19°25'58" E
S 25°03'43" E
ANGLE POINT

SBG - SHOULDER BERM GUTTER
SEE SHEET 32 FOR -Y2- PROFILE
SEE SHEET 33 FOR -Y2A- PROFILE
SEE SHEET 35 FOR -Y2B- PROFILE
SEE SHEET 37 FOR -Y2E- PROFILE

MATCHLINE SHEET 20

23-SEP-2014 15:40
R:\Roadway\Proj\R2514B_rdy_psh21.dgn
$$$$USERNAME$$$$

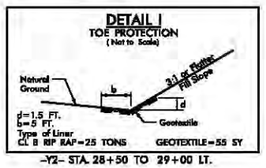
25

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

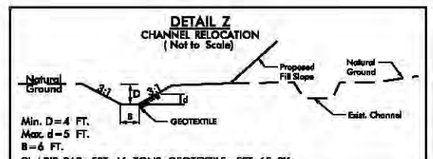
DETAIL I
TOE PROTECTION
(Not to Scale)



d= 1.5 FT.
b= 5 FT.
Type of Liner
CL B RIP RAP=25 TONS GEOTEXTILE=55 SY

-Y2- STA. 28+50 TO 29+00 LT.

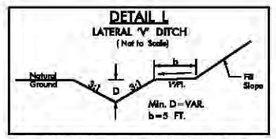
DETAIL Z
CHANNEL RELOCATION
(Not to Scale)



Min. D=4 FT.
Max. d=5 FT.
B=6 FT.
CL I RIP RAP=EST. 46 TONS; GEOTEXTILE=EST. 65 SY

-Y2- STA. 31+00 TO 31+96 RT., DDE=246 CY

DETAIL L
LATERAL "V" DITCH
(Not to Scale)



Min. D= VAR.
b=5 FT.

-Y2- STA. 28+18 TO 29+13 RT., DDE=26 CY

NAD 83/NSRS 2007

-Y2-
PI Sta 33+27.72
Δ = 4°54'06.0" (LT)
D = 2°23'14.4"
L = 205.32'
T = 102.72'
R = 2400.00'

-Y2- PT Sta. 34+30.32

-Y2- POT Sta. 34+79.79

-Y2- PC Sta. 32+25.00

END GRADING
BEGIN RESURFACING
POT STA.32+00.00 -Y2-

PAVE TO EX. BRIDGE

-Y2- STA. 28+50.00

MATCHLINE SHEET 11 -Y2-

-Y2D- PI Sta 141+49.90
Δ = 8°05'25.6" (RT)
D = 32°44'56"
L = 247.96'
R = 175.00'

-Y2D- PT Sta. 11+56.81

-Y2D- PC Sta. 10+16.54

POT Sta. 10+00.00 -Y2-
POC Sta. 27+79.76

POT Sta. 28+13.53

POT Sta. 13+51.72 -Y2C-
-L- POC Sta. 11+89.20
35.51' Rt.

(15) SLEEPY CREEK FARMS, INC.
DB 709 PG 104
MB 21 PG 201
SLIDE B-229

(44) WHITE OAK RIVER RD. INVESTMENTS
DB 2489 PG 869

(45) ROGER J. BOYD, ET UX
DB 1092 PG 134
TRACT 2

RENALDER L. & BARBARA H SWAIN
DB 595 PG 287
NO CLAIM

(12) DUSTIN J. CANESTORP, ET UX
DB 12590 PG 35
MB 49 PG 105
SLIDE L-865

DENISE PHILLIPS, ET VIR
DB 2831 PG 823
MB 51 PG 43 SLIDE L-1380
LOT 18
NO CLAIM

ARNOLD D. MEREDITH, ET UX
DB 2801 PG 804
MB 51 PG 43 SLIDE L-1380
LOT 19
NO CLAIM

(43) DONNA S. SAWYER, ET VIR
DB 2243 PG 507

DONNA S. SAWYER, ET VIR
DB 2243 PG 507

TOE PROTECTION SEE DETAIL I

+10.00 -Y2- 41.72' 53.00' Lt.

+00.00 -Y2- 40.00' Lt.

+00.00 -Y2- 30.00' 40.00' Lt.

+95.00 -Y2- Exist. R/W. 55.00' Lt.

+18.00 -Y2- Exist. R/W. 55.00' Lt.

RETAIN EXIST. STRUCTURE

MITCHELL'S BRANCH

CL B RIP RAP EST. 2.5 TONS EST. 5 SY GEOTEXTILE

LATERAL V DITCH SEE DETAIL L

CHANNEL RELOCATION SEE DETAIL Z

+40.00 -Y2- Prop. PUE 138.00' Rt.

+00.00 -Y2- 30.00' 58.00' Rt.

+60.00 -Y2- Prop. PUE

+85.00 -Y2- 30.00' 40.00' 70.00' 79.00' Rt.

+67.00 -Y2- Exist. R/W. 45.00' Rt.

+05.00 -Y2- 44.00' Rt.

BM52 EL.=29.23'
-EYA- STA 38+57
-Y2- STA 33+29, 97' RT

END CONST.
POC STA.33+12.00 -Y2-

-BY- 61

-BY- 62

MATCHLINE SHEET 11 -Y2-

S 58°30'24.2" E

S 63°24'30" E

S 70°20'47" E 222.33'

S 67°23'47" E 60.3'

S 71°58'09" E 80.00'

S 71°58'09" E 154.89'

S 71°58'09" E 395.20'

S 21°12'09" E 282.78'

S 74°37'29" E 396.20'

S 56°35'06" E 97.41'

S 70°22'08" E 175.58'

S 40°39'38" W 385.57'

N 49°32'34" W

N 85°20'47" W 222.33'

S 54°40'47" W 20.00'

S 67°23'47" W 60.3'

S 71°58'09" W 20.00'

S 71°58'09" W 48.20'

S 71°58'09" W 76.39'

S 18°01'51" W 80.00'

S 18°01'51" W 80.00'

S 18°01'51" W 80.00'

S 18°01'51" W 80.00'

N 18°01'51" E 80.00'

N 18°01'51" E 80.00'

N 18°01'51" E

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

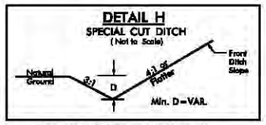
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W Revision 6/25/14 JCL Added new Permanent Utility Easement (PUE) to Parcels 25,27 and 34

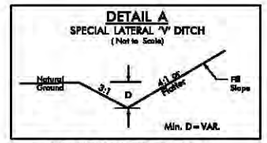
28-JUL-2014 13:50
R:\Projects\Proj\R2514B_roll_psh23.dgn
USER:ERONDE

DETAIL H
SPECIAL CUT DITCH
(Not to Scale)



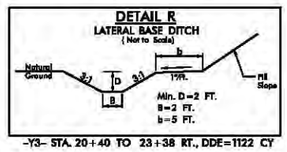
-Y3- STA. 26+00 TO 28+00 RT.
-Y3- STA. 26+50 TO 28+00 LT.
-Y3B- STA. 11+50 TO 13+08 RT.
-Y3B- STA. 11+50 TO 13+08 LT.

DETAIL A
SPECIAL LATERAL "V" DITCH
(Not to Scale)



-Y3- STA. 24+46 TO 26+00 RT.
-Y3B- STA. 10+84 TO 11+50 RT.
-Y3B- STA. 10+54 TO 11+50 LT.
-Y3C- STA. 11+88 TO 13+50 RT.

DETAIL R
LATERAL BASE DITCH
(Not to Scale)



-Y3- STA. 20+40 TO 23+38 RT., DDE=1122 CY

-Y3-
PI Sta 20+20.29
Δ = 9°18' 42.4" (RT)
D = 1°08' 45.3"
L = 812.60'
T = 407.20'
R = 5,000.00'
SE = 0.02

-Y3C-
PI Sta 10+82.52
Δ = 78°00' 18.3" (LT)
D = 114° 35' 29.6"
L = 68.01'
T = 40.49'
R = 50.00'
SE = See Plans

-Y3C-
PI Sta 12+32.41
Δ = 12° 52' 03.4" (LT)
D = 19° 05' 54.9"
L = 67.31'
T = 33.83'
R = 300.00'
SE = .03
RO = 45'

MATCHLINE SHEET 19
-Y3C- STA. 13+00.00

MATCHLINE SHEET 19
-Y3- STA. 22+00.00

MATCHLINE SHEET 18

PT Sta. 12+65.93 -Y3C-
PC Sta. 11+98.58 -Y3C-
PT Sta. 11+10.10 -Y3C-
PC Sta. 10+42.03 -Y3C-
POT Sta. 28+37.14 -Y3-
END CONST.
POT Sta. 28+00.00 -Y3-
PT Sta. 24+25.69 -Y3-
PC Sta. 24+00.00 -Y3-
POT Sta. 10+00.00 -Y3B-
POT Sta. 10+00.00 -Y3C-
PC Sta. 12+36.23 -Y3B-
PT Sta. 13+08.14 -Y3B-
END CONST.
POT Sta. 13+10.00 -Y3B-
POT Sta. 210+62.36 -L-
OFFSET = 211.63' RT
POT Sta. 13+94.13 -Y3B-

SPECIAL LATERAL "V" DITCH SEE DETAIL A
SPECIAL CUT DITCH SEE DETAIL H
SPECIAL LATERAL "V" DITCH SEE DETAIL A
SPECIAL CUT DITCH SEE DETAIL H
SPECIAL CUT DITCH SEE DETAIL H
SPECIAL LATERAL "V" DITCH SEE DETAIL A

+65.95 -Y3C- 30.00' Rt.
+98.58 -Y3C- 30.00' Rt.
+75.00 -Y3C- 30.00', 68.00', 88.00' Rt.
+29.00 -Y3C- 30.00', 59.00', 94.00' Rt.
+10.10 -Y3C- 39.00' Rt.
+05.00 -Y3C- 53.00' Rt.
+75.00 -Y3C- 47.00' Rt.
+44.00 -Y3C- 30.00' Rt.
+58.00 -Y3- 45.00' Lt.
+00.00 -Y3- 30.00', 45.00' Lt.
+61.00 -Y3- 83.85' Rt.
+67.00 -Y3- 45.00' Rt.
+00.00 -Y3- 30.00', 45.00' Rt.
+48.00 -Y3B- 33.00' Rt.
+35.00 -Y3B- 30.00' Lt.
+20.00 -Y3B- 24.00' Lt.
+20.00 -Y3B- 21.00' Rt.
+50.00 -Y3- Prop. R/W
+15.00 -Y3- 110.00' Rt.

CL B RIP-RAP=2 TONS GEOTEXTILE=14 SY
CL B RIP-RAP=5 TONS GEOTEXTILE=14 SY
LATERAL 2' BASE DITCH SEE DETAIL R
END SBG -Y3- STA. 23+35 RT.
4 BLOWS
24" RCP
15" RCP
6" CMP
6" W.M.
8" W.M.
6" W.M.
8" W.M.
6" W.M.
8" W.M.

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

—L—

LEFT DITCH
MEDIAN DITCH
RIGHT DITCH

PIPE HYDRAULIC DATA -L- Sta.14+00

DRAINAGE AREA	=	185 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	70 CFS
DESIGN HW ELEVATION	=	44.8 FT
100 YEAR DISCHARGE	=	85 CFS
100 YEAR HW ELEVATION	=	45.1 FT
OVERTOPPING FREQUENCY	=	50+ YRS
OVERTOPPING DISCHARGE	=	80 CFS
OVERTOPPING ELEVATION	=	45.1 FT

PIPE DATA FROM R-2514A

PIPE HYDRAULIC DATA -L- Sta.18+45

DRAINAGE AREA	=	185 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	70 CFS
DESIGN HW ELEVATION	=	43.6 FT
100 YEAR DISCHARGE	=	85 CFS
100 YEAR HW ELEVATION	=	44.1 FT
OVERTOPPING FREQUENCY	=	50+ YRS
OVERTOPPING DISCHARGE	=	85 CFS
OVERTOPPING ELEVATION	=	45.8 FT

PIPE DATA FROM R-2514A

BEGIN GRADE -L- STA.15+45.00 = EL. = 45.00'

BEGIN MEDIAN DITCH -L- STA. 12+50 ELEV. 43.23'

MEDIAN DITCH -L- STA. 13+50 ELEV. 42.20'

END MEDIAN DITCH -L- STA. 14+85 ELEV. 41.85'

BEGIN MEDIAN DITCH -L- STA. 16+00 ELEV. 42.10'

PI = 21+80.00
EL = 46.91'
VC = 210'
K = 256

PI = 23+70.00
EL = 45.92'
VC = 170'
K = 207

(+)0.300%

(+)0.521%

(-)0.501%

(-)0.500%

-0.400%

-0.330%

-0.240%

-0.300%

+0.700%

EXISTING 36"CS INVERT = 37.14'

EXISTING 24"CS INVERT = 36.34'

BEGIN SPECIAL LATERAL 'V' DITCH -L- STA. 14+45 LT. ELEV. 41.59'

SPECIAL LATERAL 'V' DITCH -L- STA. 15+00 LT. ELEV. 40.67'

BEGIN SPECIAL LATERAL 5' BASE DITCH -L- STA. 15+15 RT. ELEV. 37.14'

SPECIAL LATERAL 'V' DITCH -L- STA. 17+80 LT. ELEV. 39.09'

END SPECIAL LATERAL 'V' DITCH -L- STA. 18+00 LT. ELEV. 38.38'

SPECIAL LATERAL 5' BASE DITCH -L- STA. 18+50 RT. ELEV. 37.65'

END SPECIAL LATERAL 5' BASE DITCH BEGIN LATERAL 'V' DITCH -L- STA. 19+00 RT. ELEV. 38.98'

END LATERAL 'V' DITCH -L- STA. 21+50 RT. ELEV. 41.28'

BM12 ELEVATION = 45.83'
N 410544 E 2522372
BL STATION 28+06. 57' LEFT
-L- STATION 33+30. 113' LEFT
RR SPIKE IN BASE OF 12" PINE

PI = 23+70.00
EL = 45.92'
VC = 170'
K = 207

PI = 30+65.00
EL = 48.01'
VC = 200'
K = 331

PI = 32+50.00
EL = 47.45'
VC = 170'
K = 282

(+)0.300%

(+)0.300%

(-)0.302%

(-)0.302%

(+)0.300%

BEGIN LATERAL 4' BASE DITCH -L- STA. 24+51 LT. ELEV. 38.47'

END LATERAL 4' BASE DITCH -L- STA. 25+89 LT. ELEV. 38.54'

BEGIN LATERAL 5' BASE DITCH -L- STA. 28+77 RT. ELEV. 42.35'

LATERAL 5' BASE DITCH -L- STA. 38+00 RT. ELEV. 44.38'

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH
RIGHT DITCH

BMI5 ELEVATION = 45.65'
N 411675 E 2523676
BL STATION 45+33, 59' LEFT
-L- STATION 50+66, 2' LEFT
RR SPIKE IN BASE OF 18" PINE

LATERAL 3' BASE DITCH
-L- STA. 38+00 RT.
ELEV. 42.25'

BEGIN LATERAL 4' BASE DITCH
-L- STA. 44+64 LT.
ELEV. 40.25'

END LATERAL 3' BASE DITCH
-L- STA. 45+58 RT.
ELEV. 40.25'

LATERAL 4' BASE DITCH
-L- STA. 52+00 LT.
ELEV. 40.25'

PI = 56+75.00
EL = 54.73'
VC = 200'
K = 333

PI = 66+80.00
EL = 51.71'
VC = 500'
K = 478

LATERAL 4' BASE DITCH
-L- STA. 38+00 LT.
ELEV. 40.25'

END LATERAL 4' BASE DITCH
-L- STA. 53+44 LT.
ELEV. 40.25'

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LEFT DITCH ——— - ———
RIGHT DITCH - - - - -

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PI = 66+80.00
EL = 51.71'
VC = 500'
K = 478

PI = 73+80.00
EL = 42.29'
VC = 395'
K = 182

PI = 79+10.00
EL = 46.68'
VC = 135'
K = 255

PI = 86+05.00
EL = 48.76'
VC = 200'
K = 334

PI = 94+25.00
EL = 46.30'
VC = 445'
K = 248

36" EQUALIZER PIPE @
INVERT = 37.22'

36" EQUALIZER PIPE @
INVERT = 39.02'

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH ——— - -
RIGHT DITCH - - - -

PIPE HYDRAULIC DATA
-L- Sta.100+40

DRAINAGE AREA	=	435 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	160 CFS
DESIGN HW ELEVATION	=	30.6 FT
100 YEAR DISCHARGE	=	190 CFS
100 YEAR HW ELEVATION	=	32.7 FT
OVERTOPPING FREQUENCY	=	500+/- YRS
OVERTOPPING DISCHARGE	=	280 CFS
OVERTOPPING ELEVATION	=	34.3 FT

BM 50 ELEVATION = 30.16'
N 416479 E 2525138
BL2 STATION 50+83, 198' RIGHT
-L- STATION 101+17, 196' RIGHT
RR SPIKE IN 24" GUM TREE

PI = 94+25.00
EL = 46.30'
VC = 445'
K = 248

PI = 100+85.00
EL = 32.49'
VC = 550'
K = 182

PI = 108+00.00
EL = 39.14'
VC = 350'
K = 253

-L- 1'-12.092%
-L- 1+01.950'
-L- 4.900%
-L- 1'-12.092%
-L- 1+01.950'
-L- 1'-10.934%
-L- 1'-12.092%
-L- 4.900%
-L- 1'-10.934%

24" PIPE
INVERT = 26.48'

BEGIN SPECIAL CUT DITCH -L- STA. 96+50 RT. ELEV. 36.82'
SPECIAL CUT DITCH -L- STA. 97+50 RT. ELEV. 32.49'
END SPECIAL CUT DITCH BEGIN SPECIAL LATERAL 'V' DITCH -L- STA. 99+00 RT. ELEV. 27.54'
END SPECIAL LATERAL 'V' DITCH -L- STA. 100+68 RT. ELEV. 29.17'
BEGIN SPECIAL LATERAL 'V' DITCH -L- STA. 103+50 LT. ELEV. 30.90'
END SPECIAL LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -L- STA. 104+50 LT. ELEV. 32.72'
END SPECIAL CUT DITCH -L- STA. 106+00 LT. ELEV. 35.45'

94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

70 60 50 40 30 20 10 0 -10

PIPE HYDRAULIC DATA
-L- Sta.110+50

DRAINAGE AREA	=	27.8 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	91 CFS
DESIGN HW ELEVATION	=	33.8 FT
100 YEAR DISCHARGE	=	105 CFS
100 YEAR HW ELEVATION	=	34.7 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	160 CFS
OVERTOPPING ELEVATION	=	36.8 FT

PI = 108+00.00
EL = 39.14'
VC = 350'
K = 253

-Y2- OVERPASS

-L- 1'-10.465%
-L- 1'-10.465%
-L- 1'-9.200%
-L- 1'-9.200%
-L- 1'-10.465%
-L- 1'-10.465%
-L- 4.900%
-L- 4.900%

24" PIPE
INVERT = 27.18'

BEGIN LATERAL 'V' DITCH -L- STA. 110+40 LT. ELEV. 29.30'
BEGIN LATERAL 'V' DITCH -L- STA. 110+58 RT. ELEV. 23.74'
END LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -L- STA. 111+50 LT. ELEV. 30.29'
END LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -L- STA. 112+00 RT. ELEV. 28.37'
END SPECIAL CUT DITCH -L- STA. 113+00 RT. ELEV. 32.87'
END SPECIAL CUT DITCH -L- STA. 115+60 LT. ELEV. 33.89'
BEGIN SPECIAL CUT DITCH -L- STA. 117+50 RT. ELEV. 31.73'
BEGIN SPECIAL CUT 3' BASE DITCH -L- STA. 117+50 LT. ELEV. 32.98'
SPECIAL CUT 3' BASE DITCH -L- STA. 119+00 LT. ELEV. 26.78'
SPECIAL CUT DITCH -L- STA. 119+00 RT. ELEV. 26.82'
SPECIAL CUT 3' BASE DITCH -L- STA. 122+00 LT. ELEV. 23.85'
SPECIAL CUT DITCH -L- STA. 122+00 RT. ELEV. 25.35'

108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LEFT DITCH
RIGHT DITCH

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SPECIAL CUT DITCH
-L- STA. 127+00 RT.
ELEV. 23.35'

BEGIN SPECIAL STANDARD 'V' DITCH
-L- STA. 127+19 LT.
ELEV. 23.82'

END SPECIAL STANDARD 'V' DITCH
-L- STA. 129+23 LT.
ELEV. 23.46'

SPECIAL CUT DITCH
-L- STA. 136+00 RT.
ELEV. 18.67'

SPECIAL CUT DITCH
-L- STA. 122+00 RT.
ELEV. 18.49'

SPECIAL CUT X BASE DITCH
-L- STA. 124+00 RT.
ELEV. 19.28'

SPECIAL CUT 3' BASE DITCH
-L- STA. 138+00 LT.
ELEV. 17.28'

END SPECIAL CUT 3' BASE DITCH
BEGIN SPECIAL LATERAL 3' BASE DITCH
-L- STA. 138+00 LT.
ELEV. 17.08'

END SPECIAL LATERAL 3' BASE DITCH
-L- STA. 140+50 LT.
ELEV. 16.20'

SPECIAL LATERAL 3' BASE DITCH
-L- STA. 140+00 RT.
ELEV. 16.45'

END SPECIAL CUT DITCH
BEGIN SPECIAL LATERAL 3' BASE DITCH
-L- STA. 138+00 RT.
ELEV. 17.31'

END SPECIAL LATERAL 3' BASE DITCH
BEGIN LATERAL 'V' DITCH
-L- STA. 140+00 RT.
ELEV. 16.32'

END LATERAL 'V' DITCH
-L- STA. 140+35.50 RT.
ELEV. 16.79'

PI = 140+50.00
EL = 24.34'
VC = 300'
K = 298

PI = 150+05.00
EL = 29.62'
VC = 245'
K = 250

℄ -L- STA. 147+95
2@80' 54" PSCG
℄ ELEV. = 28.46'
SKEW = 90°

BEGIN BRIDGE
-L- STA. 147+15.00

END BRIDGE
-L- STA. 148+75.00

CL RIP RAP
SEE STRUCTURE PLANS

CL RIP RAP
SEE STRUCTURE PLANS

HWS = 32.0'

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5,910 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	31.0 FT
BASE DISCHARGE	=	7,520 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	30.32 FT
OVERTOPPING DISCHARGE	=	14,800 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

PIPE HYDRAULIC DATA
-L- Sta.140+22

DRAINAGE AREA	=	17.63 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	60 CFS
DESIGN HW ELEVATION	=	19.9 FT
100 YEAR DISCHARGE	=	65 CFS
100 YEAR HW ELEVATION	=	20.4 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	155 CFS
OVERTOPPING ELEVATION	=	24.7 FT

BM 53 ELEVATION = 20.0'
N 420521 E 2526727
BL2 STATION 95+01, 259' RIGHT
-L- STATION 145+10, 22' RIGHT
RR SPIKE IN 18" GUM TREE

122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00
136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH ——— - ———
RIGHT DITCH - - - - - -

PI = 150+05.00
EL = 29.62'
VC = 245'
K = 250

PI = 162+85.00
EL = 24.17'
VC = 295'
K = 183

(-)0.42568%

(+)1.03827%

24" EQUALIZER PIPE ℄
INVERT=31.13'

24" EQUALIZER PIPE ℄
INVERT=24.9'

BEGIN SPECIAL LATERAL "V" DITCH
-L- STA. 160+50 RT.
ELEV. 15.58'

END SPECIAL LATERAL "V" DITCH
-L- STA. 162+99 RT.
ELEV. 14.88'

150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00

50 40 30 20 10 0 –10 –20 –30

BM 54 ELEVATION = 14.49'
N 4922935 E 2527612
BL2 STATION 120+57. 207' RIGHT
-L- STAION 170+56. 198' RIGHT
RR SPIKE IN 20" GUM TREE

C -L- STA. 173+55
2@100', 7@110', 1@100',
1@90' 72" MBT
℄ ELEV. = 36.82'
SKEW = 90°

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5,910 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	7,520 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	20.32 FT
OVERTOPPING DISCHARGE	=	14,800 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

BEGIN BRIDGE
-L- 167+74.73 RIGHT
-L- 167+73.10 LEFT

PI = 162+85.00
EL = 24.17'
VC = 295'
K = 183

(+)1.03827%

SLOPE PROTECTION
SEE STRUCTURE PLANS

HWE = 0.76'

164+00 165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH — - -
RIGHT DITCH - - - -
STRUCTURE EXCAVATION

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5,910 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	7,520 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	20.32 FT
OVERTOPPING DISCHARGE	=	14,800 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

PIPE HYDRAULIC DATA
-L- Sta.188+08

DRAINAGE AREA	=	4.74 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	12 CFS
DESIGN HW ELEVATION	=	33.6 FT
100 YEAR DISCHARGE	=	13 CFS
100 YEAR HW ELEVATION	=	33.7 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	27 CFS
OVERTOPPING ELEVATION	=	35.6 FT

END BRIDGE
-L- 179+34.19 RIGHT
-L- 179+35.81 LEFT

PI = 181+30.00
EL = 45.99'
VC = 560'
K = 249

PI = 187+10.00
EL = 39.81'
VC = 350'
K = 256

(+)1.8927%
(-)1.0655%
(-)1.0655%
(+)0.3000%
-0.3000%
-0.3000%
-0.3000%
-0.3000%

BEGIN LATERAL 3' SIDE DITCH -L- STA. 188+08 LT. ELEV. 31.25'
END LATERAL 'V' DITCH -L- STA. 192+00 RT. ELEV. 30.97'
BEGIN LATERAL 'V' DITCH -L- STA. 190+00 LT. ELEV. 31.80'
LATERAL 3' BASE DITCH -L- STA. 192+00 RT. ELEV. 30.97'

EXCAVATE TO ELEV. 19' ±
GL. # 88' RAP SEE STRUCTURE PLANS

BM 55 ELEVATION = 38.17'
N 423693 E 2527782
BL2 STATION 128+23. 163' RIGHT
-L- STATION 178+24. 167' RIGHT
RR SPIKE IN 20" HARDWOOD

BEGIN LATERAL 'V' DITCH -L- STA. 182+50 LT. ELEV. 40.12'
LATERAL 'V' DITCH -L- STA. 184+00 LT. ELEV. 38.12'
LATERAL 'V' DITCH -L- STA. 186+00 LT. ELEV. 33.67'
LATERAL 'V' DITCH -L- STA. 187+50 LT. ELEV. 31.72'
END LATERAL 'V' DITCH -L- STA. 188+08 LT. ELEV. 31.75'
LATERAL 'V' DITCH -L- STA. 192+00 LT. ELEV. 31.82'

BM 39 ELEVATION = 37.28'
N 424814 E 2528275
BL STATION 201+18. 168' RIGHT
-L- STATION 190+00. 426' RIGHT
RR SPIKE IN BASE OF 15" PINE

178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00

70 60 50 40 30 20 10 0 -10

PIPE HYDRAULIC DATA
-L- Sta.205+47

DRAINAGE AREA	=	11.4 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	40 CFS
DESIGN HW ELEVATION	=	32.4 FT
100 YEAR DISCHARGE	=	43 CFS
100 YEAR HW ELEVATION	=	32.5 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	100 CFS
OVERTOPPING ELEVATION	=	38.3 FT

LATERAL 3' BASE DITCH -L- STA. 192+00 LT. ELEV. 30.82'
END LATERAL 3' BASE DITCH -L- STA. 197+50 RT. ELEV. 34.43'
BEGIN LATERAL 'V' DITCH -L- STA. 202+50 RT. ELEV. 39.16'
LATERAL 2' BASE DITCH -L- STA. 206+00 RT. ELEV. 42.41'

PI = 198+35.00
EL = 43.18'
VC = 234'
K = 249

PI = 201+50.00
EL = 41.16'
VC = 170'
K = 614

PI = 205+40.00
EL = 37.58'
VC = 320'
K = 182

(+)0.3000%
(+)1.0641%
(-)0.8443%
(-)0.9909%
(-)0.9795%
(+)0.8244%
-0.3000%
-0.3000%
-0.3000%

LATERAL 'V' DITCH -L- STA. 192+00 LT. ELEV. 30.82'
END LATERAL 'V' DITCH BEGIN LATERAL 4' BASE DITCH -L- STA. 194+00 LT. ELEV. 30.40'
END LATERAL 'V' DITCH BEGIN LATERAL 2' BASE DITCH -L- STA. 203+47 RT. ELEV. 39.21'
LATERAL 4' BASE DITCH -L- STA. 206+00 LT. ELEV. 42.08'

192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00 206+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH
RIGHT DITCH

Y3 - OVERPASS

PIPE HYDRAULIC DATA
-L- Sta.205+43

DRAINAGE AREA	=	3.4 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	12 CFS
DESIGN HW ELEVATION	=	32.9 FT
100 YEAR DISCHARGE	=	13 CFS
100 YEAR HW ELEVATION	=	33.5 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	45 CFS
OVERTOPPING ELEVATION	=	39.5 FT

PI = 205+40.00
EL = 37.58'
VC = 320'
K = 182

PI = 213+50.00
EL = 44.42'
VC = 470'
K = 249

PI = 218+75.00
EL = 38.94'
VC = 275'
K = 197

LATERAL 4' BASE DITCH -L- STA. 204+00 LT. ELEV. 27.00'

END LATERAL 4' BASE DITCH -L- STA. 205+70 LT. ELEV. 26.62'

BEGIN LATERAL 3' BASE DITCH -L- STA. 219+43 RT. ELEV. 34.82'

END LATERAL 3' BASE DITCH -L- STA. 219+43 RT. ELEV. 34.82'

LATERAL 2' BASE DITCH -L- STA. 206+06 RT. ELEV. 29.41'

BEGIN CHANNEL RELOCATION -L- STA. 207+25 LT. ELEV. 29.27'

END CHANNEL RELOCATION -L- STA. 208+11 LT. ELEV. 26.63'

END LATERAL 2' BASE DITCH -L- STA. 214+35 RT. ELEV. 32.12'

BEGIN CHANNEL RELOCATION -L- STA. 214+70.58 LT. ELEV. 26.82'

CHANNEL RELOCATION -L- STA. 216+43.50 LT. ELEV. 26.88'

BEGIN LATERAL 3' BASE DITCH -L- STA. 217+50 RT. ELEV. 31.82'

BEGIN CHANNEL RELOCATION -L- STA. 218+78 LT. ELEV. 27.26'

CHANNEL RELOCATION -L- STA. 220+00 LT. ELEV. 27.32'

206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00

PIPE HYDRAULIC DATA
-L- Sta.222+22

DRAINAGE AREA	=	2.50 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	7.0 CFS
DESIGN HW ELEVATION	=	32.0 FT
100 YEAR DISCHARGE	=	8.5 CFS
100 YEAR HW ELEVATION	=	32.4 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	34.0 CFS
OVERTOPPING ELEVATION	=	36.5 FT @ NATURAL GROUND

END GRADE R-2514B -L- STA.231+42.77 = R-2514C -L- STA.10+00.00, EL.= 43.38'

LATERAL 3' BASE DITCH -L- STA. 220+00 RT. ELEV. 33.80'

END LATERAL 3' BASE DITCH -L- STA. 221+50 RT. ELEV. 34.15'

LATERAL 'Y' DITCH -L- STA. 224+00 LT. ELEV. 33.60'

END LATERAL 'Y' DITCH -L- STA. 228+00 LT. ELEV. 34.61'

CHANNEL RELOCATION -L- STA. 220+00 LT. ELEV. 27.22'

END CHANNEL RELOCATION BEGIN LATERAL 'Y' DITCH -L- STA. 221+50 LT. ELEV. 27.62'

BEGIN SPECIAL CUT DITCH -L- STA. 223+20 RT. ELEV. 29.4'

END SPECIAL CUT DITCH BEGIN LATERAL 'Y' DITCH -L- STA. 225+00 RT. ELEV. 31.12'

LATERAL 'Y' DITCH -L- STA. 226+00 RT. ELEV. 33.22'

END LATERAL 'Y' DITCH -L- STA. 227+40 RT. ELEV. 33.38'

220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y1-

LEFT DITCH — - -
RIGHT DITCH - - - -

BEGIN GRADE -Y1- STA.10+47.01 = -L- STA.58+77.95, EL = 49.30'

PI = 11+75.00
EL = 50.58'
VC = 160'
K = 50

PI = 14+55.06
EL = 44.45'
VC = 250'
K = 141

END GRADE -Y1- STA.17+25.00
EL = 43.32'

PIPE HYDRAULIC DATA
-Y1- Sta.17+34

DRAINAGE AREA	=	3.65 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	13 CFS
DESIGN HW ELEVATION	=	389 FT
100 YEAR DISCHARGE	=	14 CFS
100 YEAR HW ELEVATION	=	400 FT
OVERTOPPING FREQUENCY	=	- YRS
OVERTOPPING DISCHARGE	=	- CFS
OVERTOPPING ELEVATION	=	- FT

(+)4.000%
(-)12.29%
(-)0.47%
0.269%
EXISTING 24" RCP @ INVERT 37.27'
BEGIN SPECIAL LATERAL 'Y' DITCH -Y1- STA.14+00 RT. ELEV. 38.27'
END SPECIAL LATERAL 'Y' DITCH -Y1- STA.17+34 RT. ELEV. 37.87'

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

-Y2-

PI = 22+55.00
EL = 64.17'
VC = 645'
*K = 84 (50mph)

PIPE HYDRAULIC DATA
-Y2- Sta.12+85

DRAINAGE AREA	=	5.3 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	5.3 CFS
DESIGN HW ELEVATION	=	38.6 FT
100 YEAR DISCHARGE	=	6.2 CFS
100 YEAR HW ELEVATION	=	38.8 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	15 CFS
OVERTOPPING ELEVATION	=	40.7 FT

PIPE HYDRAULIC DATA
-Y2- Sta.15+43

DRAINAGE AREA	=	9 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	39.6 FT
100 YEAR DISCHARGE	=	11 CFS
100 YEAR HW ELEVATION	=	40.0 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	14 CFS
OVERTOPPING ELEVATION	=	40.7 FT

PIPE HYDRAULIC DATA
-Y2- Sta.18+12

DRAINAGE AREA	=	3.4 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	3.4 CFS
DESIGN HW ELEVATION	=	39.9 FT
100 YEAR DISCHARGE	=	4.0 CFS
100 YEAR HW ELEVATION	=	40.0 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	11.0 CFS
OVERTOPPING ELEVATION	=	41.2 FT

BEGIN GRADE -Y2- STA.12+00.00
EL = 41.13'

*DESIGN EXCEPTION IS REQUIRED FOR V.C. K VALUE AND NIGHTTIME SSD

PI = 14+00.00
EL = 40.27'
VC = 310'
*K = 96 (50mph)

BEGIN SPECIAL CUT 4' BASE DITCH -Y2- STA.12+84.33 LT. ELEV. 37.33'
END SPECIAL CUT 4' BASE DITCH -Y2- STA.14+00 LT. ELEV. 36.81'
BEGIN LATERAL 'Y' DITCH -Y2- STA.14+50 LT. ELEV. 37.72'
BEGIN LATERAL 'Y' DITCH -Y2- STA.15+18 LT. ELEV. 37.68'
END LATERAL 'Y' DITCH -Y2- STA.15+50 LT. ELEV. 37.20'
END LATERAL 'Y' DITCH -Y2- STA.16+77 LT. ELEV. 39.41'
BEGIN LATERAL 'Y' DITCH -Y2- STA.17+18 LT. ELEV. 39.81'
END LATERAL 'Y' DITCH -Y2- STA.21+30 RT. ELEV. 39.73'
BEGIN BRIDGE -Y2- 22+22.22 +/-
END BRIDGE -Y2- 22+77.22 +/-
BEGIN SPECIAL CUT 4' BASE DITCH -Y2- STA.12+00 RT. ELEV. 39.53'
SPECIAL CUT 4' BASE DITCH -Y2- STA.12+50 RT. ELEV. 37.26'
END SPECIAL CUT 4' BASE DITCH -Y2- STA.14+00 RT. ELEV. 38.81'
END LATERAL 4' BASE DITCH -Y2- STA.14+58 RT. ELEV. 36.64'
BEGIN LATERAL 4' BASE DITCH -Y2- STA.15+27 RT. ELEV. 38.42'
LATERAL 4' BASE DITCH -Y2- STA.16+50 RT. ELEV. 38.08'
LATERAL 'Y' DITCH -Y2- STA.17+00 RT. ELEV. 37.76'
END LATERAL 'Y' DITCH -Y2- STA.21+41.06 RT. ELEV. 38.58'
BEGIN LATERAL 'Y' DITCH -Y2- STA.23+72 RT. ELEV. 38.58'
LATERAL 'Y' DITCH -Y2- STA.24+00 RT. ELEV. 37.26'

(+)2.79%
(-)4.00%
(+)2.79%
(-)4.00%
(+)2.18%
0.300%
0.300%
0.300%
0.300%
24" RCP @ INVERT = 37.79'
18" RCP @ INVERT = 39.71'

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

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R/W Revision 5/14 JCL -Y2A- Profile Redesigned

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y2-

LEFT DITCH ——— - -
RIGHT DITCH - - - -

BM 51 ELEVATION 41.48'
N 417792 E 2525690
EYA STATION 31+26.77' LEFT
-Y2- 25+96.72' LEFT
RR SPIKE IN TWIN 24" GUM TREE

BM 52 ELEVATION = 29.23'
N 417260 E 2526225
EYA STATION 38+57.97' RIGHT
-Y2- STATION 33+29.97' RIGHT
RR SPIKE IN 30" HARDWOOD TREE

* DESIGN EXCEPTION IS REQUIRED FOR SAG V.C. K VALUE AND NIGHTTIME SSD

END GRADE -Y2- STA.32+00.00
EL.= 25.90'

RETAIN EXISTING STRUCTURE

PI = 30+50.00
EL = 25.35'
VC = 275'
*K = 52 (35 MPH)

BEGIN LATERAL 'V' DITCH -Y2- STA. 28+18 RT. ELEV. 25.49'

END LATERAL 'V' DITCH -Y2- STA. 29+13 RT. ELEV. 28.72'

LATERAL 'V' DITCH -Y2- STA. 24+41.66 RT. ELEV. 37.49'

END LATERAL 'V' DITCH -Y2- STA. 27+14 RT. ELEV. 25.49'

BEGIN SPECIAL LATERAL 'V' DITCH -Y2- STA. 27+83 LT. ELEV. 29.04'

END SPECIAL LATERAL 'V' DITCH -Y2- STA. 28+50 LT. ELEV. 26.37'

T=10.83%

T=10.46%

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00

0 10 20 30 40 50 60

-Y2A-

PIPE HYDRAULIC DATA

DRAINAGE AREA	12.32 AC
DESIGN FREQUENCY	25 YRS
DESIGN DISCHARGE	29 CFS
DESIGN HW ELEVATION	39.0 FT
100 YEAR DISCHARGE	35 CFS
100 YEAR HW ELEVATION	39.9 FT
OVERTOPPING FREQUENCY	50+/- YRS
OVERTOPPING DISCHARGE	62 CFS
OVERTOPPING ELEVATION	39.2 FT

PIPE HYDRAULIC DATA

DRAINAGE AREA	7.55 AC
DESIGN FREQUENCY	25 YRS
DESIGN DISCHARGE	30 CFS
DESIGN HW ELEVATION	38.9 FT
100 YEAR DISCHARGE	21 CFS
100 YEAR HW ELEVATION	37.3 FT
OVERTOPPING FREQUENCY	500+ YRS
OVERTOPPING DISCHARGE	42 CFS
OVERTOPPING ELEVATION	39.8 FT

PIPE HYDRAULIC DATA

DRAINAGE AREA	7.55 AC
DESIGN FREQUENCY	25 YRS
DESIGN DISCHARGE	81 CFS
DESIGN HW ELEVATION	34.5 FT
100 YEAR DISCHARGE	21 CFS
100 YEAR HW ELEVATION	37.3 FT
OVERTOPPING FREQUENCY	200+/- YRS
OVERTOPPING DISCHARGE	103 CFS
OVERTOPPING ELEVATION	37.8 FT

BEGIN GRADE -Y2A- STA.10+12.00
EL.= 42.79'

PI = 11+85.00
EL = 39.33'
VC = 150'
K = 51

PI = 14+80.00
EL = 42.03'
VC = 200'
K = 114

PI = 20+60.00
EL = 37.20'
VC = 170'
K = 72

PI = 23+80.00
EL = 42.06'
VC = 200'
K = 81

BEGIN SPECIAL CUT DITCH -Y2A- STA. 12+00 LT. ELEV. 37.40'

SPECIAL CUT DITCH -Y2A- STA. 12+20 LT. ELEV. 35.90'

END SPECIAL CUT DITCH -Y2A- STA. 12+50 LT. ELEV. 37.51'

BEGIN SPECIAL LAT 'V' DITCH -Y2A- STA. 11+56.62 RT. ELEV. 38.01'

SPECIAL LAT 'V' DITCH -Y2A- STA. 12+50 RT. ELEV. 35.74'

END SPECIAL LAT 'V' DITCH -Y2A- STA. 13+00 RT. ELEV. 37.78'

BEGIN SPECIAL LATERAL 'V' DITCH -Y2A- STA. 19+00 RT. ELEV. 36.11'

BEGIN SPECIAL LATERAL 'V' DITCH -Y2A- STA. 19+00 LT. ELEV. 36.11'

SPECIAL LATERAL 'V' DITCH -Y2A- STA. 20+60.63 RT. ELEV. 30.29'

SPECIAL LATERAL 'V' DITCH -Y2A- STA. 20+60.63 LT. ELEV. 29.47'

END SPECIAL LATERAL 'V' DITCH -Y2A- STA. 22+00 RT. ELEV. 36.91'

SPECIAL LATERAL 'V' DITCH -Y2A- STA. 22+00 RT. ELEV. 36.91'

T=10.95%

T=10.93%

T=10.88%

T=10.88%

T=11.80%

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y2A-

LEFT DITCH ——— - -
RIGHT DITCH - - - -

PIPE HYDRAULIC DATA

DRAINAGE AREA	=	425 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	141 CFS
DESIGN HW ELEVATION	=	332 FT
100 YEAR DISCHARGE	=	182 CFS
100 YEAR HW ELEVATION	=	334 FT
OVERTOPPING FREQUENCY	=	50+/- YRS
OVERTOPPING DISCHARGE	=	141 CFS
OVERTOPPING ELEVATION	=	324 FT

PI = 23+80.00
EL = 42.06'
VC = 200'
K = 81

PI = 34+10.00
EL = 32.37'
VC = 220'
K = 63

PI = 36+90.00
EL = 39.44'
VC = 175'
K = 79

BEGIN SPECIAL LAT "V" DITCH -Y2A- STA. 34+00 LT. ELEV. 27.69'

END SPECIAL LAT "V" DITCH BEGIN SPECIAL CUT DITCH -Y2A- STA. 33+50 LT. ELEV. 32.99'

END SPECIAL CUT DITCH -Y2A- STA. 36+00 LT. ELEV. 34.75'

BEGIN SPECIAL CUT DITCH -Y2A- STA. 25+00 RT. ELEV. 38.61'

SPECIAL CUT DITCH -Y2A- STA. 26+00 RT. ELEV. 38.71'

END SPECIAL CUT DITCH BEGIN SPECIAL LAT "V" DITCH -Y2A- STA. 28+00 RT. ELEV. 34.42'

SPECIAL LATERAL "V" DITCH -Y2A- STA. 29+00 RT. ELEV. 31.46'

BEGIN SPECIAL LAT "V" DITCH -Y2A- STA. 33+00 RT. ELEV. 29.26'

BEGIN SPECIAL LAT "V" DITCH -Y2A- STA. 35+21 RT. ELEV. 29.25'

END SPECIAL LAT "V" DITCH BEGIN SPECIAL CUT DITCH -Y2A- STA. 34+00 RT. ELEV. 32.72'

SPECIAL CUT DITCH -Y2A- STA. 38+00 RT. ELEV. 35.97'

-Y2A-

PIPE HYDRAULIC DATA

DRAINAGE AREA	=	1.79 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	8.2 CFS
DESIGN HW ELEVATION	=	39.3 FT
100 YEAR DISCHARGE	=	4.3 CFS
100 YEAR HW ELEVATION	=	39.6 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	12+ CFS
OVERTOPPING ELEVATION	=	40.9 FT

BEGIN SPECIAL CUT DITCH -Y2A- STA. 41+50 LT. ELEV. 38.43'

SPECIAL CUT DITCH -Y2A- STA. 41+77 LT. ELEV. 37.44'

END SPECIAL CUT DITCH -Y2A- STA. 43+00 LT. ELEV. 38.89'

END GRADE -Y2A- STA. 45+58.91
EL. = 42.11'

SPECIAL CUT DITCH -Y2A- STA. 39+50 RT. ELEV. 39.02'

END SPECIAL CUT DITCH -Y2A- STA. 39+00 RT. ELEV. 37.47'

BEGIN SPECIAL CUT DITCH -Y2A- STA. 41+50 RT. ELEV. 38.43'

SPECIAL CUT DITCH -Y2A- STA. 41+77 RT. ELEV. 37.12'

END SPECIAL CUT DITCH -Y2A- STA. 42+50 RT. ELEV. 38.74'

R/W Revision 5/14 JCL -Y2A- Profile Redesigned

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEFT DITCH — · —
RIGHT DITCH - - - -

-Y2B-

BEGIN GRADE -Y2B- STA.10+12.00
EL. = 49.14'

END GRADE -Y2B- STA.12+75.00
EL. = 41.41'

PI = 10+45.00
EL = 50.46'
VC = 60'
K = 7

PI = 12+50.00
EL = 41.59'
VC = 40'
K = 10

(+)4.000% (-)4.763% (-)0.463%

Undercut Limits

BEGIN LATERAL "V" DITCH -Y2B- STA. 10+80 LT. ELEV. 37.60'

LATERAL "V" DITCH -Y2B- STA. 12+00 LT. ELEV. 38.35'

END LATERAL "V" DITCH -Y2B- STA. 12+50 LT. ELEV. 40.00'

-Y1A-

BEGIN GRADE -Y1A- STA.10+12.00
EL. = 47.35'

END GRADE -Y1A- STA.13+50.00
EL. = 45.66'

PI = 10+85.00
EL = 51.73'
VC = 140'
K = 14

PI = 12+50.00
EL = 45.38'
VC = 180'
K = 44

(+)5.000% (-)3.848% (-)1.348% (+)0.280% (+)0.280%

6" Type S INVERT = 39.05'

BEGIN STANDARD "V" DITCH -Y1A- STA. 10+32.97 RT. ELEV. 39.38'

BEGIN SPECIAL LATERAL "V" DITCH -Y1A- STA. 10+85 LT. ELEV. 41.26'

END SPECIAL LATERAL "V" DITCH -Y1A- STA. 13+00 LT. ELEV. 45.66'

END STANDARD "V" DITCH -Y1A- STA. 14+46.28 RT. ELEV. 49.30'

PIPE HYDRAULIC DATA
-Y1A- Sta.10+48

DRAINAGE AREA	=	1.99 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	6.3 CFS
DESIGN HW ELEVATION	=	40.7 FT
100 YEAR DISCHARGE	=	7.5 CFS
100 YEAR HW ELEVATION	=	40.9 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	22 CFS
OVERTOPPING ELEVATION	=	45.6 FT

-Y2C-

PIPE HYDRAULIC DATA
-Y2C- Sta.10+68

DRAINAGE AREA	=	2.39 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	27.3 FT
100 YEAR DISCHARGE	=	11 CFS
100 YEAR HW ELEVATION	=	27 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	21 CFS
OVERTOPPING ELEVATION	=	28.4 FT

Begin Grade
-Y2C- Sta.10+12.40
El. 39.18'

PI = 10+40.00
EL = 40.28'
VC = 55'
K = 5

PI = 11+95.00
EL = 28.36'
VC = 100'
K = 13

PI = 13+35.00
EL = 28.71'
VC = 50'
K = 29

End Grade
-Y2C- Sta.13+60.00
El. 29.20'

(+)3.636% (-)2.000% (+)0.200% (+)3.500%

21" RCP INVERT = 25.42'

BEGIN LATERAL "V" DITCH -Y2C- STA. 10+87 RT. ELEV. 35.42'

END LATERAL "V" DITCH -Y2C- STA. 11+50 RT. ELEV. 29.78'

BEGIN SPECIAL CUT DITCH -Y2C- STA. 11+77 RT. ELEV. 25.88'

END SPECIAL CUT DITCH -Y2C- STA. 12+42 RT. ELEV. 26.08'

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	36
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y2D-

LEFT DITCH
RIGHT DITCH

PIPE HYDRAULIC DATA
-Y2D- Sta.10+29

DRAINAGE AREA	=	1.07 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	3.4 CFS
DESIGN HW ELEVATION	=	31.9 FT
100 YEAR DISCHARGE	=	4.0 CFS
100 YEAR HW ELEVATION	=	32.0 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	11.5 CFS
OVERTOPPING ELEVATION	=	33.3 FT

PIPE HYDRAULIC DATA
-Y2D- Sta.20+06

DRAINAGE AREA	=	5.25 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	13 CFS
DESIGN HW ELEVATION	=	36.8 FT
100 YEAR DISCHARGE	=	15 CFS
100 YEAR HW ELEVATION	=	37.0 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	21 CFS
OVERTOPPING ELEVATION	=	37.7 FT

BEGIN GRADE -Y2D- STA.10+12.00
EL = 34.17'

PI = 10+85.00
EL = 32.70'
VC = 75'
K = 11

PI = 12+60.00
EL = 41.37'
VC = 150'
K = 32

PI = 15+35.00
EL = 42.20'
VC = 130'
K = 115

PI = 20+00.00
EL = 38.34'
VC = 120'
K = 79

PI = 23+10.00
EL = 40.45'
VC = 150'
K = 60

BEGIN SPECIAL CUT DITCH -Y2D- STA. 10+50 RT. ELEV. 29.04'

END SPECIAL CUT DITCH -Y2D- STA. 12+00 RT. ELEV. 35.94'

BEGIN SPECIAL CUT DITCH -Y2D- STA. 10+69 LT. ELEV. 30.97'

SPECIAL CUT DITCH -Y2D- STA. 11+00 LT. ELEV. 31.75'

SPECIAL CUT DITCH -Y2D- STA. 12+00 LT. ELEV. 35.25'

END SPECIAL CUT DITCH -Y2D- STA. 12+58 LT. ELEV. 38.00'

BEGIN SPECIAL CUT DITCH -Y2D- STA. 19+00 RT. ELEV. 39.72'

END SPECIAL CUT DITCH -Y2D- STA. 20+03.94 RT. ELEV. 34.84'

END SPECIAL CUT DITCH -Y2D- STA. 21+00 RT. ELEV. 36.60'

Proposed Undercut

24" RCP @ INVERT = 32.44'

-Y2D-

PI = 26+00.00
EL = 35.12'
VC = 150'
K = 99

PI = 28+00.00
EL = 34.48'
VC = 165'
K = 46

PI = 30+25.00
EL = 25.67'
VC = 60'
K = 15

END GRADE -Y2D- STA.30+55.00
EL = 25.72'

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y2E-

LEFT DITCH — - -
RIGHT DITCH - - - -

Begin Grade
Sta.10+12.00 -Y2E-
El.43.27'

PI = 10+50.00
EL = 44.03'
VC = 75'
K = 16

PI = 12+00.00
EL = 40.14'
VC = 150'
K = 41

PI = 13+55.00
EL = 41.81'
VC = 120'
K = 90

End Grade
Sta.14+65.00 -Y2E-
El.41.53'

-2.59%
+1.07%
+2.53%
-0.52%

BEGIN SPECIAL LATERAL 'V' DITCH -Y2E- STA. 10+50 LT. ELEV. 37.54'
BEGIN SPECIAL LATERAL 'V' DITCH -Y2E- STA. 10+50 RT. ELEV. 37.54'
END SPECIAL LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -Y2E- STA. 11+50 LT. ELEV. 38.09'
END SPECIAL LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -Y2E- STA. 11+50 RT. ELEV. 38.09'
END SPECIAL CUT DITCH -Y2E- STA. 14+50 LT. ELEV. 38.80'
END SPECIAL CUT DITCH -Y2E- STA. 14+50 RT. ELEV. 38.80'

-Y3-

BM 43 ELEVATION = 40.79'
N 427321 E 2528286
BL STATION 227+02.00 201' RIGHT
-Y3- STATION 21+05.25' RIGHT
RR SPIKE IN BASE OF 30" PECAN

BEGIN GRADE -Y3- STA.10+00.00
EL.= 36.25'

* DESIGN EXCEPTION IS REQUIRED FOR V.C. K VALUE AND NIGHTTIME SSD

PI = 12+20.00
EL = 36.91'
VC = 425'
* K = 80 (45mph)

BEGIN BRIDGE -Y3- 77+77.22 +/-

PI = 18+60.00
EL = 72.93'
VC = 630'
* K = 62 (45mph)

END BRIDGE -Y3- 77+77.22 +/-

+1.62%
+4.53%
+2.62%
+0.00%
-2.00%
-0.50%
-0.50%
-0.50%
-0.50%

BEGIN LATERAL 'V' DITCH -Y3- STA. 11+00 RT. ELEV. 31.95'
LATERAL 'V' DITCH -Y3- STA. 12+00 RT. ELEV. 30.95'
END LATERAL 'V' DITCH -Y3- STA. 13+00 RT. ELEV. 30.65'
END LATERAL 'V' DITCH -Y3- STA. 18+60 RT. ELEV. 28.85'
BEGIN LATERAL 'V' DITCH -Y3- STA. 14+28 RT. ELEV. 29.22'
BEGIN LATERAL 2' BASE DITCH -Y3- STA. 20+40 RT. ELEV. 28.86'
END LATERAL 2' BASE DITCH -Y3- STA. 23+38 RT. ELEV. 34.08'

BEGIN SPECIAL LATERAL 'V' DITCH -Y3- STA. 10+00 LT. ELEV. 32.45'
END SPECIAL LATERAL 'V' DITCH -Y3- STA. 11+30 LT. ELEV. 33.26'
BEGIN SPECIAL LATERAL 'V' DITCH -Y3- STA. 12+20 LT. ELEV. 33.50'
END SPECIAL LATERAL 'V' DITCH -Y3- STA. 13+19 LT. ELEV. 33.78'

64" PIPE @ RYLEN = 50.17

PIPE HYDRAULIC DATA
-Y3- Sta.16+52

DRAINAGE AREA	=	340 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	100 CFS
DESIGN HW ELEVATION	=	39.6 FT
100 YEAR DISCHARGE	=	120 CFS
100 YEAR HW ELEVATION	=	39.8 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	330 CFS
OVERTOPPING ELEVATION	=	39.8 FT @ -Y3D- SAG

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y3-

LEFT DITCH — · —
RIGHT DITCH - - - -

END GRADE -Y3- STA.28+00.00
EL.= 39.50'

* DESIGN EXCEPTION IS REQUIRED FOR V.C. K VALUE AND NIGHTTIME SSD

PI = 25+80.00
EL = 40.46'
VC = 340'
* K = 80 (45mph)

BEGIN SPECIAL CUT DITCH -Y3- STA. 24+00 LT. ELEV. 37.94'

END SPECIAL CUT DITCH -Y3- STA. 28+00 LT. ELEV. 37.28'

(-4.65%)

-3.00%

-0.50%

BEGIN SPECIAL LATERAL "V" DITCH -Y3- STA. 24+46 RT. ELEV. 35.87'

END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -Y3- STA. 26+00 RT. ELEV. 36.59'

END SPECIAL CUT DITCH -Y3- STA. 28+00 RT. ELEV. 37.52'

24+00 25+00 26+00 27+00 28+00

-Y3A-

PIPE HYDRAULIC DATA
-Y3A- Sta.10+70

DRAINAGE AREA	=	3.76 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	32.2 FT
100 YEAR DISCHARGE	=	11 CFS
100 YEAR HW ELEVATION	=	32.4 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	35 CFS
OVERTOPPING ELEVATION	=	36.2 FT

PIPE HYDRAULIC DATA
-Y3A- Sta.23+91

DRAINAGE AREA	=	3.80 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	10 CFS
DESIGN HW ELEVATION	=	30.7 FT
100 YEAR DISCHARGE	=	130 CFS
100 YEAR HW ELEVATION	=	31.0 FT
OVERTOPPING FREQUENCY	=	500+/- YRS
OVERTOPPING DISCHARGE	=	180 CFS
OVERTOPPING ELEVATION	=	31.6 FT @ SAG

BEGIN GRADE -Y3A- STA.10+12.00
EL.= 44.55'

PI = 11+50.00
EL = 41.82'
VC = 150'
K = 103

(-4.78%)

-1.00%

-0.50%

24" RCP @ INVERT = 30.15'

BEGIN SPECIAL "V" DITCH -Y3A- STA. 11+50 LT. ELEV. 36.03'

BEGIN SPECIAL LATERAL "V" DITCH -Y3A- STA. 12+59 RT. ELEV. 35.06'

SPECIAL LATERAL "V" DITCH -Y3A- STA. 14+50 RT. ELEV. 33.06'

SPECIAL LATERAL "V" DITCH -Y3A- STA. 16+00 LT. ELEV. 34.68'

END SPECIAL LATERAL "V" DITCH -Y3A- STA. 17+25 LT. ELEV. 33.68'

END SPECIAL LATERAL "V" DITCH BEGIN SPECIAL CUT DITCH -Y3A- STA. 19+00 RT. ELEV. 31.56'

Undercut Excavation

BEGIN SPECIAL CUT DITCH -Y3A- STA. 23+00 LT. ELEV. 26.72'

END SPECIAL CUT DITCH -Y3A- STA. 23+50 RT. ELEV. 29.56'

SPECIAL CUT DITCH -Y3A- STA. 24+00 RT. ELEV. 26.85'

66" RCP @ INVERT = 25.11'

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	39
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y3A-

LEFT DITCH
RIGHT DITCH

PI = 29+20.00
EL = 32.60'
VC = 80'
K = 97

(-)0.520%
(+)0.300%
(+)0.600%

Undercut Excavation

SPECIAL CUT DITCH -Y3A- STA. 24+00 RT. ELEV. 26.85'

SPECIAL CUT DITCH -Y3A- STA. 24+50 RT. ELEV. 27.15'

SPECIAL CUT DITCH -Y3A- STA. 38+00 LT. ELEV. 31.07'

BEGIN SPECIAL CUT DITCH -Y3A- STA. 36+72 LT. ELEV. 30.60'

SPECIAL CUT DITCH -Y3A- STA. 38+00 LT. ELEV. 31.07'

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

0 10 20 30 40 50 60 70

-Y3A-

END GRADE -Y3A- STA.40+35.30
EL = 35.95'

(+)0.300%

Undercut Excavation

SPECIAL CUT DITCH -Y3A- STA. 38+00 RT. ELEV. 31.20'

SPECIAL CUT DITCH -Y3A- STA. 38+50 LT. ELEV. 31.19'

SPECIAL CUT DITCH -Y3A- STA. 39+00 RT. ELEV. 32.47'

END SPECIAL CUT DITCH -Y3A- STA. 40+00 RT. ELEV. 33.32'

END SPECIAL CUT DITCH -Y3A- STA. 40+00 LT. ELEV. 33.32'

38+00 39+00 40+00

0 10 20 30 40 50 60

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y3B-

LEFT DITCH ——— · ———
RIGHT DITCH - - - - -

PIPE HYDRAULIC DATA
-Y3B- Sta.10+89

DRAINAGE AREA	=	3.52 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	11 CFS
DESIGN HW ELEVATION	=	37.6 FT
100 YEAR DISCHARGE	=	13 CFS
100 YEAR HW ELEVATION	=	37.8 FT
OVERTOPPING FREQUENCY	=	50+ YRS
OVERTOPPING DISCHARGE	=	12.5 CFS
OVERTOPPING ELEVATION	=	37.8 FT

BEGIN GRADE -Y3B- STA.10+12.08
EL. = 48.18'

PI = 10+50.00
EL = 47.20'
VC = 70'
K = 28

PI = 12+20.00
EL = 38.62'
VC = 135'
K = 26

END GRADE -Y3B- STA.13+10.00
EL. = 38.84'

BEGIN SPECIAL LATERAL 'V' DITCH -Y3B- STA. 10+54 RT. ELEV. 34.80'

END SPECIAL LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -Y3B- STA. 11+50 RT. ELEV. 35.30'

END SPECIAL CUT DITCH -Y3B- STA. 13+08 RT. ELEV. 37.22'

BEGIN SPECIAL LATERAL 'V' DITCH -Y3B- STA. 10+54 LT. ELEV. 35.74'

END SPECIAL LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -Y3B- STA. 11+50 LT. ELEV. 34.42'

END SPECIAL CUT DITCH -Y3B- STA. 13+08 LT. ELEV. 37.22'

24" RCP CLASS III

10+00 11+00 12+00 13+00

-Y3C-

PIPE HYDRAULIC DATA
-Y3C- Sta.12+77

DRAINAGE AREA	=	1.7 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	5.4 CFS
DESIGN HW ELEVATION	=	35.4 FT
100 YEAR DISCHARGE	=	6.4 CFS
100 YEAR HW ELEVATION	=	35.6 FT
OVERTOPPING FREQUENCY	=	25+/- YRS
OVERTOPPING DISCHARGE	=	5.6 CFS
OVERTOPPING ELEVATION	=	35.4 FT

PIPE HYDRAULIC DATA
-Y3C- Sta.16+28

DRAINAGE AREA	=	0.64 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	2.6 CFS
DESIGN HW ELEVATION	=	33.1 FT
100 YEAR DISCHARGE	=	3.0 CFS
100 YEAR HW ELEVATION	=	33.2 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	20 CFS
OVERTOPPING ELEVATION	=	34.9 FT

BEGIN GRADE -Y3C- STA.10+12.00
EL. = 48.59'

PI = 10+53.00
EL = 49.35'
VC = 80'
K = 11

PI = 12+25.00
EL = 39.85'
VC = 200'
K = 42

PI = 16+25.00
EL = 37.02'
VC = 130'
K = 96

END GRADE -Y3C- STA.18+70.00
EL. = 38.59'

BEGIN SPECIAL LATERAL 'V' DITCH -Y3C- STA. 11+88 RT. ELEV. 33.22'

SPECIAL LATERAL 'V' DITCH -Y3C- STA. 12+65.95 RT. ELEV. 33.91'

END SPECIAL LATERAL 'V' DITCH BEGIN SPECIAL CUT DITCH -Y3C- STA. 13+50 RT. ELEV. 34.85'

SPECIAL CUT DITCH -Y3C- STA. 14+00 RT. ELEV. 35.30'

BEGIN SPECIAL CUT DITCH -Y3C- STA. 15+50 RT. ELEV. 34.58'

END SPECIAL CUT DITCH BEGIN SPECIAL CUT DITCH -Y3C- STA. 16+28.22 RT. ELEV. 31.93'

END SPECIAL CUT DITCH -Y3C- STA. 18+50 RT. ELEV. 35.66'

END SPECIAL CUT DITCH -Y3C- STA. 16+28.22 LT. ELEV. 33.09'

END SPECIAL CUT DITCH -Y3C- STA. 18+50 LT. ELEV. 35.66'

24" RCP CLASS III

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	41
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y3D-

LEFT DITCH — - -
RIGHT DITCH - - - -

BEGIN GRADE -Y3D- STA.10+12.00
EL. = 44.55'

PI = 10+50.00
EL = 43.78'
VC = 50'
K = 18

PI = 11+70.00
EL = 37.93'
VC = 100'
K = 24

PI = 15+00.00
EL = 35.54'
VC = 150'
K = 110

PI = 19+80.00
EL = 38.60'
VC = 200'
K = 175

PI = 23+40.00
EL = 36.79'
VC = 60'
K = 67

END GRADE -Y3D- STA.24+00.00
EL. = 37.05'

(-)12.02%
(-)4.87%
(-)10.72%
(+)10.63%
(+)10.02%
(-)10.50%
(+)10.40%

BEGIN SPECIAL CUT DITCH -Y3D- STA. 11+75 LT. ELEV. 35.93'

END SPECIAL CUT DITCH -Y3D- STA. 13+70 LT. ELEV. 34.18'

BEGIN SPECIAL CUT DITCH -Y3D- STA. 11+75 LT. ELEV. 35.93'

END SPECIAL CUT DITCH -Y3D- STA. 13+90 LT. ELEV. 32.32'

10+00 11+00 12+00

-Y3E-

PIPE HYDRAULIC DATA
-Y3E- Sta.11+47

DRAINAGE AREA	=	1.89 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	5.4 CFS
DESIGN HW ELEVATION	=	31.8 FT
100 YEAR DISCHARGE	=	6.4 CFS
100 YEAR HW ELEVATION	=	32.0 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	13 CFS
OVERTOPPING ELEVATION	=	33.3 FT

BEGIN GRADE -Y3E- STA.10+09.00
EL. = 36.55'

END GRADE -Y3E- STA.13+00.00
EL. = 34.18'

PI = 11+05.00
EL = 32.73'
VC = 180'
K = 38

(-)15.27%
(+)10.74%
(+)10.49%

18" RCP @ INVERT = 29.99'

BEGIN SPECIAL CUT DITCH -Y3E- STA. 10+43.38 LT. ELEV. 30.60'

BEGIN SPECIAL CUT DITCH -Y3E- STA. 10+43.38 RT. ELEV. 30.32'

END SPECIAL CUT DITCH -Y3E- STA. 11+43.13 LT. ELEV. 30.00'

END SPECIAL CUT DITCH -Y3E- STA. 11+50 RT. ELEV. 29.31'

BEGIN SPECIAL CUT DITCH -Y3E- STA. 11+50 LT. ELEV. 29.31'

END SPECIAL CUT DITCH -Y3E- STA. 12+59 LT. ELEV. 32.43'

END SPECIAL CUT DITCH -Y3E- STA. 12+59 RT. ELEV. 32.43'

10+00 11+00 12+00 13+00

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PROJECT REFERENCE NO.	SHEET NO.
R-2514B	42
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
–10
–20
–30
–40
–50

BEGIN GRADE -DET1- STA.10+00.00
EL.= 51.08'

PI = 11+20.00
EL = 50.51'
VC = 125'
K = 166

PI = 14+05.00
EL = 47.01'
VC = 195'
K = 138

PI = 17+50.00
EL = 47.64'
VC = 300'
K = 495

END GRADE -DET1- STA.19+62.48
EL.= 46.74'

(-)0.47%
(-)4.29%
(+)0.82%
(-)0.42%

-DET1-

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00

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North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released July 2012)

Project/TIP No.: R-2514C **County(ies):** JONES

General Project Information

Project No.:	R-2514C		**Project Type:**	Roadway Widening		**Date:**	6/3/2013
NCDOT Contact:	Paul Atkinson, PE		**Contractor / Designer:**	Brook Anderson, PE.			
Address:	Hydraulics Unit, 1020 Birch ridge Dr., Raleigh, NC 27610		**Address:**	Hydraulics Unit, 1020 Birch ridge Dr., Raleigh, NC 27610			
Phone:	919-707-6707		**Phone:**	919-707-6706			
Email:	patkinson@ncdot.gov		**Email:**	beanderson@ncdot.gov			
City/Town:	From North of Maysville to South of Pollocksville		**County(ies):**	JONES			
River Basin(s):	Neuse	White Oak	**CAMA County?**	No			
Primary Receiving Water:	White Oak River, Mill Creek, & Goshen Branch		**NCDWQ Stream Index No.:**	White Oak R. 20-(1); Mill Cr. 27-101-26; Goshen Br. 27-101-25			
NCDWQ Surface Water Classification for Primary Receiving Water	**Primary:**		White Oak River: Class C				
	Supplemental:		Mill Creek & Goshen Branch:	Class C, Sw, NSW			
Other Stream Classification:							
303(d) Impairments:							
Buffer Rules in Effect	Neuse Buffer Rules apply to the the portion of the project (approximately the northern 2/3's of the project)						

Project Description

Project Length (lin. Miles or feet):	5.492 miles	**Surrounding Land Use:**	Primarily agricultural and forested with some rural residential development along roadways.

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	ac.	ac.
Typical Cross Section Description:	2-12' travel lanes in each direction with a 12' outside shoulder, 6' inside shoulder, and 38' grassed median. Total pavement width is 76'.	2-12' travel lanes with a 2' paved shoulder on each side for a total pavement width of 28'+/-. (Typ.)
Average Daily Traffic (veh/hr/day):	Design/Future: 17700 (ADT 2035)	Existing: 12000 (ADT 2015)

General Project Narrative:

The proposed project will upgrade US 17 to expressway standards. The proposed typical for US 17 consist of 2-12' travel lanes in each direction with 10' outside paved shoulder widths and 4' inside paved shoulder widths. An additional 2' wide grassed shoulder is provided on both the inside and outside shoulders with a 38' wide (from shoulder point to shoulder point) grassed median. A wildlife crossing consisting of dual bridges, 4 @ 72" rcp, and 4 @ 48" rcp will also be constructed as part of this project. There are no named jurisidictional streams impacted by this project. The primary downstream receiving waters are White Oak River in the White Oak River Basin and Goshen Branch and Mill Creek in the Neuse River Basin. Wetland and stream impacts throughout the project were minimized to the maximum extent practical by keeping fill slopes as steep as possible and existing drainage patterns were maintained to the maximum extent practical. Pipes and culverts will be constructed with buried inverts as required. Where possible runoff is maintained as sheetflow and treated by grassy surfaces. Where ditches are required grass-lined ditches are used whenever possible. The use of rip rap was minimized and limited to those areas that needed additional protection from erosion. Although not required, an equalizer pipe is used on the project.

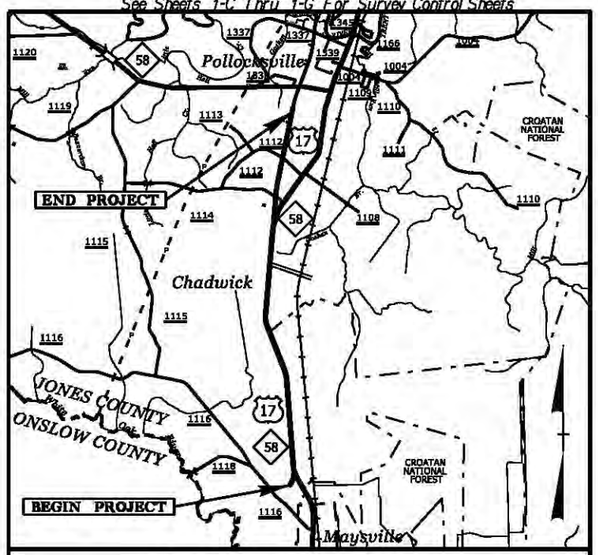
References

09/08/99

TIP PROJECT: R-2514C

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheets 1-C Thru 1-G For Survey Control Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES COUNTY

LOCATION: US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

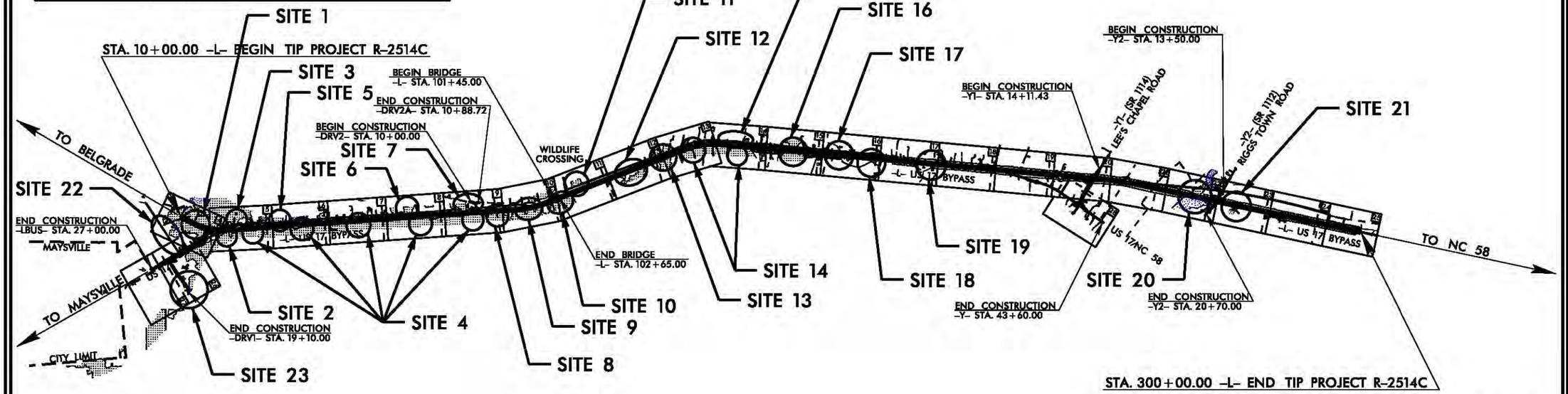
WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34442.1.4		PE	

PERMIT DRAWING SHEET 1 OF 62

NAD 83/ NSRS 2007



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING AT DESIGNATED POINTS ONLY.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD III.

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2015 = 12,000
ADT 2035 = 17,700
DHV = 12 %
D = 60 %
T = 9 % *
V = 60 MPH
* TTST = 5 % DUAL = 4 %
FUNC CLASS = EXPRESSWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2514C = 5.469 MILES
LENGTH STRUCTURE OF TIP PROJECT R-2514C = 0.023 MILES
TOTAL LENGTH OF TIP PROJECT R-2514C = 5.492 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JUNE 21, 2013

LETTING DATE: JUNE 16, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2/6/2014
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REVISIONS

4/23/2014
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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 3 OF 62

8/17/99

REVISIONS

4/23/2014
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ENGLISH

GRAPHIC SCALE 100' 0' 100'

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Min. D= 2.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-LBUS- STA. 11+22 to STA. 12+24 LT DDE=181 CY
-L- STA. 17+50 to STA. 19+18 RT DDE=569 CY

DETAIL AM
FALSE SUMP
(Not to Scale)

S=Ditch Slope

Ditch Grade	L
0.0% To 2.0%	20'
Over 2.0% To 4.0%	30'

Ditch Grade	L
Over 4.0% To 6.0%	40'
Over 6.0%	50'

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-LBUS- STA. 13+00 to STA. 19+40 LT

DETAIL L
STANDARD BASE DITCH
(Not to Scale)

Min. D= VAR.
B= 3.0 Ft.

-LBUS- STA. 12+50 to STA. 13+00 LT

NAD 83/NSRS 2007

WETLAND AND SURFACE WATER IMPACTS PERMIT

SITE 1

FILL IN WETLAND

ENLARGEMENT (5X)

MECHANIZED CLEARING

FILL IN WETLAND

J. C. LAROQUE, HEIRS

ESTATE OF FRANK JENKINS

AMBROSE ROBERTS, JR.

+13.02 (L)
113.00' (LT.)

+86.36 (L)
100.00' (LT.)

SEE SHEET 5

MATCHLINE -L- STA. 19+00.00

DONELLE MAURICE MYERS

SITE 1

ESTATE OF FRANK JENKINS

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AP

HAND CLEARING

TIE TO EXISTING DITCH

REMOVE 18" RCP

REMOVE 48" RCP

CL. B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE/DETAIL A

FILL EXISTING DITCH

TIE TO EXIST. DITCH

STANDARD BASE DITCH
SEE DETAIL/L

RIP RAP
EST. 60 TONS
EST. 31 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

MATCHLINE -LBUS- STA. 15+00.00 SEE SHEET 26

LATERAL 3' BASE DITCH
SEE DETAIL D

SITE 1
MECHANIZED CLEARING

Q10=1.9cfs
V10=1.3fps

CL. B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

Q10=2.5cfs
V10=1.2fps

CL. B RIP RAP
EST. 8 TONS
EST. 27 SY GEOTEXTILE

FILL IN WETLAND

ENLARGEMENT (5X)

FRANK JENKINS ESTATE
C/O PATSY GROVER

MAME BAKER

F F DENOTES FILL IN WETLAND

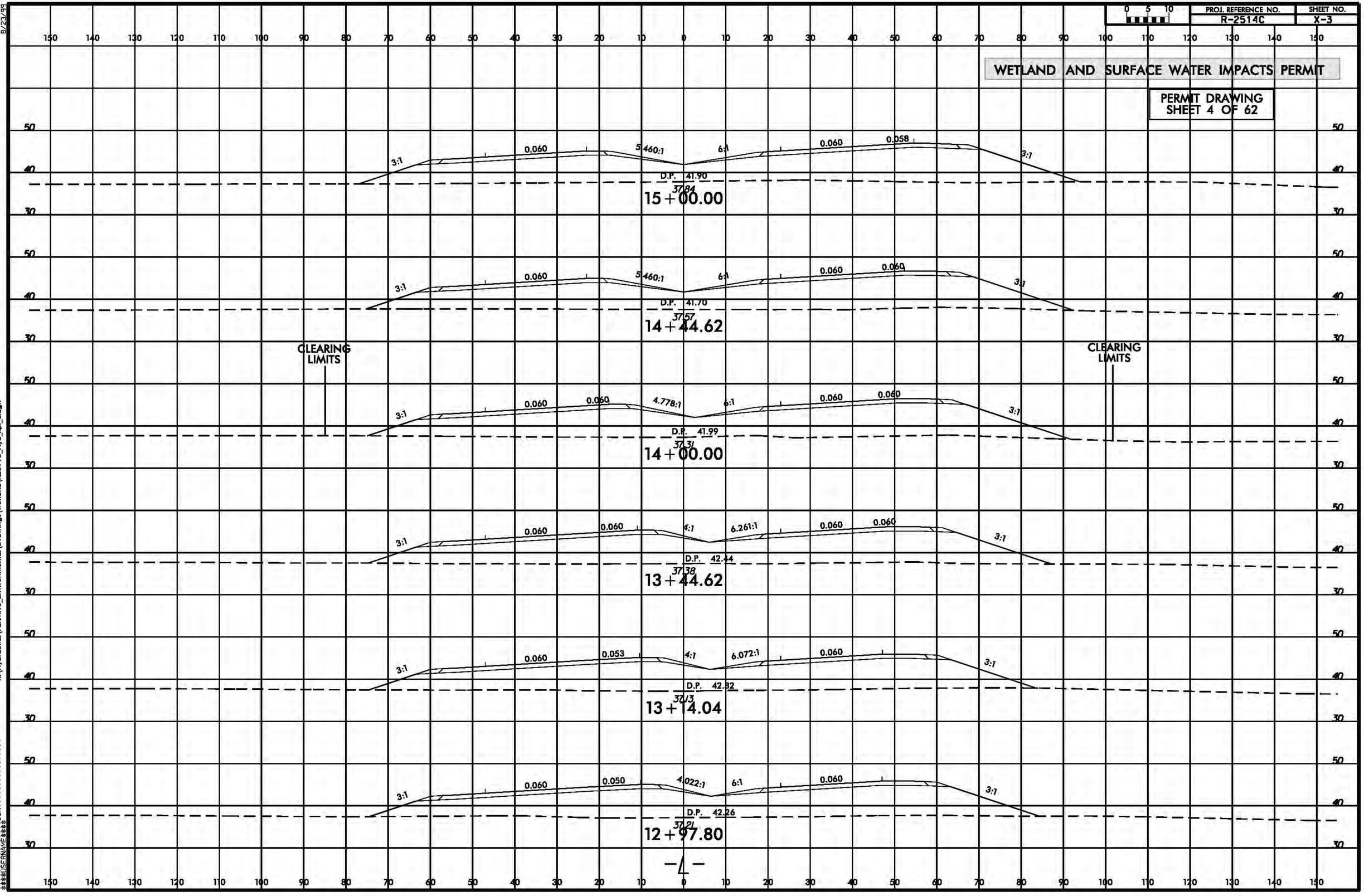
DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-3

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 4 OF 62



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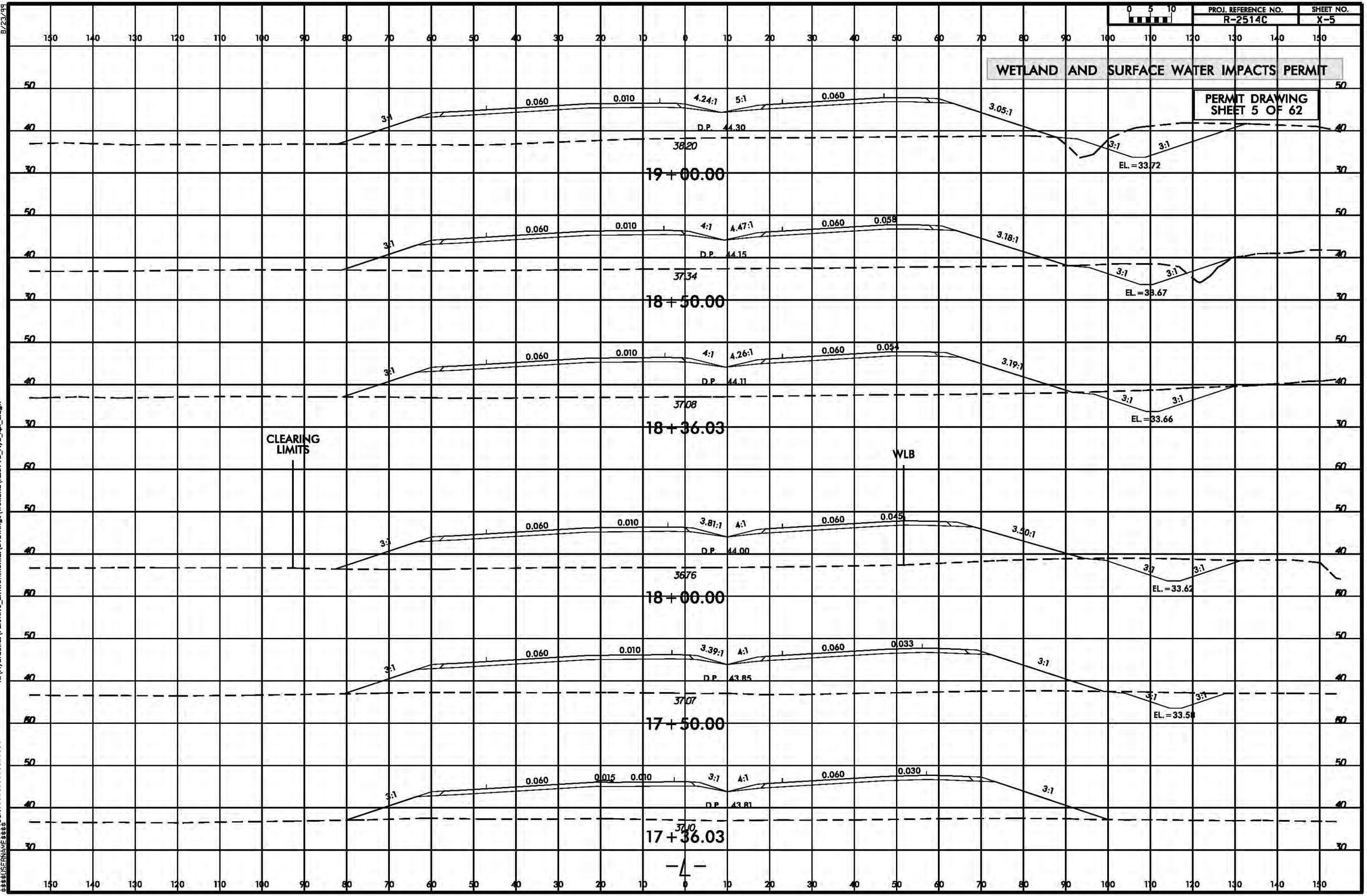
WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 5 OF 62



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epseller
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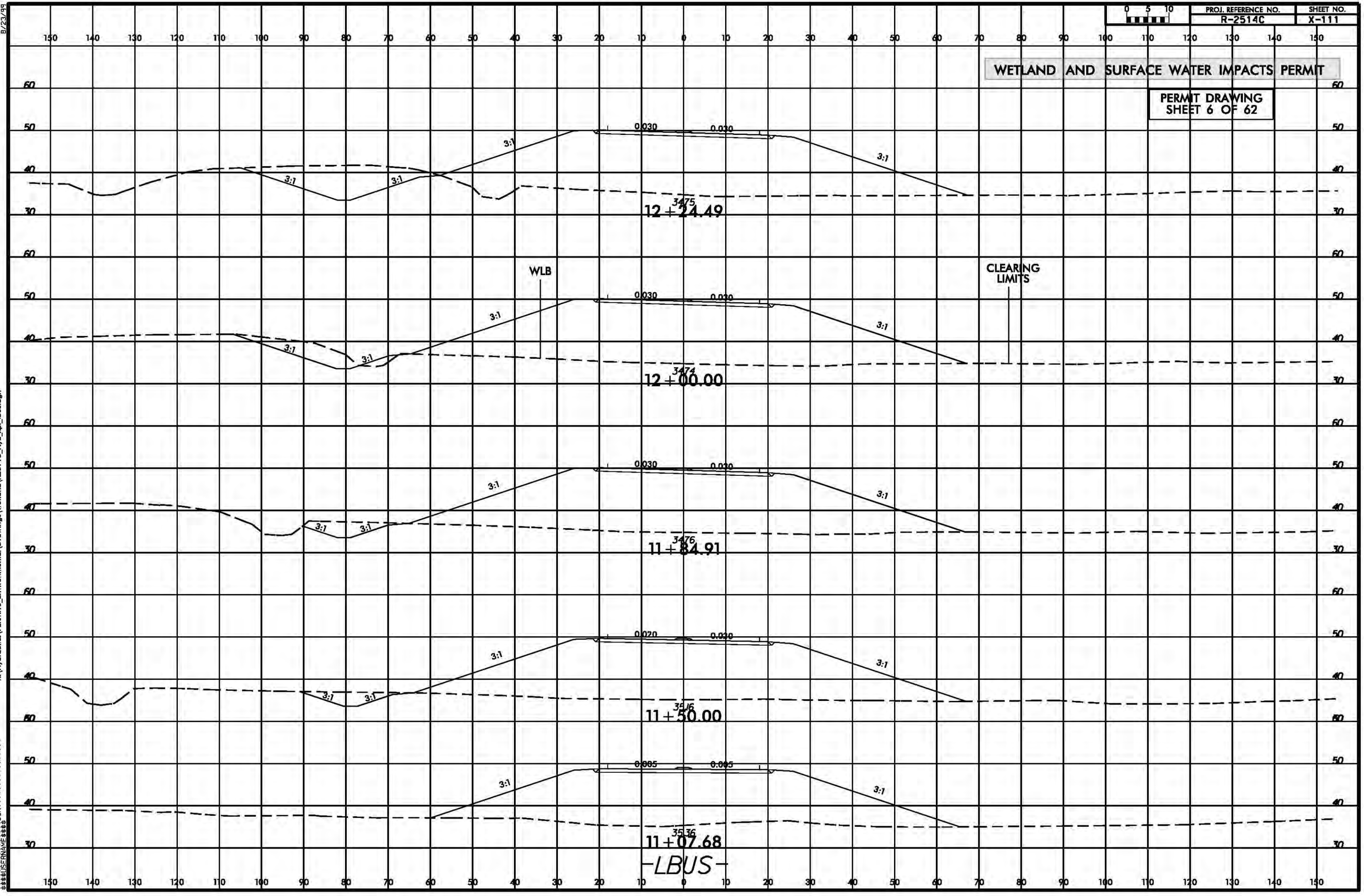
$$$$SYSDATE$$$$
$$$$DGN$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-111

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 6 OF 62



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2/6/2014
apseiler
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$$$$$$$$SYSTIME$$$$$
$$$$$$$$DGNFILE$$$$$
$$$$$$$$USERNAME$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH | NAD 83/NSRS 2007

REPLACEMENT UTILITY SITE TO BE CONVEYED TO OTHERS

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 7 OF 62

GRAPHIC SCALE 100' 0' 100'

ESTATE OF FRANK JENKINS

AMBROSE ROBERTS, JR. (3)

SITE 1

SITE 2

SITE 3

FILL IN WETLAND

EXCAVATION IN WETLAND

MECHANIZED CLEARING

MARQUITA HILL (6)

ROSA LEE SMITH (7)

LEAMON GODLEY HEIRS (8)

MICHEAL FROST (9)

HOWARD FROST, ET UX (10)

HORACE TIMMONS, ET UX (11)

VERA LEE WARD (12)

CAROLINA TELEPHONE & TELEGRAPH (13)

ALPHONSO HILL (14)

DOROTHY WARD

DAVID WARD, ET UX

SITE 4

HAND CLEARING

LATERAL 3' BASE DITCH SEE DETAIL C

LATERAL 3' BASE DITCH SEE DETAIL D

CL B RIP RAP EST. 2 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 20 SY GEOTEXTILE

ANNIE S. WARD HEIRS (5)

CHORD

REMOVE 24" RCP

REMOVE 24" CMP

24" CONC

18" RCP

24" RCP

8" HDPE

RIP RAP

US 17 MAIN ST

SEPTIC SYSTEM

ISFD

MTL CAN

GEN

FUEL

MATCHLINE -L- STA. 19+00.00 SEE SHEET 4

MATCHLINE -L- STA. 32+00.00 SEE SHEET 6

THE UNITED STATES OF AMERICA (4)

SITE 2

SITE 4

MECHANIZED CLEARING

FILL IN WETLAND

LATERAL 3' BASE DITCH SEE DETAIL A

MAINTAIN EXISTING DITCH

MEDIAN "V" DITCH SEE DETAIL B

-L-

PI Sta 16+95.31	PIs Sta 21+57.81
Δ = 27° 14' 57.6" (LT)	θs = 4° 11' 32.5"
D = 3° 29' 37.1"	Ls = 240.00'
L = 779.97'	LT = 160.04'
T = 397.51'	ST = 80.04'
R = 1640.00'	
SE = .06	
RO = 240°	

DETAIL A
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 17+50 to STA. 19+15 RT
DDE=564 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 21+10 to STA. 30+50 LT
DDE=2251 CY

DETAIL B
MEDIAN V DITCH
(Not to Scale)
-L- STA. 20+15 TO STA. 24+00 MED

F F DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

R/W REVISION 04/25/13 (DMG) - R/W REVISED TO TAKE ENTIRE PROPERTY OF PARCEL 11 (LOUISE DUDLEY, ET VIR) AND PARCEL 12 (ROLAND BARBER, ET AL) AND THE PUE WAS ELIMINATED FROM THESE TWO PARCELS.

REVISIONS

8/17/99

4/23/2014
epsellar
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WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH | NAD 83/NSRS 2007

REPLACEMENT UTILITY SITE TO BE CONVEYED TO OTHERS

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 8 OF 62

100' 0' 100'
GRAPHIC SCALE

MATCHLINE –L– STA. 19+00.00 SEE SHEET 4

MATCHLINE –L– STA. 32+00.00 SEE SHEET 6

SITE 1

SITE 2

SITE 3

SITE 4

FILL IN WETLAND

EXCAVATION IN WETLAND

MECHANIZED CLEARING

HAND CLEARING

ESTATE OF FRANK JENKINS

AMBROSE ROBERTS, JR.

ROSA LEE SMITH

MARQUITA HILL

LEAMON DUDLEY HEIRS

DOROTHY WARD

DAVID WARD, ET UX

HORACE TIMMONS, ET UX

VERA LEE WARD

LOUISE DUDLEY, ET VIR

ROLAND BARBER, ET AL

ALPHONSO HILL

ANNIE S. WARD HEIRS

CAROLINA TELEPHONE & TELEGRAPH

THE UNITED STATES OF AMERICA

LATERAL 3' BASE DITCH SEE DETAIL C

CL B RIP RAP EST. 2 TONS EST. 10 SY GEOTEXTILE

CHORD

REMOVE 24" RCP

REMOVE 24" CMP

24" CONC

LATERAL 3' BASE DITCH SEE DETAIL A

MAINTAIN EXISTING DITCH

MEDIAN "V" DITCH SEE DETAIL B

–L–
PI Sta 16+95.31
Δ = 27°14'57.6" (LT)
D = 3°29'37.1"
L = 779.97'
T = 397.51'
R = 1640.00'
SE = .06
RO = 240°

PI Sta 21+57.81
θs = 4°11'32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

DETAIL A
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 17+50 to STA. 19+15 RT
DDE=564 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 30+50 to STA. 32+00 LT
DDE=2610 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 21+10 to STA. 30+50 LT
DDE=2251 CY

DETAIL B
MEDIAN V DITCH
(Not to Scale)
–L– STA. 20+15 TO STA. 24+00 MED

F F DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

8/17/99

REVISIONS

R/W REVISION 04/25/13 (DWG) - R/W REVISED TO TAKE ENTIRE PROPERTY OF PARCEL 11(LOUISE DUDLEY,ET VIR) AND PARCEL 12 (ROLAND BARBER,ET AL) AND THE PUE WAS ELIMINATED FROM THESE TWO PARCELS.

4/23/2014
epasilar
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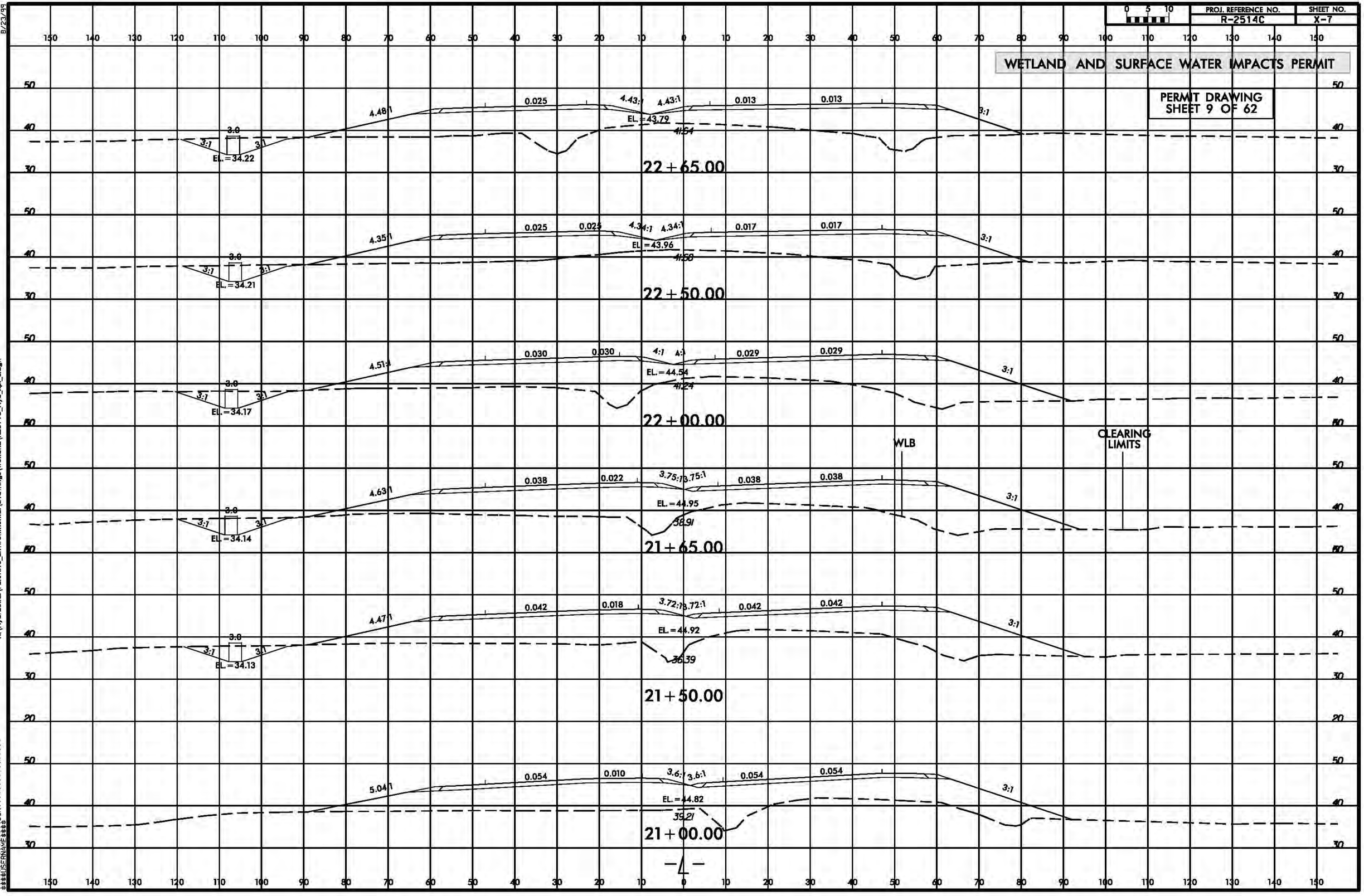
$$$$$$$$USERNAME$$$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-7

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 9 OF 62



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2/6/2014
epsaller
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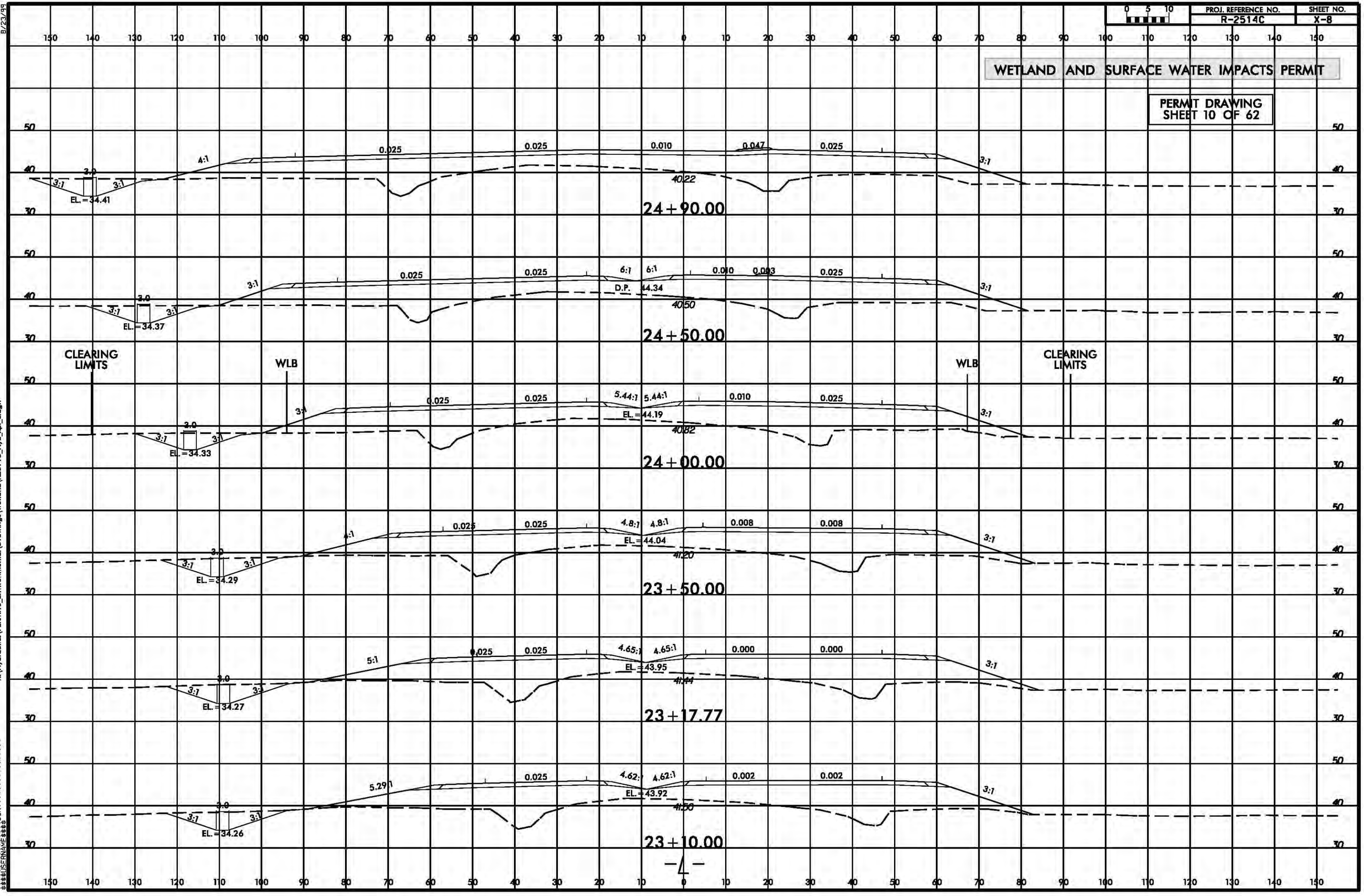
$$$$DGNNAME$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-8

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 10 OF 62



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2/6/2014
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 11 OF 62

NAD 83/NSRS 2007

ENGLISH

GRAPHIC SCALE 100'

SITE 5

EXCAVATION IN WETLAND

FILL IN WETLAND

MECHANIZED CLEARING

ESTATE OF FRANK JENKINS

(1)

(18) NORMAN HILL

(19) ELVERT LEE HOLT

(20) WOODROW F. LASSITER, ET UX

(16) ROCHELLE ANITA HOLT

(17) LYNELL MATTOCKS, ET UX

(15) ELEANOR JEAN HOLT SEPTIC SYSTEM

(4) THE UNITED STATES OF AMERICA

MATCHLINE -L- STA. 32+00 SEE SHEET 5

MATCHLINE -L- STA. 46+00 SEE SHEET 7

SITE 4

MECHANIZED CLEARING

EXCAVATION IN WETLAND

ENLARGEMENT 3X

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)

-L- STA. 36+50 TO STA. 37+60 MED
-L- STA. 41+00 TO STA. 42+00 MED

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

E E DENOTES EXCAVATION IN WETLAND

R/W REVISION 01-06-14 (DWG) - REVISED THE R/W.C/A AND PUE ON PARCEL 19 (ELVERT LEE HOLT) AND PARCEL 20 (WOODROW F.LASSITER,ET UX) TO AVOID THE HOME LOCATED AT -L- STA.37+40.00 LT.

