STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

June 2, 2015

MEMORANDUM TO: Mr. John Rouse, P.E.
Division 2 Engineer

Ms. Karen Collette, P.E.
Division 3 Engineer

FROM: for Philip S. Harris, III, P.E., Manager
Natural Environment Section
Project Development and Environmental Analysis Unit

SUBJECT: US 17 Improvements from SR 1330/1439 South of Belgrade to the New Bern Bypass at the Jones/Craven County Line;
WBS 34442.1.3; **TIP R-2514 B, C, & D**

Attached are the US Army Corps of Engineers Section 404 Nationwide Permit, N.C. Division of Water Resources (NC DWR) Water Quality Certification, and CAMA Permit. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:
https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx
Quick Links>Permit Documents> Issued Permits.

cc: w/o attachment (see website for attachments):

Mr. Randy Garris, P.E. State Contract Officer
Mr. Jay Johnson, Division 2 Environmental Officer
Mr. Stoney Matthis, Division 3 Environmental Officer
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Roger Thomas, P.E., Roadway Design
Mr. Robert Memory, Utilities Unit
Mr. Jay Twisdale, P.E., Hydraulics
Mr. Tom Koch, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Mike Robinson, P.E., State Bridge Construction Engineer
Mr. Rob Hanson, P.E., PDEA Eastern Section
Mr. Philip Ayscue, Office of Inspector General
Ms. LeiLani Paugh, ICI/Onsite Mitigation

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6100
FAX: 919-212-5785

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

PROJECT COMMITMENTS

TIP Project No. R-2514 B, C & D
US 17 Improvements
From SR 1330/1439 South of Belgrade
To the New Bern Bypass at the Jones/Craven County Line
Onslow and Jones Counties
WBS Element 34442.1.3.

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Project Development and Environmental Analysis Unit, and Right of Way Branch

1. After consultation with the North Carolina State Historic Preservation Office, it was determined that the project will have an adverse effect on Archaeological Site 31JN128**, which has been recommended as eligible for the National Register of Historic Places per Criterion D. The site falls partially within the corridor and should be avoided by construction activities if possible. At this time, the site will not be avoided by construction activities and data recovery excavations will be required once right-of-way has been acquired, prior to construction. A Memorandum of Agreement between the U.S. Army Corps of Engineers, the State Historic Preservation Office and the North Carolina Department of Transportation has been prepared and signed to describe and implement data recovery for the site.

   This site is located in Section C of the project. Data recovery excavations have been performed at the site and a corresponding management summary of those efforts was transmitted to the State Historic Preservation Office in September, 2014. The State Historic Preservation Office confirmed that the archaeological field methods agreed to in the July 2013 data recovery plan and specifically described in the management summary were adequately implemented. ***The draft data recovery report is pending, but can be produced after project let.***

Division 2, Division 3, Roadside Environmental Unit, and Construction Unit

1. The Trent River is a designated anadromous fish spawning area. An in-stream work moratorium will be in place from February 15 to June 15.

   The Trent River is located in Section D of the project. ***This commitment is applicable to***

the project and will be adhered to for work within the Trent River.

2. The White Oak River is a designated inland primary nursery area. An in-stream work moratorium will be in place from February 15 to September 30.

   The White Oak River crossing is located in Section B of the project. ***This commitment is applicable to the project and will be adhered to for work within the White Oak River.***

<u>Hydraulics Unit, Structures Management Unit, Natural Environment Section, Human Environment Section, Roadway Design Unit, Roadside Environmental Unit, Division 2, Division 3, and Construction Unit</u>

1. Neuse River Basin Buffer rules apply to the northern two-thirds of the project from north of Maysville to the New Bern Bypass. Features within the Neuse River Drainage Basin portion of the project study corridors that are mapped as either a blue-line stream channel or open water feature on the most recent version of either the USGS topographic quadrangle or the county soil survey are subject to the Neuse Riparian Buffer Rules.

   This commitment will be adhered to for portions of the project within the Neuse River Drainage Basin. Generally, Section B is within the White Oak River Drainage Basin, while portions of Section C and all of Section D are within the Neuse River Drainage Basin.

2. The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program, for approval of a Conditional Letter of Map Revision (CLOMR) and subsequent Final Letter of Map Revision
   (LOMR) for each new crossing of a FEMA-regulated stream.

   Coordination with NC Floodplain Mapping Program has occurred and has been approved for the proposed project design.

3. The project involves construction activities on or adjacent to FEMA-regulated streams. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that drainage structures and roadway embankments that are located within the 100-year floodplain were built as shown in the construction plans both horizontally and vertically.

   Standard commitment that will be adhered to for project R-2514.

4. NCDOT will construct a wildlife underpass between Maysville and the Community of

Chadwick to provide wildlife passage under US 17 from the Hofmann Forest to the Croatan National Forest. Dual bridges, 120 feet long, with a 10-foot vertical clearance are proposed, coupled with fencing parallel to US 17 to help channel animals to the underpass. With the condition that the Department reserves the right to withdraw this commitment, if prior to the start of bridge construction, there is a change or planned change in use on the private property near the bridge that will serve as a deterrent to wildlife movement in the area. The US Fish and Wildlife Service requested that the fencing associated with the Wildlife Underpass include a wire mesh at the bottom of the fence to prevent smaller species from passing through the chain link fencing. The wildlife underpass is depicted in Figure 6 in the State Record of Decision (June 25, 2012).

This site is located in Section C of the project. The final design plans include a wildlife crossing structure consisting of dual bridge structures, 120 feet long (providing at least a 60-foot bottom width) with 10 feet of vertical clearance between ground level and the bottom of the bridge girder. Smaller animal passage pipes have been designed as well and consist of four 48" pipes (two on each side of the bridge structure) and four 72" pipes (two on each side of the bridge structure). All pipes will be buried a foot deep and backfilled.

Fencing will be provided for approximately 0.5 mile on each side of the structure on both sides of the improved US 17 to guide animals to the crossing structure. The fencing will extend 9 feet above ground level with 1 foot of the fence buried below ground. The fencing will be wire mesh with 6" x 6" openings. A finer wire mesh fabric will be attached extending 2 feet above ground level and buried 1 foot below ground level to restrict passage of small mammals, reptiles, and amphibians. The wire mesh openings will be ¼" x ¼".

NCDOT will add the wildlife crossing structure to the NCDOT Division 2 - District 3 vegetation removal contract to manage vegetation beneath the structure at such time that the construction contractor is no longer required to perform maintenance. The contract, administered by the Division 2 Bridge Maintenance section, specifies hand-clearing methods for vegetation control.

5. NCDOT will purchase and maintain a paved drive located just northeast of Maysville that extends from existing US 17 to the abandoned railroad on USFS Property. USFS will make a recommendation on the extent of the closure of FSR 204.

   Provision of the wildlife crossing structure that will connect the Croatan Forest to wooded land west of US 17 between the Town of Maysville and the Chadwick community will result

in grade change and fencing requirements that necessitate closure of direct access from US 17 to one of the US Forest Service's fire suppression roads (FS 204/209). As mitigation for this closure, NCDOT's State ROD commits the department to purchase a gravel drive located just northeast of Maysville that extends from US 17to the abandoned railroad on USFS Property.

NCDOT will pave that driveway and has designed the radii to provide ingress and egress for large log trucks and 18-wheelers. *The Right of Way Branch and the US Forest Service have negotiated a "cost to cure" for damages associated with the loss of access to FS 204/209. The negotiated cost was based on an estimate to upgrade the old railroad bed from the new paved driveway to the point where it intersects FS 204/209 near the wildlife crossing, a distance of approximately 1.9 miles.* ***The USFS will be responsible for performing the railroad bed upgrade.***

6. NCDOT will communicate with the USFS Croatan Wildlife Biologist prior to the start of any activities on USFS land within the planned RCW Territory 134 to ensure that the area has not become an active RCW area.

The NCDOT searched for cavity trees in suitable habitat (pine trees over 60 years old) within 0.5 mile of the project footprint where it encroaches within RCW territory 134 in the summer of 2014. No cavity trees were found and the site is considered inactive at this time.

<u>Project Development and Environmental Analysis (PDEA) Unit - Natural Environment Section and Division 2</u>

1. Prior to construction, NCDOT will coordinate with the US Forest Service (USFS) to identify occurrences of USFS rare plant species near the project construction limits and put up high visibility protective fencing. Fencing will be removed after completion of construction.

All known rare plants along US 17 on National Forest System land are within the cut/fill boundaries;
none are known outside the construction limits, so no fencing is needed.

2. NCDOT will post "No treatment" signs at USFS rare plants sites along the highway on NFS lands (Croatan National Forest) post-construction.

<u>Proposals and Contract Management/Construction Unit/Division 2</u>

1. Fueling or oiling of mechanical equipment will occur away from aquatic habitats when work is conducted on or adjacent to Croatan National Forest.

2. To prevent the spread of non-native invasive species (NNIS) on National Forest System (NFS) lands, contractors must pressure wash all off-road equipment, including cranes, graders, pans, excavators, and loaders, prior to being brought to the Croatan National Forest construction area (in Section C).

3. To control the spread of non-native invasive plants on National Forest System land, NCDOT will locate and flag areas of non-native invasive species (NNIS). If any of these areas are within areas of proposed fill, those areas will be cleared and grubbed, and the material disposed of outside the limits of the Croatan National Forest (CNF). If NNIS are located in areas of proposed cuts, then the material and actual thickness of root mat or other defined amount will be disposed of outside the limits of the CNF.

Roadside Environmental Unit/ Division 2/PDEA

1. Herbicides will only be used in specific areas on National Forest System (NFS) lands in consultation with the USFS. NCDOT will also coordinate with the USFS on any mechanical methods that would be allowed for controlling vegetation aside from routine mowing.

2. NCDOT will contact the USFS for non-routine maintenance and use of herbicides on NFS lands. No growth retards are to be used. Acceptable herbicides are as follows:
   a) Triclopyr - Commercial brand names include Garlon 3A™, Garlon 4™, Element 3A™, Element 4™, and Pathfinder II™.
   b) Glyphosate - Commercial brand names include Roundup™, Accord™, and Rodeo™.
   c) Clopyralid - Commercial brand names include Transline™.
   d) Imazapic - Commercial brand names include Plateau™.
   e) Metsulfuron methyl - Commercial brand names include Escort™ and Oust™.
   f) Dicamba - Commercial brand names include Vanquish™ and Overdrive™.
   g) 2, 4-Dichlorophenoxyacetic Acid - (commonly shortened to 2, 4-D) Commercial brand names include Frontline, Weed-no-More, and Aqua-Kleen.
   h) Imazapyr - Commercial brand names include Chopper, Arsenal, and Stalker.
   i) Sethoxydim - Commercial brand names include Poast, Torpedo, and Vantage.

3. All guidelines and mitigation measures presented in Forest Manual 2150, *Pesticide-Use Management and Coordination*, and Forest Service Handbook 2109.14, *Pesticide Use Management and Coordination Handbook*, will be followed.

4. Along stream edges and banks, herbicide applicators will use guards on the end of herbicide wands with a wide-angle cone tip nozzle. All herbicides will be sprayed away from any water in ephemeral and perennial streams, vernal pools, or lakes. Aquatic labeled herbicides will be used when within 150 feet of any live water. Only surfactants/adjuvants with low toxicity to aquatic species, such as Agri-dex, will be used with these herbicides in these areas.

5. When conducting mechanical control by hand, invasive plant parts capable of starting new plants (seeds, rhizomes, etc.) need proper disposal. Plants will be bagged and moved

off site. Bagged plants will receive standard garbage disposal. For large woody bushes that would be difficult to move, treatments will be scheduled prior to seed set as practical.

6. When conducting chemical control of targeted non-native invasive species (NNIS) within 10 feet of any known USFS rare (endangered, threatened, sensitive, or locally rare) plant, the following guidelines apply:
    a) Rare plant species will be flagged or marked prior to treatment to avoid any off-target effects. (The Natural Environment Section in PDEA can assist with flagging.)
    b) For larger woody stems, diameters 1 inch or greater, apply herbicide to cut stem surfaces with a small wick applicator if possible or with a small spray bottle to minimize drift.
    c) For smaller woody NNIS stems, if broadcast treatment is the only feasible treatment, cut the stems and only treat after re-sprouting from 6 inches to 1 foot in height.
    d) While spraying the re-sprouting foliage, place a barrier (such as an appropriately sized cardboard sheet) next to the rare plant species or cover the rare plant species with an appropriate container.
    e) For vining species, pull the vines outside one foot of adjacent rare plants.
    f) No chemical treatment will occur within one foot of the rare plant.
    g) Prior to applying herbicide within 1-10 feet of these plants, cover the rare plants or place an appropriate barrier adjacent to them.

7. Use of mowing as a NNIS control method should be timed to avoid spreading seeds (e.g. before seed set) to the extent possible.

8. Exposed soils will be promptly revegetated to avoid potential soil erosion or colonization by NNIS. In consultation with the USFS, NCDOT will use seed mixes of native grasses and forbs or other non-aggressive, non-natives on NFS lands for erosion control and revegetation. For areas extending beyond road shoulders, only approved seed mixtures and weed seed-free mulch or rolled matting will be used. If erosion becomes problematic in any area post-construction, turfgrass may be used selectively to limit soil disturbance. The following types of turfgrass may be used in problem areas for erosion and along road shoulders: tall fescue, creeping red fescue, centipede, and Bermudagrass

9. NCDOT Division 2 forces will work with USFS staff on a periodic basis to control the presence of priority species of non-native plants along the US 17 ROW on Croatan National Forest. NCDOT will also work on adjacent NCDOT ROW to prevent the encroachment of priority non-natives on to CNF. The current list of prioritized species from USFS is below; it is subject to change as new plant threats are identified.

Lespedeza cuneata, Sericea Lespedeza	*Hedera helix* var. *helix,* English Ivy
Lespedeza bicolor, Bicolor Lespedeza	*Vinca minor,* Periwinkle
Albizia julibrissin, Mimosa	*Kummerowia striata,* Japanese-clover
Ligustrum sinense, Privet	*Youngia japonica,* Asiatic Hawk's-beard
Rosa multiflora, Multiflora Rose	*Wisteria sinensis,* Chinese Wisteria
Ailanthus altissima, Tree-of-Heaven	*Verbena brasiliensis,* Brazilian vervain

Miscanthus sinensis, Chinese Silver Grass	*Imperata cylindrica,* Cogongrass
Lonicera maacki or morrowii, Amur or Morrow's Honeysuckle	*Persicaria perfoliata,* Mile-a-minute
Lonicera japonica, Japanese Honeysuckle	*Cayratia japonica,* Bushkiller
Sorghum halepense, Johnson Grass	*Pyrus calleryana,* Bradford Pear
Arthraxon hispidus, Basket Grass	*Solanum viarum,* Tropical Soda Apple
Elaeagnus umbellata, Autumn Olive	*Centaurea stoebe ssp. micranthos,* Spotted Knapweed
Pueraria montana var. lobata, Kudzu	*Commelina communis,* Common Dayflower
Baccharis halimifolia, eastern baccharis	*Acer rubrum,* red maple (only if it becomes problematic)

7. NCDOT will harvest and preserve seeds from Spring-flowering Goldenrod prior to construction and will make plantings within the Croatan National Forest at locations designated by the U.S. Forest Service. NCDOT will monitor the plantings for a period of five years to document survival. Planting failures will be replanted until USFS and NCDOT staff concur that further plantings would not be beneficial.

   Harvest of Spring-flowering Goldenrod seeds along US 17 was initiated in 2010 and will continue until construction begins. Seeds will be planted on the Croatan National Forest, which abuts Section C of this project. Some seeds will be planted along the Croatan side of US 17 post-construction. A mitigation plan is being developed which will specify planting locations.

8. NCDOT will test a sample of the collected seeds prior to transplanting to make sure they will germinate.

   Seeds were tested and found to be viable.

9. Based upon the preliminary designs prepared for R-2514, noise barrier NW1 meets applicable feasibility and reasonableness criteria, and is recommended for detailed traffic noise analysis for the benefit of five residential receptors on Deerfield Trail. The potential barrier location is located parallel to the proposed US 17 Bypass along the shoulder in the southwest quadrant of the US 17 Maysville Bypass / White Oak River Road grade-separated intersection.

   The area referred to in this commitment is within the limits of R-2514B. Additional hydraulic design in the area results in the relocation of one additional residential receptor. With the removal of this receptor, the potential noise barrier NW1 no longer meets the criteria of feasibility and reasonableness and is no longer recommended in this area.

   In early 2013, a design modification was implemented on Section D (Pollocksville Bypass) of the project in response to a request from a property owner to minimize impacts to a

large produce farming operation. The design was modified as described in the body of this Right of Way memorandum to keep Goshen Road at grade and elevate the proposed US 17 Bypass over Goshen Road. A noise reassessment was conducted and completed in June 2013 within this redesigned section of the project. No additional impacts to noise sensitive receptors were identified.

10. Preferred Alternative section 4D will pass through a conservation easement held by the NC Coastal Land Trust, consultation will be undertaken regarding easement impacts within the North Carolina Coastal Land Trust property.

    The conservation easement is associated with the Foscue and Simmons Plantation. Estimated right of way needed from this property is 25.3 acres, which has not changed appreciably since the Final Environmental Impact Statement was completed. The preferred alternative minimizes impacts to the Foscue and Simmons Plantation by its proximity to the existing transmission line easement west of existing US 17. ***The Right of Way Branch is currently in consultation with the North Carolina Coastal Land Trust****. The preferred alternative complies with the 1999 Letter of Intent from James and Sarah Foscue and the North Carolina Coastal Land Trust to the NC Department of Transportation.*

<u>Utilities Unit, Right of Way Branch, Division 2, and Construction Unit</u>

1. All relocation of utilities including but not limited to power lines, water and sewer lines, and communication lines located on National Forest Systems (NFS) lands must be coordinated with the US Forest Service.

2. The NCDOT Highway Easement on the Croatan National Forest is not for use by utility companies. Utility companies need to coordinate easements with the US Forest Service.

   As of April 2015, no utilities are proposed to be relocated on NFS lands with the possible exception of some Duke Energy infrastructure. It is uncertain whether Duke Energy needs to relocate on NFS lands; however, they are working directly with the US Forest Service to assess potential options.

COMMITMENTS FROM PERMITTING

<u>Division 2 Construction Unit</u>

1. For the purpose of the previously mentioned in-water work moratoria, the project's Corps of Engineers CWA Section 404 Individual Permit defines "in-water" as those waters within the Trent or White Oak Rivers and their associated perennial tributaries, and their adjacent wetlands that during periods of inundation have an active connection to these tributaries.

2. Bridge pile installation at the new White Oak River crossing shall be accomplished by pile driving and/or the use of a vibratory hammer, per the project CAMA permit. Additional authorization from the N.C. Division of Coastal Management is required if NCDOT or the contractor desire to utilize another type of pile installation, such as drilled shaft construction or jetting. On other project bridges, the project 401 Water Quality Certification allows driven piles and drilled shaft construction methods, but prohibits jetting or other methods of pile driving without further coordination with the N.C. Division of Water Resources., per the 401 water Quality Certification.

3. Subaqueous Crossing Notification: Special Condition No. 26 of the Corps of Engineers CWA Individual permit requires that for utility line crossings under navigable waters, the NCDOT shall provide 1) the Corps and 2) the National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, MD 20910-3282, accurate certified as-built location drawings, or other appropriate certification such as from Miss Utility (1-800-257-7777) showing the location and configuration of the utility line upon completion of the construction. The data collected should include the "centerline" data for the utility line location in waters of the United States crossings, as well as include the "toe" data showing where utility lines enter the water at the banks as this is where dredge anchors and spuds may be placed. This information must be provided within 30 days of completion of each underwater utility line crossing.

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF:

May 22, 2015

Regulatory Division

Action ID: SAW-2008-00528

North Carolina Department Of Transportation,
Project Development and Environmental Analysis Unit
Attn: Mr. Richard W. Hancock, P.E., Manager
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Hancock:

Enclosed is a Department of the Army permit to impact approximately 46.86 acres of Department of the Army (DA) jurisdictional wetlands and 4281 linear feet of surface waters associated with 16 miles of highway improvements near or within the US Highway 17 corridor beginning at the intersection of SR 1330 (Deppe Loop Road) and SR 1439 (Springhill Road) in Onslow County near Belgrade and ending at the southern terminus of the New Bern Bypass, near the Jones/Craven County line, south of New Bern, North Carolina. The Corps is issuing this permit in response to your written request of February 11, 2015, and the ensuing administrative record.

Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notifies you that your permit has been modified.

Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant conditions require that:

a. You must complete construction before December 31, 2021.

b. You must notify this office in advance as to when you intend to commence and complete work.

c. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

You should address all questions regarding this authorization to, Mr. Thomas Steffens, in the Washington Regulatory Field Office, 2407 West 5th Street, Washington, North Carolina 27889 or telephone: (910)-251-4615.

Sincerely,

for Kevin P. Landers Sr.
Colonel, U.S. Army
District Commander

Enclosures

Copies Furnished (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
1315 East-west Hwy., Rm 7316
Silver Spring, Maryland 20910-3282

Mr. Todd Bowers
Wetlands and Marine Regulatory Section
Water Protection Division - Region IV
U. S. Environmental Protection Agency
61 Forsyth St. SW
Atlanta, Georgia 30303-8931

Copies Furnished with special conditions and plans:

U. S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Fritz Rhodes
National Marine Fisheries Service
101 Pivers Island Road
Beaufort, North Carolina 28516

Jennifer Robertson
Wetland and Natural Resources Consultants, Inc.
775 Haywood Road, Suite D
Asheville, North Carolina 28806

Mr. Doug Huggett
Division of Coastal Management
N.C. Department of Environment
and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557

Mr. Pace Wilber
National Marine Fisheries Service
219 Fort Johnson Road
Charleston, South Carolina 29412-9110

Ms. Karen Higgins
North Carolina Division of Water Resources
401/Wetlands Unit
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

DEPARTMENT OF THE ARMY PERMIT

Permittee Mr. Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Permit No. **SAW-2008-0528**

Issuing Office **CESAW-RG-Washington**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The applicant proposes to impact approximately 46.86 acres of Department of the Army (DA) jurisdictional wetlands and 4281 linear feet of surface waters associated with 16 miles of highway improvements near or within the US Highway 17 corridor.

Project Location: The project site location is located near or within the US 17 corridor beginning at the intersection of SR 1330 (Deppe Loop Road) and SR 1439 (Springhill Road) in Onslow County near Belgrade and ending at the southern terminus of the New Bern Bypass, near the Jones/Craven County line, south of New Bern, North Carolina.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2021** If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit, Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

for *Mr. Richard W. Hancock, P.E., Manager PDEA-NCDOT* — 5-19-2015 *(DATE)*

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

for *Kevin P. Landers Sr., Colonel, US Army, District Commander* — 21 May 2015 *(DATE)*

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE) *(DATE)*

*U.S. GOVERNMENT PRINTING OFFICE: 1986 - 717-425

SPECIAL CONDITIONS

SAW-2008-00528

NCDOT TIP#: R-2514-B C D Improvements to the US Highway 17 corridor beginning at the intersection of SR 1330 (Deppe Loop Road) and SR 1439 (Springhill Road) in Onslow County near Belgrade and ending at the southern terminus of the New Bern Bypass, near the Jones/Craven County line, south of New Bern, North Carolina

WORK LIMITS

1. CONSTRUCTION PLANS: All work authorized by this permit must be performed in strict compliance with the attached plans dated February 11, 2015 which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.

2. UNAUTHORIZED DREDGE OR FILL: Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

3. MAINTAIN CIRCULATION AND FLOW OF WATERS: Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

4. DEVIATION FROM PERMITTED PLANS: Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, or shall any activities take place that cause the degradation of waters or wetlands. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and fill activities connected with this project. In addition, except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.

5. BORROW AND WASTE: To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent waters and wetlands, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material or to dispose of dredged, fill or waste material. The permittee shall

provide the Corps of Engineers with appropriate maps indicating the locations of proposed borrow or waste sites as soon as such information is available. The permittee will coordinate with the Corps of Engineers before approving any borrow or waste sites that are within 400 feet of any stream or wetland. All jurisdictional wetland delineations on borrow and waste areas shall be verified by the Corps of Engineers and shown on the approved reclamation plans. The permittee shall ensure that all such areas comply with Special Condition 4 of this permit and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites associated with this project. This documentation will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with Special Condition 4. All information will be available to the Corps of Engineers upon request. The permittee shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

6. PRECONSTRUCTION MEETING: The permittee shall schedule and attend a preconstruction meeting between its representatives, the contractors representatives, and the Corps of Engineers, Washington Regulatory Field Office, NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained with this Department of Army Permit. The permittee shall provide the USACE, Washington Regulatory Field Office, NCDOT Project Manager, with a copy of the final permit plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the preconstruction meeting for a time frame when the Corps and NCDWR Project Managers can attend. The permittee shall provide the Corps and NCDWR Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedules and participate in the required meeting.

RELATED LAWS

7. SEDIMENTATION/EROSION CONTROL PLAN:
a. During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.
b. No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit.
c. The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades on those areas, prior to project completion.
d. The permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to assure compliance with the appropriate turbidity water quality standard. Erosion and sediment control practices must be in full compliance with all

specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to assure compliance with the appropriate turbidity water quality standards. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

8. WATER CONTAMINATION: All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Resources at (919) 707-8787 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

PROJECT MAINTENANCE

9. NOTIFICATION OF CONSTRUCTION COMMENCEMENT AND COMPLETION: The permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
a. Prior to construction within any jurisdictional areas, the permittee must correctly install silt fencing (with or without safety fencing) parallel with the construction corridor, on both sides of the jurisdictional crossing. This barrier is to serve both as an erosion control measure and a visual identifier of the limits of construction within any jurisdictional area. The permittee must maintain the fencing, at minimum, until the wetlands have re-vegetated and stabilized.

10. CLEAN FILL: Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.

11. PERMIT DISTRIBUTION: The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

12. SILT-FENCING: The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and

wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

13. PERMIT REVOCATION: The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

14. EROSION CONTROL MEASURES IN WETLANDS: The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

15. TEMPORARY DISCHARGES: Temporary discharge of excavated or fill material into wetlands and waters of the United States will be for the absolute minimum period of time necessary to accomplish the work. All authorized temporary wetland, stream, and tributary impacts will be returned to pre-disturbance grade and contour, and re-vegetated.

ENFORCEMENT

16. REPORTING ADDRESS: All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Regulatory Division, Washington Regulatory Field Office, c/o Mr. Thomas Steffens 2407 West 5th Street, Washington , North Carolina 27889, and by telephone at: 910-251-4615. The Permittee shall reference the following permit number, SAW-2008-00528 on all submittals.

17. REPORTING VIOLATIONS OF THE CLEAN WATER ACT AND RIVERS AND HARBORS ACT: Violation of these conditions or violation of Section 404 of the Clean Water Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the discovery of the violation.

18. COMPLIANCE INSPECTION: A representative of the Corps of Engineers will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the Corps.

COMPENSATORY MITIGATION

19. North Carolina Division of Mitigation Services:
In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit

authorization.

20. <u>CONCRETE CONDITION:</u> The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the United States when it no longer poses a threat to aquatic organisms (concrete is set and cured).

21. <u>CULVERTS:</u> For construction of culverts, measures will be included in the construction that will promote the safe passage of fish and other aquatic organisms. For all culvert construction activities, the dimension, pattern, and profile of the stream, (above and below a pipe or culvert), should not be modified by widening the stream channel or by reducing the depth of the stream. Culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. For culverts 48 inches in diameter or smaller, culverts must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert.

22. <u>MORATORIA:</u> To avoid adverse impacts to spawning populations of fish species at this project site; the following in-water work moratoria will be adhered to:

-No in-water work will be permitted in the Trent River between February 15 and June 15 of any year without prior approval from the Corps and the NMFS. The permittee shall follow the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage" (May 12, 1997) at all times.

-No in-water work will be permitted in the White Oak River between February 15 and September 30 of any year due to an Inland Primary Nursery Area designation; without prior approval from the Corps and the NC Wildlife Resources Commission.

For the purpose of this moratorium, "in-water" is defined as those waters within the Trent or White Oak Rivers and their associated perennial tributaries, and their adjacent wetlands that during periods of inundation have an active connection to these tributaries.

<u>SECTION 10 AND NAVIGATION</u>

23. The authorized structure and associated activity must not interfere with the public's right to free navigation on all navigable waters of the United States. No attempt will be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work for reasons other than safety.

24. The permittee must install and maintain, at his expense, any signal lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on authorized facilities. For further information, the permittee should contact the U.S. Coast Guard Marine Safety Office at (252) 247-4525.

25. This permit does not authorize the interference with any existing or proposed Federal project, and the Permittee will not be entitled to compensation for damage or injury to the authorized structure or work which may be caused from existing or future operations undertaken by the United States in the public interest.

26. Subaqueous Crossing Notification: For utility line crossings under navigable waters, the permittee shall provide 1) the Corps and 2) the National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, MD 20910-3282, accurate certified as-built location drawings, or other appropriate certification such as from Miss Utility (1-800-257-7777) showing the location and configuration of the utility line upon completion of the construction. The data collected should include the "centerline" data for the utility line location in waters of the United States crossings, as well as include the "toe" data showing where utility lines enter the water at the banks as this is where dredge anchors and spuds may be placed. This information must be provided within 30 days of completion of each underwater utility line crossing.

CULTURAL RESOURCES

27. Historic Resources: The permittee shall adhere to all of the stipulations contained in the Memorandum of Agreement (MOA) between the Corps, SHPO and NC DOT as developed to address the adverse effect of the proposed improvements to US 17. Archaeological Site 31JN128 will not be avoided by construction activities; as such, data recovery excavations will be required once right-of-way has been acquired and prior to construction.

CZMA

28. The permittee shall adhere to all of the conditions set forth in the NC Division of Coastal Management Major Development permit No. 43-15, dated March 24, 2015 and all subsequent letters of refinement or modifications therein.

UTILITIES

29. All utility work performed under a non-reporting Nationwide Permit 12 (NWP 12 - Utility Lines) associated with this project is subject to all applicable terms and conditions of the NWP 12 and Wilmington District Regional Conditions.

Failure to institute and carry out the details of Special Conditions 1-29, may result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with TIP No. R-2514 B, C D or such other remedy as the District Engineer or his authorized representatives may seek.

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: Mr. Richard W. Hancock, P.E. NCDOT/PDEA **Action ID: SAW-2008-00528**
Project Name: TIP R-2514 BCD **County:** Jones

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Ecosystem Enhancement Program (NCEEP), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

Instructions to Sponsor: The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation* ****8-digit HUC and Basin: 03020106, White Oak River Basin**

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
4002			**6.77**		**40.15**	

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

**** See comments below for river basin impacts information**

Compensatory Mitigation Requirements: **8-digit HUC and Basin: 03020204, Neuse River Basin**

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
8004			**13.54**		**80.06**	

Mitigation Site Debited: **NCDOT/DMS/Croatan Wetland Mitigation Bank (CWMB)**
(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCEEP, list NCEEP. If the NCEEP acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCEEP), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name:_____

Name of Sponsor's Authorized Representative:_____

_____ _____
Signature of Sponsor's Authorized Representative **Date of Signature**

USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions: R-2514 Sections B and the southern portion of Section C are located in the White Oak River Basin (HUC 03020301) and the remaining part of Section C and all of Section D is located within the Neuse River Basin (HUC 03020204). The CWMB is located in the Neuse River Basin (HUC 03020204) and is immediately adjacent to the project corridor. Total compensatory mitigation for permanent impacts to jurisdictional areas will be calculated at a 2:1 ratio. There is 0.07 acre of un-impacted non-riparian wetlands in Section C (Site 7) that was considered as a total take and was calculated at a 1:1 ratio. USACE did not require compensatory mitigation for the temporary construction activities and stream bank stabilization impacts.

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil)***. Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Tom Steffens
USACE Field Office: Washington Regulatory Field Office
US Army Corps of Engineers
2407 West Fifth Street
Washington, NC 27889
Email: **thomas.a.steffens@usace.army.mil**

	May 18, 2015
USACE Project Manager Signature	**Date of Signature**

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at http://ribits.usace.army.mil.

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at http://regulatory.usacesurvey.com/ to complete the survey online.

NCDENR
North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald van der Vaart
Secretary

March 2, 2015

Mr. Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and NEUSE BUFFER RULES with ADDITIONAL CONDITIONS for proposed improvements to US 17 from south of Belgrade at SR 1330/SR1439 to the New Bern Bypass in Onslow, Jones, and Craven Counties, TIP R-2514 B, C, & D.
NCDWR Project No. 20141169v1

Dear Mr. Hancock:

Attached hereto is a copy of Certification No. 004012 issued to The North Carolina Department of Transportation (NCDOT) dated March 2, 2015.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

S. Jay Zimmerman, Acting Director
Division of Water Resources

Attachments

Electronic copy only distribution:
Tom Steffens, US Army Corps of Engineers, Washington Field Office
Jay Johnson, Division 2 Environmental Officer
Colin Mellor, NC Department of Transportation
Chris Rivenbark, NC Department of Transportation
Gordon Cashin, NC Department of Transportation
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Steve Sollod, NC Division of Coastal Management
Beth Harmon, Ecosystem Enhancement Program
Garcy Ward, NC Division of Water Resources Washington Regional Office
File Copy

401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and NEUSE BUFFER RULES with ADDITIONAL CONDITIONS

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500 and 15A NCAC 2B .0233. This certification authorizes the NCDOT to impact 56.59 acres of jurisdictional wetlands, 4,679 linear feet of jurisdictional streams and 299,809 square feet of protected riparian buffers in Onslow, Jones, and Craven Counties. The project shall be constructed pursuant to the application dated received November 14, 2014 and the additional information received February 2015. The authorized impacts are as described below:

Stream Impacts in the White Oak and Neuse River Basins

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
Approved Impacts for Section B						
6	--	--	536	40	576	536
13	1,294	74	--	--	1,368	1,294
16	--	--	120	25	145	0
SECTION B TOTAL:	**1,294**	**74**	**656**	**65**	**2,089**	**1,830**
Approved Impacts for Section C						
17	109	--	--	--	109	0
18	132	20	--	--	152	0
19	106	58	--	--	164	0
22	32	10	--	--	42	0
SECTION C TOTAL:	**379**	**88**	**0**	**0**	**467**	**0**
Approved Impacts for Section D						
1	234	31	--	--	265	234
3	--	--	5	50	55	0
9	214	20	--	--	234	214
13	242	21	--	--	263	242
15	318	27	--	--	345	318
16	296	21	--	--	317	296
21	644	--	--	--	644	644
SECTION D TOTAL:	**1,948**	**120**	**5**	**50**	**2,123**	**1,948**
Total Approved Impacts for Project						
PROJECT TOTAL:	**3,621**	**282**	**661**	**115**	**4,679**	**3,778**

Total Stream Impact for Project: 4,679 linear feet; 3,778 linear feet require mitigation.

Section B Wetland Impacts in the White Oak River Basin

Site	Type	Fill (ac)	Temporary Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
Approved Construction Impacts								
1	Non-riparian	0.27	--	--	0.13	--	0.40	0.40
2	Non-riparian	0.19	--	--	--	--	0.19	0.19
3	Non-riparian	--	--	--	<0.01	--	<0.01	0.01
4	Non-riparian	--	--	--	0.01	--	0.01	0.01
5	Non-riparian	2.06	--	--	0.25	--	2.31	2.31
6	Riparian	1.02	--	--	0.18	--	1.20	1.20
7	Non-riparian	0.08	--	0.04	0.02	--	0.14	0.14
8	Non-riparian	0.05	--	--	0.02	--	0.07	0.07
9	Non-riparian	0.03	--	--	<0.01	--	0.03	0.00*
10	Riparian	3.32	0.06	--	0.38	0.43	4.19	3.70
11	Riparian	0.17	--	--	0.02	--	0.19	0.19
12	Non-riparian	0.01	0.01	--	--	4.02	4.04	0.01
14	Riparian	0.02	--	0.04	<0.01	--	0.07	0.07
15	Non-riparian	1.08	--	--	0.14	--	1.22	1.22
16	Riparian	<0.01	--	0.03	0.03	--	0.07	0.07
Approved Construction Total:		**8.29**	**0.07**	**0.11**	**1.21**	**4.45**	**14.13**	**9.59**
Approved Utility Impacts								
1	Utilities	<0.01	--	--	--	0.09	0.09	0.00
2	Utilities	--	--	--	--	0.02	0.02	0.00
3	Utilities	--	--	--	--	0.09	0.09	0.00
4	Utilities	--	--	--	--	0.01	0.01	0.00
Approved Utility Total:		**0.00**	**0.00**	**0.00**	**0.00**	**0.21**	**0.21**	**0.00**
SECTION B TOTAL:		**8.29**	**0.07**	**0.11**	**1.21**	**4.66**	**14.34**	**9.59**

* Site 9 - This feature is considered an agricultural ditch and will not require mitigation.

Section C Wetland Impacts in the White Oak and Neuse River Basins

Site	Type	Fill (ac)	Temporary Fill (ac)	Excavation (ac)	Temporary Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
Approved Construction Impacts									
1	Non-riparian	3.65	--	--	--	0.42	<0.01	4.08	4.07
2	Non-riparian	0.09	--	--	--	0.04	--	0.13	0.13
3	Non-riparian	<0.01	--	0.04	--	0.02	--	0.06	0.06
4	Non-riparian	6.82	--	--	--	1.43	<0.01	8.25	8.25
5	Non-riparian	0.03	--	0.11	--	0.11	--	0.25	0.25
6	Non-riparian	--	--	<0.01	--	0.03	<0.01	0.03	0.03
7	Non-riparian	0.26	--	0.01	--	0.08	--	0.35	0.35*
8	Non-riparian	0.64	--	--	--	0.09	--	0.73	0.73
9	Non-riparian	0.89	--	--	--	0.17	--	1.06	1.06
10	Non-riparian	0.95	--	--	--	0.15	--	1.10	1.10
11	Non-riparian	--	--	<0.01	--	0.03	--	0.03	0.03
12	Non-riparian	0.45	--	--	--	0.05	--	0.50	0.50
13	Non-riparian	0.34	--	<0.01	--	0.11	--	0.45	0.45
14	Non-riparian	1.52	--	--	--	0.41	--	1.93	1.93
15	Non-riparian	0.05	--	0.15	--	0.09	--	0.29	0.29
16	Non-riparian	0.51	--	0.06	--	0.16	--	0.73	0.73
17	Riparian	0.01	--	<0.01	--	<0.01	--	0.01	0.01
20	Non-riparian	1.58	--	--	--	0.2	--	1.78	1.78
21	Non-riparian	0.23	--	--	--	0.02	--	0.25	0.25
23	Non-riparian	--	--	0.01	--	0.02	--	0.03	0.03
1D	Non-riparian	--	--	--	--	--	0.03	0.03	0.00
2D	Non-riparian	--	0.08	--	--	--	0.05	0.13	0.00
TOTAL:		**18.02**	**0.08**	**0.41**	**0.00**	**3.60**	**0.08**	**22.20**	**22.02**
Approved Utility Impacts									
1	OHPL/WL	--	0.01	--	0.11	--	0.35	0.47	0.00
2	OHPL/WL	--	<0.01	--	0.10	--	0.15	0.25	0.00
3	WL	--	--	--	0.01	--	0.03	0.04	0.00
4	OHPL/WL	--	<0.01	--	--	--	0.01	0.01	0.00
5	OHPL/WL	--	--	--	--	--	0.12	0.12	0.00
6	OHPL/WL	--	--	--	--	--	<0.01	0.01	0.00
7	OHPL/WL	--	--	--	--	--	0.12	0.12	0.00
8	OHPL	--	--	--	--	--	0.01	0.01	0.00
9	OHPL/WL	--	--	--	<0.01	--	0.04	0.04	0.00
10	OHPL/WL	--	--	--	--	--	0.09	0.09	0.00
11	OHPL	--	--	--	--	--	0.01	0.01	0.00
12	OHPL	--	--	--	--	--	<0.01	0.01	0.00
13	OHPL	--	--	--	--	--	0.1	0.10	0.00
14	OHPL/WL	--	<0.01	--	0.01	--	0.02	0.03	0.00
15	OHPL/WL	--	0.01	--	--	--	0.18	0.19	0.00
16	OHPL	--	--	--	--	--	0.01	0.01	0.00
17	OHPL	--	--	--	--	--	0.1	0.10	0.00
18	OHPL	--	--	--	--	--	0.01	0.01	0.00
19	OHPL/WL	--	--	--	<0.01	--	0.02	0.02	0.00
20	OHPL/WL	--	--	--	<0.01	--	0.02	0.02	0.00
21	OHPL/WL	--	<0.01	--	0.02	--	0.04	0.05	0.00
22	OHPL/WL	--	--	--	<0.01	--	0.03	0.03	0.00
23	WL	--	--	--		--	0.03	0.03	0.00
24	OHPL/WL	--	--	--	0.02	--	0.03	0.03	0.00
25	OHPL/WL	--	--	--	--	--	0.09	0.09	0.00
26	OHPL	--	--	--	--	--	<0.01	0.01	0.00
28	OHPL	--	--	--	--	--	0.01	0.01	0.00
29	OHPL	--	--	--	--	--	0.01	0.01	0.00
	Power Poles	--	0.05	--	--	--	--	0.05	0.00
TOTAL:		**0.00**	**0.08**	**0.00**	**0.29**	**0.00**	**1.61**	**1.97**	**0.00**
Section C Impact Totals									
Construction Imp. Total:		18.02	0.08	0.41	0.00	3.60	0.08	22.20	22.02
Utility Impacts Total:		0.00	0.08	0.00	0.29	0.00	1.61	1.97	0.00
SECTION C TOTAL:		**18.02**	**0.16**	**0.41**	**0.29**	**3.60**	**1.69**	**24.17**	**22.02***

* An additional 0.06 acres at Site 7 considered to be a total take (not reflected above) will remain unimpacted and mitigatated at a 1:1 ratio.

Section D Wetland Impacts in the White Oak and Neuse River Basins

Site	Type	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
Approved Construction Impacts								
2	Non-Riparian	2.49	--	--	0.05	--	2.54	2.54
3	Riparian	0.09	<0.01	--	0.09	0.66	0.84	0.18
4	Riparian	0.76	0.06	0.06	0.12	1.19	2.19	0.94
5	Non-Riparian	0.86	--	--	0.05	--	0.91	0.91
6	Non-Riparian	1.60	--	--	0.13	--	1.73	1.73
7	Non-Riparian	<0.01	--	--	0.01	--	0.01	0.02
8	Non-Riparian	0.23	--	--	0.02	--	0.25	0.25
9	Riparian	0.54	--	--	0.06	--	0.60	0.60
10	Non-Riparian	0.38	--	--	0.02	--	0.40	0.40
11	Non-Riparian	0.96	--	--	0.09	--	1.05	1.05
12	Non-Riparian	0.31	--	--	0.06	--	0.37	0.37
13	Riparian	0.01	--	--	<0.01	--	0.01	0.02
14	Non-Riparian	0.34	--	--	--	--	0.34	0.34
15	Non-Riparian	0.03	--	--	0.02	--	0.05	0.05
17	Non-Riparian	1.39	--	--	0.16	--	1.55	1.55
18	Non-Riparian	0.58	--	--	0.10	--	0.68	0.68
19	Non-Riparian	1.35	--	--	0.20	--	1.55	1.55
20	Non-Riparian	0.30	--	--	0.06	--	0.36	0.36
21	Non-Riparian	1.58	--	0.01	0.03	--	1.62	1.62
22	Non-Riparian	0.02	--	--	--	--	0.02	0.02
23	Riparian	0.02	--	0.01	0.03	0.19	0.25	0.06
Approved Construction Total:		**13.84**	**0.07**	**0.08**	**1.29**	**2.04**	**17.32**	**15.24**
Approved Utility Impacts								
1	Aerial Power Line	<0.01	--	--	--	0.35	0.35	0.00
2	Aerial Power Line	<0.01	--	--	--	0.40	0.40	0.00
Approved Utility Total:		**0.01**	**0.00**	**0.00**	**0.00**	**0.75**	**0.75**	**0.00**
SECTION D TOTAL:		**13.85**	**0.07**	**0.08**	**1.29**	**2.79**	**18.08**	**15.24**

Total Wetland Impacts in the White Oak and Neuse River Basins

Section	Fill (ac)	Fill (temporary) (ac)	Temporary Excavation (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
Section B Total:	8.29	0.07	0	0.11	1.21	4.66	14.34	9.59
Section C Total:	18.02	0.16	0.29	0.41	3.60	1.69	24.17	22.08*
Section D Total:	13.85	0.07	0.00	0.08	1.29	2.79	18.08	15.24
PROJECT TOTAL:	**40.16**	**0.30**	**0.29**	**0.60**	**6.10**	**9.14**	**56.59**	**46.91**

* There is an additional 0.06 acres of impact at Site 7 due to total take reflected above but not reflected in the Section C impacts table

Total Wetland Impact for Project: 56.59 acres; 46.91 acres of which require mitigation.

Open Water Impacts in the Neuse River Basin

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
Section D Site 6	0.03	--	0.03
TOTAL	**0.03**	**0.00**	**0.03**

Total Open Water Impact for Project: 0.03 acres.

Section C Neuse River Basin Riparian Buffer Impacts

Site	Impact Type	Zone 1 Impact (sq ft)	*minus* Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Mitigable Impacts (sq ft)	Zone 1 Buffer Mitigation Required (3:1 ratio)	Zone 2 Impact (sq ft)	*minus* Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Mitigable Impacts (sq ft)	Zone 2 Buffer Mitigation Required (1.5:1 ratio)
Approved Impacts for Section C											
1	Road	6,426	0	6,426	0	N/A*	3,705	0	3,705	0	N/A*
2	Road	11,389	0	11,389	11,389	34,167	7,568	0	7,568	7,568	11,352
3	Road	9,916	0	9,916	9,916	29,748	4,613	0	4,613	4,613	6,920
27	Utility	519	0	519	0	N/A*	0	0	0	0	0
Section Total:		**28,250**	**0**	**28,250**	**21,305**	**63,915**	**15,886**	**0**	**15,886**	**12,181**	**18,272**
Approved Impacts for Section D											
1	Road	18,124	0	18,124	18,124	54,372	11,612	0	11,612	11,612	17,418
2	Bridge	11,778	11,630	148	0	N/A*	6,975	5,096	1,879	0	N/A*
2	Road	2,143	928	1,215	0	N/A*	2,083	379	1,704	0	N/A*
2	Parallel	0	0	0	0	N/A*	26	0	26	26	39
3	Bridge	31,209	24,130	7,079	0	N/A*	12,501	9,567	2,934	0	N/A*
4	Road	14,017	12,324	1,693	1,693	5,079	9,383	6,294	3,089	3,089	4,634
5	Road	15,142	433	14,709	14,709	44,127	9,677	0	9,677	9,677	14,516
6	Road	20,266	0	20,266	20,266	60,798	12,665	1,432	11,233	11,233	16,850
7	Road	38,167	28,108	10,059	10,059	30,177	25,504	11,272	14,232	14,232	21,348
8	Bridge	7,707	4,781	2,926	0	N/A*	6,694	2,277	4,417	0	N/A*
Section Total:		**158,553**	**82,334**	**76,219**	**64,851**	**194,553**	**97,120**	**36,317**	**60,803**	**49,869**	**74,791**
Total Approved Impacts for Project											
Project Total:		**186,803**	**82,334**	**104,469**	**86,156**	**258,468**	**113,006**	**36,317**	**76,689**	**62,050**	**93,063**

* N/A = Total for Site is less than 1/3 acre and 150 linear feet of impact or allowable; no mitigation required

Total Buffer Impact for Project is 299,809 square feet; 148,206 are mitigable.

SUMMARY OF ALL IMPACTS

Location	Stream (feet)		Wetland (acre)		Buffer Impacts (ft²)			Buffer Mitigation* (ft²)			Open Water (acre)
	Impacts	Mitigation	Impacts	Mitigation	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total	
Section B	2,089	1,830	14.34	9.59	N/A	N/A	N/A	N/A	N/A	N/A	0
Section C	467	0	24.17	22.08	28,250	15,886	44,136	21,305	12,181	33,486	0
Section D	2,123	1,948	18.08	15.24	158,553	97,120	255,673	64,851	49,869	114,720	0.03
TOTAL:	**4,679**	**3,778**	**56.59**	**46.91**	**186,803**	**113,006**	**299,809**	**86,156**	**62,050**	**148,206**	**0.03**

* Buffer mitigation does not include wetlands. See Buffer Tables above for more information.

The application provides adequate assurance that the discharge of fill material into the waters of the White Oak and Neuse River Basins in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received November 14, 2014. Should your project change, you are required to notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC .0244(9). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Conditions of Certification:

Project Specific Conditions

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]

2. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]

3. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS0000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]

4. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from the NCDWR first. [15A NCAC 02H.0506(b)(2)]

5. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)]

6. A turbidity curtain will be installed in the stream if driving or drilling activities occur within the stream channel, on the stream bank, or within 5 feet of the top of bank. This condition can be waived with prior approval from the NCDWR. [15A NCAC 02H .0506(b)(3)]

7. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water. [15A NCAC 02H .0506(b)(3)]

8. Mitigation:

    a. Compensatory mitigation for 3,778 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated February 25, 2015 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010. [15A NCAC 2H.0506(h)]

    b. Compensatory mitigation for impacts to 86,156 square feet of protected riparian buffers in Zone 1 and 62,050 square feet of protected riparian buffers in Zone 2 (a total of 148,206 square feet) shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Ecosystem Enhancement Program (EEP). Mitigation for unavoidable impacts to Neuse Riparian Buffers shall be provided in the Neuse River Basin and done in accordance with 15A NCAC 2B .0242(9). EEP has indicated in a letter dated February 25, 2015 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with EEP's Mitigation Banking Instrument signed July 28, 2010. [15A NCAC .02B .0295]

    c. Compensatory mitigation for impacts to 46.91 acres of wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated February 25, 2015 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with EEP's Mitigation Banking Instrument signed July 28, 2010. [15A NCAC 2H.0506(h)]

d. Mitigation will not be required for jurisdictional areas impacted by temporary excavation provided impacted areas are restored to pre-impact conditions as much as practicably possible and jurisdictional status is re-attained within three growing seasons after final disturbance. [15A NCAC 02H.0506(c)(3)]

9. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams, shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]

10. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage. [15A NCAC 02H.0506(b)(2)]

11. Channel relocations shall be completed and stabilized, and approved on site by NCDWR staff, prior to diverting water into the new channel. Stream banks shall be matted with coir-fiber matting. Vegetation used for bank stabilization shall be limited to native riparian vegetation, and should include establishment of a vegetated buffer on both sides of the relocated channel to the maximum extent practical. The use of rip-rap shall be kept to a minimum. Once the stream has been turned into the new channel, it may be necessary to relocate stranded fish to the new channel to prevent fish kills. [15A NCAC 02H .0506(b)(3)]

12. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed. [15A NCAC 02H.0506(b)(2)]

13. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species. [15A NCAC 02H.0506(b)(2)]

14. At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. NCDOT shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond. [15A NCAC 2H.0506(b)(3)]

15. The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) as described below [15A NCAC 02H.0506(b)(2) and 15A NCAC 04B. 0125]:
    a. Due to the anadromous fish spawning area, no in-water work is permitted in the Trent River between February 15 and July 15 of any year, without prior approval from the NC Division of Water Resources and the National Marine Fisheries Service. In addition, the permittee shall conform to the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997) at all times.
    b. Due to the Inland Primary Nursery Area designation, no in-water work is permitted in the White Oak River between February 15 and September 30 of any year, without prior approval from the NC Division of Water Resources and the NC Wildlife Resources Commission.

16. Pipes and culverts used exclusively to maintain equilibrium in wetlands, where aquatic life passage is not a concern, need not be buried and can be installed at natural ground elevation.

17. NCDOT shall be in compliance with the NCS000250 issued to the NCDOT, including the applicable requirements of the NCG010000.

18. Tall fescue shall not be used in the establishment of temporary or permanent groundcover within riparian areas. For the establishment of permanent herbaceous cover, erosion control matting shall be used in conjunction with an appropriate native seed mix on disturbed soils within the riparian area and on disturbed steep slopes with the following exception. Erosion control matting is not necessary if the area is contained by perimeter erosion control devices such as silt fence, temporary sediment ditches, basins, etc. Matting should be secured in place with staples, stakes, or wherever possible, live stakes of native trees. Erosion control matting placed in riparian areas shall not contain a nylon mesh grid, which can impinge and entrap small animals. For the establishment of temporary groundcover within riparian areas, hydroseeding along with wood or cellulose based hydro mulch applied from a fertilizer- and limestone-free tank is allowable at the appropriate rate in conjunction with the erosion control measures. Discharging hydroseed mixtures and wood or cellulose mulch into surface waters in prohibited. Riparian areas are defined as a distance 25 feet landward from top of stream bank. [15A NCAC 02B.0224 and 0225]

General Conditions:

19. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]

20. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]

21. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]

22. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]

23. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]

24. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

25. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]

26. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]

27. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]

28. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]

29. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]

30. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]

31. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]

32. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

33. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]

34. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.

35. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]

36. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]

37. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0506(b)(2)]

38. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]

39. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
    a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual.*
    b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual.* The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
    c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual.*
    d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

40. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

41. All stormwater runoff shall be directed as sheetflow through stream buffers at non-erosive velocities, unless otherwise approved by this certification. [15A NCAC 2B .0233]

42. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction. [15A NCAC 2B .0233]

43. Pursuant to 15A NCAC 2B .0233(6) sediment and erosion control devices shall not be placed in Zone 1 of any Neuse Buffer without prior approval by the NCDWR. At this time, the NCDWR has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow. [15A NCAC 2B .0233(6)]

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919)-431-3000, Facsimile: (919)-431-3100

A copy of the petition must also be served on DENR as follows:

Mr. Sam M. Hayes, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center

This the 2nd day of March 2015

DIVISION OF WATER RESOURCES

S. Jay Zimmerman, Acting Director
Division of Water Resources

WQC No. 004012

NCDENR
North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

April 8, 2015

Mr. Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1548

Subject: Correction to the 401 Water Quality Certification for the proposed improvements to US 17 from south of Belgrade at SR 1330/SR1439 to the New Bern Bypass in Onslow, Jones, and Craven Counties, TIP R-2514 B, C, & D.
NCDWR Project No. 20141169v1
NCDWR Certification No. 004012

Dear Mr. Hancock:

This letter is in regards to the 401 Water Quality Certification (WQC) issued on March 2, 2015 for improvements to US 17 in Onslow, Jones, and Craven Counties (DWQ Project No. 20141169; WQC No. 004012). Condition No. 15 of the WQC contains the following language:

1. "The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) as described below [15A NCAC 02H.0506(b)(2) and 15A NCAC 04B. 0125]:
    a. Due to the anadromous fish spawning area, no in-water work is permitted in the Trent River between February 15 and July 15 of any year, without prior approval from the NC Division of Water Resources and the National Marine Fisheries Service. In addition, the permittee shall conform to the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997) at all times.
    b. Due to the Inland Primary Nursery Area designation, no in-water work is permitted in the White Oak River between February 15 and September 30 of any year, without prior approval from the NC Division of Water Resources and the NC Wildlife Resources Commission."

Subsequent to the issuance of the initial 401 WQC on March 2, 2015, it was brought to our attention that, due to anadromous fish spawning, the in-water work moratorium for the Trent River should be between February 15 and June 15 of any year and not February 15 to July 15 of any year as stated in the original 401 WQC. The in-water work moratorium dates stated in the original 401 WQC for the White Oak River remain unchanged. Therefore, Condition 15 is revised as follows:

1. "The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) as described below [15A NCAC 02H.0506(b)(2) and 15A NCAC 04B. 0125]:
    a. Due to the anadromous fish spawning area, no in-water work is permitted in the Trent River between February 15 and **June 15** of any year, without prior approval from the NC Division of Water Resources and the National Marine Fisheries Service. In addition, the permittee shall conform to the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997) at all times.

b. Due to the Inland Primary Nursery Area designation, no in-water work is permitted in the White Oak River between February 15 and September 30 of any year, without prior approval from the NC Division of Water Resources and the NC Wildlife Resources Commission."

Please attach a copy of this letter with any copies of the original Water Quality Certification. All other conditions written into the previous Water Quality Certification for this project dated March 2, 2015 still apply except where superseded by this correction. We are sorry for any inconvenience this may have caused. If you have any questions please contact David Wainwright at (919) 707-8787 or David.Wainwright@ncdenr.gov.

Sincerely,

S. Jay Zimerman, Director
Division of Water Resources

Electronic copies:

Tom Steffens, US Army Corps of Engineers, Washington Field Office
Jay Johnson, Division 2 Environmental Officer
Colin Mellor, NC Department of Transportation
Chris Rivenbark, NC Department of Transportation
Gordon Cashin, NC Department of Transportation
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Cathy Brittingham, NC Division of Coastal Management
Garcy Ward, NC Division of Water Resources Washington Regional Office
File Copy

NCDENR
North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald van der Vaart
Secretary

NCDWR Project No.: _____ **County:** _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion
Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date:_____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

NCDENR
North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

March 24, 2015

RECEIVED
MAR 30 2015
OFFICE OF NATURAL ENVIRONMENT

Richard W. Hancock, PE
Manager
Project Development and Environmental Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

The enclosed permit constitutes authorization under the Coastal Area Management Act, and where applicable, the State Dredge and Fill Law, for you to proceed with your project proposal. The original (buff-colored form) is retained by you and it must be available on site when the project is inspected for compliance. Please sign both the original and the copy and return the copy to this office in the enclosed envelope. Signing the permit and proceeding means you have waived your right of appeal described below.

If you object to the permit or any of the conditions, you may request a hearing pursuant to NCGS 113A-121.1 or 113-229. Your petition for a hearing must be filed in accordance with NCGS Chapter 150B with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27611-6714, (919) 733-2698 within twenty (20) days of this decision on your permit. You should also be aware that if another qualified party submits a valid objection to the issuance of this permit within twenty (20) days, the matter must be resolved prior to work initiation. The Coastal Resources Commission makes the final decision on any appeal.

The project plan is subject to those conditions appearing on the permit form. Otherwise, all work must be carried out in accordance with your application. Modifications, time extensions, and future maintenance require additional approval. Please read your permit carefully prior to starting work and review all project plans, as approved. If you are having the work done by a contractor, it would be to your benefit to be sure that he fully understands all permit requirements.

From time to time, Department personnel will visit the project site. To facilitate this review, we request that you complete and mail the enclosed Notice Card just prior to work initiation. However, if questions arise concerning permit conditions, environmental safeguards, or problem areas, you may contact Department personnel at any time for assistance. By working in accordance with the permit, you will be helping to protect our vitally important coastal resources.

Sincerely,

Douglas V Huggett

Douglas V. Huggett
Major Permits and Consistency Manager

Enclosure

Division of Coastal Management
400 Commerce Ave., Morehead City, NC 28557
Phone: 252-808-2808 \ FAX: 252-247-3330 Internet: www.nccoastalmanagement.net

An Equal Opportunity \ Affirmative Action Employer – Made in part by recycled paper

Permit Class
NEW

Permit Number
43-15

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

X Major Development in an Area of Environmental Concern pursuant to NCGS 113A-118

____ Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1548**

Authorizing development in Onslow and Craven County at new crossing of White Oak River and improvements to US 17 (R-2514) as requested in the permittee's application dated 11/3/14, MP-1, MP-2, and MP-5 and received as complete on 2/20/15.

This permit, issued on **3/24/15**, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

New Crossing of White Oak River and US 17 Improvements

1) In accordance with commitments made by the permittee and in order to protect anadromous fish during spawning periods and through embryonic, larval or juvenile life stages in the White Oak River, no in-water work shall be conducted from February 15 through September 30, without prior approval of the NC Division of Coastal Management (DCM), in consultation with the appropriate resource agencies.

2) The installation of bridge piles shall be accomplished by pile driving and/or the use of a vibratory hammer. Should the permittee and/or its contractor desire to utilize another type of pile installation, such as drilled shaft construction or jetting, additional authorization from DCM shall be required.

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

No Expiration Date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

Douglas V Huggett
for

Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

for

RICHARD W. HANCOCK

Signature of Permittee

ADDITIONAL CONDITIONS

3) Turbidity curtains shall be used to isolate all in-water work areas within the White Oak River, including but not limited to the permanent and temporary work bridge installation and removal. The turbidity curtains shall encircle the immediate work area; however, they shall not impede navigation. The turbidity curtains shall be properly maintained and retained in the water until construction is complete. The turbidity curtains shall be removed when turbidity within the curtains reaches ambient levels.

4) Placement of riprap shall be limited to the areas as depicted on the attached workplan drawings. The riprap material shall be free from loose dirt or any pollutant. The riprap material shall consist of clean rock or masonry materials, such as but not limited to, granite, marl, or broken concrete.

5) Any debris resulting from the demolition of the existing bridge or construction of the new bridge shall not enter wetlands or waters of the State, even temporarily.

6) Any waste materials and debris associated with construction, demolition, or other activities shall be disposed of at an approved upland site or shall be recycled in an environmentally appropriate manner provided appropriate authorizations are obtained from any relevant state, federal, or local authorities.

7) The permittee and/or his contractor shall exercise all available precautions in day-to-day operations to prevent waste from entering the adjacent waters.

8) The permittee and/or his contractor shall provide for proper storage and handling of all oils, chemicals, etc., necessary to carry out the project.

9) Uncured concrete shall not be allowed to contact waters of the State or water that will enter waters of the State.

10) Construction staging areas shall be located only in upland areas, and not in wetlands or waters of the State.

11) There shall be no clearing or grubbing of wetlands outside of the areas indicated on the attached workplan drawings without prior approval from DCM.

12) The permittee shall minimize the need to cross wetlands to the maximum extent practicable.

13) Construction mats shall be utilized to support equipment within wetland areas to minimize temporary wetland impacts. These mats shall be removed immediately following project completion.

14) The temporary work bridges shall be removed in their entirety within 90 days after they are no longer needed. However, if this timeframe occurs while the moratorium referenced in Condition No. 1 of this permit is in effect, then the temporary work bridges shall be removed in their entirety within 90 days of the moratorium end date.

ADDITIONAL CONDITIONS

Excavation and Fill

15) No excavation or filling shall take place at any time in any vegetated wetlands or surrounding waters outside of the alignment of the areas indicated on the attached workplan drawings, without prior DCM authorization.

16) Material excavated may be used in fill areas associated with the project once properly dewatered or shall be removed from the site and taken to an approved high ground location.

17) The temporary placement and double handling of any excavated or fill material within waters or vegetated wetlands is not authorized.

18) All fill material shall be clean and free of any pollutants except in trace quantities.

Navigation/Public Trust Usage

19) During bridge construction, the permittee shall make every attempt to maintain traditional navigation in the White Oak River. If this is not possible, then adequate notice shall be provided to the public that navigation will be limited during construction. The notice shall include an estimate of the amount of time that the limited navigation will occur.

Sedimentation and Erosion Control

20) This project shall conform to all requirements of the NC Sedimentation Pollution Control Act and NC DOT's Memorandum of Agreement with the Division of Energy, Mineral and Land Resources.

Compensatory Mitigation

NOTE: The Ecosystem Enhancement Program (EEP) agreed to provide compensatory mitigation for impacts in accordance with the EEP acceptance letter dated 2/25/15.

Utilities Relocation

21) Any relocation of utility lines that has not been previously permitted by DCM or is not already depicted on the attached work plan drawings, or described within the attached permit application, shall require approval by DCM, either under the authority of this permit, or by the utility company obtaining separate authorization.

ADDITIONAL CONDITIONS

Historical and Cultural Resource Protection

22) The permittee shall adhere to stipulations contained within the Memorandum of Agreement between the US Army Corp of Engineers and the North Carolina Historic Preservation Office dated 5/2/11, which NCDOT concurred with by signature on 5/25/11.

General

23) The NC Division of Water Resources (DWR) authorized the proposed project (Project No. 20141169v1) on 3/2/15. Any violation of the Certification approved by the DWR shall be considered a violation of this CAMA permit.

24) The permittee and/or contractor shall contact the DCM Transportation Field Representative in the Morehead City District Office at (252) 808-2808 to schedule a pre-construction conference prior to project initiation.

NOTE: This permit conveys DCM's determination that the portion of the project not located within a CAMA Area of Environmental Concern (AEC), including the extent of the linear project located outside of the coastal zone, will be undertaken in a manner that to the maximum extent practicable is not expected to have an effect on a coastal use or resources within the coastal zone and therefore is consistent with the enforceable policies of the NC Coastal Management Program in accordance with the provisions of Federal Consistency (15CFR930).

NOTE: If it is determined that additional permanent and/or temporary impacts are necessary that are not shown on the attached permit drawings or described in the authorized permit application, permit modification or additional authorization from DCM may be required.

NOTE: Plans and specifications for the relocation and/or replacement of water mains must be submitted to the NC Division of Water Resources, Public Water Supply Plan Review Section for approval prior to construction. Final approval must be issued before water mains are placed into service.

NOTE: This permit does not eliminate the need to obtain any additional state, federal, or local permits, approvals, or authorizations that may be required.

NOTE: An application processing fee of $475 was received by DCM for this project. This fee also satisfied the Section 401 application processing fee requirements of the Division of Water Resources.

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: dpb
Phone: (757) 398-6557
Fax: (757) 398-6222
Email: James.L.Rouseau2@uscg.mil
Or CGDFiveBridges@uscg.mil

16593
24 NOV 2014

Mr. Richard W. Hancock, P.E.
Project Development and Environment Analysis Unit
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Hancock:

This responds to your letter dated October 8, 2014 for the proposed US 17 improvements over several small tributaries, Trent River and White Oak River in Jones and Onslow Counties, NC.

The Coast Guard Authorization Act of 1982 exempts bridge projects from Coast Guard Bridge permits when the bridge project crosses non-tidal waters which are not used, susceptible to use in their natural condition, or susceptible to use by reasonable improvement as a means to transport interstate commerce. The information provided with the letter and our research describe such a project, therefore the bridges in this vicinity are exempt, and will not require Coast Guard Bridge Permits.

This determination is for the location and study area of the bridges in the proposed project vicinity and is **valid for five years from the date of this letter**. If construction does not commence within this time period, you must contact this office for reaffirmation of this authorization. Further bridge projects along the same waterways will have to be independently evaluated before they may be considered for this determination. In addition, the requirement to display navigational lighting at the aforementioned bridges is herby waived, as per Title 33 Code of Federal Regulations, Part 118.40(b). This waiver may be rescinded at anytime in the future should nighttime navigation through the proposed bridge be increased to a level determined by the District Commander to warrant lighting.

The fact that a Coast Guard permit is not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of the project.

Sincerely,

James L. Rousseau

JAMES L.ROUSSEAU
Bridge Program Manager
By direction of the Commander
Fifth Coast Guard District

Copy: CG Sector North Carolina, Waterways Management
Mr. Gordon Cashin, NCDOT

North Carolina
Environmental Management Commission
Department of Environment and Natural Resources

Permit For The Withdrawal And Use Of Water In The Central Coastal Plain Capacity Use Area

In accordance with the provisions of Part 2, Article 21 of Chapter 143, General Statutes of North Carolina as amended, and any other applicable Laws, Rules and Regulations,

Permission Is Hereby Granted To

NC Department of Transportation

NCDOT TIP project: **R-2514B**
(US 17 from south of Belgrade at SR 1330/SR 1439 to north of Maysville in Onslow and Jones Counties. Total length of project is 4.156 miles)

FOR THE

Withdrawal and Use of Water in Onslow and Jones Counties, North Carolina in accordance with the grantee's application dated October 15, 2014, and any supporting data submitted with the application, all of which are filed with the Department of Environment and Natural Resources and are considered part of this Permit.

This Permit shall be effective from the date of its issuance until October 31, 2019, and shall be subject to the specified conditions and/or limitations contained in Sections I - X of this Permit.

Permit issued this the 12th day of November, 2014.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

BY _____

Thomas A. Reeder
Director, Division of Water Resources

By Authority of the Secretary of the Department of Environment and Natural Resources

PERMIT #CU4034

I. WITHDRAWALS

A. USE

This Permit allows the withdrawal of water for the purpose of dewatering borrow pits to extract material for road construction.

B. RATES OF WITHDRAWALS

The maximum quantity of water that may be withdrawn shall not exceed what is established in the Reclamation Plan as specified in NCDOT's CCPCUA Special Provisions document.

C. SOURCE(s) OF WITHDRAWALS

Ground Water Source(s): Withdrawals shall be made from sumps in borrow pits in the surficial aquifer.

D. MONITORING OF WITHDRAWALS

Withdrawals from each source, whether well or sump, shall be measured by an approved metering device equipped with a totalizing indicator, and having an accuracy within plus or minus five percent.

II. WATER LEVELS

A. MAXIMUM DRAWDOWN LEVELS

1. Pump intakes for the well(s) shall not be set below the depth specified in the permit application or associated documentation without prior approval of the Division of Water Resources.

2. In the event that data from the permitted wells or other wells within the zone influenced by pumping of the permitted wells indicates a deterioration of quality or quantity in surrounding aquifers or the source aquifer, an alternate maximum pumping level may be established by the Division of Water Resources.

B. MONITORING OF WATER LEVELS

1. The <u>pumping</u> water level in each supply well shall be measured once a month:
   a. by a steel or electric tape from a fixed reference point, or by using the air-line method
   b. within accuracy limits of plus or minus one percent,
   c. just prior to shutting off the pump, or after sufficient time of pumping, so that a maximum drawdown may be obtained, and
   d. during the last planned pumping day of the month, or within the last five days of the month.

2. The static water level in each supply well shall be measured once a month:
   a. by a steel or electric tape from a fixed reference point, or by using the air-line method
   b. within accuracy limits of plus or minus one percent,
   c. after the pump is shut off for approximately 12 hours, and
   d. within the last five days of the month.

3. Unused supply wells or other suitable wells that may be available shall be monitored when such monitoring is specified by the Division of Water Resources and when pertinent to observation or evaluation of the effects of withdrawals made under this permit.

III. OTHER PROVISIONS

A. WELL CONSTRUCTION APPROVAL

A Well Construction Permit shall be required prior to the construction of any well that will be used to withdraw any portion of the water regulated under this Permit. Application for these permits must be submitted to the Washington Regional Office, Water Quality Regional Operations Section, 943 Washington Square Mall • Washington, NC 27889.

B. ACCESS TO FACILITIES

The Environmental Management Commission and employees of the Department of Environment and Natural Resources shall have reasonable access to areas owned and under control of the permittee for observation and inspection of water use and related facilities pertinent to the provisions of this permit and other regulations.

IV. REPORTS REQUIRED

A. WITHDRAWALS

Monthly reports of daily withdrawal totals from each well or sump shall be furnished to the Division on a quarterly basis, within 30 days after the end of March, June, September and December.

B. WATER LEVELS

Water level measurements for each supply well shall be measured in accordance with Condition II. B. 1. of this permit and submitted to the Division not later than 30 days after the end of the calendar month in which the measurement was taken.

V. MODIFICATION OR REVOCATION

A. MODIFICATION

1. The Permittee must notify the Director of any proposed major changes in usage and apply for a modification of the permit for such changes or for any revisions of the terms of this permit.

2. The Director may modify the terms of the permit, after 60 days written notice to the permittee, if he finds that the terms of the permit and/or the resulting water use are found to be contrary to the purposes of the Water Use Act of 1967 or contrary to public interest or having an unreasonably adverse effect upon other water uses in the capacity use area. Modifications may include, but are not limited to, requirements for alternate pumping levels or the collection, analysis, and reporting of ground or surface water quality samples.

B. REVOCATION

The Director may revoke the permit if he finds that:

1. the Permittee has violated the terms of the permit; or

2. the terms of the Permit and/or the resulting water use are contrary to the purpose of the Water Use Act of 1967 or contrary to the public interest or having an unreasonably adverse effect upon other water uses in the capacity use area and cannot be cured by modification; or

3. the Permittee made false or fraudulent statements in the application for the water use permit; or

4. water withdrawn under the terms of the permit is used for purposes other than those set forth in the permit.

VI. CONSTRUCTION OF PERMIT

A. The terms and conditions shall not be construed to relieve the Permittee of any legal obligation or liability, which it owes or may incur to third parties as the result of the conduct of its operations in conformity with this Permit.

B. When under the terms hereof, any provision of this Permit requires approval of the Department or becomes effective at the discretion of the Department, the notice of approval or the exercise of such discretion shall be evidenced by written instrument issued by the Department.

C. The terms and conditions of this Permit shall not be construed as a limitation of the powers, duties, and authority vested in the Environmental Management Commission

or any other State, Federal, or local agency, or any applicable laws hereafter enacted.

VII. ADDITIONAL CONDITIONS

A. This Permit shall be subject to any limitations or conditions in other State permits, including but not limited to permits required pursuant to North Carolina General Statutes §143-215.1.

B. Issuance of this Permit shall have no bearing on subsequent State decision(s) regarding any other water use or other permit application(s) submitted or which may be submitted by the Permittee, its successors or assigns.

C. Compliance with the terms and conditions in this permit does not relieve the permittee of compliance with any provision, now in force or hereafter enacted or promulgated, of the Water Use Act of 1967, the regulations promulgated thereunder, or any other provision of State law.

VIII. PENALTIES

Violations of the terms and conditions of this Permit are subject to penalties as set forth in North Carolina General Statutes §143-215.17.

IX. PERMIT NONTRANSFERABLE

Water Use Permits shall not be transferred except with approval of the Environmental Management Commission.

X. RENEWAL OF PERMIT

The Permittee, at least three (3) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Report of Water Withdrawals from Each Source

North Carolina Department of Environment and Natural Resources

Mail To: Division of Water Resources - NC DENR
1611 Mail Service Center
Raleigh, North Carolina 27699-1611
Attention : Capacity Use Administration

Check Box If No Use This Month ☐

For month of: _____ Year: _____ Facility: **NCDOT (R-2514B)** Permit #: **CU4034** Sheet ___of___

Well/Sump ID →							
	meter readings ↓	gallons per day	meter readings ↓	gallons per day	meter readings ↓	gallons per day	Total Withdrawn
Beginning reading →							
Day 1							
Day 2							
Day 3							
Day 4							
Day 5							
Day 6							
Day 7							
Day 8							
Day 9							
Day 10							
Day 11							
Day 12							
Day 13							
Day 14							
Day 15							
Day 16							
Day 17							
Day 18							
Day 19							
Day 20							
Day 21							
Day 22							
Day 23							
Day 24							
Day 25							
Day 26							
Day 27							
Day 28							
Day 29							
Day 30							
Day 31							

DWR CCPCUA-4 **Name:** _____ **Signature:** _____ **Date:** _____

Report of Weekly or Monthly Water Levels
Pumping (P) and (S)

North Carolina Department Of Environmental and Natural Resources

Mail to: Division of Water Resources- NC DENR
1611 Mail Service Center
Raleigh, NC 27699-1611
Attention: Capacity Use Administration

Name: _____
Signature: _____
Date: _____

Month _____ Year _____ Facility Name: **NCDOT (R-2514B)** Permit #: **CU4034** Sheet # ____ of ____

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

DWR CCPCUA-6

State land surface elevations and depths below land surface to the nearest 0.1 feet.

North Carolina
Environmental Management Commission
Department of Environment and Natural Resources

Permit For The Withdrawal And Use Of Water In The Central Coastal Plain Capacity Use Area

In accordance with the provisions of Part 2, Article 21 of Chapter 143, General Statutes of North Carolina as amended, and any other applicable Laws, Rules and Regulations,

Permission Is Hereby Granted To

NC Department of Transportation

NCDOT TIP project: **R-2514C**
(US 17 from north of Maysville to south of NC 58 near Pollocksville in Jones County. Total length of project is 5.492 miles.)

FOR THE

Withdrawal and Use of Water in Jones County, North Carolina in accordance with the grantee's application dated October 15, 2014, and any supporting data submitted with the application, all of which are filed with the Department of Environment and Natural Resources and are considered part of this Permit.

This Permit shall be effective from the date of its issuance until October 31, 2019, and shall be subject to the specified conditions and/or limitations contained in Sections I - X of this Permit.

Permit issued this the 12th day of November, 2014.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

BY _____

Thomas A. Reeder
Director, Division of Water Resources

By Authority of the Secretary of the Department of Environment and Natural Resources

PERMIT #CU4035

I. WITHDRAWALS

A. USE

This Permit allows the withdrawal of water for the purpose of dewatering borrow pits to extract material for road construction.

B. RATES OF WITHDRAWALS

The maximum quantity of water that may be withdrawn shall not exceed what is established in the Reclamation Plan as specified in NCDOT's CCPCUA Special Provisions document.

C. SOURCE(s) OF WITHDRAWALS

Ground Water Source(s): Withdrawals shall be made from sumps in borrow pits in the surficial aquifer.

D. MONITORING OF WITHDRAWALS

Withdrawals from each source, whether well or sump, shall be measured by an approved metering device equipped with a totalizing indicator, and having an accuracy within plus or minus five percent.

II. WATER LEVELS

A. MAXIMUM DRAWDOWN LEVELS

1. Pump intakes for the well(s) shall not be set below the depth specified in the permit application or associated documentation without prior approval of the Division of Water Resources.

2. In the event that data from the permitted wells or other wells within the zone influenced by pumping of the permitted wells indicates a deterioration of quality or quantity in surrounding aquifers or the source aquifer, an alternate maximum pumping level may be established by the Division of Water Resources.

B. MONITORING OF WATER LEVELS

1. The pumping water level in each supply well shall be measured once a month:
   a. by a steel or electric tape from a fixed reference point, or by using the air-line method
   b. within accuracy limits of plus or minus one percent,
   c. just prior to shutting off the pump, or after sufficient time of pumping, so that a maximum drawdown may be obtained, and
   d. during the last planned pumping day of the month, or within the last five days of the month.

2. The static water level in each supply well shall be measured once a month:
   a. by a steel or electric tape from a fixed reference point, or by using the air-line method
   b. within accuracy limits of plus or minus one percent,
   c. after the pump is shut off for approximately 12 hours, and
   d. within the last five days of the month.

3. Unused supply wells or other suitable wells that may be available shall be monitored when such monitoring is specified by the Division of Water Resources and when pertinent to observation or evaluation of the effects of withdrawals made under this permit.

III. OTHER PROVISIONS

A. WELL CONSTRUCTION APPROVAL

A Well Construction Permit shall be required prior to the construction of any well that will be used to withdraw any portion of the water regulated under this Permit. Application for these permits must be submitted to the Washington Regional Office, Water Quality Regional Operations Section, 943 Washington Square Mall • Washington, NC 27889.

B. ACCESS TO FACILITIES

The Environmental Management Commission and employees of the Department of Environment and Natural Resources shall have reasonable access to areas owned and under control of the permittee for observation and inspection of water use and related facilities pertinent to the provisions of this permit and other regulations.

IV. REPORTS REQUIRED

A. WITHDRAWALS

Monthly reports of daily withdrawal totals from each well or sump shall be furnished to the Division on a quarterly basis, within 30 days after the end of March, June, September and December.

B. WATER LEVELS

Water level measurements for each supply well shall be measured in accordance with Condition II. B. 1. of this permit and submitted to the Division not later than 30 days after the end of the calendar month in which the measurement was taken.

V. MODIFICATION OR REVOCATION

A. MODIFICATION

1. The Permittee must notify the Director of any proposed major changes in usage and apply for a modification of the permit for such changes or for any revisions of the terms of this permit.

2. The Director may modify the terms of the permit, after 60 days written notice to the permittee, if he finds that the terms of the permit and/or the resulting water use are found to be contrary to the purposes of the Water Use Act of 1967 or contrary to public interest or having an unreasonably adverse effect upon other water uses in the capacity use area. Modifications may include, but are not limited to, requirements for alternate pumping levels or the collection, analysis, and reporting of ground or surface water quality samples.

B. REVOCATION

The Director may revoke the permit if he finds that:

1. the Permittee has violated the terms of the permit; or

2. the terms of the Permit and/or the resulting water use are contrary to the purpose of the Water Use Act of 1967 or contrary to the public interest or having an unreasonably adverse effect upon other water uses in the capacity use area and cannot be cured by modification; or

3. the Permittee made false or fraudulent statements in the application for the water use permit; or

4. water withdrawn under the terms of the permit is used for purposes other than those set forth in the permit.

VI. CONSTRUCTION OF PERMIT

A. The terms and conditions shall not be construed to relieve the Permittee of any legal obligation or liability, which it owes or may incur to third parties as the result of the conduct of its operations in conformity with this Permit.

B. When under the terms hereof, any provision of this Permit requires approval of the Department or becomes effective at the discretion of the Department, the notice of approval or the exercise of such discretion shall be evidenced by written instrument issued by the Department.

C. The terms and conditions of this Permit shall not be construed as a limitation of the powers, duties, and authority vested in the Environmental Management Commission

or any other State, Federal, or local agency, or any applicable laws hereafter enacted.

VII. ADDITIONAL CONDITIONS

A. This Permit shall be subject to any limitations or conditions in other State permits, including but not limited to permits required pursuant to North Carolina General Statutes §143-215.1.

B. Issuance of this Permit shall have no bearing on subsequent State decision(s) regarding any other water use or other permit application(s) submitted or which may be submitted by the Permittee, its successors or assigns.

C. Compliance with the terms and conditions in this permit does not relieve the permittee of compliance with any provision, now in force or hereafter enacted or promulgated, of the Water Use Act of 1967, the regulations promulgated thereunder, or any other provision of State law.

VIII. PENALTIES

Violations of the terms and conditions of this Permit are subject to penalties as set forth in North Carolina General Statutes §143-215.17.

IX. PERMIT NONTRANSFERABLE

Water Use Permits shall not be transferred except with approval of the Environmental Management Commission.

X. RENEWAL OF PERMIT

The Permittee, at least three (3) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Report of Water Withdrawals from Each Source

North Carolina Department of Environment and Natural Resources

Mail To: Division of Water Resources - NC DENR
1611 Mail Service Center
Raleigh, North Carolina 27699-1611
Attention : Capacity Use Administration

Check Box If No Use This Month ☐

For month of: _____ Year: _____ Facility: **NCDOT (R-2514C)** Permit #: **CU4035** Sheet ___of___

Well/Sump ID →							
	meter readings ↓	gallons per day	meter readings ↓	gallons per day	meter readings ↓	gallons per day	Total Withdrawn
Beginning reading →							
Day 1							
Day 2							
Day 3							
Day 4							
Day 5							
Day 6							
Day 7							
Day 8							
Day 9							
Day 10							
Day 11							
Day 12							
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Day 23							
Day 24							
Day 25							
Day 26							
Day 27							
Day 28							
Day 29							
Day 30							
Day 31							

DWR CCPCUA-4 **Name:** _____ **Signature:** _____ **Date:** _____

Report of Weekly or Monthly Water Levels
Pumping (P) and (S)

North Carolina Department Of Environmental and Natural Resources

Mail to: Division of Water Resources- NC DENR
1611 Mail Service Center
Raleigh, NC 27699-1611
Attention: Capacity Use Administration

Name: _____
Signature: _____
Date: _____

Month _____ Year _____ Facility Name: **NCDOT (R-2514C)** Permit #: **CU4035** Sheet # ____ of ____

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

DWR CCPCUA-6

State land surface elevations and depths below land surface to the nearest 0.1 feet.

North Carolina
Environmental Management Commission
Department of Environment and Natural Resources

Permit For The Withdrawal And Use Of Water In The Central Coastal Plain Capacity Use Area

In accordance with the provisions of Part 2, Article 21 of Chapter 143, General Statutes of North Carolina as amended, and any other applicable Laws, Rules and Regulations,

Permission Is Hereby Granted To

NC Department of Transportation

NCDOT TIP project: **R-2514D**
(US 17 from south of NC 58 to the New Bern Bypass in Craven and Jones Counties. Total length of project is 6.383 miles.)

FOR THE

Withdrawal and Use of Water in Craven and Jones Counties, North Carolina in accordance with the grantee's application dated October 15, 2014, and any supporting data submitted with the application, all of which are filed with the Department of Environment and Natural Resources and are considered part of this Permit.

This Permit shall be effective from the date of its issuance until October 31, 2019, and shall be subject to the specified conditions and/or limitations contained in Sections I - X of this Permit.

Permit issued this the 12th day of November, 2014.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

BY _____

Thomas A. Reeder
Director, Division of Water Resources

By Authority of the Secretary of the Department of Environment and Natural Resources

PERMIT #CU4036

I. WITHDRAWALS

A. USE

This Permit allows the withdrawal of water for the purpose of dewatering borrow pits to extract material for road construction.

B. RATES OF WITHDRAWALS

The maximum quantity of water that may be withdrawn shall not exceed what is established in the Reclamation Plan as specified in NCDOT's CCPCUA Special Provisions document.

C. SOURCE(s) OF WITHDRAWALS

Ground Water Source(s): Withdrawals shall be made from sumps in borrow pits in the surficial aquifer.

D. MONITORING OF WITHDRAWALS

Withdrawals from each source, whether well or sump, shall be measured by an approved metering device equipped with a totalizing indicator, and having an accuracy within plus or minus five percent.

II. WATER LEVELS

A. MAXIMUM DRAWDOWN LEVELS

1. Pump intakes for the well(s) shall not be set below the depth specified in the permit application or associated documentation without prior approval of the Division of Water Resources.

2. In the event that data from the permitted wells or other wells within the zone influenced by pumping of the permitted wells indicates a deterioration of quality or quantity in surrounding aquifers or the source aquifer, an alternate maximum pumping level may be established by the Division of Water Resources.

B. MONITORING OF WATER LEVELS

1. The pumping water level in each supply well shall be measured once a month:
   a. by a steel or electric tape from a fixed reference point, or by using the air-line method
   b. within accuracy limits of plus or minus one percent,
   c. just prior to shutting off the pump, or after sufficient time of pumping, so that a maximum drawdown may be obtained, and
   d. during the last planned pumping day of the month, or within the last five days of the month.

2. The static water level in each supply well shall be measured once a month:
   a. by a steel or electric tape from a fixed reference point, or by using the air-line method
   b. within accuracy limits of plus or minus one percent,
   c. after the pump is shut off for approximately 12 hours, and
   d. within the last five days of the month.

3. Unused supply wells or other suitable wells that may be available shall be monitored when such monitoring is specified by the Division of Water Resources and when pertinent to observation or evaluation of the effects of withdrawals made under this permit.

III. OTHER PROVISIONS

A. WELL CONSTRUCTION APPROVAL

A Well Construction Permit shall be required prior to the construction of any well that will be used to withdraw any portion of the water regulated under this Permit. Application for these permits must be submitted to the Washington Regional Office, Water Quality Regional Operations Section, 943 Washington Square Mall • Washington, NC 27889.

B. ACCESS TO FACILITIES

The Environmental Management Commission and employees of the Department of Environment and Natural Resources shall have reasonable access to areas owned and under control of the permittee for observation and inspection of water use and related facilities pertinent to the provisions of this permit and other regulations.

IV. REPORTS REQUIRED

A. WITHDRAWALS

Monthly reports of daily withdrawal totals from each well or sump shall be furnished to the Division on a quarterly basis, within 30 days after the end of March, June, September and December.

B. WATER LEVELS

Water level measurements for each supply well shall be measured in accordance with Condition II. B. 1. of this permit and submitted to the Division not later than 30 days after the end of the calendar month in which the measurement was taken.

V. MODIFICATION OR REVOCATION

A. MODIFICATION

1. The Permittee must notify the Director of any proposed major changes in usage and apply for a modification of the permit for such changes or for any revisions of the terms of this permit.

2. The Director may modify the terms of the permit, after 60 days written notice to the permittee, if he finds that the terms of the permit and/or the resulting water use are found to be contrary to the purposes of the Water Use Act of 1967 or contrary to public interest or having an unreasonably adverse effect upon other water uses in the capacity use area. Modifications may include, but are not limited to, requirements for alternate pumping levels or the collection, analysis, and reporting of ground or surface water quality samples.

B. REVOCATION

The Director may revoke the permit if he finds that:

1. the Permittee has violated the terms of the permit; or

2. the terms of the Permit and/or the resulting water use are contrary to the purpose of the Water Use Act of 1967 or contrary to the public interest or having an unreasonably adverse effect upon other water uses in the capacity use area and cannot be cured by modification; or

3. the Permittee made false or fraudulent statements in the application for the water use permit; or

4. water withdrawn under the terms of the permit is used for purposes other than those set forth in the permit.

VI. CONSTRUCTION OF PERMIT

A. The terms and conditions shall not be construed to relieve the Permittee of any legal obligation or liability, which it owes or may incur to third parties as the result of the conduct of its operations in conformity with this Permit.

B. When under the terms hereof, any provision of this Permit requires approval of the Department or becomes effective at the discretion of the Department, the notice of approval or the exercise of such discretion shall be evidenced by written instrument issued by the Department.

C. The terms and conditions of this Permit shall not be construed as a limitation of the powers, duties, and authority vested in the Environmental Management Commission

or any other State, Federal, or local agency, or any applicable laws hereafter enacted.

VII. ADDITIONAL CONDITIONS

A. This Permit shall be subject to any limitations or conditions in other State permits, including but not limited to permits required pursuant to North Carolina General Statutes §143-215.1.

B. Issuance of this Permit shall have no bearing on subsequent State decision(s) regarding any other water use or other permit application(s) submitted or which may be submitted by the Permittee, its successors or assigns.

C. Compliance with the terms and conditions in this permit does not relieve the permittee of compliance with any provision, now in force or hereafter enacted or promulgated, of the Water Use Act of 1967, the regulations promulgated thereunder, or any other provision of State law.

VIII. PENALTIES

Violations of the terms and conditions of this Permit are subject to penalties as set forth in North Carolina General Statutes §143-215.17.

IX. PERMIT NONTRANSFERABLE

Water Use Permits shall not be transferred except with approval of the Environmental Management Commission.

X. RENEWAL OF PERMIT

The Permittee, at least three (3) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Report of Water Withdrawals from Each Source

North Carolina Department of Environment and Natural Resources

Mail To: Division of Water Resources - NC DENR
1611 Mail Service Center
Raleigh, North Carolina 27699-1611
Attention : Capacity Use Administration

Check Box If No Use This Month ☐

For month of: _____ Year: _____ Facility: **NCDOT (R-2514D)** Permit #: **CU4036** Sheet ___of___

Well/Sump ID →							
	meter readings ↓	gallons per day	meter readings ↓	gallons per day	meter readings ↓	gallons per day	Total Withdrawn
Beginning reading →							
Day 1							
Day 2							
Day 3							
Day 4							
Day 5							
Day 6							
Day 7							
Day 8							
Day 9							
Day 10							
Day 11							
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Day 26							
Day 27							
Day 28							
Day 29							
Day 30							
Day 31							

DWR CCPCUA-4 **Name:** _____ **Signature:** _____ **Date:** _____

Report of Weekly or Monthly Water Levels Pumping (P) and (S)

North Carolina Department Of Environmental and Natural Resources

Mail to: Division of Water Resources- NC DENR
1611 Mail Service Center
Raleigh, NC 27699-1611
Attention: Capacity Use Administration

Name: _____
Signature: _____
Date: _____

Month _____ Year _____ Facility Name: **NCDOT (R-2514D)** Permit #: **CU4036** Sheet # ____ of ____

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____				Well ID_____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

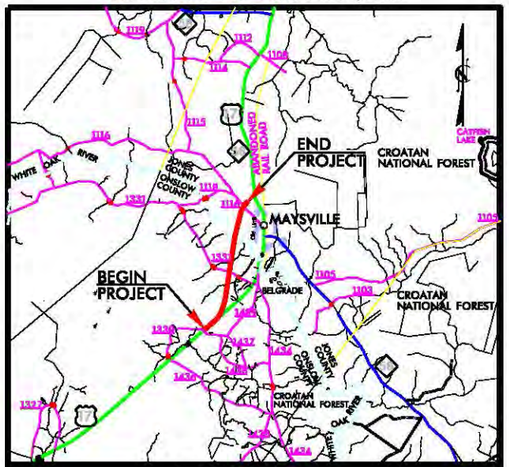
DWR CCPCUA-6

State land surface elevations and depths below land surface to the nearest 0.1 feet.

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

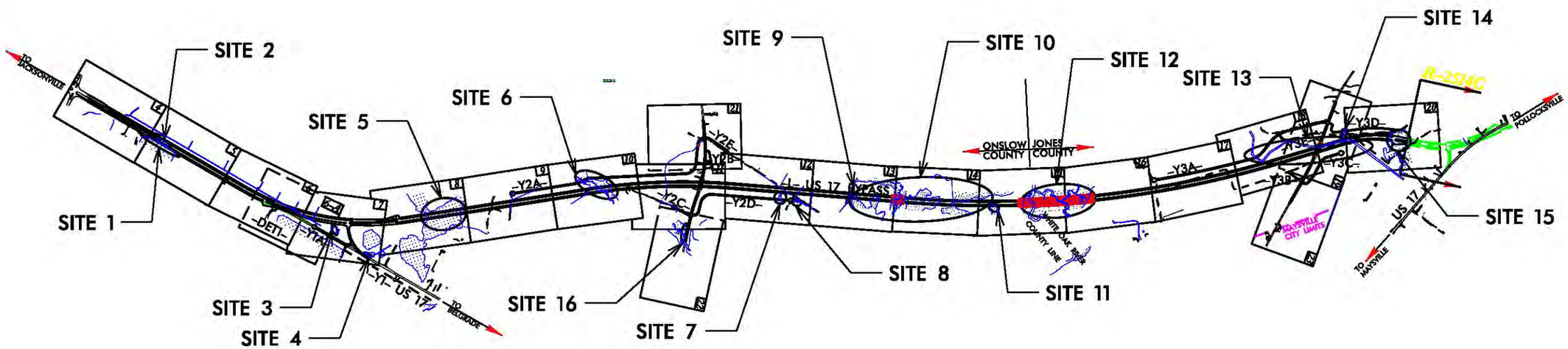
ONSLOW & JONES COUNTIES

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

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

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

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

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

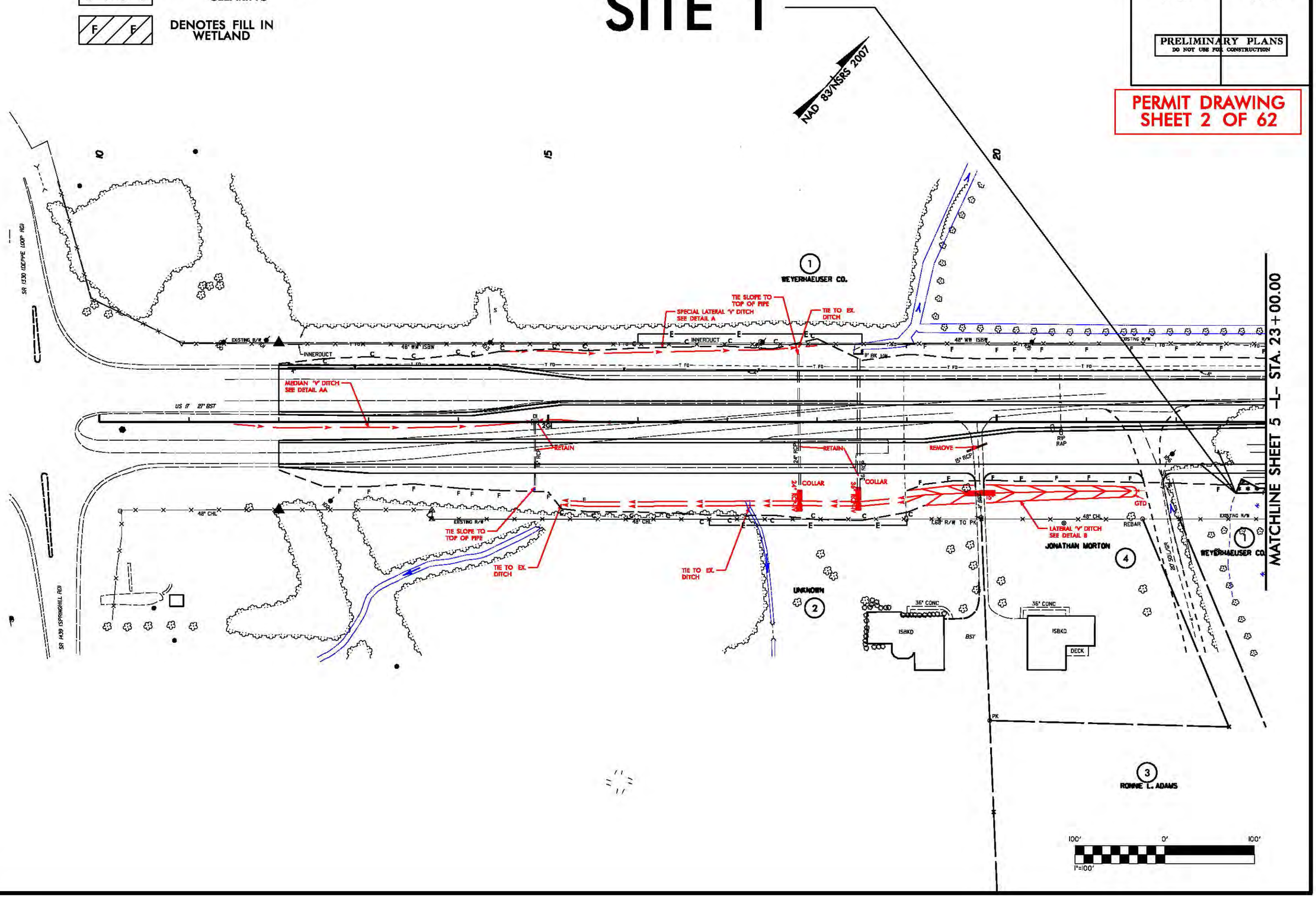
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 2 OF 62

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

SITE 1



REVISIONS

8/17/99

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

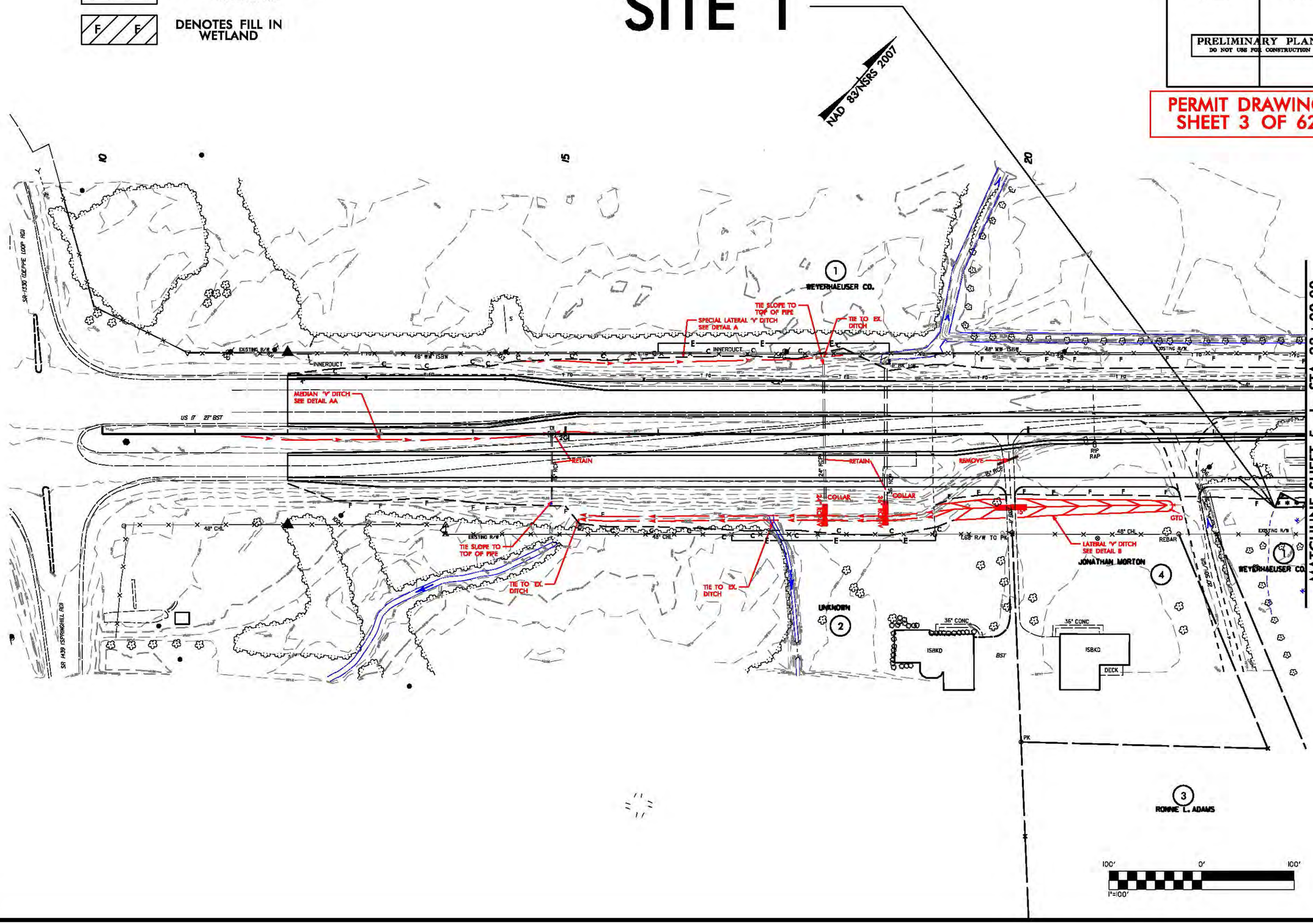
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 3 OF 62

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

SITE 1



REVISIONS

8/17/99

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

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

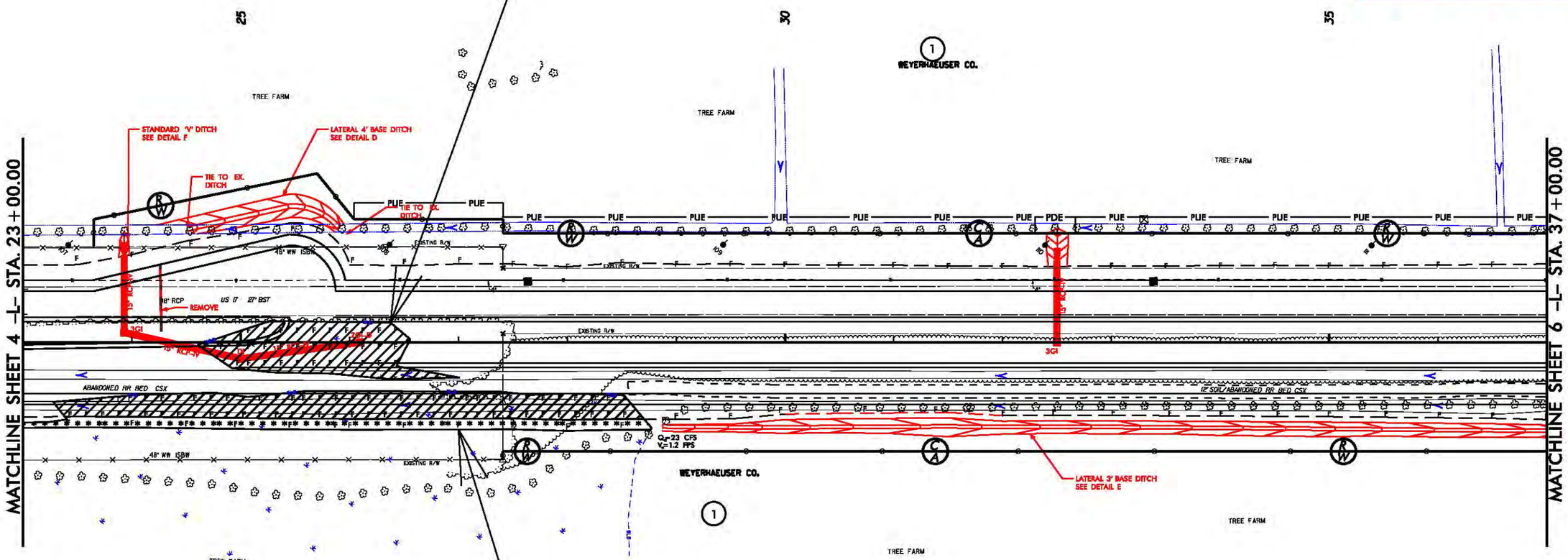
PERMIT DRAWING
SHEET 4 OF 62

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 2

NAD 83/NSRS 2007



SITE 1

100' 0' 100'
1"=100'

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

REVISIONS

8/17/99

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

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

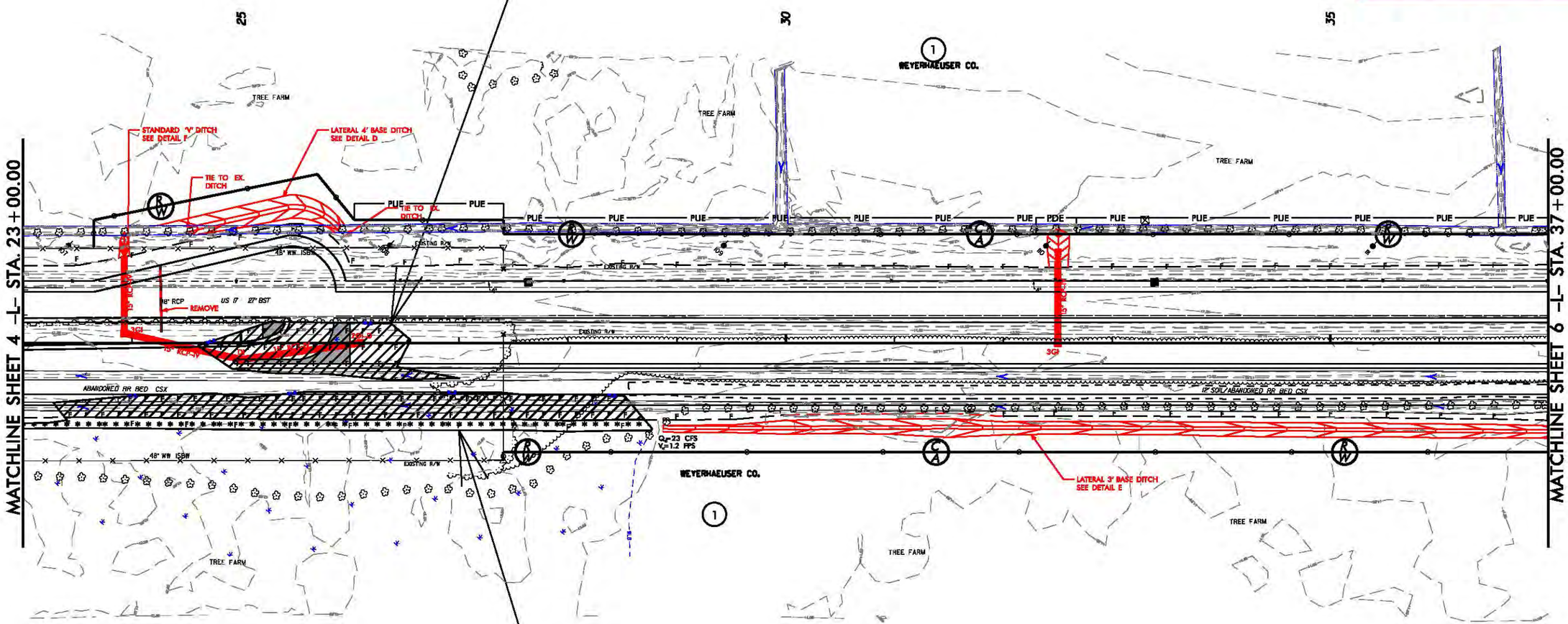
PERMIT DRAWING
SHEET 5 OF 62

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SITE 2

NAD 83/NSRS 2007



SITE 1

100' 0' 100'
1"=100'

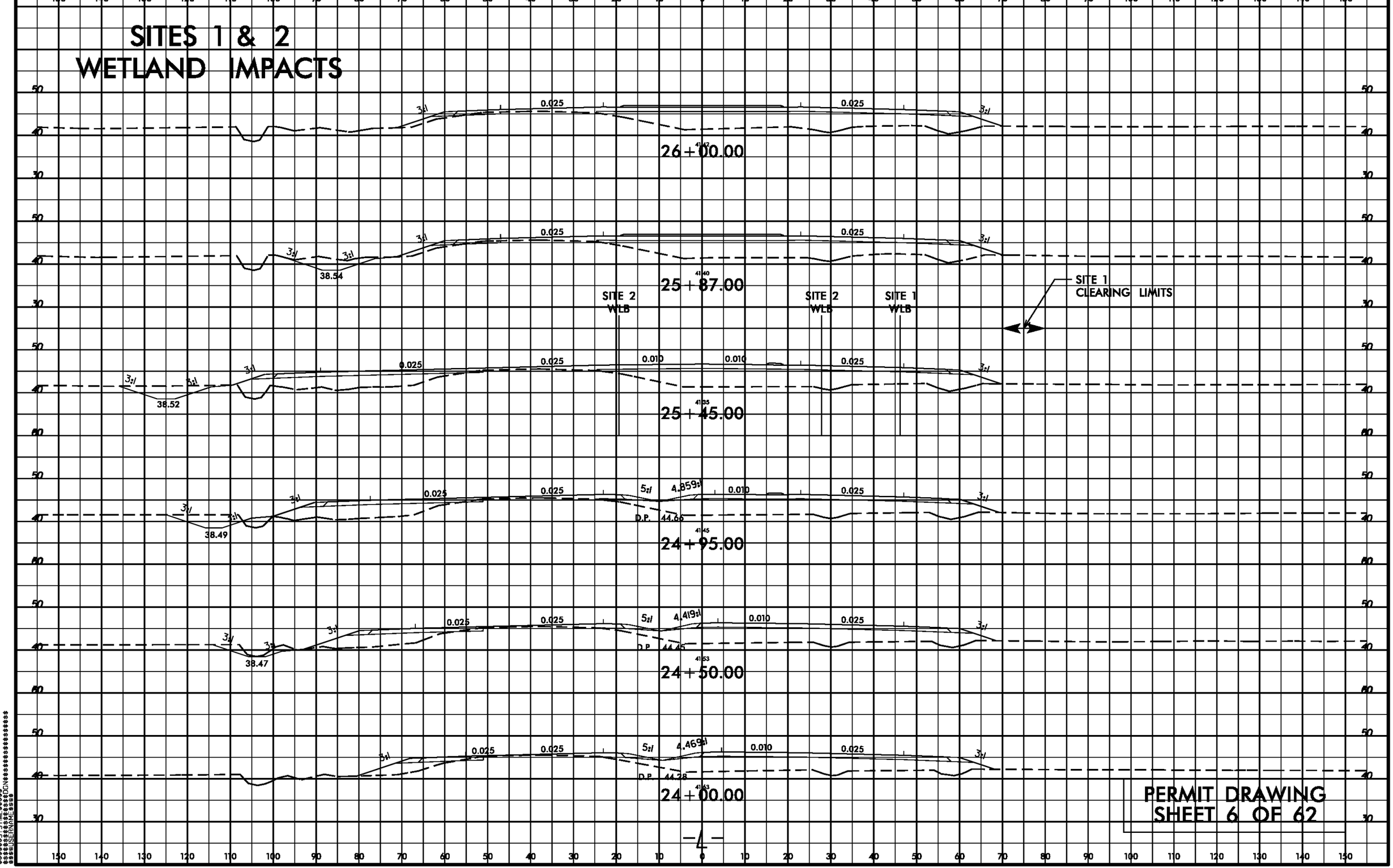
SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

REVISIONS

8/17/99

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

SITES 1 & 2 WETLAND IMPACTS



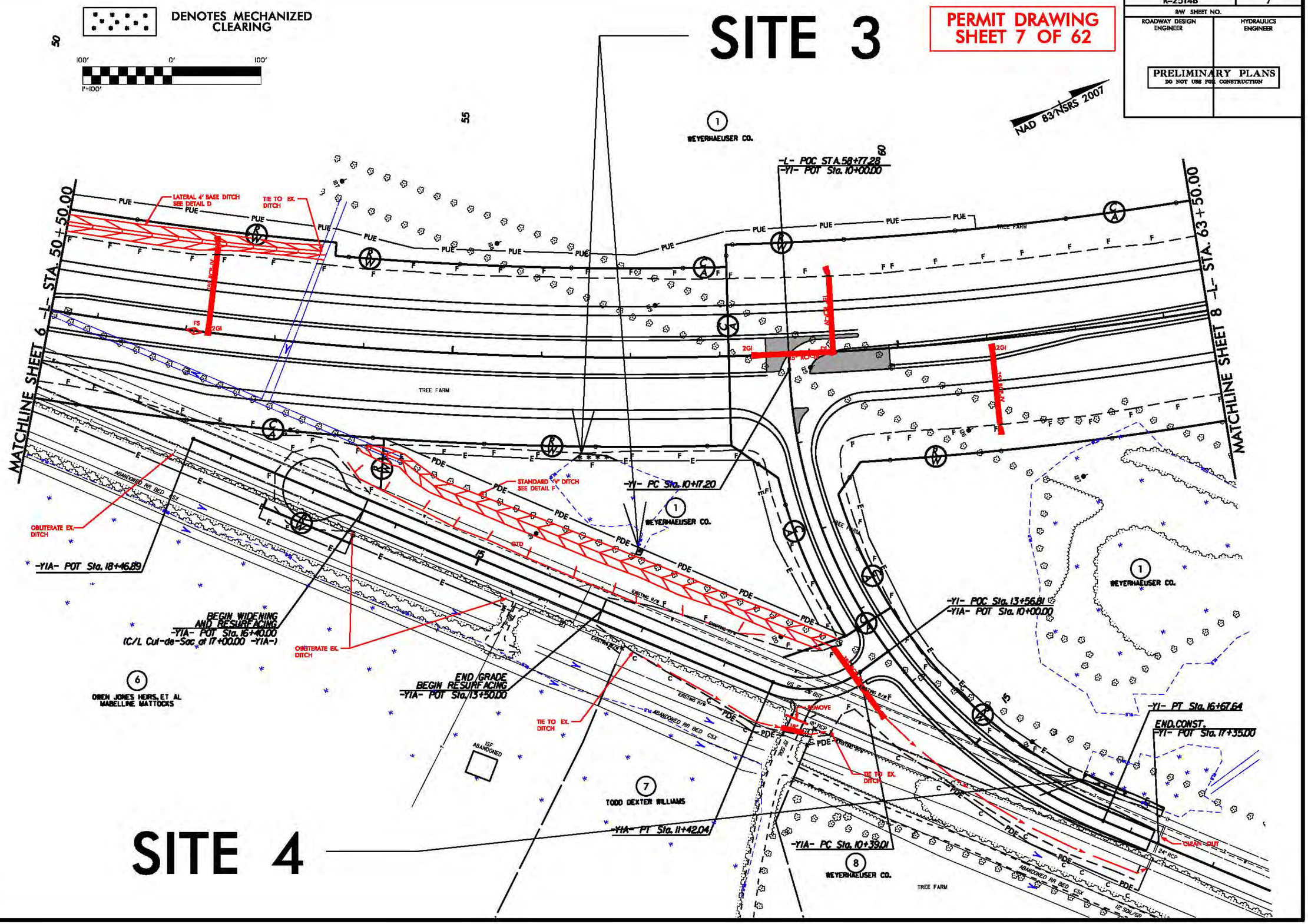
PERMIT DRAWING
SHEET 6 OF 62

8/23/99
$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$SELENAME$$$$

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



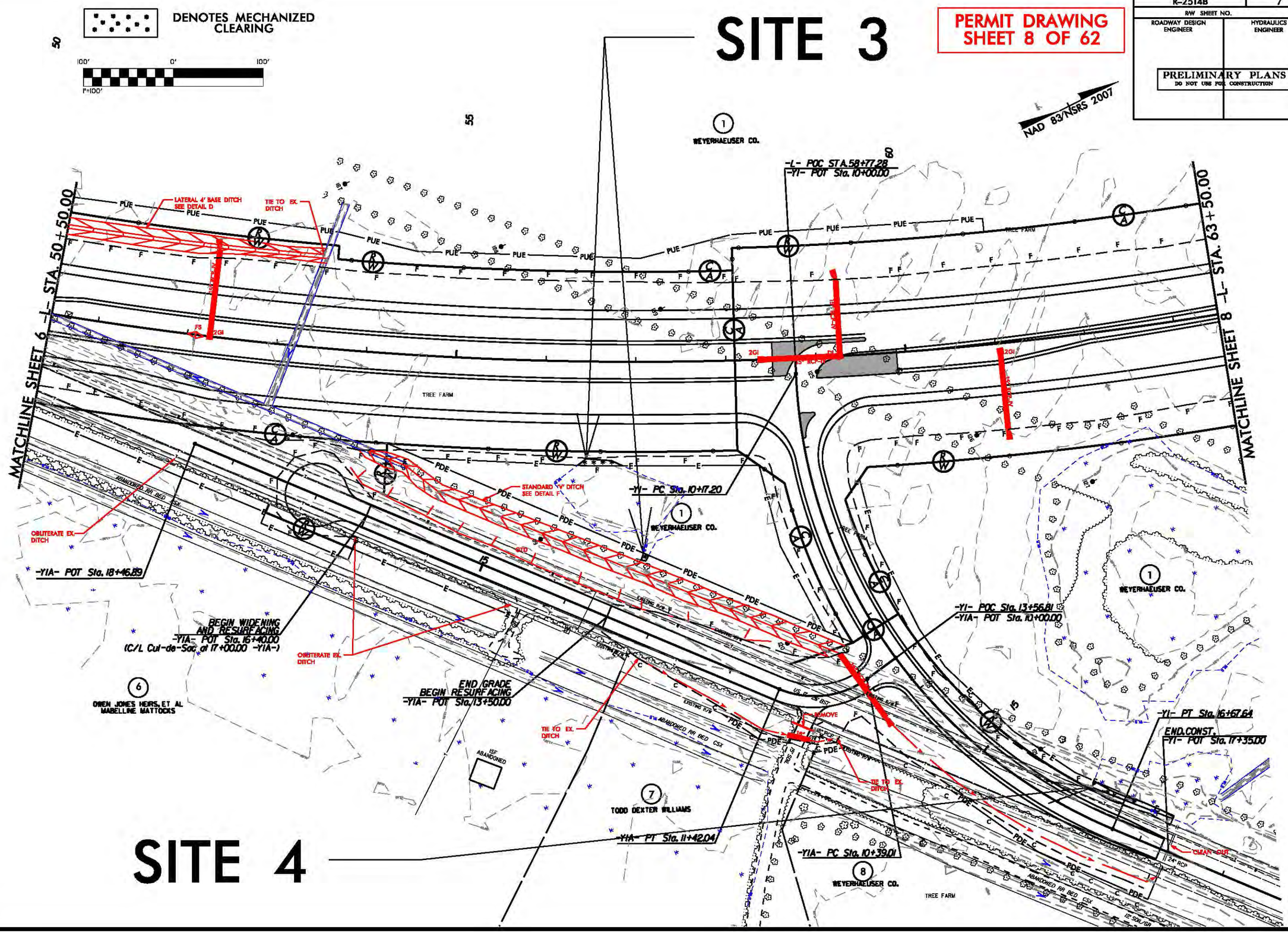
REVISIONS

8/17/99

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



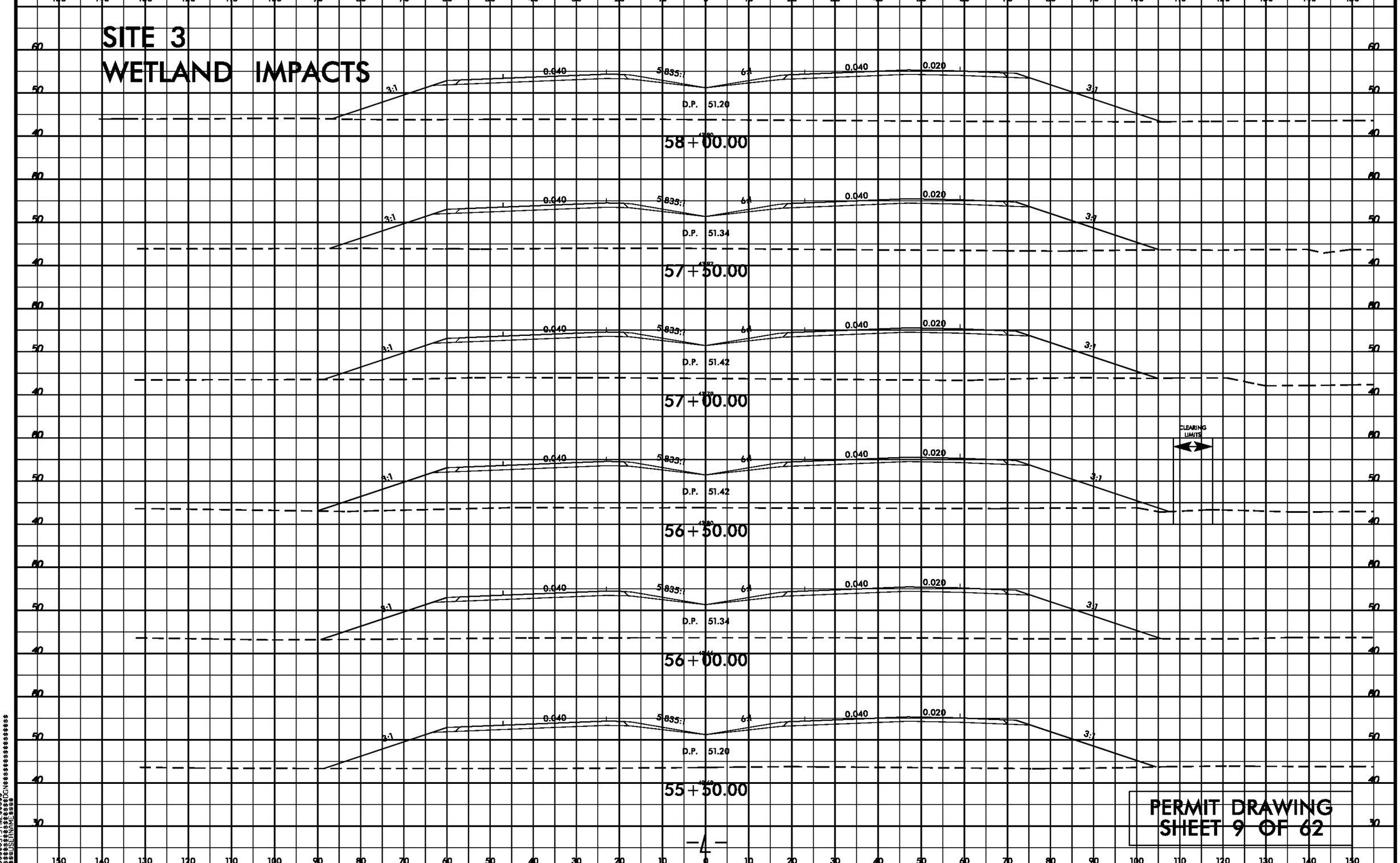
REVISIONS

8/17/99

8/23/99

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

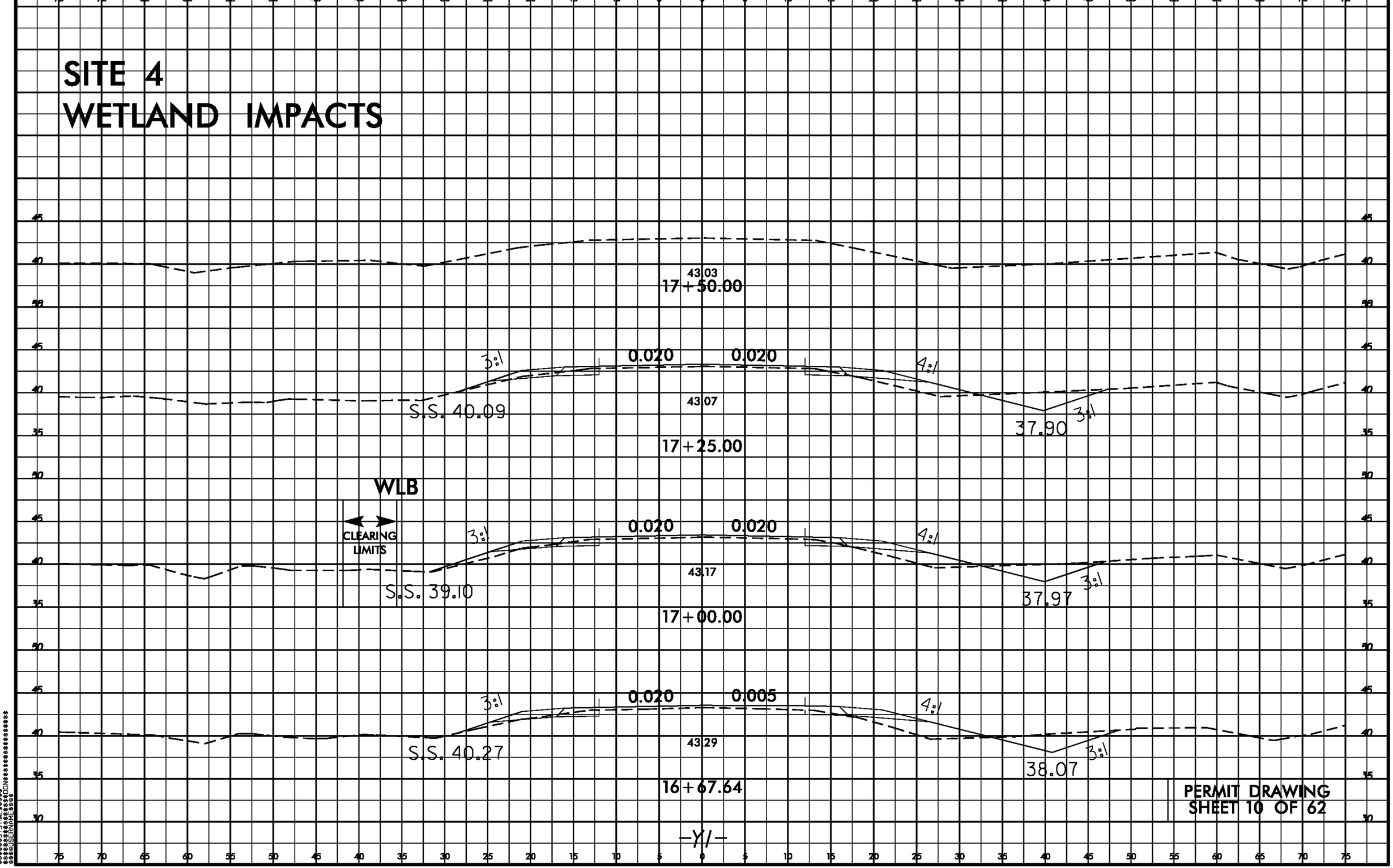
SITE 3
WETLAND IMPACTS



PERMIT DRAWING
SHEET 9 OF 62

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

SITE 4
WETLAND IMPACTS



PERMIT DRAWING
SHEET 10 OF 62

8/23/99
$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 11 OF 62

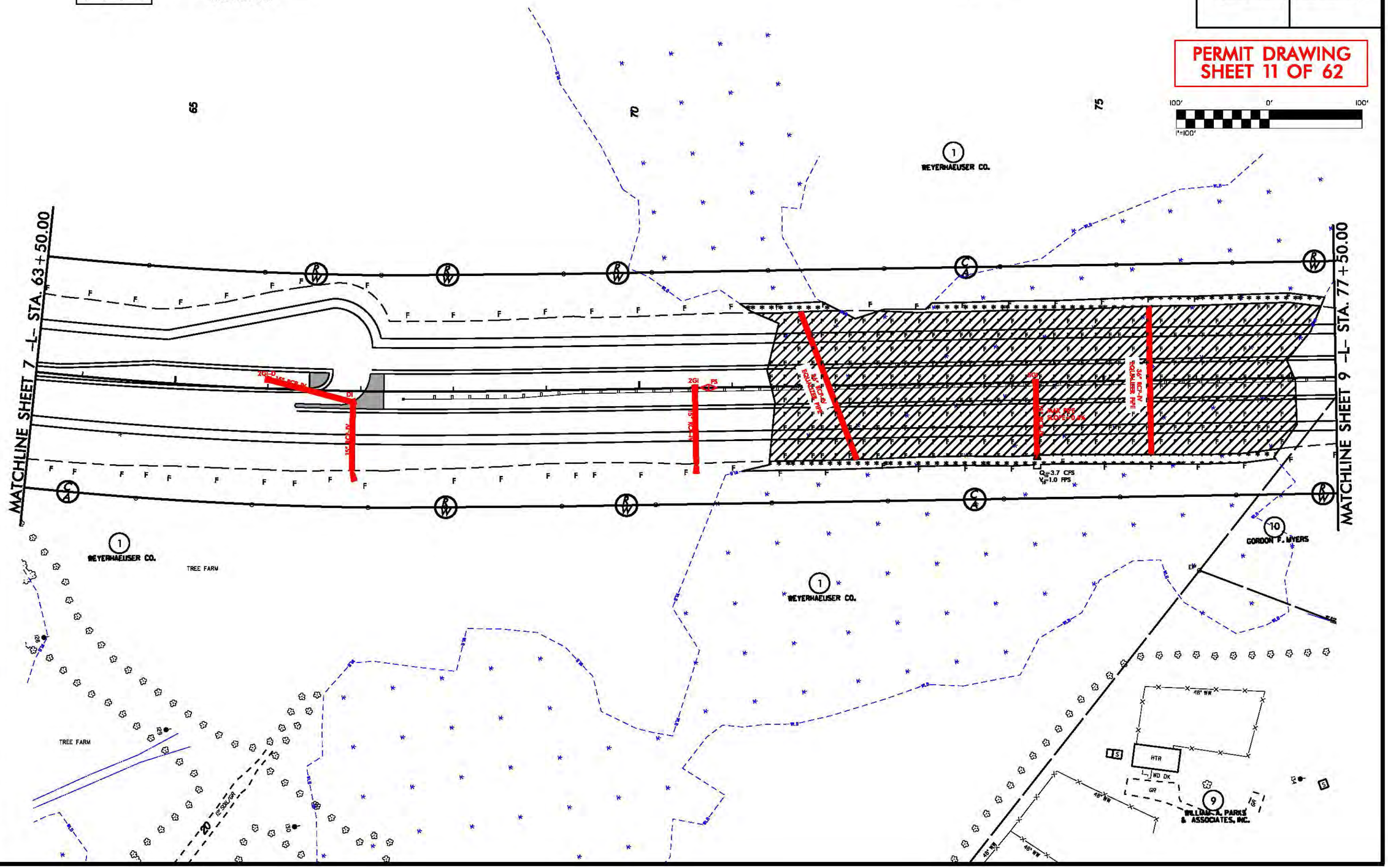
SITE 5

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

NAD 83/NSRS 2007

1"=100'



REVISIONS

8/17/99

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 12 OF 62

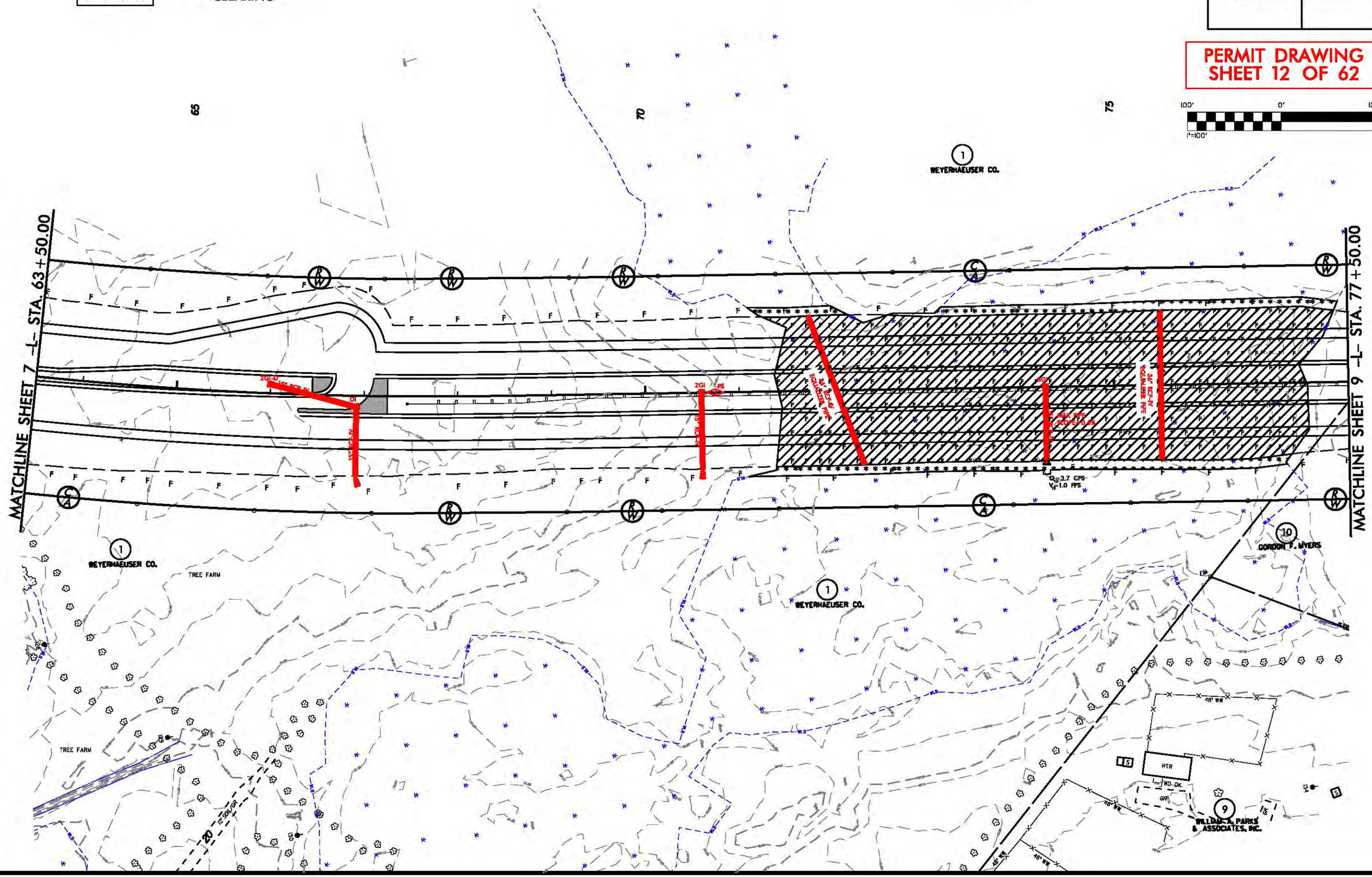
SITE 5

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

NAD 83/NSRS 2007

1"=100'



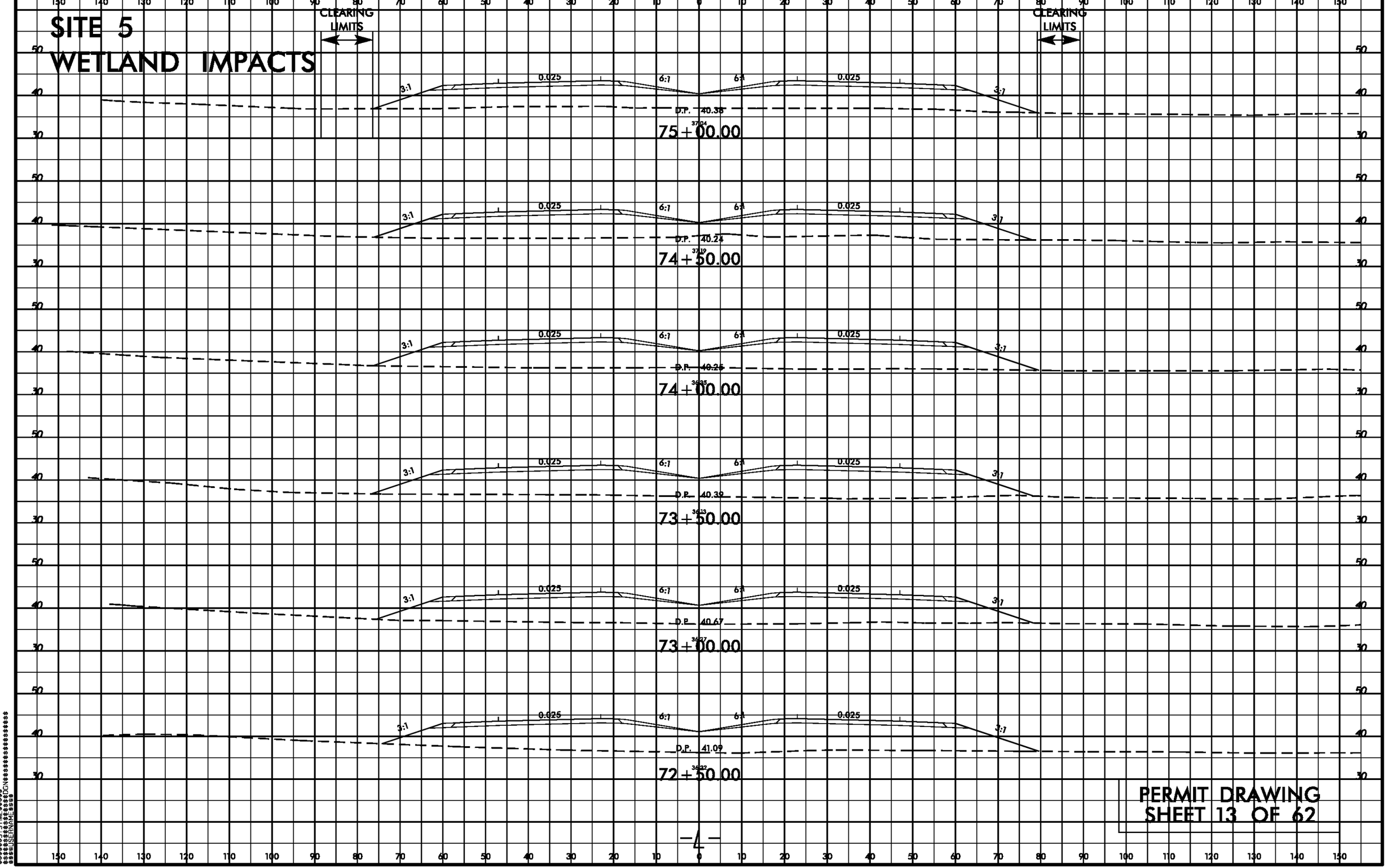
REVISIONS

8/17/99

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-2514B	X-26

SITE 5
WETLAND IMPACTS



PERMIT DRAWING
SHEET 13 OF 62

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

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

SITE 6

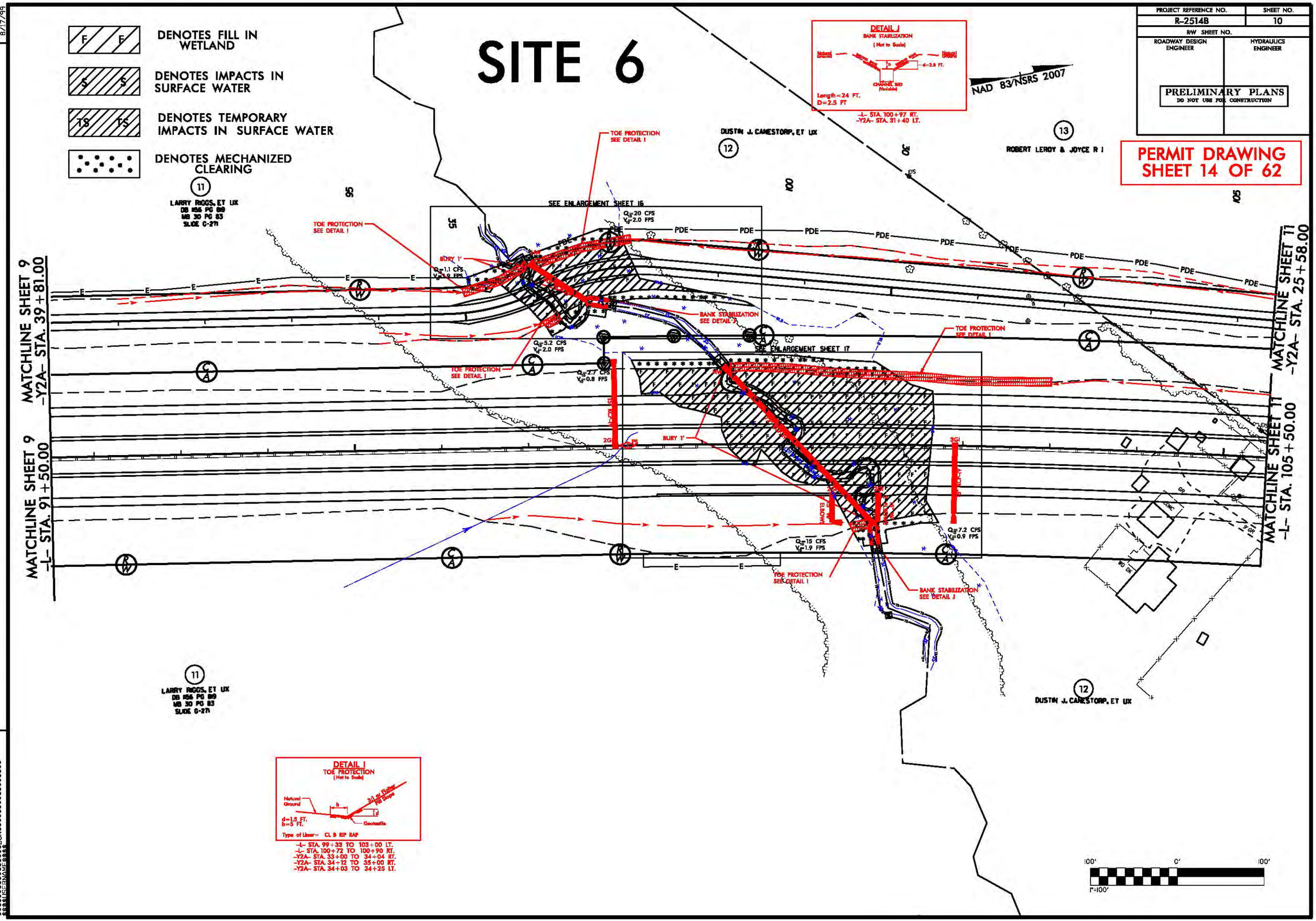
F/F DENOTES FILL IN WETLAND

S/S DENOTES IMPACTS IN SURFACE WATER

TS/TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

NAD 83/NSRS 2007



DETAIL 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.

DETAIL J
BANK STABILIZATION
(Not to Scale)

Natural Ground; Natural Ground; d=2.5 FT.; Channel Bed (Variable)

Length=24 FT.
D=2.5 FT

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

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

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

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 15 OF 62

SITE 6

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)

Natural Ground — Natural — d=2.5 FT. — b — Geotextile — Channel Bed (Variable)

Length=24 FT.
D=2.5 FT

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

11 LARRY RIGGS, ET UX
DB 1156 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'

Q_{10}=20 CFS V_{10}=2.0 FPS

Q_{10}=1.1 CFS V_{10}=1.9 FPS

Q_{10}=5.2 CFS V_{10}=2.0 FPS

Q_{10}=2.7 CFS V_{10}=0.8 FPS

Q_{10}=16 CFS V_{10}=1.9 FPS

Q_{10}=7.2 CFS V_{10}=0.9 FPS

PDE

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

-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.

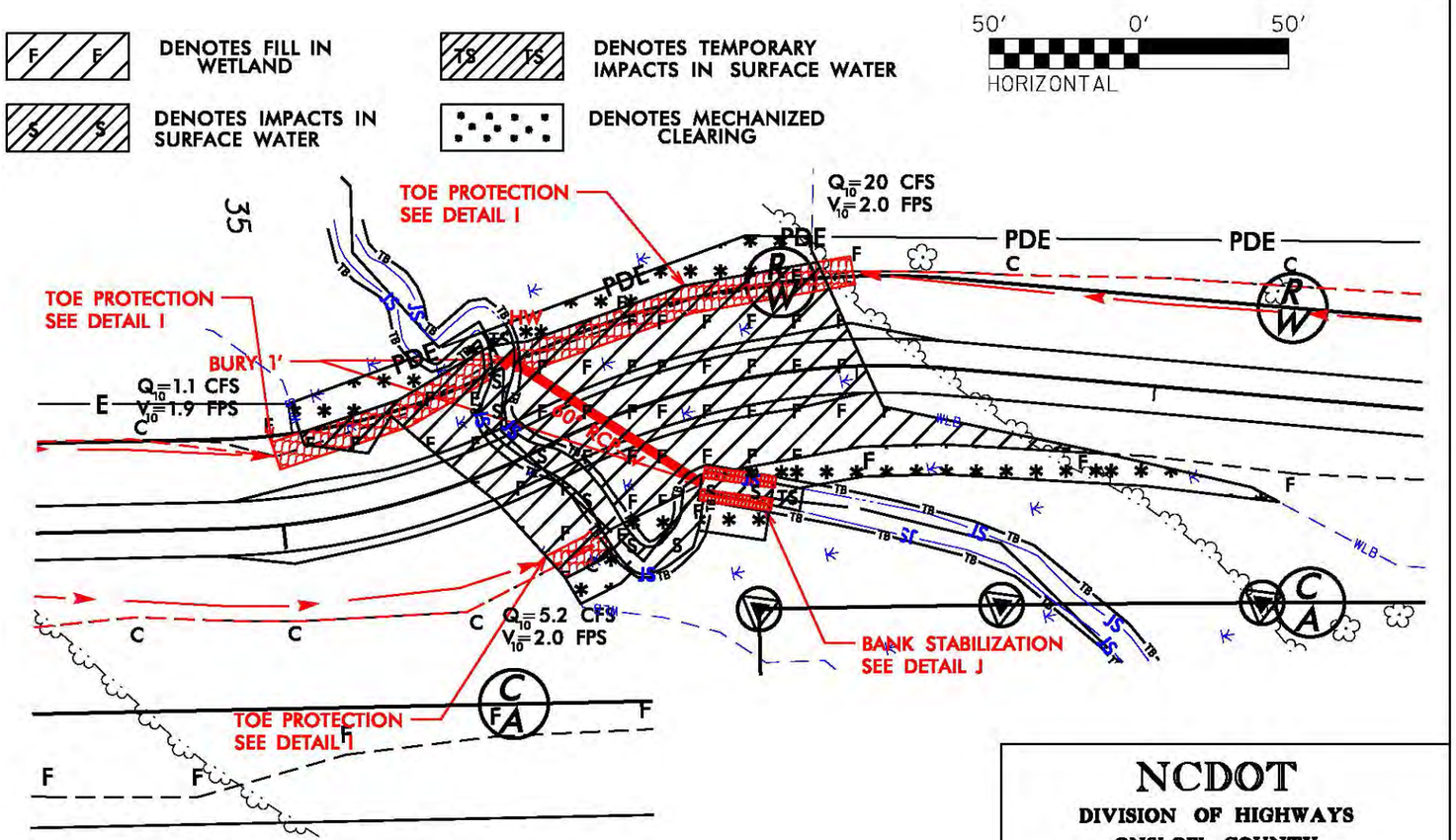
100' 0' 100'
1"=100'

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

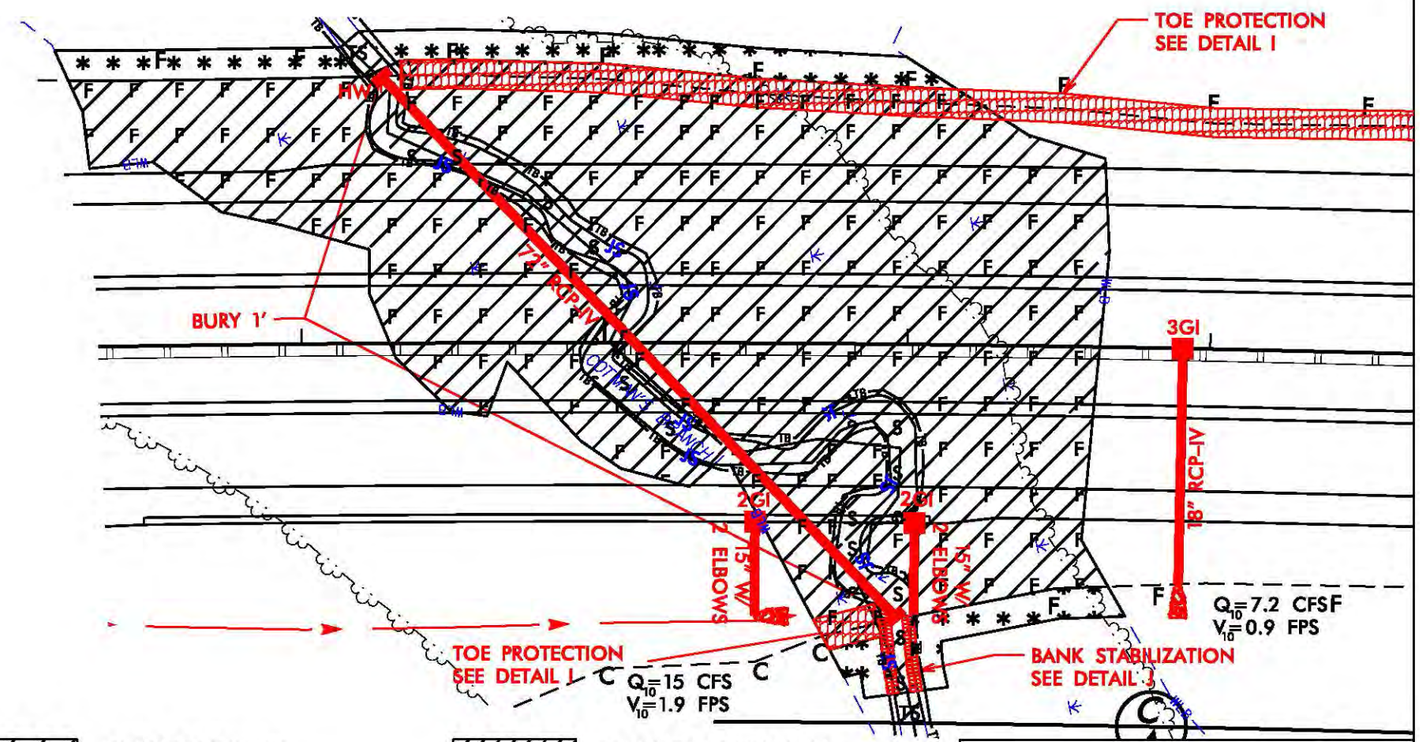
$$$$$$$SYSTIME$$$$$$
$$$$$$$



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



DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

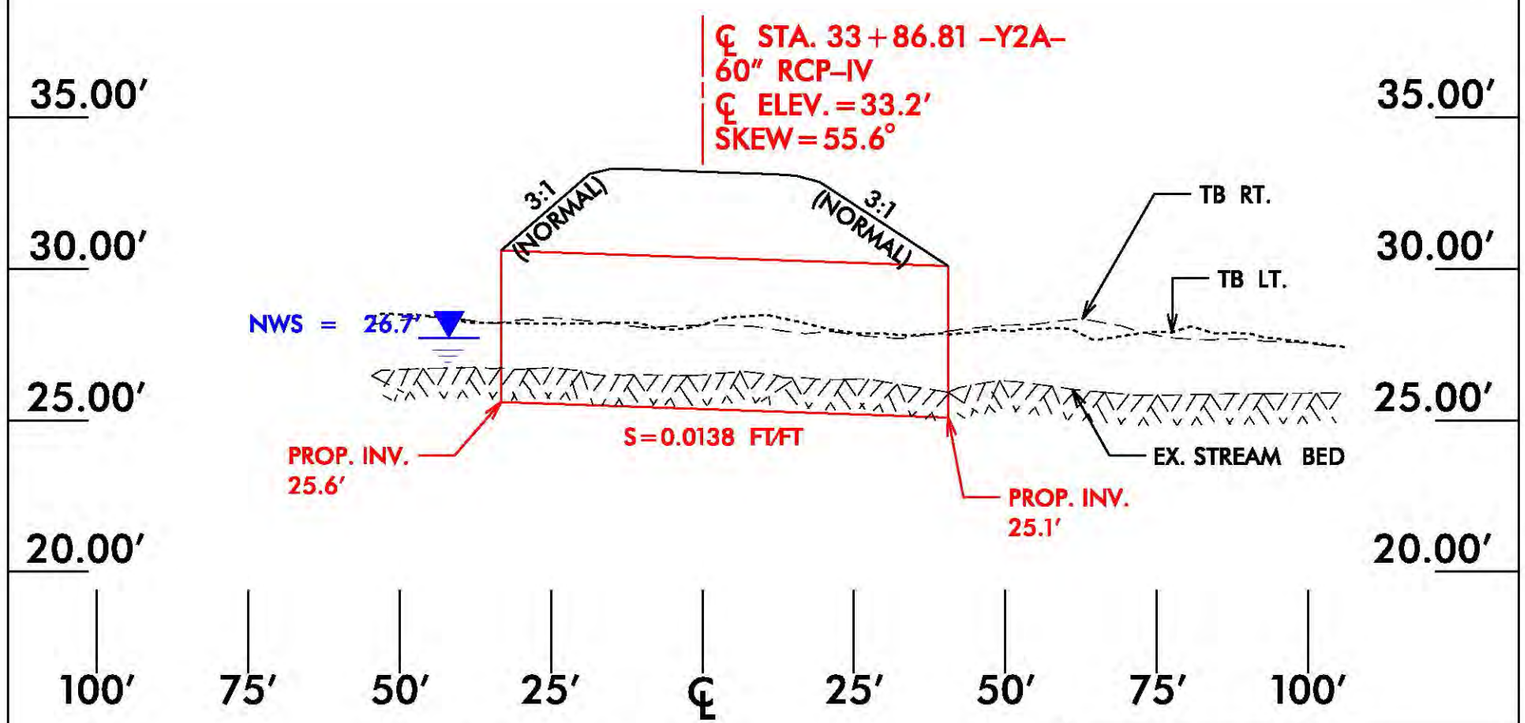
50' 0' 50'
HORIZONTAL

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



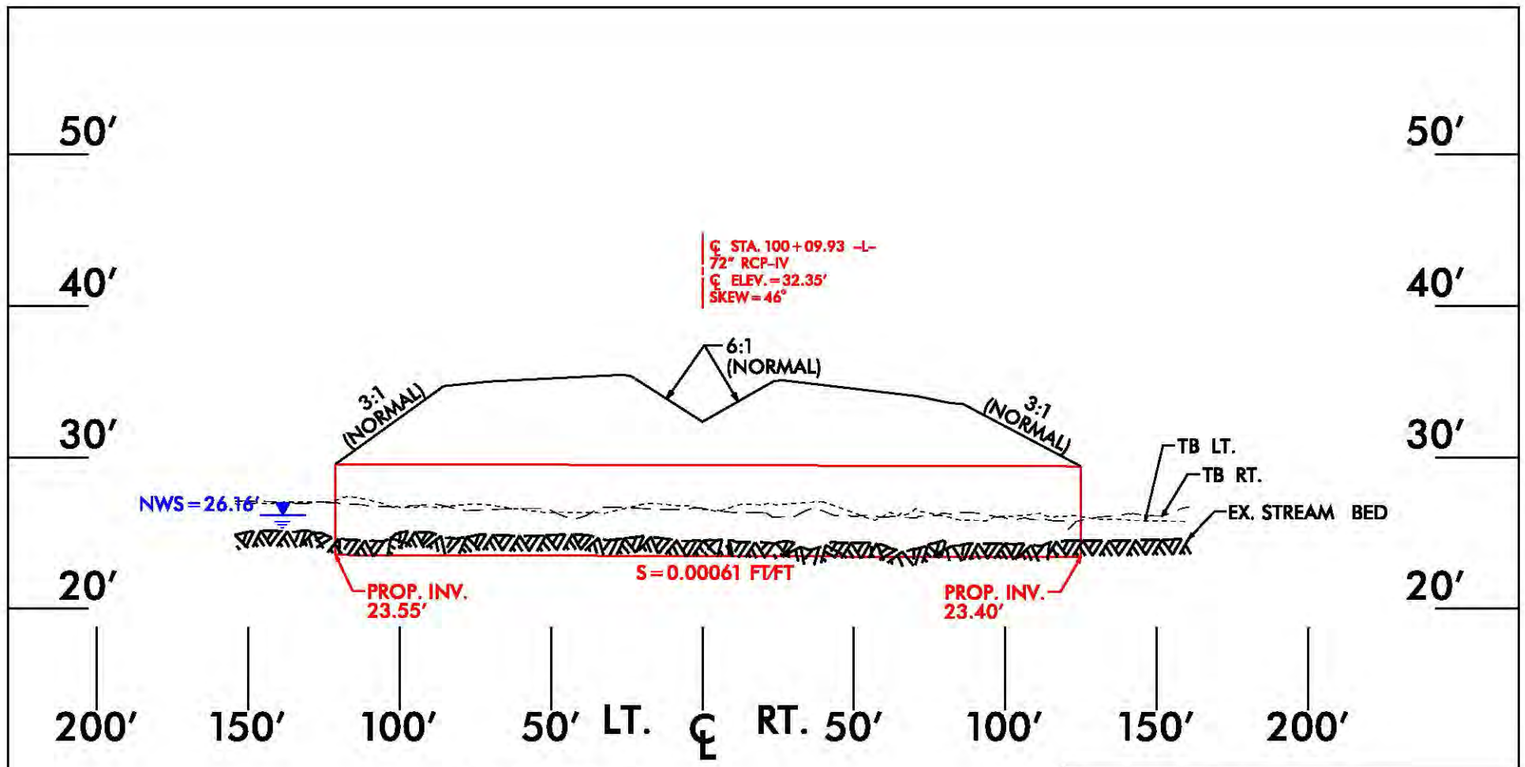
PROFILE
–Y2A– 60" PIPE

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

50′ 0′ 50′
HORIZONTAL

10′ 0′ 10′
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 19 OF 62

5/28/99

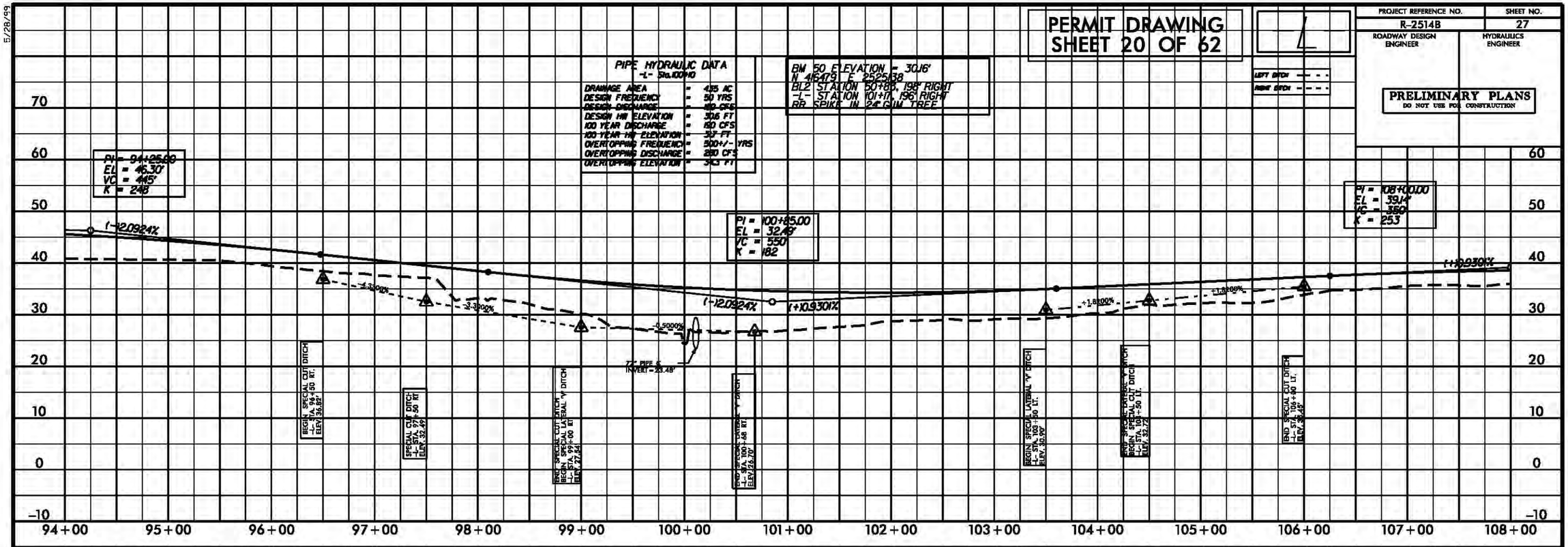
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

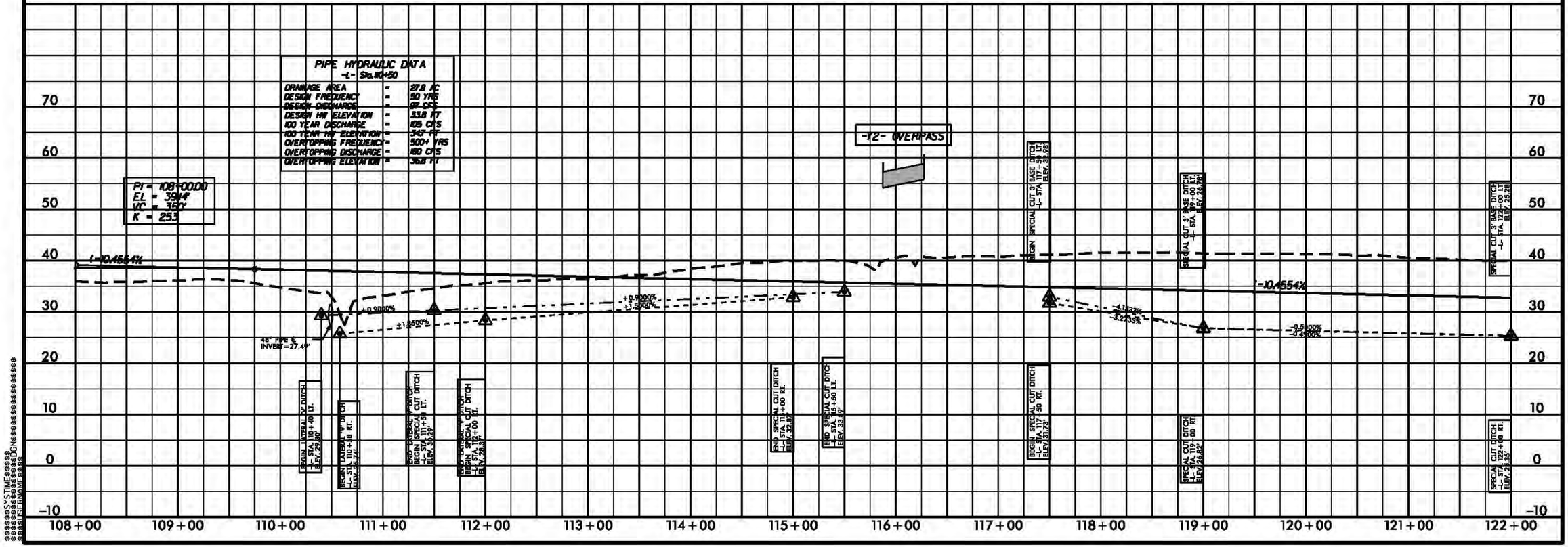
PERMIT DRAWING
SHEET 20 OF 62

-L-

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

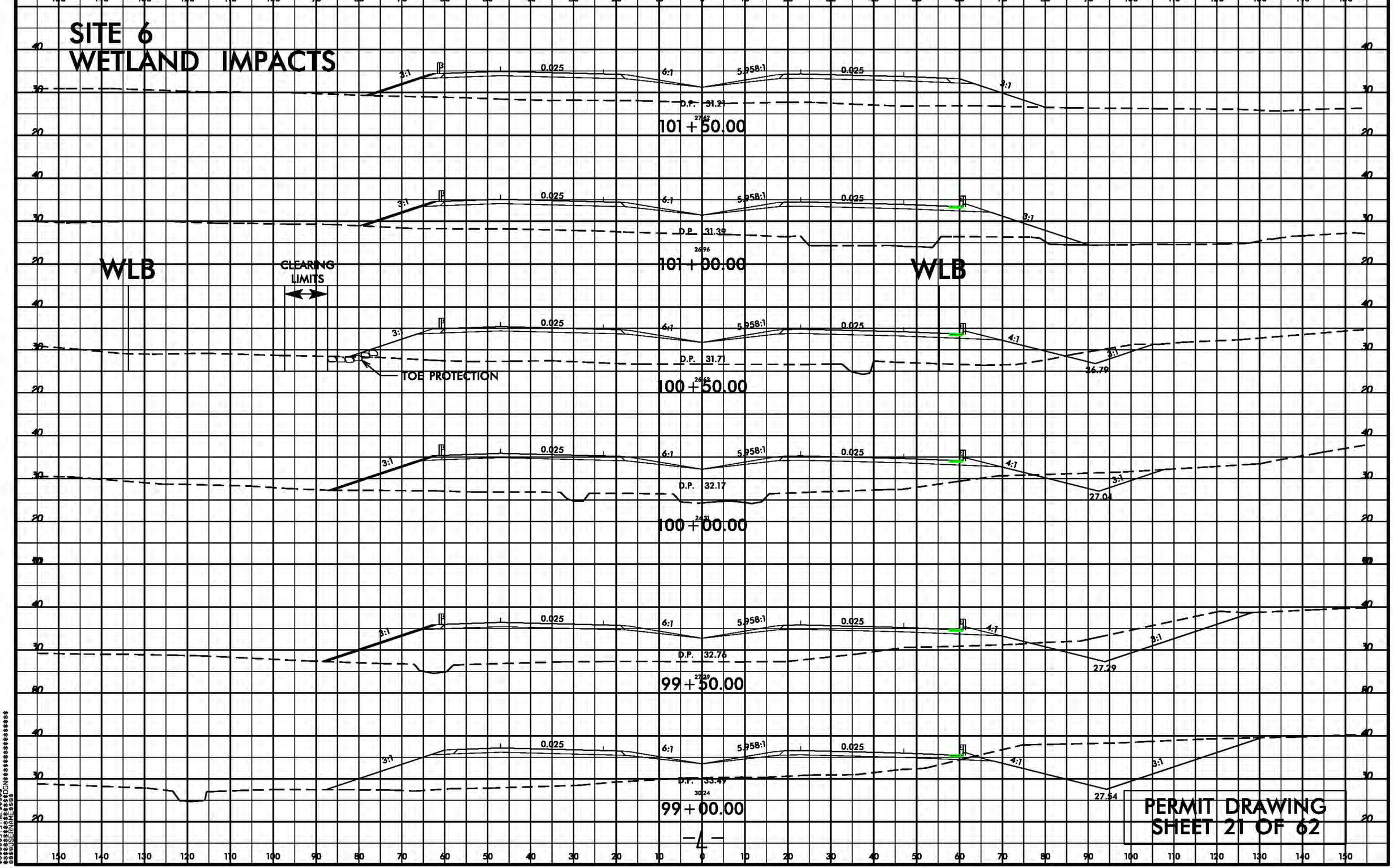
LEFT DITCH - - -
RIGHT DITCH - - -





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

SITE 6 WETLAND IMPACTS



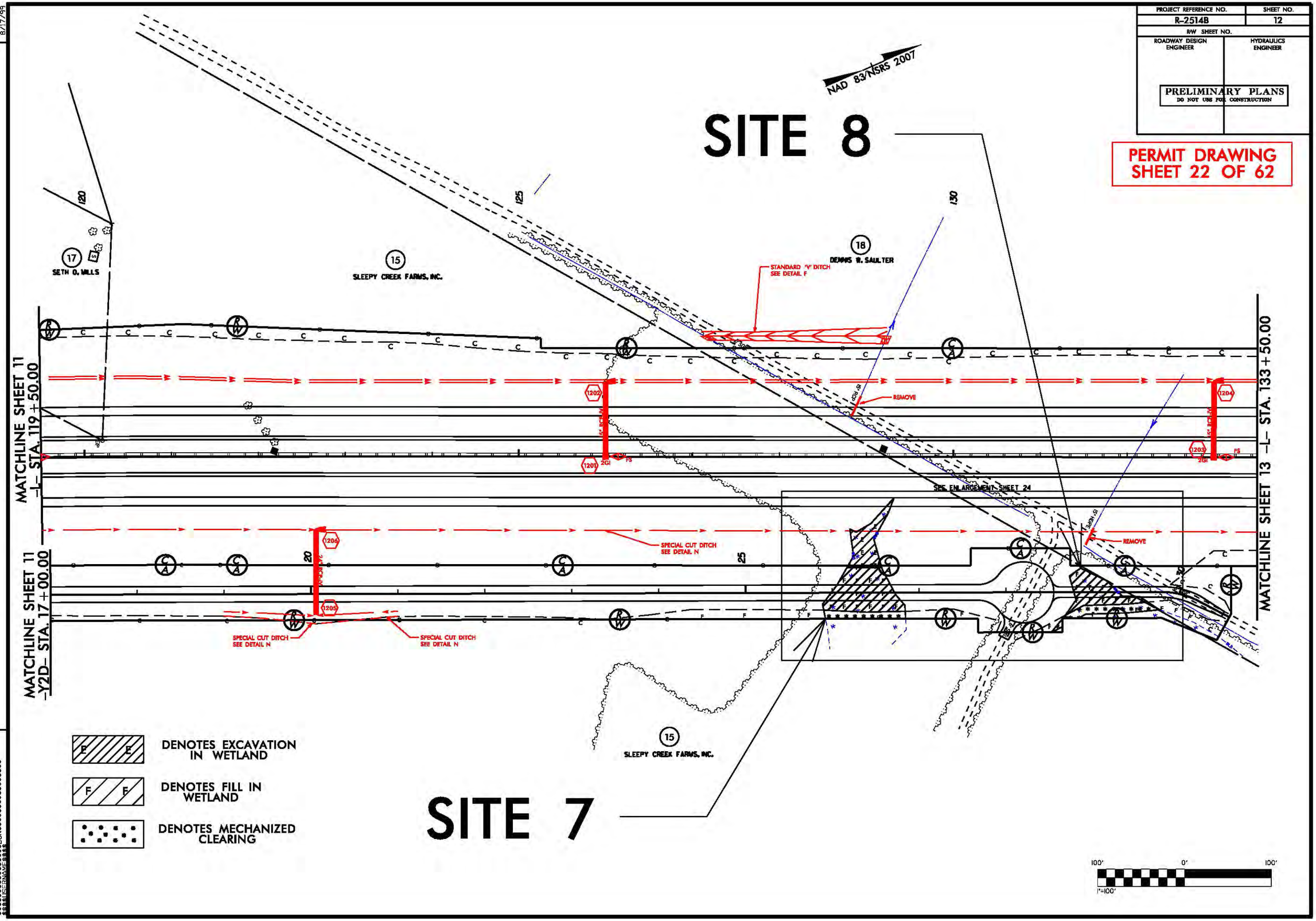
PERMIT DRAWING
SHEET 21 OF 62

8/23/99
$$$$$$SYSTIME$$$$$$DGN$$$$$$

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



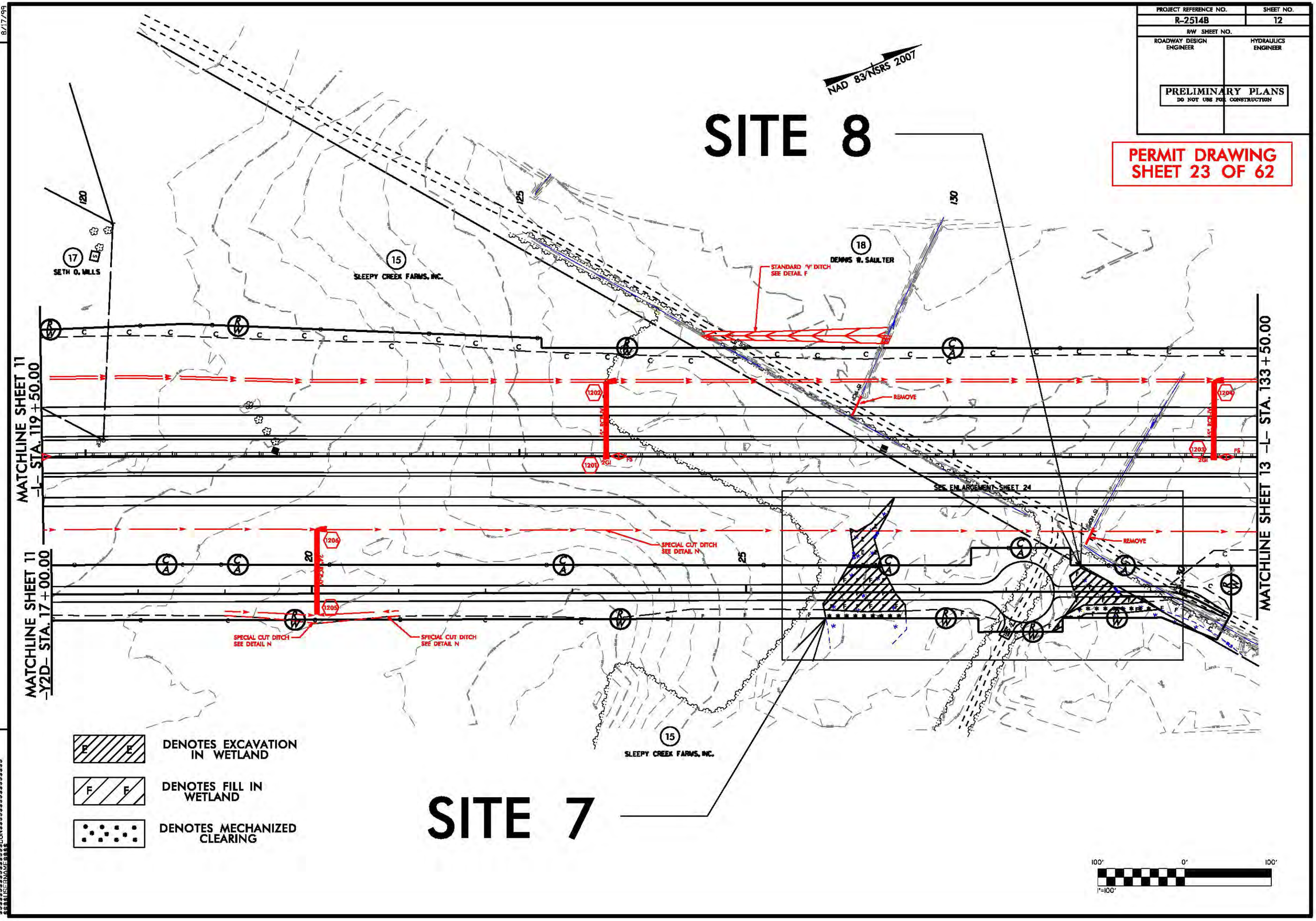
REVISIONS

8/17/99

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

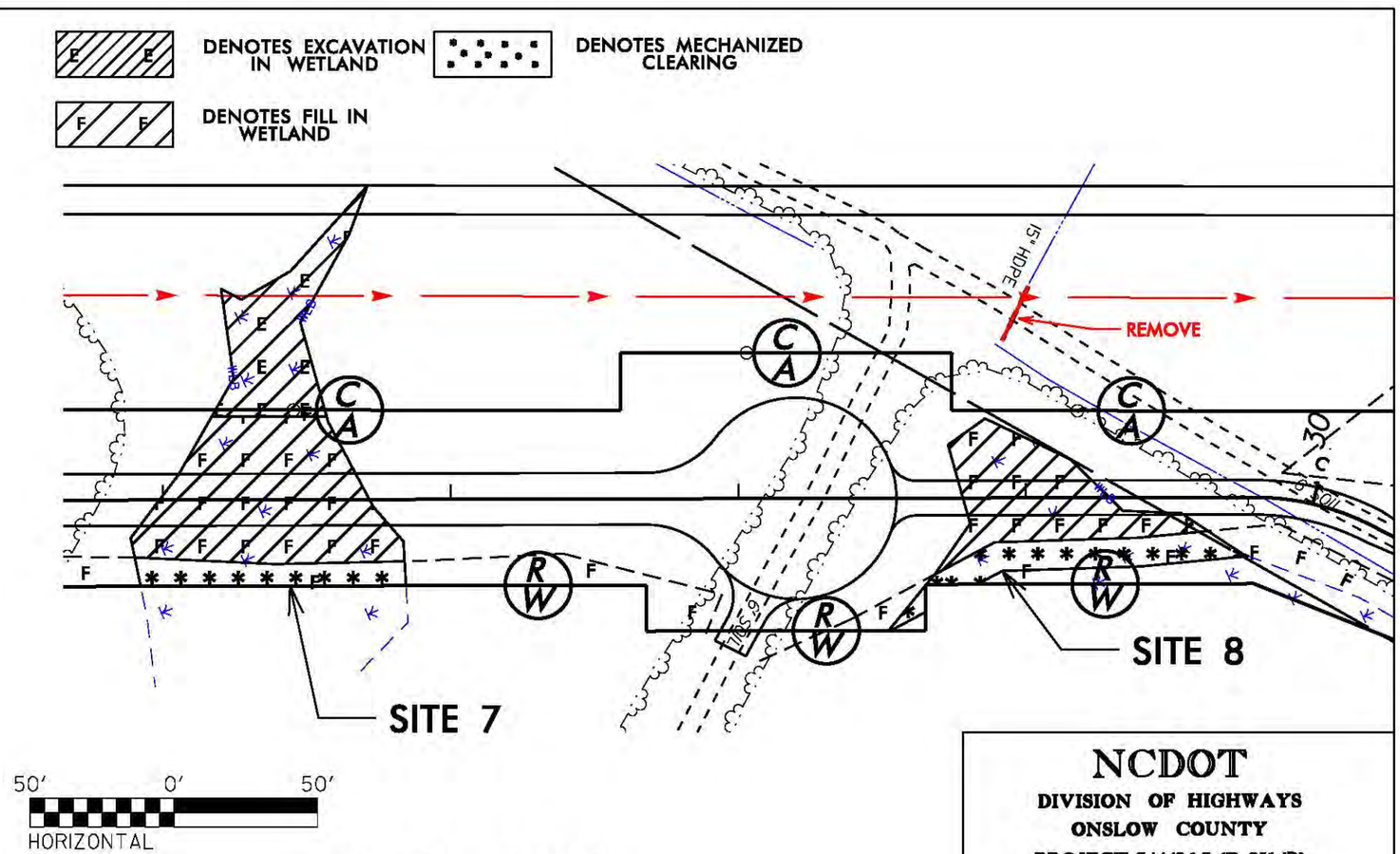
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 23 OF 62



REVISIONS

8/17/99



PLAN VIEW

SITE 7 & 8

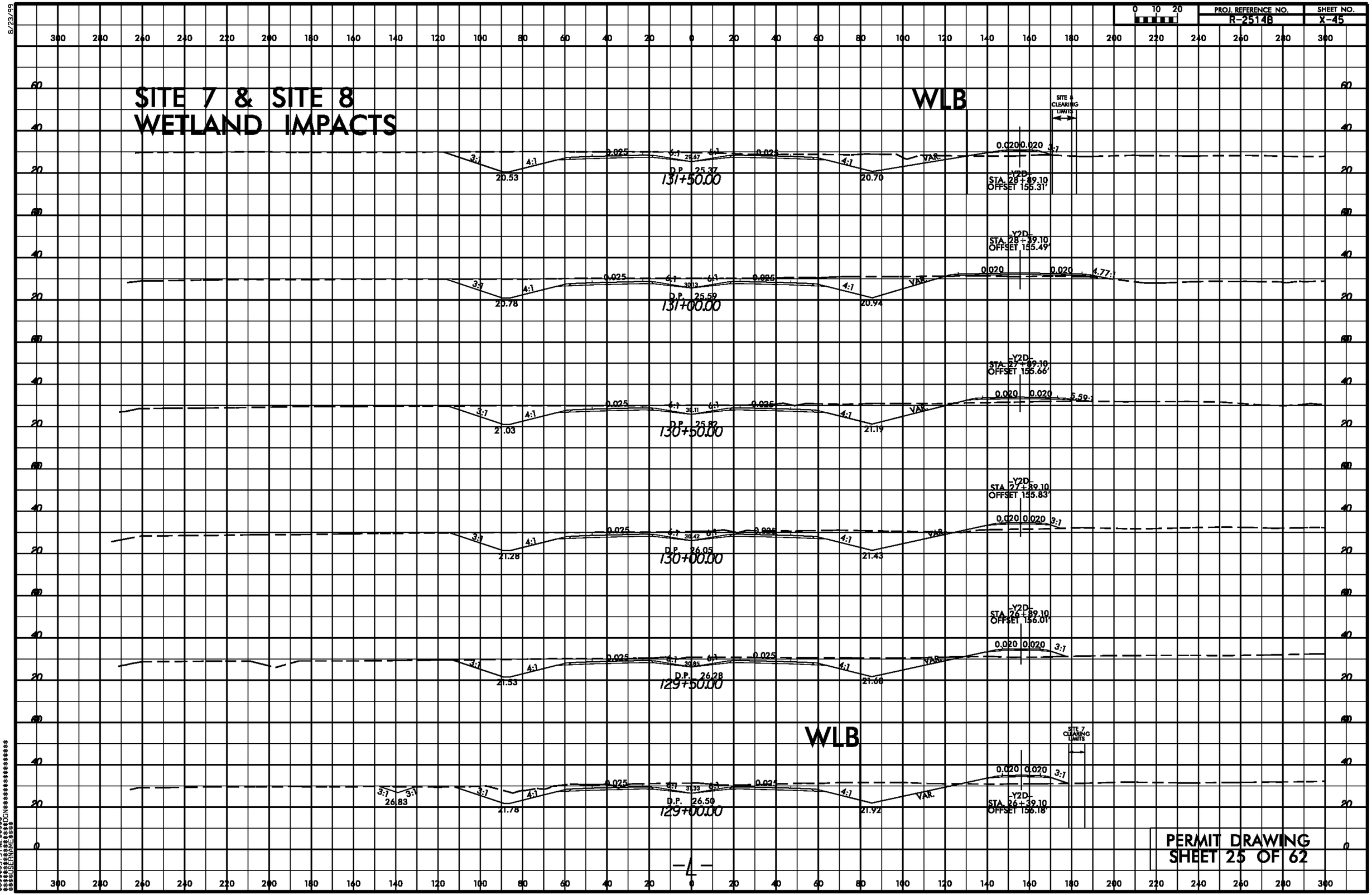
NCDOT

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

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

SITE 7 & SITE 8 WETLAND IMPACTS



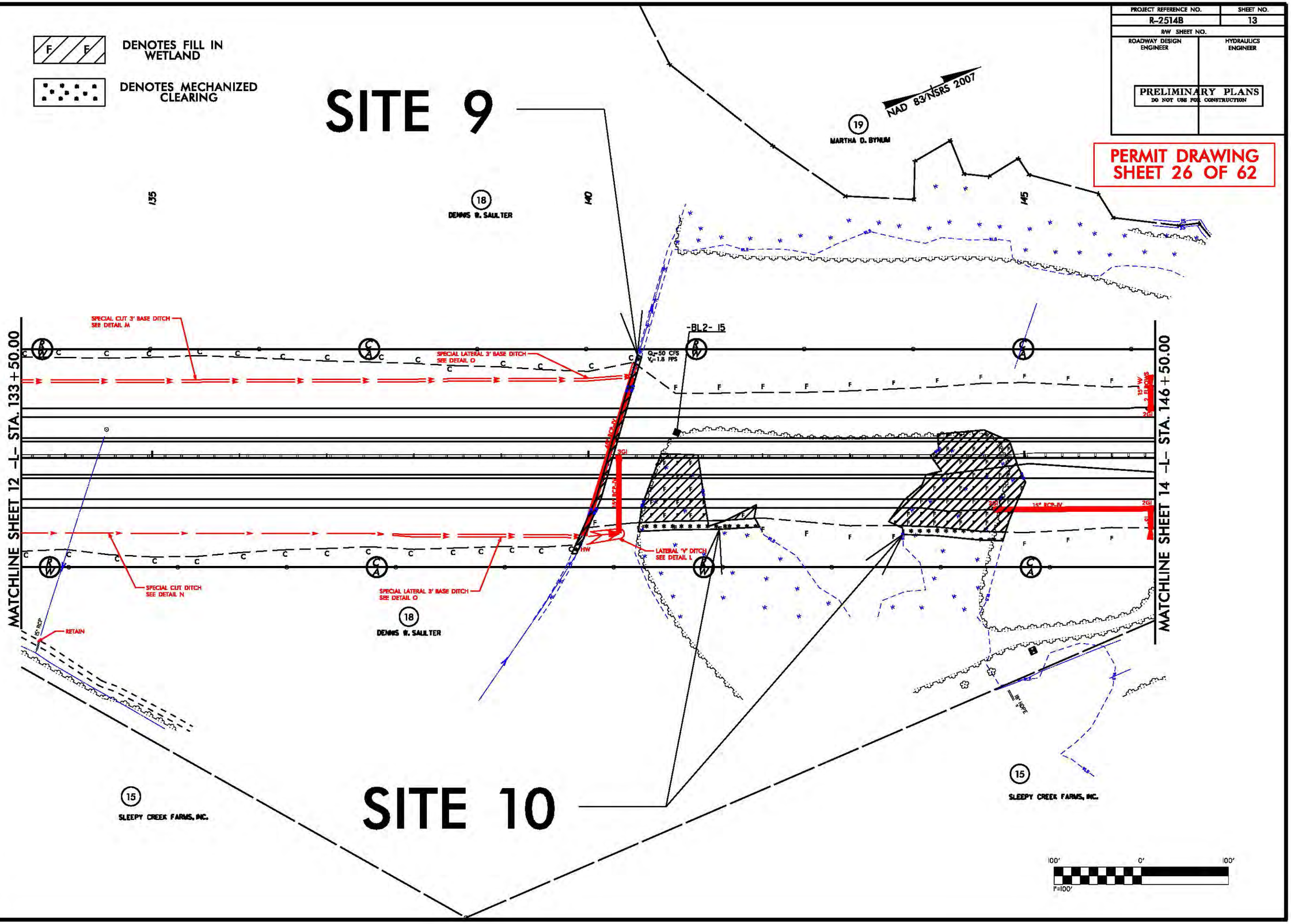
PERMIT DRAWING
SHEET 25 OF 62

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$$SELENAME$$$$

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



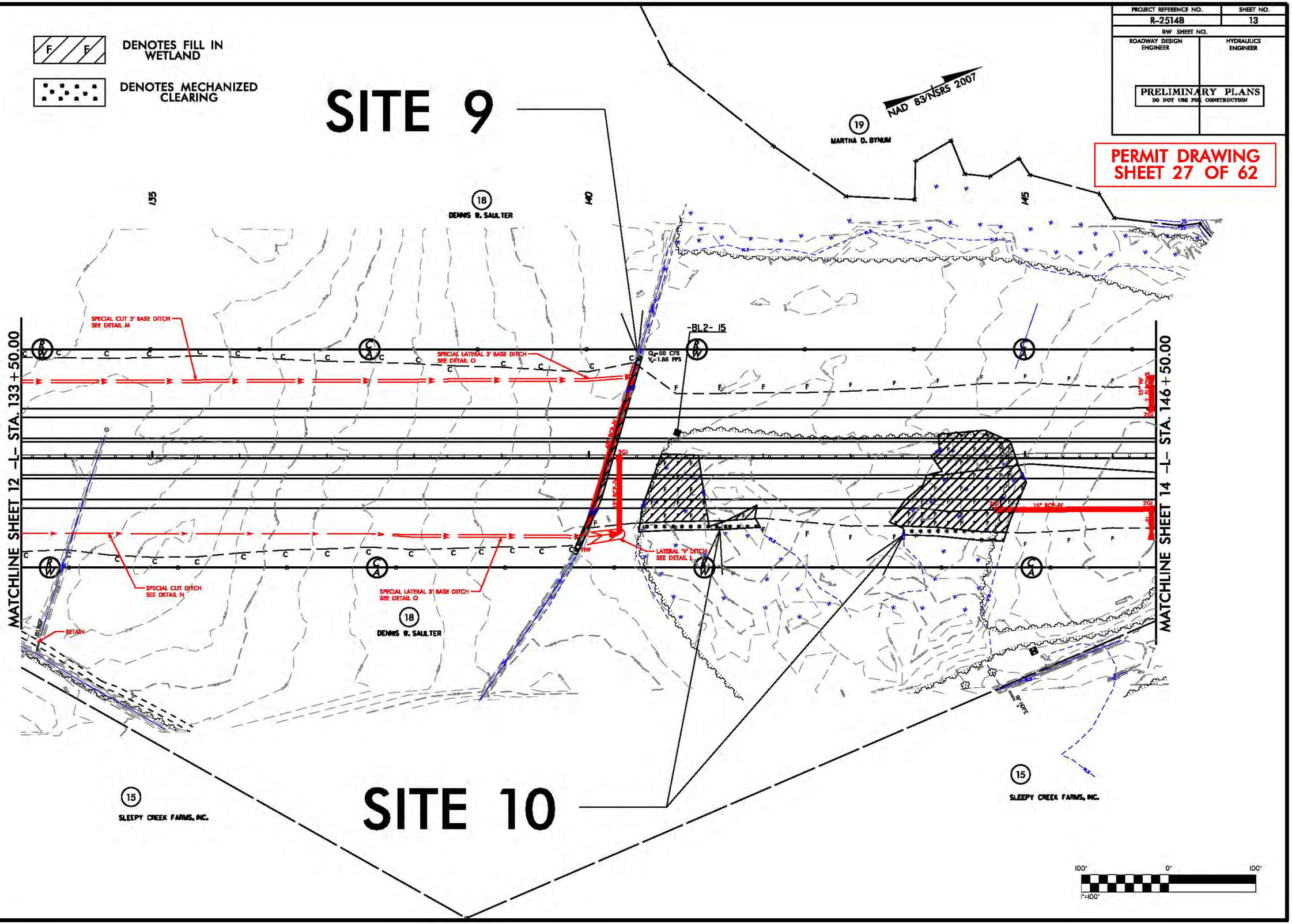
REVISIONS

8/17/99

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

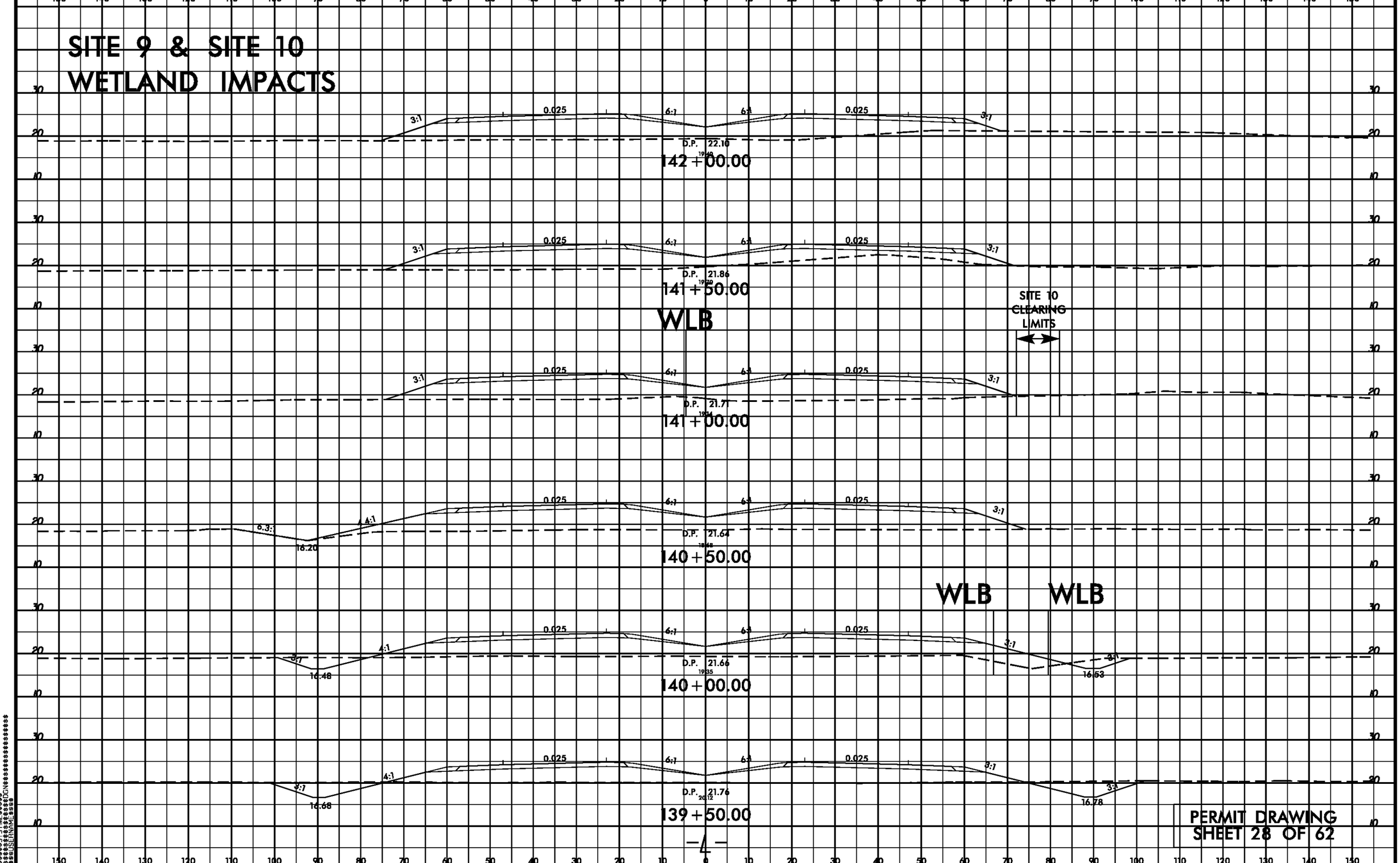
PERMIT DRAWING SHEET 27 OF 62



REVISIONS

8/17/99

SITE 9 & SITE 10 WETLAND IMPACTS



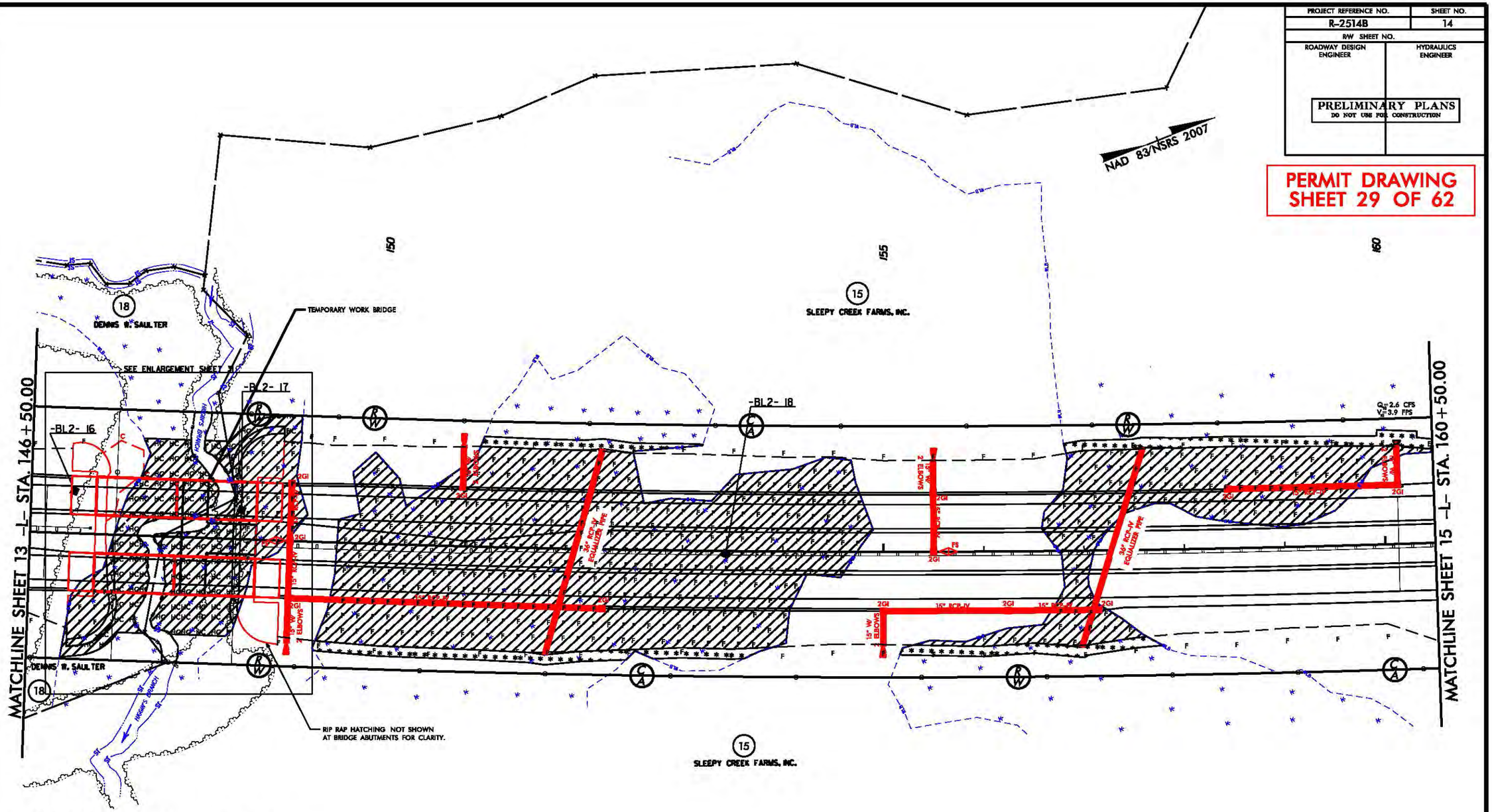
PERMIT DRAWING
SHEET 28 OF 62

8/23/99
$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

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



DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING

DENOTES TEMPORARY FILL IN WETLAND

SITE 10

100' 0' 100'
1"=100'

REVISIONS

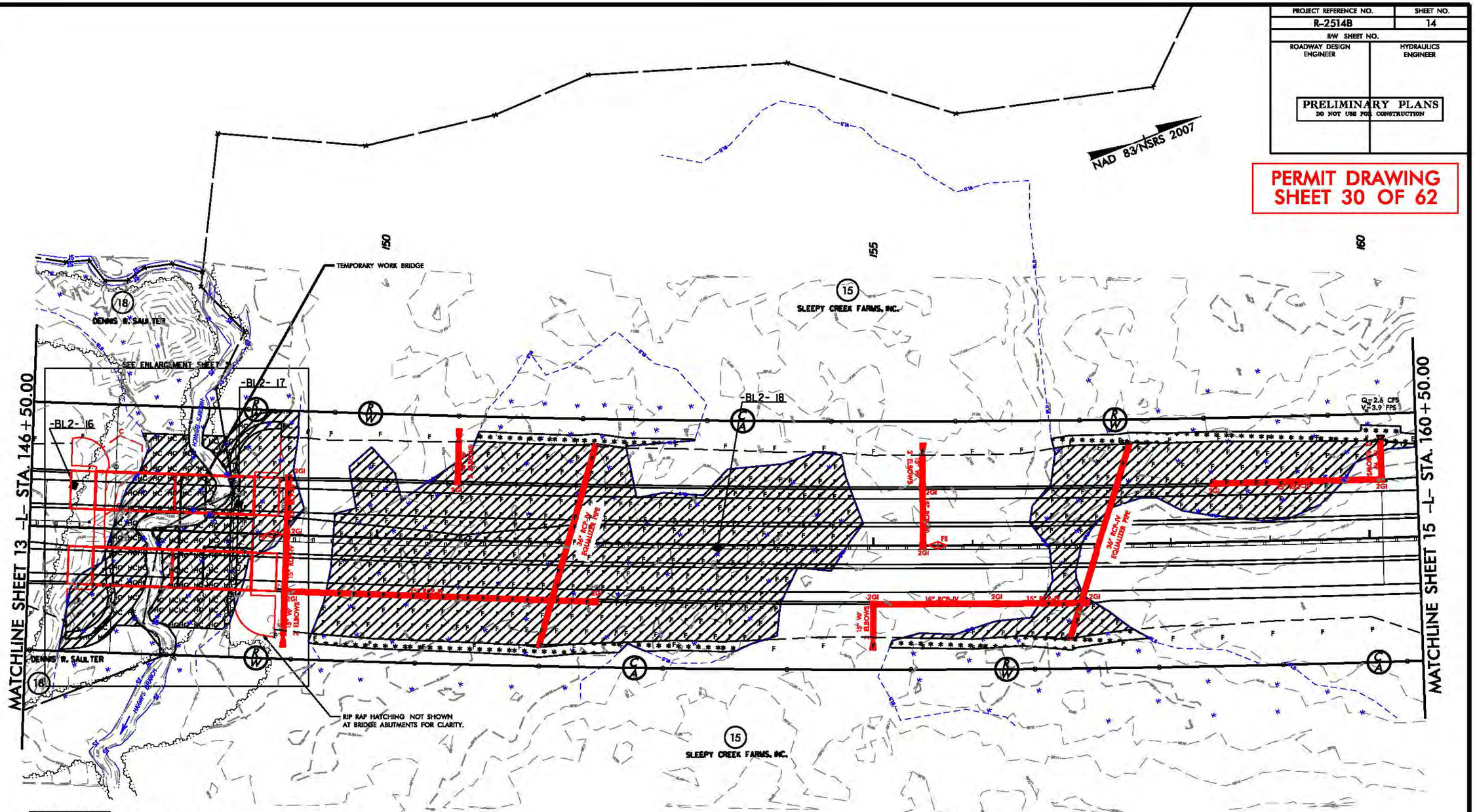
8/17/99

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

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



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'