REVISIONS

4/23/2014
gseiler
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8/17/99

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 12 OF 62

NAD 83/NSRS 2007

ENGLISH

GRAPHIC SCALE

SITE 5

SITE 4

ESTATE OF FRANK JENKINS

THE UNITED STATES OF AMERICA

ELEANOR JEAN HOLT (SEPTIC)
JACKSON, ET AL

ROCHELLE ANITA HOLT

LYNELL MATTOCKS, ET UX

NORMAN HILL

CULVERT LEE HOLT

WOODROW F. LASSITER, ET UX

MATCHLINE –L– STA. 32 + 00

SEE SHEET 5

MATCHLINE –L– STA. 46 + 00

SEE SHEET 7

EXCAVATION IN WETLAND

FILL IN WETLAND

MECHANIZED CLEARING

LATERAL 3' BASE DITCH
SEE DETAIL D

MEDIAN 'V' DITCH
SEE DETAIL B

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 3.0 Ft.
T= 5.0 Ft.

-L- STA. 30+50 TO STA. 52+00 LT
DDE=2610 CY

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)

-L- STA. 36+50 TO STA. 37+60 MED
-L- STA. 41+00 TO STA. 42+00 MED

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES EXCAVATION IN WETLAND

ENLARGEMENT 3X

EST. 2 TONS
EST. 7 SY GEOTEXTILE

8/17/99

R/W REVISION 01-06-14 (DNG) - REVISED THE R/W,C/A,AND PUE ON PARCEL 19 (ELVERT LEE HOLT),AND PARCEL 20 (WOODROW F.LASSITER,ET UX)TO AVOID THE HOME LOCATED AT -L- STA.37+40.00 LT.

REVISIONS

4/23/2014
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$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNSS$$$$$$$$$$
$$$$$$$$MACHINAME$$$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-12

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 13 OF 62

36 + 00.00

D.P. 42.78

37.03

35 + 50.00

D.P. 42.68

36.87

35 + 00.00

D.P. 42.55

37.35

CLEARING LIMITS

WLB

34 + 50.00

D.P. 42.38

37.51

34 + 00.00

D.P. 42.21

37.33

33 + 50.00

D.P. 42.08

37.31

8/23/99
2/6/2014
epsaller
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SYSTIME
DGN

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 14 OF 62

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

REVISIONS 8/17/99

4/23/2014
epseller
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MATCHLINE –L– STA. 46+00.00 SEE SHEET 6

MATCHLINE –L– STA. 60+00.00 SEE SHEET 8

GREENWAY BLVD. 80' ACCESS EASEMENT

GREEN CO LAND, LLC. 20A

CECIL R. HILL, ET UX

DORIS L. HILL 21

ABBY B. HEATH, ET UX 22

MICHAEL ANTHONY DUDLEY, ET UX 23

FREDRICK E. KING, ET UX 24

WILBER G. KING, ET UX 25

ROY L. KING, ET UX 26

BOBBY A. FLOWERS, ET UX 27

RAYMOND C. BANKS, JR, ET UX 28

THE UNITED STATES OF AMERICA 4

-Y3- POT Sta. 10+00.00

-L- POT Sta. 46+34.83=
-Y3- POT Sta. 12+60.19

LATERAL 3' BASE DITCH SEE DETAIL D

LATERAL 3' BASE DITCH SEE DETAIL E

MEDIAN "V" DITCH SEE DETAIL B

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 5 TONS EST. 14 SY GEOTEXTILE

SEPTIC SYSTEM

ISBKD

ISFBUS

ISFD

HTR

PUE

15" RCP REMOVE

18" HDPE REMOVE

24" RCP REMOVE

US 17 MAIN ST 29' BST

-L-

N 4°26'35.8"W

MECHANIZED CLEARING

FILL IN WETLAND

SITE 4

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)

Shoulder Point — 3:1 or Flatter — 3:1 or Flatter — Shoulder Point

–L– STA. 46+90 TO STA. 48+00 MED

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — b — 1'Min. — Fill Slope — B

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — b — 1'Min. — Fill Slope — B

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 52+00 to STA. 61+00 LT
DDE=765 CY

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

$$$$$$$SYSTIME$$$$$$$
$$$$$$$DGNS$$$$$$$
$$$$$$$MACHINE$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

PERMIT DRAWING
SHEET 15 OF 62

ENGLISH

GRAPHIC SCALE 100' 0' 100'

MATCHLINE –L– STA. 46+00.00 SEE SHEET 6

MATCHLINE –L– STA. 60+00.00 SEE SHEET 8

-L- POT Sta. 46+34.83=
-Y3- POT Sta. 12+60.19

SITE 4

MECHANIZED CLEARING

FILL IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)
-L- STA. 46+90 TO STA. 48+00 MED

DETAIL D
LATERAL BASE DITCH
(Not to Scale)
Min. D = 1.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
-L- STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Min. D = 1.0 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
-L- STA. 52+00 to STA. 61+00 LT
DDE=765 CY

THE UNITED STATES OF AMERICA

GREEN CO LAND, LLC.

CECIL R. HILL, ET UX

DORIS L. HILL

ABBY B. HEATH, ET UX

MICHAEL ANTHONY DUDLEY, ET UX

FREDRICK E. KING, ET UX

ROY L. KING, ET UX

ALBER G. KING, ET UX

BOBBY A. FLOWERS, ET UX

RAYMOND C. BANKS, JR, ET UX
DB 690 PG 894
TRACT 2

RAYMOND C. BANKS, JR, ET UX

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

LATERAL 3' BASE-DITCH
SEE DETAIL D

LATERAL 3' BASE DITCH
SEE DETAIL E

MEDIAN 'V' DITCH
SEE DETAIL B

-L- POT Sta. 10+00.00

SEPTIC SYSTEM

ISBKD

ISFBUS

ISFD

HTR

CONC.

PUE

REMOVE

US-R MAIN ST. (SR 1957)

N 4°26'35"W

REVISIONS

8/17/99

4/23/2014
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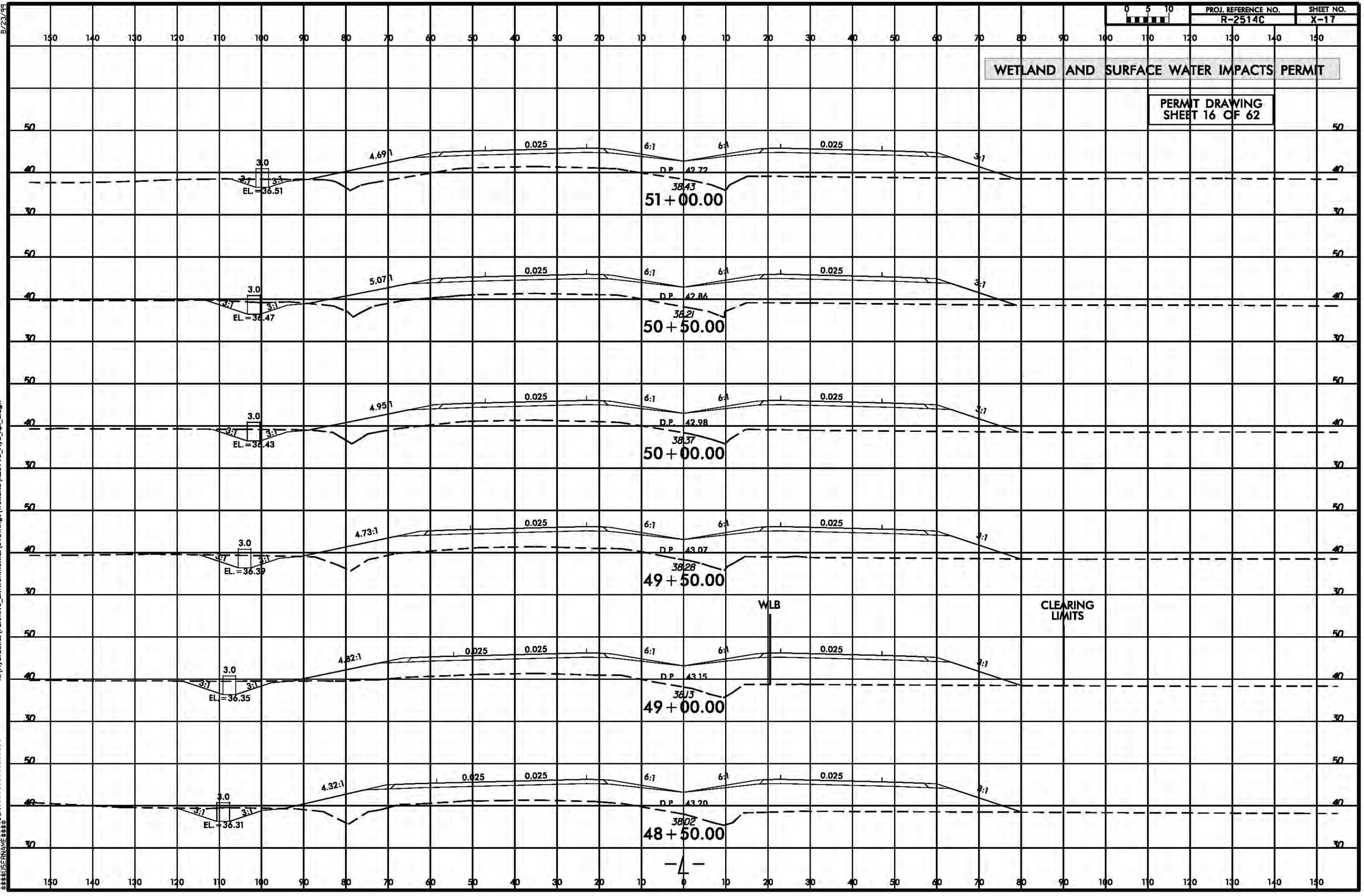
$$$$SYSTIME$$$$
$$$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-17

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 16 OF 62



B/23/99

2/6/2014
epsaller
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$$SYSTIME$$ $$DGNFILE$$ $$USERNAME$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 17 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

MATCHLINE -L- STA. 60+00.00 SEE SHEET 7

MATCHLINE -L- STA. 74+00.00 SEE SHEET 9

SITE 6

SITE 4

HAND CLEARING

EXCAVATION IN WETLAND

MECHANICAL CLEARING

FILL IN WETLAND

MECHANIZED CLEARING

-BL- 4 PINC 65+86.77

RAYMOND C. BANKS, JR. ET UX

MARVIN L. GOODSON

JOHN TAYLOR, JR., ET UX

EDWARD E. BUCKEY, ET UX

RACHEL M. EUBANK

THE UNITED STATES OF AMERICA

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL G

SEPTIC SYSTEM

MTL. CANOPY

HTR

ISFD

PED

PUE

CL B RIP RAP EST. 5 TONS EST. 10 SY GEOTEXTILE

15" RCP REMOVE

15" CMP REMOVE

18" RCP

US HWY 17/NC 58 24' BST

-L-

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 52+00 to STA. 61+00 LT
DDE=765 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)

Min. D= VAR.
B= 3.0 Ft.
b= 5.0 Ft.

Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

-L- STA. 61+00 to STA. 66+00 LT
DDE=176 CY

DETAIL G
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.0 Ft.
b= 5.0 Ft.

Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

-L- STA. 66+00 to STA. 78+30 LT
DDE=439 CY

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES HAND CLEARING

REVISIONS 8/17/99

4/23/2014
eseiler
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 18 OF 62

ENGLISH

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

MATCHLINE –L– STA. 60+00.00 SEE SHEET 7

MATCHLINE –L– STA. 74+00.00 SEE SHEET 9

SITE 6

HAND CLEARING

EXCAVATION IN WETLAND

MECHANIZED CLEARING

SITE 4

FILL IN WETLAND

MECHANIZED CLEARING

–BL– 4 PINC 65+86.77

RAYMOND C. BANKS, JR. ET UX

MARVIN L. GOODSON

EDWARD E. DUDLEY, ET UX

RACHEL M. EUBANK

JOHN TAYLOR, JR. ET UX

THE UNITED STATES OF AMERICA

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL G

LATERAL 3' BASE DITCH SEE DETAIL F

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

US HWY 17/NC 58 - 24' DST

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 52+00 to STA. 61+00 LT
DDE=765 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)

Min. D= VAR.
B= 3.0 Ft.
b= 5.0 Ft.

Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

–L– STA. 61+00 to STA. 66+00 LT
DDE=176 CY

DETAIL G
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.0 Ft.
b= 5.0 Ft.

Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

–L– STA. 66+00 to STA. 78+30 LT
DDE=439 CY

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES HAND CLEARING

REVISIONS

8/17/99

4/23/2014
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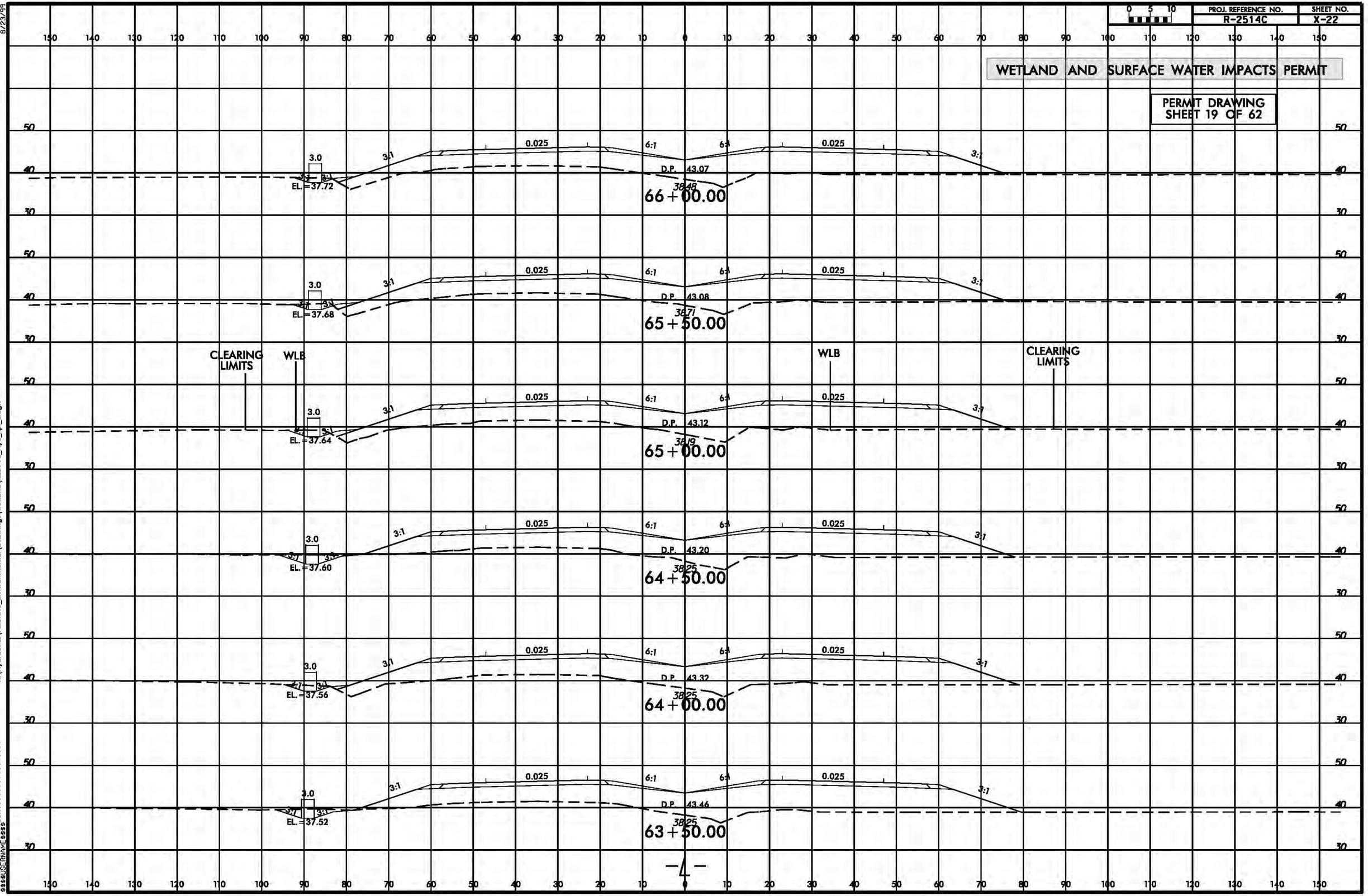
$$$$USERNAME$$$$
$$$$SYSTIME$$$$
$$$$DGNNAME$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-22

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 19 OF 62



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$$$$$$$$SYSTIME$$$$$$
$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 20 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

MATCHLINE –L– STA. 74+00.00 SEE SHEET 8

MATCHLINE –L– STA. 88+00.00 SEE SHEET 10

MECHANIZED CLEARING

ENLARGEMENT (3X)

FILL IN WETLAND

EXCAVATION IN WETLAND

MAINTAIN EXISTING DITCH

SPECIAL CUT DITCH SEE DETAIL K

SPECIAL CUT DITCH SEE DETAIL AF

SPECIAL CUT DITCH SEE DETAIL I

SITE 7
(SEE ENLARGEMENT SHEET 22)

SITE 7

RACHEL M. EUBANK

32

WEYERHAEUSER COMPANY

34

33

JACK L. HOLLAND

LATERAL 'V' DITCH SEE DETAIL G

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL J

TIE DITCH TO NATURAL GROUND

POND WS= 395'

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

REMOVE 10' SOIL

15" RCP

18" RCP-III

24" RCP-III

30" RCP-III

36" RCP-III

2GI

HW

PUE

BURY 1.0'

WILDLIFE CROSSING

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-E

US 17 MAIN ST 28' EST

-L-

75

80

85

FILL IN WETLAND

MECHANIZED CLEARING

THE UNITED STATES OF AMERICA

4

ENLARGEMENT (3X)

MECHANIZED CLEARING

FILL IN WETLAND

SITE 4

SITE 8

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL G
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.0 Ft.
b= 5.0 Ft.

–L– STA. 66+00 to STA. 78+30 LT DDE=439 CY
–L– STA. 81+50 TO STA. 83+50 LT DDE=47 CY

DETAIL I
SPECIAL CUT DITCH
(Not to Scale)

Min. D=1.0 Ft.

–DRV2A– STA. 10+25 TO STA. 11+20 RT

DETAIL K
SPECIAL CUT DITCH
(Not to Scale)

Min. D=1.0 Ft.

–DRV2– STA. 9+35 TO STA. 11+13 RT

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Min. D=1.0 Ft.
b=5.0 Ft.

–L– STA. 83+50 TO STA. 86+50 LT
DDE=219 CY

DETAIL J
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 0.5 Ft.
b= 5.0 Ft.

–L– STA. 86+50 to STA. 89+00 LT
DDE=30 CY

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= VAR.

–DRV2A– STA. 10+50 TO STA. 11+25 (LT)

REVISIONS

8/17/99

R/W REVISION 01-06-14 (DWG) - ADDED R/W AND REVISED THE TCE AND PUE ON PARCEL 32 (RACHEL M.EUBANK),PARCEL 33 (JACK L.HOLLAND),AND PARCEL 34 (WEYERHAEUSER COMPANY) FOR THE REVISED 20'WIDTH OF -DRV2- AND -DRV2A-.

4/23/2014
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$$$$$$$SYSTIMES$$$$$
$$$$$$$DGNSIZE$$$$$
$$$$$$$MECHANICAL$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 21 OF 62

ENGLISH

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

MATCHLINE –L– STA. 74+00.00 SEE SHEET 8

MATCHLINE –L– STA. 88+00.00 SEE SHEET 10

MECHANIZED CLEARING
ENLARGEMENT (3X)
FILL IN WETLAND
EXCAVATION IN WETLAND
FILL IN WETLAND
MAINTAIN EXISTING DITCH
SPECIAL CUT DITCH SEE DETAIL K
SPECIAL CUT DITCH SEE DETAIL AF
SPECIAL CUT DITCH SEE DETAIL I
WEYERHAEUSER COMPANY
34
ENLARGEMENT 3X
MECHANIZED CLEARING
SITE 7
(SEE ENLARGEMENT SHEET 22)
SITE 7
RACHEL M. EUBANK
32
EXCAVATION IN WETLAND
LATERAL 'V' DITCH SEE DETAIL J
LATERAL 'V' DITCH SEE DETAIL G
TIE DITCH TO NATURAL GROUND
CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
LATERAL 'V' DITCH SEE DETAIL G
33
JACK L. HOLLAND
LATERAL 'V' DITCH SEE DETAIL H
LATERAL 'V' DITCH SEE DETAIL G
CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
REMOVE 10" RCP
WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-E
BURY 1.0'
FILL IN WETLAND
MECHANIZED CLEARING
THE UNITED STATES OF AMERICA
4
CL B RIP RAP EST. 5 TONS EST. 16 SY GEOTEXTILE
ENLARGEMENT (3X)
MECHANIZED CLEARING
FILL IN WETLAND
SITE 4
SITE 8

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL G LATERAL 'V' DITCH (Not to Scale)
Min. D= 1.0 Ft.
b= 5.0 Ft.
–L– STA. 66+00 to STA. 78+30 LT DDE=439 CY
–L– STA. 81+50 TO STA. 83+50 LT DDE=47 CY

DETAIL I SPECIAL CUT DITCH (Not to Scale)
Min. D=1.0 Ft.
–DRV2A– STA. 10+25 TO STA. 11+20 RT

DETAIL K SPECIAL CUT DITCH (Not to Scale)
Min. D=1.0 Ft.
–DRV2– STA. 9+35 TO STA. 11+13 RT

DETAIL H LATERAL 'V' DITCH (Not to Scale)
Min. D=1.0 Ft.
b=5.0 Ft.
–L– STA. 83+50 TO STA. 86+50 LT
DDE=219 CY

DETAIL J LATERAL 'V' DITCH (Not to Scale)
Min. D= 0.5 Ft.
b= 5.0 Ft.
–L– STA. 86+50 to STA. 89+00 LT
DDE=30 CY

DETAIL AF SPECIAL LATERAL 'V' DITCH (Not to Scale)
Min. D= VAR.
–DRV2A– STA. 10+50 TO STA. 11+25 (LT)

R/W REVISION 01-06-14 (DWG) - ADDED R/W AND REVISED THE TCE AND PUE ON PARCEL 32 (RACHEL M.EUBANK), PARCEL 33 (JACK L.HOLLAND), AND PARCEL 34 (WEYERHAEUSER COMPANY) FOR THE REVISED 20' WIDTH OF -DRV2- AND -DRV2A-.

REVISIONS

8/17/99

4/23/2014
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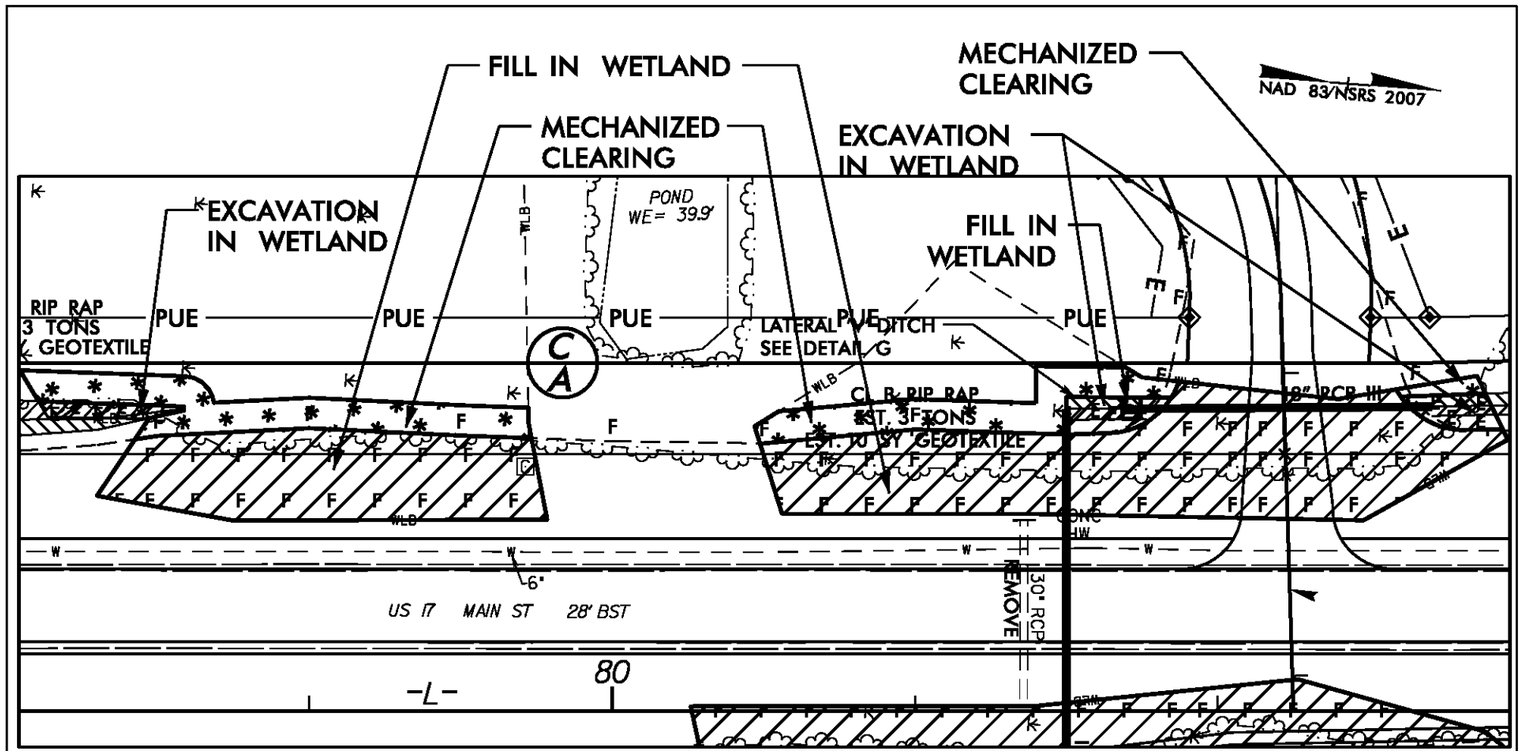
$$$$$$$SYSTIMES$$$$$
$$$$$$$DGNSIZE$$$$$
$$$$$$$MECHANICS$$$$$



SITE 7 ENLARGEMENT

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50'
GRAPHIC SCALE

NCDOT

DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.1 (R-2514C)
US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-28

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 23 OF 62

DRY2
SHEAR LINE

82+05.00
D.P. 49.13
3784

81+50.00
D.P. 48.40
3806
EL. = 37.90

CLEARING LIMITS
WLB
WLB
CLEARING LIMITS

81+00.00
D.P. 47.78
3819

80+50.00
D.P. 47.61
3843

80+00.00
D.P. 47.44
3892

-4-

2/6/2014
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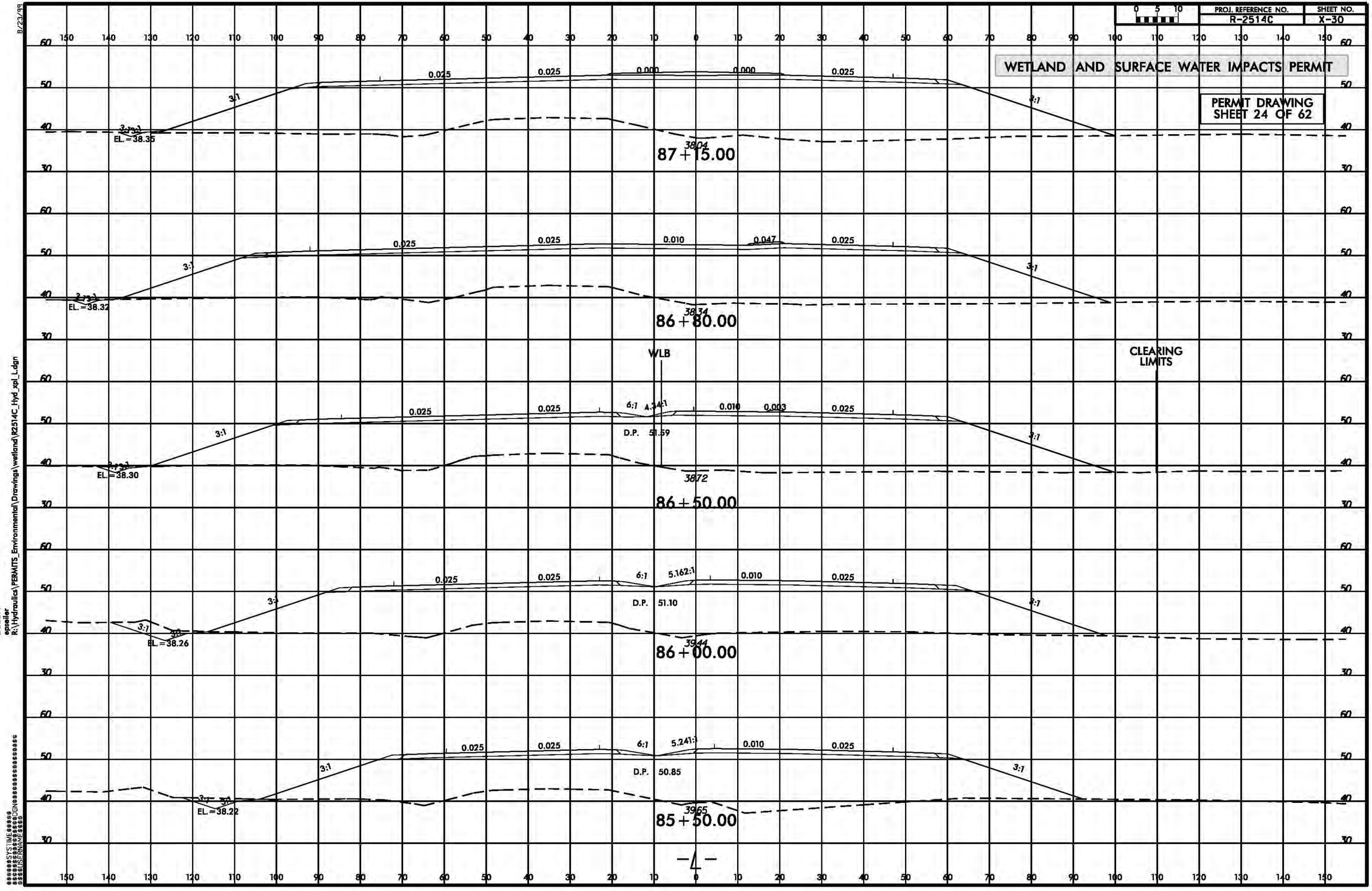
$$$$$$SYSTIME$$$$$
$$$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-30

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 24 OF 62



8/23/99
2/6/2014
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8/17/99

REVISIONS

2/24/2014
beanderson
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$$$$$$$$SYSTIMES$$$$$$$$
$$$$$$$$DGNSETTINGS$$$$$$$$
$$$$$$$$XREFNAMES$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

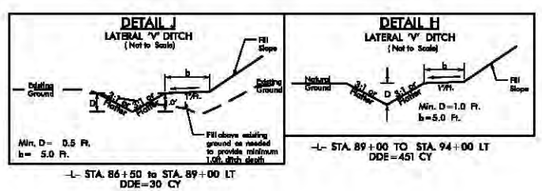
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 25 OF 62

ENGLISH

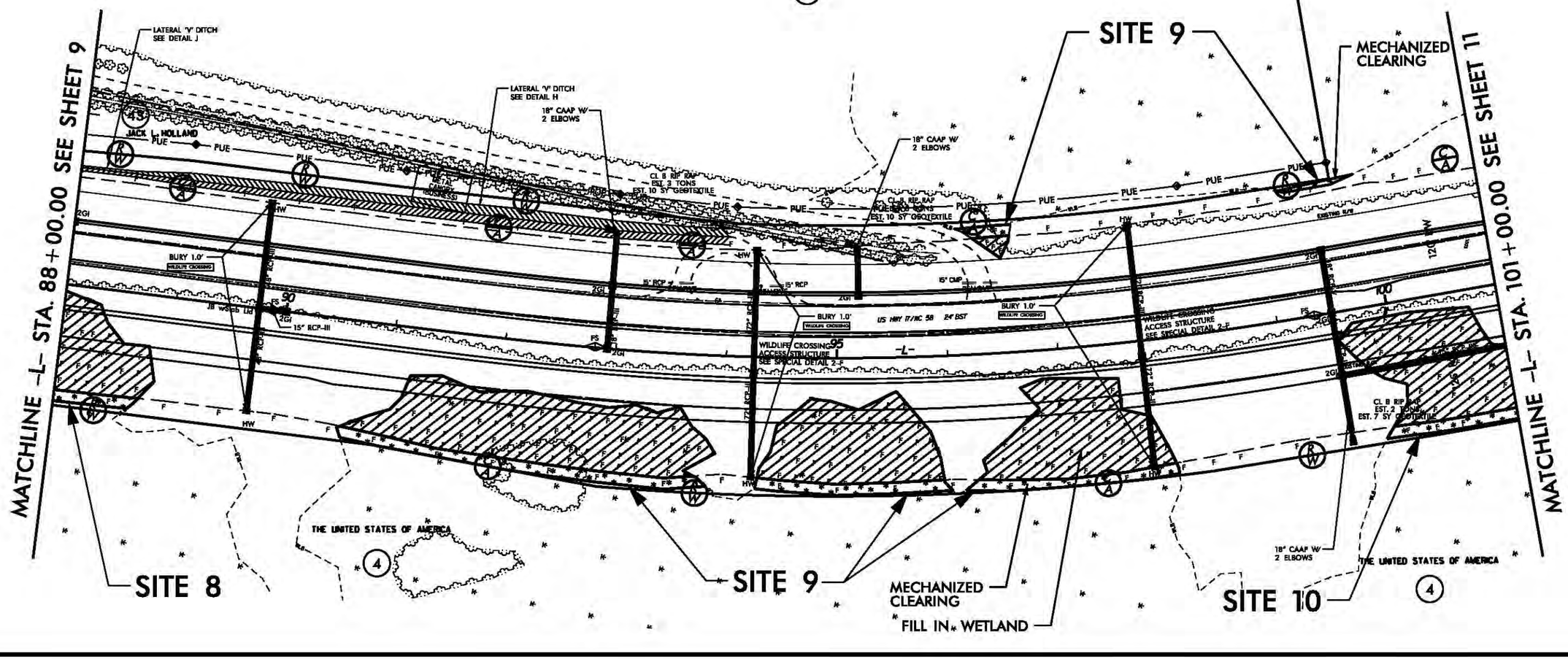
100' 0' 100'
GRAPHIC SCALE

NAD 83/NSRS 2007



F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING



WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 26 OF 62

ENGLISH

GRAPHIC SCALE 100' 0' 100'

NAD 83/NSRS 2007

DETAIL J
LATERAL "V" DITCH
(Not to Scale)

Min. D= 0.5 Ft.
b= 5.0 Ft.

-L- STA. 86+50 to STA. 89+00 LT
DDE=30 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)

Min. D=1.0 Ft.
b=5.0 Ft.

-L- STA. 89+00 TO STA. 94+00 LT
DDE=451 CY

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

MATCHLINE -L- STA. 88+00.00 SEE SHEET 9

MATCHLINE -L- STA. 101+00.00 SEE SHEET 11

SITE 8

SITE 9

SITE 9

SITE 10

MECHANIZED CLEARING

MECHANIZED CLEARING

FILL IN WETLAND

WEYERHAEUSER COMPANY

WEYERHAEUSER COMPANY

THE UNITED STATES OF AMERICA

THE UNITED STATES OF AMERICA

JACK L. HOLLAND

LATERAL "V" DITCH SEE DETAIL J

LATERAL "V" DITCH SEE DETAIL H

18" CAAP W/ 2 ELBOWS

18" CAAP W/ 2 ELBOWS

18" CAAP W/ 2 ELBOWS

PUE

BURY 1.0' WILDLIFE CROSSING

WILDLIFE CROSSING AGGRESS. STRUCTURE SEE SPECIAL DETAIL 2

WILDLIFE CROSSING AGGRESS. STRUCTURE SEE SPECIAL DETAIL 1

US HWY. 17 (NC 30) SR RST

15" RCP III

CL II RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL II RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

EXISTING PIPE

REVISIONS

4/23/2014
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$$$$$$$SYSTIMES$$$$$$$
$$$$$$$

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0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-34

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 27 OF 62

97+00.00

CLEARING LIMITS

WLB

WLB

CLEARING LIMITS

B 0.050 5.264:1 6:1 0.050 E

3:1

3:1

D.P. 53.62

3977

96+50.00

B 0.050 5.447:1 6:1 0.050 E

3:1

3:1

D.P. 53.24

3989

96+00.00

B 0.050 5.579:1 6:1 0.050 E

3:1

3:1

D.P. 52.85

3949

95+50.00

B 0.050 5.642:1 6:1 0.050 E

3:1

3:1

D.P. 52.55

3912

95+00.00

B 0.050 5.642:1 6:1 0.050 E

3:1

3:1

D.P. 52.38

3940

-4-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

60 50 40 30

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REVISIONS

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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 28 OF 62

ENGLISH

100' 0' 100'
GRAPHIC SCALE

NAD 83/NSRS 2007

CHORD

WEYERHAEUSER COMPANY

34

REMOVE EXISTING ROADWAY UNDER PROPOSED BRIDGE AND GRADE TO DRAIN

EXCAVATION IN WETLAND

SITE 11

MECHANIZED CLEARING

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

LATERAL 3' BASE DITCH SEE DETAIL E

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

34

WEYERHAEUSER COMPANY

MATCHLINE -L- STA. 101+00.00 SEE SHEET 10

MATCHLINE -L- STA. 115+00.00 SEE SHEET 12

PUE

HW

CONC HW

15" CMP REMOVE

WILDLIFE CROSSING BURY 1.0'

US HWY 17/NC 58 24" BST

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-F

-L-

105

110

2GI

FS

RT

LT

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

4

THE UNITED STATES OF AMERICA

4

LATERAL "V" DITCH SEE DETAIL H

18" CAAP W/ 2 ELBOWS

FILL IN WETLAND

MECHANIZED CLEARING

SITE 10

BM #4
SEE SHEET 1-E
ELEV. 88.91'

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 Max. Fill Slope, 17ft., b, D, B

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)

Natural Ground, 3:1 Max. Fill Slope, 17ft., b, D

Min. D=1.0 Ft.
b=5.0 Ft.

-L- STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

SYSTIMESSSSS
DGNSSSSSSSSS
MICROSTATIONSSS

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 29 OF 62

ENGLISH

GRAPHIC SCALE 100' 0' 100'

NAD 83/NSRS 2007

CHORD

WEYERHAEUSER COMPANY

REMOVE EXISTING ROADWAY UNDER PROPOSED BRIDGE AND GRADE TO DRAIN

EXCAVATION IN WETLAND

SITE 11

MECHANIZED CLEARING

CL B RIP RAP EST. 9 TONS EST. 10 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

LATERAL 3' BASE DITCH SEE DETAIL E

CL B RIP RAP EST. 9 TONS EST. 10 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

WEYERHAEUSER COMPANY

MATCHLINE –L– STA. 101+00.00 SEE SHEET 10

MATCHLINE –L– STA. 115+00.00 SEE SHEET 12

US HWY 17/NC 58 BY-BST

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-F

BURY 1.0'

2GI

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

LATERAL 'V' DITCH SEE DETAIL H

FILL IN WETLAND

MECHANIZED CLEARING

SITE 10

SEE SHEET 12 FOR CONTINUATION ELEV. 38.9

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Min. D=1.0 Ft.
b=5.0 Ft.

–L– STA. 114+87 TO STA. 115+10 LT
SDE=9 CY

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

8/17/99

REVISIONS

4/23/2014
epseiler
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SYSTIMESSSSS
DGNSSSSSSSSS
USERNAMESSSS

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-39

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 30 OF 62

106 + 00.00

105 + 50.00

105 + 00.00

104 + 50.00

104 + 00.00

WLB

CLEARING LIMITS

8/23/99

2/6/2014
epseller
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$$\text{USERNAME}\text{DESIGN}\text{SETTINGS}$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 31 OF 62

NAD 83/NSRS 2007

ENGLISH

100' 0' 100'
GRAPHIC SCALE

MATCHLINE –L– STA. 115+00.00 SEE SHEET 11

MATCHLINE –L– STA. 129+00.00 SEE SHEET 13

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

WEYERHAEUSER COMPANY

34

LATERAL 3' BASE DITCH SEE DETAIL E

35

HOLIDAY LODGE, INC

SEPTIC SYSTEM

ISFD

GLENN ALLEN

36

MECHANIZED CLEARING

JESSE JAMES, ET UX

37

ELNITA SCOTT

38

39

JOSEPH L. JACKSON, ET UX
DB 3019 PG 157

EXCAVATION IN WETLAND

SITE 13

REMOVE 15" RCP

REMOVE 15" RCP

REMOVE 15" RCP

REMOVE 15" RCP

BURY 1.0' WILDLIFE CROSSING

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-E

US HWY 17/NC 58 24' EST

120 -L- 125

18" RCP-III

2GI

FS

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

4

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

4

TOE

STANDARD 3' BASE DITCH SEE DETAIL L EST. 37 C.Y. DDE

TIE TO EXISTING DITCH

LATERAL 'V' DITCH SEE DETAIL H

FILL IN WETLAND

MECHANIZED CLEARING

SITE 12

SITE 13

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 Slope, D, 3:1 Slope, b, 1'Ft., Fill Slope, B
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)

Natural Ground, 3:1 Slope, D, 3:1 Slope, b, 1'Ft., Fill Slope
Min. D=1.0 Ft.
b=5.0 Ft.

-L- STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

DETAIL L
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground, B
Min. D= VAR.
B= 3.0 Ft.

-L- STA. 115+15 RT

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

E E DENOTES EXCAVATION IN WETLAND

8/17/99

REVISIONS

2/24/2014
beanderson
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$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNNAME$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 32 OF 62

NAD 83/NSRS 2007

ENGLISH

100' 0' 100'
GRAPHIC SCALE

MATCHLINE –L– STA. 115+00.00 SEE SHEET 11

MATCHLINE –L– STA. 129+00.00 SEE SHEET 13

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

WEYERHAEUSER COMPANY

LATERAL 3' BASE DITCH SEE DETAIL E

HOLIDAY LODGE, INC

SEPTIC SYSTEM

GLENN ALLEN

MECHANIZED CLEARING

JESSE JAMES, ET UX

ELNITA SCOTT

JOSEPH L. JACKSON, ET UX DB 3019 157

EXCAVATION IN WETLAND

SITE 13

REMOVE 15" RCP

BURY 1.0' (WILDLIFE CROSSING)

US HWY 17/NC 58 24' EST

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL

18" RCP-III

2GI

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

4

TOE

STANDARD 3' BASE DITCH SEE DETAIL L EST. 37 C.Y. DDE

TIE TO EXISTING DITCH

LATERAL 'V' DITCH SEE DETAIL H

FILL IN WETLAND

MECHANIZED CLEARING

SITE 12

SITE 13

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA

4

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 Slope, D, B, 3:1 Slope, 1'Ft., Fill Slope

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)

Natural Ground, D, 3:1 Slope, b, 1'Ft., Fill Slope

Min. D=1.0 Ft.
b=5.0 Ft.

-L- STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

DETAIL L
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground, B

Min. D= VAR.
B= 3.0 Ft.

-L- STA. 115+15 RT

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

E E DENOTES EXCAVATION IN WETLAND

8/17/99

REVISIONS

2/24/2014
beanderson
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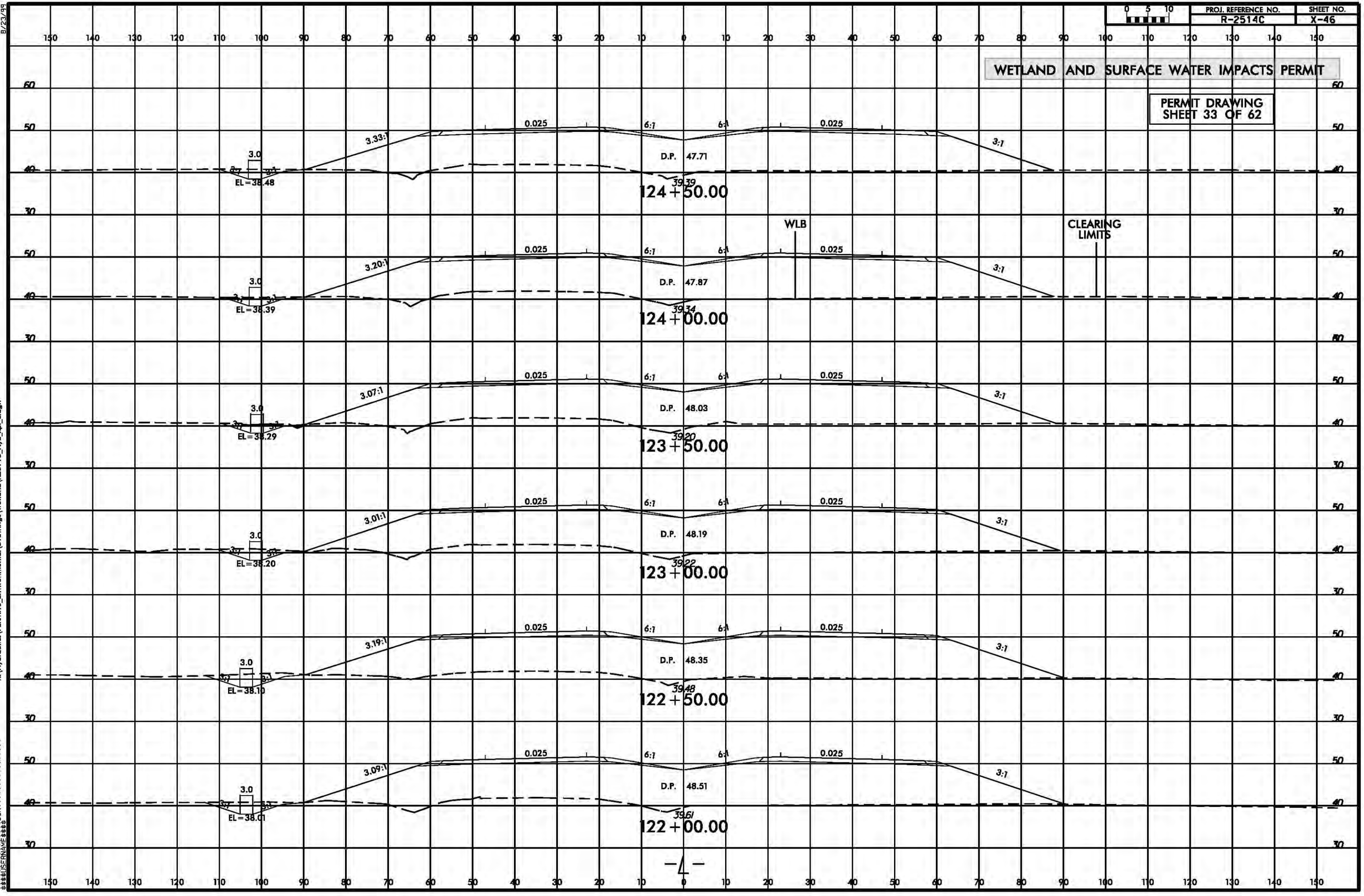
$$$$$$$$SYSTEM$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$USERNAME$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 33 OF 62



B/23/99
2/6/2014
epsaller
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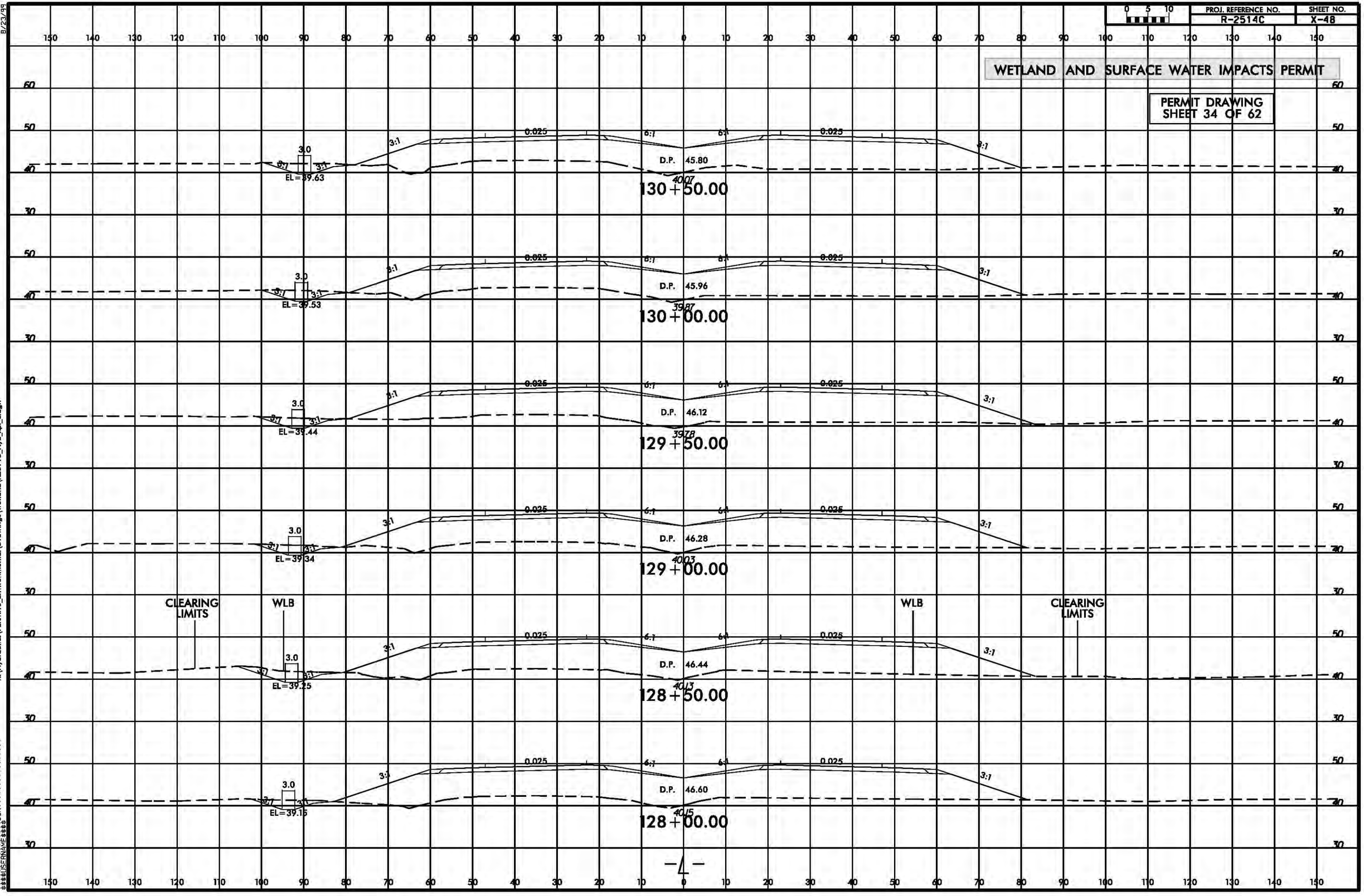
$$$$$$$$SYSTEM$$$$$$
$$$$$$$$LINE$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$
$$$$$$$USERNAME$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 34 OF 62



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2/6/2014 epsaller R:\Hydraulics\PERMITS_Environmental\Drawings\wetland\R2514C_Hyd_xpl_L.dgn
$$SYSTIME$$ $$DGN$$ $$USERNAME$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 35 OF 62

ENGLISH

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

SITE 13

MECHANIZED CLEARING

MATCHLINE -L- STA. 129+00.00 SEE SHEET 12

MATCHLINE -L- STA. 141+00.00 SEE SHEET 14

ELMYA SCOTT (38)

JOSEPH L. JACKSON, ET UX (39)

JAMES V. BENDER, JR. (40)

JANE FRANCES JONES, ET VIR (41)

OTIS A. SIMMONS, ET AL (42)

EDWARD EARL DUDLEY, ET UX (44)

STEPHEN SHORT, ET UX (45)

JAMES V. BENDER, JR. (46)

CHARLES W. JONES, ET UX (47)

BERNARD C. JONES, SR. (48)

MARY W. DAVIS
CRISSIE SIMMONS (49)

PERNELLE G. SMITH, ET UX (50)

LATERAL 3' BASE DITCH
SEE DETAIL E

ISFD (ABAND)

SEPTIC SYSTEM

CONC

PUE

CHORD

-L- 135

-L- 140

-L- 130

US HWY 17/NC 58 24' BST

15" RCP

18" RCP

18" RCP-III

2GI

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

Q10=4.3cfs
V10=1.8fps

MECHANIZED CLEARING

FILL IN WETLAND

ENLARGEMENT (3X)

HISTORIC* PROPERTY
ELIGIBLE FOR NRHP*
J. MANLY FOSCUE, JR. (43)

SITE 14

THE UNITED STATES OF AMERICA (4)

E E

MECHANIZED CLEARING

EXCAVATION IN WETLAND

ENLARGEMENT (8X)

SITE 13

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground

3:1 or Flatter

D

B

1'Ft.

Fill Slope

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

E E DENOTES EXCAVATION IN WETLAND

REVISIONS

8/17/99

4/23/2014
epseiler
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$$$$$$$SYSTIME$$$$$$$
$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 36 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH

GRAPHIC SCALE 100' 0' 100'

NAD 83/NSRS 2007

SITE 13

SITE 14

MATCHLINE -L- STA. 129+00.00 SEE SHEET 12

MATCHLINE -L- STA. 141+00.00 SEE SHEET 14

STEPHEN SHORT, ET UX

CHARLES W. JONES, ET UX

JAMES V. BENDER, JR.

BERNARD JONES, SR.

OTIS A. SIMMONS, ET AL

ELMYA SCOTT

JOSEPH L. JACKSON, ET UX

JAMES V. BENDER, JR.

ANN FRANCES JONES, ET VIR

EDWARD EARL DUDLEY, ET UX

MARY W. DAVIS
CRISSIE SIMMONS

HAYLE H. SMITH, ET UX

THE UNITED STATES OF AMERICA

HISTORIC* PROPERTY
ELIGIBLE FOR NRHP
J. MANLY FOSCUE, JR.

LATERAL 3' BASE DITCH
SEE DETAIL E

MECHANIZED CLEARING

FILL IN WETLAND

ENLARGEMENT (3X)

EXCAVATION IN WETLAND

ENLARGEMENT (8X)

CHORD

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

Q10=4.3cfs
V10=1.8fps

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA 104+50 to STA 142+00 LT
DDE=4025 CY

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES EXCAVATION IN WETLAND

REVISIONS

8/17/99

4/23/2014
epseller
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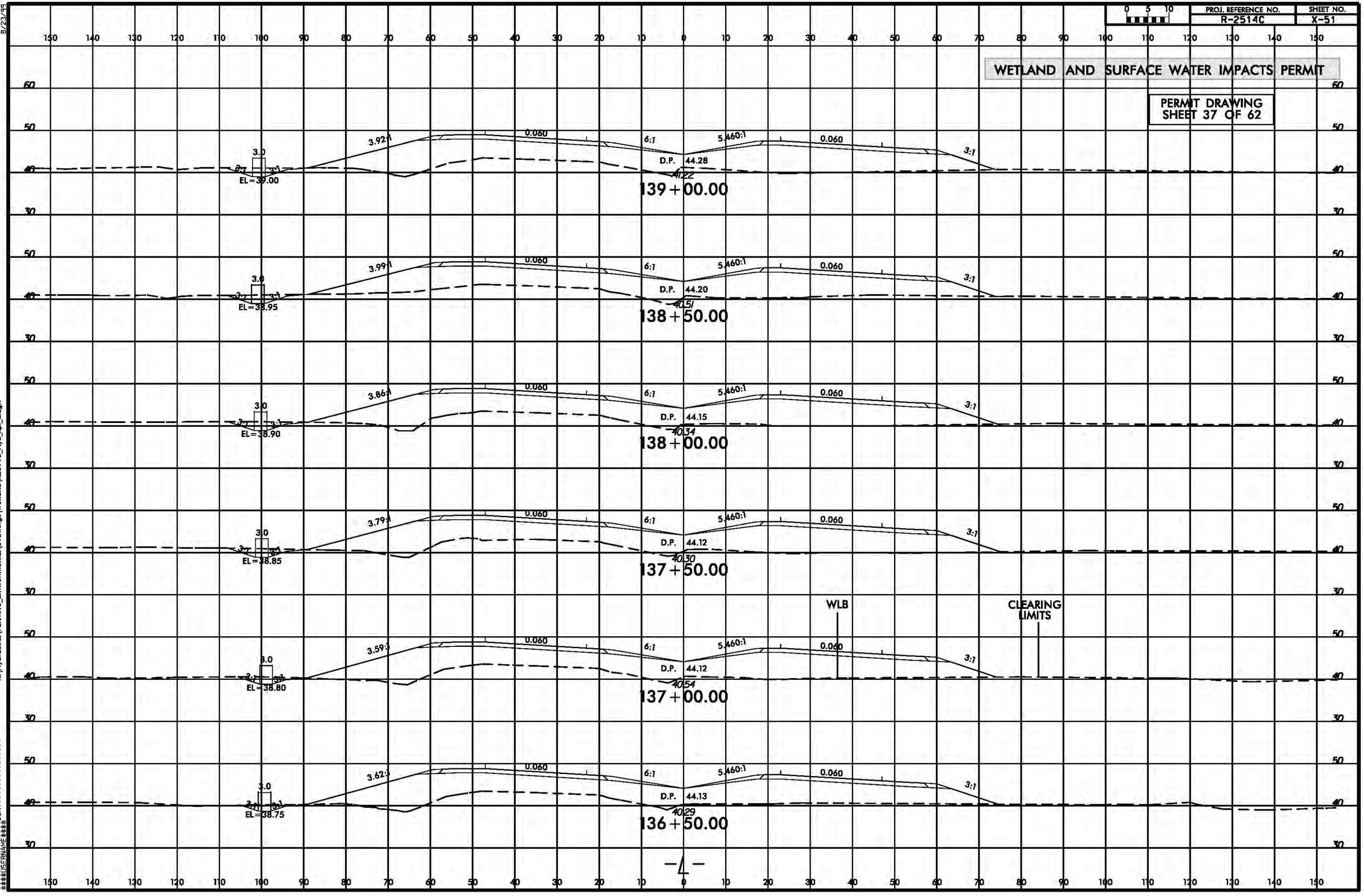
$$$$$$$SYSTEM$$$$$$$
$$$$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-51

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 37 OF 62



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2/6/2014
epsaller
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$SYSTIME$ DGN $USERNAME$

ENGLISH

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 38 OF 62

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

SITE 15

EXCAVATION IN WETLAND

ANNIE R. PAGE

VERONICA M. PAGE

ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS, ET UX

51 ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS

WILLIE G. SMITH, ET UX

50

52 WILLIAM E. HASSELL

53 SHERRY M. JARMAN

54 MAZIE B. ISLER

55 MARY SIMMONS-ISLER, ET AL

56 TYRONE SMITH

57 JAMES V. BENDER, JR.

59 DAWN M. PAGAN, ET VIR

61 TALMAGE DOCKERY, ET AL

60 MOULTRE L. SPENCER

58 BLUE ROCK STRUCTURES, INC.

43 J. MANLY FOSCUE, JR.

MATCHLINE -L- STA. 141+00.00 SEE SHEET 13

MATCHLINE -L- STA. 154+00.00 SEE SHEET 15

SITE 14

FILL IN WETLAND

MECHANIZED CLEARING

EXCAVATION IN WETLAND

ENLARGEMENT (4X)

TIE EXISTING DITCH TO PROPOSED DITCH

LATERAL "V" DITCH SEE DETAIL H

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL C

SEPTIC SYSTEM

ISBKD

ISFD

CONC

PUE

RW

CA

18" RCP REMOVE

15" HDPE REMOVE

18" RCP REMOVE

24" BST

US HWY 17/NC 58

145

-L-

150

72" CHL & 358W

SEPTIC SYSTEM W/ CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

2CMP 18" RCP REMOVE 18" RAP

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

E E DENOTES EXCAVATION IN WETLAND

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1 Slope, D, 2:1 Slope, B, b, 1'VR., Fill Slope
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 104+50 to STA. 142+00 LT DDE=4025 CY
-L- STA. 147+00 to STA. 151+50 LT DDE=264 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1 Slope, D, 2:1 Slope, B, b, 1'VR., Fill Slope
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)
Natural Ground, 2:1 Slope, D, 2:1 Slope, b, 1'VR., Fill Slope
Min. D=1.0 Ft.
b=5.0 Ft.
-L- STA. 151+39 TO STA. 156+50 RT
DDE=261 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)
Existing Ground, D, 2:1 Slope, B, b, 1'VR., Fill Slope, Existing Ground
Min. D= VAR.
B= 3.0 Ft.
b= 5.0 Ft.
Fill above existing ground as needed to provide minimum 1.0ft. ditch depth
-L- STA. 142+00 to STA. 147+00 LT
DDE=202 CY

REVISIONS

8/17/99

2/6/2014
epseller
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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 39 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

SITE 15

EXCAVATION IN WETLAND

SITE 14

FILL IN WETLAND

MECHANIZED CLEARING

EXCAVATION IN WETLAND

FILL IN WETLAND

ENLARGEMENT (4X)

TIE EXISTING DITCH TO PROPOSED DITCH

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL C

MATCHLINE –L– STA. 141+00.00 SEE SHEET 13

MATCHLINE –L– STA. 154+00.00 SEE SHEET 15

ANNE R. PAIGE

ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS, LIX

VERONICA M. PAIGE

51 ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS

WILLIE G. SMITH, ET UX

50

WILLIAM E. MISSELL

52

SHERRY M. JARMAN

53

MAZIE B. ISLER

54

MARY SIMMONS-ISLER, ET AL

55

JAMES V. BENDER, JR.

57

TYRONE SMITH

56

DAWN M. PAGAN, ET VIR

59

TALMAGE DOCKERY, ET AL

61

MOULTRE L. SPENCER

60

J. MANLY FOSCUE, JR.

43

BLUE ROCK STRUCTURES, INC.

58

SEPTIC SYSTEM

ISD/LD

ISFD

CONC

PUE

RW

EP

REMOVE

US HWY 17/NC 58 – 2nd EST

F / F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

E / E DENOTES EXCAVATION IN WETLAND

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 104+50 to STA. 142+00 LT DDE=4025 CY
–L– STA. 147+00 to STA. 151+50 LT DDE=264 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 151+00 to STA. 181+00 LT
DDE=6255 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Min. D=1.0 Ft.
b=5.0 Ft.

–L– STA. 151+39 TO STA. 156+50 RT
DDE=261 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)

Min. D= VAR.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 142+00 to STA. 147+00 LT
DDE=202 CY

REVISIONS

8/17/99

2/6/2014
epseller
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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-53

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 40 OF 62

CLEARING LIMITS

WLB

WLB

WLB

CLEARING LIMITS

144 + 50.00

3.0

3:1

3:1

BL=37.94

0.013

3:1

6:1

6:1

0.025

3:1

D.P. 45.30

3975

144 + 00.00

3.0

3:1

3:1

BL=38.12

0.025

3:1

6:1

5.955:1

0.028

3:1

D.P. 45.29

4055

143 + 50.00

3.0

3:1

3:1

EL=38.30

0.038

3:1

6:1

5.853:1

0.038

3:1

D.P. 45.23

4024

143 + 00.00

3.0

3:1

3:1

EL=38.48

0.060

3.10:1

6:1

5.635:1

0.050

3:1

D.P. 45.15

4115

142 + 61.44

3.0

3:1

3:1

EL=38.62

0.060

3.06:1

6:1

5.460:1

0.060

3:1

D.P. 45.07

4003

142 + 50.00

3.0

3:1

3:1

EL=38.66

0.060

3.09:1

6:1

5.460:1

0.060

3:1

D.P. 45.06

3994

-L-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

60 50 40 30

8/23/99

2/6/2014
epsaller
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$$$$$$$FILENAME$$$$$
$$$$$USERNAME$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 41 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

SITE 16

EXCAVATION IN WETLAND

MATCHLINE –L– STA. 154+00.00 SEE SHEET 14

MATCHLINE –L– STA. 168+00.00 SEE SHEET 16

WILBER STRAYHORN, ET UX C/O DORIS HUMPHREY

WILLIAM YOUNG C/O JERVENS YOUNG

FANNIE FORRESTER

ERNEST HILL, JR., ET UX

EDDIE HUMPHREY

TALMAGE DOCKERY, ET AL

JACK L. BROWN, ET UX

CHRISTINE DUDLEY MORRIS

LINWOOD WILLIAMS HEIRS

MARY L. WHITE

CHARLES HARGETT

LONELL MATTOCKS, ET UX

JAMES V. BENDER, JR.

HENRY LEE BROWN

ALEXANDER SMITH, III

VAN S. SMITH

HENRY D. SMITH

FLORETTA BRYANT, ET VIR

LATERAL 3' BASE DITCH SEE DETAIL C

CLASS B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

CLASS B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

US HWY 17/NC 58 24' BST

REMOVE SYSTEM

15" RCP-III

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL M

LATERAL 'V' DITCH SEE DETAIL N

WILLIAM F. DUDLEY

MABEL S. WEAVER

BLUE ROCK STRUCTURES, INC.

JOSEPH BRYANT, ET UX

LOUISE MURRELL FOYE, ET AL C/O ROBERT HORRY

LEVY MOORE, ET UX

MATTHEW MOORE, JR., ET UX

FILL IN WETLAND

MECHANIZED CLEARING

SITE 16

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES EXCAVATION IN WETLAND

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)
Min. D=1.0 Ft.
b=5.0 Ft.
–L– STA. 151+39 TO STA. 156+50 RT DDE=261 CY
–L– STA. 158+25 TO STA. 158+90 RT DDE=22 CY

DETAIL M
LATERAL 'V' DITCH
(Not to Scale)
Min. D=1.5 Ft.
b=5.0 Ft.
–L– STA. 156+50 TO STA. 158+25 RT
DDE=147 CY

DETAIL N
LATERAL 'V' DITCH
(Not to Scale)
Min. D=2.0 Ft.
b=5.0 Ft.
–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

REVISIONS

8/17/99

4/23/2014
epseller
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 42 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

SITE 16

EXCAVATION IN WETLAND

FILL IN WETLAND

MECHANIZED CLEARING

MATCHLINE –L– STA. 154+00.00 SEE SHEET 14

MATCHLINE –L– STA. 168+00.00 SEE SHEET 16

WILBER STRAYHORN, ET UX C/O DORIS HUMPHREY (61)
TALMAGE DOCKERY, ET AL (62)
CODIE HUMPHREY (63)
EARNEST HILL, JR., ET UX (64)
FANNIE FORRESTER (65)
WILLIAM YOUNG C/O JERVENS YOUNG
JACK L. BROWN, ET UX
CHRISTINE DUDLEY MORRIS
LINWOOD WILLIAMS-HEIRS (68)
CHARLES HARGETT (70)
MARY L. WHITE (67)
LONELL MATTOCKS, ET UX (71)
JAMES V. BENDER, JR. (77)
EARNEST HILL, JR. (80)
ALEXANDER SMITH, III (84)
VAN S. SMITH (86)
HENRY D. SMITH (89)
FLORETTA BRYANT, ET VIR (91)
BLUE ROCK STRUCTURES, INC. (58)
WILLIAM F. DUDLEY (66)
MABEL S. WEAVER (69)
MABEL S. WEAVER, ET VIR (69)
JANE B. SMALLWOOD, JR. (72)
MABEL S. WEAVER, ET VIR (73)
JAMES NELSON SMALLWOOD (74)
JANE B. SMALLWOOD, JR. (75)
CARL BRUCE BOONE (76)
ROSA LEE WILLIAMS (78)
ELIZABETH EVANS FRANKS (79)
JAMES NELSON SMALLWOOD (81)
MABEL S. WEAVER (83)
ARRELL DUDLEY, ET UX (85)
LOUISE MURRELL FOYE, ET AL C/O ROBERT HORRY (88)
JOSEPH BRYANT, ET UX (87)
LEVY MOORE, ET UX
MATTHEW MOORE, JR., ET UX (90)

HENRY LEE BOONE

LATERAL 3' BASE DITCH SEE DETAIL C

CLASS B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

CLASS B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

LATERAL "V" DITCH SEE DETAIL H

LATERAL "V" DITCH SEE DETAIL M

LATERAL "V" DITCH SEE DETAIL N

48" RCP-III

15" RCP-III

REMOVE SYSTEM

US HWY 17/NC 58 – 84' BST

72" CMP & 3SBW

2SBKBUS

ISBLKD

ISFD

HTR (ABAND)

HTR

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES EXCAVATION IN WETLAND

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Min. D = 2.0 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
–L– STA. 181+50 to STA. 181+00 LT DDE=6255 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)
Min. D=1.0 Ft.
b=5.0 Ft.
–L– STA. 151+39 TO STA. 156+50 RT DDE=261 CY
–L– STA. 158+25 TO STA. 158+90 RT DDE=22 CY

DETAIL M
LATERAL "V" DITCH
(Not to Scale)
Min. D=1.5 Ft.
b=5.0 Ft.
–L– STA. 156+50 TO STA. 158+25 RT DDE=147 CY

DETAIL N
LATERAL "V" DITCH
(Not to Scale)
Min. D=2.0 Ft.
b=5.0 Ft.
–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

REVISIONS

8/17/99

4/23/2014
epseller
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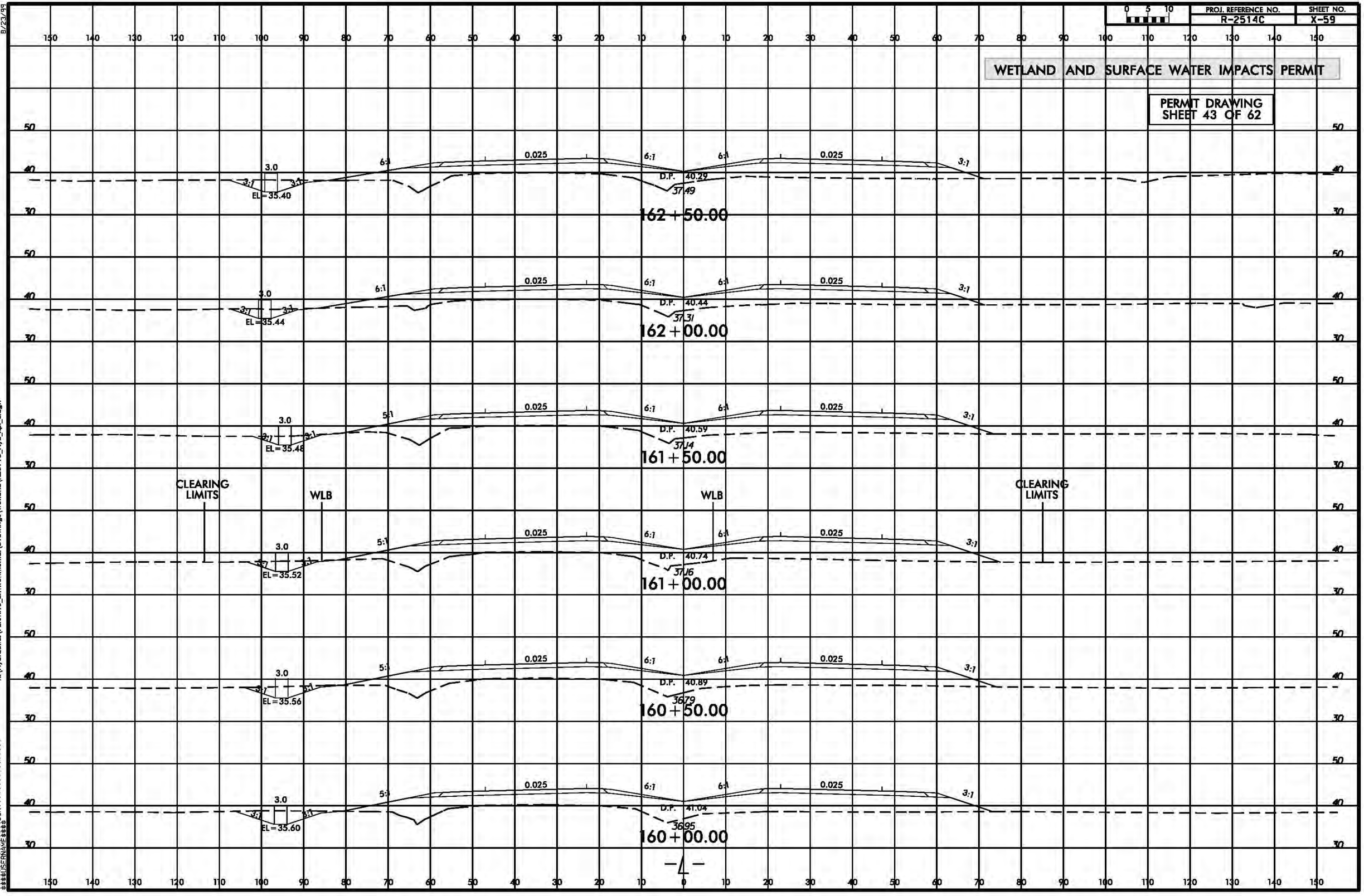
$$$$SYSTEM$$$$
$$$$DESIGNFILE$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 43 OF 62



B/23/99

2/6/2014
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$USERNAME$$$$
$$$$SYSTIME$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 44 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCHLINE -L- STA. 168+00.00 SEE SHEET 15

MATCHLINE -L- STA. 182+00.00 SEE SHEET 17

SITE 17
(SEE ENLARGEMENT SHEET 46)

MECHANIZED CLEARING
FILL IN WETLAND
EXCAVATION IN WETLAND

IMPACTS IN SURFACE WATER

SITE 17
(SEE ENLARGEMENT SHEET 46)

SITE 18
(SEE ENLARGEMENT SHEET 47)

IMPACTS IN SURFACE WATER

TEMP. IMPACTS IN SURFACE WATER

HISTORIC PROPERTY ELIGIBLE FOR NRHP

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL P
CHANNEL CHANGE
(Not to Scale)
Min. D= 2.5 Ft.
Max. d= 2.5 Ft.
Min. B= 5.0 Ft.
Min. b= 10.0 Ft.
Type of Liner= Class B Rip Rap

DETAIL O
SPECIAL CUT DITCH
(Not to Scale)
Min. D= VAR.
-L- STA. 174+50 TO STA. 175+50 (RT)

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 181+00 to STA. 185+50 LT
DDE=744 CY

DETAIL Q
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
Type of Liner= Class B Rip-Rap
-L- STA. 180+76 RT

DETAIL N
LATERAL 'V' DITCH
(Not to Scale)
Min. D=2.0 Ft.
b=5.0 Ft.
-L- STA. 164+50 to STA. 173+17 RT DDE=964 CY

DETAIL R
MEDIAN 'V' DITCH
(Not to Scale)
-L- STA. 181+80 TO STA. 186+00 MED

8/17/99
REVISIONS
4/23/2014
speeller
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$$$$$$SYSTIME$$$$$$
$$$$$$DGNSPACENAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 45 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCHLINE –L– STA. 168+00.00 SEE SHEET 15

MATCHLINE –L– STA. 182+00.00 SEE SHEET 17

SITE 17
(SEE ENLARGEMENT SHEET 46)

MECHANIZED CLEARING
FILL IN WETLAND
EXCAVATION IN WETLAND

IMPACTS IN SURFACE WATER

SITE 17
(SEE ENLARGEMENT SHEET 46)

SITE 18
(SEE ENLARGEMENT SHEET 47)

IMPACTS IN SURFACE WATER

TEMP. IMPACTS IN SURFACE WATER

HISTORIC PROPERTY ELIGIBLE FOR NRHP

BENJAMIN BROWN, ET UX

CYNTHIA D. YOUNG, ET VIR

FLORETTA BRYANT, ET VIR

EDWARD L. BRYANT, ET UX

JAMES HENRY BRYANT

WILLIE L. BRYANT, ET UX

WILLIE L. BRYANT, ET UX

WILLIE L. BRYANT, ET UX

WEYERHAEUSER COMPANY

MATTHEW MOORE, JR., ET UX

RICHARD L. HARRELL, ET UX

ESTELLA BURGE

ESTELLA BURGE

ELEANOR J. JACKSON, ET VIR

EVELYN D. WILLIE, ET VIR

SUE BOWLING FOSCUE

REMOVE FOOT BRIDGE

LATERAL 3' BASE DITCH SEE DETAIL C

MEDIAN 'V' DITCH SEE DETAIL R

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL O

CHANNEL CHANGE W/ CLASS B RIP RAP SEE DETAIL P

STANDARD 2' BASE DITCH W/CLASS B RIP RAP SEE DETAIL Q
EST. 4 C.Y. DDE
EST. 10 TONS RIP RAP
EST. 15 S.Y. F.G.

C. I RIP RAP
EST. 33 TONS
EST. 62 SY GEOTEXTILE

US 17/NC-58 -SY- DST

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
b= 3.0 Ft.
B= 5.0 Ft.

–L– STA. 151+50 to STA. 161+00 LT
DDE=628S CY

DETAIL P
CHANNEL CHANGE
(Not to Scale)

Min. D= 2.5 Ft.
Max. d= 2.5 Ft.
Min. B= 5.0 Ft.
Min. b= 10.0 Ft.

Type of Liner= Class B Rip Rap

DETAIL O
SPECIAL CUT DITCH
(Not to Scale)

Min. D= VAR.

–L– STA. 174+50 TO STA. 175+50 (RT)

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
b= 3.0 Ft.
B= 5.0 Ft.

–L– STA. 181+00 to STA. 185+50 LT
DDE=744 CY

DETAIL Q
STANDARD BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.

Type of Liner= Class B Rip-Rap
–L– STA. 180+76 RT

DETAIL N
LATERAL 'V' DITCH
(Not to Scale)

Min. D=2.0 Ft.
b=5.0 Ft.

–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

DETAIL R
MEDIAN 'V' DITCH
(Not to Scale)

–L– STA. 181+80 TO STA. 186+00 MED

REVISIONS

8/17/99

4/23/2014
speiller
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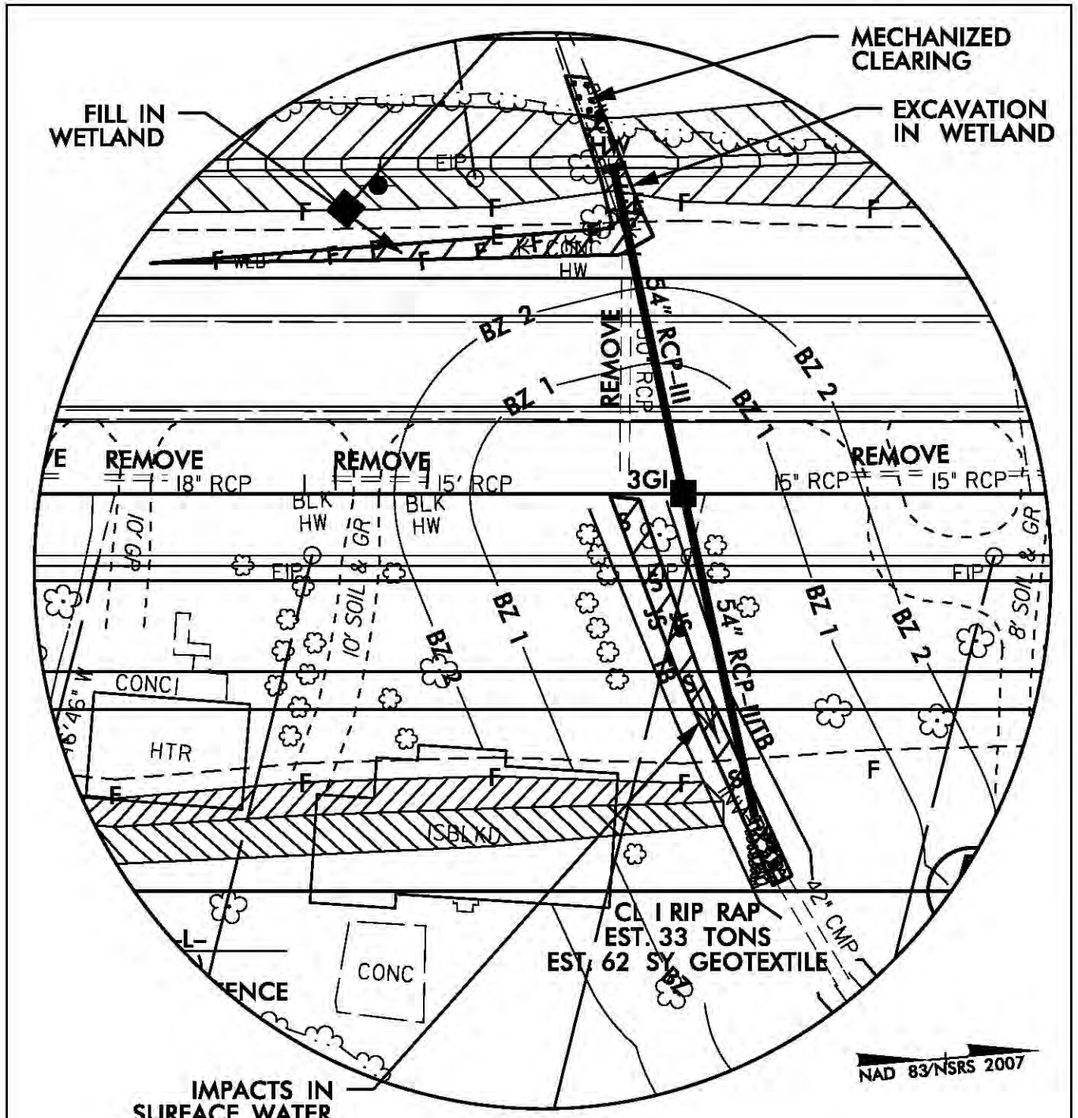
SYSTEMS
DGN
MISCELLANEOUS



SITE 17 ENLARGEMENT

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

40' 0 40'

GRAPHIC SCALE

NCDOT

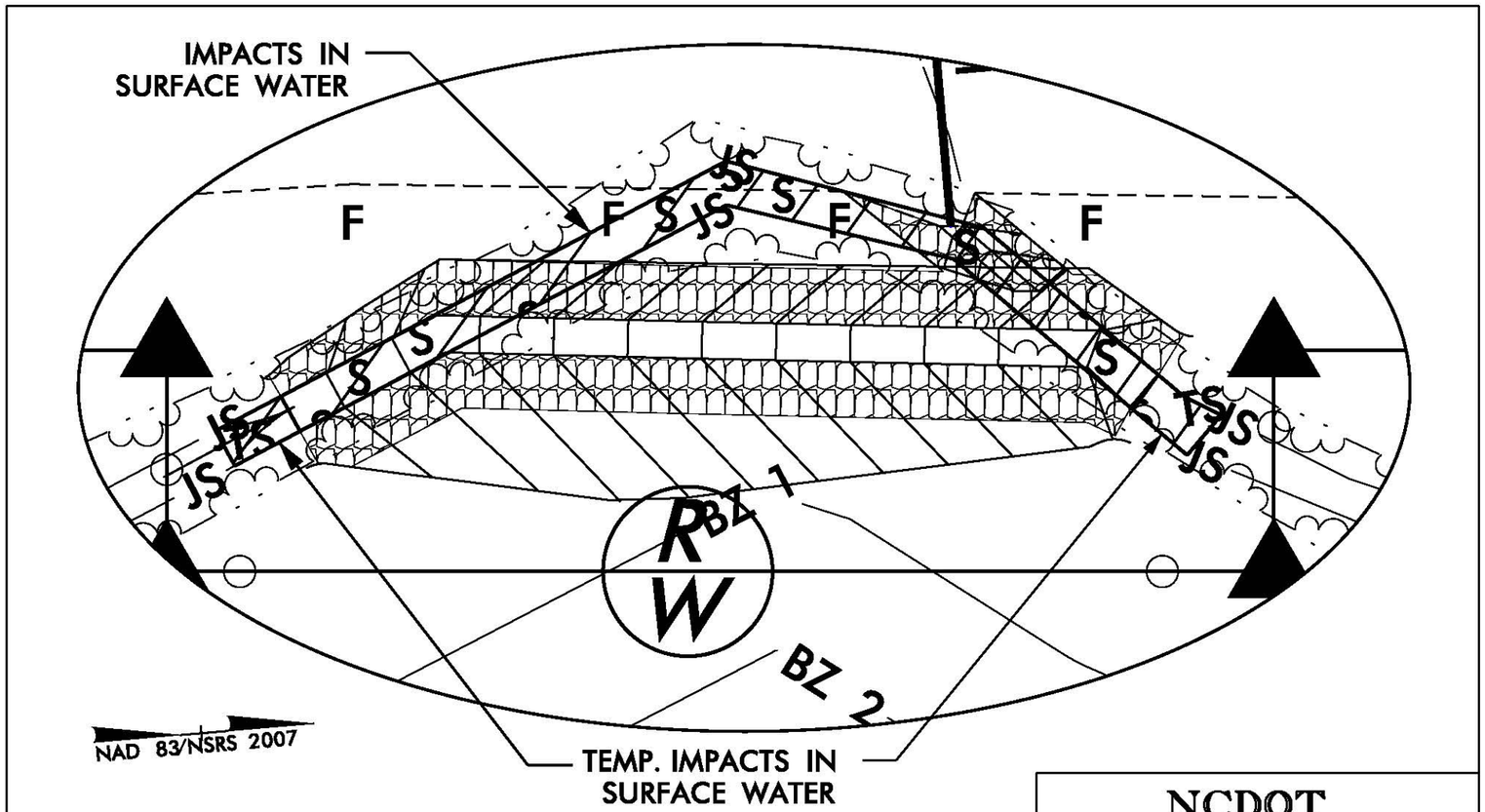
DIVISION OF HIGHWAYS

JONES COUNTY

PROJECT: 34442.1.1 (R-2514C)

US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

SHEET 46 OF 62 **04/24/13**



SITE 18 ENLARGEMENT

S S DENOTES IMPACTS IN SURFACE WATER

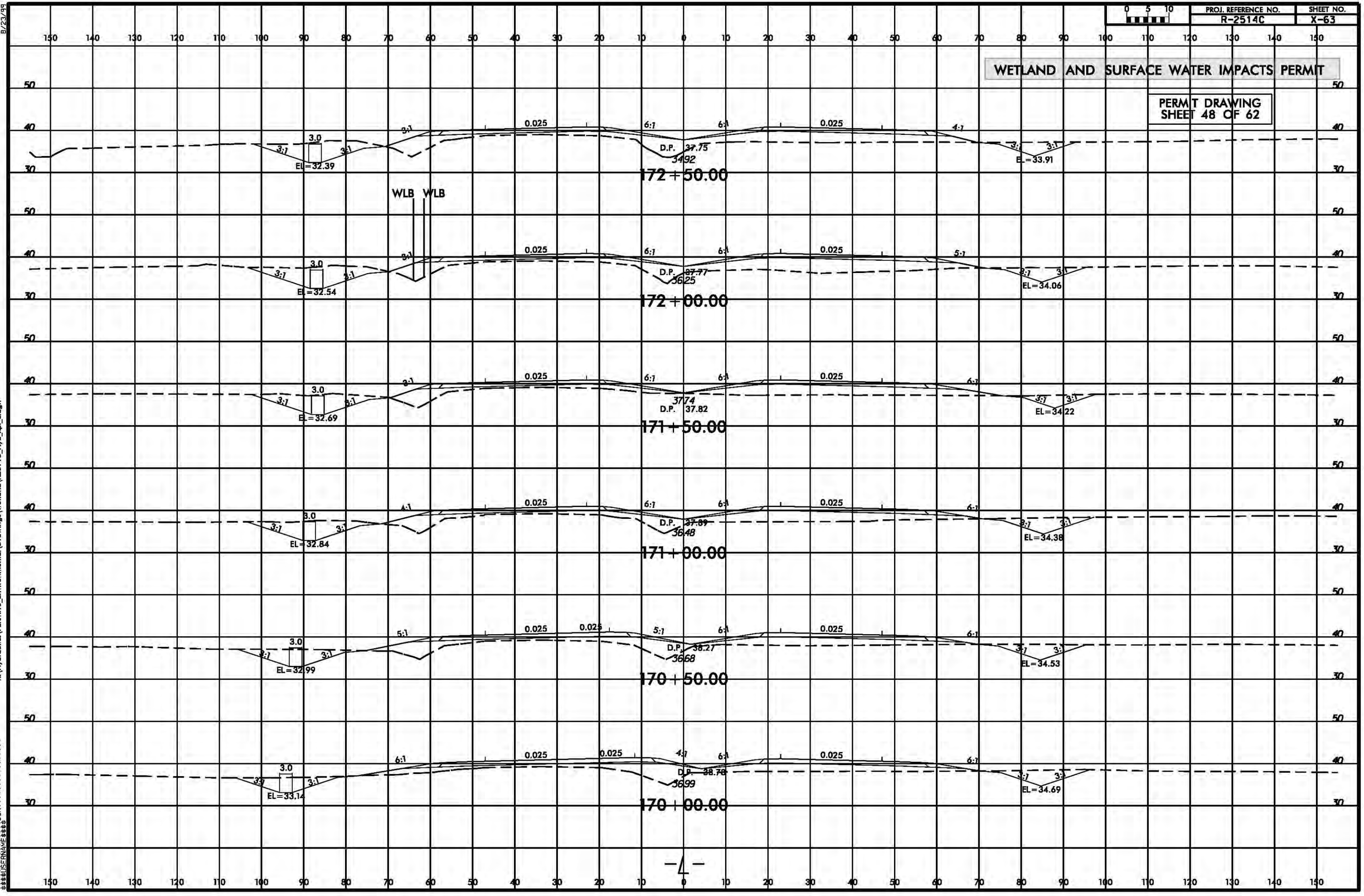
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

20′ 0′ 20′
GRAPHIC SCALE

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.1 (R-2514C)
US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 48 OF 62



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$$SYSTIME$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 49 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

REVISIONS
8/17/99
R/W REVISION 02-10-14 (DWG) - REVISED THE C/A AND R/W TO A 130' OFFSET AND ADDED TIDE FROM -L- STA 194+20.00 TO STA 195+20.00 RT. ON PARCEL 110
(THERON D. HUMPHREY).

MATCHLINE -L- STA. 182+00.00 SEE SHEET 16

MATCHLINE -L- STA. 196+00.00 SEE SHEET 18

SITE 19
(SEE ENLARGEMENT SHEET 51)

106 WEYERHAEUSER COMPANY
107 C.B. CHADWICK, SR.
108 EVERA COLLINS
109 JAMES C. ALLISON, ET UX
111 JOHN RAY McDANIEL, ET UX
112 DEDRE' EDWINA JONES
113 LEE W. NELSON
114 BETTY LOU W. LIGI
105 SUE BOWLING FOSCUE
110 THERON D. HUMPHREY

MEDIAN "V" DITCH SEE DETAIL R
LATERAL 3' BASE DITCH SEE DETAIL E
GRAPE ARBOR
SEPTIC SYSTEM
ISFD
ISBKD
ISBLKD
HTR
PUE
RETAIN
TDE
BANK STABILIZATION SEE DETAIL AQ
CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
US HWY 17/NC 58 24' BST
2' BST

DETAIL AQ
BANK STABILIZATION
(Not to Scale)
Existing Retaining Wall
Existing Ground Excavation
Natural Ground
Lay Back Banks at 2:1 or Flatter
Class I Rip Rap with Geotextile
Max. d=3.0 Ft.
Min. B=3.0 Ft.
-L- STA. 194+94 (100' RT TO 130' RT)

DETAIL R
MEDIAN "V" DITCH
(Not to Scale)
Shoulder Point
3:1 or Flatter
-L- STA. 181+80 TO STA. 186+00 MED

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-L- STA. 181+00 to STA. 185+50 LT DDE=744 CY

DETAIL S
SPECIAL LATERAL "V" DITCH
(Not to Scale)
Min. D= 1.5 Ft.
-L- STA. 185+50 TO STA. 191+07 (RT)
-L- STA. 185+50 TO STA. 190+07 (LT)
-L- STA. 190+10 TO STA. 195+19 (LT)

DETAIL V
STANDARD BASE DITCH
(Not to Scale)
Geotextile
Min. D= VAR.
Max. d= VAR.
Min B= 3.0 FT.
*When B is < 6.0'
Type of Liner= CLASS I RIP-RAP
-L- STA. 194+94 (80' RT TO 100' RT)

DETAIL W
SPECIAL LATERAL "V" DITCH
(Not to Scale)
Min. D= 1.0 Ft.
-L- STA. 195+21 TO STA. 199+35 (LT)

DETAIL T
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.5 FT.
B= 2 Ft.
-L- STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1 Ft.
B= 3 Ft.
-L- STA. 194+93 TO STA. 199+50 (RT)

TEMPORARY IMPACTS IN SURFACE WATER DUE TO BANK STABILIZATION

IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 50 OF 62

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

REVISIONS

8/17/99

R/W REVISION 02-10-14 (DWG) - REVISED THE C/A AND R/W TO A 130' OFFSET AND ADDED TIDE FROM -L- STA 194+20.00 TO STA 195+20.00 RT. ON PARCEL 110 (THERON D. HUMPHREY).

MATCHLINE -L- STA. 182 + 00.00 SEE SHEET 16

MATCHLINE -L- STA. 196 + 00.00 SEE SHEET 18

SITE 19
(SEE ENLARGEMENT SHEET 51)

C.B. CHADWICK, SR. 107

EVERA COLLINS 108

JAMES C. ELLISON, ET UX 109

JOHN RAY McDANIEL, ET UX 111

DEDRE' EDWINA JONES 112

LEE W. NELSON 113

BETTY LOU W. LIGI 114

MEYERHAEUSER COMPANY 106

SUE BOWLING FOSCLE 105

THERON D. HUMPHREY 110

GRAPE ARBOR

SEPTIC SYSTEM

MEDIAN "V" DITCH SEE DETAIL R

LATERAL 3' BASE DITCH SEE DETAIL E

ISFD

ISBKD

ISBLKD

2SFD

PUE

-L- STA. 185

-L- STA. 190

-L- STA. 195

US HWY 17/NC 58 2-4 EST

REMOVE 18" RCP

REMOVE 24" RCP

CC'B RIP RAP EST. 9 TONS EST. 10 SY GEOTEXTILE

BANK STABILIZATION SEE DETAIL AQ

RETAIN

TDE

DETAIL AQ
BANK STABILIZATION
(Not to Scale)

-L- STA. 194+94 (100' RT TO 130' RT)

DETAIL R
MEDIAN "V" DITCH
(Not to Scale)

-L- STA. 181+80 TO STA. 186+00 MED

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

-L- STA. 181+00 to STA. 185+50 LT DDE=744 CY

DETAIL S
SPECIAL LATERAL "V" DITCH
(Not to Scale)

-L- STA. 185+50 TO STA. 191+07 (RT)
-L- STA. 185+50 TO STA. 190+07 (LT)
-L- STA. 190+10 TO STA. 195+19 (LT)

DETAIL V
STANDARD BASE DITCH
(Not to Scale)

-L- STA. 194+94 (80' RT TO 100' RT)

DETAIL W
SPECIAL "V" DITCH
(Not to Scale)

-L- STA. 195+21 TO STA. 199+35 (LT)

DETAIL T
STANDARD BASE DITCH
(Not to Scale)

-L- STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)

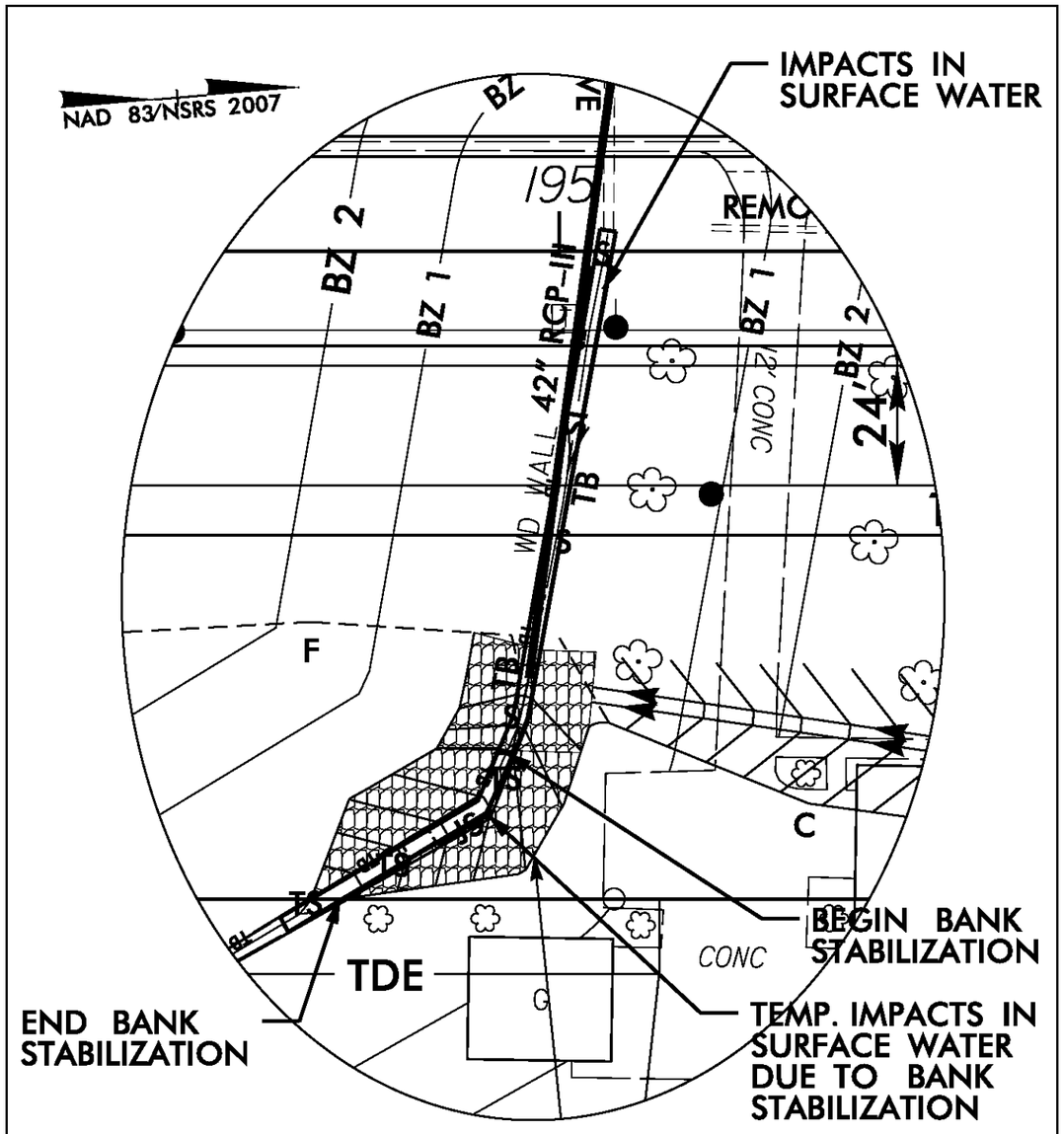
-L- STA. 194+93 TO STA. 199+50 (RT)

TEMPORARY IMPACTS IN SURFACE WATER DUE TO BANK STABILIZATION

IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

$$$$$$$SYSTIME$$$$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$
$$$$$$$MECHNAME$$$$$$$



SITE 19 ENLARGEMENT

DENOTES IMPACTS IN SURFACE WATER

30′ 0′ 30′
GRAPHIC SCALE

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.1 (R-2514C)
US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

SHEET 51 OF 62 **04/24/13**

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 52 OF 62

8/17/99

REVISIONS

4/23/2014
epsellar
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SYSTEM
DGN

ENGLISH

GRAPHIC SCALE 100' 0' 100'

NAD 83/NSRS 2007

SITE 20

MATCHLINE –L– STA. 251+00.00 SEE SHEET 21

MATCHLINE –L– STA. 263+00.00 SEE SHEET 23

136 WILLIE ROBERT MUMFORD, JR.

138 WILLIE ROBERT MUMFORD, JR.

137 SHIRLEY HOWARD RIGGS, ET VIR

137 SHIRLEY HOWARD RIGGS, ET VIR

SHIRLEY HOWARD RIGGS, ET VIR
MB 4 PG 31
137

DALTON LEE EUBANK JR.

140 THELMA FOY METTS

139 HELEN ZAVALNEY

HELEN ZAVALNEY
139

142 JERE WALTER PELLETIER, II, ET UX
DB 264 PG 391

NAOMIN. MURPHY
141

US 17 BYPASS

–L–

255

2GH

FS

15" RCP

8:1

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

TOE PROTECTION
SEE DETAIL AC

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

MECHANIZED CLEARING

FILL IN WETLAND

FILL IN WETLAND ENLARGEMENT 2.5X

FILL IN WETLAND ENLARGEMENT 2.5X

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE = 0.010429
EST. 28 CY DDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

SPECIAL CUT DITCH
SEE DETAIL AE

SPECIAL CUT DITCH
SEE DETAIL AE

SR 1112 PRICES TWPH RD

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 OR FLATTER, D, 3:1 OR FLATTER, Natural Ground
Min. D= 1.5 Ft.

–Y2– STA. 18+63 TO 19+50 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 Or Flatter, D, 3:1 or Flatter, Fill Slope
Min. D= 1.0 Ft.

–L– STA. 234+12 TO STA. 256+13 (RT)
–L– STA. 240+00 TO STA. 257+94 (LT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D= 1.0 Ft.

–Y2– STA. 19+50 TO STA. 20+53 (RT)
–Y2– STA. 19+50 TO STA. 20+21 (LT)
–Y2– STA. 19+50 (LT) TO 19+50 (RT)

DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1 or Flatter, Fill Slope
Min. D=0.5 Ft.
B=3.0 Ft.

–L– STA. 261+00 TO STA. 264+50 (LT)

DETAIL AC
TOE PROTECTION
(Not to Scale)

Natural Ground, 3:1 or Flatter Fill Slope, b, d, Geotextile
d= 1.0 Ft.
b= 5.0 Ft.
Type of Liner= Class B Rip-Rap

–L– STA. 257+80 TO STA. 261+00 (LT)

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 53 OF 62

ENGLISH

GRAPHIC SCALE 100' 0' 100'

NAD 83/NSRS 2007

SITE 20

MATCHLINE -L- STA. 251+00.00 SEE SHEET 21

MATCHLINE -L- STA. 263+00.00 SEE SHEET 23

WILLIE ROBERT MUMFORD, JR. (136)

SHIRLEY HOWARD RIGGS, ET VIR (137)

WILLIE ROBERT MUMFORD, JR. (138)

DALTON LEE EUBANK JR.

THELMA FOY METTS (140)

HELEN ZAVALNEY (139)

JERE WALTER PELLETIER, II, ET UX DB 264 PG 391 (142)

NAOMI N. MURPHY (141)

SHIRLEY HOWARD RIGGS, ET VIR DB 4 PG. 3

US 17 BYPASS

-L-

255 FS 2GI

15" RCCP

8:1

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

TOE PROTECTION SEE DETAIL AC

SPECIAL LATERAL 'J' BASE DITCH SEE DETAIL AD

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 9 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 11 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 9 SY GEOTEXTILE

MECHANIZED CLEARING

FILL IN WETLAND

FILL IN WETLAND ENLARGEMENT 2.5X

FILL IN WETLAND ENLARGEMENT 2.5X

STANDARD 'V' DITCH SEE DETAIL Y SLOPE = 0.010429 EST. 28 CY DDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

SPECIAL CUT DITCH SEE DETAIL AE

SPECIAL CUT DITCH SEE DETAIL AE

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)
Min. D = 1.5 Ft.
-Y2- STA. 18+62 TO 19+50 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Min. D = 1.0 Ft.
-L- STA. 234+12 TO STA. 256+13 (RT)
-L- STA. 240+00 TO STA. 257+94 (LT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)
Min. D = 1.0 Ft.
-Y2- STA. 19+50 TO STA. 20+53 (RT)
-Y2- STA. 19+50 TO STA. 20+21 (LT)
-Y2- STA. 19+50 (LT) TO 19+60 (RT)

DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D = 0.5 Ft.
B = 3.0 Ft.
-L- STA. 261+00 TO STA. 264+50 (LT)

DETAIL AC
TOE PROTECTION
(Not to Scale)
d = 1.0 Ft.
B = 3.0 Ft.
Type of Liner = Class B Rip-Rap
-L- STA. 257+80 TO STA. 261+00 (LT)

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REVISIONS

4/23/2014
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SYSTIMESSSSS
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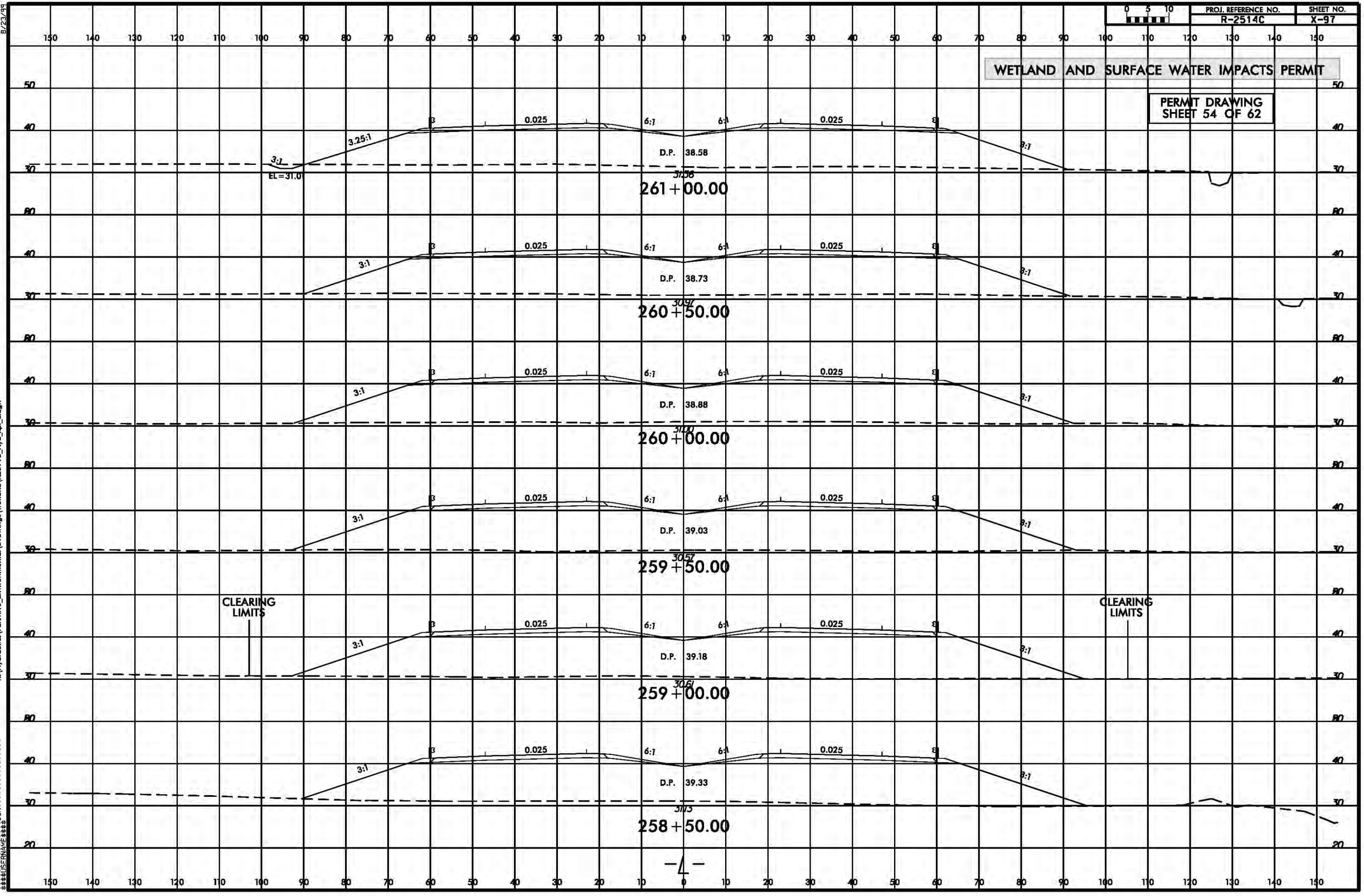
PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-97

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 54 OF 62



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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 55 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

8/17/99

REVISIONS

4/23/2014
epsaylor
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MATCHLINE –L– STA. 263+00.00 SEE SHEET 22

MATCHLINE –L– STA. 277+00.00 SEE SHEET 24

REGINALD KING, ET UX

THELMA FOY METTS 140

HELEN ZAVALNEY 139

JERE WALTER PELLETIER,II, ET UX 142

REMOVE

SPECIAL LATERAL 'V' DITCH SEE DETAIL AF

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.002737 EST. 5 CY DDE

SPECIAL CUT DITCH SEE DETAIL AE

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AD

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

US 17 BYPASS

-L-

265 270 275

CL I RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL U

STANDARD 3' BASE DITCH SEE DETAIL AB SLOPE=0.005426 EST. 42 CY DDE

-Y2- +85.20 -L- 110.00' (RT) REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

STANDARD 'X' BASE DITCH SEE DETAIL X SLOPE=0.005892 EST. 152 CY DDE

REMOVE EXISTING 24" RCP

STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.010439 EST. 28 CY DDE

TDE

FILL IN WETLAND

MECHANIZED CLEARING

SITE 21

HELEN ZAVALNEY
DB 266 PG 997
DB 327 PG 32
PB 12 PG 96

JERE WALTER PELLETIER,II, ET UX 142

SPECIAL LATERAL 'V' DITCH SEE DETAIL AF

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, B, 3:1 OR Flatter, Fill Slope
Min. D= 1 Ft.
B= 3 Ft.
-L- STA. 236+00 TO STA. 263+72 (RT)

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)
Natural Ground, 3:1 OR Flatter, D, 3:1 OR Flatter, Natural Ground
Min. D= 1.5 Ft.
-Y2- STA. 14+90 TO 15+85 (RT)
-Y2- STA. 18+63 TO 19+50 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 3:1 OR Flatter, D, 3:1 OR Flatter, Fill Slope
Min. D= 1.0 Ft.
-L- STA. 267+50 TO STA. 278+28 (LT)

DETAIL X
STANDARD BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, 3:1, Natural Ground
Min. D= 2.0 Ft.
B= 4.0 Ft.
-Y2- STA. 18+62 (RT)

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 3:1 OR Flatter, D, 3:1 OR Flatter, Fill Slope
Min. D= VAR.
-L- STA. 276+50 TO STA. 280+00 (RT)
-L- STA. 264+50 TO STA. 267+50 (LT)

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, 3:1, Natural Ground
Min. D= VAR.
B= 3 Ft.
-Y2- STA. 17+93 TO 18+59 (RT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1, D, 3:1 OR Flatter, Front Ditch Slope
Min. D= 1.0 Ft.
-Y2- STA. 19+50 TO STA. 20+53 (RT)
-Y2- STA. 14+50 TO STA. 14+90 (LT)
-Y2- STA. 19+50 TO STA. 20+21 (LT)
-Y2- STA. 14+90 (LT) TO STA. 14+90 (RT)

DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, B, 3:1 OR Flatter, Fill Slope
Min. D=0.5 Ft.
B=3.0 Ft.
-L- STA. 261+00 TO STA. 264+50 (LT)

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

$$$$SYSTIME$$$$
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 56 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

MATCHLINE –L– STA. 263+00.00 SEE SHEET 22

MATCHLINE –L– STA. 277+00.00 SEE SHEET 24

REGINALD KING, ET UX

THELMA FOY METTS
140

HELEN ZAVALNEY
139

JERE WALTER PELLETIER, II, ET UX
142

REMOVE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.002737
EST. 5 CY DDE

SPECIAL CUT DITCH
SEE DETAIL AE

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

US 17 BYPASS

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL U

STANDARD 3' BASE DITCH
SEE DETAIL AB
SLOPE=0.005426
EST. 43 CY DDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

STANDARD 4' BASE DITCH
SEE DETAIL X
SLOPE=0.005892
EST. 152 CY DDE

REMOVE EXISTING 24" RCP

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

FILL IN WETLAND

MECHANIZED CLEARING

SITE 21

HELEN ZAVALNEY
DB 286 PG 997
DB 327 PG 32
PB 12 PG 96

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Min. D= 1 Ft.
B= 3 Ft.

–L– STA. 236+00 TO STA. 263+72 (RT)

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)

Min. D= 1.5 Ft.

–Y2– STA. 14+90 TO 15+85 (RT)
–Y2– STA. 18+63 TO 19+50 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.0 Ft.

–L– STA. 267+50 TO STA. 278+28 (LT)

DETAIL X
STANDARD BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
B= 4.0 Ft.

–Y2– STA. 18+62 (RT)

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= VAR.

–L– STA. 276+88 TO STA. 280+00 (RT)
–L– STA. 264+50 TO STA. 267+60 (LT)

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)

Min. D= VAR.
B= 3 Ft.

–Y2– STA. 17+93 TO 18+59 (RT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)

Min. D= 1.0 Ft.

–Y2– STA. 19+50 TO STA. 20+53 (RT)
–Y2– STA. 14+50 TO STA. 14+90 (LT)
–Y2– STA. 19+50 TO STA. 20+21 (LT)
–Y2– STA. 14+90 (LT) TO STA. 14+90 (RT)

DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Min. D=0.5 Ft.
B=3.0 Ft.

–L– STA. 261+00 TO STA. 264+50 (LT)

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

REVISIONS

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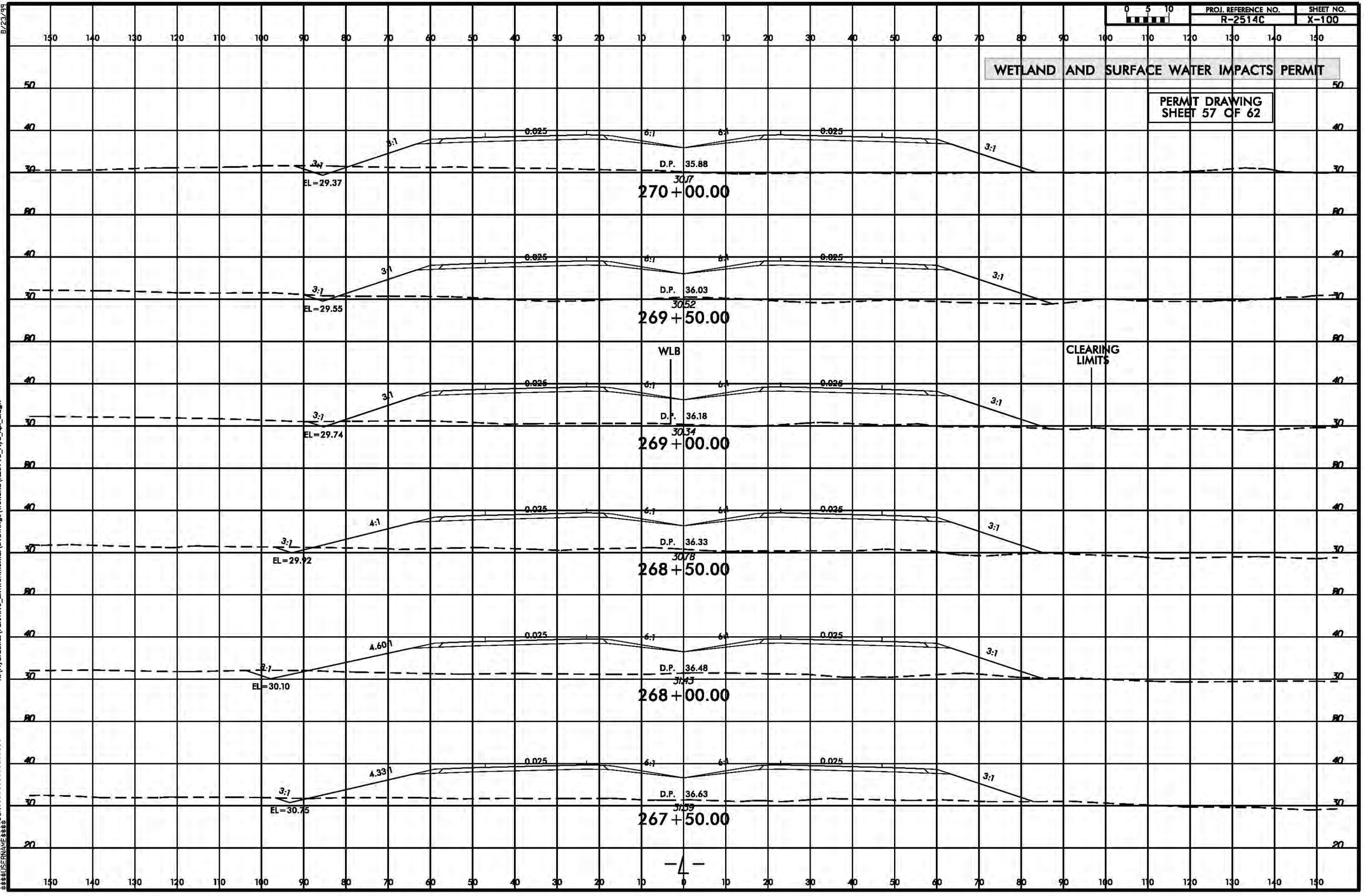
WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 57 OF 62



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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 58 OF 62

ENGLISH

100' 0' 100'
GRAPHIC SCALE

NAD 83/NSRS 2007

MATCHLINE –LBUS– STA. 15+00.00 SEE SHEET 4

143 MARY ELLEN EADY

144 HARRIETT BARBER HEIRS

145 MANUFACTURERS AND STEADERS TRUST CO.

146 R.S. PROGEN ESTATE

147 MAYSVILLE DEVELOPMENT CORPERATION

4 THE UNITED STATES OF AMERICA

ESTATE OF FRANK JENKINS

REMOVE 18" RCP
REMOVE 24" CMP
REMOVE 36" CMP
REMOVE 30" RCP
REMOVE 15" CMP
REMOVE 24" CMP

LATERAL 3' BASE DITCH SEE DETAIL D

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AP

SITE 1

MECHANIZED CLEARING*

TEMP. IMPACTS IN SURFACE WATER

TIE TO EXIST. SWALE

1 IMPACTS IN SURFACE WATER

SITE 22

STANDARD 3' BASE DITCH W/CLASS B RIP RAP SEE DETAIL AJ
EST. 25 C.Y. DDE
EST. 21 TONS RIP RAP
EST. 47 S.Y. F.G.

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

STANDARD 'V' DITCH SEE DETAIL AN

SPECIAL CUT BASE DITCH SEE DETAIL AI

RETAIN CL B RIP RAP EST. 3 TONS
EST. 11 S.Y. GEOTEXTILE

-LBUS- POT Sta. 22+59.00=
-DRV1- POT Sta. 10+00.00

SPECIAL CUT DITCH SEE DETAIL AL

SPECIAL CUT DITCH SEE DETAIL AK

STANDARD 'V' DITCH SEE DETAIL Y
SLOPE=0.01868
EST. 14 CY DDE

PDE

ENLARGEMENT 2X

MECHANIZED CLEARING

EXCAVATION IN WETLAND

SITE 23

MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 27

DETAIL AP
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 4:1, D, B, 3:1 or Flatter, Fill Slope
Min. D= 2.0 Ft.
B= 3 Ft.
-LBUS- STA. 13+70 TO STA. 19+44 (RT)

DETAIL AK
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 4:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D= 2.0 Ft.
-DRV1- STA. 12+06 TO STA. 17+00 (RT)

DETAIL AI
SPECIAL CUT BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 4:1 or Flatter, Front Ditch Slope
Min. D= 1 Ft.
B= 3 Ft.
-DRV1- STA. 11+45 TO STA. 18+00 (LT)

DETAIL AL
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 4:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D= 1.0 Ft.
-DRV1- STA. 11+45 TO STA. 12+06 (RT)

DETAIL Y
STANDARD "V" DITCH
(Not to Scale)

Natural Ground, D, 3:1 OR FLATTER, Natural Ground
Min. D= 1.5 Ft.
-DRV1- STA. 17+00 (RT)

DETAIL AJ
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground, Geotextile, B
Min. D= 3.0 Ft.
Max. d= 2.0 Ft.
B= 3.0 Ft.
Type of Liner= Class B Rip-Rap
-LBUS- STA. 19+77 (LT)

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, B, 1Vert., b, Fill Slope
Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-LBUS- STA. 13+00 to STA. 19+40 LT

DETAIL AO
SPECIAL LATERAL "V" DITCH
(Not to Scale)

Natural Ground, 4:1 or Flatter, D, Fill Slope
Min. D= 1.0 Ft.
-LBUS- STA. 19+40 TO STA. 24+30 (LT)
-LBUS- STA. 21+80 TO STA. 25+00 (RT)

DETAIL AN
STANDARD "V" DITCH
(Not to Scale)

Natural Ground, 4:1 OR FLATTER, D, Natural Ground
Min. D= VAR.
-LBUS- STA. 21+00 TO STA. 21+50 (RT)

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S S DENOTES IMPACTS IN SURFACE WATER

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REVISIONS
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 59 OF 62

ENGLISH

GRAPHIC SCALE 100' 0' 100'

NAD 83/NSRS 2007

MATCHLINE –LBUS– STA. 15+00.00 SEE SHEET 4

MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 27

SITE 1

SITE 22

SITE 23

MECHANIZED CLEARING*

ENLARGEMENT 2X

MECHANIZED CLEARING

EXCAVATION IN WETLAND

TEMP. IMPACTS IN SURFACE WATER

IMPACTS IN SURFACE WATER

143 MARY ELLEN EADY

144 HARRIETT BARBER HEIRS

145 MANUFACTURERS AND STANDARD TRUST CO.

ESTATE OF FRANK JENKINS

146 R.S. PROGEN ESTATE

147 MAYSVILLE DEVELOPMENT CORPERATION

THE UNITED STATES OF AMERICA

REMOVE 18" RCP

REMOVE 24" CMP

REMOVE 36" CMP

REMOVE 30" RCP

REMOVE 15" CMP

TIE TO EXIST. SWALE

LATERAL 3' BASE DITCH SEE DETAIL D

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AP

STANDARD 3' BASE DITCH W/CLASS B RIP RAP SEE DETAIL AJ EST. 25 C.Y. DDE EST. 21 TONS RIP RAP EST. 47 S.Y. F.G.

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

SPECIAL CUT BASE DITCH SEE DETAIL AI

STANDARD 'V' DITCH SEE DETAIL AN

RETAIN CL B RIP RAP EST. 3 TONS EST. 11 S.Y. GEOTEXTILE

SPECIAL CUT DITCH SEE DETAIL AL

STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.01868 EST. 14 CY DDE

SPECIAL CUT DITCH SEE DETAIL AK

-LBUS- POT Sta. 22+59.00=
-DRVI- POT Sta. 10+00.00

GR PARKING

BUS TR

ISFD

ISFD ABAND

DECK

DETAIL AP
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3 Ft.
-LBUS- STA. 13+70 TO STA. 19+44 (RT)

DETAIL AK
SPECIAL CUT DITCH
(Not to Scale)
Min. D= 2.0 Ft.
-DRVI- STA. 12+06 TO STA. 17+00 (RT)

DETAIL AI
SPECIAL CUT BASE DITCH
(Not to Scale)
Min. D= 1 Ft.
B= 3 Ft.
-DRVI- STA. 11+45 TO STA. 18+00 (LT)

DETAIL AL
SPECIAL CUT DITCH
(Not to Scale)
Min. D= 1.0 Ft.
-DRVI- STA. 11+45 TO STA. 12+06 (RT)

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)
Min. D= 1.5 Ft.
-DRVI- STA. 17+00 (RT)

DETAIL AJ
STANDARD BASE DITCH
(Not to Scale)
Min. D= 3.0 Ft.
Max. d= 2.0 Ft.
B= 3.0 Ft.
Type of Liner= Class B Rip-Rap
-LBUS- STA. 19+77 (LT)

DETAIL D
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
-LBUS- STA. 13+00 to STA. 19+40 LT

DETAIL AO
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Min. D= 1.0 Ft.
-LBUS- STA. 19+40 TO STA. 24+30 (LT)
-LBUS- STA. 21+00 TO STA. 25+00 (RT)

DETAIL AN
STANDARD 'V' DITCH
(Not to Scale)
Min. D= VAR.
-LBUS- STA. 21+00 TO STA. 21+50 (RT)

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S S DENOTES IMPACTS IN SURFACE WATER

REVISIONS

8/17/99

4/23/2014
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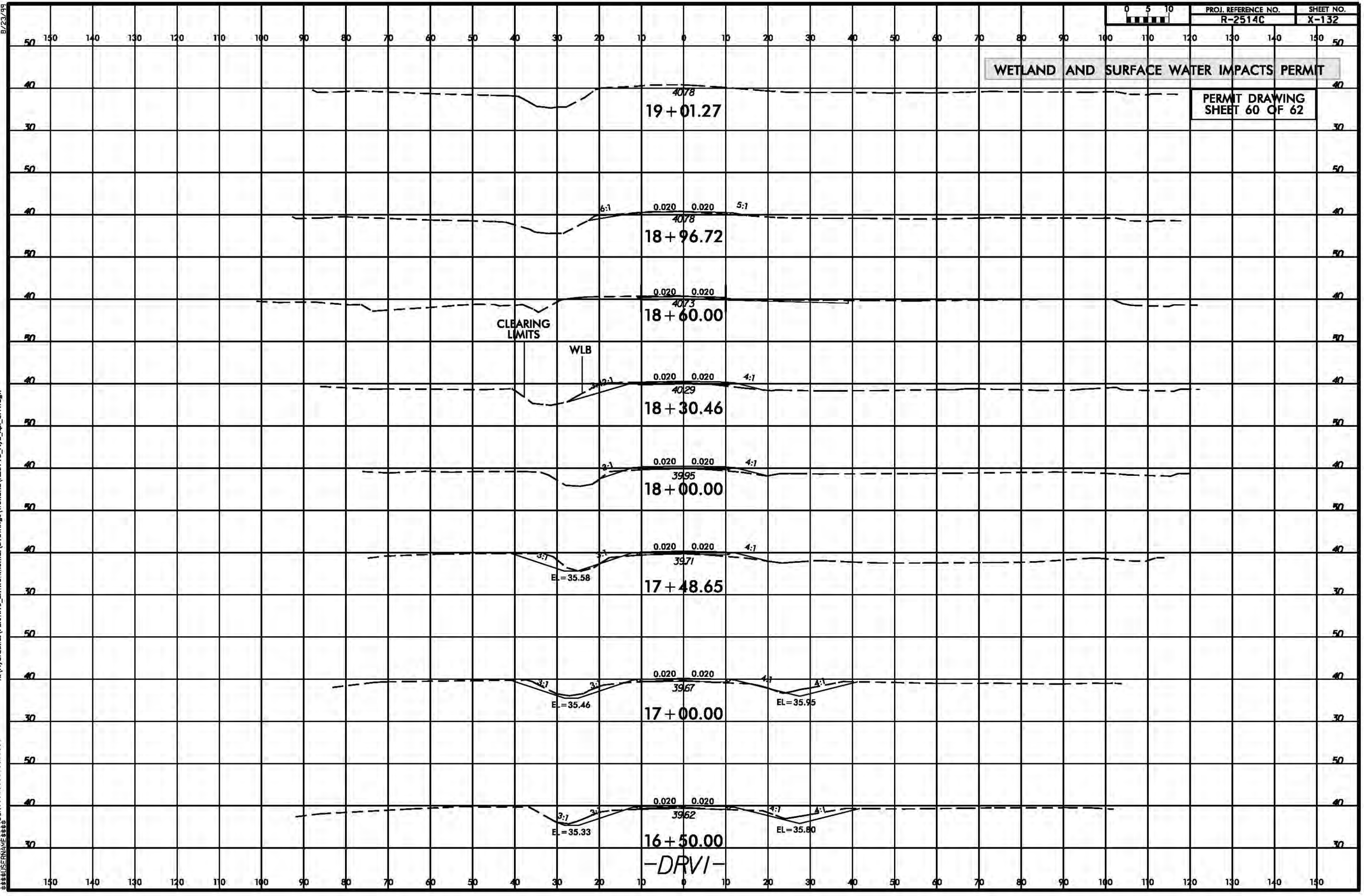
WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 60 OF 62



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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS						SURFACE WATER IMPACTS				
			CAMA Permanent Fill In Wetlands (ac)	404 Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- STA 10+00 TO	ROADWAY		3.62			0.43	<0.01					
	-L- STA 19+49												
2	-L- STA 21+50 RT	ROADWAY		0.09			0.04						
3	-L- STA 24+00 LT	18" RCP		<0.01		0.04	0.02						
4	-L- STA 22+95 RT TO	ROADWAY		6.82			1.43						
	-L- STA 84+82 RT												
4	-L- STA 30+11 LT	ROADWAY						<0.01					
5	-L- STA 24+30 LT	ROADWAY		0.03		0.11	0.11						
6	-L- STA 62+27 LT TO	ROADWAY				<0.01	0.03	<0.01					
	-L- STA 84+82 LT												
*7	-L- STA 76+79 LT TO	ROADWAY		0.26		0.02	0.08						
	-L- STA 82+96 RT												
8	-L- STA 87+00 RT	ROADWAY		0.64			0.09						
9	-L- STA 90+56 TO	ROADWAY		0.89			0.17						
	-L- STA 97+96												
10	-L- STA 99+50 RT TO	BRIDGE		0.95			0.15						
	-L- STA 105+79 RT												
11	-L- STA 106+50 LT	ROADWAY				<0.01	0.03						
12	-L- STA 118+16 RT TO	ROADWAY		0.45			0.05						
	-L- STA 124+70 RT												
**SUBTOTALS THIS SHEET:			0.00	13.75	0.00	0.18	2.61	<0.01	0.00	0.00	0	0	0

NOTES:

*Site 7 includes an additional 0.06ac of unimpacted wetlands counted as total take

** Totals may not match sum of individual impacts due to rounding.

N.C.D.O.T.

DIVISION OF HIGHWAYS

JONES COUNTY

PROJECT: 34442.1.4 (R-2514C)

US 17 FROM NORTH OF MAYSVILLE TO

SOUTH OF NC 58 NEAR POLLOCKSVILLE

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: CAMA Permanent Fill In Wetlands (ac)	404 Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
13	-L- STA 127+87 TO	ROADWAY		0.34		<0.01	0.11						
	-L- STA 131+32												
14	-L- STA 133+26 RT TO	ROADWAY		1.52			0.41						
	-L- STA 151+44 RT												
15	-L- STA 143+74 LT TO	ROADWAY		0.05		0.15	0.09						
	-L- STA 151+54 LT												
16	-L- STA 159+00 TO	ROADWAY		0.51		0.06	0.16						
	-L- STA 164+07												
17	-L- STA 172+50	54" RCP		0.01		<0.01	<0.01		0.01		109		
18	-L- STA 180+50 LT	ROADWAY							0.02	<0.01	132	20	
19	-L- STA 194+89	BANK STABILIZATION**								<0.01**		58**	
	-L- STA 195+00	42" RCP							0.01		106		
20	-L- STA 256+16 TO	ROADWAY &		1.58			0.20						
	-L- STA 262+25	2-30" RCP											
21	-L- STA 269+40	ROADWAY		0.23			0.02						
22	-LBUS- STA 19+40 RT	48" RCP							0.02	0.01	32	10	
23	-DRV1- STA 18+60 LT	ROADWAY				0.01	0.02						
*SUBTOTALS THIS SHEET:			0.00	4.24	0.00	0.23	1.00	0.00	0.06	0.01	379	88	0
*SUBTOTALS SHEET 1:			0.00	13.75	0.00	0.18	2.61	<0.01	0.00	0.00	0.00	0.00	0.00
*TOTALS:			0.00	17.99	0.00	0.41	3.62	<0.01	0.06	0.01	379	88	0

NOTES:

* Totals may not match sum of individual impacts due to rounding.

****** Bank Stabilization at Site 19 is due to placement of rip rap on sides of channel where existing retaining wall is removed and more natural geometry restored to channel.

N.C.D.O.T.

DIVISION OF HIGHWAYS

JONES COUNTY

PROJECT: 34442.1.4 (R-2514C)

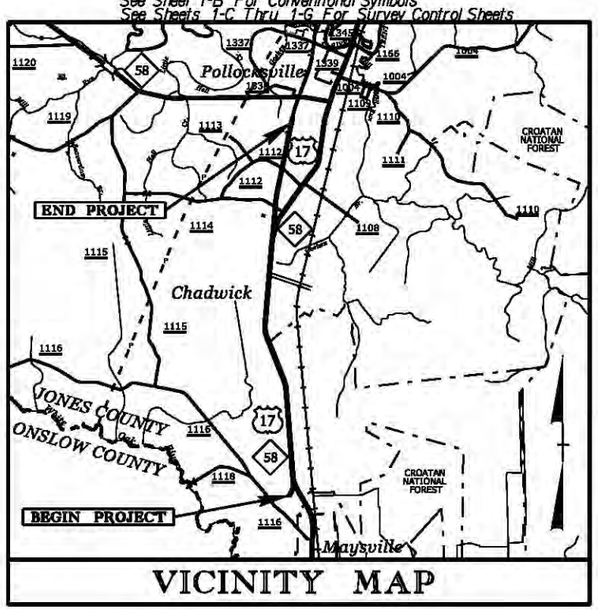
US 17 FROM NORTH OF MAYSVILLE TO

SOUTH OF NC 58 NEAR POLLOCKSVILLE

09/08/09

TIP PROJECT: R-2514C

CONTRACT:



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES COUNTY

LOCATION: US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

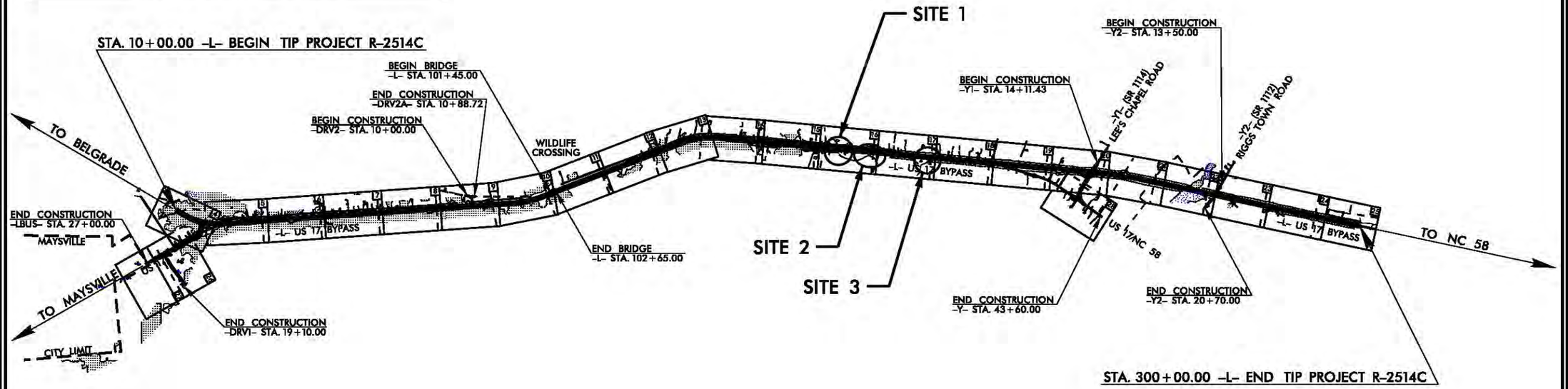
BUFFER IMPACTS PERMIT

ENGLISH

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34442.1.4		PE	

BUFFER DRAWING SHEET 1 OF 4

NAD 83/ NSRS 2007



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING AT DESIGNATED POINTS ONLY.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2015 = 12,000
ADT 2035 = 17,700
DHV = 12 %
D = 60 %
T = 9 % *
V = 60 MPH
* TTST = 5 % DUAL = 4 %
FUNC CLASS = EXPRESSWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2514C = 5.469 MILES
LENGTH STRUCTURE OF TIP PROJECT R-2514C = 0.023 MILES
TOTAL LENGTH OF TIP PROJECT R-2514C = 5.492 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JUNE 21, 2013

LETTING DATE: JUNE 16, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

2/6/2014
bsanderson
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$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING
SHEET 2 OF 4

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

ENGLISH

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

SITE 1

ZONE 2 ALLOWABLE

ZONE 1 ALLOWABLE

MATCHLINE –L– STA. 168+00.00 SEE SHEET 15

MATCHLINE –L– STA. 182+00.00 SEE SHEET 17

BENJAMIN BROWN, ET UX

CYNTHIA D. YOUNG, ET VIR

FLORETTA BRYANT, ET VIR

EDWARD L. BRYANT, ET UX

JAMES HENRY BRYANT

WILLIE L. BRYANT, ET UX

WILFRED T. MORGAN

WEYERHAEUSER COMPANY

MATTHEW MOORE, JR., ET UX

RICHARD L. HARRELL, ET UX

JOSEPH O. BRYANT

ESTELLA BURGE

ELEANOR J. JACKSON, ET VIR

RONALD EARL WILLIE

EVELYN D. WILLIE, ET VIR

SUE BOWLING FOSCUE

HISTORIC PROPERTY ELIGIBLE FOR NRHP

ZONE 2 MITIGABLE

ZONE 1 MITIGABLE

ZONE 1 MITIGABLE

ZONE 2 MITIGABLE

SITE 2

REMOVE FOOT BRIDGE

LATERAL 3' BASE DITCH SEE DETAIL C

MEDIAN 'V' DITCH SEE DETAIL R

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL O

CHANNEL CHANGE W/ CLASS B RIP RAP SEE DETAIL P

STANDARD 2' BASE DITCH W/CLASS B RIP RAP SEE DETAIL Q
EST. 4 C.Y. DDE
EST. 10 TONS RIP RAP
EST. 15 S.Y. F.G.

CL. I RIP RAP
EST. 33 TONS
EST. 62 SY. GEOTEXTILE

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL P
CHANNEL CHANGE
(Not to Scale)

Min. D= 2.5 Ft.
Max. d= 2.5 Ft.
Min. B= 5.0 Ft.
Min. b= 10.0 Ft.

Type of Liner= Class B Rip Rap

DETAIL O
SPECIAL CUT DITCH
(Not to Scale)

Min. D= VAR.

–L– STA. 174+50 TO STA. 175+50 (RT)

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 181+00 to STA. 185+50 LT
DDE=744 CY

DETAIL Q
STANDARD BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.

Type of Liner= Class B Rip-Rap
–L– STA. 180+76 RT

DETAIL N
LATERAL 'V' DITCH
(Not to Scale)

Min. D=2.0 Ft.
b=5.0 Ft.

–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

DETAIL R
MEDIAN 'V' DITCH
(Not to Scale)

–L– STA. 181+80 TO STA. 186+00 MED

8/17/99
REVISIONS

3/28/2014
epsteller
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BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 3 OF 4

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

MATCHLINE –L– STA. 182+00.00 SEE SHEET 16

MATCHLINE –L– STA. 196+00.00 SEE SHEET 18

C.B. CHADWICK, SR. (107) · EVERA COLLINS (108) · JAMES C. ALLISON, ET UX (109) · JOHN RAY McDANIEL, ET UX (111) · DEDRE' EDWINA JONES (112) · LEE W. NELSON (113) · BETTY LOU W. LIGI (114) · WEYERHAEUSER COMPANY (106) · SUE BOWLING FOSCUE (105) · THERON D. HUMPHREY (110)

ZONE 2 MITIGABLE
ZONE 1 MITIGABLE
SITE 2

ZONE 2 MITIGABLE
ZONE 1 MITIGABLE
ZONE 1 MITIGABLE
ZONE 2 MITIGABLE
SITE 3

DETAIL AQ
BANK STABILIZATION
(Not to Scale)
Max. d=3.0 Ft.
Min. B=3.0 Ft.
–L– STA. 194+94 (100' RT TO 130' RT)

DETAIL R
MEDIAN "V" DITCH
(Not to Scale)
–L– STA. 181+80 TO STA. 186+00 MED

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 181+00 to STA. 185+50 LT DDE=744 CY

DETAIL S
SPECIAL LATERAL "V" DITCH
(Not to Scale)
Min. D= 1.5 Ft.
–L– STA. 185+50 TO STA. 191+07 (RT)
–L– STA. 185+50 TO STA. 190+07 (LT)
–L– STA. 190+10 TO STA. 195+19 (LT)

DETAIL V
STANDARD BASE DITCH
(Not to Scale)
Min. D= VAR.
Max. d= VAR.
Min B= 3.0 FT.
*When B is < 6.0'
Type of Liner= CLASS I RIP-RAP
–L– STA. 194+94 (80' RT TO 100' RT)

DETAIL W
SPECIAL LATERAL "V" DITCH
(Not to Scale)
Min. D= 1.0 Ft.
–L– STA. 195+21 TO STA. 199+35 (LT)

DETAIL T
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.5 FT.
B= 2 Ft.
–L– STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1 Ft.
B= 3 Ft.
–L– STA. 194+93 TO STA. 199+50 (RT)

REVISIONS

R/W REVISION 02-10-14 (DWG) - REVISED THE C/A AND R/W TO A 130' OFFSET AND ADDED TIE FROM -L- STA 194+20.00 TO STA 195+20.00 RT. ON PARCEL 110 (THERON D. HUMPHREY).

8/17/99

3/28/2014
epseller
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$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNNAME$$$$$$$$

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	ROAD	-L- STA. 172+19 TO	X			6426	3705	10131					
		-L- STA. 173+49											
2	ROAD	-L- STA. 178+97 TO			X				11389	7568	18957		
		-L- STA. 182+54											
3	ROAD	-L- STA. 193+44 TO	X						9916	4613	14529		
		-L- STA. 195+62											
TOTAL:						6426	3705	10131	21305	12181	33486		

NOTE: THERE ARE NO BUFFER IMPACTS IN WETLANDS.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.4 (R-2514C)
US 17 FROM NORTH OF MAYSVILLE TO
SOUTH OF NC 58 NEAR POLLOCKSVILLE

SHEET 4 OF 4 04/23/14

Rev. May 2006

T.I.P. NO.	SHEET NO.
R-2514C	UE-1

RECEIVED
OCT 24 2014
OFFICE OF NATURAL ENVIRONMENT

REVISION 10/23/14

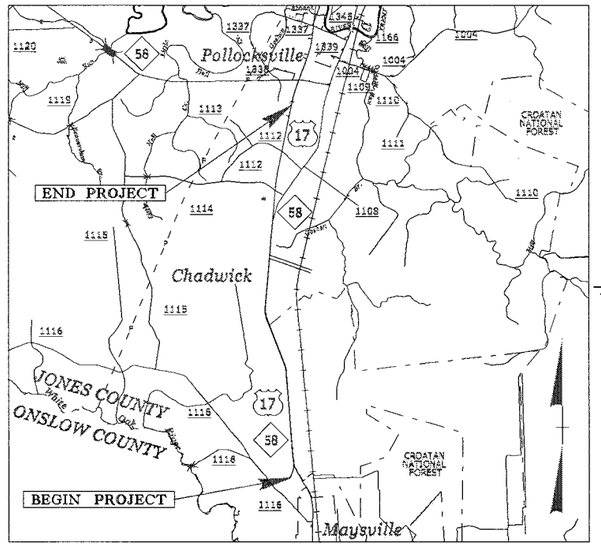
Utility Permit Drawing
Sheet 1 of 20

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY PERMIT PLANS
JONES COUNTY

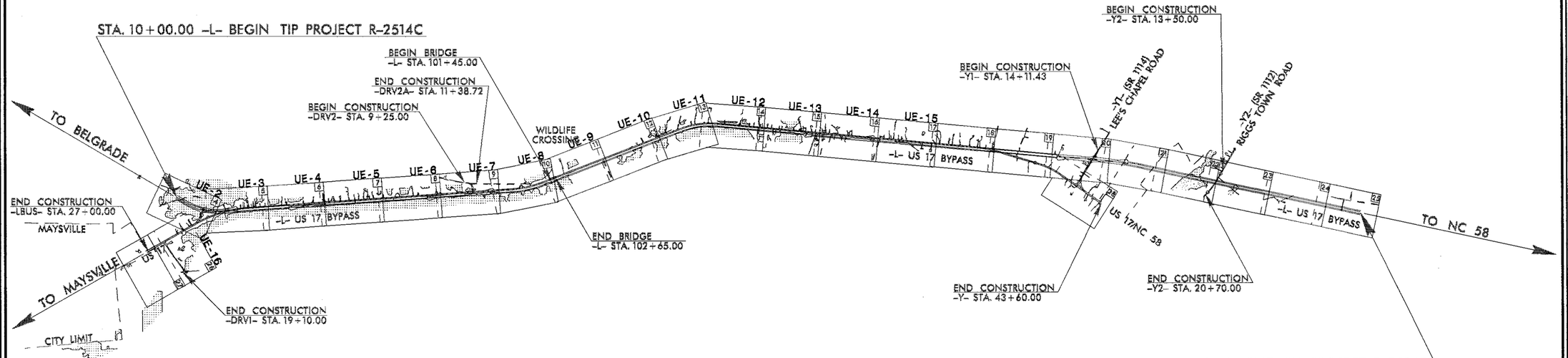
LOCATION: US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

TYPE OF WORK: RELOCATION OF WATER, TELEPHONE AND POWER



VICINITY MAP

NAD 83/
NSRS 2007



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING AT DESIGNATED POINTS ONLY.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: _____

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

INDEX OF SHEETS

SHEET NO.	*DESCRIPTION*
UE-1	*TITLE SHEET*
UE-2, 3, 6, 7, 8, 10, 11, 12	*UTILITY ENGINEERING SHEETS*

WATER AND SEWER OWNERS ON PROJECT

(1) WATER - JONES COUNTY
(2) FIBER OPTIC - CENTURYLINK
(3) POWER - DUKE ENERGY PROGRESS

SEAL

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. — *UTILITIES SECTION ENGINEER*
Corey Bousquet, P.E. — *UTILITIES SQUAD LEADER PROJECT ENGINEER*
Mariko Hafeez — *UTILITIES PROJECT DESIGNER*

09/08/99
23-OCT-2014 13:10
R:\Utilities\Engineering\NEU\Permit Plans and Narrative\Rev 2\R-2514C_Ut_tsh_UEREV_2_psh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-2
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 2 of 20

NAD 83/NSRS 2007

NC GRID
83/NSRS 2007

UTILITY CONSTRUCTION

PROPOSED US 17

7,700 / 11,400 — 400 / 500 — 400 / 500 — 12,000 / 17,700

4,500 / 6,700 EXISTING US 17 245

ADT
2015
2035

TRAFFIC DIAGRAM

-L-		-LBUS-
PI Sta 12+17.85	PI Sta 16+95.31	PI Sta 13+12.68
Θs = 4° 11' 32.5"	Δ = 27° 14' 57.6" (LT)	Δ = 46° 08' 20.6" (RT)
Ls = 240.00'	D = 3° 29' 37.1"	D = 19° 05' 54.9"
LT = 160.04'	L = 779.97'	L = 241.58'
ST = 80.04'	T = 397.51'	T = 127.77'
	R = 1,640.00'	R = 300.00'
	SE = .06	SE = SEE PLANS
	RO = 2.40'	

-BL- 106 POT 5+00.00
(BEGIN R2514C)
-BL- 106 PINC 243+83.34
(END R2514B)

-L- POT Sta. 10+00.00

-L- TS Sta. 10+57.80

-L- SC Sta. 12+97.80

797' OPEN CUT WETLAND

SITE 1 .067 ACRES
TEMP. EXCAVATION

-L- POC Sta. 16+75.00=
-LBUS- POT Sta. 10+00.00

BEGIN R-2514C
R/W ACQUISITION

BEGIN PROJECT R-2514C
-L- STA. 10+00.00

BEGIN R-2514C
R/W ACQUISITION

SITE 2
.044 ACRES TEMP. EXCAVATION
.007 ACRES TEMP. FILL

-LBUS- PC Sta. 11+84.91

-LBUS- PT Sta. 14+26.49

-BL- 104 PINC 13+53.58=
-BYA- POT 5+00.00

J. C. LAROQUE, HEIRS
DB 109 PG 559

N 28° 37' 27.7" E

-L- Sta. 244+76.05

-L- Pls Sta. 245+94.29
Θs = 6° 11' 16.6"
Ls = 354.33'
LT = 236.36'
ST = 118.24'

ESTATE OF FRANK JENKINS
DB 181PG 494
MB 3 PG 7

AMBROSE ROBERTS, JR.
DB 122 PG 245

DONELLE MAURICE MYERS
DB 320 PG 847

FRANK JENKINS ESTATE
C/O PATSY GROOVER
DB 181PG 494

MAMIE BAKER
DB 110 PG 532

THE UNITED STATES OF AMERICA
DB 89 PG 285

MATCHLINE -L- STA. 19+00.00 SEE SHEET 3

MATCHLINE -LBUS- STA. 15+00.00 SEE SHEET 16

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 40 FOR -LBUS- PROFILE

REVISIONS

R/W REVISION 6-25-14 (DMG) - ADDED ADDITIONAL PUE FROM -L- STA.14+85.00 TO STA.18+75.00 LT. ON PARCEL 1 (ESTATE OF FRANK JENKINS). ADDED PUE ON PARCEL 2 (DONELLE MAURICE MYERS) AND REVISED PUE ON PARCEL 3 (AMBROSE ROBERTS, JR.).

5/14/99

23-OCT-2014 10:06
\Permit Plans and Narrative\Rev 2\R-2514C_Ut_rdy4_UE2REV_2_psh.dgn
$$$$USERNAME$$$$

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-3

DESIGNED BY:	MEH
DRAWN BY:	MEH
CHECKED BY:	CDB
APPROVED BY:	CDB
REVISED:	

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 3 of 20

NAD 83/NSRS 2007

SITE 4
.0027 ACRES TEMP. EXCAVATION

SITE 3
.014 ACRES TEMP EXCAVATION

83' OPEN CUT

24' OPEN CUT

MATCHLINE -L- STA. 19+00.00 SEE SHEET 2

MATCHLINE -L- STA. 32+00.00 SEE SHEET 4

-L- CS Sta. 20+77.77

-L- ST Sta. 23+17.77

CHORD

CHORD

REMOVE 24" RCP

REMOVE 24" CMP

REMOVE 24" RCP

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL C

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL C

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL A

MAINTAIN EXISTING DITCH

MEDIAN 'V' DITCH
SEE DETAIL B

PLACED AS PER UTILITY RECORD -
UNABLE TO COLLECT DUE TO FENCE

N 4° 26' 35.8" W

NO ASSOCIATED
RECORDS FOUND

ACCESS POINT

INNERDUCT

REMOVE

10' PS

4' PS

24' MED.

-L-

PI Sta 16+95.31
Δ = 27° 14' 57.6" (LT)
D = 3° 29' 37.1"
L = 779.97'
T = 397.51'
R = 1,640.00'
SE = .06
RO = 240'

PIs Sta 21+57.81
Θs = 4° 11' 32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Natural Ground · 3:1 or Flatter · D · 3:1 or Flatter · 10Ft. · Fill Slope · B

Min. D= 2.5 Ft.
B= 3.0 Ft.
b= 8.0 Ft.

-L- STA. 17+50 to STA. 19+15 RT
DDE=564 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground · 3:1 or Flatter · D · 3:1 or Flatter · 10Ft. · Fill Slope · B

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 8.0 Ft.

-L- STA. 30+30 to STA. 32+00 LT
DDE=2610 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Natural Ground · 3:1 or Flatter · D · 3:1 or Flatter · 10Ft. · Fill Slope · B

Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 8.0 Ft.

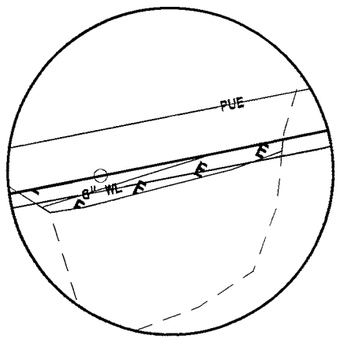
-L- STA. 21+10 to STA. 30+50 LT
DDE=2251 CY

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)

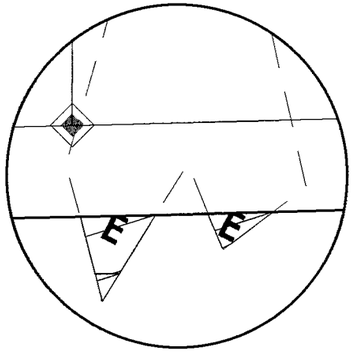
Shoulder Point · 3:1 or Flatter · 3:1 or Flatter · Shoulder Point

-L- STA. 20+15 TO STA. 24+00 MED

SITE 3



SITE 4



E E DENOTES EXCAVATION IN WETLAND

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS

SEE SHEET 29 FOR -L- PROFILE

REVISIONS
5/14/99 R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 14Z (ALPHONSO HILL).

23-OCT-2014 10:24
N:\Permit Plans and Narratives\Rev 2\R-2514C_Ut_rdy5_UE3REV_2.psh.dgn
$$USERNAME$$

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-4
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 4 of 20

3 - POWER POLES
FILL IN WETLANDS

214' TRENCHLESS INSTALL

107' TRENCHLESS INSTALL

286' TRENCHLESS INSTALL

292' TRENCHLESS INSTALL

PROP. O/H POWER

218' TRENCHLESS INSTALL

220' TRENCHLESS INSTALL

SITE 4 .12 AC

PROP. 6" WATER LINE

SITE 6 .12 AC

SITE 5 .02 AC

PROP. UG F/O CABLE

ESTATE OF FRANK JENKINS
DB 181 PG 494
MB 3 PC 7

NORMAN HILL
DB 218 PG 847

ELEANOR JEAN HOLT (SEPTIC SYSTEM)
JACKSON, ET AL
DB 271 PG 970

ROCHELLE ANITA HOLT

L'YNELL MAYNOR, ET UX
DB 1416 PG 2

LEE CULVERT
DB 148 PG 25
LOT 1 BLOCK

WOODROW F. LASSITER, ET UX
DB 318 PG 981
DB 261 PG 142
DB 180 PG 3

WOODROW F. LASSITER, ET UX
DB 187 PG 277

THE UNITED STATES OF AMERICA
DB 89 PG 285

MATCHLINE –L– STA. 32+00.00 SEE SHEET 3

MATCHLINE –L– STA. 46+00.00 SEE SHEET 5

BM #1
SEE SHEET 1-E
ELEV. 40.95

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
b= 3.0 Ft.
b/a = 5.0 Ft.

–L– STA. 30+50 to STA. 32+00 LT
DDE=2510 CY

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)

–L– STA. 36+50 TO STA. 37+60 MED
–L– STA. 41+00 TO STA. 42+00 MED

F / F DENOTES FILL IN WETLAND

HC / HC DENOTES HAND CLEARING

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR –L– PROFILE

REVISIONS

R/W REVISION 01-06-14 (DWG) - REVISED THE R/W, C/A AND PUE ON PARCEL 1 (ESTATE OF FRANK JENKINS), PARCEL 19 (ELVERT LEE HOLT), AND PARCEL 20 (WOODROW F. LASSITER, ET UX) TO AVOID THE HOME LOCATED AT -L- STA. 37+40.00 LT.

5/14/99

E-MAIL 2014 16:42
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DESIGN SERVICES

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-5
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151

UTILITY CONSTRUCTION
PLANS ONLY

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 5 of 20

1 - POWER POLE
FILL IN WETLANDS

PROP. O/H POWER

PROP. 6" WATER LINE

PROP. UG F/O CABLE

MATCHLINE -L- STA. 46+00.00 SEE SHEET 4

MATCHLINE -L- STA. 60+00.00 SEE SHEET 6

GREEN CO LAND, LLC.
DB 351 PG 256
PC C SLIDE 37-2

CECIL R. HILL, ET UX
DB 177 PG 152
DB 236 PG 639

FREDRICK E. KING, ET UX
DB 165 PG 526

FREDRICK E. KING, ET UX
DB 166 PG 603

ROY L. KING, ET UX
DB 166 PG 165

BOBBY A. FLOWERS, ET UX
DB 230 PG 279

RAYMOND C. BANKS, JR, ET UX
DB 190 PG 894
TRACT 2

RAYMOND C. BANKS, JR, et ux
DB 190 PG 894
TRACT 3

RAYMOND C. BANKS, JR, et ux
DB 190 PG 894
TRACT 1

DORIS L. HILL
DB 236 PG 642

DORIS L. HILL
DB 236 PG 645

ABBY B. HEATH, ET UX
DB 226 PG 335
TRACT 2

ABBY B. HEATH, ET UX
DB 226 PG 335
TRACT 1

MICHAEL ANTHONY DUDLEY, ET UX
DB 185 PG

ET UX
DB 156 PG 668

WILBER G. KING, ET UX
DB 153 PG 222

ROY L. KING, ET UX
DB 166 PG 627

THE UNITED STATES OF AMERICA
DB 89 PG 285

THE UNITED STATES OF AMERICA
DB 89 PG 285

150' FULL LANE

150' TAPER

LATERAL 3' BASE DITCH
SEE DETAIL D

CL B RIP RAP
EST. 2 TONS
EST. 1 SY GEOTEXTILE

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

MEDIAN "V" DITCH
SEE DETAIL B

-L- POT Sta. 46+34.83=
-Y3- POT Sta. 12+60.19

-BL- 2 PINC 43+93.45

-BL- 3 PINC 54+80.92

SITE 7 .02 AC

BM #5
SEE SHEET 1-E
ELEV. 41.22'

DETAIL B
MEDIAN V DITCH
(Not to Scale)

-L- STA. 46+90 TO STA. 48+00 MED

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 6.0 Ft.

-L- STA. 30+50 to STA. 32+00 LT
DDE=2610 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 6.0 Ft.

-L- STA. 32+00 to STA. 61+00 LT
DDE=765 CY

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR -L- PROFILE

REVISIONS

5/14/99

15-MAY-2014 16:40
N:\Projects\R-2514C_Ut_rdy7_UE5_psh.dgn
Users: Default
Settings: Default
MicroStation V8 2004 Edition (08.11.07.443)

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-6

DESIGNED BY:	MEH
DRAWN BY:	MEH
CHECKED BY:	CDB
APPROVED BY:	CDB
REVISED:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
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FAX: (919)250-4151

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 6 of 20

REVISIONS
5/14/99 R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 282 (RAYMOND C. BANKS, JR. ET UX) AND PARCEL 292 (JOHN TAYLOR, JR. ET UX).

MATCHLINE -L- STA. 60+00 SEE SHEET 5

MATCHLINE -L- STA. 74+00.00 SEE SHEET 7

SITE 5
.0024 ACRES TEMP. EXCAVATION

8' OPEN CUT

RAYMOND C. BANKS, JR. ET UX
DB 153 PG 194
28

RAYMOND C. BANKS, JR. ET UX
DB 153 PG 60
28

RAYMOND C. BANKS, JR. ET UX
DB 153 PG 194
TRACT 2
28

JOHN TAYLOR, JR., ET UX
DB 227 PG 258
29

MARVIN L. GOODSON
DB 191 PG 343
TRACT 1
30

MARVIN L. GOODSON
DB 168 PG 740
30

MARVIN L. GOODSON
DB 189 PG 177
30

EDWARD E. DUDLEY, ET UX
DB 340 PG 438
31

RACHEL M. EUBANK
DB 156 PG 712
32

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

S 03°34'26" E 60.00'
S 03°34'26" E 216.43'
S 03°34'26" E 105.02'
S 03°34'26" E 104.99'
S 04°27'15" E 196.21'
S 03°34'26" E 370.00'
S 04°26'16" E 75.00'
N 89°52'34" W 290.00'
S 89°27'14" W 405.36'
N 89°27'14" E 407.39'
S 89°27'14" W 405.36'
S 89°25'58" W 409.56'
S 89°32'49" W 449.56'
S 89°32'49" W 447.98'
N 89°52'34" W 290.00'
N 89°52'34" W 290.00'

LATERAL 'V' DITCH SEE DETAIL

LATERAL BASE DITCH SEE DETAIL

+62.00 -L- (137.00' (LT.) SEPTIC SYSTEM
+41.00 -L- 124.08' (LT.) END C/A FENCE
+00.00 -L- 105.00' (LT.)
+01.00 -L- 124.08' (LT.) BEGIN C/A FENCE
+25.00 -L- 105.00' (LT.) END C/A FENCE
+73.00 -L- 105.00' (LT.) BEGIN C/A FENCE
+95.00 -L- 121.00' (LT.)
+50.00 -L- 105.00' (LT.)
+30.00 -L- 115.00' (LT.) 130.00' (LT.) END C/A FENCE
+63.00 -L- 130.00' (LT.) 141.00' (LT.)
+83.00 -L- 130.00' (LT.) 141.00' (LT.)
+10.00 -L- 115.00' (LT.)
+80.00 -L- 115.00' (LT.)
+40.00 -L- 115.00' (LT.) BEGIN C/A FENCE
+47.00 -L- 115.00' (LT.) END C/A FENCE
+00.00 -L- 100.00' (RT.)
+60.00 -L- 135.00' (RT.)
+50.00 -L- 100.00' (RT.)

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

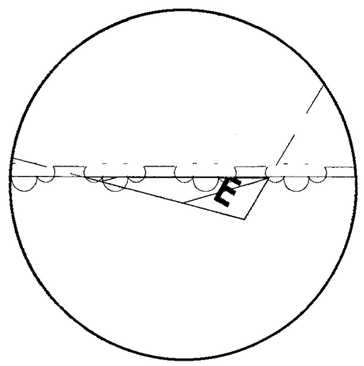
ACCESS POINT (080A) (080) (080B) (080C) (080D)

15" RCP REMOVE
15" CMP REMOVE
18" RCP REMOVE
REPEATER
GTD

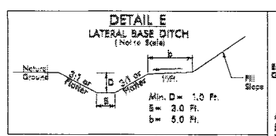
SEPTIC SYSTEM
HTR
WD DK
CONC
FIBER (PB)

N 4°26'35.8" W

SITE 5

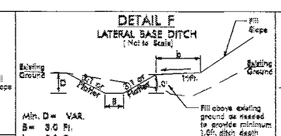


DETAIL E
LATERAL BASE DITCH
(Not to Scale)



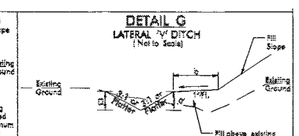
-L- STA. 52+00 to STA. 61+00 LT
DDE= 765 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)



-L- STA. 61+00 to STA. 66+00 LT
DDE= 176 CY

DETAIL G
LATERAL 'V' DITCH
(Not to Scale)



-L- STA. 66+00 to STA. 78+30 LT
DDE= 439 CY

E E DENOTES EXCAVATION IN WETLAND

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE. PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS. SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 31 FOR -L- PROFILE

23-OCT-2014 10:46
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$$$$USERNAME$$$$

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-7
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 7 of 20

NAD 83/NSRS 2007

REVISIONS

5/14/99 R/W REVISION 01-06-14 (DWG) - ADDED R/W AND REVISED THE TOE AND PUE ON PARCEL 32 (RACHEL M.EUBANK), PARCEL 33 (JACK L.HOLLAND), AND PARCEL 34 (WEYERHAEUSER COMPANY) FOR THE REVISED 20' WIDTH OF -DRV2- AND -DRV2A-.

MATCHLINE -L- STA. 74+00.00 SEE SHEET 6

MATCHLINE -L- STA. 88+00.00 SEE SHEET 8

SITE 6
.0144 ACRES TEMP. EXCAVATION
.0067 ACRES TEMP. FILL

102' OPEN CUT

-DRV2- PC Sta. 10+00.00
MAINTAIN EXISTING DITCH
SPECIAL CUT DITCH SEE DETAIL K
N 39° 55' 58.0" W
-DRV2A- PC Sta. 10+13.96
SPECIAL CUT DITCH SEE DETAIL AF
SPECIAL CUT DITCH SEE DETAIL I
-DRV2A- PT Sta. 10+88.72
-DRV2A- POT Sta. 11+38.72
-DRV2- POT Sta. 9+25.00
BEGIN GRADE -DRV2- STA. 9+50.00
BEGIN CONSTRUCTION -DRV2- STA. 9+25.00
-DRV2- POC Sta. 10+00.00=
-DRV2A- POT Sta. 10+08.00
-DRV2- PT Sta. 11+45.65
END CONSTRUCTION -DRV2A- STA. 11+38.72

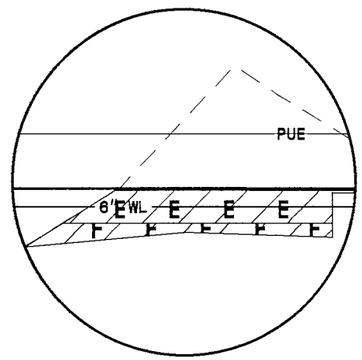
RACHEL M. EUBANK DB 156 PG 712 (32)
JACK L. HOLLAND DB 230 PG 32 (33)
WEYERHAEUSER COMPANY PC "B" SLIDE 33 (34)
THE UNITED STATES OF AMERICA DB 89 PG 285 (4)

TIE DITCH TO NATURAL GROUND
LATERAL 'V' DITCH SEE DETAIL G
LATERAL 'V' DITCH SEE DETAIL H
LATERAL 'V' DITCH SEE DETAIL J
POND WE= 339'
ACCESS POINT 20'
WILDLIFE FENCE GATE
BEGIN CA FENCE
END CA FENCE
BEGIN WILDLIFE FENCE
WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D-1
BEG. SBG -L- STA. 87+40 LT
18" CAAP W/ 2 ELBOWS
CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
CL B RIP RAP EST. 5 TONS EST. 16 SY GEOTEXTILE
BM #3 SEE SHEET 1-E ELEV. 40.96'
BURY 1.0'
N 83° 49' 25.7" E
N 11° 26' 35.8" W
-L- POT Sta. 82+25.00=
-DRV2- POT Sta. 13+11.66

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

SITE 6



DETAIL G LATERAL 'V' DITCH (Not to Scale)
Min. D= 1.0 Ft. b= 5.0 Ft. Fill above existing ground as needed to provide minimum 1.0ft. ditch depth.
-L- STA. 66+00 to STA. 78+30 LT DDE=439 CY
-L- STA. 81+50 TO STA. 83+50 LT DDE=47 CY

DETAIL I SPECIAL CUT DITCH (Not to Scale)
Min. D=1.0 Ft.
-DRV2A- STA. 10+25 TO STA. 11+20 RT

DETAIL K SPECIAL CUT DITCH (Not to Scale)
Min. D=1.0 Ft.
-DRV2- STA. 9+35 TO STA. 11+13 RT

DETAIL H LATERAL 'V' DITCH (Not to Scale)
Min. D=1.0 Ft. b=5.0 Ft.
-L- STA. 83+50 TO STA. 86+50 LT DDE=219 CY

DETAIL J LATERAL 'V' DITCH (Not to Scale)
Min. D= 0.5 Ft. b= 5.0 Ft. Fill above existing ground as needed to provide minimum 1.0ft. ditch depth.
-L- STA. 86+50 to STA. 89+00 LT DDE=30 CY

DETAIL AF SPECIAL LATERAL 'V' DITCH (Not to Scale)
Min. D= VAR.
-DRV2A- STA. 10+50 TO STA. 11+25 (LT)

NOTE: SBG - "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 43 FOR -DRV2- PROFILE
SEE SHEET 43 FOR -DRV2A- PROFILE

23-OCT-2014 10:56
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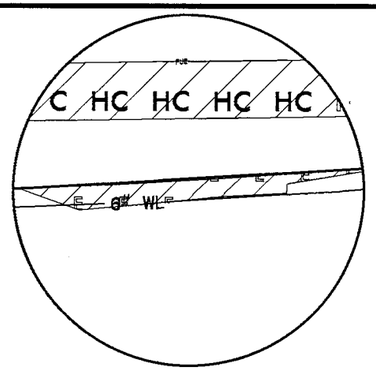
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-8
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

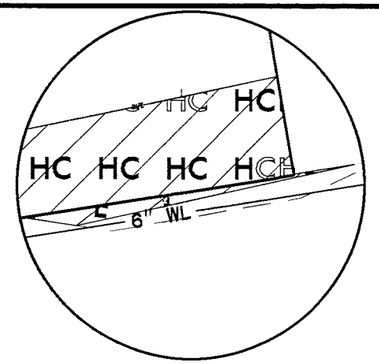
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 3 of 20



SITE 7-1



SITE 7-2

-L-		
PIs Sta 92+25.52	PI Sta 95+60.26	PIs Sta 98+92.91
Θs = 2°19' 44.7"	Δ = 12° 26' 19.1" (LT)	Θs = 2°19' 44.7"
Ls = 200.00'	D = 2°19' 44.7"	Ls = 200.00'
LT = 133.34'	L = 534.05'	LT = 133.34'
ST = 66.68'	T = 268.08'	ST = 66.68'
	R = 2,460.00'	
	SE = .05	
	R0 = 200'	

NAD 83/NSRS 2007

350' OPEN CUT

SITE 7
.1484 ACRES HAND CLEARING
.0107 ACRES TEMP. EXCAVATION

WEYERHAEUSER COMPANY
PC "B" SLIDE 33
34

MATCHLINE -L- STA. 88+00.00 SEE SHEET 7

MATCHLINE -L- STA. 101+00.00 SEE SHEET 9

-L- TS Sta. 90+92

-L- SC Sta. 92+92.17

-L- CS Sta. 99+26.23

-L- ST Sta. 100+26.23

LATERAL 'V' DITCH SEE DETAIL J

LATERAL 'V' DITCH SEE DETAIL H

18" CAAP W/ 2 ELBOWS

JACK L. HOLLAND
DB 250 PG 32
43

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

CL 9 RIP RAP EST. 3 TONS EST. 3 SY GEOTEXTILE

CL 9 RIP RAP EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

BEGIN SBG -L- 99+45 RT

SBG

SBG 30:1

GRAU 350

TYPE M-350

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D-2

E E DENOTES EXCAVATION IN WETLAND

HC HC DENOTES HAND CLEARING

NOTE: SBG - "SHOULDER BERM GUTTER"
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR -L- PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) FROM -L- STA. 92+92.17 TO STA. 99+68.00 LT.

5/14/99

23-OCT-2014 11:22
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$$$$ISER.ROOM$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-9
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
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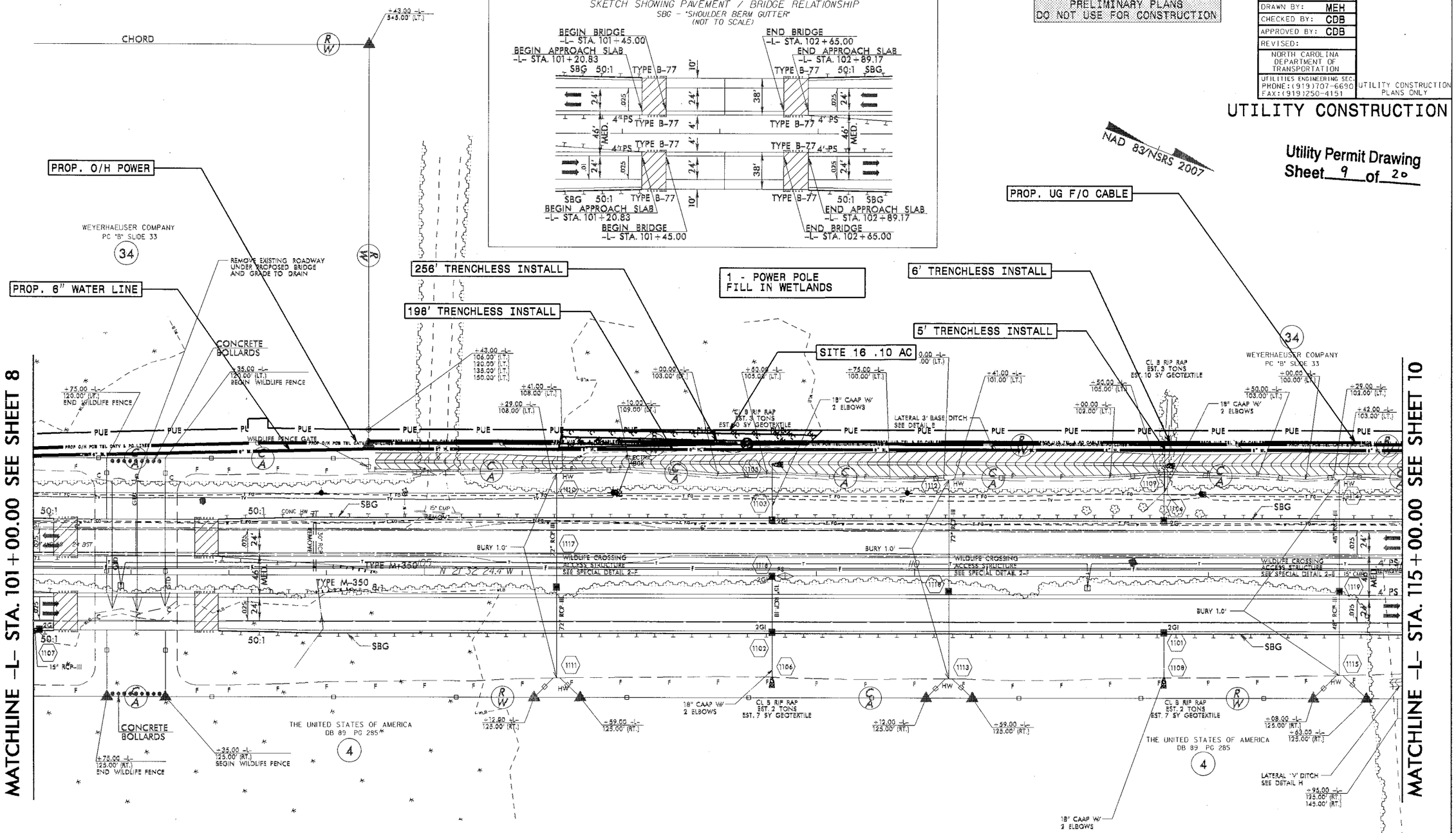
UTILITY CONSTRUCTION

NAD 83/NSRS 2007

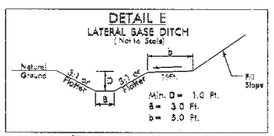
Utility Permit Drawing
Sheet 9 of 20

REVISIONS
5/14/99

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG - "SHOULDER BERM GUTTER"
(NOT TO SCALE)

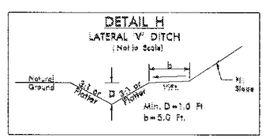


DETAIL E
LATERAL BASE DITCH
(Not to Scale)



-L- STA. 104+30 to STA. 143+00 LT
DDE=4025 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)



-L- STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

NOTE: SBG - "SHOULDER BERM GUTTER"
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR -L- PROFILE
SEE SHEETS S-1 THRU S-2 FOR STRUCTURE PLANS

E:\MAY-2014 17.05 ...\Design and Narrative\R-2514C_Utl_Rdy11_UE9_psh.dgn

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-10
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 10 of 39 20

SITE 9
.0077 ACRES TEMP. EXCAVATION

66' OPEN CUT

43' OPEN CUT

SITE 8
.0015 ACRES TEMP. EXCAVATION

MATCHLINE –L– STA. 115+00.00 SEE SHEET 9

MATCHLINE –L– STA. 129+00.00 SEE SHEET 11

WEYERHAEUSER COMPANY
PC "B" SLIDE 33
34

HOLIDAY LODGE, INC
DB 192 PG 539
35

GLENN ALLEN
DB 265 PG 987
36

JESSE JAMES, ET UX
DB 225 PG 688
MB 4 PG 85
37

JOSEPH L. JACKSON, ET UX
DB 301 PG 137

ELNITA SCOTT
38

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

LATERAL 3' BASE DITCH
SEE DETAIL E

STANDARD 3' BASE DITCH
SEE DETAIL L
EST. 37 C.Y. DDE

TIE TO EXISTING DITCH

LATERAL 'V' DITCH
SEE DETAIL H

WILDLIFE CROSSING
ACCESS STRUCTURE
SEE SPECIAL DETAIL 2-E

BURY 1.0'

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

16" CAAP W/
2 ELBOWS

18" CAAP W/
2 ELBOWS

END SBG
–L– 117+95 RT

END WILDLIFE FENCE
BEGIN C/A FENCE

REMOVE C/A
18" RCP

REMOVE
15" RCP

REMOVE
END SECT

REMOVE
18" RCP

REMOVE
18" RCP ELBOW

REMOVE
15" RCP

REMOVE
24" RCP

REMOVE
30" RCP

REMOVE
36" RCP

REMOVE
42" RCP

REMOVE
48" RCP

REMOVE
54" RCP

REMOVE
60" RCP

REMOVE
66" RCP

REMOVE
72" RCP

REMOVE
78" RCP

REMOVE
84" RCP

REMOVE
90" RCP

REMOVE
96" RCP

REMOVE

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-11
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 11 of 20

NAD 83/NSRS 2007

REVISIONS

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 42 (OTIS A. SIMMONS, ET AL), PARCEL 46 (JAMES V. BENDER, JR.), PARCEL 47 (CHARLES W. JONES, ET UX), AND PARCEL 48 (BERNARD JONES, SR.). 5/14/99

MATCHLINE -L- STA. 129+00.00 SEE SHEET 10

MATCHLINE -L- STA. 141+00.00 SEE SHEET 12

SITE 10
.0264 ACRES TEMP. EXCAVATION
.0073 ACRES TEMP. FILL

128' OPEN CUT

SITE 11
.0019 ACRES TEMP. EXCAVATION

63' OPEN CUT DITCH

-L- PI STA 133+33.78

ELNIVA SCOTT (38)

AGNES S. MOORE, ET VIR DB 168 PG 598 (39)

JOSEPH L. JACKSON, ET UX DB 361 PG 137 (40)

JAMES V. BENDER, JR. DB 14 PG 92, DB 49 PG 160 (41)

MAE FRANCES JONES, ET VIR DB 191 PG 591 (41)

OTIS A. SIMMONS, ET AL DB 313 PG 275 (42)

STEPHEN SHORT, ET UX DB 148 PG 267, MB 4 PG 85 (45)

JAMES V. BENDER, JR. DB 14 PG 92, DB 49 PG 160 (46)

CHARLES W. JONES, ET UX (47)

BERNARD JONES, SR. DB 1269 PG 376 (48)

MARY W. DAVIS, CRISSIE SIMMONS DB 172 PG 519 (49)

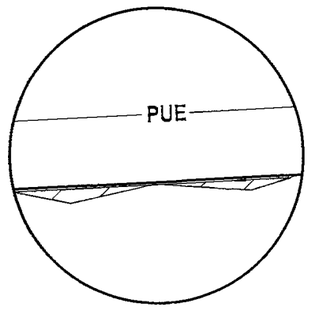
LIE G. SMITH, ET UX DB 186 PG 912, PC A SL106 86 (50)

THE UNITED STATES OF AMERICA DB 89 PG 285 (4)

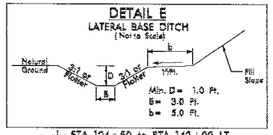
HISTORIC* PROPERTY ELIGIBLE FOR NRHP
J. MANLY FOSCUE, JR.
DB 137 PG 257 (43)

CL B RIP RAP EST. 3 TONS EST. 11 SY GEOTEXTILE

SITE 11



DETAIL E
LATERAL BASE DITCH
(None Scale)



-L- STA. 104+50 to STA. 142+00 LT
DDE = 4025 CY

-L-	
PIs Sta 135+53.82	PI Sta 139+50.54
Θs = 3° 38' 50.9"	Δ = 19° 04' 40.6" (RT)
Ls = 240.00'	D = 3° 02' 22.4"
LT = 160.03'	L = 627.65'
ST = 80.03'	T = 316.76'
	R = 1,885.00'
	SE = .06
	RO = 240'

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 33 FOR -L- PROFILE

23-OCT-2014 13:02
Plotted By: Narrative\Rev 2\R-2514C_Utility_rdy13_UE11REV_2_psh.dgn
Project Files: 2\R-2514C_Utility_rdy13_UE11REV_2_psh.dgn
Users: SERVANT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-12
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
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PRELIMINARY PLANS
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NAD 83/NSRS 2007

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 12 of 20

102' OPEN CUT

SITE 12
.0253 ACRES TEMP. EXCAVATION

MATCHLINE -L- STA. 141+00.00 SEE SHEET 11

MATCHLINE -L- STA. 154+00.00 SEE SHEET 13

ANNIE R. PAIGE
DB 174 PG 677

VERONICA M. PAIGE
DB 259 PG 961

ABUNDANT BLESSINGS MINISTRIES INC.
NEW HOPE CHURCH OF GOD
C/O OLIVER J. COLLINS, ET UX
DB 247 PG 457
MB 5 PG 72
PC B SLIDE 117

ABUNDANT BLESSINGS MINISTRIES INC.
NEW HOPE CHURCH OF GOD
C/O OLIVER J. COLLINS
DB 247 PG 459
MB 5 PG 72
PC B SLIDE 117

WILLIE G. SMITH, ET UX
DB 186 PG 912
PC A SLIDE 86

WILLIAM E. HASSELL
DB 28 PG 91

SHERRY M. JARMAN
DB 269 PG 930

MAZIE W. ISLER
DB 128 PG 6

MARY SIMMONS-ISLER, ET AL
ESTATE FILE 02 E-62
DB 49 PG 85
DB 116 PG 555

TYRONE SMITH
DB 229 PG 548

JAMES V. BEADER, JR.
DB 114 PG 92
DB 49 PG 160

DAWN M. PAGAN, ET VIR
DB 315 PG 995

MOULTRE L. SPENCER
DB 267 PG 261

J. MANLY FOSCUE, JR.
DB 137 PG 257

HISTORIC PROPERTY
ELIGIBLE FOR NRHP

BLUE ROCK STRUCTURES, INC.
DB 300 PG 444

PLACED PER UTILITY RECORD

TIE EXISTING DITCH TO PROPOSED DITCH

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL C

LATERAL 3' BASE DITCH SEE DETAIL E

US HWY 70/NC 58 EAST

BM SEE SHEET 11-E ELEV. 46.13'

-L- PI Sta 139+50.54 | PIs Sta 143+41.47
Δ = 19° 04' 40.6" (RT) | Θs = 3° 38' 50.9"
D = 3° 02' 22.4" | Ls = 240.00'
L = 627.65' | LT = 160.03'
T = 316.76' | ST = 80.03'
R = 1,885.00' | SE = .06
RO = 240'

E E DENOTES EXCAVATION IN WETLAND

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

-L- STA. 104+50 to STA. 142+00 LT DDE=4025 CY
-L- STA. 147+00 to STA. 151+50 LT DDE=264 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

-L- STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

-L- STA. 151+39 TO STA. 156+80 RT
DDE=261 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)

-L- STA. 142+00 to STA. 147+00 LT
DDE=202 CY

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR -L- PROFILE

REVISIONS
R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 51 (ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS). ADDED PUE ON PARCEL 58 (BLUE ROCK STRUCTURES, INC.).

5/14/99

23-OCT-2014 11:39
Pen Table: C:\Projects\Narrative\Rev 2\R-2514C_Ut_rdy14_UE12REV_2_psh.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-13
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 13 of 20

UTILITY CONSTRUCTION

1 - POWER POLE
FILL IN WETLANDS

PROP. OH POWER

PROP. UG F/O CABLE

191' TRENCHLESS INSTALL

189' TRENCHLESS INSTALL

PROP. 6" WATER LINE

MATCHLINE –L– STA. 154+00.00 SEE SHEET 12

MATCHLINE –L– STA. 168+00.00 SEE SHEET 14

REVISIONS

5/4/99

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

–L– STA. 151+90 to STA. 155+00 LT
DDE=6355 CY

DETAIL H
LATERAL "V" DITCH
(Not to Scale)

–L– STA. 161+39 TO STA. 164+50 DDE=28 CY
–L– STA. 158+25 TO STA. 158+90 RT DDE=22 CY

DETAIL M
LATERAL "V" DITCH
(Not to Scale)

–L– STA. 156+50 TO STA. 158+25 RT
DDE=147 CY

DETAIL N
LATERAL "V" DITCH
(Not to Scale)

–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR –L– PROFILE

E:\WAY-2014\120
DWG\Plans and Narrative\R-2514C_Utility_Plan\5_UE13.psh.dgn
USER:KERRBARNHARDT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-14
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 14 of 20

NAD 83/NSRS 2007

REVISIONS

5/14/99

MATCHLINE –L– STA. 168+00.00 SEE SHEET 13

MATCHLINE –L– STA. 182+00.00 SEE SHEET 15

PROP. 6" WATER LINE

PROP. O/H POWER

5' TRENCHLESS INSTALL

6' TRENCHLESS INSTALL

PROP. UG F/O CABLE

BENJAMIN BROWN, ET UX
DB 156 PG 685
PC "A" SLIDE 152
93

CYNTHIA D. YOUNG, ET VIR
DB 291 PG 677
92

FLORETTA BRYANT, ET VIR
DB 227 PG 43
91

EDWARD E. BRYANT, ET UX
DB 323 PG 479
MC "B" SLIDE 322 PG 1
95

JAMES HENRY BRYANT
DB 246 PG 993
MC "B" SLIDE 322 PG 1
98

MILDRED B. MORGAN
DB 246 PG 995
MC "B" SLIDE 322 PG 1

WILLIE L. BRYANT, ET UX
DB 320 PG 187
103

WILLIE L. BRYANT, ET UX
DB 323 PG 477
MC "B" SLIDE 322 PG 1
100

WILLIE L. BRYANT, ET UX
DB 320 PG 187
104

WEYERHAEUSER COMPANY
DB 190 PG 508
PARCEL #1
106

MATTHEW MOORE, JR., ET UX
DB 229 PG 639
90

RICHARD L. HARRELL, ET UX
DB 167 PG 331
94

JOSEPH O. BRYANT
DB 224 PG 698
96

ELEANOR J. JACKSON, ET VIR
DB 296 PG 300
97

ESTELLA BURGE
DB 197 PG 198
99

ESTELLA BURGE
DB 14 PG 86
99

RONALD EARL WILLIE
DB 222 PG 61
101

EVELYN D. WILLIE, ET VIR
ESTATE FILE 78-E-52
102

SUE BOWLING FOSCUE
DB 186 PG 09
105

HISTORIC PROPERTY
ELIGIBLE FOR NRHP

SITE 24 <.01 AC

C/A RIP RAP
EST. 33 TONS
EST. 62 SY GEOTEXTILE

HC HC DENOTES HAND CLEARING

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
–L– STA. 151+50 to STA. 161+00 LT
DDE=6255 CY

DETAIL F
CHANNEL CHANGE
(Not to Scale)
Min. D= 2.5 Ft.
Max. d= 2.5 Ft.
Min. S= 5.0 Ft.
Min. b= 10.0 Ft.
Type of Liner= Class B Rip Rap
–L– STA. 174+50 TO STA. 175+50 (RT)

DETAIL O
SPECIAL CUT DITCH
(Not to Scale)
Min. D= VAR.

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
b= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 181+00 to STA. 185+50 LT
DDE=744 CY

DETAIL Q
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
b= 2.0 Ft.
Type of Liner= Class B Rip-Rap
–L– STA. 180+76 RT

DETAIL N
LATERAL "V" DITCH
(Not to Scale)
Min. D=2.0 Ft.
b=9.0 Ft.
–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

DETAIL R
MEDIAN "V" DITCH
(Not to Scale)
–L– STA. 181+80 TO STA. 186+00 MED

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

E-MAY-2014 07:23
...and Narrative\R-2514C_Ut_rdpl6_UE14_psh.dgn

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-15

DESIGNED BY:	MEH
DRAWN BY:	MEH
CHECKED BY:	CDB
APPROVED BY:	CDB
REVISED:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 15 of 20

NAD 83/NSRS 2007

REVISIONS
5/14/99
R/W REVISION 02-10-14 (DWG) - REVISED THE C/A AND R/W TO A 130' OFFSET AND ADDED TOE FROM -L- STA 194+20.00 TO STA 195+20.00 RT. ON PARCEL 110

(THERON D. HUMPHREY).

15-MAY-2014 17:31
N:\Projects\Roadway\Design and Narrative\R-2514C_Utility\dgn\17_UE15_psh.dgn

MATCHLINE -L- STA. 182+00.00 SEE SHEET 14

PROP. 6" WATER LINE

PROP. O/H POWER

PROP. UG F/O CABLE

C.B. CHADWICK, SR.
DB 1111 PG 433
107

EVERA COLLINS
DB 214 PG 797
108

JAMES C. OLLISON, ET UX
DB 1911 PG 884
109

JOHN RAY McDANIEL, ET UX
DB 249 PG 30
111

JONES
DB 205 PG 110
112

LEE W. NELSON
ESTATE FILE 94-E-36
PC "A" SLIDE 114-A
113

BETTY LOU W. LIGI
ESTATE FILE 94-E-36
PC "A" SLIDE 114-A
114

WEYERHAEUSER COMPANY
DB 190 PG 608
PARCEL "I"
106

THERON D. HUMPHREY
DB 128 PG 112
110

THERON D. HUMPHREY
DB 128 PG 112
110

MEDIAN 'V' DITCH SEE DETAIL R

LATERAL 3' BASE DITCH SEE DETAIL E

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

BUFFER ZONE 1
SITE 25 .01 AC FOSCUE 09
105

SEE SHEET 1-E
ELEV. 33.35'

DETAIL AQ
BANK STABILIZATION
(Not to Scale)
-L- STA. 194+94 (100' RT TO 120' RT)

DETAIL R
MEDIAN 'V' DITCH
(Not to Scale)
-L- STA. 181+80 TO STA. 186+00 MED

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
-L- STA. 181+00 to STA. 185+50 LT DDE=744 CY

DETAIL S
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
-L- STA. 185+30 TO STA. 191+07 (RT)
-L- STA. 185+50 TO STA. 190+07 (LT)
-L- STA. 190+10 TO STA. 195+19 (LT)

DETAIL V
STANDARD BASE DITCH
(Not to Scale)
-L- STA. 194+94 (80' RT TO 100' RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
-L- STA. 195+21 TO STA. 199+35 (LT)

DETAIL T
STANDARD BASE DITCH
(Not to Scale)
-L- STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)
-L- STA. 194+93 TO STA. 199+80 (RT)

ALLOWABLE IMPACTS ZONE 1

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR -L- PROFILE

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-16
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	

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FAX: (919)250-4151

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 16 of 20

MATCHLINE -LBUS- STA. 15+00.00 SEE SHEET 2

NAD 83/NSRS 2007

PROP. O/H POWER

PROP. 6" WATER LINE

215' TRENCHLESS INSTALL

PROP. UG F/O CABLE

LATERAL 3' BASE DITCH SEE DETAIL D

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AP

REMOVE 18" RCP

REMOVE 24" CMP

REMOVE 36" CMP

REMOVE 30" RCP

TIE TO EXIST. SWALE

REMOVE 15" CMP

CL B RIP RAP EST. 17 TONS
EST. 38 SY GEOTEXTILE

+78.00 -LBUS- 60.00' (RT.) 90.00' (RT.)

STANDARD 3' BASE DITCH W/CLASS B RIP RAP SEE DETAIL AJ
EST. 28 C.Y. DDE
EST. 21 TONS RIP RAP
EST. 47 S.Y. F.G.

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

+37.14 -LBUS- 62.00' (LT.)

STANDARD 'V' DITCH SEE DETAIL AN

-LBUS- POT Sta. 22+59.00=
-DRVI- POT Sta. 10+00.00

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

SPECIAL CUT DITCH SEE DETAIL AL

+70.00 -DRVI- 35.00' (RT.)

+00.00 LBUS- 60.00' (LT.)

+03.00 -LBUS- 60.00' (LT.)

+70.00 -DRVI- 35.00' (LT.)

+00.00 -DRVI- 35.00' (LT.)
+80.00 -DRVI- 35.00' (LT.)
50.00' (LT.)

RETAIN CL B RIP RAP EST. 3 TONS EST. 11 SY GEOTEXTILE

+25.00 -DRVI- 35.00' (LT.) 50.00' (LT.)

+12.29 -DRVI- 35.00' (LT.)

+50.00 -DRVI- 45.00' (LT.)

-DRVI- PC Sta. 13+12.29

SPECIAL CUT BASE DITCH SEE DETAIL AI

-DRVI- PT Sta. 13+77.62

+77.62 -DRVI- 35.00' (LT.)

+50.00 -DRVI- 40.00' (LT.)