REVISIONS

8/17/99

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

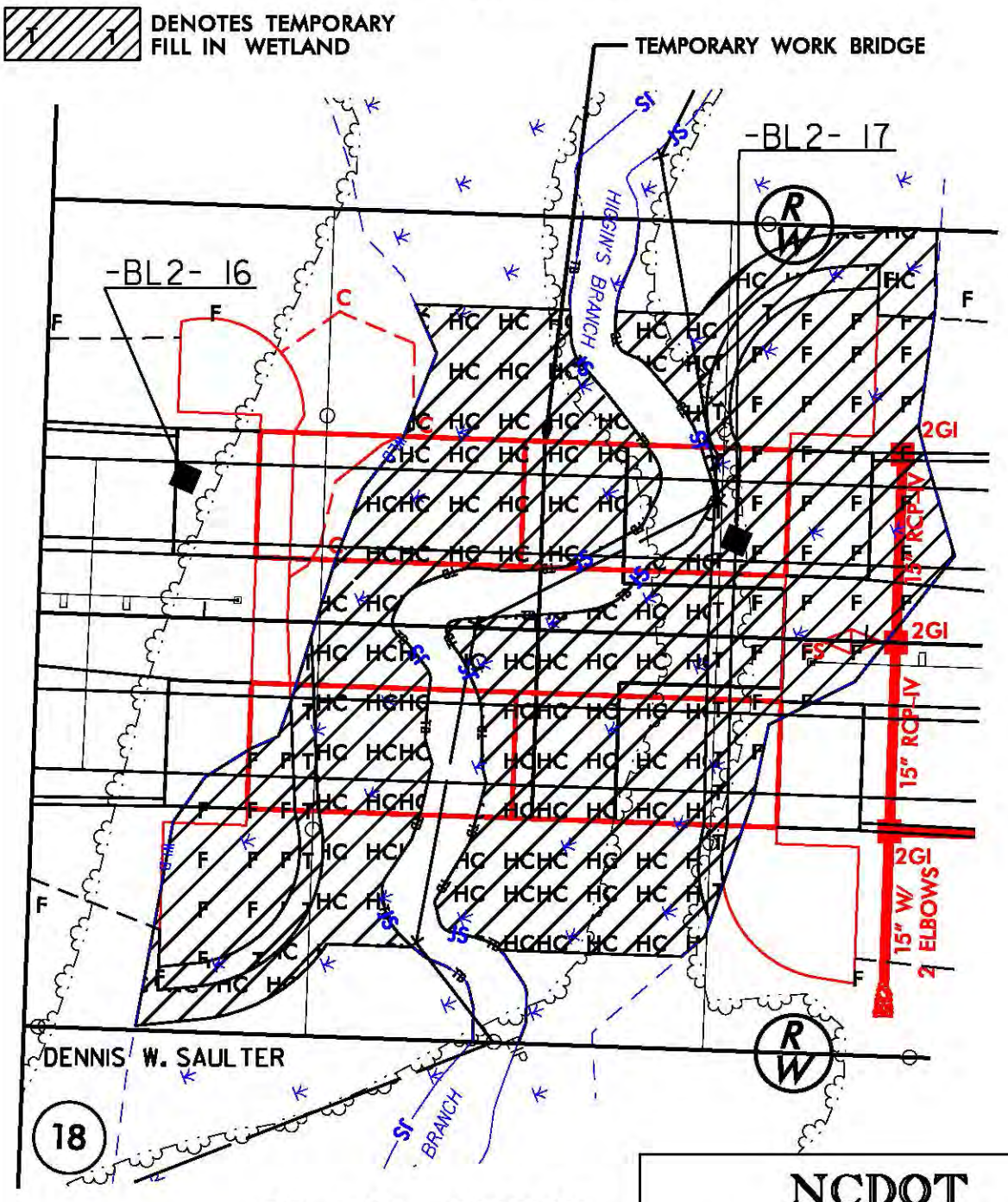
E E DENOTES EXCAVATION IN WETLAND

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

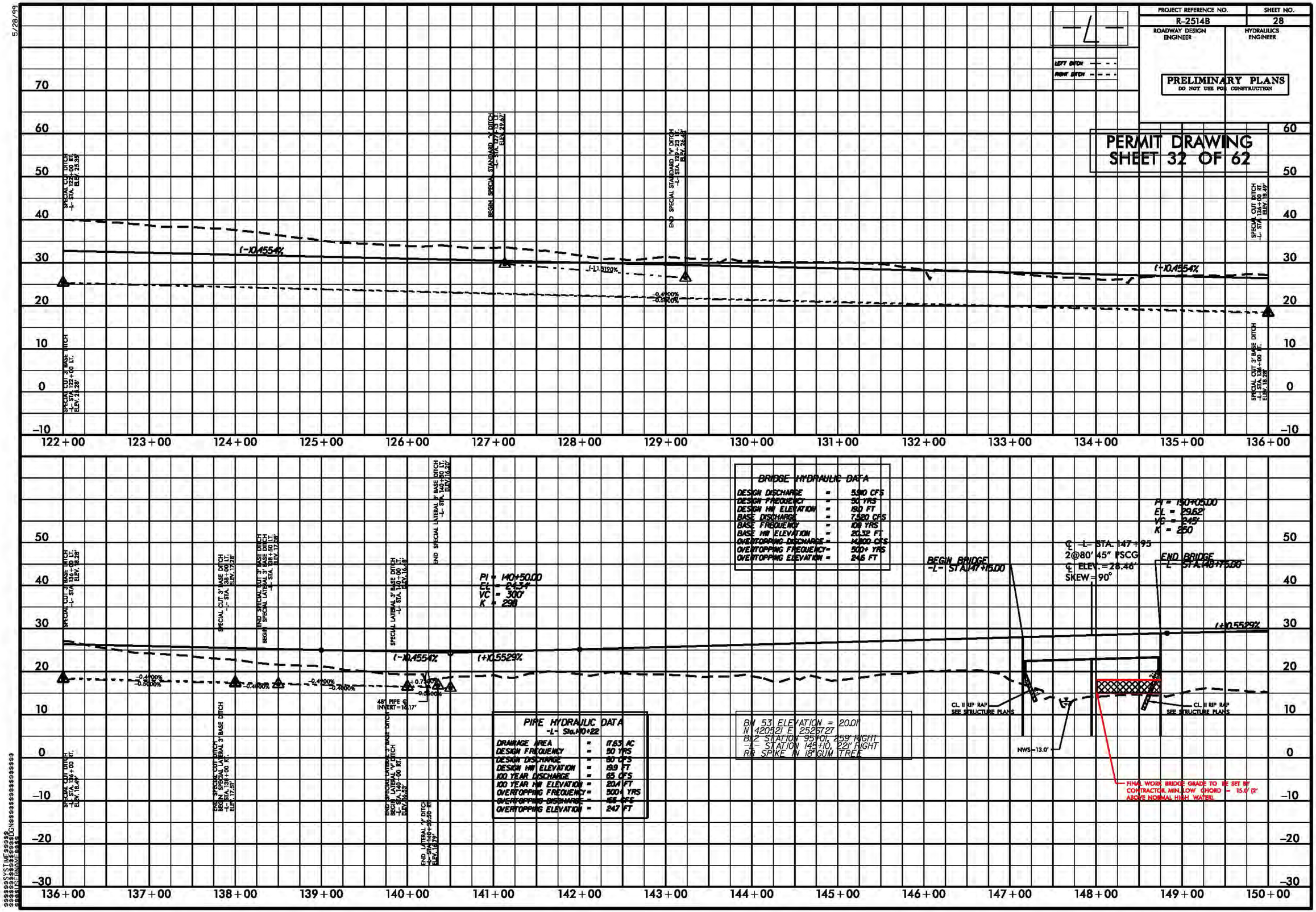
5/28/99

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

LEFT DITCH
RIGHT DITCH

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 32 OF 62

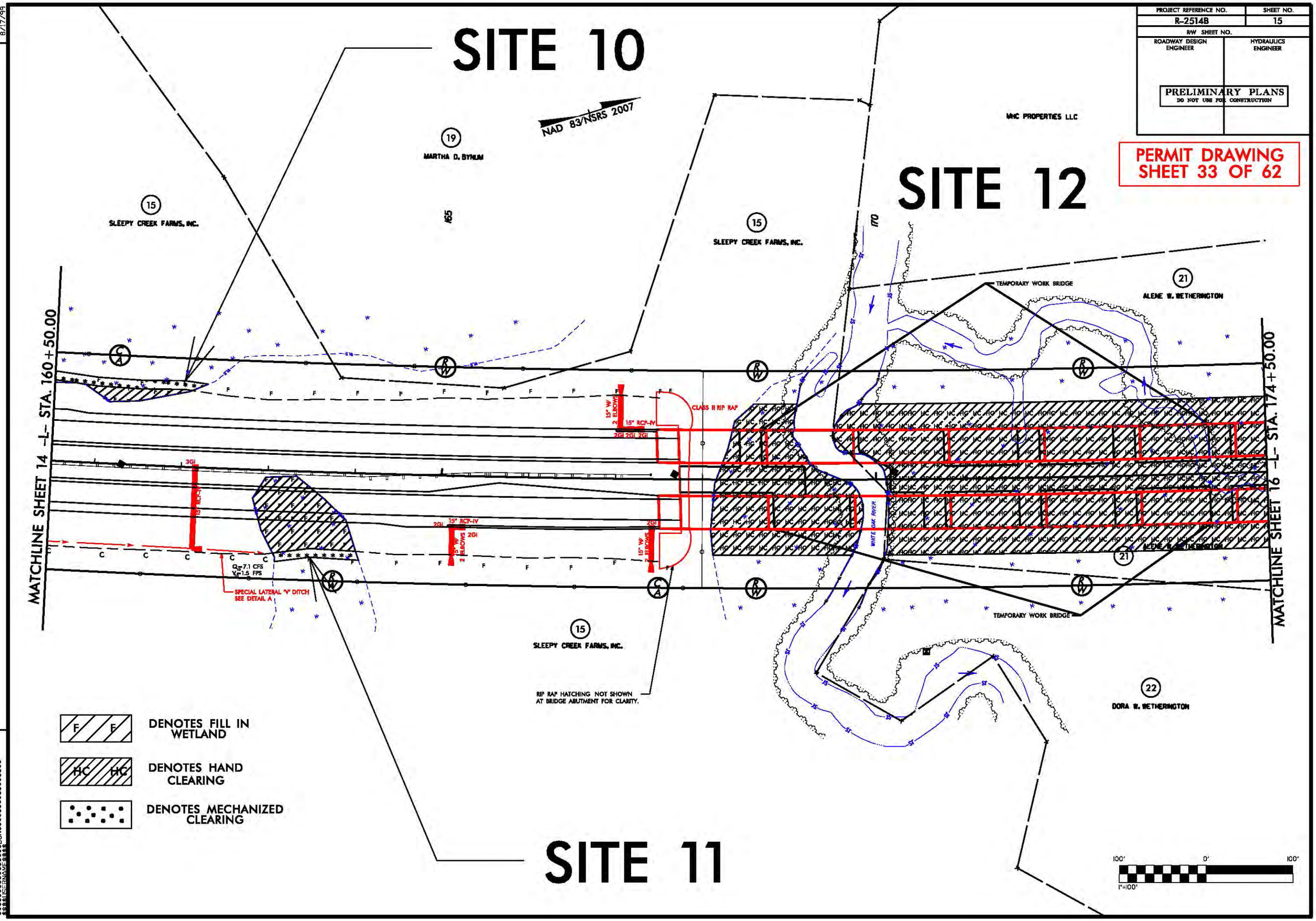


$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$

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 33 OF 62



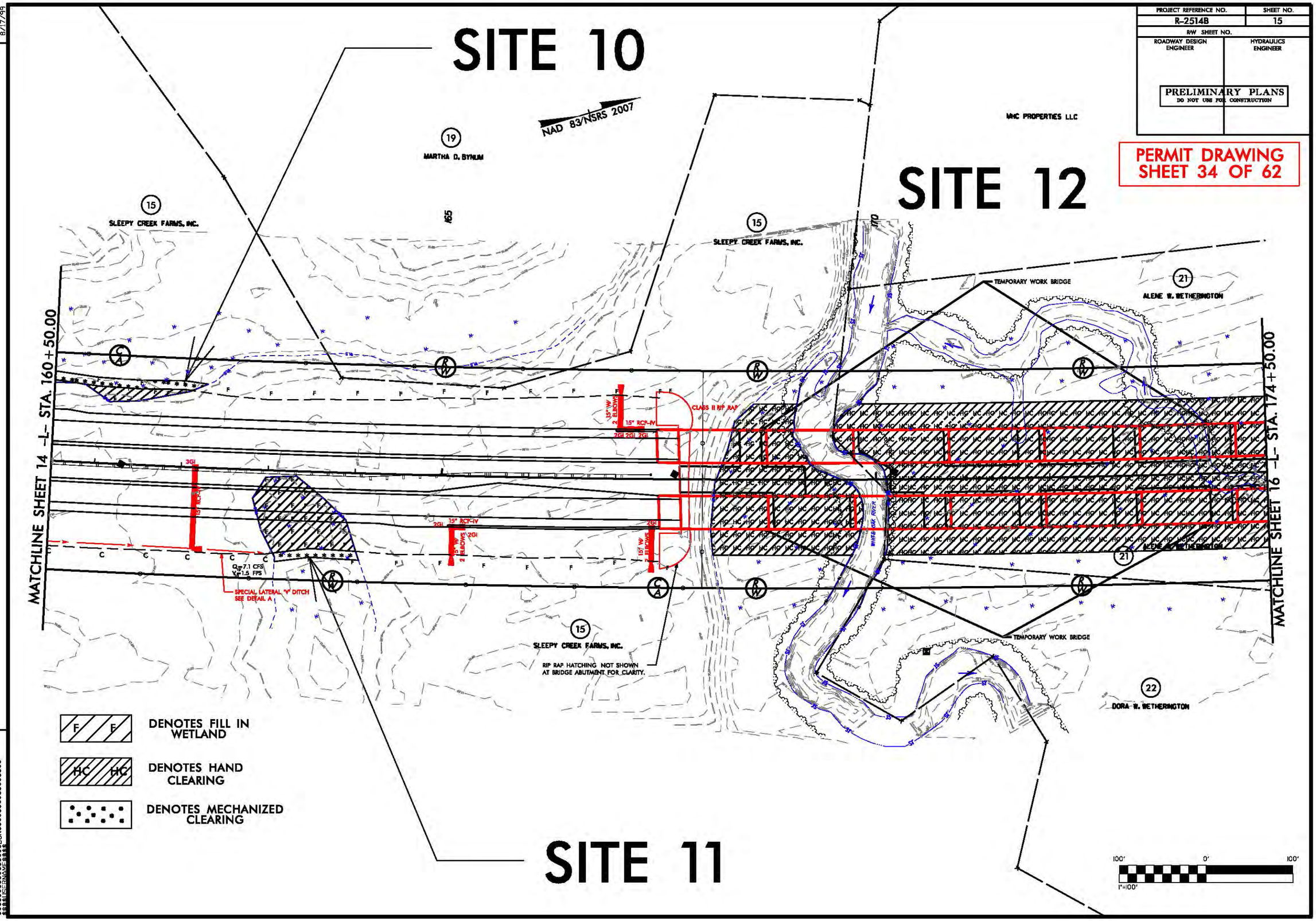
REVISIONS

8/17/99

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



REVISIONS

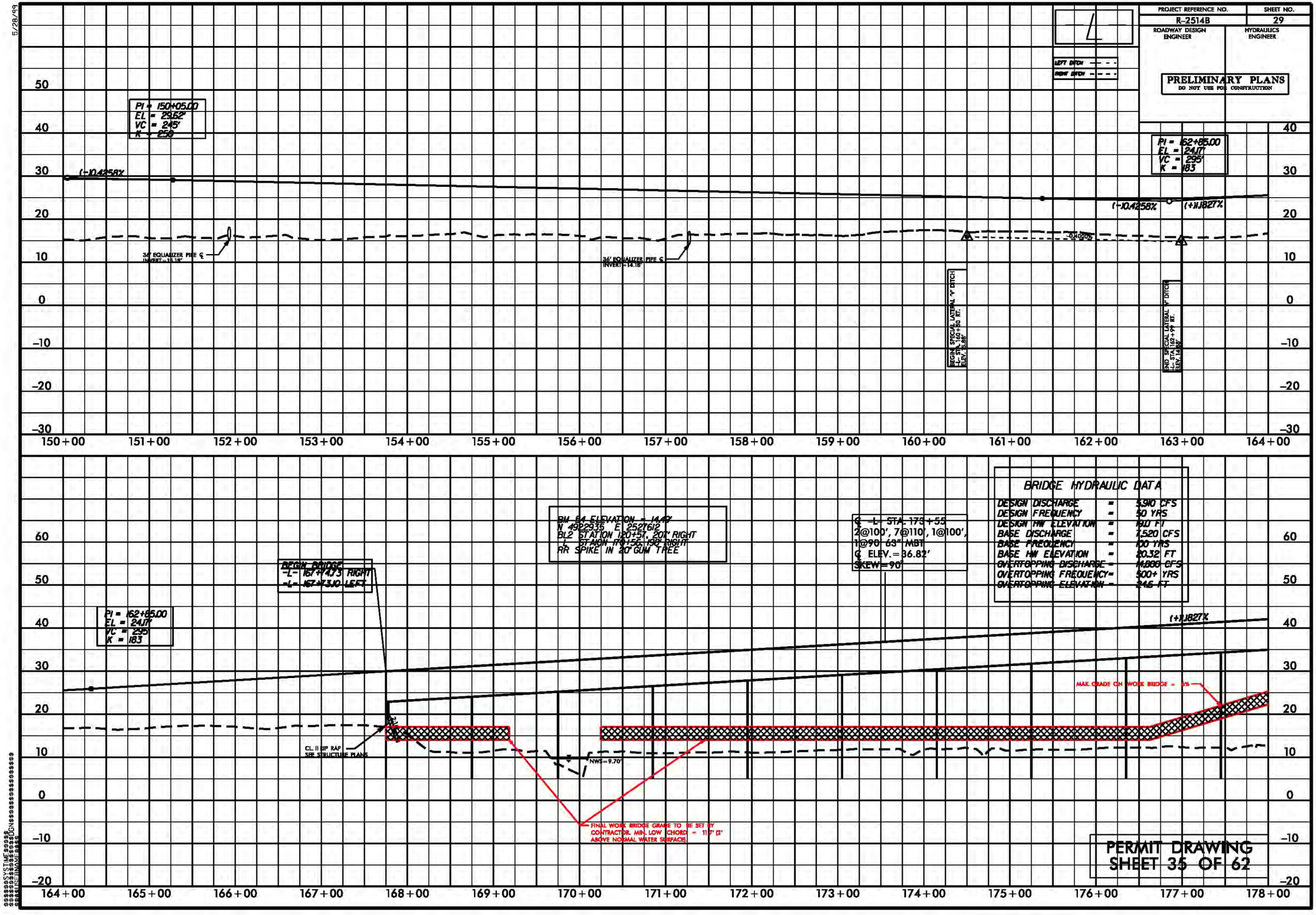
8/17/99

5/28/99

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

LEFT DITCH - - -
RIGHT DITCH - - -

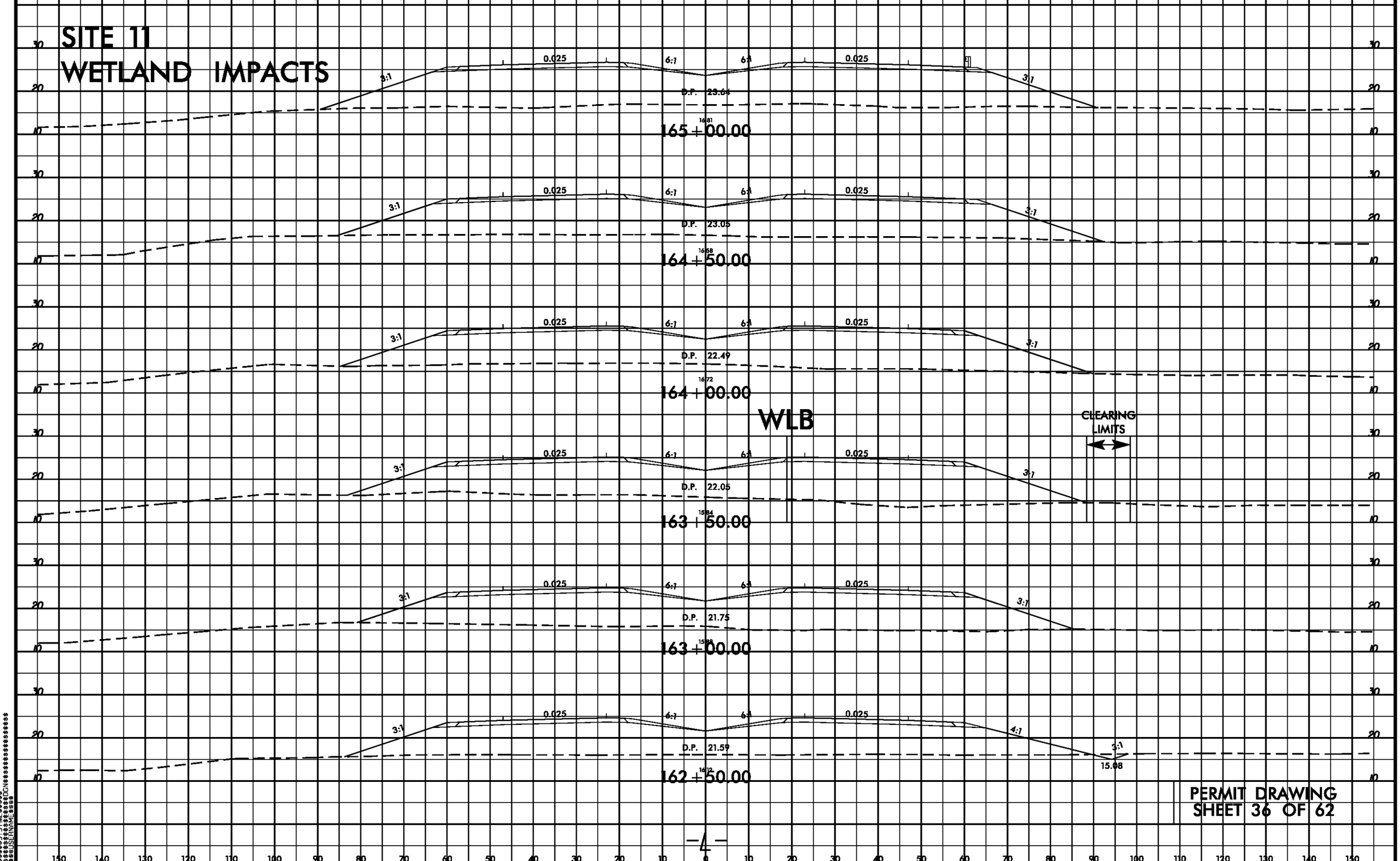
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



PERMIT DRAWING
SHEET 35 OF 62

SYSTIME$$$$$$$$
DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
DATE$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

SITE 11
WETLAND IMPACTS



PERMIT DRAWING
SHEET 36 OF 62

8/23/99
$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

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

SITE 12

NAD 83/NSRS 2007

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

21 ALENE W. WETHERINGTON

23 MHC PROPERTIES, LLC

22 DORA W. WETHERINGTON

TEMPORARY WORK BRIDGE

SEE ENLARGEMENT SHEET 39

MATCHLINE SHEET 15 -L- STA. 174+50.00

MATCHLINE SHEET 17 -L- STA. 188+50.00

LATERAL "V" DITCH
SEE DETAIL L

LATERAL 3' BASE DITCH
SEE DETAIL E

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENT FOR CLARITY.

20' INGRESS, EGRESS EASEMENT

MAYSVILLE CITY LIMITS

100' 0' 100'
1"=100'

REVISIONS

8/17/99

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

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 38 OF 62

SITE 12

NAD 83/NSRS 2007

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

21 ALENE W. WETHERINGTON

23 MHC PROPERTIES, LLC

22 DORA W. WETHERINGTON

TEMPORARY WORK BRIDGE

SEE ENLARGEMENT SHEET 39

LATERAL "V" DITCH SEE DETAIL L

LATERAL 3' BASE DITCH SEE DETAIL E

RIP RAP HATCHING NOT SHOWN AT BRIDGE ABUTMENT FOR CLARITY.

20' INGRESS, EGRESS EASEMENT

MAYSVILLE CITY LIMITS

MATCHLINE SHEET 15 -L- STA. 174+50.00

MATCHLINE SHEET 17 -L- STA. 188+50.00

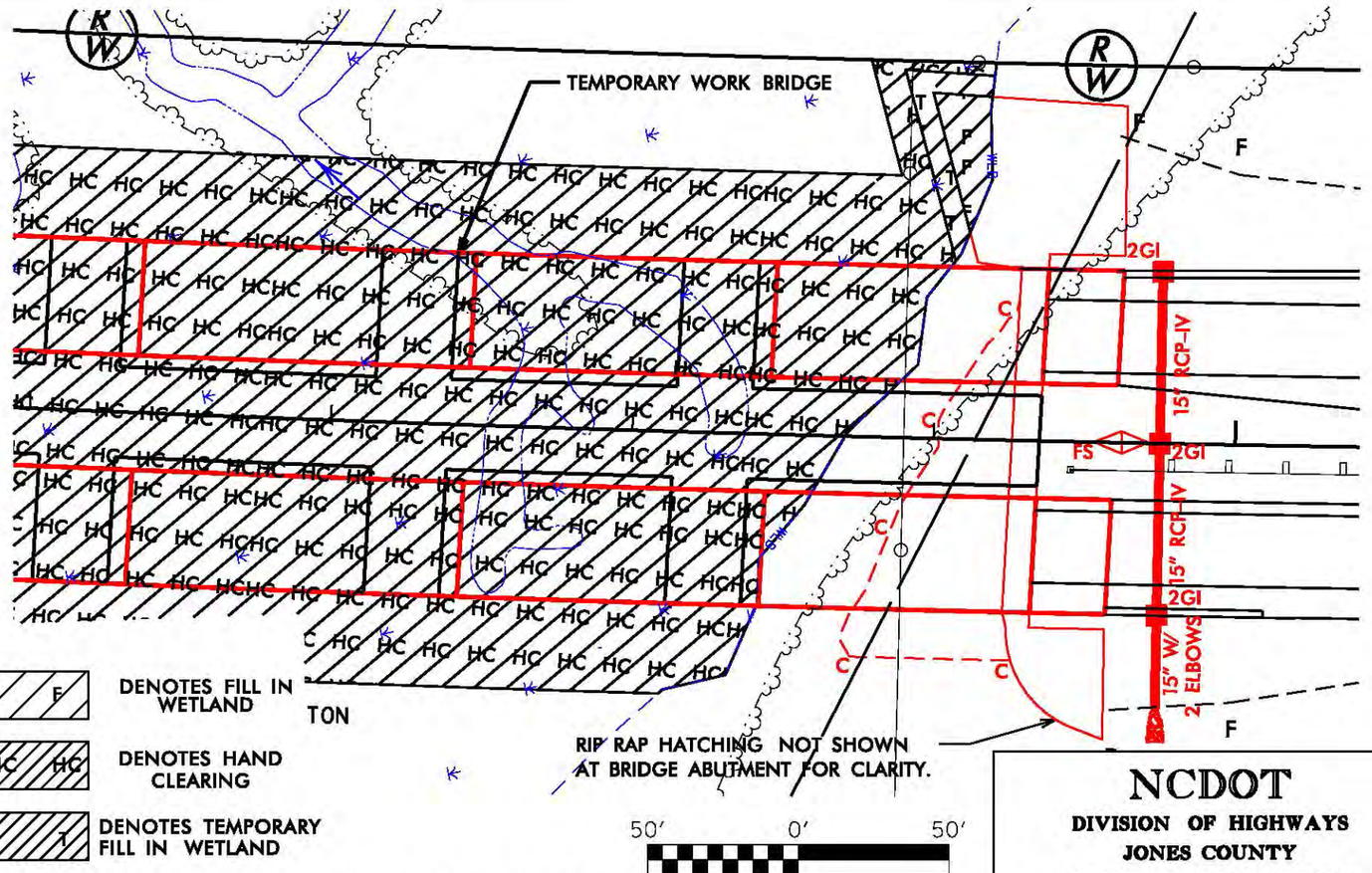
175 180 185

100' 0' 100'
1"=100'

REVISIONS

8/17/99

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$
$$$$$$$$STEINMUE$$$$



F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

T T DENOTES TEMPORARY FILL IN WETLAND

PLAN VIEW

SITE 12

NCDOT

DIVISION OF HIGHWAYS

JONES COUNTY

PROJECT: 34442.1.3 (R-2514B)

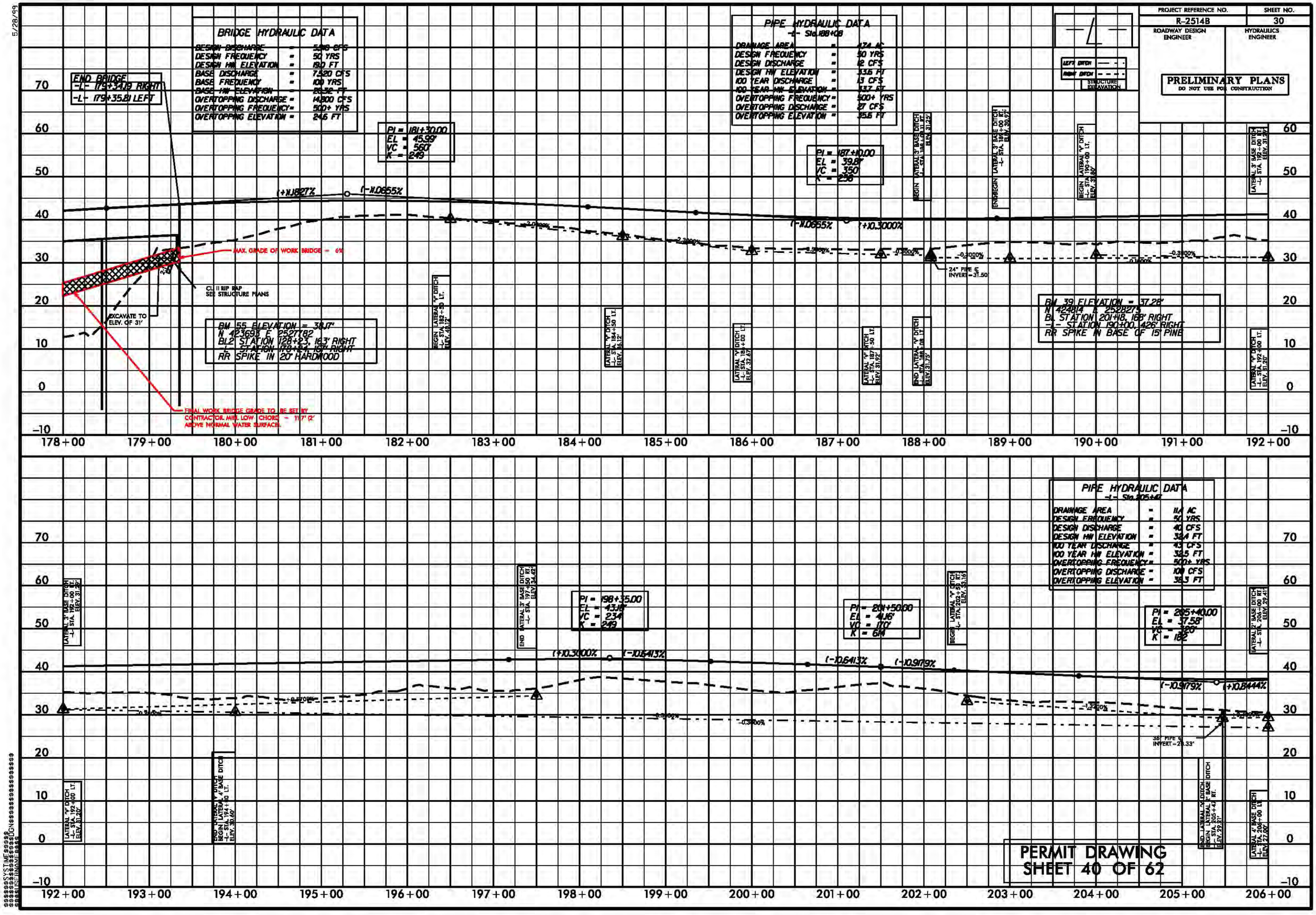
US 17 FROM SOUTH OF BELGRADE AT SR 1330/SR 1439 TO NORTH OF MAYSVILLE

SHEET 39 OF 62

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

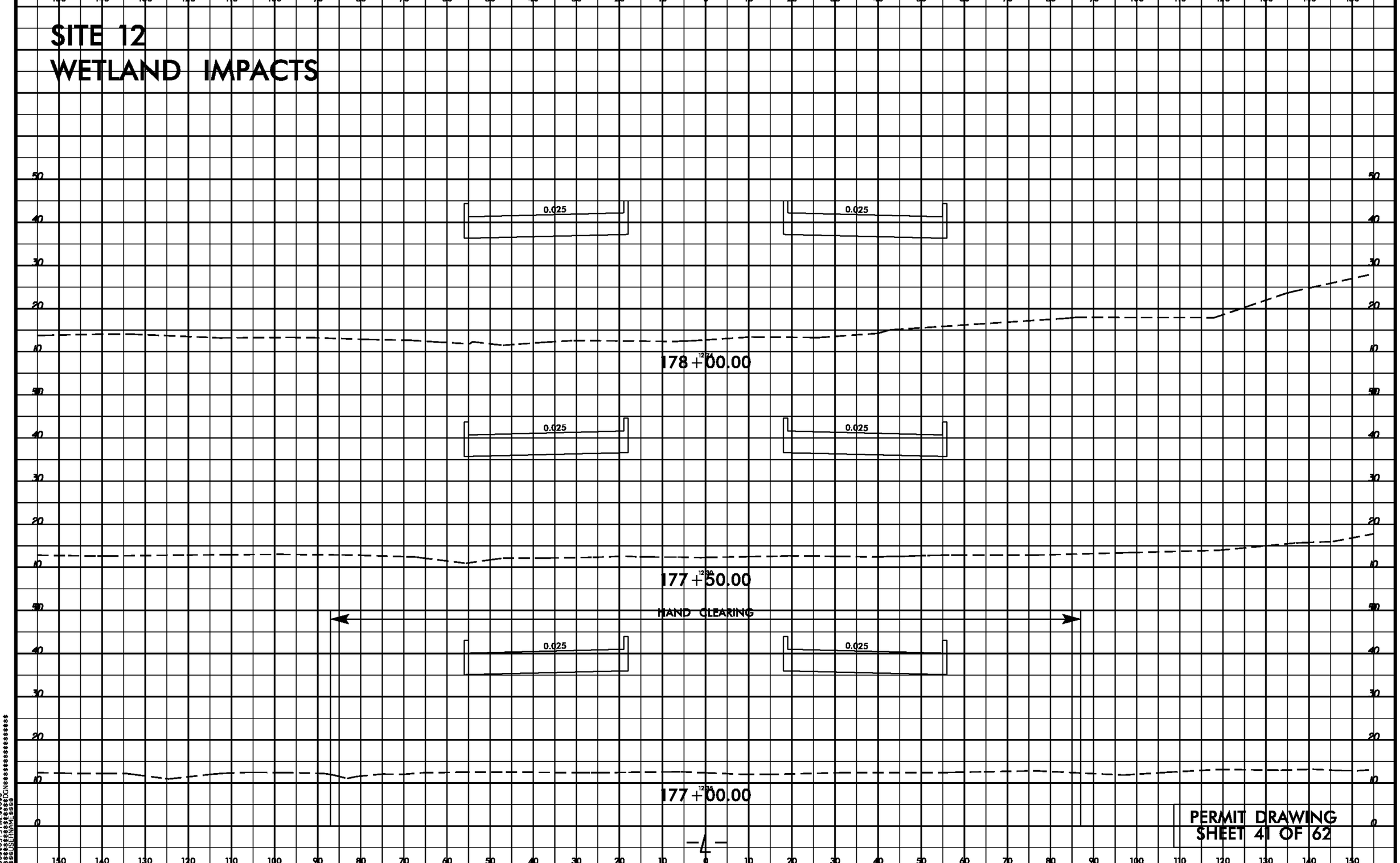
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



PERMIT DRAWING
SHEET 40 OF 62

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

SITE 12
WETLAND IMPACTS

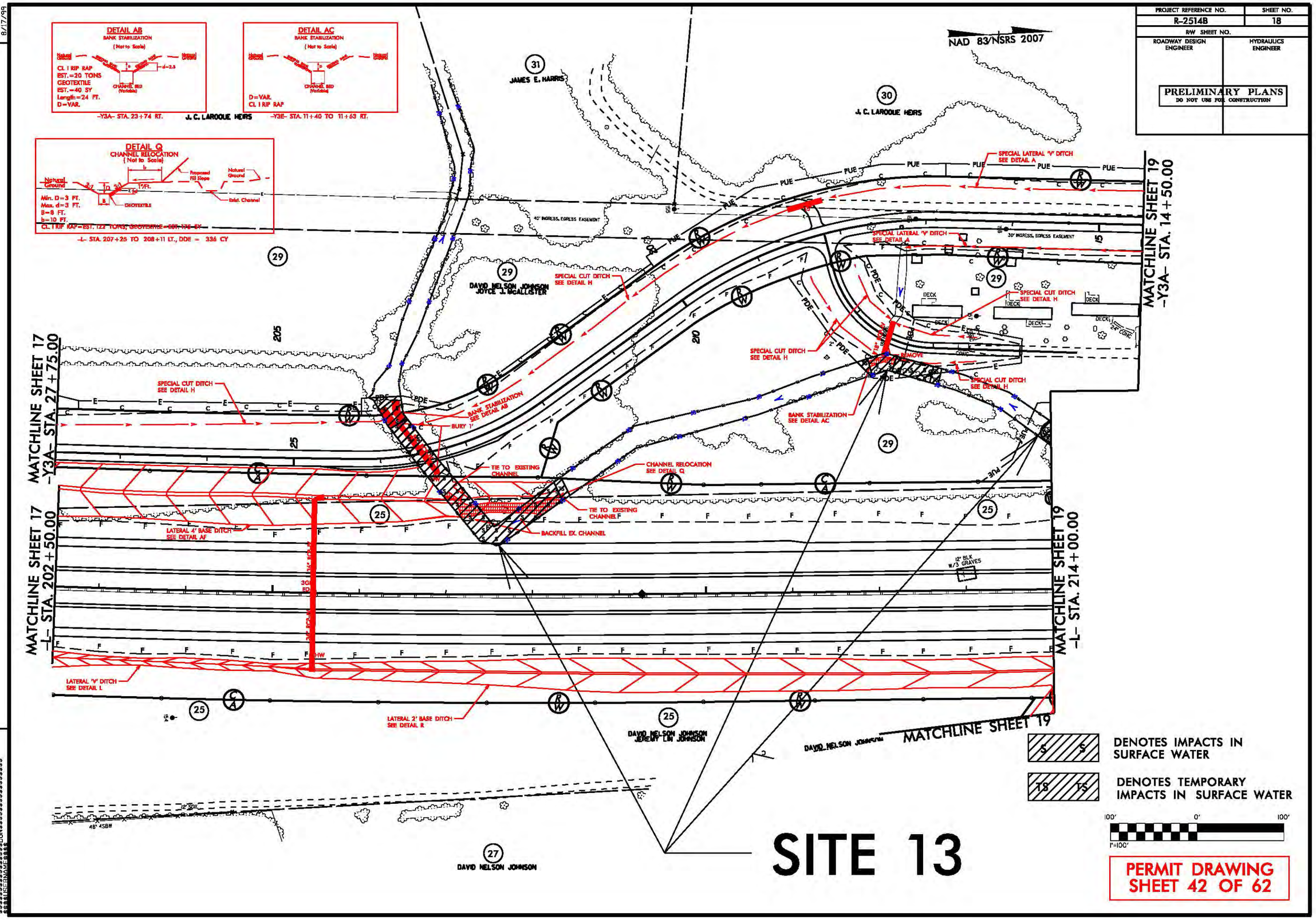


PERMIT DRAWING
SHEET 41 OF 62

8/23/99
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'
1"=100'

PERMIT DRAWING
SHEET 42 OF 62

8/17/99

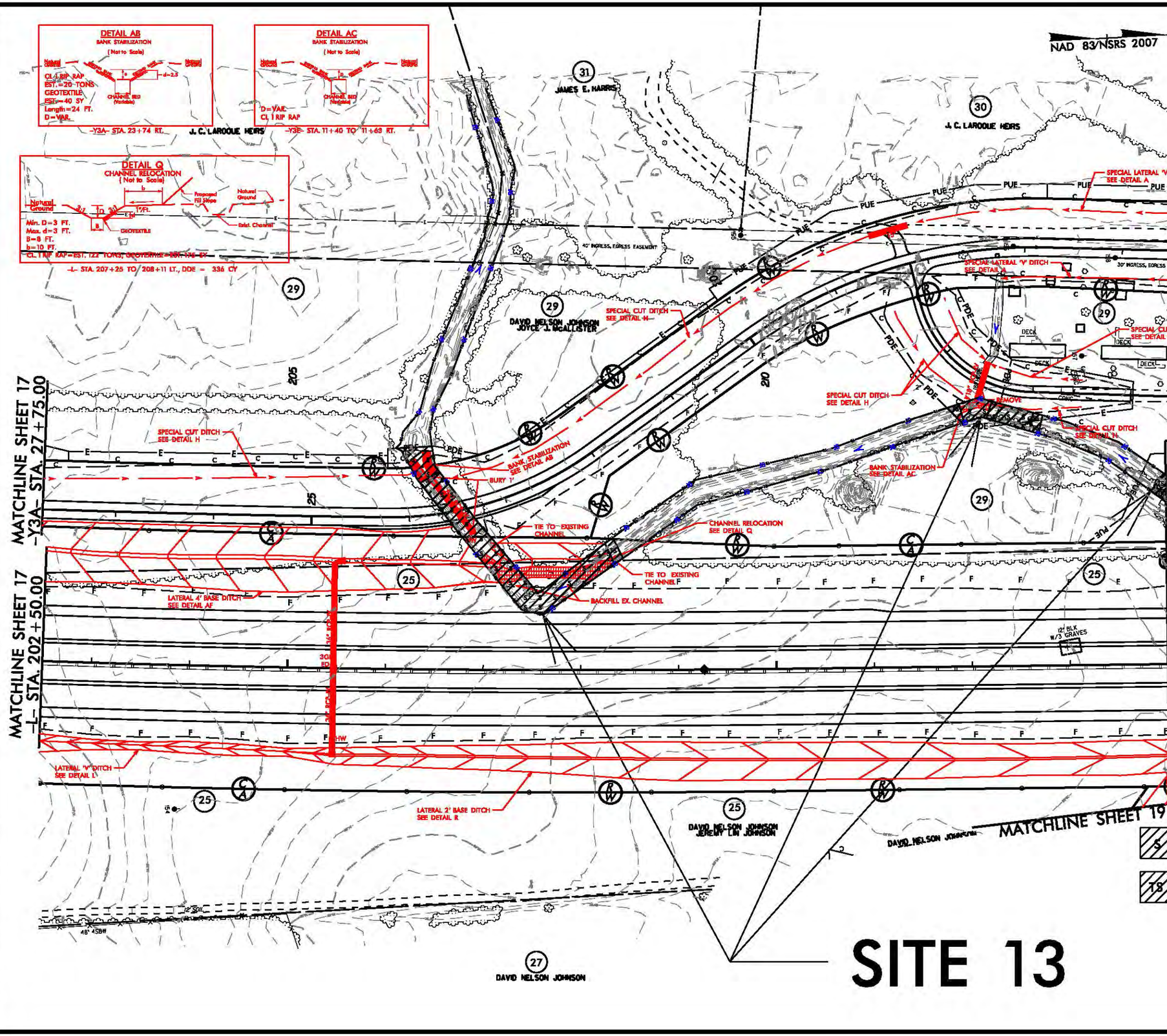
REVISIONS

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

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

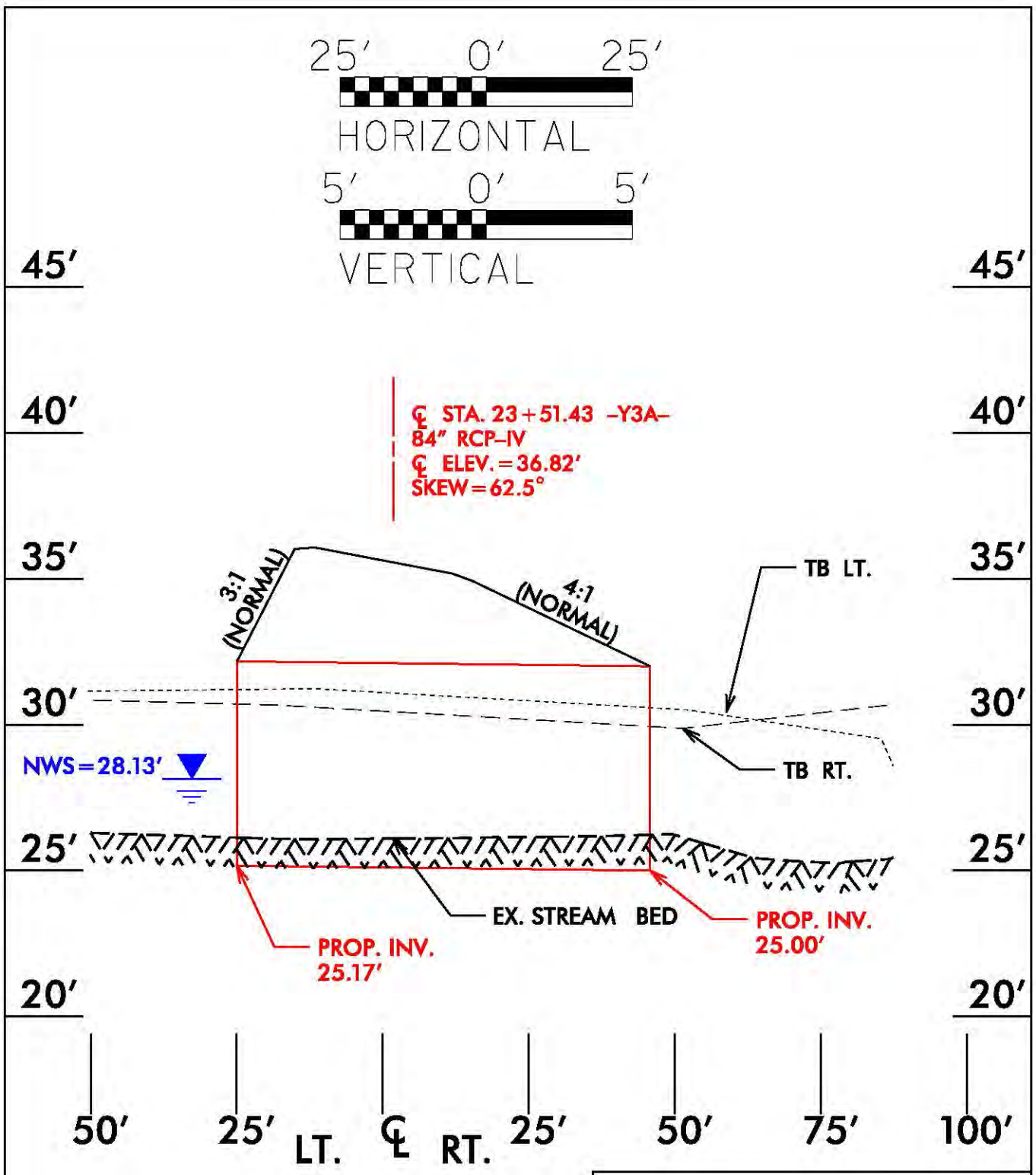


SITE 13

PERMIT DRAWING
SHEET 43 OF 62

REVISIONS

8/17/99



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

SHEET 44 OF 62

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	3B
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 = 40.15'
VC = 340'
K = 80

BEGIN SPECIAL CUT DITCH -Y3- STA. 24+50 LT. ELEV. 37.24

END SPECIAL CUT DITCH -Y3- STA. 24+00 LT. ELEV. 37.28

(-14.5514%)

(-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. 26+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

-Y3A-

PIPE HYDRAULIC DATA
-Y3A- Sta.10+70

DRAINAGE AREA	=	370 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	322.2 FT
100 YEAR DISCHARGE	=	11 CFS
100 YEAR HW ELEVATION	=	322.1 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	35 CFS
OVERTOPPING ELEVATION	=	36.9 FT

PIPE HYDRAULIC DATA
-Y3A- Sta.23+51

DRAINAGE AREA	=	580 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	110 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

44.55

(-1.9783%)

(-0.5200%)

-0.5000%

-0.3000%

-0.3000%

-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. 43.03'

BEGIN SPECIAL LATERAL "V" DITCH -Y3A- STA. 12+50 RT. ELEV. 33.00'

SPECIAL LATERAL "V" DITCH -Y3A- STA. 14+50 RT. ELEV. 33.00'

SPECIAL LATERAL "V" DITCH -Y3A- STA. 16+00 LT. ELEV. 34.69'

END SPECIAL LATERAL "V" DITCH -Y3A- STA. 17+25 LT. ELEV. 33.69'

END SPECIAL LATERAL "V" DITCH
BEGIN SPECIAL CUT DITCH -Y3A- STA. 19+50 RT. ELEV. 31.50'

BEGIN SPECIAL CUT DITCH -Y3A- STA. 23+51 LT. ELEV. 39.96'

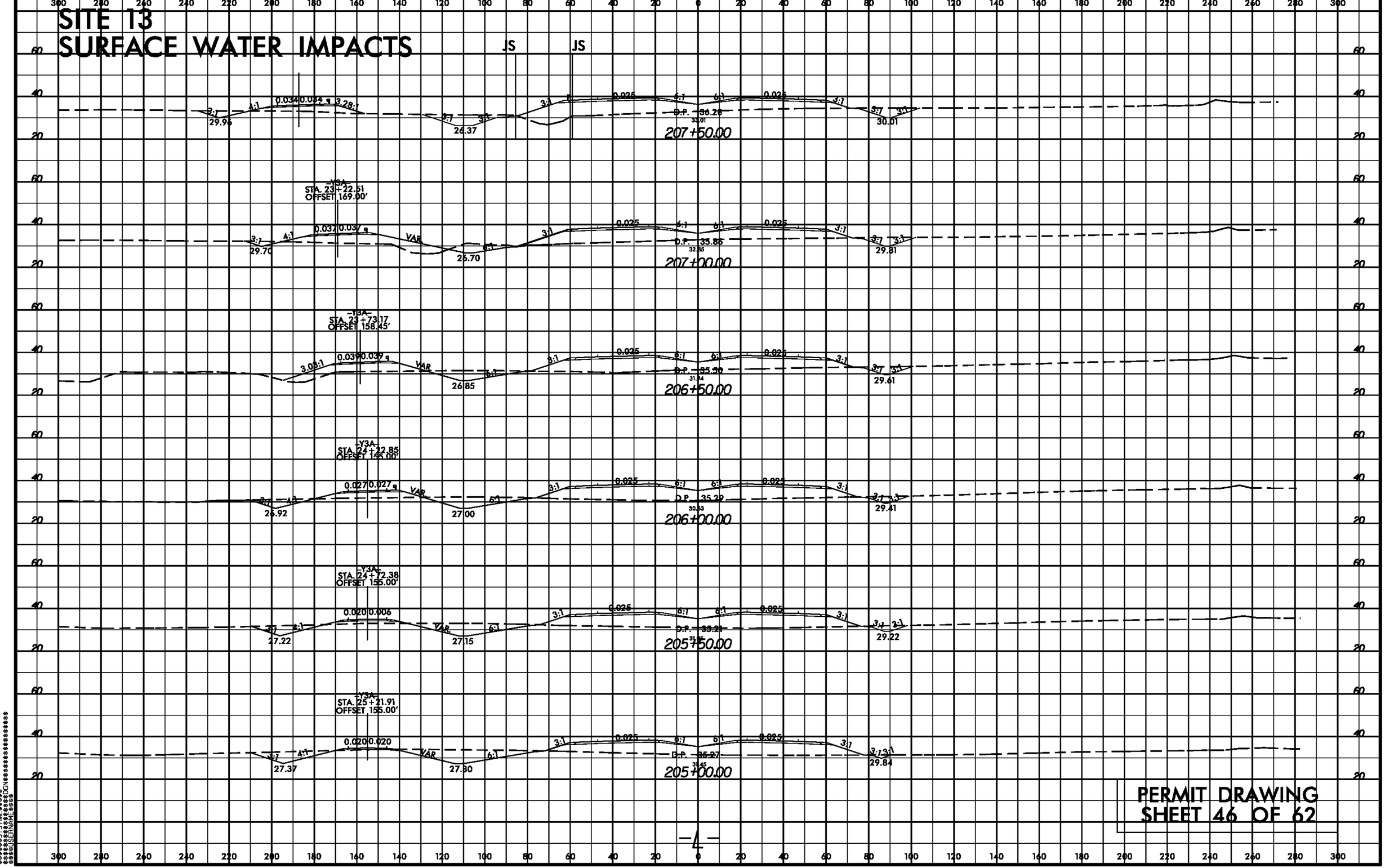
END SPECIAL CUT DITCH -Y3A- STA. 23+50 RT. ELEV. 39.56'

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

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

SITE 13
SURFACE WATER IMPACTS



PERMIT DRAWING
SHEET 46 OF 62

8/23/99
$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

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

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

SITE 14

NAD 83/NSRS 2007

MATCHLINE SHEET 20 -L- STA. 222+00.00

MATCHLINE SHEET 23 -Y3C- STA. 13+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

THE 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 HARRISON

SR 1115 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 AT EMBANKMENT SEE DETAIL AF

REMOVE

RETAIN

PUE

PDE

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

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

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

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

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

SITE 14

NAD 83/NSRS 2007

MATCHLINE SHEET 20 -L- STA. 222+00.00

MATCHLINE SHEET 23 -Y3C- STA. 13+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

THE WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP

ALTON ODELL HUDGINS, ET UX

MICHAEL A. KIRK

REGINA LEE HANSLEY

LESTER L. HANSLEY, ET UX

J. C. LAROQUE HEIRS

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

SR 1115 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

LATERAL 2' BASE DITCH SEE DETAIL R

STANDARD "V" DITCH SEE DETAIL A

BANK STABILIZATION SEE DETAIL AD

RIP RAP AT PERMANENT SEE DETAIL AF

Q_{10} = 0.4 CFS
V_{10} = 1.4 FPS

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)
Natural Ground
Proposed Fill Slope
Natural Ground
Exist. Channel
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)
Natural Ground
Proposed Fill Slope
Natural Ground
Exist. Channel
Min. D = 3 FT.
B = 8 FT.
-L- STA. 214+06 TO 216+41 LT., DDE = 1775 CY

SITE 13

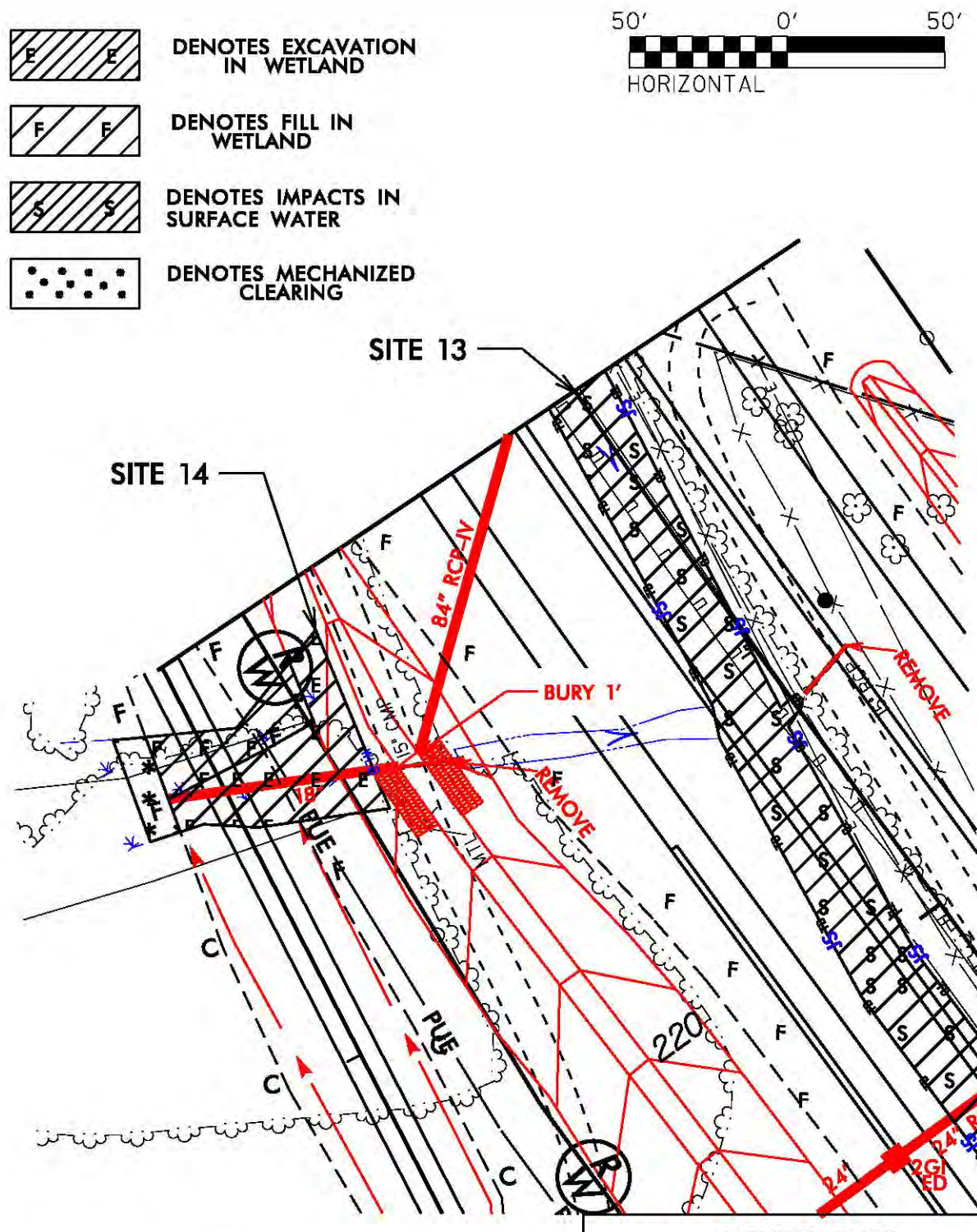
100' 0' 100'
1"=100'

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

REVISIONS

8/17/99

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

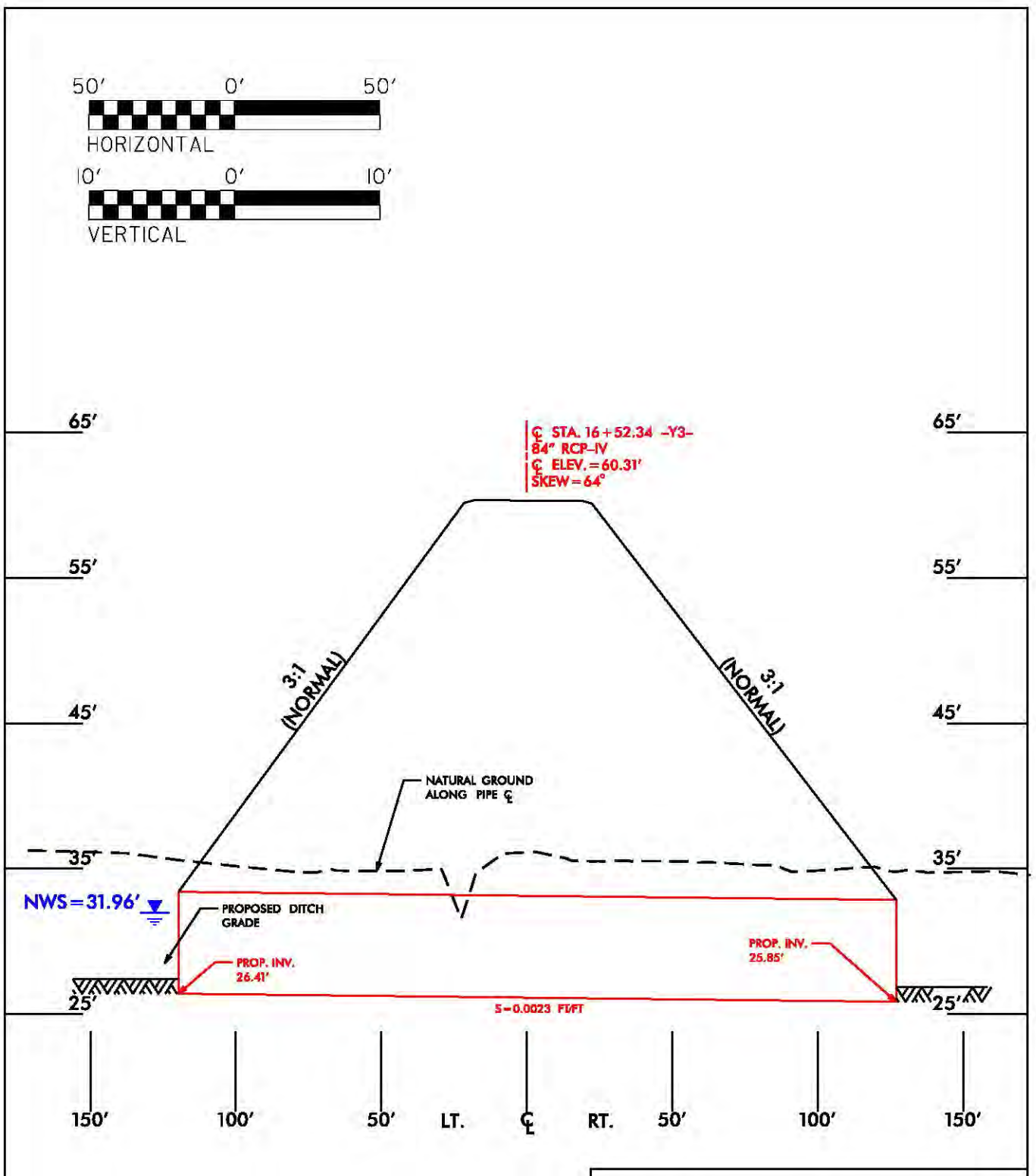


PLAN VIEW

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

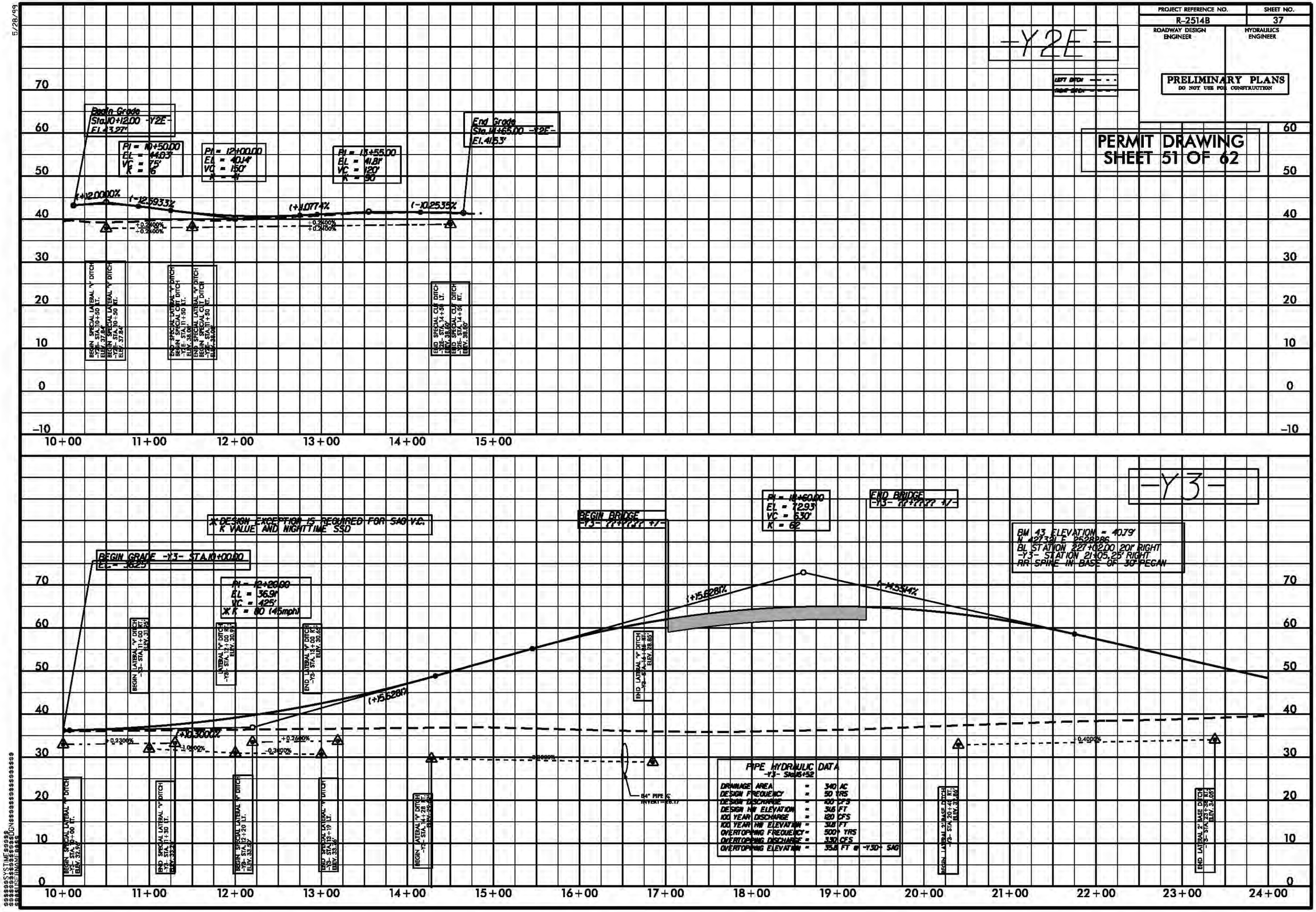
NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE AT SR 1330/SR 1439 TO NORTH OF MAYSVILLE

5/28/99

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

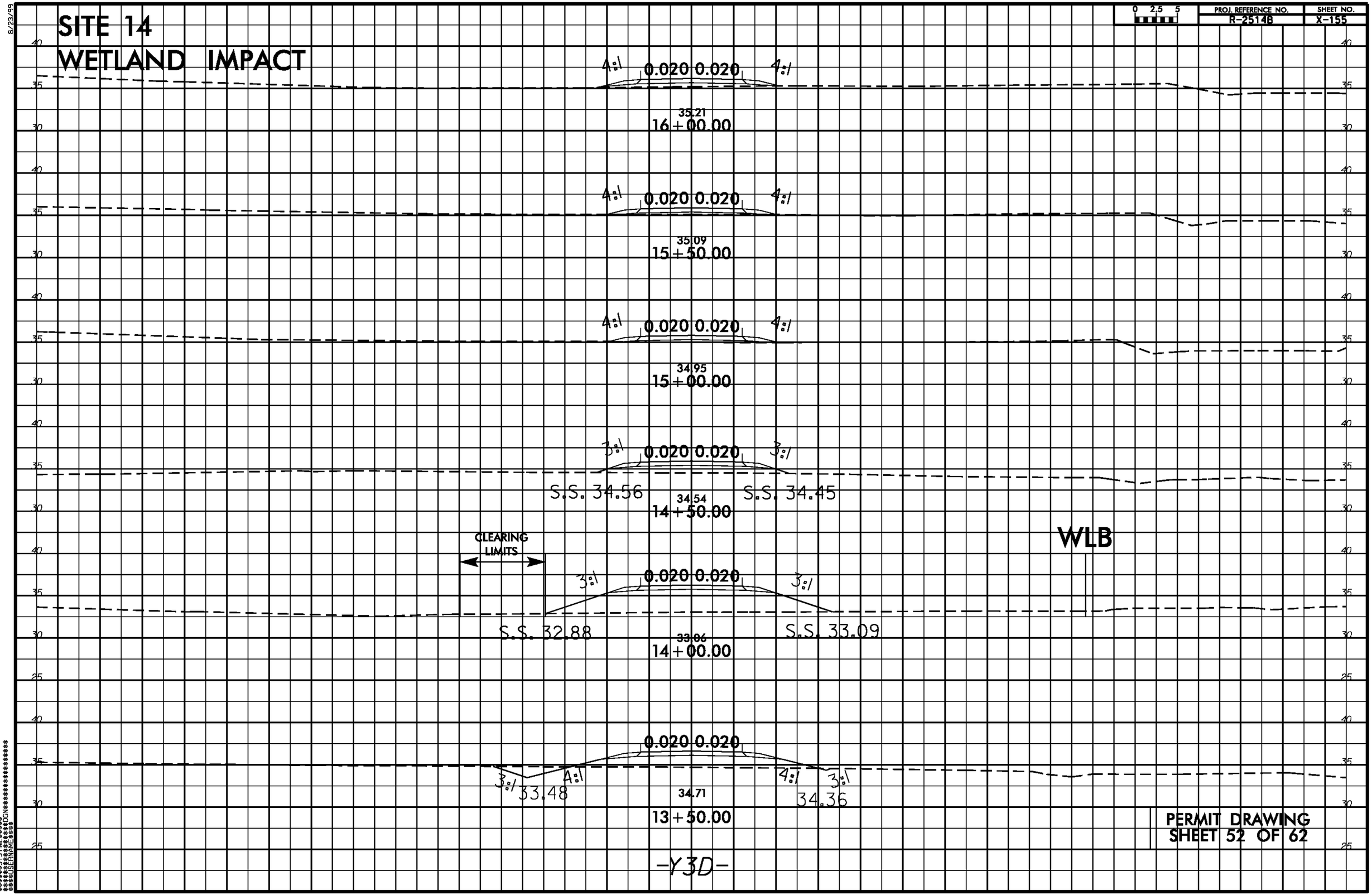
PERMIT DRAWING
SHEET 51 OF 62



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

8/23/99

SITE 14
WETLAND IMPACT



$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$SELENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	20
R/W 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

S S DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

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

LATERAL 'V' DITCH
SEE DETAIL T

BURY 1'

Q_{10}= 2.7 FPS
Q_{25} V_p= 0.3 FPS

34 J. C. LAROQUE, HEIRS

35 TIME WARNER ENTERTAINMENT - ADVANCE/NEWHOUSE PARTNERSHIP

34 J. C. LAROQUE, HEIRS

36

37

38

100' 0' 100'
1"=100'

REVISIONS

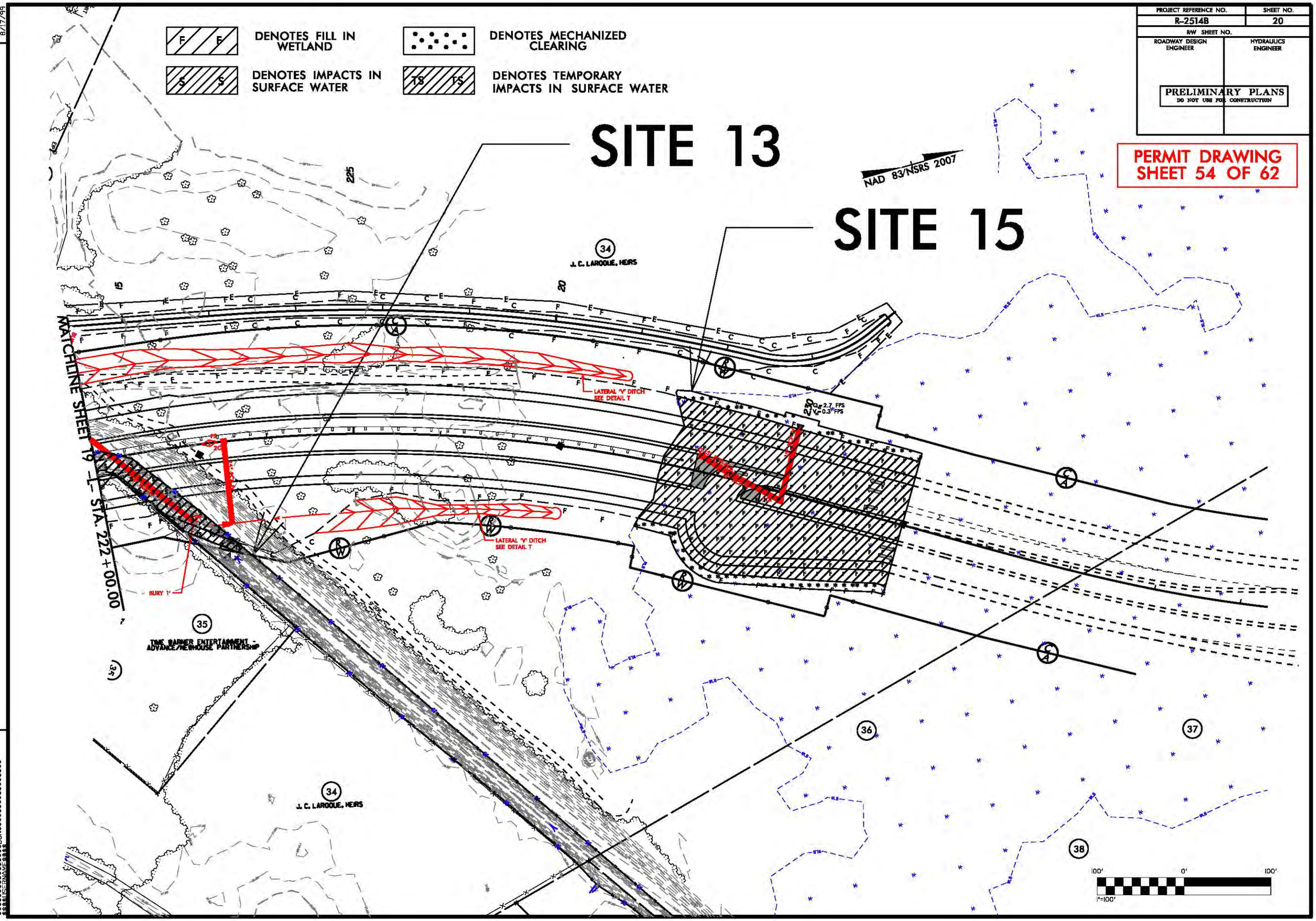
8/17/99

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

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

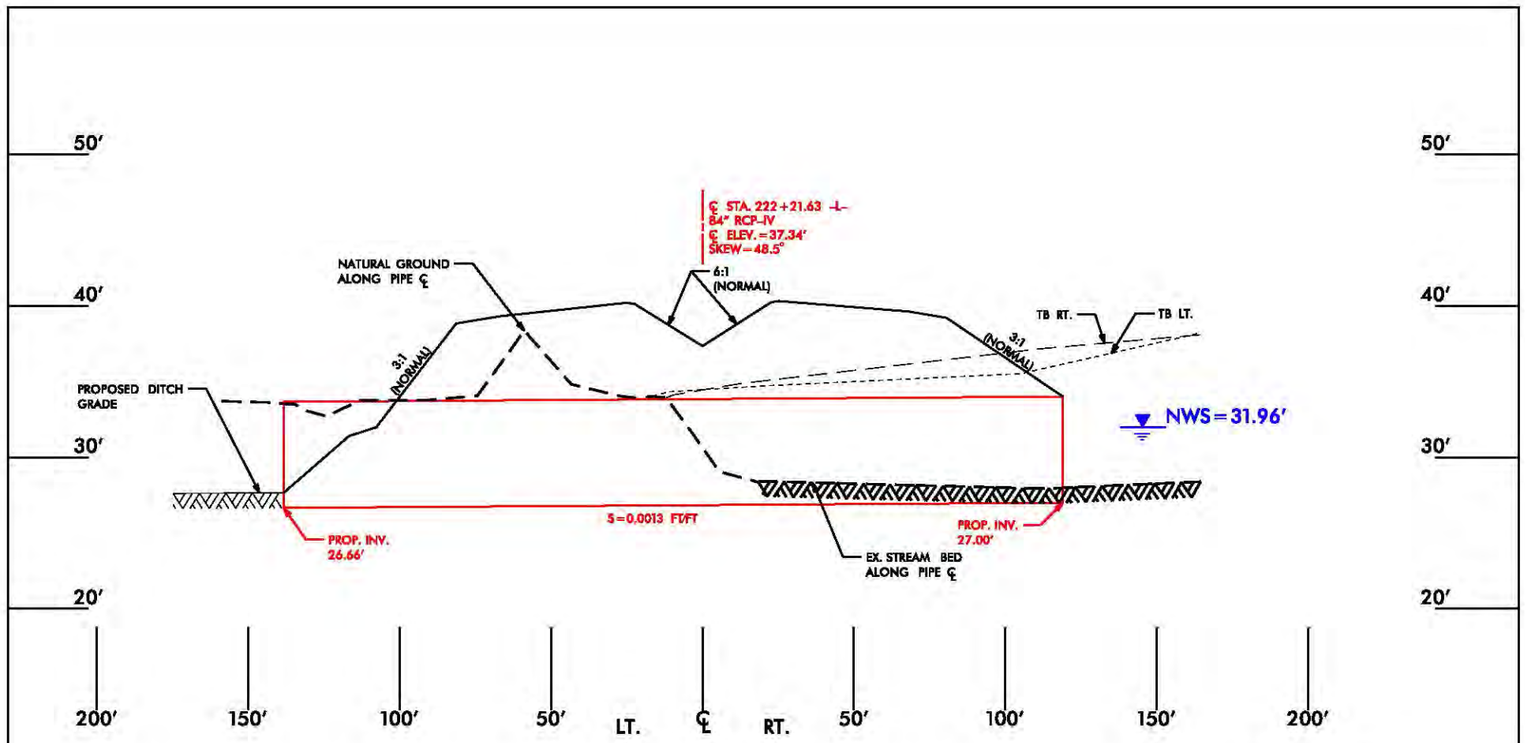
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 54 OF 62



REVISIONS

8/17/99



PROFILE
-L- 84" PIPE

50′ 0′ 50′
HORIZONTAL

10′ 0′ 10′
VERTICAL

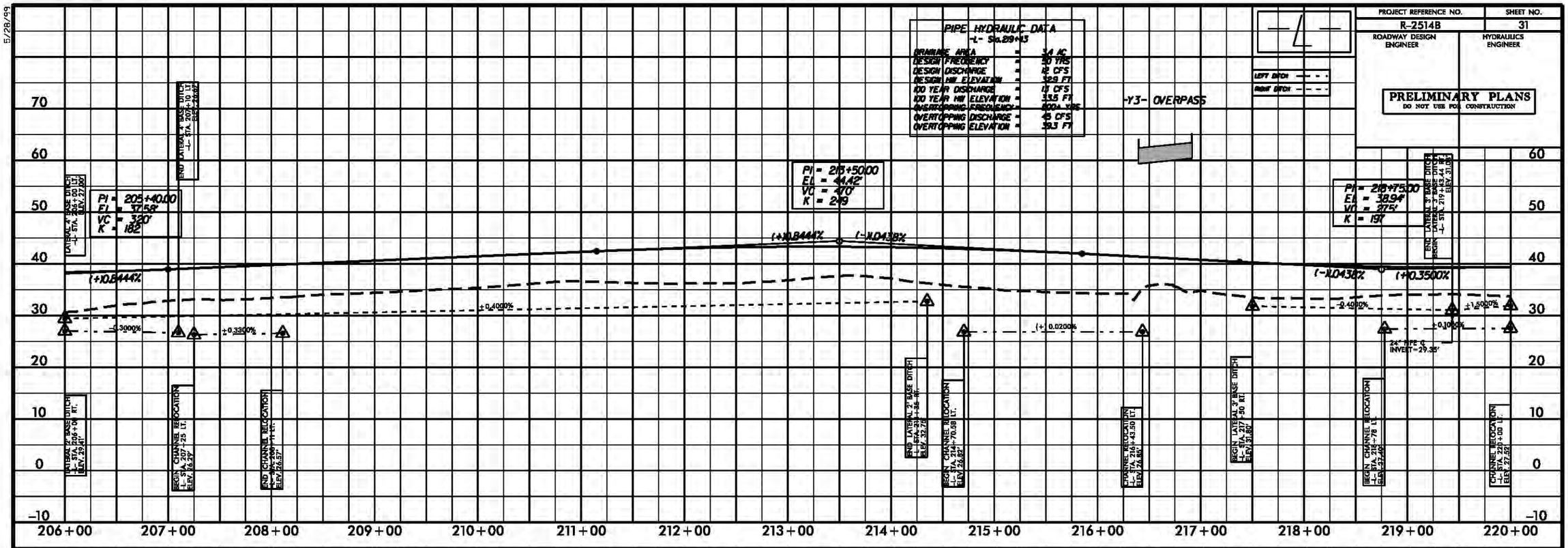
NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330/SR 1439 TO
NORTH OF MAYSVILLE

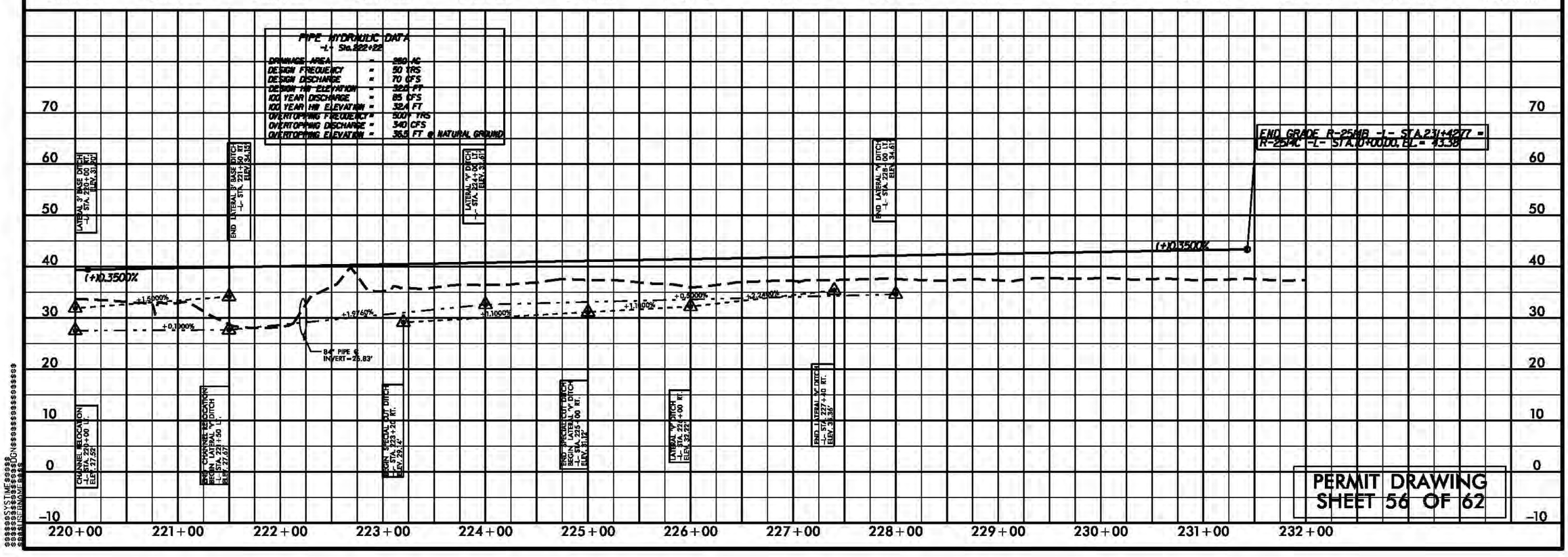
SHEET 55 OF 62

5/28/99

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

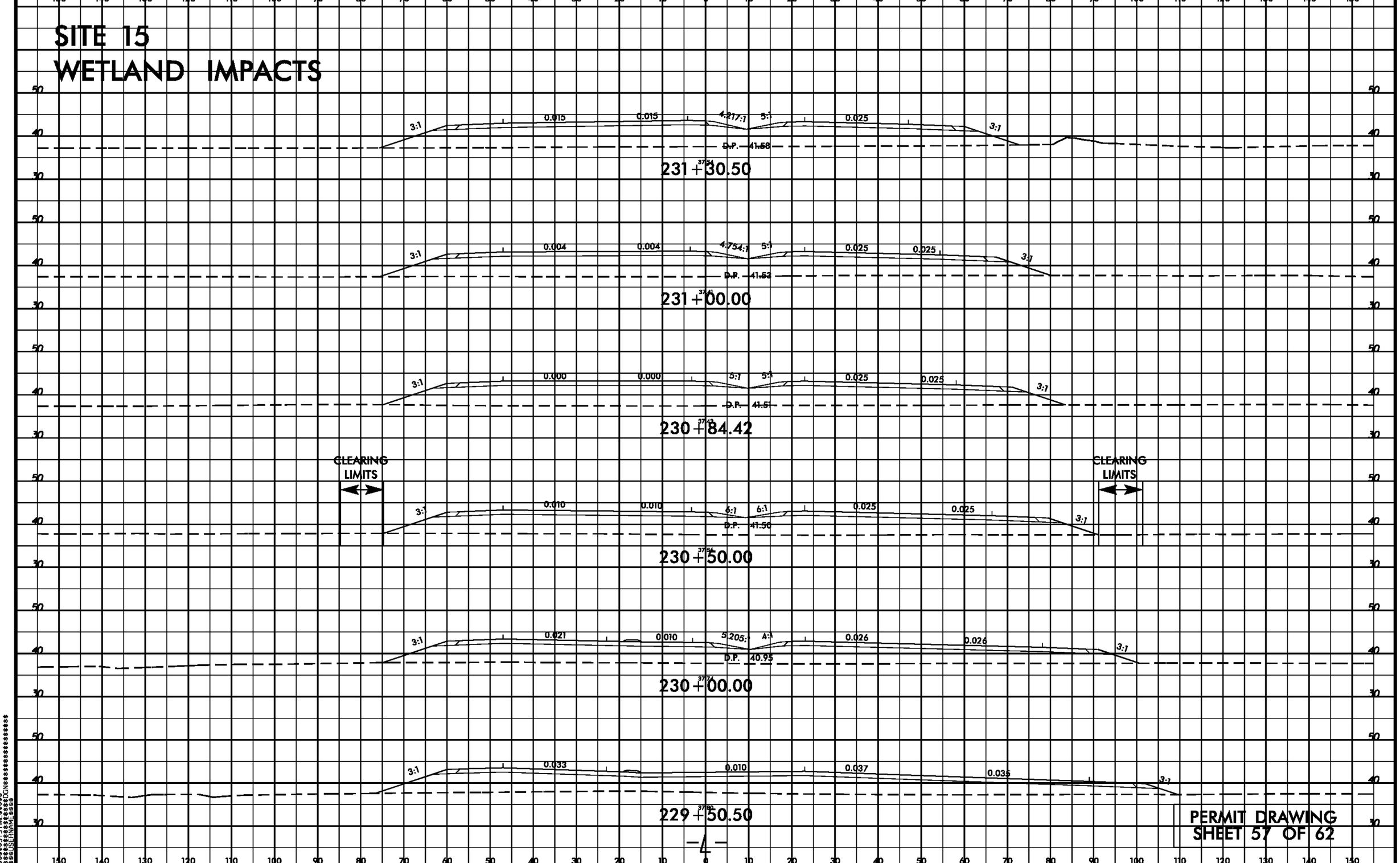




PERMIT DRAWING
SHEET 56 OF 62

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

SITE 15
WETLAND IMPACTS



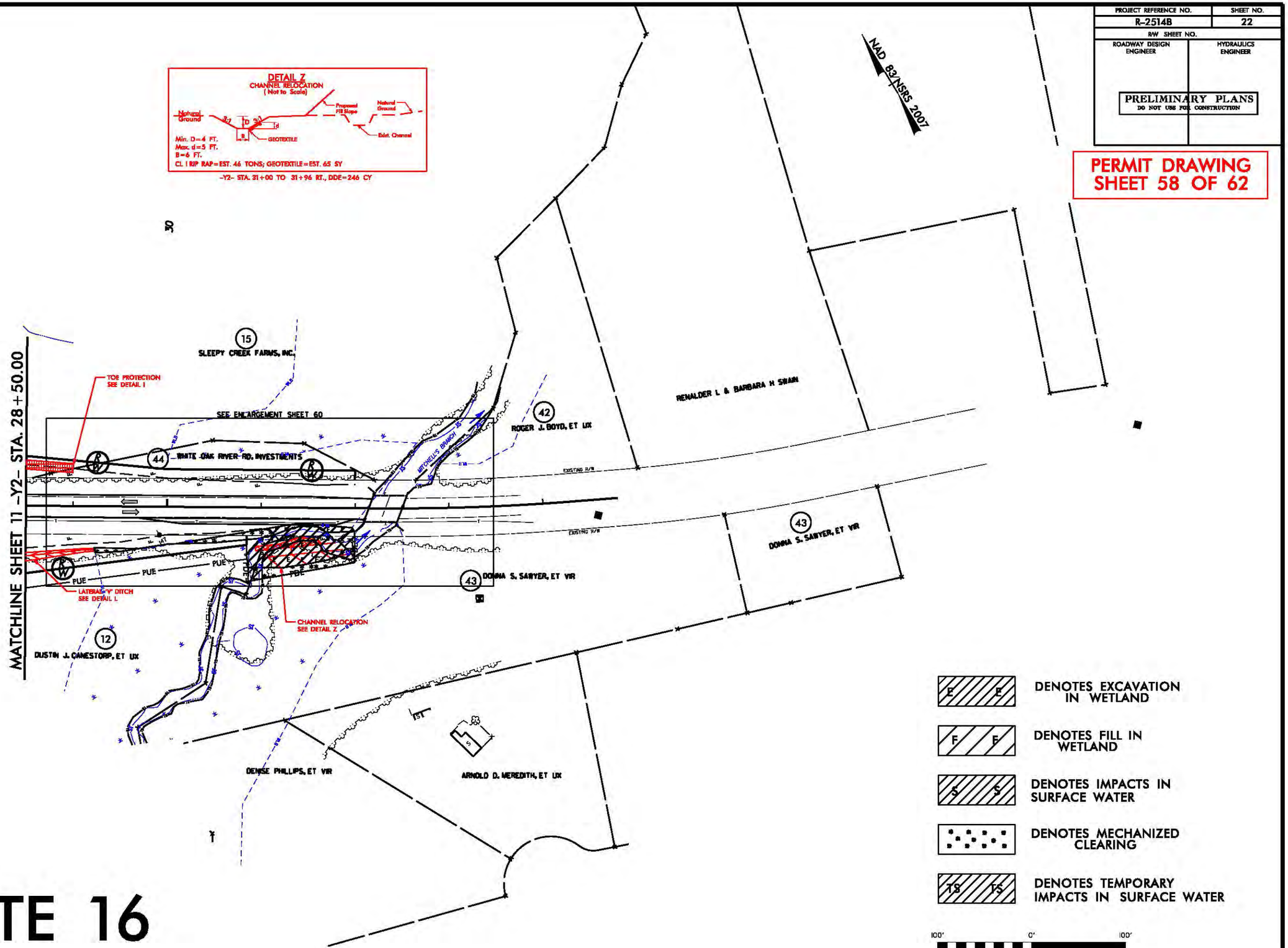
PERMIT DRAWING
SHEET 57 OF 62

8/23/99
$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$SENAME$$$$

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



SITE 16

REVISIONS

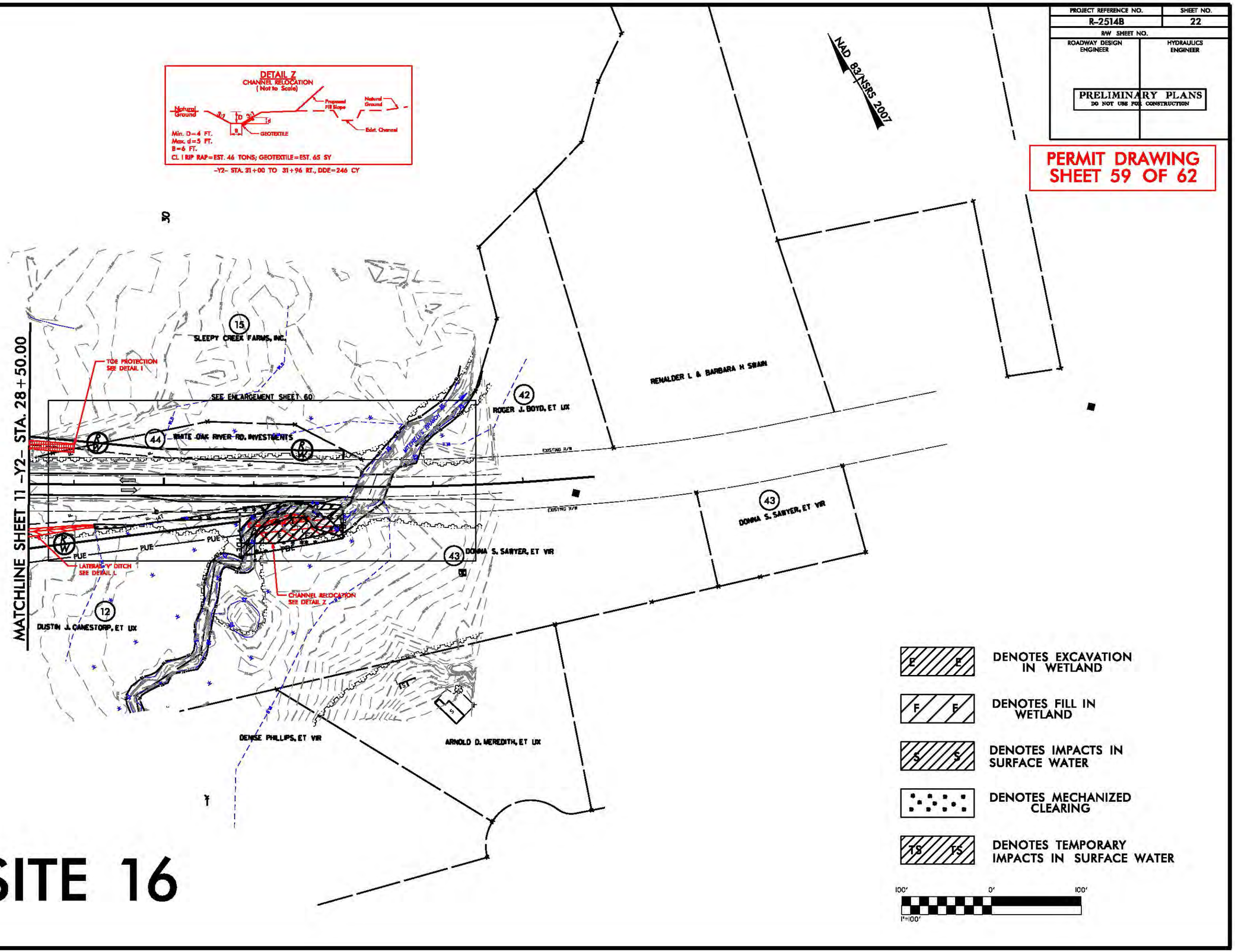
8/17/99

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

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 59 OF 62



SITE 16

REVISIONS

8/17/99

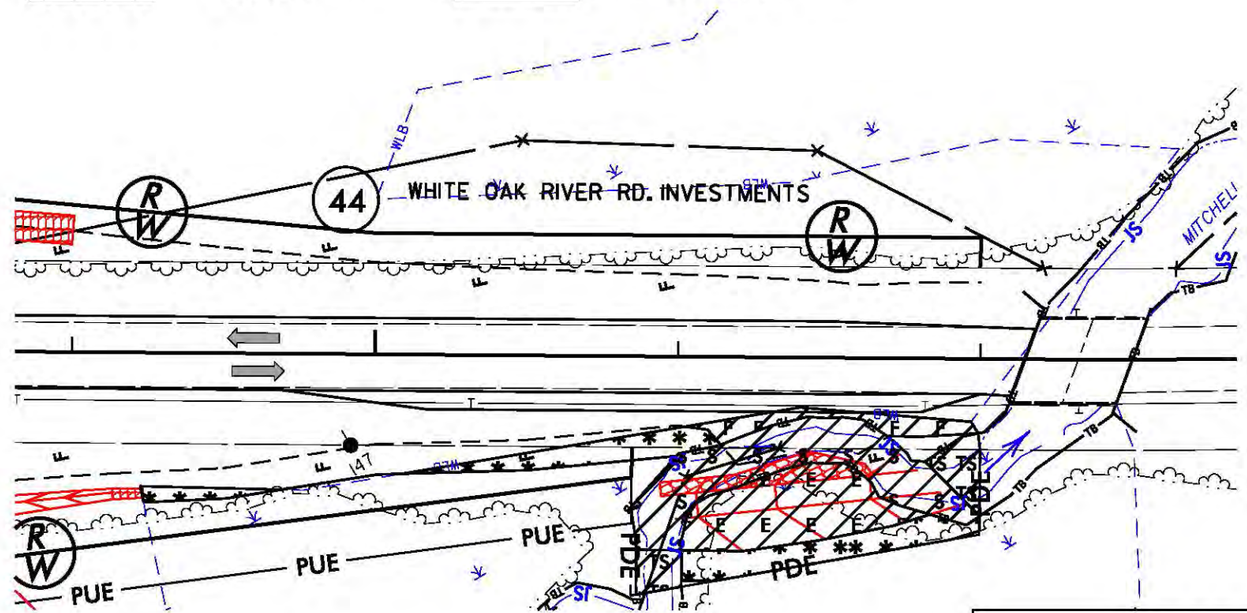
E E DENOTES EXCAVATION IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING



50′ 0′ 50′

HORIZONTAL

PLAN VIEW

SITE 16

NCDOT

DIVISION OF HIGHWAYS

ONSLOW COUNTY

PROJECT: 34442.1.3 (R-2514B)

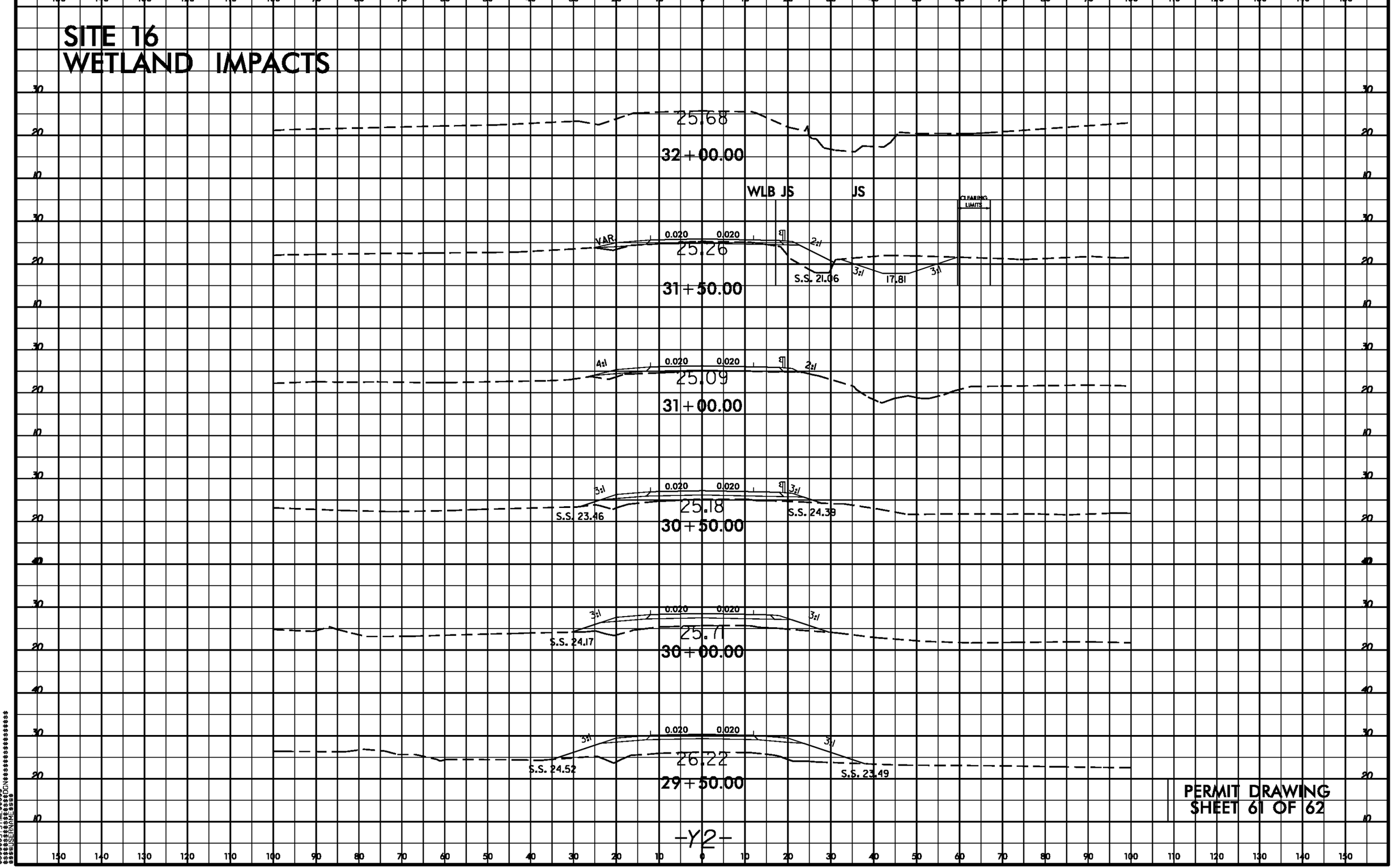
US 17 FROM SOUTH OF BELGRADE AT SR 1330/SR 1439 TO NORTH OF MAYSVILLE

SHEET 60 OF 62

8/23/99

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

SITE 16
WETLAND IMPACTS



PERMIT DRAWING
SHEET 61 OF 62

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

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	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

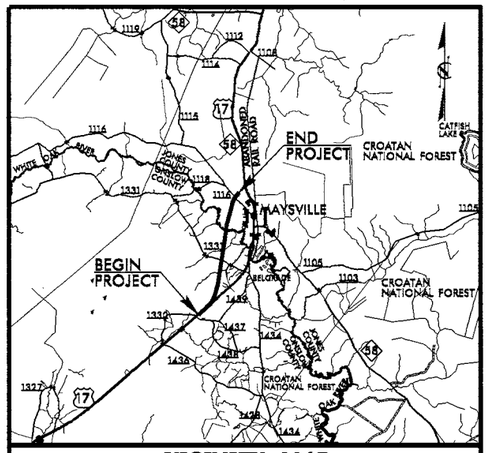
ONSLOW AND JONES COUNTY
WBS - 34442.1.3 (R-2514B)

Revised 2013 10 24

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

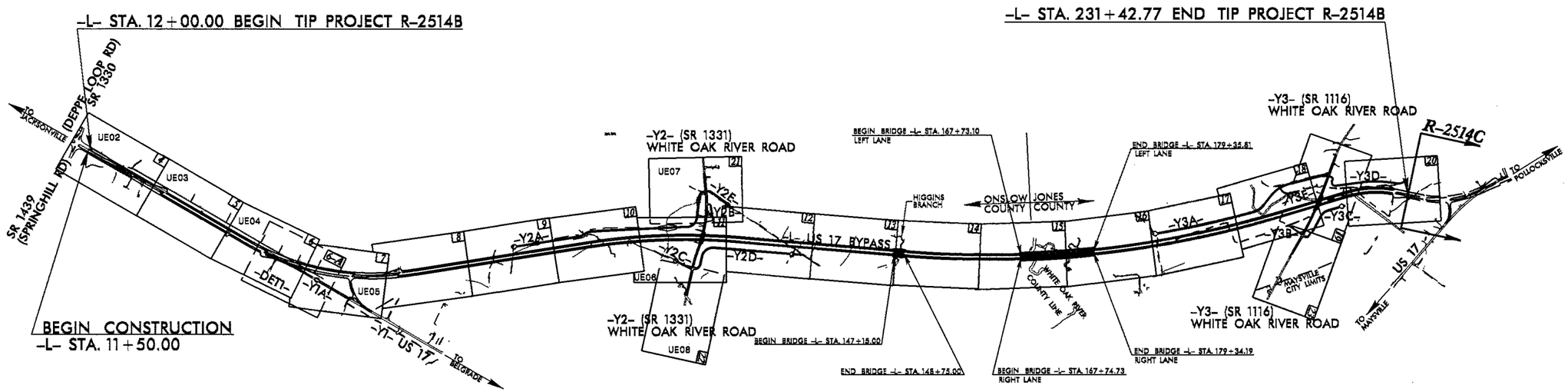
NEU PERMIT DRAWING PLANS

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



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

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

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
R:\Utilities\Engineering\NEU\Permit Plans and Narrative\R2514B_ut_tsh_UE01_psh.dgn
$$$$USERNAME$$$$

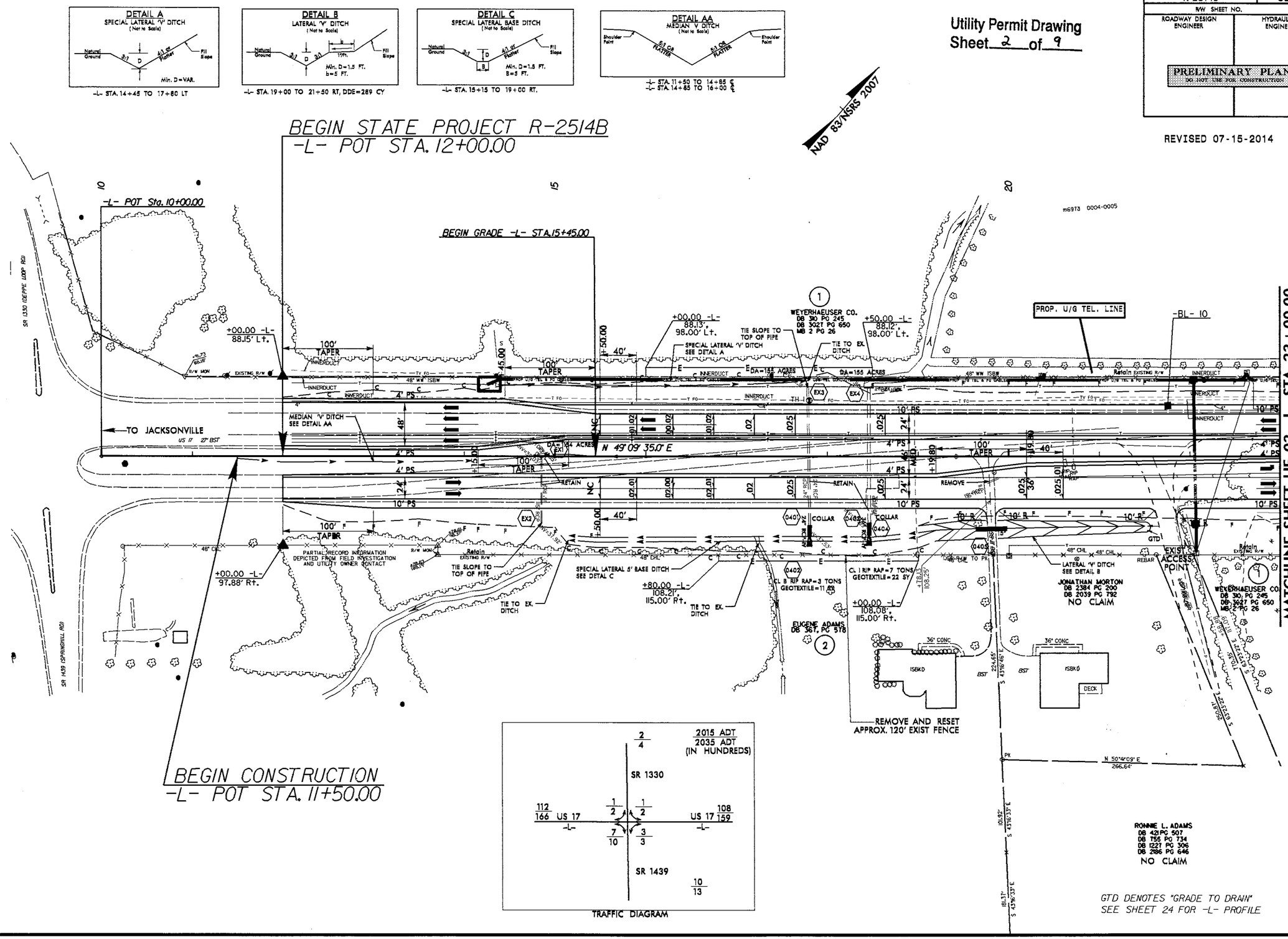
09/08/99

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



REVISIONS

8/17/99

13-OCT-2014 12:22
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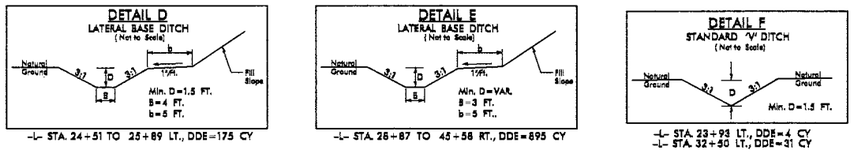
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-03
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