REMOVE

N 56° 33' 10.1" E

100' TAPER

+00.00 -DRVI- 35.00' (RT.)

+12.29 -DRVI- 35.00' (RT.)
+50.00 -DRVI- 50.00' (RT.)

+77.62 -DRVI- 35.00' (RT.)

+00.00 -DRVI- 60.00' (RT.)

+00.00 -DRVI- 55.00' (RT.)

SPECIAL CUT DITCH SEE DETAIL AK

+50.00 -DRVI- 45.00' (RT.)

+00.00 -DRVI- 50.00' (RT.)

STANDARD 'V' DITCH SEE DETAIL Y
SLOPE = 0.01848
EST. 14 CY DDE

+03.57 -DRVI- 50.00' (RT.)

+80.00 -DRVI- 35.00' (RT.)

-DRVI- PC Sta. 17+48.85

+50.00 -DRVI- 50.00' (LT.)

+60.00 -DRVI- 45.00' (LT.)

+48.65 -DRVI- 35.00' (LT.)

+00.00 -DRVI- 35.00' (LT.)

+00.00 -DRVI- 50.00' (LT.)

+40.00 -DRVI- 40.00' (LT.)

+44.09

+68.65 -DRVI- 35.00' (RT.)

+35.00 -DRVI- 70.00' (RT.)

+80.00 -DRVI- 75.00' (RT.)

+00.00 -DRVI- 35.00' (RT.)

+80.00 -DRVI- 35.00' (RT.)

+10.00 -DRVI- 35.00' (LT.)

+07.27 -DRVI- 35.00' (LT.)

END CONSTRUCTION
-DRVI- STA. 19+10.00

-DRVI- POT Sta. 19+50.00

N 52° 48' 34.8" E

+30.97

N 86° 26' 32.2" E

+10.00 -DRVI- 45.00' (RT.)

+01.27 -DRVI- 35.00' (RT.)

-DRVI- PT Sta. 19+01.27

PDE

REMOVE 24" CMP

STANDARD 3' BASE DITCH W/CLASS B RIP RAP SEE DETAIL AJ EST. 28 C.Y. DDE EST. 21 TONS RIP RAP EST. 47 S.Y. F.G.

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

-DRVI-

PI Sta 13+44.97	PI Sta 18+27.23
Δ = 3° 44' 35.3" (LT)	Δ = 33° 37' 57.4" (RT)
D = 5° 43' 46.5"	D = 22° 02' 12.6"
L = 65.33'	L = 152.62'
T = 32.68'	T = 78.58'
R = 1,000.00'	R = 260.00'
SE = SEE PLANS	SE = SEE PLANS

DETAIL AP
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 4:1 or Flatter, Fill Slope
Min. D = 2.0 Ft.
B = 3 Ft.

-LBUS- STA. 13+70 TO STA. 19+44 (RT)

DETAIL AK
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 4:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D = 2.0 Ft.

-DRVI- STA. 12+06 TO STA. 17+00 (RT)

DETAIL AI
SPECIAL CUT BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 4:1 or Flatter, Front Ditch Slope
Min. D = 1 Ft.
B = 3 Ft.

-DRVI- STA. 11+45 TO STA. 18+00 (LT)

DETAIL AL
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 4:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D = 1.0 Ft.

-DRVI- STA. 11+45 TO STA. 12+06 (RT)

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 OR FLATTER, D, 3:1 OR FLATTER, Natural Ground
Min. D = 1.5 Ft.

-DRVI- STA. 17+00 (RT)

DETAIL AJ
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground, Geotextile, B
Min. D = 3.0 Ft.
Max. d = 2.0 Ft.
B = 3.0 Ft.
Type of Liner = Class B Rip-Rap

-LBUS- STA. 19+77 (LT)

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 4:1 or Flatter, b, 15%, B, Fill Slope
Min. D = 1.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.

-LBUS- STA. 13+00 to STA. 19+40 LT

DETAIL AO
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 4:1 or Flatter, D, 4:1 or Flatter, Fill Slope
Min. D = 1.0 Ft.

-LBUS- STA. 19+40 TO STA. 24+50 (LT)
-LBUS- STA. 21+50 TO STA. 25+00 (RT)

DETAIL AN
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 4:1 OR FLATTER, D, 4:1 OR FLATTER, Natural Ground
Min. D = VAR.

-LBUS- STA. 21+00 TO STA. 21+50 (RT)

SEE SHEET 40 FOR -LBUS- PROFILE
SEE SHEET 43 FOR -DRVI- PROFILE

REVISIONS 5/14/99

DATE: MAY-2014 3:47
\\NES\ENGNAME\$\$\$\$\Projects and Narrative\R-2514C_Ut_-dg26_UE16_ash.dgn

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	L 16+26.00 TO 19+65.23	6" Water Line			0.07							
2	LBUS 11+14.56 TO 13+85.29	6" Water Line		0.01	0.04							
3	L 23+82.74 TO 24+64.51	6" Water Line			0.01							
4	L 30+09.12 TO 30+38.05	6" Water Line			<.01							
5	L 62+27.27 TO 62+58.49	6" Water Line			<.01							
6	L 80+55.07 TO 81+40.00	6" Water Line		0.01	0.01							
7	L 94+73.67 TO 99+68.00	6" Water Line			0.01		0.15					
8	L 127+14.66 TO 127+68.70	6" Water Line			<.01							
9	L 128+16.88 TO 128+88.77	6" Water Line			0.01							
10	L 130+03.74 TO 131+31.56	6" Water Line		0.01	0.03							
11	L 135+52.94 TO 136+13.67	6" Water Line			<.01							
12	L 149+59.77 TO 150+71.91	6" Water Line			0.03							
TOTALS:				0.03	0.21		0.15					

Note: * TEMPORARY FILL AND TEMPORARY EXCAVATION WILL BE USED TO INSTALL THE 6' WATER LINE BY METHOD OF OPEN CUT

Revised 10/24/14

ATN Revised 3/31/05

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.2.4 (R-2514C)

SHEET 1 OF 1 10/24/2014

Utility Permit Drawing
Sheet 17 of 20

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	L 14+85 TO 15+16	O/H Power					<.01					
2	LBUS 11+17.5 TO 11+77	O/H Power					<.01					
3	L 23+58 TO 24+69	O/H Power					0.03					
4	L 30+04 TO 30+07.4	O/H Power					<.01					
5	L 31+31 TO 31+36	O/H Power					<.01					
TOTALS:							0.03					

Note:

Revised 6/24/14

ATN Revised 3/31/05

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.1.1 (R-2514C)

SHEET 1 OF 1 6/24/2014

Utility Permit Drawing
Sheet 18 of 20

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	L 14+90 - 21+62	OH/ POWER					0.40					
2	L 23+70 - 24+64	OH/ POWER					0.02					
3	L 30+06 - 30+45	OH/ POWER					0.01					
4	L 33+21 - 35+47	OH/ POWER					0.12					
5	L 36+29 - 36+49	OH/ POWER					0.02					
6	L 37+78 - 40+81	OH/ POWER					0.12					
7	L 49+52 - 49+72	OH/ POWER					0.02					
8	L 61+82 - 62+74	OH/ POWER					0.04					
9	L 64+83 - 65+03	OH/ POWER					0.02					
10	L 64+77 - 66+72	OH/ POWER					0.09					
11	L 76+71 - 77+00	OH/ POWER					<.01					
12	L 78+00 - 79+72	OH/ POWER					0.10					
13	L 80+55 - 81+70	OH/ POWER					0.05					
14	L 92+92 - 93+11	OH/ POWER					0.01					
15	L 94+74 - 100+60	OH/ POWER					0.23					
16	L 106+37 - 109+06	OH/ POWER					0.10					
17	L 122+90 - 123+10	OH/ POWER					0.01					
18	L 127+05 - 128+01	OH/ POWER					0.03					
19	L 128+15 - 129+00	OH/ POWER					0.04					
20	L 130+04 - 131+31	OH/ POWER					0.08					
21	L 135+33 - 136+28	OH/ POWER					0.03					
22	L 149+60 - 150+72	OH/ POWER					0.06					
23	L 160+27 - 162+34	OH/ POWER					0.09					
24	L 172+38 - 172+75	OH/ POWER					<.01					
26	LBUS 10+47 - 14+01	OH/H POWER					0.18					
27	18 POLES	POWER POLES		0.04								
TOTALS:				0.04			1.69					

Note:

Revised 5/15/14

Utility Permit Drawing
Sheet 19 of 20

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.2.4 (R-2514C)

SHEET 1 OF 1 5/15/2014

ATN Revised 3/31/05

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
25	POWER POLE	L 182+00 - 182+20				519		519					
TOTAL:						519	0	519	0	0	0		

Utility Permit Drawing
Sheet 20 of 20

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
PROJECT: 34442.2.4 (R-2514C)

5/15/2014
SHEET 1 OF 1

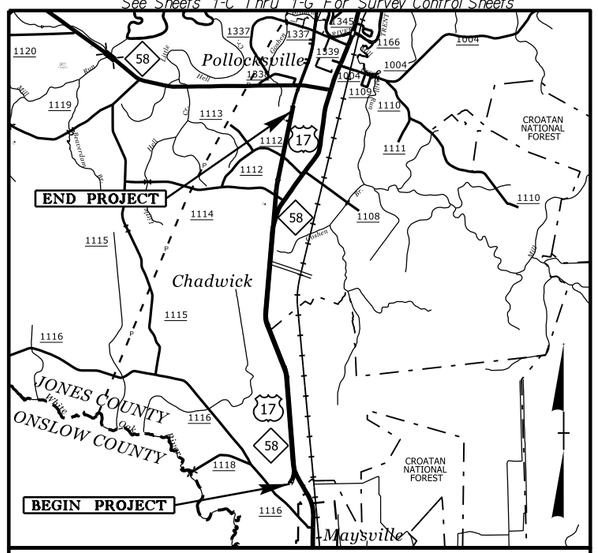
Rev. May 2006

09/08/99

TIP PROJECT: R-2514C

CONTRACT: C203591

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheets 1-C Thru 1-G For Survey Control Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES COUNTY

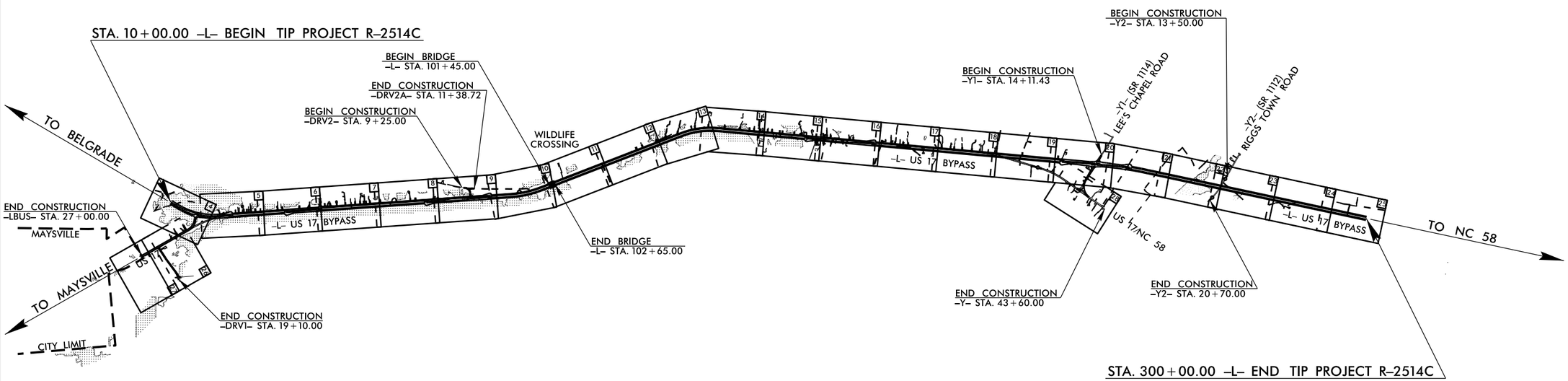
LOCATION: US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514C	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.4		PE
34442.2.4		R/W & UTILITIES
34442.3.S5		CONST.

NAD 83/
NSRS 2007



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING AT DESIGNATED POINTS ONLY.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2015 = 12,000
ADT 2035 = 17,700
K = 12 %
D = 60 %
T = 9 % *
V = 60 MPH
* TTST = 5 % DUAL = 4 %
FUNC CLASS = EXPRESSWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2514C = 5.469 MILES
LENGTH STRUCTURE OF TIP PROJECT R-2514C = 0.023 MILES
TOTAL LENGTH OF TIP PROJECT R-2514C = 5.492 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 20, 2013

LETTING DATE:
JUNE 16, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

08-OCT-2014 14:42
R:\Roadway\Proj\R2514C_Rdy_tsh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99 R/W REVISION 6-25-14 (ONG) - ADDED ADDITIONAL PUE FROM -L- STA.14+85.00 TO STA.18+75.00 LT.ON PARCEL 1(ESTATE OF FRANK JENKINS). ADDED PUE ON PARCEL 2 (DONELLE MAURICE MYERS) AND REVISED PUE ON PARCEL 3 (AMBROSE ROBERTS, JR.).

PROPOSED US 17

7,700 / 11,400 — 400 / 200 — 4,400 / 6,500 — 12,000 / 17,700

4,500 / 6,700 EXISTING US 17

ADT 2015 / 2035

TRAFFIC DIAGRAM

-L-		-LBUS-
Pls Sta 12+17.85	PI Sta 16+95.31	PI Sta 13+12.68
Θs = 4° 11' 32.5"	Δ = 27° 14' 57.6" (LT)	Δ = 46° 08' 20.6" (RT)
Ls = 240.00'	D = 3° 29' 37.1"	D = 19° 05' 54.9"
LT = 160.04'	L = 779.97'	L = 241.58'
ST = 80.04'	T = 397.51'	T = 127.77'
	R = 1,640.00'	R = 300.00'
	SE = .06	SE = SEE PLANS
	RO = 240'	

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, 1'-Ft., b, B, Fill Slope

Min. D= 2.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-LBUS- STA. 11+22 to STA. 12+24 LT DDE=181 CY
-L- STA. 17+50 to STA. 19+15 RT DDE=569 CY

DETAIL AM
FALSE SUMP
(Not to Scale)

Median Ditch, 9", 2', S, L (See Chart Below), 20', GI etc., ℄ Proposed Ditch

S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, B, Fill Slope

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-LBUS- STA. 13+00 to STA. 19+40 LT

DETAIL L
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground, B

Min. D= VAR.
B= 3.0 Ft.

-LBUS- STA. 12+50 to STA. 13+00 LT

NAD 83/NSRS 2007

-BL- 106 POT 5+00.00 (BEGIN R2514C)
-BL- 106 PINC 243+83.34 (END R2514B)

-L- POT Sta. 10+00.00
-L- TS Sta. 10+57.80
-L- SC Sta. 12+97.80

-L- POC Sta. 16+75.00=
-LBUS- POT Sta. 10+00.00

BEGIN PROJECT R-2514C
-L- STA. 10+00.00

BEGIN R-2514C
R/W ACQUISITION

BEGIN R-2514C
RW ACQUISITION

-LBUS- PC Sta. 11+84.91

-LBUS- PT Sta. 14+26.49

-BL- 104 PINC 13+53.58=
-BYA- POT 5+00.00

MATCHLINE -L- STA. 19+00.00 SEE SHEET 5

MATCHLINE -LBUS- STA. 15+00.00 SEE SHEET 26

J. C. LAROQUE, HEIRS
DB 109 PG 559

1 ESTATE OF FRANK JENKINS
DB 181PG 494
MB 3 PG 7

2 DONELLE MAURICE MYERS
DB 320 PG 847

3 AMBROSE ROBERTS, JR.
DB 122 PG 245

4 THE UNITED STATES OF AMERICA
DB 89 PG 285

FRANK JENKINS ESTATE
C/O PATSY GROOVER
DB 181PG 494

MAMIE BAKER
DB 110 PG 532

CHORD, ARC, 40' INC TYP., 17.80, 100' R/W, 10' PS, 4' PS, 2GI, 15" RCP-III, 18" RCP-III, 20' RAD., 2' RAD., 6' RAD., 120' TAPER, 300' TAPER, R=50', CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE, CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE, CL I RIP RAP EST. 20 TONS EST. 39 SY GEOTEXTILE, 36"X24" ELLIPTICAL RCP, REMOVE 18" RCP, REMOVE 36" RCP, 15' SOIL, 10' SOIL, 15D, 20' SOIL, 2' PS, 2GI, DI, 6' DI, 2' DI, 4' PS, 2' PS, 2' SBD, 3' SBD, 4' SBD, 5' SBD, 6' SBD, 7' SBD, 8' SBD, 9' SBD, 10' SBD, 11' SBD, 12' SBD, 13' SBD, 14' SBD, 15' SBD, 16' SBD, 17' SBD, 18' SBD, 19' SBD, 20' SBD, 21' SBD, 22' SBD, 23' SBD, 24' SBD, 25' SBD, 26' SBD, 27' SBD, 28' SBD, 29' SBD, 30' SBD, 31' SBD, 32' SBD, 33' SBD, 34' SBD, 35' SBD, 36' SBD, 37' SBD, 38' SBD, 39' SBD, 40' SBD, 41' SBD, 42' SBD, 43' SBD, 44' SBD, 45' SBD, 46' SBD, 47' SBD, 48' SBD, 49' SBD, 50' SBD, 51' SBD, 52' SBD, 53' SBD, 54' SBD, 55' SBD, 56' SBD, 57' SBD, 58' SBD, 59' SBD, 60' SBD, 61' SBD, 62' SBD, 63' SBD, 64' SBD, 65' SBD, 66' SBD, 67' SBD, 68' SBD, 69' SBD, 70' SBD, 71' SBD, 72' SBD, 73' SBD, 74' SBD, 75' SBD, 76' SBD, 77' SBD, 78' SBD, 79' SBD, 80' SBD, 81' SBD, 82' SBD, 83' SBD, 84' SBD, 85' SBD, 86' SBD, 87' SBD, 88' SBD, 89' SBD, 90' SBD, 91' SBD, 92' SBD, 93' SBD, 94' SBD, 95' SBD, 96' SBD, 97' SBD, 98' SBD, 99' SBD, 100' SBD, 101' SBD, 102' SBD, 103' SBD, 104' SBD, 105' SBD, 106' SBD, 107' SBD, 108' SBD, 109' SBD, 110' SBD, 111' SBD, 112' SBD, 113' SBD, 114' SBD, 115' SBD, 116' SBD, 117' SBD, 118' SBD, 119' SBD, 120' SBD, 121' SBD, 122' SBD, 123' SBD, 124' SBD, 125' SBD, 126' SBD, 127' SBD, 128' SBD, 129' SBD, 130' SBD, 131' SBD, 132' SBD, 133' SBD, 134' SBD, 135' SBD, 136' SBD, 137' SBD, 138' SBD, 139' SBD, 140' SBD, 141' SBD, 142' SBD, 143' SBD, 144' SBD, 145' SBD, 146' SBD, 147' SBD, 148' SBD, 149' SBD, 150' SBD, 151' SBD, 152' SBD, 153' SBD, 154' SBD, 155' SBD, 156' SBD, 157' SBD, 158' SBD, 159' SBD, 160' SBD, 161' SBD, 162' SBD, 163' SBD, 164' SBD, 165' SBD, 166' SBD, 167' SBD, 168' SBD, 169' SBD, 170' SBD, 171' SBD, 172' SBD, 173' SBD, 174' SBD, 175' SBD, 176' SBD, 177' SBD, 178' SBD, 179' SBD, 180' SBD, 181' SBD, 182' SBD, 183' SBD, 184' SBD, 185' SBD, 186' SBD, 187' SBD, 188' SBD, 189' SBD, 190' SBD, 191' SBD, 192' SBD, 193' SBD, 194' SBD, 195' SBD, 196' SBD, 197' SBD, 198' SBD, 199' SBD, 200' SBD, 201' SBD, 202' SBD, 203' SBD, 204' SBD, 205' SBD, 206' SBD, 207' SBD, 208' SBD, 209' SBD, 210' SBD, 211' SBD, 212' SBD, 213' SBD, 214' SBD, 215' SBD, 216' SBD, 217' SBD, 218' SBD, 219' SBD, 220' SBD, 221' SBD, 222' SBD, 223' SBD, 224' SBD, 225' SBD, 226' SBD, 227' SBD, 228' SBD, 229' SBD, 230' SBD, 231' SBD, 232' SBD, 233' SBD, 234' SBD, 235' SBD, 236' SBD, 237' SBD, 238' SBD, 239' SBD, 240' SBD, 241' SBD, 242' SBD, 243' SBD, 244' SBD, 245' SBD, 246' SBD, 247' SBD, 248' SBD, 249' SBD, 250' SBD, 251' SBD, 252' SBD, 253' SBD, 254' SBD, 255' SBD, 256' SBD, 257' SBD, 258' SBD, 259' SBD, 260' SBD, 261' SBD, 262' SBD, 263' SBD, 264' SBD, 265' SBD, 266' SBD, 267' SBD, 268' SBD, 269' SBD, 270' SBD, 271' SBD, 272' SBD, 273' SBD, 274' SBD, 275' SBD, 276' SBD, 277' SBD, 278' SBD, 279' SBD, 280' SBD, 281' SBD, 282' SBD, 283' SBD, 284' SBD, 285' SBD, 286' SBD, 287' SBD, 288' SBD, 289' SBD, 290' SBD, 291' SBD, 292' SBD, 293' SBD, 294' SBD, 295' SBD, 296' SBD, 297' SBD, 298' SBD, 299' SBD, 300' SBD, 301' SBD, 302' SBD, 303' SBD, 304' SBD, 305' SBD, 306' SBD, 307' SBD, 308' SBD, 309' SBD, 310' SBD, 311' SBD, 312' SBD, 313' SBD, 314' SBD, 315' SBD, 316' SBD, 317' SBD, 318' SBD, 319' SBD, 320' SBD, 321' SBD, 322' SBD, 323' SBD, 324' SBD, 325' SBD, 326' SBD, 327' SBD, 328' SBD, 329' SBD, 330' SBD, 331' SBD, 332' SBD, 333' SBD, 334' SBD, 335' SBD, 336' SBD, 337' SBD, 338' SBD, 339' SBD, 340' SBD, 341' SBD, 342' SBD, 343' SBD, 344' SBD, 345' SBD, 346' SBD, 347' SBD, 348' SBD, 349' SBD, 350' SBD, 351' SBD, 352' SBD, 353' SBD, 354' SBD, 355' SBD, 356' SBD, 357' SBD, 358' SBD, 359' SBD, 360' SBD, 361' SBD, 362' SBD, 363' SBD, 364' SBD, 365' SBD, 366' SBD, 367' SBD, 368' SBD, 369' 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SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 40 FOR -LBUS- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

MATCHLINE –L– STA. 19+00.00 SEE SHEET 4

MATCHLINE –L– STA. 32+00.00 SEE SHEET 6

–L– CS Sta. 20+77.77

–L– ST Sta. 23+47.77

–L– BL– 105 PINC 23+19.89

ESTATE OF FRANK JENKINS
DB 181 PG 494
MB 3 PG 7
1

AMBROSE ROBERTS, JR.
DB 122 PG 245
3

ANNIE B. WARD HEIRS
DB 236 PG 382
5

MARQUITA HILL
DB 186 PG 815
DB 307 PG 898
6

ROSA LEE SMITH
DB 106 PG 252
7

LEAMON GOODLEY HEIRS
ESTATE FILE 84-E-37
DB 109 PG 473
DB 109 PG 475
8

MICHEAL FROST
DB 855 PG 59
MB 10 PG 8
9

HOWARD FROST, ET UX
DB 855 PG 59
MB 10 PG 8
10

DOROTHY WARD
DB 164 PG 668

DAVID WARD, ET UX
DB 137 PG 169

HORACE TIMMONS, ET UX
DB 156 PG 379
11

VERA LEE WARD
DB 153 PG 263
12

CAROLINA TELEPHONE & TELEGRAPH
DB 117 PG 278
13

ROLAND BARBER, ET UX
DB 156 PG 186
DB 153 PG 263

LOUISE DUDLEY, ET UX
DB 156 PG 443

ALPHONSO HILL
DB 272 PG 219
MB 3 PG 7
14

14Z

ESTATE OF FRANK JENKINS
DB 181 PG 494
MB 3 PG 7
1

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

CHORD

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

REMOVE 24" RCP

MAINTAIN EXISTING DITCH

MEDIAN 'V' DITCH
SEE DETAIL B

PLACED AS PER UTILITY RECORD - UNABLE TO COLLECT DUE TO FENCE

–L–
PI Sta 16+95.31
Δ = 27° 14' 57.6" (LT)
D = 3° 29' 37.1"
L = 779.97'
T = 397.51'
R = 1,640.00'
SE = .06
RO = 240'
PIs Sta 21+57.81
Θs = 4° 11' 32.5"
Ls = 240.00'
LT = 160.04'
ST = 80.04'

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, B, b, 1'-Ft., 3:1 or Flatter, Fill Slope

Min. D= 2.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 17+50 to STA. 19+15 RT
DDE=564 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, B, b, 1'-Ft., 3:1 or Flatter, Fill Slope

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, B, b, 1'-Ft., 3:1 or Flatter, Fill Slope

Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 21+10 to STA. 30+50 LT
DDE=2251 CY

DETAIL B
MEDIAN V DITCH
(Not to Scale)

Shoulder Point, 3:1 or Flatter, 3:1 or Flatter, Shoulder Point

–L– STA. 20+15 TO STA. 24+00 MED

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS

SEE SHEET 29 FOR –L– PROFILE

REVISIONS
8/17/99
R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 14Z (ALPHONSO HILL).

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 15 (ELEANOR JEAN HOLT JACKSON, ET ALI, PARCEL 16 (ROCHELLE ANITA HOLT), PARCEL 17 (LYNELL MATTOCKS, ET UX), AND PARCEL 20 (WOODROW F. LASSITER, ET UX) AT -L- STA.38+50.00 LT.

MATCHLINE -L- STA. 32 + 00.00 SEE SHEET 5

MATCHLINE -L- STA. 46 + 00.00 SEE SHEET 7

ESTATE OF FRANK JENKINS
DB 181 PG 494
MB 3 PG 7
1

ELEANOR JEAN HOLT JACKSON, ET AL
DB 271 PG 970
15

ROCHELLE ANITA HOLT
16

LYNELL MATTOCKS, ET UX
DB 161 PG 254
17

NORMAN HILL
DB 218 PG 847
18

SILVERT LEE HOLT
DB 248 PG 295
LOT 1 BLOCK A
19

WOODROW F. LASSITER, ET UX
DB 318 PG 981
DB 267 PG 142
DB 180 PG 3
20

WOODROW F. LASSITER, ET UX
DB 187 PG 277
20

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

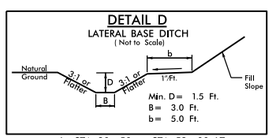
US 17 MAIN ST 28' BST

US HWY 17/NC 58 24' BST

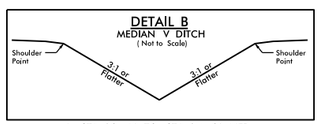
-BL- 1 PINC 33+53.96

BM #1
SEE SHEET 1-E
ELEV. 40.95'

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE



-L- STA. 30+50 to STA. 52+00 LT
DDE=2610 CY



-L- STA. 36+50 TO STA. 37+60 MED
-L- STA. 41+00 TO STA. 42+00 MED

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

R/W REVISION 7-28-14 (DWG) - REVISED THE PROPERTY OWNER NAME OF PARCEL 21 (DORIS L. HILL) TO PARCEL 21A (BRADLEY HILL), PARCEL 21AZ (BRADLEY HILL), PARCEL 21Z (DORIS L. HILL), AND PARCEL 282 (RAYMOND C. BANKS, JR., ET UX).

R/W REVISION 9-25-14 (DWG) - REVISED THE PUE ON PARCEL 21 (DORIS L. HILL) AND ELIMINATED THE SECOND CLAIMS (21Z AND 21AZ) FROM PARCEL 21A (BRADLEY HILL).

MATCHLINE –L– STA. 46+00.00 SEE SHEET 6

MATCHLINE –L– STA. 60+00.00 SEE SHEET 8

GREEN CO LAND, LLC.
DB 351 PG 256
PC C SLIDE 37-2
20A

BRADLEY HILL
DB 236 PG 642
21A

DORIS L. HILL
DB 236 PG 645
21

CECIL R. HILL, ET UX
DB 177 PG 152
DB 236 PG 639

ABBY B. HEATH, ET UX
DB 226 PG 335
TRACT 2
22

ABBY B. HEATH, ET UX
DB 226 PG 335
TRACT 1
22

MICHAEL ANTHONY DUDLEY, ET UX
DB 188 PG 49
23

FREDRICK E. KING, ET UX
DB 166 PG 603
24

FREDRICK E. KING, ET UX
DB 165 PG 526
24

FREDRICK E. KING, ET UX
DB 156 PG 668
24

ROY L. KING, ET UX
DB 166 PG 165

WILBER G. KING, ET UX
DB 153 PG 222
25

ROY L. KING, ET UX
DB 166 PG 627
26

BOBBY A. FLOWERS, ET UX
DB 230 PG 279
27

RAYMOND C. BANKS, JR, ET UX
DB 190 PG 894
TRACT 3
28

RAYMOND C. BANKS, JR, ET UX
DB 190 PG 894
TRACT 2
28

RAYMOND C. BANKS, JR, ET UX
DB 190 PG 894
TRACT 1
28

28Z

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

-L- POT Sta. 46+34.83=
-Y3- POT Sta. 12+60.19

-BL- 2 PINC 43+93.45

-BL- 3 PINC 54+80.92

BM #5
SEE SHEET 1-E
ELEV. 41.22'

DETAIL B
MEDIAN 'V' DITCH
(Not to Scale)

Shoulder Point — 3:1 or Flatter — 3:1 or Flatter — Shoulder Point

–L– STA. 46+90 TO STA. 48+00 MED

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — b — 1':1ft. — Fill Slope

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — b — 1':1ft. — Fill Slope

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 52+00 to STA. 61+00 LT
DDE=765 CY

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 282 (RAYMOND C. BANKS, JR., ET UX) AND PARCEL 292 (JOHN TAYLOR, JR., ET UX).

MATCHLINE –L– STA. 60+00.00 SEE SHEET 7

MATCHLINE –L– STA. 74+00.00 SEE SHEET 9

RAYMOND C. BANKS, JR. ET UX DB 153 PG 194 TRACT 2 — 28

RAYMOND C. BANKS, JR. ET UX DB 153 PG 194 — 28

RAYMOND C. BANKS, JR. ET UX DB 153 PG 60 — 28

RAYMOND C. BANKS, JR. ET UX DB 153 PG 61 — 28

JOHN TAYLOR, JR., ET UX DB 227 PG 258 — 29

MARVIN L. GOODSON DB 168 PG 740 — 30

MARVIN L. GOODSON DB 151 PG 543 TRACT 1 — 30

MARVIN L. GOODSON DB 189 PG 177 — 30

EDWARD E. DUDLEY, ET UX DB 240 PG 436 — 31

RACHEL M. EUBANK DB 156 PG 712 — 32

THE UNITED STATES OF AMERICA DB 89 PG 285 — 4

S 03°34'26" E 60.00'

S 03°34'26" E 216.43'

S 03°34'26" E 105.02'

S 03°34'26" E 104.99'

S 04°27'15" E 196.21'

S 04°26'16" E 75.00'

S 86°25'34" W 210.00'

S 85°27'14" W 126.95'

S 85°27'14" W 405.38'

S 85°27'14" W 279.44'

S 85°32'45" W 165.56'

S 85°32'45" W 445.56'

S 85°32'45" W 467.98'

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL G

LATERAL 3' BASE DITCH SEE DETAIL F

-BL- 4 PINC 65+86.77

+62.00 –L– 137.00' (LT.) SEPTIC SYSTEM

+41.00 –L– 124.08' (LT.) END C/A FENCE

+00.00 –L– 105.00' (LT.)

+25.00 –L– 105.00' (LT.) END C/A FENCE

+73.00 –L– 105.00' (LT.) BEGIN C/A FENCE

+95.00 –L– 121.00' (LT.)

+50.00 –L– 105.00' (LT.)

+50.00 –L– 130.00' (LT.) END C/A FENCE

+63.00 –L– 130.00' (LT.)

+83.00 –L– 130.00' (LT.) 141.00' (LT.)

+10.00 –L– 115.00' (LT.)

+80.00 –L– 115.00' (LT.)

+40.00 –L– 115.00' (LT.) BEGIN C/A FENCE

+47.00 –L– 115.00' (LT.) END C/A FENCE

+01.00 –L– 10.88' (LT.) BEGIN C/A FENCE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

+79 (T) 85.00' (LT.)

MTL CANOPY

SEPTIC SYSTEM

HTR

WD DK

CONC

ISP

ACCESS POINT 0806 0807 0808 0809 0810

REMOVE 15" RCP

REMOVE 15" CMP

18" RCP III

18" RCP IV

FIBER PED

PD

DI

GTD

10' PS

4' PS

24"

18"

025

MED.

20'

65

70

3GI

N 4°26'35.8" W

+00.00 –L– 100.00' (RT.)

+50.00 –L– 100.00' (RT.)

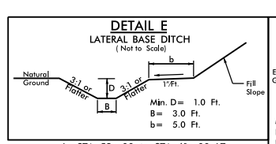
+60.00 –L– 135.00' (RT.)

+70.00

+20.00

REPEATER

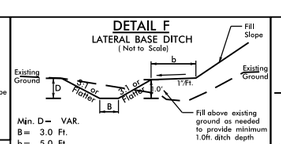
DETAIL E
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 52+00 to STA. 61+00 LT
DDE=765 CY

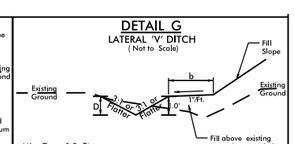
DETAIL F
LATERAL BASE DITCH
(Not to Scale)



Min. D= VAR.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 61+00 to STA. 66+00 LT
DDE=176 CY

DETAIL G
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.0 Ft.
b= 5.0 Ft.

–L– STA. 66+00 to STA. 78+30 LT
DDE=439 CY

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 31 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

-DRV2-	-DRV2A-
PI Sta 11+04.13	PI Sta 10+53.19
Δ = 79° 35' 35.6" (RT)	Δ = 42° 49' 54.6" (RT)
D = 45° 50' 11.8"	D = 57° 17' 44.8"
L = 173.65'	L = 74.76'
T = 104.13'	T = 39.22'
R = 125.00'	R = 100.00'
SE = SEE PLANS	SE = SEE PLANS

MATCHLINE –L– STA. 74+00.00 SEE SHEET 8

MATCHLINE –L– STA. 88+00.00 SEE SHEET 10

REVISIONS

8/17/99

R/W REVISION 01-06-14 (DWG) - ADDED R/W AND REVISED THE TCE AND PUE ON PARCEL 32 (RACHEL M.EUBANK), PARCEL 33 (JACK L.HOLLAND), AND PARCEL 34 (WEYERHAEUSER COMPANY) FOR THE REVISED 20' WIDTH OF -DRV2- AND -DRV2A-.

RACHEL M. EUBANK
DB 156 PG 712
32

JACK L. HOLLAND
DB 230 PG 32
33

WEYERHAEUSER COMPANY
PC "B" SLIDE 33
34

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

BEGIN GRADE
-DRV2- STA. 9+50.00

-DRV2- POT Sta. 9+25.00

BEGIN CONSTRUCTION
-DRV2- STA. 9+25.00

-DRV2- POC Sta. 11+00.00=
-DRV2A- POT Sta. 10+08.00

-DRV2- PC Sta. 10+00.00

-DRV2- PT Sta. 11+73.65

-DRV2A- PC Sta. 10+13.96

-DRV2A- PT Sta. 10+88.72

-DRV2A- POT Sta. 11+38.72

END CONSTRUCTION
-DRV2A- STA. 11+38.72

N 39° 55' 58.0" W

N 83° 49' 25.7" E

N 4° 24' 35.8" W

-BL- 5 PINC 76+74.75

-L- POT Sta. 82+25.00=
-DRV2- POT Sta. 13+11.66

BM #3
SEE SHEET 1-E
ELEV. 40.96'

TIE DITCH TO NATURAL GROUND

LATERAL 'V' DITCH SEE DETAIL G

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL J

MAINTAIN EXISTING DITCH

SPECIAL CUT DITCH SEE DETAIL AF

SPECIAL CUT DITCH SEE DETAIL I

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 3FTONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 5 TONS EST. 16 SY GEOTEXTILE

ACCESS POINT 20'

WILDLIFE FENCE GATE

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-E

BURY 1.0'

POND WE= 39.9'

18" CAAP W/ 2 ELBOWS

15" RCP-V

10' PS

4' PS

PUE

RW

CA

HW

SBG

BEG. SBG –L– 87+40 LT

REMOVE 15" RCP 10' SOIL

REMOVE 30" RCP

REMOVE 18" RCP

REMOVE 48" RCP

DETAIL G
LATERAL 'V' DITCH
(Not to Scale)

Existing Ground; Fill Slope; Existing Ground; b; D; 3:1 or Flatter; 4:1 or Flatter; 1.0'; 1'Ft.; Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

Min. D= 1.0 Ft.
b= 5.0 Ft.

–L– STA. 66+00 to STA. 78+30 LT DDE=439 CY
–L– STA. 81+50 TO STA. 83+50 LT DDE=47 CY

DETAIL I
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground; 3:1; D; 4:1; Front Ditch Slope

Min. D=1.0 Ft.

–DRV2A– STA. 10+25 TO STA. 11+20 RT

DETAIL K
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground; 4:1; D; 4:1; Front Ditch Slope

Min. D=1.0 Ft.

–DRV2– STA. 9+35 TO STA. 11+13 RT

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground; D; 3:1 or Flatter; 4:1 or Flatter; b; 1'Ft.; Fill Slope

Min. D=1.0 Ft.
b=5.0 Ft.

–L– STA. 83+50 TO STA. 86+50 LT
DDE=219 CY

DETAIL J
LATERAL 'V' DITCH
(Not to Scale)

Existing Ground; Fill Slope; b; D; 3:1 or Flatter; 4:1 or Flatter; 1.0'; 1'Ft.; Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

Min. D= 0.5 Ft.
b= 5.0 Ft.

–L– STA. 86+50 to STA. 89+00 LT
DDE=30 CY

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground; 3:1 or Flatter; D; 3:1 or Flatter; Fill Slope

Min. D= VAR.

–DRV2A– STA. 10+50 TO STA. 11+25 (LT)

NOTE: SBG – "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 31 FOR –L– PROFILE
SEE SHEET 43 FOR –DRV2– PROFILE
SEE SHEET 43 FOR –DRV2A– PROFILE

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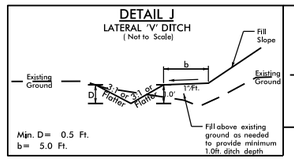
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

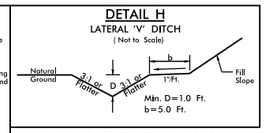
REVISIONS
8/17/99
R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) FROM -L- STA. 92+92.17 TO STA. 99+68.00 LT.

DETAIL J
LATERAL 'V' DITCH
(Not to Scale)



-L- STA. 86+50 to STA. 89+00 LT
DDE=30 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)



-L- STA. 89+00 TO STA. 94+00 LT
DDE=451 CY

-L-		
PIs Sta 92+25.52	PI Sta 95+60.26	PIs Sta 98+92.91
Θs = 2° 19' 44.7"	Δ = 12° 26' 19.1" (LT)	Θs = 2° 19' 44.7"
Ls = 200.00'	D = 2° 19' 44.7"	Ls = 200.00'
LT = 133.34'	L = 534.05'	LT = 133.34'
ST = 66.68'	T = 268.08'	ST = 66.68'
	R = 2,460.00'	
	SE = .05	
	RO = 200'	

NAD 83/NSRS 2007

MATCHLINE -L- STA. 88+00.00 SEE SHEET 9

MATCHLINE -L- STA. 101+00.00 SEE SHEET 11

-L- TS Sta. 90+92.17

-L- SC Sta. 92+92.17

-L- CS Sta. 98+26.23

-L- ST Sta. 100+26.23

WEYERHAEUSER COMPANY
PC "B" SLIDE 33
34

JACK L. HOLLAND
DB 230 PG 32
43

THE UNITED STATES OF AMERICA
DB 89 PG 285
4

-BL- 6" PINC 88+56.43

LATERAL 'V' DITCH SEE DETAIL J

LATERAL 'V' DITCH SEE DETAIL H

+00.00 -L- 125.00' (LT.) 140.00' (LT.)
+69.00 -L- 99.00' (LT.)
+81.00 -L- 99.00' (LT.)
+92.17 -L- 98.00' (LT.) 125.00' (LT.) 140.00' (LT.)
+05.00 -L- 98.00' (LT.) 120.00' (LT.)
+53.00 -L- 120.00' (LT.)
+56.00 -L- 120.00' (LT.)
+26.23 -L- 120.00' (LT.) 135.00' (LT.)
+93.00 -L- 120.00' (LT.)
+68.00 -L- 120.00' (LT.) 142.00' (LT.)
+26.23 -L- 120.00' (LT.)
+68.00 -L- 545.00' (LT.)

+55.00 -L- 110.00' (RT.)
+95.00 -L- 110.00' (RT.)
+92.17 -L- 110.00' (RT.)
+92.17 -L- 125.00' (RT.)
+06.00 -L- 125.00' (RT.)
+44.00 -L- 125.00' (RT.)
+62.00 -L- 125.00' (RT.)
+89.00 -L- 125.00' (RT.)
+26.23 -L- 125.00' (RT.)

18" CAAP W/ 2 ELBOWS

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

METAL CANOPY (BUSINESS)

SBG

40' INC TYP

BURY 1.0'
WILDLIFE CROSSING

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-F

15" RCP-III

48" RCP-III

72" RCP-III

15" RCP REMOVE

15" CMP REMOVE

4' BSD

2' BSD

HWY 17/NC211

GRAU 350

TYPE M-350

8:1

4' PS

12' PS

10' PS

2GI

FS

HW

CHORD

ARC

EL

BEGIN SBG -L- 99+45 RT

EXISTING R/W

NOTE: SBG - "SHOULDER BERM GUTTER"
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

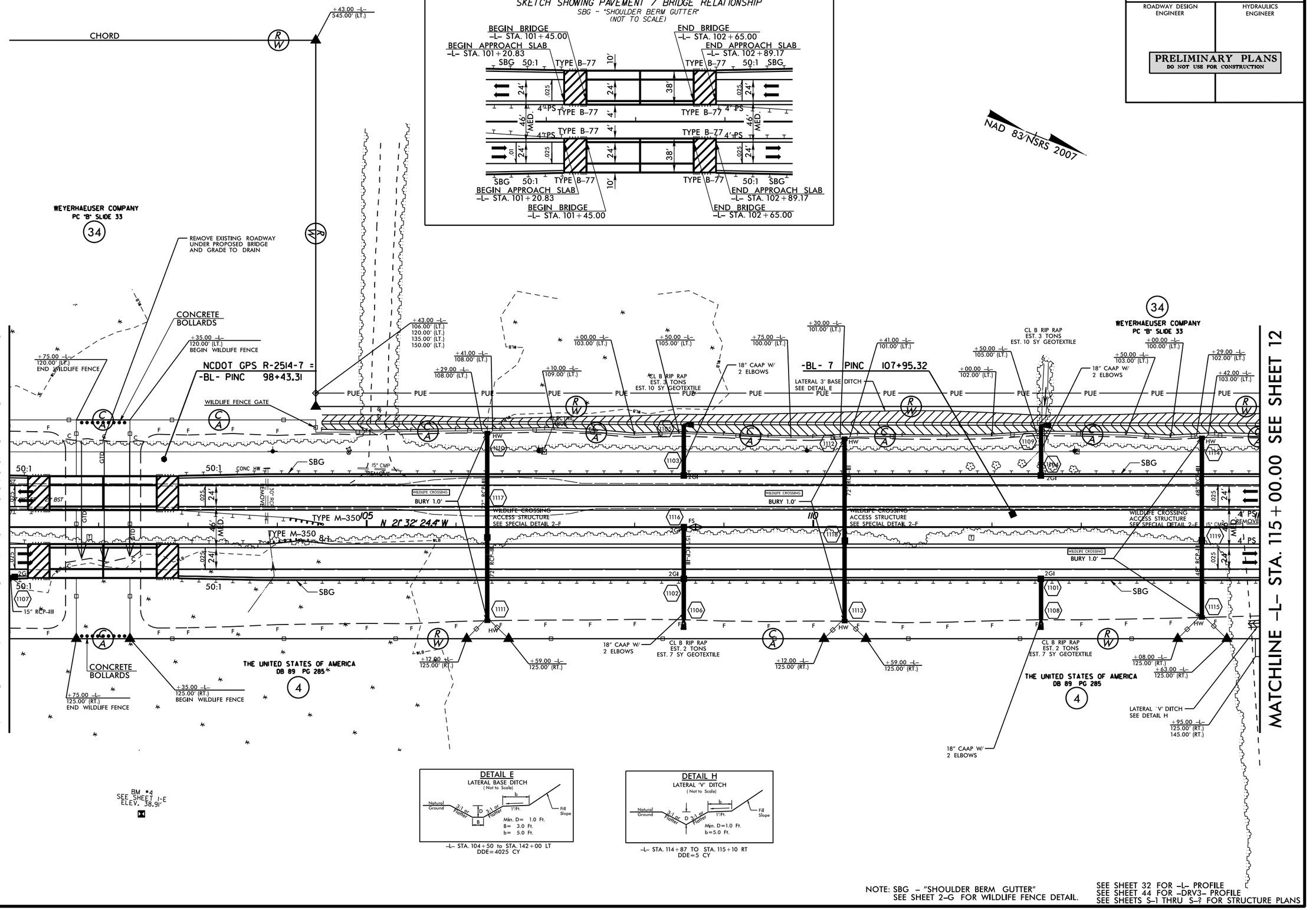
8/17/99

REVISIONS

NAD 83/NSRS 2007

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP

SBG – "SHOULDER BERM GUTTER"
(NOT TO SCALE)



DETAIL E
LATERAL BASE DITCH
(Not to Scale)

–L– STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

–L– STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

NOTE: SBG – "SHOULDER BERM GUTTER"
SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR –L– PROFILE
SEE SHEET 44 FOR –DRV3– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

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$$$$ICENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) AT -L- STA. 115+80.00 LT.

MATCHLINE -L- STA. 115+00.00 SEE SHEET 11

MATCHLINE -L- STA. 129+00.00 SEE SHEET 13

NCDOT GPS R-2514-8 = -BL- PINC 116+69.38

WEYERHAEUSER COMPANY PC "B" SLIDE 33 (34)

HOLIDAY LODGE, INC DB 172 PG 539 (35)

GLENN ALLEN DB 265 PG 987 (36)

JESSE JAMES, ET UX DB 225 PG 688 WB 4 PG 85 (37)

ELNITA SCOTT (38)

JOSEPH L. JACKSON, ET UX DB 301 PG 137 (39)

THE UNITED STATES OF AMERICA DB 89 PG 285 (4)

S 65°10'00" E 950.58

S 15°45'57" E 778.48'

N 25°32'24.4" W

N 76°59'00" W 249.67'

+70.00 -L- 150.00' (LT.) 161.00' (LT.)

+00.00 -L- 98.00' (LT.)

18" CAAP W/ 2 ELBOWS

+90.00 -L- 150.00' (LT.) 161.00' (LT.)

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

+50.00 -L- 100.00' (LT.) 135.00' (LT.) 150.00' (LT.)

+00.00 -L- 96.00' (LT.)

+28.00 -L- 97.00' (LT.)

+41.00 -L- 97.00' (LT.)

+00.00 -L- 97.00' (LT.)

+00.00 -L- 93.00' (LT.)

+57.00 -L- 120.00' (LT.) 135.00' (LT.)

+17.00 -L- 120.00' (LT.)

+12.70 114.36' (LT.)

PUE ACCESS POINT (1210)

+07.00 -L- 120.00' (LT.)

SEPTIC SYSTEM

ISFD

+67.00 -L- 120.00' (LT.) BEGIN C/A FENCE

PUE ACCESS POINT (1211)

REMOVE 15" RCP

+81.00 -L- 120.00' (LT.) END C/A FENCE

LATERAL 3' BASE DITCH SEE DETAIL E

REMOVE +57.00 -L- 93.00' (LT.) END WILDLIFE FENCE

REMOVE ISOLATED CHIMNEY

REMOVE 15" RCP

REMOVE REPEATER PED

GRAU 350 -L- 116+27 LT

END SBG -L- 117+95 RT

18" CAAP W/ 2 ELBOWS

CAT-1

8:1

BURY 1.0' WILDLIFE CROSSING

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-E

CL B RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

+50.00 -L- 125.00' (RT.)

+35.00 -L- 125.00' (RT.) 145.00' (RT.)

+50.00 -L- 110.00' (RT.)

+18.00 -L- 110.00' (RT.)

+52.00 -L- 110.00' (RT.)

+00.00 -L- 110.00' (RT.)

+90.00 -L- 100.00' (RT.) END WILDLIFE FENCE BEGIN C/A FENCE

BM #5 SEE SHEET 11E ELEV. 42.52'

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

STANDARD 3' BASE DITCH SEE DETAIL L EST. 37 C.Y. DDE

TIE TO EXISTING DITCH

LATERAL 'V' DITCH SEE DETAIL H

FOREST SERVICE RD. 204

DDE

10' PS

12' PS

4' PS

2.4' MED.

2.5' SHLD.

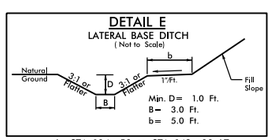
2GI

18" RCP III

FS

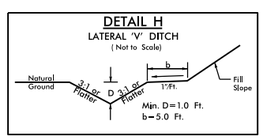
HW

DETAIL E
LATERAL BASE DITCH
(Not to Scale)



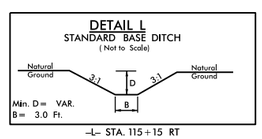
-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)



-L- STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

DETAIL I
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 115+15 RT

NOTE: SBG - "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS. SEE SHEET 33 FOR -L- PROFILE
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL. SEE SHEET 44 FOR -DRV3- PROFILE

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$$$$ICEHAUE$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 42 (OTIS A. SIMMONS, ET AL), PARCEL 46 (JAMES V. BENDER, JR.), PARCEL 47 (CHARLES W. JONES, ET UX), AND PARCEL 48 (BERNARD JONES, SR.).

NAD 83/NSRS 2007

MATCHLINE -L- STA. 129+00.00 SEE SHEET 12

MATCHLINE -L- STA. 141+00.00 SEE SHEET 14

-L- TS Sta. 133+93.78

-L- SC Sta. 136+33.78

-L- CHORD

BL 8 PINC 126+90.32

ELNITA SCOTT
(38)

JOSEPH L. JACKSON, ET UX
DB 301 PG 137
(39)

AGNES S. MOORE, ET VIR
DB 168 PG 698
(40)

JAMES V. BENDER, JR.
DB 84 PG 92
DB 49 PG 160
(41)

MAE FRANCES JONES, ET VIR
DB 197 PG 59

OTIS A. SIMMONS, ET AL
DB 313 PG 275
(42)

EDWARD CARL DUDLEY, ET UX
DB 240 PG 458
(44)

STEPHEN SHORT, ET UX
DB 148 PG 267
MB 4 PG 85
(45)

JAMES V. BENDER, JR.
DB 84 PG 92
DB 49 PG 160
(46)

CHARLES W. JONES, ET UX
DB 132 PG 49
MB 4 PG 85
(47)

BERNARD JONES, SR.
DB 269 PG 376
(48)

MARY W. DAVIS
CRISSIE SIMMONS
DB 172 PG 519
(49)

WILLIE G. SMITH, ET UX
DB 186 PG 312
PC A SLIDE 86
(50)

THE UNITED STATES OF AMERICA
DB 89 PG 285
(4)

HISTORIC* PROPERTY
ELIGIBLE FOR NRHP
J. MANLY FOSCUE, JR.
DB 137 PG 257
(43)

LATERAL 3' BASE DITCH
SEE DETAIL E

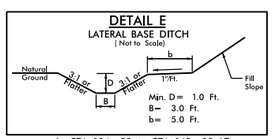
CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

+93.78 -L- 100.00' (RT.)

+33.78 -L- 100.00' (RT.)

N 2° 32' 24.4" W

DETAIL E
LATERAL BASE DITCH
(Not to Scale)



-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

-L-	
PIs Sta 135+53.82	PI Sta 139+50.54
Θs = 3° 38' 50.9"	Δ = 19° 04' 40.6" (RT)
Ls = 240.00'	D = 3° 02' 22.4"
LT = 160.03'	L = 627.65'
ST = 80.03'	T = 316.76'
	R = 1,885.00'
	SE = .06
	RO = 240'

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 33 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 51 (ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J.COLLINS). ADDED PUE ON PARCEL 58 (BLUE ROCK STRUCTURES, INC.).

MATCHLINE -L- STA. 141+00.00 SEE SHEET 13

MATCHLINE -L- STA. 154+00.00 SEE SHEET 15

ANNIE R. PAIGE
DB 174 PG 677

VERONICA M. PAIGE
DB 259 PG 961

ABUNDANT BLESSINGS MINISTRIES INC.
NEW HOPE CHURCH OF GOD
C/O OLIVER J. COLLINS, ET UX
DB 247 PG 457
MB 5 PG 72
PC B SLIDE 87

ABUNDANT BLESSINGS MINISTRIES INC.
NEW HOPE CHURCH OF GOD
C/O OLIVER J. COLLINS
DB 247 PG 459
MB 5 PG 72
PC B SLIDE 87

WILLIE G. SMITH, ET UX
DB 186 PG 912
PC A SLIDE 86

WILLIAM E. HASSELL
DB 128 PG 94

SHERRY M. JARMAN
DB 269 PG 930

MAZIE W. ISLER
DB 128 PG 6

MARY SIMMONS-ISLER, ET AL
ESTATE FILE 02 E-62
DB 49 PG 85
DB 116 PG 555

TYRONE SMITH
DB 229 PG 548

JAMES V. BENDER, JR.
DB 114 PG 92
DB 49 PG 160

DAWN M. PAGAN, ET VIR
DB 315 PG 995

TALMAGE DOCKERY, ET AL
DB 161 PG 299

MOULTRE L. SPENCER
DB 267 PG 261

BLUE ROCK STRUCTURES, INC.
DB 300 PG 444

J. MANLY FOSCUE, JR.
DB 137 PG 257

HISTORIC PROPERTY
ELIGIBLE FOR NRHP

-BL- 9 PINC 137+42.85

-BL- 10 PINC 147+08.84

-L- CS Sta. 142+61.44

-L- ST Sta. 145+01.44

US HWY 70/NC 58

N 4° 49' 58.0" E

CHORD

BM SEE SHEET 1-E ELEV. 43.13'

PLACED PER UTILITY RECORD

SEPTIC SYSTEM

ISBLKD

ISFD

CONC

ACCESS POINT

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL C

LATERAL 'V' DITCH SEE DETAIL H

TIE EXISTING DITCH TO PROPOSED DITCH

REMOVE RIP RAP

72" CHL & 3SBW

-L-	
PI Sta 139+50.54	PIs Sta 143+41.47
Δ = 19° 04' 40.6" (RT)	Θs = 3° 38' 50.9"
D = 3° 02' 22.4"	Ls = 240.00'
L = 627.65'	LT = 160.03'
T = 316.76'	ST = 80.03'
R = 1,885.00'	
SE = .06	
RO = 240'	

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 104+50 to STA. 142+00 LT DDE=4025 CY
-L- STA. 147+00 to STA. 151+50 LT DDE=264 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

-L- STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)
Min. D=1.0 Ft.
b=5.0 Ft.

-L- STA. 151+39 TO STA. 156+50 RT
DDE=261 CY

DETAIL F
LATERAL BASE DITCH
(Not to Scale)
Min. D= VAR.
B= 3.0 Ft.
b= 5.0 Ft.
Fill above existing ground as needed to provide minimum 1.0ft. ditch depth

-L- STA. 142+00 to STA. 147+00 LT
DDE=202 CY

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 58 (BLUE ROCK STRUCTURES,INC) AND PARCEL 88 (LOUISE MURRELL FOYE,ET AL C/O ROBERT HORRY). ADDED PUE ON PARCEL 86 (VAN S. SMITH). ADDED A NEW CLAIM OF PUE ON PARCEL 90A (LEVY MOORE, ET UX).

MATCHLINE –L– STA. 154 + 00.00 SEE SHEET 14

MATCHLINE –L– STA. 168 + 00.00 SEE SHEET 16

WILBER STRAYHORN, ET UX C/O DORIS HUMPHREY DB 163 PG 409

WILLIAM YOUNG C/O JERVENS YOUNG DB 137 PG 217

FANNIE FORRESTER DB 137 PG 206

ERNEST HILL, JR., ET UX DB 218 PG 689

EDDIE HUMPHREY DB 122 PG 89

JACK L. BROWN, ET UX DB 165 PG 351

CHRISTINE DUDLEY MORRIS DB 176 PG 385

LINWOOD WILLIAMS HEIRS ESTATE FILE 74-E-22

CHARLES HARGETT DB 203 PG 182

MARY L. WHITE DB 172 PG 490

LONELL MATTOCKS, ET UX DB 146 PG 78

JAMES V. BENDER, JR. DB 84 PG 92

HENRY LEE BROWN, SR. DB 288 PG 142

EARNEST HILL, JR. DB 132 PG 336

ALEXANDER SMITH, III DB 287 PG 844

VAN S. SMITH DB 159 PG 160

HENRY D. SMITH DB 247 PG 796

FLORETTA BRYANT, ET VIR DB 227 PG 431

TALMAGE DOCKERY, ET AL DB 161PG 299

BM #7 SEE SHEET 1-E ELEV. 40.86'

-BL- II PINC 158+37.53

BLUE ROCK STRUCTURES, INC. DB 300 PG 444

WILLIAM F. DUDLEY DB 324 PG 415

MABEL S. WEAVER DB 207 PG 421 MC "B" SLIDE 266 PG 1

MABEL S. WEAVER, ET VIR DB 207 PG 421 MC "B" SLIDE 266 PG 1

JAMES B. SMALLWOOD, JR. DB 122 PG 202 DB 272 PG 663 MB 3 PG 47 MC "B" SLIDE 266 PG 1

MABEL S. WEAVER, ET VIR DB 207 PG 421 MC "B" SLIDE 266 PG 1

JAMES NELSON SMALLWOOD DB 220 PG 78 MB 3 PG 47

JAMES B. SMALLWOOD, JR. DB 200 PG 122 MB 3 PG 47

CARL JUNIOR KOONCE DB 224 PG 995 MB 3 PG 47

ROSA LEE WILLIAMS DB 122 PG 200 MB 3 PG 47

ELIZABETH EVANS FRANKS DB 122 PG 199 MB 3 PG 47 PC "B" SLIDE 69

JAMES NELSON SMALLWOOD DB 221G 130 MB 3 PG 47

MABEL S. WEAVER DB 221 PG 153 PC "B" SLIDE 160

ADELL DUDLEY, ET UX DB 69 PG 622

JOSEPH BRYANT, ET UX DB 117 PG 003

LOUISE MURRELL FOYE, ET AL C/O ROBERT HORRY DB 206 PG 690

LEVY MOORE, ET UX DB 161PG 65

MATTHEW MOORE, JR., ET UX DB 229 PG 639

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Min. D=1.0 Ft.
b=5.0 Ft.

–L– STA. 151+39 TO STA. 156+50 RT DDE=261 CY
–L– STA. 158+25 TO STA. 158+90 RT DDE=22 CY

DETAIL M
LATERAL 'V' DITCH
(Not to Scale)

Min. D=1.5 Ft.
b=5.0 Ft.

–L– STA. 156+50 TO STA. 158+25 RT
DDE=147 CY

DETAIL N
LATERAL 'V' DITCH
(Not to Scale)

Min. D=2.0 Ft.
b=5.0 Ft.

–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 98Z (JAMES HENRY BRYANT).

MATCHLINE –L– STA. 168+00.00 SEE SHEET 15

MATCHLINE –L– STA. 182+00.00 SEE SHEET 17

-BL- 12 PINC 168+14.51

N 04°45'33" W 100.00'
N 04°45'33" E 100.00'
S 04°45'33" W 100.00'
N 05°05'11" E 106.29'
N 04°48'53" E 105.21'
N 4°49'58.0" E
N 13°03'00" E 100.00'
S 86°00'33" W 407.84'
N 86°00'33" E 407.85'
N 86°25'15" E 3208.27'
N 86°54'57" E 3349.63'
S 86°05'37" W 210.45'
N 86°29'29" E 205.79'
N 86°32'56" E 348.80'
S 86°32'32" W 210.00'
S 04°28'43" W 102.85'
N 11°19'21" E 116.96'
S 11°19'21" E 117.74'
N 11°20'25" W 1667.54'
S 11°20'25" E 1695.80'
N 11°19'21" W 1522.50'
S 10°46'46" E 200.00'
N 10°46'46" W 200.00'
N 78°13'14" W 100.00'

91 FLORETTA BRYANT, ET VIR DB 227 PG 49
92 CYNTHIA D. YOUNG, ET VIR DB 291PG 677
93 BENJAMIN BROWN, ET UX DB 156 PG 585 PC "A" SLIDE 152
94 RICHARD L. HARRELL, ET UX DB 167 PG 331
95 EDWARD E. BRYANT, ET UX DB 323 PG 479 MC "B" SLIDE 322 PG 1
96 JOSEPH O. BRYANT DB 224 PG 698
97 ELEANOR J. JACKSON, ET VIR DB 296 PG 300
98 JAMES HENRY BRYANT DB 246 PG 993 MC "B" SLIDE 322 PG 1
98Z JAMES HENRY BRYANT MC "B" SLIDE 322 PG 1
99 ESTELLA BURGE DB 197 PG 198
ESTELLA BURGE DB 114 PG 86
100 WILLIE L. BRYANT, ET UX DB 323 PG 477 MC "B" SLIDE 322 PG 1
101 RONALD ERIC WILLIE DB 222 PG 87
102 EVELYN D. WILLIE, ET VIR DB 114 PG W ESTATE FILE 78-E-52
103 MILDRED B. MORGAN DB 246 PG 997 MC "B" SLIDE 322 PG 1
WILLIE L. BRYANT, ET UX DB 320 PG 187
104 WILLIE L. BRYANT, ET UX DB 320 PG 187
105 SUE BOWLING FOSCUE DB 186 PG 09
HISTORIC PROPERTY ELIGIBLE FOR NRHP
106 WEYERHAEUSER COMPANY DB 190 PG 608 PARCEL #1

+74.00 –L– 120.00' (LT.) END C/A FENCE
+00.00 –L– 120.00' (LT.)
+70.00 120.00' (LT.)
+34.00 –L– 120.00' (LT.)
+48.00 –L– 120.00' (LT.)
+01.00 –L– 120.00' (LT.) BEGIN C/A FENCE
+31.00 –L– 148.00' (LT.)
+35.00 –L– 135.00' (LT.)
+60.00 –L– 135.00' (LT.) 140.00' (LT.)
+10.00 –L– 120.00' (LT.) END C/A FENCE
+38.08 –L– 120.00' (LT.)
+90.00 –L– 120.00' (LT.)
+44.00 –L– 120.00' (LT.) BEGIN C/A FENCE
+35.00 –L– 135.00' (LT.)
+40.00 –L– 120.00' (LT.)
+42.00 –L– 148.00' (LT.)
+60.00 –L– 139.00' (LT.)
+30.00 –L– 160.00' (LT.) 175.00' (LT.)
+85.00 –L– 105.00' (RT.)
+15.00 –L– 105.80' (RT.) BEGIN C/A FENCE
+10.00 –L– 105.00' (RT.)
+75.00 105.00' (RT.) END C/A FENCE
+22.00 105.00' (RT.) BEGIN C/A FENCE
+53.00 105.00' (RT.)
+41.00 132.00' (RT.)
+21.00 124.00' (RT.)
+75.00 105.00' (RT.) 135.00' (RT.)
+25.90 –L– 105.00' (RT.) 135.00' (RT.)

ISBKD, ISFD, SEPTIC SYSTEM, ACCESS POINT, CONC HW, INV=4.70', 36" VINYL, 30" RCP, 18" RCP, 15" RCP, 24" RCP, 10' PS, 40 PS, 44 PS, 46' MED., 24' PAVEMENT, 20' PAVEMENT, 30' ROAD, 45.00' ROAD, 70.00' ROAD, PUE, LATERAL 3' BASE DITCH SEE DETAIL C, LATERAL 3' BASE DITCH SEE DETAIL E, REMOVE FOOT BRIDGE, MEDIAN 'V' DITCH SEE DETAIL R, CHANNEL CHANGE W/ CLASS B RIP RAP SEE DETAIL P, STANDARD 2' BASE DITCH W/CLASS B RIP RAP SEE DETAIL O EST. 4 C.Y. DDE EST. 10 TONS RIP RAP EST. 15 S.Y. F.G., SPECIAL CUT DITCH BK SEE DETAIL O, CL I RIP RAP EST. 33 TONS EST. 62 SY. GEOTEXTILE, LATERAL 'V' DITCH SEE DETAIL N, 36" VINYL, 30" RCP, 18" RCP, 15" RCP, 24" RCP, 18" RCP ELBOW, 15" RCP ELBOW, 18" RCP TIES HW, 15" RCP TIES HW, 18" RCP TIES BLK. HW, 15" RCP TIES BLK. HW, 18" RCP REMOVE, 15" RCP REMOVE, 24" RCP REMOVE, 30" RCP REMOVE, CONC, MTR, ISFD F, ISBKD C C F, JS, TB, BZ 1, BZ 2, CHANNEL CHANGE W/ CLASS B RIP RAP SEE DETAIL P, STANDARD 2' BASE DITCH W/CLASS B RIP RAP SEE DETAIL O EST. 4 C.Y. DDE EST. 10 TONS RIP RAP EST. 15 S.Y. F.G.

DETAIL C
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-Ft., B, Fill Slope
Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 151+50 to STA. 181+00 LT
DDE=6255 CY

DETAIL P
CHANNEL CHANGE
(Not to Scale)
Natural Ground, d, Geotextile, 3:1, D, 3:1, b, 1'-Ft., B, Proposed Fill Slope, Natural Ground, Exist. Channel
Min. D= 2.5 Ft.
Max. d= 2.5 Ft.
Min. B= 5.0 Ft.
Min. b= 10.0 Ft.
Type of Liner= Class B Rip Rap

DETAIL O
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Front Ditch Slope
Min. D= VAR.
–L– STA. 174+50 TO STA. 175+50 (RT)

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-Ft., B, Fill Slope
Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.
–L– STA. 181+00 to STA. 185+50 LT
DDE=744 CY

DETAIL Q
STANDARD BASE DITCH
(Not to Scale)
Natural Ground, 3:1, d, Geotextile, D, 3:1, Natural Ground, B
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
Type of Liner= Class B Rip-Rap
–L– STA. 180+76 RT

DETAIL N
LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-Ft., Fill Slope
Min. D=2.0 Ft.
b=5.0 Ft.
–L– STA. 164+50 to STA. 173+17 RT DDE=964 CY

DETAIL R
MEDIAN 'V' DITCH
(Not to Scale)
Shoulder Point, 4:1 or Flatter, 4:1 or Flatter, Shoulder Point
–L– STA. 181+80 TO STA. 186+00 MED

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 114Z (BETTY LOU W. LIGI.

MATCHLINE –L– STA. 182+00.00 SEE SHEET 16

MATCHLINE –L– STA. 196+00.00 SEE SHEET 18

C.B. CHADWICK, SR. DB 111PG 433 (107)

EVERA COLLINS DB 214 PG 797 (108)

JAMES C. OLLISON, ET UX DB 191PG 884 (109)

JOHN RAY McDANIEL, ET UX DB 249 PG 30 (111)

DEIDRE' EDWINA JONES DB 205 PG 110 (112)

LEE W. NELSON ESTATE FILE 94-E-36 PC "A" SLIDE 114-A (113)

BETTY LOU W. LIGI ESTATE FILE 94-E-36 PC "A" SLIDE 114-A (114, 114Z)

WEYERHAEUSER COMPANY DB 190 PG 608 PARCEL #1 (106)

SUE BOWLING FOSCUE DB 186 PG 09 (105)

THERON D. HUMPHREY DB 128 PG 112 (110)

-BL- 13 PINC 179+12.69

-BL- 14 PINC 188+75.67

BM 28 SEE SHEET 1-E ELEV. 33.35'

#13

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

DETAIL AQ
BANK STABILIZATION
(Not to Scale)

Existing Retaining Wall; Natural Ground; Existing Ground Excavation; Class I Rip Rap with Geotextile; Lay Back Banks at 3:1 or Flatter

Max. d=3.0 Ft.
Min. B=3.0 Ft.

–L– STA. 194+94 (100' RT TO 130' RT)

DETAIL R
MEDIAN 'V' DITCH
(Not to Scale)

Shoulder Point; 4:1 or Flatter

–L– STA. 181+80 TO STA. 186+00 MED

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground; 3:1 or Flatter; Fill Slope

Min. D= 1.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 181+00 to STA. 185+50 LT DDE=744 CY

DETAIL S
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground; 3:1 Flatter; 3:1 or Flatter; Fill Slope

Min. D= 1.5 Ft.

–L– STA. 185+50 TO STA. 191+07 (RT)
–L– STA. 185+50 TO STA. 190+07 (LT)
–L– STA. 190+10 TO STA. 195+19 (LT)

DETAIL V
STANDARD BASE DITCH
(Not to Scale)

Natural Ground; 3:1; Geotextile

Min. D= VAR.
Max. d= VAR.
Min B= 3.0 Ft.

*When B is < 6.0'
Type of Liner= CLASS I RIP-RAP

–L– STA. 194+94 (80' RT TO 100' RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground; 3:1 Flatter; 3:1 or Flatter; Fill Slope

Min. D= 1.0 Ft.

–L– STA. 195+21 TO STA. 199+35 (LT)

DETAIL T
STANDARD BASE DITCH
(Not to Scale)

Natural Ground; 3:1

Min. D= 1.5 FT.
B= 2 Ft.

–L– STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground; 2:1; 3:1 or Flatter; Fill Slope

Min. D= 1 Ft.
B= 3 Ft.

–L– STA. 194+93 TO STA. 199+50 (RT)

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NC GRID 83/NSRS 2007

NAD 83/NSRS 2007

MATCHLINE –L– STA. 196+00.00 SEE SHEET 17

MATCHLINE –L– STA. 210+00.00 SEE SHEET 19

BETTY LOU W. LIGI ESTATE FILE 94-E-36 PC "A" SLIDE 114-A (114)

JACKIE W. TAYLOR ESTATE FILE 94-E-36 PC "A" SLIDE 114-A (115)

SADIE LEE WILSON AVERY DB 210 PG 497 (116)

GLENN N. NORMAN, ET UX DB 178 PG 3 (117)

BONNIE W. NORMAN ESTATE FILE 94-E-36 PC "A" SLIDE 114-A (118)

SADIE R. W. FALLS DB 171 PG 219 MB 6 PG 83 (120)

HOWARD FALLS, ET UX DB 132 PG 102 (121)

GEORGE W. GRIGGS, ET AL DB 263 PG 413 (122)

BLANCHE W. AYCOCK DB 171 PG 215 MB 6 PG 83 (123)

MELVIN L. AYCOCK, SR., ET UX DB 87 PG 219 (124)

MELVIN L. AYCOCK, SR., ET UX DB 171 PG 403 (125)

THERON D. HUMPHREY DB 128 PG 112 (110)

THERON D. HUMPHREY DB 176 PG 609 (110)

SUSAN JEAN BOOTH DB 323 PG 993 (119)

-BL- 15 PINC 198+62.60

US 17/NC 58 28' BST

EXISTING R/W

N 4°49'58.0" E

"ENVIRONMENTALLY SENSITIVE AREA"

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL U

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

DETAIL S
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Fill Slope

Min. D= 1.5 Ft.

–L– STA. 199+50 TO STA. 207+35 (RT)
–L– STA. 199+57 TO STA. 206+73 (LT)
–L– STA. 208+56 TO STA. 214+40 (LT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Fill Slope

Min. D= 1.0 Ft.

–L– STA. 207+39 TO STA. 214+22 (RT)
–L– STA. 195+21 TO STA. 199+35 (LT)
–L– STA. 206+76 TO STA. 208+37 (LT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 3:1 or Flatter, Fill Slope

Min. D= 1 Ft.
B= 3 Ft.

–L– STA. 194+93 TO STA. 199+50 (RT)

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 36 FOR –L– PROFILE

REVISIONS

R/W REVISION 7-28-14 (DW6) - ADDED A SECOND CLAIM OF PUE ON PARCEL 122 (GEORGE W. GRIGGS, ET AL).

8/17/99

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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99

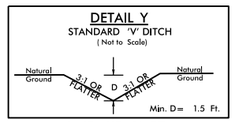
R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 125 (MELVIN L AYCOCK, JR., ET UX), PARCEL 126 (WEYERHAEUSER), AND PARCEL 129 (DELGEN L MITCHELL, ET UX) AT -L- STA.224+84.00 LT. ADDED ADDITIONAL PUE ON PARCEL 129 (DELGEN L MITCHELL, ET UX) AT -Y- STA. 26+33.00 LT. AND -L- STA. 225+21.00 RT.

MATCHLINE -L- STA. 210+00.00 SEE SHEET 18

MATCHLINE -L- STA. 224+00.00 SEE SHEET 20

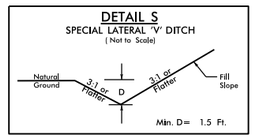
MATCHLINE -Y- STA. 28+00.00 SEE SHEET 20

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)



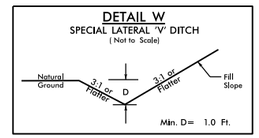
-L- STA. 217+50 (RT)

DETAIL S
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



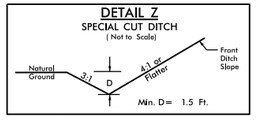
-L- STA. 214+26 TO STA. 228+34 (RT)
-L- STA. 208+56 TO STA. 214+40 (LT)
-L- STA. 214+44 TO STA. 222+50 (LT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



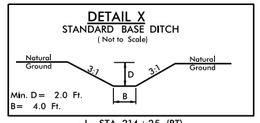
-L- STA. 207+39 TO STA. 214+22 (RT)
-L- STA. 222+50 TO STA. 229+33 (LT)

DETAIL Z
SPECIAL CUT DITCH
(Not to Scale)



-Y- STA. 22+71 TO STA. 25+49 (RT)

DETAIL X
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 214+25 (RT)

125
MELVIN L. AYCOCK, JR., ET UX
DB 171 PG 403

NCGS MON GUYED =
-BL- 16 PINC 208+64.04
-BY- PINC 5+00.00

+72.00 -L- 135.00' (LT.) 146.00' (LT.)
+93.00 -L- 136.00' (LT.) 147.00' (LT.)
WEYERHAEUSER
DB 103 PG 55
126
+18.00 -L- 109.72' (LT.) SPECIAL LATERAL 'V' DITCH SEE DETAIL S END C/A FENCE
+73.00 -L- 127.00' (LT.)
+71.00 -L- 111.84' (LT.) BEGIN C/A FENCE
+00.00 -L- 125.00' (LT.) 140.00' (LT.)
+81.00 -L- 140.00' (LT.) 152.00' (LT.)
+01.00 -L- 140.00' (LT.) 152.00' (LT.)
+48.00 -L- 125.00' (LT.) END C/A FENCE
+89.00 -L- 125.00' (LT.) BEGIN C/A FENCE
FRANKLIN L. EUBANK, ET UX
DB 214 PG 328
PC "B" SLIDE 261 PG 3
127
JAMES D. BIZZELL, ET UX
DB 289 PG 422
128
FRANKLIN L. EUBANK, ET UX
DB 214 PG 328
PC "B" SLIDE 261 PG 3
127
129
DELGEN L. MITCHELL, ET UX
DB 290 PG 399
SPECIAL LATERAL 'V' DITCH SEE DETAIL W
-BL- 17 PINC 219+52.83
SPECIAL LATERAL 'V' DITCH SEE DETAIL S
ACCESS POINT
PUE
RW
CA
1901
1902
1903
1904
1905
1906
1907
N 4° 49' 58.0" E
215
220
10' PS
4' PS
60' WD
24' MED.
025
REMOVE 15" RCP
REMOVE
CONC HW
EIP
INV=34.74
INV=34.29
18" RCP
CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE
-EY-
-BY- 29 PINC 16+40.74
END PAVING
-Y- STA. 25+70.00
+19.00 -Y- 50.00' (LT.) 65.00' (LT.)
+46.00 -Y- 50.00' (LT.) 65.00' (LT.)
DELGEN L. MITCHELL, ET UX
DB 290 PG 399
+00.00 -L- 115.00' (RT.)
SPECIAL LATERAL 'V' DITCH SEE DETAIL W
+00.00 -L- 125.00' (RT.)
+65.00 -L- 125.00' (RT.)
STANDARD 4' BASE DITCH SEE DETAIL X SLOPE=0.004717 EST. 80 CY DDE
CL A RIP RAP EST. 26 TONS EST. 50 SY GEOTEXTILE
+00.00 -L- 125.00' (RT.) 155.00' (RT.)
+65.00 -L- 125.00' (RT.) 133.15 (RT.)
+45.00 -L- 130.64' (RT.) 155.00' (RT.)
TDE
"ENVIRONMENTALLY SENSITIVE AREA"
+65.00 -L- 255.00' (RT.)
OBLITERATE DITCH; FILL TO NATURAL GROUND
SUSAN JEAN BOOTH
DB 323 PG 993
119
STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.0066 EST. 148 CY DDE
SPECIAL LATERAL 'V' DITCH SEE DETAIL S
-Y- POT Sta. 21+50.00
OBLITERATE DITCH; FILL TO NATURAL GROUND
+27.87 -L- 125.00' (RT.)
+00.00 -L- 125.00' (RT.) 50.00' (LT.)
+15.00 -L- 50.00' (LT.)
R=435'
+80.00
25
29.42'
29.84'
VN 18° 21' 25.0" E
US 11 28 BST
+35.00 -Y- 50.00' (RT.) 70.00' (RT.)
SPECIAL CUT DITCH SEE DETAIL Z
+20.00 -Y- 50.00' (RT.) 70.00' (RT.)
-Y- PC Sta. 24+81.61
-Y- PT Sta. 25+89.30
-Y- PC Sta. 26+33.53
SUSAN JEAN BOOTH
DB 323 PG 993
119

-Y-	
PI Sta 25+35.46	PI Sta 27+70.92
Δ = 2° 03' 29.3" (RT)	Δ = 8° 48' 46.6" (RT)
D = 1° 54' 40.1"	D = 3° 12' 49.4"
L = 107.69'	L = 274.23'
T = 53.85'	T = 137.39'
R = 2,998.00'	R = 1,782.85'

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 42 FOR -Y- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	20

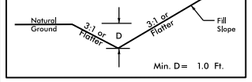
RW SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

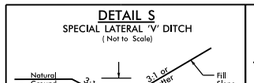
-L-		-Y-	
PIs Sta 237+12.25	PI Sta 241+42.88	PI Sta 27+70.92	PI Sta 30+24.50	PI Sta 32+43.19
θs = 0° 33' 43.5"	Δ = 5° 42' 02.2" (RT)	Δ = 8° 48' 46.6" (RT)	Δ = 6° 31' 30.1" (RT)	Δ = 1° 03' 35.2" (RT)
Ls = 150.00'	D = 0° 44' 58.0"	D = 3° 12' 49.4"	D = 2° 47' 51.9"	D = 0° 31' 06.4"
LT = 100.00'	L = 760.63'	L = 274.23'	L = 233.22'	L = 204.41'
ST = 50.00'	T = 380.63'	T = 137.39'	T = 116.74'	T = 102.21'
	R = 7,645.00'	R = 1,782.85'	R = 2,047.92'	R = 11,051.47'
	SE = .03			
	R0 = 150'			

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

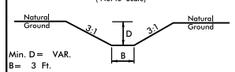


-L- STA. 228+37 TO STA. 232+85 (RT)
-L- STA. 234+12 TO STA. 256+13 (RT)
-L- STA. 222+50 TO STA. 229+33 (LT)
-L- STA. 229+35 TO STA. 234+44 (LT)

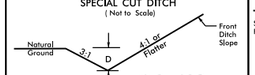
DETAIL S
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



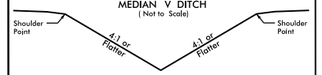
DETAIL AB
STANDARD BASE DITCH
(Not to Scale)



DETAIL Z
SPECIAL CUT DITCH
(Not to Scale)



DETAIL AA
MEDIAN 'V' DITCH
(Not to Scale)



-L- STA. 214+26 TO STA. 228+34 (RT)
-L- STA. 235+56 TO STA. 240+00 (LT)

-L- STA. 228+37 TO STA. 231+30 (RT)
-Y- STA. 31+30 (RT)

-Y1- STA. 18+09 TO STA. 21+23 (RT)
-Y1- STA. 17+85 TO STA. 21+23 (LT)
-Y1- STA. 14+11 TO STA. 15+50 (RT)
-Y1- STA. 14+11 TO STA. 15+12 (LT)

-L- STA. 227+00 TO STA. 228+37 (MED)
-L- STA. 231+95 TO STA. 233+07 (MED)

NAD 83/NSRS 2007

WILLIAM DENFORD EUBANK, ET UX
DB 214 PG 323

S 25°56'22" W
456.60'

N 25°00.65' N

BEGIN CONSTRUCTION
-Y1- STA. 14+11.43

WILLIAM DENFORD EUBANK, ET UX
DB 214 PG 323
132

+11.43 -Y1-
40.00' (RT.)
30.00' (RT.)
END C/A FENCE

SPECIAL CUT DITCH
SEE DETAIL Z

N 27°05'59" E
435.70'

134
RANDY D. RIGGS, ET AL
DB 316 PG 995
PC "A" SLIDE 64A

SPECIAL CUT DITCH
SEE DETAIL Z
+11.43 -Y1-
30.00' (RT.)
40.00' (LT.)
BEGIN FULL C/A FENCE

+27.00 -Y1-
43.89' (RT.)
+77.00 -L-
136.00' (LT.)

S 58°00'28.2" E
LEES CHAPEL RD. (SR 1342)

-L- TS Sta. 236+12.25

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S
+89.00 -L-
125.00' (LT.)
132.00' (LT.)
+62.25 -L-
125.00' (LT.)

-L- SC Sta. 237+62.25

-BL- 18 PINC 230+54.50
-BYI- PINC 11+70.11

+13.46 -L-
140.00' (LT.)

+00.00 -L-
125.00' (LT.)

+100.30
30.11'

-L- POT Sta. 234+27.30=
-Y1- POT Sta. 16+67.29

R=100'

50.00'

66' RAD.

116' RAD.

109' TAPER

CHORD
C60.00 CL-
125.00' (LT.)
+12.25 -L-
125.00' (LT.)

300' TAPER

2' PS

2' RAD. TYP.

10' RAD.

10' PS

4' PS

24'

MED.

46'

2' PS

2' RAD. TYP.

10' RAD.

10' PS

4' PS

24'

+55.00

+32.30

+12.25

50' INC. TYP.

15" RCP-III

+76.00

115' RAD.

100' TAPER

+92.87 -Y1-
75.00' (LT.)
+15.00 -Y1-
60.00' (LT.)

+75.00 -Y1-
125.00' (RT.)

CHORD
CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE
SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

+62.25 -L-
125.00' (RT.)

SPECIAL CUT DITCH
SEE DETAIL Z

+75.00 -Y1-
75.00' (LT.)
84.00' (LT.)

+95.00 -Y1-
75.00' (LT.)
84.00' (LT.)

+25.00 -Y1-
60.00' (LT.)
BEGIN FULL C/A FENCE

RANDY D. RIGGS, ET AL
DB 316 PG 995
PC "A" SLIDE 64A
134

134Z

200' TAPER

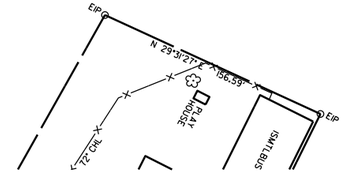
PROPOSED US 17

12,000 / 17,700	400 / 500	8,500 / 12,800
4,000 / 5,600	100 / 200	
	200 / 300	

LEE'S CHAPEL RD.

ADT
2015
2035

TRAFFIC DIAGRAM



DELGEN L. MITCHELL, ET UX
DB 290 PG 399
129

+88.00 -L-
125.00' (LT.)
END C/A FENCE

+72.00 -L-
154.00' (LT.)

+74.00 -L-
140.00' (LT.)

+92.00 -L-
158.00' (LT.)

+94.00 -L-
140.00' (LT.)

+48.00 -L-
125.00' (LT.)
BEGIN C/A FENCE

SHED
25FD
PROPOSED
SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

DELGEN L. MITCHELL, ET UX
DB 290 PG 399
129

N 24°52.65' W
175.13'

EIP

WILLIAM DENFORD EUBANK, ET UX
DB 214 PG 323
132

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

FRANKLIN L. EUBANK, ET UX
DB 214 PG 328
TRACT "1
130

-L- POT Sta. 234+27.30=
-Y1- POT Sta. 16+67.29

PUE ACCESS POINT

PUE

PUE

PUE

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

-L-	
PI Sta 241+42.88	PIs Sta 245+72.89
Δ = 5°42'02.2" (RT)	Θs = 0°33'43.5"
D = 0°44'58.0"	Ls = 150.00'
L = 760.63'	LT = 100.00'
T = 380.63'	ST = 50.00'
R = 7,645.00'	
SE = .03	
RO = 150'	

DETAIL S
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.5 Ft.

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.0 Ft.

-L- STA. 235+56 TO STA. 240+00 (LT)
-L- STA. 234+12 TO STA. 256+13 (RT)
-L- STA. 240+00 TO STA. 257+94 (LT)

RANDY D. RIGGS, ET AL
DB 316 PG 995
PC "A" SLIDE 64A
134

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S

+50.00 -L- 125.00' (LT.)

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

+30.00 -L- 160.00' (LT.)

+00.00 -L- 125.00' (LT.)

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

+22.89 -L- 125.00' (LT.)

DALTON LEE EUBANK JR.
DB 146 PG 289
WB F PG 12
MB 4 PG 31
135

-L- CS Sta. 245+22.89

-L- ST Sta. 246+72.89

+72.89 -L- 125.00' (LT.)

DALTON LEE EUBANK JR.
DB 146 PG 305
WB F PG 12
MB 4 PG 31

-BL- 19 PINC 245+48.83

CHORD

50' INC. TYP.

+56.24

300' TAPER

+50.00

+17.30

+7.30

+30.00

+90.00

+22.89

10' PS

24'

4' PS

46'
MED.

2102
2103
2105
2106
2GI
DI
18" RCP-III
15" RCP-III

240
245
250

N 11°39'27.2" E
465.34'
N 5°19'51" E

N 39°08'23" E
99.19'

TANGENT 39.47'

FENCE POST

N 40°26'36" W
25.60'

S 30°29'59" W
418.78'

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

+22.89 -L- 125.00' (RT.)

+72.89 -L- 130.00' (RT.)

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

N 59°30'00" W
213.85'

DALTON LEE EUBANK JR.
DB 146 PG 289
WB F PG 12
MB 4 PG 31
135

RANDY D. RIGGS, ET AL
DB 316 PG 995
PC "A" SLIDE 64A
134

WILLIE ROBERT MUMFORD, JR.
DB 184 PG 765
MB 4 PG 31
PARCEL #2
136

OUTLET ROAD

SHIRLEY HOWARD RIGGS, ET VIR
DB 321 PG 441
MB 4 PG 31
TRACT #3
137

SHIRLEY HOWARD RIGGS, ET VIR
DB 321 PG 441
MB 4 PG 31
TRACT #6
137

239.66'
S 5°19'51" W

136
WILLIE ROBERT MUMFORD, JR.
DB 184 PG 765
MB 4 PG 31
PARCEL #4

N 33°29'59" E
320.00'

EIP
S 34°08'54" W
57.59'

S 33°44'09" W
88.58'

EIP
S 33°15'55" W
98.07'

EIP
S 34°08'...

MATCHLINE -L- STA. 238+00.00 SEE SHEET 20

MATCHLINE -L- STA. 251+00.00 SEE SHEET 22

SEE SHEET 37 FOR -L- PROFILE

REVISIONS

8/17/99

08-OCT-2014 14:44
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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

MATCHLINE –L– STA. 251+00.00 SEE SHEET 21

MATCHLINE –L– STA. 263+00.00 SEE SHEET 23

NAD 83/NSRS 2007

-BL- 20 PINC 254+11.33

WILLIE ROBERT MUMFORD, JR.
DB 184 PG 765
MB 4 PG 31
PARCEL #2
136

WILLIE ROBERT MUMFORD, JR.
DB 184 PG 765
MB 4 PG 31
PARCEL #1
138

DALTON LEE EUBANK JR.
DB 148 PG 292
WB F PG 12
MB 4 PG 31

THELMA FOY METTS
DB 252 PG 257
DB 167 PG 734
140

SHIRLEY HOWARD RIGGS, ET VIR
DB 321PG 441
MB 4 PG 31
TRACT #3
137

SHIRLEY HOWARD RIGGS, ET VIR
DB 321PG 441
MB 4 PG 31
TRACT #2
137

HELEN ZAVALNEY
DB 266 PG 997
DB 327 PG 32
PB 12 PG 96
139

SHIRLEY HOWARD RIGGS, ET VIR
DB 321PG 441
MB 4 PG 31
TRACT #6
137

JERE WALTER PELLETIER, II, ET UX
DB 264 PG 391
142

NAOMI N. MURPHY
DB 217 PG 926
MB 4 PG 51
ESTATE FILE 02/E-41
141

S 39°10'28" W 794.18'

N 39°08'23" E 103.82'

N 39°08'23" E 565.16'

N 11° 39' 27.2" E

S 45°00'00" E 91.03'

S 43°49'12" E 300.65'

S 43°49'12" E 78.58'

S 46°20'06.3" E

-Y2- PT Sta. 19+79.83

-Y2- POT Sta. 20+72.79

-BY2- 32 POT 21+04.23

END CONSTRUCTION
-Y2- STA. 20+70.00

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

TOE PROTECTION
SEE DETAIL AC

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

SPECIAL CUT DITCH
SEE DETAIL AE

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

CL B RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

BURY 0.5 FT.

BURY 0.5 FT.

8:1 GRAU 350

8:1 CAT 31

10' PS | 12' PS | 4' PS | 46' MED. | 4' PS | 24' .025

15' RCP-III

30" RCP-III

36" RCP-III

2GI FS 255

2201 2202 2203 2204 2205 2206 2207 2208 2209 2210

HW

+00.00 –L– 130.00' (RT.)

+00.00 –L– 110.00' (RT.)

+90.00 –L– 110.00' (RT.) 12.00' (RT.)

+25.00 –Y2– 35.00' (RT.)

+38.43 –Y2– 45.00' (RT.)

+88.00 –Y2– 80.00' (RT.)

+70.00 –Y2– 35.00' (RT.)

+15.88 –Y2– 60.00' (LT.)

+70.00 –Y2– 84.39' (LT.)

+55.00 –Y2– 35.00' (LT.)

R = 35'
R = 30'
90.00°
+41.49
+41.49
20

205.75'
207.85'

SR 1112 RIGGS TOWN RD

70.00'

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground | 3:1 OR FLATTER | D | 3:1 OR FLATTER | Natural Ground

Min. D= 1.5 Ft.

–Y2– STA. 18+63 TO 19+50 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground | 3:1 or Flatter | D | 3:1 or Flatter | Fill Slope

Min. D= 1.0 Ft.

–L– STA. 234+12 TO STA. 256+13 (RT)
–L– STA. 240+00 TO STA. 257+94 (LT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground | 3:1 | D | 4:1 or Flatter | Front Ditch Slope

Min. D= 1.0 Ft.

–Y2– STA. 19+50 TO STA. 20+53 (RT)
–Y2– STA. 19+50 TO STA. 20+21 (LT)
–Y2– STA. 19+50 (LT) TO 19+50 (RT)

DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground | 3:1 | D | B | 3:1 or Flatter | Fill Slope

Min. D=0.5 Ft.
B=3.0 Ft.

–L– STA. 261+00 TO STA. 264+50 (LT)

DETAIL AC
TOE PROTECTION
(Not to Scale)

Natural Ground | b | d | 3:1 or Flatter | Fill Slope | Geotextile

d= 1.0 Ft.
b= 5.0 Ft.

Type of Liner= Class B Rip-Rap

–L– STA. 257+80 TO STA. 261+00 (LT)

SEE SHEET 38 FOR –L– PROFILE
SEE SHEET 42 FOR –Y2– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

-Y2-	
PI Sta 15+72.16	PI Sta 18+26.00
△ = 1° 24' 47.7" (RT)	△ = 12° 43' 28.9" (RT)
D = 0° 57' 15.5"	D = 4° 07' 08.5"
L = 148.09'	L = 308.92'
T = 74.05'	T = 155.10'
R = 6,004.00'	R = 1,391.00'

MATCHLINE -L- STA. 263+00.00 SEE SHEET 22

MATCHLINE -L- STA. 277+00.00 SEE SHEET 24

REVISIONS

8/17/99

REGINALD KING, ET UX
DB 289 PG 363
PC "A" SLIDE 38 A

N 30°31'25" W 444.64'

+50.00 -Y2- 35.00' (RT.)

HTR

S

CANOPY

PUMP HOUSE

HTR

140

THELMA FOY METTS
DB 252 PG 257
DB 167 PG 234

N 30°28'25" E 463.45'

10" SOIL

15" RCP

TBR - 15"

S 60°28'22" E

BEGIN CONSTRUCTION
-Y2- STA. 13+50.00

-BL- 21 PINC 261+82.66
-BY2- PINC 13+72.78

+98.27

+63.00 -Y2- 35.00' (LT.)

+90.87 -Y2- 47.00' (RT.)

+91.07 -Y2- 35.00' (RT.)

+50.00 -Y2- 75.00' (RT.)

REMOVE

+97.88

R=80'

R=35'

+49.71

139

HELEN ZAVALNEY
DB 266 PG 997
DB 327 PG 32
PB 12 PG 96

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.002737
EST. 5 CY DDE

+40.00 -L- 125.00' (LT.)

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

+50.00 -Y2- 80.00' (LT.)

SPECIAL CUT DITCH
SEE DETAIL AE

-Y2- PC Sta. 14+98.11

-Y2- PT Sta. 16+46.21
S 59°03'35.2" E

+24.05 -L- 125.00' (LT.)

REMOVE

HW

-Y2- PC Sta. 16+70.90

GRAU 350 8:1

12' PS

10' PS

24" 025

4' PS

40' MED.

4' PS

24" 025

12' PS

10' PS

230

265

N 11°39'27.2" E

270

275

2302

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

CAT-1

8:1

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL U

-L- POT Sta. 264+44.34=
-Y2- POC Sta. 16+77.67

STANDARD 3' BASE DITCH
SEE DETAIL AB
SLOPE=0.005426
EST. 42 CY DDE

+80.20 -L- 110.00' (RT.)

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

TDE

GTD

+38.23 -L- 110.00' (RT.)

STANDARD 4' BASE DITCH
SEE DETAIL X
SLOPE=0.005892
EST. 152 CY DDE

+52.11 -Y2- 35.00' (LT.)

REMOVE EXISTING 24" RCP

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

+40.00 -L- 120.00' (RT.)

+61.33 -L- 110.00' (RT.)

HELEN ZAVALNEY
DB 266 PG 997
DB 327 PG 32
PB 12 PG 96

139

JERE WALTER PELLETIER,II, ET UX
DB 264 PG 391

142

-BL- 22 PINC 272+74.61

JERE WALTER PELLETIER,II, ET UX
DB 264 PG 391

142

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

2308

CL B RIP RAP
EST. 7 SY GEOTEXTILE

2305

2304

2GI

FS

2307

13' RCP-III

2306

42" RCP-III

+00.00 -L- 110.00' (RT.)

+50.00 -L- 120.00' (RT.)

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 3:1 or Flatter, Fill Slope

Min. D= 1 Ft.
B= 3 Ft.

-L- STA. 236+00 TO STA. 263+72 (RT)

DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 OR FLATTER, D, 3:1 OR FLATTER, Natural Ground

Min. D= 1.5 Ft.

-Y2- STA. 14+90 TO 15+85 (RT)
-Y2- STA. 18+63 TO 19+50 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Fill Slope

Min. D= 1.0 Ft.

-L- STA. 267+50 TO STA. 278+28 (LT)

DETAIL X
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 3:1, Natural Ground

Min. D= 2.0 Ft.
B= 4.0 Ft.

-Y2- STA. 18+62 (RT)

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Fill Slope

Min. D= VAR.

-L- STA. 276+50 TO STA. 280+00 (RT)
-L- STA. 264+50 TO STA. 267+50 (LT)

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 3:1, Natural Ground

Min. D= VAR.
B= 3 Ft.

-Y2- STA. 17+93 TO 18+59 (RT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope

Min. D= 1.0 Ft.

-Y2- STA. 19+50 TO STA. 20+53 (RT)
-Y2- STA. 14+50 TO STA. 14+90 (LT)
-Y2- STA. 19+50 TO STA. 20+21 (LT)
-Y2- STA. 14+90 (LT) TO STA. 14+90 (RT)

DETAIL AD
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 3:1 or Flatter, Fill Slope

Min. D=0.5 Ft.
B=3.0 Ft.

-L- STA. 261+00 TO STA. 264+50 (LT)

SEE SHEET 38 FOR -L- PROFILE
SEE SHEET 42 FOR -Y2- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 277+00.00 SEE SHEET 23

MATCHLINE –L– STA. 290+00.00 SEE SHEET 25

-BL-23 PINC 278+01.68

JERE WALTER PELLETIER,II, ET UX
DB 264 PG 391
142

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

SPECIAL LATERAL 'V' DITCH SEE DETAIL AF

+00.00 –L– 125.00' (LT.)