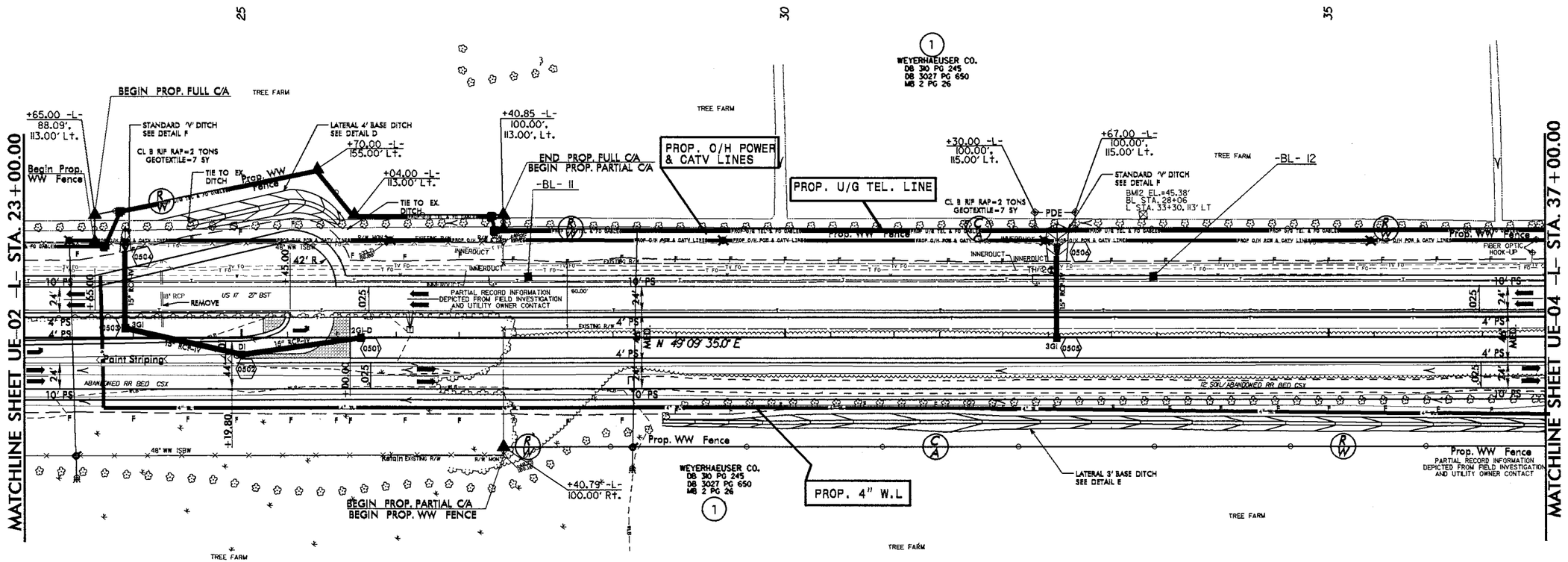
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 3 of 9

NAD 83/NSRS 2007

REVISED 07-15-2014





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

REVISIONS
8/17/99

13-OCT-2014 14:05
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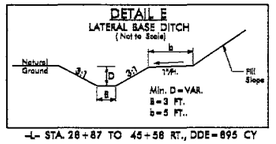
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

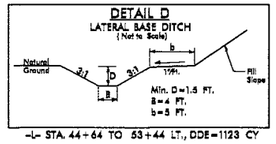
Utility Permit Drawing
Sheet 4 of 9

NAD 83/NSRS 2007

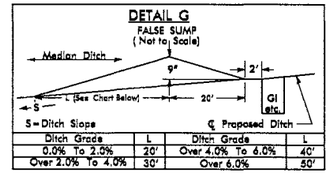
REVISED 07-15-2014



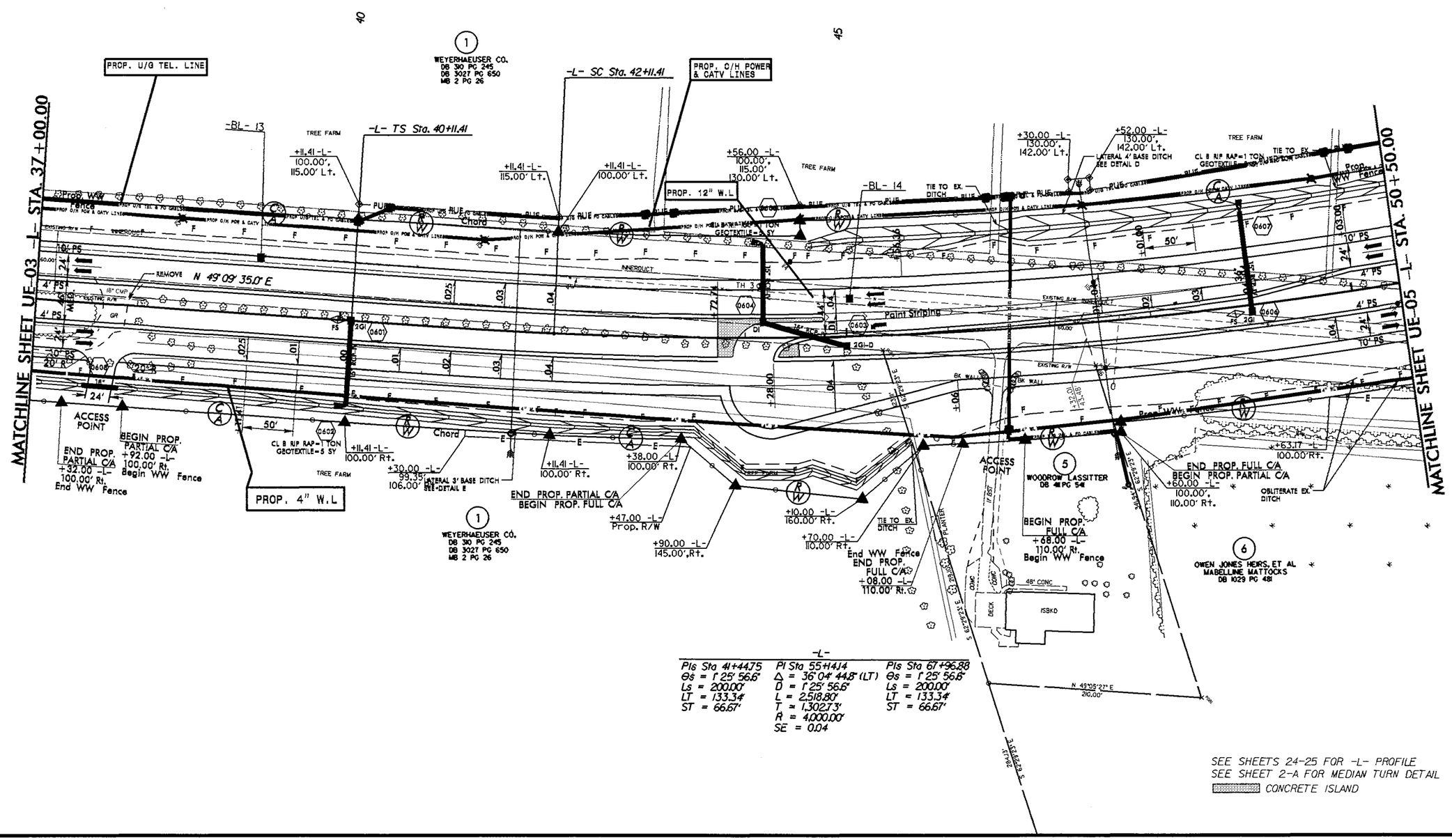
-L- STA. 28+87 TO 45+58 RT., DDE=895 CY



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



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-

PIs Sta 41+44.75	PI Sta 55+14.14	PIs Sta 67+96.88
Θs = 1° 25' 56.6"	Δ = 36° 04' 44.8" (LT)	Θs = 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	

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

REVISIONS

8/17/99

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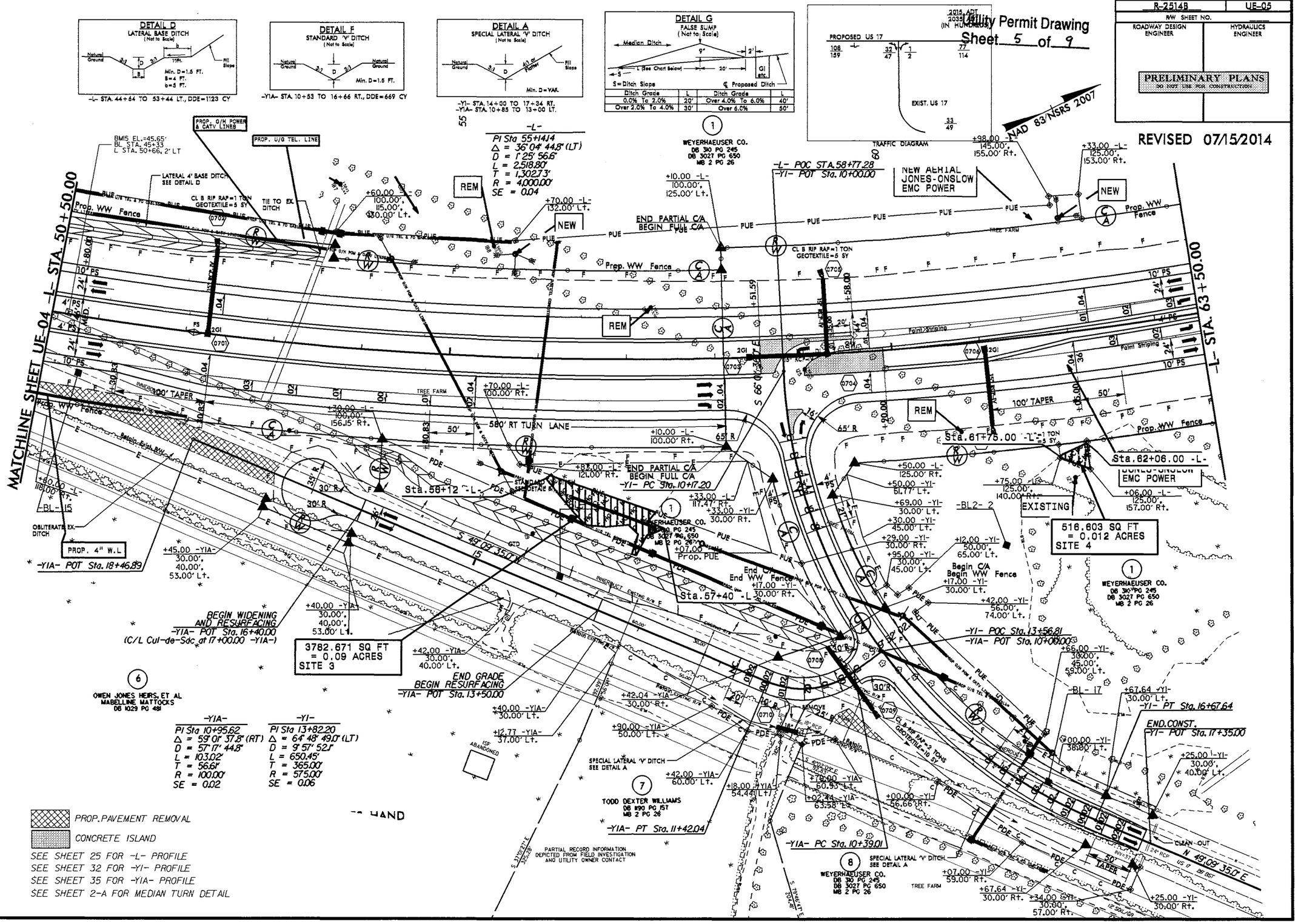
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Utility Permit Drawing
Sheet 5 of 9

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISED 07/15/2014

NAD 83/NSRS 2007



REVISIONS

8/17/99

13-OCT-2014 14:14
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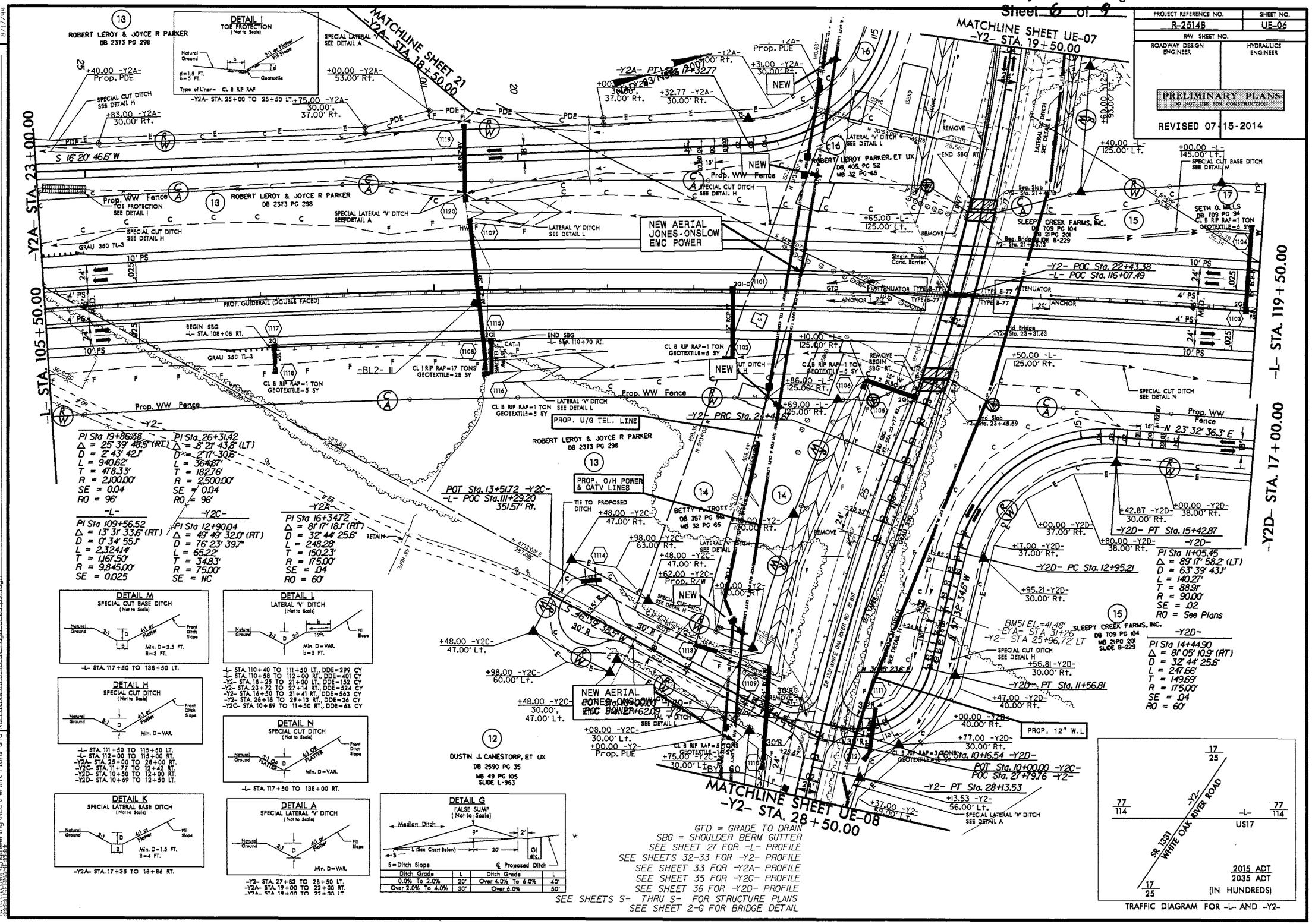
Utility Permit Drawing
Sheet 6 of 9

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



REVISIONS

8/17/99

13-OCT-2014 14:15
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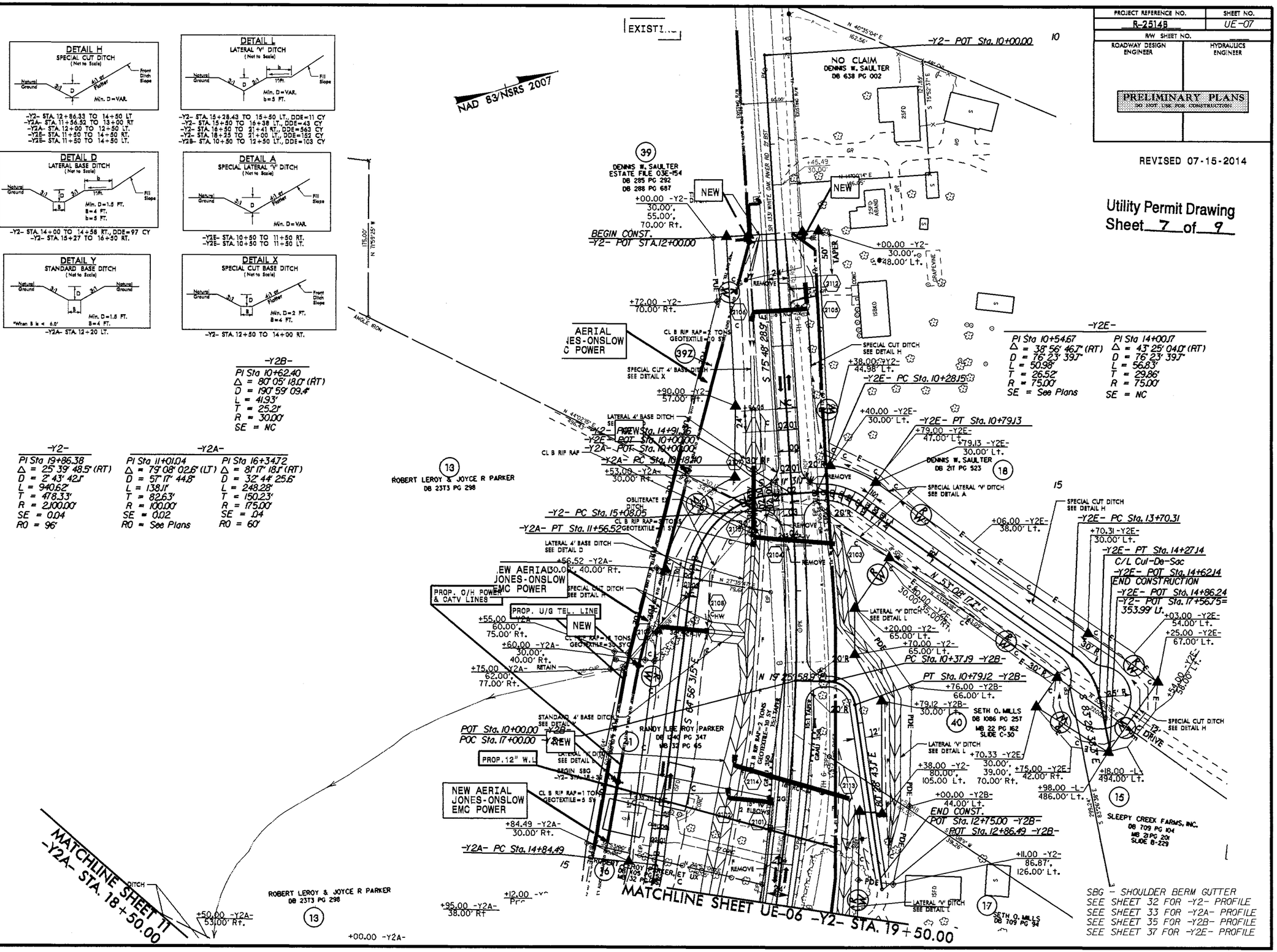
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	UE-07
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISED 07-15-2014

Utility Permit Drawing
Sheet 7 of 9



REVISIONS

8/17/99

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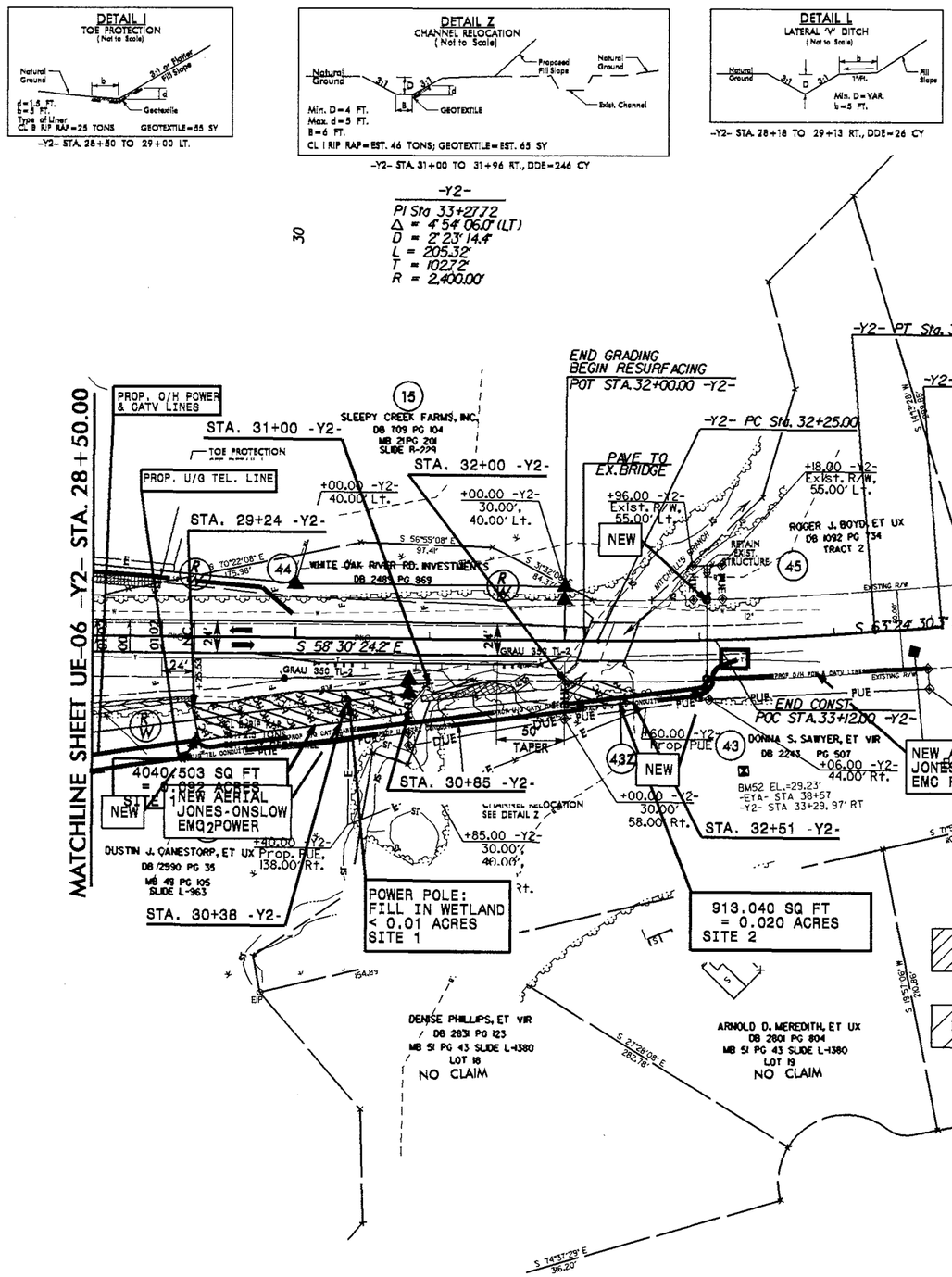
Plans and
Permit
NEU\Permit
Engineering
8/17/99

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



REVISIONS

8/17/99

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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	-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

TIP PROJECT: R-2514C

CONTRACT:

09/28/99

2/6/2014
epsailer
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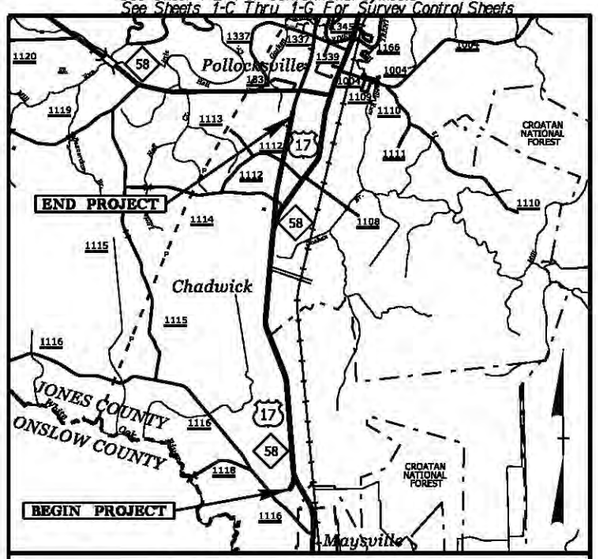
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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

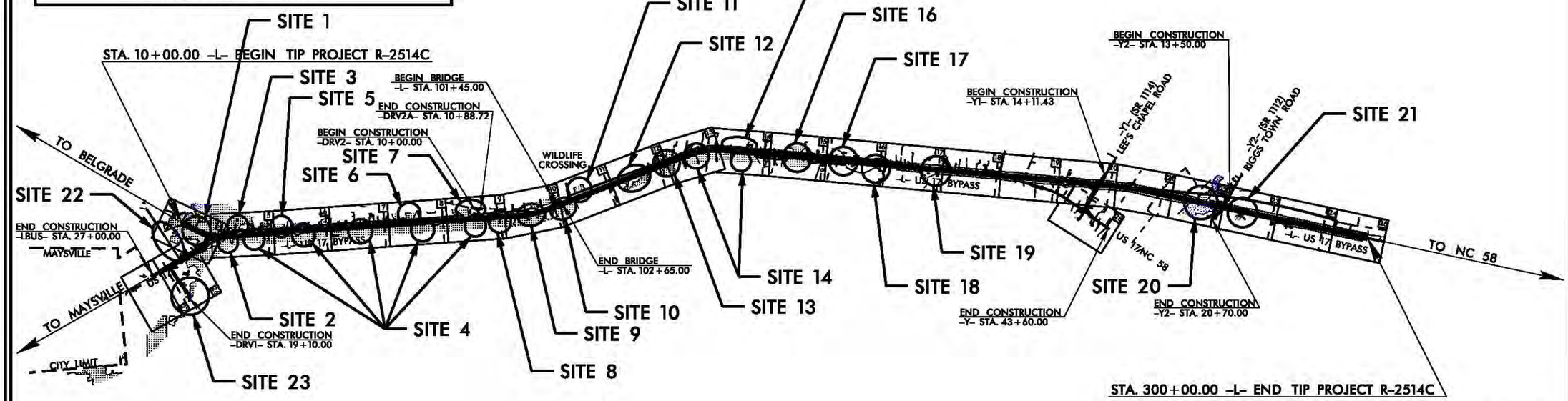
ENGLISH

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



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.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
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
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

SIGNATURE: P.E.

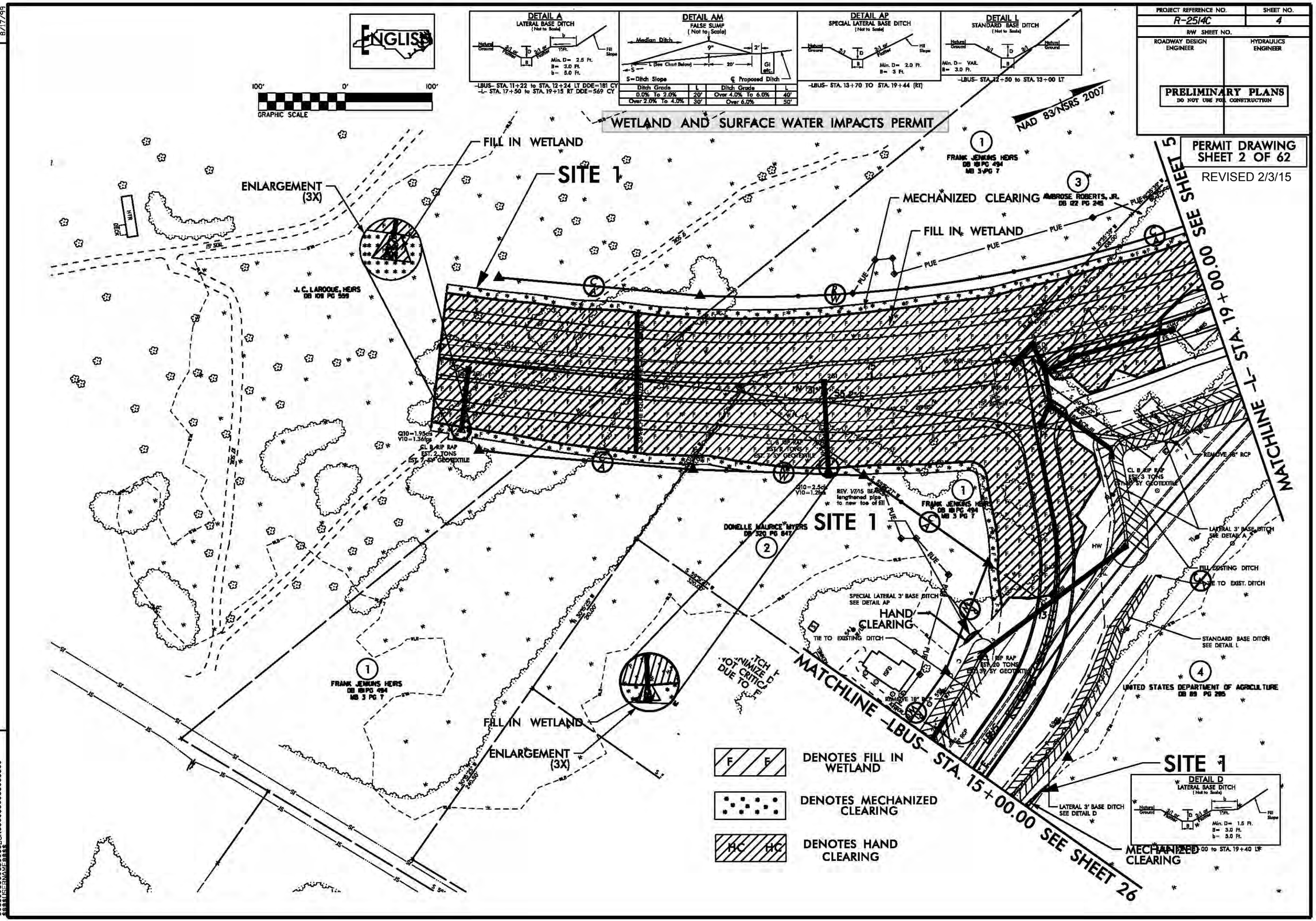
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 2 OF 62
REVISED 2/3/15



REVISIONS

1/30/2015
beanderson
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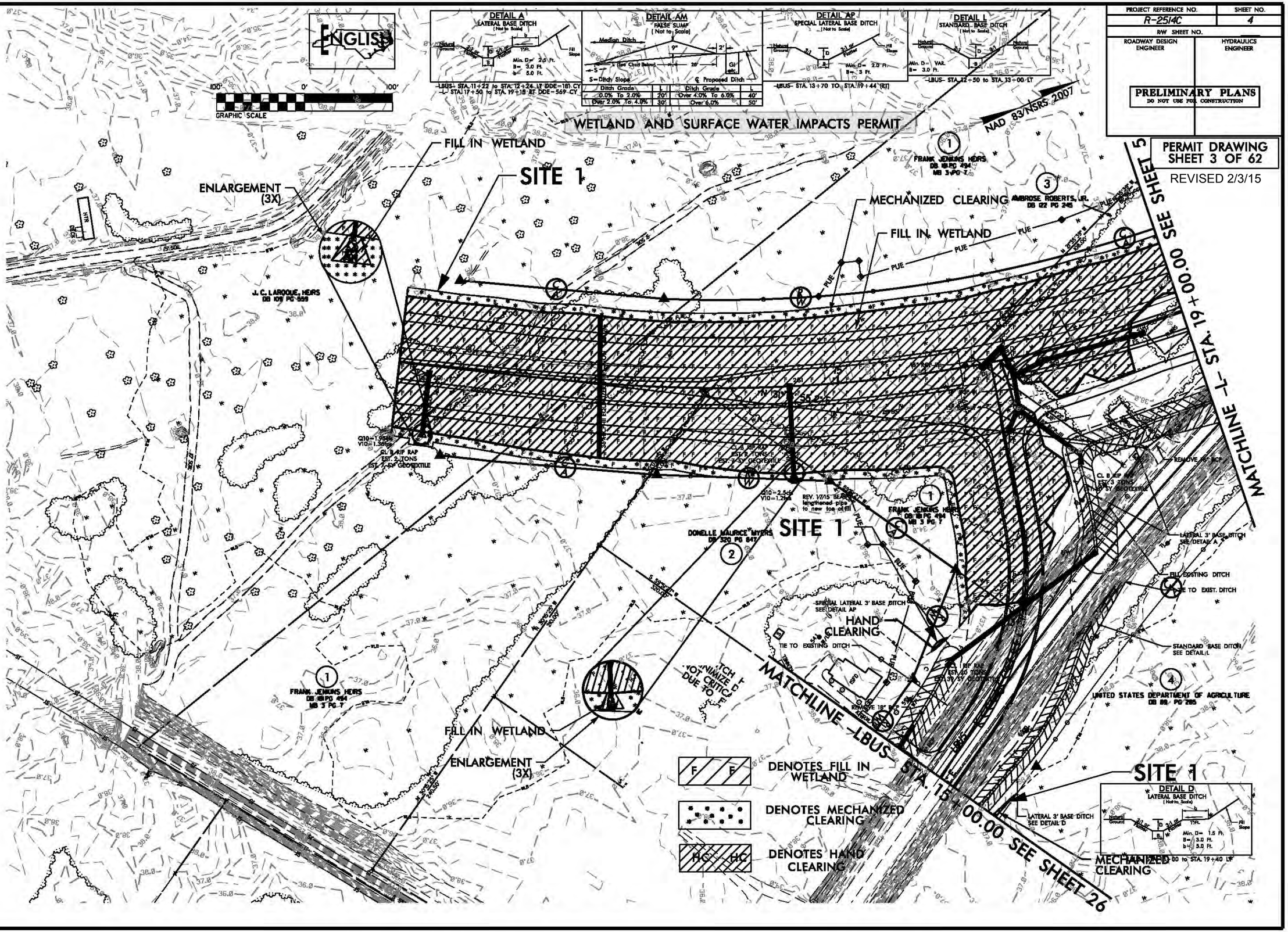
8/17/99

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNSIZE$$$$$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 3 OF 62
REVISED 2/3/15



8/17/99

REVISIONS

1/30/2015
beanderson
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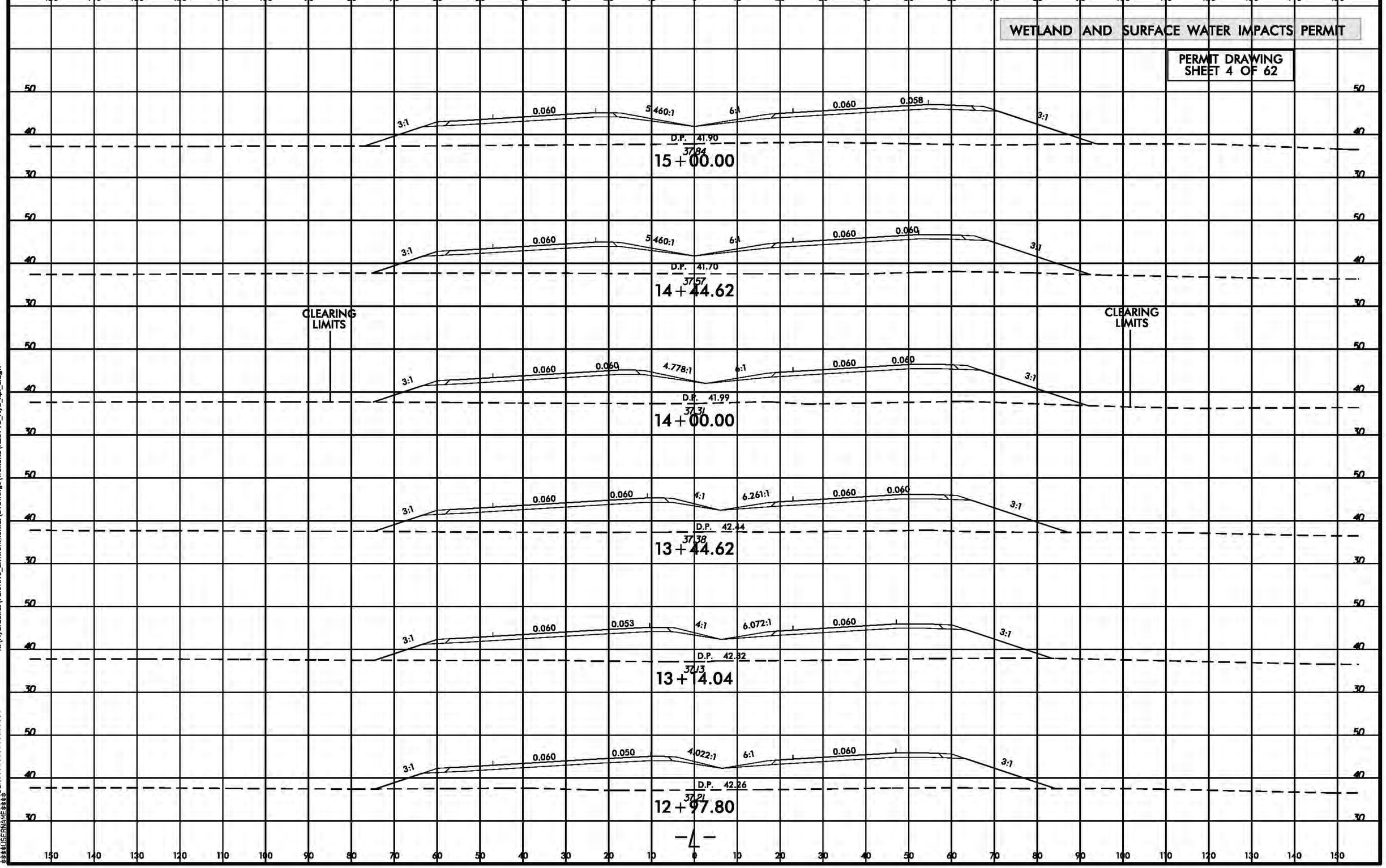
$$$$$$DGNS$$$$$$
$$$$$$USERNAME$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-3

0 5 10

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 4 OF 62



8/23/99

2/6/2014
epsaller
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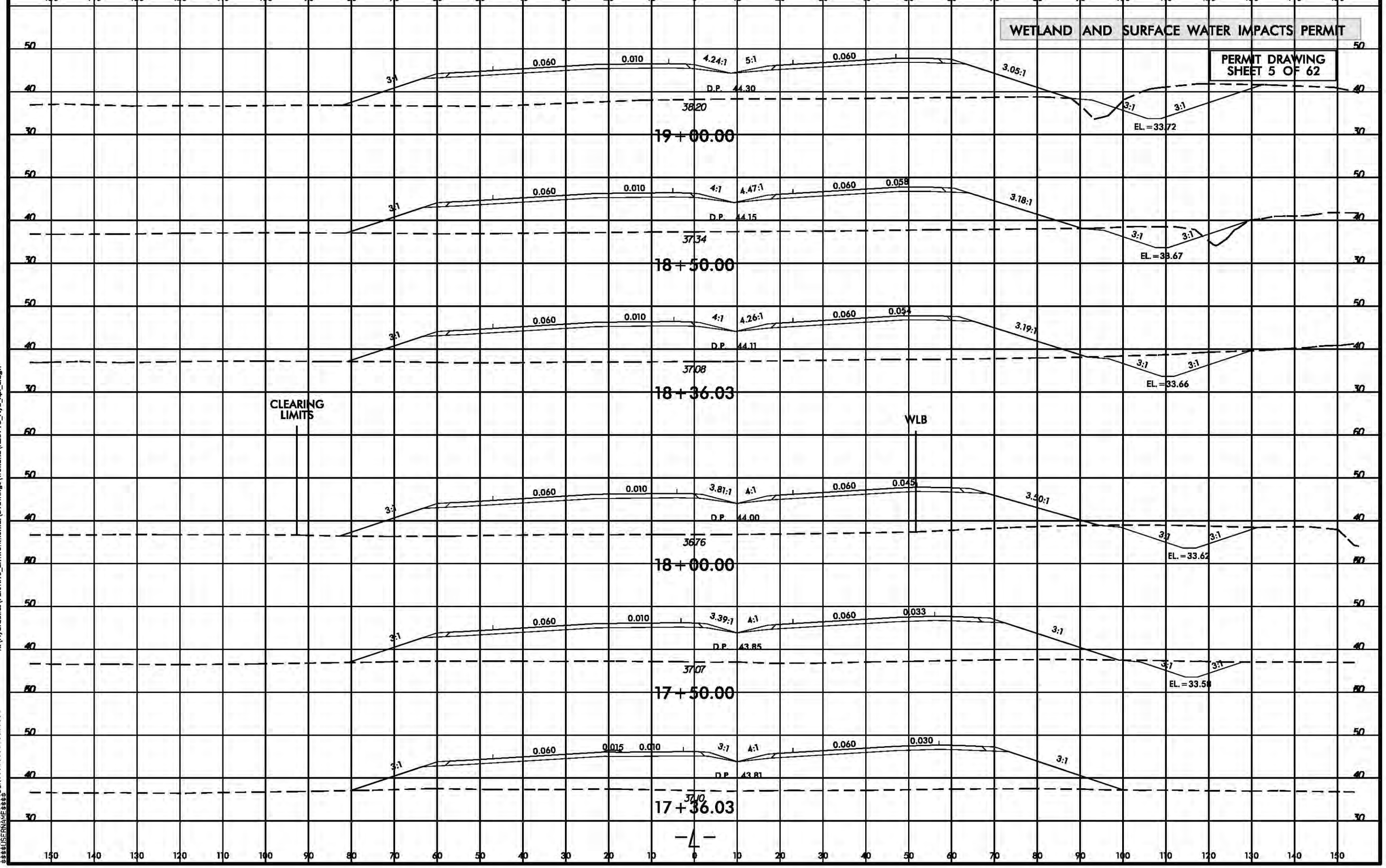
$$$$$$$SYSTIME$$$$$
$$$$$$$DGNE$$$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-5

0 5 10

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 5 OF 62



B/23/99

2/6/2014
epseller
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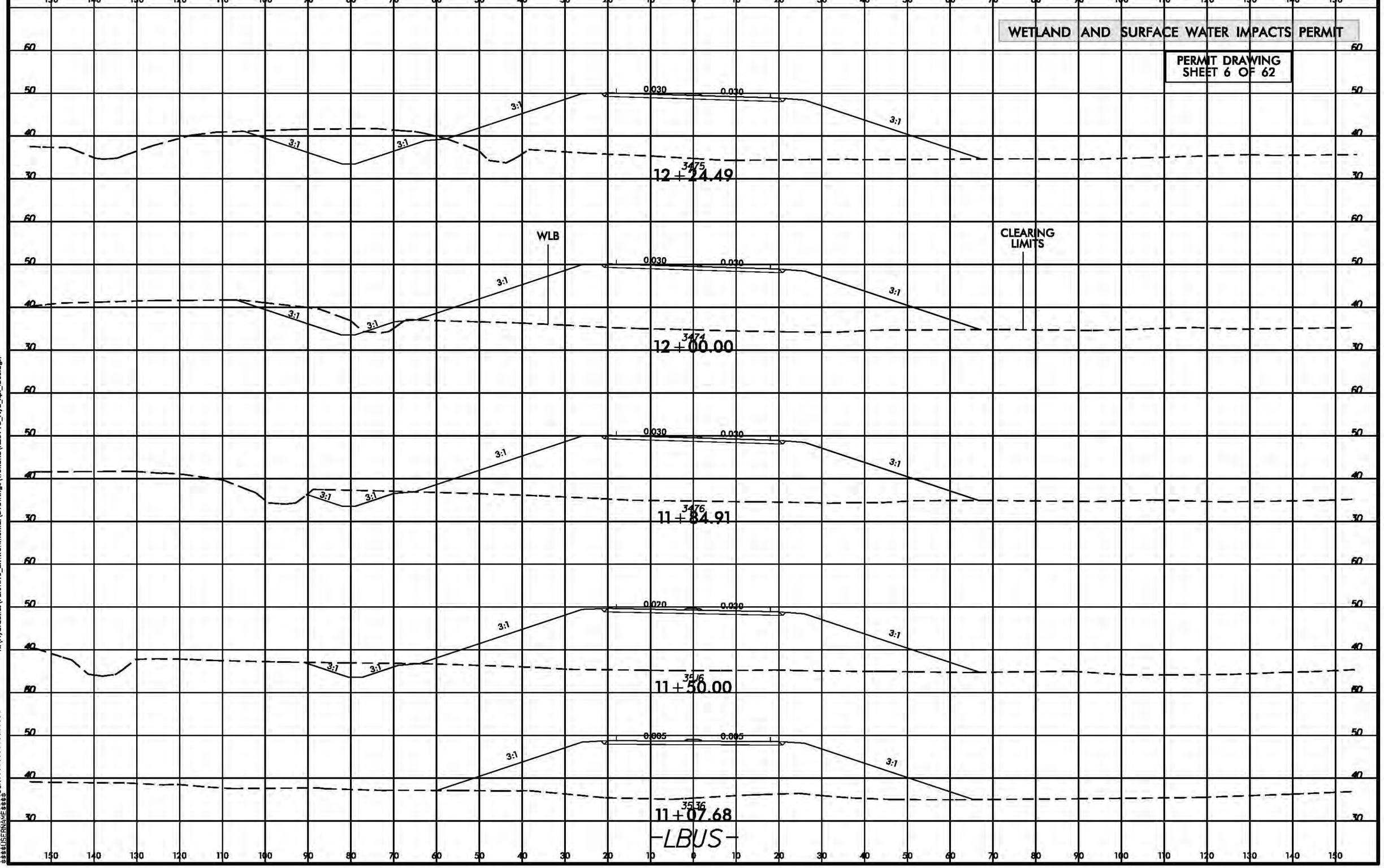
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-111

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 6 OF 62



8/23/99

2/6/2014
epseller
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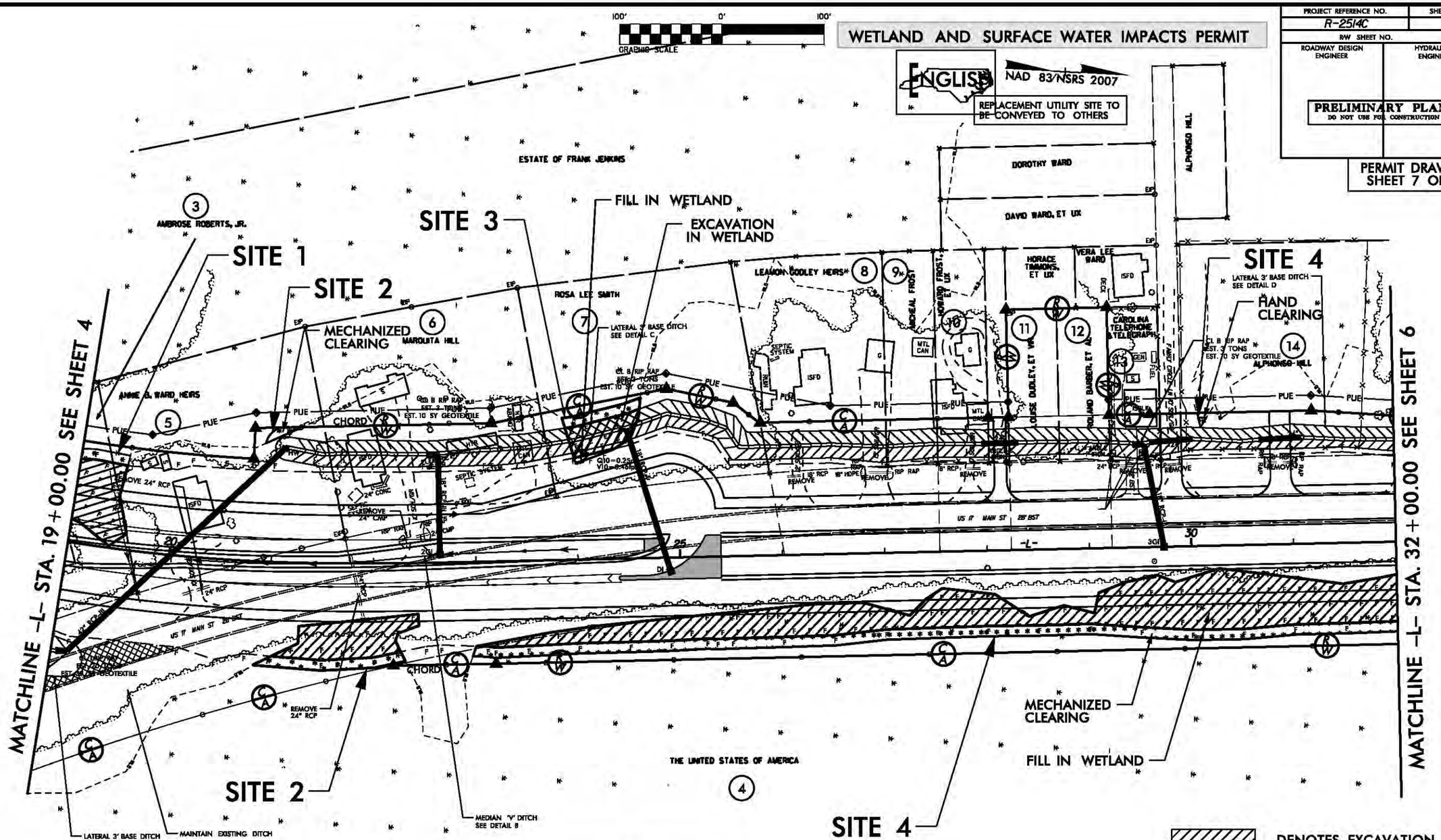
$$$$$$$SYSTIME$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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

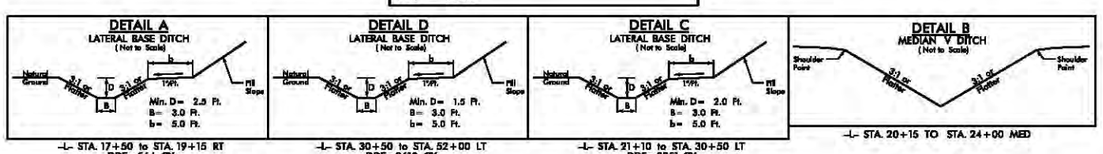
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 7 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



-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 = 1,640.00'	
SE = .06	
RO = 240'	



E E 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
epseiler
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$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$STEINWIDE$$$$$$$$

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 8 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH

NAD 83/NSRS 2007

REPLACEMENT UTILITY SITE TO BE CONVEYED TO OTHERS

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

MECHANIZED CLEARING

FILL IN WETLAND

EXCAVATION IN WETLAND

HAND CLEARING

ESTATE OF FRANK JENKINS

AMBROSE ROBERTS, JR.

ROSA LEE SMITH

LEAMON COOLEY HEIRS

DOROTHY WARD

DAVID WARD, ET UX

HORACE TIMMONS, ET UX

VERA LEE WARD

CAROLINA TELEPHONE & TELEGRAPH

ROLAND BARBER, ET AL

CLYDE DUDLEY, ET VIR

ANNIE G. WARD HEIRS

MARGUITA HILL

ALPHONSO HILL

THE UNITED STATES OF AMERICA

LATERAL 3' BASE DITCH SEE DETAIL C

LATERAL 3' BASE DITCH SEE DETAIL D

MEDIAN "V" DITCH SEE DETAIL B

LATERAL 3' BASE DITCH SEE DETAIL A

MAINTAIN EXISTING DITCH

CHORD

REMOVE 24" RCP

REMOVE 24" CMP

US 17 MAIN ST 25 BST

-L-

PI Sta 16+95.31	PIs Sta 21+57.81
Δ = 27° 14' 57.6" (LT)	θs = 4° 17' 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 = 2.5 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)
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

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

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
epsellar
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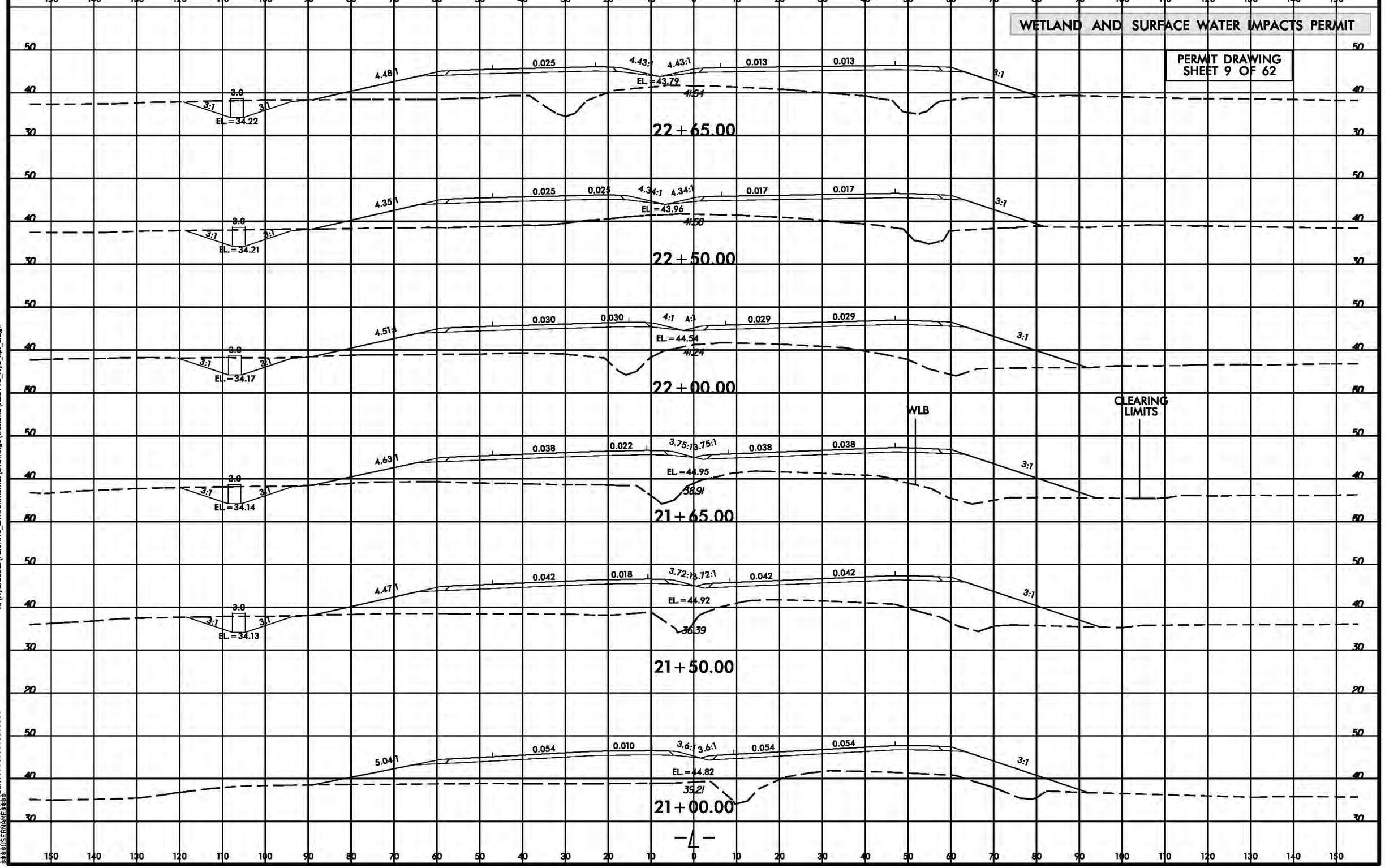
$$$$$$$FILENAME$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-7

0 5 10

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 9 OF 62



8/23/99

2/6/2014
epsaller
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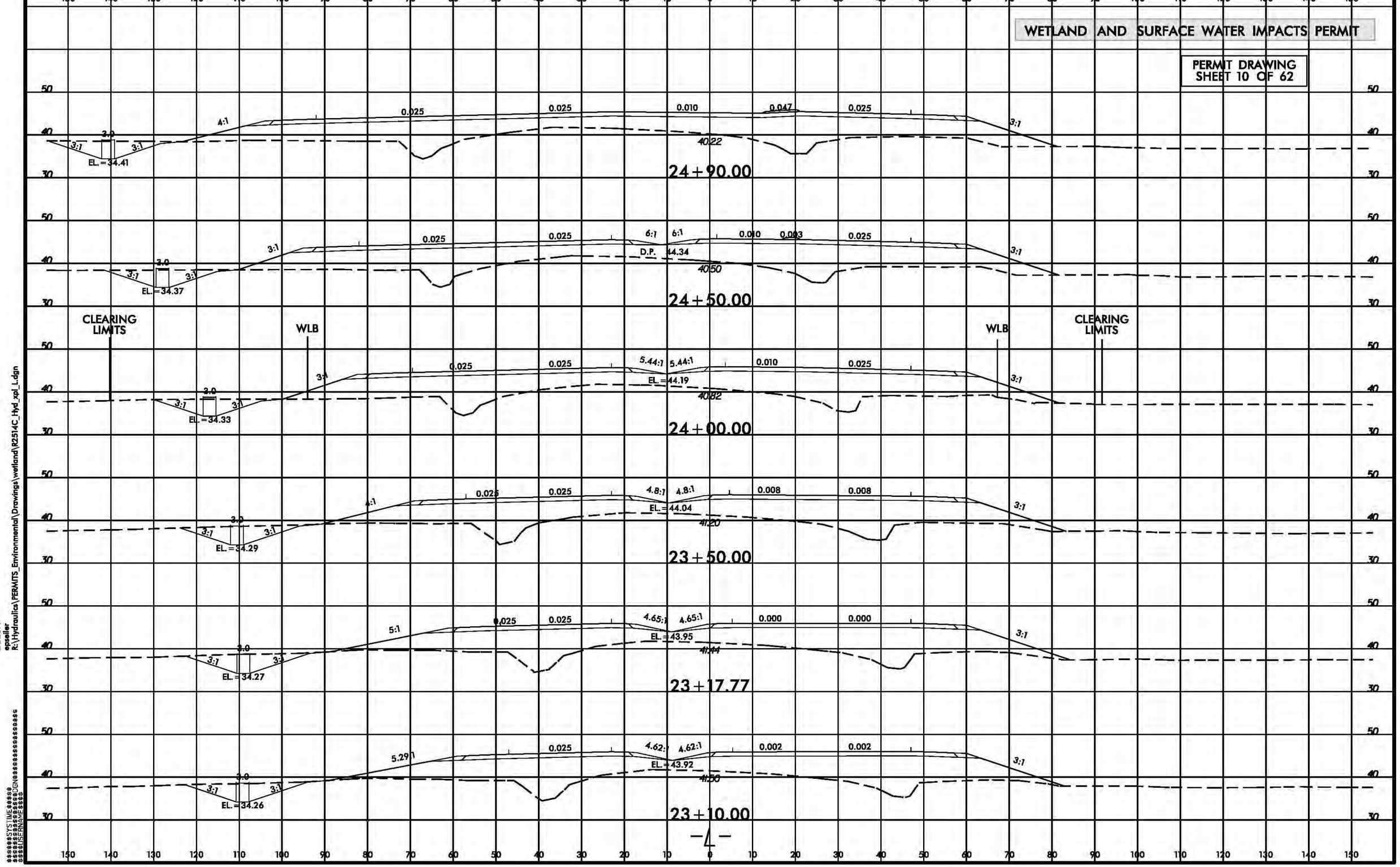
$$$$$$SYSTIME$$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-8

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 10 OF 62



8/23/99

2/6/2014
epsaller
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$$$$$$$SYSTIME$$$$$$$
$$$$$$$DGNFILE$$$$$$$
$$$$$$$USERNAME$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

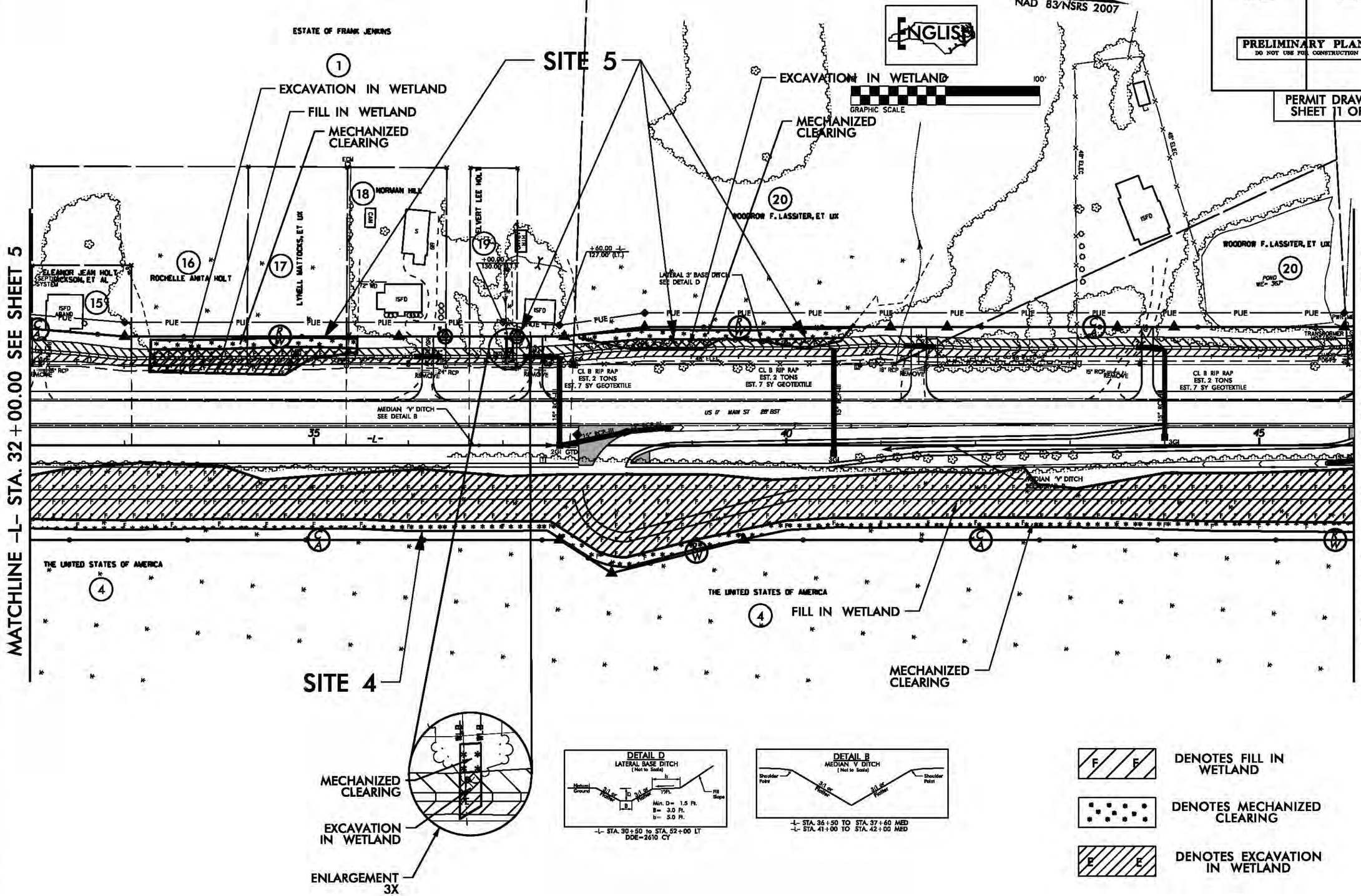
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 11 OF 62

NAD 83/NSRS 2007

ENGLISH

GRAPHIC SCALE 100'



8/17/99

REVISIONS

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.

4/23/2014
gsaeiler
R:\Hydraulics\PERMITS_Environmental\Drawings\wetland\R-2514C_Hyd_prm_wet_psh06.dgn

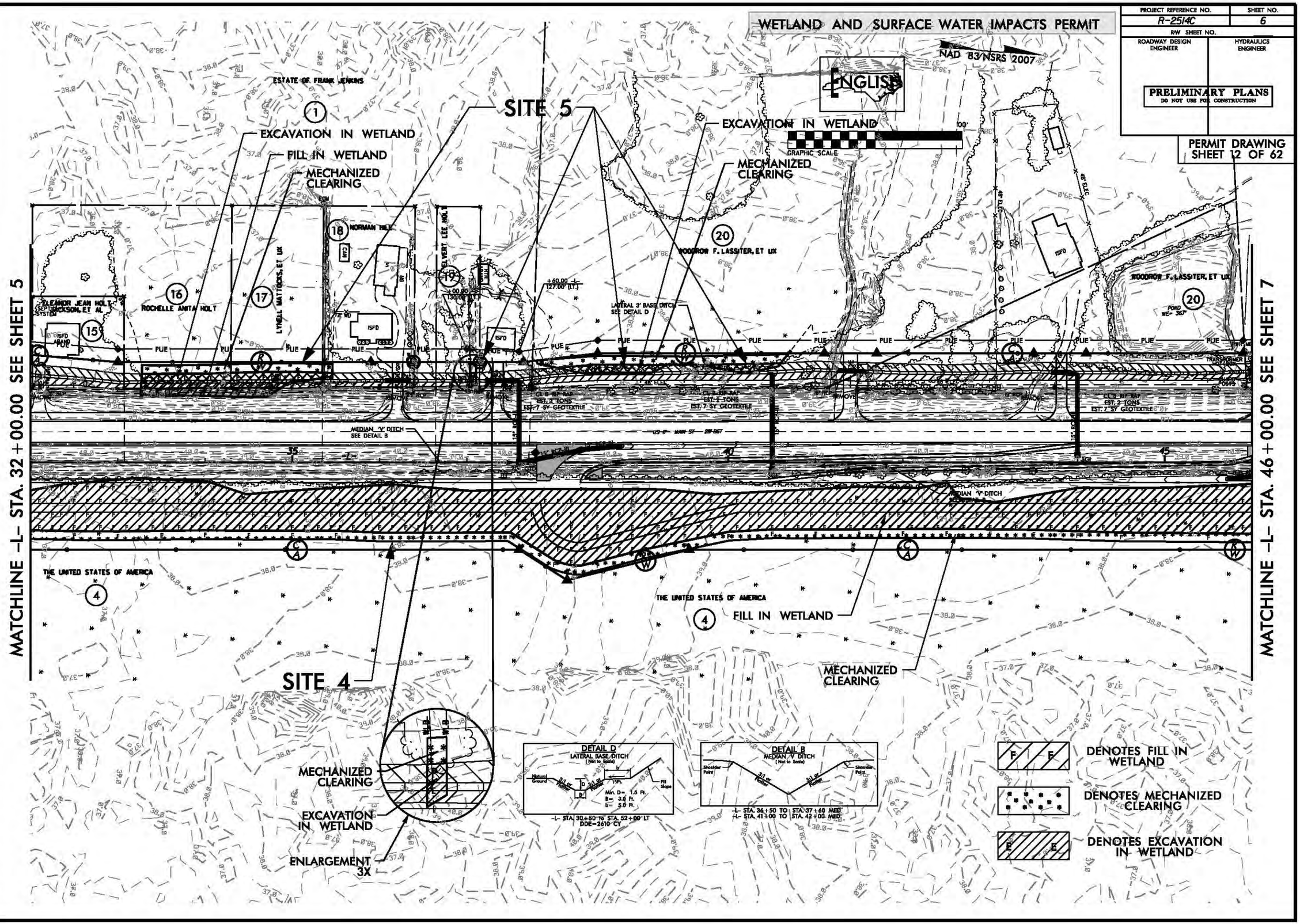
$$$$$$$SYSTIME$$$$$$$
$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$

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



8/17/99

REVISIONS

R/W REVISION 01-06-14 (DNG) - REVISED THE R/W,C/A,AND PUE ON PARCEL 11(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.

4/23/2014
gsessler
R:\Hydraulics\PERMITS_Environmental\Drawings\wetland\R-2514C_Hyd_prm_wet_psh06.dgn

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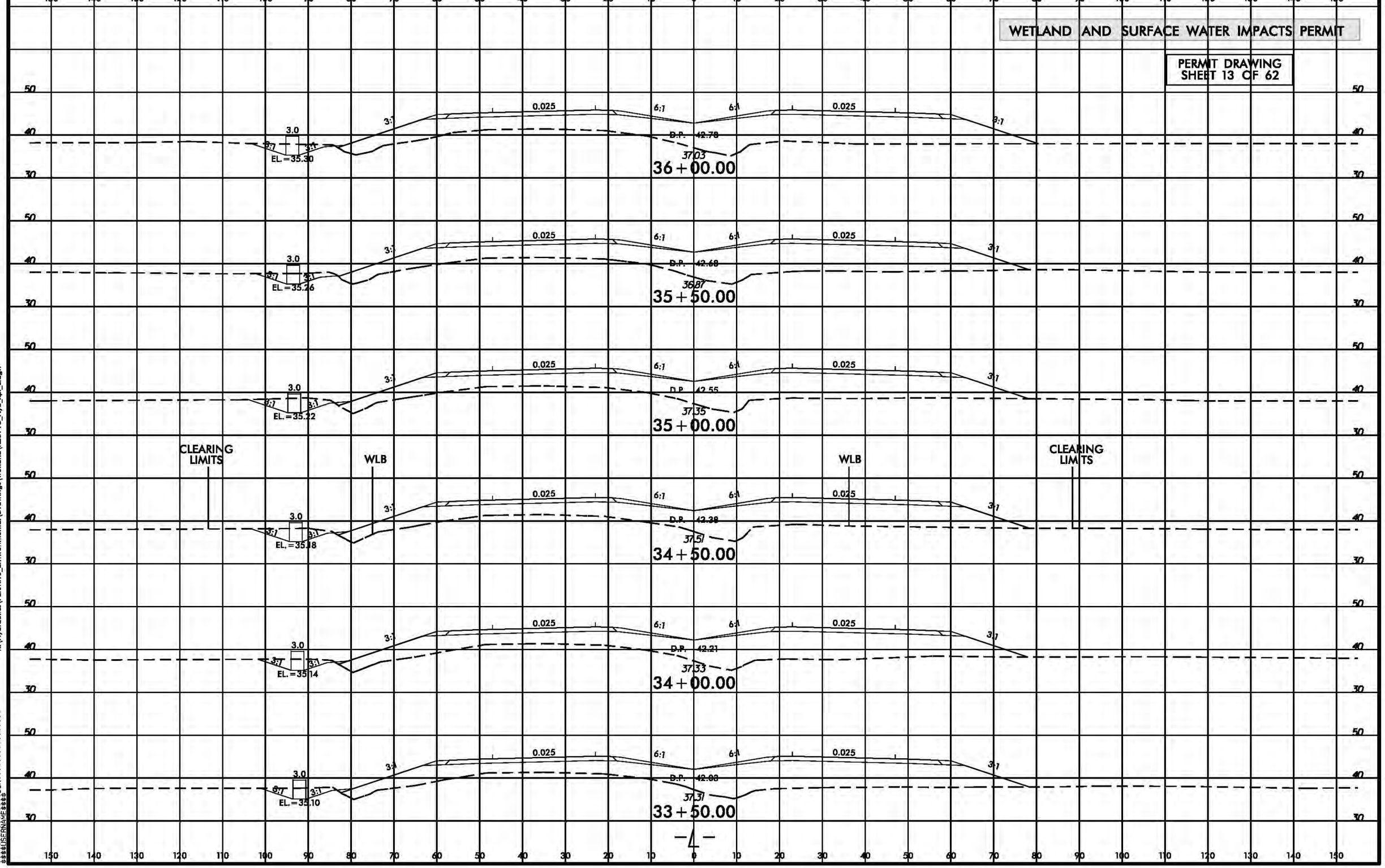
PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-12

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 13 OF 62



8/23/99
2/6/2014
epsaller
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$$$$$$$DGNE$$$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$$

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

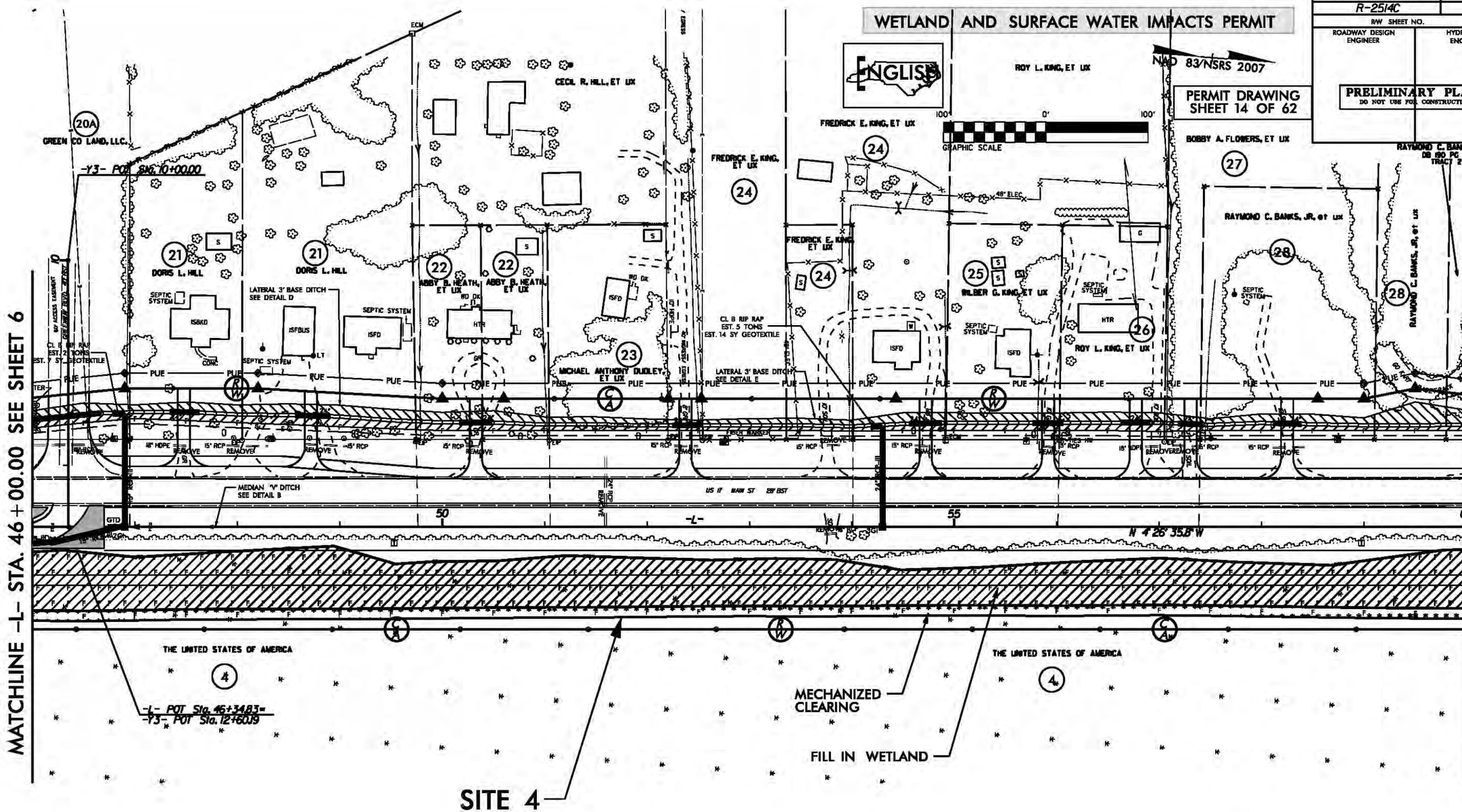
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

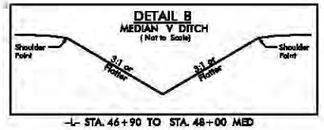
WETLAND AND SURFACE WATER IMPACTS PERMIT

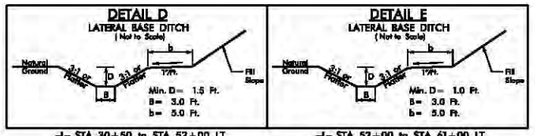
PERMIT DRAWING
SHEET 14 OF 62

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'







DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

REVISIONS

8/17/99

4/23/2014
epseller
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$$$$$$DGN$$$$$$
$$$$$$USERNAME$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

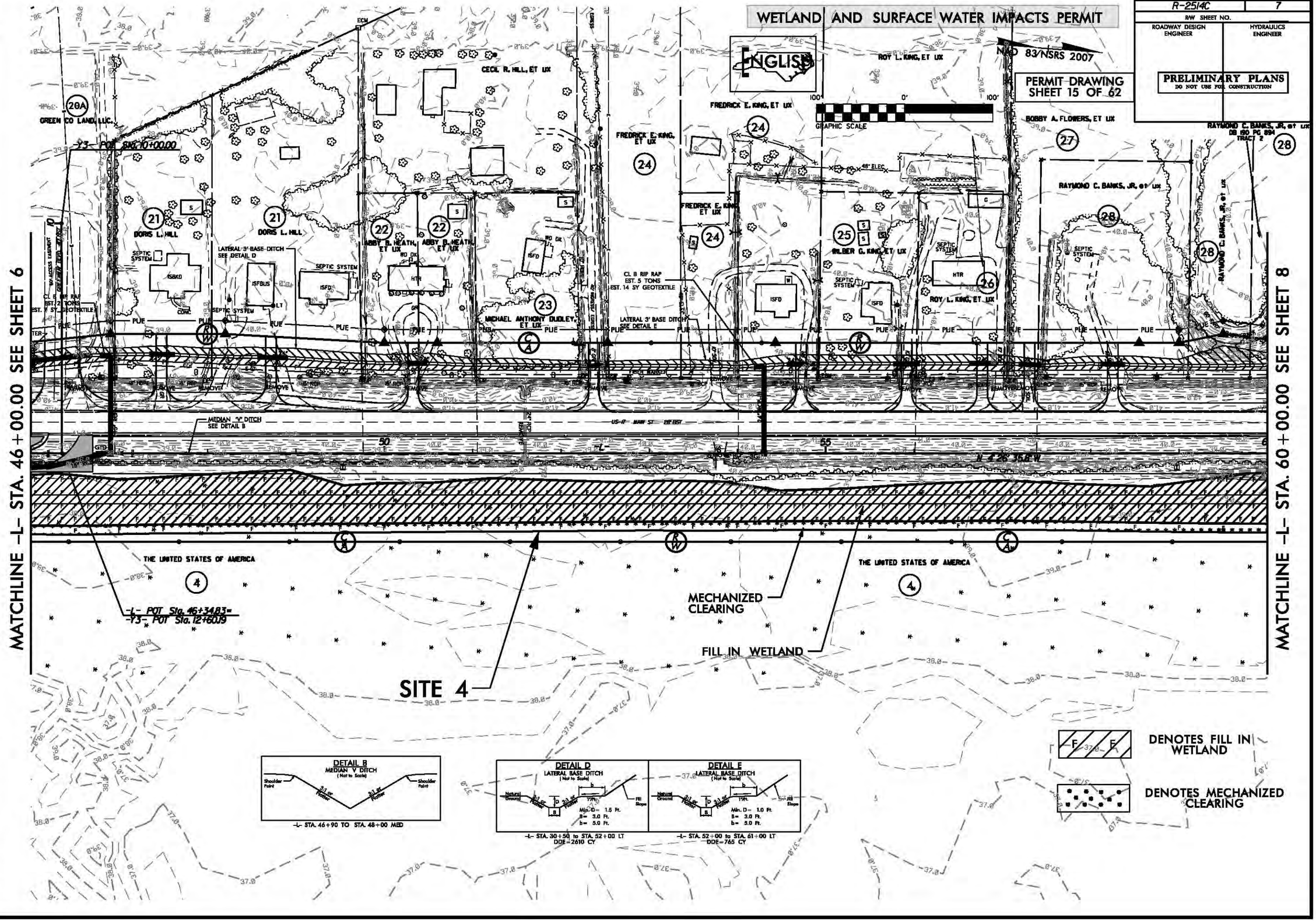
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 15 OF 62

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'



REVISIONS

8/17/99

4/23/2014
epseller
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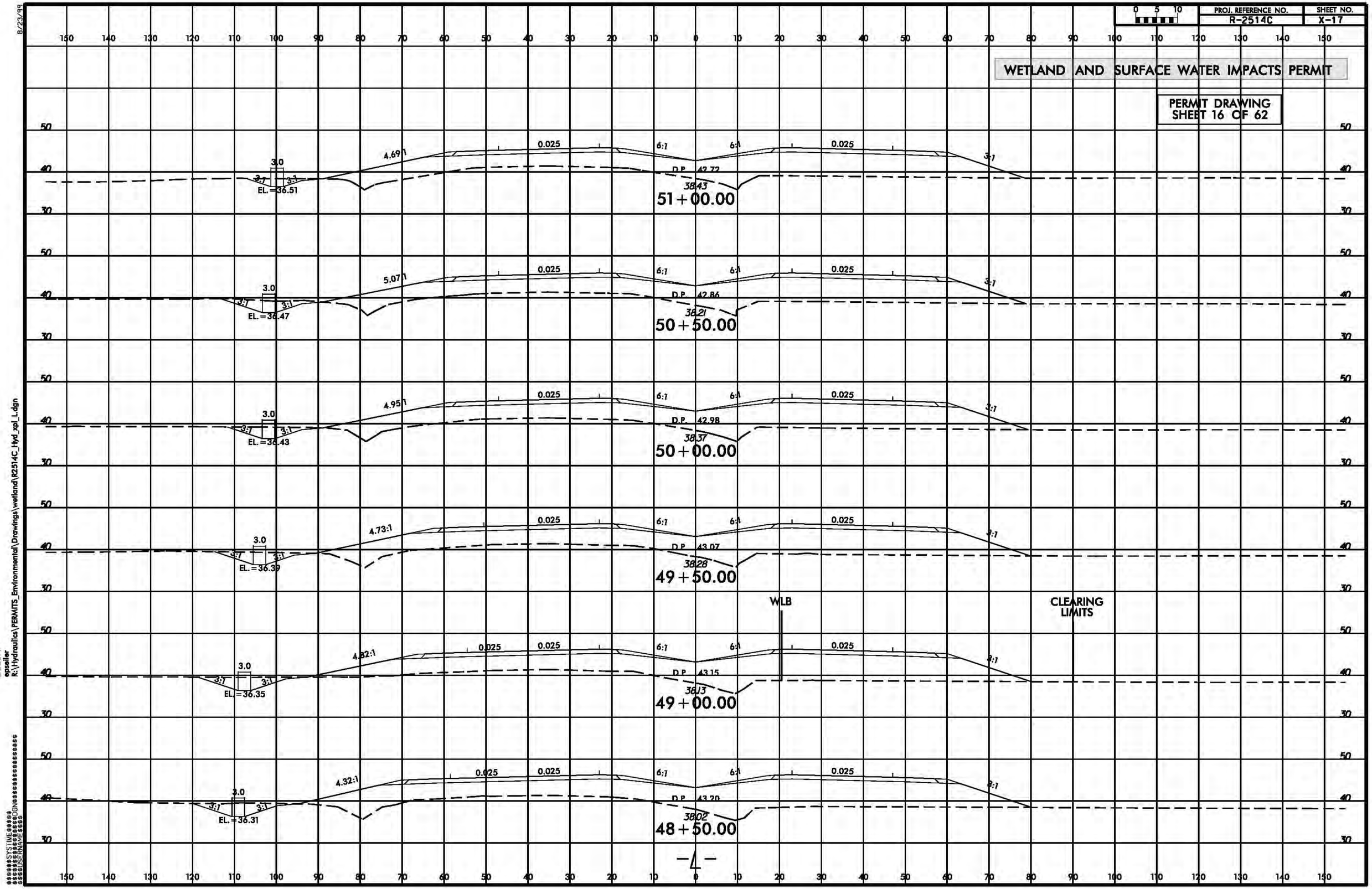
$$$$$$SYSTIME$$$$$$
$$$$$$DGNSIZE$$$$$$



B/23/99

2/6/2014
epsaller
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$$SYSTIME$$
$$DGNFILE$$
$$USERNAME$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 17 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

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

RAYMOND C. BANKS, JR. ET UX

MARVIN L. GOODSON

RACHEL M. ELBANK

JOHN TAYLOR, JR., ET UX

EDWARD E. BUCKLEY, ET UX

THE UNITED STATES OF AMERICA

SITE 6

SITE 4

HAND CLEARING

EXCAVATION IN WETLAND

MECHANIZED CLEARING

FILL IN WETLAND

MECHANIZED CLEARING

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL G

-BL- 4 PINC 65+86.77

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

US HWY 17/NC 58 24' BST

15" RCP REMOVE

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES HAND CLEARING

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

8/17/99

REVISIONS

4/23/2014
epsellar
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$$$$$$$$SYSTIME$$$$$$
$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	8
R/W 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

RAYMOND C. BANKS, JR. ET UX

JOHN TAYLOR, JR. ET UX

MARVIN L. GOODSON

EDWARD E. DUDLEY, ET UX

RACHEL M. EUBANK

THE UNITED STATES OF AMERICA

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 'V' DITCH SEE DETAIL G

SITE 6

HAND CLEARING

EXCAVATION IN WETLAND

MECHANIZED CLEARING

-BL- 4 PINC 65+86.77

CL B RIP RAP BST, 3 TONS EST. 10 SY GEOTEXTILE

US HWY 17/NC 58 24' DST

SITE 4

FILL IN WETLAND

MECHANIZED CLEARING

DENOTES MECHANIZED CLEARING

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES HAND CLEARING

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

REVISIONS

8/17/99

4/23/2014
epseiler
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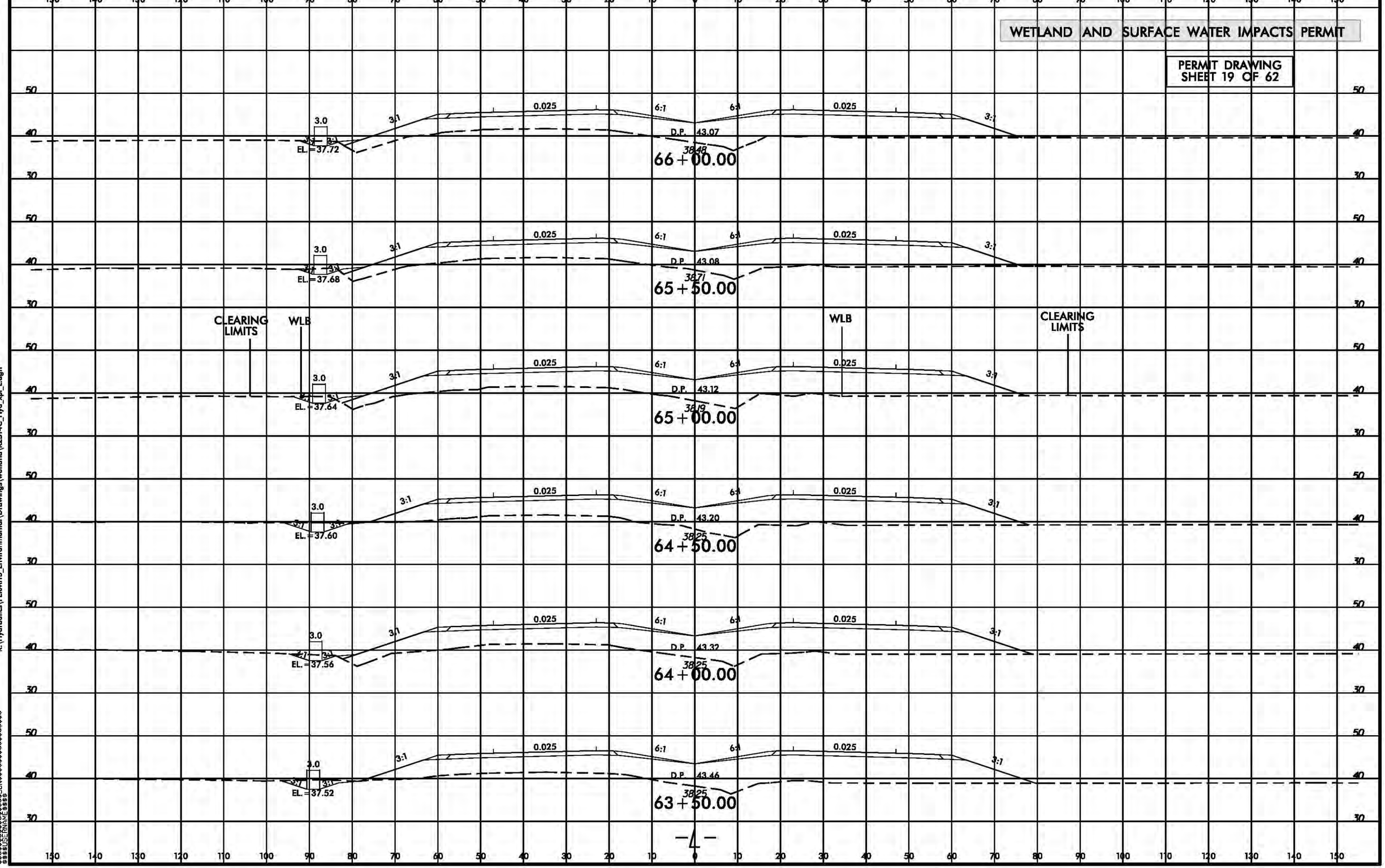
$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-22

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 19 OF 62



8/23/99

2/6/2014
epseller
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$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

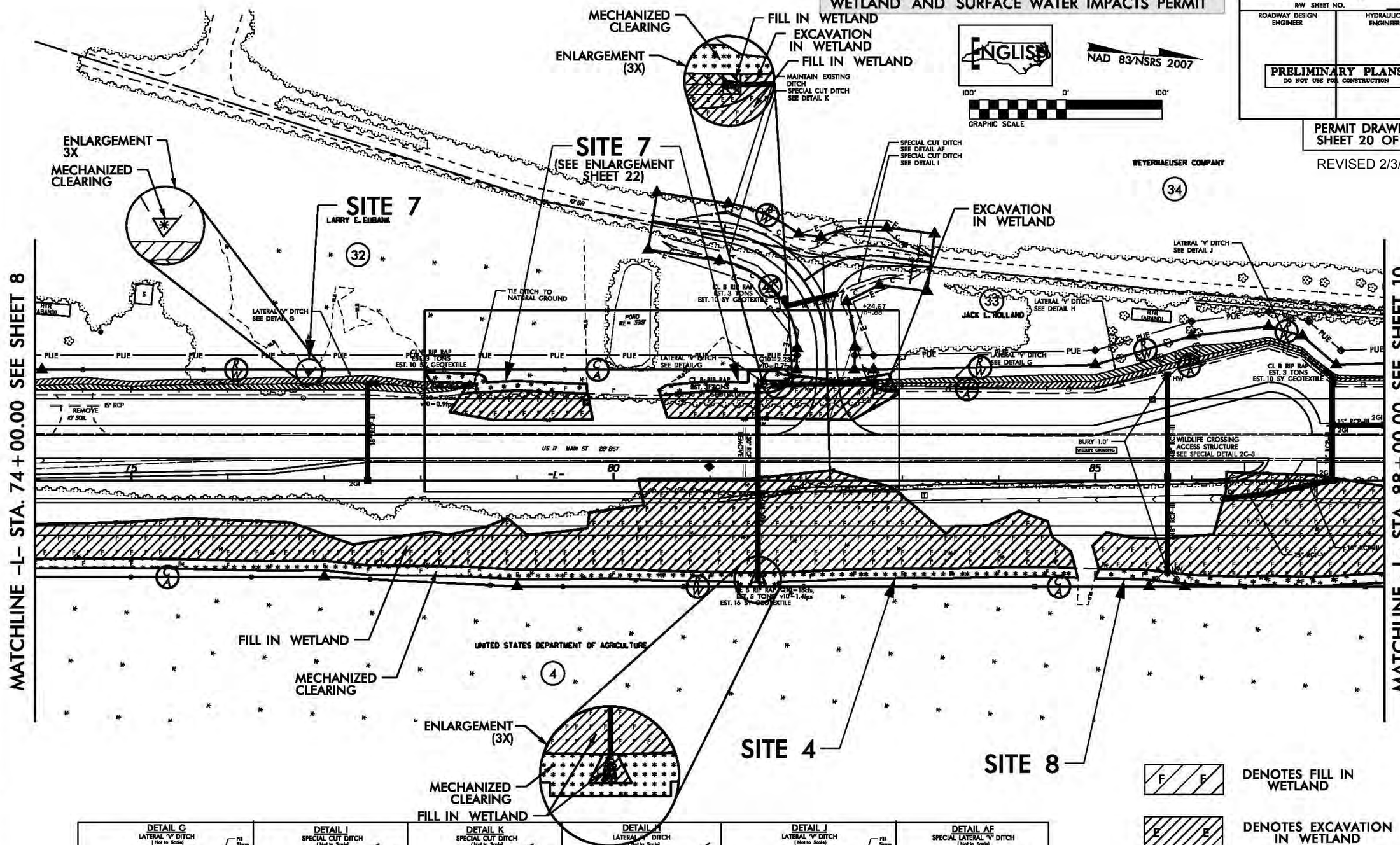
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 20 OF 62

REVISED 2/3/15



REVISIONS

1/30/2015
beanderson
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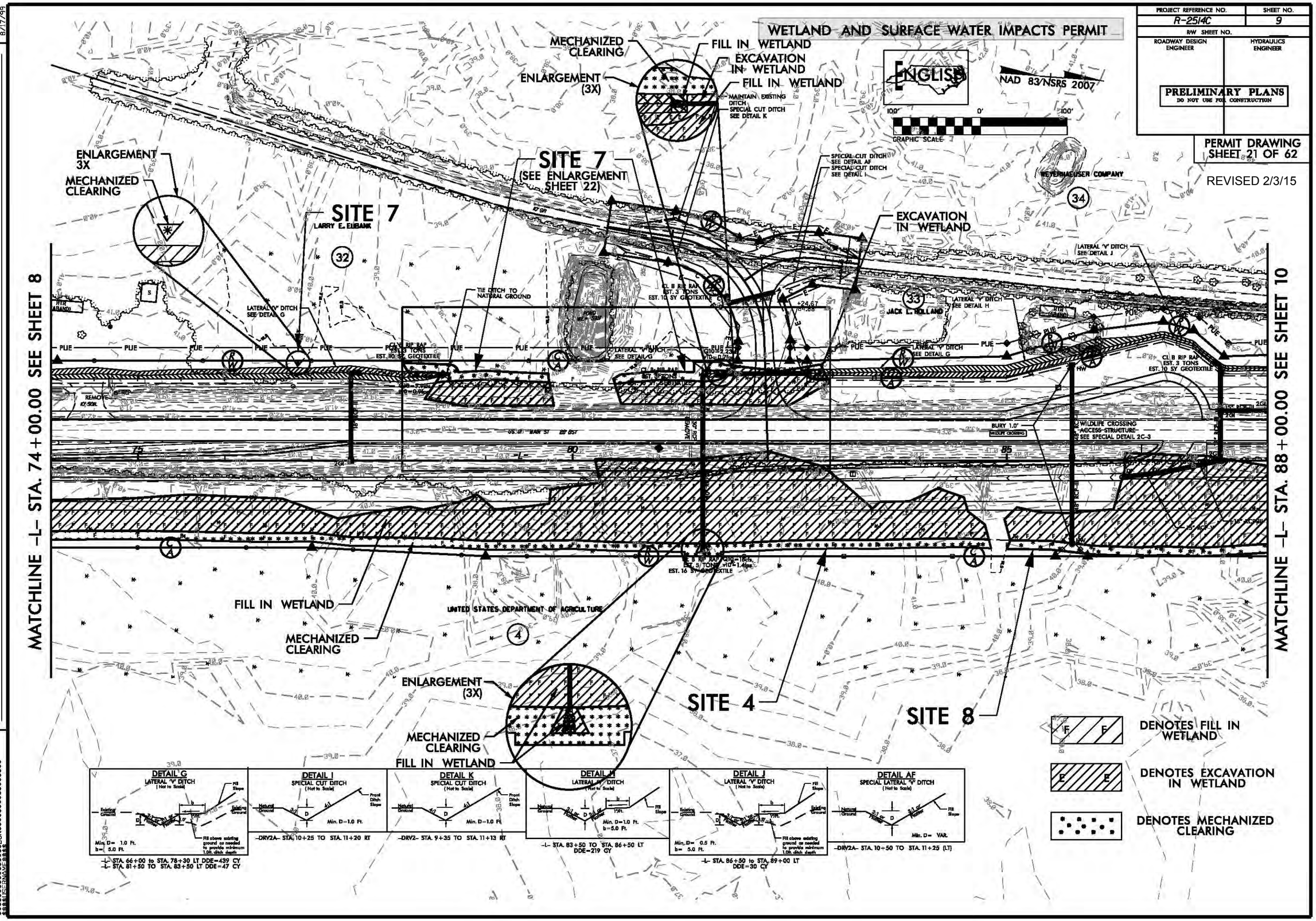
$$$$$$DGN$$$$$$
$$$$$$USERNAME$$$$$$


WETLAND AND SURFACE WATER IMPACTS PERMIT
PROJECT REFERENCE NO.
R-2514C
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
PERMIT DRAWING SHEET 21 OF 62
REVISED 2/3/15
ENGLISH
NAD 83/NSRS 2007
GRAPHIC SCALE
MECHANIZED CLEARING
ENLARGEMENT (3X)
FILL IN WETLAND
EXCAVATION IN WETLAND
MAINTAIN EXISTING DITCH
SPECIAL CUT DITCH SEE DETAIL K
SITE 7
(SEE ENLARGEMENT SHEET 22)
SITE 7
LARRY E. ELIBANK
SPECIAL CUT DITCH SEE DETAIL AF
SPECIAL CUT DITCH SEE DETAIL I
WEYERHAEUSER COMPANY
EXCAVATION IN WETLAND
LATERAL "V" DITCH SEE DETAIL J
LATERAL "V" DITCH SEE DETAIL G
TIE DITCH TO NATURAL GROUND
LATERAL "V" DITCH SEE DETAIL H
JACK L. HOLLAND
CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2C-3
BURY 1.0'
MATCHLINE -L- STA. 74+00.00 SEE SHEET 8
MATCHLINE -L- STA. 88+00.00 SEE SHEET 10
FILL IN WETLAND
MECHANIZED CLEARING
UNITED STATES DEPARTMENT OF AGRICULTURE
ENLARGEMENT (3X)
MECHANIZED CLEARING
FILL IN WETLAND
SITE 4
SITE 8
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)
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
REVISIONS
8/17/99
1/30/2015
beanderson
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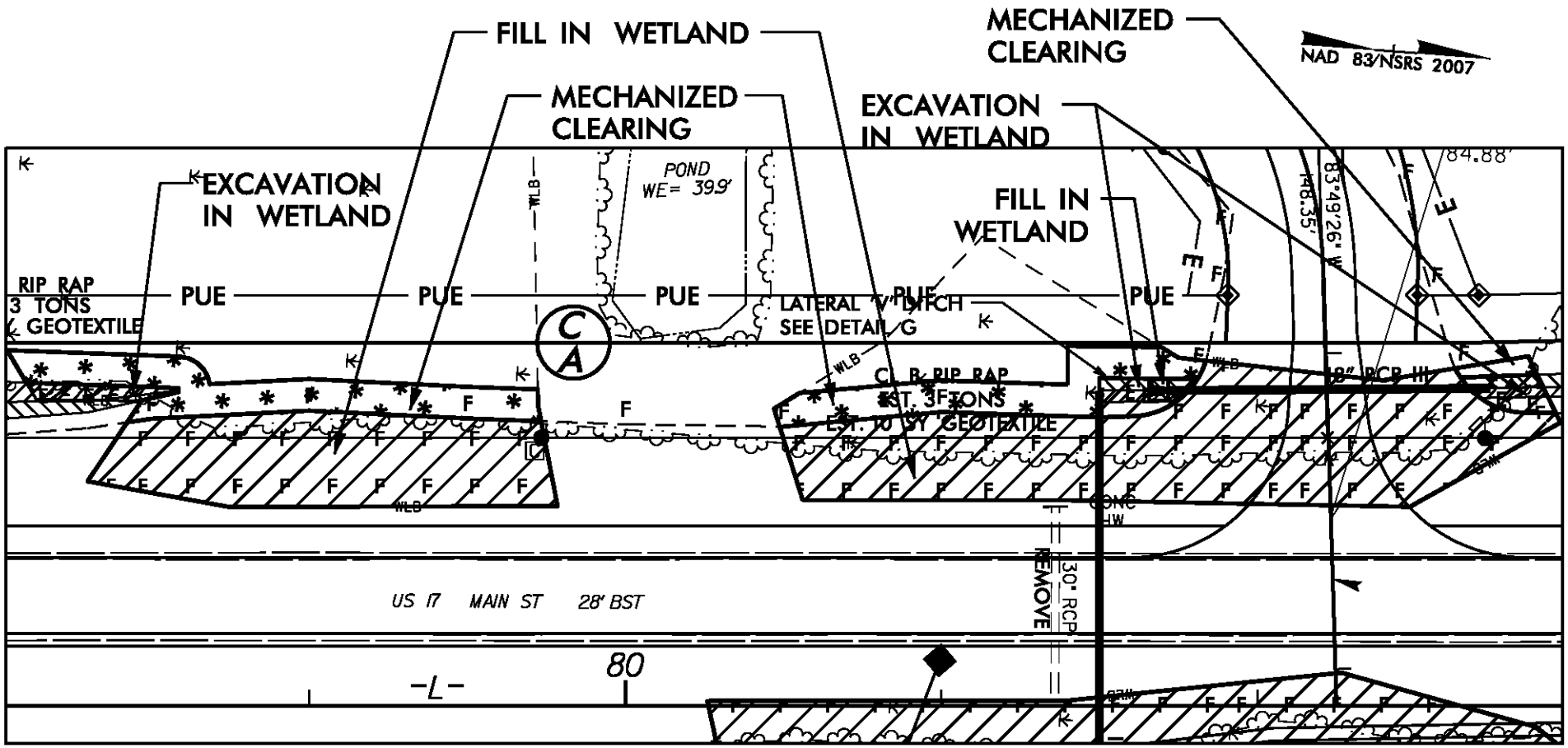


SITE 7 ENLARGEMENT

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

Revised
1/30/15

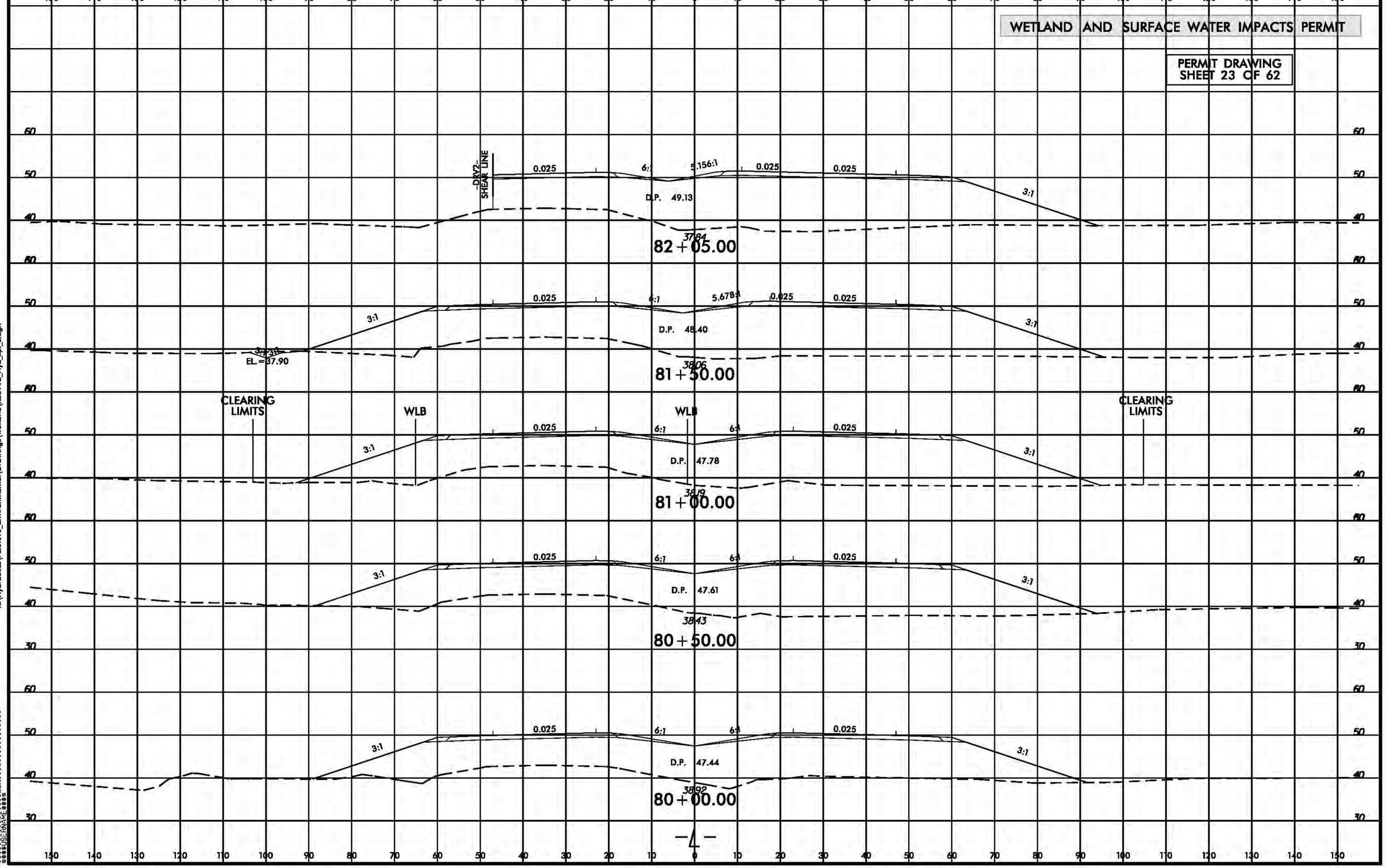
SHEET 22 OF 62

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-28

0 5 10

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 23 OF 62



8/23/99

2/6/2014
gpeiler
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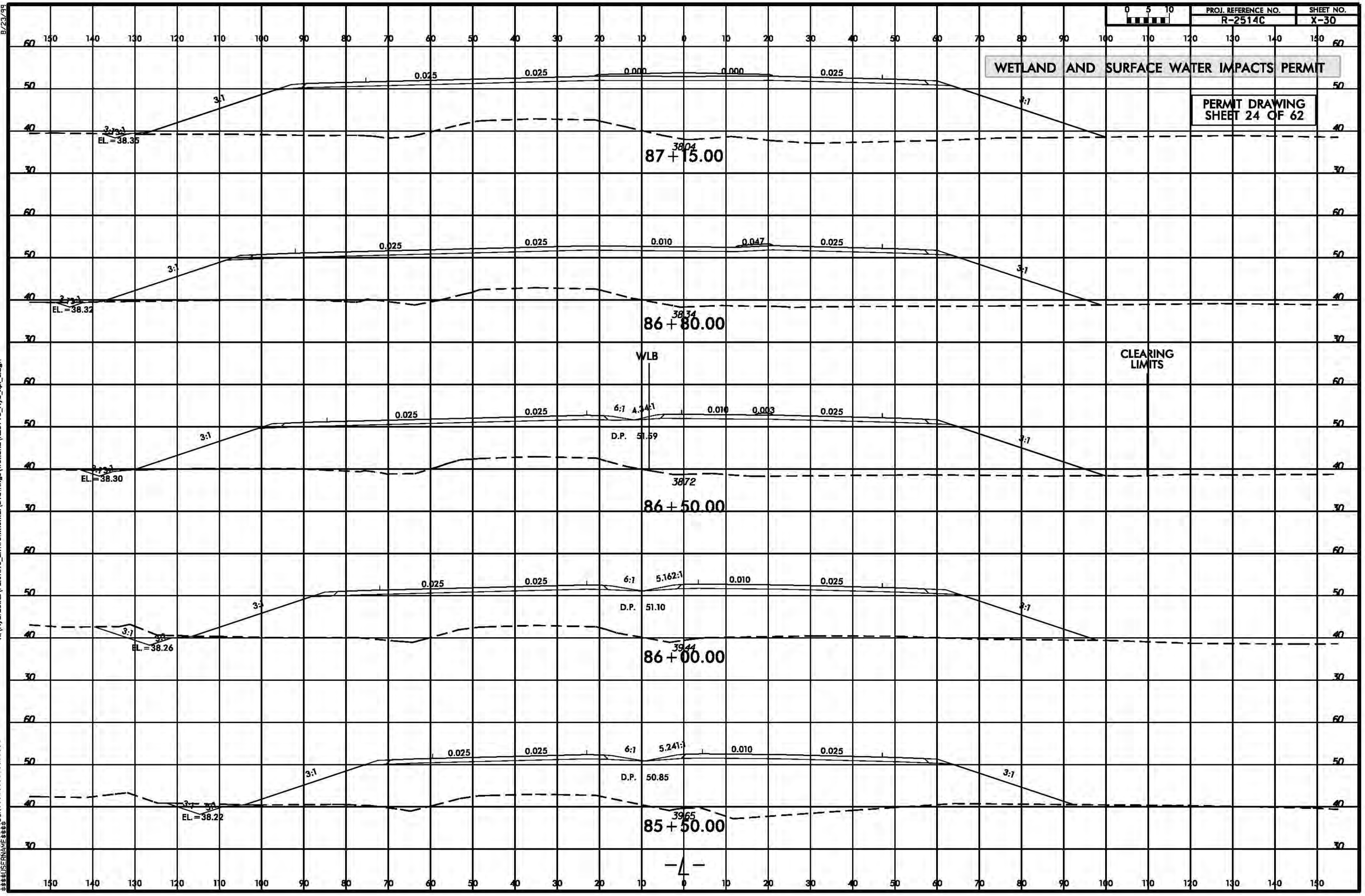
$$$$$$DATE$$$$$$
$$$$$$DGNNAME$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 24 OF 62



8/23/99
2/6/2014
epseiler
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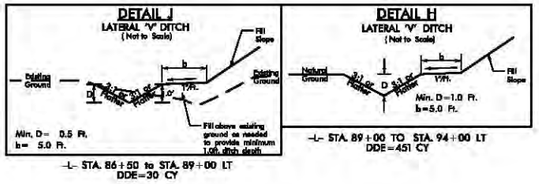
$$$$$$$SYSTIME$$$$$
$$$$$$$DGNE$$$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$$

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 25 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

ENGLISH

100' 0' 100'
GRAPHIC SCALE

NAD 83/NSRS 2007

MATCHLINE -L- STA. 88+00.00 SEE SHEET 9

MATCHLINE -L- STA. 101+00.00 SEE SHEET 11

WEYERHAEUSER COMPANY 34

WEYERHAEUSER COMPANY 34

SITE 9

MECHANIZED CLEARING

LATERAL "V" DITCH SEE DETAIL J

LATERAL "V" DITCH SEE DETAIL H

18" CAAP W/ 2 ELBOWS

JACK L. HOLLAND

PUE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 10 TONS EST. 10 SY GEOTEXTILE

BURY 1.0'
WILDLIFE CROSSING

15" RCP-III

15" RCP

15" CMP

US HWY 17/NC 58 24' BST

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-F

-L-

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

THE UNITED STATES OF AMERICA 4

SITE 8

SITE 9

MECHANIZED CLEARING

FILL IN WETLAND

SITE 10

2/24/2014
beanderson
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REVISIONS

8/17/99

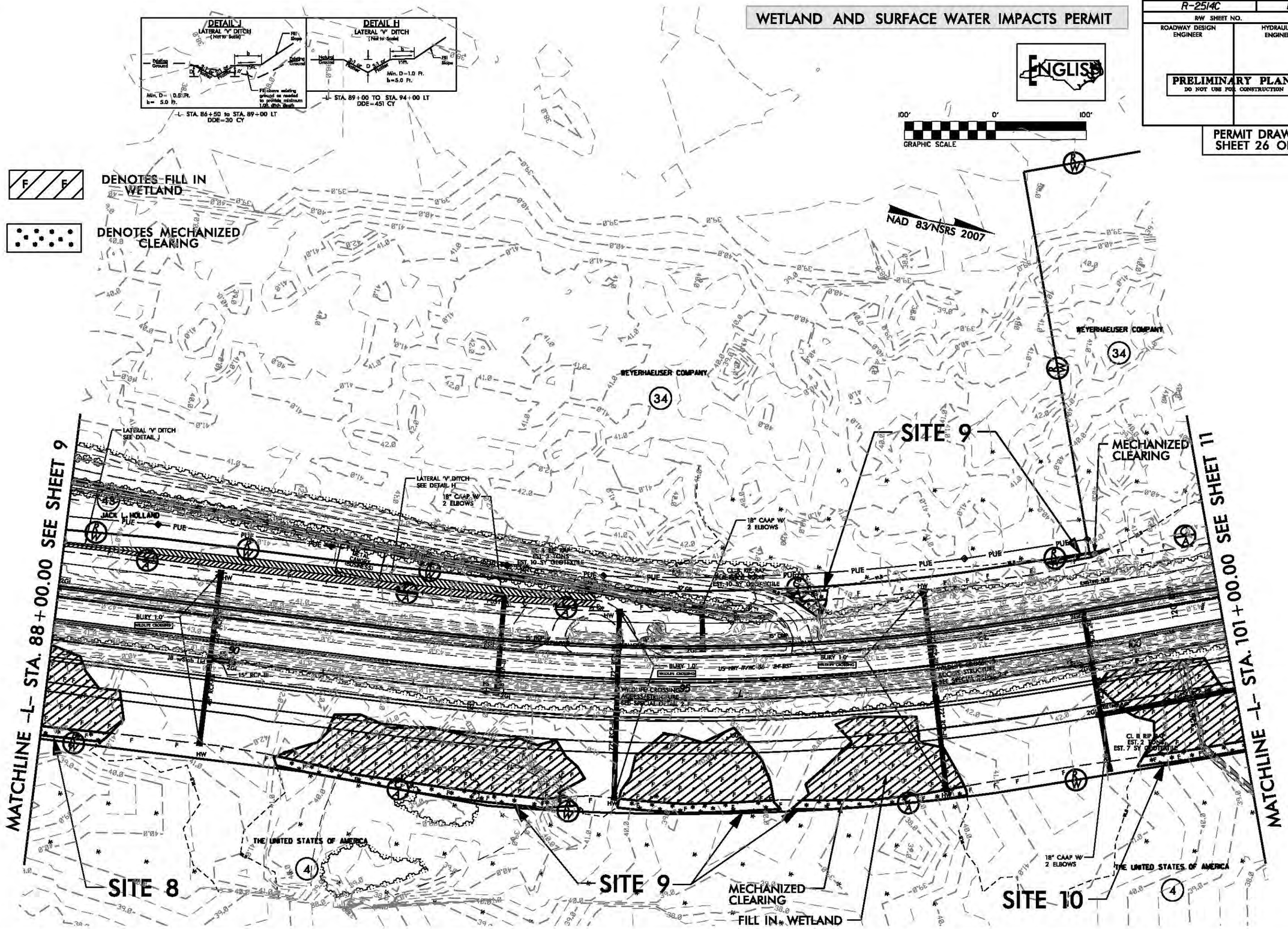
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNSPACE$$$$$$$$

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

WETLAND AND SURFACE WATER IMPACTS PERMIT



8/17/99

REVISIONS

4/23/2014
epsellar
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$$$$$$SYSTIME$$$$$$
$$$$$$DGNS$$$$$$
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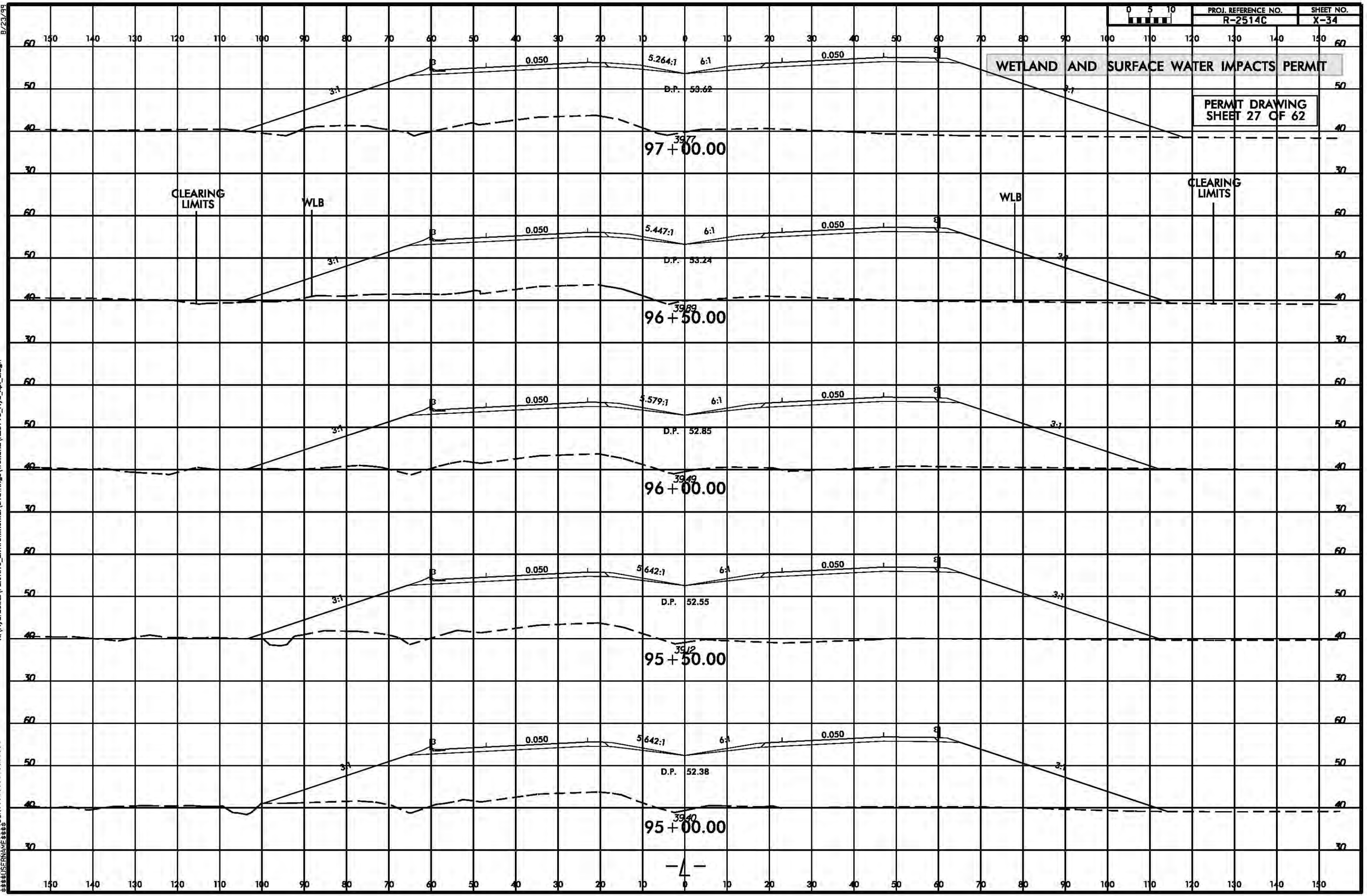

8/23/99

2/6/2014
epsalier
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$$$$$$SYSTIME$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

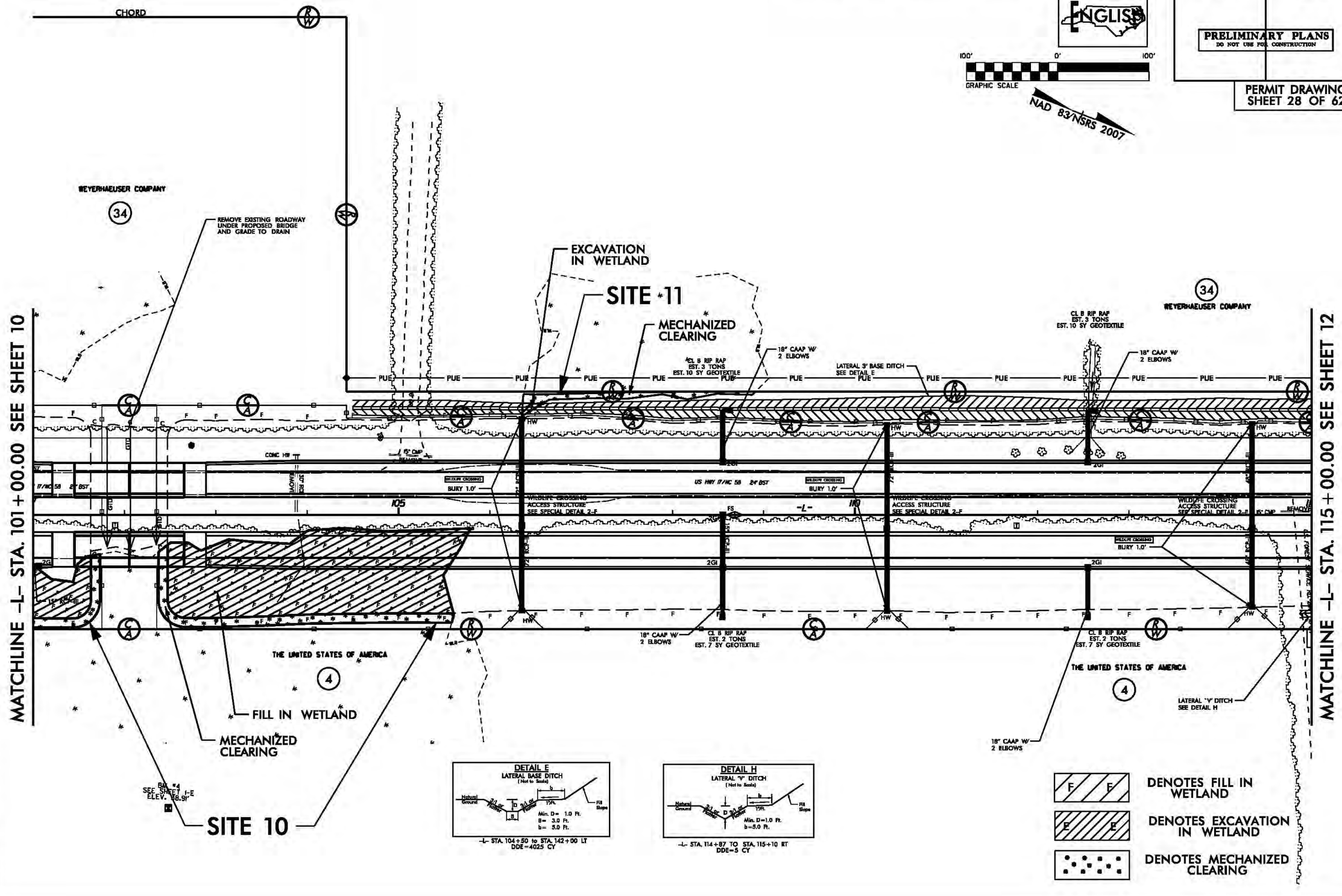
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 28 OF 62

ENGLISH

100' 0' 100'
GRAPHIC SCALE

NAD 83/NSRS 2007



8/17/99

REVISIONS

4/23/2014
epseiler
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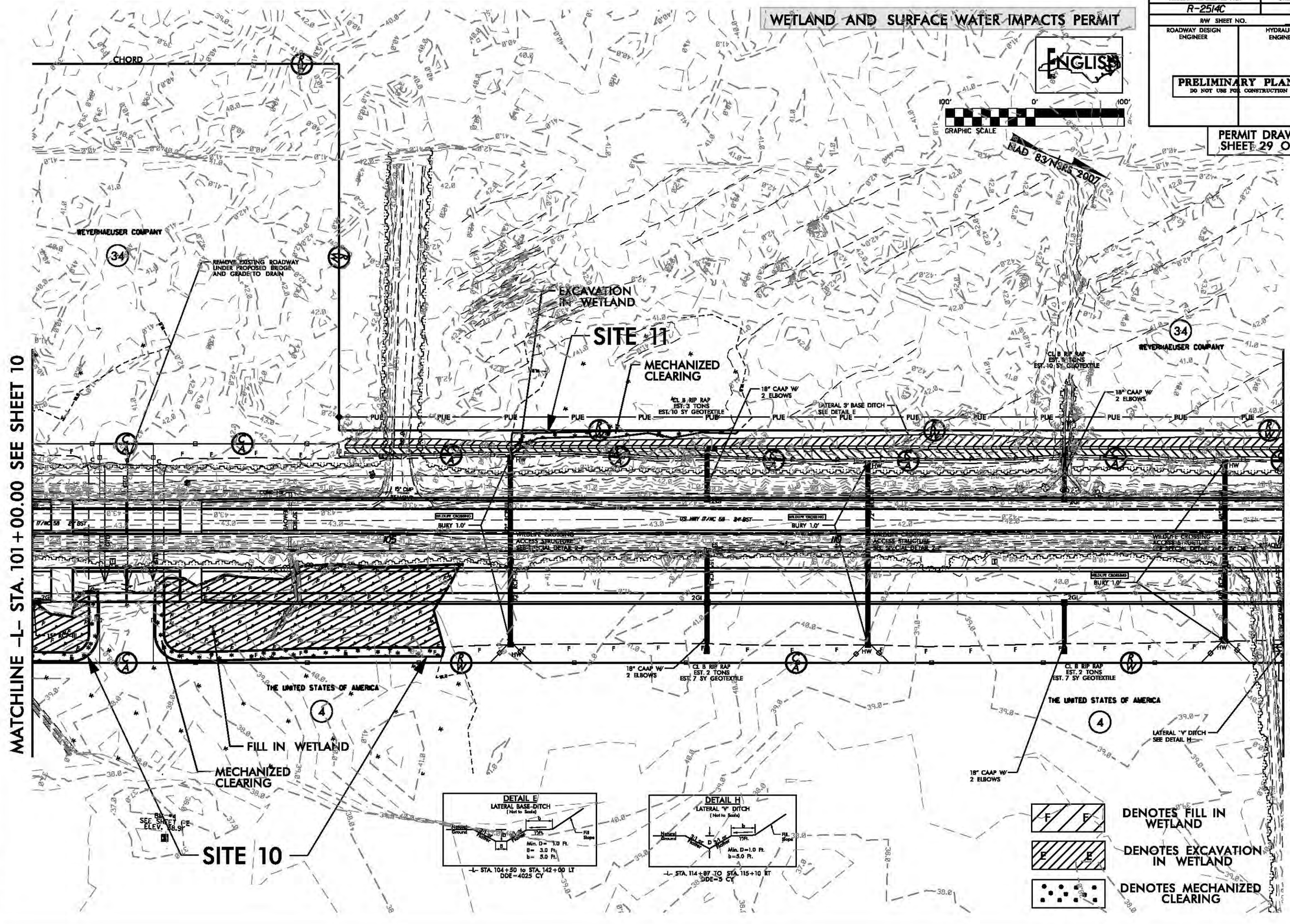
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	11
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

4/23/2014
epsellar
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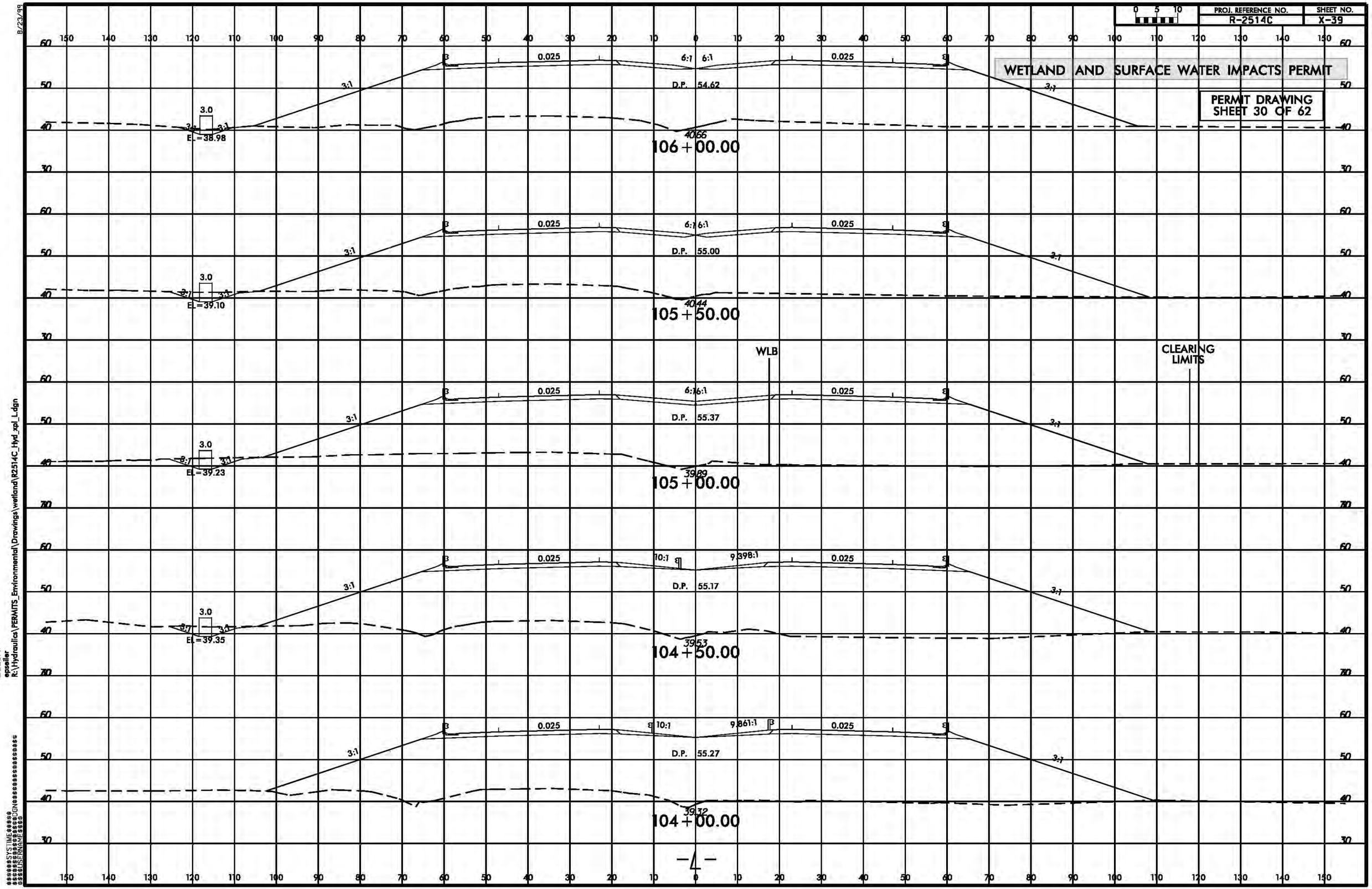
PROJ. REFERENCE NO.
R-2514C
SHEET NO.
X-39
WETLAND AND SURFACE WATER IMPACTS PERMIT
PERMIT DRAWING
SHEET 30 OF 62
106+00.00
D.P. 54.62
40.66
EL.=38.98
105+50.00
D.P. 55.00
40.44
EL.=39.10
105+00.00
D.P. 55.37
39.89
EL.=39.23
WLB
CLEARING LIMITS
104+50.00
D.P. 55.17
39.53
EL.=39.35
104+00.00
D.P. 55.27
39.32
0.025
6:1
3:1
3.0
10:1
9.398:1
9.861:1
8/23/99
2/6/2014
epseller
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WETLAND AND SURFACE WATER IMPACTS PERMIT

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

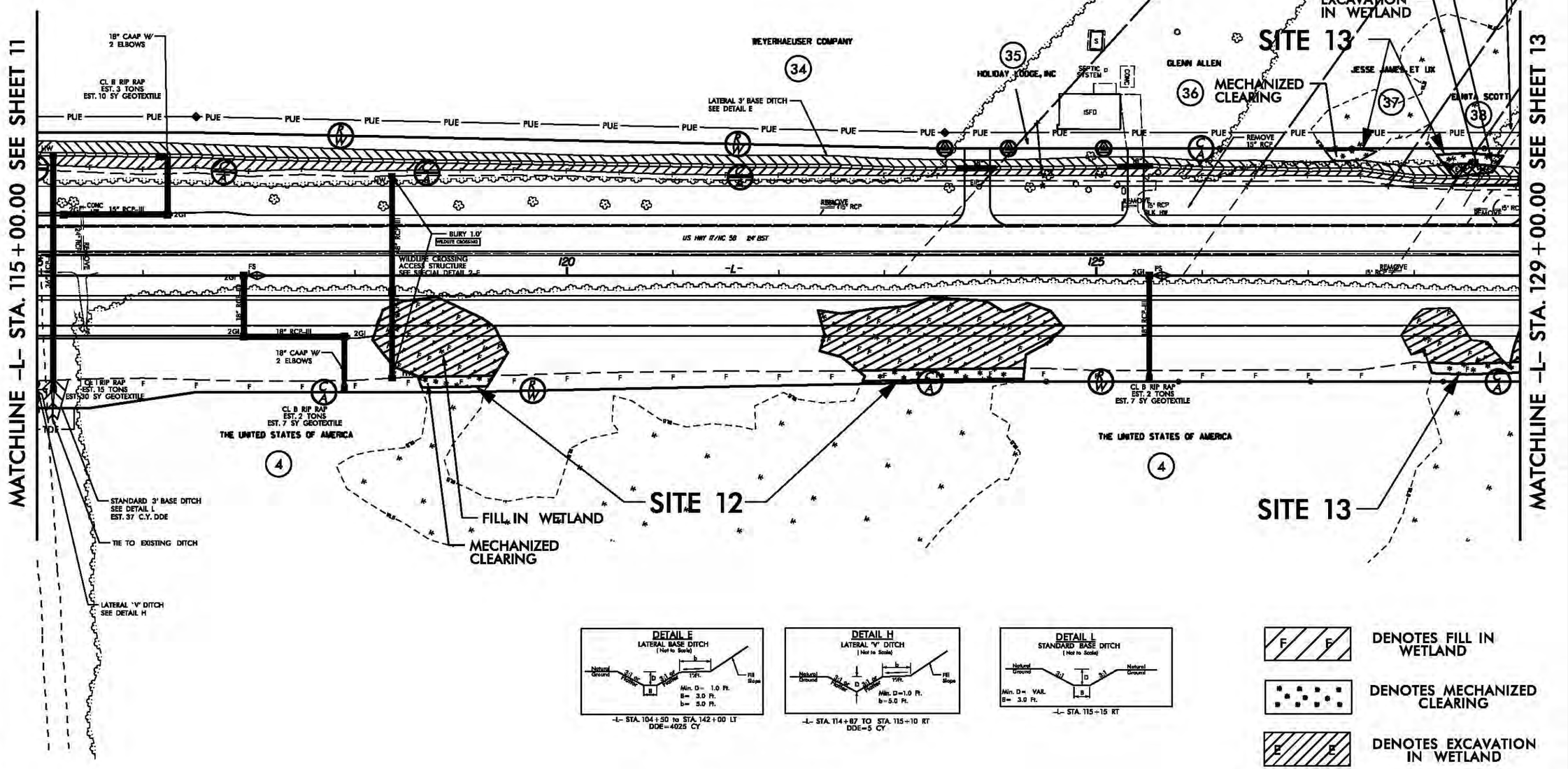
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 31 OF 62

NAD 83/NSRS 2007

ENGLISH

100' 0' 100'
GRAPHIC SCALE



-L- STA. 104+50 to STA. 142+00 LT
DDE=4025 CY

-L- STA. 114+87 TO STA. 115+10 RT
DDE=5 CY

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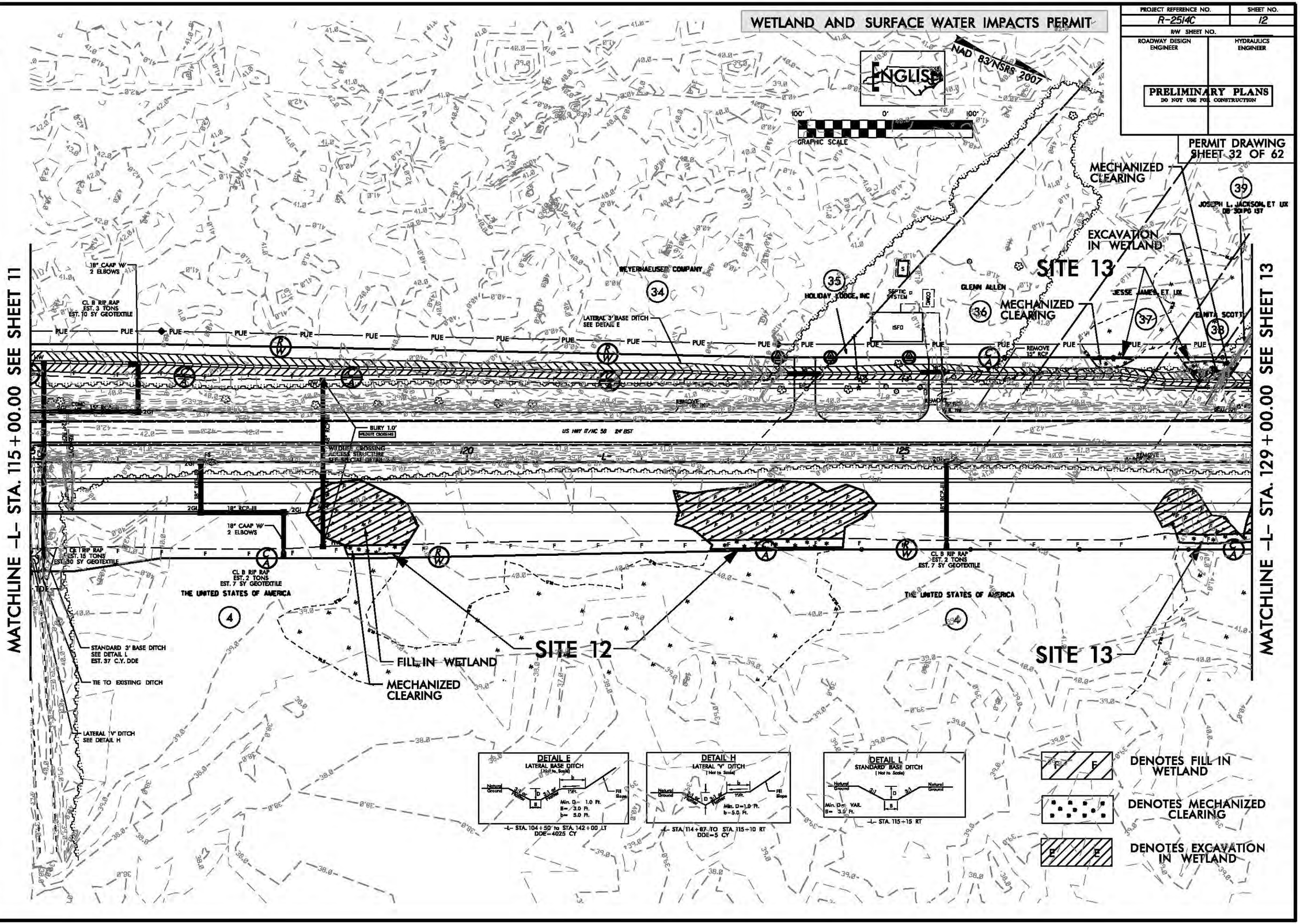
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNS$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 32 OF 62



8/17/99

REVISIONS

2/24/2014
beanderson
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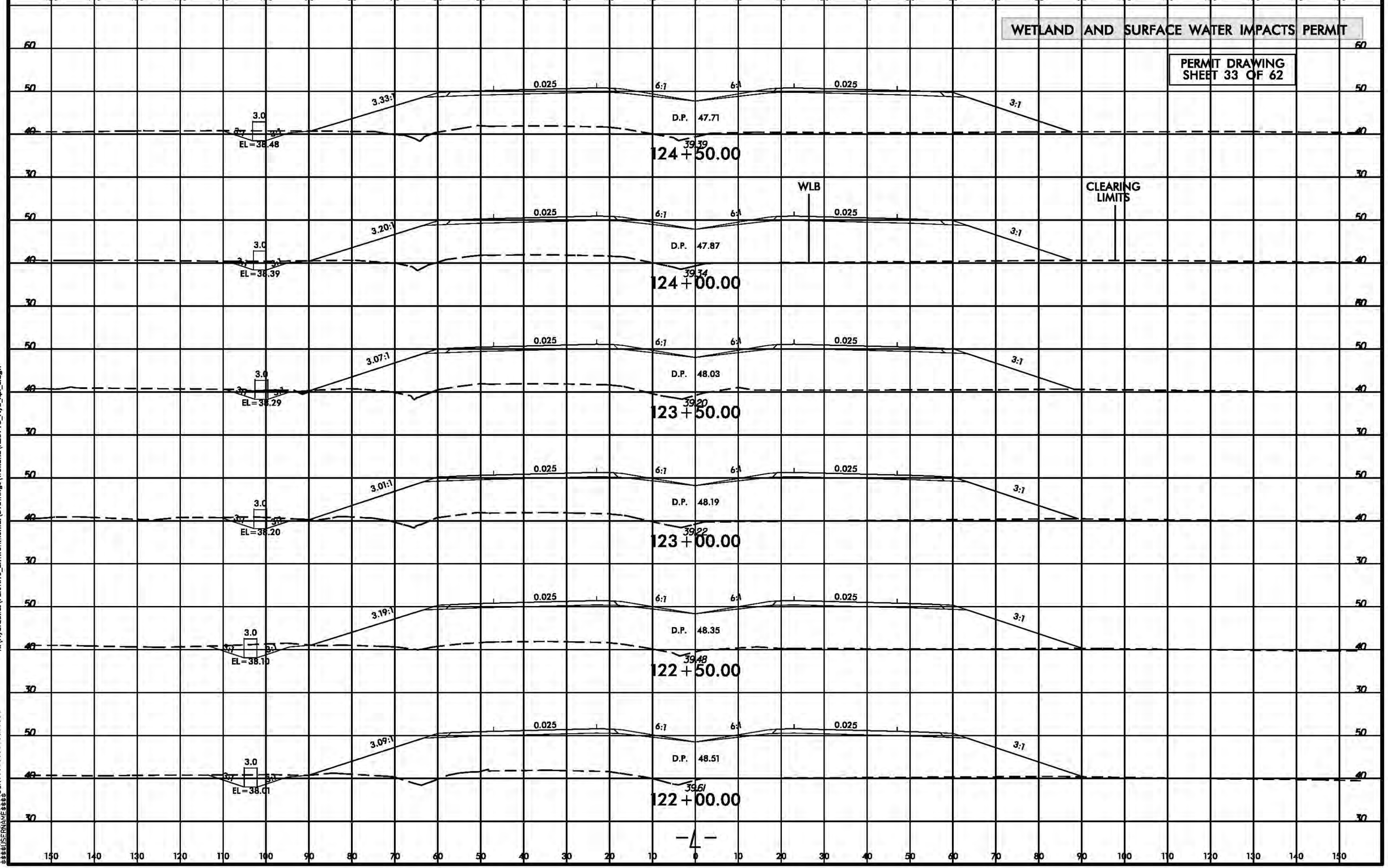
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNS$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-46

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 33 OF 62



8/23/99
2/6/2014
epsaller
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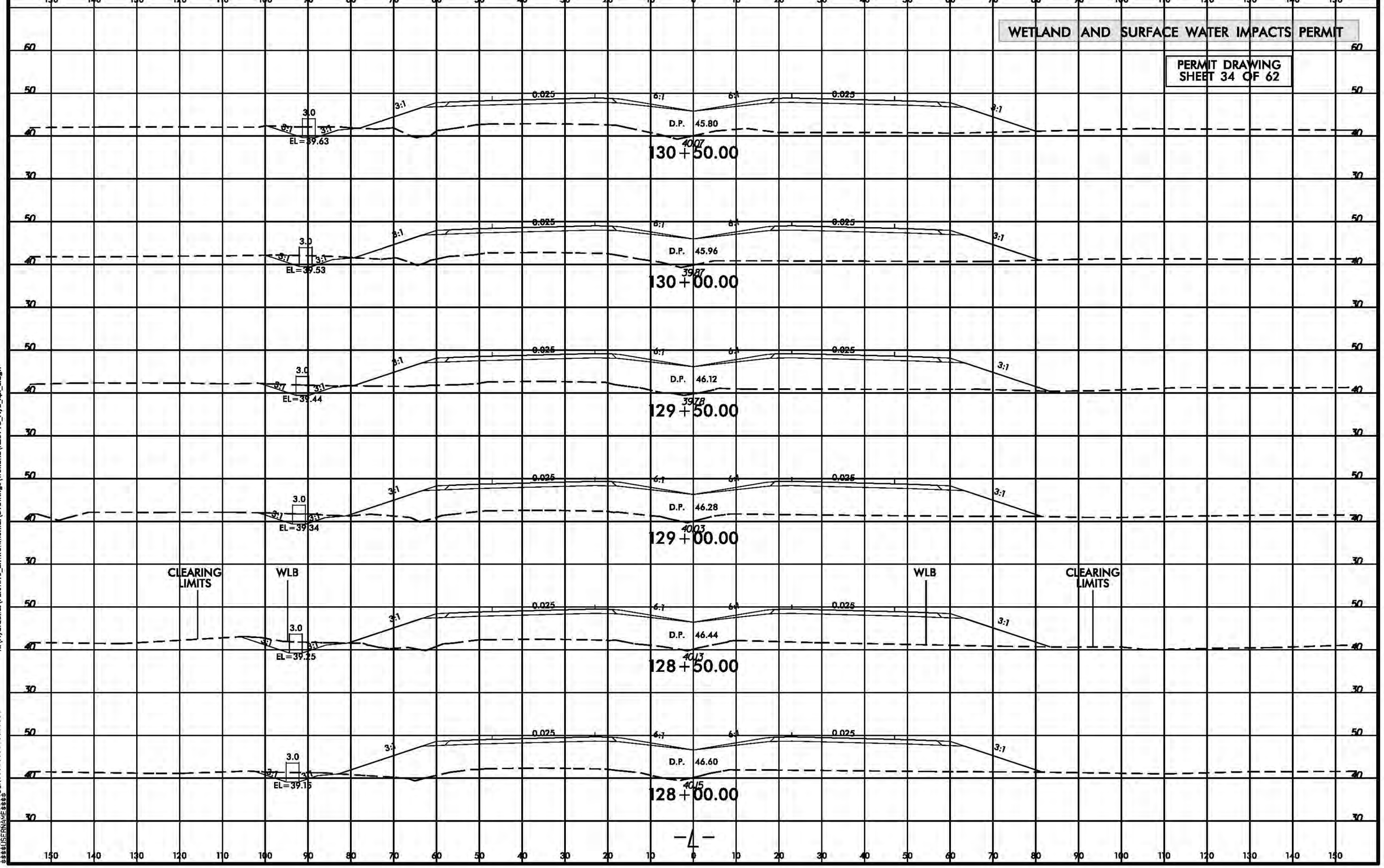
$$$$$$$SYSTIME$$$$$
$$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-48

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 34 OF 62



8/23/99

2/6/2014
epsaller
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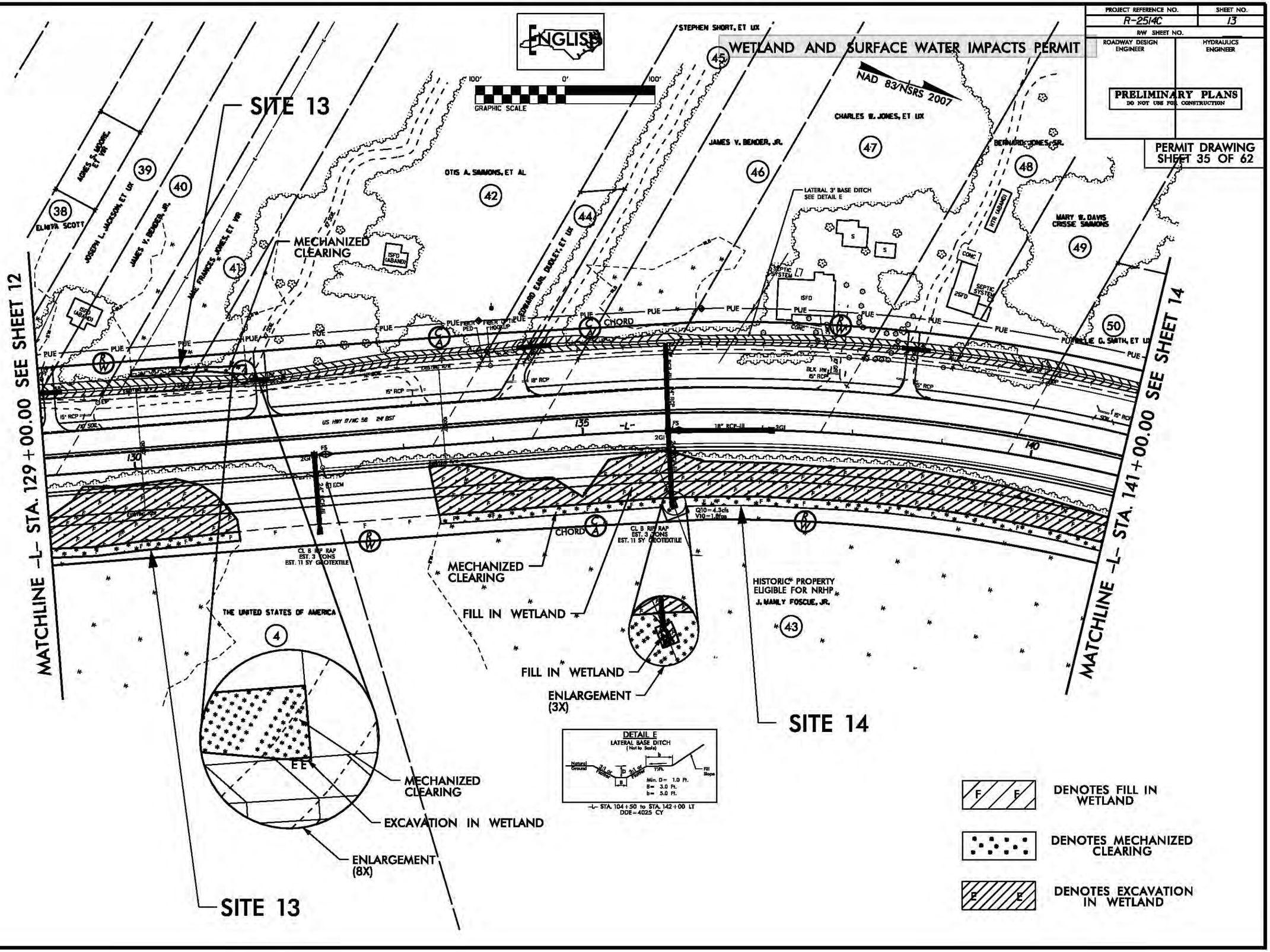
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 35 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



8/17/99

REVISIONS

4/23/2014
epseiler
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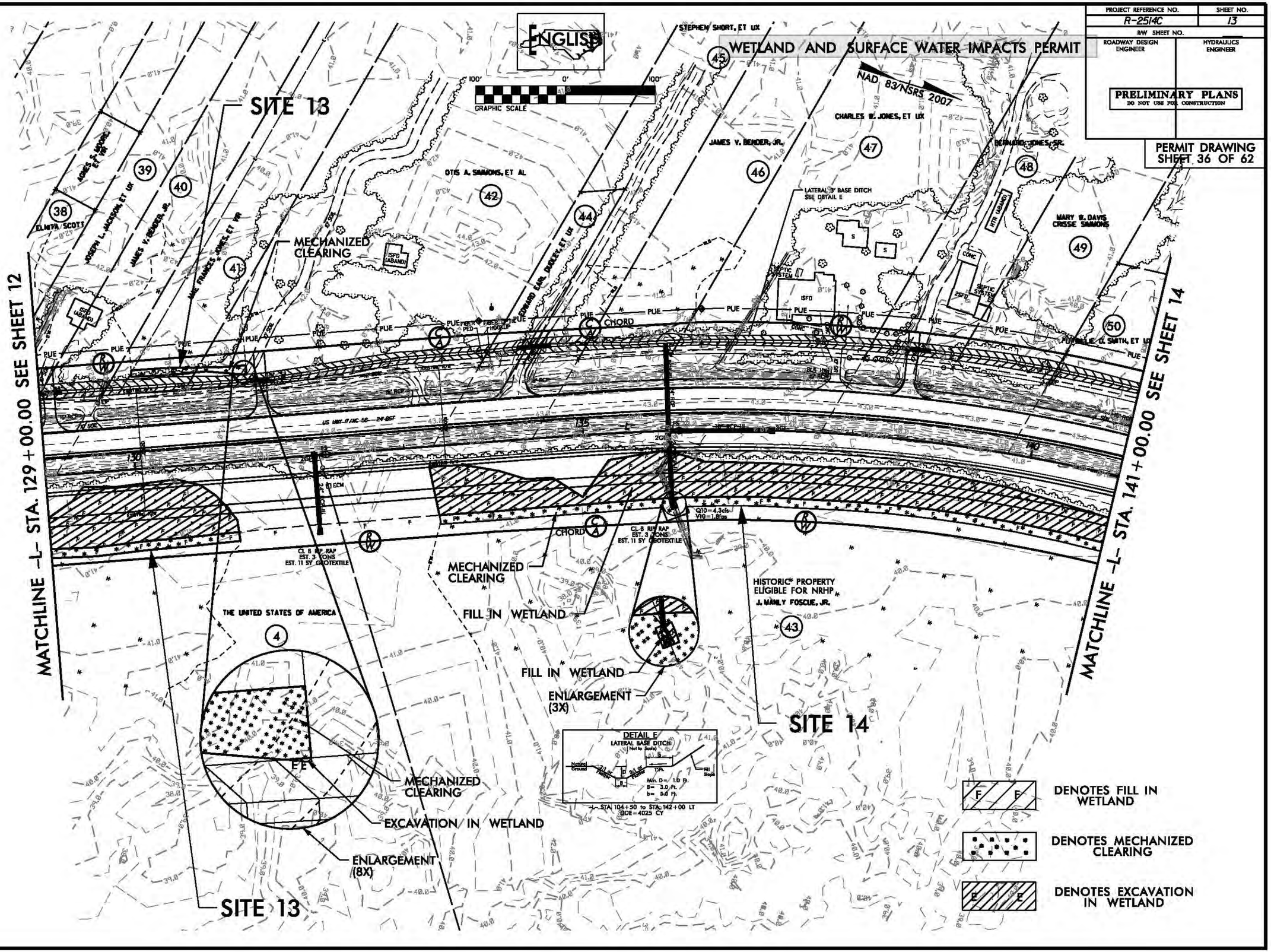
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGNSIZE$$$$$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 36 OF 62



8/17/99

REVISIONS

4/23/2014
epseiler
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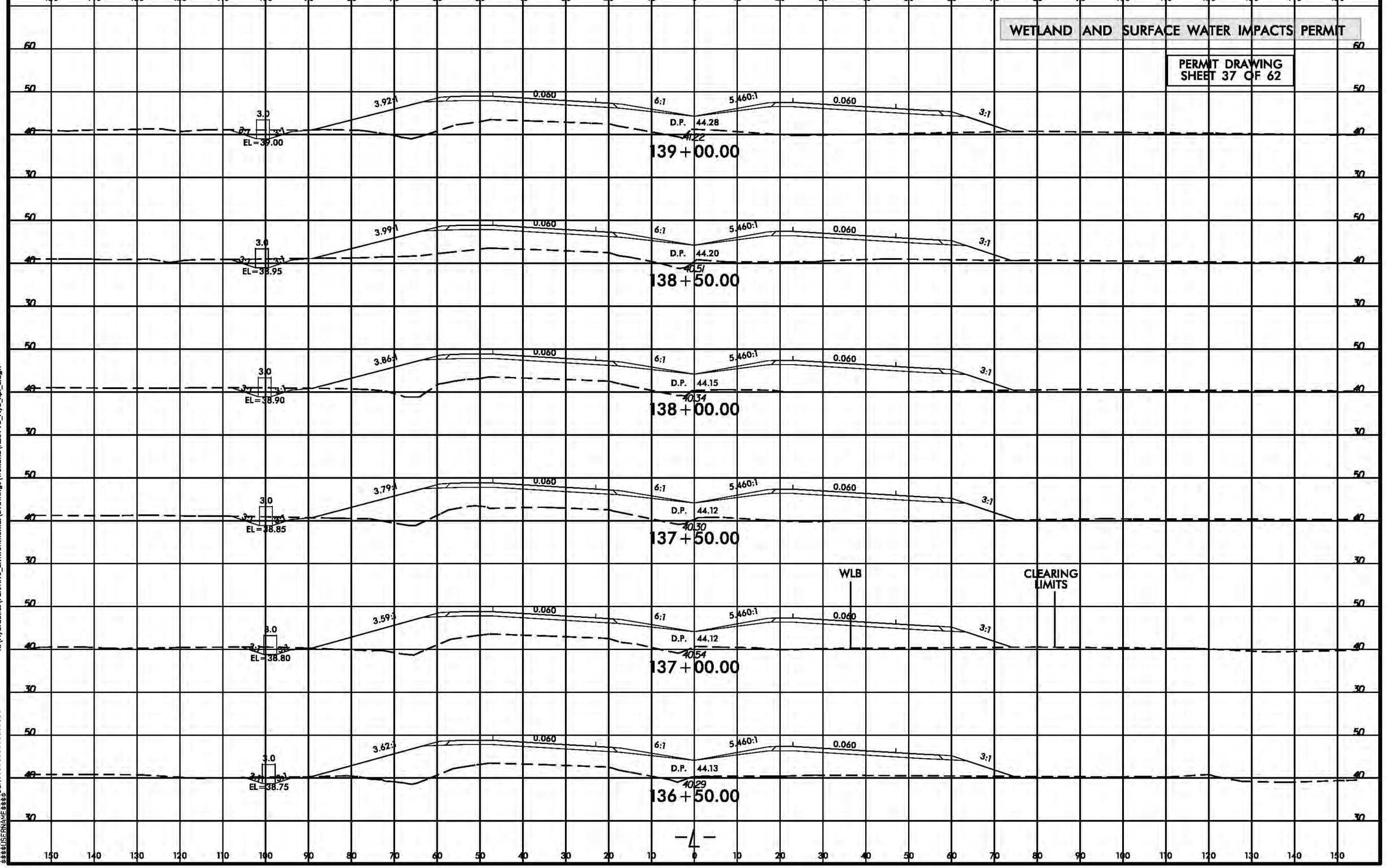
$$$$$$$SYSTIME$$$$$$
$$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-51

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 37 OF 62



8/23/99

2/6/2014
epsaller
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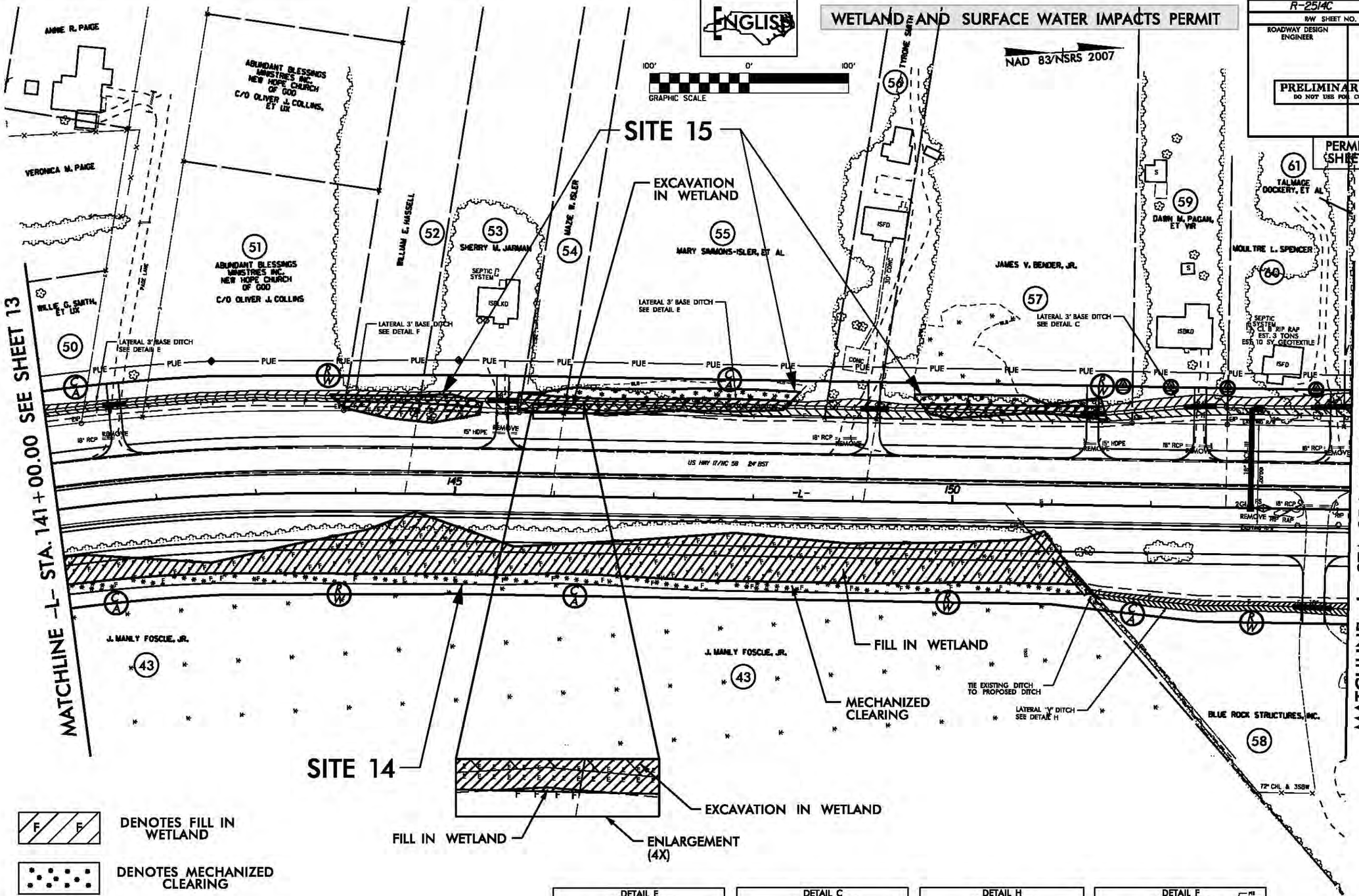
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 38 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



8/17/99

REVISIONS

2/6/2014
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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

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

MATCHLINE -L- STA. 141+00.00 SEE SHEET 13

MATCHLINE -L- STA. 154+00.00 SEE SHEET 15

ANNIE R. PAGE

VERONICA M. PAGE

ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS, LIX

51 ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J. COLLINS

WILLIE G. SMITH, ET UX

50

WILLIAM E. MASSELL

52

53 SHERRY M. JARMAN

SEPTIC SYSTEM

ISBKD

MAZIE R. ISLER

54

55 MARY SIMMONS-ISLER, ET AL

TYRONE SMITH

56

ISFD

JAMES V. BENDER, JR.

57

59 DAWN M. PAGAN, ET VIR

61 TALMADGE DOCKERY, ET AL

MOULTRIE L. SPENCER

60

SEPTIC SYSTEM CL B RIP RAP EST. 3 TONS EST. 10' BY GEOTEXTILE

ISFD

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL C

PUE

REMOVE

US HWY 17/NC 58 24 FEET

145

150

J. MANLY FOSCUE, JR.

43

FILL IN WETLAND

MECHANIZED CLEARING

TIE EXISTING DITCH TO PROPOSED DITCH

LATERAL "V" DITCH SEE DETAIL H

BLUE ROCK STRUCTURES, INC.

58

72" CHL & 36" CSP

SITE 14

EXCAVATION IN WETLAND

FILL IN WETLAND

ENLARGEMENT (4X)

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES EXCAVATION IN WETLAND

DETAIL E
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1 Max. Fill Slope, D, B, 1 Yr., 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 G
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1 Max. Fill Slope, D, B, b, 1 Yr., 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, 3:1 Max. Fill Slope, D, b, 1 Yr., 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, B, b, 1 Yr., 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
epsellar
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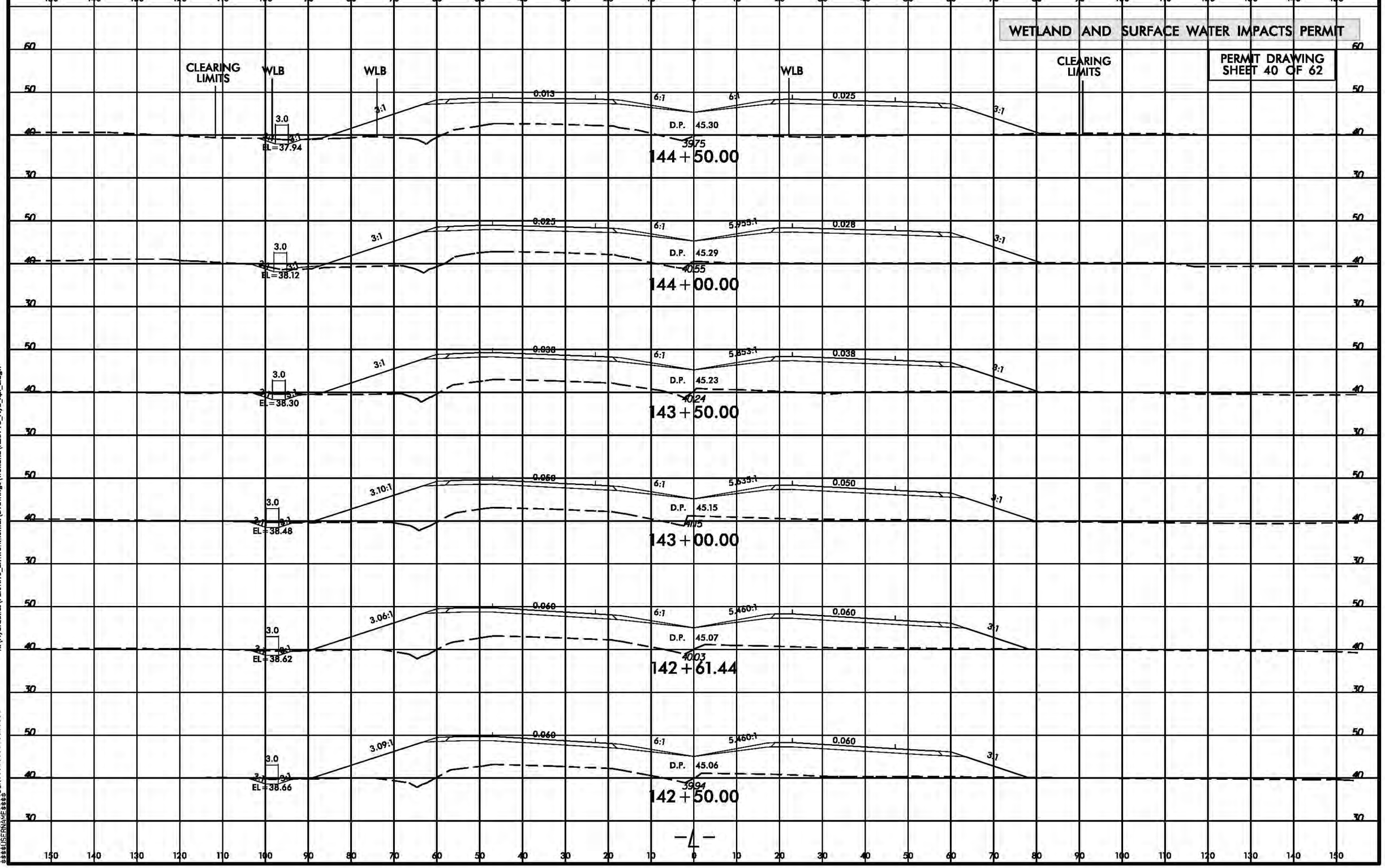
WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 40 OF 62



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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

PERMIT DRAWING
SHEET 41 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

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
HTR (ABAND)
EARNEST HILL, JR., ET UX
EDDIE HUMPHREY
TALMAGE DOCKERY, ET AL
JACK L. BROWN, ET UX
CHRISTINE DUDLEY MORRIS
LINWOOD WILLIAMS HEIRS
MARY L. WHITE
LATERAL 3' BASE DITCH SEE DETAIL C
CLASS B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE
CHARLES HARGETT
LONELL MATTOCKS, ET UX
JAMES V. BENDER, JR.
HENRY LEE BROWN
EARNEST HILL, JR.
ALEXANDER SMITH, III
CLASS B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
VAN S. SMITH
HENRY D. SMITH
FLORETTA BRYANT, ET VIR
US 17/NC 58 24' BST
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.
MABEL S. WEAVER
MABEL S. WEAVER, ET VIR
JAME B. SMALLWOOD, JR.
MABEL S. WEAVER, ET VIR
JAMES NELSON SMALLWOOD
JAME B. SMALLWOOD, JR.
CARL JUNIOR KONICE
ROSA LEE WILLIAMS
ELIZABETH EVANS FRANKS
JAMES NELSON SMALLWOOD
MABEL S. WEAVER
ARDELL DUDLEY, ET UX
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

8/17/99

REVISIONS

4/23/2014
epseller
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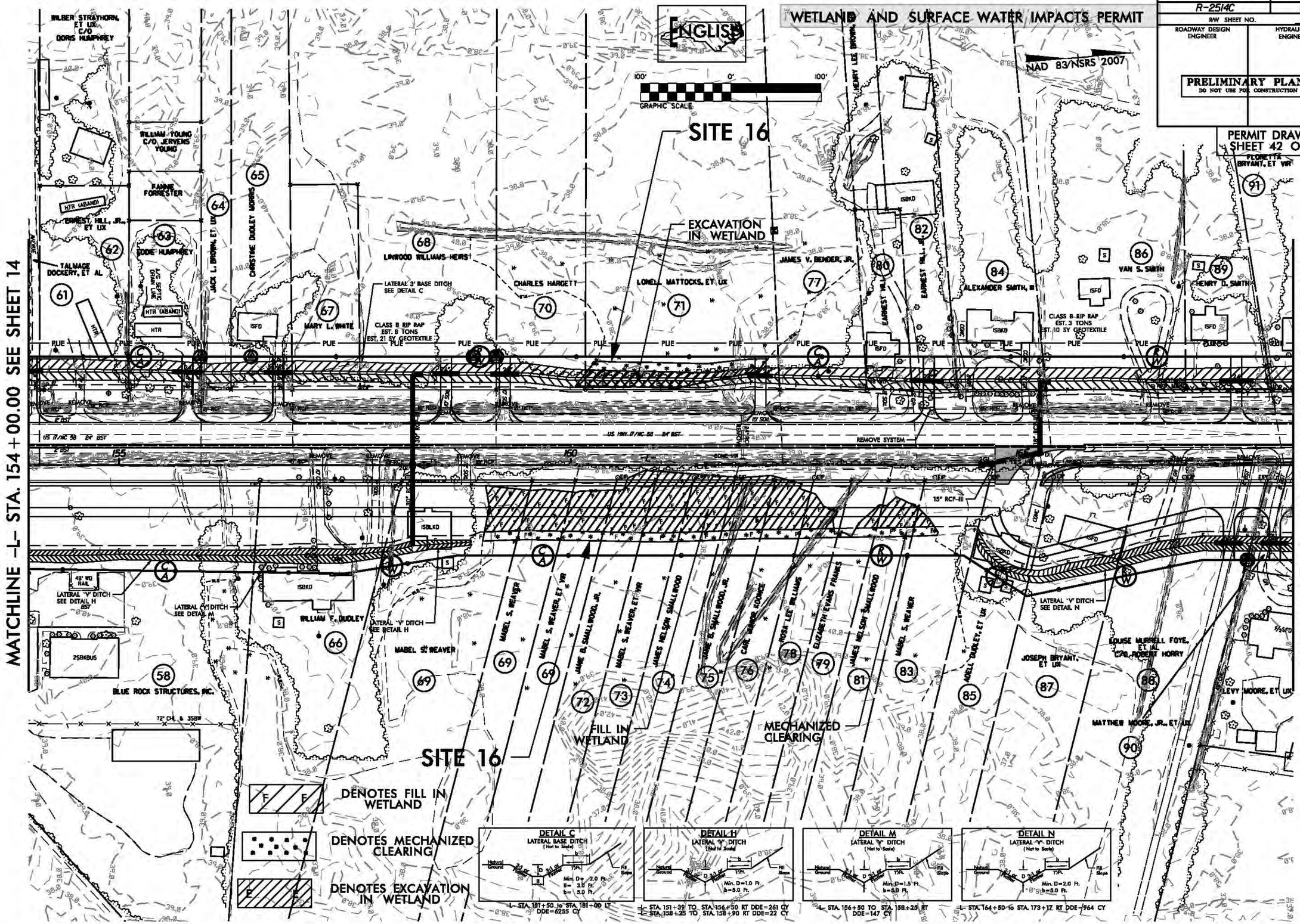
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 42 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



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REVISIONS

4/23/2014
epseller
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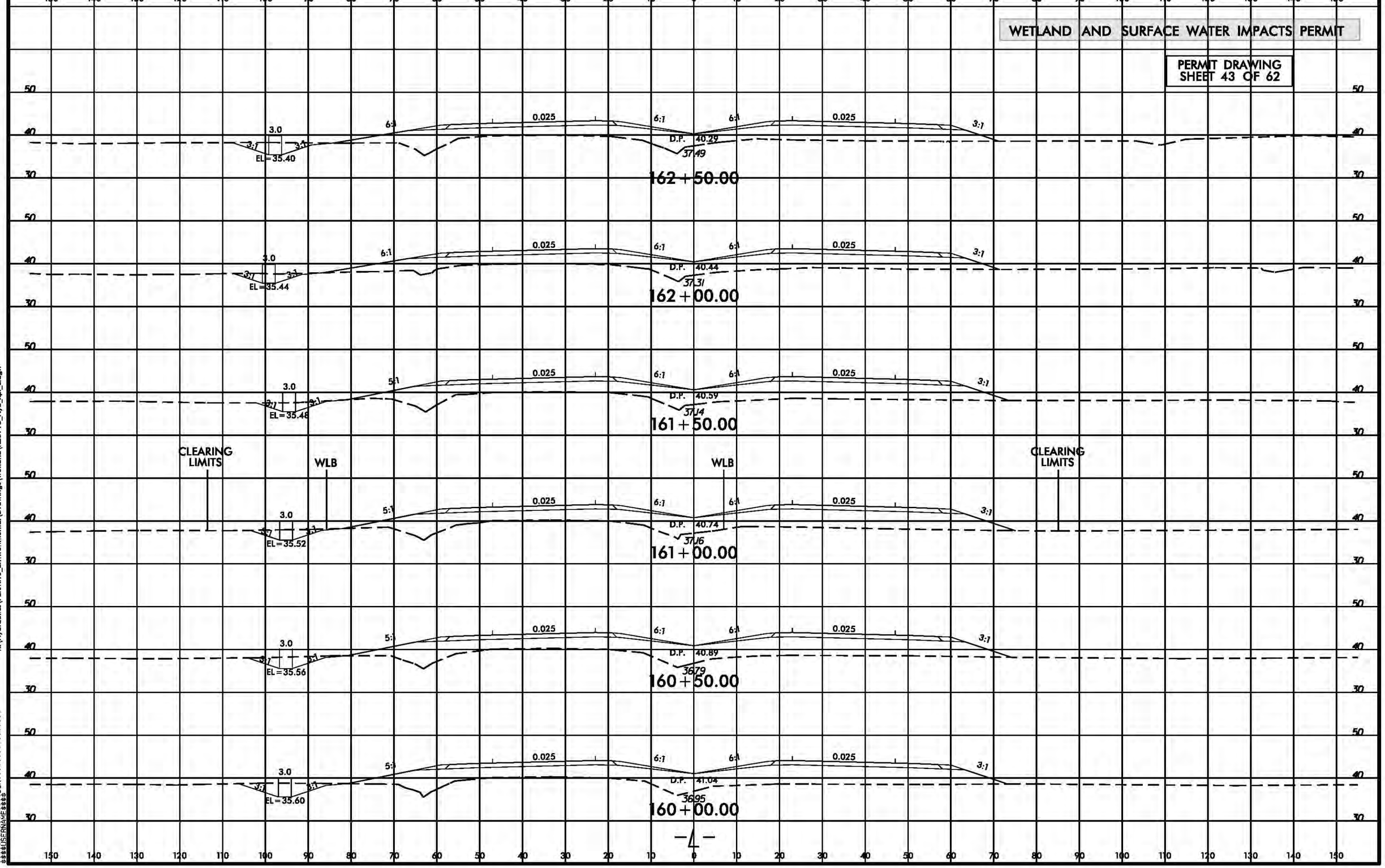
DGN: 8
TIME: 8
USER NAME: 8

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-59

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 43 OF 62



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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

PERMIT DRAWING
SHEET 44 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

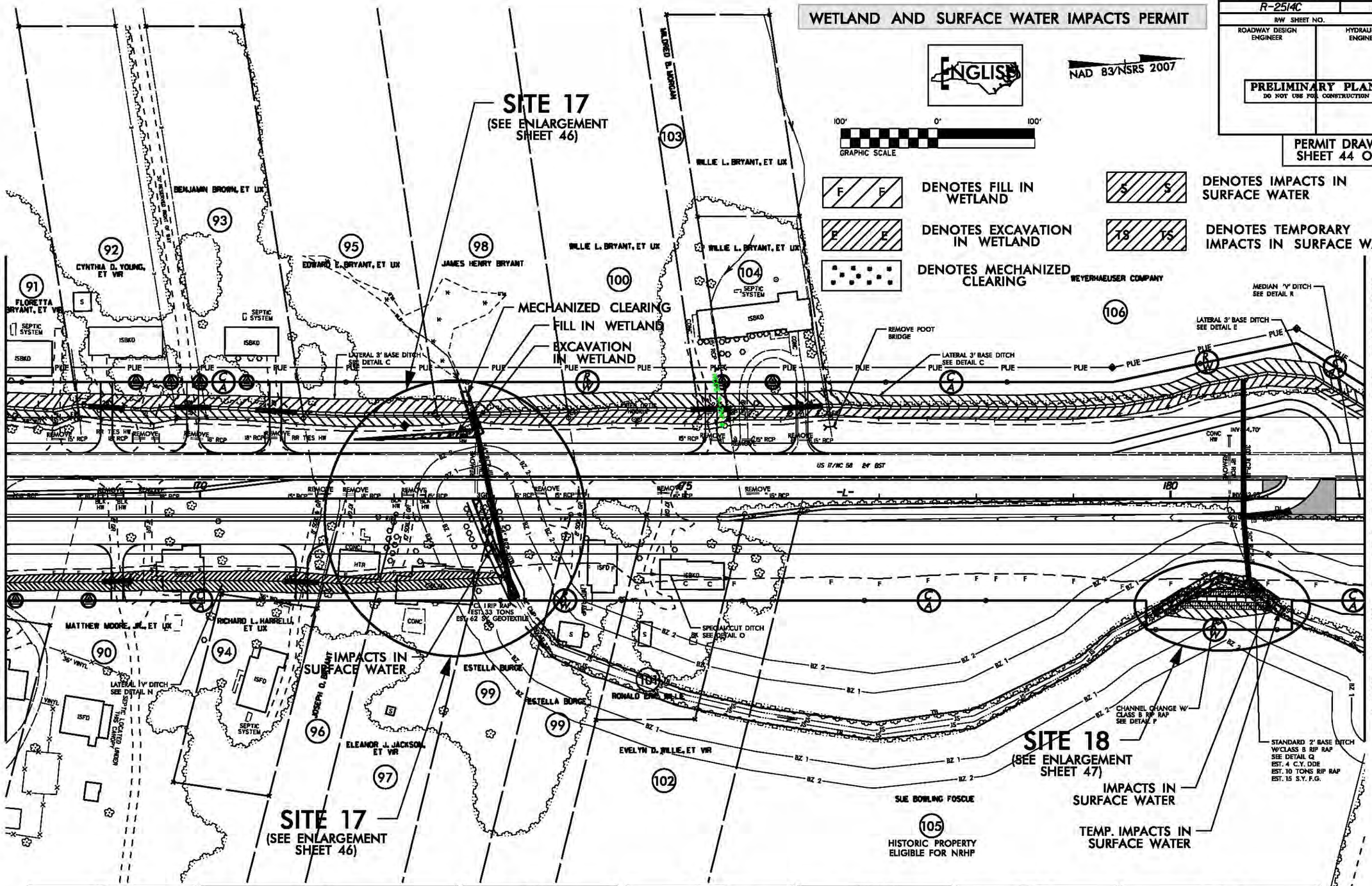
F F DENOTES FILL IN WETLAND

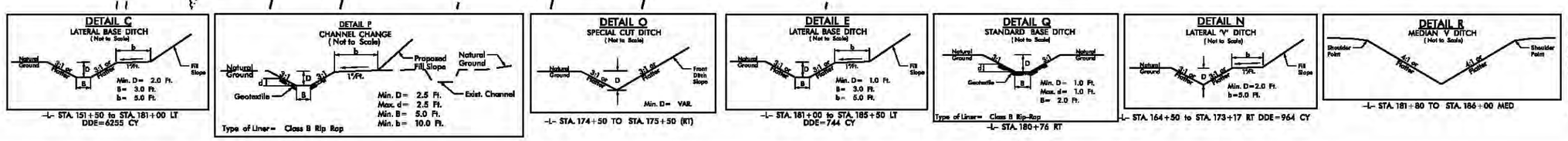
E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER





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REVISIONS

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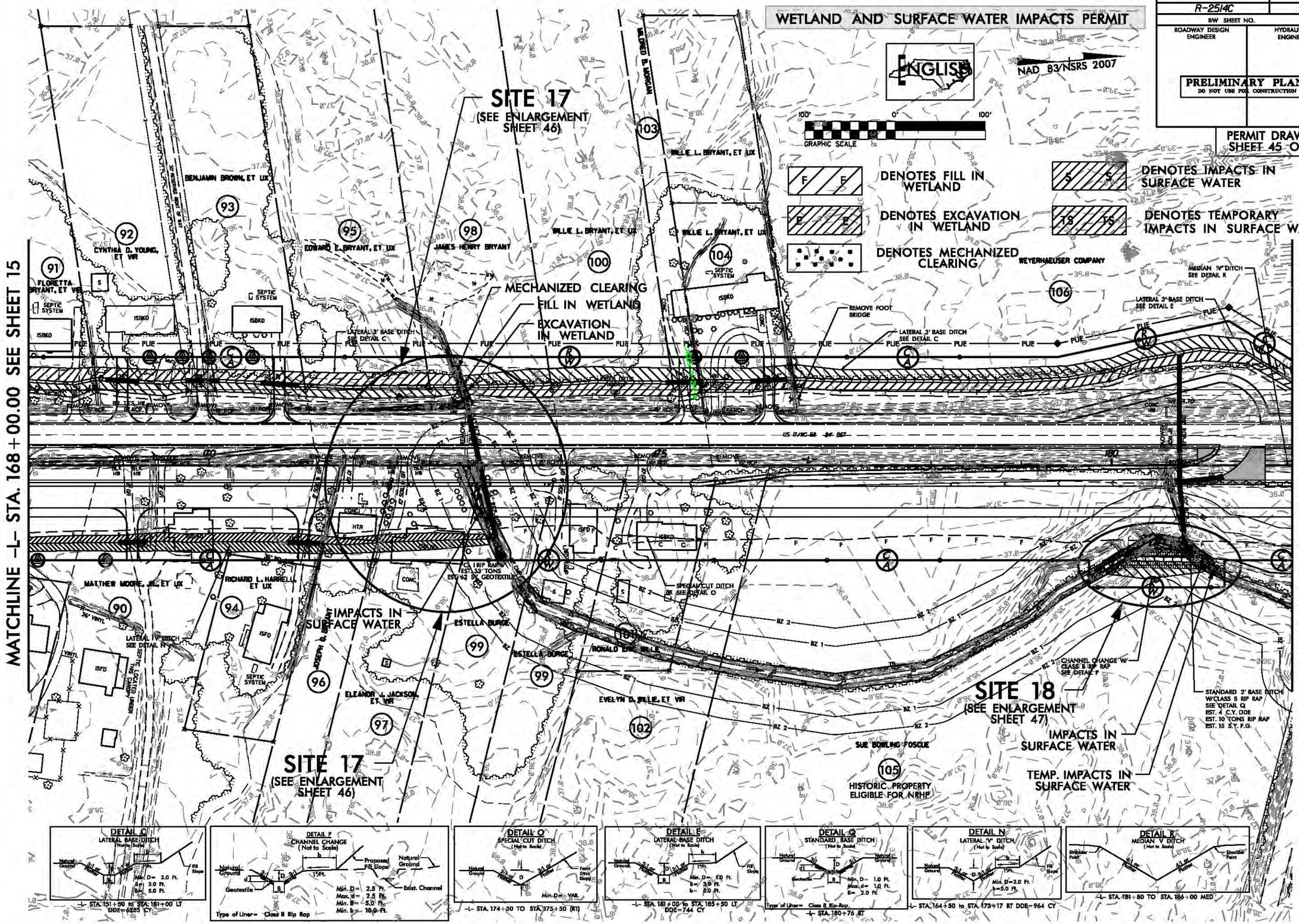
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 45 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



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REVISIONS

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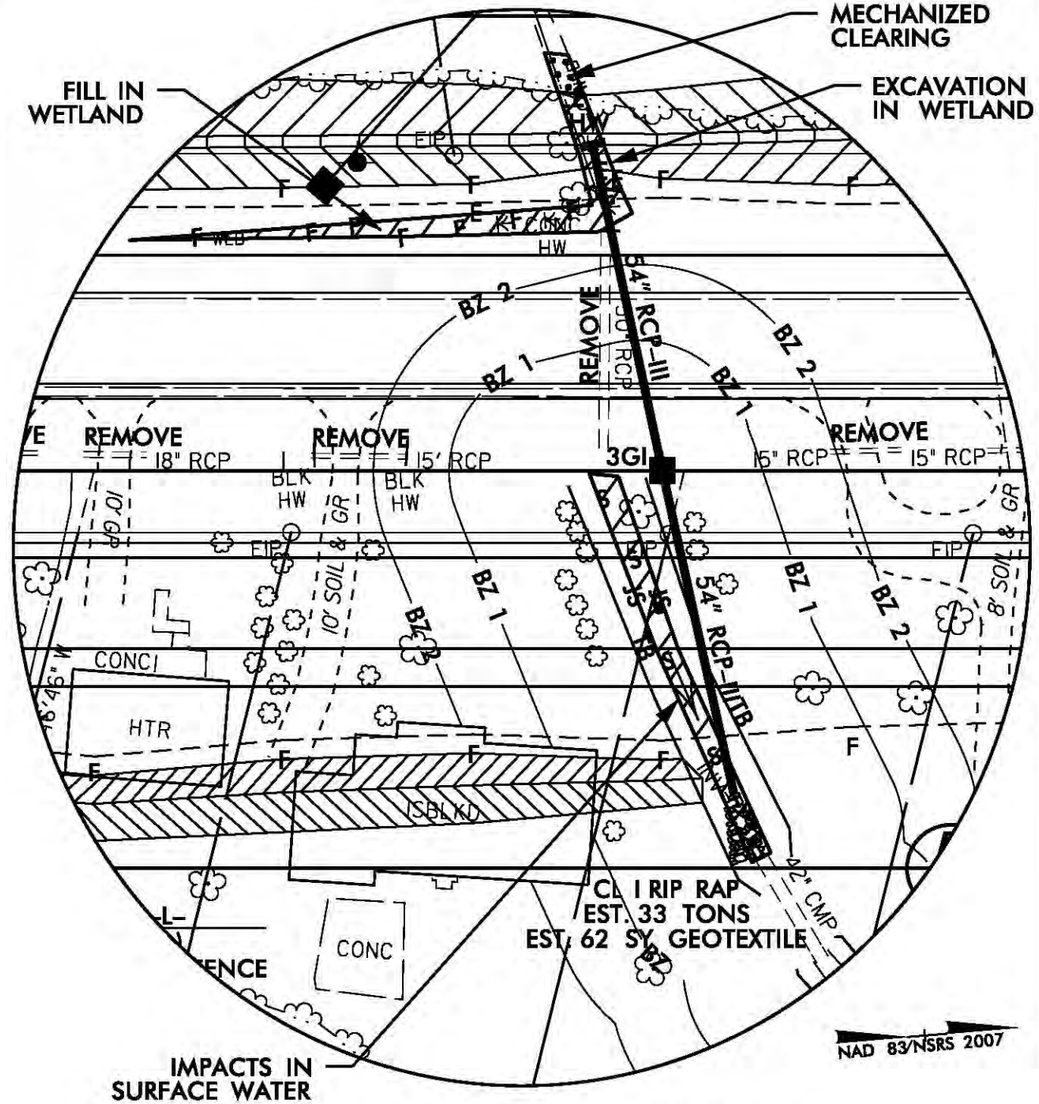


SITE 17 ENLARGEMENT

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

40' 0 40'

GRAPHIC SCALE

NCDOT

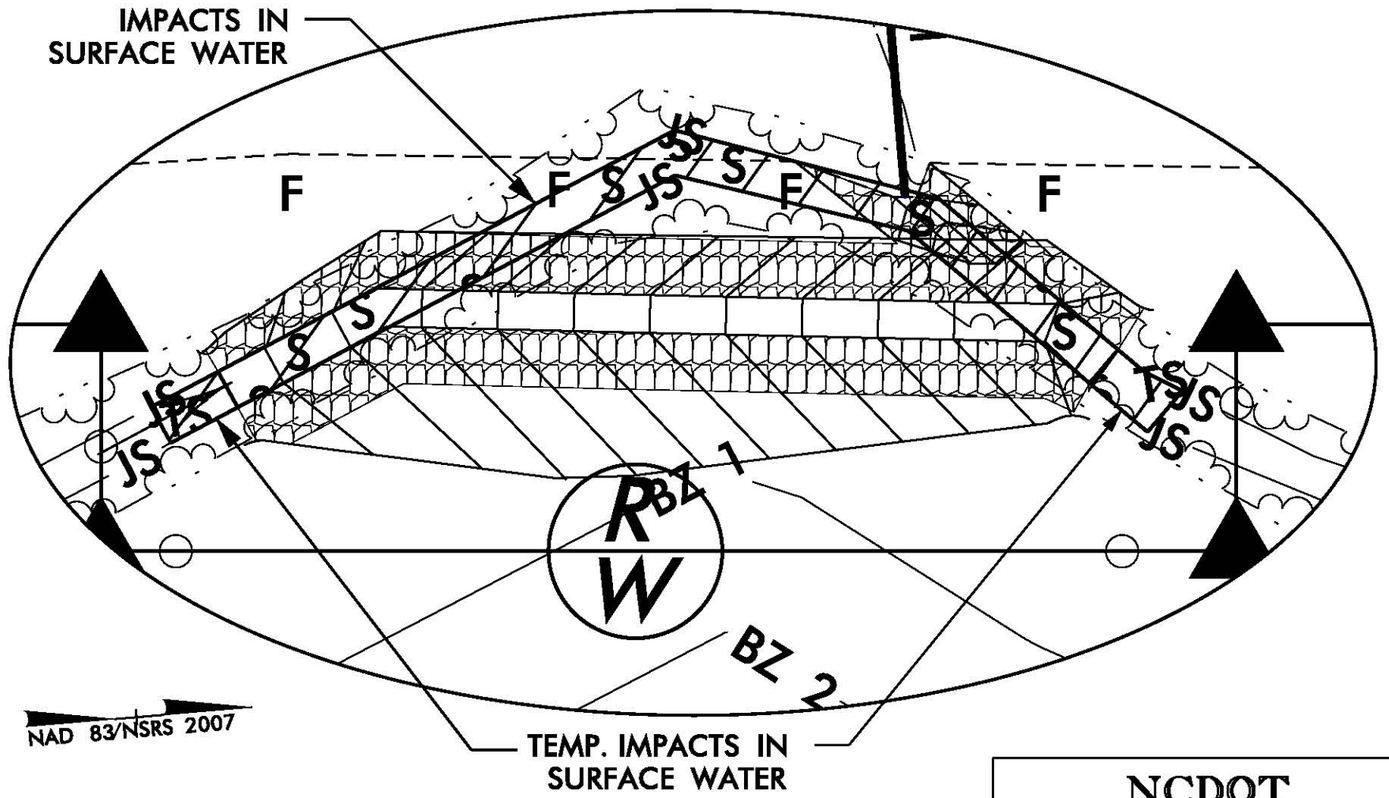
DIVISION OF HIGHWAYS

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

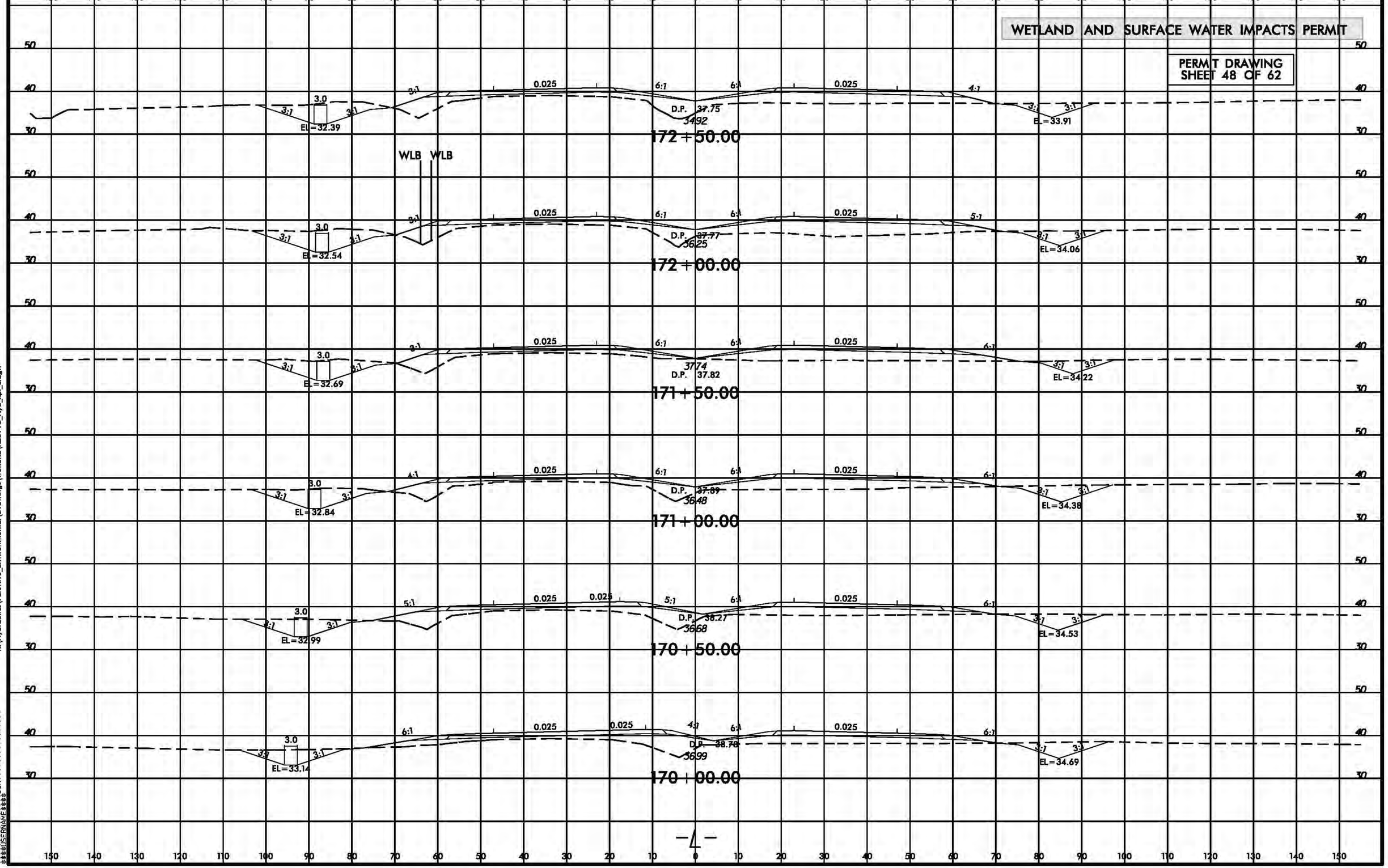
NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.4 (R-2514C)
US 17 FROM NORTH OF
MAYSVILLE TO SOUTH OF
NC 58 NEAR POLLOCKSVILLE

SHEET 47 OF 62 04/24/13

PROJ. REFERENCE NO.	SHEET NO.
R-2514C	X-63

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 48 OF 62



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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 49 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE

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. ULLISON, 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)

THERON D. HUMPHREY (110)

MEDIAN "V" DITCH SEE DETAIL R

LATERAL 3' BASE DITCH SEE DETAIL E

SITE 19
(SEE ENLARGEMENT SHEET 51)

US HWY 17/NC 58 24' BST

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

BANK STABILIZATION SEE DETAIL AQ

TEMPORARY IMPACTS IN SURFACE WATER DUE TO BANK STABILIZATION

IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

DETAIL AQ
BANK STABILIZATION
(Not to Scale)

Existing Retaining Wall; Natural Ground; Existing Ground Excavation; Natural Ground; Lay Back Banks at 3:1 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; 4:1 or Flatter; 4:1 or Flatter; Shoulder Point

-L- STA. 181+80 TO STA. 186+00 MED

DETAIL E
LATERAL BASE DITCH
(Not to Scale)

Natural Ground; 3:1 or Flatter; 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 or 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; 3:1; Natural Ground; 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 or 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; 3:1; Natural Ground; Min. D = 1.5 FT. B = 2 Ft.

-L- STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground; 3:1; 3:1 or Flatter; Fill Slope; 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 TIDE FROM -L- STA 194+20.00 TO STA 195+20.00 RT. ON PARCEL 110 (THERON D. HUMPHREY).

8/17/99

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$$$$$$$$USERNAME$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 50 OF 62

ENGLISH

NAD 83/NSRS 2007

GRAPHIC SCALE 100' 0' 100'

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. ALLISON, 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

MEDIAN "V" DITCH SEE DETAIL R
LATERAL 3' BASE DITCH SEE DETAIL E
GRAPE ARBOR
SEPTIC SYSTEM
CC'B RIP RAP EST. 9 TONS EST. 10 SY GEOTEXTILE
BANK STABILIZATION SEE DETAIL AQ
US HWY 17/NC 58 24' BST
RETAIN
TDE

DETAIL AQ
BANK STABILIZATION
(Not to Scale)
Existing Retaining Wall
Natural Ground
Existing Ground Excavation
Lay Back Banks at 3:1 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
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 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 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
3:1
3:1 or Flatter
Fill Slope
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

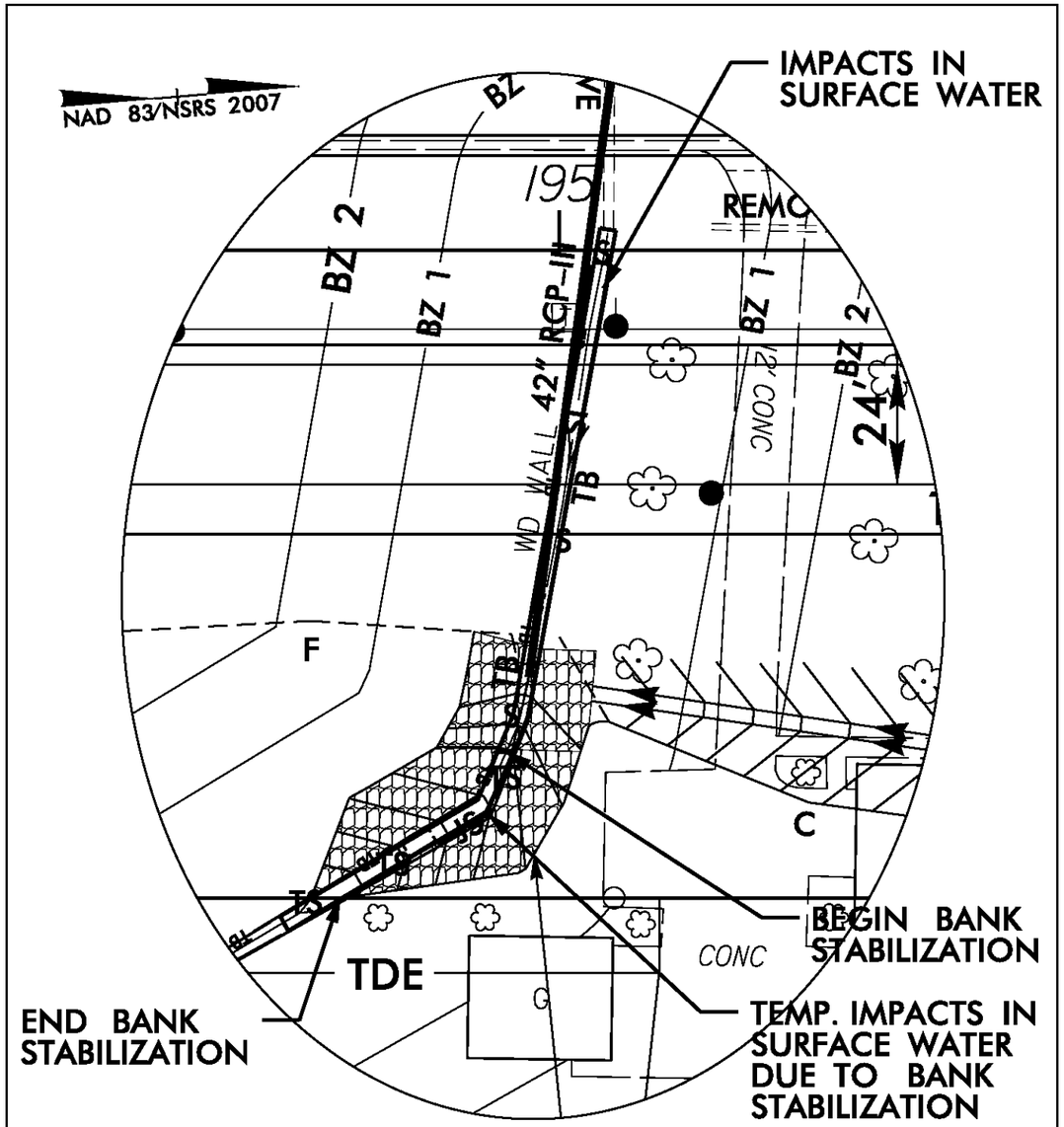
DENOTES IMPACTS IN SURFACE WATER

REVISIONS

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).