CL I RIP RAP EST. 20 TONS EST. 39 SY GEOTEXTILE

CL I RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

SPECIAL LATERAL BASE DITCH SEE DETAIL AG

CL B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

10' PS
4' PS
4' PS
10' PS
24" .025
40' MED.

15" RCP-III
24" RCP-III
30" RCP-III
18" RCP-III

2401 2402 2403 2404 2405 2406 2407 2408 2409 2410

2GI FS

280 285

N 11° 39' 27.2" E

REMOVE

+00.00 –L– 120.00' (RT.)

CL B RIP RAP C EST. 3 TONS EST. 10 SY GEOTEXTILE

JERE WALTER PELLETIER,II, ET UX
DB 264 PG 391
142

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — Fill Slope

Min. D= VAR.

–L– STA. 276+50 TO STA. 280+00 (RT)
–L– STA. 280+04 TO STA. 288+49 (RT)
–L– STA. 288+51 TO STA. 290+96 (RT)
–L– STA. 278+32 TO STA. 281+37 (LT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — Fill Slope

Min. D= 1.0 Ft.

–L– STA. 267+50 TO STA. 278+28 (LT)
–L– STA. 286+50 TO STA. 289+14 (LT)
–L– STA. 289+17 TO STA. 291+63 (LT)

DETAIL AG
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 — D — B — 4:1 or Flatter — Fill Slope

Min. D= 1 Ft.
B= 3 Ft.

–L– STA. 281+41 TO STA. 286+50 (LT)

SEE SHEET 39 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 290+00.00 SEE SHEET 24

BM #13
-BL- STA 5+00.00
166.10 LT
ELEV. 26.14'

R-2514C
-BL- 24 POT 288+83.04
R-2514D
-BL- 24 POT 5+00.00

BELL BROTHERS FARM, INC
DB 310 PG 78
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
WB 12 PG 8

STANDARD 2' BASE DITCH
SEE DETAIL T
SLOPE=0.003243
EST. 54 CY DDE

END R-2514C
R/W ACQUISITION
@ PL
125.00' (LT.)
END C/A FENCE

+00.00 –L–
125.00' (LT.)

+00.00 –L–
125.00' (LT.)
SET W/ R-2514D

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE
SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

LATERAL BASE DITCH
SEE DETAIL AH

-BL- 25 PINC 11+65.42

10' SOIL

10' PS
24" @ .025
40' MED.
4' PS
4' PS
24" @ .025
10' PS

24" RCP III
15" RCP III
15" HDPE
REMOVE

2501 2502 2503 2504 2505 2506
2GI
FS

290 295 300

N 11° 39' 27.2" E

TDE TDE TDE

@ PL
120.00' (RT.)
END C/A FENCE

+50.00 –L–
120.00' (RT.)
SET W/ R-2514D

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

+50.00 –L–
120.00' (RT.)

END R-2514C
R/W ACQUISITION

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

BELL BROTHERS FARM, INC
DB 310 PG 78
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
WB 12 PG 8

END PROJECT R-2514C
BEGIN PROJECT R-2514D
–L– STA. 300+00.00

N 08°33'40" E
1758.58'

DETAIL AF
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Fill Slope

Min. D= VAR.

–L– STA. 288+51 TO STA. 290+96 (RT)
–L– STA. 290+98 TO STA. 299+00 (RT)

DETAIL W
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, Fill Slope

Min. D= 1.0 Ft.

–L– STA. 289+17 TO STA. 291+63 (LT)
–L– STA. 291+65 TO STA. 292+00 (LT)

DETAIL T
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground, B

Min. D= 1.5 FT.
B= 2 Ft.

–L– STA. 291+64 (LT)

DETAIL AH
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-Ft., Fill Slope, B

Min. D= 0.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 292+00 to STA. 300+00 (LT)
DDE=453 CY

SEE SHEET 39 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS 8/17/99

R/W REVISION 7-28-14 (DWG) - ADDED ADDITIONAL R/W ON PARCEL 4 (THE UNITED STATES OF AMERICA) ALONG -DRV1A- STA. 10+50.00 TO STA. 13+27.42 LT.
REVISED THE R/W AND TCE ON PARCEL 147 (MAYSVILLE DEVELOPMENT CORPORATION) AND PARCEL 147A (SAFE HARBOR FARM, INC.).

MATCHLINE –LBUS– STA. 15+00.00 SEE SHEET 4

NAD 83/NSRS 2007

-DRV1-
PI Sta 13+44.97
Δ = 3° 44' 35.3" (LT)
D = 5° 43' 46.5"
L = 65.33'
T = 32.68'
R = 1,000.00'
SE = SEE PLANS

PI Sta 18+27.23
Δ = 33° 37' 57.4" (RT)
D = 22° 02' 12.6"
L = 152.62'
T = 78.58'
R = 260.00'
SE = SEE PLANS

DETAIL AP – SPECIAL LATERAL BASE DITCH (Not to Scale): Natural Ground, 2:1, D, 3:1 or Flatter, Fill Slope, B. Min. D= 2.0 Ft. B= 3 Ft.
–LBUS– STA. 13+70 TO STA. 19+44 (RT)

DETAIL AK – SPECIAL CUT DITCH (Not to Scale): Natural Ground, 4:1, D, 4:1 or Flatter, Front Ditch Slope. Min. D= 2.0 Ft.
–DRV1– STA. 12+06 TO STA. 17+00 (RT)

DETAIL AI – SPECIAL CUT BASE DITCH (Not to Scale): Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope, B. Min. D= 1 Ft. B= 3 Ft.
–DRV1– STA. 11+45 TO STA. 18+00 (LT)

DETAIL AJ – STANDARD BASE DITCH (Not to Scale): Natural Ground, 2:1, d, D, 2:1, Natural Ground, Geotextile, B. Min. D= 3.0 Ft. Max. d= 2.0 Ft. B= 3.0 Ft. Type of Liner= Class B Rip-Rap
–LBUS– STA. 19+77 (LT)

DETAIL AL – SPECIAL CUT DITCH (Not to Scale): Natural Ground, 4:1, D, 4:1 or Flatter, Front Ditch Slope. Min. D= 1.0 Ft.
–DRV1– STA. 11+45 TO STA. 12+06 (RT)

DETAIL Y – STANDARD 'V' DITCH (Not to Scale): Natural Ground, 3:1 OR FLATTER, D, 3:1 OR FLATTER, Natural Ground. Min. D= 1.5 Ft.
–DRV1– STA. 17+00 (RT)

DETAIL AN – STANDARD 'V' DITCH (Not to Scale): Natural Ground, 4:1 OR FLATTER, D, 4:1 OR FLATTER, Natural Ground. Min. D= VAR.
–LBUS– STA. 21+00 TO STA. 21+50 (RT)

DETAIL AO – SPECIAL LATERAL 'V' DITCH (Not to Scale): Natural Ground, 4:1 or Flatter, D, 4:1 or Flatter, Fill Slope. Min. D= 1.0 Ft.
–LBUS– STA. 19+40 TO STA. 24+50 (LT)
–LBUS– STA. 21+50 TO STA. 25+00 (RT)

DETAIL D – LATERAL BASE DITCH (Not to Scale): Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'Ft., Fill Slope, B. Min. D= 1.5 Ft. B= 3.0 Ft. b= 5.0 Ft.
–LBUS– STA. 13+00 to STA. 19+40 LT

-DRV1A- POT Sta. 10+00.00

143 MARY ELLEN EADY DB 195 PG 550 DB 274 PG 507
144 HARRIETT BARBER HEIRS DB 106 PG 48
145 MANUFACTURERS AND TRADERS TRUST CO. DB 318 PG 778
146 R.S. PRIDGEN ESTATE DB 90 PG 177 DB 82 PG 30 WB 1 PG 59
1 ESTATE OF FRANK JENKINS DB 181 PG 494 WB 3 PG 7
4 THE UNITED STATES OF AMERICA DB 89 PG 285
147 MAYSVILLE DEVELOPMENT CORPERATION DB 283 PG 282 PC B SLIDE 355-2
147A SAFE HARBOR FARM, INC. DB 301 PG 583 PC B SLIDE 374-1

REMOVE 18" RCP
SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AP
LATERAL 3' BASE DITCH SEE DETAIL D
REMOVE 24" CMP
REMOVE 36" CMP
REMOVE 30" RCP
TIE TO EXIST. SWALE
STANDARD 'V' DITCH SEE DETAIL AN
REMOVE 15" CMP
SPECIAL LATERAL 'V' DITCH SEE DETAIL AO
SPECIAL CUT DITCH SEE DETAIL AL
STANDARD 3' BASE DITCH W/CLASS B RIP RAP SEE DETAIL AJ EST. 25 C.Y. DDE EST. 21 TONS RIP RAP EST. 47 S.Y. F.G.
SPECIAL CUT BASE DITCH SEE DETAIL AI
RETAIN CL B RIP RAP EST. 3 TONS EST. 11 SY GEOTEXTILE
SPECIAL CUT DITCH SEE DETAIL AK
STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.01868 EST. 14 CY DDE
EST. 38 SY GEOTEXTILE
EST. 137 TONS RIP RAP
EST. 11 SY GEOTEXTILE
EST. 3 TONS
EST. 21 TONS RIP RAP
EST. 47 S.Y. F.G.
EST. 14 CY DDE

-LBUS- POT Sta. 22+59.00= -DRV1- POT Sta. 10+00.00
-DRV1- PC Sta. 13+12.29
-DRV1- PT Sta. 13+77.62
-DRV1- PC Sta. 17+48.85
-DRV1- PT Sta. 19+01.27
-DRV1- POT Sta. 18+68.29= -DRV1A- POT Sta. 13+71.06
-DRV1- POT Sta. 19+50.00
END CONSTRUCTION -DRV1- STA. 19+10.00

-BYA- 103 PINC
-BYB- 101 POT
BM #33 SEE SHEET 1-E ELEV. 39.84'
N 56°33'10.1" E
N 52°48'34.8" E
N 52°01'05" E 956.54'
S 5°22'10.3" E
N 18°26'32.2" E
S 30°02'25.8" E
S 59°51'27" W 416.89'
S 55°42'13" W 321.05'
N 30°08'33" W 50.00'
S 55°42'13" W 96.27'
S 55°42'13" W 96.68'
N 30°08'33" W 50.00'
S 59°51'27" W 97.68'
CANAL STREET
TER OF CANAL
ISBL/KD
ISFD
ISFD ABAND
DECK
PUE
PDE
TCE
EXIST. R/W
EXIST. 36" CMP
EXIST. 24" RCP
EXIST. 15" RCP
EXIST. 30" RCP
EXIST. 36" RCP
EXIST. 60" RCP
EXIST. 72" RCP
2' PS
36" PS
15" RCP
24" RCP
30" RCP
36" RCP
60" RCP
72" RCP
CL RIP RAP
SPECIAL CUT DITCH SEE DETAIL AL
NO RIP RAP IN CANAL
+97.00 –LBUS– 119.00' (RT.)
+35.00 –LBUS– 124.00' (RT.) 137.00' (RT.)
+55.00 –LBUS– 98.00' (RT.) 137.00' (RT.)
+75.00 –LBUS– 60.00' (RT.) 90.00' (RT.)
+37.14 –LBUS– 82.00' (LT.)
+93.55 –LBUS– 61.50' (LT.)
+03.20 –LBUS– 60.00' (LT.)
+70.00 –DRV1– 35.00' (LT.)
+0.00 –LBUS– 80.00' (LT.)
+83.00 –DRV1– 51.00' (LT.)
+89.36 –LBUS– 79.00' (LT.)
+00.00 –DRV1– 35.00' (RT.)
+70.00 –DRV1– 35.00' (RT.)
+00.00 –LBUS– 60.00' (LT.)
+28.00 –DRV1– 35.00' (LT.) 51.00' (LT.)
+80.00 –DRV1– 35.00' (LT.) 50.00' (LT.)
+25.00 –DRV1– 35.00' (LT.) 50.00' (LT.)
+12.29 –DRV1– 35.00' (LT.)
+50.00 –DRV1– 40.00' (LT.)
+77.62 –DRV1– 35.00' (LT.)
+00.00 –DRV1– 60.00' (RT.)
+00.00 –DRV1– 55.00' (RT.)
+50.00 –DRV1– 45.00' (RT.)
+00.00 –DRV1– 50.00' (RT.)
+03.57 –DRV1– 50.00' (RT.)
+48.65 –DRV1– 35.00' (RT.)
+35.00 –DRV1– 70.00' (RT.)
+80.00 –DRV1– 75.00' (RT.)
+00.00 –DRV1– 35.00' (RT.)
+01.22 –DRV1– 35.00' (RT.)
+10.00 –DRV1– 35.00' (RT.)
+10.00 –DRV1– 45.00' (RT.)
+50.00 –DRV1– 25.00' (RT.)
+50.00 –DRV1– 50.00' (LT.)
+15.00 –DRV1A– 25.00' (RT.)
+48.65 –DRV1– 35.00' (LT.)
+80.00 –DRV1– 36.80' (LT.)
+15.00 –DRV1A– 25.00' (LT.)
+10.00 –DRV1– 42.88' (LT.)
+50.00 –DRV1A– 25.00' (LT.)
+50.00 –DRV1A– 25.00' (RT.)
+30.96
+37.16
+50.00 –DRV1– 50.00' (LT.)
+00.00 –DRV1– 50.00' (LT.)
+50.00 –DRV1– 40.00' (LT.)
+00.00 –DRV1– 35.00' (LT.)
+50.00 –DRV1– 40.00' (LT.)
+00.00 –DRV1– 50.00' (RT.)
+03.57 –DRV1– 50.00' (RT.)
+80.00 –DRV1– 35.00' (RT.)
+00.00 –DRV1– 35.00' (RT.)
+50.00 –DRV1– 45.00' (RT.)
+48.65 –DRV1– 35.00' (RT.)
+35.00 –DRV1– 70.00' (RT.)
+80.00 –DRV1– 75.00' (RT.)
+00.00 –DRV1– 35.00' (RT.)
+01.22 –DRV1– 35.00' (RT.)
+10.00 –DRV1– 35.00' (RT.)
+10.00 –DRV1– 45.00' (RT.)
+50.00 –DRV1– 25.00' (LT.)
+50.00 –DRV1– 25.00' (RT.)
+15.00 –DRV1A– 25.00' (LT.)
+10.00 –DRV1– 42.88' (LT.)
+15.00 –DRV1A– 25.00' (RT.)
+48.65 –DRV1– 35.00' (LT.)
+80.00 –DRV1– 36.80' (LT.)
+37.16
+30.96
+30.96
+00.00 –DRV1– 50

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 26

146
R.S. PRIDGEN ESTATE
DB 90 PG 177
DB 112 PG 30
MB 1PG 59

147
MAYSVILLE DEVELOPMENT CORPERATION
DB 283 PG 282
PC B SLIDE 355-2

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

+50.00 –LBUS– 50.00' (RT.) 60.00' (RT.)

+75.00 –LBUS– 50.00' (RT.) 76.00' (RT.)

+95.00 –LBUS– 50.00' (RT.) 76.00' (RT.)

PUE

25FD AGRD

EXIST. 36'

2' PS

S 30°02'25.8" E

US 17 MAIN ST 28' RST

+50.00 –LBUS– 50.00' (LT.) 60.00' (LT.)

+84.00 –LBUS– 50.00' (LT.) 66.00' (LT.)

RETAIN

10' SOIL

-BYA- 102 POT=
-BYB- POT

END CONSTRUCTION
–LBUS– STA. 27+00.00

-LBUS- POT Sta. 27+50.00

154.13'

S 29°06'07" E 100.00'

AKEICO N. STANLEY
DB 305 PG 83
MB 1PG 59
LOTS 9-12

N 60°53'53" E 155.77'

EXISTING R/W

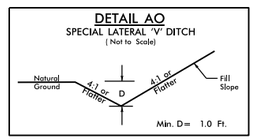
100.00'

30' C&G

TOP=40.00

EIP

DETAIL AO
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



–LBUS– STA. 19+40 TO STA. 24+50 (LT)
–LBUS– STA. 21+50 TO STA. 25+00 (RT)

NAD 83/NSRS 2007

CENTER LINE OF ABANDONED A.C.L. RAILROAD
S73°53'36" W 1579.59' (S72°40'E 1701.41')

SEE SHEET 40 FOR –LBUS– PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) - ADDED PUE ON PARCEL 146 (R. S. PRIDGEN ESTATE) AND PARCEL 147 (MAYSVILLE DEVELOPMENT CORPORATION).

8/17/99

08-OCT-2014 14:46
R:\Roadway\Proj\R2514C_Rdy_psh_27.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 134Z (RANDY D. RIGGS, ET AL).

MATCHLINE –Y1– STA. 21+00.00 SEE SHEET 20

MATCHLINE –Y– STA. 32+00.00 SEE SHEET 20

FRANKLIN L. EUBANK, ET UX
DB 214 PG 328
TRACT #1
130

LEE'S CHAPEL METHODIST CHURCH
DB 1PG 537
MB 8 PG 82
131

WILLIAM DENNIS RIGGS, ET UX
DB 269 PG 530
TRACT 1
148

RANDY D. RIGGS, ET AL
DB 316 PG 995
PC "A" SLIDE 64A
134

DONALD A. GREENE, ET UX
DB 318 PG 461
134A

HAROLD D. BABSON, ET UX
DB 246 PG 463

ALVIN J. FONVILLE, ET UX
DB 261PG 930

DALTON LEE EUBANK JR.
DB 1446 PG 306
MB 4 PG 31

JERRY M. RIGGS
DB 245 PG 610
DB 210 PG 313

JERRY RIGGS
DB 170 PG 636
149

EVERA COLLINS
DB 186 PG 197

NCDOT GPS R2514-10=
-BY- PINC 24+57.05 =
-BYI- POT 18+39.84

-Y- POT Sta. 21+23.02=
-Y1A- PC Sta. 10+00.00

-Y- POT Sta. 38+93.75=
-Y1A- PT Sta. 14+49.16

-Y1A- POC Sta. 12+27.00=
-YA- POT Sta. 10+00.00

-YA- PC Sta. 10+31.53

-Y- PT Sta. 33+45.40

-Y- POT Sta. 35+39.20=
-YA- PT Sta. 11+78.57

-Y- POT Sta. 36+12.64=
-Y1- POT Sta. 24+04.13

END CONSTRUCTION
-Y- STA. 43+60.00

-Y- POT Sta. 44+00.00

END PAVING
-Y1A- STA. 14+49.16

S 12°02'56.3" E

N 34°45'16.8" E

S 58°00'28.5" E

S 58°40'47" E 430.71'

N 55°53'30" W 464.67'

S 54°43'17" E 1084.44'

N 54°43'17" W 1022.02'

S 34°44'18" W 167.96'

S 55°10'15" E 556.80'

N 58°49'52" W 124.50'

N 34°39'39" E 115.62'

S 58°14'22" E 159.49'

S 34°10'05" E 2022.67'

S 57°30'49" E 2824.22'

N 34°45'16.8" E 1028.44'

-Y-	-YA-	-Y1A-
PI Sta 32+43.19	PI Sta 11+09.43	PI Sta 12+81.11
Δ = 1°03'35.2" (RT)	Δ = 46°48'13.2" (RT)	Δ = 87°14'15.0" (LT)
D = 0°31'06.4"	D = 31°49'51.6"	D = 19°25'20.3"
L = 204.41'	L = 147.04'	L = 449.16'
T = 102.21'	T = 77.90'	T = 281.11'
R = 11,051.47'	R = 180.00'	R = 295.00'
	SE = SEE PLANS	SE = SEE PLANS

TRAFFIC DIAGRAM
ADT
2015 4,100 / 5,600
2035 4,100 / 5,700
LEE'S CHAPEL RD.
EXISTING US 17/NC 58
<50 / 100

DETAIL AB
STANDARD BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, 3:1, Natural Ground, B
Min. D= VAR.
B= 3 Ft.
–YA– STA. 10+50 (LT)

DETAIL Z
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D= 1.5 Ft.
–Y1A– STA. 10+00 TO STA. 11+92 (RT)
–Y1A– STA. 12+64 TO STA. 14+49 (RT)
–Y1A– STA. 10+00 TO STA. 14+00 (LT)

DETAIL AE
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D= 1.0 Ft.
–YA– STA. 10+50 TO STA. 11+79 (RT)
–YA– STA. 10+76 TO STA. 11+79 (LT)
–Y1A– STA. 14+00 TO STA. 14+49 (LT)

SEE SHEET 41 FOR –Y1– PROFILE
SEE SHEET 41 FOR –Y1A– PROFILE
SEE SHEET 41 FOR –YA– PROFILE

08-OCT-2014 14:46
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$$$$USERNAME$$$$

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

General Project Information

Project No.:	34442.1.5		**Project Type:**	New Location		**Date:**	3/7/2014
NCDOT Contact:	Randy Henegar, P.E.		**Contractor / Designer:**				
Address:	1020 Birch Ridge Dr. Raleigh, N.C. 27610		**Address:**				
Phone:	919-707-6700		**Phone:**				
Email:	rhenegar@ncdot.gov		**Email:**				
City/Town:	Pollocksville		**County(ies):**	Jones	Craven		
River Basin(s):	Neuse		**CAMA County?**	No	Yes		
Primary Receiving Water:	Trent River		**NCDWQ Stream Index No.:**	27-101-(1)			
NCDWQ Surface Water Classification for Primary Receiving Water		**Primary:**	Class C				
		Supplemental:	Swamp Waters (Sw)	Nutrient Sensitive Waters (NSW)			
Other Stream Classification:							
303(d) Impairments:							
Buffer Rules in Effect	Neuse						

Project Description

Project Length (lin. Miles or feet):	6.383 Miles	**Surrounding Land Use:**	Farmland

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	58.80 ac.	N/A ac.
Typical Cross Section Description:	The roadway typical section is of a four-lane roadway divided by a 46-foot median with 12-foot lanes and paved shoulders.	N/A
Average Daily Traffic (veh/hr/day):	Design/Future: 20,800 (2035)	Existing: 12,600 (2009)

General Project Narrative:

NCDOT proposes to improve a 16-mile portion of US 17 between Deppe Loop Road (SR1330) Springhill Road (SR 1439) south of Belgrade and the New Bern Bypass near the Jones/Craven County line South of New Bern. Proposed improvements include a combination of widening on the existing alignment and constructing new segments west of the existing route. The proposed facility would widen US 17 to a divided four-lane facility with bypasses of Maysville and Pollocksville on new location. R-2514D is the planned new US 17 bypass of Pollocksville. Two major Structures are planned at the crossing of the -L- Line (US 17 Bypass) with Goshen Branch and the Trent River. The structure over Goshen Branch is dual bridges with 5@95' 54" Girders for a total length of 475', while the structure over the Trent River is dual bridges with 13@95' 54" Girders for a total length of 1235'. Another major structure is planned at the crossing of the -DRV3- Line and Goshen Branch, which is a 2@ 8'X8' Reinforced Concrete Box Culvert with a total length of 40'. One last major structure is planned at the crossing of the -Y10RPA- Line and Deep Gully, and is a bridge with 2@100' 63" Modified Bulb Tee for a total length of 200'. Grassed swales have been utilized where possible to treat drainage going into buffered zones. The cumulative length of grass swale ditches on the project total 12853 ft. The recommended treatment length for the entire project totals to 11329 ft.

References

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: 34442.1.5 **County(ies):** Jones Craven

Swale

Sheet No.	Station (From / To)	Stream Crossing Station	Base Width (ft)	Front Slope (H:V)	Back Slope (H:V)	Drainage Area (ac)	Recommended Treatment Length (ft)	Actual Length (ft)	Longitudinal Slope (%)	Q2 (cfs)	V2 (fps)	Q10 (cfs)	V10 (fps)	Rock Checks Used
4	300+00 to 301+50 LT -L-	NA	4.0	3:1	3:1	6.12	612	150	0.30%	11.0	1.6	14.0	1.7	No
4&5	300+15 to 304+00 MED -L-	NA	0.0	6:1	6:1	0.47	47	426	0.30%	1.2	0.8	1.6	0.9	No
9	364+06 to 370+37 MED -L-	NA	0.0	10:1	10:1	0.68	68	631	1.70%	1.5	1.4	2.0	1.6	No
9	370+50 to 372+30 RT -L-	372+30 RT -L-	3.0	3:1	3:1	4.78	478	180	0.45%	13.5	2.0	17.5	2.1	No
9	17+00 to 18+00 -DRV3-	NA	2.0	3:1	3:1	0.15	15	100	2.11%	0.4	1.3	0.5	1.4	No
9	18+28 to 20+16 -DRV3-	NA	2.0	3:1	3:1	0.14	14	188	1.20%	0.4	1.0	0.5	1.1	No
9	375+40 to 380+50 MED -L-	NA	0.0	6:1	6:1	0.58	58	510	0.60%	1.5	1.1	2.0	1.2	No
9&10	380+50 to 383+30 -L-	NA	0.0	6:1	6:1	0.30	30	280	0.30%	0.8	0.7	1.0	0.8	No
11	399+70 to 400+95 LT -L-	NA	0.0	4:1	3:1	0.20	20	125	0.30%	0.6	0.8	0.8	0.8	No
11	400+95 to 406+50 LT -L-	NA	0.0	4:1	3:1	5.80	580	555	0.30%	8.0	1.4	10.0	1.5	No
11	404+50 to 408+50 RT -L-	NA	0.0	4:1	3:1	1.70	170	400	0.40%	3.1	1.2	4.0	1.3	No
11	395+78 to 398+50 MED -L-	NA	0.0	10:1	10:1	0.28	28	272	0.34%	0.8	0.7	1.0	0.7	No
11	398+50 to 404+30 MED -L-	NA	0.0	6:1	6:1	0.62	62	580	0.30%	1.6	0.9	2.1	0.9	No
11	404+30 to 410+35 MED -L-	NA	0.0	6:1	6:1	0.64	64	605	0.38%	1.7	0.8	2.2	0.8	No
16	465+50 to 472+70 MED -L-	NA	0.0	6:1	6:1	0.90	90	720	0.30%	2.7	1.0	3.5	1.1	No
16&17	472+70 to 476+00 MED -L-	NA	0.0	6:1	6:1	0.37	37	330	0.30%	1.0	0.8	1.2	0.8	No
17	476+00 to 483+36 MED -L-	NA	0.0	6:1	6:1	0.80	80	736	0.30%	2.1	0.9	2.7	1.0	No
21	528+50 to 539+16 MED -L-	NA	0.0	6:1	6:1	1.07	107	1066	0.30%	2.8	1.0	3.7	1.1	No
							0							
							0							

☐ YES ☑ NO Have minimum design criteria, as presented in the NCDOT Best Management Practices Toolbox, Version 1 (March 2008), been met and verified? If No, provide further explanantion of why design criteria was not met.

Additional Comments

On roadway sheet 4, buffer site 1, the swale from station 300+00 to 301+50 Lt. -L- has 5.4 ac. of offsite drainage coming to it from project R-2514C. The 5.4 ac. is composed of 4.8 ac. of grass and 0.6 ac. of pavement.

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

(Version 1.2; Released September 2011) FOR LINEAR ROADWAY PROJECTS

Project/TIP No.: 34442.1.5 **County(ies):** Jones Craven

Swale

Sheet No.	Station (From / To)	Stream Crossing Station	Base Width (ft)	Front Slope (H:V)	Back Slope (H:V)	Drainage Area (ac)	Recommended Treatment Length (ft)	Actual Length (ft)	Longitudinal Slope (%)	Q2 (cfs)	V2 (fps)	Q10 (cfs)	V10 (fps)	Rock Checks Used
21	539+16 to 544+32 MED -L-	NA	0.0	6:1	6:1	0.53	53	516	0.30%	1.4	0.8	1.8	0.9	No
25 &26	593+67 to 601+17 MED -L-	NA	0.0	6:1	6:1	0.99	99	750	0.30%	3.1	1.0	4.0	1.1	No
26	598+45 RT -L- to 16+00 RT -Y10RPC-	NA	6.0	4:1	3:1	35.20	3520	860	0.30%	31.0	1.9	42.0	2.0	No
26	16+00 to 17+00 RT -Y10RPC-	NA	4.0	3:1	3:1	4.60	460	100	1.00%	7.0	2.0	9.0	2.1	No
26	605+15 to 608+85 LT -L-	NA	6.0	3:1	3:1	29.70	2970	370	0.30%	41.0	1.7	55.0	2.4	No
26	608+85 to 610+00 LT -L-	NA	2.0	3:1	3:1	2.70	270	115	0.30%	5.0	1.3	6.0	1.4	No
26	56+50 to 58+31 LT -Y8A-	NA	0.0	4:1	3:1	0.29	29	150	0.30%	1.0	0.9	1.3	0.9	No
26	601+17 to 608+85 MED -L-	NA	0.0	6:1	6:1	0.82	82	767	0.30%	2.1	0.9	2.8	1.0	No
26	608+85 to 613+34 MED -L-	NA	0.0	6:1	6:1	0.50	50	450	0.30%	1.3	0.8	1.7	0.9	No
26	613+34 to 619+40 MED -L-	NA	0.0	6:1	6:1	0.62	62	606	2.20%	1.6	1.8	2.1	1.9	No
27	627+15 to 627+50 RT -L-	627+15 RT -	4.0	3:1	3:1	2.60	260	35	0.90%	7.0	2.0	9.0	2.2	No
27	15+25 to 18+05 RT -Y10RPA-	NA	2.0	3:1	3:1	3.99	399	280	0.30%	8.0	1.4	10.0	1.5	No
							0							
							0							
							0							
							0							
							0							
							0							
							0							

☐ YES ☑ NO Have minimum design criteria, as presented in the NCDOT Best Management Practices Toolbox, Version 1 (March 2008), been met and verified? If No, provide further explanantion of why design criteria was not met.

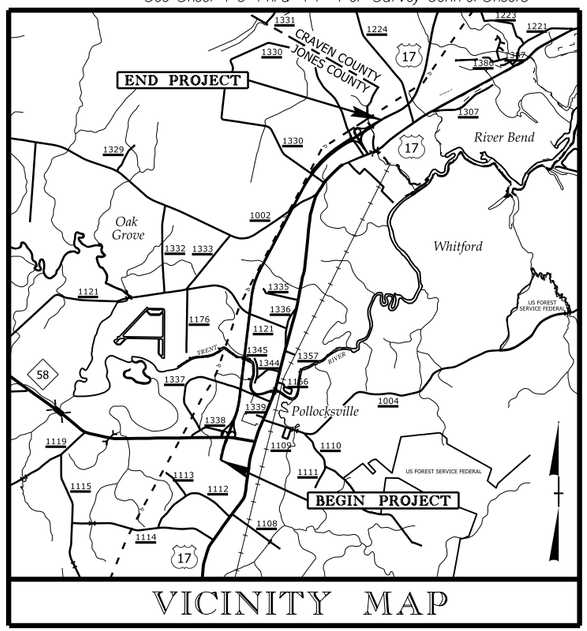
Additional Comments

On roadway sheet 26, buffer site 7, there are three instances of offsite drainage draining to swales. From station 598+45 Rt. -L- to station 16+00 Rt. -Y10RPC-, the swale has 33 ac. of offsite drainage. From station 605+15 to 608+85, the swale has 25.2 ac. of offsite drainage. From station 608+85 to 610+00 Lt. -L-, the swale has 1.5 ac of offsite drainage. On roadway sheet 27, buffer site 8, there are two instances of offsite drainage draining to swales. From station 627+15 to 627+50 Rt. -L-, the swale has 0.82 ac. of offsite drainage. From station 15+25 to 18+05 Rt. -Y10RPA-, the swale has 2.95 ac. of offsite drainage.

09/08/99

TIP PROJECT: R-2514D

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C Thru 1-F For Survey Control Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES & CRAVEN COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514D	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.5		PE
34442.2.S5		R/W & UTILITIES

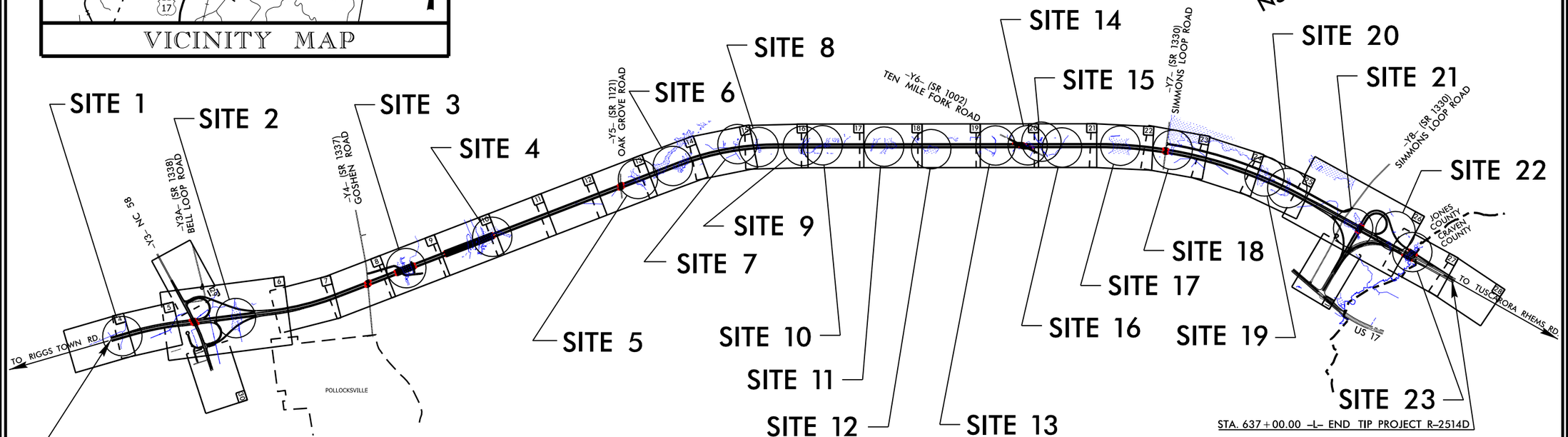
PERMIT DRAWING
SHEET 1 OF 84

LOCATION: US 17 FROM SOUTH OF NC 58 TO THE NEW BERN BYPASS

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

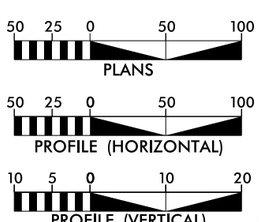
NAD 83/
NSRS 2007



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2015 = 10,600
ADT 2035 = 15,700
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST=4 % DUAL =3 %
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY, TIP PROJECT R-2514D = 5.894 Miles
LENGTH OF STRUCTURES, TIP PROJECT R-2514D = 0.489 Miles
TOTAL LENGTH OF TIP PROJECT R-2514D = 6.383 Miles

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 27, 2013

LETTING DATE:
JUNE 16, 2015

JAMES A. SPEER, P.E.
PROJECT ENGINEER

DANIEL W. GARDNER, JR., P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

2/26/2014
mjyork
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$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

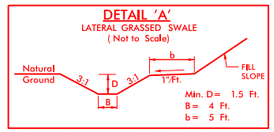
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 2 OF 84

NAD 83/NSRS 2007

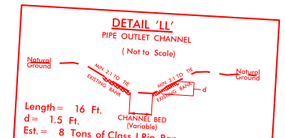
DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 300+00 LT. TO STA. 301+50 LT. –L–

DETAIL 'LL'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 16 Ft.
d = 1.5 Ft.
Est. = 8 Tons of Class I Rip-Rap
Est. = 16 SY Geotextile

FROM STA. 303+16 TO STA. 303+34 –L–

SITE 1

1
BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

CHORD
CL 'B' RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

PIPE OUTLET CHANNEL SEE DETAIL 'LL'

BURIED 20%

N 11° 39' 27.2" E

300

305

–L– STA. 308+00.00

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 32 FOR –L– PROFILE

REVISIONS 8/17/99

3/19/2014
mwyatt
N:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_site_1.dgn
$$$$$$$SYSTIME$$$$$$
$$$$$$$

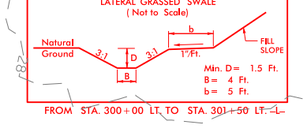
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 3 OF 84

NAD 83/NSRS 2007

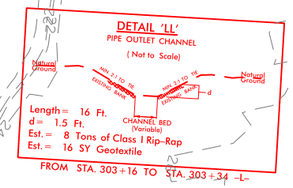
DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 300+00 LT TO STA. 301+50 LT. -L-

DETAIL 'LL'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 16 Ft.
d = 1.5 Ft.
Est. = 8 Tons of Class I Rip-Rap
Est. = 16 SY Geotextile

FROM STA. 303+16 TO STA. 303+34 -L-

SITE 1

1
BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

1
BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

PIPE OUTLET CHANNEL SEE DETAIL 'LL'

CHORD
CL B RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

CHORD
CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

HW BURIED 20%

N 11° 39' 27.2" E

N 11° 39' 27.2" E

300

305

-L- STA. 308+00.00

SEE SHEET 32 FOR -L- PROFILE

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200

REVISIONS

8/17/99

3/19/2014
n:\hydraulics\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hydrm_site_1_con.dgn
$$$$$$$$$$USER$$$$$$$$$$
$$$$$$$$$$SYSTIME$$$$$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 4 OF 84

SITE 1

TB TB

JS

C A

CHORD

R W

CL 'B' RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

BURIED 20%
PIPE OUTLET CHANNEL
SEE DETAIL 'LL'

48" RCP-IV

15" RCP-IV

F

BZ 2 BZ 1 BZ 1 BZ 2

SF SF SF SF

305

2GI FS

3GI

–L– STA. 308+00.00

48" RCP-IV

BZ 2 BZ 1 BZ 1 BZ 2

F HW
BURIED 20%

TS TS

TB TB

JS

C A

CHORD

R W

CL 'B' RI
EST. 2 T
EST. 7 S

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 32 FOR –L– PROFILE

3/19/2014
mlynch
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_pmn_site_1X2.dgn
$$$$$$USERNAME$$$$
$$$$$$SYSTIME$$$$$$
$$$$$$

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2540	6
R-W- SHEET NO.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 5 OF 84

NAD 83/NSRS 2007

MATCHLINE –Y3– STA. 18+50.00 SEE SHEET 29

MATCHLINE –Y3A– STA. 15+50.00 SEE SHEET 29

MATCHLINE –L– STA. 315+00.00 SEE SHEET 5

MATCHLINE –L– STA. 341+00.00 SEE SHEET 7

MATCHLINE –Y3– STA. 34+00.00 SEE SHEET 30

SITE 2

DETAIL "E" SPECIAL CUT DITCH

DETAIL "F" LATERAL BASE DITCH

DETAIL "G" LATERAL BASE DITCH

DETAIL "H" LATERAL BASE DITCH

DETAIL "J" STANDARD V DITCH

DETAIL "K" STANDARD V DITCH

DETAIL "S" SPECIAL BACK OF CURB CUT DITCH

DETAIL "U" FALSE SUMP

NOTE: TOTAL TAKE

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHEET 6-A FOR –Y3B– & –DRV2– DESIGN AND R/W DETAILS
SEE SHEET 53 FOR –L– PROFILE
SEE SHEET 46 FOR –Y3– PROFILE
SEE SHEET 47 FOR –Y3RPA– PROFILE
SEE SHEET 49 FOR –Y3LPA– PROFILE
SEE SHEET 48 FOR –Y3RPD– PROFILE
SEE SHEET 49 FOR –Y3LPD– PROFILE
SEE SHEET 50 FOR –Y3B– PROFILE
SEE SHEET 50 FOR –DRV2– PROFILE
SEE SHEETS 5-1 THRU 5-7 FOR STRUCTURE PLANS

SBG = "SHOULDER BERM GUTTER"

LOCATION:

DES NO. | COUNTY:

DESIGNED BY:

CHECKED BY: | DATE:

GRAPHIC SCALE
50 25 0 50 100
PLANS

3/24/2014
mjyork
R:\Hydraulics PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_06.dgn

REVISIONS

PROJECT REFERENCE NO. R-2924D | SHEET NO. 6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

PERMIT DRAWING
SHEET 6 OF 84

MATCHLINE –Y3– STA. 18+50.00 SEE SHEET 29

MATCHLINE –Y3A– STA. 15+50.00 SEE SHEET 29

MATCHLINE –L– STA. 315+00.00 SEE SHEET 5

MATCHLINE –L– STA. 341+00.00 SEE SHEET 7

MATCHLINE –Y3– STA. 34+00.00 SEE SHEET 30

SITE 2

DETAIL "E" SPECIAL CUT DITCH

DETAIL "F" 4' LATERAL BASE DITCH

DETAIL "L" 4' LATERAL BASE DITCH

DETAIL "M" 4' LATERAL BASE DITCH

DETAIL "A" 4' STANDARD BASE DITCH

DETAIL "K" 4' STANDARD V DITCH

DETAIL "S" SPECIAL BACK OF CURB CUT DITCH

DETAIL "U" FALSE SUMP

NOTE: TOTAL TAKE

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHEET 6-A FOR –Y3B– & –DRV2– DESIGN AND R/W DETAILS
SEE SHEET 33 FOR –L– PROFILE
SEE SHEET 46 FOR –Y3– PROFILE
SEE SHEET 47 FOR –Y3RPA– PROFILE
SEE SHEET 49 FOR –Y3LPA– PROFILE
SEE SHEET 48 FOR –Y3RPD– PROFILE
SEE SHEET 49 FOR –Y3LPD– PROFILE
SEE SHEET 50 FOR –Y3B– PROFILE
SEE SHEET 50 FOR –DRV2– PROFILE
SEE SHEETS 5-1 THRU 5-7 FOR STRUCTURE PLANS

SBG = "SHOULDER BERM GUTTER"

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:
DIV. NO. | COUNTY:
DESIGNED BY:
CHECKED BY: | DATE:

3/24/2014
mpark
R:\Hydraulics PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_06_con.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 7 OF 84

SITE 2

RICHARD H. [illegible]
DB [illegible]

-Y3RPA-

-L-

-Y3RPD-

NOTE: FILL GORE AREA TO ELEVATION 26.7'

NOTE: FILL GORE AREA TO ELEVATION 26.7'

8' SOIL

36" RCP-IV

36" RCP-IV

36" RCP-IV

OTCB

OTCB

HWE

Q10 = 32 CFS
V10 = 0.9 FPS

CL 'B' RIP RAP
EST 7 TONS

JOE SPENCER ESTATE
DB 128 PG 295

47

WILHEMINA SPENCER
DB 128 PG 293

51

STEPHEN L. CARMON ET UX
DB 321 PG 295

52

72" CHL

LE

FS

201

NOTE: TOTAL TAKE

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

3/24/2014
mlynch
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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-18

PERMIT DRAWING
SHEET 8 OF 84

0.025 6:1 6:1 0.025 4:1 4:1

D.P. 32.25

2484

-Y3RPA- EARTHWORK SHEAR LINE

-Y3RPD- EARTHWORK SHEAR LINE

332+00.00

SITE 2

FILL IN WETLAND

0.025 6:1 6:1 0.025 4:1 4:1

D.P. 32.72

2182

-Y3RPA- EARTHWORK SHEAR LINE

-Y3RPD- EARTHWORK SHEAR LINE

331+50.00

SITE 2

FILL IN WETLAND

0.025 6:1 6:1 0.025 4:1 4:1

D.P. 33.30

2109

-Y3RPA- EARTHWORK SHEAR LINE

-Y3RPD- EARTHWORK SHEAR LINE

331+00.00

SITE 2

FILL IN WETLAND

0.025 6:1 6:1 0.025 4:1 4:1

D.P. 34.01

2127

-Y3RPA- EARTHWORK SHEAR LINE

-Y3RPD- EARTHWORK SHEAR LINE

330+50.00

SITE 2

FILL IN WETLAND

0.025 6:1 6:1 0.025 4:1 4:1

D.P. 34.86

2277

-Y3RPA- EARTHWORK SHEAR LINE

-Y3RPD- EARTHWORK SHEAR LINE

330+00.00

3/7/2014
mjwork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_1.dgn
$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-156

PERMIT DRAWING
SHEET 9 OF 84

200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

40 35 30 25 20

0,025 0.025
5.23:1
4.37:1
2859
20+00.00

0,036 0.036
5.82:1
4.97:1
2877
19+50.00

0,053 0.053
5:1
4:1
2900
19+00.00

SITE 2

FILL IN WETLAND

0,070 0.070
4:1
3:1
2592
18+48.13

SITE 2

FILL IN WETLAND
MECHANIZED CLEARING
EARTHWORK SHEAR LINE

0,070 0.070
4:1
3:1
2348
18+00.00

SITE 2

FILL IN WETLAND
EARTHWORK SHEAR LINE

0,070 0.070
4:1
3:1
2283
17+50.00

-Y3RPA-

40 35 30 25 20 15

200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

3/7/2014
mlyork
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$$$

PERMIT DRAWING
SHEET 10 OF 84

SITE 2

FILL IN WETLAND

0.080 0.080

3:1

4:1

23.51

17+50.00

-L- EARTHWORK SHEAR LINE

SITE 2

FILL IN WETLAND

0.080 0.080

3.95:1

4:1

23.76

17+00.00

-L- EARTHWORK SHEAR LINE

SITE 2

FILL IN WETLAND

0.080 0.080

4.40:1

4:1

24.25

16+50.00

-L- EARTHWORK SHEAR LINE

0.080 0.080

4.77:1

4:1

24.65

16+00.00

-L- EARTHWORK SHEAR LINE

0.080 0.080

5.23:1

4:1

25.20

15+50.00

-L- EARTHWORK SHEAR LINE

0.080 0.080

5.66:1

4:1

25.71

15+00.00

-L- EARTHWORK SHEAR LINE

-Y3RPD-

8/23/99

3/7/2014
mwood
R:\Hydraulics\PERMITS, Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_y3rpd.dgn
$$$

8/17/99

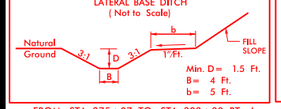
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 11 OF 84

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

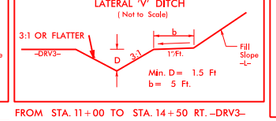
FROM STA. 375+07 TO STA. 383+00 RT. –L–

DETAIL 'W'
LATERAL 'V' DITCH
(Not to Scale)

Min. D= VAR
b= 5 Ft.

FROM STA. 364+00 TO STA. 370+50 RT. –L–

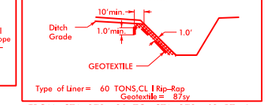
DETAIL 'X'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft.
b= 5 Ft.

FROM STA. 11+00 TO STA. 14+50 RT. –DRV3–

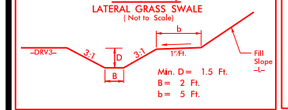
DETAIL 'AA'
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 60 TONS,CL I Rip-Rap
Geotextile= 87sy

FROM STA. 372+30 TO STA. 372+62 RT. –L–
FROM STA. 17+39 TO STA. 17+65 LT. –DRV3–

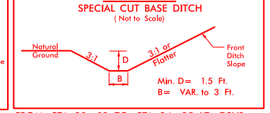
DETAIL 'Q'
LATERAL GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 14+50 TO STA. 16+50 RT. –DRV3–

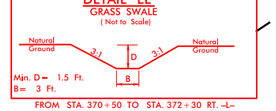
DETAIL 'BB'
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= VAR. to 3 Ft.

FROM STA. 23+02 TO STA. 24+25 LT –DRV3–

DETAIL 'EE'
GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 3 Ft.

FROM STA. 370+50 TO STA. 372+30 RT. –L–

F F DENOTES FILL IN WETLAND

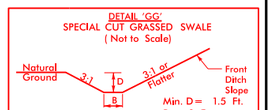
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S S DENOTES IMPACTS IN SURFACE WATER

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

DETAIL 'GG'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.

FROM STA. 17+00 TO STA. 18+00 RT. –DRV3–
FROM STA. 18+28 TO STA. 20+16 RT. –DRV3–

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SITE 3

NAD 83/NSRS 2007

MATCHLINE –L– STA. 368+00.00 SEE SHEET 8

MATCHLINE –L– STA. 382+00.00 SEE SHEET 10

–DRV3– STA. 14+00.00

54 RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
THIRD TRACT

54 RICHARD PARKER, ET UX
DB 254 PG 544

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'

SPECIAL CUT BASE DITCH PSRM LINED SEE DETAIL 'MM'

2' LATERAL GRASSED SWALE SEE DETAIL 'Q'

RIP RAP AT EMBANKMENT SEE DETAIL AA

Q10 = 16.5 CFS
V10 = 3.7 FPS

CLASS 'I' RIP RAP

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

BEGIN BRIDGE 370+65 –L–

GRADE TO DRAIN

WORK BRIDGE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

Q10 = 3.1 CFS
V10 = 1.4 FPS

CLASS 'II' RIP RAP

END BRIDGE 375+40 –L–

15" W ELBOWS

15" RCP–IV

2GI

3GI

45 ELEC

18" RCP–IV

JB w/MH

3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'

LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'

RIP RAP AT EMBANKMENT SEE DETAIL AA

Q10 = 17.5 CFS
V10 = 1.1 FPS

Q10 = 32.4 CFS
V10 = 1.7 FPS

PDE

SPECIAL CUT BASE DITCH GRASSED SEE DETAIL 'BB'

LATERAL BASE DITCH SEE DETAIL 'L'

9" SOIL

48" CMP

HW

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEET 52 FOR –DRV3– PROFILE
SEE SHEET 52 FOR –DRV4– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

3/19/2014
mlynch
R:\Projects\Roadway\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_pth_09.dgn
$$$$$$$$$$USERNAME$$$$$$$$$$
$$$$$$$$$$STIME$$$$$$$$$$
$$$$$$$$$$DGNAME$$$$$$$$$$

8/17/99

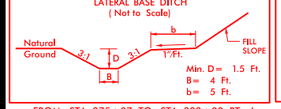
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 12 OF 84

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

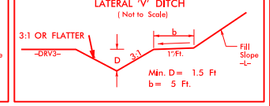
FROM STA. 375+07 TO STA. 383+00 RT. –L–

DETAIL 'W'
LATERAL 'V' DITCH
(Not to Scale)

Min. D= VAR
b= 5 Ft.

FROM STA. 364+00 TO STA. 370+50 RT. –L–

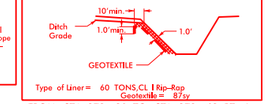
DETAIL 'X'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft.
b= 5 Ft.

FROM STA. 11+00 TO STA. 14+50 RT. –DRV3–

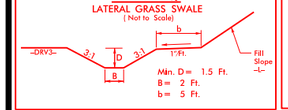
DETAIL 'AA'
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 60 TONS,CL I Rip-Rap
Geotextile= 87sy

FROM STA. 372+30 TO STA. 372+62 RT. –L–
FROM STA. 17+39 TO STA. 17+65 LT. –DRV3–

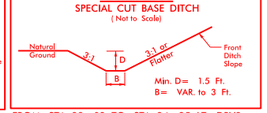
DETAIL 'Q'
LATERAL GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 14+50 TO STA. 16+50 RT. –DRV3–

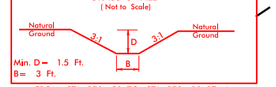
DETAIL 'BB'
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= VAR. to 3 Ft.

FROM STA. 23+02 TO STA. 24+25 LT –DRV3–

DETAIL 'EE'
GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 3 Ft.

FROM STA. 370+50 TO STA. 372+30 RT. –L–

F F DENOTES FILL IN WETLAND

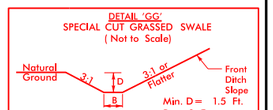
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S S DENOTES IMPACTS IN SURFACE WATER

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

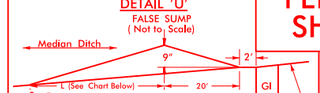
DETAIL 'GG'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.

FROM STA. 17+00 TO STA. 18+00 RT. –DRV3–
FROM STA. 18+28 TO STA. 20+16 RT. –DRV3–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S= Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SITE 3

NAD 83/NSRS 2007

MATCHLINE –L– STA. 368+00.00 SEE SHEET 8

MATCHLINE –L– STA. 382+00.00 SEE SHEET 10

–DRV3– STA. 14+00.00

54 RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
THIRD TRACT

54 RICHARD PARKER, ET UX
DB 254 PG 544

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'

SPECIAL CUT BASE DITCH PSRM LINED SEE DETAIL 'MM'

2' LATERAL GRASSED SWALE SEE DETAIL 'Q'

RIP RAP AT EMBANKMENT SEE DETAIL AA

Q10 = 16.5 CFS
V10 = 3.7 FPS

CLASS 'I' RIP RAP

15" RCP–IV

2GI

BEGIN BRIDGE 370+65 –L–

GRADE TO DRAIN

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

18" RCP–IV

45 ELEC

JB

MH

3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'

LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'

RIP RAP AT EMBANKMENT SEE DETAIL AA

WORK BRIDGE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

Q10 = 17.5 CFS
V10 = 1.1 FPS

Q10 = 32.4 CFS
V10 = 1.7 FPS

PDE

Q10 = 3.1 CFS
V10 = 1.4 FPS

CLASS 'II' RIP RAP

15" W ELBOWS

END BRIDGE 375+40 –L–

3GI

LATERAL BASE DITCH SEE DETAIL 'L'

SPECIAL CUT BASE DITCH GRASSED SEE DETAIL 'BB'

8' SOIL

9' SOIL

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEET 52 FOR –DRV3– PROFILE
SEE SHEET 52 FOR –DRV4– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

3/19/2014
mlynch
R:\Structure Projects\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_09_con.dgn
$$$

SITE 3

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 13 OF 84

F / F — DENOTES FILL IN WETLAND

TS / TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S / S — DENOTES IMPACTS IN SURFACE WATER

HC / HC — DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

Q10 = 16.5 CFS
V10 = 3.7 FPS

Q10 = 3.1 CFS
V10 = 1.4 FPS

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

WORK BRIDGE

24" RCP-IV

CLASS 'II' RIP RAP

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

GRADE TO DRAIN

15" RCP-IV

15" W/ ELBOWS

2GI

FS

3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'

18" RCP-IV

JB w/MH

INV=4.45'

PROPOSED 1 @ 8'X8' RCBC

48" CMP

Q10 = 17.5 CFS
V10 = 1.1 FPS

Q10 = 32.4 CFS
V10 = 1.7 FPS

35" RCP-IV

HW

END BRIDGE
375+40 -L-

-DRV3-

-DRV4-

-L-

BRIDGE
65 -L-

370 371 372 373 374 375 376

GRAPHIC SCALE

50 25 0 50 100

REVISIONS 8/17/99

3/18/2014
mpyatt
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$$$$$$$SYSTIME$$$$$$
$$$$$$$USERNAME$$$$$$
$$$$$$$DGNS$$$$$$$

5/28/99

PERMIT DRAWING
SHEET 14 OF 84

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SITE 3

℄ STA. 373+02.5 –L–
5 @ 95'-54" GIRDER
SKEW = 90°
GRADE POINT ELEV. = 32.06'

39.09

(–)1.4000%

(–)1.4000%

CLASS 'II' RIP RAP
2:1

TRENT RIVER 100 YR WSEL 14.27'

100 YR WSEL 6.60'

50 YR WSEL 5.6'

NWS 1.0' (2/27/12)

PROPOSED –DRV3–

PROPOSED –DRV4–

2:1
CLASS 'II' RIP RAP

PI = 379+50.00
EL = 22.99'
VC = 350'
K = 197 (DS > 70 MPH)

(–)1.4000%

(+)0.3800%

23.94

(+)0.5064%

(+)0.3400%

(+)0.3600%

BM18 ELEVATION = 9.42'
N 464379 E 2530558
L STATION 372+45.00 127' RIGHT
RR SPIKE IN GUY POLE (RSQ 61)

SEE SHEET 9 FOR PLAN VIEW

–L–

SITE 4

℄ STA. 389+47.5 –L–
13 @ 95'-54" GIRDER
SKEW = 90°
GRADE POINT ELEV. = 26.78'

23.94

(+)0.3800%

29.26

50 YR WSEL 13.0'

100 YR WSEL 14.27'

NWS 1.0'

CLASS 'II' RIP RAP
2:1

(+)0.5000%

(+)0.8400%

BM19 ELEVATION = 13.46'
N 465426 E 2530928
L STATION 383+29.00 370' RIGHT
RR SPIKE IN 18" OAK

BM20 ELEVATION = 3.92'
N 466317 E 2530930
L STATION 394+12.00 243' RIGHT
RR SPIKE IN 16" HARDWOOD

DITCH LEGEND
RIGHT DITCH - - - - - - -

SEE SHEET 10 FOR PLAN VIEW

2/27/2014
mjork
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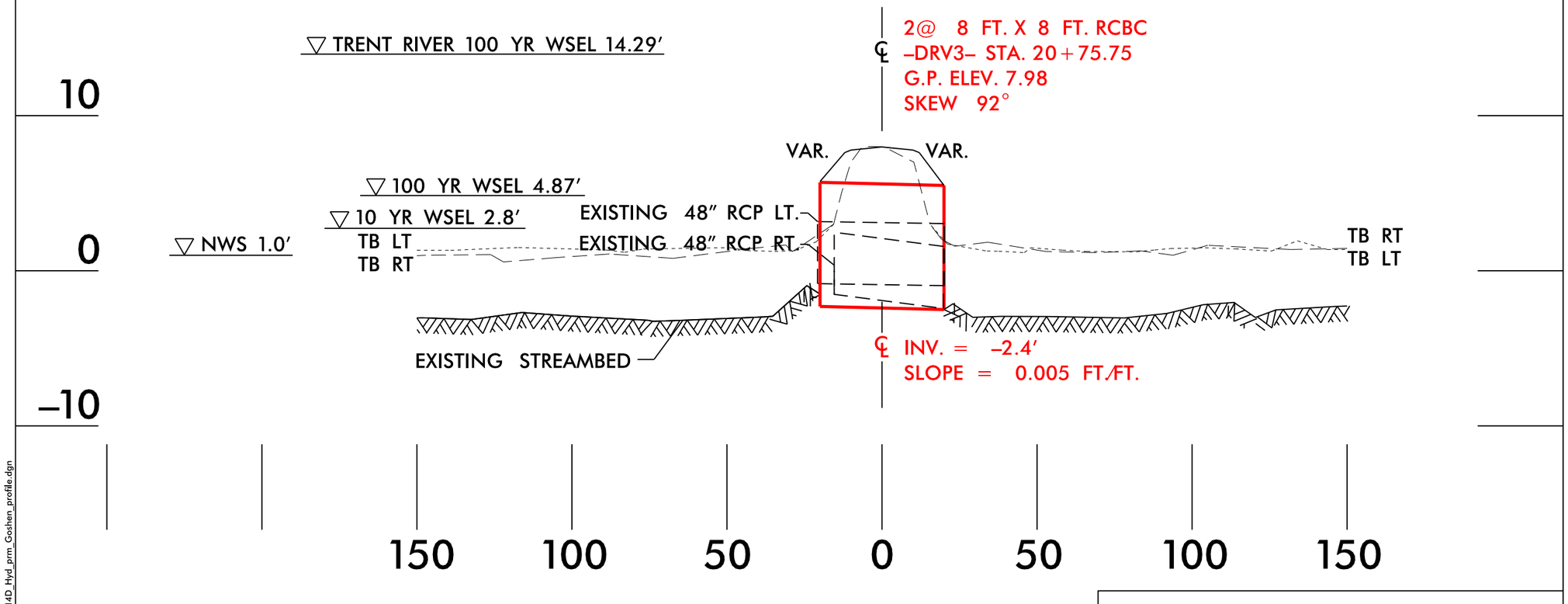
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$DGN$$$$$$$$

PERMIT DRAWING
SHEET 15 OF 84



PROFILE

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.5 (R-2514D)
US 17 FROM SOUTH OF NC 58
TO THE NEW BERN BYP

2/27/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_Goshen_profile.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-37

PERMIT DRAWING
SHEET 16 OF 84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

40 35 30 25 20 15 10 5 0

0.025 0.025

SITE 3

HAND CLEARING

-0.34

373+00.00

SITE 3

TEMPORARY IMPACTS IN SURFACE WATERS

FILL IN WETLAND

0.025 0.025

SITE 3

HAND CLEARING

0.70

372+50.00

0.025 0.025

14.92

3:1 3:1

EL=3.78

372+00.00

3/7/2014
mjork
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$$$

8/23/99

PROJ. REFERENCE NO. R-2514D

SHEET NO. X-236

PERMIT DRAWING
SHEET 17 OF 84

SITE 3

HAND CLEARING

FILL IN WETLAND

0.020 0.020

7.98

3:1 3:1

21+00.00

SITE 3

4:1 0.020 0.020 3:1

8.01

20+78.55

SITE 3

HAND CLEARING

0.020 0.020 7:1

3:1 8.15

20+50.00

SITE 3

MECHANIZED CLEARING
HAND CLEARING

SITE 3

HAND CLEARING

4:1 0.020 0.020 4:1 3:1

7.96

EL=3.95

20+00.00

SITE 3

HAND CLEARING
MECHANIZED CLEARING
HAND CLEARING

SITE 3

HAND CLEARING
MECHANIZED CLEARING
HAND CLEARING

13.57

5:1 0.020 0.020 4:1 3:1

EL=4.62

19+44.30

SITE 3

HAND CLEARING

SITE 3

HAND CLEARING

12.93

4:1 0.020 0.020 4:1 3:1

EL=5.19

18+96.47

-DRV 3-

3/7/2014
mjork
R:\Hydraulics PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_drv3.dgn
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8/23/99

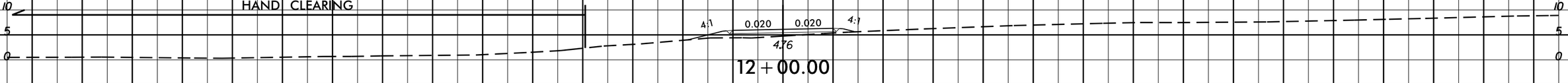
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-239

PERMIT DRAWING
SHEET 18 OF 84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 3

HAND CLEARING

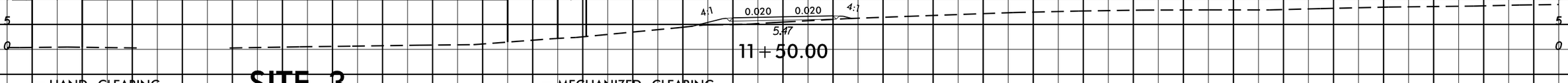


12 + 00.00

SITE 3

HAND CLEARING
MECHANIZED CLEARING

HAND CLEARING
MECHANIZED CLEARING

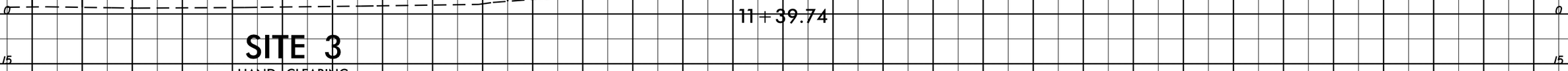


11 + 50.00

SITE 3

HAND CLEARING
MECHANIZED CLEARING

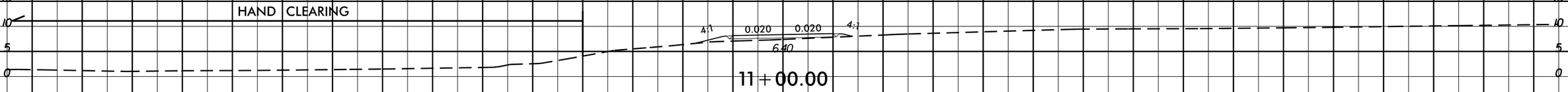
HAND CLEARING
MECHANIZED CLEARING



11 + 39.74

SITE 3

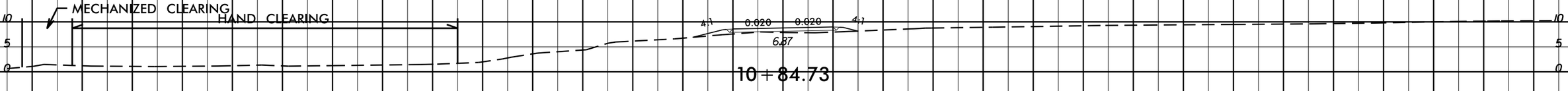
HAND CLEARING



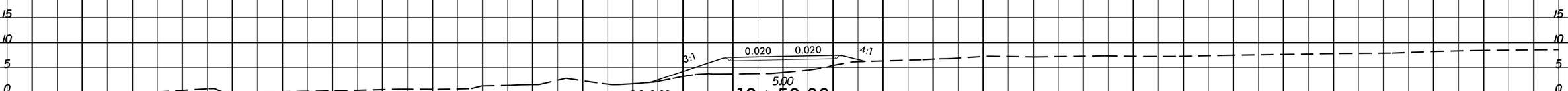
11 + 00.00

SITE 3

MECHANIZED CLEARING
HAND CLEARING



10 + 84.73



10 + 50.00

10 + 19.93

-DRV4-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

3/7/2014
mjcork
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$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 19 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 382+00.00 SEE SHEET 9

MATCHLINE –L– STA. 396+00.00 SEE SHEET 11

(54) RICHARD PARKER, ET UX
DB 254 PG 544

(56) THOMAS B. MOORE, ET AL
DB 306 PG 520

WORK BRIDGE

NO FENCE

CLASS 'II' RIP RAP

15" W/ ELBOWS

2GI

TB

BZ 1

BZ 2

105.6

385

390

395

30'

FRENT RIVER

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

JOHN H. DAVIS, JR.
DB 184 PG 566
MC "A" SLIDE 104-A

SITE 4

T T DENOTES TEMPORARY FILL IN WETLAND

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

3/8/2014
mpratt
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$$$$$$$$$$STYLE$$$$$$$$$$
$$$$$$$$$$CELLNAME$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 20 OF 84

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 382+00.00 SEE SHEET 9

MATCHLINE –L– STA. 396+00.00 SEE SHEET 11

54 RICHARD PARKER, ET UX
DB 254 PG 544

54 RICHARD PARKER, ET UX
DB 254 PG 544

56 THOMAS B. MOORE, ET AL
DB 306 PG 520

WORK BRIDGE

WORK BRIDGE

NO FENCE

NO FENCE

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT

CLASS 'II' RIP RAP

CLASS 'II' RIP RAP

15" W/ ELBOWS

15" W/ ELBOWS

54 RICHARD PARKER, ET UX
DB 254 PG 544

JOHN H. DAVIS, JR.
DB 184 PG 566
MC "A" SLIDE 104-A

56 THOMAS B. MOORE, ET AL
DB 306 PG 520

SITE 4

GRAPHIC SCALE

100 50 0 100 200

T T DENOTES TEMPORARY FILL IN WETLAND

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

3/8/2014
mpyatt
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$$$$$$$$$SYSTIME$$$$$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 21 OF 84

DENOTES TEMPORARY FILL IN WETLAND

DENOTES FILL IN WETLAND

DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

SITE 4

WORK BRIDGE

WORK BRIDGE

NO FENCE

NO FENCE

CLASS 'II' RIP RAP

TRENT RIVER

MATCHLINE –L– STA. 396+00.00 SEE SHEET

GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

3/8/2014
mywork
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$$$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$

5/28/99

PERMIT DRAWING
SHEET 22 OF 84

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SITE 3

℄ STA. 373+02.5 –L–
5 @ 95'-54" GIRDER
SKEW = 90°
GRADE POINT ELEV. = 32.06'

39.09

(–)1.4000%

(–)1.4000%

CLASS 'II' RIP RAP
2:1

TRENT RIVER 100 YR WSEL 14.27'
100 YR WSEL 6.60'
50 YR WSEL 5.6'
NWS 1.0' (2/27/12)

PROPOSED –DRV3–

PROPOSED –DRV4–

CLASS 'II' RIP RAP
2:1

PI = 379+50.00
EL = 22.99'
VC = 350'
K = 197 (DS > 70 MPH)

(–)1.4000%
(+)0.3800%

23.94

(+)0.5064%

(+)0.3400%
(+)0.3600%

BM18 ELEVATION = 9.42'
N 464379 E 2530558
L STATION 372+45.00 127' RIGHT
RR SPIKE IN GUY POLE (RSQ 61)

SEE SHEET 9 FOR PLAN VIEW

–L–

SITE 4

℄ STA. 389+47.5 –L–
13 @ 95'-54" GIRDER
SKEW = 90°
GRADE POINT ELEV. = 26.78'

23.94

(+)0.3800%

29.26

CLASS 'I' RIP RAP
2:1

50 YR WSEL 13.0'
100 YR WSEL 14.27'
NWS 1.0'

(+)0.5000%
(+)0.8400%

BM19 ELEVATION = 13.46'
N 465426 E 2530928
L STATION 383+29.00 370' RIGHT
RR SPIKE IN 18" OAK

BM20 ELEVATION = 3.92'
N 466317 E 2530930
L STATION 394+12.00 243' RIGHT
RR SPIKE IN 16" HARDWOOD

DITCH LEGEND
RIGHT DITCH - - - - - - -

SEE SHEET 10 FOR PLAN VIEW

2/27/2014
mjork
R:\Hydraulics\PERMITS_Environmental\Drawings\Welland Permit\R2514D_Hyd_prm_pfl.dgn
$$$$$$$$USERNAME$$$$
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$DGN$$$$$$$$

8/23/99

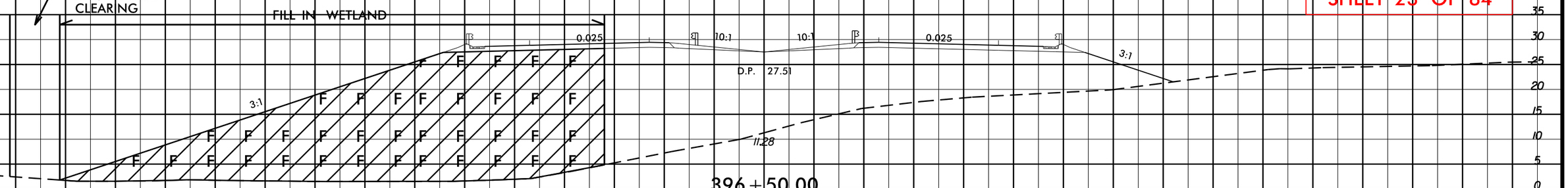
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-49

PERMIT DRAWING
SHEET 23 OF 84

SITE 4

MECHANIZED CLEARING

FILL IN WETLAND

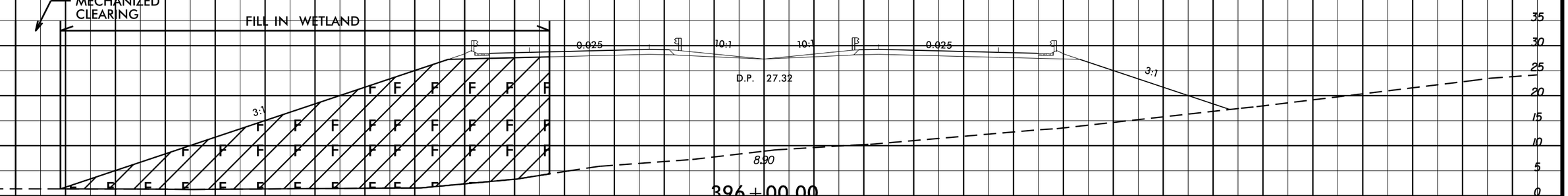


396+50.00

SITE 4

MECHANIZED CLEARING

FILL IN WETLAND



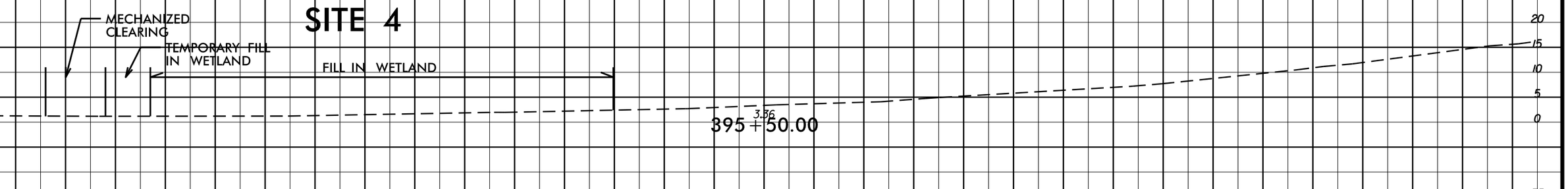
396+00.00

SITE 4

MECHANIZED CLEARING

TEMPORARY FILL IN WETLAND

FILL IN WETLAND



395+50.00

SITE 4

HAND CLEARING

395+00.00

3/7/2014
mjork
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$$$$$$$$$$USERNAME$$$$$
$$$$$$$$$$

8/17/99

REVISIONS

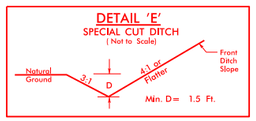
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 24 OF 84

NAD 83/NSRS 2007

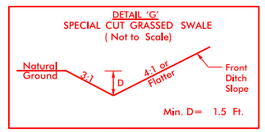
DETAIL 'E'
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 404+50 TO STA. 409+00 LT. –L–

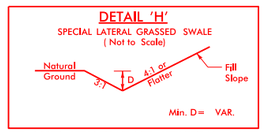
DETAIL 'G'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 400+95 TO STA. 402+50 LT. –L–
FROM STA. 404+50 TO STA. 408+50 RT. –L–
FROM STA. 399+70 TO STA. 400+95 LT. –L–

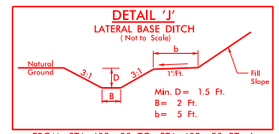
DETAIL 'H'
SPECIAL LATERAL GRASSED SWALE
(Not to Scale)



Min. D= VAR.

FROM STA. 402+50 TO STA. 404+50 LT. –L–

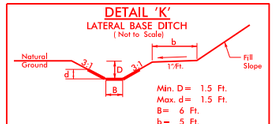
DETAIL 'I'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 403+00 TO STA. 403+50 RT. –L–

DETAIL 'K'
LATERAL BASE DITCH
(Not to Scale)

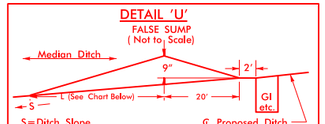


Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 6 Ft.
b= 5 Ft.

Type of Liner= PSRM

FROM STA. 398+50 TO STA. 399+18 RT. –L–
FROM STA. 399+18 TO STA. 403+00 RT. –L–

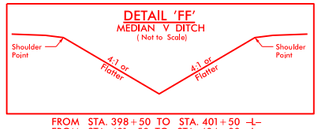
DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'FF'
MEDIAN 'V' DITCH
(Not to Scale)



FROM STA. 398+50 TO STA. 401+50 –L–
FROM STA. 401+50 TO STA. 404+00 –L–

(56)
THOMAS B. MOORE, ET AL
DB 306 PG 520

(57)
C. E. WILLIE, SR, HEIRS
DB HO PG 221
MB 6 PG 26

MATCHLINE –L– STA. 396+00.00 SEE SHEET 10

MATCHLINE –L– STA. 409+00.00 SEE SHEET 12

Q10 = 74 CFS
V10 = 1.1 FPS

PDE

END SBG @ STA. 398+20 RT –L–

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

SPECIAL LATERAL GRASSED SWALE SEE DETAIL 'H'

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'

15" RCP-IV

2GI

15" RCP-IV

15" ALT. w/ ELBOWS

15" RCP-IV

MEDIAN 'V' DITCH SEE DETAIL 'FF'

400

JB w/MH

3GI

15" RCP-IV

30" RCP-IV

MEDIAN 'V' DITCH SEE DETAIL 'FF'

FS 2GI

405

15" RCP-IV

END SBG @ STA. 398+75 RT. –L–

MAXIMUM PIPE SLOPE = 2.0%

JB w/MH

30" RCP-IV

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

FS 2GI

15"

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

6' LATERAL BASE DITCH PSRM LINED SEE DETAIL 'K'

SITE 4

(57)
C. E. WILLIE, SR, HEIRS
DB HO PG 221
MB 6 PG 26

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 36 FOR –L– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

3/5/2014
mpyrek
n:\hydraulics\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_11.dgn
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$$$$$$$$USERNAME$$$$$$
$$$$$$$$DGNS$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$

8/17/99

REVISIONS

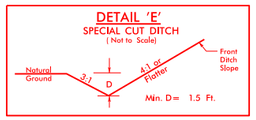
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 25 OF 84

NAD 83/NSRS 2007

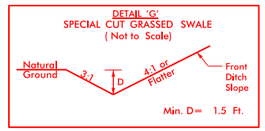
DETAIL 'E'
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 404+50 TO STA. 409+00 LT. –L–

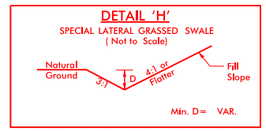
DETAIL 'G'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 400+95 TO STA. 402+50 LT. –L–
FROM STA. 404+50 TO STA. 408+50 RT. –L–
FROM STA. 399+70 TO STA. 400+95 LT. –L–

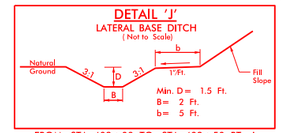
DETAIL 'H'
SPECIAL LATERAL GRASSED SWALE
(Not to Scale)



Min. D= VAR.

FROM STA. 402+50 TO STA. 404+50 LT. –L–

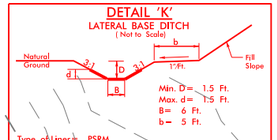
DETAIL 'I'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 403+00 TO STA. 403+50 RT. –L–

DETAIL 'K'
LATERAL BASE DITCH
(Not to Scale)

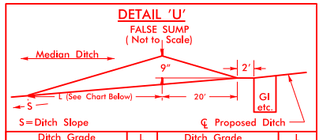


Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 6 Ft.
b= 5 Ft.

Type of Liner= PSRM

FROM STA. 398+50 TO STA. 399+18 RT. –L–
FROM STA. 399+18 TO STA. 403+00 RT. –L–

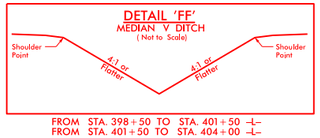
DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'FF'
MEDIAN 'V' DITCH
(Not to Scale)



FROM STA. 398+50 TO STA. 401+50 –L–
FROM STA. 401+50 TO STA. 404+00 –L–

(56)
THOMAS B. MOORE, ET AL
DB 306 PG 520

(57)
C. E. WILLIE, SR. HEIRS
DB HO PG 221
MB 6 PG 26

MATCHLINE –L– STA. 396+00.00 SEE SHEET 10

MATCHLINE –L– STA. 409+00.00 SEE SHEET 12

Q10 = 74 CFS
V10 = 1.1 FPS

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

SPECIAL LATERAL GRASSED SWALE SEE DETAIL 'H'

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'

END SBG @ STA. 398+20 RT –L–

MEDIAN 'V' DITCH SEE DETAIL 'FF'

MEDIAN 'V' DITCH SEE DETAIL 'FF'

JB w/MH
15" RCP-IV
3GI

FS 2GI

2GI

15" RCP-IV

END SBG @ STA. 398+75 RT –L–

MAXIMUM PIPE SLOPE = 2.0%

JB w/MH
30" RCP-IV

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

6' LATERAL BASE DITCH PSRM LINED SEE DETAIL 'K'

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'I'

SITE 4

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 36 FOR –L– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

3/5/2014
mjpark
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 26 OF 84

8/17/99

REVISIONS

SITE 4

MATCHLINE –L– STA. 396+00.00 SEE SHEET 10

Q10 = 74 CFS
V10 = 1.1 FPS

A

PDE

PDE

SPECIAL CUT GRASSED SWALE
SEE DETAIL 'G'

R/W

END SBG @
STA 398+20 RT –L–

FS

48" RCP-IV

2GI

15" RCP-IV

WLB

MEDIAN 'V' DITCH
SEE DETAIL 'FF'

400

2GI

15" RCP-IV

2GI

15" ALT W/ELBOWS

15" RCP-IV

END SBG @
STA. 398+75 RT. –L–

48" RCP-IV

MAXIMUM PIPE
SLOPE = 2.0%

HW

C/A

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

F F — DENOTES FILL IN WETLAND

E E — DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

50 25 0 50 100

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 36 FOR –L– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

352014
mpyatt
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 27 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 422+00.00 SEE SHEET 12

MATCHLINE –L– STA. 435+00.00 SEE SHEET 14

LEROY WAY, JR.
DB 277 PG 817

CELIA W. HADDOCK, ESTATE
ESTATE FILE 99-E-9

MICHELE M. STATEN
DB 297 PG 990

(58) VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT TWO

(59) NATHANIEL SIMMONS HEIRS
C/O KATHERINE S. WAY
DB 153 PG 44

(60) CREIGHTON R. BARBER, ET AL
DB 277 PG 813

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

(62) FLORENCE STRAYHORN
DB 119 PG 124

(66) CHARLES D. GREEN
DB 313 PG 272

Q10 = 2.1 CFS
V10 = 0.3 FPS

15' INGRESS - EGRESS EASEMENT

425

430

(61) KENNETH L. MURPHY
NO DEED DESCRIPTION

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT ONE

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT THREE

JAMES H. WILSON, ET UX
DB 188 PG 910

(63) EARL MURPHY, ET UX
DB 192 PG 900
PLAT CAB A SLIDE 142-A

(64) JOHN A. MURPHY, ET UX
DB 192 PG 904
PLAT CAB A SLIDE 142-A

(65) WILLIAM MURPHY, ET UX
DB 192 PG 908
PLAT CAB A SLIDE 142-A

ERIC K. KENYEAR
DB 271 PG 761
PLAT CAB A SLIDE 142-A

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

Q10 = 4.7 CFS
V10 = 0.6 FPS

SITE 5

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 37 FOR –L– PROFILE
SEE SHEET 53 FOR –Y5– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

3/2014
mpyatt
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$$$$$$$$$$DGNSET$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 28 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 422+00.00 SEE SHEET 12

MATCHLINE –L– STA. 435+00.00 SEE SHEET 14

LEROY WAY, JR.
DB 277 PG 817

CELIA W. HADDOCK, ESTATE
ESTATE FILE 99-E-9

MICHELE M. STATEN
DB 297 PG 990

(58) VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT TWO

(59) NATHANIEL SIMMONS HEIRS
C/O KATHERINE S. WAY
DB 153 PG 44

(60) CREIGHTON R. BARBER, ET AL
DB 277 PG 813

(61) KENNETH L. MURPHY
NO DEED DESCRIPTION

(62) FLORENCE STRAYHORN
DB 119 PG 124

(63) EARL MURPHY, ET UX
DB 192 PG 900
PLAT CAB A SLIDE 142-A

(64) JOHN A. MURPHY, ET UX
DB 192 PG 904
PLAT CAB A SLIDE 142-A

(65) WILLIAM MURPHY, ET UX
DB 192 PG 908
PLAT CAB A SLIDE 142-A

(66) CHARLES D. GREEN
DB 313 PG 272

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT ONE

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT THREE

JAMES H. WILSON, ET UX
DB 188 PG 910

ERIC K. KENYEAR
DB 271 PG 761
PLAT CAB A SLIDE 142-A

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

15' INGRESS - EGRESS EASEMENT

Q10 = 2.1 CFS
V10 = 0.3 FPS

Q10 = 4.7 CFS
V10 = 0.6 FPS

15" WELBOWS

425

430

SITE 5

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 37 FOR –L– PROFILE
SEE SHEET 53 FOR –Y5– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

3/2014
mpyatt
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$$$$$$$$$$Y$TIME$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$

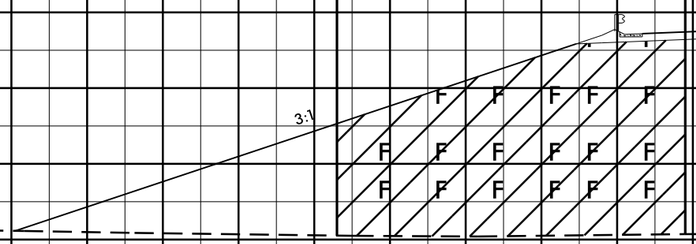
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-66

PERMIT DRAWING
SHEET 29 OF 84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 5
FILL IN WETLAND

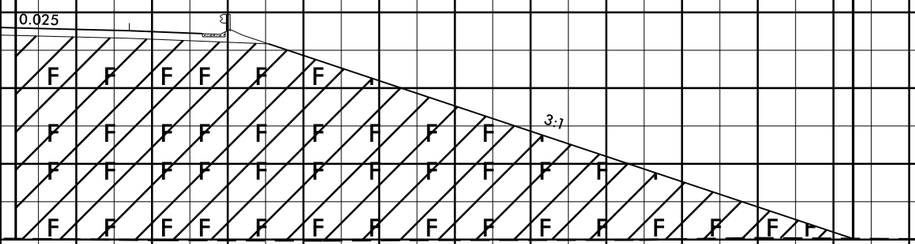


35.39

433 + 50.00

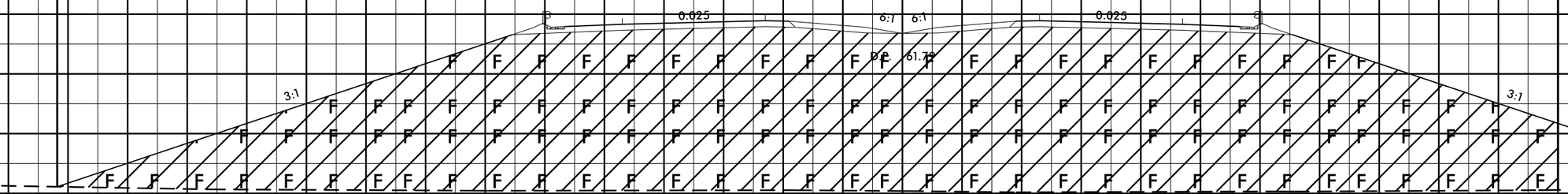
SITE 5
FILL IN WETLAND

MECHANIZED CLEARING



SITE 5
FILL IN WETLAND

MECHANIZED CLEARING

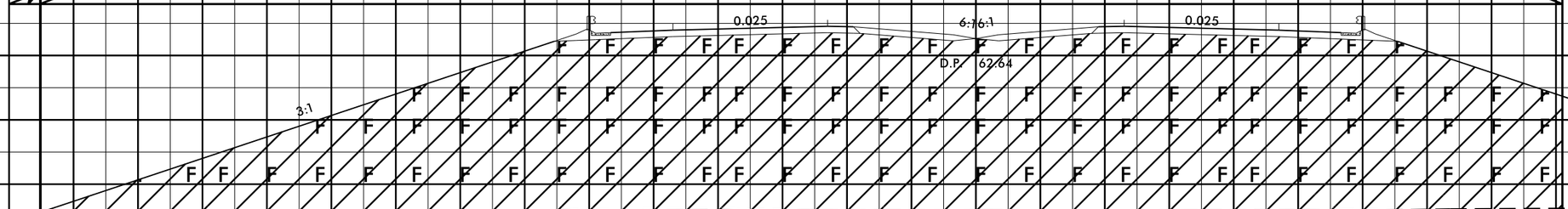


35.40

433 + 00.00

SITE 5
FILL IN WETLAND

MECHANIZED CLEARING



35.77

432 + 50.00

3/19/2014
mjork
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$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 30 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 435+00.00 SEE SHEET 13

MATCHLINE –L– STA. 448+00.00 SEE SHEET 15

(66) CHARLES D. GREEN DB 313 PG 272

(67) G. N. NOBLE, PER DEED DB 117 PG 20

DELLA B. HILL, ET AL DB 161 PG 561 MB 2 PG 92

155 160 165

Q10 = 2.0 CFS
V10 = 1.0 FPS

15" W/ERBMS 2GI

Q10 = 3.0 CFS
V10 = 0.9 FPS

15" RCP-IV 2GI 2GI

15" W/ERBMS

Q10 = 3.9 CFS
V10 = 1.1 FPS

18" RCP-IV 2GI

24" RCP-IV 2GI

15" RCP-IV 2GI

FILL RAISE TO EL 310

Q10 = 2.1 CFS
V10 = 0.3 FPS

Q10 = 1.8 CFS
V10 = 0.6 FPS

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

CHORD

440 445

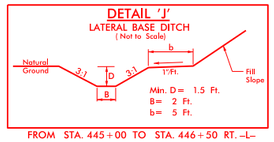
SITE 6

(66) CHARLES D. GREEN DB 313 PG 272

SITE 6

(67) G. N. NOBLE, PER DEED DB 117 PG 20

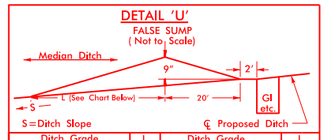
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 445+00 TO STA. 446+50 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

F F DENOTES FILL IN WETLAND

P P DENOTES IMPACTS IN SURFACE WATER (POND)

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 37 FOR –L– PROFILE

3/2014
mpark
n:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_14.dgn
$$$$$$$$$USER:$$$$
$$$$$$$$$SYSTIME:$$$$
$$$$$$$$$SYSTEM:$$$$
$$$$$$$$$DGN:$$$$
$$$$$$$$$FILENAME:$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 31 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 435+00.00 SEE SHEET 13

MATCHLINE –L– STA. 448+00.00 SEE SHEET 15

66 CHARLES D. GREEN DB 313 PG 272

67 G. N. NOBLE, PER DEED DB 117 PG 20

DELLA B. HILL, ET AL DB 161 PG 561 MB 2 PG 92

Q10 = 2.0 CFS
V10 = 1.0 FPS

15" W/ FLARES 2GI

Q10 = 3.0 CFS
V10 = 0.9 FPS

15" RCP-IV 2GI 2GI

15" W/ FLARES

Q10 = 3.9 CFS
V10 = 1.1 FPS

15" RCP-IV 2GI

FILL POND TO EL 31.0 ±

Q10 = 2.1 CFS
V10 = 0.3 FPS

Q10 = 1.8 CFS
V10 = 0.6 FPS

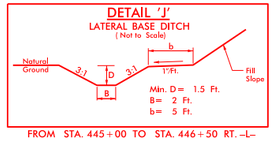
2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

CHORD

SITE 6

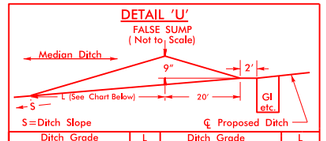
SITE 6

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 445+00 TO STA. 446+50 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

F F DENOTES FILL IN WETLAND

P P DENOTES IMPACTS IN SURFACE WATER (POND)

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

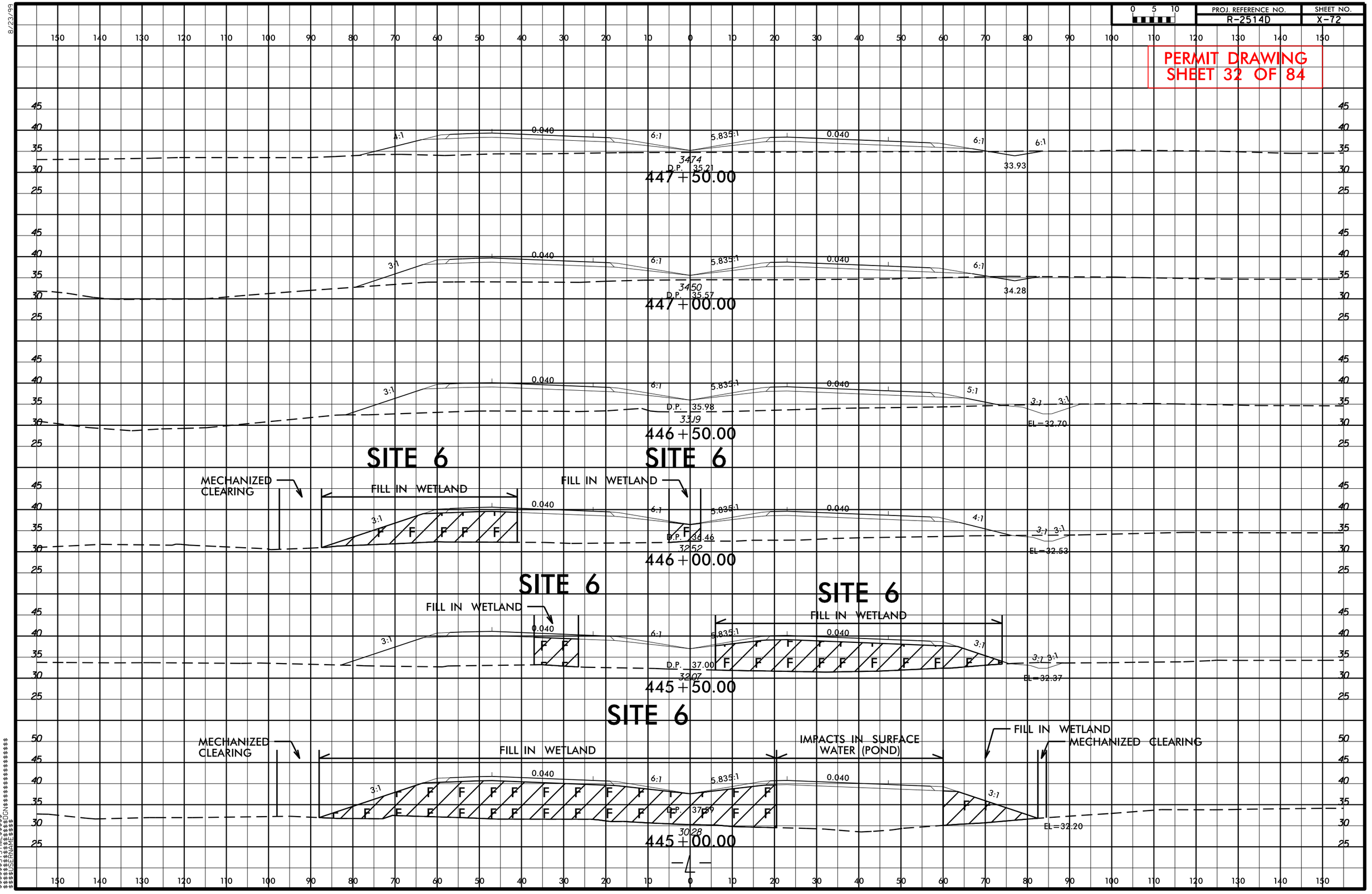
SBG – "SHOULDER BERM GUTTER"

SEE SHEET 37 FOR –L– PROFILE

3/6/2014
mbpark
N:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_14_con.dgn
$$$$$$$$$$USER NAME$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$STYLE$$$$$$$$$$
$$$$$$$$$$TIME$$$$$$$$$$
$$$$$$$$$$DATE$$$$$$$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-72

PERMIT DRAWING
SHEET 32 OF 84



3/9/2014
mjork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_2.dgn
$$$$$$$SYSTIME$$$$$$
$$$$$$$

8/17/99

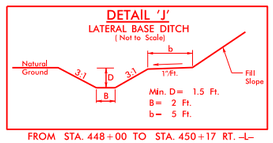
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

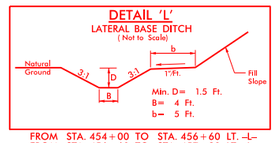
PERMIT DRAWING SHEET 33 OF 84

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



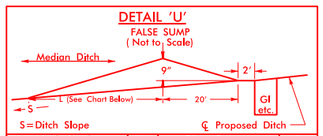
FROM STA. 448+00 TO STA. 450+17 RT. –L–

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 454+00 TO STA. 456+60 LT. –L–
FROM STA. 456+60 TO STA. 457+80 LT. –L–
FROM STA. 450+17 TO STA. 457+50 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

NAD 83/NSRS 2007

WRIGHT A. HILL HEIRS
DB 161 PG 485
PC "A" SLIDE 175

100' CP&L POWERLINE EASEMENT

WRIGHT A. HILL HEIRS
DB 161 PG 485
PC "A" SLIDE 175

MATCHLINE –L– STA. 448+00.00 SEE SHEET 14

MATCHLINE –L– STA. 461+00.00 SEE SHEET 16

SITE 7

(68)
TERRY LLOYD, ET UX
DB 278 PG 718
PC "A" SLIDE 175

+62.54
240.98

(69)
CLAUDIA H. HADDOCK, ET AL
DB 287 PG 578
PC "A" SLIDE 175

4' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'L'

4' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'L'

450

455

460

3GI 2GI
15" RCP-IV
18 RCP-IV

HW

24" RCP-IV

PS

2GI

2GI
24" RCP-IV

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

4' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'L'

(68)
TERRY LLOYD, ET UX
DB 278 PG 718
PC "A" SLIDE 175

(69)
CLAUDIA H. HADDOCK, ET AL
DB 287 PG 578
PC "A" SLIDE 175

CEMETERY
APPROXIMATE
LOCATION

MARY W. BROWN
DB 168 PG 129

(70)
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHEET FOR 38 –L– PROFILE

2/27/2014
mjrock
n:\projects\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_15.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERNAME$$$$
$$$$$$$$DGNS$$$$$$$$$$$$$$$$$$$$

8/17/99

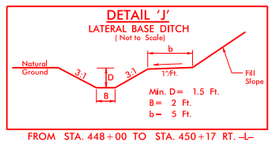
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 34 OF 84

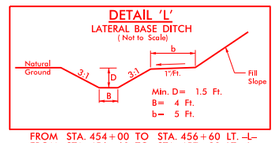
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 448+00 TO STA. 450+17 RT. –L–

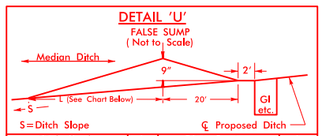
DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 454+00 TO STA. 456+60 LT. –L–
FROM STA. 456+60 TO STA. 457+80 LT. –L–
FROM STA. 450+17 TO STA. 457+50 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

NAD 83/NSRS 2007

WRIGHT A. HILL HEIRS
DB 161 PG 485
PC "A" SLIDE 175

100' CP&L POWERLINE EASEMENT

WRIGHT A. HILL HEIRS
DB 161 PG 485
PC "A" SLIDE 175

SITE 7

MATCHLINE –L– STA. 448+00.00 SEE SHEET 14

MATCHLINE –L– STA. 461+00.00 SEE SHEET 16

(68) TERRY LLOYD, ET UX
DB 278 PG 718
PC "A" SLIDE 175

(69) CLAUDIA H. HADDOCK, ET AL
DB 287 PG 578
PC "A" SLIDE 175

+62.54
240.98

4' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'

4' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

4' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'

450 455 460

3GI 2GI
15" RCP-IV
18 RCP-IV

2GI
PS
30" RCP-IV

(68) TERRY LLOYD, ET UX
DB 278 PG 718
PC "A" SLIDE 175

(69) CLAUDIA H. HADDOCK, ET AL
DB 287 PG 578
PC "A" SLIDE 175

CEMETERY APPROXIMATE LOCATION

MARY W. BROWN
DB 168 PG 129

(70) (HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHEET FOR 38 –L– PROFILE

2/27/2014
mjrock
n:\roadsucc\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_15_con.dgn
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$USER$$$$$$$$
$$$$$$$$ELEVATIONS$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 35 OF 84

8/17/99

REVISIONS

69

CLAUDIA H. HADDOCK, ET AL
DB 287 PG 578
PC "A" SLIDE 175

12"

E

G

WLB

WLB

L BASE DITCH
SS LINED
DETAIL 'L'

4' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'L'

C
A

R
W

HW

F

SITE 7

36" RCP-IV

2GI

FS

455

460

MATCHLINE -L- STA. 461+00.00 SEE SHEET

DITCH

GRAPHIC SCALE

50 25 0 50 100

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

2/27/2014
mjrork
R:\Projects\Rocks\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_1512.dgn
$$$$$$$$$$USER:$$$$$
$$$$$$$$$$SYSTIME:$$$$$$
$$$$$$$$$$DGN:$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 36 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

70
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

DETAIL 'U'
FALSE SUMP
(Not to Scale)

S = Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'NN'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 18 Ft.
d = 2.0 Ft.
Est. = 12 Tons of Class I Rip-Rap

FROM STA. 473+64 TO STA. 473+88 –L–

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

+76.08
1394.60'

100' CP&L POWERLINE EASEMENT

12"

CHORD

GAS TEST STATION

465

470

2GI FS

15" RCP-HV

Q10 = 3.5 CFS
V10 = 1.1 FPS

CL 'B' RIP RAP
EST. TONS
EST. SY GEOTEXTILE

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

BURIED TB

MATCHLINE –L– STA. 461+00.00 SEE SHEET 15

MATCHLINE –L– STA. 474+00.00 SEE SHEET 17

SITE 8

SITE 9

70
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 38 FOR –L– PROFILE

3/19/2014
mpyrtk
R:\Projects\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_16.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 37 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

70
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

DETAIL 'U'
FALSE SUMP
(Not to Scale)

S = Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'NN'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 18 Ft.
d = 2.0 Ft.
Est. = 12 Tons of Class I Rip-Rap

FROM STA. 473+64 TO STA. 473+88 –L–

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

+76.08
1394.60

100' CP&L POWERLINE EASEMENT

MATCHLINE –L– STA. 461+00.00 SEE SHEET 15

MATCHLINE –L– STA. 474+00.00 SEE SHEET 17

SITE 8

SITE 9

CHORD

GAS TEST STATION

2GI FS

15" RCP-HV

Q10 = 3.5 CFS
V10 = 1.1 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 1 SY GEOTEXTILE

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

BURIED TB

70
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 38 FOR –L– PROFILE

3/19/2014
mpyrak
R:\Projects\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_16_con.dgn
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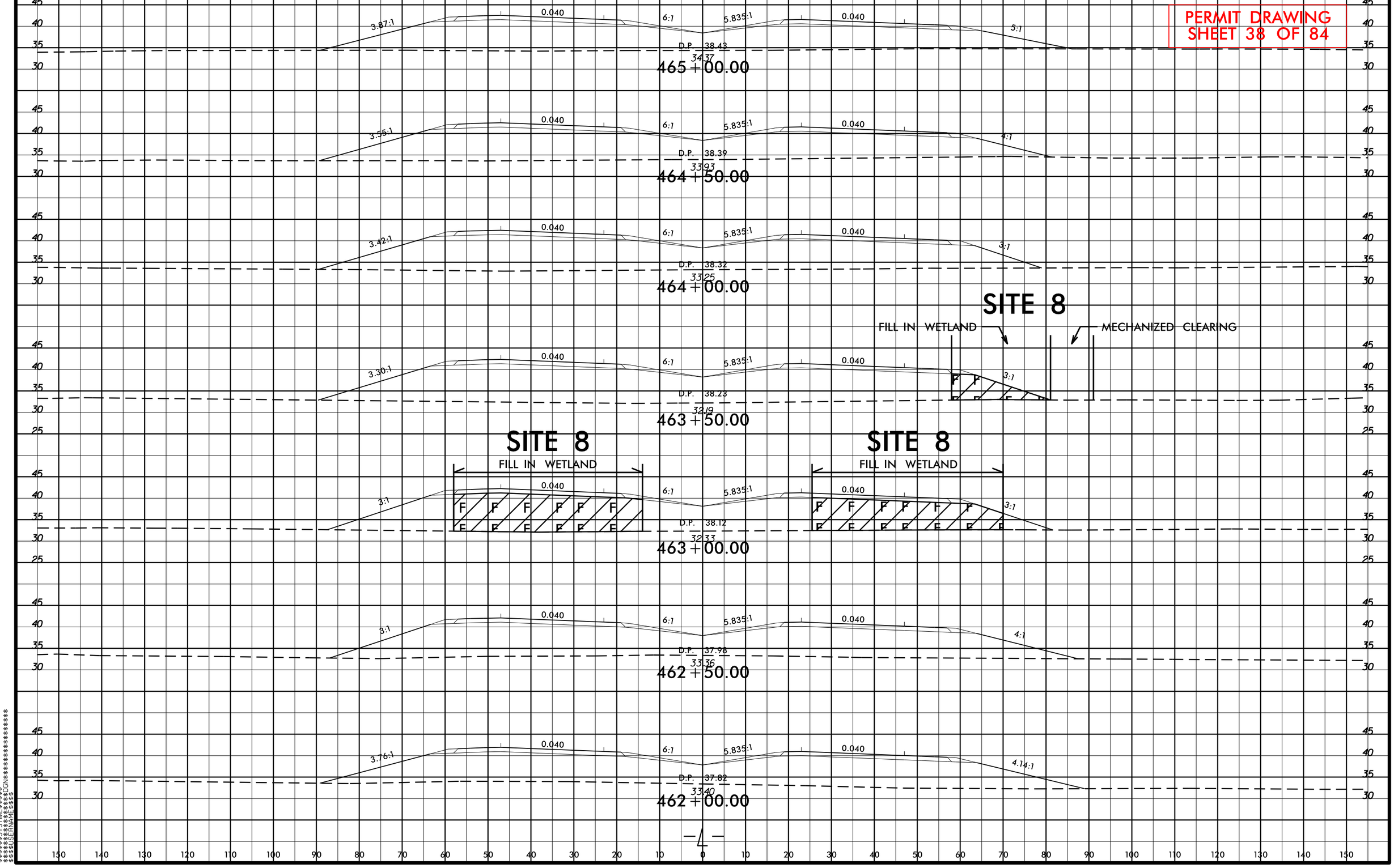
$$$$$$$USERNAME$$$$$$
$$$$$$$DGNS$$$$$$$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-78

PERMIT DRAWING
SHEET 38 OF 84



3/19/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART 2.dgn
$$$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 39 OF 84

NAD 83/NSRS 2007

DETAIL 'NN'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 18 Ft.
d = 2.0 Ft.
Est. = 12 Tons of Class I Rip-Rap
FROM STA. 473+64 TO STA. 473+88 –L–

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

–L– STA. 469+00.00

–L– STA. 483+00.00

+76.08
1,395,601

SITE 9

SITE 10

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

TOE PROTECTION SEE DETAIL 'B'

5' BERM
35.0' TOP EL.
3:1 SIDE SLOPES
APPROX. 7 CY FILL

470 475 480

2GI FS

3GI

15" RCP

Q10 = 3.5 CFS
V10 = 1.1 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

Q10 = 3.8 CFS
V10 = 1.3 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

BURIED

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

STA. 487+37.80

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

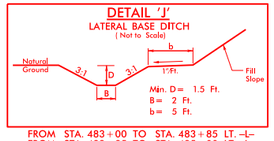
F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

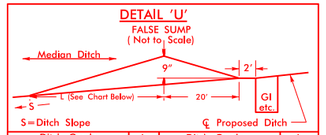
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 483+00 TO STA. 483+85 LT. –L–
FROM STA. 483+85 TO STA. 485+00 LT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 39 FOR –L– PROFILE

3/19/2014
mpratt
R:\Projects\Projects\PERMITS Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_site_9-10.dgn
$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

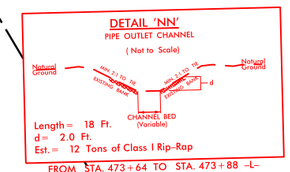
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 40 OF 84

8/17/99

REVISIONS

NAD 83/NSRS 2007



71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

-L- STA. 469+00.00

-L- STA. 483+00.00

SITE 9

SITE 10

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

TOE PROTECTION SEE DETAIL 'B'

5' BERM
35.0' TOP EL.
3:1 SIDE SLOPES
APPROX. 7 CY. FILL

2GI

3GI

5' RCP-LT

5' RCP-LT

Q10 = 3.5 CFS
V10 = 1.1 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

Q10 = 3.8 CFS
V10 = 1.3 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

BURIED

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

TB

BZ 2

BZ 1

WLB

SIA-187+37.80

+76.08
1,394,160

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

F F — DENOTES FILL IN WETLAND

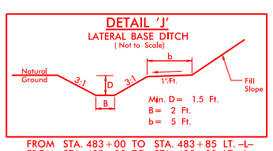
DENOTES MECHANIZED CLEARING

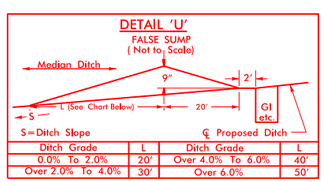
S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200





Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SEE SHEET 39 FOR -L- PROFILE

3/9/2014
mpratt
R:\Projects\Sites\PERMITS Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_site_9-10_con.dgn
$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 41 OF 84

8/17/99

REVISIONS

-L- STA. 469+00.00

SITE 9

470

475

GAS TEST STATION

12"

2GI

15" RCP-IV

54" RCP-IV

Q10 = 3.5 CFS
V10 = 1.1 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

Q10 = 3.8 CFS
V10 = 1.3 FPS

CL 'B'
EST.
EST.