8/17/99

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



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

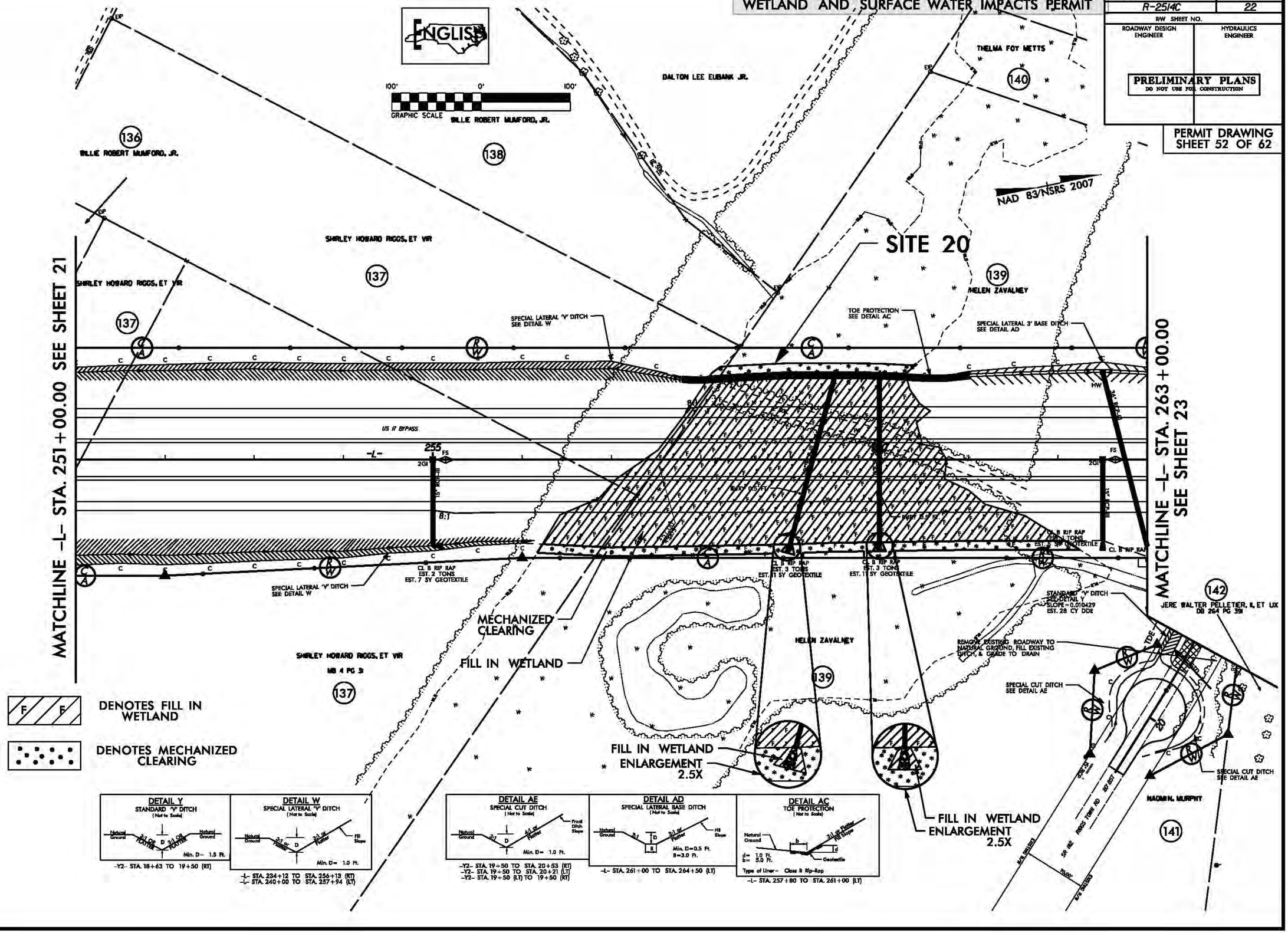
SHEET 51 OF 62 04/24/13

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	22
R/W 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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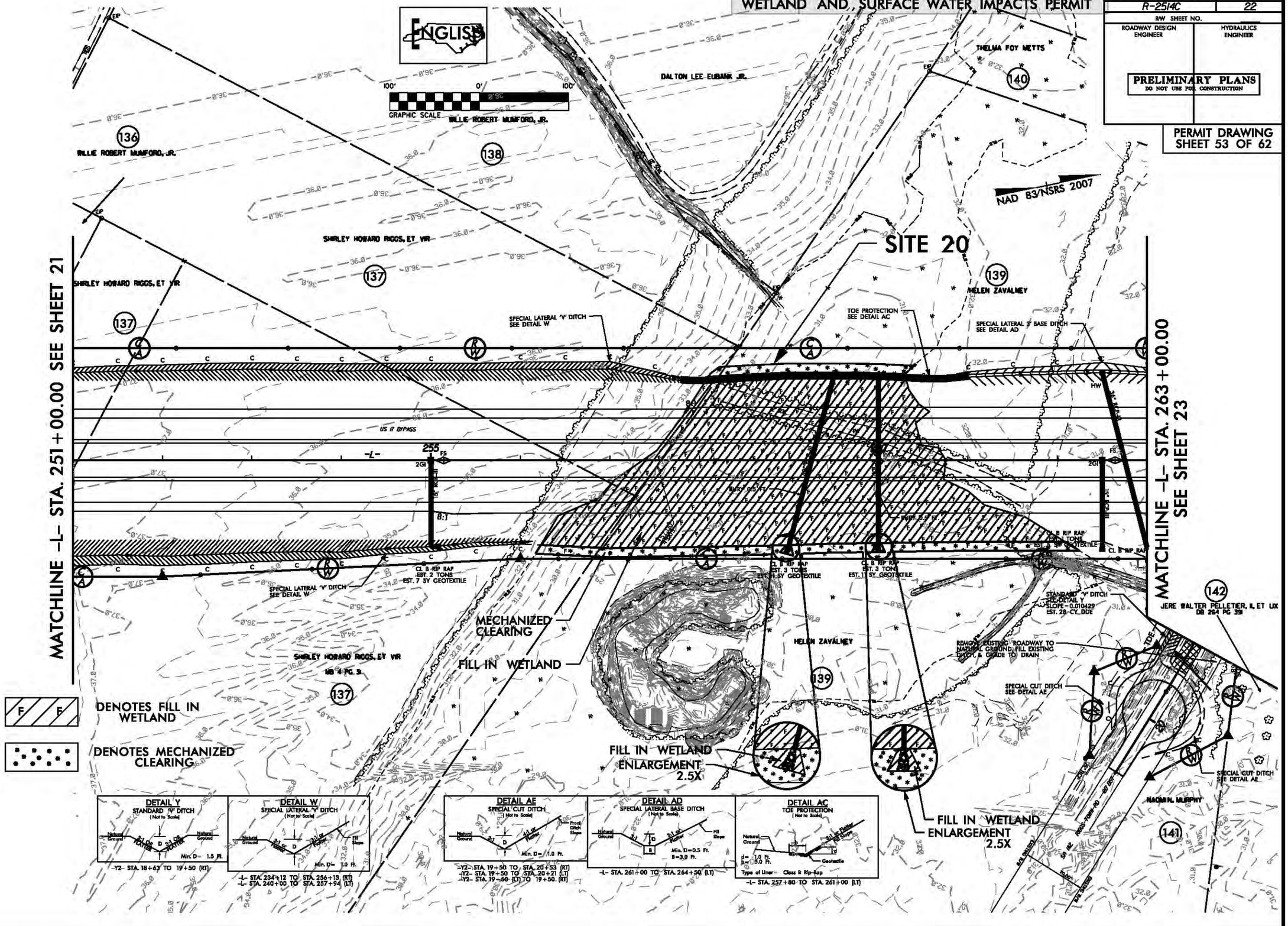
SYSTIME$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 53 OF 62



8/17/99

REVISIONS

4/23/2014
epsaller
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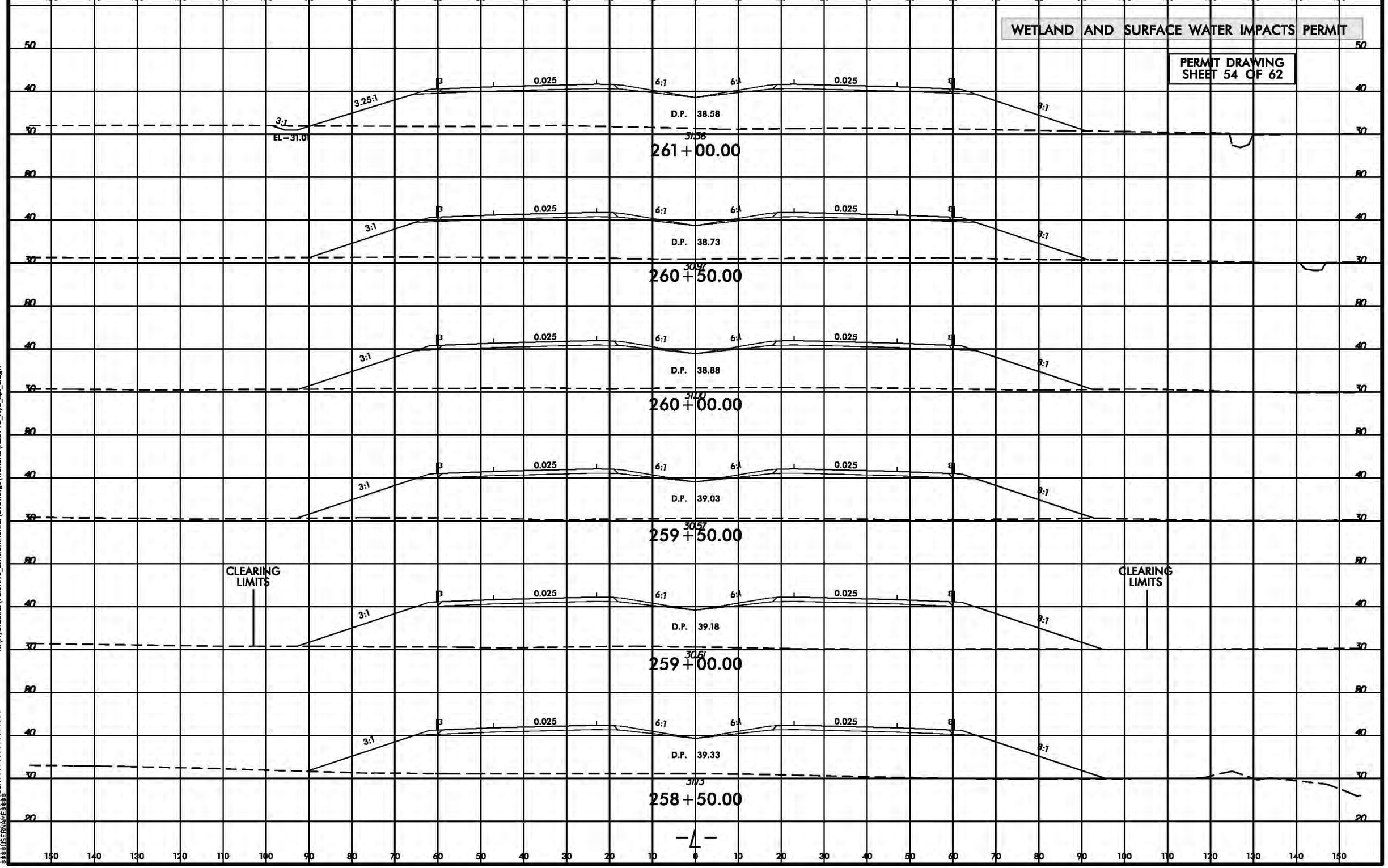
$$$$$$$SYSTIME$$$$$$$
$$$$$$$DGN$$$$$$$
$$$$$$$USERNAME$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 54 OF 62



8/23/99
2/6/2014
epseller
R:\Hydraulics\PERMITS_Environmental\Drawings\wetland\R2514C_Hyd_xpl_L.dgn
$$$$$$SYSTIME$$$$$$
$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

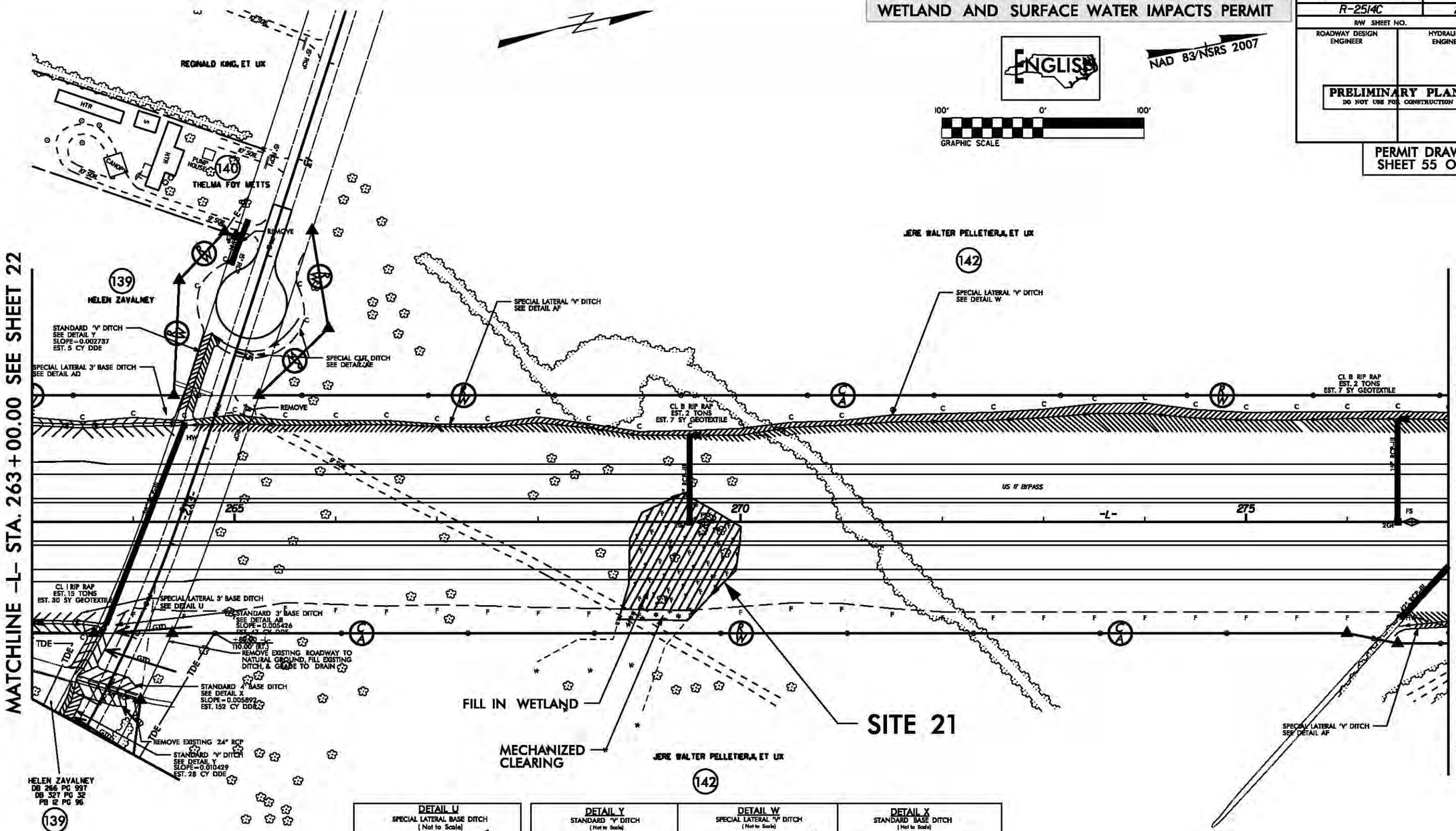
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 55 OF 62

ENGLISH

NAD 83/NSRS 2007

100' 0' 100'
GRAPHIC SCALE



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 — 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

8/17/99

REVISIONS

4/23/2014
epsailer
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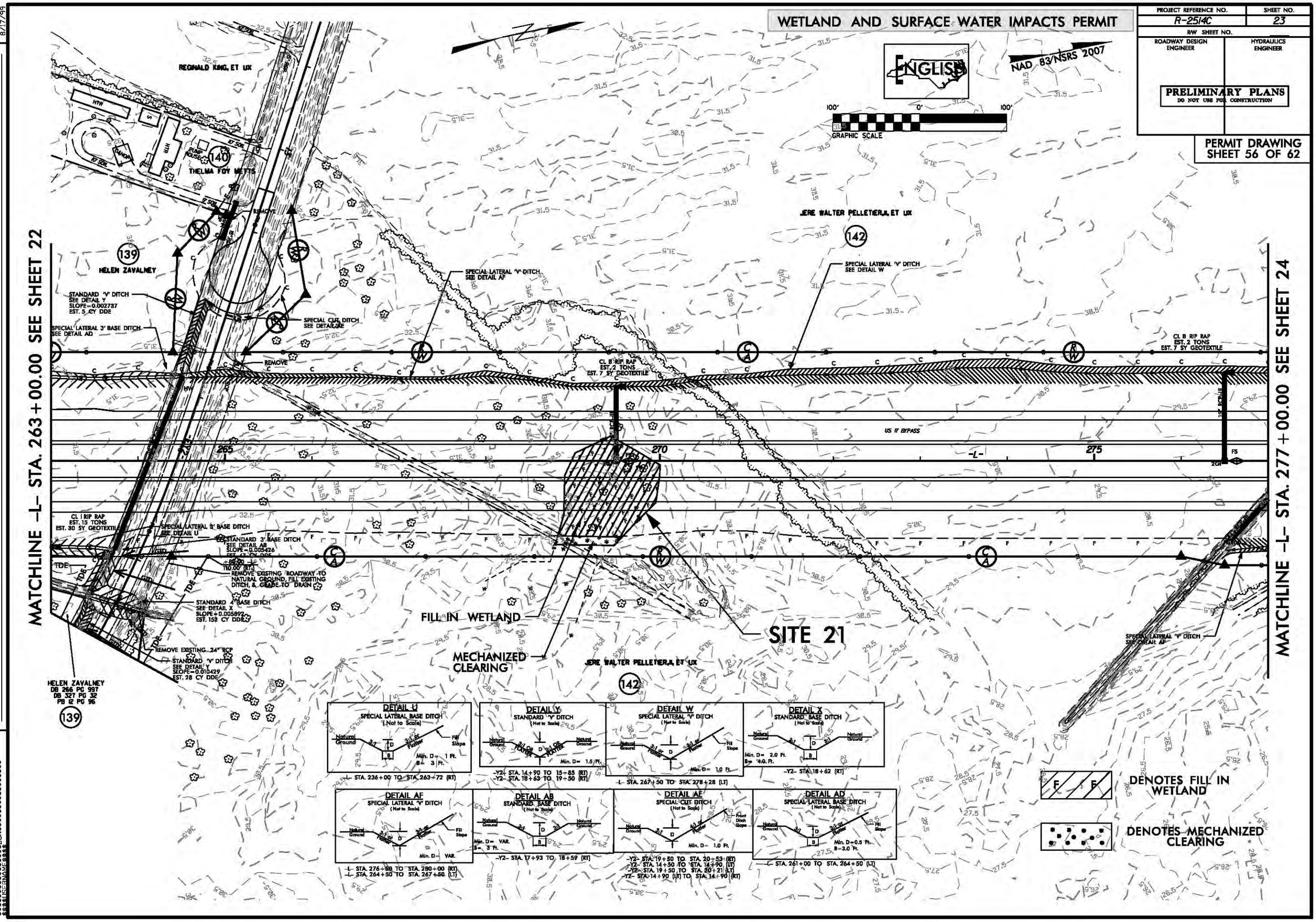
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 56 OF 62



8/17/99

REVISIONS

4/23/2014
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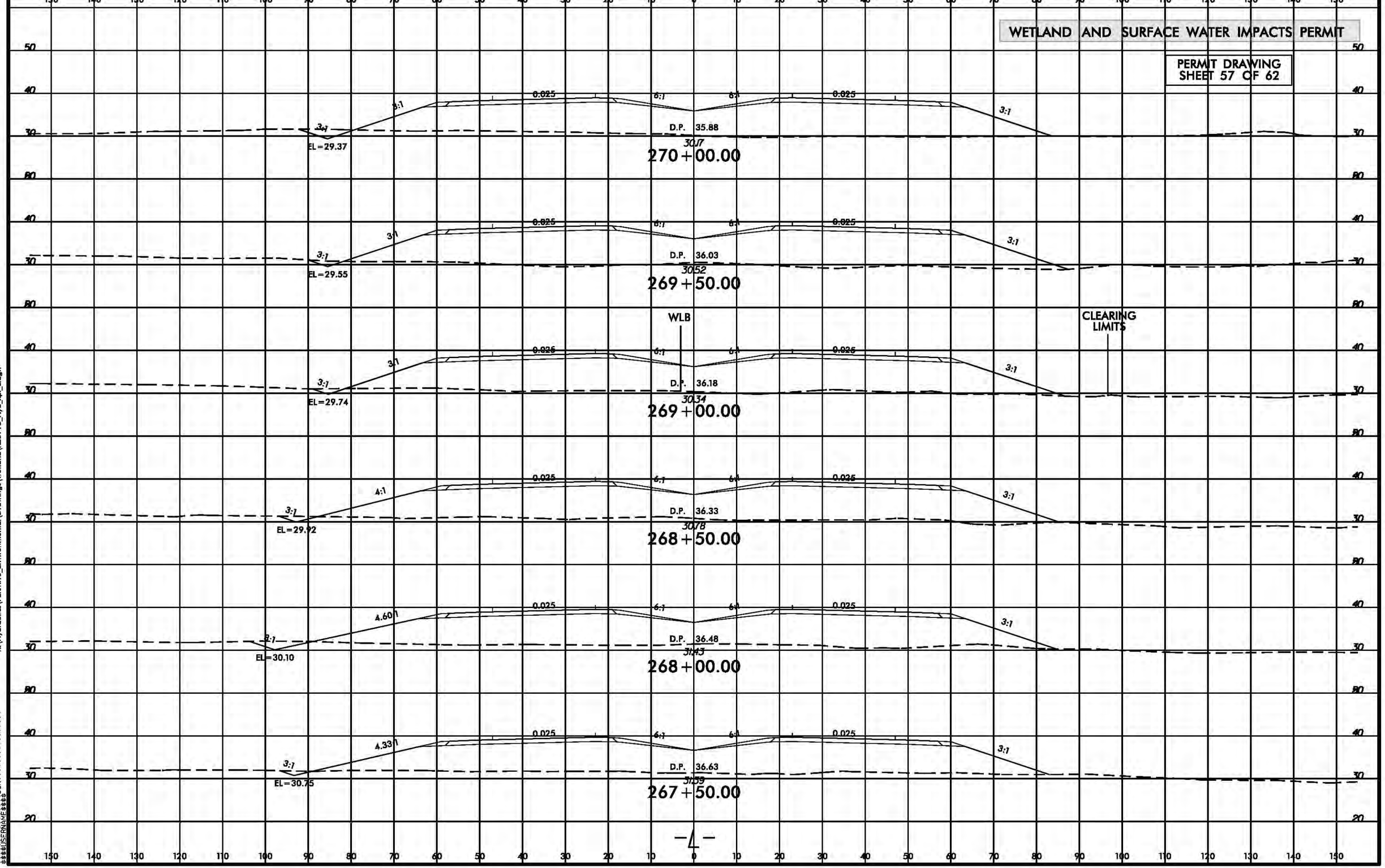
$$$$$$$$STLENWIS$$$$$$$$

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 57 OF 62



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2/6/2014
epsellar
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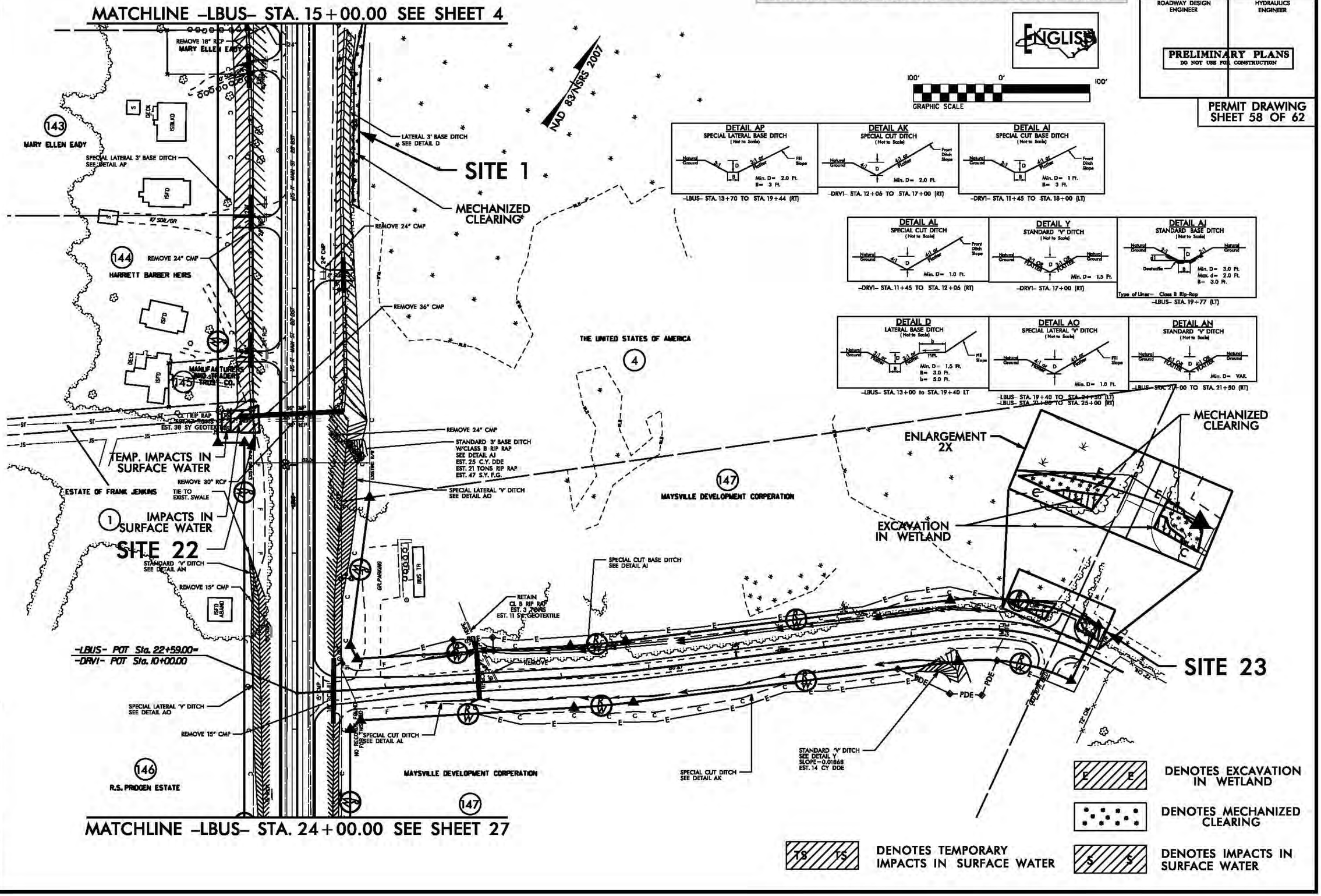
$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$DGNIS$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

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 58 OF 62

WETLAND AND SURFACE WATER IMPACTS PERMIT



8/17/99

REVISIONS

4/23/2014
epsaller
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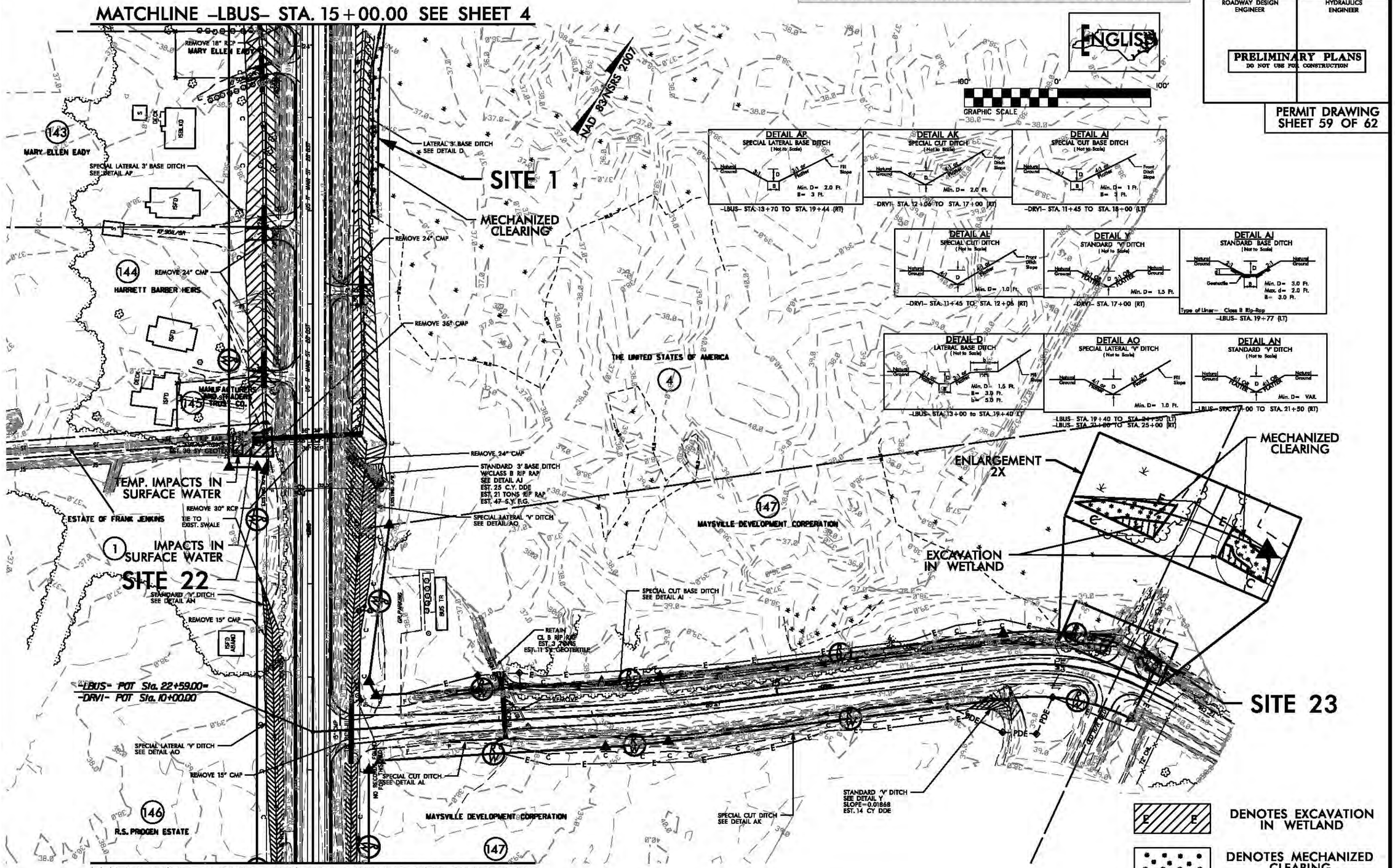
WETLAND AND SURFACE WATER IMPACTS PERMIT

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



8/17/99

REVISIONS

4/23/2014
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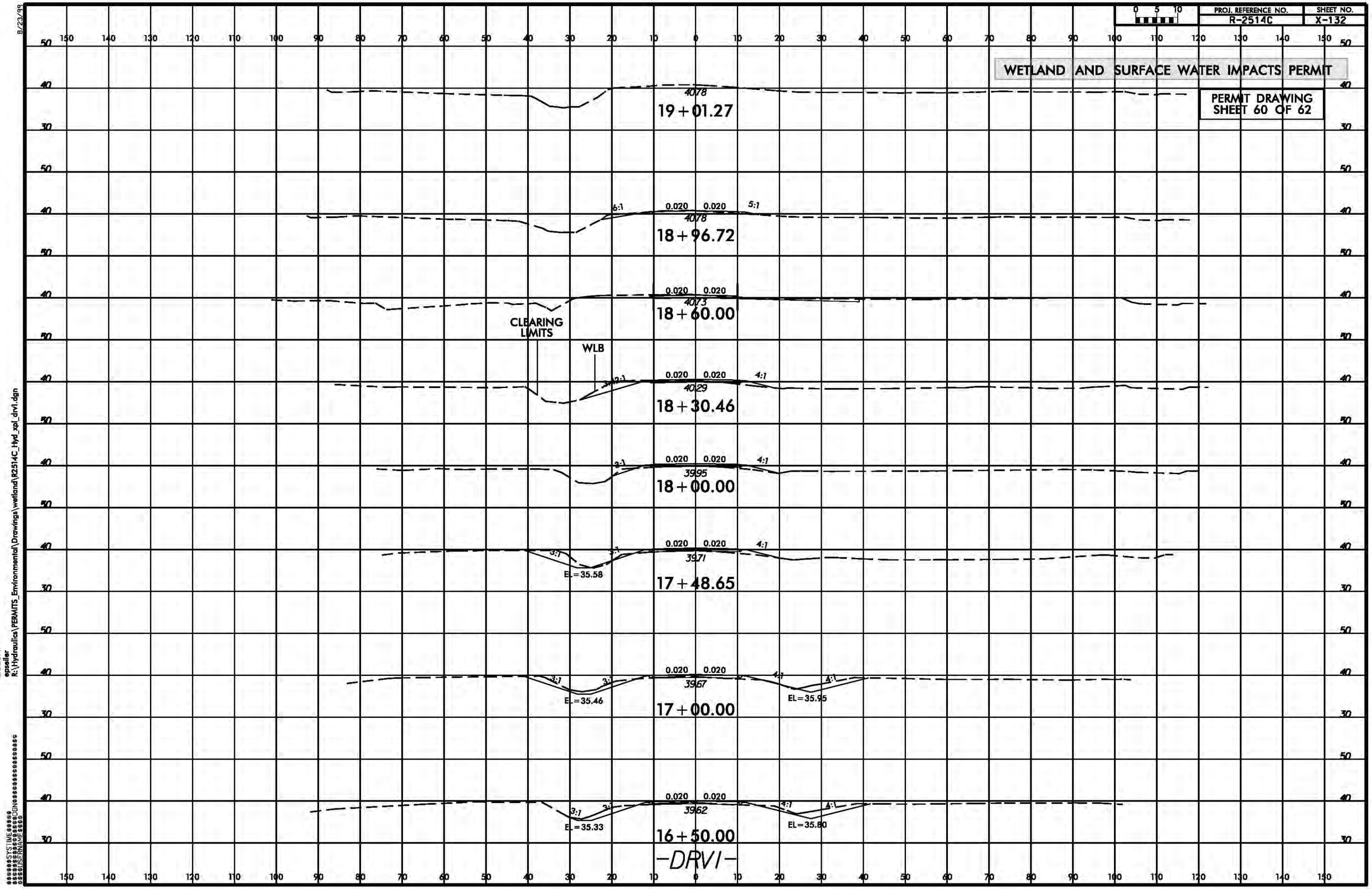
PROJ. REFERENCE NO.
R-2514C
SHEET NO.
X-132
WETLAND AND SURFACE WATER IMPACTS PERMIT
PERMIT DRAWING
SHEET 60 OF 62
19+01.27
4078
18+96.72
4078
18+60.00
4073
CLEARING LIMITS
WLB
18+30.46
4029
18+00.00
39.95
17+48.65
39.71
EL=35.58
17+00.00
39.67
EL=35.46
EL=35.95
16+50.00
39.62
EL=35.33
EL=35.80
0.020
6:1
5:1
4:1
3:1
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WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS						SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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		3.65			0.42	<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		0.01	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	13.78	0.00	0.17	2.60	<0.01	0.00	0.00	0	0	0

NOTES:

*Site 7 has an additional 0.06ac of unimpacted wetlands that are considered part of a total take but are not included in the impact summary table quantities above.

** 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

			WETLAND IMPACTS						SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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)
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						
***1D	-DET3- STA 18+54 TO	DETOUR 3						0.03					
	-DET3- STA 22+60												
***2D	-DET3- STA 25+93 TO	DETOUR 3			0.08			0.05					
	-DET3- STA 28+54												
*SUBTOTALS THIS SHEET:			0	4.24	0.08	0.23	1.00	0.08	0.06	0.01	379	88	0
*SUBTOTALS SHEET 1:			0	13.78	0.00	0.17	2.60	<0.01	0.00	0.00	0	0	0
*TOTALS:			0	18.02	0.08****	0.40	3.60	0.08****	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.

***** Detour impacts shown on separate DETOUR PERMIT DRAWINGS (6 sheets)

******0.01 acre of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures

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

-DET3- DETOUR SHEET

NOTE: USE FOR CONSTRUCTION OF DETOUR ONLY

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

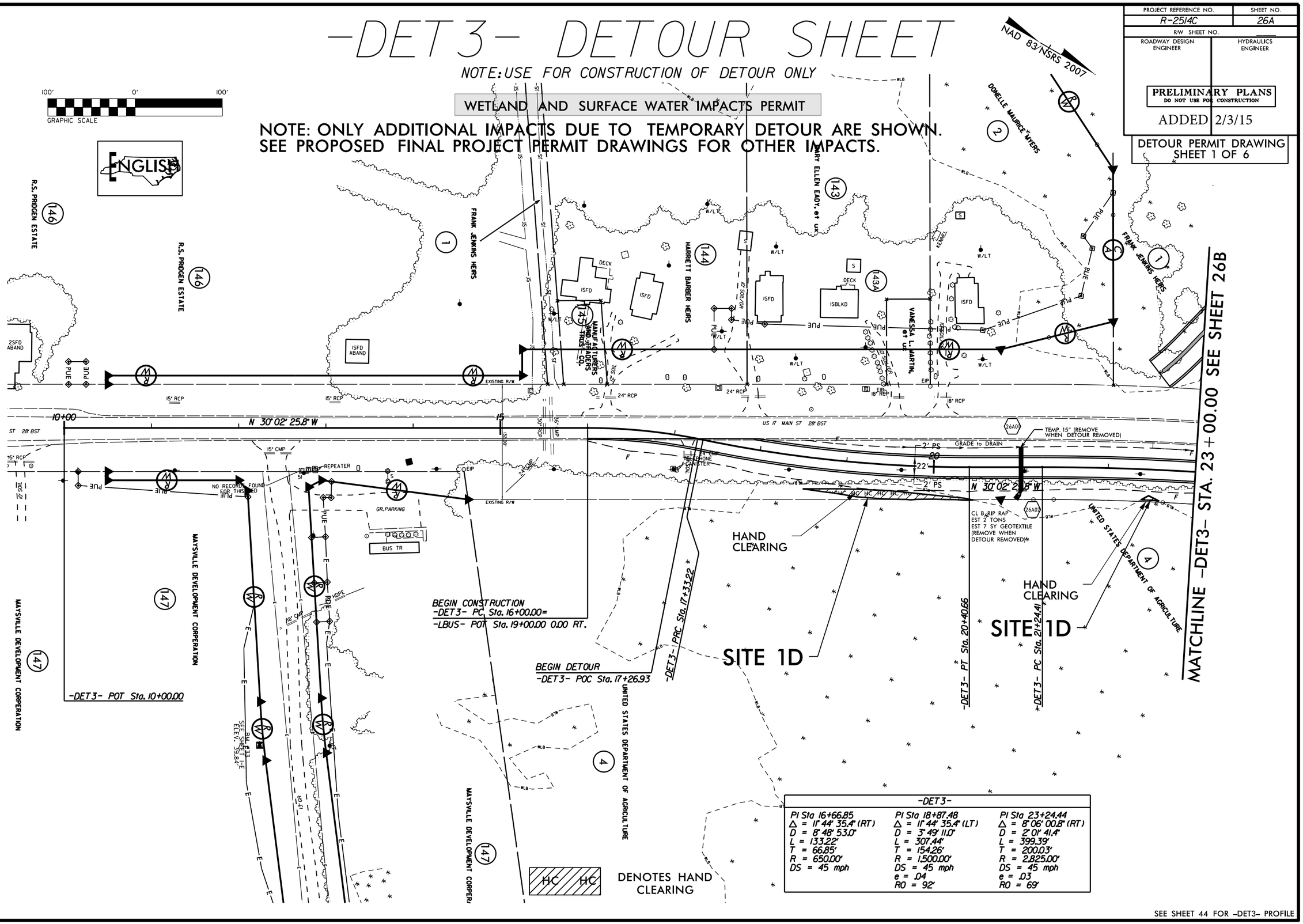
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ADDED 2/3/15

DETOUR PERMIT DRAWING
SHEET 1 OF 6

WETLAND AND SURFACE WATER IMPACTS PERMIT

NOTE: ONLY ADDITIONAL IMPACTS DUE TO TEMPORARY DETOUR ARE SHOWN.
SEE PROPOSED FINAL PROJECT PERMIT DRAWINGS FOR OTHER IMPACTS.



-DET3-		
PI Sta 16+66.85	PI Sta 18+87.48	PI Sta 23+24.44
Δ = 11° 44' 35.4" (RT)	Δ = 11° 44' 35.4" (LT)	Δ = 8° 06' 00.8" (RT)
D = 8° 48' 53.0"	D = 3° 49' 11.0"	D = 2° 01' 41.4"
L = 133.22'	L = 307.44'	L = 399.39'
T = 66.85'	T = 154.26'	T = 200.03'
R = 650.00'	R = 1,500.00'	R = 2,825.00'
DS = 45 mph	DS = 45 mph	DS = 45 mph
	e = .04	e = .03
	RO = 92'	RO = 69'

REVISIONS

8/17/99

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

-DET3- DETOUR SHEET

NOTE: USE FOR CONSTRUCTION OF DETOUR ONLY

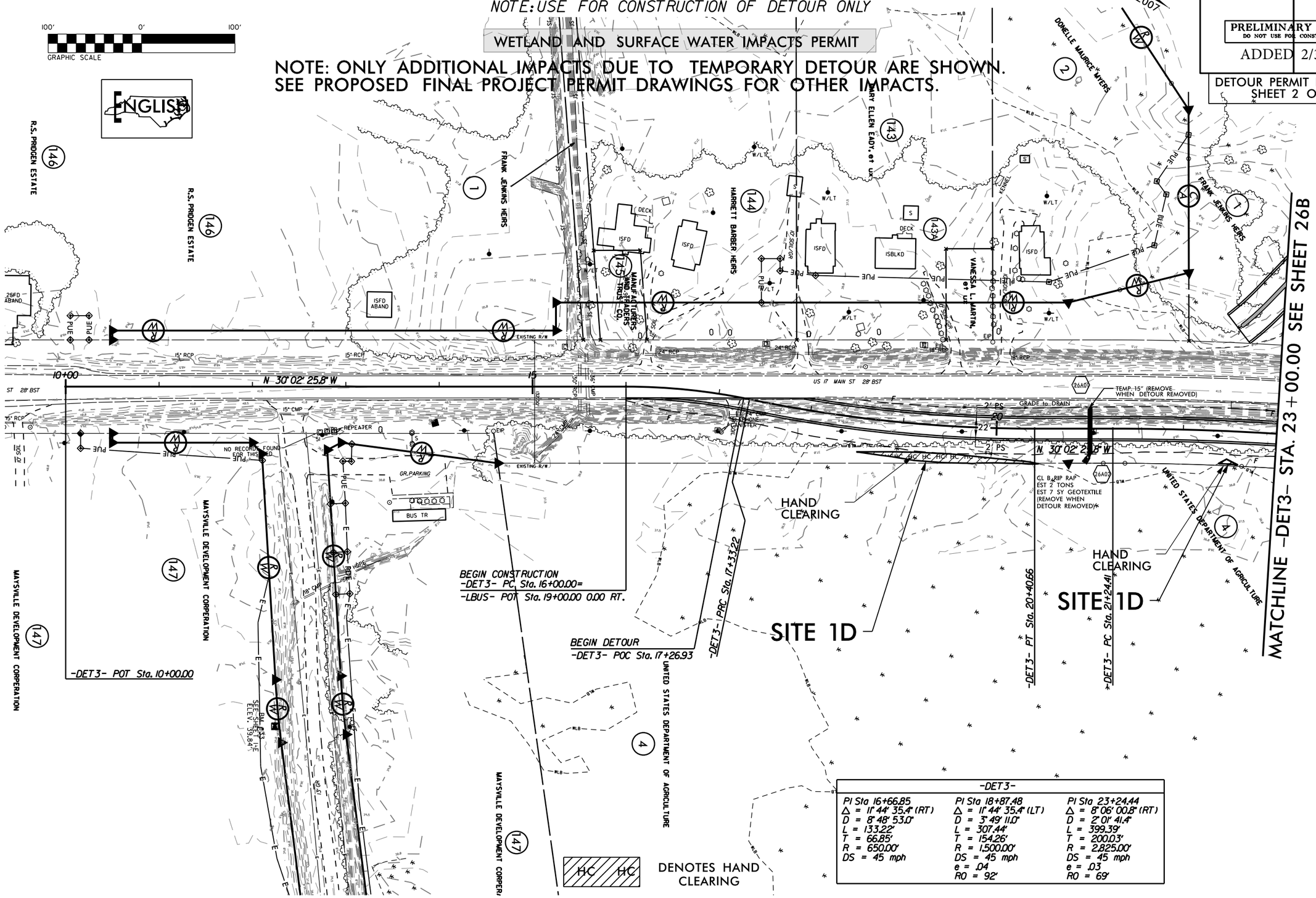
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ADDED 2/3/15

DETOUR PERMIT DRAWING
SHEET 2 OF 6

WETLAND AND SURFACE WATER IMPACTS PERMIT

NOTE: ONLY ADDITIONAL IMPACTS DUE TO TEMPORARY DETOUR ARE SHOWN.
SEE PROPOSED FINAL PROJECT PERMIT DRAWINGS FOR OTHER IMPACTS.



-DET3-		
PI Sta 16+66.85	PI Sta 18+87.48	PI Sta 23+24.44
Δ = 11° 44' 35.4" (RT)	Δ = 11° 44' 35.4" (LT)	Δ = 8° 06' 00.8" (RT)
D = 8° 48' 53.0"	D = 3° 49' 11.0"	D = 2° 01' 41.4"
L = 133.22'	L = 307.44'	L = 399.39'
T = 66.85'	T = 154.26'	T = 200.03'
R = 650.00'	R = 1,500.00'	R = 2,825.00'
DS = 45 mph	DS = 45 mph	DS = 45 mph
	e = .04	e = .03
	RO = 92'	RO = 69'

SEE SHEET 44 FOR -DET3- PROFILE

8/17/99

REVISIONS

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

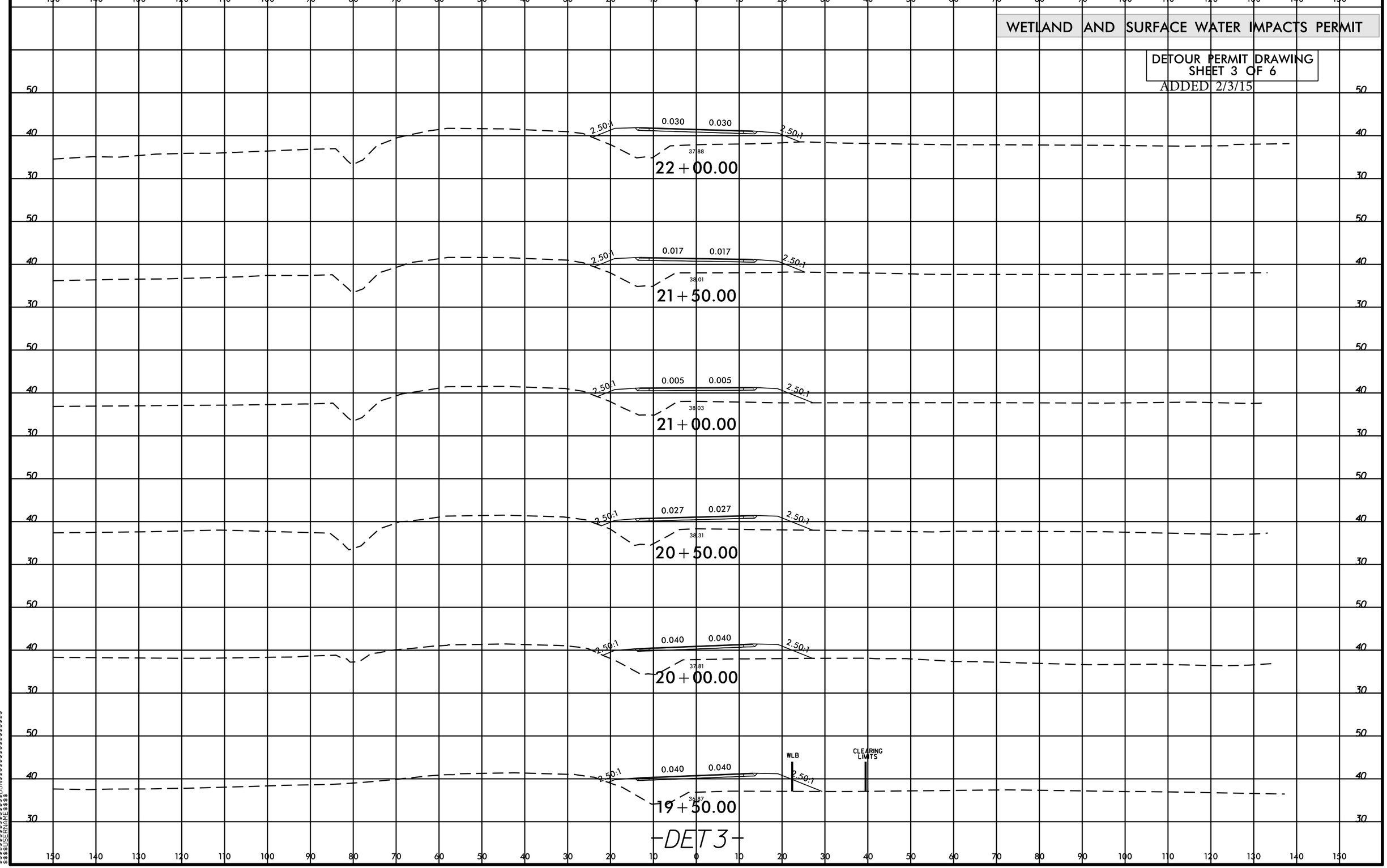
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-137

WETLAND AND SURFACE WATER IMPACTS PERMIT

DETOUR PERMIT DRAWING
SHEET 3 OF 6

ADDED 2/3/15



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

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ADDED 2/3/15

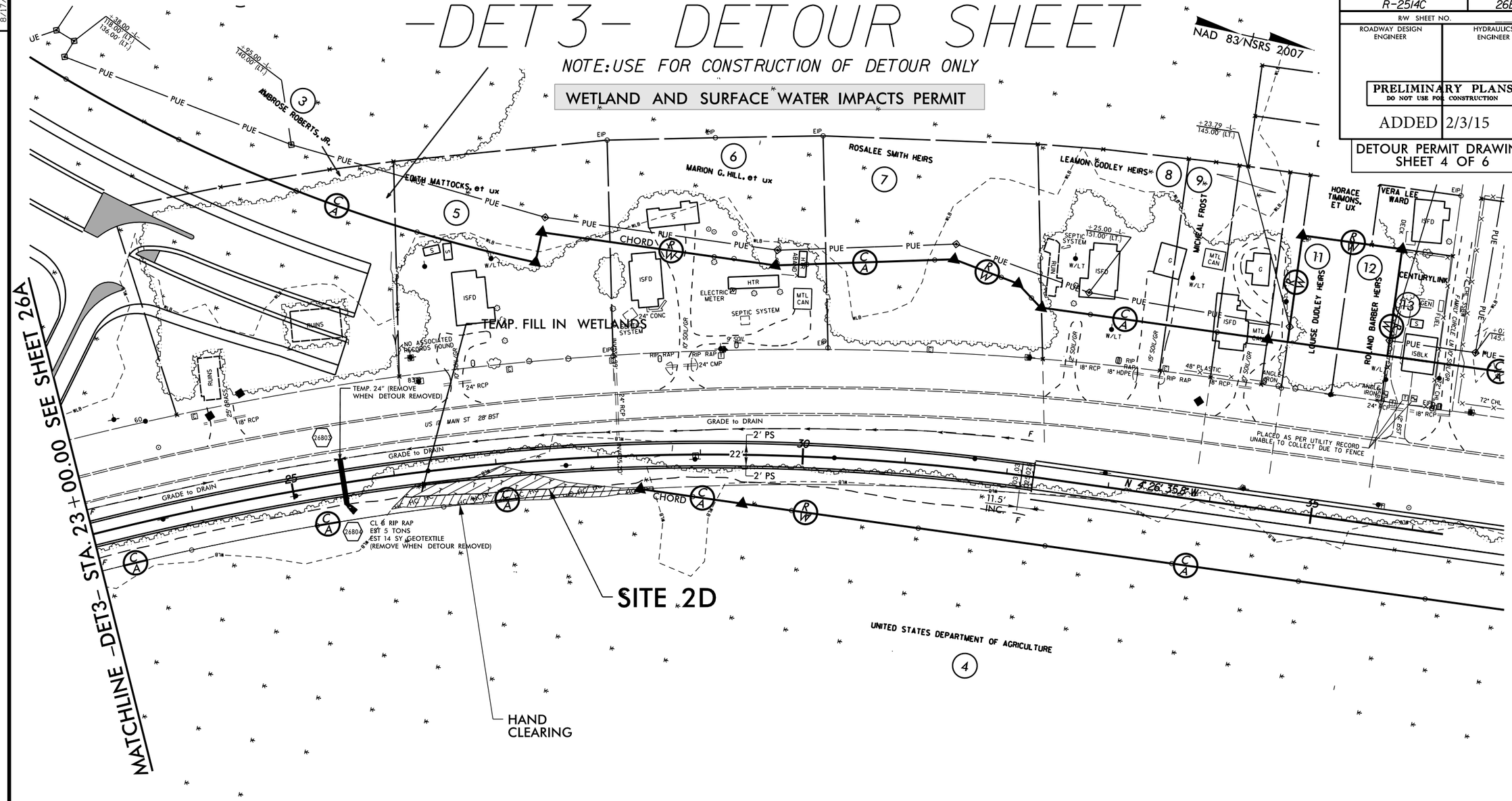
DETOUR PERMIT DRAWING
SHEET 4 OF 6

-DET3- DETOUR SHEET

NOTE: USE FOR CONSTRUCTION OF DETOUR ONLY

WETLAND AND SURFACE WATER IMPACTS PERMIT

NAD 83/NSRS 2007



HC HC DENOTES HAND CLEARING

T T DENOTES TEMPORARY FILL IN WETLAND

-DET3-	
PI Sta 23+24.44	PI Sta 28+77.74
Δ = 8° 06' 00.8" (RT)	Δ = 17° 29' 49.2" (RT)
D = 2° 01' 41.4"	D = 2° 29' 28.0"
L = 399.39'	L = 702.37'
T = 200.03'	T = 353.94'
R = 2,825.00'	R = 2,300.00'
DS = 45 mph	DS = 45 mph
e = .03	e = .03
RO = 69'	RO = 69'

ENGLISH

100' 0' 100'
GRAPHIC SCALE

SEE SHEET 44 FOR -DET3- PROFILE

REVISIONS

8/17/99

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

-DET3- DETOUR SHEET

NOTE: USE FOR CONSTRUCTION OF DETOUR ONLY

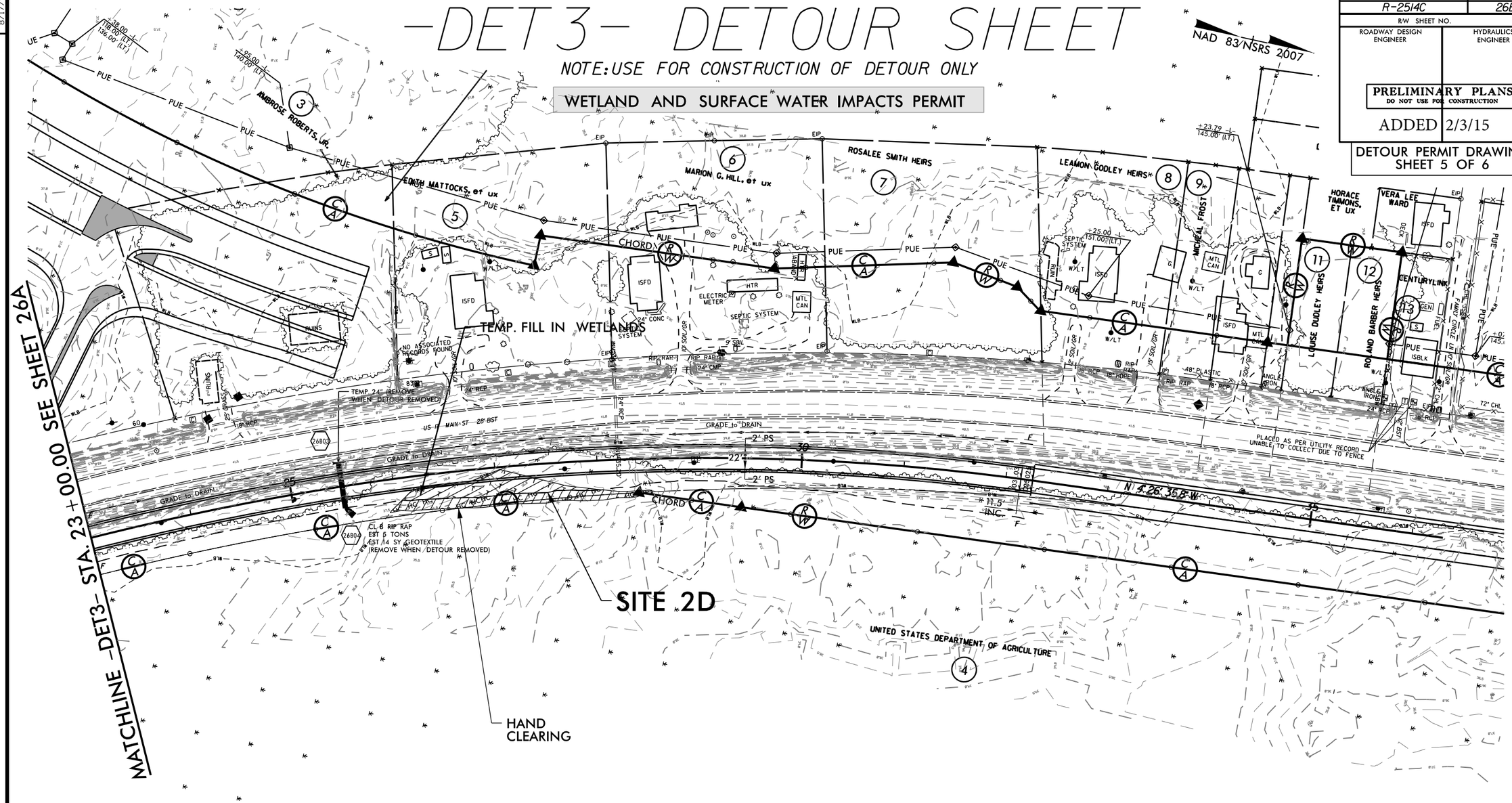
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	26B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ADDED 2/3/15

DETOUR PERMIT DRAWING
SHEET 5 OF 6



HC HC DENOTES HAND CLEARING

T T DENOTES TEMPORARY FILL IN WETLAND

-DET3-	
PI Sta 23+24.44	PI Sta 28+77.74
Δ = 8° 06' 00.8" (RT)	Δ = 17° 29' 49.2" (RT)
D = 2° 01' 41.4"	D = 2° 29' 28.0"
L = 399.39'	L = 702.37'
T = 200.03'	T = 353.94'
R = 2,825.00'	R = 2,300.00'
DS = 45 mph	DS = 45 mph
e = .03	e = .03
RO = 69'	RO = 69'

ENGLISH

100' 0' 100'
GRAPHIC SCALE

SEE SHEET 44 FOR -DET3- PROFILE

8/17/99

REVISIONS

$$$$$SYSTIME$$$$
$$$$$LSTLEDIT$$$$DGN$$$$$$$$$$$$$$$$

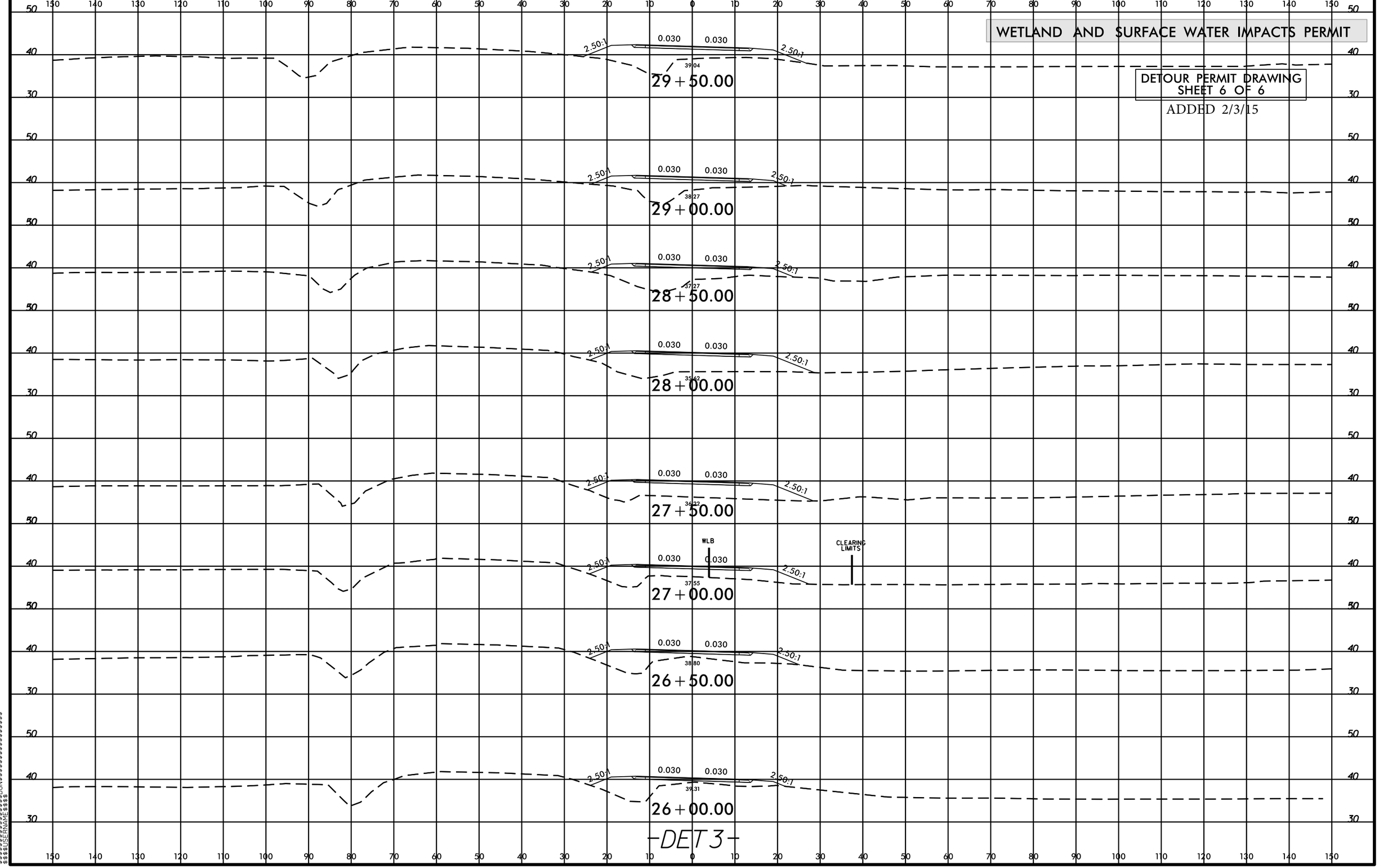
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2514C	X-139

WETLAND AND SURFACE WATER IMPACTS PERMIT

DETOUR PERMIT DRAWING
SHEET 6 OF 6

ADDED 2/3/15



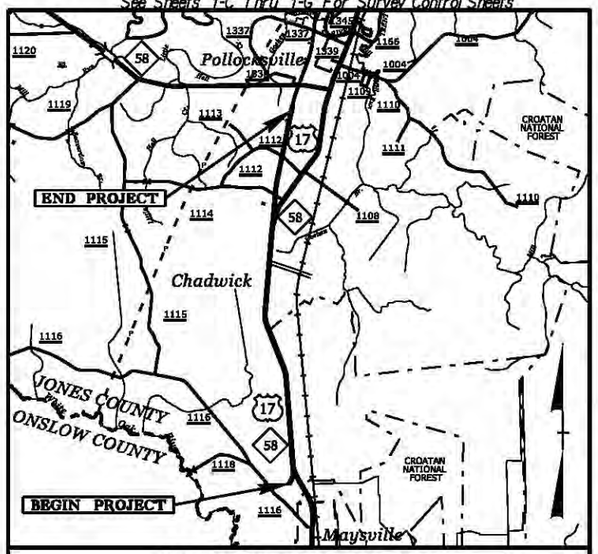
-DET 3-

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

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

BUFFER IMPACTS PERMIT

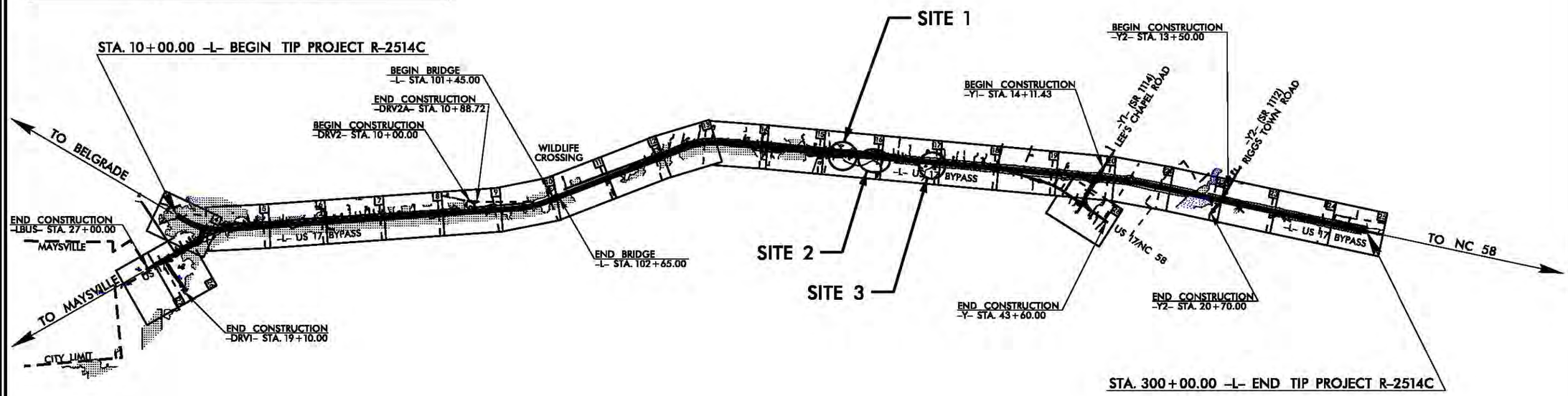
ENGLISH

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

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
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
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

09/08/99
2/6/2014
beanderson
R:\Hydraulics\PERMITS_Environmental\Drawings\buffer\R2514C_Hyd_buf_tsh.dgn
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

BUFFER 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

BUFFER DRAWING
SHEET 2 OF 4

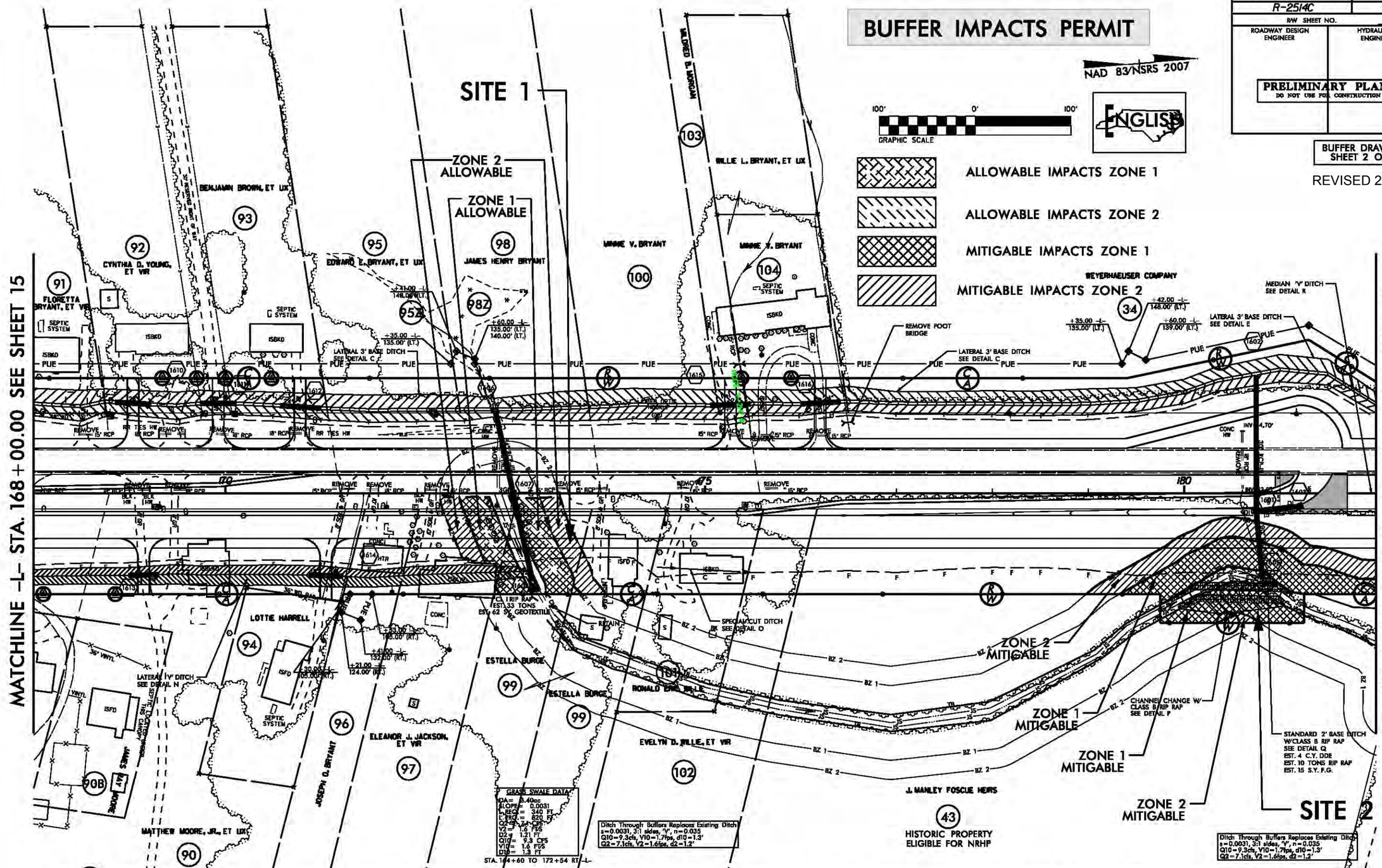
REVISED 2/3/15

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



8/17/99

REVISIONS

R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 98Z (JAMES HENRY BRYANT).

1/9/2015
mgberry
R:\Hydraulics\PERMITS Environmental\Drawings\buffer\R-2514C_Hyd_prm_buf_psh16.dgn

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

NAD 83/NSRS 2007

ENGLISH

100' 0' 100'
GRAPHIC SCALE

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

Buffer Drawing
Sheet 3 of 4
Revised 2/3/15

MATCHLINE -L- STA. 182+00.00 SEE SHEET 16

MATCHLINE -L- STA. 196+00.00 SEE SHEET 18

NANCY M. CHADWICK (107)
EVERA COLLINS (108)
LILLIE M. ALLISON (109)
JOHN RAY McDANIEL, ET UX (111)
DEIDRE EDWINA JONES (112)
LEE W. NELSON (113)
BETTY LOU W. LIGI (114)
(114A)
(34) WEYERHAEUSER COMPANY
(105) SUE BOWLING FOSCUE
J. MANLY FOSCUE, JR. HEIRS
MARGARET E. HUMPHREY (110)

-BL- 13 PINC 179+12.69

-BL- 14 PINC 188+75.67

ZONE 2 MITIGABLE

ZONE 1 MITIGABLE

SITE 2
HISTORIC PROPERTY ELIGIBLE FOR NRHP

SITE 3

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 W

STANDARD 2' BASE DITCH SEE DETAIL T
SLOPE = 0.007407
EST. 37 CY DDE

CL I RIP RAP
EST. 19 TONS
EST. 59 SY GEOTEXTILE

CL II RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

REMOVE RETAINING WALL TO R/W OR AS DIRECTED BY ENGINEER

STANDARD 3' BASE DITCH W/CLASS I RIP RAP SEE DETAIL V FROM 80' RT TO 100' RT OR MIN. 15' ALONG CHANNEL FROM PIPE OUTLET, STR. NO. 17711
SLOPE = 0.0100
EST. 30 CY DDE
EST. 30 TONS RIP RAP
EST. 60 SY FG

BANK STABILIZATION SEE DETAIL AQ
EST. 60 CY DDE
EST. 64 TONS RIP RAP
EST. 100 SY FG

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL U

BURY 0.7 FT

RETAIN

DETAIL AQ
BANK STABILIZATION
(Not to Scale)
Existing Retaining Wall; Natural Ground; Existing Ground Elevation; Lay Back Banks at 3:1 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; 4:1 or Flatter; 3:1 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 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; 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 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; Min. D = 1.5 Ft.; B = 2 Ft.
-L- STA. 191+59 (RT)

DETAIL U
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground; 3:1 or Flatter; Fill Slope; Min. D = 1 Ft.; B = 3 Ft.
-L- STA. 194+93 TO STA. 199+50 (RT)

GRASS SWALE DATA
DA = 1.7ac
SLOPE = 0.003
L REQ. = 170 FT
L PRO. = 456 FT
Q2 = 6.5 CFS
V2 = 1.5 FPS
D2 = 0.79 FT
Q10 = 8.4 CFS
V10 = 1.6 FPS
D10 = 0.9 FT
STA. 195+45 TO 200+00 RT -L-

REVISIONS

8/17/5

2/3/2015
beanderson
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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	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.

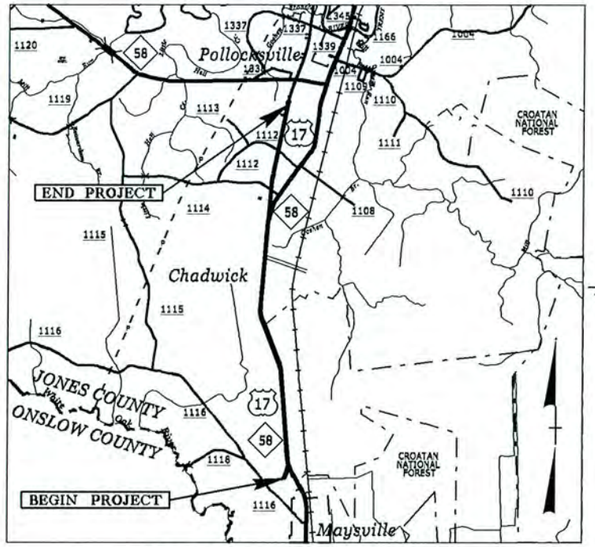
N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.4 (R-2514C)
US 17 FROM NORTH OF MAYSVILLE TO
SOUTH OF NC 58 NEAR POLLOCKSVILLE

SHEET 4 OF 4 04/23/14

Rev. May 2006

T.I.P. NO.	SHEET NO.
R-2514C	UE-1

TIP PROJECT: _____



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

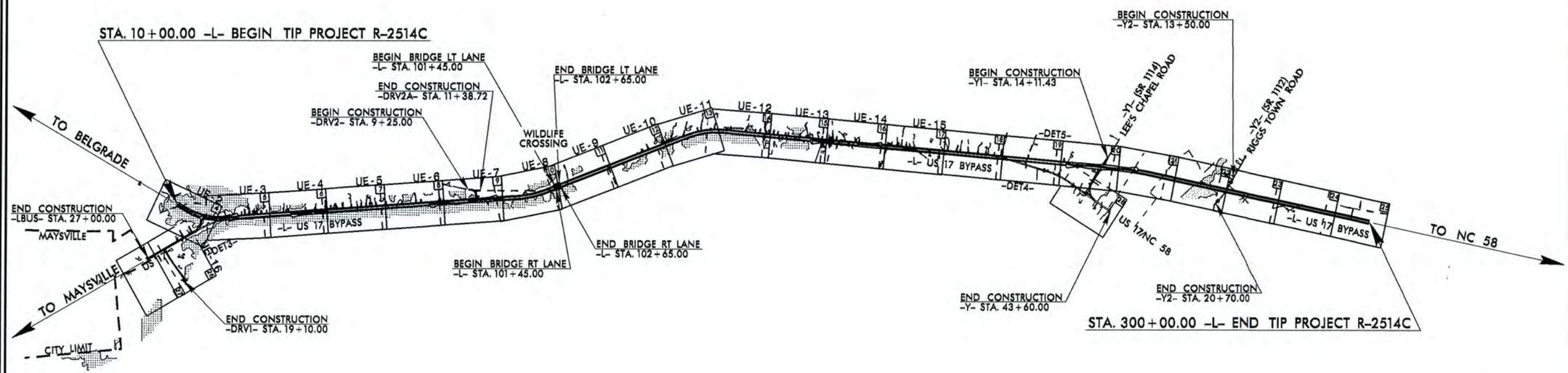
UTILITY PERMIT PLANS
JONES COUNTY

Utility Permit Drawing
Sheet 1 of 20
Revised 1/30/15

LOCATION: US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

TYPE OF WORK: RELOCATION OF WATER, TELEPHONE AND POWER

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.

SEE SHEET 18-A FOR -DET4- PLAN
SEE SHEET 18-B FOR -DET5- PLAN
SEE SHEETS 26-A & 26-B FOR -DET3- PLAN

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
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)

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UE-1	TITLE SHEET
UE-2 THRU UE-16	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

03/26/99
30-JAN-2015 15:07
R:\Utilities\Engineering\NEU\Permit Plans and Narrative\R-2514C_UT_tsh_UE1_psh.dgn
$$$$USERNAME$$$$

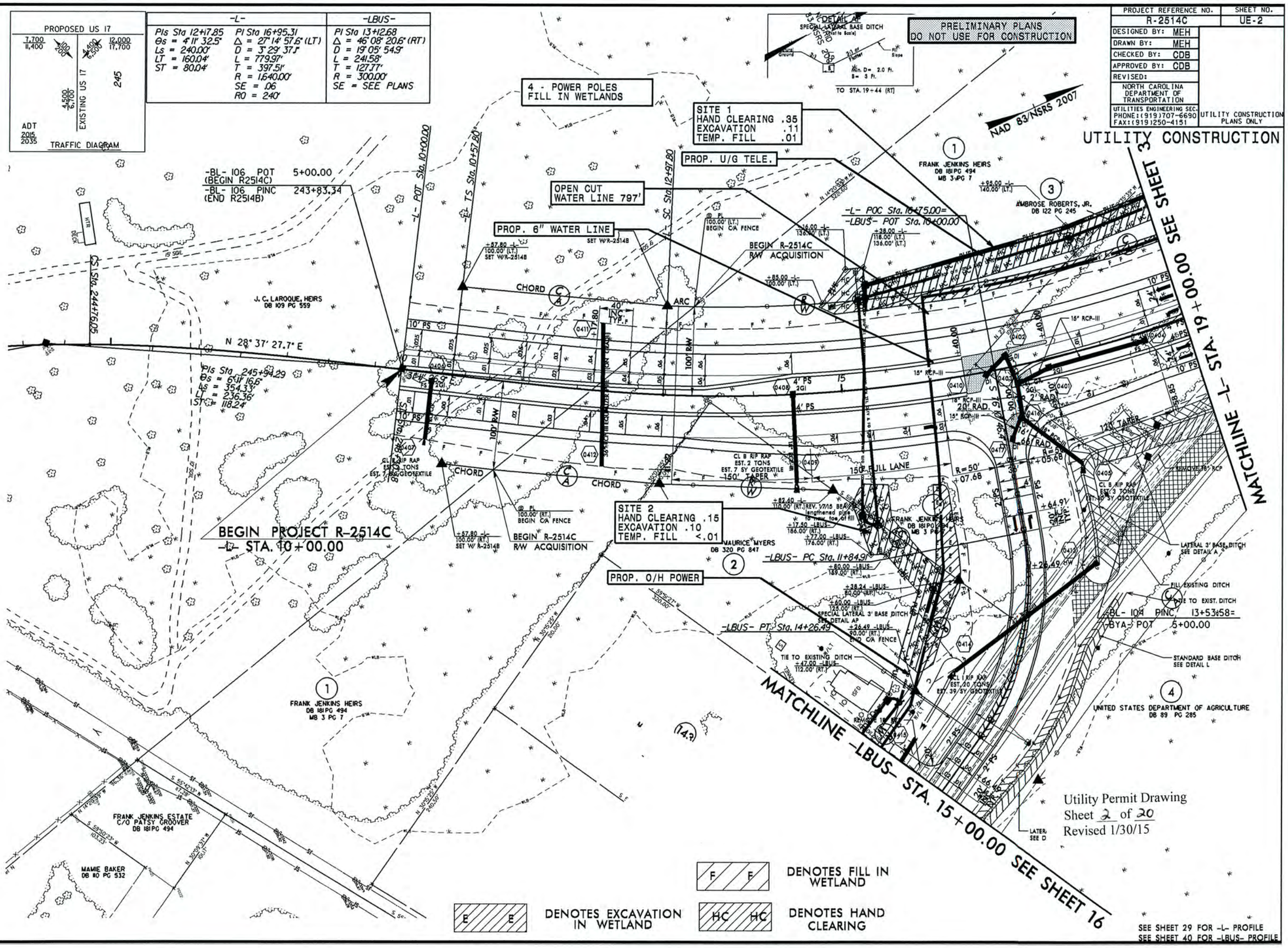
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-2
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROPOSED US 17
7,700 / 11,400 — 400 / 500 — 4,400 / 6,500 — 12,000 / 17,700
EXISTING US 17 — 245
4,500 / 6,700
ADT 2015 / 2035
TRAFFIC DIAGRAM

-L-		-LBUS-
PIs 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'	



Utility Permit Drawing
Sheet 2 of 20
Revised 1/30/15

SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 40 FOR -LBUS- PROFILE

REVISIONS

5/14/99

30-JAN-2015 16:07
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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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 3 of 20
Revised 1/30/15

NAD 83/NSRS 2007

1 - POWER POLES
FILL IN WETLAND

PROP. 6" WATER LINE

PROP. O/H POWER

SITE 3
HAND CLEARING .03
EXCAVATION .01

OPEN CUT
WATER LINE 73'

PROP. UG TELE.

OPEN CUT
WATER LINE 8'

SITE 4
HAND CLEARING .01
EXCAVATION <.01

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

AMBROSE ROBERTS, JR.
DB 122 PG 245

FRANK JENKINS HEIRS
DB 181 PG 494
MB 3 PG 7

ROSALEE SMITH HEIRS
DB 106 PG 252

MARION C. HILL, et ux
DB 186 PG 815
DB 307 PG 898
DB 369 PG 947

DOROTHY WARD
DB 164 PG 668

DAVID WARD, ET UX
DB 137 PG 169

HORACE TIMMONS, ET UX
DB 156 PG 379

VERA LEE WARD
DB 153 PG 263

ALPHONSO HILL
DB 272 PG 219
MB 3 PG 7

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285

-BL-1105 PINC 23+19.89

LATERAL 3' BASE DITCH
SEE DETAIL A

MAINTAIN EXISTING DITCH

MEDIAN 'V' DITCH
SEE DETAIL B

REMOVE 24" RCP

PLACED AS PER UTILITY RECORD
UNABLE TO COLLECT DUE TO FENCE

N 4°26'35.8" W

SITE 3

SITE 4

-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., 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., 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., 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

F F — DENOTES FILL IN WETLAND

HC HC — DENOTES HAND CLEARING

E E — DENOTES EXCAVATION IN WETLAND

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS

SEE SHEET 29 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 14:10
R:\Roadway\Proj\R2514c_Utilities_Plans and Narrative\R-2514C_UE_adj5_UE3_psh.dgn
$$$$USERNAME$$$$

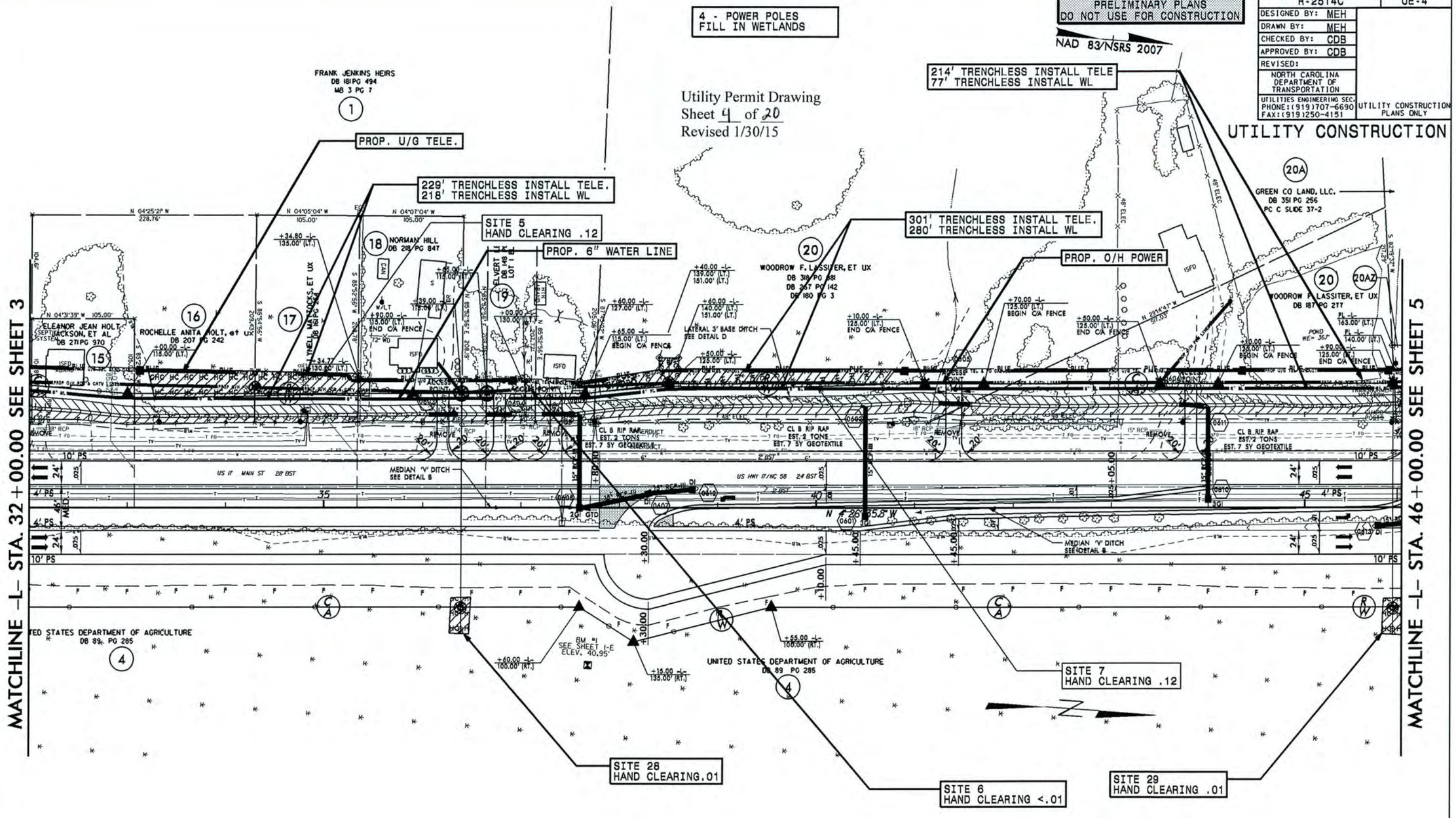
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-4
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

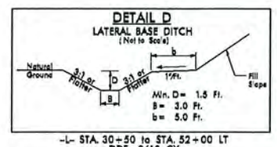
UTILITY CONSTRUCTION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

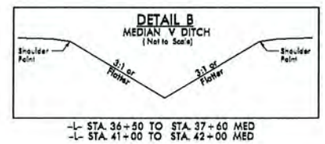
NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 4 of 20
Revised 1/30/15





-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

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 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 14:22
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$$$$USERNAME$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 5 of 20
Revised 1/30/15

UTILITY CONSTRUCTION

1 - POWER POLE
FILL IN WETLANDS

PROP. O/H POWER

74' TRENCHLESS INSTALL TELE.

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

MEDA J. KING (WIDOW)
DB 165 PG 526

MEDA J. KING (WIDOW)
DB 166 PG 603

ROY L. KING, ET UX
DB 166 PG 165

L. FLOWERS, ET UX
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

BRADLEY HILL
DB 337 PG 508

DORIS L. HILL (LIFE ESTATE)
DB 236 PG 645
DB 337 PG 506

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

PAULINE J. KING (WIDOW)
DB 153 PG 222

ROY L. KING JR., et al
DB 166 PG 627
DB 349 PG 230

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285

-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 #2
SEE SHEET 1-E
ELEV. 41.22'

SITE 8
HAND CLEARING .01

MEDIAN 'V' DITCH
SEE DETAIL B

LATERAL 3' BASE DITCH
SEE DETAIL E

LATERAL 3' BASE DITCH
SEE DETAIL D

150' FULL LANE

150' TAPER

SEPTIC SYSTEM

ISFD

ISBKD

HTR

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 Ft. — 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 Ft. — 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

HC HC — DENOTES HAND CLEARING

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 14:24
R:\Roadway\Proposals and Narrative\R-2514C_Ut_rdy7_UE5_psh.dgn

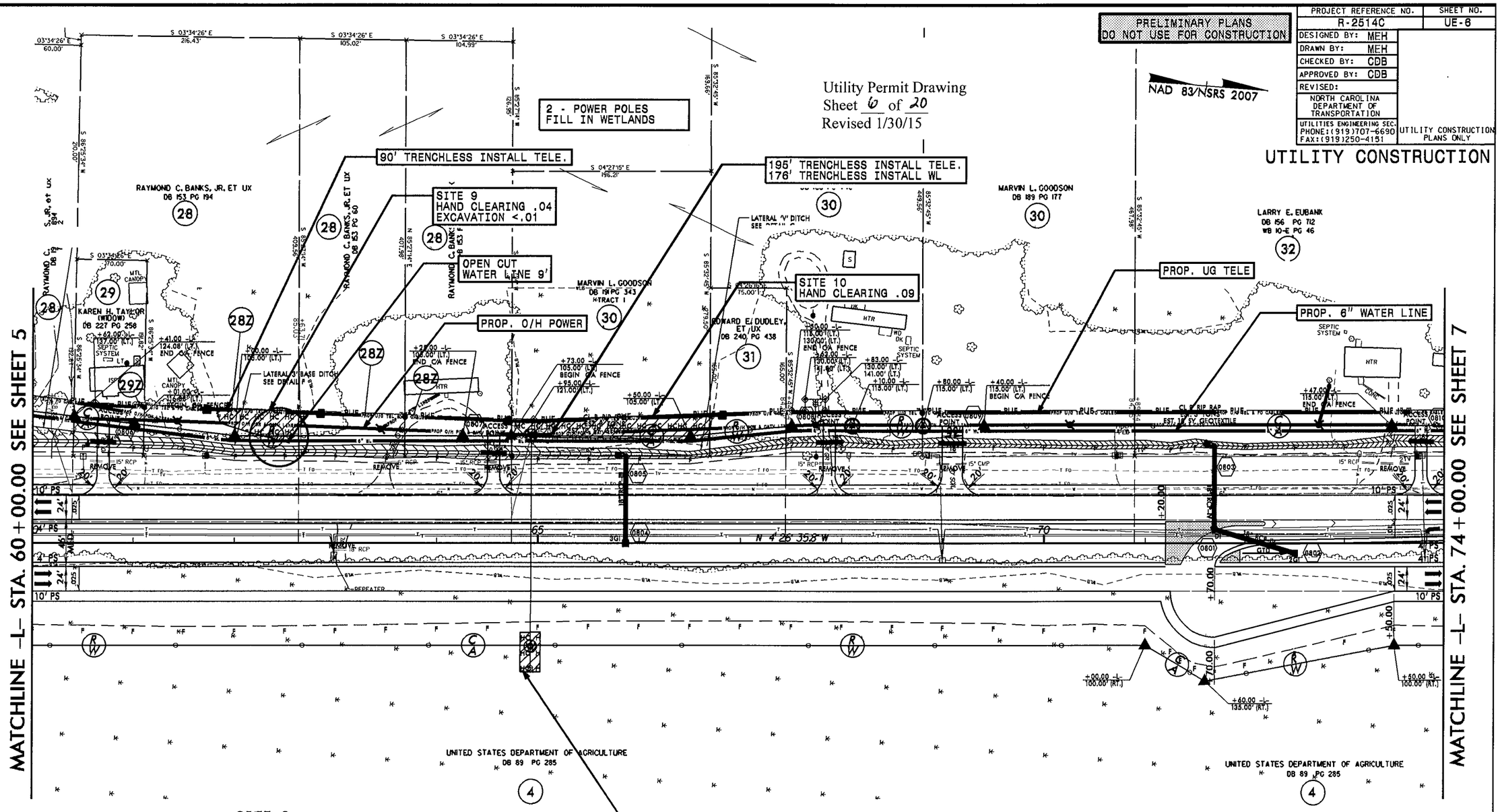
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-6
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

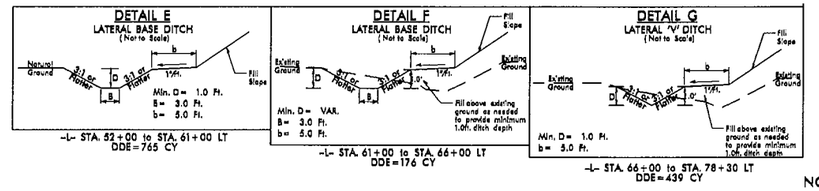
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 6 of 20
Revised 1/30/15





F F — DENOTES FILL IN WETLAND

E E — DENOTES EXCAVATION 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 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 31 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 14:29
g:\NEW\Permits Plans and Narrative\R-2514C_Ut_Pdg8_UE6_psh.dgn

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	
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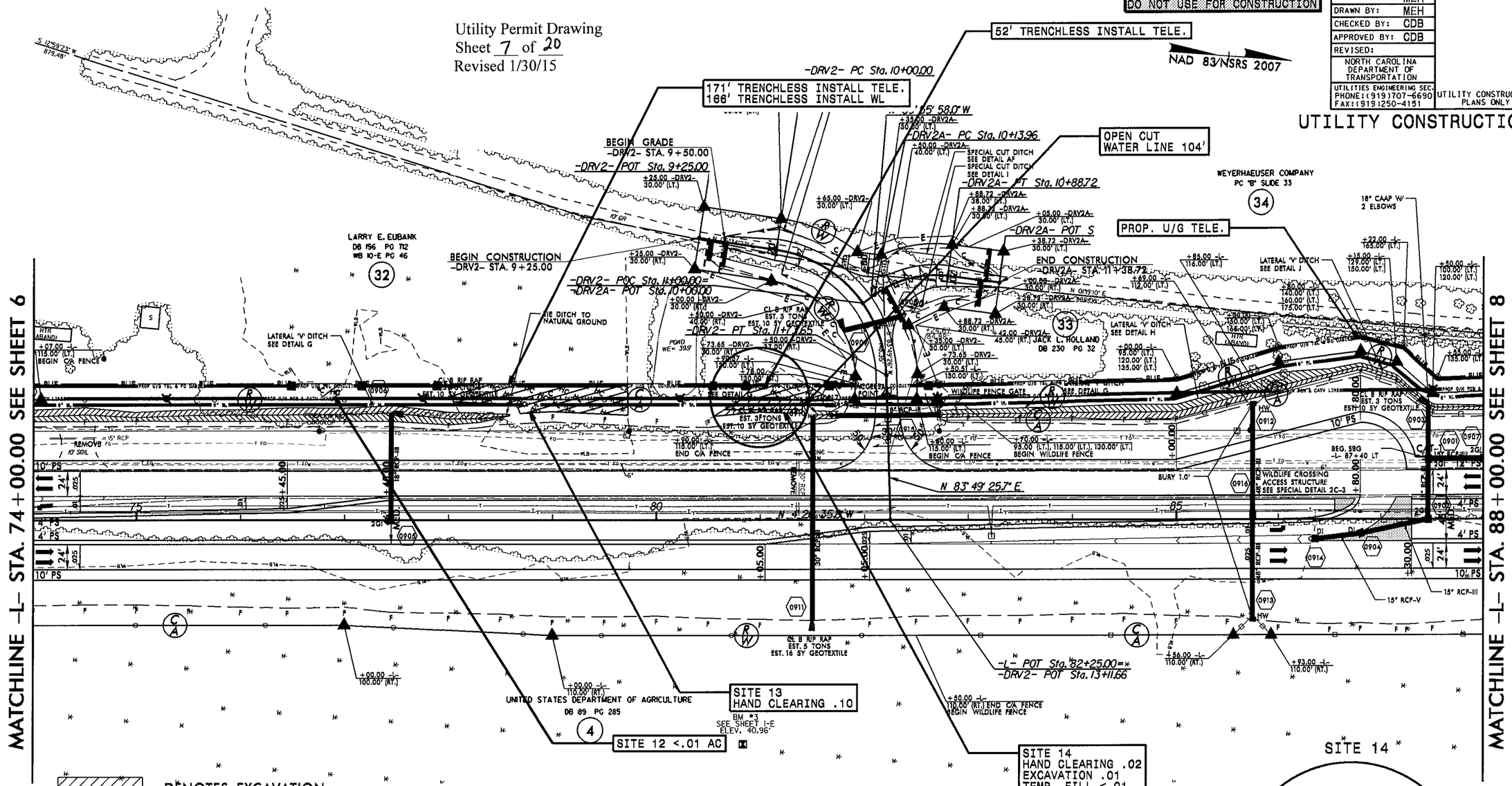
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 7 of 20
Revised 1/30/15

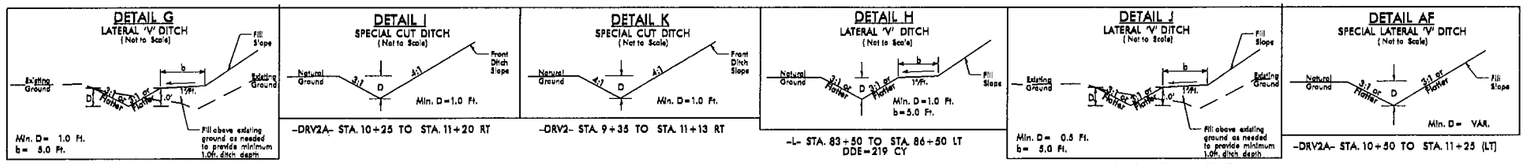
NAD 83/NSRS 2007



E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING



NOTE: SBG - "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2C-1 FOR WILDLIFE FENCE DETAIL.

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 43 FOR -DRV2- PROFILE
SEE SHEET 43 FOR -DRV2A- PROFILE

REVISIONS

5/14/99

30-JAN-2015 14:37
e:\Projects\Permit Plans and Narrative\R-2514C_Ut_Pdy9_UE7.psh.dgn
$$$$USERNAME$$$$

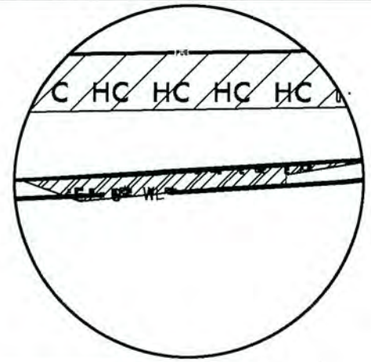
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-8
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

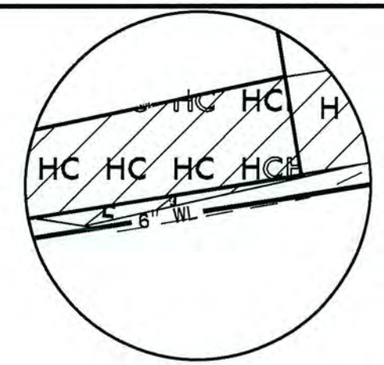
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 8 of 20
Revised 1/30/15

2- POWER POLE
FILL IN WETLAND



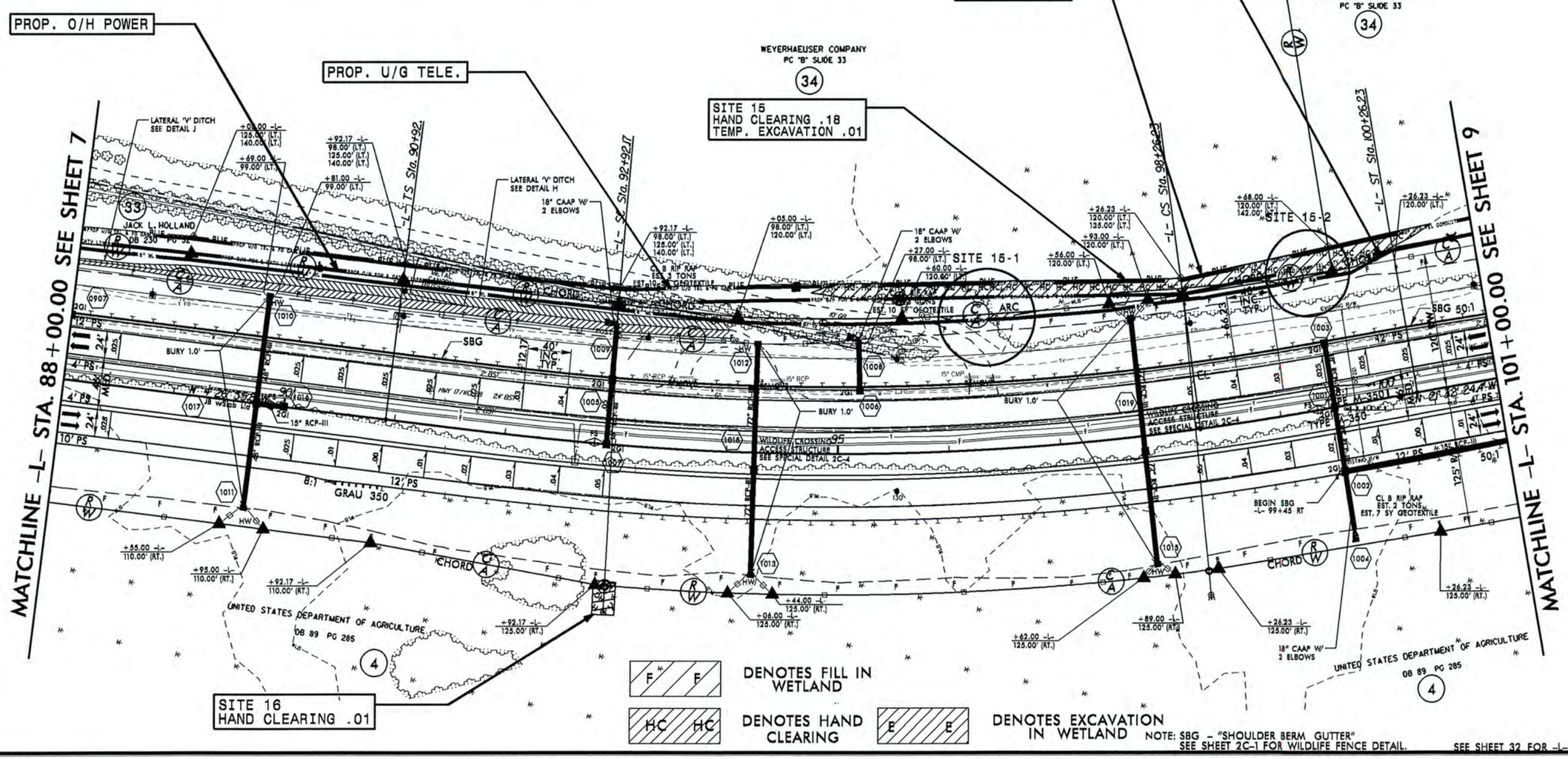
SITE 15-1



SITE 15-2

NAD 83/NSRS 2007

-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'	



NOTE: SBG - "SHOULDER BERM GUTTER"
SEE SHEET 2C-1 FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR -L- PROFILE

REVISIONS

5/14/99

02-FEB-2015 07:46
a:\NEU\R-2514C_Utility_Plans_and_Narrative\R-2514C_Ut_Pl_UE8.psh.dgn

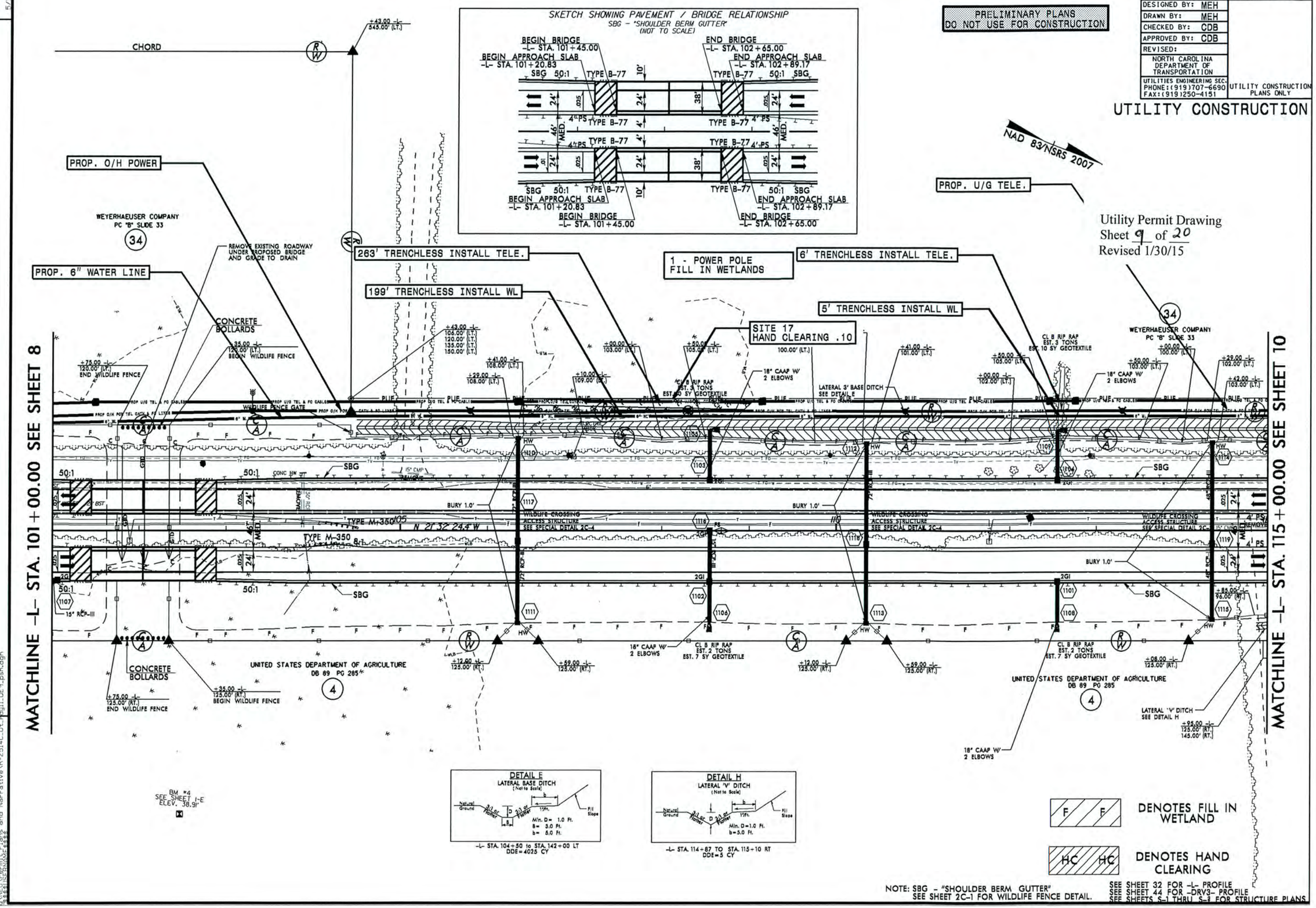
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-9
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 9 of 20
Revised 1/30/15



NOTE: SBG - "SHOULDER BERM GUTTER"
SEE SHEET 2C-1 FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 44 FOR -DRV3- PROFILE
SEE SHEETS S-1 THRU S-8 FOR STRUCTURE PLANS.

REVISIONS

5/14/99

30-JAN-2015 14:47
b:\R2514c_plans and Narrative\R-2514C_Ut_Pdu11_UE9.pshdgn

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

2- POWER POLES
FILL IN WETLANDS

Utility Permit Drawing
Sheet 10 of 20
Revised 1/30/15

SITE 20
HAND CLEARING .02
EXCAVATION <.01

OPEN CUT
WATER LINE 66'

OPEN CUT
WATER LINE 43'

SITE 19
HAND CLEARING .02
EXCAVATION <.01

91' TRENCHLESS INSTALL TELE.

85' TRENCHLESS INSTALL TELE.

SITE 18
HAND CLEARING .01

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

CAROLYN M. BLACKMON
CARL MORGAN BUTLER
REVOCABLE TRUST
DB 172 PG 539
35

GLENN ALLEN
DB 265 PG 987
36

JESSE JAMES, ET UX
DB 224 PG 688,
MB 4 PG 85
37

JOSEPH L. JACKSON, ET UX
DB 301 PG 137
39

PLANTS SCOTT HEIRS
DB 56 PG 340
38

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285
4

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285
4

LATERAL 3' BASE DITCH
SEE DETAIL E

18" CAAP W/
2 ELBOWS

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

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

GRAU 350' -L- 116+27 LT

END SBG
-L- 117+95 RT

18" RCP-III

18" CAAP W/
2 ELBOWS

CAT-1

WILDLIFE CROSSING
ACCESS STRUCTURE
SEE SPECIAL DETAIL 2C-3

BURY 1.0'

REMOVE 18" RCP

REMOVE 15" RCP

END WILDLIFE FENCE

END WILDLIFE FENCE
BEGIN C/A FENCE

BEGIN CA FENCE

BM #5
SEE SHEET 1-E
ELEV. 42.52'

N 21°32'24.4" W

S 15°35'51" E
178.18'

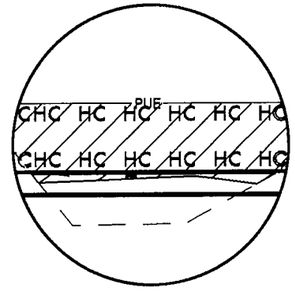
N 15°35'30" W
208.50'

STANDARD 3' BASE DITCH
SEE DETAIL L
EST. 37 C.Y. DDE

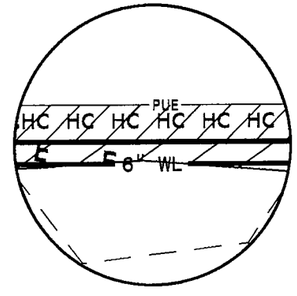
TIE TO EXISTING DITCH

LATERAL 'V' DITCH
SEE DETAIL H

SITE 19



SITE 20



F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

E E DENOTES EXCAVATION IN WETLAND

NOTE: SBG - "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS. SEE SHEET 33 FOR -L- PROFILE
SEE SHEET 2C-1 FOR WILDLIFE FENCE DETAIL. SEE SHEET 44 FOR -DRV3- PROFILE

REVISIONS

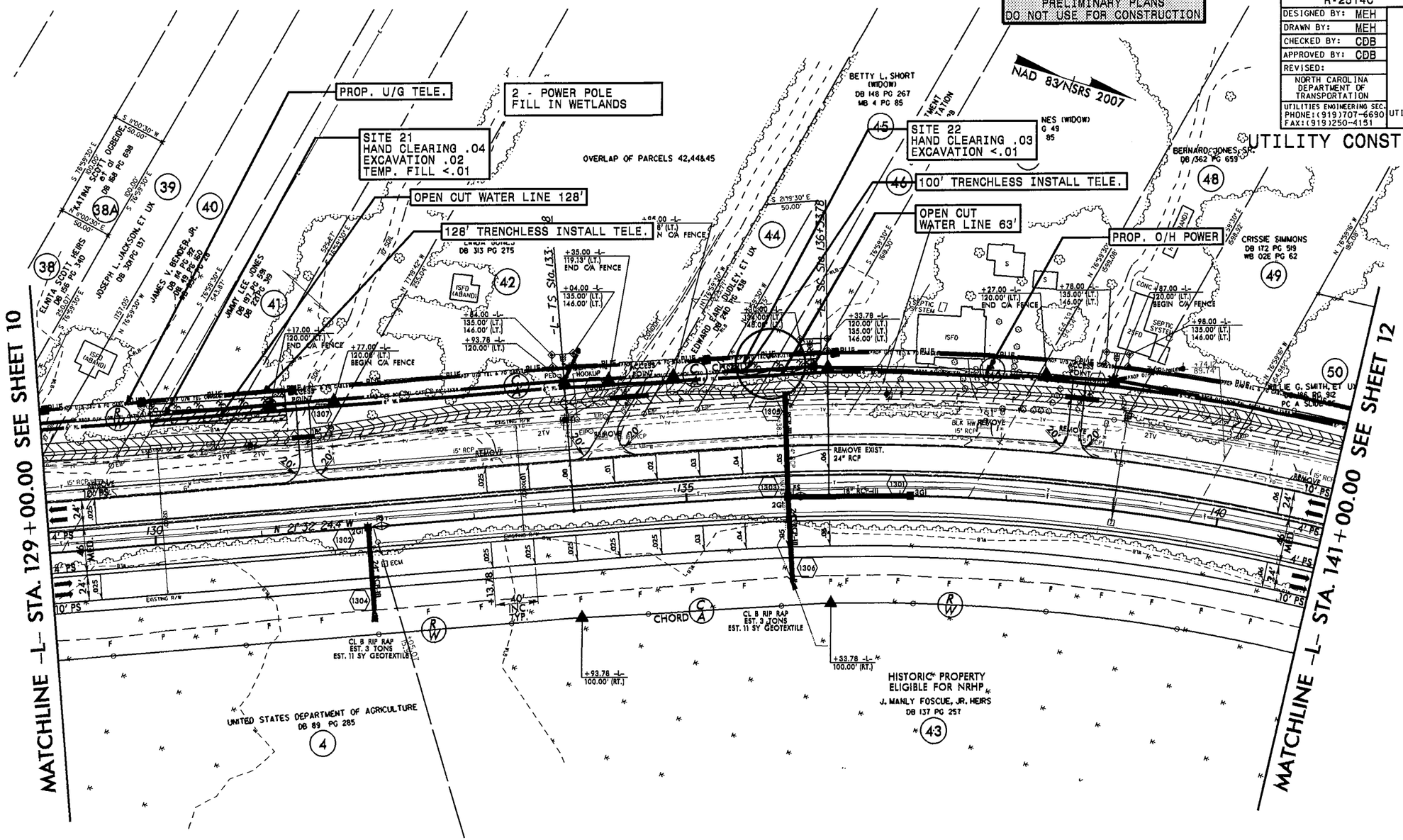
5/14/99

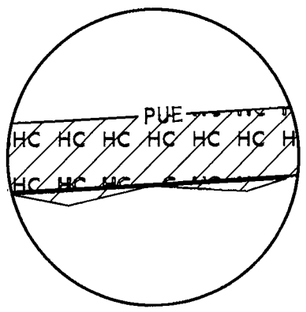
30-JAN-2015 14:52
S:\Unit Projects\R-2514C_Hyd\Design and Narrative\R-2514C_UE_Hyd12_UE10_psh.dgn

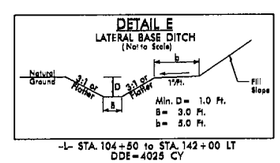
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-11
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

UTILITY CONSTRUCTION







Utility Permit Drawing
Sheet 11 of 20
Revised 1/30/15

-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

HC HC — DENOTES HAND CLEARING

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 33 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 14:58
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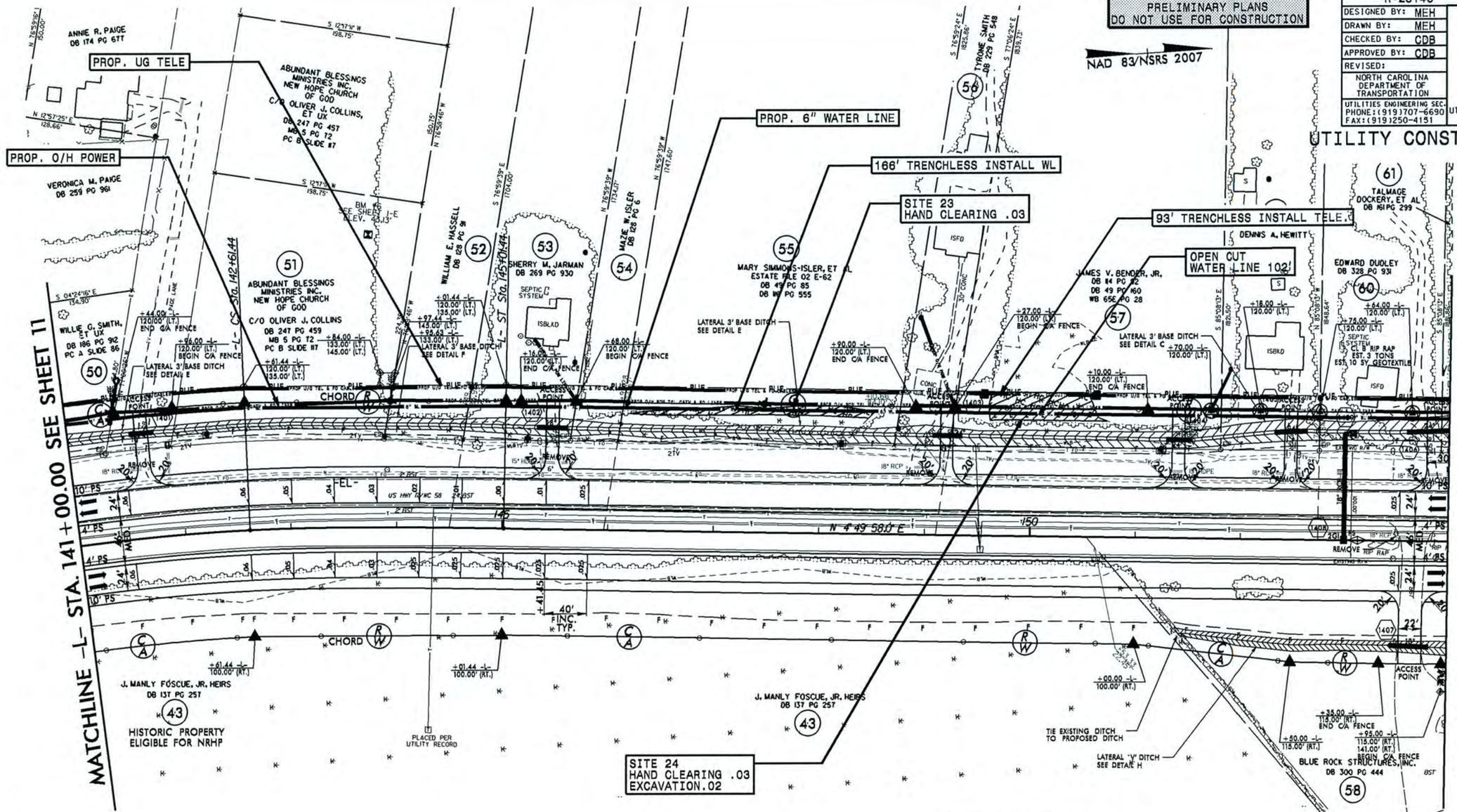
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-12
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

UTILITY CONSTRUCTION

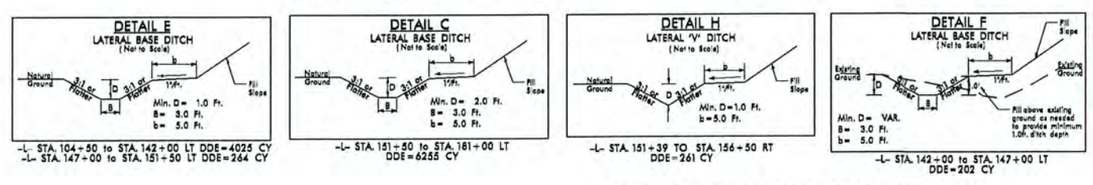


Utility Permit Drawing
Sheet 12 of 20
Revised 1/30/15

-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	
R0 = 240'	

E E DENOTES EXCAVATION 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 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 15:00
N:\Project\Roadway\Proj\R-2514C_Ut_Plans and Narrative\R-2514C_Ut_Plan14_UE12_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

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NAD 83/NSRS 2007

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 13 of 20
Revised 1/30/15

1 - POWER POLE
FILL IN WETLANDS

PROP. O/H POWER

PROP. U/G TELE.

196' TRENCHLESS INSTALL TELE.
189' TRENCHLESS INSTALL WL

PROP. 6" WATER LINE

MATCHLINE -L- STA. 154+00.00 SEE SHEET 12

MATCHLINE -L- STA. 168+00.00 SEE SHEET 14

WILBER STRAYHORN, ET UX C/O DORIS HUMPHREY DB 163 PG 409

FANNIE FORRESTER DB 137 PG 206

DB 137 PG 217

LAVON CARTER DB 365 PG 678

TALMAGE DOCKERY, ET AL DB 161PG 299

EDDIE HUMPHREY DB 122 PG 91

JACK L. BROWN, ET UX DB 165 PG 931

JEFFREY MORRIS DB 326 PG 659

LINWOOD WILLIAMS HEIRS ESTATE FILE 74-E-22

LATERAL 3' BASE DITCH SEE DETAIL C

CLASS B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

MARY L. WHITE DB 172 PG 490

CHARLES HARGETT DB 203 PG 182

LOWELL MATTOCKS, ET UX DB 146 PG 78

BM #7 SEE SHEET 1-E ELEV. 40.86'

JAMES V. BENDER, JR. DB 114 PG 92

HENRY LEE BROWN, SR. DB 288 PG 142

LAVON CARTER DB 363 PG 348

GREEN TREE SERVICE, LLC DB 359 PG 324

ALEXANDER SMITH, III DB 287 PG 844

VAN S. SMITH DB 169 PG 160

CLASS B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

HENRY D. SMITH DB 247 PG 796

FLORETTA BRYANT, ET VIR DB 227 PG 431

REMOVE SYSTEM

15" RCP-III

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL M

LATERAL 'V' DITCH SEE DETAIL N

MABEL S. WEAVER DB 207 PG 421 MC "B" SLIDE 266 PG 1

WILLIAM F. DUDLEY DB 324 PG 415

BLUE ROCK STRUCTURES, INC. DB 300 PG 444

SITE 25
HAND CLEARING .09

MABEL S. WEAVER DB 244 PG 668 MC "B" SLIDE 266 PG 1

MARGARET J. WILLIAMS, et al DB 121 PG 421 WB 13E PG 37 MC "B" SLIDE 266 PG 1

E.L. WILLIAMS, JR. DB 122 PG 202 MB 3 PG 47 DB 272 PG 663 MC "B" SLIDE 266 PG 1 DB 348 PG 383

SARAH SMALLWOOD HEIRS DB 207 PG 421 MC "B" SLIDE 266 PG 1

JAMES LANARD SMALLWOOD DB 220 PG 78 MB 3 PG 47

E.L. WILLIAMS, JR. DB 205 PG 522 DB 348 PG 590 MB 3 PG 47

CARL JUNIOR KOONCE DB 224 PG 585 MB 3 PG 47

MARGARET J. WILLIAMS, et al DB 122 PG 200 WB 13E PG 37 MB 3 PG 47

ANDREW FRANKS, et al DB 122 PG 189 MB 3 PG 47 PC "B" SLIDE 69

JAMES LANARD SMALLWOOD DB 221 PG 152 MB 3 PG 47

MABEL S. WEAVER DB 221 PG 153 PC "B" SLIDE 160

ADELL DUDLEY, ET UX DB 89 PG 622

PARCEL 83B
MARGARET J. WILLIAMS, et al
WB 13E PG 37
LOCATED BELOW PARCEL 83A
SARAH SMALLWOOD HEIRS
DB 153 PG 415
DB 153 PG 227,
ACCESS NEEDED

JOSEPH BRYANT, ET UX DB 87 PG 003

ROBERT LEE BRYANT, ET UX DB 30 PG 983

LEVY MOORE DB 161PG 615

MATTHEW MOORE, JR., ET UX DB 329 PG 639

LOUISE MURRELL ROYE ET UX C/O ROBERT HORRY DB 206 PG 690

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=6255 CY

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)
Min. D=2.0 Ft.
b=5.0 Ft.
-L- STA. 151+39 TO STA. 156+50 RT DDE=267 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

HC / HC DENOTES HAND CLEARING

F / F DENOTES FILL IN WETLAND

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR -L- PROFILE

REVISIONS

5/14/99

30-JAN-2015 p:\503 and Narrative\R-2514C_Ut_rdy15_UE13.pshdgn

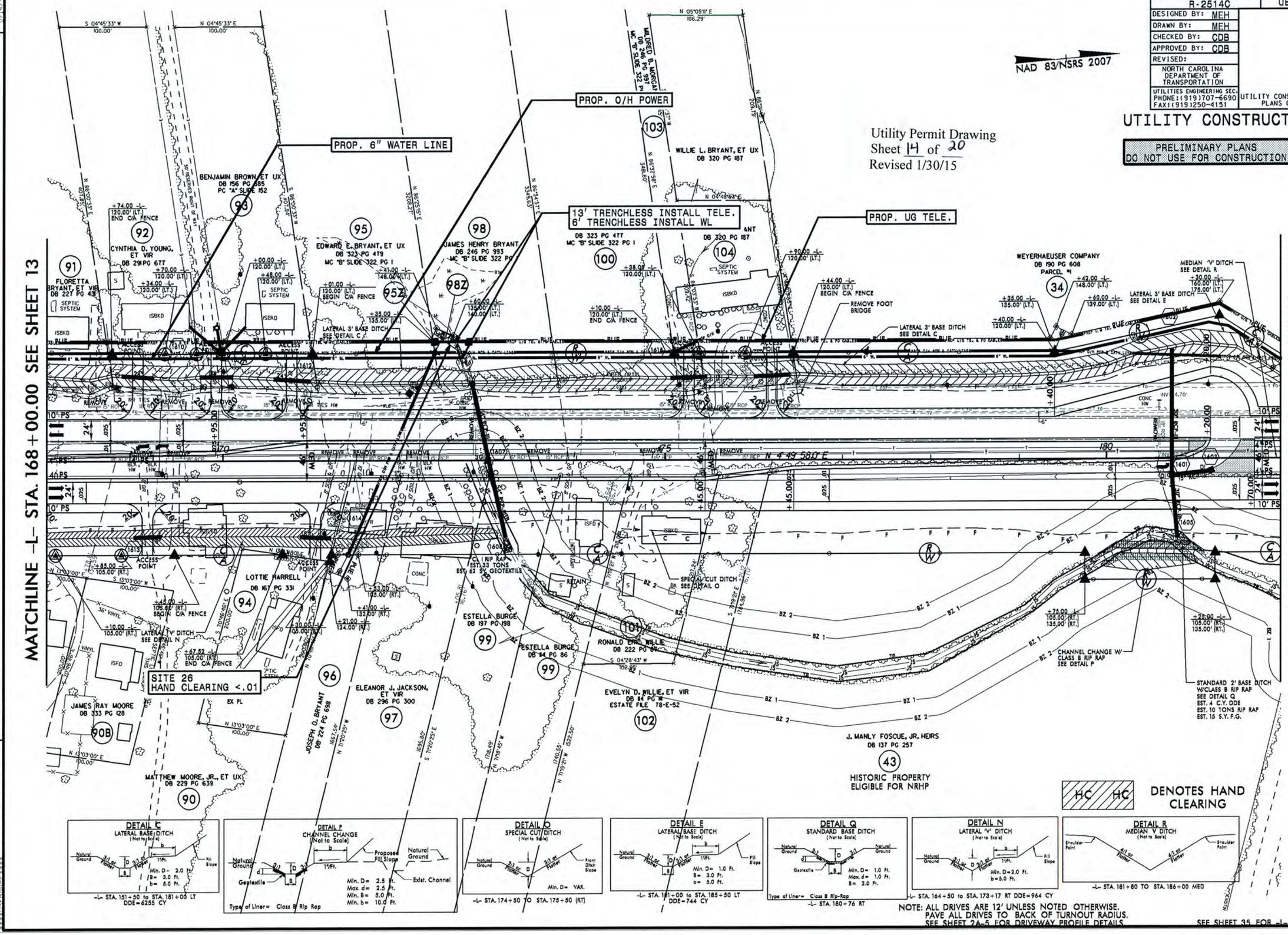
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-14
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

Utility Permit Drawing
Sheet 14 of 20
Revised 1/30/15



NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 24-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR -L- PROFILE

REVISIONS

5/14/99

20-JAN-2015 13:30
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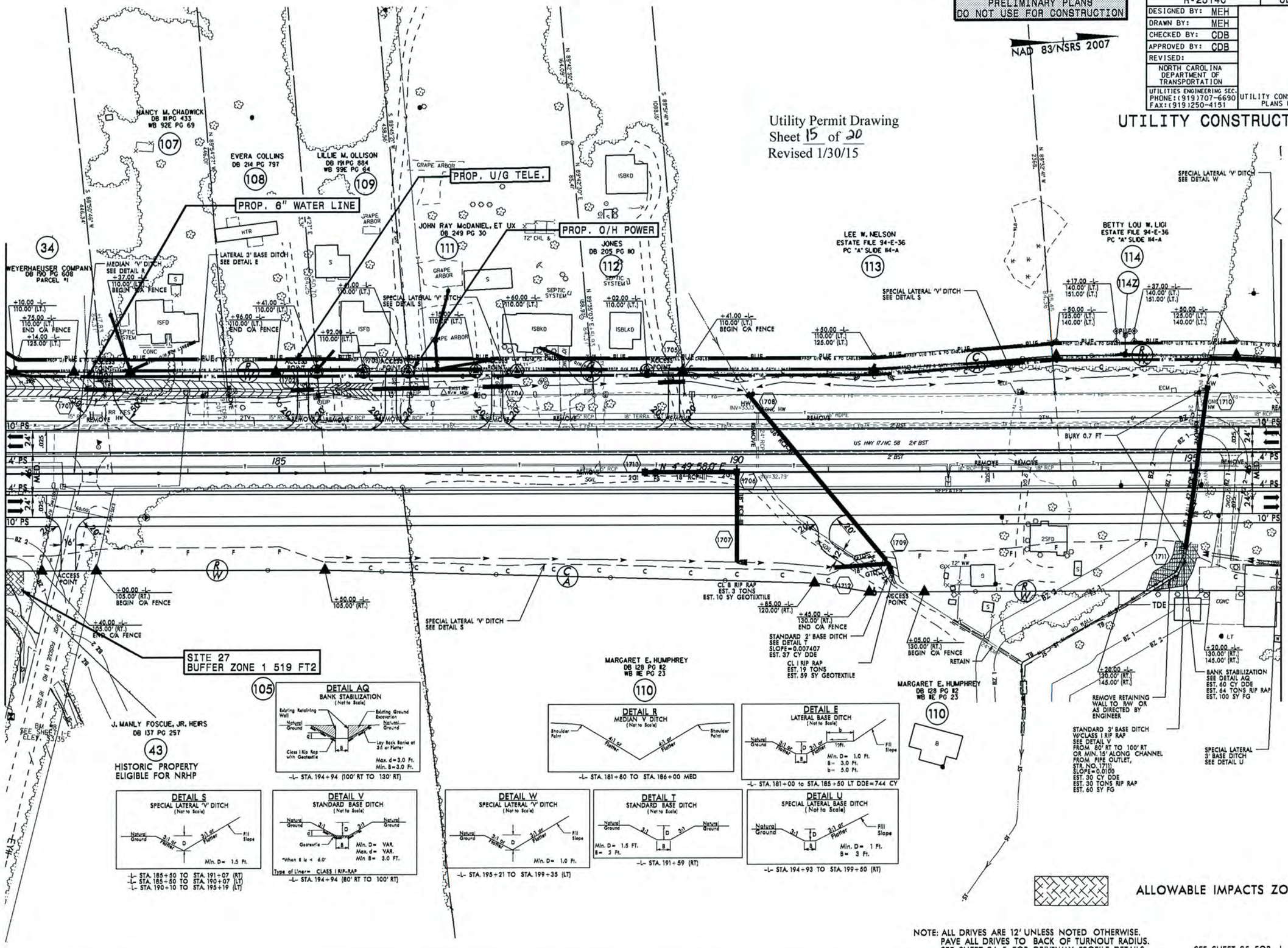
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-15
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 15 of 20
Revised 1/30/15



NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A-5 FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR -L- PROFILE

REVISIONS

5/14/99

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$$$$USERNAME$$$$

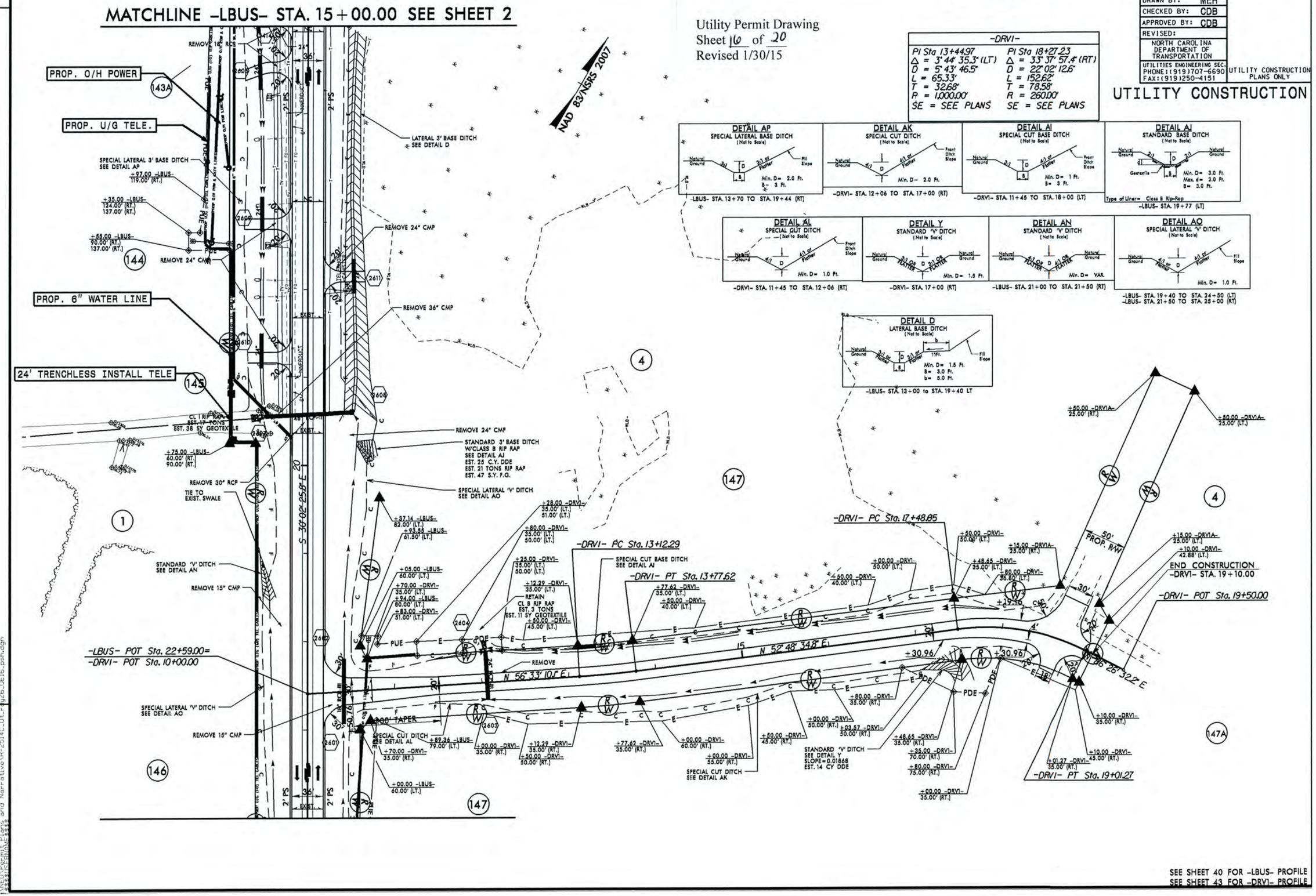
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	UE-16
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
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 16 of 20
Revised 1/30/15

-DRV1-	
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



SEE SHEET 40 FOR -LBUS- PROFILE
SEE SHEET 43 FOR -DRV1- PROFILE

REVISIONS

5/14/99

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R-2514C_UE_16.psh.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 14+85 - 21+27.10	OH Power/ 6" Water Line		0.01	0.11		0.35					
2	LBUS 10+99 - 14+00	OH Power/ 6" Water Line		<.01	0.10		0.15					
3	L 23+82.74 - 24+54.75	6" Water Line			0.01		0.03					
4	L 30+09.12 - 30+33.16	OH Power/ 6" Water Line		<.01			0.01					
5	L 33+24.70 - 35+37	OH Power/ 6" Water Line					0.12					
6	L 37+03.24 - 37+10.52	OH Power/ 6" Water Line					<.01					
7	L 37+79.43 - 40+68.89	OH Power/ 6" Water Line					0.12					
8	L 49+53.15 - 49+73.23	OH Power					0.01					
9	L 61+85.84 - 62+63.94	OH Power/ 6" Water Line			<.01		0.04					
10	L 64+85.68 - 66+69.71	OH Power/ 6" Water Line					0.09					
11	L 64+82.90 - 65+02.91	OH Power					0.01					
12	L 76+79.36 - 76+89.85	OH Power					<.01					
13	L 78+03.15 - 79+72.19	OH Power					0.10					
14	L 80+73.42 - 81+67.23	OH Power/ 6" Water Line		<.01	0.01		0.02					
15	L 95+17.90 - 100+16.87	OH Power/ 6" Water Line		0.01			0.18					
16	L 92+90.92 - 93+10.19	OH Power					0.01					
17	L 106+37.92 - 108+92.00	OH Power					0.10					
18	L 122+89.61 - 123+09.95	OH Power					0.01					
19	L 127+14.66 - 127+70.53	OH Power/ 6" Water Line			<.01		0.02					
20	L 128+15.72 - 128+89.88	OH Power/ 6" Water Line			<.01		0.02					
21	L 130+03.89 - 131+31.42	OH Power/ 6" Water Line		<.01	0.02		0.04					
22	L 135+44.57 - 136+16.23	OH Power/ 6" Water Line			<.01		0.03					
23	L 146+17.42 - 148+52.41	6" Water Line					0.03					
24	L 149+60.12 - 150+62.20	OH Power/ 6" Water Line			0.02		0.03					
25	L 160+31.11 - 162+21.27	OH Power/ 6" Water Line					0.09					
26	L 172+38.67 - 172+69.97	OH Power					<.01					
28	L 36+28.65 - 36+48.73	OH Power					0.01					
29	L 45+80.71 - 46+00	OH Power					0.01					
	20 Poles	Power Poles		0.05								
TOTALS:				0.07	0.27		1.63					

Note: * TEMPORARY FILL AND TEMPORARY EXCAVATION WILL BE USED TO INSTALL THE 6' WATER LINE BY METHOD OF OPEN CUT

Utility Permit Drawing
Sheet 17 of 20
Revised 2/5/15

Revised 02/05/15

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.2.4 (R-2514C)

SHEET 1 OF 1 2/5/2015

ATN Revised 3/31/05

Merged with Impact Summary Sheet 17 of 20

Utility Permit Drawing
Sheet 18 of 20

Merged with Impact Summary Sheet 17 of 20

Utility Permit Drawing
Sheet 19 of 20

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)
27	POWER POLE	L 182+00 - 182+20				519		519					
TOTAL:						519	0	519	0	0	0		

Utility Permit Drawing
Sheet 20 of 20
Revised 2/2/15

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
PROJECT: 34442.2.4 (R-2514C)

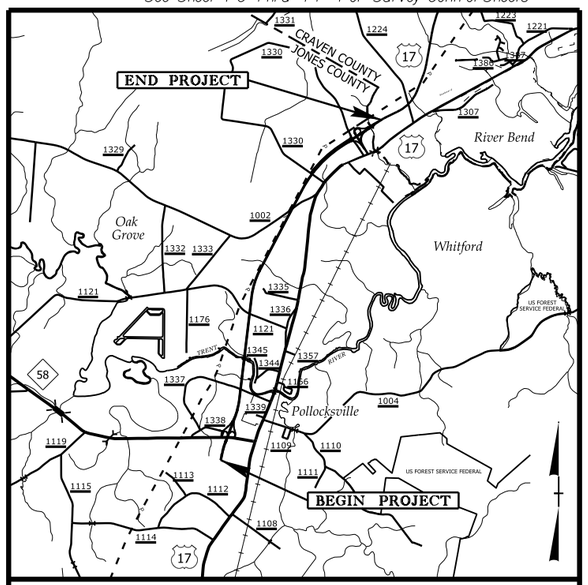
2/2/2015
SHEET 1 OF 1

Rev. May 2006

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

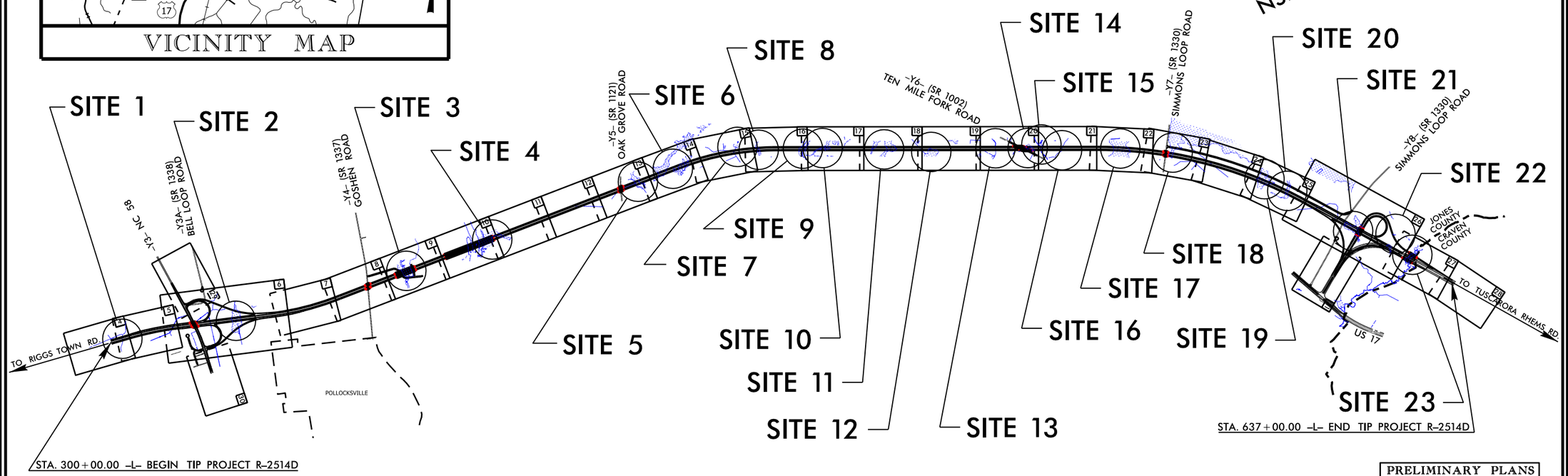
LOCATION: US 17 FROM SOUTH OF NC 58 TO THE NEW BERN BYPASS

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

WETLAND AND SURFACE WATER IMPACTS PERMIT

NAD 83/
NSRS 2007

SITE 8



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

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 = 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)

Natural Ground, 2:1, 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-

DETAIL 'LL'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground, min. 2:1 to 3:1, EXISTING BANK, CHANNEL BED (Variable), EXISTING BANK, min. 2:1 to 3:1, Natural Ground, d

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

10' SOIL

4' BASE LATERAL GRASSED SWALE
SEE DETAIL 'A'

CHORD

CL 8' RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

BURIED 20%
PIPE OUTLET CHANNEL
SEE DETAIL 'LL'

N 11° 39' 27.2" E

300

305

-L- STA. 308+00

HW
BURIED 20%

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

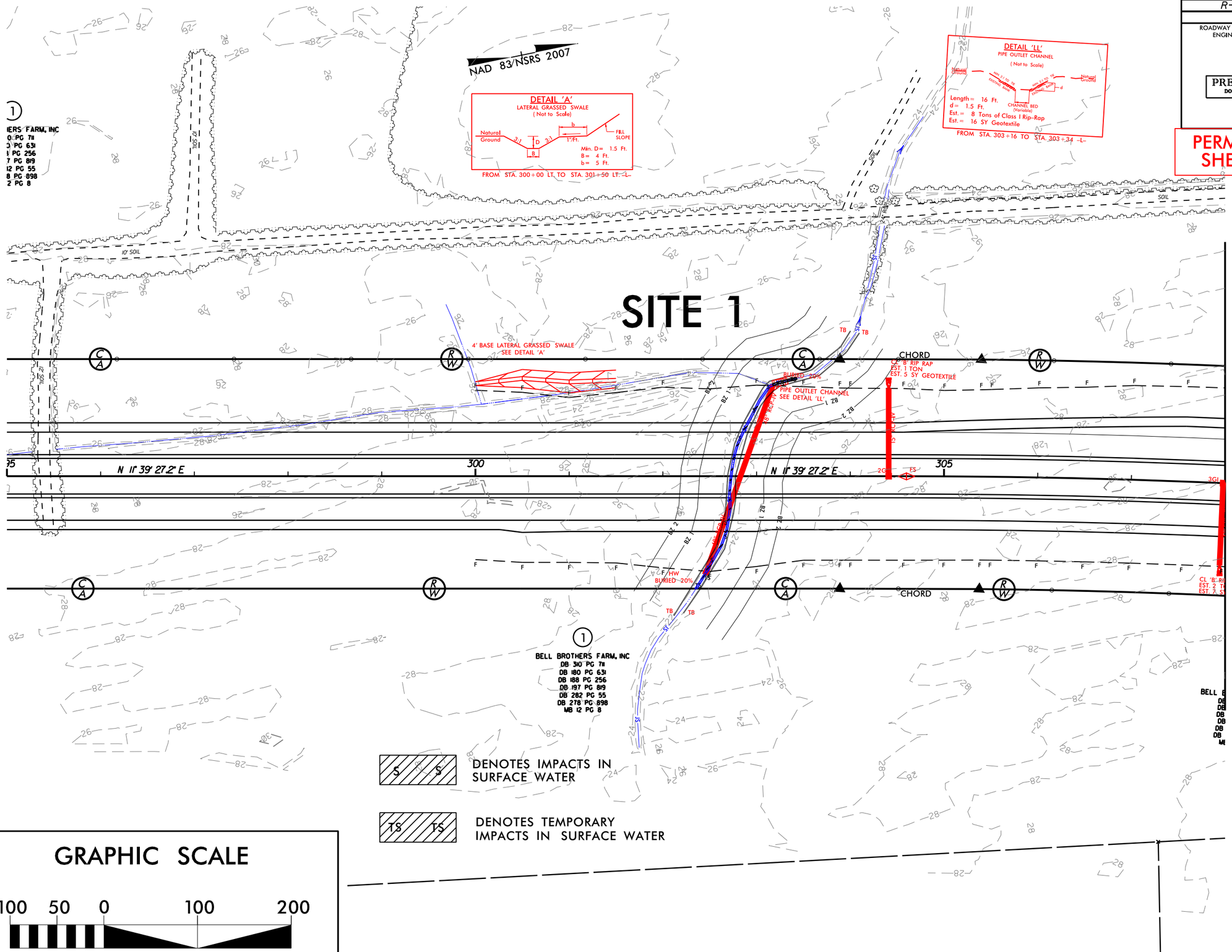
8/17/99

3/19/2014
mpowell
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hydr_prm_site_1.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USER$$$$$$
$$$$$$$$DGN$$$$$$
$$$$$$$$

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 3 OF 84



SEE SHEET 32 FOR -L- PROFILE

REVISIONS

8/17/99

3/19/2014
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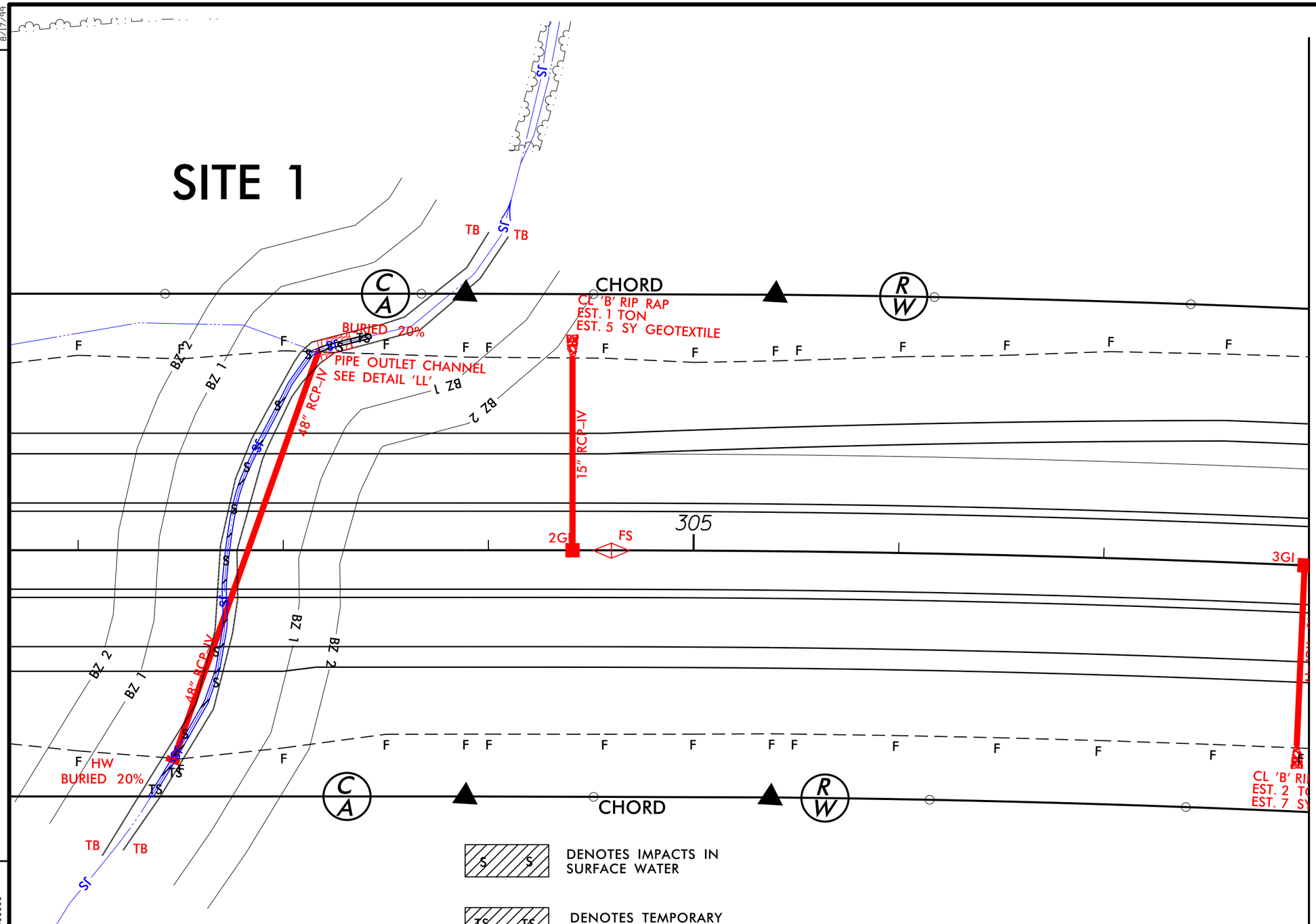
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 4 OF 84

SITE 1



–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
R-2514D
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$ELEVATION$$$$
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REVISIONS

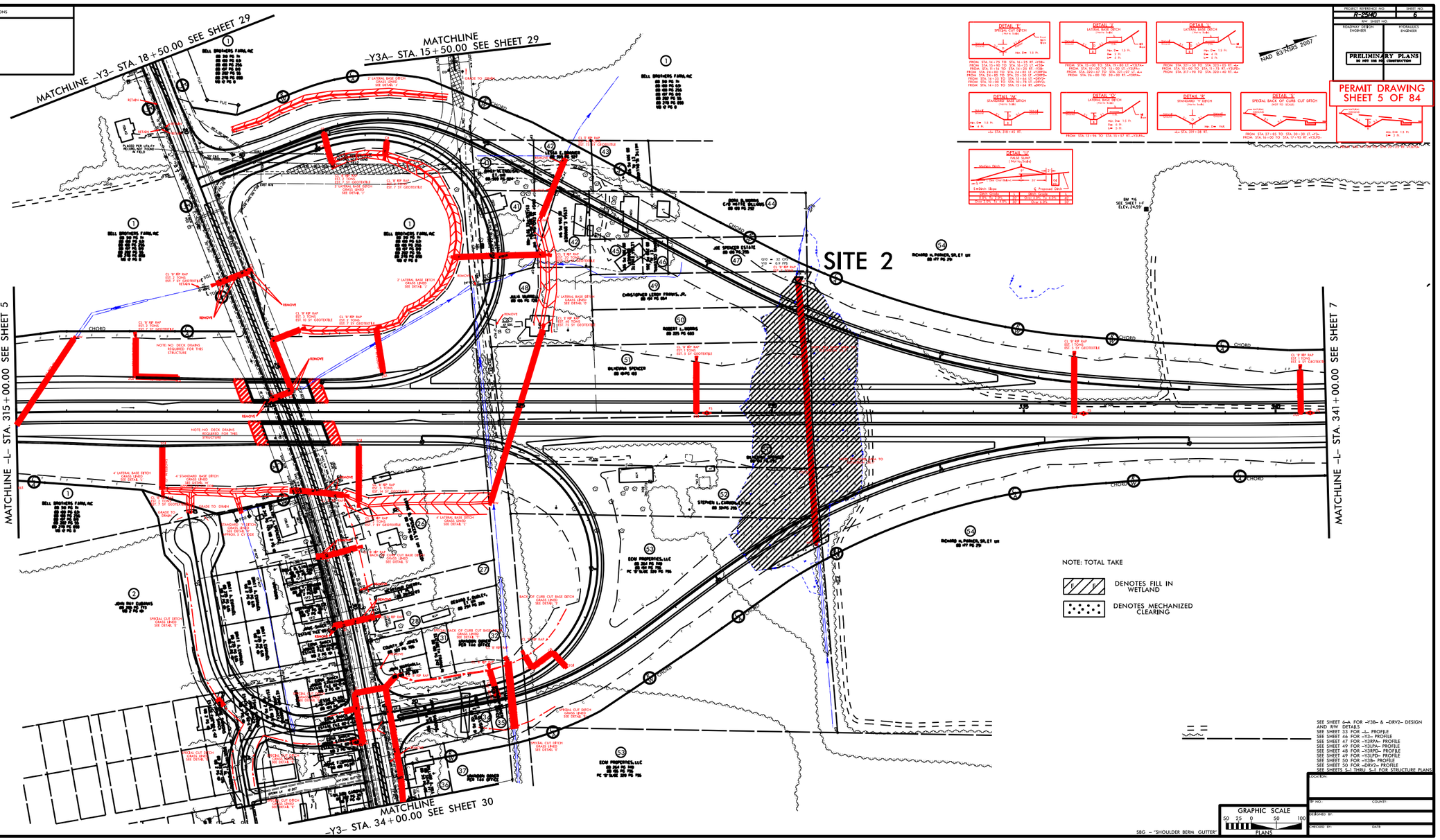
PROJECT REFERENCE NO.	SHEET NO.
R-2524D	6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

PERMIT DRAWING
SHEET 5 OF 84



3/24/2014
mjyork
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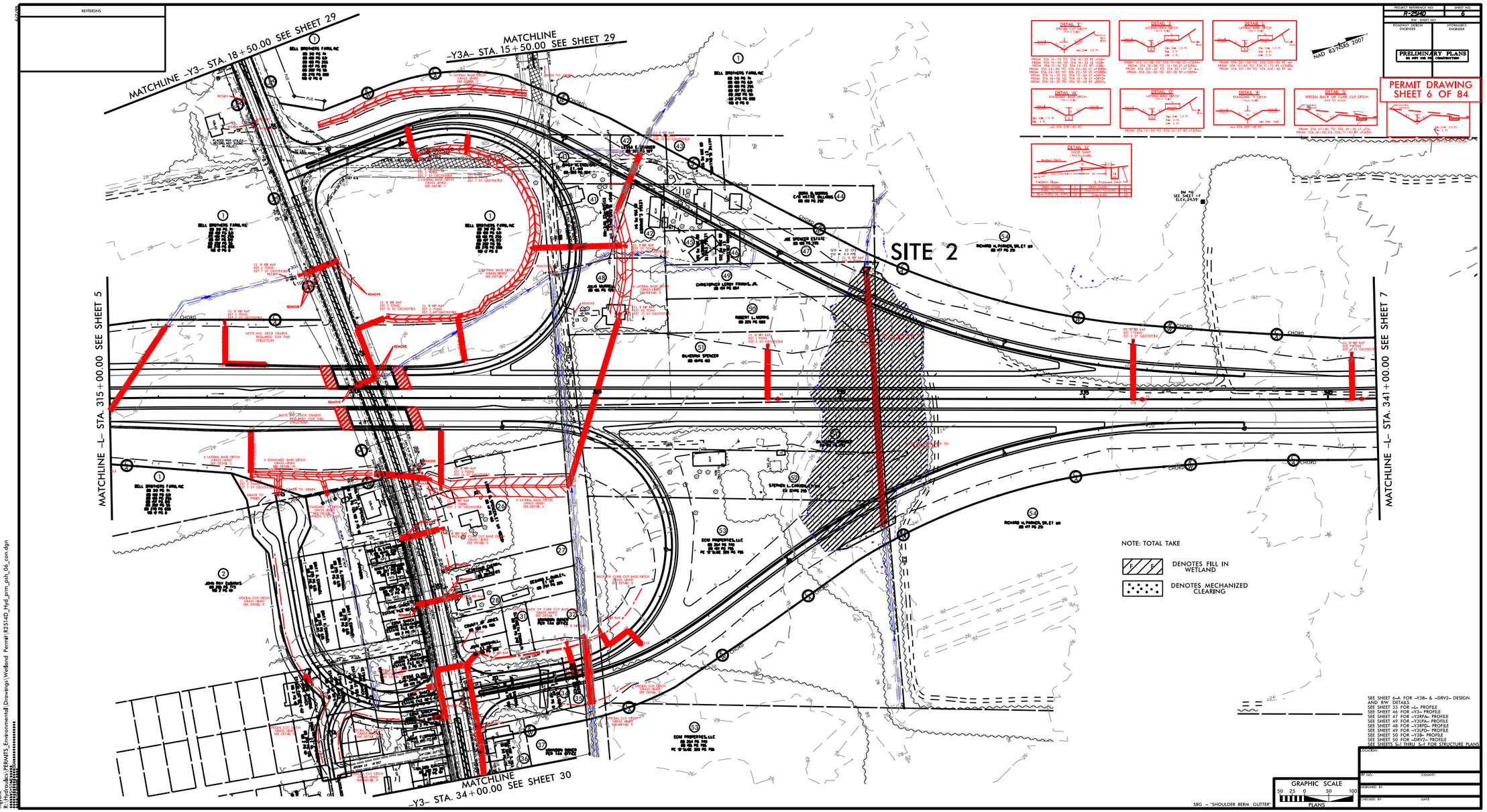
REVISIONS

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 6 OF 84

NAD 83/NSRS 2007



LOCATION:

TIP NO. COUNTY:

DESIGNED BY:

CHECKED BY: DATE:

3/24/2014
mjrock
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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.
DB

-Y3RPA-

-L-

-Y3RPD-

NOTE: FILL GORE AREA TO ELEVATION 26.7'

NOTE: FILL GORE AREA TO ELEVATION 26.7'

38" RCP-IV

38" RCP-IV

38" RCP-IV

OTCB

OTCB

HWF

8' SOIL

Q10 = 32 CFS
Y10 = 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. CARMONA ET UX
DB 321 PG 295

52

72" CHL

LE

FS

2CI

NOTE: TOTAL TAKE

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

3242014
mjyork
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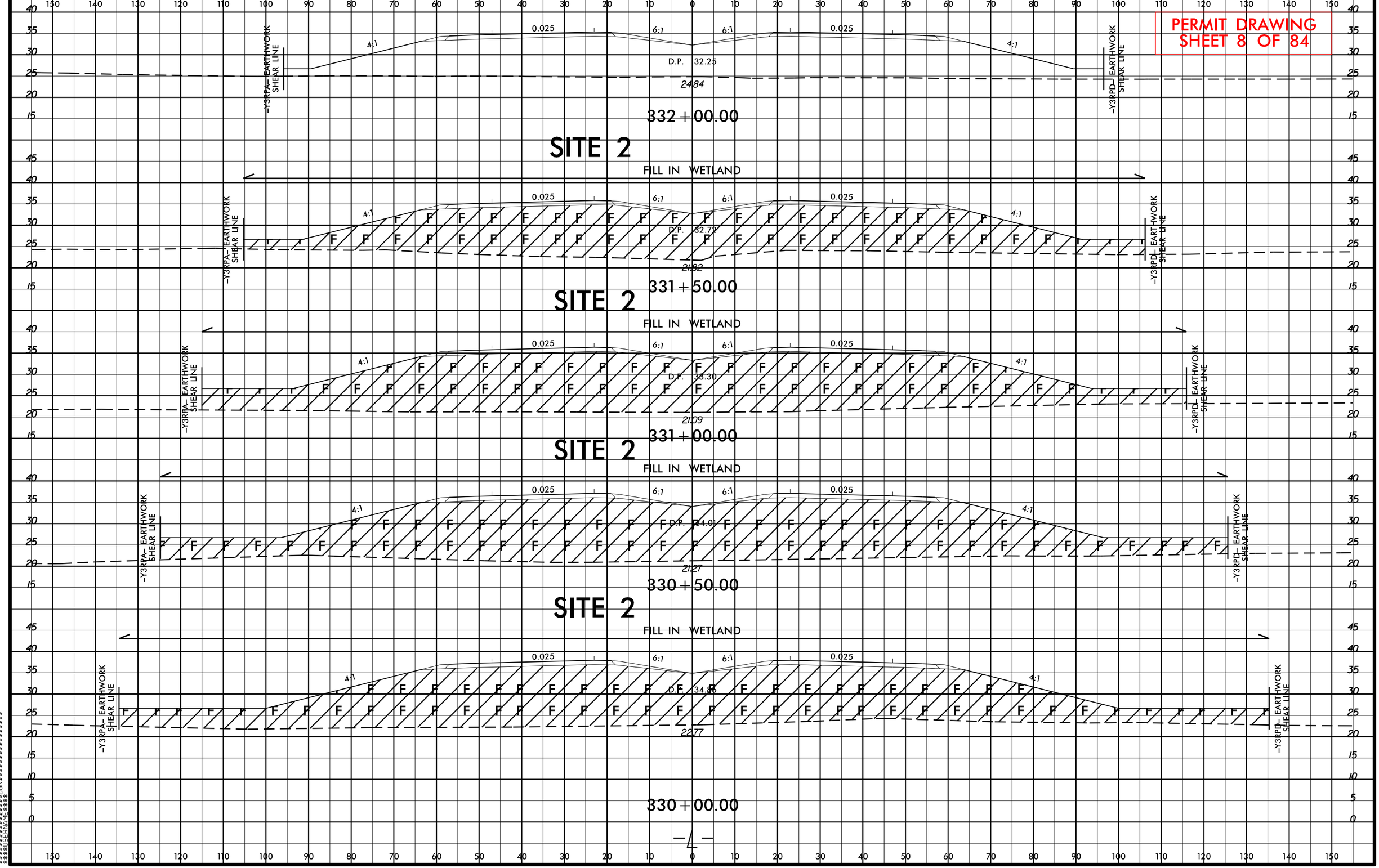
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-18

0 5 10

PERMIT DRAWING
SHEET 8 OF 84



8/23/99

3/7/2014
mjyork
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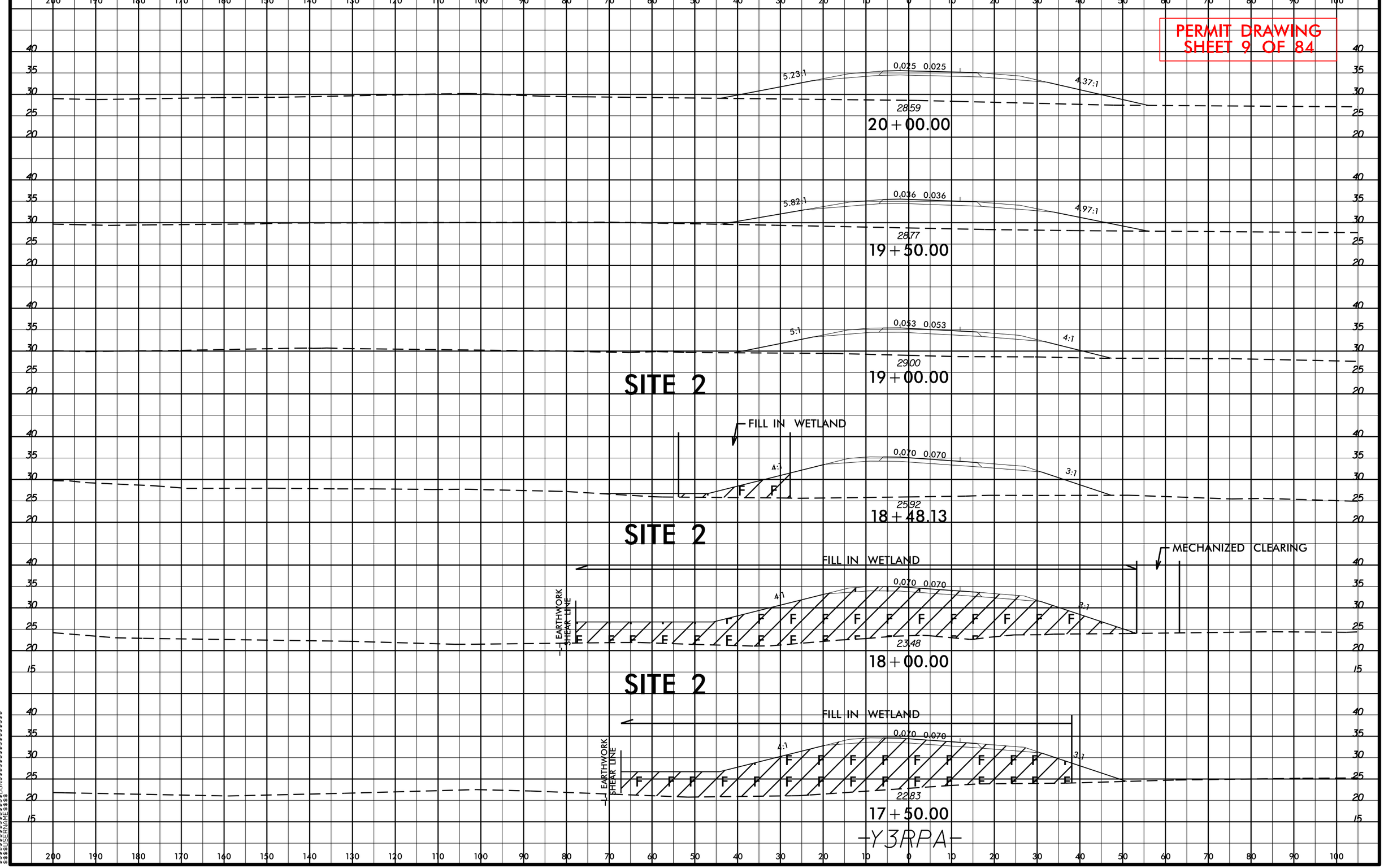
PERMIT DRAWING
SHEET 9 OF 84



8/23/99

3/7/2014
mjyork
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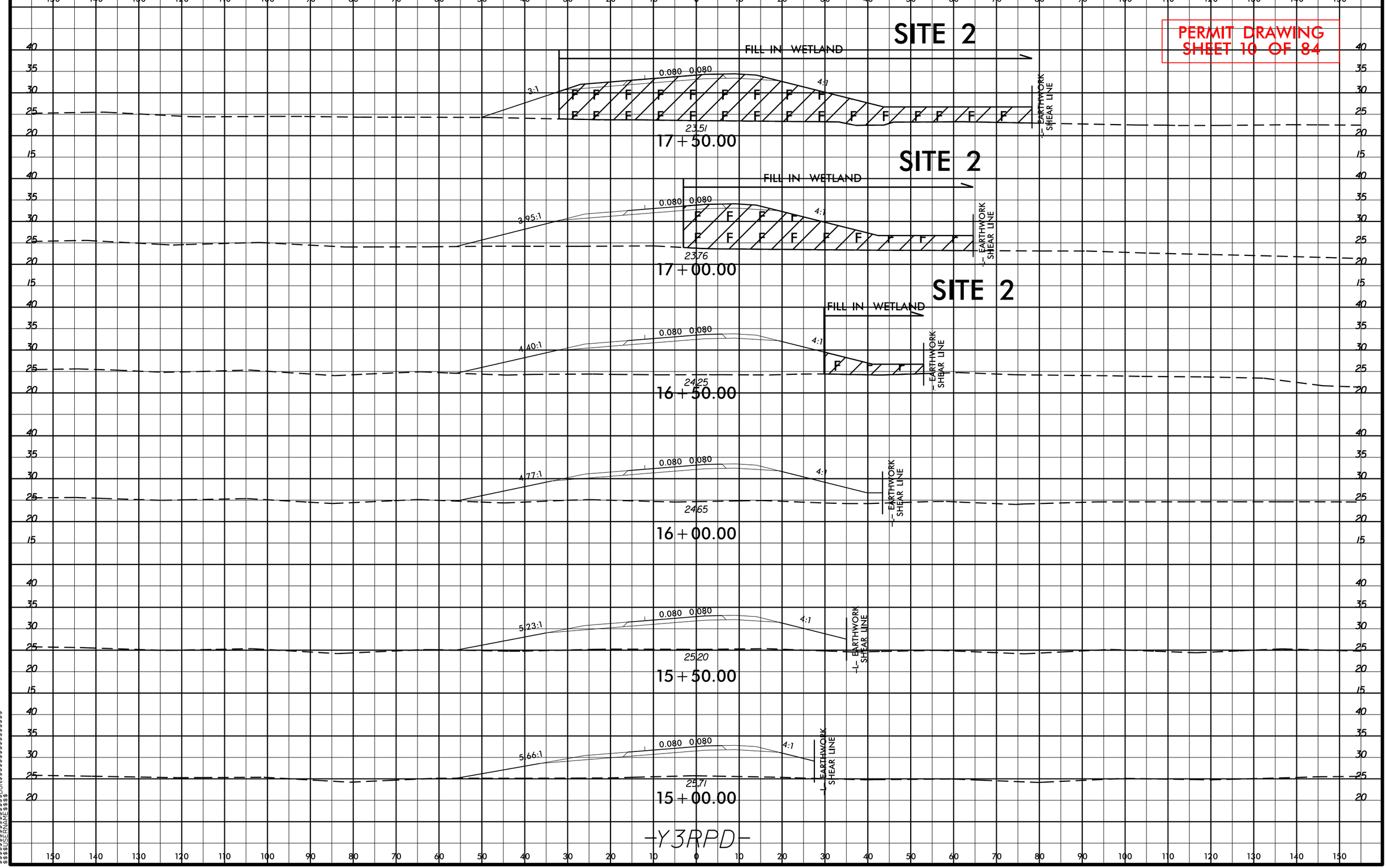
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-164

PERMIT DRAWING
SHEET 10 OF 84



8/23/99

3/7/2014
mjones
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$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

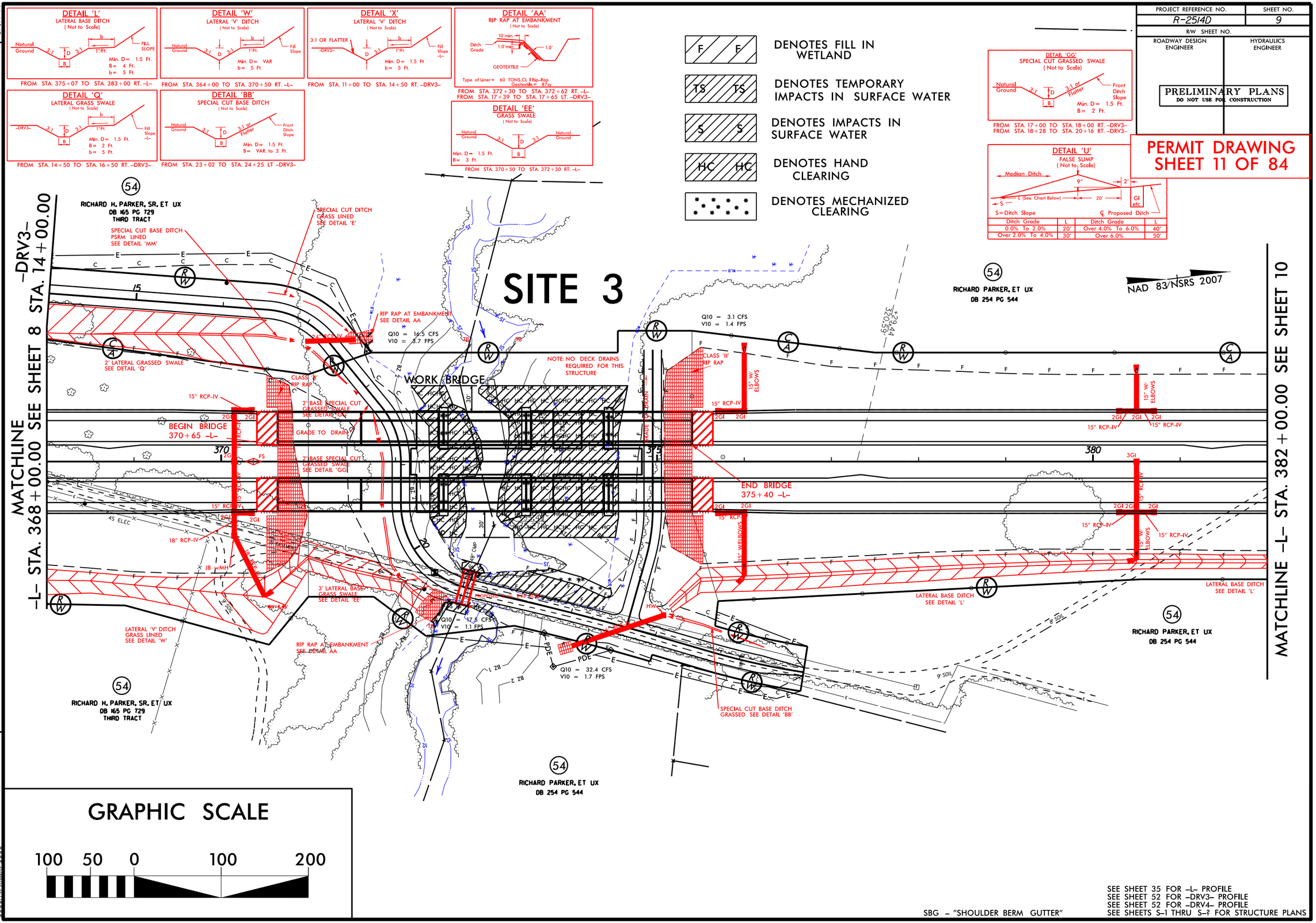
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 11 OF 84

8/17/99

REVISIONS



3/18/2014
mjyork
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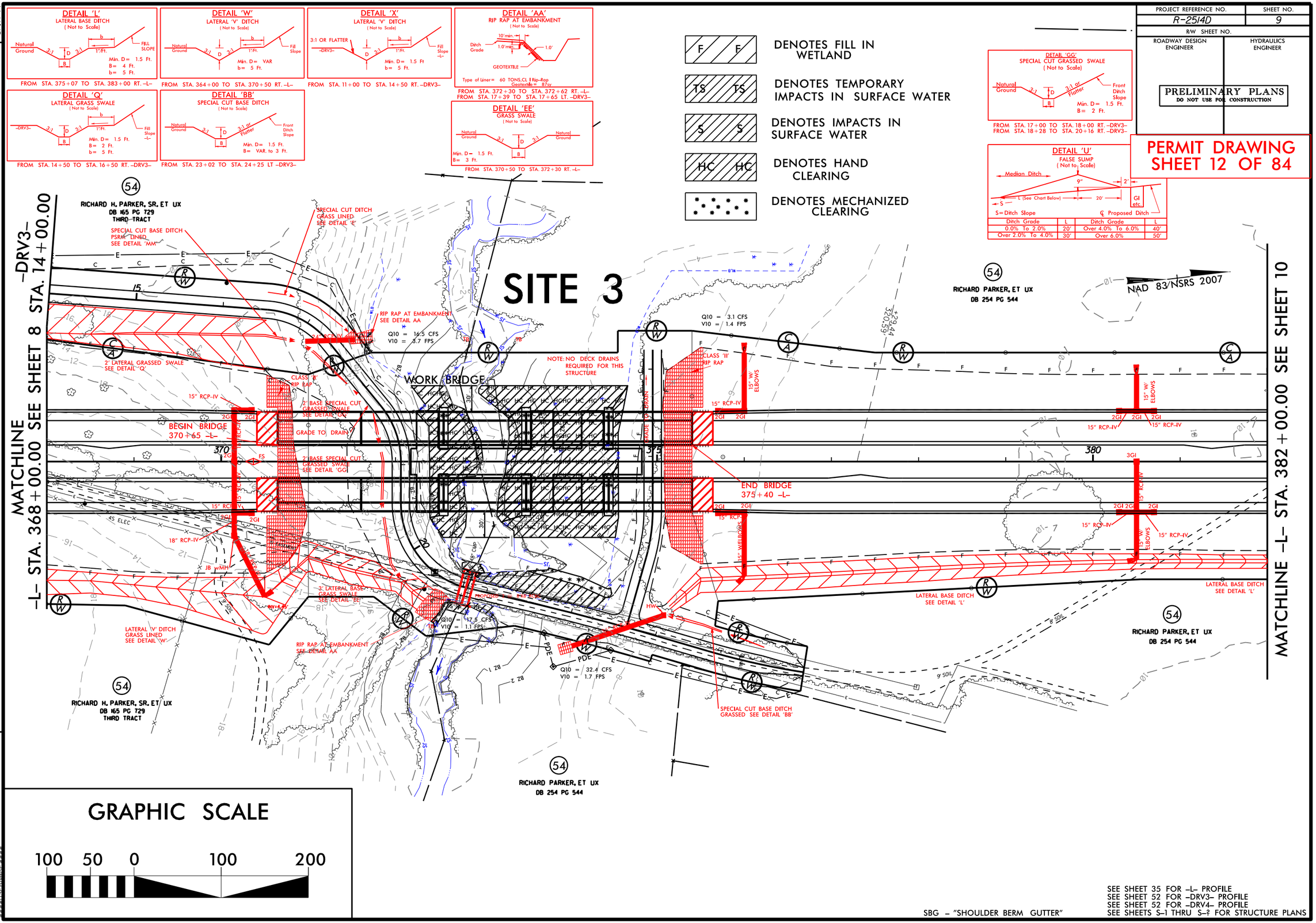
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 12 OF 84

8/17/99

REVISIONS



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

SBG – "SHOULDER BERM GUTTER"

3/18/2014
mjyork
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_09_con.dgn
$$$

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

SITE 3

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

WORK BRIDGE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

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

15" W/ELBOWS

BRIDGE 65 -L-

END BRIDGE 375+40 -L-

18" RCP-IV

JB w/MH

INV=4.45'

3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'

PROPOSED 1 @ 8'X8' RCBC

Q10 = 17.5 CFS
V10 = 1.1 FPS

Q10 = 32.4 CFS
V10 = 1.7 FPS

HW

-DRV3-

-DRV4-

GRAPHIC SCALE

50 25 0 50 100

8/17/99

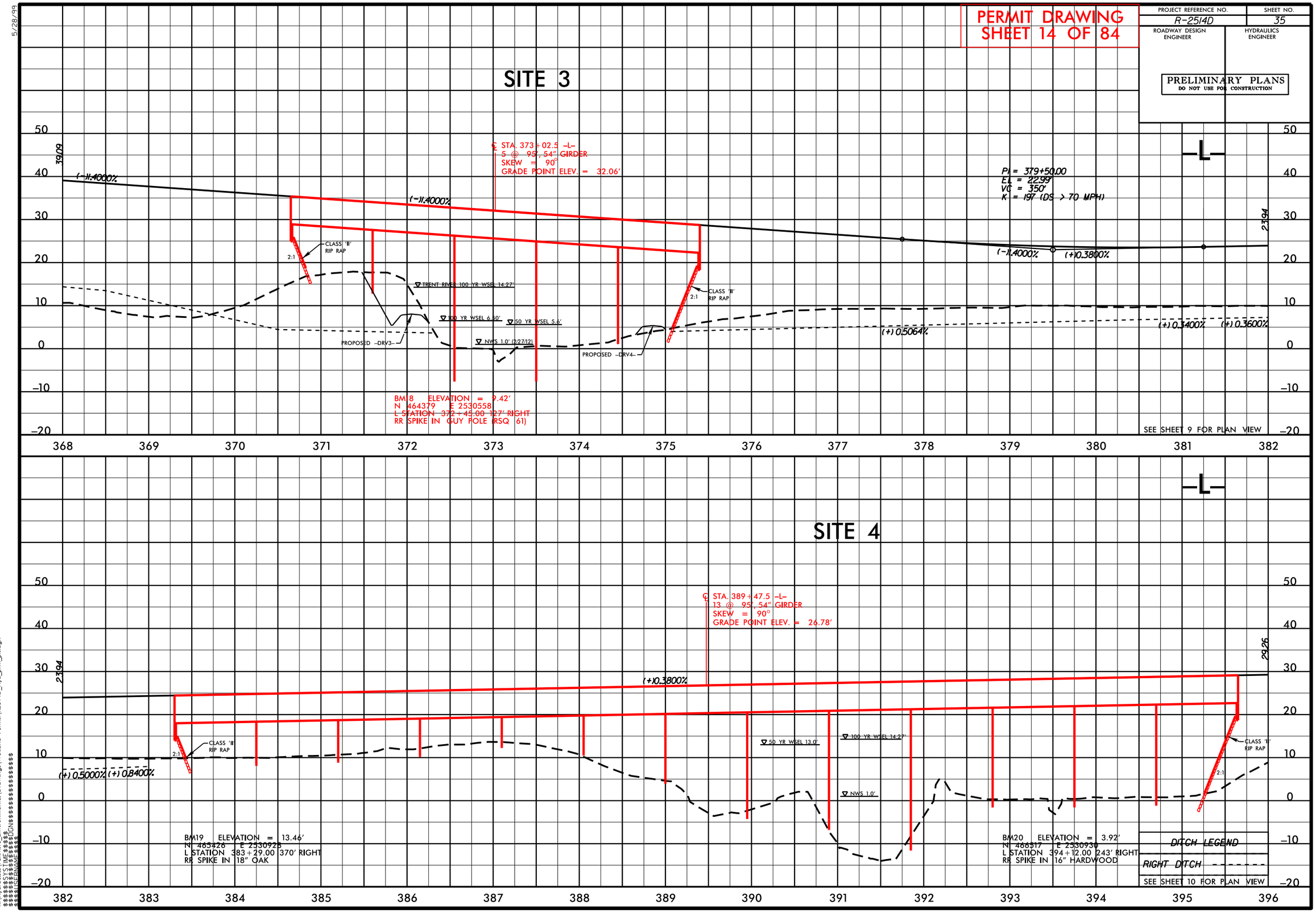
REVISIONS

3/18/2014
mjrock
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_gsh_0902.dgn
$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$
$$$$$$DGNS$$$$$$$$$$$$$$$$$$$$

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



5/28/99

2/27/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_pfl.dgn
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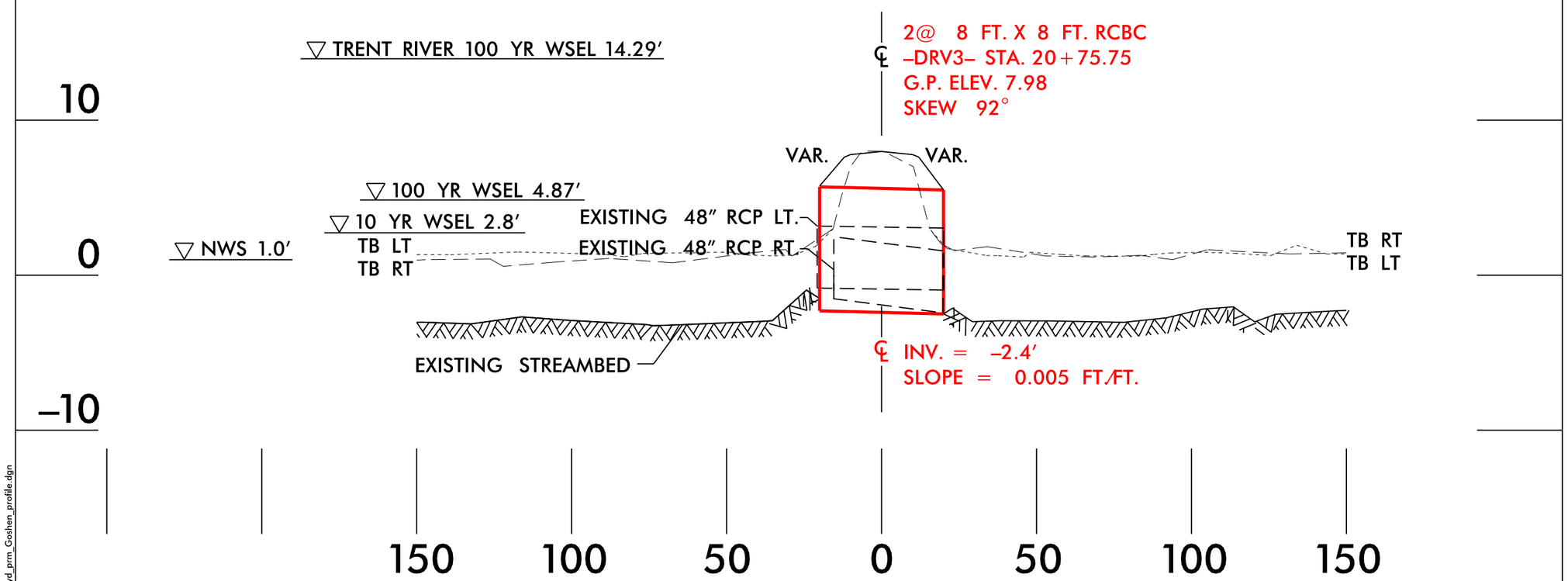
PERMIT DRAWING
SHEET 15 OF 84

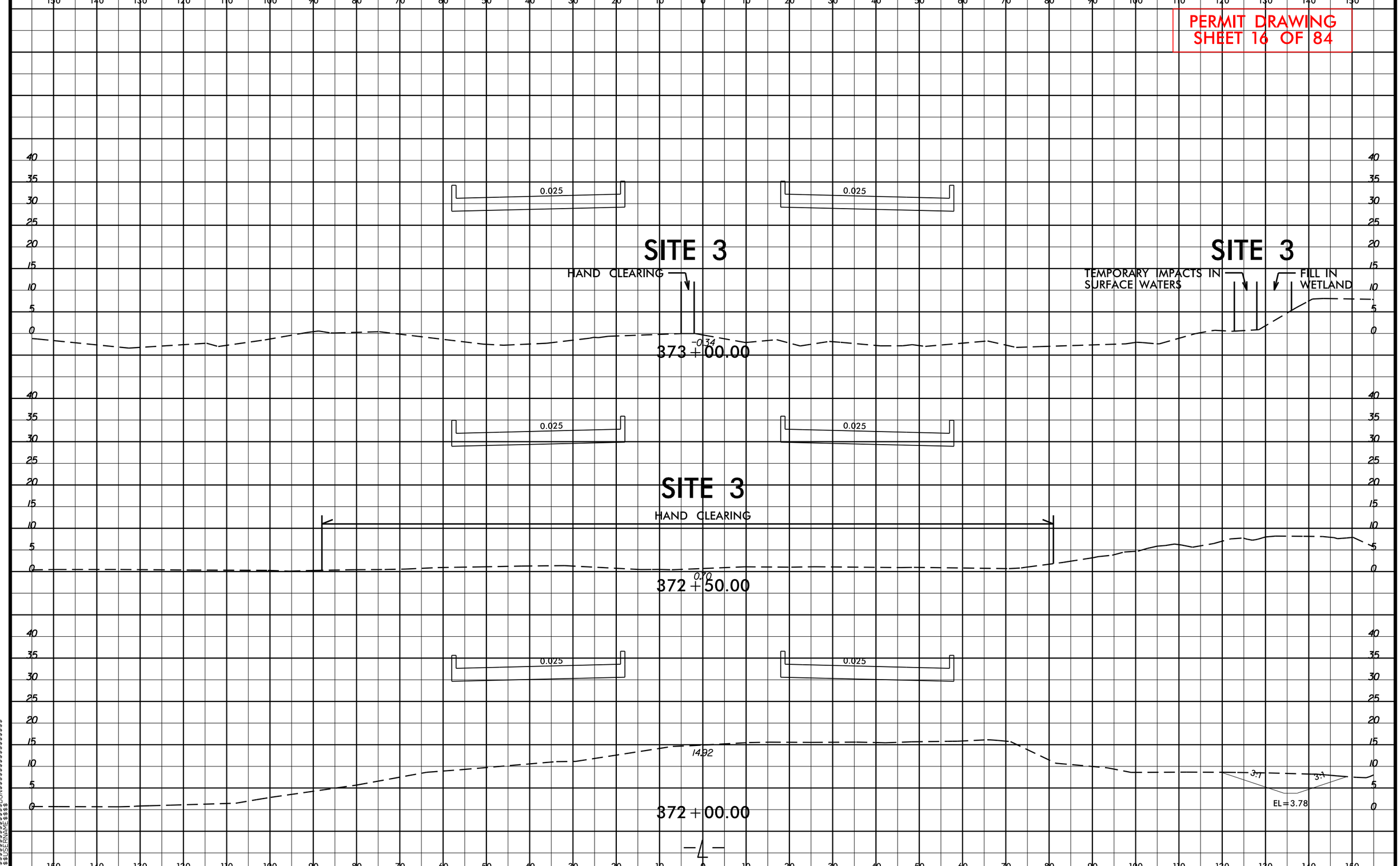


PROFILE

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

PERMIT DRAWING
SHEET 16 OF 84



8/23/99
3/7/2014
mjcark
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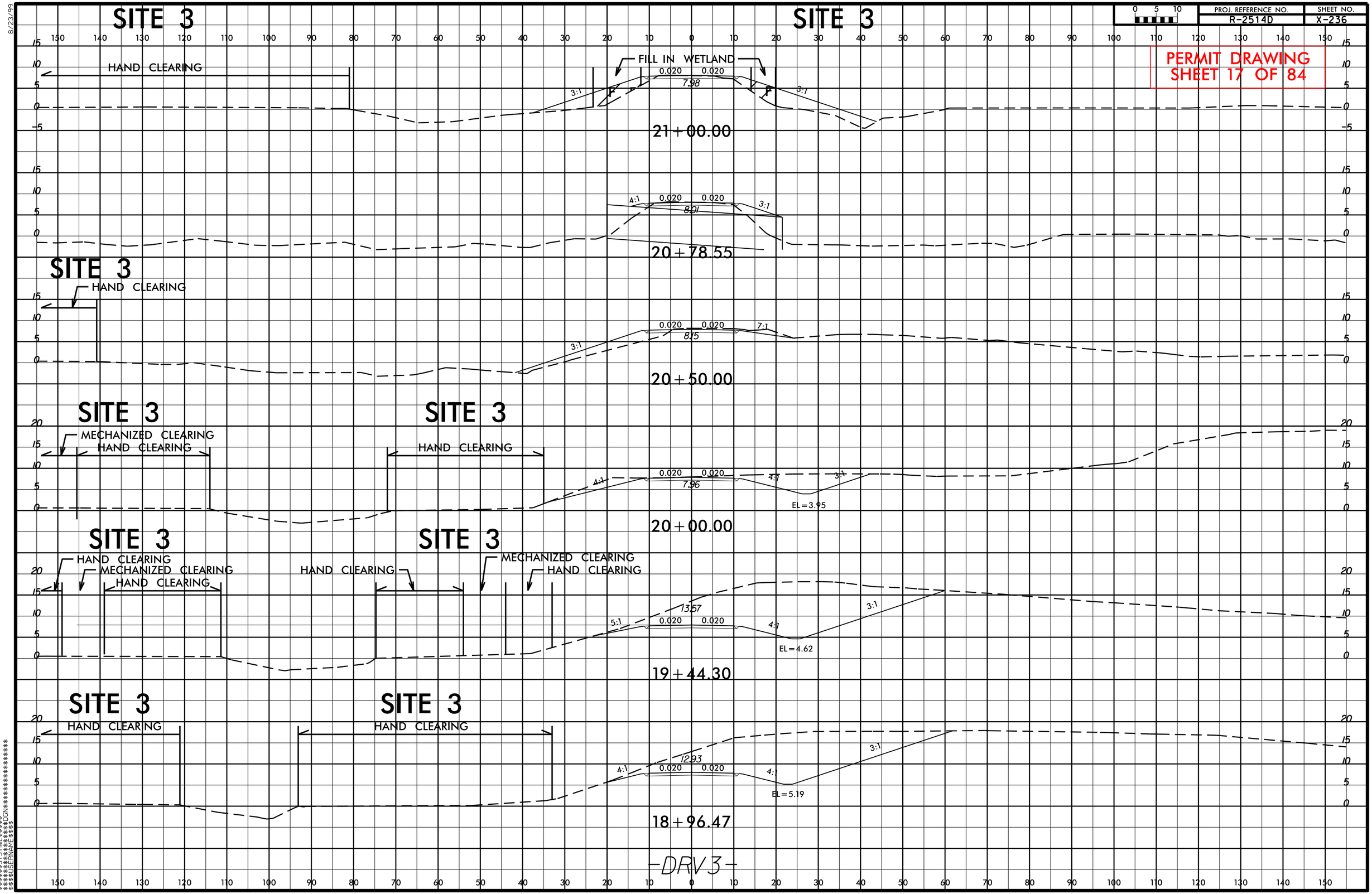
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-236

PERMIT DRAWING
SHEET 17 OF 84



8/23/99

3/7/2014
mjcurk
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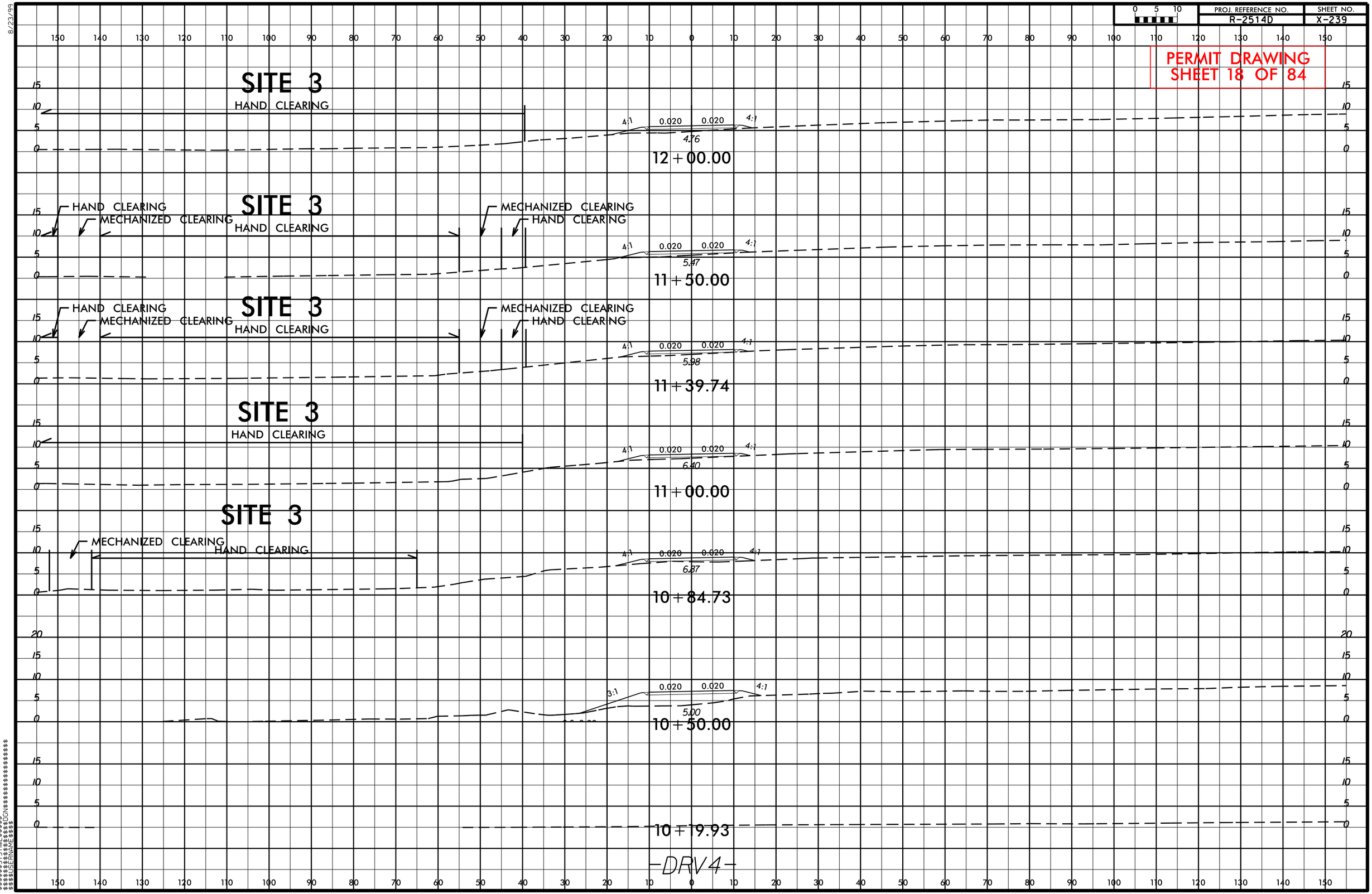
$$$$$$USERNAME$$$$

PERMIT DRAWING
SHEET 18 OF 84



8/23/99
3/7/2014
mjcark
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$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

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

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

15" W/ ELBOWS

2GI

385

390

395

TRENT RIVER

54
RICHARD PARKER, ET UX
DB 254 PG 544

JOHN H. DAVIS, JR.
DB 184 PG 566
MC "A" SLIDE 104-A

SITE 4

56
THOMAS B. MOORE, ET AL
DB 306 PG 520

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

REVISIONS

8/17/99

3/8/2014
mycot
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_10.dgn
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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 20 OF 84

NAD 83/NSRS 2007

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

385

390

395

TB

BZ

HC

F

NOTE: STANDARD DECK DRAINS:
FROM STA. 383+35 TO STA. 388+50 RT
FROM STA. 383+35 TO STA. 388+50 LT.

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

REVISIONS

8/17/99

3/18/2014
mjyoo
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_10_con.dgn
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$$$$$$$$$$DGNS$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$

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

390

395

30'

TB

BZ 1

BZ 2

JS

SF

WLB

FS

GL

RT
LT.

GRAPHIC SCALE

50 25 0 50 100

MATCHLINE -L- STA. 396+00.00 SEE SHEET

REVISIONS

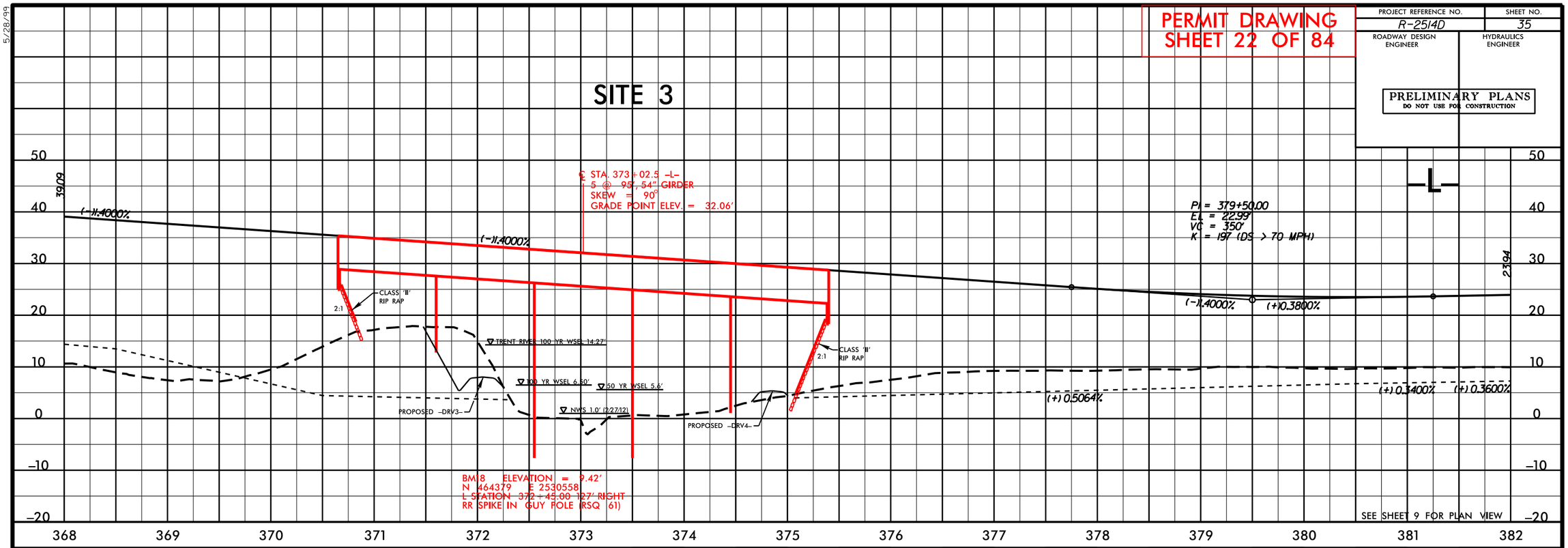
8/17/99

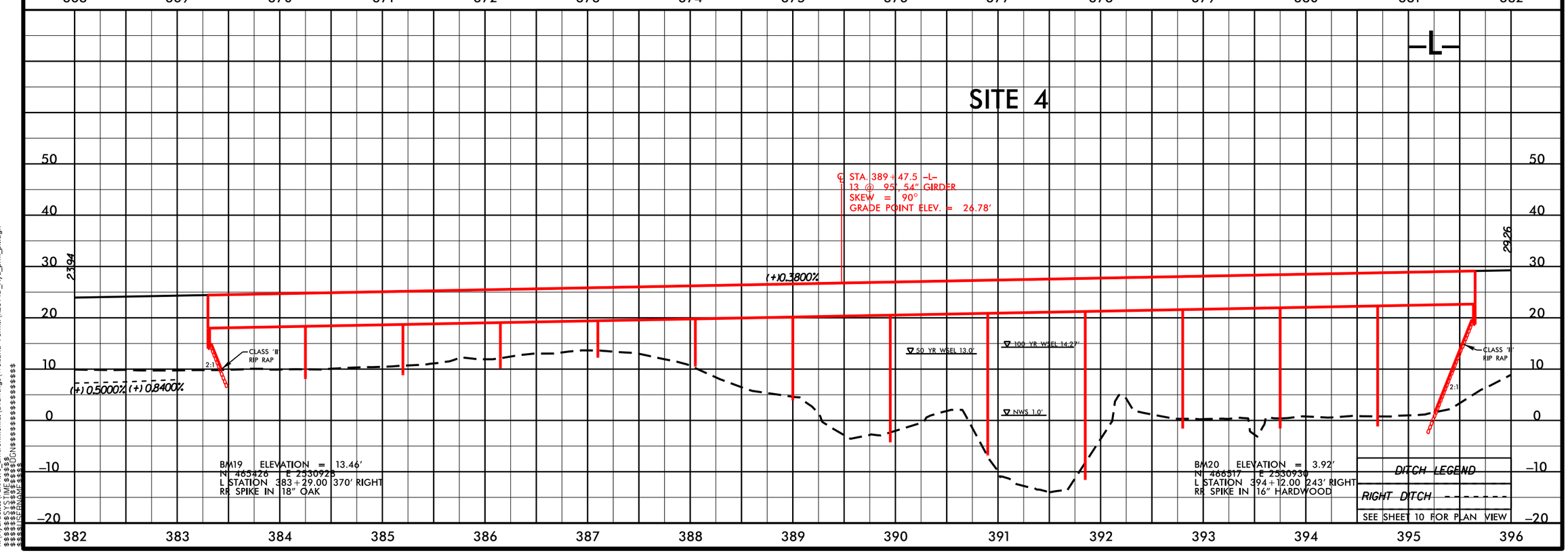
3/8/2014
mlynch
R:\Hydraulics\PERMITS\Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_psh_10X2.dgn
$$$

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





5/28/99

2/27/2014
mjyork
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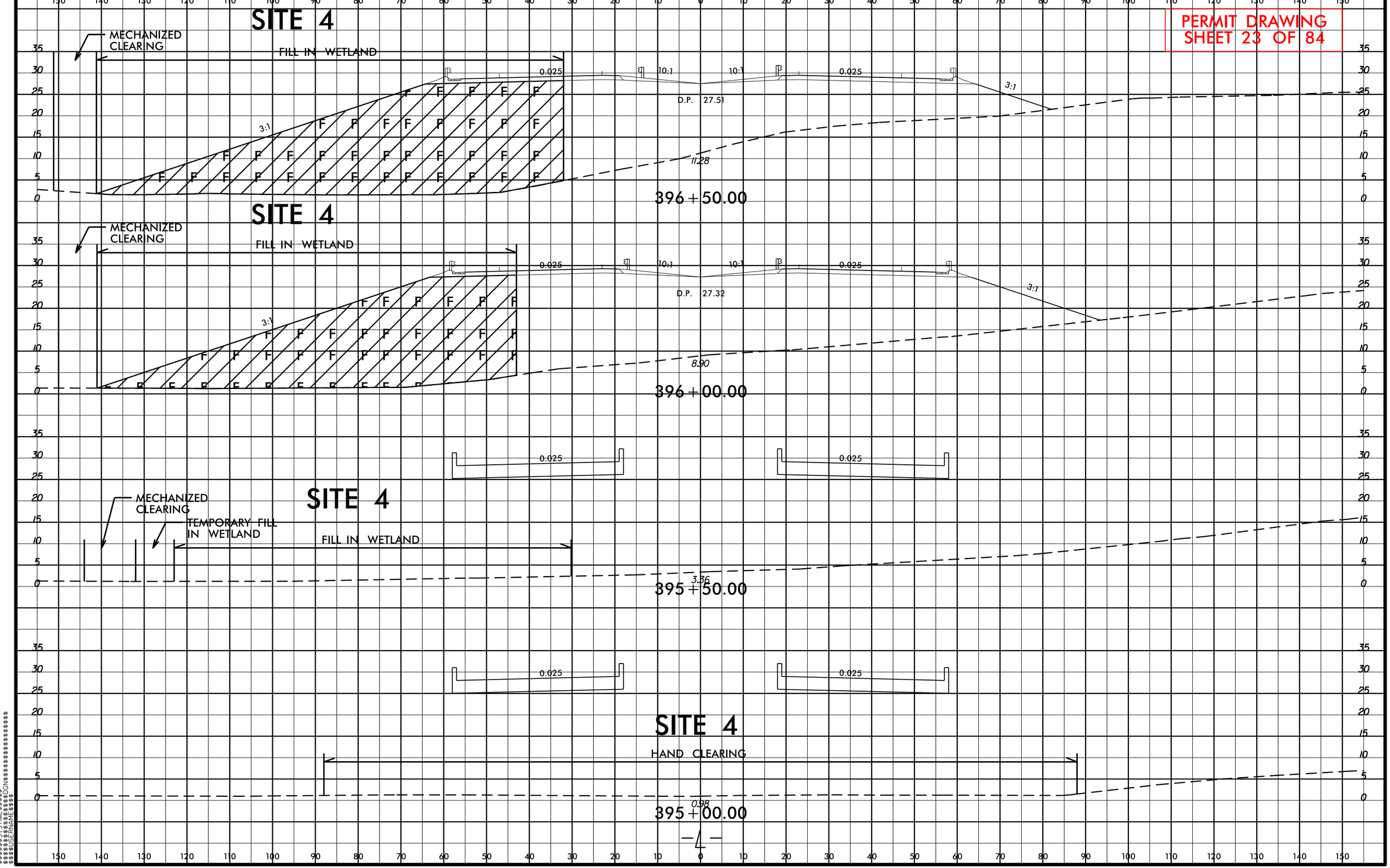
PERMIT DRAWING
SHEET 23 OF 84



8/23/99
3/7/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_1.dgn
$$$

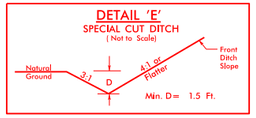
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 24 OF 84

NAD 83/NSRS 2007

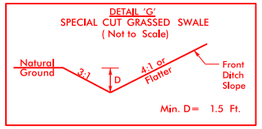
DETAIL 'E'
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 404+50 TO STA. 409+00 LT. –L–

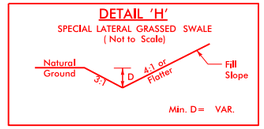
DETAIL 'G'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



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–

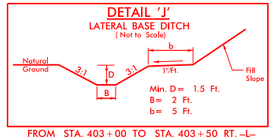
DETAIL 'H'
SPECIAL LATERAL GRASSED SWALE
(Not to Scale)



Min. D= VAR.

FROM STA. 402+50 TO STA. 404+50 LT. –L–

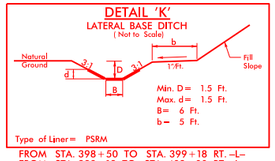
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



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)

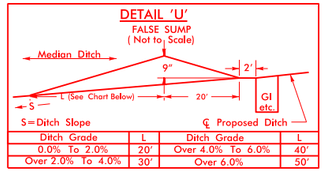


Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 6 Ft.
b= 5 Ft.