BURIED

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

TB
HW
BURIED
TS
WLB
BZ 1
BZ 2

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

50 25 0 50 100

-L- Sta. 487+37.

3/19/2014
mpratt
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$$$$$$$$$

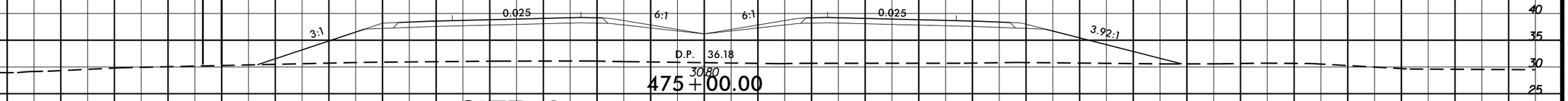
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-81

PERMIT DRAWING
SHEET 42 OF 84

SITE 9

MECHANIZED CLEARING

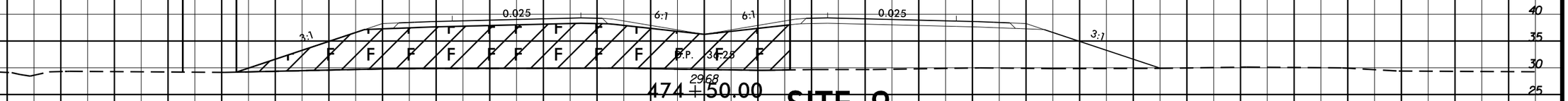


475 + 00.00

SITE 9

MECHANIZED CLEARING

FILL IN WETLAND



474 + 50.00

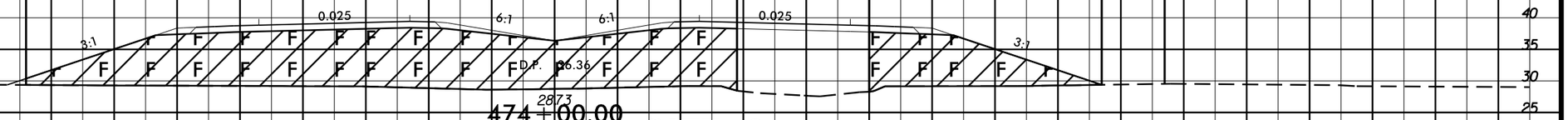
SITE 9

FILL IN WETLAND

IMPACTS IN SURFACE WATER

FILL IN WETLAND

MECHANIZED CLEARING



474 + 00.00

SITE 9

FILL IN WETLAND

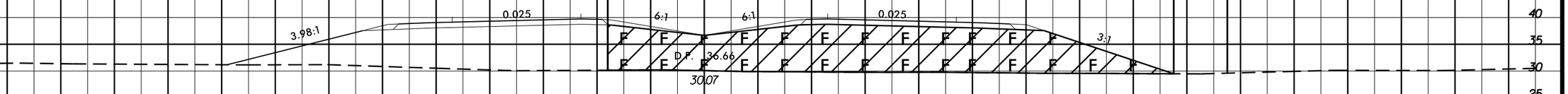
MECHANIZED CLEARING

473 + 50.00

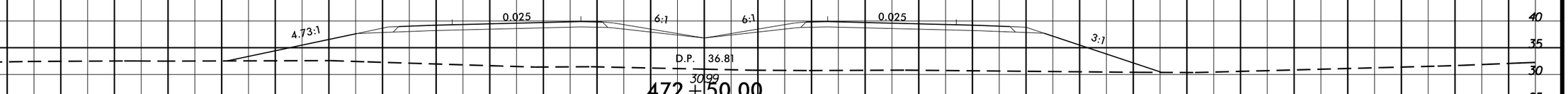
SITE 9

FILL IN WETLAND

MECHANIZED CLEARING



473 + 00.00



472 + 50.00

3/19/2014
mjwork
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$$$$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-82

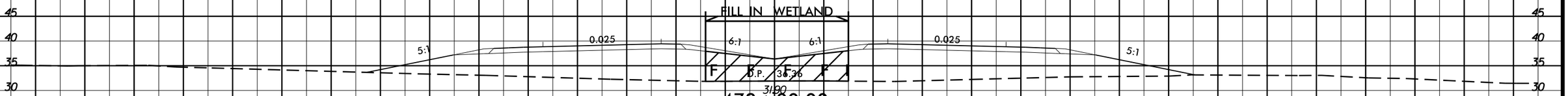
PERMIT DRAWING
SHEET 43 OF 84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

45 40 35 30 25

SITE 10

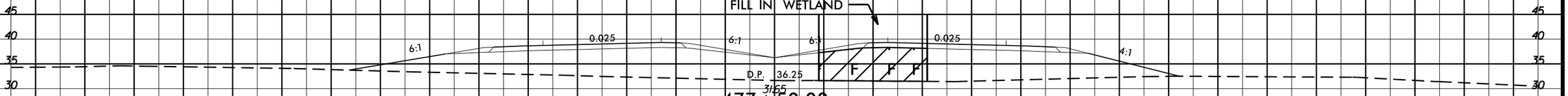
FILL IN WETLAND



478+00.00

SITE 10

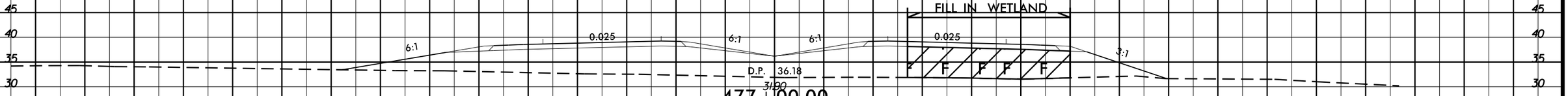
FILL IN WETLAND



477+50.00

SITE 10

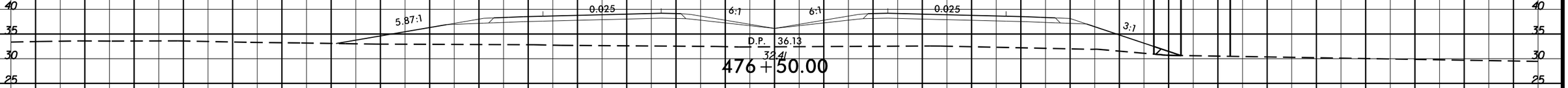
FILL IN WETLAND



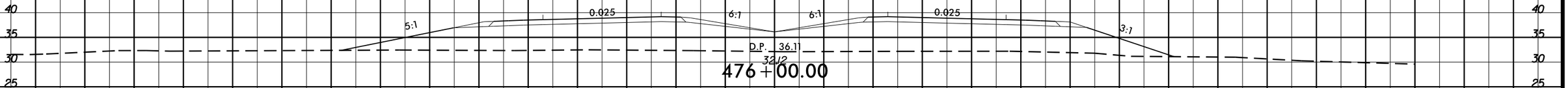
477+00.00

SITE 10

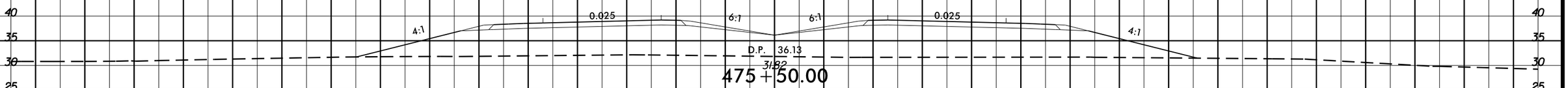
FILL IN WETLAND — MECHANIZED CLEARING



476+50.00



476+00.00



475+50.00

3/9/2014
mjork
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$$$$$$USERNAME$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 44 OF 84

NAD 83/NSRS 2007

72
STEPHEN P. CLARY
DB 289 PG 787

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

MATCHLINE –L– STA. 488+00.00 SEE SHEET 17

MATCHLINE –L– STA. 502+00.00 SEE SHEET 19

SITE 11

SITE 11

100' CP&L POWERLINE EASEMENT

100' CP&L POWERLINE EASEMENT

490

495

500

N 12° 47' 22.6" E

36" RCP

30" RCP

18" RCP

HWL

RW

CA

72
STEPHEN P. CLARY
DB 289 PG 787

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 39 FOR –L– PROFILE

2/27/2014
mpyatt
R:\Projects\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_18.dgn
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 45 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

72
STEPHEN P. CLARY
DB 289 PG 787

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

MATCHLINE –L– STA. 488+00.00 SEE SHEET 17

MATCHLINE –L– STA. 502+00.00 SEE SHEET 19

SITE 11

SITE 11

100' CP&L POWERLINE EASEMENT

100' CP&L POWERLINE EASEMENT

36" RCP-JW

18" RCP-JW

30" RCP-JW

N 12° 47' 22.6" E

490

495

500

72
STEPHEN P. CLARY
DB 289 PG 787

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 39 FOR –L– PROFILE

2/27/2014
mpyatt
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$$$

8/23/99

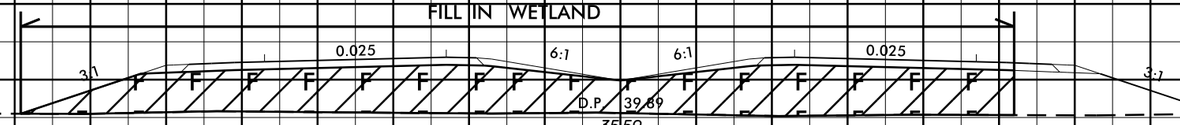
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-87

PERMIT DRAWING
SHEET 46 OF 84

SITE 11

FILL IN WETLAND

MECHANIZED CLEARING

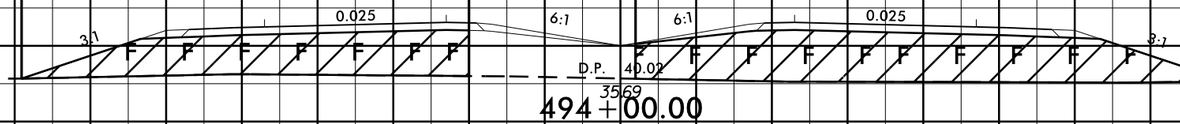


494 + 50.00

SITE 11

FILL IN WETLAND

MECHANIZED CLEARING

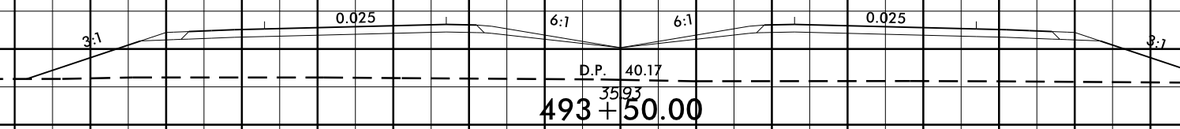


494 + 00.00

SITE 11

FILL IN WETLAND

MECHANIZED CLEARING

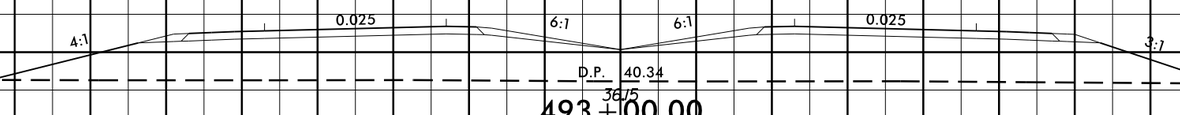


493 + 50.00

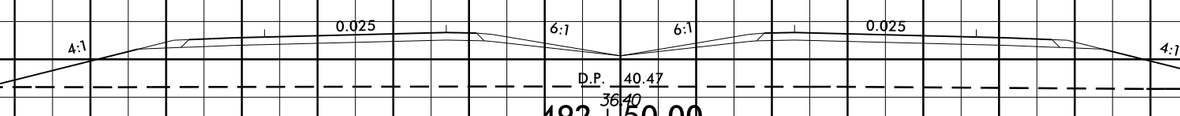
SITE 11

FILL IN WETLAND

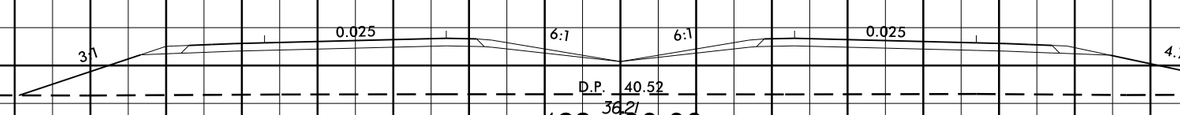
MECHANIZED CLEARING



493 + 00.00



492 + 50.00



492 + 00.00

3/19/2014
mjork
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$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

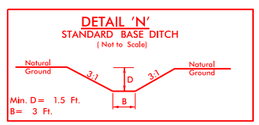
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 47 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

DETAIL 'N'
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 503+00 RT.

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

ANTHONY W. FOTHERGILL, ET UX
PC "B" SLIDE 272 PG 6

PHILLIP W. EDWARDS
DB 249 PG 016

MATCHLINE -L- STA. 502+00.00 SEE SHEET 18

MATCHLINE -L- STA. 516+00.00 SEE SHEET 20

225 230

505 510 515

100' CP&L POWERLINE EASEMENT

12" RCP

8"W

EIP

EIP

EIP

30" RCP-IN

3GI

18" RCP-IN

3' STANDARD BASE DITCH
GRASS LINED
SEE DETAIL 'N'
APPROX. 20 CY DDE

Q10 = 16 CFS
V10 = 2.0 FPS

SITE 12

(73)
A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 40 FOR -L- PROFILE

3/6/2014
n:\pvt
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 48 OF 84

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 502 + 00.00 SEE SHEET 18

MATCHLINE –L– STA. 516 + 00.00 SEE SHEET 20

DETAIL 'N'
STANDARD BASE DITCH
(Not to Scale)

Natural Ground — 2:1 — D — 2:1 — Natural Ground

Min. D = 1.5 Ft.
B = 3 Ft.

–L– STA. 503 + 00 RT.

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

ANTHONY W. FOTHERGILL, ET UX
PC "B" SLIDE 272 PG 6

PHILLIP W. EDWARDS
DB 249 PG 016

100' CP&L POWERLINE EASEMENT

30" RCP-IV

3' STANDARD BASE DITCH
GRASS LINED
SEE DETAIL 'N'
APPROX. 20 CY DDE

Q10 = 16 CFS
V10 = 2.0 FPS

18" RCP-IV

3GL

EIP

SITE 12

(73)
A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 40 FOR –L– PROFILE

3/6/2014
mlynak
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$$$$$$$$$$DGN $$$$$$$$$$$

8/23/99

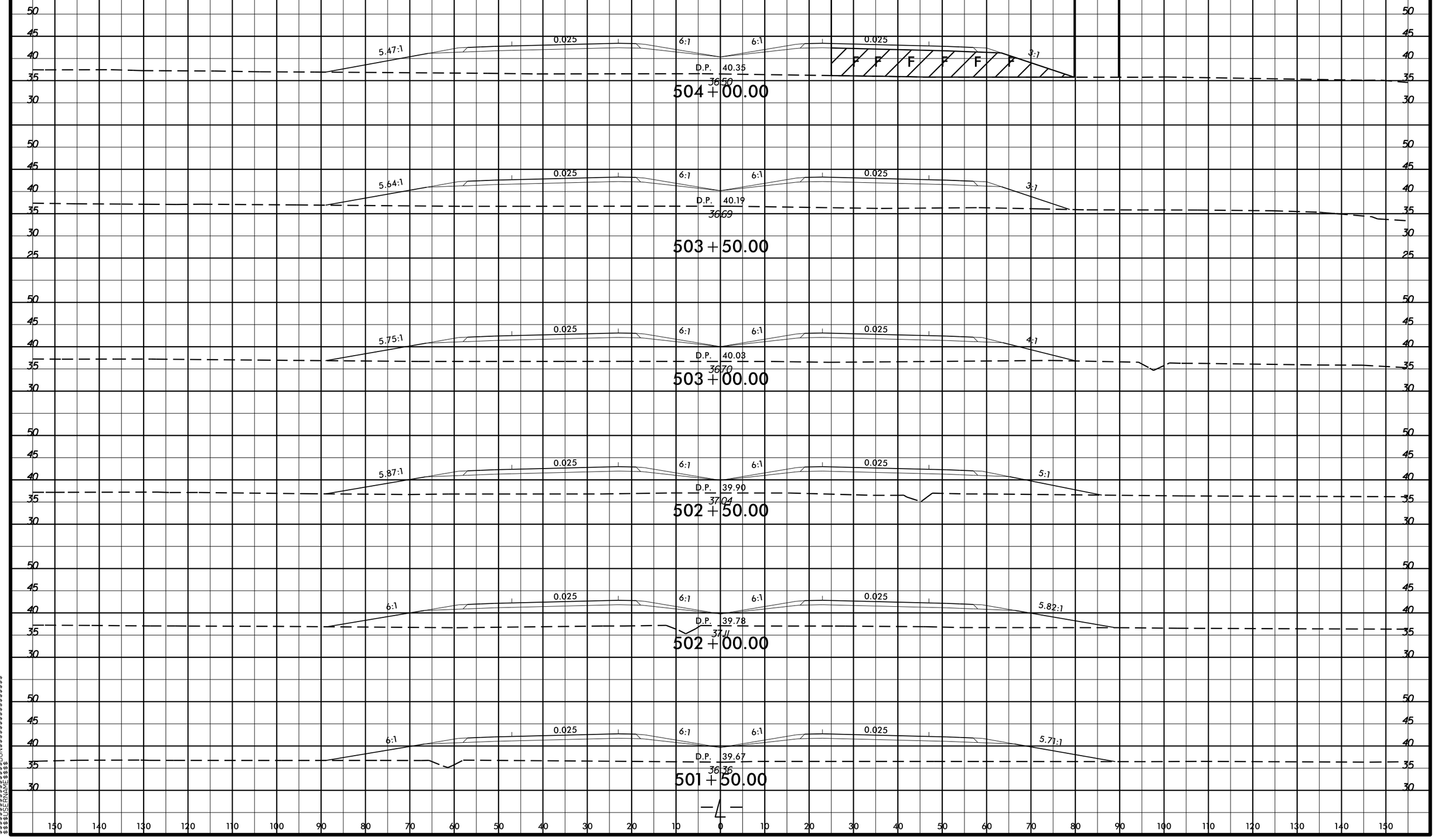
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-90

PERMIT DRAWING
SHEET 49 OF 84

SITE 12

MECHANIZED CLEARING

FILL IN WETLAND



3/9/2014
mjork
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$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 50 OF 84

REVISIONS 8/17/99

MATCHLINE –L– STA. 516+00.00 SEE SHEET 19

MATCHLINE –L– STA. 530+00.00 SEE SHEET 21

NAD 83/NSRS 2007

DOUGLAS C. FURGASON, ET UX
DB 293 PG 498
PLAT CAB. B SLIDE 76-90

WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

(73) A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

(75) BRENDA S. HUGHES
ESTATE FILE 01-E-98

ROGER A. HUGHES (76)
DB 101 PG 62
DIVISION BOOK G-7 PG 475

SITE 13

SITE 14

SR 1002 TAYLOR MILL FORK

N 53° 38' 22.3" E

N 27° 47' 22.6" E

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

ELECTRIC METER

HTR

HW BURIED 20%

15" RCP-IV

15" W.W. ELBOWS

24" RCP

18" RCP

15" RCP

36" CONC

30" CONC

12" CMP

10" PVC

ISFD

DK

GR

BST

EIP

TB

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

(74) MELBA J. METTS
DB 291 PG 340

CHARLES F. WALKER (77)
DB 161 PG 681

(78) JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

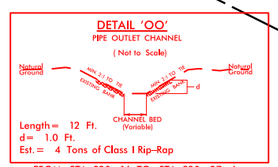
(73) A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

C. ROBERT BROWN, ET UX
DB 180 PG 555
PC "B" SLIDE 234 PG 53

STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 186 PG 906
PC "B" SLIDE 234 PG 53

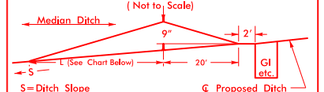
DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 12 Ft.
d = 1.0 Ft.
Est. = 4 Tons of Class I Rip-Rap

FROM STA. 520+16 TO STA. 520+27 –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F — DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 53 FOR –Y6– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

4/6/2014
mlynch
N:\Projects\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_pth_20.dgn
$$$$$$$$$$USER$$$$$$$$$$
$$$$$$$$$$STIME$$$$$$$$$$
$$$$$$$$$$PLOTSCALE$$$$$$$$$$
$$$$$$$$$$PLOTDATE$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 51 OF 84

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 516+00.00 SEE SHEET 19

MATCHLINE –L– STA. 530+00.00 SEE SHEET 21

SITE 13

SITE 14

DOUGLAS C. FURGASON, ET UX
DB 293 PG 498
PLAT CAB. B SLIDE 76-90

WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

(73) A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

(75) BRENDA S. HUGHES
ESTATE FILE 01-E-98

(76) ROGER A. HUGHES
DB 101 PG 62
DIVISION BOOK G-7 PG 475

(74) MELBA J. METTS
DB 291 PG 340

(77) CHARLES F. WALKER
DB 161 PG 681

(78) JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 180 PG 555
PC "B" SLIDE 234 PG 53

STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 186 PG 906
PC "B" SLIDE 234 PG 53

SR 1002 TWIN MILE FORK

N 53°38'22.3" E

N 27°47'22.6" E

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

15" RCP-IV

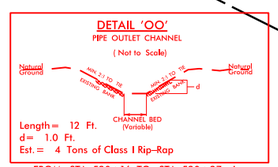
15" W/ 15" ELBOWS

HW BURIED 20%

PIPE OUTLET CHANNEL SEE DETAIL 'OO'

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

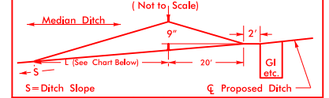
DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 12 Ft.
d = 1.0 Ft.
Est. = 4 Tons of Class I Rip-Rap

FROM STA. 520+16 TO STA. 520+27 –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F — DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 53 FOR –Y6– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

4/6/2014
mlynch
I:\projects\Div 7\R2514D_Hyd_prm_pth_20_con.dgn
$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 52 OF 84

MATCHLINE –L– STA. 516+00.00 SEE SHEET 19

SITE 13

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

EXIST R/W

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

15" W/ ELBOWS

15" RCP–IV

2GI 2GI

HW to BURIED 20%

36" RCP–IV

FS 2GI

15" RCP–IV

2GI 2GI

15" W/ ELBOWS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

BURIED 20%

PIPE OUTLET CHANNEL
SEE DETAIL 'OO'

N 27° 47' 22.6" E

520

ELECTRIC METER

HTR

36" CONC

48" WD

8' GR

10' BST

15" CMP

BZ 1

BZ 2

2SFD

DK

W.L.B.

TB

JS

MLB

S S	DENOTES IMPACTS IN SURFACE WATER
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
F F	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING

(73)

A. FOSTER BORDEAUX, T

DB 259 PG 349
PC "B" SLIDE 272 PC

GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

4/6/2014
mpyatt
R:\Projects\Asheville\PERMITS Environmental\ Drawings\ Wetland Permit\R2514D_Hyd_prm_psh_20X2_SITE13.dgn
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$$$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGNFILE$$$$$
$$$$$$$$$$DGNSETNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 53 OF 84

MATCHLINE –L– STA. 530+00.00 SEE SHEET 21

SITE 14

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

100' CP&L POWERLINE EASEMENT

22.3" E

12" CMP

36" CMP

15" RCP

18" RCP

10" PVC

30" CONC

ISFD

ISBL

WLB

TB

SOIL & GR

CHARLES F. WALKER
DB 161 PG 681

77

78

JON A THOMAS
DB 299 PG 534
"C "B" SLIDE 234 PG 53

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

F F DENOTES FILL IN WETLAND

GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

2/27/2014
rtyork
R:\Projects\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_20X2_SITE14.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$

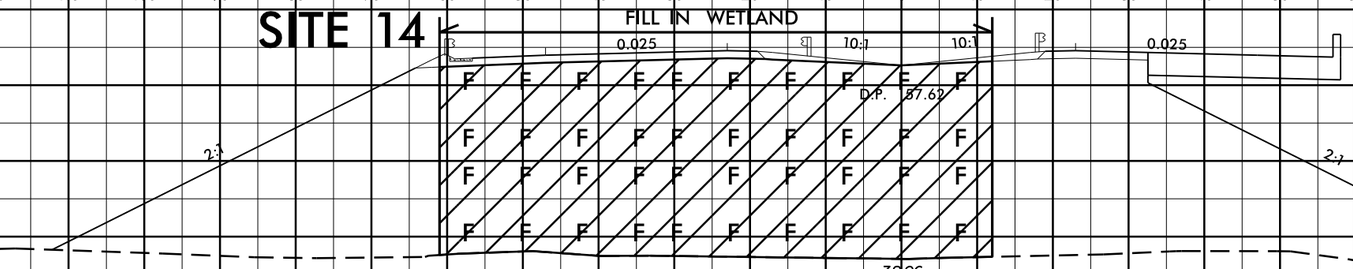
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-100

PERMIT DRAWING
SHEET 54 OF 84

SITE 14

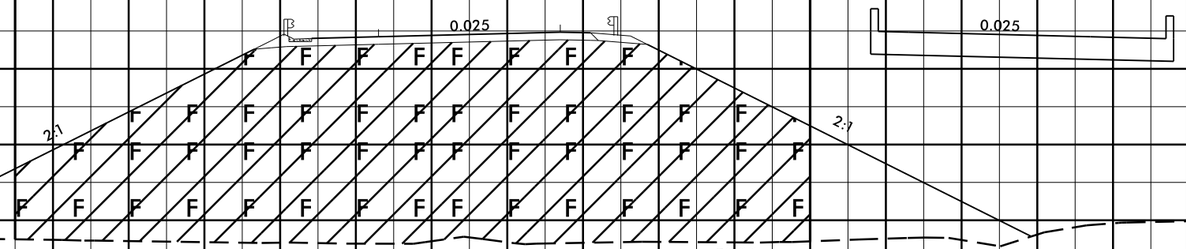
FILL IN WETLAND



528+50.00

SITE 14

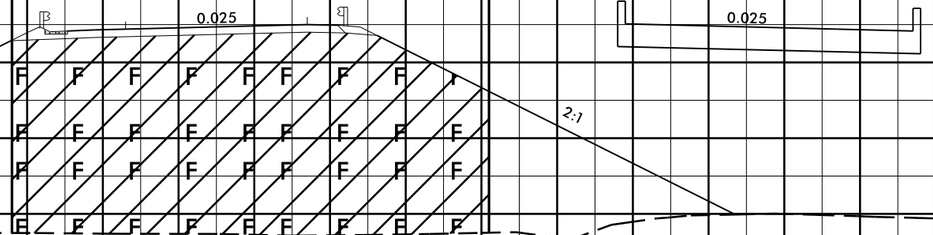
FILL IN WETLAND



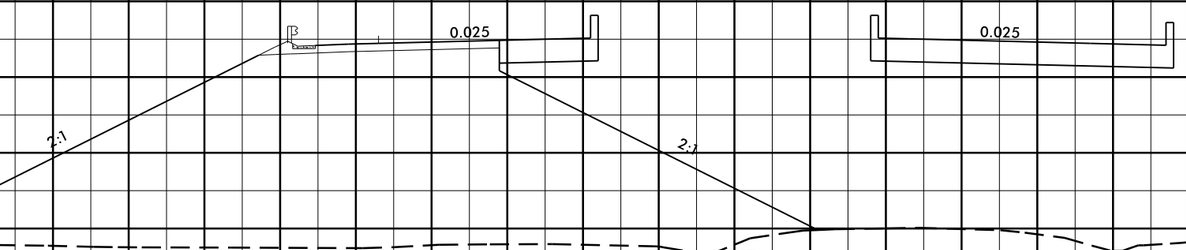
527+97.92

SITE 14

FILL IN WETLAND



527+50.00



527+20.64

3/9/2014
mjork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_3.dgn
$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	21
R/W SHEET NO.	___
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 55 OF 84

REVISIONS 8/17/99

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 26 Ft.
d = 3.0 Ft.
Est.= 25 Tons of Class I Rip-Rap

FROM STA. 531+54 TO STA. 531+85 -L-

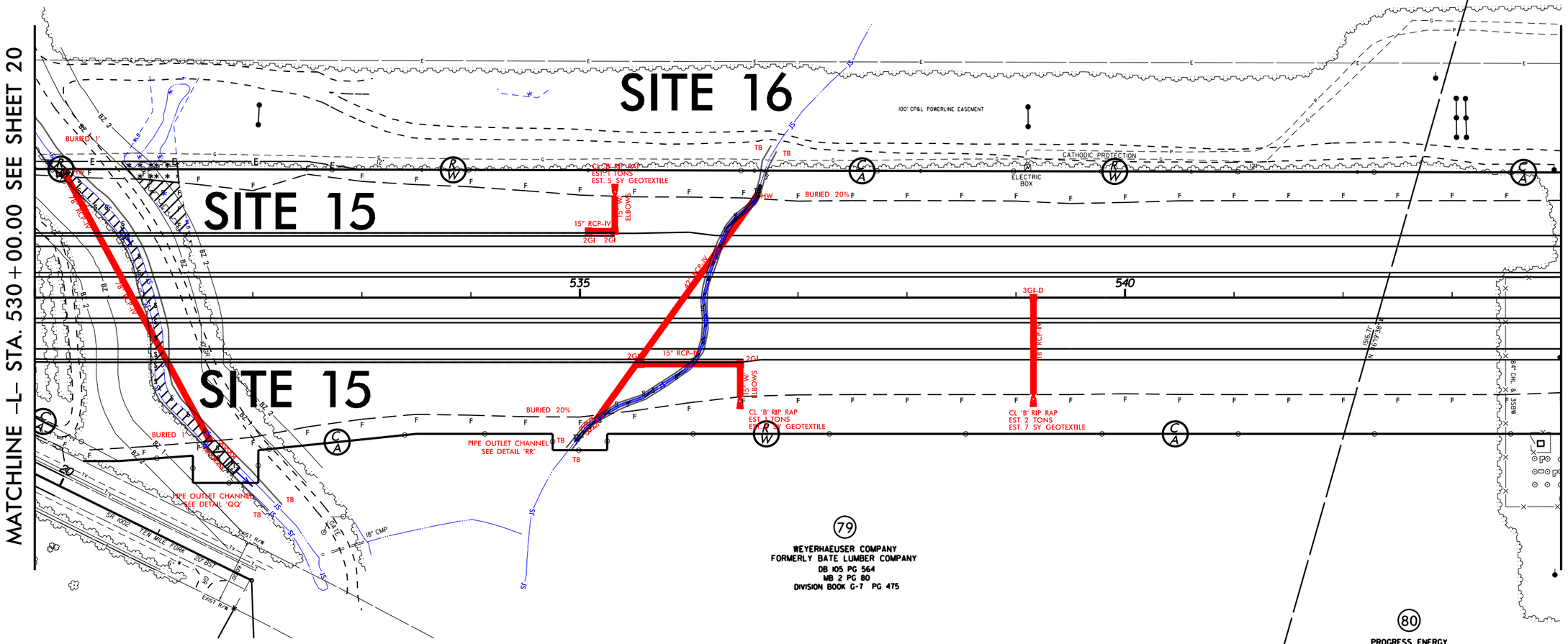
DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 14 Ft.
d = 2.0 Ft.
Est.= 9 Tons of Class I Rip-Rap

FROM STA. 534+99 TO STA. 535+18 -L-

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

MATCHLINE -L- STA. 530+00.00 SEE SHEET 20



MATCHLINE -L- STA. 544+00.00 SEE SHEET 22

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

(80)
PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG - "SHOULDER BERM GUTTER"

SEE SHEET 41 FOR -L- PROFILE

4/6/2014
mpratt
R:\Projects\Misc\PERMITS Environmental\ Drawings\ Wetland Permit\ R2514D_Hyd_prm_pth_21.dgn
$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 56 OF 84

NAD 83/NSRS 2007

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 26 Ft.
d = 3.0 Ft.
Est.= 25 Tons of Class I Rip-Rap
FROM STA. 531+54 TO STA. 531+85 –L–

DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 14 Ft.
d = 2.0 Ft.
Est.= 9 Tons of Class I Rip-Rap
FROM STA. 534+99 TO STA. 535+18 –L–

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

MATCHLINE –L– STA. 530+00.00 SEE SHEET 20

SITE 16

SITE 15

100' CP&L POWERLINE EASEMENT

CATHODIC PROTECTION ELECTRIC BOX

CLASS B RIP RAP EST. 1 TONS EST. 5 SY GEOTEXTILE

15" RCP-IV 2GI 2GI

15" W. ELBOWS

GRAU 350

BURIED 20%

BURIED 1'

TB

535

540

3GL-D

18" RCP-IV

CAT-1

CL 'B' RIP RAP EST. 1 TONS EST. 2 SY GEOTEXTILE

CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

PIPE OUTLET CHANNEL SEE DETAIL 'RR'

PIPE OUTLET CHANNEL SEE DETAIL 'QQ'

GRAU 350

SR 1008 TEN MILE FORK

EXIST R/W

8" CMP

84" CHL & 35BW

N 66°19'38" W 156.71'

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

(80)
PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230-KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

MATCHLINE –L– STA. 544+00.00 SEE SHEET 22

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 41 FOR –L– PROFILE

4/6/2014
mlynch
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$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 57 OF 84

8/17/99

REVISIONS

MATCHLINE –L– STA. 530+00.00 SEE SHEET 20

SITE 15

SITE 16

BURIED 1'

78" RCP–IV

42" RCP–IV

15" RCP–IV

2GI

15" W/ ELBOWS

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

BURIED 20%

PIPE OUTLET CHANNEL
SEE DETAIL 'QQ'

PIPE OUTLET CHANNEL
SEE DETAIL 'RR'

535

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

50 25 0 50 100

4/6/2014
mpratt
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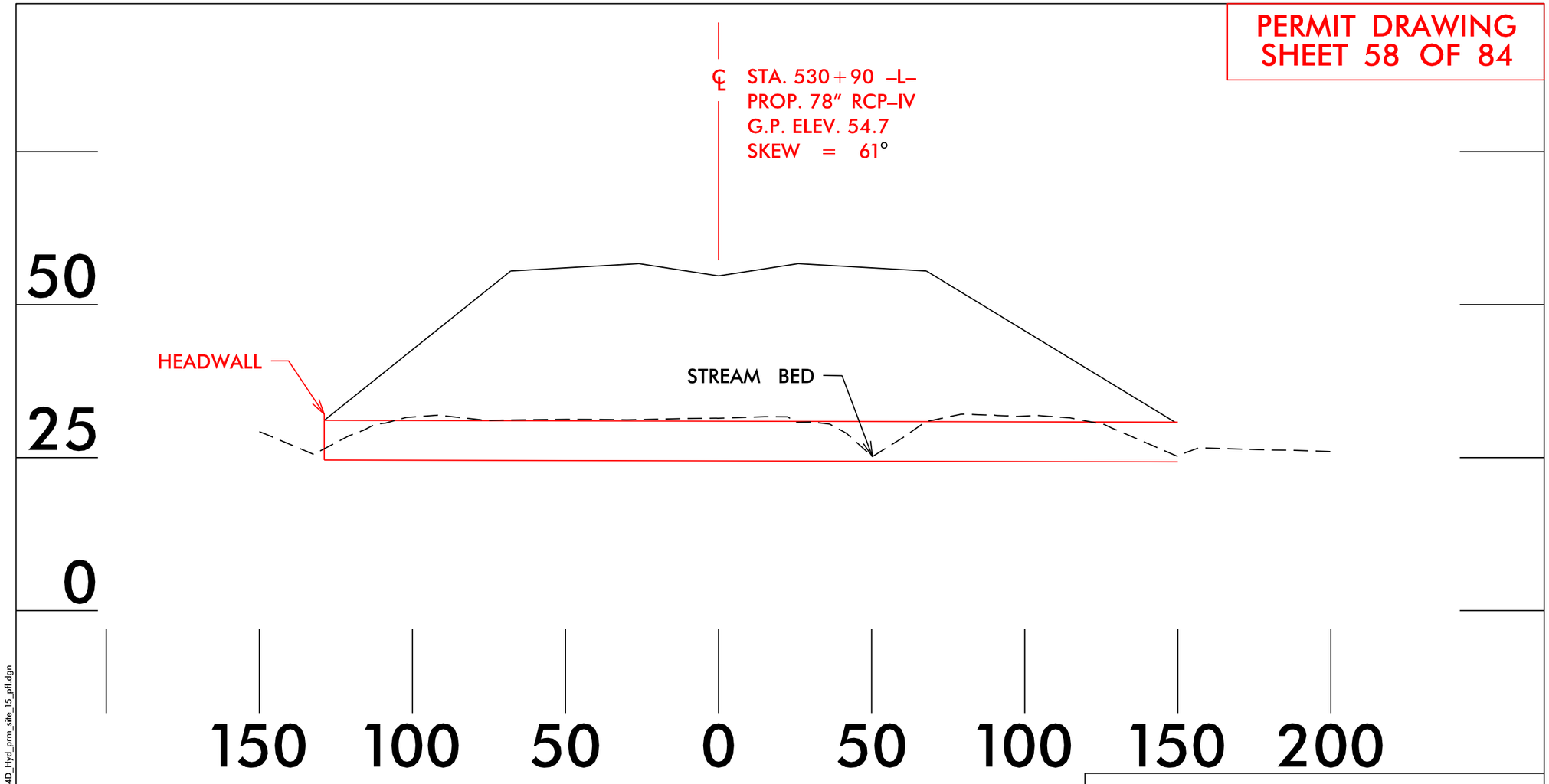
$$$$$$$$$$USER$$$$$$$$$$
$$$$$$$$$$STIME$$$$$$$$$$
$$$$$$$$$$DGNSIZE$$$$$$$$$$

PERMIT DRAWING
SHEET 58 OF 84

℄ STA. 530+90 –L–
PROP. 78" RCP–IV
G.P. ELEV. 54.7
SKEW = 61°



PROFILE

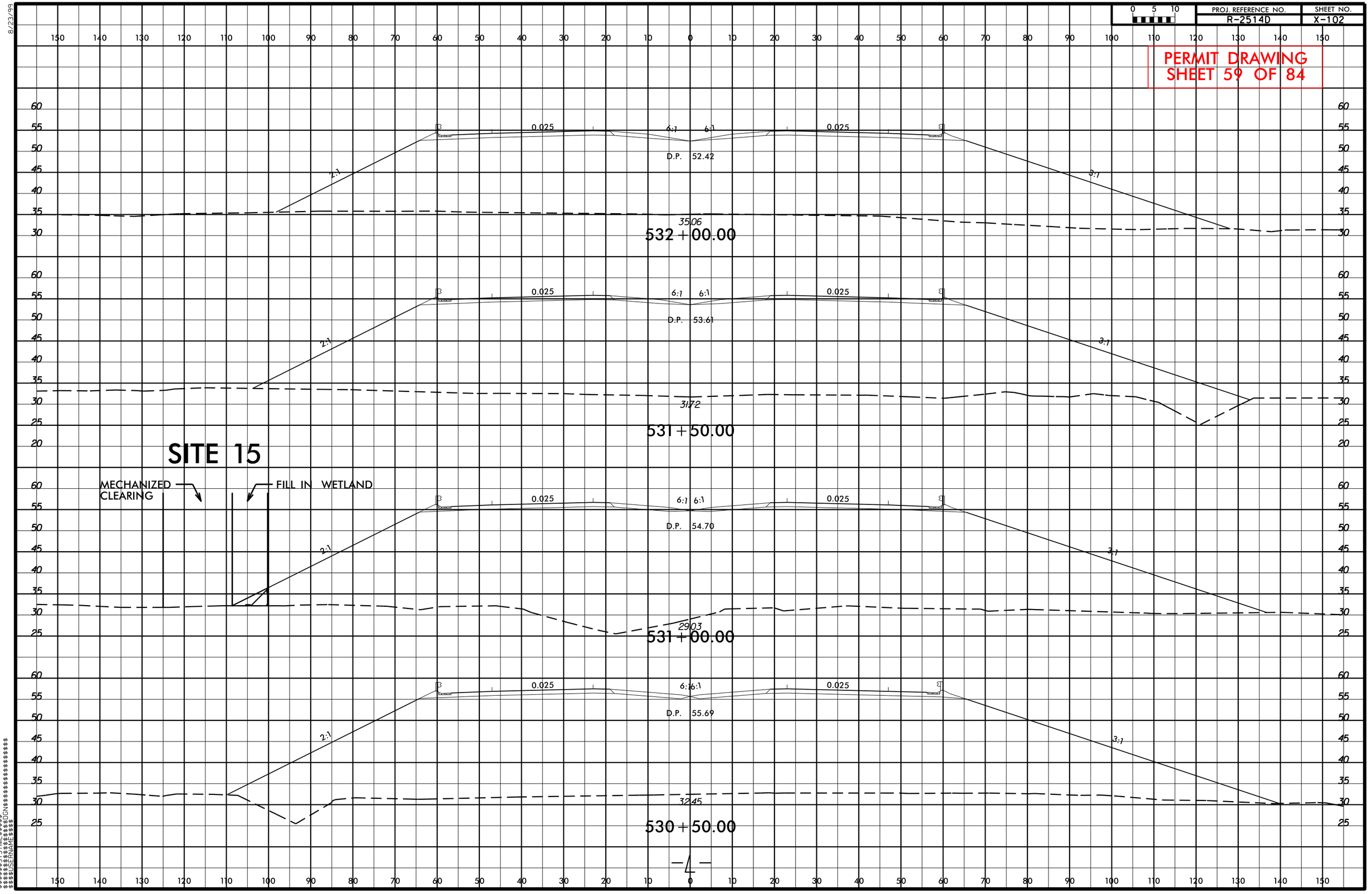
NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.5 (R-2514D)
US 17 FROM SOUTH OF NC 58
TO THE NEW BERN BYP

2/27/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_site_15_pfl.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-102

PERMIT DRAWING
SHEET 59 OF 84



3/19/2014
mjwork
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

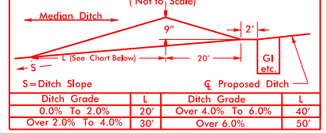
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 60 OF 84

NAD 83/NSRS 2007

REVISIONS
8/17/99

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SITE 17

(80)
PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

(82)
RUTH S. MORTON
DB 269 PG 941
PLAT CAB. B SLIDE 350-1

ELECTRIC BOX
CATHODIC PROTECTION
100' CP&L POWERLINE EASEMENT

MATCHLINE –L– STA. 544+00.00 SEE SHEET 21

MATCHLINE –L– STA. 557+00.00 SEE SHEET 23

545 550 555

84" CHL & 3SBW
4" CHL & 3SBW
POWER SUBSTATION
2GI-D
FS
18" RCP-IV
2GI-A
EIP
18" RCP-IV
2GI
FS
2GI
2GI
RCP-IV
18" W.C. ELBOWS
Q10 = 8 CFS
V10 = 0.8 FPS
ECM

(82)
RUTH S. MORTON
DB 274 PG 863
PLAT CAB. B SLIDE 350-1

(81)
JACKIE W. MIRAYA
DB 240 PG 479
MB 13 PG 56

(83)
RUTHIE M. BLAND
DB 193 PG 271

(80)
PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 41 FOR –L– PROFILE

3/6/2014
mlynch
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$$$$$$$$USERNAME$$$$$$$$
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNS$$$$$$$$
$$$$$$$$ELEVATION$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

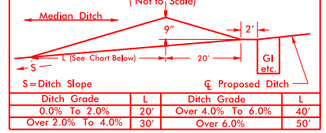
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 61 OF 84

NAD 83/NSRS 2007

REVISIONS
8/17/99

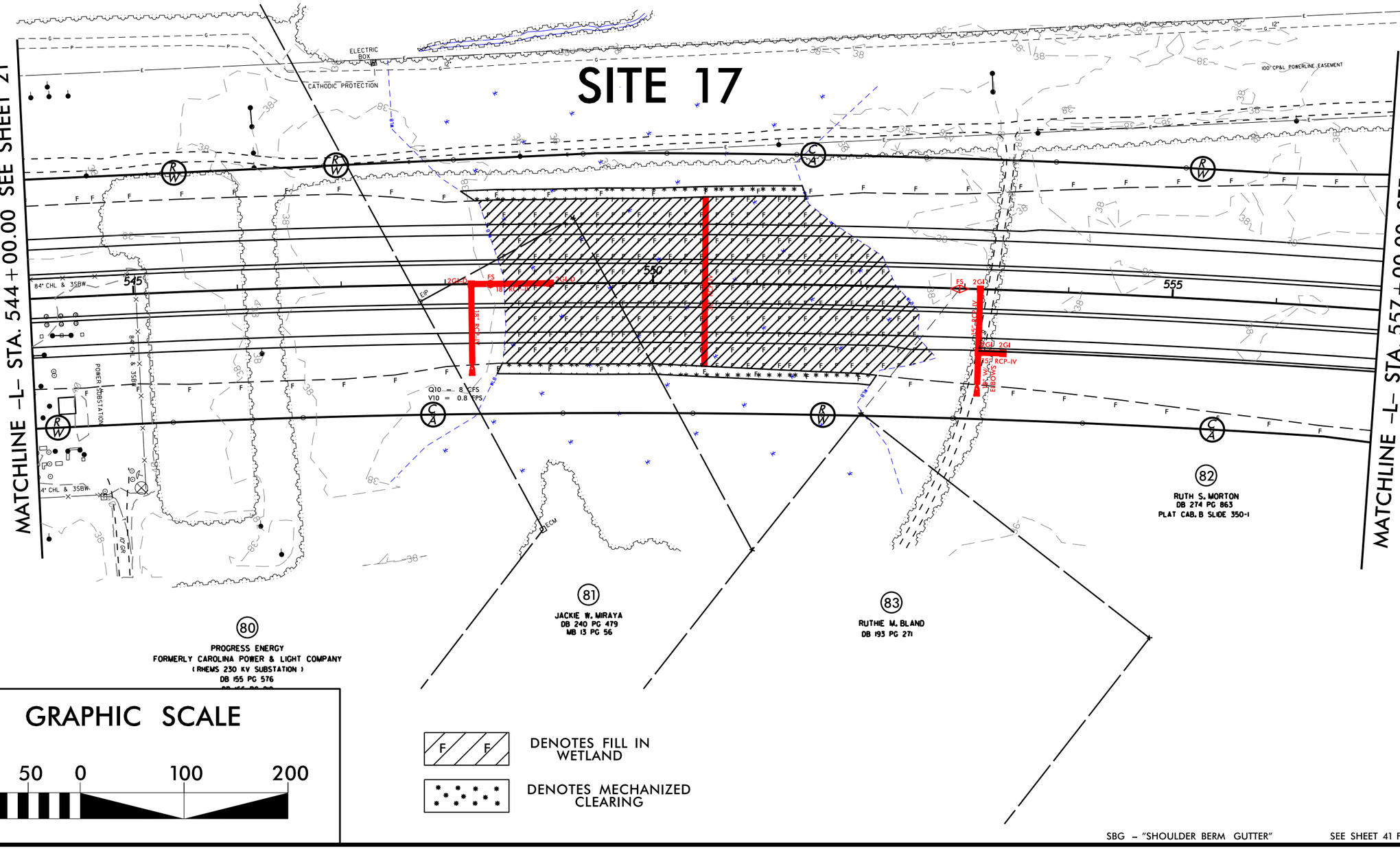
DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SITE 17



GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SBG - "SHOULDER BERM GUTTER"

SEE SHEET 41 FOR -L- PROFILE

3/6/2014
mlynch
R:\Hydraulics\PERMITS Environmental\ Drawings\ Wetland Permit\ R2514D_Hyd_prm_psh_22_con.dgn
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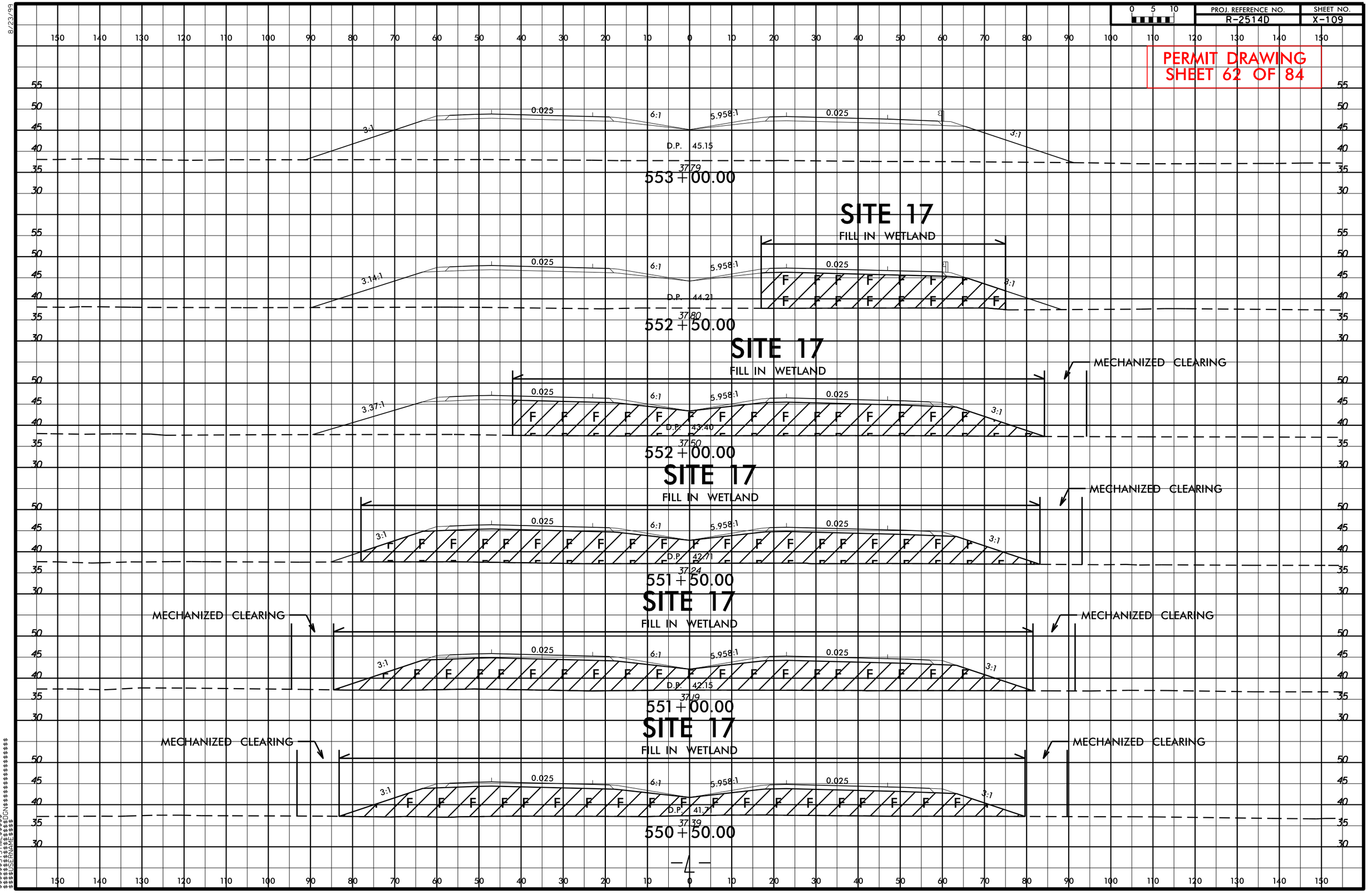
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$
$$$$$$$$ELEMENT$$$$$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-109

PERMIT DRAWING
SHEET 62 OF 84



3/19/2014
mjyork
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$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$FILENAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

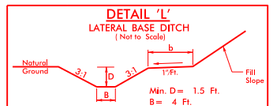
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 63 OF 84

8/17/99

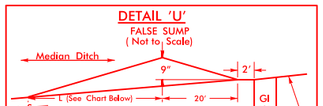
REVISIONS

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 564+85 TO STA. 569+06 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SITE 18

NAD 83/NSRS 2007

(85) ESTATE OF CLENNIE L. BROWN & SEYMOUR C. BROWN DB 206 PG 181

(82) RUTH S. MORTON DB 274 PG 863 PLAT CAB. B SLIDE 350-1

(84) LUCILLE P. BRYAN DB 176 PG 287

MOSES D. LASITTER DB 303 PG 790

(86) FAMILY OUTREACH WORD OF DELIVERANCE MINISTRIES, INC. DB 299 PG 718

(88) JOSEPH L. MEADOWS DB 319 PG 620 PC "B" SLIDE 27

(87) PARSHEE J. FLEMING ESTATE FILE 09-E-15

(86) FAMILY OUTREACH WORD OF DELIVERANCE MINISTRIES, INC. DB 299 PG 718

(82) RUTH S. MORTON DB 274 PG 863 PLAT CAB. B SLIDE 350-1

(84) LUCILLE P. BRYAN DB 176 PG 287

(88) JOSEPH L. MEADOWS DB 319 PG 620 PC "B" SLIDE 27

MATCHLINE –L– STA. 557+00.00 SEE SHEET 22

MATCHLINE –L– STA. 570+00.00 SEE SHEET 24

SR 1520 SIMMONS LOOP RD

20' EOP

560 565

15" RCP

18" RCP

24" CMP

4" LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'

2GI FS 15" RCP-IV 18" W. ELBOWS

ELECTRIC BOX

CATHODIC PROTECTION

GAS TEST STATION

10' SOIL

EXIST R/W

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 42 FOR –L– PROFILE
SEE SHEET 54 FOR –Y7– PROFILE
SEE SHEET 55 FOR –Y8A– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

3/24/2014
mpark
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$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$

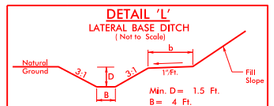
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 64 OF 84

REVISIONS 8/17/99

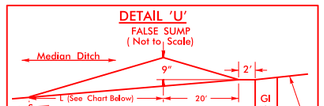
DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 564+85 TO STA. 569+06 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S= Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SITE 18

NAD 83/NSRS 2007

MOSES D. LASITTER
DB 303 PG 790

(85) ESTATE OF CLENNIE L. BROWN & SEYMOUR C. BROWN
DB 206 PG 181

(82) RUTH S. MORTON
DB 274 PG 863
PLAT CAB. B
SLIDE 350-1

(84) LUCILLE P. BRYAN
DB 176 PG 287

(86) FAMILY OUTREACH WORD OF DELIVERANCE MINISTRIES, INC.
DB 299 PG 718

(88) JOSEPH L. MEADOWS
DB 319 PG 620
PC "B" SLIDE 27

(87) PARSHEE J. FLEMING
ESTATE FILE 09-E-15

GAS TEST STATION
ELECTRIC BOX
CATHODIC PROTECTION
SIS
SF
DIS TURBED SOIL
15" RCP
SR 1530 SIMMONS LOOP RD
20' EOP
EXIST R/W
10' SOIL
24" RCP
4" LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'
2GI
FS
15" RCP-IV
18" W. ELBOWS
560
565
36
34

MATCHLINE –L– STA. 557+00.00 SEE SHEET 22

MATCHLINE –L– STA. 570+00.00 SEE SHEET 24

GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 42 FOR –L– PROFILE
SEE SHEET 54 FOR –Y7– PROFILE
SEE SHEET 55 FOR –Y8A– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

3/24/2014
mpark
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$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-115

PERMIT DRAWING
SHEET 65 OF 84

SITE 18

MECHANIZED CLEARING

SITE 18

FILL IN WETLAND

3:1

SITE 18

FILL IN WETLAND

0.025 10:1 9.884:1 0.025

D.P. 57.81

3:1

34.5

562 + 50.00

SITE 18

FILL IN WETLAND

0.025 10:1 9.884:1 0.025

D.P. 58.04

3:1 3:1

34.77

562 + 00.00

0.025 10:1 9.884:1 0.025

D.P. 58.07

3:1 3:1

34.93

561 + 92.30

3/20/2014
mjork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_3.dgn
$$$

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-183

PERMIT DRAWING
SHEET 66 OF 84

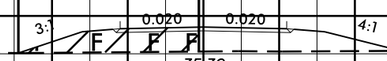
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

45 40 35 30

SITE 18

MECHANIZED CLEARING

FILL IN WETLAND

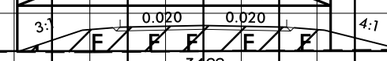


3530
13+50.00

SITE 18

MECHANIZED CLEARING

FILL IN WETLAND

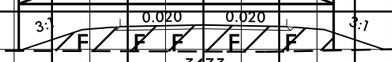


3499
13+00.00

SITE 18

MECHANIZED CLEARING

FILL IN WETLAND



3473
12+50.00

SITE 18

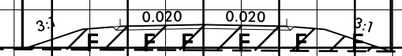
MECHANIZED CLEARING

MECHANIZED CLEARING

–L– LINE SLOCPE STAKE

FILL IN WETLAND

FILL IN WETLAND



3467
12+00.00

SITE 18

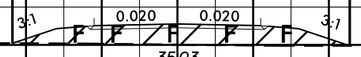
MECHANIZED CLEARING

MECHANIZED CLEARING

–L– LINE SLOPE STAKE

FILL IN WETLAND

FILL IN WETLAND

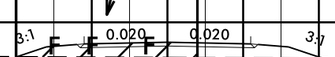


3503
11+50.00

SITE 18

MECHANIZED CLEARING

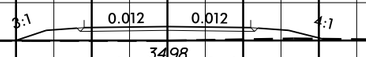
FILL IN WETLAND



3533
11+00.00

SITE 18

FILL IN WETLAND



3498
10+46.24

–Y8A–

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

3202014
mjyork
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$$$$$$$SYSTIME$$$$$$
$$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 67 OF 84

NAD 83/NSRS 2007

SITE 19

SITE 20

(91) JOHN K. AVOLIS, ET UX
DB 312 PG 104
PLAT BOOK 3 PG 35

(90) JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

MATCHLINE –L– STA. 583+00.00 SEE SHEET 24

MATCHLINE –L– STA. 596+00.00 SEE SHEET 26

585 590 595

40 45

2GL FS

15" RCP

18" RCP

24" RCP

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

(90) JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

(91) JOHN K. AVOLIS, ET UX
DB 312 PG 104
PLAT BOOK 3 PG 35

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Median Ditch — 9" — 2' — L (See Chart Below) — 20' — GI etc. — S

S=Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 43 FOR –L– PROFILE
SEE SHEET 55 AND 56 FOR –Y8A– PROFILE

REVISIONS 8/17/99

2/27/2014
mpyatt
N:\Hydraulics\Projects\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_25.dgn
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$$$$$$$$$$SYSTIME$$$$$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 68 OF 84

NAD 83/NSRS 2007

SITE 19

SITE 20

(91) JOHN K. AVOLIS, ET UX
DB 312 PG 104
PLAT BOOK 3 PG 35

(90) JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

MATCHLINE –L– STA. 583 + 00.00 SEE SHEET 24

MATCHLINE –L– STA. 596 + 00.00 SEE SHEET 26

585 590 595

40 45

2GI FS 15" RCP

15" RCP

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

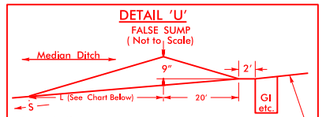
(90) JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

(91) JOHN K. AVOLIS, ET UX
DB 312 PG 104
PLAT BOOK 3 PG 35

GRAPHIC SCALE

100 50 0 100 200

DETAIL 'U'
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SEE SHEET 43 FOR –L– PROFILE
SEE SHEET 55 AND 56 FOR –Y8A– PROFILE

REVISIONS 8/17/99

2/27/2014
mpyatt
N:\Hydraulics\Projects\PERMITS_Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_25_con.dgn
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$$$$$$$$$$SYSTEM$$$$$$$$$$
$$$$$$$$$$PLOTDATE$$$$$$$$$$
$$$$$$$$$$PLOTTIME$$$$$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$LEVELS$$$$$$$$$$

8/23/99

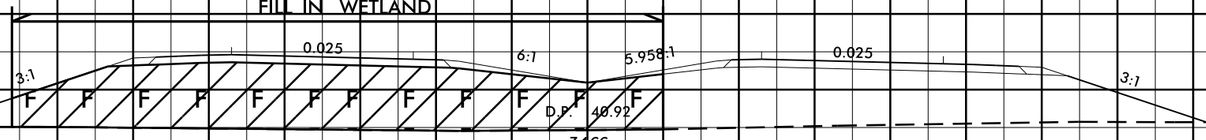
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-124

PERMIT DRAWING
SHEET 69 OF 84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

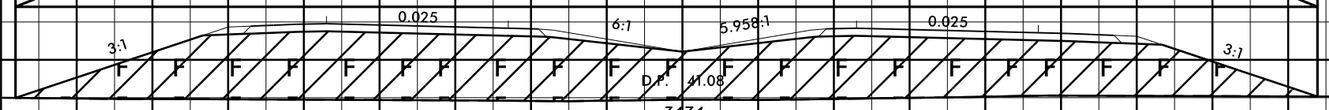
50 45 40 35 30

SITE 19
FILL IN WETLAND



3466
586+50.00

SITE 19
FILL IN WETLAND
MECHANIZED CLEARING
MECHANIZED CLEARING


0.025
6:1
5.958:1
0.025
3:1
3:1
F F F F F F F F F F F F F F

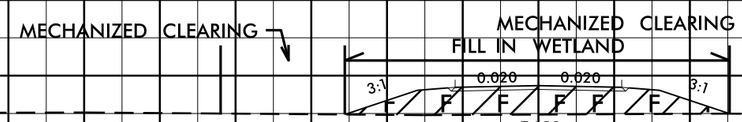
8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-189

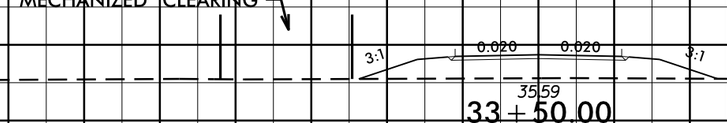
PERMIT DRAWING
SHEET 70 OF 84

SITE 19

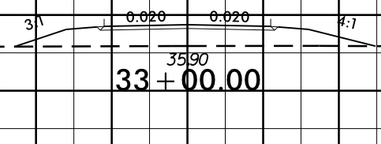


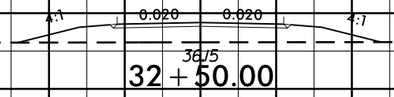
SITE 19

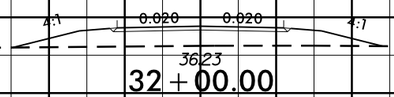
SITE 19

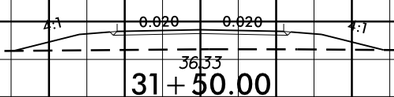


SITE 19









–Y8A–

3/4/2014
mjork
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$$$$$$$SYSTIME$$$$$$
$$$$$$$USERNAME$$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-126

PERMIT DRAWING
SHEET 71 OF 84

SITE 20

FILL IN WETLAND
MECHANIZED CLEARING
0.025
3:1
6:1
5.958:1
3:1
D.P. 39.06
3497
592+50.00

SITE 20

FILL IN WETLAND
-Y8A- LINE SLOPE STAKE
MECHANIZED CLEARING
3:1
0.025
6:1
5.958:1
D.P. 39.22
3466
592+00.00

SITE 20

FILL IN WETLAND
MECHANIZED CLEARING
0.025
6:1
5.958:1
3:1
D.P. 39.37
3505
591+50.00

SITE 20

FILL IN WETLAND
-Y8A- LINE SLOPE STAKE
MECHANIZED CLEARING
MECHANIZED CLEARING
FILL IN WETLAND
3:1
0.025
6:1
5.958:1
4:1
D.P. 39.53
3528
591+00.00

SITE 20

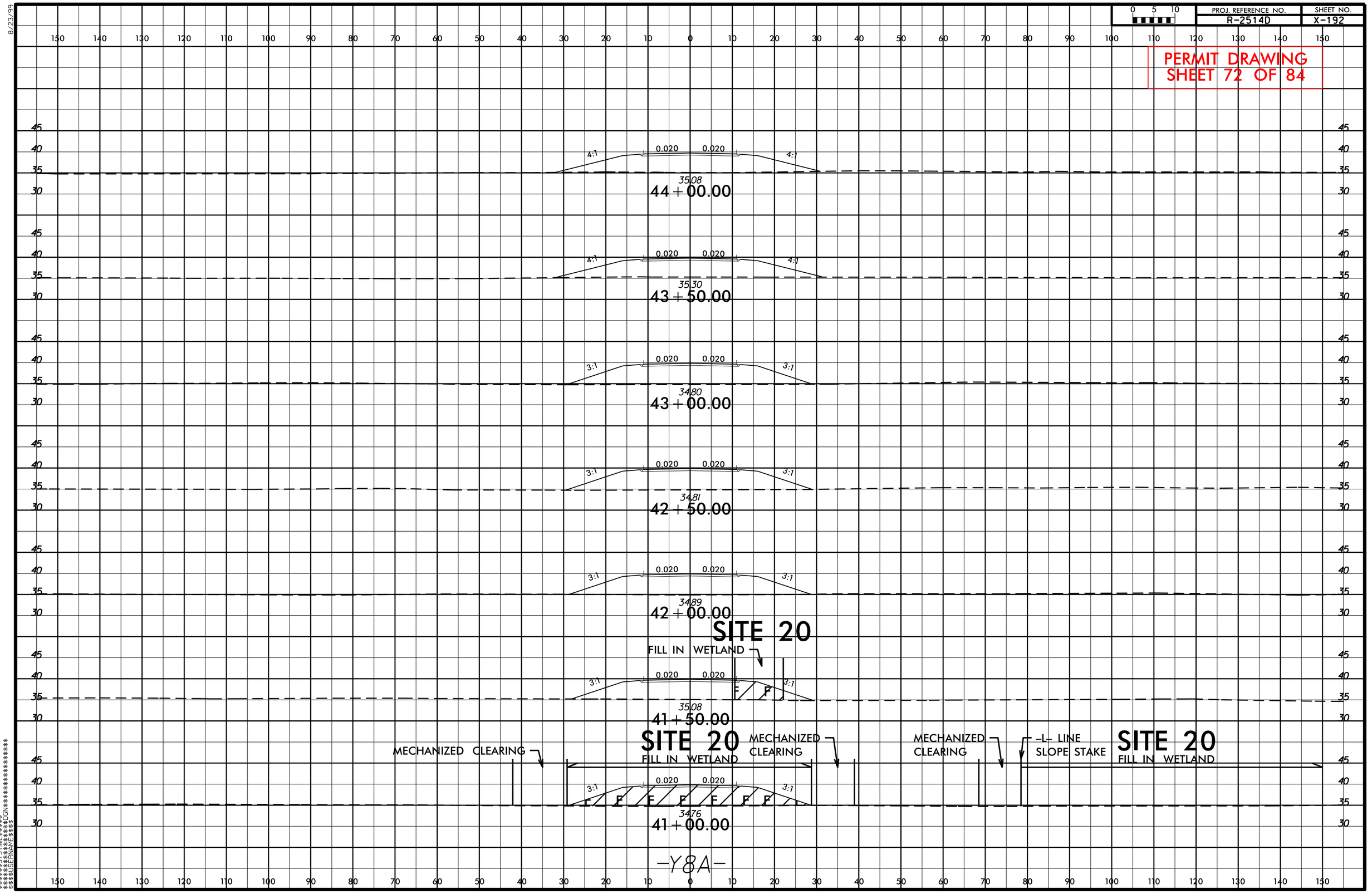
FILL IN WETLAND
MECHANIZED CLEARING
3.97:1
0.025
6:1
5.958:1
4.87:1
D.P. 39.68
3557
590+50.00

SITE 20

FILL IN WETLAND
MECHANIZED CLEARING
3.68:1
0.025
6:1
5.958:1
4.68:1
D.P. 39.84
3549
590+00.00

3/19/2014
mjork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_3.dgn
$$$

PERMIT DRAWING
SHEET 72 OF 84



8/23/99
3242014
mjyork
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$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

REVISIONS

PROJECT REFERENCE NO. R-2940 | SHEET NO. 25
STATE SHEET NO.
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
NO RWY USE OR CONSTRUCTION

PERMIT DRAWING
SHEET 73 OF 84

SITE 21

SITE 22

"SEE NOTE"

MATCHLINE –L– STA. 596+00.00 SEE SHEET 25

MATCHLINE –Y8– STA. 33+40.00 SEE SHEET 31

MATCHLINE –Y10– STA. 22+50.00 SEE SHEET 31

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 27

MATCHLINE –L– STA. 622+00.00 SEE SHEET 27

NOTE: NOT A WETLAND SITE.
WETLAND IS SHOWN ON
EXISTING FOUR LANE HIGHWAY

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

SEE SHEET 43 AND 44 FOR –L– PROFILE
SEE SHEET 56 FOR –Y8A– PROFILE
SEE SHEET 54 FOR –Y8– PROFILE
SEE SHEET 57 FOR –Y10– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEET 61 FOR –Y10LPA– PROFILE
SEE SHEET 59 FOR –Y10RPC– PROFILE
SEE SHEET 60 FOR –Y10RPD– PROFILE
SEE SHEETS 5–1 THRU 5–7 FOR STRUCTURE PLANS

LOCATION:
TIP NO. | COUNTY:
DESIGNED BY:
CHECKED BY: | DATE:

GRAPHIC SCALE
50 25 0 50 100
PLANS

SBG – "SHOULDER BERM GUTTER"

NAD 83/NSRS 2007

3/6/2014
P:\Projects\TIP\R-2940\Environmental Drawings\Wetland Permit\R2940_PermitPlans_SR.dgn

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2940	26
STATE PROJECT NO.	

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
NOT FOR CONSTRUCTION

PERMIT DRAWING
SHEET 74 OF 84

SITE 21

SITE 22

"SEE NOTE"

MATCHLINE –L– STA. 596+00.00 SEE SHEET 25

MATCHLINE –Y8– STA. 33+40.00 SEE SHEET 31

MATCHLINE –Y10– STA. 22+50.00 SEE SHEET 31

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 27

MATCHLINE –L– STA. 622+00.00 SEE SHEET 27

NOTE: NOT A WETLAND SITE.
WETLAND IS SHOWN ON
EXISTING FOUR LANE HIGHWAY

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

E E DENOTES EXCAVATION IN WETLAND

SEE SHEET 43 AND 44 FOR –L– PROFILE
SEE SHEET 56 FOR –Y8A– PROFILE
SEE SHEET 54 FOR –Y8– PROFILE
SEE SHEET 57 FOR –Y10– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEET 61 FOR –Y10LPA– PROFILE
SEE SHEET 59 FOR –Y10RPC– PROFILE
SEE SHEET 60 FOR –Y10RPD– PROFILE
SEE SHEETS 5–1 THRU 5–7 FOR STRUCTURE PLANS

LOCATION:

TIP NO. COUNTY:

DESIGNED BY:

CHECKED BY: DATE:

GRAPHIC SCALE
50 25 0 50 100
PLANS

SBG – "SHOULDER BERM GUTTER"

NAD 83/NSRS 2007

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 75 OF 84

Q10 = 1.3 CFS
V10 = 2.1 FPS

SITE 21

6' LATERAL BASE GRASSED SWALE
SEE DETAIL 'C'

15" W/ELBOWS
TB 2GI
15" RCP-IV
TB 2GI
15" RCP-IV
CB

2' BASE LATERAL GRASSED SWALE
SEE DETAIL 'Q'

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

HW
48" RCP-IV
N 54° 31' 31.1" E
REMOVE
REMOVE
18" RCP
24" RCP
3GI-A
-L-
607
608
609
610
611
612
613
FS
MAG
EXIST R/W MON
15" RCP
N 35°54'29" W 99.90'
8" GR
36"
95
TERRI

6' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'O'

6' STANDARD BASE DITCH
GRASS LINED
SEE DETAIL 'I'

60" RCP-IV
TB 2GI
TB 2GI
15" RCP-IV
15" W/ELBOWS
15" RCP-IV
TB 2GI
36" RCP-IV
HW
TB JB w/Slab Lid

BZ 1
BZ 2
WLB
S
F
E

GRAPHIC SCALE

50 25 0 50 100

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

E E DENOTES EXCAVATION IN WETLAND

REVISIONS

8/17/99

3/6/2014
mpyatt
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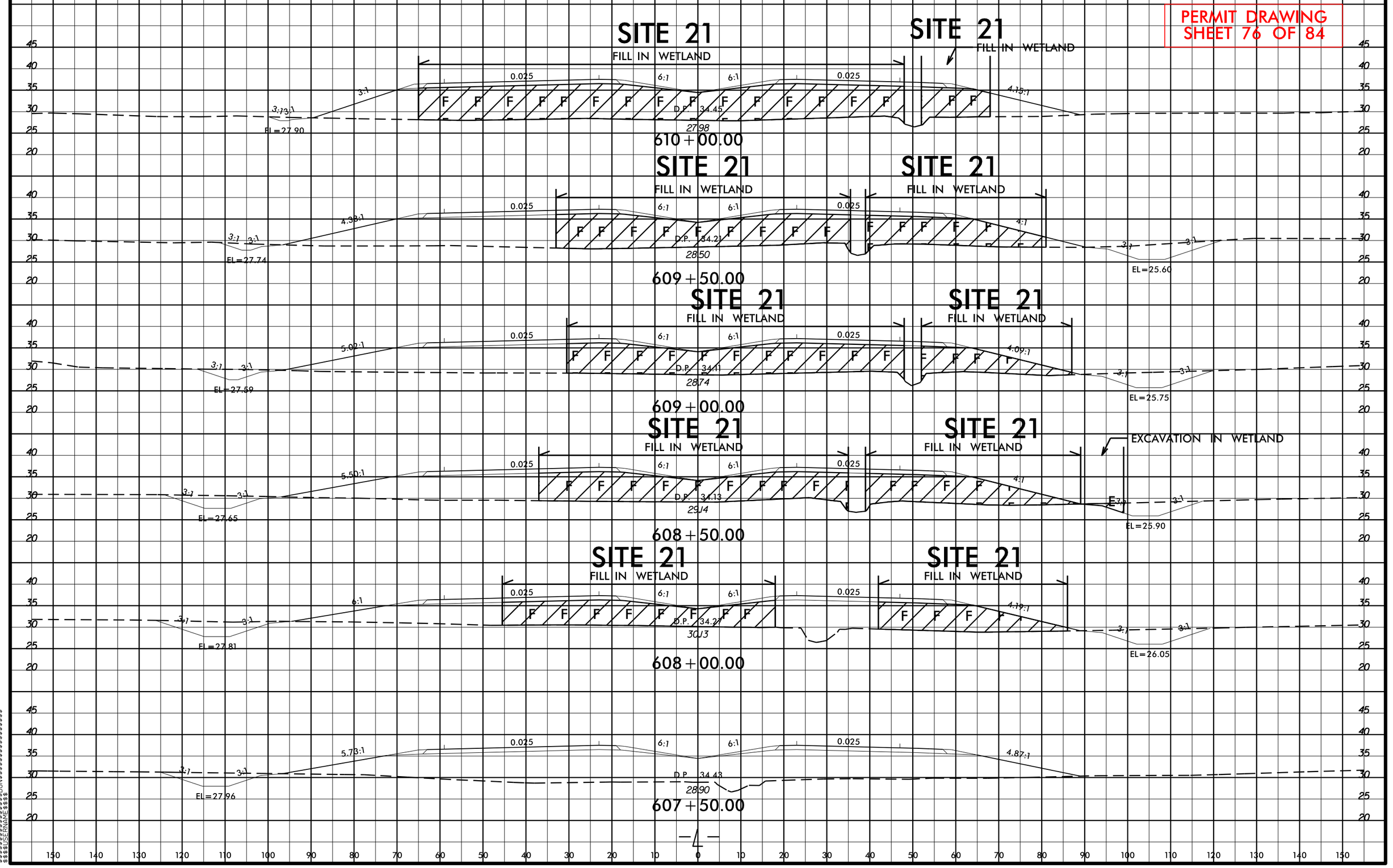
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-133

PERMIT DRAWING
SHEET 76 OF 84



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mjyork
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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-204

PERMIT DRAWING
SHEET 77 OF 84

SITE 21

FILL IN WETLAND

FILL IN WETLAND

MATCHLINE C

29.54

4:1

0.025 10:1 10:1 0.025

D.P. 62.03

3:1

S.S. 32.76

27.64

27+12.75

MATCHLINE C

SITE 21

MATCHLINE B

S.S. 29.77

4:1

FILL IN WETLAND

FILL IN WETLAND

0.025 10:1 10:1 0.025

D.P. 61.92

3:1

S.S. 32.17

27.72

27+00.00

MATCHLINE B

MATCHLINE A

SITE 21

FILL IN WETLAND

FILL IN WETLAND

MATCHLINE D

S.S. 32.15

4:1

0.025 10:1 10:1 0.025

D.P. 61.36

28.83

26+50.00

MATCHLINE A

MATCHLINE D

-Y10-

3/24/2014
mjork
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 78 OF 84

8/17/99

REVISIONS

SITE 22

ERAL BASE DITCH
RASS LINED
E DETAIL 'J'

3' STANDARD BASE DITCH
GRASS LINED
SEE DETAIL 'N'
APPROX. 25 CY DDE

COLLAR AND EXTEND
36" RCP IV

36" RCP IV

HW

RETAIN

"SEE NOTE"

WLB

620

10

36" RCP

MATCHLINE
-Y10RPA- STA. 23+00.00
SEE SHEET 27

MATCHLINE
-L- STA. 622+00.00
SEE SHEET 27

NOTE: NOT A WETLAND SITE.
WETLAND IS SHOWN ON
EXISTING FOUR LANE HIGHWAY.

F F — DENOTES FILL IN WETLAND

GRAPHIC SCALE

50 25 0 50 100

2/27/2014
mlpark
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$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-213

PERMIT DRAWING
SHEET 79 OF 84

200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

65 60 55 50 45 40 35 30 25

– Y10LPA –
STA 15+43.61
EL=46.60

0.080 0.080

4:1 4:1 4:1

D.P. 36.54

0.020 0.020

3:1

3479

27+74.00

– Y10LPA –
STA 15+24.57
EL=46.51

0.080 0.080

4:1 4:1 4:1

D.P. 34.38

0.020 0.020

3:1

3499

27+50.00

0.030 0.030

3:1 3:1 4:1 3:1

EL=30.94

3403

27+00.00

SITE 22

FILL IN WETLAND

0.050 0.050

3:1 3:1 4:1 3:1

EL=30.79

3293

26+50.00

–Y10RPA–

3242014
mjyork
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$$$$$$$$$$PROFILE$$$$$$
$$$$$$USERNAME$$$$
$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 80 OF 84

NAD 83/NSRS 2007

SITE 23

97
AARON L. MALLARD, ET UX
DB 132 PG 057

98
MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

MATCHLINE –Y10RPA– STA. 23+00.00
SEE SHEET 26

MATCHLINE –L– STA. 622+00.00
SEE SHEET 26

MATCHLINE –L– STA. 635+00.00 SEE SHEET 28

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

CHORD

WORK ACCESS

Q10 = 14 CFS
V10 = 3.0 FPS

74" W/ELBOW AT BDO

2' BASE LATERAL GRASSED SWALE
SEE DETAIL 'Q'

2GI
15" RCP-IV 2GI

15" W/ELBOWS

OTCB

RETAIN

PLUG & FILL W/ FLOWABLE FILL

625

630

15" HDPE

DI

CB

REMOVE

TB 2GI

CL B RIP RAP
EST. 59 TONS

CL B RIP RAP
EST. 110 TONS

2GI 2GI 15" RCP-IV
15" RCP-IV

15" W/ELBOWS

COLLAR AND EXTEND W/15" RCP IV

Q10 = 10 CFS
V10 = 2.3 FPS

FS

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

END GRADE
–L– STA. 623+35.00

STANDARD 'V' DITCH
GRASS LINED
SEE DETAIL 'R'
APPROX. 2 CY DDE

NOTE: DECK DRAINS REQUIRED
FROM STA. 623+90 TO STA. 624+38 RT. –L–
FROM STA. 625+70 TO STA. 626+18 RT. –L–

US HWY 17 BY

T T DENOTES TEMPORARY FILL IN WETLAND

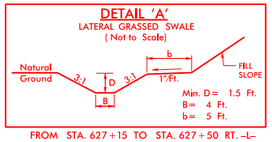
E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

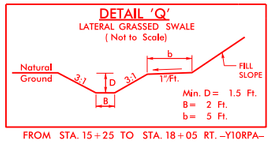
DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 627+15 TO STA. 627+50 RT. –L–

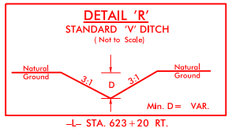
DETAIL 'Q'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 15+25 TO STA. 18+05 RT. –Y10RPA–

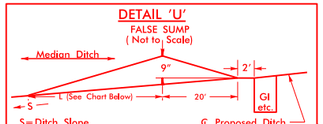
DETAIL 'R'
STANDARD 'V' DITCH
(Not to Scale)



Min. D = VAR.

–L– STA. 623+20 RT.

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 44 FOR –L– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

REVISIONS 8/17/99

6/5/2014
mhyrk
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 81 OF 84

NAD 83/NSRS 2007

SITE 23

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 26

MATCHLINE –L– STA. 622+00.00 SEE SHEET 26

MATCHLINE –L– STA. 635+00.00 SEE SHEET 28

97 AARON L. MALLARD, ET UX
DB 132 PG 057

98 MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

CHORD

WORK ACCESS

Q10 = 14 CFS
V10 = 3.0 FPS

24" W/BEVELED EDGE BDO

2' BASE LATERAL GRASSED SWALE SEE DETAIL 'Q'

15" MITERED

2GI

15" RCP-IV 2GI

OTCB

RETAIN

PLUG & FILL W/ FLOWABLE FILL

REMOVE

CB

625

630

15" HDPE

DI

TB 2GI

2GI 15" RCP-IV

15" W. ELBOWS

ESTIMATED RIP RAP
EST. 59 TONS

ESTIMATED RIP RAP
EST. 70 TONS

COLLAR AND EXTEND W/15" RCP IV

Q10 = 10 CFS
V10 = 2.3 FPS

24" FES

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

END GRADE
–L– STA. 623+35.00

STANDARD 'V' DITCH GRASS LINED SEE DETAIL 'R' APPROX. 2 CY DDE

NOTE: DECK DRAINS REQUIRED
FROM STA. 623+90 TO STA. 624+38 RT. –L–
FROM STA. 625+70 TO STA. 626+18 RT. –L–

US HWY 17 BY

MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

98

AARON L. MALLARD, ET UX
DB 132 PG 057

97

T T DENOTES TEMPORARY FILL IN WETLAND

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1'/Ft., FILL SLOPE, B

Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 627+15 TO STA. 627+50 RT. –L–

DETAIL 'Q'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1'/Ft., FILL SLOPE, B

Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 15+25 TO STA. 18+05 RT. –Y10RPA–

DETAIL 'R'
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground

Min. D = VAR.

–L– STA. 623+20 RT.

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Median Ditch, 9", 2', L (See Chart Below), 20', GI etc.

S = Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 44 FOR –L– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

REVISIONS

8/17/99

6/5/2014
mlynch
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 82 OF 84

TRUSTEES OF THE D
DB 25
PC F

SITE 23

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

CHORD R/W

WORK ACCESS

WORK ACCESS

WORK ACCESS

-YIORPA-

-L-

Q10 = 14 CFS
V10 = 3.0 FPS

24" W/ELBOWS @ BDO

2' BASE LATERAL GRASSED SWALE
SEE DETAIL 'Q'

2GI

15" RCP-IV

15" RCP

OTCB

15" HDPE

RETAIN

RETAIN

RETAIN

DI

DI

15" HDPE

PLUG & FILL W/ FLOWABLE FILL

15" RCP

REMOVE

CB

2GI

2GI 2GI 15" RCP-IV

15" W/ ELBOWS

18" RCP

TB 2GI

15" RCP

15" W/ ELBOWS

CL 'B' RIP RAP
EST. 59 TONS

CL 'B' RIP RAP
EST. 110 TONS

COLLAR AND EXTEND W/15" RCP IV

Q10 = 10 CFS
V10 = 2.3 FPS

FS

18"

2GI

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

20 21 18 17 16

623 624 625 626 627 628 629

BZ 1 BZ 2 WLB WLF JS ST TB F C HC

DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES HAND CLEARING

DENOTES TEMPORARY FILL IN WETLAND

GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

6/5/2014
mlynch
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5/28/99

PERMIT DRAWING
SHEET 83 OF 84

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SITE 26

-Y10RPA-

BEGIN GRADE -Y10RPA- STA. 10+00.00
ELEV. = 40.81'

PI = 15+00.00
EL = 37.07'
VC = 300'
K = 204 (DS > 70 MPH)

℄ -Y10RPA- STA. 19+43.20
2 @ 100'-63" MODIFIED BULB TEE
SKEW = 115
GRADE POINT ELEV. = 40.27'

43.57

(-)0.7480%

(+)0.7219%

(-) 0.3000%

(+)0.7219%

EXCAVATE TO EL. 28.7'
350 CY +/- EXCAVATION

3.5'

2:1

CLASS 'II' RIP RAP
(STR. PAY ITEM)

50 YR WSEL 21.4'

100 YR WSEL 21.83'

NWS 2/27/92 - 16.5'

EXCAVATE TO EL. 29.7'
180 CY +/- EXCAVATION

3.5'

2:1

CLASS 'II' RIP RAP
(STR. PAY ITEM)

SEE SHEET 27 AND 26 FOR PLAN VIEW

0 10 20 30 40 50

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

-Y10RPA-

END GRADE -Y10RPA- STA. 38+02.02
ELEV. = 62.13'

PI = 31+41.52
EL = 48.92'
VC = 300'
K = 235 (DS > 70 MPH)

43.67

(+)0.7219%

(+) 0.3000%

(+)0.7219%

(+)2.0000%

BEGIN LAT. BASE DITCH
-Y10RPA- STA. 25+00.00 LT
E1 = 30.34

END LAT. BASE DITCH
-Y10RPA- STA. 27+20.00 LT
E1 = 31.00

DITCH LEGEND
LEFT DITCH
RIGHT DITCH

SEE SHEET 26 FOR PLAN VIEW

0 10 20 30 40 50 60 70

24 25 26 27 28 29 30 31 32 33 34 35 36 37 38

2/27/2014
mjork
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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514D	X-209

PERMIT DRAWING
SHEET 84 OF 84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

45 40 35 30 25 20 15 10

0.020 0.020

SITE 23

MECHANIZED CLEARING
HAND CLEARING

HAND CLEARING

17.38

19+50.00

0.020 0.020

SITE 23

HAND CLEARING

15.78

19+00.00

0.020 0.020

32.86

18+50.00

4:1 0.020 0.020 3:1

33.80

18+20.60

-YIORPA-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

4/2/2014
mjyork
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$$$$$$$$$$USERNAME$$$$

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	302+50 to 303+50 -L-	48" RCP-IV						0.01	<0.01	218	31	
		Bank Stabilization								16		
2	329+50 to 331+50 -L-	36" RCP-IV	2.49			0.05						
	17+00 to 18+48.13											
	-Y3RPA-											
	17+00 to 19+00											
	-Y3RPD-											
3	372+50 to 374+50 -L-	Dual Bridges	<0.01	<0.01		0.07	0.66					
	17+51 to 22+00	2@ 8'X8' RCBC	0.08			0.02		<0.01	0.01	5	50	
	-DRV3-											
	11+50 to 12+50											
	-DRV4-											
4	389+02 to 399+75 -L-	Dual Bridges	0.76	0.06	0.06	0.12	1.19					
		48" RCP-IV										
5	432+00 to 434+00 -L-	36" RCP-IV	0.86			0.05						
6	437+00 to 446+00 -L-		1.60			0.13		0.03				
TOTALS:			5.79	0.06	0.06	0.44	1.84	0.04	0.01	239.00	81.00	0.00

Site 2 is a total take, and all of the wetland has been accounted for, including the wetland that is outside of the ROW.

There is permanent fill in wetlands at sites 3 and 4 due to the piles for the proposed bridges. Also, there is temporary fill in wetlands at sites 3 and 4 due to the piles for the work bridges. The pile areas are too small to show in the permit drawings, but they have been accounted for in the wetland summary.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY

WBS - 34442.1.1 (R-2514D)

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
7	458+02 to 458+33 -L-		<0.01			0.01						
8	463+00 to 463+50 -L-		0.23			0.02						
9	473+00 to 475+00 -L-	54" RCP-IV	0.54			0.06		0.05	<0.01	196	20	
		Bank Stabilization								18		
10	476+50 to 480+00 -L-	36" RCP-IV	0.38			0.02						
11	490+50 to 496+00 -L-	36" RCP-IV	0.96			0.09						
12	504+00 to 506+00 -L-	36" RCP-IV	0.31			0.06						
13	520+07 to 520+23 -L-	36" RCP-IV	0.01			<0.01		0.01	<0.01	230	21	
		Bank Stabilization								12		
14	527+50 to 529+50 -L-		0.34									
TOTALS:			2.77	0.00	0.00	0.26	0.00	0.06	<0.01	456.00	41.00	0.00

Site 7 includes 0.25 Ac. permanent fill to a pond.
Site 8 includes a total take of the remaining 0.05 Ac. of wetland to the right of the roadway.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.1.1 (R-2514D)

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
15	530+12 to 531+75 -L-	78" RCP-IV	0.03			0.02		0.06	<0.01	292	27	
		Bank Stabilization								26		
16	535+00 to 536+67 -L-	42" RCP-IV						0.01	<0.01	282	21	
		Bank Stabilization								14		
17	548+16 to 552+75	36" RCP-IV	1.39			0.16						
18	562+00 to 563+00 -L-	18" RCP-IV	0.58			0.10						
	11+00 to 13+50 -Y8A-											
19	584+00 to 588+00 -L-	36" RCP-IV	1.35			0.20						
	33+50 to 35+00 -Y8A-											
20	591+50 to 592+50 -L-	36" RCP-IV	0.30			0.06						
	41+00 to 41+50 -Y8A-											
21	608+00 to 612+50 -L-		1.58		0.01	0.03		0.06		644		
	26+00 to 30+00 -Y10-											
TOTALS:			5.23	0.00	0.01	0.57	0.00	0.13	<0.01	1258	48	0

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.1.1 (R-2514D)

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
22	26+07 to 26+67		0.02									
	-Y10RPA-											
23	19+00 to 20+00	BRIDGE	<0.01			0.01	0.17					
	-Y10RPA-	Bank Stabilization										
	624+49 to 625+64	BRIDGE					0.02					
	-L-											
	627+15 to 627+40	Grassed Swale	<0.01		0.01	0.02						
	-L-											
TOTALS:			0.02	0.00	0.01	0.03	0.18	0.00	0.00	0.00	0.00	0.00

OVERALL PROJECT TOTALS:	13.82	0.07	0.07	1.29	2.02	0.23	0.02	1953.00	170.00	0.00

Structure @ Sta. 18+43 to 20+43 -Y10RPA-
- 15ft² permanent impacts
- 3000 ft² temporary impacts

Strucure @ Sta. 623+81 to 626+31 -L-
- 70ft² permanent impacts
- 3900 ft² temporary impacts

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

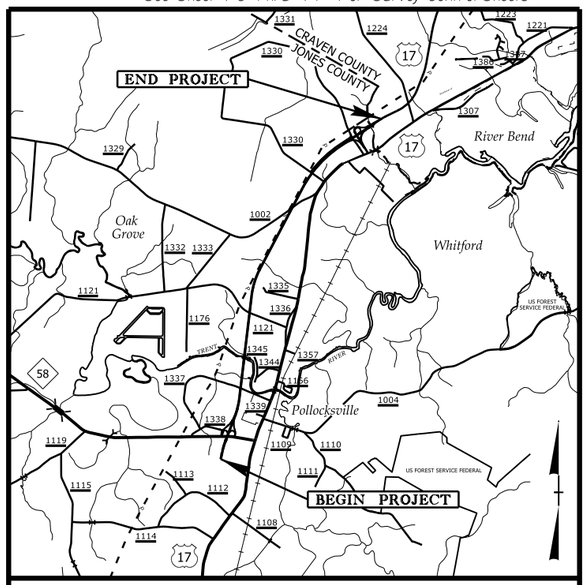
JONES COUNTY
WBS - 34442.1.1 (R-2514D)

09/08/99

TIP PROJECT: R-2514D

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C Thru 1-F For Survey Control Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES & CRAVEN COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514D	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.5		PE
34442.2.S5		R/W & UTILITIES

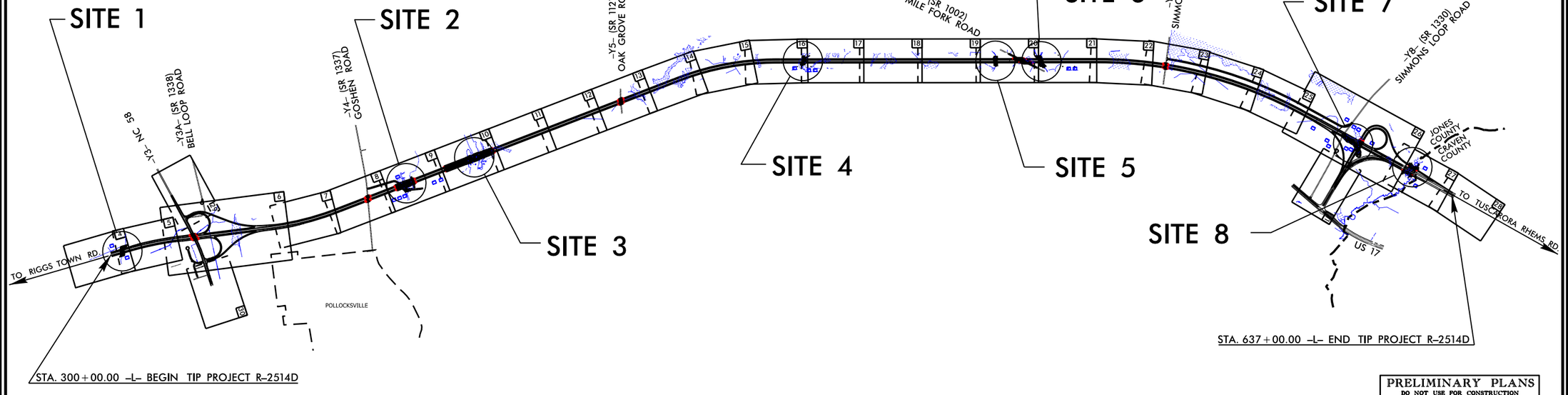
BUFFER DRAWING
SHEET 1 OF 20

LOCATION: US 17 FROM SOUTH OF NC 58 TO THE NEW BERN BYPASS

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

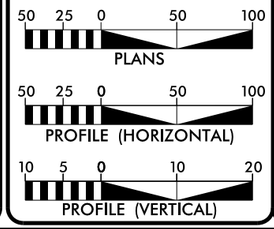
BUFFER IMPACTS PERMIT

NAD 83/
NSRS 2007



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2015 = 10,600
ADT 2035 = 15,700
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST=4 % DUAL =3 %
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY, TIP PROJECT R-2514D = 5.894 Miles
LENGTH OF STRUCTURES, TIP PROJECT R-2514D = 0.489 Miles
TOTAL LENGTH OF TIP PROJECT R-2514D = 6.383 Miles

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 27, 2013

LETTING DATE:
JUNE 16, 2015

JAMES A. SPEER, P.E.
PROJECT ENGINEER

DANIEL W. GARDNER, JR., P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

4/2/2014
mjork
R:\Hydraulics\ PERMITS_Environmental\ Drawings\ Buffer Permit\ R2514D_Buffer_tsh.dgn
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$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

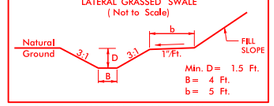
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 2 OF 20

NAD 83/NSRS 2007

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 300+00 LT. TO STA. 301+50 LT. –L–

DETAIL 'LL'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 16 Ft.
d = 1.5 Ft.
Est. = 8 Tons of Class I Rip-Rap
Est. = 16 SY Geotextile

FROM STA. 303+16 TO STA. 303+34 –L–

1
IERS FARM, INC
0 PG 71
) PG 631
1 PG 256
7 PG 819
12 PG 55
8 PG 898
2 PG 8

SITE 1

GRASS SWALE DATA
DA= 0.72 AC PAV.
0.67 AC GRASS
5.4 AC OFFSITE
SLOPE= 0.003 FT/FT
L REQ.= 612 FT
L PRO.= 150 FT
Q2= 11 CFS
V2= 1.6 FT/S
Q10= 14.0 CFS
V10= 1.7 FT/S
STA. 300+00 TO 301+50 LT –L–

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

CHORD
2' D RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

300' TAPER

BURIED 70%
PIPE OUTLET CHANNEL
SEE DETAIL 'LL'

CL 'B' RIP RAP
EST. 2 TON
EST. 7 SY GEOTEXTILE

N 11° 39' 27.2" E

12' PS

8:1

1
BELL BROTHERS FARM, INC
DB 390 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

GRASS SWALE DATA
DA= 0.08 AC PAV.
0.39 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 47 FT
L PRO.= 426 FT
Q2= 1.2 CFS
V2= 0.8 FT/S
Q10= 1.6 CFS
V10= 0.9 FT/S
STA. 300+15 TO 304+41 MEDIAN –L–

END PROJECT R–2514C
BEGIN PROJECT R–2514D
–L– STA. 300+00.00

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

–L– STA. 308+00.00

+56.91

+21.37
385.87

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 32 FOR –L– PROFILE

REVISIONS
8/17/99

4/21/2014
mywork
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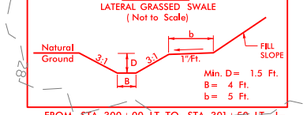
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 3 OF 20

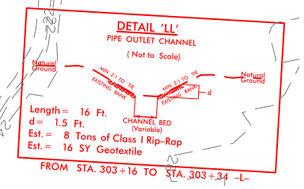
NAD 83/NSRS 2007

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.
FROM STA. 300+00 LT TO STA. 301+50 LT -L-

DETAIL 'LL'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 16 Ft.
d = 1.5 Ft.
Est. = 8 Tons of Class I Rip-Rap
Est. = 16 SY Geotextile
FROM STA. 303+16 TO STA. 303+34 -L-

1
BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

SITE 1

GRASS SWALE DATA
DA= 0.72 AC PAV.
0.67 AC GRASS
5.4 AC OFFSITE
SLOPE= 0.003 FT/FT
L REQ.= 612 FT
L PRO.= 150 FT
Q2= 11 CFS
V2= 1.6 FT/S
Q10= 14.0 CFS
V10= 1.7 FT/S
STA. 300+00 TO 301+50 LT -L-

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

CHORD
8 RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

300' TAPER

+56.61

N 11° 39' 27.2" E

300

305

12' PS

8:1

BURIED END PIPE OUTLET CHANNEL SEE DETAIL 'LL'

CHORD

GRASS SWALE DATA
DA= 0.08 AC PAV.
0.39 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 47 FT
L PRO.= 426 FT
Q2= 1.2 CFS
V2= 0.8 FT/S
Q10= 1.6 CFS
V10= 0.9 FT/S
STA. 300+15 TO 304+41 MEDIAN -L-

+21.37

385.87

-L- STA. 308+00.00

END PROJECT R-2514C
BEGIN PROJECT R-2514D
-L- STA. 300+00.00

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 32 FOR -L- PROFILE

REVISIONS 8/17/99

4/2/2014
mywork
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$$$$$$$$$$$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 4 OF 20

DETAIL 'I'
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

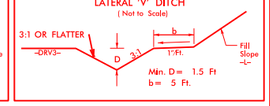
FROM STA. 375+07 TO STA. 383+00 RT. –L–

DETAIL 'W'
LATERAL 'V' DITCH
(Not to Scale)

Min. D= VAR
b= 5 Ft.

FROM STA. 364+00 TO STA. 370+50 RT. –L–

DETAIL 'X'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft.
b= 5 Ft.

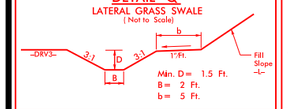
FROM STA. 11+00 TO STA. 14+50 RT. –DRV3–

DETAIL 'AA'
RIP RAP AT EMBANKMENT
(Not to Scale)

Type of Liner= 60 TONS,CL I Rip-Rap
Geotextile= 87sy

FROM STA. 372+30 TO STA. 372+62 RT. –L–
FROM STA. 17+39 TO STA. 17+65 LT. –DRV3–

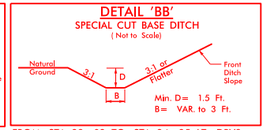
DETAIL 'Q'
LATERAL GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 14+50 TO STA. 16+50 RT. –DRV3–

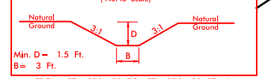
DETAIL 'BB'
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= VAR. to 3 Ft.

FROM STA. 23+02 TO STA. 24+25 LT –DRV3–

DETAIL 'EE'
GRASS SWALE
(Not to Scale)



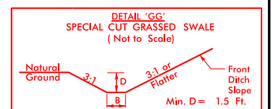
Min. D= 1.5 Ft.
B= 3 Ft.

FROM STA. 370+50 TO STA. 372+30 RT. –L–

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

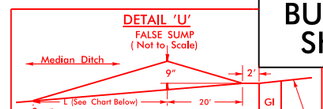
DETAIL 'GG'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.

FROM STA. 17+00 TO STA. 18+00 RT. –DRV3–
FROM STA. 18+28 TO STA. 20+16 RT. –DRV3–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S= Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

54
RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
THIRD TRACT

54
RICHARD PARKER, ET UX
DB 254 PG 544

NAD 83/NSRS 2007

SITE 2

MATCHLINE –L– STA. 368+00.00 SEE SHEET 8

MATCHLINE –L– STA. 382+00.00 SEE SHEET 10

–DRV3– STA. 14+00.00

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'

SPECIAL CUT BASE DITCH PSRM LINED SEE DETAIL 'MM'

2' LATERAL GRASSED SWALE SEE DETAIL 'Q'

GRASS SWALE DATA
DA= 0.02 AC PAV.
0.13 AC GRASS
SLOPE= .0211 FT/FT
L REQ.= 115 FT
L PRO.= 100 FT
Q2= 0.4 CFS
V2= 1.3 FT/S
Q10= 0.5 CFS
V10= 1.4 FT/S

STA 17+00 TO 18+00 RT –DRV3–

+48.00 –DRV3– 62.00' (LT.)

RIP RAP AT EMBANKMENT SEE DETAIL AA

Q10 = 16.5 CFS
V10 = 2.7 FPS

85.00 125.00' (LT.)

CLASS 'II' RIP RAP

15" RCP–IV

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

GRADE TO DRAIN

WORK BRIDGE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

Q10 = 3.1 CFS
V10 = 1.4 FPS

+29.44 325.59'

15" W ELBOWS

2GI 2GI 2GI

15" RCP–IV

3GI

4S ELEC

18" RCP–IV

JB MH

3' LATERAL BASE GRASS SWALE SEE DETAIL EE

LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'

RIP RAP AT EMBANKMENT SEE DETAIL AA

Q10 = 17.5 CFS
V10 = 1.1 FPS

Q10 = 32.4 CFS
V10 = 1.7 FPS

SPECIAL CUT BASE DITCH GRASSED SEE DETAIL 'BB'

LATERAL BASE DITCH SEE DETAIL 'L'

GRASS SWALE DATA
DA= 0.12 AC PAV.
0.56 AC GRASS
SLOPE= 0.0173 FT/FT
L REQ.= 68 FT
L PRO.= 631 FT
Q2= 1.5 CFS
V2= 1.4 FT/S
Q10= 2.0 CFS
V10= 1.6 FT/S

STA. 364+06 TO 370+37 MEDIAN –L–

GRASS SWALE DATA
DA= 0.6 AC PAV.
5.0 AC GRASS
SLOPE= 0.0045 FT/FT
L REQ.= 478 FT
L PRO.= 180 FT
Q2= 13.5 CFS
V2= 2.0 FT/S
Q10= 17.5 CFS
V10= 2.1 FT/S

STA. 370+50 TO 372+30 RT –L–

GRASS SWALE DATA
DA= 0.03 AC PAV.
0.11 AC GRASS
SLOPE= 0.012 FT/FT
L REQ.= 94 FT
L PRO.= 188 FT
Q2= 0.4 CFS
V2= 1.0 FT/S
Q10= 0.5 CFS
V10= 1.1 FT/S

STA. 18+28 TO 20+16 RT –DRV3–

GRASS SWALE DATA
DA= 0.10 AC PAV.
0.48 AC GRASS
SLOPE= 0.006 FT/FT
L REQ.= 58 FT
L PRO.= 510 FT
Q2= 1.5 CFS
V2= 1.1 FT/S
Q10= 2.0 CFS
V10= 1.2 FT/S

STA. 375+40 TO 380+50 MEDIAN –L–

GRASS SWALE DATA
DA= 0.05 AC PAV.
0.25 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 30 FT
L PRO.= 280 FT
Q2= 0.8 CFS
V2= 0.7 FT/S
Q10= 1.0 CFS
V10= 0.8 FT/S

STA. 380+50 TO 383+30 MEDIAN

54
RICHARD PARKER, ET UX
DB 254 PG 544

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEET 52 FOR –DRV3– PROFILE
SEE SHEET 52 FOR –DRV4– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

4/21/2014
mlynk
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8/17/99

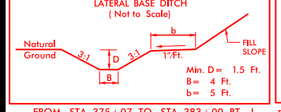
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 5 OF 20

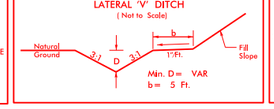
DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 375+07 TO STA. 383+00 RT. –L–

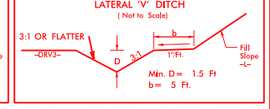
DETAIL 'W'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= VAR
b= 5 Ft.

FROM STA. 364+00 TO STA. 370+50 RT. –L–

DETAIL 'X'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft.
b= 5 Ft.

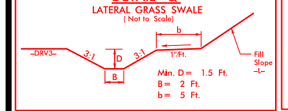
FROM STA. 11+00 TO STA. 14+50 RT. –DRV3–

DETAIL 'AA'
RIP RAP AT EMBANKMENT
(Not to Scale)

Type of Liner= 60 TONS,CL I Rip-Rap
Geotextile= 87sy

FROM STA. 372+30 TO STA. 372+62 RT. –L–
FROM STA. 17+39 TO STA. 17+65 LT. –DRV3–

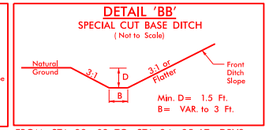
DETAIL 'Q'
LATERAL GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 14+50 TO STA. 16+50 RT. –DRV3–

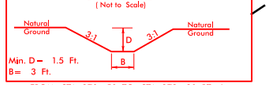
DETAIL 'BB'
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= VAR. to 3 Ft.

FROM STA. 23+02 TO STA. 24+25 LT –DRV3–

DETAIL 'EE'
GRASS SWALE
(Not to Scale)



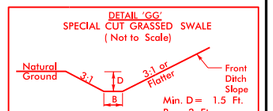
Min. D= 1.5 Ft.
B= 3 Ft.

FROM STA. 370+50 TO STA. 372+30 RT. –L–

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

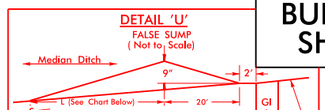
DETAIL 'GG'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.

FROM STA. 17+00 TO STA. 18+00 RT. –DRV3–
FROM STA. 18+28 TO STA. 20+16 RT. –DRV3–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S= Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

54
RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
THIRD TRACT

54
RICHARD PARKER, ET UX
DB 254 PG 544

NAD 83/NSRS 2007

SITE 2

MATCHLINE –L– STA. 368+00.00 SEE SHEET 8

MATCHLINE –L– STA. 382+00.00 SEE SHEET 10

–DRV3– STA. 14+00.00

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'

SPECIAL CUT BASE DITCH PSRM LINED SEE DETAIL 'MM'

GRASS SWALE DATA
DA= 0.02 AC PAV.
0.13 AC GRASS
SLOPE= 0.0211 FT/FT
L REQ.= 115 FT
L PRO.= 100 FT
Q2= 0.4 CFS
V2= 1.3 FT/S
Q10= 0.5 CFS
V10= 1.4 FT/S

STA. 17+00 TO 18+00 RT –DRV3–

48.00' –DRV3– / 62.00' (LT.)

RIP RAP AT EMBANKMENT SEE DETAIL AA

85.00' / 125.00' (LT.)

Q10 = 16.5 CFS
V10 = 2.7 FPS

2' LATERAL GRASSED SWALE SEE DETAIL 'Q'

CLASS 'I' RIP RAP

15" RCP–IV

2GI

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

GRADE TO DRAIN

WORK BRIDGE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

Q10 = 3.1 CFS
V10 = 1.4 FPS

CLASS 'II' RIP RAP

15" W ELBOWS

3GI

18" RCP–IV

45 ELEC

JB MH

3' LATERAL BASE GRASS SWALE SEE DETAIL 'BE'

Q10 = 17.5 CFS
V10 = 1.1 FPS

LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'

RIP RAP AT EMBANKMENT SEE DETAIL AA

Q10 = 32.4 CFS
V10 = 1.7 FPS

SPECIAL CUT BASE DITCH GRASSED SEE DETAIL 'BB'

LATERAL BASE DITCH SEE DETAIL 'L'

GRASS SWALE DATA
DA= 0.12 AC PAV.
0.56 AC GRASS
SLOPE= 0.0173 FT/FT
L REQ.= 68 FT
L PRO.= 631 FT
Q2= 1.5 CFS
V2= 1.4 FT/S
Q10= 2.0 CFS
V10= 1.6 FT/S

STA. 364+06 TO 370+37 MEDIAN –L–

GRASS SWALE DATA
DA= 0.6 AC PAV.
5.0 AC GRASS
SLOPE= 0.0045 FT/FT
L REQ.= 478 FT
L PRO.= 180 FT
Q2= 13.5 CFS
V2= 2.0 FT/S
Q10= 17.5 CFS
V10= 2.1 FT/S

STA. 370+50 TO 372+30 RT –L–

GRASS SWALE DATA
DA= 0.03 AC PAV.
0.11 AC GRASS
SLOPE= 0.012 FT/FT
L REQ.= 94 FT
L PRO.= 188 FT
Q2= 0.4 CFS
V2= 1.0 FT/S
Q10= 0.5 CFS
V10= 1.1 FT/S

STA. 18+28 TO 20+16 RT –DRV3–

GRASS SWALE DATA
DA= 0.10 AC PAV.
0.48 AC GRASS
SLOPE= 0.006 FT/FT
L REQ.= 58 FT
L PRO.= 510 FT
Q2= 1.5 CFS
V2= 1.1 FT/S
Q10= 2.0 CFS
V10= 1.2 FT/S

STA. 375+40 TO 380+50 MEDIAN –L–

GRASS SWALE DATA
DA= 0.05 AC PAV.
0.25 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 30 FT
L PRO.= 280 FT
Q2= 0.8 CFS
V2= 0.7 FT/S
Q10= 1.0 CFS
V10= 0.8 FT/S

STA. 380+50 TO 383+30 MEDIAN

54
RICHARD PARKER, ET UX
DB 254 PG 544

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEET 52 FOR –DRV3– PROFILE
SEE SHEET 52 FOR –DRV4– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

4/21/2014
mlynch
R:\Projects\Rocks\PERMITS_Environmental\Drawings\Buffer Permit\R2514D_Hyd_Buffer_psh_09_con.dgn
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$$$$$$$$$$SYSTIME$$$$$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$LEVELS$$$$$$$$$$
$$$$$$$$$$LEGEND$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 6 OF 20

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

SITE 2

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

WORK BRIDGE

+48.00 –DRV3–
62.00' (LT.)

Q10 = 16.5 CFS
V10 = 3.7 FPS

+85.00 –L–
125.00' (LT.)

Q10 = 3.1 CFS
V10 = 1.4 FPS

Q10 = 17.5 CFS
V10 = 1.1 FPS

Q10 = 32.4 CFS
V10 = 1.7 FPS

24" RCP-IV

5" RCP-IV

15" RCP-IV

18" RCP-IV

35" RCP-IV

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'

GRADE TO DRAIN

15" W/ ELBOWS

15" W/ELBOWS

JB w/MH

HW

248" CMP

-DRV3-

-DRV4-

-L-

370 371 372 373 374 375 376

GRAPHIC SCALE

50 25 0 50 100

8/17/99

REVISIONS

4/21/2014
mjmyk
R:\Hydraulics\PROJECTS_Environmental\Drawings\Buffer Permit\R2514D_Hyd_Buffer_pch_09X2.dgn
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$$$$$$$$USERNAME$$$$$$
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 7 OF 20

NAD 83/NSRS 2007

REVISIONS
8/17/99

MATCHLINE –L– STA. 382+00.00 SEE SHEET 9

MATCHLINE –L– STA. 396+00.00 SEE SHEET 11

54
RICHARD PARKER, ET UX
DB 254 PG 544

56
THOMAS B. MOORE, ET AL
DB 306 PG 520

54
RICHARD PARKER, ET UX
DB 254 PG 544

WORK BRIDGE

WORK BRIDGE

NO FENCE

NO FENCE

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

54
RICHARD PARKER, ET UX
DB 254 PG 544

JOHN H. DAVIS, JR.
DB 184 PG 566
MC "A" SLIDE 104-A

56
THOMAS B. MOORE, ET AL
DB 306 PG 520

CLASS 'II' RIP RAP

CLASS 'II' RIP RAP

15" W/ ELBOWS

15" W/ ELBOWS

2GI

2GI

385

390

395

30'

30'

30'

30'

TB

TB

TB

TB

TB

TB

BZ 2

BZ 1

105.6

105.6

EBP

EBP

THEW RIVER

SITE 3

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

4/21/2014
mtyrell
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$$$$$$$$$$ENGMAT$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 8 OF 20

NAD 83/NSRS 2007

REVISIONS
8/17/99

MATCHLINE –L– STA. 382+00.00 SEE SHEET 9

MATCHLINE –L– STA. 396+00.00 SEE SHEET 11

54
RICHARD PARKER, ET UX
DB 254 PG 544

56
THOMAS B. MOORE, ET AL
DB 306 PG 520

JOHN H. DAVIS, JR.
DB 184 PG 566
MC "A" SLIDE 104-A

WORK BRIDGE

NO FENCE

CLASS "II" RIP RAP

15" W/ ELBOWS

2GI

SBG

TB

BZ

30'

385 390 395

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

SITE 3

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR –L– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

4/21/2014
mtyrell
R:\Projects\Misc\PERMITS_Environmental\Drawings\Buffer Permit\R2514D_Hyd_Buffer_pph_10_con.dgn
$$$$$$$$$$USER$$$$$$$$$$
$$$$$$$$$$SYSTIME$$$$$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$ENGAREA$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

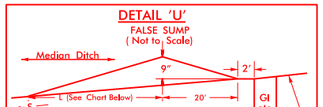
BUFFER DRAWING SHEET 9 OF 20

8/17/99

REVISIONS

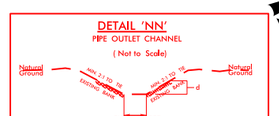
NAD 83/NSRS 2007

DETAIL 'U'
FALSE SUMP
(Not to Scale)



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'NN'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 18 Ft.
d = 2.0 Ft.
Est. = 12 Tons of Class I Rip-Rap

FROM STA. 473+64 TO STA. 473+88 –L–

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

+76.08
1395.60'

SITE 4

–L– STA. 466+00.00

–L– STA. 479+00.00

100' CP&L POWERLINE EASEMENT

CHORD

GAS TEST STATION

470

475

TOE PROTECTION SEE DETAIL 'B'

5' BERM
35.0' TOP EL.
3:1 SIDE SLOPES
APPROX. 7 CY FILL

2GI FS

15" RCP-IV

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

Q10 = 3.5 CFS
V10 = 1.1 FPS

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

BURIED 1 JB

3GI

15" RCP-IV

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

Q10 = 3.8 CFS
V10 = 1.3 FPS

GRASS SWALE DATA
DA= 0.29 AC PAV.
0.61 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 90 FT
L PRO.= 720 FT
Q2= 2.7 CFS
V2= 1.0 FT/S
Q10= 3.5 CFS
V10= 1.1 FT/S

STA. 465+50 TO 472+70 MEDIAN –L–

GRASS SWALE DATA
DA= 0.06 AC PAV.
0.31 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 37 FT
L PRO.= 330 FT
Q2= 1.0 CFS
V2= 0.8 FT/S
Q10= 1.2 CFS
V10= 0.8 FT/S

STA. 472+70 TO 476+00 MEDIAN –L–

GRASS SWALE DATA
DA= 0.14 AC PAV.
0.66 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 80 FT
L PRO.= 736 FT
Q2= 2.1 CFS
V2= 0.9 FT/S
Q10= 2.7 CFS
V10= 1.0 FT/S

STA. 476+00 TO 483+36 MEDIAN –L–

(PERTY)
GE RESTORATION
OFIT CORPORATION
: 96

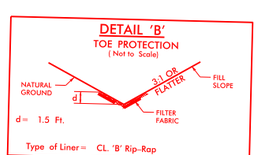
MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

GRAPHIC SCALE

100 50 0 100 200

DETAIL 'B'
TOE PROTECTION
(Not to Scale)

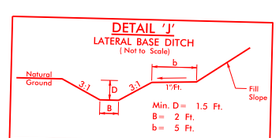


d = 1.5 Ft.

Type of Liner = CL 'B' Rip-Rap

FROM STA. 476+00 TO STA. 479+00 LT. –L–

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 483+00 TO STA. 483+85 LT. –L–
FROM STA. 483+85 TO STA. 483+00 LT. –L–

SEE SHEET 38 FOR –L– PROFILE

4/21/2014
mlynk
N:\Projects\PERMITS_Environmental\Drawings\Buffer Permit\R2514D_Hyd_Buffer_site_4.dgn
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$$$$$$$$USERID$$$$$$$$
$$$$$$$$DGN$$$$$$$$
$$$$$$$$$$$$$$$$$$$$
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

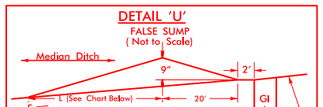
BUFFER DRAWING SHEET 10 OF 20

NAD 83/NSRS 2007

8/17/99

REVISIONS

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'NN'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 18 Ft.
d = 2.0 Ft.
Est.= 12 Tons of Class I Rip-Rap
FROM STA. 473+64 TO STA. 473+88 –L–

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

+76.08
L39+16.00

SITE 4

–L– STA. 466+00.00

–L– STA. 479+00.00

CHORD

GAS TEST STATION

100' CP&L POWERLINE EASEMENT

TOE PROTECTION SEE DETAIL 'B'

5' BERM
35.0' TOP EL.
3:1 SIDE SLOPES
APPROX. 7 CY. FILL

2GI FS

3GI

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY. GEOTEXTILE

PIPE OUTLET CHANNEL SEE DETAIL 'NN'

Q10 = 3.5 CFS
V10 = 1.1 FPS

Q10 = 3.8 CFS
V10 = 1.3 FPS

GRASS SWALE DATA
DA= 0.29 AC PAV
0.61 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 90 FT
L PRO.= 720 FT
Q2= 2.7 CFS
V2= 1.0 FT/S
Q10= 3.5 CFS
V10= 1.1 FT/S
STA. 465+50 TO 472+70 MEDIAN –L–

GRASS SWALE DATA
DA= 0.06 AC PAV
0.31 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 37 FT
L PRO.= 330 FT
Q2= 1.0 CFS
V2= 0.8 FT/S
Q10= 1.2 CFS
V10= 0.8 FT/S
STA. 472+70 TO 476+00 MEDIAN –L–

GRASS SWALE DATA
DA= 0.14 AC PAV
0.66 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 80 FT
L PRO.= 736 FT
Q2= 2.1 CFS
V2= 0.9 FT/S
Q10= 2.7 CFS
V10= 1.0 FT/S
STA. 476+00 TO 483+36 MEDIAN –L–

(PERTY)
SE RESTORATION
OFIT CORPORATION
: 96

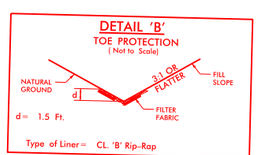
MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

GRAPHIC SCALE

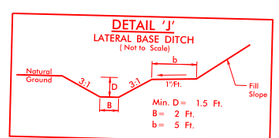
100 50 0 100 200

DETAIL 'B'
TOE PROTECTION
(Not to Scale)



d = 1.5 Ft.
Type of Liner = CL 'B' Rip-Rap
FROM STA. 476+00 TO STA. 479+00 LT. –L–

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.
FROM STA. 483+00 TO STA. 483+85 LT. –L–
FROM STA. 483+85 TO STA. 485+00 LT. –L–

SEE SHEET 38 FOR –L– PROFILE

4/21/2014
mpyatt
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 11 OF 20

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 516+00.00 SEE SHEET 19

MATCHLINE –L– STA. 530+00.00 SEE SHEET 21

SITE 5

SITE 6

(73) A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

DOUGLAS C. FURGASON, ET UX
DB 293 PG 498
PLAT CAB. B SLIDE 76-90

(75) BRENDA S. HUGHES
ESTATE FILE 01-E-98

WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

(76) ROGER A. HUGHES
DB 101 PG 62
DIVISION BOOK G-7 PG 475

(74) MELBA J. METTS
DB 291PG 340

(77) CHARLES F. WALKER
DB 161 PG 681

(78) JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 180 PG 555
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 186 PG 906
PC "B" SLIDE 234 PG 53

STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

SR 1002 – TAR MILE FORK

GRAU 350

N 53°38'22.3" E

N 27°47'22.6" E

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

ELECTRIC METER

HTR

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

TYPE M-350

TYPE B-77

15" RCP-IV

15" W ELBOWS

DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 12 Ft.
d = 1.0 Ft.
Est. = 4 Tons of Class I Rip-Rap

FROM STA. 520+16 TO STA. 520+27 –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)

S = Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 53 FOR –Y6– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

GRAPHIC SCALE

100 50 0 100 200

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

4/21/2014
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 12 OF 20

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 516+00.00 SEE SHEET 19

MATCHLINE –L– STA. 530+00.00 SEE SHEET 21

SITE 5

SITE 6

WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

DOUGLAS C. FURGASON, ET UX
DB 293 PG 498
PLAT CAB. B SLIDE 76-90

(73) A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

(75) BRENDA S. HUGHES
ESTATE FILE 01-E-98

(76) ROGER A. HUGHES
DB 101 PG 62
DIVISION BOOK G-7 PG 475

(74) MELBA J. METTS
DB 291 PG 340

(77) CHARLES F. WALKER
DB 161 PG 681

(78) JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 180 PG 555
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 186 PG 906
PC "B" SLIDE 234 PG 53

STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

SR 1002 TAYLOR MILL FORK

GRAU 350

N 53° 58' 22.3" E

N 27° 47' 22.6" E

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

TYPE M-350

TYPE B-77

15" RCP-IV

15" W ELBOWS

2GI

10" PVC

8" CONC

ISFD

HTR

ELECTRIC METER

GRAPHIC SCALE

100 50 0 100 200

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — min 2:1 SS or EXISTING SLOPE — CHANNEL BED (Variable) — min 2:1 SS or EXISTING SLOPE — Natural Ground — d

Length = 12 Ft.
d = 1.0 Ft.
Est. = 4 Tons of Class I Rip-Rap

FROM STA. 520+16 TO STA. 520+27 –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Median Ditch — 9" — 2' — S — L (See Chart Below) — 20' — GI etc. — ℄ Proposed Ditch

S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 53 FOR –Y6– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

4/21/2014
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 13 OF 20

8/17/99

REVISIONS

ER COMPANY
LUMBER COMPANY
5 PG 564
PG 80
K G-7 PG 475

NAD 83/NSRS 2007

ES (76)
PG 475

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)

Length= 26 Ft.
d= 3.0 Ft.
Est.= 25 Tons of Class I Rip-Rap
FROM STA. 531+54 TO STA. 531+85 –L–

DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)

Length= 14 Ft.
d= 2.0 Ft.
Est.= 9 Tons of Class I Rip-Rap
FROM STA. 534+99 TO STA. 535+18 –L–

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

MATCHLINE –L– STA. 526+00.00

SITE 6

100' CP&L POWERLINE EASEMENT

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

TYPE M-350

GRAU 350

15" RCP-IV

Q10 = 4.6 CFS
V10 = 1.1 FPS

535

N 27° 47' 22.6" E

15" RCP-IV 2GI 2GI

15" W. ELBOWS

CAT-1

3GI-D

18" RCP-IV

Q10 = 5.0 CFS
V10 = 1.1 FPS

Q10 = 5.7 CFS
V10 = 0.7 FPS

GRASS SWALE DATA
DA= 0.19 AC PAV
0.88 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 107 FT
L PRO.= 1066 FT
Q2= 2.8 CFS
V2= 1.0 FTS
Q10= 3.7 CFS
V10= 1.1 FTS
STA. 528+50 TO 539+16 MEDIAN –L–

GRASS SWALE DATA
DA= 0.09 AC PAV
0.44 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 53 FT
L PRO.= 516 FT
Q2= 1.4 CFS
V2= 0.8 FTS
Q10= 1.8 CFS
V10= 0.9 FTS
STA. 539+16 TO 544+32 MEDIAN –L–

MATCHLINE –L– STA. 540+00.00

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

(78)
JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

HTR

ISFD

GRAU 350

15" RCP-IV

N 53° 58' 22.5" E
SR 1002
TEN MILE FORK 20' BSL

EXIST R/W

STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

18" CMP

DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)

12 Ft.

GRAPHIC SCALE
100 50 0 100 200

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 53 FOR –Y6– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

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mpyrek
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 14 OF 20

8/17/99

REVISIONS

ER COMPANY
LUMBER COMPANY
5 PG 564
PG 80
K G-7 PG 475

NAD 83/NSRS 2007

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)

Length= 26 Ft.
d= 3.0 Ft.
Est.= 25 Tons of Class I Rip-Rap
FROM STA. 531+54 TO STA. 531+85 –L–

DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)

Length= 14 Ft.
d= 2.0 Ft.
Est.= 9 Tons of Class I Rip-Rap
FROM STA. 534+99 TO STA. 535+18 –L–

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

(76)
PG 475

MATCHLINE –L– STA. 526+00.00

MATCHLINE –L– STA. 540+00.00

SITE 6

100' CP&L POWERLINE EASEMENT

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

TYPE M-350

TYPE M-350

GRAU 350

15" RCP-IV

GRAU 350

20

N 53° 58' 22.5" E

TEN MILE FORK

SR 1002

EXIST R/W

535

N 27° 47' 22.6" E

Q10 = 4.6 CFS
V10 = 1.1 FPS

15" RCP-IV
15" W ELBOWS
2GI 2GI

CATHODIC PROTECT
ELECTRIC BOX

18" RCP-IV
3GI-D

CAT-1

15" RCP-IV
2GI 2GI

Q10 = 5.0 CFS
V10 = 1.1 FPS

Q10 = 5.7 CFS
V10 = 0.7 FPS

GRASS SWALE DATA
DA= 0.19 AC PAV
0.88 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 107 FT
L PRO.= 1066 FT
Q2= 2.8 CFS
V2= 1.0 FT/S
Q10= 3.7 CFS
V10= 1.1 FT/S
STA. 528+50 TO 539+16 MEDIAN –L–

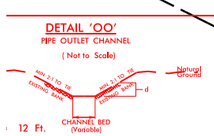
GRASS SWALE DATA
DA= 0.09 AC PAV
0.44 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 53 FT
L PRO.= 516 FT
Q2= 1.4 CFS
V2= 0.8 FT/S
Q10= 1.8 CFS
V10= 0.9 FT/S
STA. 539+16 TO 544+32 MEDIAN –L–

(78)
JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)



12 Ft.

GRAPHIC SCALE

100 50 0 100 200

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 53 FOR –Y6– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

4/21/2014
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REVISIONS

PROJECT REFERENCED NO.	SHEET NO.
R-2940	26
STATE SHEET NO.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
NOT USED FOR CONSTRUCTION

BUFFER DRAWING
SHEET 15 OF 20

SITE 7

MATCHLINE –L– STA. 596+00.00 SEE SHEET 25

MATCHLINE –Y8– STA. 33+40.00 SEE SHEET 31

MATCHLINE –Y10– STA. 22+50.00 SEE SHEET 31

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 27

MATCHLINE –L– STA. 622+00.00 SEE SHEET 27

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

SPECIAL CUT GRASSED SWALE SEE DETAIL 'G'

6' LATERAL BASE GRASSED SWALE SEE DETAIL 'C'

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

6' BASE LATERAL GRASSED SWALE SEE DETAIL 'C'

6' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'P'

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

6' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'O'

6' STANDARD BASE DITCH GRASS LINED SEE DETAIL APPROX. 100 CY DDE

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

3' STANDARD BASE DITCH GRASS LINED SEE DETAIL 'N' APPROX. 25 CY DDE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

SEE SHEET 43 AND 44 FOR –L– PROFILE
SEE SHEET 56 FOR –Y8A– PROFILE
SEE SHEET 54 FOR –Y8– PROFILE
SEE SHEET 57 FOR –Y10– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEET 61 FOR –Y10LPA– PROFILE
SEE SHEET 59 FOR –Y10RPC– PROFILE
SEE SHEET 60 FOR –Y10RPD– PROFILE
SEE SHEETS 5-1 THRU 5-7 FOR STRUCTURE PLANS

SBG = "SHOULDER BERM GUTTER"

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:
TIP NO.: COUNTY:
DESIGNED BY:
CHECKED BY: DATE:

4/21/2014
R-2940_Sheet15_Environmental Drawings_Buffer Permit #2315-FD_Mvd_Buffer_psh_26.dgn

REVISIONS

PROJECT REFERENCE NO. R-2924D | SHEET NO. 25
STATE SHEET NO.
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
NO RWY USE OR CONSTRUCTION

BUFFER DRAWING SHEET 16 OF 20

SITE 7

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

MATCHLINE –L– STA. 596+00.00 SEE SHEET 25

MATCHLINE –Y8– STA. 33+40.00 SEE SHEET 31

MATCHLINE –Y10– STA. 22+50.00 SEE SHEET 31

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 27

MATCHLINE –L– STA. 622+00.00 SEE SHEET 27

SEE SHEET 43 AND 44 FOR –L– PROFILE
SEE SHEET 56 FOR –Y8A– PROFILE
SEE SHEET 54 FOR –Y8– PROFILE
SEE SHEET 57 FOR –Y10– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEET 61 FOR –Y10LPA– PROFILE
SEE SHEET 59 FOR –Y10RPC– PROFILE
SEE SHEET 60 FOR –Y10RPD– PROFILE
SEE SHEETS 5-1 THRU 5-7 FOR STRUCTURE PLANS

SBG – "SHOULDER BERM GUTTER"

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:
TIP NO.: COUNTY:
DESIGNED BY:
CHECKED BY: DATE:

4/21/2014
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Environmental Processes
Preliminary Design and Environmental (Planning)
R-2924D_Environmental (Drawings)\Buffer Permit\R2924D_Mvd_Buffer_pln_25_con.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 17 OF 20

SITE 7

6' LATERAL BASE GRASSED SWALE
SEE DETAIL 'C'

2' BASE LATERAL GRASSED SWALE
SEE DETAIL 'Q'
NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

6' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'O'

6' STANDARD BASE DITCH
GRASS LINED
SEE DETAIL 'I'
APPROX. 100 CY DDE

N 54° 31' 31.1" E

REMOVE

REMOVE

15" W/ELBOWS

TB 2GI

15" RCP-IV

TB 2GI

CB

TYPE M-350

HW

48" RCP-IV

3GI-A

610

FS

TB 2GI

TB 2G

15" W/ELBOWS

15" RCP-IV

60" RCP-IV

TB 2GI

TB JB w/Slab Lid

HW

TYPE M-350

TYPE M-350

GRAU 350

GRASS SWALE DATA	
DA =	0.09 AC PAV.
	0.41 AC GRASS
SLOPE =	0.003 FT/FT
L REQ. =	50 FT
L PRO. =	450 FT
Q2 =	1.3 CFS
V2 =	0.8 FT/S
Q10 =	1.7 CFS
V10 =	0.9 FT/S

STA. 608+85 TO 613+34 MEDIAN –L–

GRAPHIC SCALE
50 25 0 50 100

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

REVISIONS

8/17/99

4/21/2014
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 18 OF 20

NAD 83/NSRS 2007

REVISIONS 8/17/99

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

SITE 8

97 AARON L. MALLARD, ET UX
DB 132 PG 057

98

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 26

MATCHLINE –L– STA. 622+00.00 SEE SHEET 26

MATCHLINE –L– STA. 635+00.00 SEE SHEET 28

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

CHORD

WORK ACCESS

GRASS SWALE DATA
DA= 0.91 AC PAV.
0.13 AC GRASS
2.95 AC OFFSITE
SLOPE= 0.003 FT/FT
L REQ.= 399 FT
L PRO.= 280 FT
Q2= 8.0 CFS
V2= 1.4 FT/S
Q10= 10 CFS
V10= 1.5 FT/S
STA. 15+25 TO 18+05 RT –Y10RPA–

2' BASE LATERAL GRASSED SWALE SEE DETAIL 'Q'

4' FLOWBOX W/ BDO

15" MITERED ENDS W/ 30° BEVEL

2GI

15" RCP-IV 2GI

GRAU 350

ATTENUATOR

OTCB

RETAIN

PLUG & FILL W/ FLOWABLE FILL

15" HDPE

DI

REMOVE

CB

CAT-1

TB 2GI

15" W/ ELBOWS

ESE .5% CONN

COLLAR AND EXTEND W/15" RCP IV

FS

US HWY 17 BY

MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

98

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

GRASS SWALE DATA
DA= 0.93 AC PAV.
0.86 AC GRASS
0.82 AC OFFSITE
SLOPE= 0.009 FT/FT
L REQ.= 260 FT
L PRO.= 35 FT
Q2= 7.0 CFS
V2= 2.0 FT/S
Q10= 9.0 CFS
V10= 2.2 FT/S
STA. 627+15 TO 627+50 RT –L–

END GRADE
–L– STA. 623+35.00

STANDARD 'V' DITCH GRASS LINED SEE DETAIL 'R' APPROX. 2 CY DDE

NOTE: DECK DRAINS REQUIRED
FROM STA. 623+90 TO STA. 624+38 RT. –L–
FROM STA. 625+70 TO STA. 626+18 RT. –L–

97 AARON L. MALLARD, ET UX
DB 132 PG 057

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1"/Ft., FILL SLOPE, B

Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 627+15 TO STA. 627+50 RT. –L–

DETAIL 'Q'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1"/Ft., FILL SLOPE, B

Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 15+25 TO STA. 18+05 RT. –Y10RPA–

DETAIL 'R'
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground

Min. D= VAR.

–L– STA. 623+20 RT.

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Median Ditch, 9", 2', L (See Chart Below), 20', GI etc., S=Ditch Slope, ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 44 FOR –L– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

6/5/2014
mbrock
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 19 OF 20

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

NAD 83/NSRS 2007

SITE 8

AARON L. MALLARD, ET UX
DB 132 PG 057

MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

MATCHLINE –Y10RPA– STA. 23+00.00 SEE SHEET 26

MATCHLINE –L– STA. 622+00.00 SEE SHEET 26

MATCHLINE –L– STA. 635+00.00 SEE SHEET 28

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

CHORD

WORK ACCESS

GRASS SWALE DATA
DA= 0.91 AC PAV.
0.13 AC GRASS
2.95 AC OFFSITE
SLOPE= 0.003 FT/FT
L REQ.= 399 FT
L PRO.= 280 FT
Q2= 8.0 CFS
V2= 1.4 FT/S
Q10= 10 CFS
V10= 1.5 FT/S
STA. 15+25 TO 18+05 RT –Y10RPA–

2' BASE LATERAL GRASSED SWALE SEE DETAIL 'Q'

15" MITERED FLARED END SECTION W/ TRASH GUARD

15" RCP-IV 2GI

GRAU 350

ATTENUATOR

OTCB

RETAIN

PLUG & FILL W/ FLOWABLE FILL

625

630

15" HDPE

DI

CB

REMOVE

CAT-1

TB 2GI

15" RCP

15" W. FLARED END SECTION

COLLAR AND EXTEND W/15" RCP IV

END GRADE
–L– STA. 623+35.00

STANDARD 'V' DITCH GRASS LINED SEE DETAIL 'R' APPROX. 2 CY DDE

NOTE: DECK DRAINS REQUIRED
FROM STA. 623+90 TO STA. 624+38 RT. –L–
FROM STA. 625+70 TO STA. 626+18 RT. –L–

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

GRASS SWALE DATA
DA= 0.93 AC PAV.
0.86 AC GRASS
0.82 AC OFFSITE
SLOPE= 0.009 FT/FT
L REQ.= 260 FT
L PRO.= 35 FT
Q2= 7.0 CFS
V2= 2.0 FT/S
Q10= 9.0 CFS
V10= 2.2 FT/S
STA. 627+15 TO 627+50 RT –L–

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1'/Ft., FILL SLOPE, B

Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 627+15 TO STA. 627+50 RT. –L–

DETAIL 'Q'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1'/Ft., FILL SLOPE, B

Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 15+25 TO STA. 18+05 RT. –Y10RPA–

DETAIL 'R'
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, Natural Ground

Min. D= VAR.

–L– STA. 623+20 RT.

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Median Ditch, 9", 2', L (See Chart Below), 20', GI etc, S

S= Ditch Slope ℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GRAPHIC SCALE

100 50 0 100 200

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 44 FOR –L– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

REVISIONS

8/17/99

6/5/2014
mycek
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 20 OF 20

GRASS SWALE DATA

DA = 0.91 AC PAV.
0.13 AC GRASS
2.95 AC OFFSITE
SLOPE = 0.003 FT/FT
L REQ. = 399 FT
L PRO. = 280 FT
Q2 = 8.0 CFS
V2 = 1.4 FT/S
Q10 = 10 CFS
V10 = 1.5 FT/S

STA. 15+25 TO 18+05 RT –Y10RPA–

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

SITE 8

CHORD (RW)

WORK ACCESS

WORK ACCESS

WORK ACCESS

WORK ACCESS

2' BASE LATERAL GRASSED SWALE
SEE DETAIL 'Q'

24" W/ELBOWS BDO

15" RCP-IV

OTCB

15" HDPE

CB

15" RCP-IV 2GI

15" W/ELBOWS

2GI

RETAIN

RETAIN

PLUG & FILL W/ FLOWABLE FILL

REMOVE

TB 2GI

CL 'B' RIP RAP
EST. 59 TONS

CL 'B' RIP RAP
EST. 110 TONS

15" W/ ELBOWS

2GI 2GI 15" RCP-IV

15" W/ ELBOWS

FS

2GI

18"

CAT-1

18" RCP

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

–Y10RPA–

–L–

BZ 1

BZ 2

30'

F

ST

JS

WLB

WLE

GRAPHIC SCALE

50 25 0 50 100

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

REVISIONS

8/17/99

6/5/2014
mlynk
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BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	48" RCP-IV	301+70 TO 303+89 -L-	X						18124	11612	29736		
2	DUAL BRIDGES	371+98 TO 374+73 -L-		X		11778	6975	18753					
	2@8'X8' RCBC	18+28 TO 22+07 -DRV3-	X			2143	2083	4226					
		10+65 TO 10+78 -DRV4-			X		26	26					
3	DUAL BRIDGES	388+28 TO 395+18 -L-		X		31209	12501	43710					
4	54"RCP-IV	473+16 TO 474+13 -L-	X						14017	9383	23400		
5	36" RCP-IV	519+60 TO 520+66 -L-	X						15142	9677	24819		
6	78" RCP-IV	529+50 TO 532+45 -L-	X						20266	12665	32931		
7	60" RCP-IV	507+43 TO 513+23 -L-	X						38167	25504	63671		
8	BRIDGE	18+45 TO 20+27 -Y10RPA-		X		7707	6694	14401					
TOTAL:						52837	28279	81116	105716	68841	174557		

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
PROJECT: 34442.1.1 (R-2514D)

5/29/2014
SHEET 1 OF 1

Rev. May 2006

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS ZONE 1 (ft^2)	WETLANDS IN BUFFERS ZONE 2 (ft^2)
2	371+98 -L-	TO 374+73 -L-	11630	5096
	18+28 -DRV3-	TO 22+07 -DRV3-	928	379
3	388+28 -L-	TO 395+18 -L-	24130	9567
4	473+16 -L-	TO 474+13 -L-	12324	6294
5	519+60 -L-	TO 520+66 -L-	433	0
6	529+50 -L-	TO 532+44 -L-	0	1432
7	507+43 -L-	TO 513+23 -L-	28108	11272
8	18+45 -Y10RPA-	TO 20+27 -Y10RPA-	4781	2277
TOTAL:			82334	36317

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
PROJECT: 34442.1.1 (R-2514D)

5/29/2014
SHEET 1 OF 1

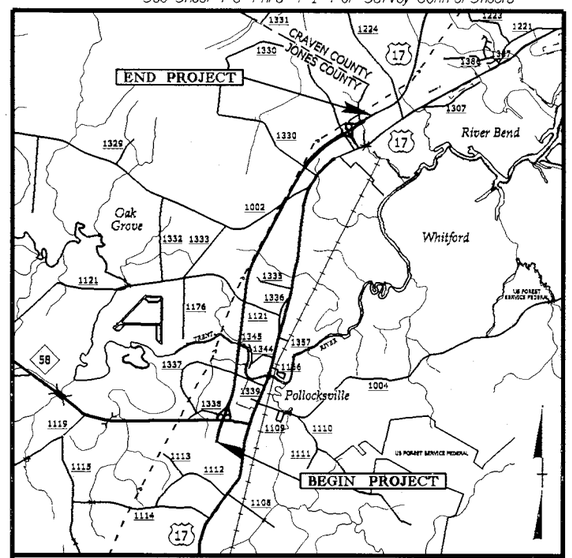
Rev. Jan 2009

09/08/99

TIP PROJECT: R-2514D

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C Thru 1-I For Survey Control Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES & CRAVEN COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514D	UE-01	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.5		PE
34442.2.S5		R/W & UTILITIES

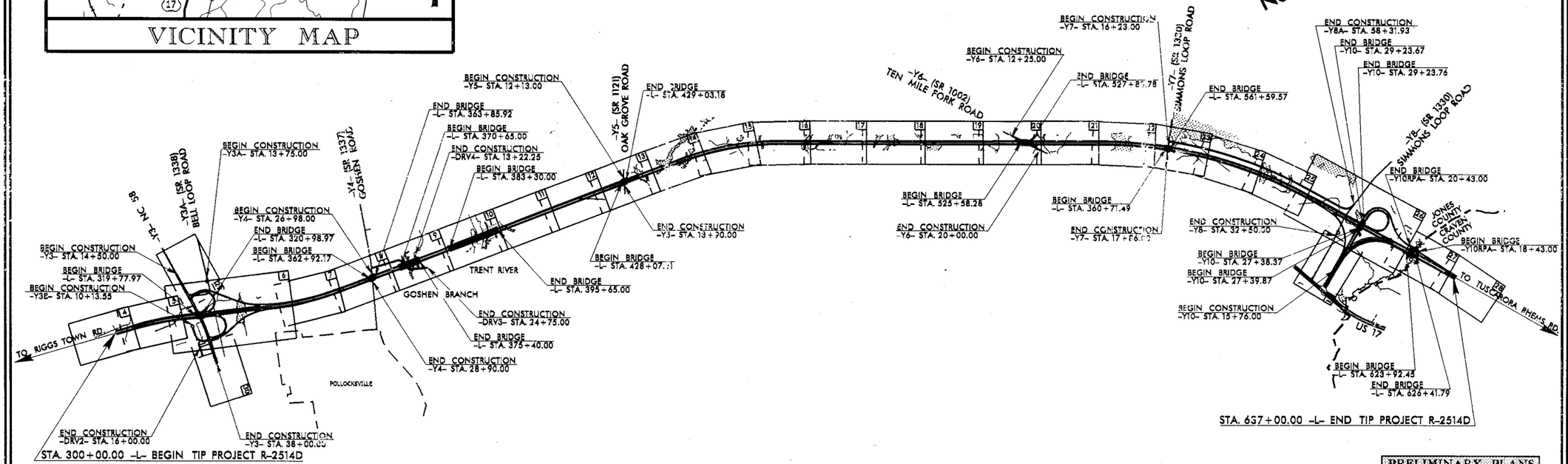
LOCATION: US 17 FROM SOUTH OF NC 58 TO THE NEW BERN BYPASS

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

Utility Permit Drawing
Sheet 1 of 3

NEU PERMIT PLANS
(May 14, 2014)

NAD 83/
NSRS 2007



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2015 = 10,600
ADT 2035 = 15,700
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST=4 % DUAL =3 %
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY, TIP PROJECT R-2514D = 5.894 Miles
LENGTH OF STRUCTURES, TIP PROJECT R-2514D = 0.489 Miles
TOTAL LENGTH OF TIP PROJECT R-2514D = 6.383 Miles

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPTEMBER 27, 2013

LETTING DATE: JUNE 16, 2015

JAMES A. SPEER, P.E.
PROJECT ENGINEER

DANIEL W. GARDNER, JR., P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	UE-02
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NEU PERMIT PLANS
Revised (Oct. 09, 2014)

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 2 of 3

-L-
PI Sta 571+12.36
Δ = 28° 45' 22.4" (RT)
D = 0° 33' 17.1"
L = 5,183.63'
T = 2,647.63'
R = 10,328.19'
SE = .025
RO = 90'

HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

(80) PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

(82) RUTH S. MORTON
DB 269 PG 941
PLAT CAB. B SLIDE 350-1

SITE 1
54,865.4832 SF
1.259533 AC

SITE 2
26104.0509 SF
0.5993 AC

-BL- 66 PINC 266+88.67

-L- PC Sta. 544+64.43

BM #28
SEE SHEET 1-F
ELEV. 39.62'

ELECTRIC BOX

CATHODIC PROTECTION

-BL- 65 PINC 268+35.61

+64.73 -L- 114.68' (LT.)

+19.36 -L- 115.47' (LT.)

+06.30 -L- 133.39'

+00.00 -L- 125.00' (LT.)

+64.73 -L- 125.00' (RT.)

+55.00 -L- 125.00' (LT.)

BEGIN SBG -L- 553+15

MATCHLINE -L- STA. 544+00.00 SEE SHEET 21

MATCHLINE -L- STA. 557+00.00 SEE SHEET 23

10' PS | 24' | .01 | 4' PS | 4' PS | 10' PS

4' CHL & 3SBW

30' MEDIAN

.025 | 8:1 | 12' PS | 12' PS | 10' PS | 8:1 GRAD 350 | 12' PS | 4' PS | 4' PS

CAT-1

545 | 550 | 556

12" RCP

18" RCP-IV

36" RCP-IV

3GI-D | 2GI

CL. 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

POWER SUBSTATION

ABSS & TYP

PROP O/H POW LINES (TRANS)

PROP O/H POW LINES (DISTRIBUTION)

EDM

S 20°05'51" W 709.19'

S 68°36'56" W 39.97'

(81) JACKIE W. MIRAYA
DB 240 PG 479
MB 13 PG 56

(83) RUTHIE M. BLAND
DB 193 PG 271

(82) RUTH S. MORTON
DB 274 PG 863
PLAT CAB. B SLIDE 350-1

(80) PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

REVISIONS

8/17/99

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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1	-L-547+44 TO 552+27	Aerial Power line (Transmission)					0.01					
2	-L-546+70 TO 550+26	Aerial Power line (Transmission)					0.60					
1	-L-551+57 LT	Power Pole (Transmission)	< 0.01									
2	-L-549+02 RT	Power Pole (Transmission)	< 0.01									
TOTALS:			< 0.01	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00

Note :

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
JONES & CRAVEN COUNTIESYY
TIP PROJECT (R-2514D)

Rev. 10/09/2014

ATN Revised 3/31/05

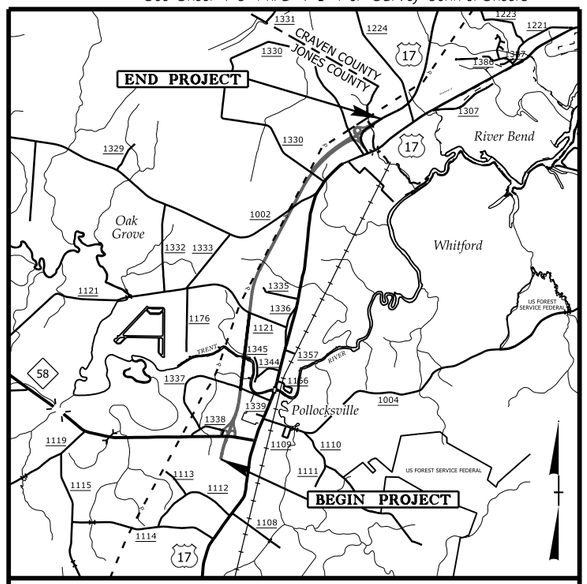
Utility Permit Drawing
Sheet 3 of 3

09/08/99

TIP PROJECT: R-2514D

CONTRACT: C203592

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C Thru 1-I For Survey Control Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES & CRAVEN COUNTIES

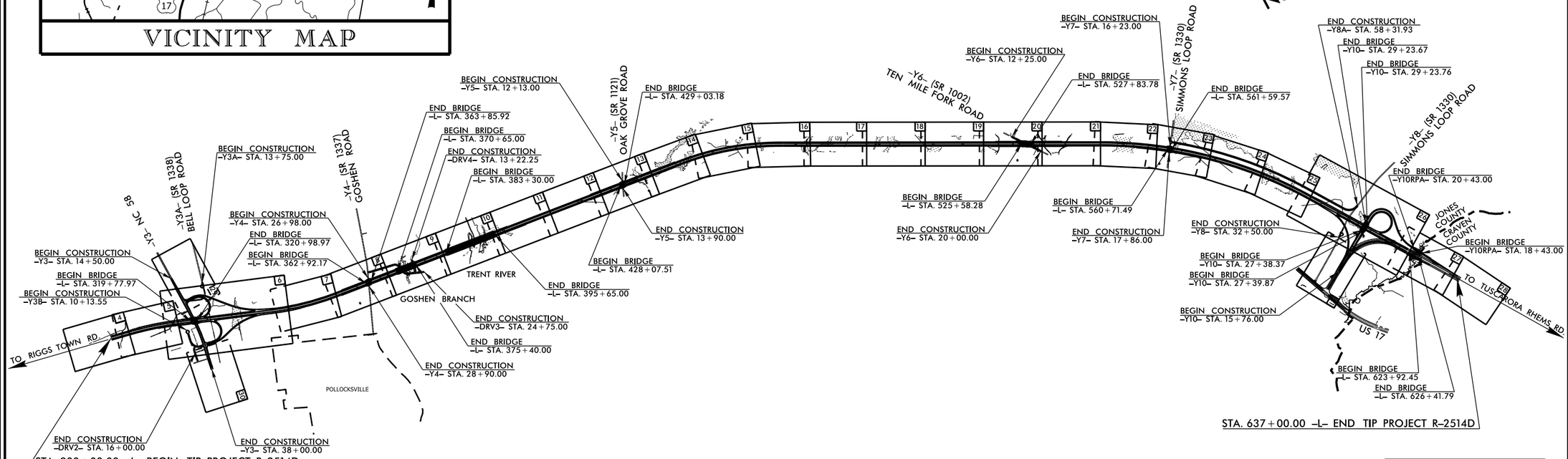
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514D	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.5		PE
34442.2.S5		R/W & UTILITIES
34442.3.S6		CONST.

LOCATION: US 17 FROM SOUTH OF NC 58 TO THE NEW BERN BYPASS

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

NAD 83/
NSRS 2007



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2015 = 10,600
ADT 2035 = 15,700
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST=4 % DUAL =3 %
FUNC CLASS = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY, TIP PROJECT R-2514D = 5.894 Miles
LENGTH OF STRUCTURES, TIP PROJECT R-2514D = 0.489 Miles
TOTAL LENGTH OF TIP PROJECT R-2514D = 6.383 Miles

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 27, 2013

LETTING DATE:
JUNE 16, 2015

JAMES A. SPEER, P.E.
PROJECT ENGINEER

DANIEL W. GARDNER, JR., P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

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04/16/11

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line

- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

6/2/99

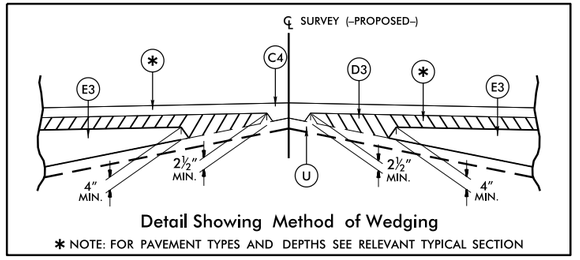
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE
(PRELIMINARY PAVEMENT DESIGN)

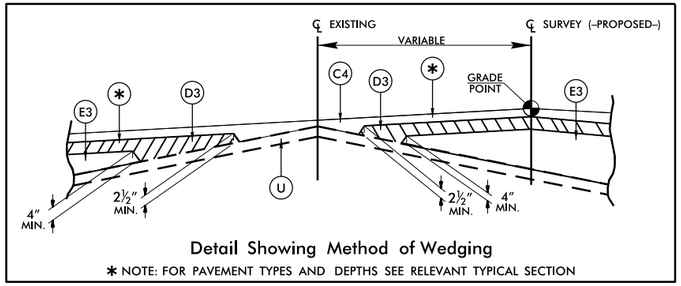
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	J1	PROP. 8" AGGREGATE BASE COURSE
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	J2	PROP. VAR. DEPTH AGGREGATE BASE COURSE
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS	P	PRIME COAT AT THE RATE OF 0.35 GAL. PER SQ. YD.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1½" OR GREATER THAN 2" IN DEPTH.	R1	2'-6" CONCRETE CURB AND GUTTER
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	R2	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	S	4" CONCRETE SIDEWALK
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2½" OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
E2	PROP. APPROX. 4½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.	V	PROPOSED ASPHALT PAVEMENT MILLING (VAR. 0" TO 3")
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 4" OR GREATER THAN 5½" IN DEPTH.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
		Y	PROPOSED MILLED RUMBLE STRIPS (SEE STD. 665.01)

NOTES: 1) PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2) MILL EXISTING PAVEMENT AT END OF GRADE TIE-IN LOCATIONS.



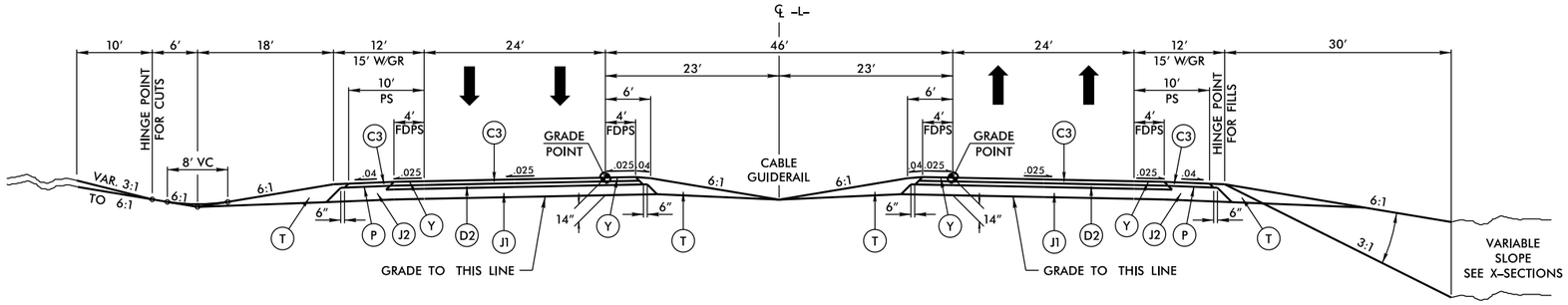
Detail Showing Method of Wedging

✱ NOTE: FOR PAVEMENT TYPES AND DEPTHS SEE RELEVANT TYPICAL SECTION



Detail Showing Method of Wedging

✱ NOTE: FOR PAVEMENT TYPES AND DEPTHS SEE RELEVANT TYPICAL SECTION



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 FOR:

–L– STA. 300+00.00 TO –L– STA. 319+77.97 (BEGIN BRIDGE)
–L– STA. 320+98.97 (END BRIDGE) TO –L– STA. 362+92.17 (BEGIN BRIDGE)
–L– STA. 363+85.92 (END BRIDGE) TO –L– STA. 370+65.00 (BEGIN BRIDGE)
–L– STA. 375+40.00 (END BRIDGE) TO –L– STA. 383+30.00 (BEGIN BRIDGE)
–L– STA. 395+65.00 (END BRIDGE) TO –L– STA. 428+07.51 (BEGIN BRIDGE)
–L– STA. 429+03.18 (END BRIDGE) TO –L– STA. 525+58.28 (BEGIN BRIDGE)
–L– STA. 527+83.78 (END BRIDGE) TO –L– STA. 560+71.49 (BEGIN BRIDGE)
–L– STA. 561+59.57 (END BRIDGE) TO –L– STA. 623+35.00

NOTES:

1) END CONSTRUCTION OF ACCELERATION LANE –L– STA. 629+75.72 RT.
2) USE 2:1 REINFORCED SOIL SLOPES –L– STA. 527+00.00 TO STA. 532+00.00 LT.
3) USE 3:1 FILL SLOPE IN WETLAND AREAS
–L– STA. 303+00.00 (LT) TO –L– STA. 304+00.00 (LT)
–L– STA. 431+50.00 (LT) TO –L– STA. 433+50.00 (LT)
–L– STA. 432+50.00 (RT) TO –L– STA. 434+50.00 (RT)
–L– STA. 436+50.00 (RT) TO –L– STA. 438+00.00 (RT)
–L– STA. 437+00.00 (LT) TO –L– STA. 441+50.00 (LT)
–L– STA. 442+00.00 (RT) TO –L– STA. 445+50.00 (RT)
–L– STA. 444+50.00 (LT) TO –L– STA. 447+00.00 (LT)
–L– STA. 455+00.00 (LT) TO –L– STA. 455+50.00 (LT)
–L– STA. 457+50.00 (LT) TO –L– STA. 459+00.00 (LT)
–L– STA. 462+50.00 (LT) TO –L– STA. 463+00.00 (LT)
–L– STA. 463+00.00 (RT) TO –L– STA. 464+00.00 (RT)
–L– STA. 472+50.00 (RT) TO –L– STA. 474+50.00 (RT)
–L– STA. 473+50.00 (LT) TO –L– STA. 475+00.00 (LT)
–L– STA. 476+00.00 (RT) TO –L– STA. 477+00.00 (RT)
–L– STA. 479+00.00 (LT) TO –L– STA. 480+00.00 (LT)
–L– STA. 482+00.00 (LT) TO –L– STA. 482+50.00 (LT)
–L– STA. 490+00.00 (RT) TO –L– STA. 491+00.00 (RT)
–L– STA. 490+50.00 (LT) TO –L– STA. 492+00.00 (LT)
–L– STA. 493+00.00 (RT) TO –L– STA. 495+50.00 (RT)
–L– STA. 493+50.00 (LT) TO –L– STA. 496+00.00 (LT)
–L– STA. 503+50.00 (RT) TO –L– STA. 506+50.00 (RT)
–L– STA. 520+00.00 (LT) TO –L– STA. 520+50.00 (LT)
–L– STA. 520+00.00 (RT) TO –L– STA. 520+50.00 (RT)
–L– STA. 527+50.00 (LT) TO –L– STA. 528+50.00 (LT)
–L– STA. 529+50.00 (LT) TO –L– STA. 531+50.00 (LT)
–L– STA. 531+00.00 (RT) TO –L– STA. 531+50.00 (RT)
–L– STA. 535+00.00 (RT) TO –L– STA. 536+00.00 (RT)
–L– STA. 536+25.00 (LT) TO –L– STA. 537+00.00 (LT)
–L– STA. 548+00.00 (LT) TO –L– STA. 551+50.00 (LT)
–L– STA. 548+50.00 (RT) TO –L– STA. 553+00.00 (RT)
–L– STA. 562+00.00 (LT) TO –L– STA. 563+50.00 (LT)
–L– STA. 584+00.00 (LT) TO –L– STA. 588+50.00 (LT)
–L– STA. 584+50.00 (RT) TO –L– STA. 586+50.00 (RT)
–L– STA. 591+00.00 (LT) TO –L– STA. 592+50.00 (LT)
–L– STA. 591+50.00 (RT) TO –L– STA. 593+00.00 (RT)
–L– STA. 610+00.00 (LT) TO –L– STA. 612+00.00 (LT)
–L– STA. 626+25.00 (RT) TO –L– STA. 627+75.00 (RT)

NOTE: USE MILLED RUMBLE STRIPS FOR MEDIAN AND OUTSIDE ASPHALT PAVED SHOULDERS. SEE STD. 665.01

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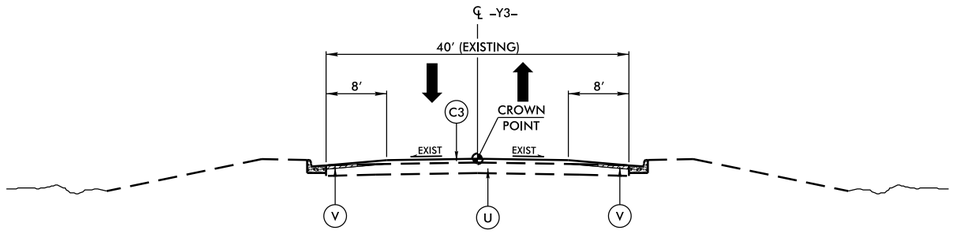
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	2-A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE

C1	1½" TYPE S9.5B
C2	2" TYPE S9.5B
C3	3" TYPE S9.5B
C4	VAR. DEPTH TYPE S9.5B
D1	2½" TYPE I19.0B
D2	3" TYPE I19.0B
D3	VAR. DEPTH TYPE I19.0B
E1	4" TYPE B25.0B
E2	4½" TYPE B25.0B
E3	VAR. DEPTH TYPE B25.0B
J1	8" ABC
J2	VAR. DEPTH ABC
P	PRIME COAT
R1	2'-6" CONC. C&G
R2	5" CONC. ISLAND (KEYED IN)
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING
W	VAR. DEPTH PAVEMENT (WEDGING)
Y	RUMBLE STRIPS



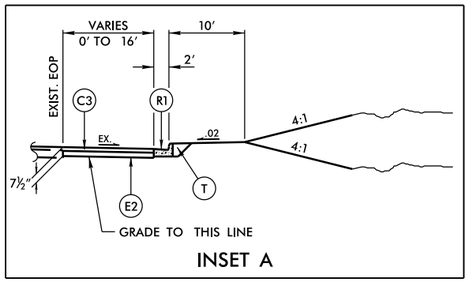
TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 FOR:

–Y3– STA. 18+50.00 TO –Y3– STA. 34+50.00

NOTES:

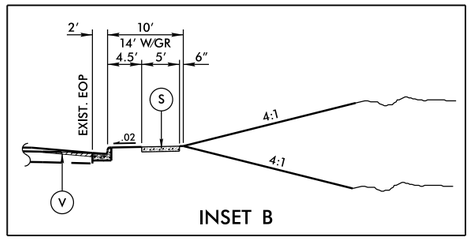
1) TRANSITION EOT WIDTH FROM 25' TO 40'
–Y3– STA. 14+50.00 TO –Y3– STA. 18+50.00
2) TRANSITION EOT WIDTH FROM 40' TO 26'
–Y3– STA. 34+50.00 TO –Y3– STA. 38+00.00



INSET A

USE WITH TYPICAL SECTION NO. 2:

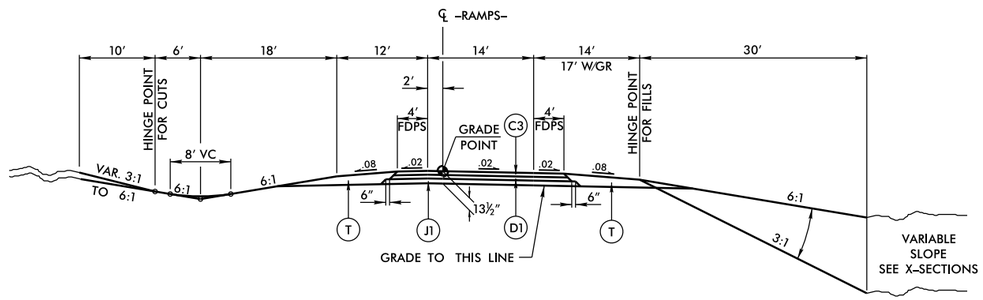
–Y3– STA. 19+34.00 (LT) TO –Y3– STA. 19+94.00 (LT)
–Y3– STA. 22+02.00 (LT) TO –Y3– STA. 24+02.00 (LT)
–Y3– STA. 30+65.00 (LT) TO –Y3– STA. 31+25.00 (LT)
–Y3– STA. 33+34.00 (LT) TO –Y3– STA. 35+34.00 (LT)



INSET B

USE WITH TYPICAL SECTION NO. 2:

–Y3– STA. 27+60.00 (RT) TO –Y3– STA. 38+00.00 (RT)



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 FOR:

–Y3RPA– STA. 10+00.00 TO –Y3RPA– STA. 30+00.02
–Y3RPD– STA. 10+00.00 TO –Y3RPD– STA. 26+40.83
–Y10RPA– STA. 10+00.00 TO –Y10RPA– STA. 18+43.00 (BEGIN BRIDGE)
–Y10RPA– STA. 20+43.00 (END BRIDGE) TO –Y10RPA– STA. 38+02.02
–Y10RPC– STA. 10+00.00 TO –Y10RPC– STA. 25+41.37
–Y10RPD– STA. 10+00.00 TO –Y10RPD– STA. 24+45.24

NOTE:

1) USE 3:1 FILL SLOPE IN WETLAND AREAS
–Y3RPA– STA. 17+00.00 (RT) TO –Y3RPA– STA. 18+50.00 (RT)
–Y3RPD– STA. 17+50.00 (LT) TO –Y3RPD– STA. 19+50.00 (LT)
–Y10RPA– STA. 26+00.00 (RT) TO –Y10RPA– STA. 26+50.00 (RT)
–Y10RPA– STA. 37+50.00 (RT) TO –Y10RPA– STA. 38+02.02 (RT)
–Y10RPD– STA. 10+00.00 (LT) TO –Y10RPA– STA. 10+75.00 (LT)

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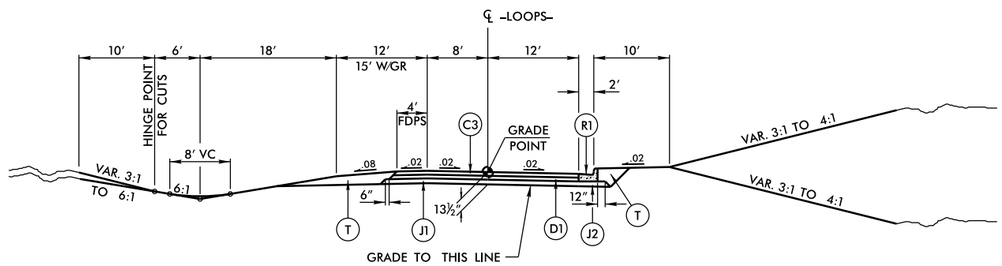
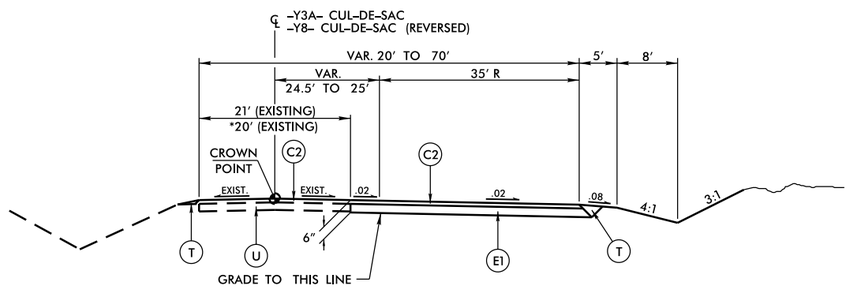


TYPICAL SECTION NO. 4

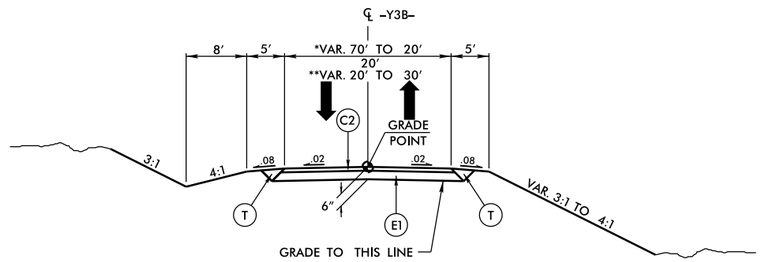
USE TYPICAL SECTION NO. 4 FOR:
–Y3LPA– STA. 10+00.00 TO –Y3LPA– STA. 21+37.85
–Y3LPD– STA. 10+00.00 TO –Y3LPD– STA. 19+93.14
–Y10LPA– STA. 10+00.00 TO –Y10LPA– STA. 24+13.14



TYPICAL SECTION NO. 5

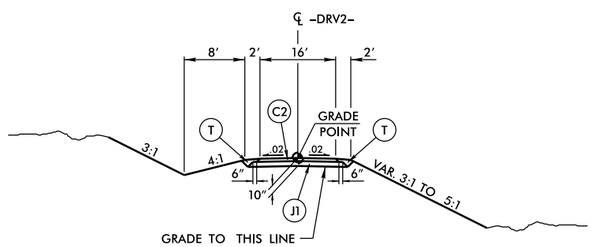
USE TYPICAL SECTION NO. 5 FOR:
–Y3A– STA. 13+75.00 TO –Y3A– STA. 15+00.00
*–Y8– STA. 31+25.00 TO –Y8– STA. 32+50.00

NOTE:
1) MILLING WILL BE REQUIRED TO HANDLE PAVEMENT TIE–IN.



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6 FOR:
*–Y3B– STA. 10+13.55 TO –Y3B– STA. 10+99.78
–Y3B– STA. 10+99.78 TO –Y3B– STA. 15+50.00
**–Y3B– STA. 15+50.00 TO –Y3B– STA. 16+25.00



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7 FOR:
–DRV2– STA. 14+39.11 TO –DRV2– STA. 16+00.00

PROJECT REFERENCE NO.	SHEET NO.
R–2514D	2–B

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE

C1	1½″ TYPE S9.5B
C2	2″ TYPE S9.5B
C3	3″ TYPE S9.5B
C4	VAR. DEPTH TYPE S9.5B
D1	2½″ TYPE I19.0B
D2	3″ TYPE I19.0B
D3	VAR. DEPTH TYPE I19.0B
E1	4″ TYPE B25.0B
E2	4½″ TYPE B25.0B
E3	VAR. DEPTH TYPE B25.0B
J1	8″ ABC
J2	VAR. DEPTH ABC
P	PRIME COAT
R1	2′–6″ CONC. C&G
R2	5″ CONC. ISLAND (KEYED IN)
S	4″ CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING
W	VAR. DEPTH PAVEMENT (WEDGING)
Y	RUMBLE STRIPS

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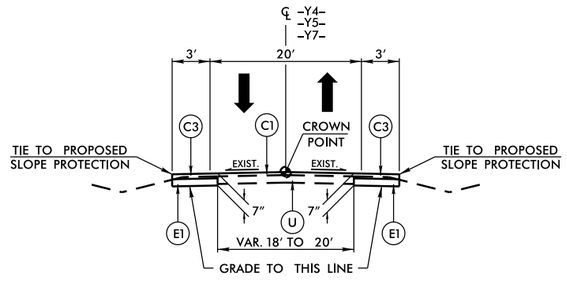
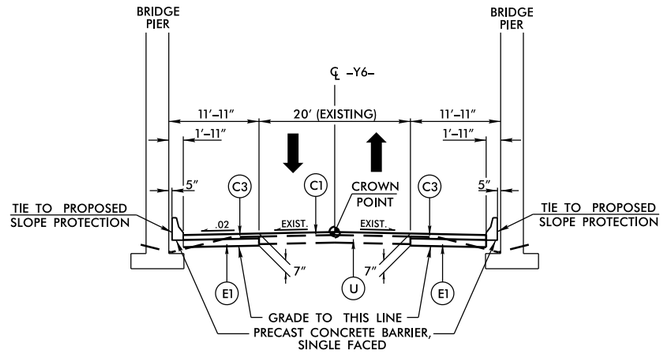


TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8 FOR:

–Y4– STA. 26+98.00 TO –Y4– STA. 28+90.00
–Y5– STA. 12+13.00 TO –Y5– STA. 13+90.00
–Y7– STA. 16+23.00 TO –Y7– STA. 17+86.00



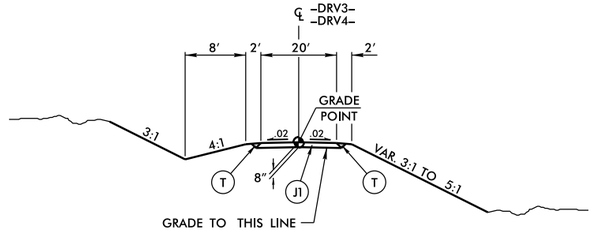
TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9 FOR:

–Y6– STA. 15+20.00 TO –Y6– STA. 17+75.00 LT.
–Y6– STA. 14+40.00 TO –Y6– STA. 16+96.00 RT.

NOTE:

1) WIDEN SHOULDERS TO ACCOMMODATE PROPOSED GUARDRAIL (SEE X–SECTIONS).
–Y6– STA. 12+25.00 TO –Y6– STA. 15+20.00 LT.
–Y6– STA. 12+25.00 TO –Y6– STA. 14+40.00 RT.
–Y6– STA. 17+75.00 TO –Y6– STA. 20+00.00 LT.
–Y6– STA. 16+96.00 TO –Y6– STA. 20+00.00 RT.



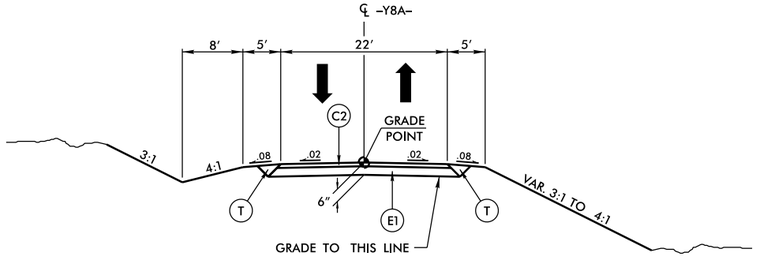
TYPICAL SECTION NO. 10

USE TYPICAL SECTION NO. 10 FOR:

–DRV3– STA. 10+08.39 TO –DRV3– STA. 24+25.00
–DRV4– STA. 10+10.00 TO –DRV4– STA. 13+22.25

NOTE:

1) TRANSITION FROM 20′ TO EXISTING
–DRV3– STA. 24+25.00 TO –DRV3– STA. 24+75.00



TYPICAL SECTION NO. 11

USE TYPICAL SECTION NO. 11 FOR:

–Y8A– STA. 10+09.81 TO –Y8A– STA. 57+81.93

NOTES:

1) TRANSITION FROM TYPICAL NO. 11 TO EXISTING
–Y8A– STA. 57+81.93 TO –Y8A– STA. 58+31.93
2) USE 3:1 FILL SLOPE IN WETLAND AREAS
–Y8A– STA. 10+50.00 (LT) TO –Y8A– STA. 14+00.00 (LT)
–Y8A– STA. 11+00.00 (RT) TO –Y8A– STA. 12+50.00 (RT)
–Y8A– STA. 33+00.00 (LT) TO –Y8A– STA. 35+50.00 (LT)
–Y8A– STA. 33+50.00 (RT) TO –Y8A– STA. 35+50.00 (RT)
–Y8A– STA. 40+50.00 (LT) TO –Y8A– STA. 41+50.00 (LT)
–Y8A– STA. 40+50.00 (RT) TO –Y8A– STA. 41+50.00 (RT)

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	2-C

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE

C1	1½″ TYPE S9.5B
C2	2″ TYPE S9.5B
C3	3″ TYPE S9.5B
C4	VAR. DEPTH TYPE S9.5B
D1	2½″ TYPE I19.0B
D2	3″ TYPE I19.0B
D3	VAR. DEPTH TYPE I19.0B
E1	4″ TYPE B25.0B
E2	4½″ TYPE B25.0B
E3	VAR. DEPTH TYPE B25.0B
J1	8″ ABC
J2	VAR. DEPTH ABC
P	PRIME COAT
R1	2′–6″ CONC. C&G
R2	5″ CONC. ISLAND (KEYED IN)
S	4″ CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING
W	VAR. DEPTH PAVEMENT (WEDGING)
Y	RUMBLE STRIPS

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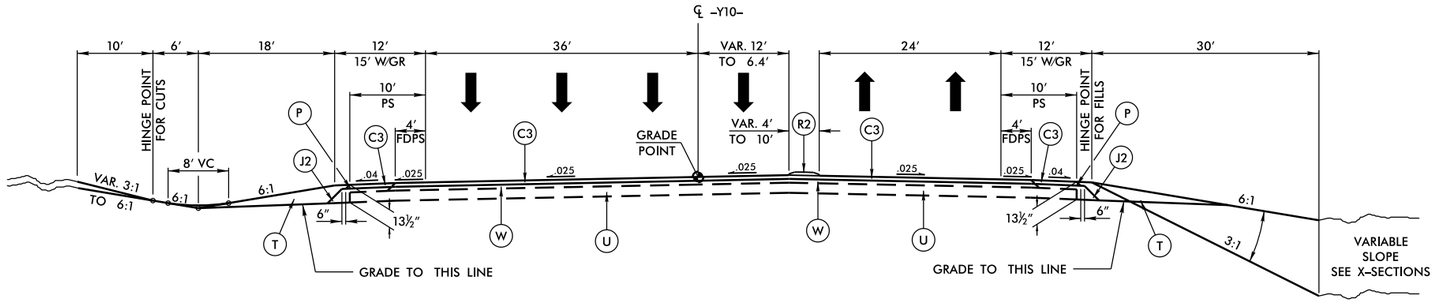
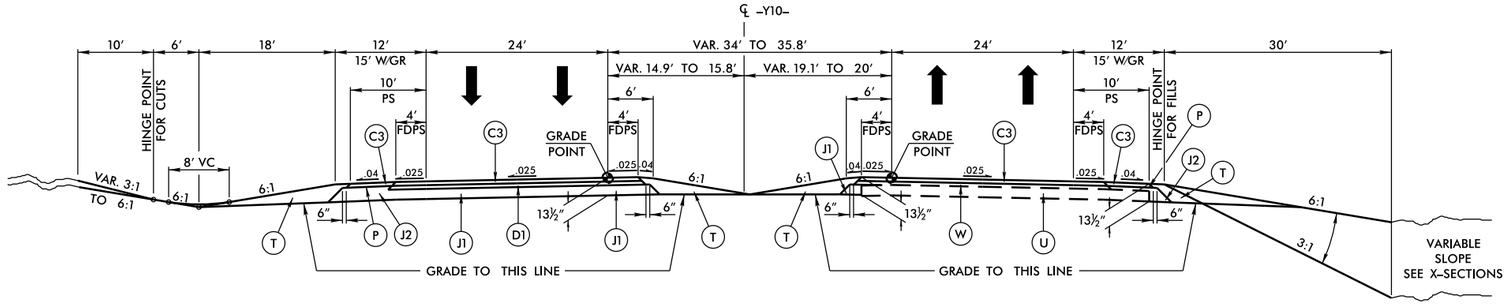


TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12 FOR:
–Y10– STA. 15+76.00 TO –Y10– STA. 16+16.39

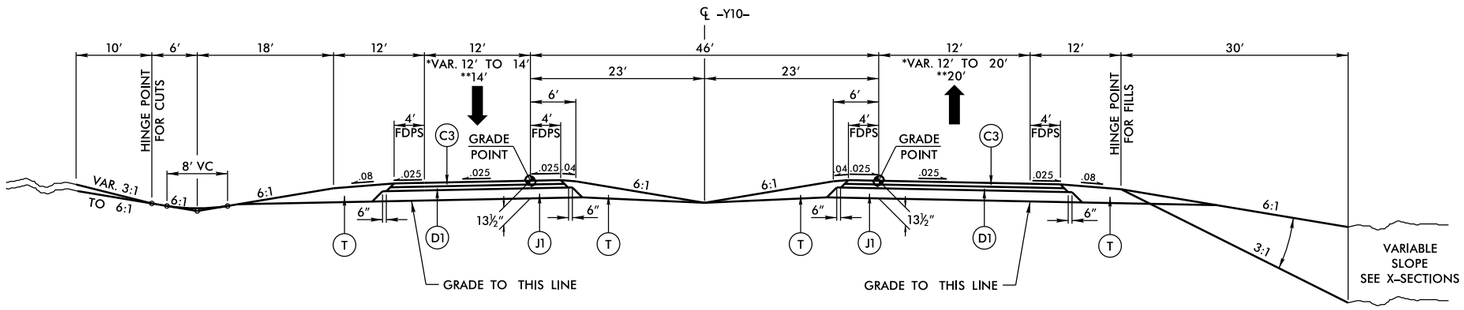
NOTES:
1) MILL EXISTING PAVEMENT AS DIRECTED BY ENGINEER
2) TRANSITION FROM TYPICAL NO. 12 TO TYPICAL NO. 13 –Y10– STA. 16+16.39 TO –Y10– STA. 17+00.00



TYPICAL SECTION NO. 13

USE TYPICAL SECTION NO. 13 FOR:
–Y10– STA. 17+00.00 TO –Y10– STA. 18+33.89

NOTES:
1) MILL EXISTING PAVEMENT AS DIRECTED BY ENGINEER
2) TRANSITION FROM TYPICAL NO. 13 TO TYPICAL NO. 14 –Y10– STA. 18+33.89 TO –Y10– STA. 23+06.00



TYPICAL SECTION NO. 14

USE TYPICAL SECTION NO. 14 FOR:
–Y10– STA. 23+06.00 TO –Y10– STA. 24+70.00
*–Y10– STA. 24+70.00 TO –Y10– STA. 26+00.00
**–Y10– STA. 26+00.00 TO –Y10– STA. 27+39.87 (BEGIN BRIDGE)
**–Y10– STA. 29+23.67 (END BRIDGE) TO –Y10– STA. 30+00.00

NOTE:
1) USE 3:1 FILL SLOPE IN WETLAND AREAS –Y10– STA. 29+44.42 (LT) TO –Y10– STA. 30+00.00 (LT)

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	2-D
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE

C1	1½″ TYPE S9.5B
C2	2″ TYPE S9.5B
C3	3″ TYPE S9.5B
C4	VAR. DEPTH TYPE S9.5B
D1	2½″ TYPE I19.0B
D2	3″ TYPE I19.0B
D3	VAR. DEPTH TYPE I19.0B
E1	4″ TYPE B25.0B
E2	4½″ TYPE B25.0B
E3	VAR. DEPTH TYPE B25.0B
J1	8″ ABC
J2	VAR. DEPTH ABC
P	PRIME COAT
R1	2′–6″ CONC. C&G
R2	5″ CONC. ISLAND (KEYED IN)
S	4″ CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING
W	VAR. DEPTH PAVEMENT (WEDGING)
Y	RUMBLE STRIPS

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

ECM

BM #13
SEE SHEET 1-F
ELEV. 26.16'

R-2514C
-BL- 24 POT 288+83.04
R-2514D
-BL- 24 POT 5+00.00

BEGIN R-2514D
R/W ACQUISITION

S 76°58'
3,140.99' S

+54.50 -L-
125.00' (LT.)
BEGIN C/A FENCE

+00.00 -L-
125.00' (LT.)

1

BELL BROTHERS FARM, INC
DB 310 PG 71
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

10' SOIL

105.21'

-BL- 25 PINC 11+65.42

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground
3:1
D
3:1
b
1'/Ft.
FILL SLOPE
B
Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 300+00 LT. TO STA. 301+50 LT. -L-

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

295

N 11° 39' 27.2" E

300

(050)

10% PS

24"

.025

4'

MED.

PS

24"

.025

10' PS

12' PS

12' PS

8:1 GRAU 350

CAT-1

(040)

F HW
BURIED 20%

1

BELL BROTHERS FARM, INC
DB 310 PG 71
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

+50.00 -L-
120.00' (RT.)

+88.22 -L-
120.00' (RT.)
BEGIN C/A FENCE

BEGIN R-2514D
R/W ACQUISITION

END PROJECT R-2514C
BEGIN PROJECT R-2514D
-L- STA. 300+00.00

MATCHLINE -L- STA. 303+00.00 SEE SHEET 5

N 08°33'40" E
1758.58'

SEE SHEET 32 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

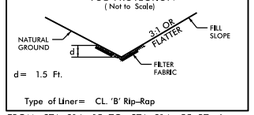
REVISIONS 8/17/99

DETAIL 'LL'
PIPE OUTLET CHANNEL
(Not to Scale)

Length= 16 Ft.
d= 1.5 Ft.
Est.= 8 Tons of Class I Rip-Rap
Est.= 16 SY Geotextile

FROM STA. 303+16 TO STA. 303+34 -L-

DETAIL 'B'
TOE PROTECTION
(Not to Scale)



d= 1.5 Ft.

Type of Liner= CL 'B' Rip-Rap

FROM STA. 314+15 TO STA. 314+55 RT. -L-

MATCHLINE -L- STA. 303+00.00 SEE SHEET 4

MATCHLINE -L- STA. 315+00.00 SEE SHEET 6

-L- TS Sta. 303+88.75

-L- SC Sta. 305+38.75

-BL- 26 PINC 18+35.19

-BL- 27 PINC 24+40.56

BM #14
SEE SHEET 1-F
ELEV. 29.52'

1

BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

+88.75 -L-
125.00' (LT.)

+38.75 -L-
125.00' (LT.)

+30.00 -L-
125.00' (LT.)

CHORD

CL 'B' RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

0501 BURIED 20%
8" RCP-IV
PIPE OUTLET CHANNEL
SEE DETAIL 'LL'

0503 15" RCP-IV
+56.6'

300' TAPER

1350' FULL LANE

CAT-1
8:1
10' PS
12' PS

305

310

N 12°39'27.2" E

0502 FS 2GI

0504 15" RCP-IV
+85.80'

0505 FS 2GI

0506 FS 2GI

0508 15" RCP-IV 2GI

10' PS
8:1
GRAU 350

0507 18" RCP-IV W/ELBOWS

BEGIN SBG
-L- 311+54

0509 CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

0510 36" RCP-IV
+85.05'

CL 'I' RIP RAP
EST. 10 TONS
EST. 23 SY GEOTEX

+88.75 -L-
120.00' (RT.)

+38.75 -L-
120.00' (RT.)

+50.00 -L-
120.00' (RT.)

+21.37
385.87'

1

BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

N 08°33'40" E
1214.67'

-L-	
PIs Sta 304+88.75	PI Sta 310+63.74
Θs = 0° 33' 43.5"	Δ = 7° 51' 24.5" (RT)
Ls = 150.00'	D = 0° 44' 58.0"
LT = 100.00'	L = 1,048.34'
ST = 50.00'	T = 524.99'
	R = 7,645.00'
	SE = .03
	R0 = 150'

SBG - "SHOULDER BERM GUTTER"

SEE SHEET 32 FOR -L- PROFILE

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REVISIONS
R/W REVISION 6-24-14 (DWG) ADDED ADDITIONAL PUE AT –Y3– STA. 18+68.00 RT. ON PARCEL 1 (BELL BROTHERS FARM, INC). REVISED PUE ON PARCEL 36 (WILLIAM A. HILL).

PROJECT REFERENCE NO.	SHEET NO.
R-2540	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/1987 2007

MATCHLINE –Y3– STA. 18+50.00 SEE SHEET 29

MATCHLINE –Y3A– STA. 15+50.00 SEE SHEET 29

MATCHLINE –L– STA. 315+00.00 SEE SHEET 5

MATCHLINE –L– STA. 341+00.00 SEE SHEET 7

MATCHLINE –Y3– STA. 34+00.00 SEE SHEET 30

A

D

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG - "SHOULDER BERM GUTTER"
PS - "PAVED SHOULDER"
(NOT TO SCALE)

BEGIN BRIDGE –L– STA. 319+69.60
BEGIN APPROACH SLAB –L– STA. 319+45.49
END BRIDGE –L– STA. 320+90.60
END APPROACH SLAB –L– STA. 321+14.71
TYPE B-77 SBG 4' PS 8:1
–Y3PA– TYPE B-77 –L– TYPE B-77 4' PS
BEGIN APPROACH SLAB –L– STA. 319+62.22
BEGIN BRIDGE –L– STA. 319+86.34
END BRIDGE –L– STA. 321+07.34
END APPROACH SLAB –L– STA. 321+31.45
TYPE B-77 SBG CAT-1 6' PS

DETAIL 'E' SPECIAL CUT DITCH (Not to Scale)
DETAIL 'J' LATERAL BASE DITCH (Not to Scale)
DETAIL 'N' LATERAL BASE DITCH (Not to Scale)
DETAIL 'M' STANDARD BASE DITCH (Not to Scale)
DETAIL 'O' LATERAL BASE DITCH (Not to Scale)
DETAIL 'K' STANDARD 'V' DITCH (Not to Scale)
DETAIL 'S' SPECIAL BACK OF CURB CUT DITCH (NOT TO SCALE)
DETAIL 'T' SPECIAL BACK OF CURB CUT BASE DITCH (NOT TO SCALE)
DETAIL 'U' FALSE SUMP (Not to Scale)

Ditch Grades	%
Min. in Rock	0.5
Min. in Earth	1.0
Other Earth	2.0

Ditch Grades	%
Min. in Rock	0.5
Min. in Earth	1.0
Other Earth	2.0

–L– POT Sta. 321+05.05=
–Y3PD– POT Sta. 321+05.05
–Y3– POT Sta. 321+05.05
–Y3PA– POT Sta. 321+05.05
–Y3PD– SC Sta. 321+00.00
–Y3PD– ST Sta. 321+00.00
–Y3PA– SC Sta. 321+00.00
–Y3PA– ST Sta. 321+00.00
–Y3– SC Sta. 321+00.00
–Y3– ST Sta. 321+00.00
–Y3– POT Sta. 321+05.05=
–Y3PA– POT Sta. 321+05.05
–Y3– POT Sta. 321+05.05
–Y3PD– POT Sta. 321+05.05
–Y3– POT Sta. 321+05.05=
–Y3PD– POT Sta. 321+05.05
–Y3– POT Sta. 321+05.05=
**–Y3PA

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	6-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

R/W REVISION 03-26-14 (DWG) - PROPERTY OWNER NAME CHANGE ON PARCELS 9,11, AND 100 TO (JANIE MAE SHACK JAMAR STRAYHORN). PARCELS 4 AND 5 WERE COMBINED TO PARCEL 4 (BRITT A. EMANUEL). PARCELS 11 AND 14 WERE COMBINED TO PARCEL 11 (JANIE MAE SHACK JAMAR STRAYHORN). PARCELS 16 AND 17 WERE COMBINED TO PARCEL 16 (UNKNOWN). MOVED THE C/A BOUNDARY FROM SOUTH OF -Y3- TO THE NORTHERN PROPOSED R/W LINE OF -Y3B-. DELETED THE R/W FROM THE SOUTH SIDE OF -Y3- STA.27+57.00 TO STA.31+80.00 RT. AND THE R/W ALONG THE WESTERN PROPERTY LINES OF OF PARCELS 2 AND 3. ALL TCE AND PDE IN THE AREA BETWEEN -Y3- AND -Y3B- WERE DELETED FROM ALL PARCELS.

-Y3- STA. 26+00.00

MATCHLINE -Y3- STA. 34+00.00 SEE SHEET 30

BEGIN 5' CONC. SIDEWALK -Y3- STA. 27+60.00 RT.

BEGIN CONSTRUCTION -Y3B- STA. 10+13.55

END CONSTRUCTION -DRV2- STA. 16+00.00

-Y3- POT Sta. 32+32.00= -Y3B- POT Sta. 16+75.00

-Y3B- POT Sta. 10+00.00

-Y3B- PT Sta. 15+90.93

-Y3B- PC Sta. 12+74.19

-Y3B- POC Sta. 14+48.13= -DRV2- POT Sta. 14+15.29

-DRV2- PC Sta. 14+61.36

-DRV2- PT Sta. 15+32.51

-DRV2- POT Sta. 16+00.00

1 BELL BROTHERS FARM, INC DB 30 PG 71 DB 80 PG 63 DB 80 PG 65 DB 80 PG 67 DB 80 PG 69 DB 218 PG 498 MB 12 PG 9

2 JOHN RAY EUBANKS DB 285 PG 773 MB 2 PG 101

3 MOULTRY L. SPENCER, ET AL DB 243 PG 726 MB 2 PG 101

4 BRITT A. EMANUEL DB 235 PG 635 MB 2 PG 101

6 ROSA B. STRAYHORN DB 181 PG 236 MB 2 PG 101

7 MARY F. BENDER DB 227 PG 880 MB 2 PG 101

8 GERTRUDE ISLER DB 137 PG 86 MB 2 PG 101

9 JANIE MAE SHACK JAMAR STRAYHORN ESTATE FILE 02-E-62 MB 2 PG 101

10 JANIE MAE SHACK ESTATE FILE 05-E-42

11 JANIE MAE SHACK JAMAR STRAYHORN ESTATE FILE 02-E-62 MB 2 PG 101

12 YVASNE SIMMONS JANIE SHACK ESTATE FILE 02-E-62 MB 2 PG 101

13 KETSHIA SIMMONS JANIE SHACK ESTATE FILE 02-E-62 MB 2 PG 101

15 JESSE CLARK C/O JANIE SHACK DB 109 PG 373

16 UNKNOWN

19 JONNIE F. BROWN, JR. DB 180 PG 47

21 WILDER ST

22 BROWN LN

26 LONNIE D. SPENCER, ET UX (DEED) DB 87 PG 160

27 MCARTHUR CHERRY, ET AL DB 281 PG 123

28 DEWARD E. DUDLEY, ET UX DB 294 PG 225

29 COUNTY OF JONES DB 322 PG 786

30 JOHN MARSHALL, ET UX DB 109 PG 369

31 ELIZABETH FRANKLIN DB 108 PG 242

32 UNKNOWN OWNER PER TAX OFFICE

33 JOHN L. SAMMONS, ET UX DB 194 PG 902

34 ROBERT S. OLLISON, ET UX DB 132 PG 81

36 WILLIAM A. HILL DB 321 PG 77 DB 313 PG 128

99 MOULTRY L. SPENCER, ET AL DB 243 PG 726 MB 2 PG 101

100 JANIE MAE SHACK JAMAR STRAYHORN ESTATE FILE 02-E-62 MB 2 PG 101 JONNIE F. BROWN, JR. DB 180 PG 47

MILTON GARDNER DB 282 PG 207 MB 2 PG 101

NAD 83/NSRS 2007

GRAPHIC SCALE
30 15 0 30 60
PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

S 68°05'59" E
25.74'

N 12°45'49" E
376.79'

S 11°53'53" W
451.40'

-L-
PI Sta 347+21.81
Δ = 12° 04' 25.6" (LT)
D = 0° 52' 24.3"
L = 1,382.37'
T = 693.75'
R = 6,560.00'
SE = .04
RO = 200'

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, 3:1, b, 1':1Ft., Fill Slope
Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 346+50 TO STA. 348+50 RT. -L-
FROM STA. 348+50 TO STA 350+00 RT. -L-
FROM STA. 348+50 TO STA. 351+00 LT. -L-
FROM STA. 345+00 TO STA. 348+50 LT. -L-

DETAIL 'E'
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D= 1.5 Ft.

FROM STA. 351+00 TO STA. 354+10 LT. -L-

MATCHLINE -L- STA. 341+00.00 SEE SHEET 6

MATCHLINE -L- STA. 354+00.00 SEE SHEET 8

54
RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
SECOND TRACT

-BL- 36 PINC 57+79.02

-BL- 37 PINC 65+72.45

DRY POND

+87.08
496.81'

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

CL 'I' RIP RAP
EST. 10 TONS
EST. 23 SY GEOTEXTILE

SPECIAL CUT DITCH
GRASS LINED
SEE DETAIL 'E'

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

10' PS
24'
.04
4' PS
4' SHLD.
MED.
36'
580' FULL LANE
300' TAPER
15" RCP-IV
36" RCP-IV
30" RCP-IV
FS
HW
2GI-D
3GI
0705
0706
0707
0703
0702
0701
0704
0708
350

54
RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
SECOND TRACT

SEE SHEET 34 FOR -L- PROFILE

REVISIONS
8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

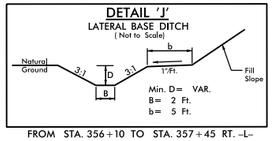
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

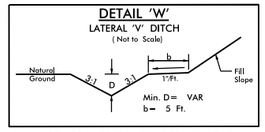
R/W REVISION 6-24-14 (DNG) - ADDED PUE TO PARCEL 54 (RICHARD H. PARKER,SR.ET UX) AT THE FOLLOWING LOCATIONS:-Y4- STA.25+57.00 TO STA.26+57.00 RT. -Y4- STA.29+70.00 TO STA.32+70.00 RT. AND -DRV3- STA.10+43.00 TO STA.16+50.72 LT. REVISED THE TCE FROM -DRV3- STA.10+30.00 TO STA.16+50.72 LT.

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



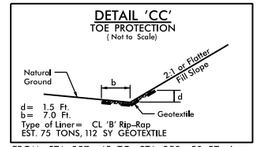
FROM STA. 356+10 TO STA. 357+45 RT. -L-

DETAIL 'W'
LATERAL 'V' DITCH
(Not to Scale)



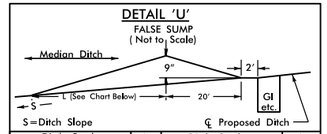
FROM STA. 354+50 TO STA. 358+00 LT. -L-
FROM STA. 358+00 TO STA. 360+50 LT. -L-
FROM STA. 358+50 TO STA. 360+50 RT. -L-
FROM STA. 364+00 TO STA. 370+50 RT. -L-

DETAIL 'CC'
TOE PROTECTION
(Not to Scale)



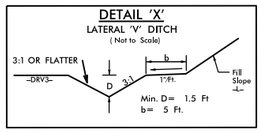
FROM STA. 357+45 TO STA. 358+50 RT. -L-

DETAIL 'U'
FALSE SUMP
(Not to Scale)



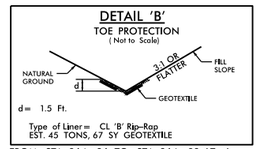
Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL 'X'
LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 11+00 TO STA. 14+50 RT. -DRV3-

DETAIL 'B'
TOE PROTECTION
(Not to Scale)



FROM STA. 364+26 TO STA. 364+83 LT. -L-

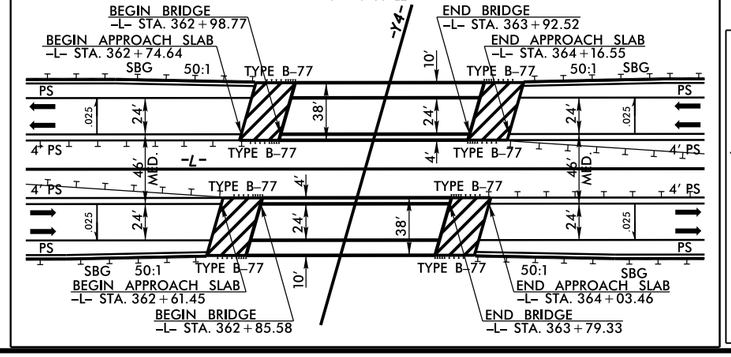
MATCHLINE -L- STA. 354+00.00 SEE SHEET 7

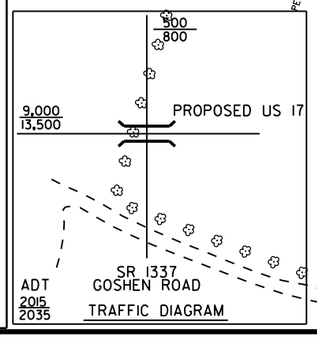
-L- CS Sta. 354+10.43
-L- ST Sta. 356+10.43
+10.43 -L- 125.00' (LT.)
BEGIN SBG -L- 356+61
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE
+00.00 -L- 150.00' (LT.)
LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'
CHORD
CAT-1 8:1
15" RCP-IV 2GI
10' PS
4' PS
12' PS
8:1 GRAU 350
2GI-D
30" RCP-IV
15" CSP
GRADE MEDIAN DITCH TO DRAIN AROUND ATTENUATOR
NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE
N 6°49'04.6" E
8:1 TYPE M-350
TYPE M-350
TOE PROTECTION SEE DETAIL 'CC'
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE
+10.43 -L- 125.00' (RT.)
BEGIN SBG -L- 356+12
2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'
+30.00 -L- 155.00' (RT.)
CL 'B' RIP RAP EST. 5 TONS EST. 16 SY GEOTEXTILE
LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'
54 RICHARD H. PARKER, SR. ET UX DB 165 PG 729 SECOND TRACT
+34.61 482°32'
54 RICHARD H. PARKER, SR. ET UX DB 165 PG 729 FIRST TRACT
-Y4- PT Sta. 25+30.48
-Y4- POT Sta. 25+52.88=
-DRV3- POT Sta. 10+00.00
+46.00 -L- 156.82' (LT.) C/A FENCE
+57.00 -Y4- 30.00' (RT.)
+15.87 -L- 160.00' (LT.)
REMOVE EXISTING
BEGIN CONSTRUCTION -Y4- STA. 26+98.00
-L- POT Sta. 363+38.90=
-Y4- POC Sta. 27+95.56
Δ = 105°57'45.24"
+50.61 -L- 150.00' (LT.)
+20.00 -L- 150.00' (LT.) C/A FENCE
END C/A FENCE
END SBG AT APPROACH SLAB
50:1
TOE PROTECTION SEE DETAIL 'B' BEGIN C/A FENCE
CL 'B' RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
BEGIN SBG AT APPROACH SLAB
+00.00 -L- 130.00' (LT.)
LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'
+00.00 -L- 140.00' (LT.)
-DRV3- PT Sta. 10+84.31
-DRV3- PC Sta. 10+23.48
+77.64 -Y4- 30.68' (LT.)
+74.21 -Y4- 51.00' (LT.)
+30.71 -DRV3- 30.00' (LT.)
+00.00 -Y4- 51.00' (LT.)
+84.81 -DRV3- 30.00' (LT.)
NAD 83/NSRS 2007
54 RICHARD H. PARKER, SR. ET UX DB 165 PG 729 THIRD TRACT
N 11°04'03.0" E
209.05'
S 11°33'22" W
PUE
ISBRO
BEGIN SBG AT APPROACH SLAB
-BL- 38 PINC 75+82.31=
-BY4- PINC 23+96.96
+57.00 -L- 155.00' (RT.)
+25.77 -L- 155.00' (RT.)
END CONSTRUCTION -Y4- STA. 28+90.00
+30.00 -L- 155.00' (RT.) C/A FENCE
+46.00 -L- 155.00' (RT.)
+63.37 -L- 155.00' (RT.)
S 66°13'02.2" E
+70.00 -Y4- 30.00' (RT.) 46.00' (RT.)
PEACH ORCHARD
MATCHLINE -DRV3- STA. 14+00.00 SEE SHEET 9
MATCHLINE -L- STA. 368+00.00

-L-	
PI Sta 347+21.81	PIs Sta 354+77.10
Δ = 12°04'25.6" (LT)	Θs = 0°52'24.3"
D = 0°52'24.3"	Ls = 200.00'
L = 1,382.37'	LT = 133.33'
T = 693.75'	ST = 66.67'
R = 6,560.00'	
SE = .04	
RO = 200'	

-Y4-	-DRV3-
PI Sta 23+71.52	PI Sta 10+54.26
Δ = 5°41'48.8" (RT)	Δ = 11°42'46.8" (LT)
D = 1°47'25.8"	D = 19°05'54.9"
L = 318.17'	L = 61.33'
T = 159.22'	T = 30.77'
R = 3,200.00'	R = 300.00'

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG - "SHOULDER BERM GUTTER"
PS - "PAVED SHOULDER"
(NOT TO SCALE)





SEE SHEET 34 FOR -L- PROFILE
SEE SHEET 51 FOR -Y4- PROFILE
SEE SHEET 51 FOR -DRV3- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

25-JUN-2014 jl2l
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$$$$ICTRANS$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

R/W REVISION 6-24-14 (DWG) - ADDED PUE TO PARCEL 54 (RICHARD H. PARKER,SR.ET UX) AT THE FOLLOWING LOCATIONS: -Y4- STA. 25+57.00 TO STA. 26+57.00 RT.-
-Y4- STA. 29+70.00 TO STA. 32+70.00 RT. AND -DRV3- STA. 10+30.00 TO STA. 16+50.72 LT. REVISED THE TCE FROM -DRV3- STA. 10+31.00 TO STA. 16+50.72 LT.
ON PARCEL 54 (RICHARD H. PARKER,SR.ET UX)..

25-JUN-2014 11:21
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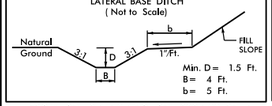
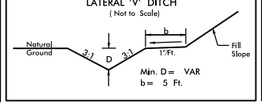
DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 375+07 TO STA. 383+00 RT. –L–

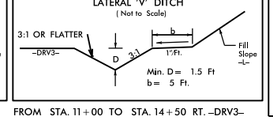
DETAIL 'W'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= VAR
b= 5 Ft.

FROM STA. 364+00 TO STA. 370+50 RT. –L–

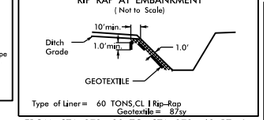
DETAIL 'X'
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft
b= 5 Ft.

FROM STA. 11+00 TO STA. 14+50 RT. –DRV3–

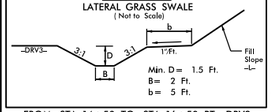
DETAIL 'AA'
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 60 TONS,CL 1 Rip-Rap
Geotextile = 87sy

FROM STA. 372+30 TO STA. 372+62 RT. –L–
FROM STA. 17+39 TO STA. 17+65 LT. –DRV3–

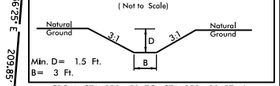
DETAIL 'Q'
LATERAL GRASS SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 14+50 TO STA. 16+50 RT. –DRV3–

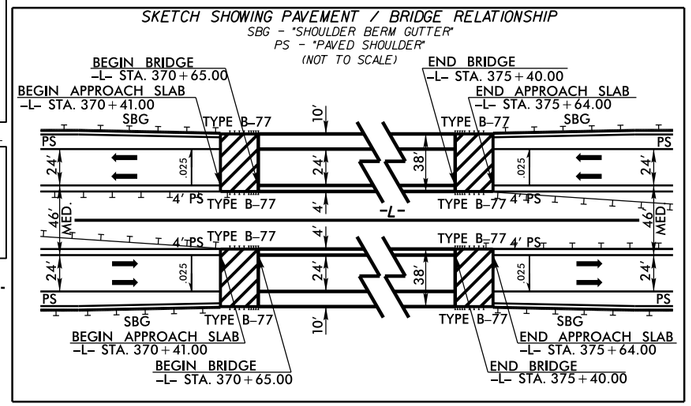
DETAIL 'EE'
GRASS SWALE
(Not to Scale)



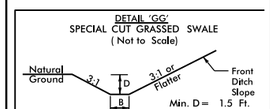
Min. D= 1.5 Ft.
B= 3 Ft.

FROM STA. 370+50 TO STA. 372+30 RT. –L–

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG - "SHOULDER BERM GUTTER"
PS - "PAVED SHOULDER"
(NOT TO SCALE)



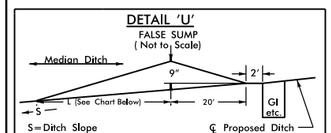
DETAIL 'GG'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.

FROM STA. 17+00 TO STA. 18+00 RT. –DRV3–
FROM STA. 18+28 TO STA. 20+16 RT. –DRV3–

DETAIL 'U'
FALSE SUMP
(Not to Scale)

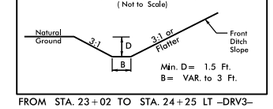


S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

NAD 83/NSRS 2007

DETAIL 'BB'
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= VAR. to 3 Ft.

FROM STA. 23+02 TO STA. 24+25 LT –DRV3–

MATCHLINE –L– STA. 368+00.00 SEE SHEET 8

MATCHLINE –L– STA. 382+00.00 SEE SHEET 10

–DRV3–

AMERICAN LEGION POST NUMBER 64
DB 198 PG 382
PLAT CAB. A SLIDE 183A

S 11°21'28" W 209.58'
S 11°21'28" W 315.00'
S 11°21'28" W 78.90'

–DRV3– PC Sta. 16+50.72
–DRV3– PT Sta. 17+31.97
–L– POT Sta. 374+95.00=
–DRV4– POT Sta. 11+93.99
Δ = 90° 00' 00.00"
–DRV3– PC Sta. 18+28.06
–L– POT Sta. 372+06.16=
–DRV3– RT Sta. 18+96.47
Δ = 90° 00' 00.00"
–DRV3– PC Sta. 19+44.30
–DRV4– PT Sta. 11+38.37
–DRV4– PC Sta. 10+83.36
–DRV3– PC Sta. 21+39.78
–DRV3– POC Sta. 22+65.36=
–DRV4– POT Sta. 10+00.00
–DRV3– PT Sta. 23+02.41
–DRV3– PT Sta. 20+78.55
–DRV4– POT Sta. 13+22.25
–DRV3– PC Sta. 23+62.46
–DRV3– PT Sta. 24+75.00

54 RICHARD H. PARKER, SR. ET UX
DB 165 PG 729
THIRD TRACT

54 RICHARD PARKER, ET UX
DB 254 PG 544

55 1st CEMETERY
DB 219 PG 52
PC "B" SLIDE 280

2nd CEMETERY
DB 219 PG 52
PC "B" SLIDE 280

-BL- 40 PINC 84+62.95
-BL- 41 PINC 88+45.95
-BL- 39 PINC 81+22.72

END SBG AT APPROACH SLAB
BEGIN SBG AT APPROACH SLAB
END CONSTRUCTION –DRV4– STA. 13+22.25
END CONSTRUCTION –DRV3– STA. 24+75.00
BEGIN C/A FENCE

PUE
SPECIAL CUT BASE DITCH PSRM LINED SEE DETAIL 'MM'
2' LATERAL GRASSED SWALE SEE DETAIL 'Q'
3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'
LATERAL 'V' DITCH GRASS LINED SEE DETAIL 'W'
LATERAL BASE DITCH SEE DETAIL 'L'
SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'E'
RIP RAP AT EMBANKMENT SEE DETAIL AA
2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'
SPECIAL CUT BASE DITCH GRASSED SEE DETAIL 'BB'

CLASS 'II' RIP RAP
CL 'B' RIP RAP EST. 1 TONS EST. 5 SY GEOTEXTILE
CL 'B' 12'X15' RIP RAP PAD EST. 17.5 TONS EST. 70 SY GEOTEXTILE
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

15" RCP–IV
18" RCP–IV
45° ELEC
15" W ELBOWS
PROP 2 @ 8'-0" x 8' RCBC
JB w/MH
HW
GRADE TO DRAIN
NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

TYPE M–350 8:1
TYPE B–77
4' PS
50:1
2GI
3GI
2' SBG
2' SBG
2' SBG

8/17/99

REVISIONS

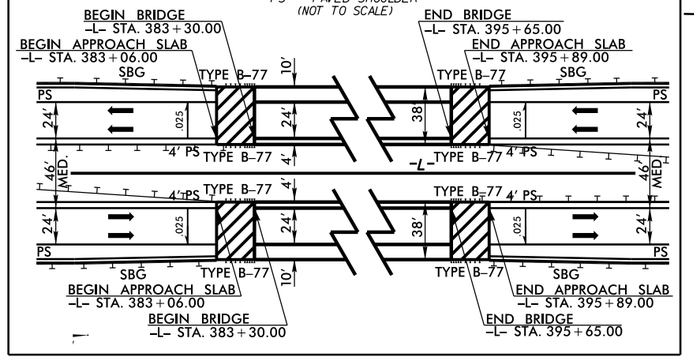
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP

SBG - "SHOULDER BERM GUTTER"
PS - "PAVED SHOULDER"
(NOT TO SCALE)



MATCHLINE -L- STA. 382+00.00 SEE SHEET 9

MATCHLINE -L- STA. 396+00.00 SEE SHEET 11

(54) RICHARD PARKER, ET UX
DB 254 PG 544

(56) THOMAS B. MOORE, ET AL
DB 306 PG 520

-BL- 44 PINC 101+83.44

-BL- 43 PINC 100+31.19

-BL- 42 PINC 98+42.77

-BL- 46 PINC 108+21.00

-BL- 45 PINC 104+91.52

END SBG AT APPROACH SLAB

+50.00 -L- 125.00' (LT.) C/A FENCE

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CLASS 'II' RIP RAP

LATERAL BASE DITCH
SEE DETAIL 'L'

15" W/ ELBOWS

50:1

NO FENCE

+20.00 -L- 125.00' (LT.) 170.00' (LT.) C/A FENCE

+50.00 -L- 125.00' (RT.) 135.00' (RT.) C/A FENCE

BEGIN SBG AT APPROACH SLAB

+20.00 -L- 125.00' (RT.) C/A FENCE

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

JOHN H. DAVIS, JR.
DB 184 PG 566
MC "A" SLIDE 104-A

BM #19
SEE SHEET 1-F
ELEV. 13.46'

BM #20
SEE SHEET 1-F
ELEV. 3.92'

N 6°49'046" E

N 75°31'38" W 155.00'

N 14°28'22" W 168.00'

N 75°59'22" W 240.00'

N 22°32'39" E 360.20'

S 22°32'39" W 360.20'

N 67°27'21" W 247.00'

S 67°27'21" E 247.00'

N 45°53'50" W 524.85'

N 14°00'00" W 241.46'

S 67°27'21" E 264.54'

S 08°10'38" W 254.34'

+12.93 17.30

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, B, b, 3:1, 1"/Ft., FILL SLOPE

Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 375+07 LT. TO STA. 383+00 RT. -L-

SBG - "SHOULDER BERM GUTTER"

SEE SHEET 35 FOR -L- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

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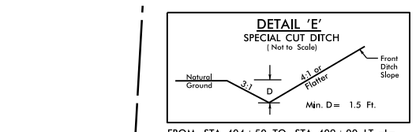
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

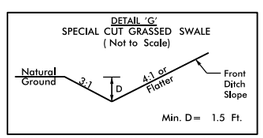
NAD 83/NSRS 2007

REVISIONS

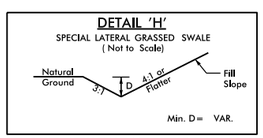
8/17/99



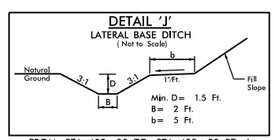
FROM STA. 404+50 TO STA. 409+00 LT. –L–



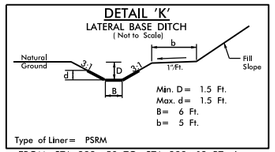
FROM STA. 400+95 TO STA. 402+50 LT. –L–
FROM STA. 404+50 TO STA. 408+50 RT. –L–
FROM STA. 399+70 TO STA. 400+95 LT. –L–



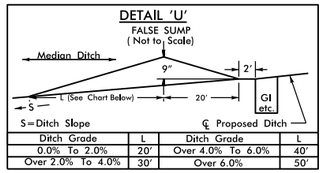
FROM STA. 402+50 TO STA. 404+50 LT. –L–



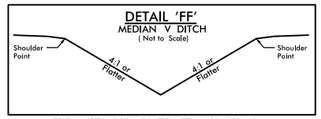
FROM STA. 403+00 TO STA. 403+50 RT. –L–



FROM STA. 398+50 TO STA. 399+18 RT. –L–
FROM STA. 399+18 TO STA. 403+00 RT. –L–



Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'



FROM STA. 398+50 TO STA. 401+50 –L–
FROM STA. 401+50 TO STA. 404+00 –L–

(56) THOMAS B. MOORE, ET AL
DB 306 PG 520

(57) C. E. WILLIE, SR, HEIRS
DB HO PG 221
WB 6 PG 26

BM #21
SEE SHEET 1-F
ELEV. 33.42'

S 79°56'46" E
229.53'

MATCHLINE –L– STA. 396+00.00 SEE SHEET 10

MATCHLINE –L– STA. 409+00.00 SEE SHEET 12

–BL– 47 PINC 109+36.84

–BL– 48 PINC 111+24.39

–BL– 49 PINC 113+07.58

–BL– 50 PINC 118+75.56

CL 'I' RIP RAP PAD
EST. 17 TONS
EST. 38 SY GEOTEXTILE

+50.00 –L–
125.00' (LT.)
170.00' (LT.)

PDE

END SBG
–L– 399+20

END SBG @
STA 398+20 RT –L–

SPECIAL CUT GRASSED SWALE
SEE DETAIL 'G'

SPECIAL LATERAL GRASSED SWALE
SEE DETAIL 'H'

SPECIAL CUT DITCH
GRASS LINED
SEE DETAIL 'E'

GRAU 350 8:1

50:1

2GI

10' PS

4' PS

24"

.025

48" RCP-IV

30" RCP-IV

15" RCP-IV

TYPE M-350
8:1

MEDIAN 'V' DITCH
SEE DETAIL 'FF'

400

405

JB w/MH

3GI

N 6°49'04.6" E

FS

END SBG @
STA. 398+75 RT. –L–

MAXIMUM PIPE
SLOPE = 2.0%

CL 'B' RIP RAP
EST. 8 TONS
EST. 21 SY GEOTEXTILE

JB wMH

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

END SBG
–L– 403+55

8:1
CAT-1

SPECIAL CUT GRASSED SWALE
SEE DETAIL 'G'

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

+50.00 –L–
185.00' (RT.)

6' LATERAL BASE DITCH
PSRM LINED
SEE DETAIL 'K'

+50.00 –L–
190.00' (RT.)

+90.00 –L–
125.00' (RT.)

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

(57) C. E. WILLIE, SR. HEIRS
DB HO PG 221
WB 6 PG 26

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 36 FOR –L– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

25-JUN-2014 11:22
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 409+00.00 SEE SHEET 11

MATCHLINE –L– STA. 422+00.00 SEE SHEET 13

NATHANIEL SIMMONS HEIRS
C/O KATHERINE S. WAY
DB 153 PG 44

HERMAN C. SIMMONS
DB 212 PG 140

HERMAN C. SIMMONS
DB 212 PG 140

S 20°06'22" W 1144.20'

S 20°06'22" W 1141.42'

N 17°07'28" W 253.62'

N 17°07'28" W 141.50'

(57)
C. E. WILLIE, SR. HEIRS
DB 110 PG 221
MB 6 PG 26

(58)
VELMA J. BRYAN, ET AL
DB 2919PG 186
TRACT TWO

+80.00 –L– 125.00' (LT.) 200.00' (LT.)

4' STANDARD BASE DITCH GRASS LINED SEE DETAIL 'M' APPROX. 110 CY DDE

+85.00 –L– 125.00' (LT.) 175.00' (LT.)

N 30°28'59" E 2679.18'

CL 'B' RIP RAP EST. 1 TONS EST. 5 SY GEOTEXTILE

CL 'I' RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

+50.00 –L– 125.00' (LT.)

+12.04 2853.27'

+28.76 2762.49'

CL 'B' RIP RAP EST. 1 TONS EST. 5 SY GEOTEXTILE

BEGIN SBG –L– 420+42

15" SMOOTH ELBOWS

8:1

CA=1

2GI

15" RCP-IV

10' PS

4' PS

24' MED.

.025

410

415

420

N 6°49'04.6" E

38.00' INCREASE

1202 1201 1211 1206 1205 1204 1203 1208 1207 1210 1209

FS

HW

12' PS

GRAU 350

15" RCP-IV
CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

2' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'J'

+00.00 –L– 125.00' (RT.)

+00.00 –L– 135.00' (RT.)

-BL- 51 PINC 125+25.89

-BL- 52 PINC 128+92.18

4' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'

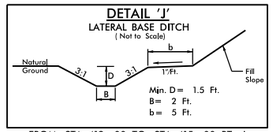
+75.00 –L– 135.00' (RT.)

+50.00 –L– 110.00' (RT.)

BEGIN SBG –L– 419+95

(57)
C. E. WILLIE, SR. HEIRS
DB 110 PG 221
MB 6 PG 26

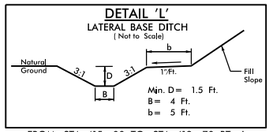
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 412+00 TO STA. 415+00 RT. –L–

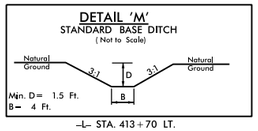
DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 415+00 TO STA. 419+70 RT. –L–

DETAIL 'M'
STANDARD BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.

–L– STA. 413+70 LT.

KATIE BROWN
DB 172 PG 899

SEE SHEET 36 FOR –L– PROFILE

25-JUN-2014 11:22
R:\Roadway\Proj\R2514D_Rdy_psh_12.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

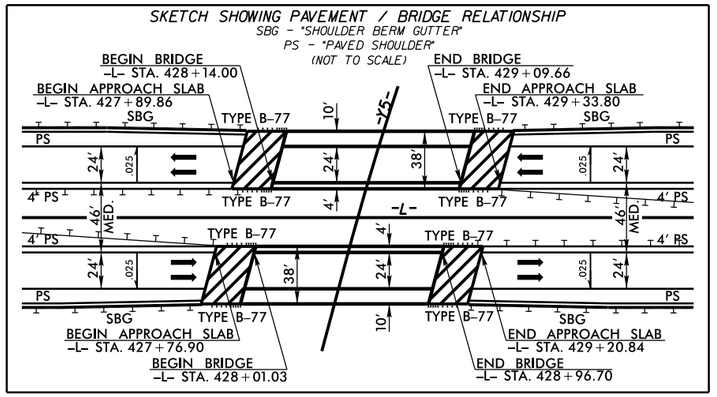
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W REVISION 7-23-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 62Z (FLORENCE STRAYHORN) AND PARCEL 65Z (WILLIAM MURPHY, ET UX).

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP

SBG - "SHOULDER BERM GUTTER"
PS - "PAVED SHOULDER"
(NOT TO SCALE)



-Y5-
PI Sta 11+65.79
Δ = 9° 35' 48.1" (LT)
D = 2° 54' 03.8"
L = 330.80'
T = 165.79'
R = 1,975.00'

MATCHLINE -L- STA. 422+00.00 SEE SHEET 12

MATCHLINE -L- STA. 435+00.00 SEE SHEET 14

-BL- 53 PINC 136+12.75

LEROY WAY, JR.
DB 277 PG 817

CELIA W. HADDOCK, ESTATE
ESTATE FILE 99-E-9

MICHELE M. STATEN
DB 297 PG 990

-Y5- PC Sta. 10+00.00

BEGIN CONSTRUCTION
-Y5- STA. 12+13.00

CREIGHTON R. BARBER, ET AL
DB 277 PG 813

NATHANIEL SIMMONS HEIRS
C/O KATHERINE S. WAY
DB 153 PG 44

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT TWO

FLORENCE STRAYHORN
DB 119 PG 124

CHARLES D. GREEN
DB 313 PG 272

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

-L- POT Sta. 428+53.58=
-Y5- POC Sta. 13+04.09
Δ = 105° 44' 13.43"

END C/A FENCE

15' INGRESS - EGRESS EASEMENT

END SBG AT APPROACH SLAB

BEGIN C/A FENCE

BEGIN SBG AT APPROACH SLAB

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

15" W/ELBOWS

425

430

TYPE M-350

8:1

50:1

N 6° 49' 04.6" E

-BL- 54 PINC 141+42.76=
-BY5- PINC 12+08.84

JOHN A. MURPHY, ET UX
DB 192 PG 904
PLAT CAB A SLIDE 142-A

EARL MURPHY, ET UX
DB 192 PG 900
PLAT CAB A SLIDE 142-A

-Y5- PT Sta. 13+30.80

KENNETH L. MURPHY
NO DEED DESCRIPTION

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT ONE

VELMA J. BRYAN, ET AL
DB 291PG 186
TRACT THREE

JAMES H. WILSON, ET UX
DB 188 PG 910

WILLIAM MURPHY, ET UX
DB 192 PG 908
PLAT CAB A SLIDE 142-A

ERIC K. KENYEAR
DB 271 PG 761
PLAT CAB A SLIDE 142-A

-Y5- POT Sta. 16+13.22

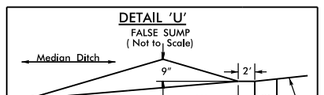
BEGIN CONSTRUCTION
-Y5- STA. 13+90.00

TBM #22
SEE SHEET 1-F
ELEV. 39.54'

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

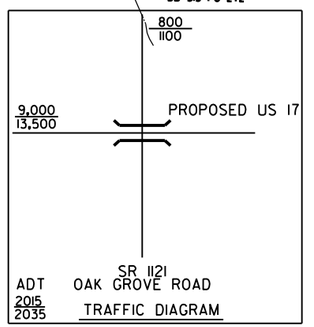
ISFD

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'



SEE SHEET 37 FOR -L- PROFILE
SEE SHEET 53 FOR -Y5- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

SBG - "SHOULDER BERM GUTTER"

23-JUL-2014 07:03
R:\Roadway\Proj\R2514D_Rdy_psh_13.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-	
PIs Sta 443+76.73	PI Sta 455+54.40
θs = 0°52'24.3"	Δ = 19°13'29.4" (RT)
Ls = 200.00'	D = 0°52'24.3"
LT = 133.33'	L = 2,201.12'
ST = 66.67'	T = 1,111.00'
	R = 6,560.00'
	SE = .04
	RO = 200'

NAD 83/NSRS 2007

MATCHLINE -L- STA. 435+00.00 SEE SHEET 13

MATCHLINE -L- STA. 448+00.00 SEE SHEET 15

66
CHARLES D. GREEN
DB 313 PG 272

67
G. N. NOBLE, PER DEED
DB 117 PG 20

DELLA B. HILL, ET AL
DB 161 PG 561
WB 2 PG 92

-BL- 55 PINC 152+20.16

-L- TS Sta. 442+43.39

-L- SC Sta. 444+43.39

+43.39 -L- 125.00' (LT.)

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

END SBG
-L- 442+24

GRAU 350 8:1

15" RCP-IV

15" W/FLR BOWS

2GI

12' PS

10' PS

4' PS

24' MED.

CHORD

FILL POND TO EL. 31.0'

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

END SBG
-L- 442+14

+43.39 -L- 125.00' (RT.)

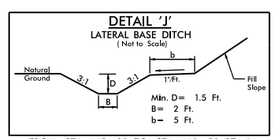
TS Sta. 439+30.79

SC Sta. 446+39.91

N 23°59'01" E
749.57'

N 06°29'01" E
815.58'

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 445+00 TO STA. 446+50 RT. -L-

SBG - "SHOULDER BERM GUTTER"

SEE SHEET 37 FOR -L- PROFILE

REVISIONS

8/17/99

25-JUN-2014 11:22
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$$$$USERNAME$$$$

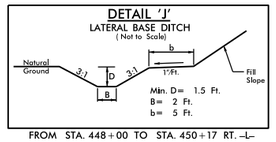
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS 8/17/99

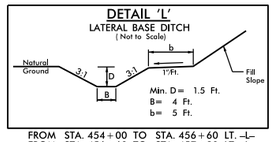
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 448+00 TO STA. 450+17 RT. –L–

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 454+00 TO STA. 456+60 LT. –L–
FROM STA. 456+60 TO STA. 457+80 LT. –L–
FROM STA. 450+17 TO STA. 457+50 RT. –L–

MATCHLINE –L– STA. 448+00.00 SEE SHEET 14

MATCHLINE –L– STA. 461+00.00 SEE SHEET 16

WRIGHT A. HILL HEIRS
DB 161 PG 485
PC "A" SLIDE 175

100' CP&L POWERLINE EASEMENT

N 20°10'27" E
257.75'

N 20°10'27" E
389.78'

N 34°07'10" W
200.00'

N 16°37'10" W
57.34'

160.00'
N 16°37'10" W

N 16°37'10" W
175.66'

-BL- 57 PINC 172+03.82

BM #23
SEE SHEET 1-F
ELEV. 34.77'

68
TERRY LLOYD, ET UX
DB 278 PG 718
PC "A" SLIDE 175

69
CLAUDIA H. HADDOCK, ET AL
DB 287 PG 578
PC "A" SLIDE 175

+62.54
240.38

4' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'L'

+00.00 –L–
125.00' (LT.)

-BL- 56 PINC 161+61.59

N 78°37'10" W
1330.00'

N 78°37'10" W
488.56'

N 78°37'10" W
471.78'

N 48°05'16" W
185.86'

10' PS
4' PS
24'
.04
MED.
46'

450
455
460

1501
1502
1503
1504
1505
1506

15" RCP-IV
18" RCP-IV
24" RCP-IV

2GI
3GI
PS

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

CL 'B' RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

CL 'I' RIP RAP
EST. 11 TONS
EST. 28 SY GEOTEXTILE

N 78°37'10" W
112.34'

N 11°22'50" E
394.90'

S 11°22'50" W
664.16'

N 78°37'10" W
113.09'

N 78°44'44" W
48.52'

N 11°17'23" E
964.54'

CEMETERY
APPROXIMATE
LOCATION

MARY W. BROWN
DB 168 PG 129

LUCY HILL
DB 215 PG 936

70
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

-L-
PI Sta 455+54.40
Δ = 19°13' 29.4" (RT)
D = 0° 52' 24.3"
L = 2,201.12'
T = 1,111.00'
R = 6,560.00'
SE = .04
RO = 200'

SEE SHEET FOR 38 –L– PROFILE

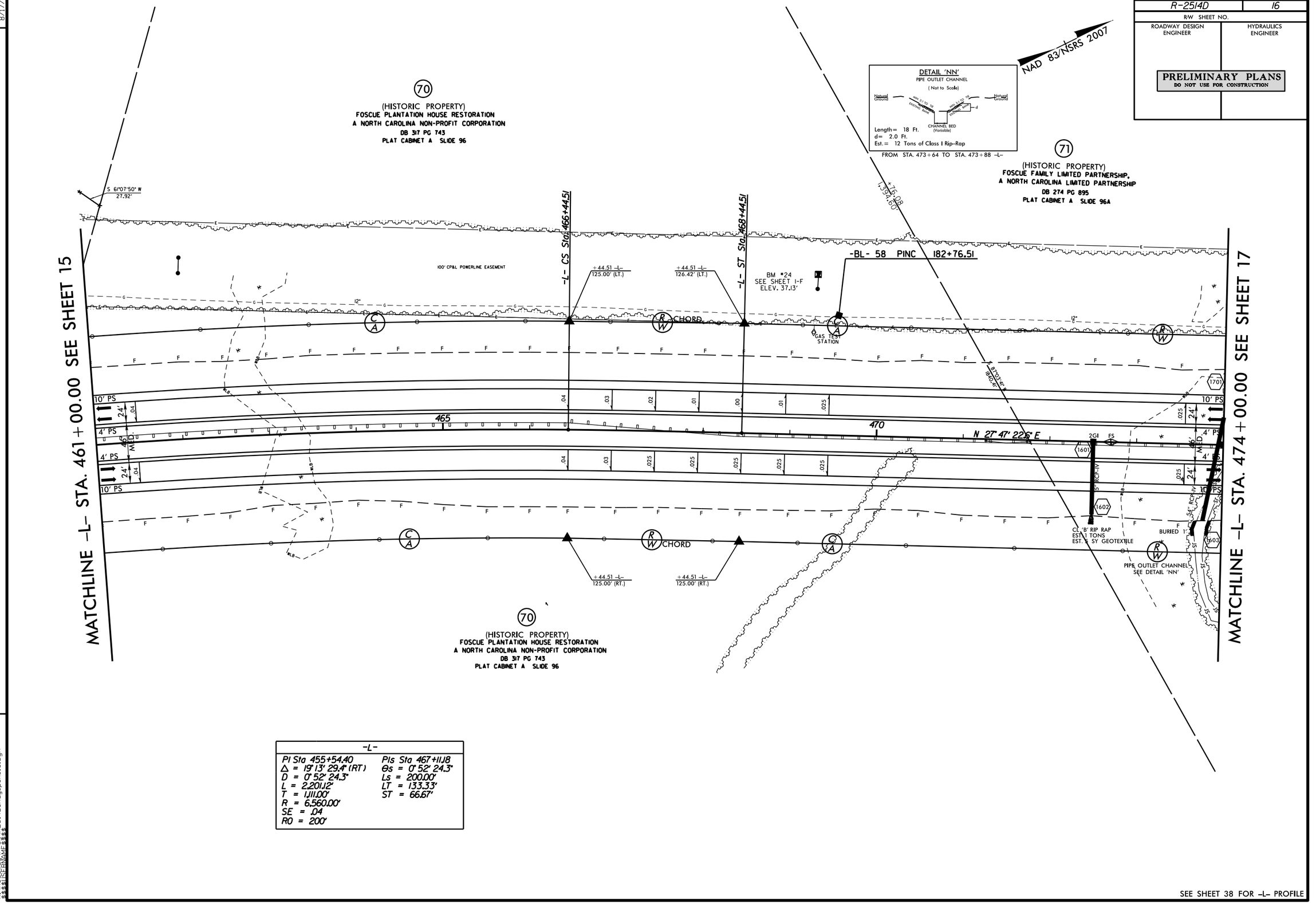
25-JUN-2014 11:22
R:\Roadway\Pro\R2514D_Rdy_psh_15.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS 8/17/99



DETAIL 'NN'
PIPE OUTLET CHANNEL
(Not to Scale)

Length = 18 Ft.
d = 2.0 Ft.
Est. = 12 Tons of Class I Rip-Rap
FROM STA. 473+64 TO STA. 473+88 -L-

(70)
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

(70)
(HISTORIC PROPERTY)
FOSCUE PLANTATION HOUSE RESTORATION
A NORTH CAROLINA NON-PROFIT CORPORATION
DB 317 PG 743
PLAT CABINET A SLIDE 96

-L-	
PI Sta 455+54.40	PIs Sta 467+11.18
Δ = 19° 13' 29.4" (RT)	θs = 0° 52' 24.3"
D = 0° 52' 24.3"	Ls = 200.00'
L = 2,201.12'	LT = 133.33'
T = 1,111.00'	ST = 66.67'
R = 6,560.00'	
SE = .04	
RO = 200'	

SEE SHEET 38 FOR -L- PROFILE

25-JUN-2014 11:22
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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

8/17/99

REVISIONS

MATCHLINE –L– STA. 474+00.00 SEE SHEET 16

MATCHLINE –L– STA. 488+00.00 SEE SHEET 18

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

(72)
STEPHEN P. CLARY
DB 289 PG 787

-BL- 59 PINC 194+00.46

100' CP&L POWERLINE EASEMENT

+05.45 –L–
124.46' (LT.)

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

12" HDPE

2' LATERAL BASE DITCH
GRASS LINED
SEE DETAIL 'J'

TOE PROTECTION
SEE DETAIL 'B'

5' BERM
35.0' TOP EL.
3:1 SIDE SLOPES
APPROX. 7 CY FILL

S 45°46'59" W
159.71'

30" RCP

10' PS

4' PS

475 480 485

N 27° 47' 22.6" E

15" RCP

30" RCP

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

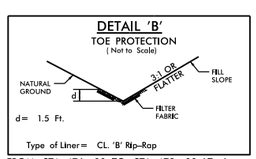
CL 'B' RIP RAP
EST. 5 TONS
EST. 16 SY GEOTEXTILE

+00.00 –L–
125.00' (RT.)

(71)
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

(72)
STEPHEN P. CLARY
DB 289 PG 787

DETAIL 'B'
TOE PROTECTION
(Not to Scale)

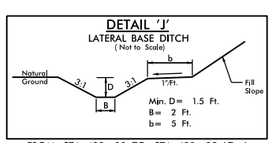


d= 1.5 Ft.

Type of Liner= CL. 'B' Rip-Rap

FROM STA. 476+00 TO STA. 479+00 LT. –L–

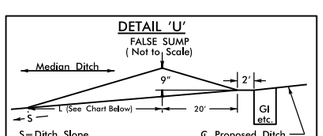
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 483+00 TO STA. 483+85 LT. –L–
FROM STA. 483+85 TO STA. 485+00 LT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S= Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SEE SHEET 39 FOR –L– PROFILE

25-JUN-2014 11:22
R:\Roadway\Prj\R2514D_Rdy_psh_17.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 488+00.00 SEE SHEET 17

MATCHLINE –L– STA. 502+00.00 SEE SHEET 19

-BL- 60 PINC 204+86.19

BM #25
SEE SHEET I-F
ELEV. 37.48'

100' CP&L POWERLINE EASEMENT

100' CP&L POWERLINE EASEMENT

+00.00 –L–
122.34' (LT.)

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

72
STEPHEN P. CLARY
DB 289 PG 787

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

N 27° 41' 22.6" E
203.59'
S 01°09'48" E

+00.00 –L–
125.00' (RT.)

72
STEPHEN P. CLARY
DB 289 PG 787

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

SEE SHEET 39 FOR –L– PROFILE

25-JUN-2014 11:23
R:\Roadway\Pro\R2514D_Rdy_psh_18.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

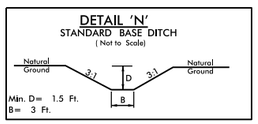
NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 502+00.00 SEE SHEET 18

MATCHLINE –L– STA. 516+00.00 SEE SHEET 20

DETAIL 'N'
STANDARD BASE DITCH
(Not to Scale)



–L– STA. 503+00 RT.

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

225

230

ANTHONY W. FOTHERGILL, ET UX
PC "B" SLIDE 272 PG 6

PHILLIP W. EDWARDS
DB 249 PG 016

-BL- 61 PINC 215+92.37

-BL- 62 PINC 226+18.53

100' CP&L POWERLINE EASEMENT

BM #26
SEE SHEET I-F
ELEV. 38.36'
+05.61 –L–
120.21' (LT.)

S 87°44'26" W
79.83'

393.24'
N 43°21'53" W

61.61'
N 43°21'53" W

N 81°40'11" W
41.09'

S 27°37'56" W
204.25'

S 87°44'26" W
100.00'

10' PS
4' PS
24' MED.
4' PS
10' PS

N 27° 47' 27.5" E
N 27° 47' 22.6" E

5

510

515

(1901) (1902) (1903) (1904) (1905)

30" RCP

18" RCP

3' STANDARD BASE DITCH
GRASS LINED
SEE DETAIL 'N'
APPROX. 20 CY DDE

CL 'B' RIP RAP
EST. 8 TONS
EST. 21 SY GEOTEXTILE

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

+00.00 –L–
125.00' (RT.)

73
A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

71
(HISTORIC PROPERTY)
FOSCUE FAMILY LIMITED PARTNERSHIP,
A NORTH CAROLINA LIMITED PARTNERSHIP
DB 274 PG 895
PLAT CABINET A SLIDE 96A

SEE SHEET 40 FOR –L– PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99 R/W REVISION 03-11-14 (DWG) - THE TDE AT -L- STA. 520+2000 RT. WAS ELIMINATED FROM PARCEL 73 (A. FOSTER BORDEAUX, TRUSTEE).

MATCHLINE -L- STA. 516+00.00 SEE SHEET 19

MATCHLINE -L- STA. 530+00.00 SEE SHEET 21

NAD 83/NSRS 2007

-BY6- 87 PINC 24+74.68

73 A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

DOUGLAS C. FURGASON, ET UX
DB 293 PG 498
PLAT CAB. B SLIDE 76-90

S 68°03'37" E 309.45'

-Y6- POT Sta. 10+00.00

N 68°03'15" W 307.87'

S 53°50'23" W 24.58'

WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
MB 2 PG 80
DIVISION BOOK G-7 PG 475

75 BRENDA S. HUGHES
ESTATE FILE 01-E-98

BEGIN CONSTRUCTION
-Y6- STA. 12+25.00

-BL- 63 PINC 237+78.84=
-BY6- PINC 31+64.16

S 53°50'23" W 469.32'

76 ROGER A. HUGHES
DB 101 PG 62
DIVISION BOOK G-7 PG 475

BEGIN SFCB
-Y6- STA. 15+20.00

N 68°19'38" W 309.37'

NCDOT GPS R2514-16 =
-BY6- PINC 33+74.75
-L- POT Sta. 526+71.12=
-Y6- POT Sta. 16+08.07
Δ = 26°10'59.74"

BEGIN REINFORCED SLOPES
-L- STA. 527+00.00 +/-
SEE DETAIL SHEET 2_2

SR 1002 TEN MILE FORK
EXIST R/W
15" RCP
+34.68 -L- 132.00' (LT)
+61.27 -L- 118.93' (LT.)
+75.00 -L- 118.69' (LT)
+00.00 -L- 123.00' (LT)
100' CP&L POWERLINE EASEMENT
+19.14 -L- 118.60' (LT)
+16.00 -L- 118.20' (LT.) C/A FENCE
+13.85 35.49'
BM #27 SEE SHEET 1-F ELEV. 35.11'
+97.16 -L- 118.97' (LT.)
+32.00 -L- 118.91' (LT.) C/A FENCE
+00.00 -L- 118.78' (LT.)
+50.00 -L- 125.00' (LT.)

BEGIN SBG
-L- 519+30

GAS TEST STATION

CL 'B' RIP-RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

GRAU 350

N 53°58'22.3" E

END C/A FENCE

END SBG AT APPROACH SLAB

BEGIN C/A FENCE

TYPE B-77

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

BEGIN SBG AT APPROACH SLAB

ELECTRIC METER

HTR

36" CONC

15" W/ 2 ELBOWS

15" RCP-IV

BURIED 20%

END SFCB
-Y6- STA. 14+40.00
MELBA J. METTS
DB 291 PG 340

END SBG AT APPROACH SLAB

END SFCB
-Y6- STA. 16+96.00

CHARLES F. WALKER
DB 151 PG 681

77

78 JON A THOMAS
DB 299 PG 534
PC "B" SLIDE 234 PG 53

BEGIN SBG
-L- 518+15

PIPE OUTLET CHANNEL
SEE DETAIL 'OO'

+00.00 -L- 125.00' (RT.) 140.00' (RT.)

+40.00 -L- 130.00' (RT.) 140.00' (RT.)

+40.00 -L- 145.00' (RT.)

+13.00 -L- 125.00' (RT.) C/A FENCE

+57.36 -L- 125.00' (RT.)

+40.00 -L- 125.00' (RT.) 145.00' (RT.)

73 A. FOSTER BORDEAUX, TRUSTEE
DB 259 PG 349
PC "B" SLIDE 272 PG 6

END SFCB
-Y6- STA. 17+75.00

BEGIN C/A FENCE

BEGIN SBG AT APPROACH SLAB
STEPHANIE S. KEECH
DB 226 PG 645
PC "B" SLIDE 234 PG 53

C. ROBERT BROWN, ET UX
DB 180 PG 555
PC "B" SLIDE 234 PG 53

S 54°18'16" W 222.18'

N 54°18'16" E 300.00'

C. ROBERT BROWN, ET UX
DB 186 PG 906
PC "B" SLIDE 234 PG 53

SBG – "SHOULDER BERM GUTTER"
SFCB – "SINGLE FACED CONCRETE BARRIER"

SEE SHEET 40 FOR -L- PROFILE
SEE SHEET 53 FOR -Y6- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG - "SHOULDER BERM GUTTER"
PS - "PAVED SHOULDER"
(NOT TO SCALE)

BEGIN APPROACH SLAB -L- STA. 524+88.77
BEGIN BRIDGE -L- STA. 525+11.51
END BRIDGE -L- STA. 527+37.01
END APPROACH SLAB -L- STA. 527+59.74
BEGIN APPROACH SLAB -L- STA. 525+82.33
BEGIN BRIDGE -L- STA. 526+05.06
END BRIDGE -L- STA. 528+30.56
END APPROACH SLAB -L- STA. 528+53.29

-Y6- -L- TYPE B-77 TYPE M350 SBG PS 4' PS 46' MED. 24' .025 10' 38' 28' 8:1

2700
4000
9,000
13,500
PROPOSED US 17
SR 1002
ADT TEN MILE FORK ROAD
2015
2035
TRAFFIC DIAGRAM

DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)
Natural Ground
Min. 2:1 to 10' Existing Road
CHANNEL BED (Variable)
Length = 12 Ft.
d = 1.0 Ft.
Est. = 4 Tons of Class I Rip-Rap
FROM STA. 520+16 TO STA. 520+27 -L-

DETAIL 'U'
FALSE SUMP
(Not to Scale)
Median Ditch
9" 2' 20'
L (See Chart Below)
GI etc.
S = Ditch Slope
℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

25-JUN-2014 11:23
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

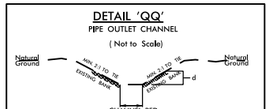
NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W REVISION 03-11-14 (DWG) - THE TOE AT -L- STA. 531+75.00 RT. AND -L- STA. 535+00.00 RT. WAS ELIMINATED FROM PARCEL 79 (WEYERHAEUSER COMPANY FORMERLY BATE LUMBER COMPANY).

MATCHLINE -L- STA. 530+00.00 SEE SHEET 20

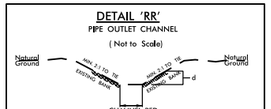
MATCHLINE -L- STA. 544+00.00 SEE SHEET 22

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 26 Ft.
d = 3.0 Ft.
Est. = 25 Tons of Class I Rip-Rap
FROM STA. 531+54 TO STA. 531+85 -L-

DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 14 Ft.
d = 2.0 Ft.
Est. = 9 Tons of Class I Rip-Rap
FROM STA. 534+99 TO STA. 535+18 -L-

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
WB 2 PG 80
DIVISION BOOK G-7 PG 475

-BL- 64 PINC 248+41.47

+05.36 -L- 117.68' (LT.)
+50.00 -L- 125.00' (LT.)
+00.00 -L- 117.45' (LT.)
100' CP&L POWERLINE EASEMENT
+10.97 -L- 116.01' (LT.)
CATHODIC PROTECTION ELECTRIC BOX
+36.54 121.47'
BURIED 1'
BURIED 20%
END REINFORCED SLOPES -L- STA. 532+00.00+/- SEE DETAIL SHEET 2-?
CL 'B' RIP RAP EST. 1 TONS EST. 5 SY GEOTEXTILE
END SBG -L- 535+32
GRAU 350 8:1
2GI 2GI12' PS
10' PS
4' PS
535
N 27° 47' 22.6" E
540
3GI-D
18" RCP-IV
15" RCP-IV
2GI
8:1CAT-1
15" W. ELBOWS
CL 'B' RIP RAP EST. 1 TONS EST. 2 SY GEOTEXTILE
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE
PIPE OUTLET CHANNEL SEE DETAIL 'RR'
+50.00 -L- 125.00' (RT.)
+75.00 -L- 125.00' (RT.) 140.00' (RT.)
END SBG -L- 536+50
+25.00 -L- 125.00' (RT.) 140.00' (RT.)
PIPE OUTLET CHANNEL SEE DETAIL 'QQ'
GRAU 350
N 53° 58' 22.3" E
SR 1006 TEN MILE FORK
207 RBT
+05.00 -L- 140.00' (RT.) 170.00' (RT.)
8' CMP
EXIST R/W
+77.00 -L- 150.00' (RT.) C/A FENCE
+44.18 -L- 150.00' (RT.)
+45.00 -L- 145.00' (RT.) 170.00' (RT.)
END CONSTRUCTION -Y6- STA. 20+00.00
-BY6- 88 PINC 41+37.78
-Y6- POT Sta. 21+96.16
24"RCP N 49°52'41" W
156.71' N 69°36'19" W
8" PVC & 3" SSBM
SBG - "SHOULDER BERM GUTTER"
SEE SHEET 41 FOR -L- PROFILE

(79)
WEYERHAEUSER COMPANY
FORMERLY BATE LUMBER COMPANY
DB 105 PG 564
WB 2 PG 80
DIVISION BOOK G-7 PG 475

(80)
PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS 8/17/99

-L-
PI Sta 571+12.36
Δ = 28° 45' 22.4" (RT)
D = 0° 33' 17.1"
L = 5,183.63'
T = 2,647.63'
R = 10,328.19'
SE = .025
RO = 90°

MATCHLINE -L- STA. 544+00.00 SEE SHEET 21

MATCHLINE -L- STA. 557+00.00 SEE SHEET 23

(80) PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

(82) RUTH S. MORTON
DB 269 PG 941
PLAT CAB. B SLIDE 350-1

-L- PC Sta. 544+64.23

-BL- 65 PINC 259+35.51

-BL- 66 PINC 266+88.67

BM #28
SEE SHEET I-F
ELEV. 39.62'

ELECTRIC BOX

CATHODIC PROTECTION

100' CP&L POWERLINE EASEMENT

+64.73 -L- 114.68' (LT.)

+19.36 -L- 115.47' (LT.)

+46.06 -L- 125.00' (LT.)

+00.00 -L- 125.00' (LT.)

+06.30 133.39'

+64.73 -L- 125.00' (RT.)

+55.00 -L- 125.00' (LT.)

N 81°43'36" W 78.79'

N 81°43'36" W 36.07'

S 68°31'36" W 351.94'

S 81°43'36" E 76.65'

N 08°16'24" W 167.68'

S 08°16'24" E 167.68'

CAT-1 8:1

GRAU 350

BEGIN SBG -L- 553+15

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

10' PS | 12' PS | 4' PS | 24' MEDIAN | 44' CHL & 3SBW | 4' CHL & 3SBW | 12GI | 3GI-D | 18" RCP-IV | 30" RCP-IV | 24" RCP-IV | 15" RCP-IV | 2GI

2201 2202 2203 2204 2205 2206 2207 2208 2209

545 550 555

POWER SUBSTATION

EIP

(81) JACKIE W. MIRAYA
DB 240 PG 479
MB 13 PG 56

(83) RUTHIE M. BLAND
DB 193 PG 271

(80) PROGRESS ENERGY
FORMERLY CAROLINA POWER & LIGHT COMPANY
(RHEMS 230 KV SUBSTATION)
DB 155 PG 576
DB 166 PG 210

(82) RUTH S. MORTON
DB 274 PG 863
PLAT CAB. B SLIDE 350-1

SBG - "SHOULDER BERM GUTTER"

SEE SHEET 41 FOR -L- PROFILE

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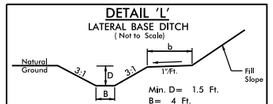
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

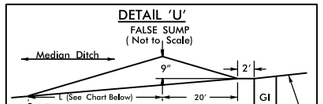
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 564+85 TO STA. 569+06 RT. –L–

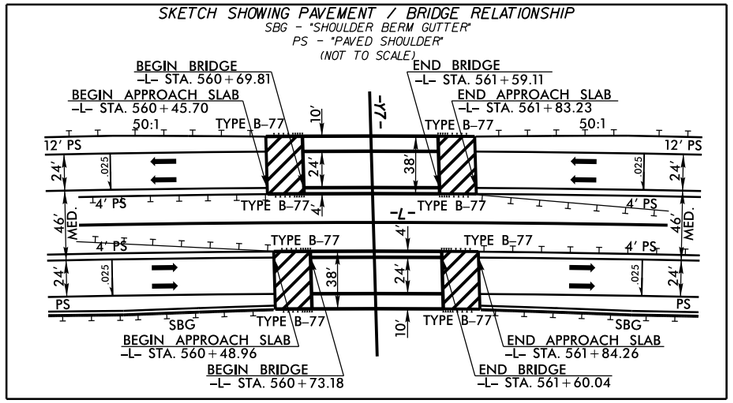
DETAIL 'U'
FALSE SUMP
(Not to Scale)



S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG – "SHOULDER BERM GUTTER"
PS – "PAVED SHOULDER"
(NOT TO SCALE)



NAD 83/NSRS 2007

MATCHLINE –L– STA. 557+00.00 SEE SHEET 22

MATCHLINE –L– STA. 570+00.00 SEE SHEET 24

(85) ESTATE OF CLENNIE L. BROWN & SEYMOUR C. BROWN DB 206 PG 181

(82) RUTH S. MORTON DB 274 PG 863 PLAT CAB. B SLIDE 350-1

(84) LUCILLE P. BRYAN DB 176 PG 287

(86) FAMILY OUTREACH WORD OF DELIVERANCE MINISTRIES, INC. DB 299 PG 718

(88) JOSEPH L. MEADOWS DB 319 PG 620 PC "B" SLIDE 27

(87) PARSHEE J. FLEMING ESTATE FILE 09-E-15

MOSES D. LASITTER DB 303 PG 790

120 SIMMONS LOOP TRUST DB 315 PG 417

BM #29 SEE SHEET 1-F ELEV. 37.70'

GAS TEST STATION

ELECTRIC BOX

CATHODIC PROTECTION

N 27°51'16" E 438.19'

S 54°47'39" E 1336.84'

-Y7- POT Sta. 15+30.00=
-Y8A- PC Sta. 10+00.00

-L- POC Sta. 561+15.20=
-Y7- POT Sta. 17+04.80
Δ = 88° 21' 51.91"

-BL- 67 PINC 274+79.71=
-BY7- PINC 9+46.87
-BY10- POT 55+18.81

-BL- 68 PINC 277+32.61=
-BY7- PINC 11+99.77

-BL- 69 PINC 282+73.87

BEGIN CONSTRUCTION
-Y7- STA. 16+23.00

NOTE: STANDARD DECK DRAINS REQUIRED ON LOW SIDE OF BRIDGE
FROM STA. 560+40 TO 561+00 LT. –L–
FROM STA. 561+35 TO 561+95 LT. –L–

END CONSTRUCTION
-Y7- STA. 17+86.00

END SBG AT APPROACH SLAB

BEGIN SBG AT APPROACH SLAB

END SBG
–L– 569+06

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

4' LATERAL BASE DITCH GRASS LINED SEE DETAIL 'L'

CL B RIP RAP EST. 3 TONS
EST. 10 SY GEOTEXTILE

-Y8A-
PI Sta 27+46.63
Δ = 19° 48' 53.9" (RT)
D = 0° 34' 22.6"
L = 3,458.37'
T = 1,746.63'
R = 10,000.00'
SE = NC

-L-
PI Sta 571+12.36
Δ = 28° 45' 22.4" (RT)
D = 0° 33' 17.1"
L = 5,183.63'
T = 2,647.63'
R = 10,328.19'
SE = .025
R0 = 90'

-BY7- 91 POT 16+39.24

-Y7- POT Sta. 21+53.43

S 39°18'26" W 554.51'

S 54° 41' 23.9" E

S 89°25'04" W 20.32'

N 41°50'19" W 352.20'

N 41°46'03" W 257.09'

ADT SIMMONS LOOP ROAD
2015
2035
9,000
13,500
200
400
PROPOSED US 17
SR 1330
TRAFFIC DIAGRAM

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 42 FOR –L– PROFILE
SEE SHEET 54 FOR –Y7– PROFILE
SEE SHEET 55 FOR –Y8A– PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-	-Y8A-
PI Sta 571+12.36	PI Sta 27+46.63
Δ = 28° 45' 22.4" (RT)	Δ = 19° 48' 53.9" (RT)
D = 0° 33' 17.1"	D = 0° 34' 22.6"
L = 5,183.63'	L = 3,458.37'
T = 2,647.63'	T = 1,746.63'
R = 10,328.19'	R = 10,000.00'
SE = .025	SE = NC
RO = 90°	

NAD 83/NSRS 2007

REVISIONS

8/17/99

CATHODIC PROTECTION

ELECTRIC BOX

-BY10- 102 PINC 44+95.44

89
FLORA M. THOMAS
DB 170 PG 209
MB 1A PG 153

90
JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

S 65°55'53" E 180.14'

+00.00 -Y8A-
30.00' (LT.)

+00.00 -L-
125.00' (LT.)

MATCHLINE -L- STA. 570+00.00 SEE SHEET 23

MATCHLINE -L- STA. 583+00.00 SEE SHEET 25

2405 2407 2404 2406 2401 2403 2402

24" CPAW

18" RCP-W

18" RCP-IV

12" RCP

GRAU 350 8:1

12' PS 10' PS 4' PS 4' PS 10' PS 10' PS 4' PS 4' PS 10' PS

24' .025 MED. 46'

675 580

3GI-D 2GI-D

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

-BL- 70 PINC 292+79.86

O FIP

BM #30
SEE SHEET 1-F
ELEV. 37.77'

88
JOSEPH L. MEADOWS
DB 319 PG 620
PC 'B' SLIDE 27

89
FLORA M. THOMAS
DB 170 PG 209
MB 1A PG 153

90
JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

SEE SHEET 42 FOR -L- PROFILE
SEE SHEET 55 FOR -Y8A- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-	-Y8A-
PI Sta 571+12.36	PI Sta 27+46.63
Δ = 28° 45' 22.4" (RT)	Δ = 19° 48' 53.9" (RT)
D = 0° 33' 17.1"	D = 0° 34' 22.6"
L = 5,183.63'	L = 3,458.37'
T = 2,647.63'	T = 1,746.63'
R = 10,328.19'	R = 10,000.00'
SE = .025	SE = NC
RO = 90°	

NAD 83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE -L- STA. 583+00.00 SEE SHEET 24

MATCHLINE -L- STA. 596+00.00 SEE SHEET 26

(91) JOHN K. AVOLIS, ET UX
DB 312 PG 104
PLAT BOOK 3 PG 35

(90) JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

-Y8A- PI Sta. 44+58.37

+00.00 -Y8A- 30.00' (LT.)

+58.37 -Y8A- 42.00' (LT.)

+58.37 -Y8A- 30.00' (LT.)

+02.35 -Y8A- 42.00' (LT.)

2506 2509 2504 2512 2511 2510 2501 2502 2503 2513 2514 2509

35' RCR-W 45' RCR-W 35' RCR-W 45' RCR-W 35' RCR-W

10' PS 4' PS 4' PS 10' PS

24' 24' MED. .025

585 590 595

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

CL 'B' RIP RAP
EST. 1 TON'S
EST. 5 SY GEOTEXTILE

-BL- 71 PINC 302+80.61

-BL- 72 PINC 308+13.58

-BL- 73 PINC 311+29.76

BM #31
SEE SHEET 1-F
ELEV. 36.89'

(90) JANIE MAE SHACK
DB 207 PG 833
MB 1A PG 153

(91) JOHN K. AVOLIS, ET UX
DB 312 PG 104
PLAT BOOK 3 PG 35

SEE SHEET 43 FOR -L- PROFILE
SEE SHEET 55 AND 56 FOR -Y8A- PROFILE

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REVISIONS
R/W REVISION 6-24-14 (DWG) – ADDED PUE FROM –Y8– STA. 32+35.80 TO STA. 35+43.00 LT. ON PARCEL 97 (AARON L. MALLARD, ET UX).

PROJECT REFERENCE NO.	SHEET NO.
R-2540	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
NOT FOR CONSTRUCTION

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 4 Ft.
Iw = 3 Ft.

DETAIL 'C'
LATERAL GRASSED SWALE
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 4 Ft.
Iw = 3 Ft.

DETAIL 'D'
SPECIAL LATERAL 'Y' DITCH
(Not to Scale)
Min. D= Vari.

DETAIL 'E'
SPECIAL CUT GRASSED SWALE
(Not to Scale)
Min. D= 1.5 Ft.

DETAIL 'I'
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 4 Ft.

DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 2 Ft.
Iw = 3 Ft.

DETAIL 'N'
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 3 Ft.

DETAIL 'O'
LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 3 Ft.
Iw = 3 Ft.

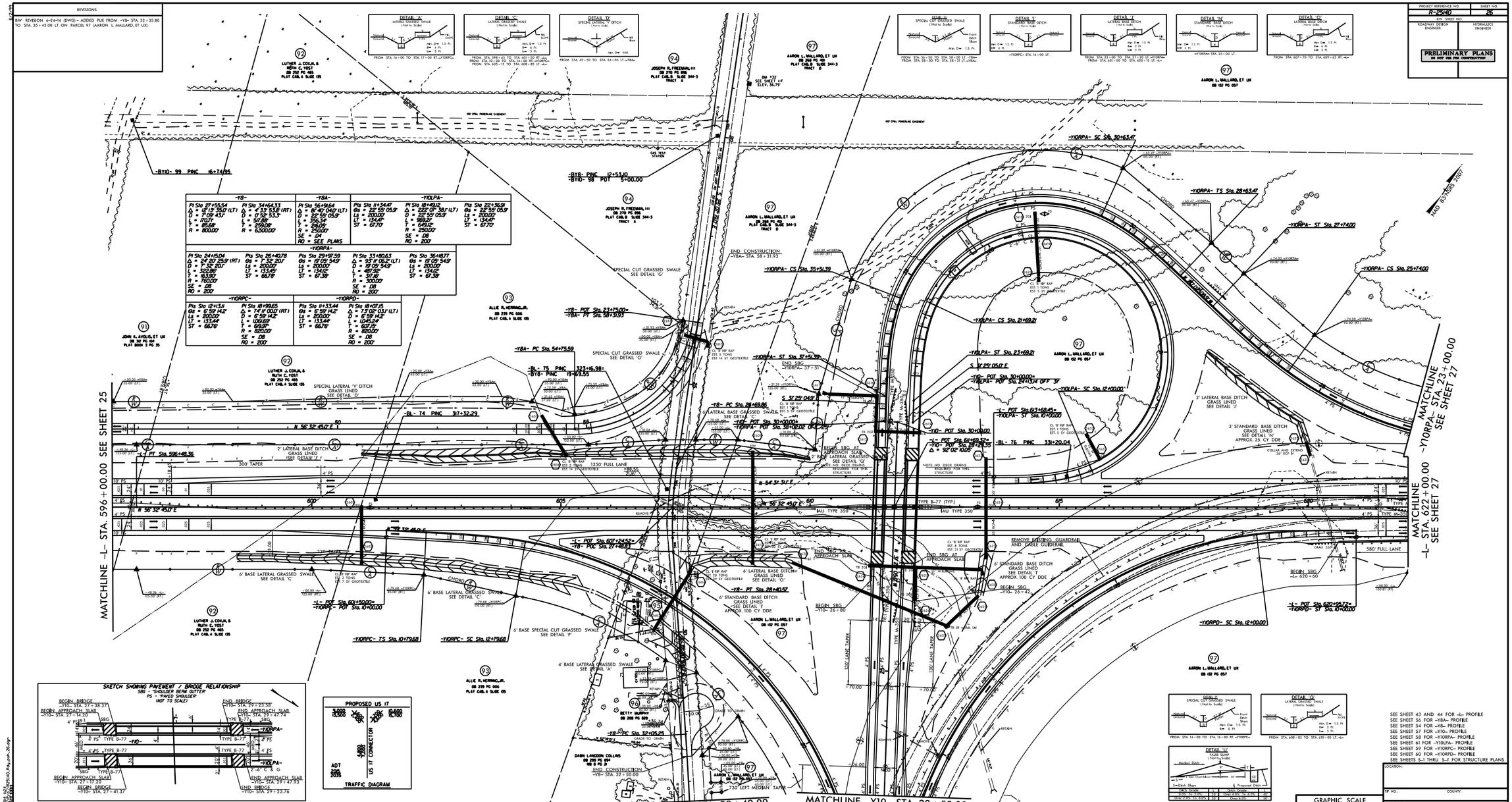
–Y8–		–Y8A–		–Y10LPA–	
Pt Sta 27+55.54	Pt Sta 34+64.33	Pt Sta 56+19.64		Pt Sta 18+49.16	Pt Sta 22+36.91
Δ = 15° 13' 35.0" (LT)	Δ = 4° 39' 53.8" (RT)	Δ = 18° 40' 04.7" (LT)		Δ = 222° 01' 38.1" (LT)	Gs = 22° 55' 05.9"
D = 7° 59' 43.1"	D = 7° 52' 53.3"	D = 22° 55' 05.9"		D = 22° 59' 05.9"	Lc = 200.00'
L = 170.71'	L = 367.86'	Lc = 256.54'		L = 960.87'	Lt = 154.47'
T = 85.86'	T = 239.00'	T = 129.09'		T = 549.00'	St = 67.70'
R = 800.00'	R = 430.00'	R = 250.00'		R = 250.00'	
		SE = 04		SE = 08	
		RO = SEE PLANS		RO = 200'	

–Y10RPC–		–Y10RPD–	
Pt Sta 12+13.11	Pt Sta 18+99.65	Pt Sta 11+33.44	Pt Sta 18+07.15
Gs = 6° 59' 14.2"	Δ = 74° 11' 00.0" (RT)	Gs = 6° 59' 14.2"	Δ = 73° 02' 03.4" (LT)
Lc = 200.00'	D = 6° 59' 14.2"	Lc = 200.00'	D = 6° 59' 14.2"
Lt = 133.44'	L = 1,064.69'	Lt = 133.44'	L = 1,045.24'
St = 66.78'	T = 619.87'	St = 66.78'	T = 607.15'
	R = 820.00'		R = 820.00'
	SE = 08		SE = 08
	RO = 200'		RO = 200'

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG – "SHOULDER BEAM GUTTER"
PS – "PAVED SHOULDER"
(NOT TO SCALE)

PROPOSED US 17

TRAFFIC DIAGRAM



SBG – "SHOULDER BERM GUTTER"

DETAIL 'M'
SPECIAL CUT GRASSED SWALE
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 4 Ft.
Iw = 3 Ft.

DETAIL 'O'
LATERAL GRASSED SWALE
(Not to Scale)
Min. D= 1.5 Ft.
Sw = 2 Ft.
Iw = 3 Ft.

DETAIL 'U'
FACE SLOPE
(Not to Scale)

Median Ditch		2-Proposed Ditch	
Min. Grade	%	Min. Grade	%
2-Ditch Slope	4.0	Ditch w/ Pipe	0.5
Ditch w/ Pipe	0.5	Other Ditch	1.0
Other Ditch	1.0		

SEE SHEET 43 AND 44 FOR –L– PROFILE
SEE SHEET 56 FOR –Y8A– PROFILE
SEE SHEET 54 FOR –Y8– PROFILE
SEE SHEET 57 FOR –Y10– PROFILE
SEE SHEET 58 FOR –Y10RPA– PROFILE
SEE SHEET 61 FOR –Y10LPA– PROFILE
SEE SHEET 59 FOR –Y10RPC– PROFILE
SEE SHEET 60 FOR –Y10RPD– PROFILE
SEE SHEETS 5–1 THRU 5–7 FOR STRUCTURE PLANS

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:	
TIP NO.:	COUNTY:
DESIGNED BY:	
CHECKED BY:	DATE:

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS 8/17/99

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP

SBG – "SHOULDER BERM GUTTER"
PS – "PAVED SHOULDER"
(NOT TO SCALE)

-Y10RPA- TS Sta. 20+51.14

4' PS | .03 | .02 | 4' | 6' TYPE B-77 | 24 | -Y10RPA- | 4' | TYPE B-77 6' | .02 | 4' | SBG | 4' PS

END APPROACH SLAB
-Y10RPA- STA. 20+66.90
END BRIDGE
-Y10RPA- STA. 20+43.00

BEGIN APPROACH SLAB
-Y10RPA- STA. 18+19.10
BEGIN BRIDGE
-Y10RPA- STA. 18+43.00

-Y10RPA-

PIs Sta 21+84.59	PI Sta 24+15.04
Θs = 7° 32' 20.1"	Δ = 24° 20' 25.9" (RT)
Ls = 200.00'	D = 7° 32' 20.1"
LT = 133.45'	L = 322.86'
ST = 66.78'	T = 163.90'
	R = 760.00'
	SE = .08
	R0 = 200'

MATCHLINE -Y10RPA- STA. 23+00.00 SEE SHEET 26

MATCHLINE -L- STA. 622+00.00 SEE SHEET 26

MATCHLINE -L- STA. 635+00.00 SEE SHEET 28

97 AARON L. MALLARD, ET UX
DB 132 PG 057

98 MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

-Y10RPA- SC Sta. 22+51.14

-Y10RPA- TS Sta. 20+51.14

-BL- 78 PINC 342+72.41

-L- POT Sta. 635+00.00=
-Y10RPA- POT Sta. 10+00.00

-BL- 79 PINC 350+55.92

-BL- 77 PINC 340+56.98

+51.14 -Y10RPA- 90.00' (RT.)

+80.00 -Y10RPA- 90.00' (RT.) C/A FENCE

+30.00 -Y10RPA- 90.00' (RT.) C/A FENCE

+80.00 -Y10RPA- 65.00' (RT.)

+85.00 -Y10RPA- 27.00' (LT.)

+00.00 -Y10RPA- 90.00' (RT.)

+00.00 -Y10RPA- 60.00' (RT.)

+00.00 -Y10RPA- 33.04' (RT.)

+50.00 -Y10RPA- 57.52' (RT.) END C/A FENCE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

CHORD

CL 'II' RIP RAP
EST. 8 TONS
EST. 11 SY GEOTEXTILE

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

END SBG AT APPROACH SLAB

BEGIN SBG -Y10RPA- 15+72

2' BASE LATERAL GRASSED SWALE SEE DETAIL 'Q'

4" W/ELBOWS

BDO

GRAU 350

15" RCP-IV 2GI

S 60° 32' 45.0" W

ATTENUATOR

4' PS

10' PS

RETAIN

TIE TO EXISTING GUARDRAIL

18" HDPE +20.00 -L- 0.00

+25.00 -L- 0.00

PLUG & FILL W/ FLOWABLE FILL

N 56° 32' 45.0" E

15" HDPE

625

630

36' MED.

50:1

40:1

30:1

8:1

CAT-1

300' TAPER

300' FULL LANE

MATCH EXISTING GRADE AND SUPERELEVATION

12' PS

10' PS

+75.72

END SBG -L- 628+05

COLLAR AND EXTEND W/15" RCP IV

CL 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

+15.00 -L- 165.00' (RT.)

STANDARD 'V' DITCH GRASS LINED SEE DETAIL 'R' APPROX. 2 CY DDE

+75.00 -L- 135.89' (RT) C/A FENCE

END GRADE
-L- STA. 623+35.00

NOTE: DECK DRAINS REQUIRED
FROM STA. 623+90 TO STA. 624+38 RT. -L-
FROM STA. 625+70 TO STA. 626+18 RT. -L-

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

CL 'B' RIP RAP
EST. 110 TONS

CL 'II' RIP RAP
EST. 8 TONS
EST. 11 SY GEOTEXTILE

BEGIN SBG AT APPROACH SLAB

+10.00 -L- 115.83' (RT) 160.00' (RT.) C/A FENCE

+50.00 -L- 170.00' (RT.)

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

+12.00 -L- 146.32' (RT) END C/A FENCE

MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

AARON L. MALLARD, ET UX
DB 132 PG 057

DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground | 3:1 | D | 3:1 | b | 1"/Ft. | FILL SLOPE | B

Min. D = 1.5 Ft.
B = 4 Ft.
b = 5 Ft.

FROM STA. 627+15 TO STA. 627+50 RT. -L-

DETAIL 'Q'
LATERAL GRASSED SWALE
(Not to Scale)

Natural Ground | 3:1 | D | 3:1 | b | 1"/Ft. | FILL SLOPE | B

Min. D = 1.5 Ft.
B = 2 Ft.
b = 5 Ft.

FROM STA. 15+25 TO STA. 18+05 RT. -Y10RPA-

DETAIL 'R'
STANDARD 'V' DITCH
(Not to Scale)

Natural Ground | 3:1 | D | 3:1 | Natural Ground

Min. D = VAR.

-L- STA. 623+20 RT.

DETAIL 'U'
FALSE SUMP
(Not to Scale)

Median Ditch | 9" | 2' | L (See Chart Below) | 20' | GI etc.

S = Ditch Slope

℄ Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP

SBG – "SHOULDER BERM GUTTER"
(NOT TO SCALE)

-L-

BEGIN APPROACH SLAB
-L- STA. 623+68.31

END APPROACH SLAB
-L- STA. 626+65.93

EXIST. | 7.135' | 65.0625' | EXIST.

SBG | TYPE B-77 | FULL 12' LANE | TYPE B-77 | SBG | LANE TAPER

BEGIN BRIDGE
-L- STA. 623+92.45

END BRIDGE
-L- STA. 626+41.79

SBG – "SHOULDER BERM GUTTER"

SEE SHEET 44 FOR -L- PROFILE
SEE SHEET 58 FOR -Y10RPA- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

8/17/99

REVISIONS

WEYERHAEUSER COMPANY

-L- POT Sta. 635+00.00=
-Y10RPA- POT Sta. 10+00.00

-L- TS Sta. 635+62.27

-L- SC Sta. 638+24.74

-L- CS Sta. 639+83.96

-L- ST Sta. 642+46.43

(98)
MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

S 86°11'42" W
632.18'

-BL- 80 PINC 361+15.62

195' TAPER
MATCH EXISTING GRADE AND SUPERELEVATION

+95.00

10' BST
PASS 24' BST
4' BST
4' BST
PASS 24' BST
10' BST

640

645

N 63°54'36.6" E

MATCHLINE -L- STA. 635+00.00 SEE SHEET 27

N 56°32'45.0" E

END PROJECT R-2514D
-L- STA. 637+00.00

(98)
MACON AND JOYCE DUNCAN
TRUSTEES OF THE DUNCAN REVOCABLE TRUST
DB 2564 PG 128
PC F SLIDE 162 H

-L-		
PIs Sta 637+37.26	PI Sta 639+04.37	PIs Sta 640+71.46
Θs = 2°17'30.6"	Δ = 2°46'50.4" (RT)	Θs = 2°17'30.6"
Ls = 262.47'	D = 1°44'47.0"	Ls = 262.47'
LT = 174.99'	L = 159.22'	LT = 174.99'
ST = 87.50'	T = 79.63'	ST = 87.50'
	R = 3,280.83'	

SEE SHEET 45 FOR -L- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 6-24-14 (DWG) - ADDED ADDITIONAL PUE AT -Y3- STA.18+50.00 RT. ON PARCEL 1 (BELL BROTHERS FARM, LLC).

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-Y3A- POT Sta. 10+00.00

BM #15
SEE SHEET 1-F
ELEV. 28.34'

12" RCP

S 75 58 09.6 E

SR 1338 BELL LOOP RD

BEGIN CONSTRUCTION
-Y3A- STA. 13+75.00

+85.00 -Y3A-
30.00' (RT.)

+34.00 -Y3A-
90.00' (RT.)

+95.00 -Y3A-
90.00' (RT.)

+25.00 -Y3A-
50.00' (RT.) &
30.00' (RT.)

GRADE TO DRAIN

MATCHLINE -Y3A- STA. 15+50.00
SEE SHEET 6

(1)
BELL BROTHERS FARM, INC
DB 310 PG 711
DB 180 PG 631
DB 188 PG 256
DB 197 PG 819
DB 282 PG 55
DB 278 PG 898
MB 12 PG 8

-Y3- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y3- STA. 14+50.00

+00.00 -Y3-
40.00' (LT.)
75.00' (LT.)

+50.00' -Y3-
40.00' (LT.)
BEGIN C/A FENCE

PUE PUE PUE PUE

4:1 TAPER

400' LANE TRANSITION LT. & RT.

4" 72" CONC

72" CONC

CONC HW

54" RCP

2' BST

NC 58 24' BST

2' BST

6" CONC HW

72" CONC

72" CONC

15" RCP

30" C&G

RETAIN

N 89 16 21.5 E

RETAIN

+50.00' -Y3-
40.00' (RT.)
END C/A FENCE

+38.00 -Y3-
75.00' (RT.)

MATCHLINE -Y3- STA. 18+50.00
SEE SHEET 6

SEE SHEET 46 FOR -Y3- PROFILE
SEE SHEET 50 FOR -Y3A- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	30
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

REVISIONS
8/17/99
R/W REVISION 6-24-14 (DWG) - REVISED THE PUE ON PARCEL 22 (MILTON GARDNER) AND PARCEL 38 (SARAH W.RUCKER C/O AGNES CONTRERAS).

MATCHLINE -Y3- STA. 34+00.00 SEE SHEET 6

(53) ECIM PROPERTIES, LLC
DB 264 PG 740
DB 196 PG 796
PC "B" SLIDE 320 PG 796

40.50' R/W OLD TRENTON ROAD
N 74°15'17" W 139.48'
N 74°15'17" W 76.33'
N 74°15'17" W 116.25'
N 74°12'42" W 951.08'
S 08°50'25" W 227.80'
EIP DISTURBED
EIP
TOWN OF POLLOCKSVILLE DB 225 PG 556

(38) SARAH W. RUCKER C/O AGNES CONTRERAS DB 245 PG 779
(39) GUY BROWN ESTATE FILE 02-E-62 ITEM 4
(40) BARBARA STRAYHORN
(101) LEE MORRIS DB 180 PG 208 DB 313 PG 128

S 08°16'54" W 20' ELVA COURT
N 05°02'22" E 201.85'
N 05°02'22" E 199.55'
N 08°16'54" E 164.33'
-Y3- POT Sta. 38+37.83

+92.00 -Y3- 56.00' (LT.)
+32.28 30.00'
+30.00 -Y3- 65.00' (LT.)
+30.00 -Y3- 50.00' (LT.)
+12.72 30.00'
+98.00 -Y3- 63.00' (LT.)
+07.00 -Y3- 54.00' (LT.)
30.00 -Y3- 50.00' (LT.)
+30.00 -Y3- 30.00' (LT.) BEGIN C/A FENCE
+82.73 30.00'
+25.93 30.10'
+00.00 -Y3- 50.00' (LT.) 30.00' (LT.)
HTR
ISFD
100' TAPER
350' LANE TRANSITION LT. & RT.
PUE
10' GR
24" RCP
30" C&G
4' EXIST R/W
7' BST
REMOVE
RETAIN
S 80°10'40.3" E
NC 58 / 26' BST
20'
END CONSTRUCTION -Y3- STA. 38+00.00
END 5' CONC. SIDEWALK -Y3- STA. 38+00.00 RT.
+50.00 -Y3- 45.00' (RT.)
+00.00 -Y3- 30.00' (RT.) 35.00' (RT.)
+00.00 -Y3- 50.00' (RT.)
-BY3- 33 POT 38+12.96

(22) BRUCE C. FREEMAN DB 148 PG 290 MB 2 PG 101
(23) BRUCE L. FREEMAN DB 251 PG 290 DB 251 PG 291 MB 2 PG 101
(24) ROBERT M. JONES, ET UX DB 265 PG 721 MB 2 PG 101
(25) UNKNOWN

S 10°33'40" W 106.20'
S 10°33'40" W 49.99'
S 10°33'40" W 48.99'
S 10°33'40" W 49.25'
S 10°33'40" W 107.36'
S 08°33'40" W 49.28'
S 79°26'20" E 44.57'
S 79°26'20" E 84.72'
N 79°26'20" W 102.50'
N 79°26'20" W 86.44'
+31.70 -Y3- 45.00' (RT.)
+33.00 -Y3- ISFD 35.00' (RT.)
END C/A FENCE
+31.51 -Y3- 60.00' (RT.)
+05.00 -Y3- 45.00' (RT.) 60.00' (RT.)
16' BST
GARDNER LN
24" CONC. GUTTER

24" C&G
CB
TOWN OF POLLOCKSVILLE
MOULTRY L. SPENCER, ET AL DB 243 PG 726 MB 2 PG 101
BRITT A. EMANUEL DB 235 PG 635
TT A. EMANUEL 3 235 PG 635

SEE SHEET 46 FOR -Y3- PROFILE

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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y10RPC-		-Y10RPD-		-Y9-
PI Sta 18+99.65	PIs Sta 24+08.13	PI Sta 18+07.15	PIs Sta 23+12.00	PI Sta 20+60.71
Δ = 74° 11' 00.0" (RT)	Θs = 6° 59' 14.2"	Δ = 73° 02' 03.1" (LT)	Θs = 6° 59' 14.2"	Δ = 0° 39' 21.1" (LT)
D = 6° 59' 14.2"	Ls = 200.00'	D = 6° 59' 14.2"	Ls = 200.00'	D = 0° 14' 59.4"
L = 1,061.69'	LT = 133.44'	L = 1,045.24'	LT = 133.44'	L = 262.51'
T = 619.97'	ST = 66.76'	T = 607.15'	ST = 66.76'	T = 131.26'
R = 820.00'		R = 820.00'		R = 22,933.03'
SE = .08		SE = .08		
R0 = 200'		R0 = 200'		

NAD 83/NSRS 2007

-Y10RPD- CS Sta. 22+45.24

-Y10- POT Sta. 19+04.00=
-Y10RPD- ST Sta. 24+45.24

MATCHLINE -Y10- STA. 22 + 50.00
SEE SHEET 26

(97)
AARON L. MALLARD, ET UX
DB 132 PG 057

BEGIN CONSTRUCTION
-Y10- STA. 15 + 76.00

435' RIGHT MEDIAN TAPER

RETAIN

+11.00 -Y10RPD-

4' PS

10' PS

CLEAN OUT PIPE

15" RCP

+76.00

(3102) Convert to JB

(3101)

N 31° 25' 05.0" W

20

15

25

GRADE TO DRAIN

+76.00 -Y10-
114.82' (LT.)
END C/A FENCE

CHORD
-Y10- POT Sta. 18+33.89=
-Y10RPC- ST Sta. 25+41.37
730' LEFT MEDIAN TAPER

200' TAPER

+41.37 -Y10RPC-
90.00' (RT.)

+41.37 -Y10RPC-
84.56' (RT)

-Y10RPC- CS Sta. 23+41.37

MTL CANOPY

ISBKD

DK

HTR

48" WW ISBW

EXIST R/W MON

-Y9- PC Sta. 19+29.45

-Y9- POT Sta. 18+33.35=
-Y10- POT Sta. 10+00.00

INV=22.38
12" RCP
INV=22.72'

6" RCP

30" RCP

INV=23.54

INV=22.87'

RIP RAP

48" WW ISBW MH

DOT OH SIGN POSTS

ARDAD

CONC

SHARON M. SOLTOW
DB 235 PG 193
MB 3 PG 35

(97)
AARON L. MALLARD, ET UX
DB 132 PG 057

-Y8- PT Sta. 37+23.13

-BY8- 93 PINC 27+76.77

+43.00 -Y8-
30.00' (LT.)
45.00' (LT.)

PUE

35

40

S 32° 47' 00.2" E

15" CMP

15" RCP

EXIST R/W

15" HDPE

24" RCP

-BY9- PINC 25+97.64
-BY8- 94 POT 38+41.81

S 35°48'35" E
63.49

ISFD

SIGN

MATCHLINE -Y8- STA. 33 + 40.00
SEE SHEET 26

DAWN LANGDON COLLINS
DB 299 PG 894
MB 8 PG 21

-Y8-
PI Sta 34+64.33
Δ = 4° 33' 53.8" (RT)
D = 0° 52' 53.3"
L = 517.88'
T = 259.08'
R = 6,500.00'

ELECTRIC METER
ELECTRIC BOX
EOR
N 72°29'15" E
83.36'

EIP

-Y9- POT Sta. 14+76.87=
-Y8- POT Sta. 45+03.98

SHARON M. SOLTOW
DB 235 PG 193

EXIST R/W MON

NCDOT OH SIGN POSTS

N 68° 32' 55" E

SHARON M. SOLTOW
DB 235 PG 193

SEE SHEET 57 FOR -Y10- PROFILE
SEE SHEET 59 FOR -Y10RPC- PROFILE
SEE SHEET 60 FOR -Y10RPD- PROFILE

REVISIONS
8/17/99
R/W REVISION 6-24-14 (DWG) - ADDED PUE FROM -Y8- STA.32+36.00 TO STA.35+43.00 LT.ON PARCEL 97 (AARON L.MALLARD,ET UX).

25-JUN-2014 11:24
R:\Roadway\Proj\R2514D_Rdy_psh_31.dgn
$$$$USERNAME$$$$