Type of Liner= PSRM

FROM STA. 398+50 TO STA. 399+18 RT. –L–
FROM STA. 399+18 TO STA. 403+00 RT. –L–

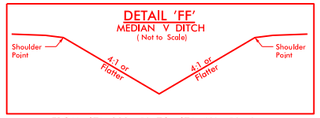
DETAIL 'U'
FALSE SUMP
(Not to Scale)



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'

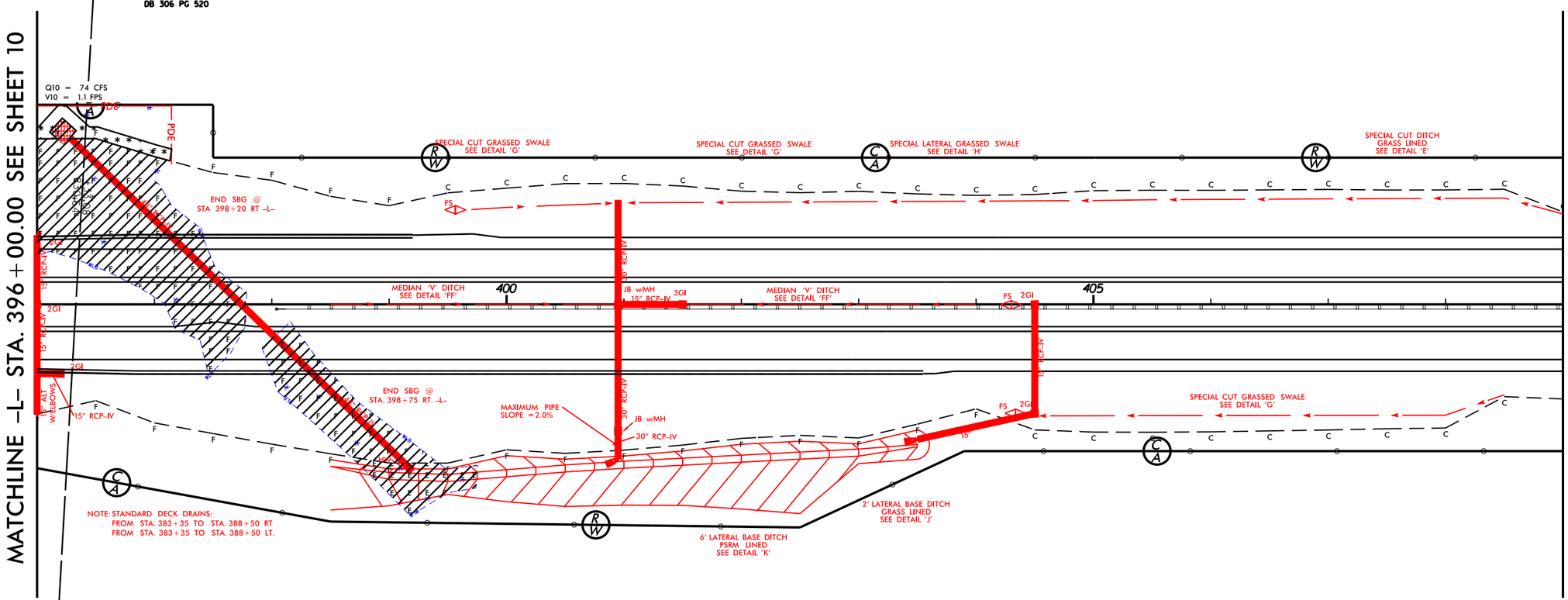
DETAIL 'FF'
MEDIAN 'V' DITCH
(Not to Scale)



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 110 PG 221
MB 6 PG 26



SITE 4

(57)
C. E. WILLIE, SR. HEIRS
DB 110 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

REVISIONS

8/17/99

3/5/2014
mpark
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_pmn_psh_11.dgn
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$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

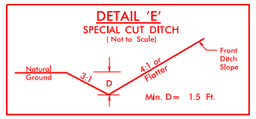
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 25 OF 84

NAD 83/NSRS 2007

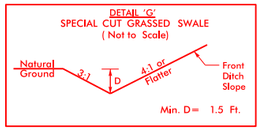
DETAIL 'E'
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 404+50 TO STA. 409+00 LT. –L–

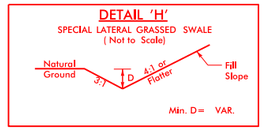
DETAIL 'G'
SPECIAL CUT GRASSED SWALE
(Not to Scale)



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–

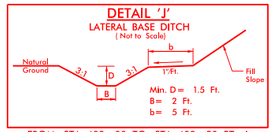
DETAIL 'H'
SPECIAL LATERAL GRASSED SWALE
(Not to Scale)



Min. D= VAR.

FROM STA. 402+50 TO STA. 404+50 LT. –L–

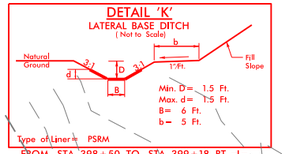
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



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)

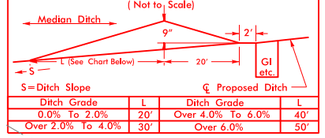


Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 6 Ft.
b= 5 Ft.

Type of Liner= PSRM

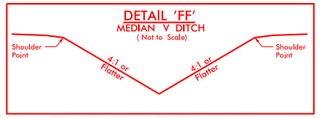
FROM STA. 398+50 TO STA. 399+18 RT. –L–
FROM STA. 399+18 TO STA. 403+00 RT. –L–

DETAIL 'U'
FALSE SUMP
(Not to Scale)



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–

57
C. E. WILLIE, SR. HEIRS
DB 110 PG 221
MB 6 PG 26

56
THOMAS B. MOORE, ET AL
DB 306 PG 520

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

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'

400

JB wMH
15" RCP-IV
3GI

MEDIAN 'V' DITCH SEE DETAIL 'FF'

405

FS 2GI

15" RCP-IV

2GI

15" RCP-IV

2GI

15" ALT WELDBOWS

15" RCP-IV

END SBG @ STA. 398+75 RT –L–

MAXIMUM PIPE SLOPE = 2.0%

JB wMH

30" RCP-IV

FS 2GI

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 'J'

SITE 4

57
C. E. WILLIE, SR. HEIRS
DB 110 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

REVISIONS

8/17/99

3/5/2014
rhyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_11_con.dgn
$$$

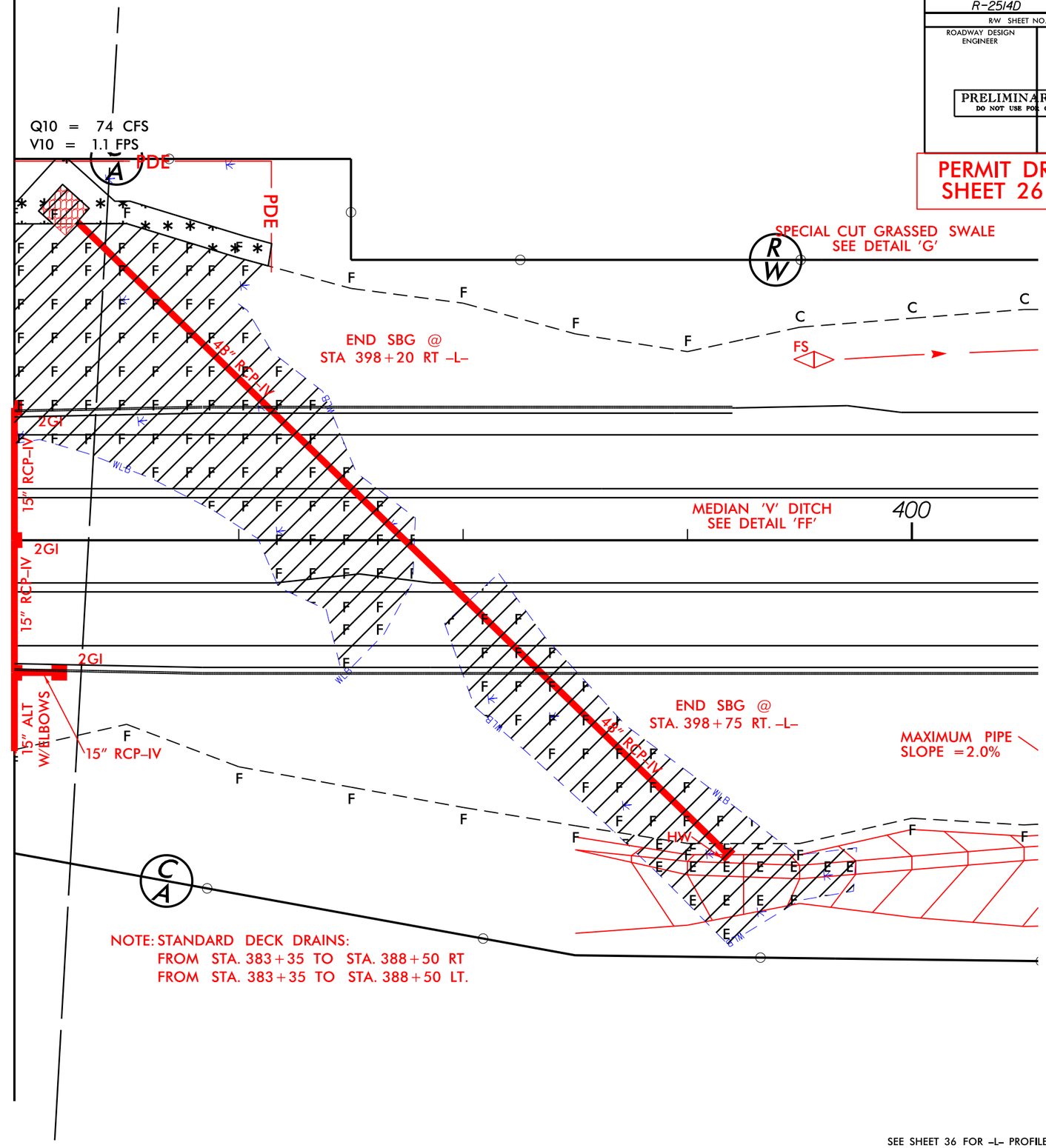
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 26 OF 84

SITE 4

MATCHLINE –L– STA. 396+00.00 SEE SHEET 10



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

REVISIONS

8/17/99

352014
mpeel
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$$$$$$$SYSTIME$$$$$$
$$$$$$$

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

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 291 PG 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

(63) EARL MURPHY, ET UX
DB 192 PG 900
PLAT CAB A SLIDE 142-A

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

(64) JOHN A. MURPHY, ET UX
DB 192 PG 904
PLAT CAB A SLIDE 142-A

Q10 = 4.7 CFS
V10 = 0.6 FPS

SITE 5

(58) VELMA J. BRYAN, ET AL
DB 291 PG 186
TRACT TWO

KENNETH L. MURPHY
NO DEED DESCRIPTION

(61) VELMA J. BRYAN, ET AL
DB 291 PG 186
TRACT ONE

(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 291 PG 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

1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312

15' WELDOWS

2GI FS

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

REVISIONS

8/17/99

3/6/2014
mpeck
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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 28 OF 84

NAD 83/NSRS 2007

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

(60) CREIGHTON R. BARBER, ET AL
DB 277 PG 813

(59) NATHANIEL SIMMONS HEIRS
C/O KATHERINE S. WAY
DB 153 PG 44

(58) VELMA J. BRYAN, ET AL
DB 291 PG 186
TRACT TWO

(62) FLORENCE STRAYHORN
DB 119 PG 124

(66) CHARLES D. GREEN
DB 313 PG 272

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

15' INGRESS - EGRESS EASEMENT

Q10 = 2.1 CFS
V10 = 0.3 FPS

425

430

(63) EARL MURPHY, ET UX
DB 192 PG 900
PLAT CAB A SLIDE 142-A

(61) KENNETH L. MURPHY
NO DEED DESCRIPTION

ISFD

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

(64) JOHN A. MURPHY, ET UX
DB 192 PG 904
PLAT CAB A SLIDE 142-A

Q10 = 4.7 CFS
V10 = 0.6 FPS

SITE 5

(58) VELMA J. BRYAN, ET AL
DB 291 PG 186
TRACT TWO

VELMA J. BRYAN, ET AL
DB 291 PG 186
TRACT ONE

(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 291 PG 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

15" WELDOWS

1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312

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

REVISIONS

8/17/99

3/6/2014
mpeck
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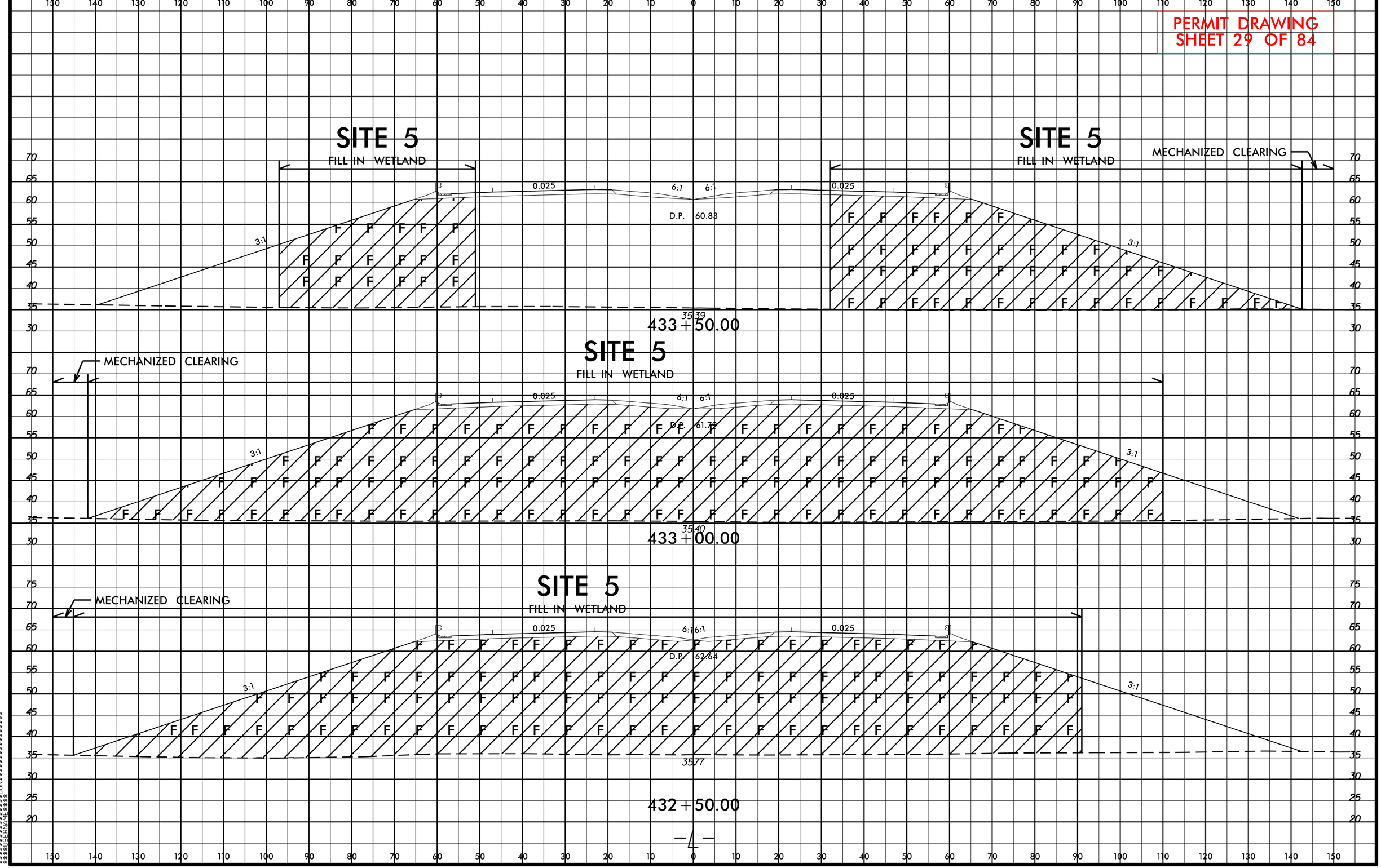
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-66

0 5 10

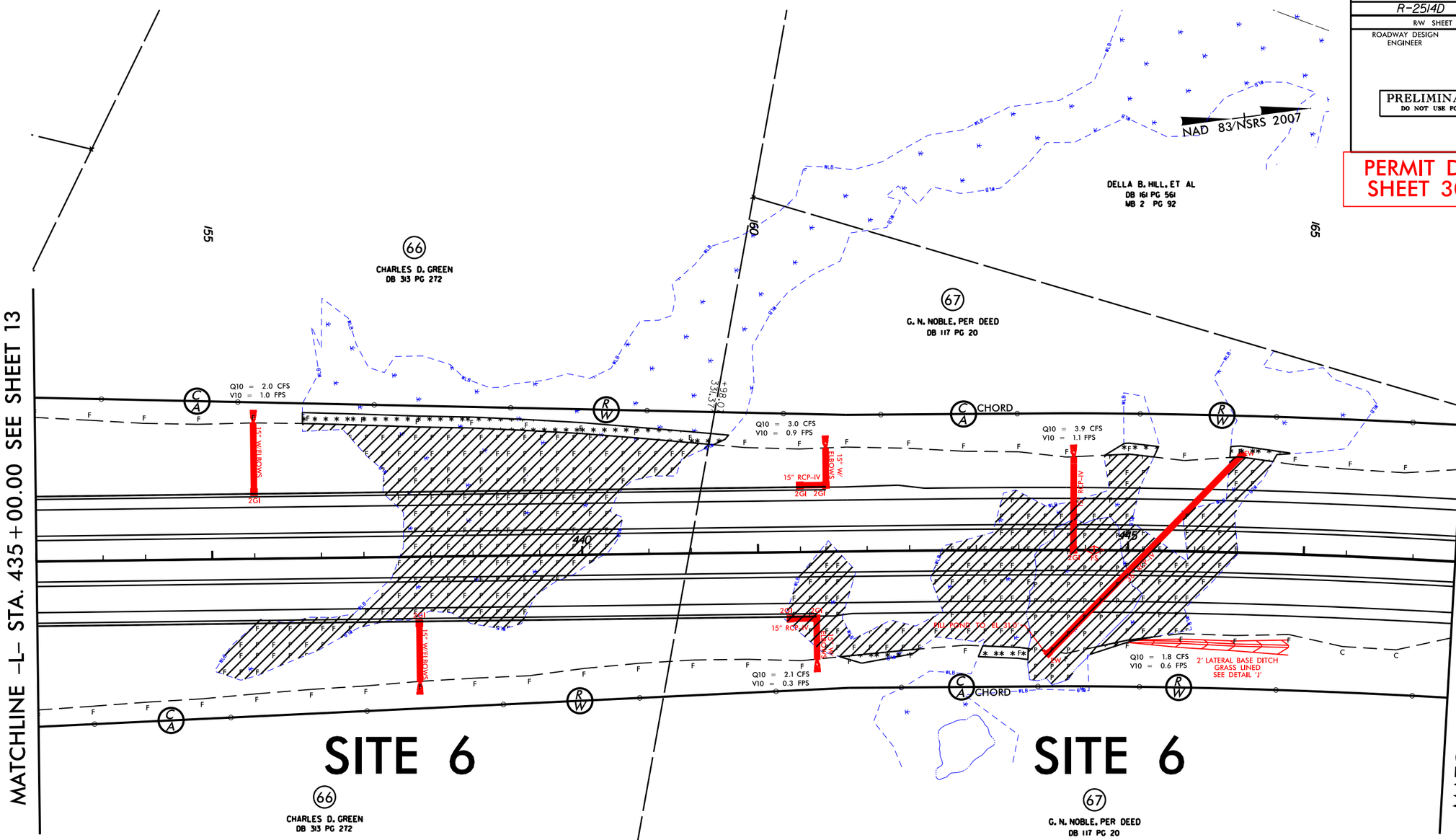
PERMIT DRAWING
SHEET 29 OF 84

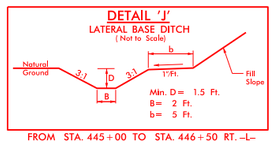


PROJECT REFERENCE NO.	SHEET NO.
R-2514D	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

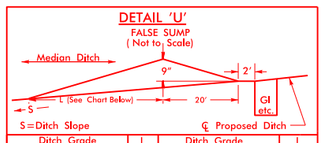
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 30 OF 84





FROM STA. 445+00 TO STA. 446+50 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'

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

REVISIONS

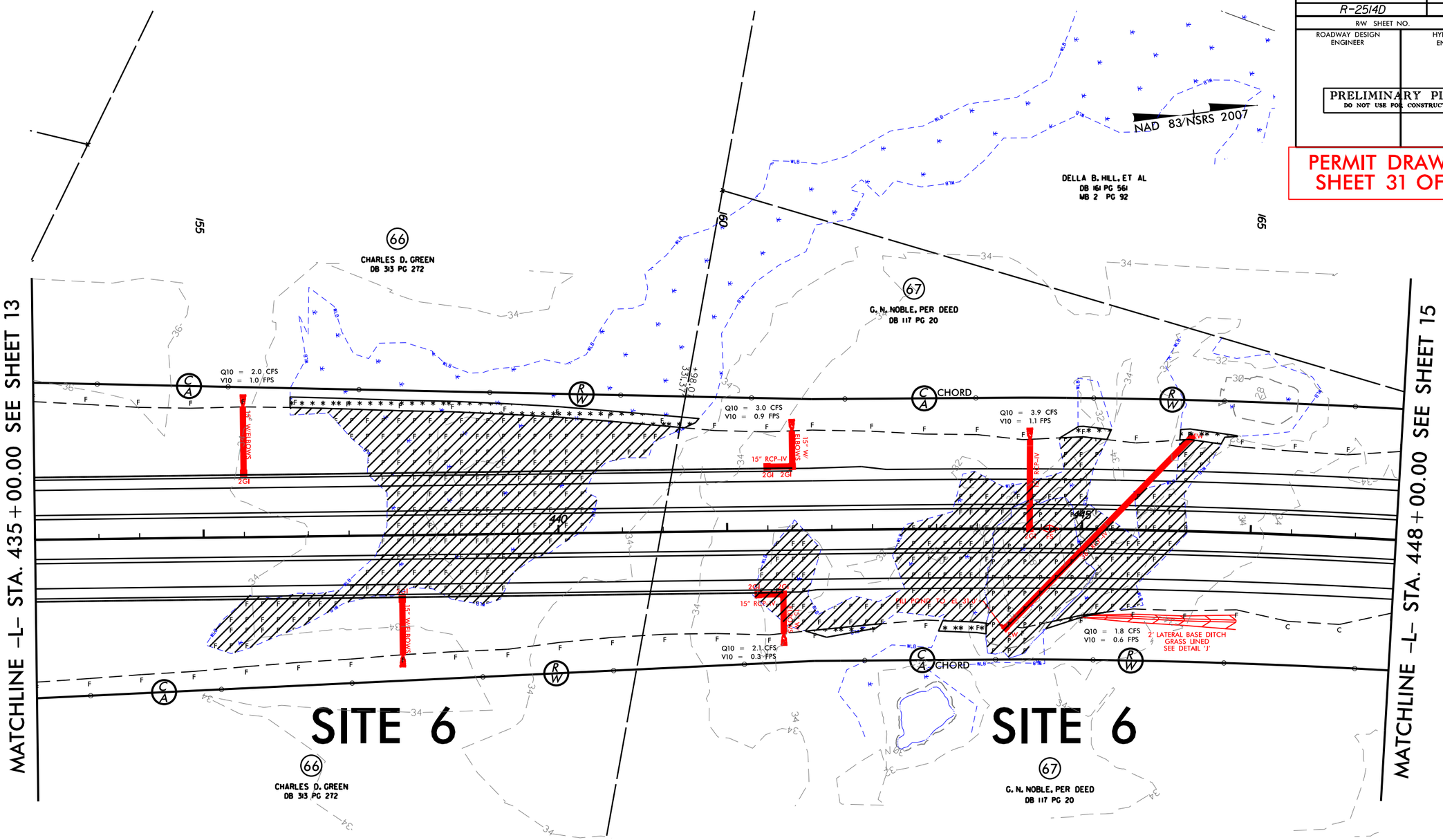
8/17/99

3/6/2014
mbock
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_14.dgn
$$$$$$$$USERNAME$$$$
$$$$$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$

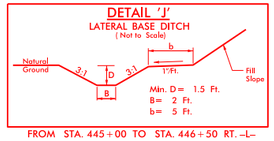
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 31 OF 84

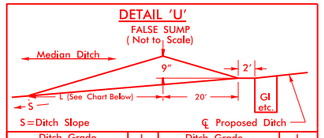


DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 445+00 TO STA. 446+50 RT. -L-

DETAIL 'U'
FALSE SUMP
(Not to Scale)



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'

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

REVISIONS

8/17/99

3/6/2014
mjpick
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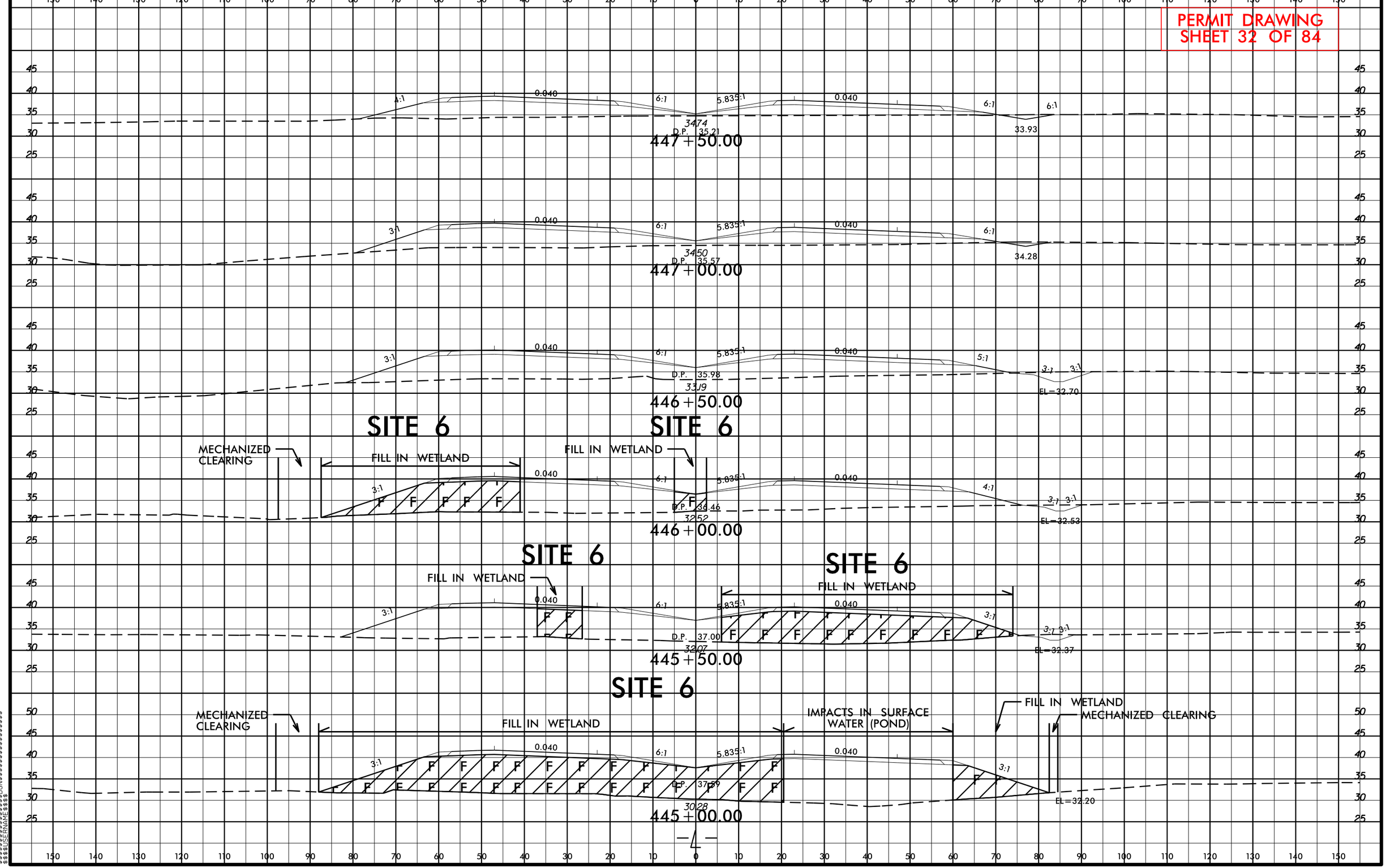
PERMIT DRAWING
SHEET 32 OF 84



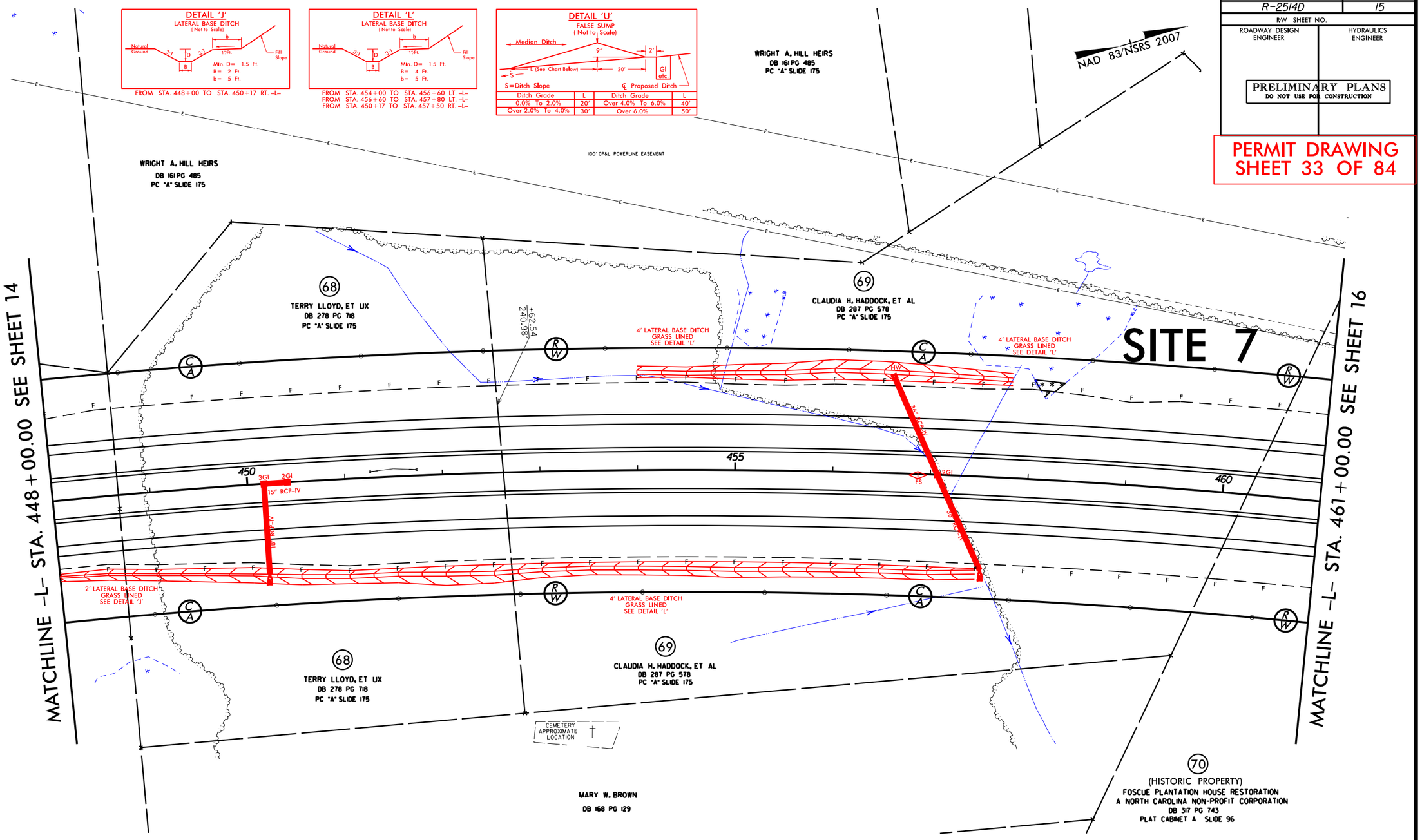
8/23/99

3/19/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_2.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERNAME$$$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 33 OF 84



GRAPHIC SCALE

100 50 0 100 200

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHEET FOR 38 -L- PROFILE

REVISIONS

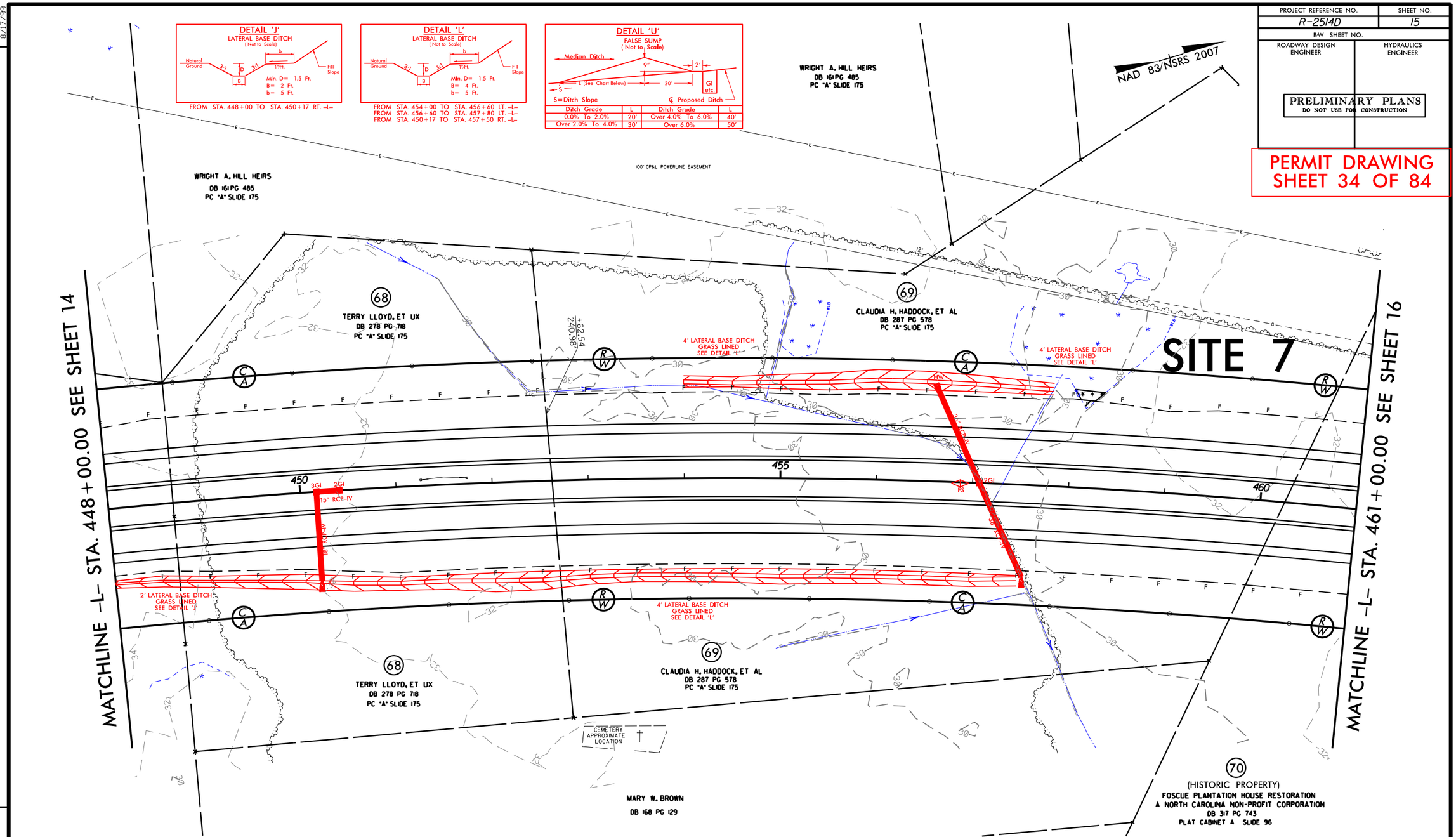
8/17/99

2/27/2014
mjrock
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_pmt_gsh_15.dgn
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$USER$$$$$$$$
$$$$$$$$DGNSETUP$$$$$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 34 OF 84



SEE SHEET FOR 38 -L- PROFILE

REVISIONS

8/17/99

2/27/2014
mpeck
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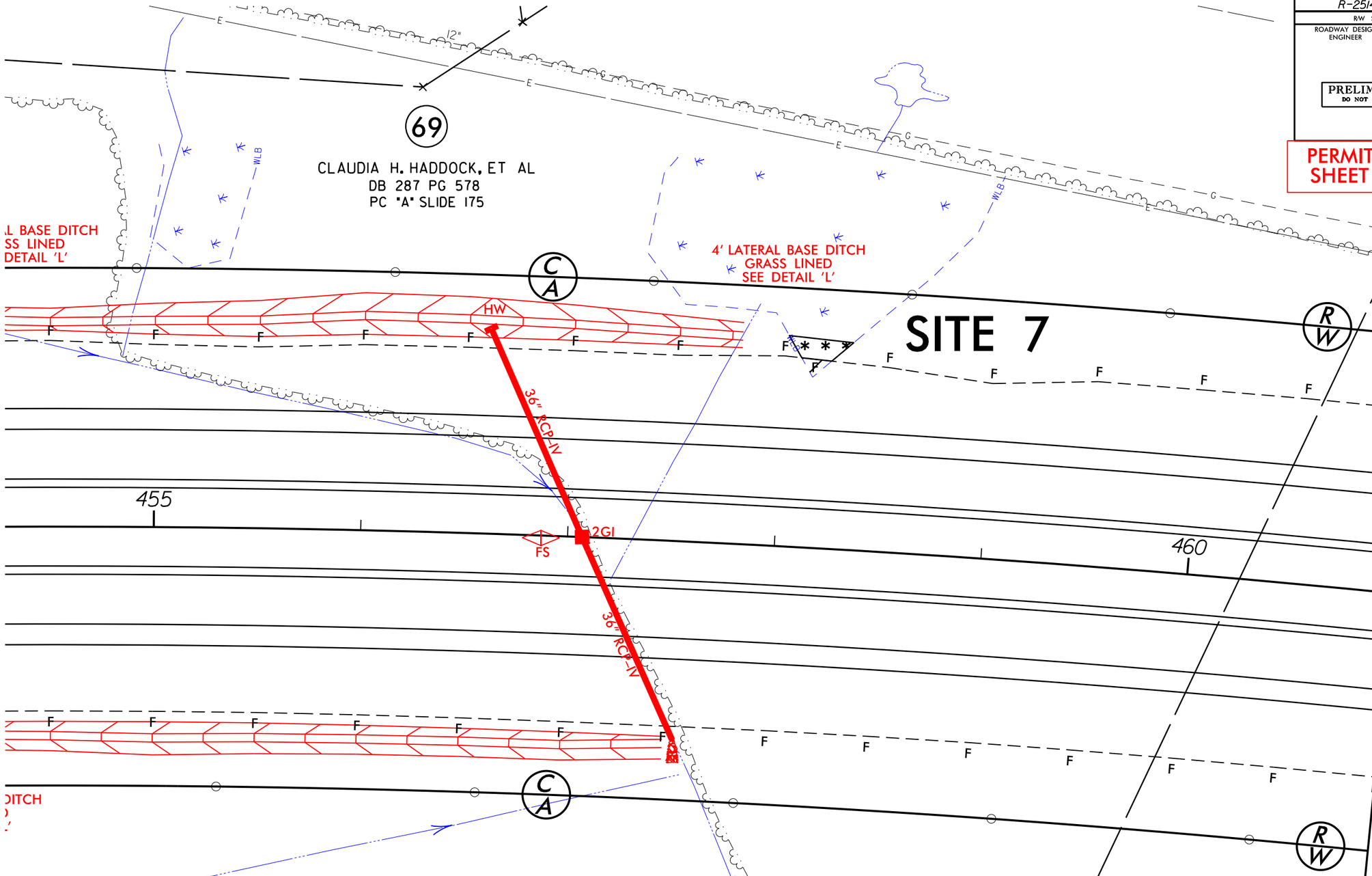
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 35 OF 84



MATCHLINE -L- STA. 461+00.00 SEE SHEET

GRAPHIC SCALE

50 25 0 50 100

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

8/17/99

REVISIONS

2/27/2014
mjrock
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_pth_15X2.dgn
$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$USERNAME$$$$
$$$$$$$$$$

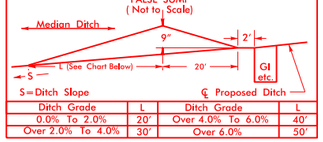
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 36 OF 84

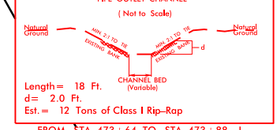
NAD 83/NSRS 2007

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–

(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

+76.08
1,394.60'

100' CP&L POWERLINE EASEMENT

12"

CHORD

GAS TEST STATION

465

470

2GI FS

Q10 = 3.5 CFS
V10 = 1.1 FPS

CL 'B' RIP RAP
EST. 1 TONS
EST. 6 SY GEOTEXTILE

BURIED 1:1 SS

PIPE OUTLET CHANNEL
SEE DETAIL 'NN'

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

REVISIONS

8/17/99

3/19/2014
mpyck
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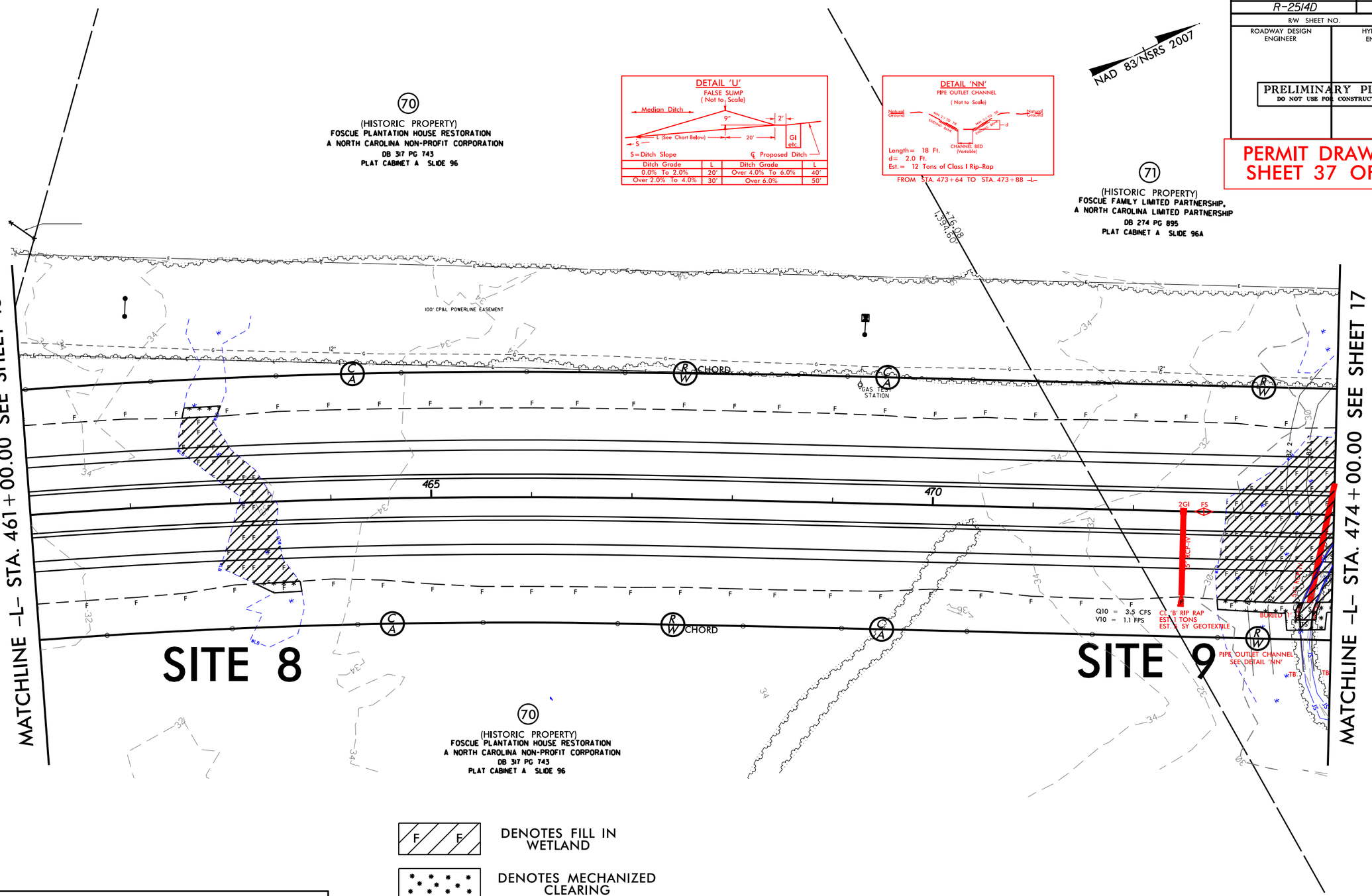
$$$$$$$SYSTIME$$$$$$
$$$$$$$

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



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-

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

REVISIONS

8/17/99

3/19/2014
mpeck
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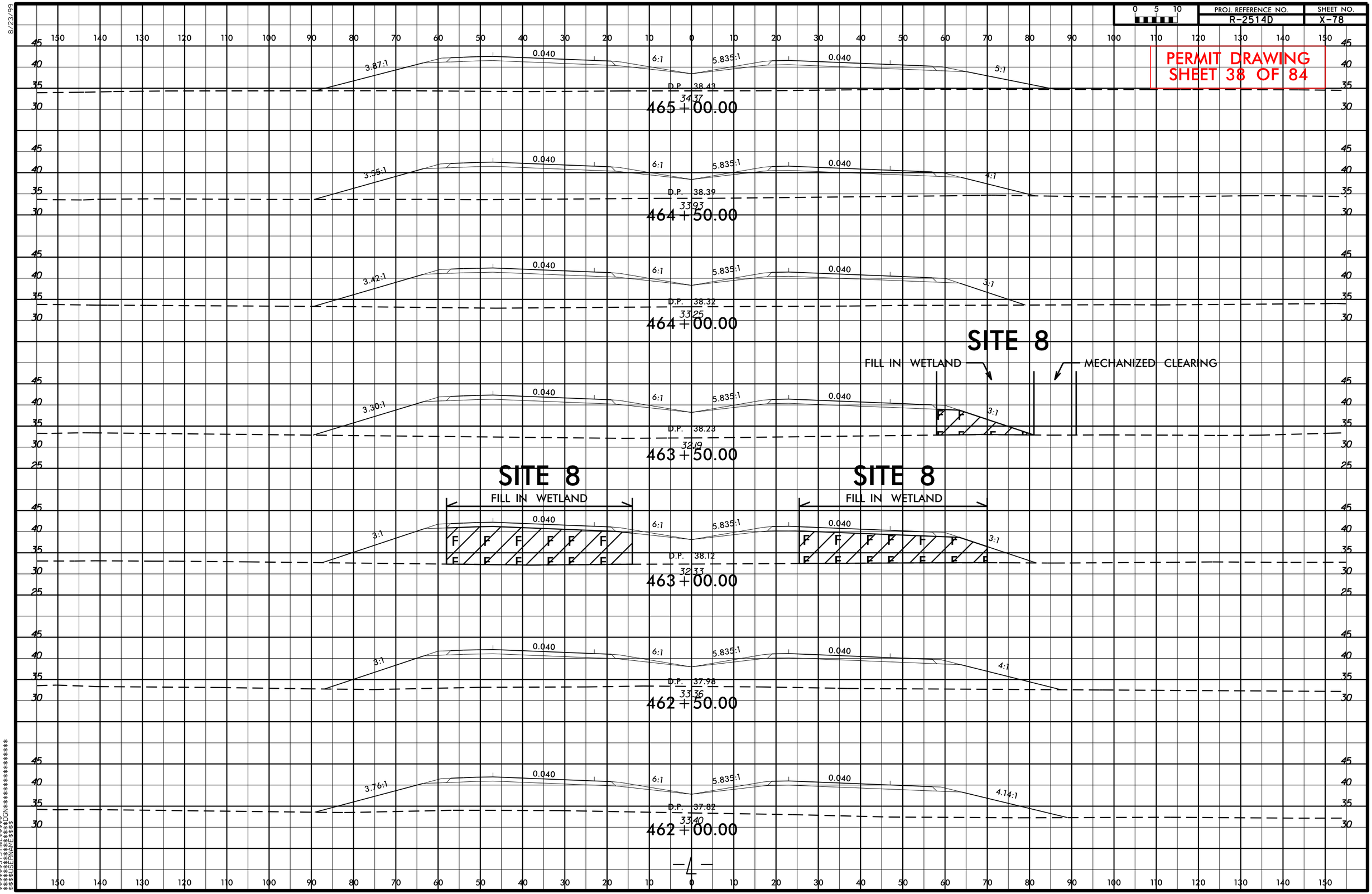
$$$$$$$SYSTIME$$$$$$
$$$$$$$

PERMIT DRAWING
SHEET 38 OF 84

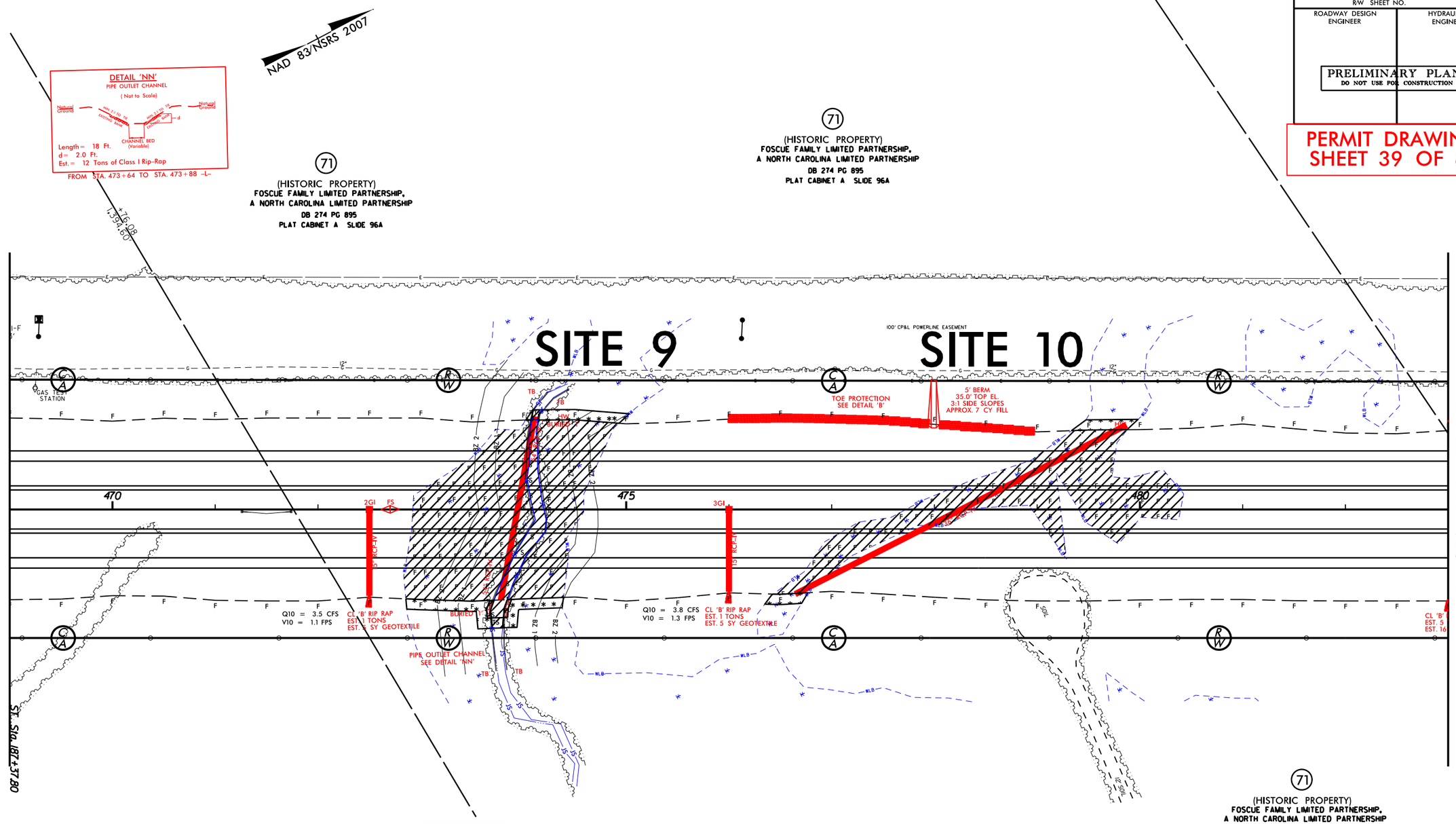


8/23/99
3/19/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xsl_L_PART 2.dgn
$$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$

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 39 OF 84



F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

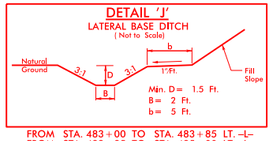
S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200

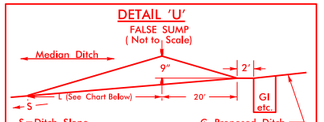
DETAIL 'J'
LATERAL BASE DITCH
(Not to Scale)



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)



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

REVISIONS

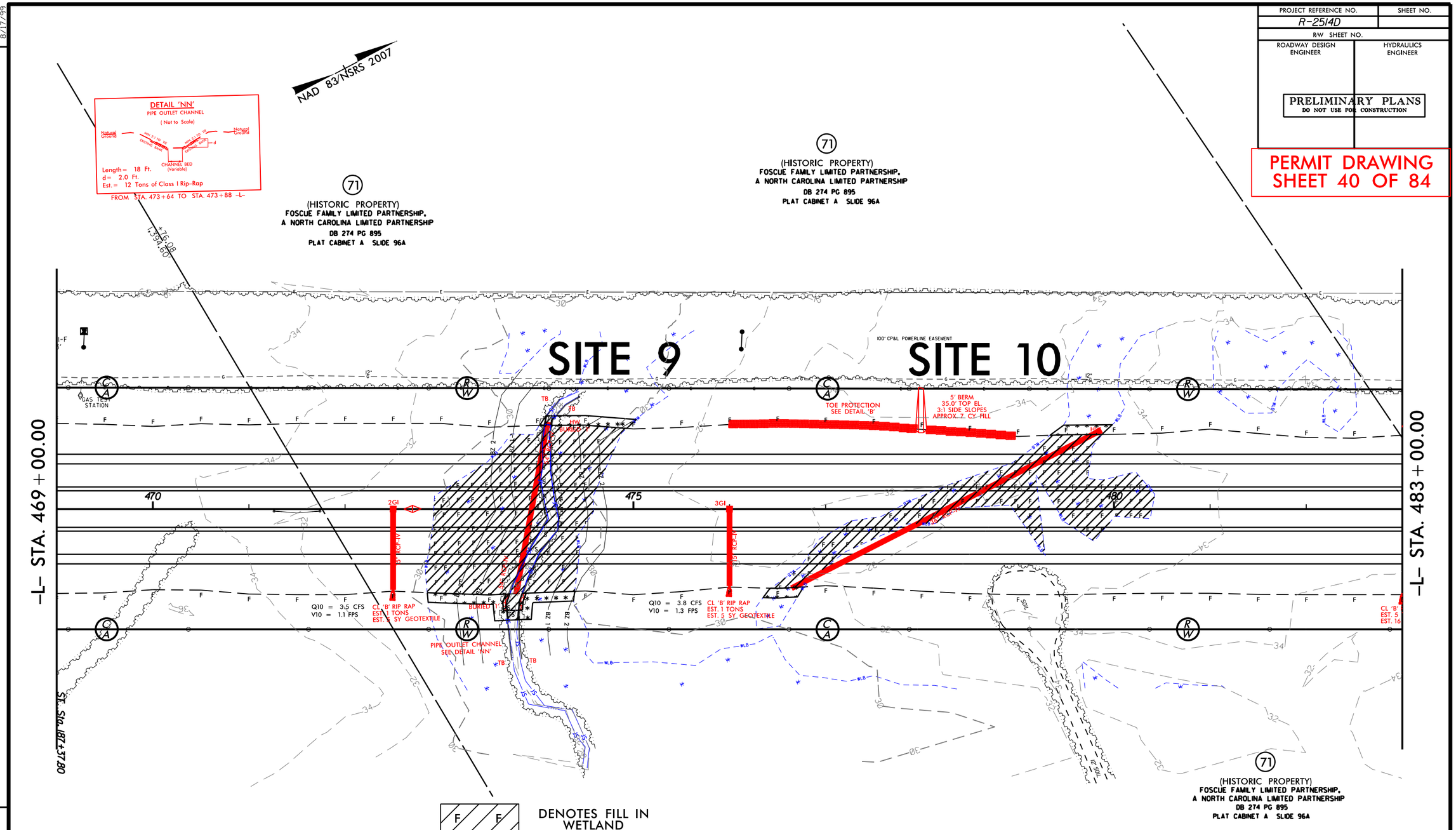
8/17/99

3/19/2014
mycot
R:\Hydraulics\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



F F — DENOTES FILL IN WETLAND

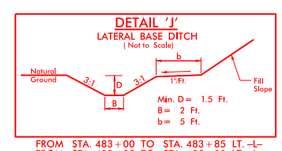
DENOTES MECHANIZED CLEARING

S S — DENOTES IMPACTS IN SURFACE WATER

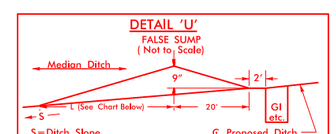
TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE

100 50 0 100 200



FROM STA. 483+00 TO STA. 483+85 LT. -L-
FROM STA. 483+85 TO STA. 485+00 LT. -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'

SEE SHEET 39 FOR -L- PROFILE

REVISIONS

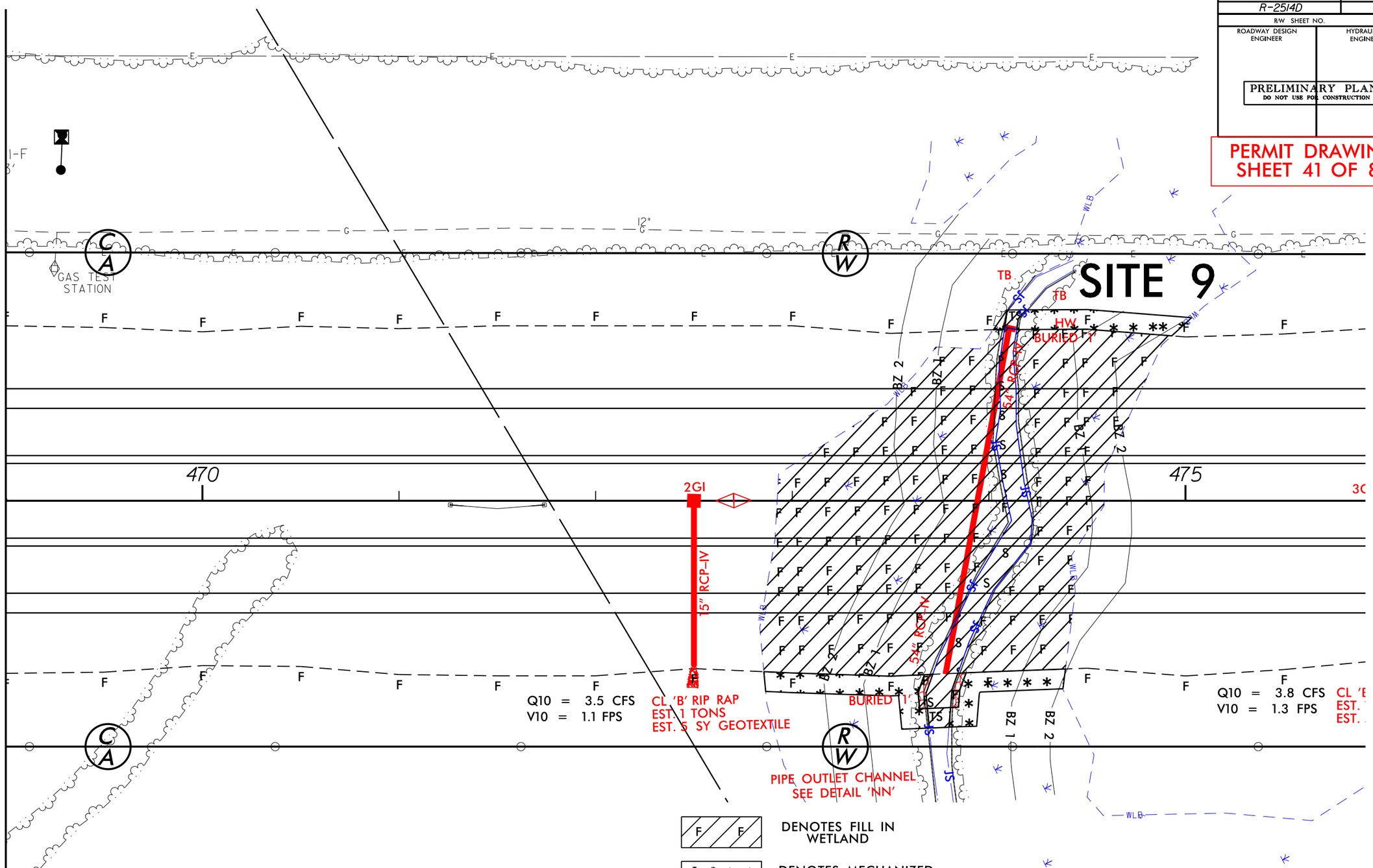
8/17/99

3/19/2014
mycot
R:\Hydraulics\PERMITS Environmental Drawings\Wetland Permit\R2514D_Hyd_prm_site_9-10_con.dgn
$$$$$$$$$$CYSTIME$$$$$$
$$$$$$$$$$CTDGN$$$$$$$$$$
$$$$$$$$$$CTLENGUNIT$$$$

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



REVISIONS

8/17/99

3/19/2014
myoot
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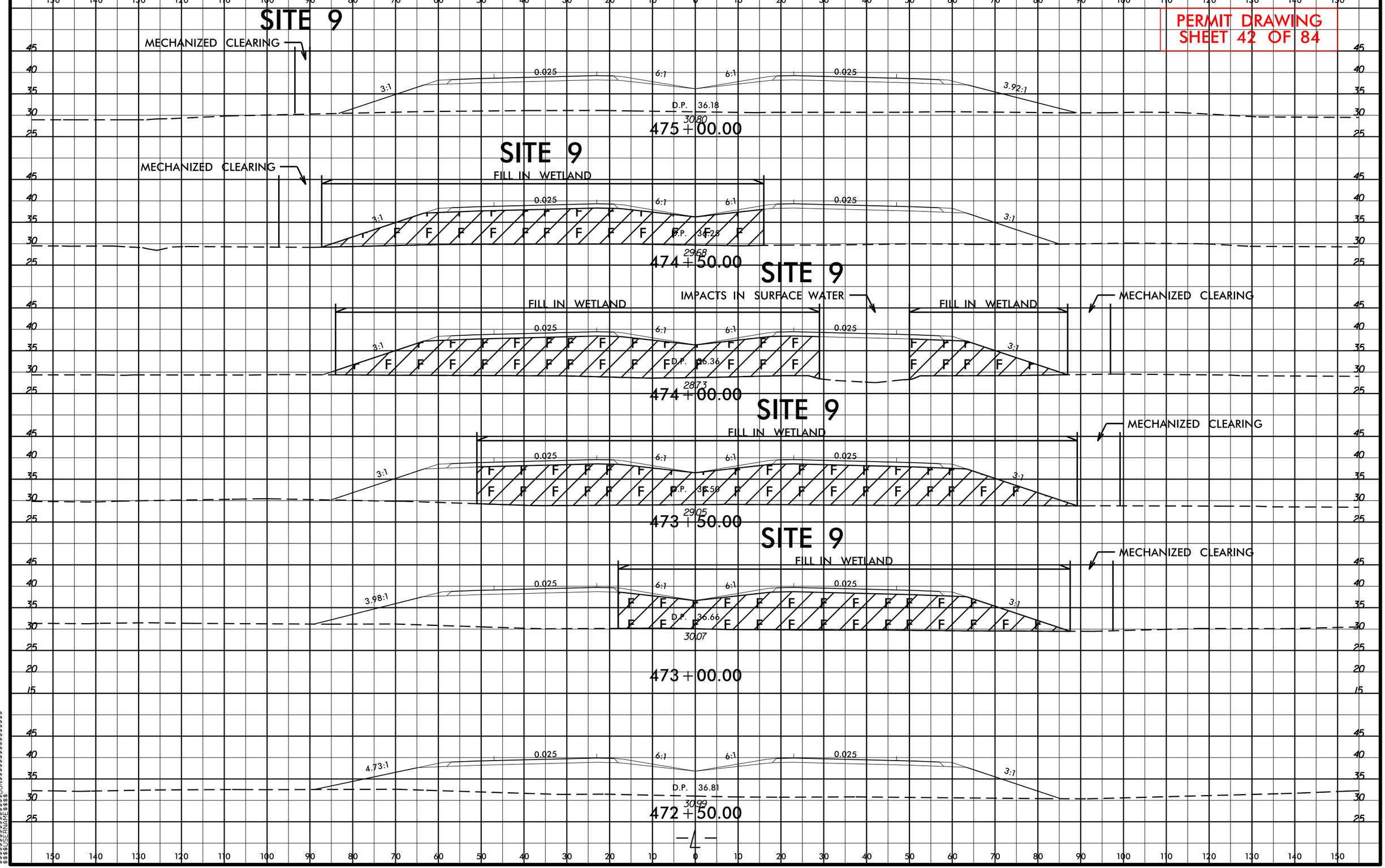
$$$$$$$$$$CTIME$$$$$$
$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

PERMIT DRAWING
SHEET 42 OF 84



8/23/99
3/19/2014
mjyork
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_2.dgn
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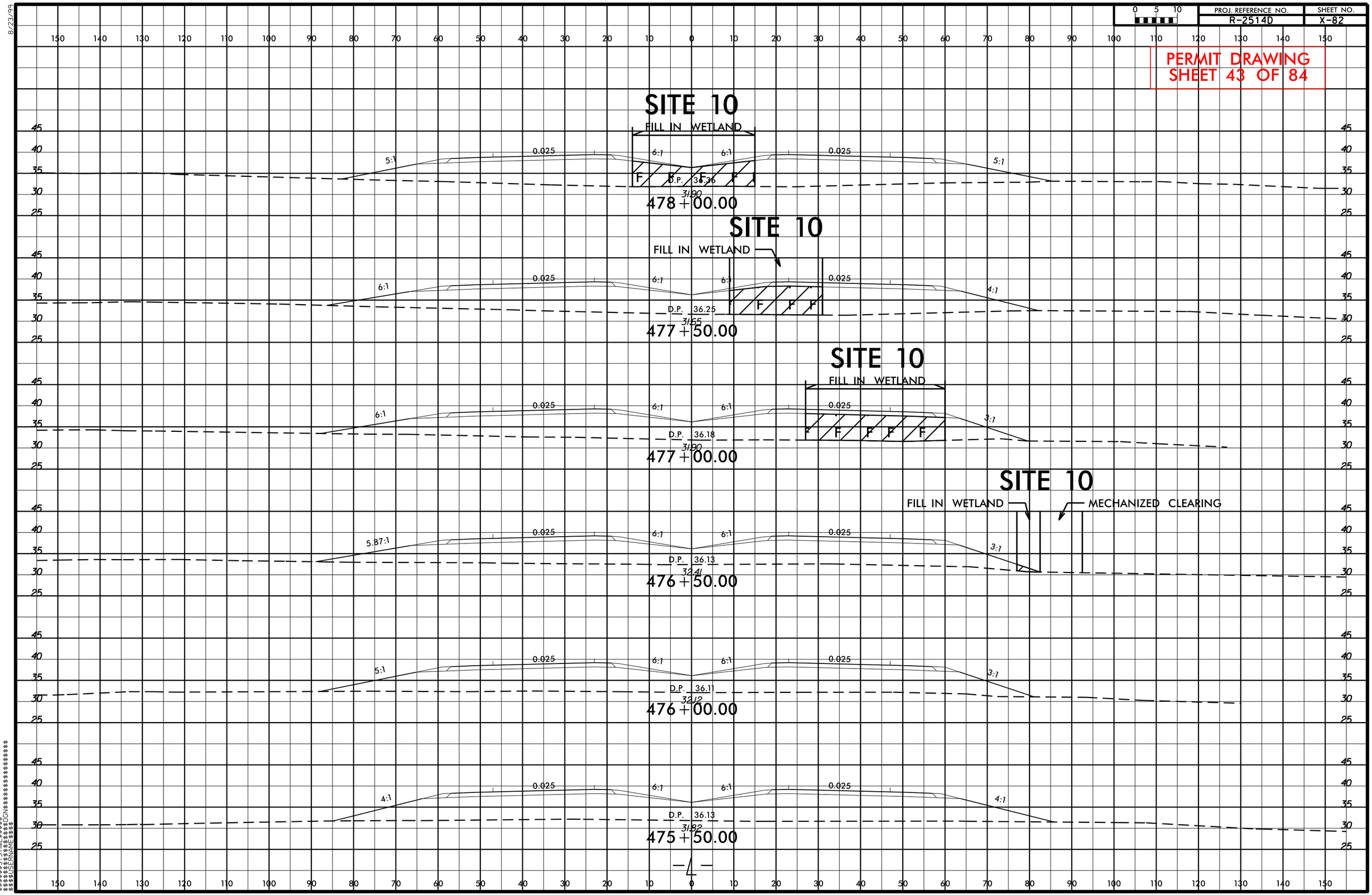
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

PERMIT DRAWING
SHEET 43 OF 84



8/23/99

3/19/2014
mjyork
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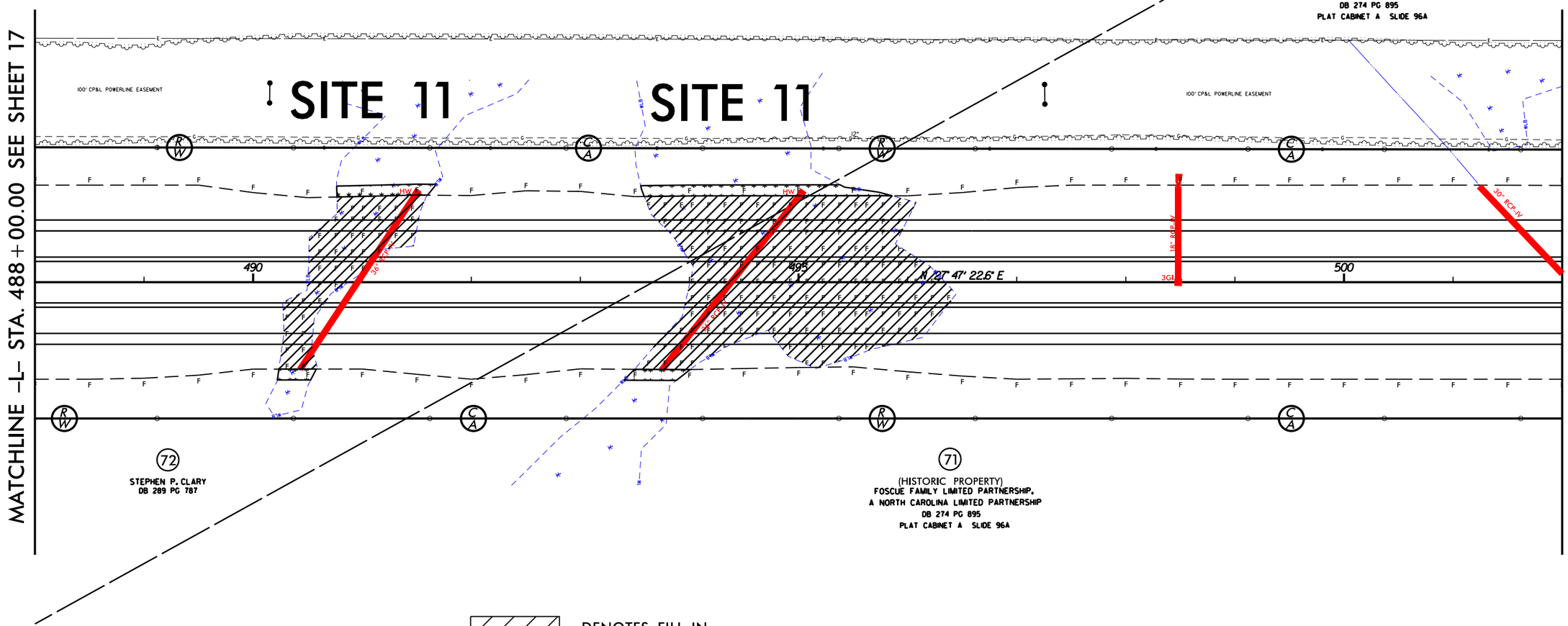
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 44 OF 84

NAD 83/NSRS 2007



F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

SEE SHEET 39 FOR -L- PROFILE

REVISIONS

8/17/99

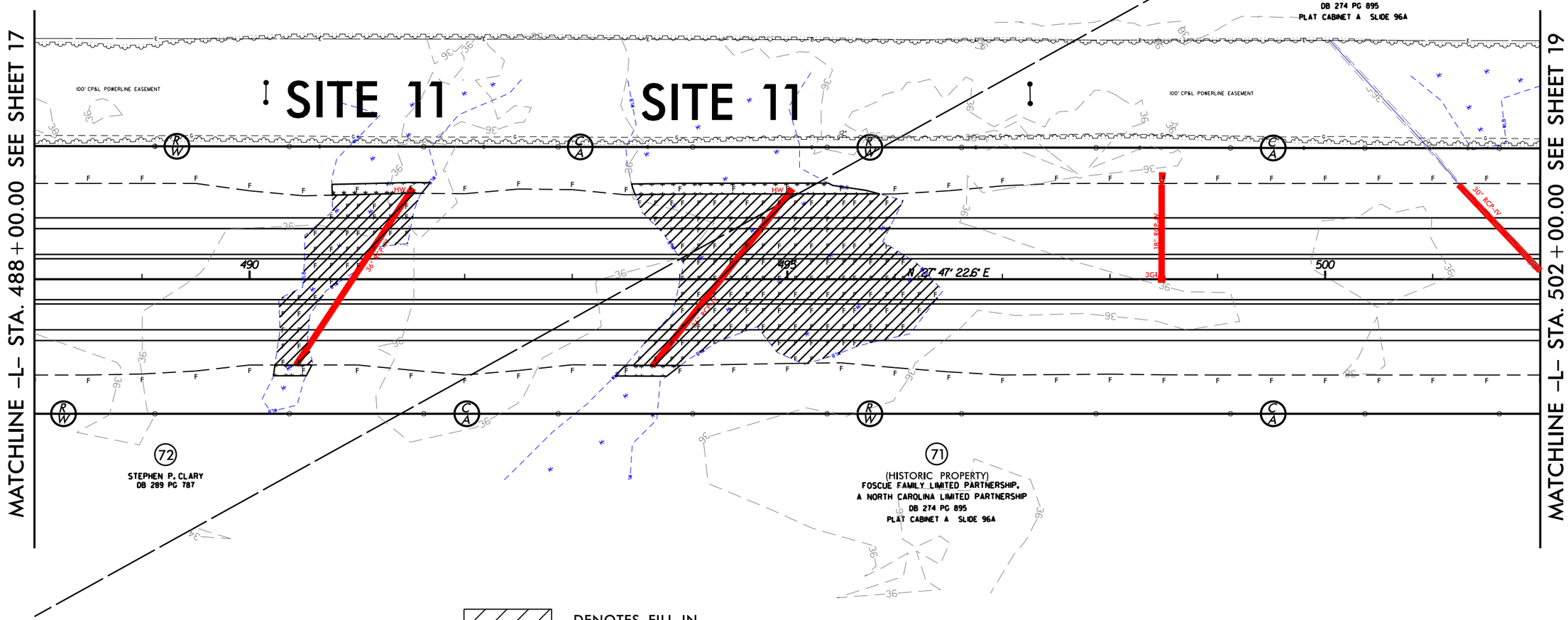
2/27/2014
mpeck
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_18.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$DGNS$$$$$$$$
$$$$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 45 OF 84

NAD 83/NSRS 2007



F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

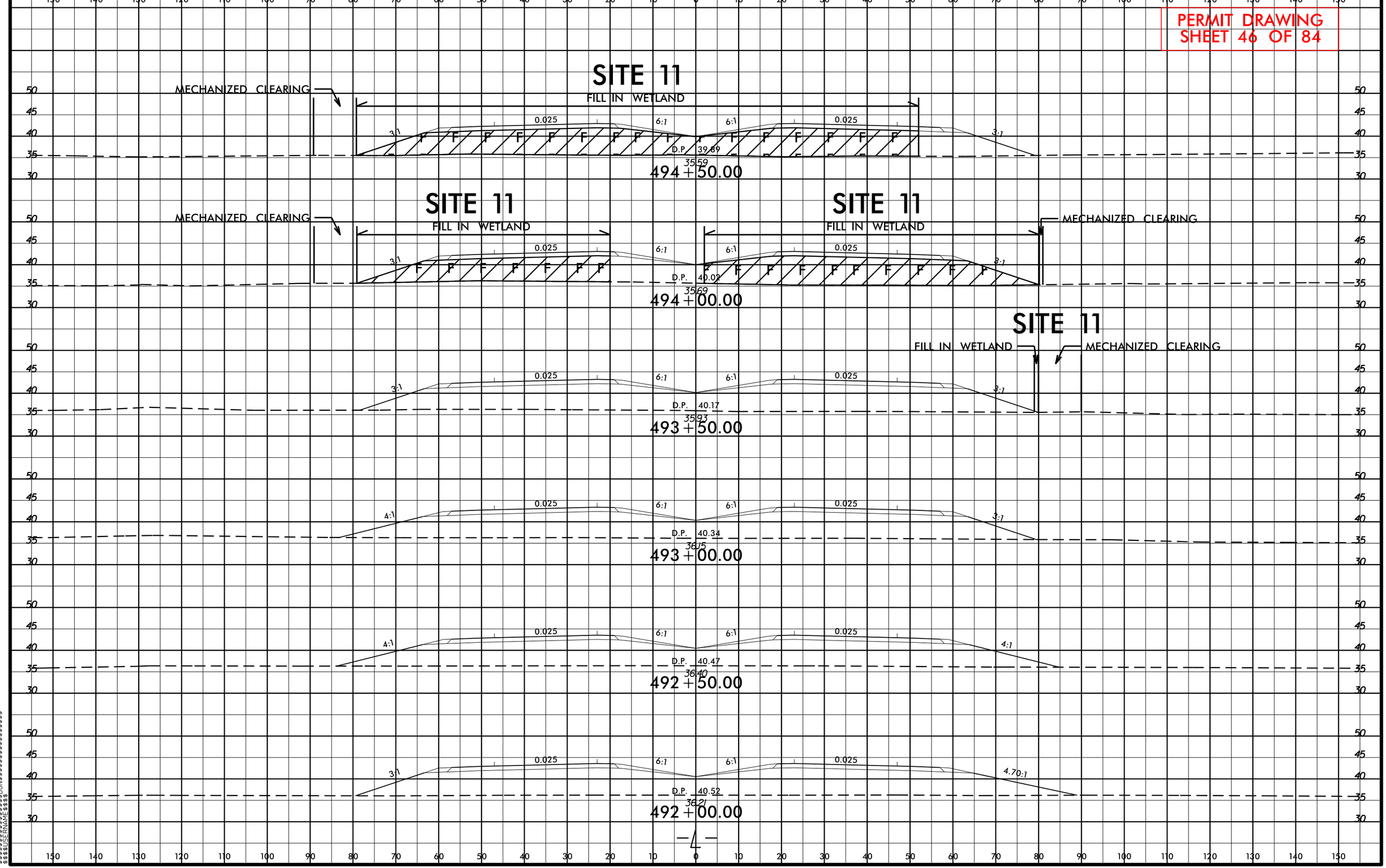
SEE SHEET 39 FOR -L- PROFILE

REVISIONS

8/17/99

2/27/2014
mlyon
n:\hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_18_con.dgn
$$$$USERNAME$$$$
$$$$SYSTIME$$$$
$$$$DGN$$$$

PERMIT DRAWING
SHEET 46 OF 84



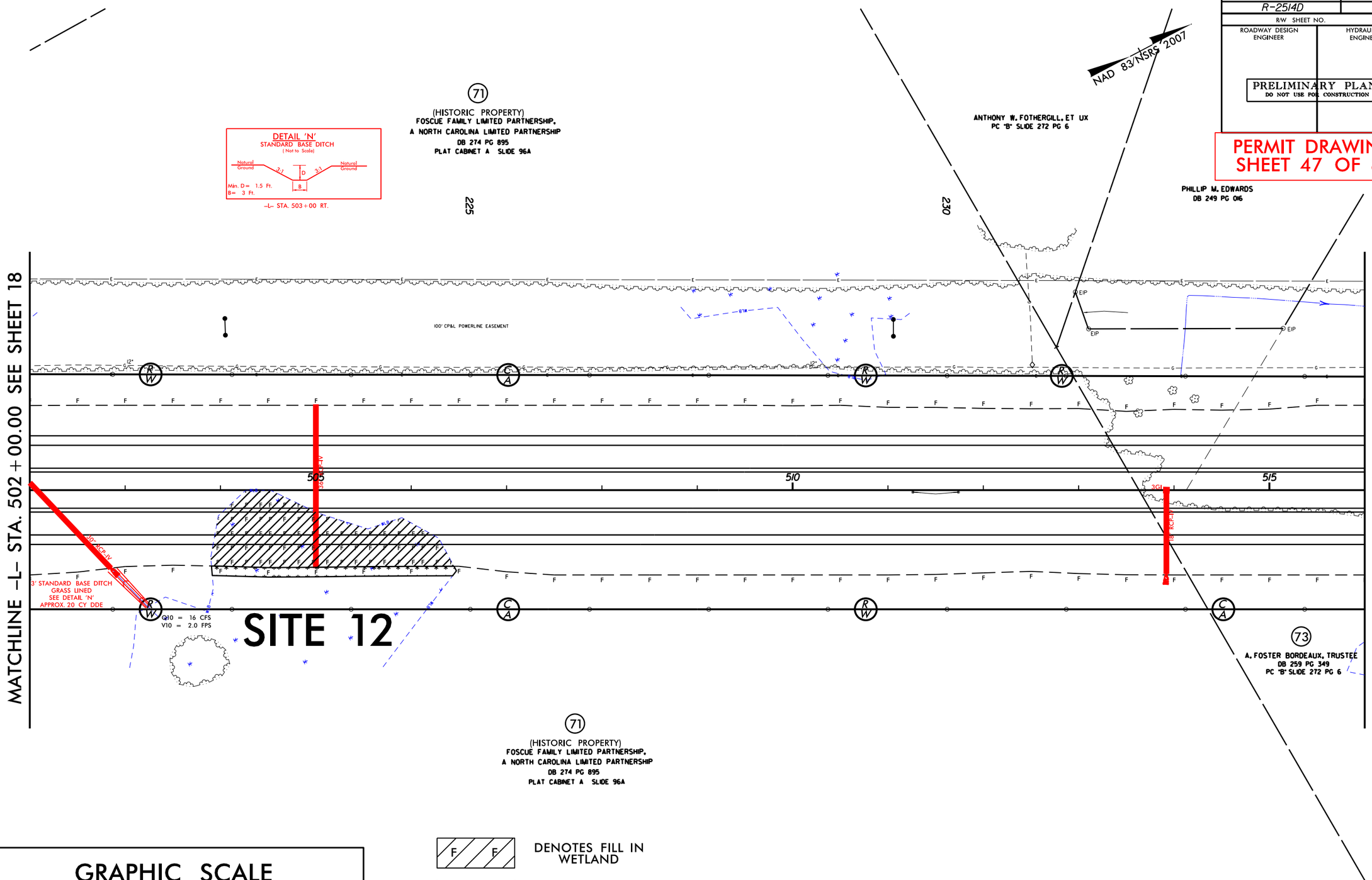
8/23/99

3/19/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_2.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERNAME$$$$$$

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



SEE SHEET 40 FOR -L- PROFILE

REVISIONS

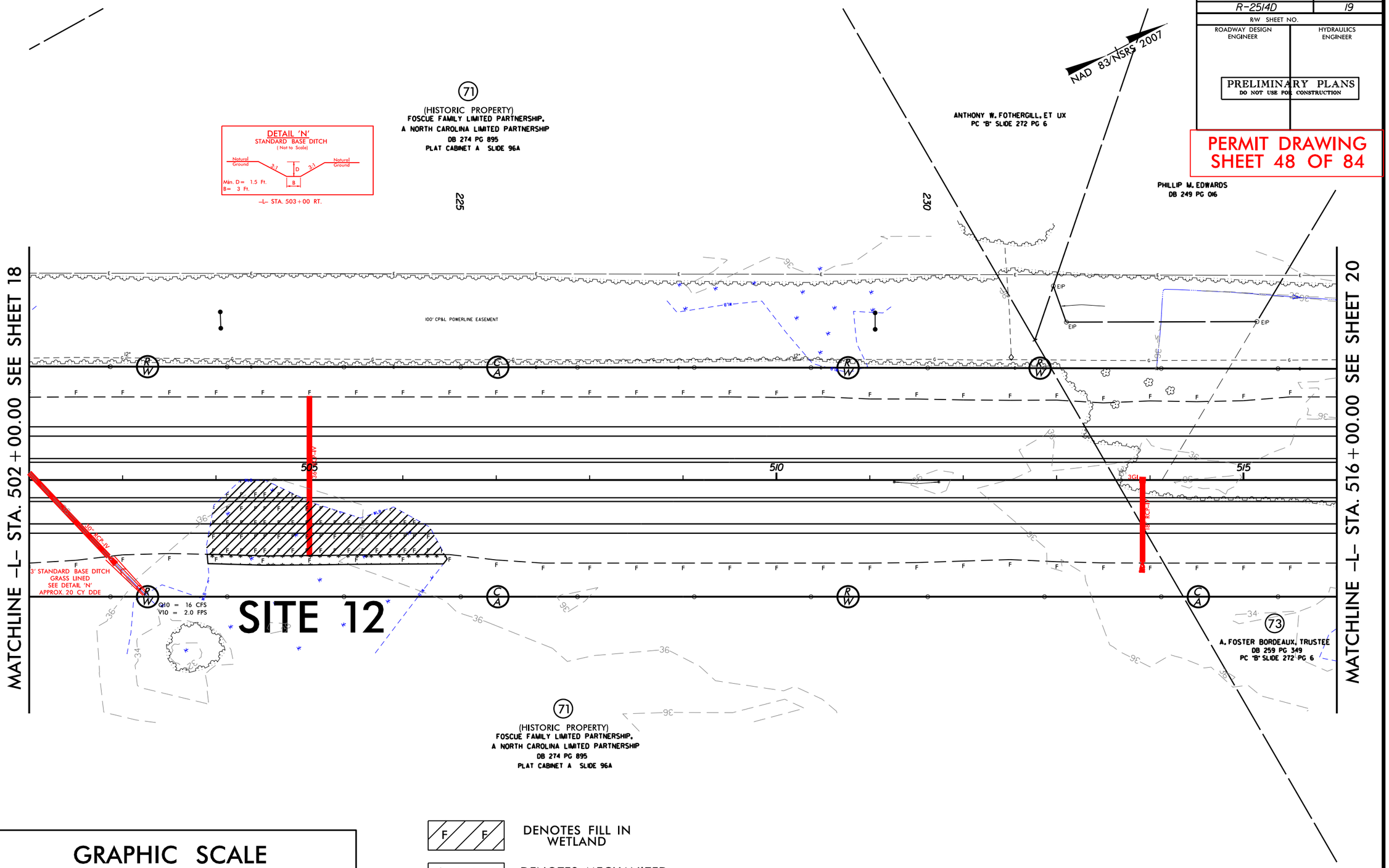
8/17/99

3/6/2014
n:\hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_19.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USER$$$$$$$$DGN$$$$$$$$$$$$
$$$$$$$$LSTEXTENT$$$$$$$$$$$$

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



SEE SHEET 40 FOR -L- PROFILE

REVISIONS

8/17/99

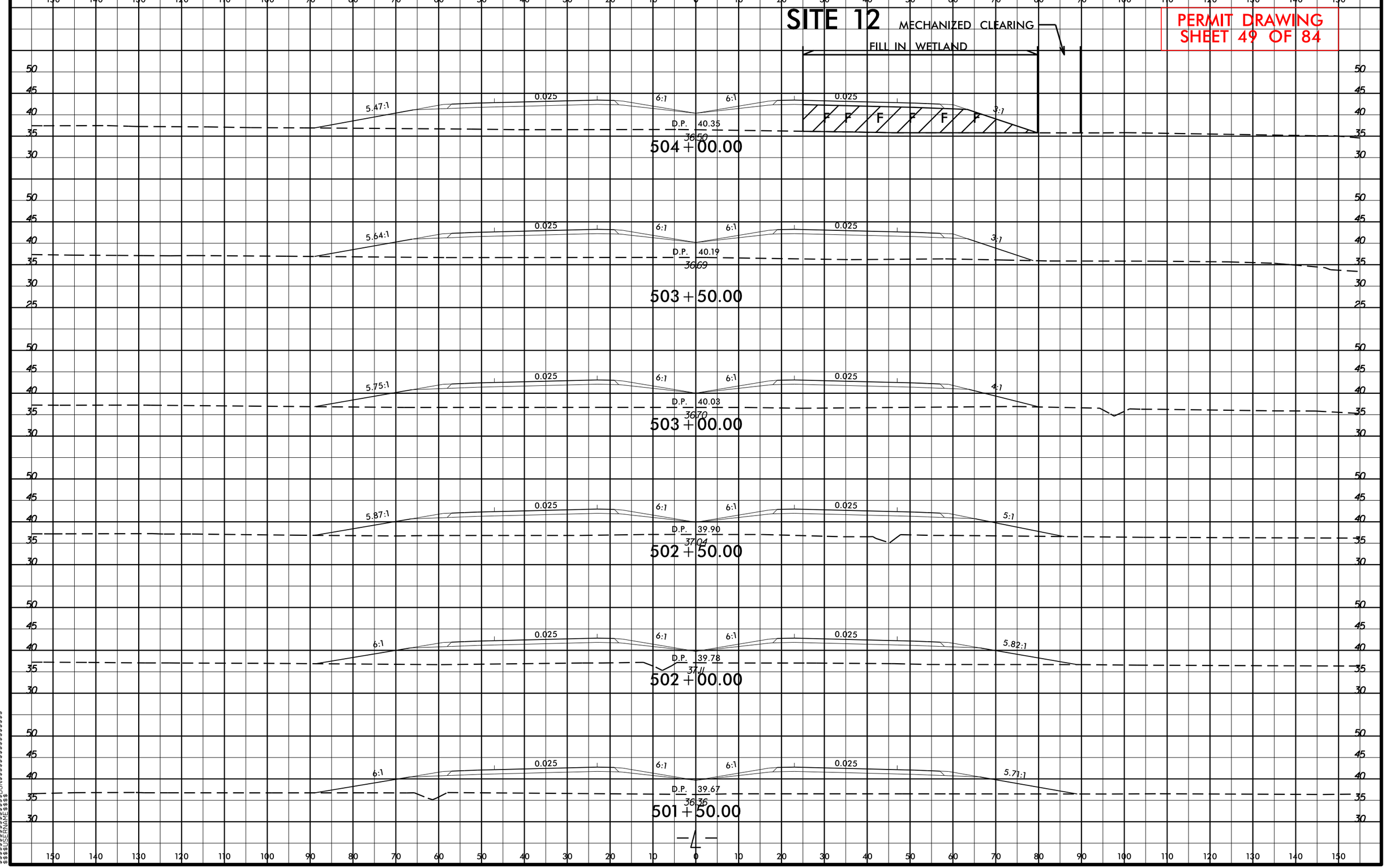
3/6/2014
rhyck
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_19_con.dgn
$$$$$$$$$USERNAME$$$$
$$$$$$$$$SYSTIME$$$$$
$$$$$$$$$

PERMIT DRAWING
SHEET 49 OF 84

SITE 12

MECHANIZED CLEARING

FILL IN WETLAND



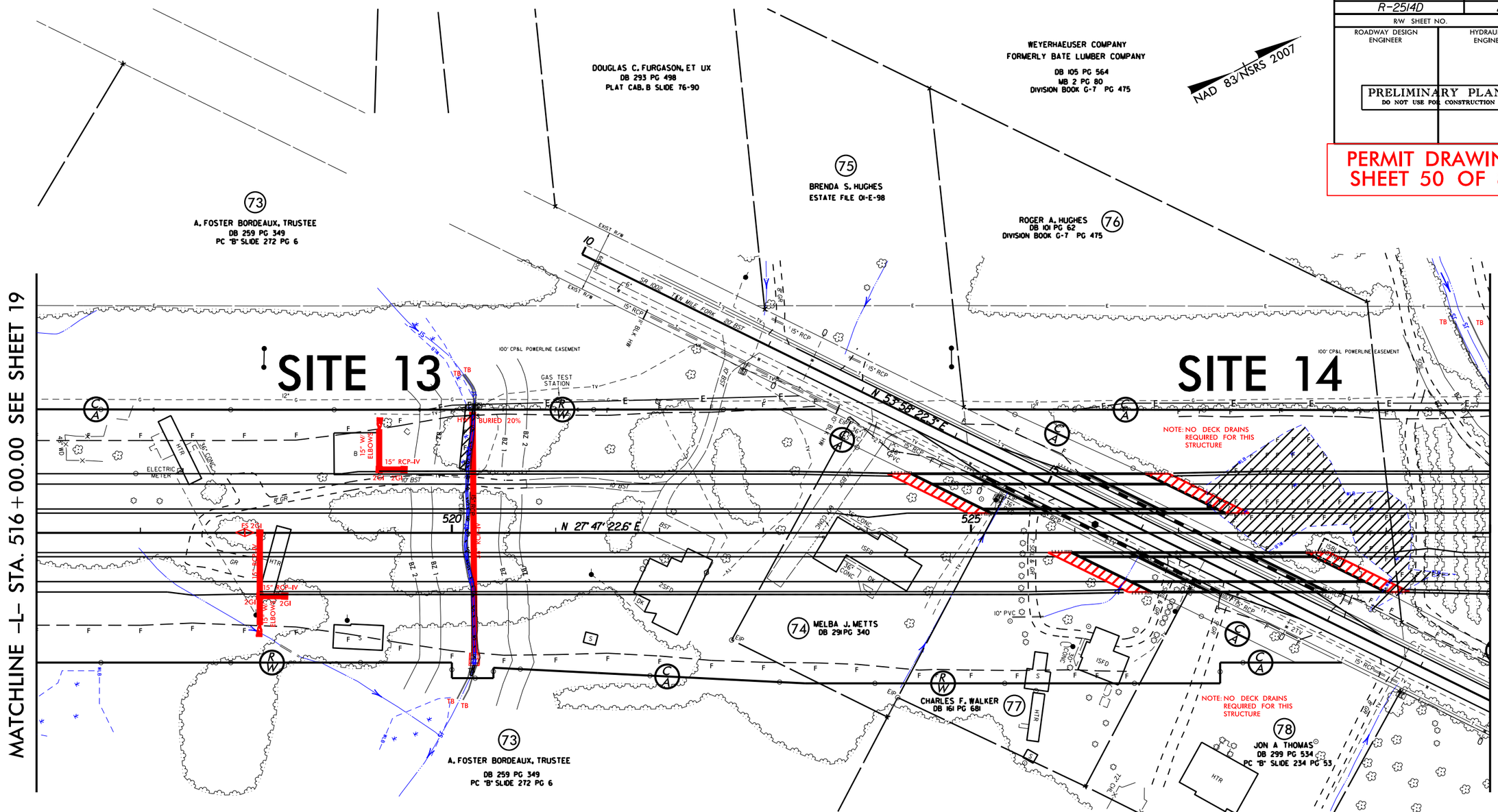
8/23/99
3/19/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_2.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERNAME$$$$$$

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

NAD 83/NSRS 2007



DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

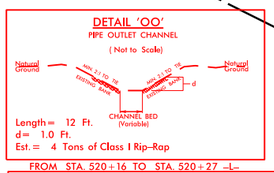
DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

GRAPHIC SCALE

100 50 0 100 200

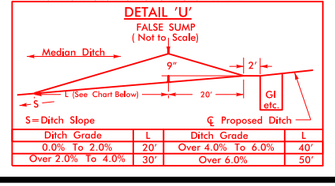
DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)



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)



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

REVISIONS

8/17/99

4/6/2014
mjyork
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_20.dgn
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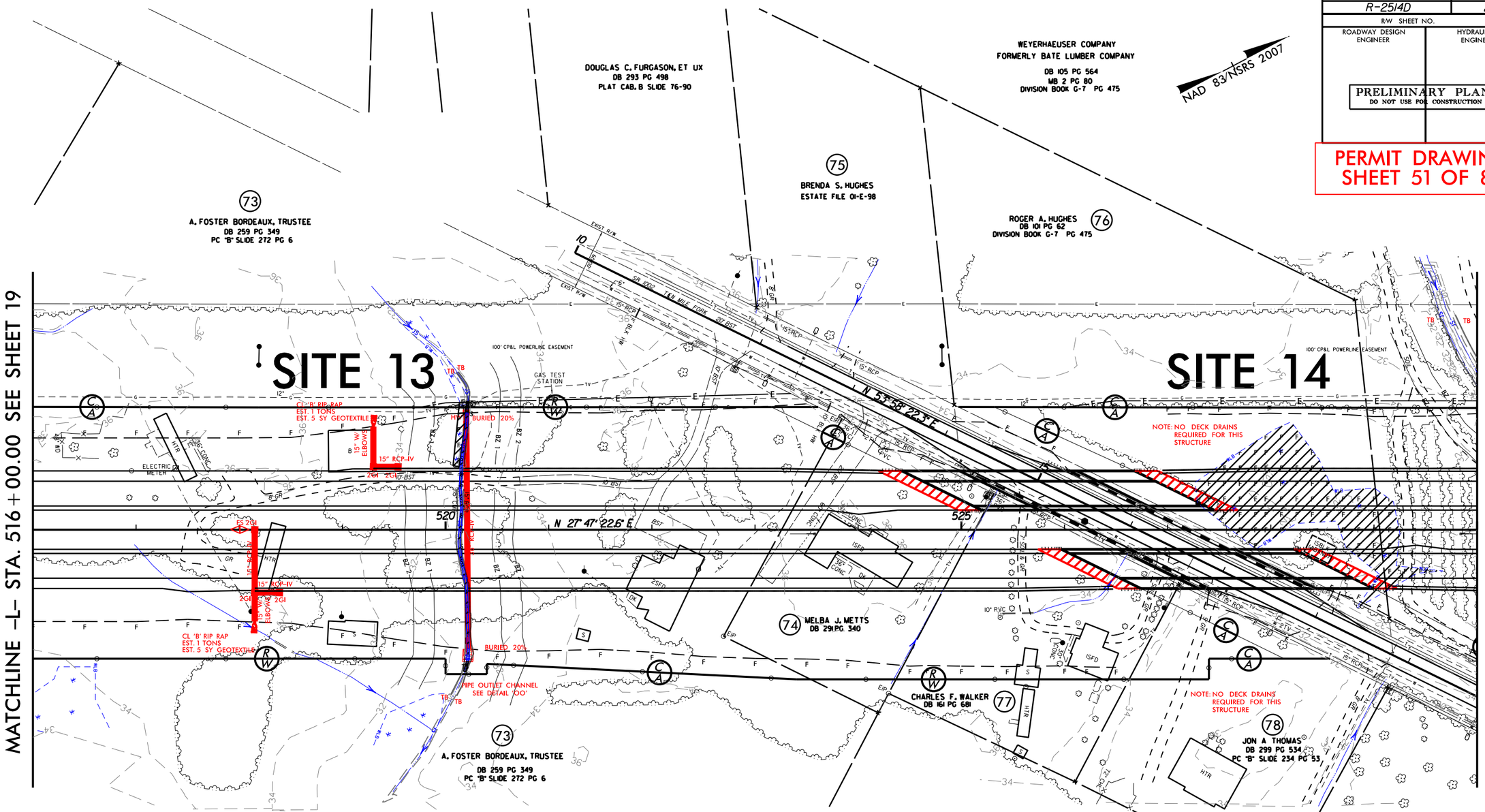
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 51 OF 84

NAD 83/NSRS 2007



GRAPHIC SCALE

100 50 0 100 200

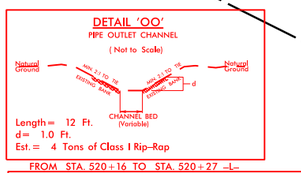
S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F — DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

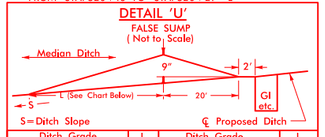
DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)



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

REVISIONS

8/17/99

4/6/2014
mlynch
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_20_con.dgn
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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

PERMIT DRAWING SHEET 52 OF 84

SITE 13

MATCHLINE -L- STA. 516+00.00 SEE SHEET 19

100' CP&L POWERLINE EASEMENT

GAS TEST STATION

EXIST R/W

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

HW 15" BURIED 20%

15" W/ ELBOWS

15" RCP-IV

2GI 2GI

10' BST

8' GR

ELECTRIC METER

HTR

36" CONC

48" WD

BZ 1

BZ 2

520

N 27° 47' 22.6" E

FS 2GI

15" RCP-IV

36" RCP-IV

2SFD

DK

BST

CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

BURIED 20%

PIPE OUTLET CHANNEL
SEE DETAIL 'OO'

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
mpost
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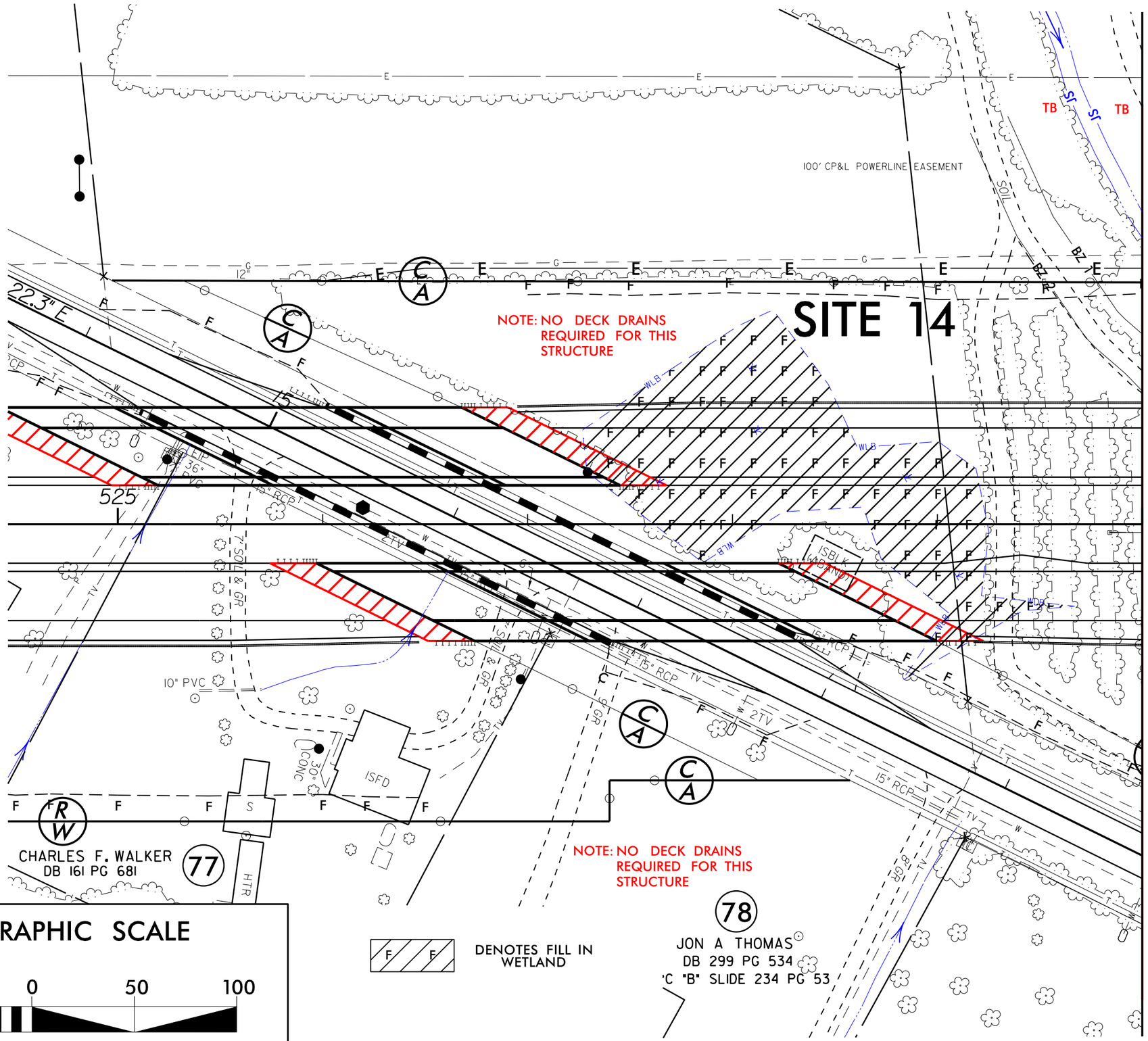
$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$USER$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$$$$$ENGINE$$$$

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 53 OF 84



MATCHLINE -L- STA. 530+00.00 SEE SHEET 21

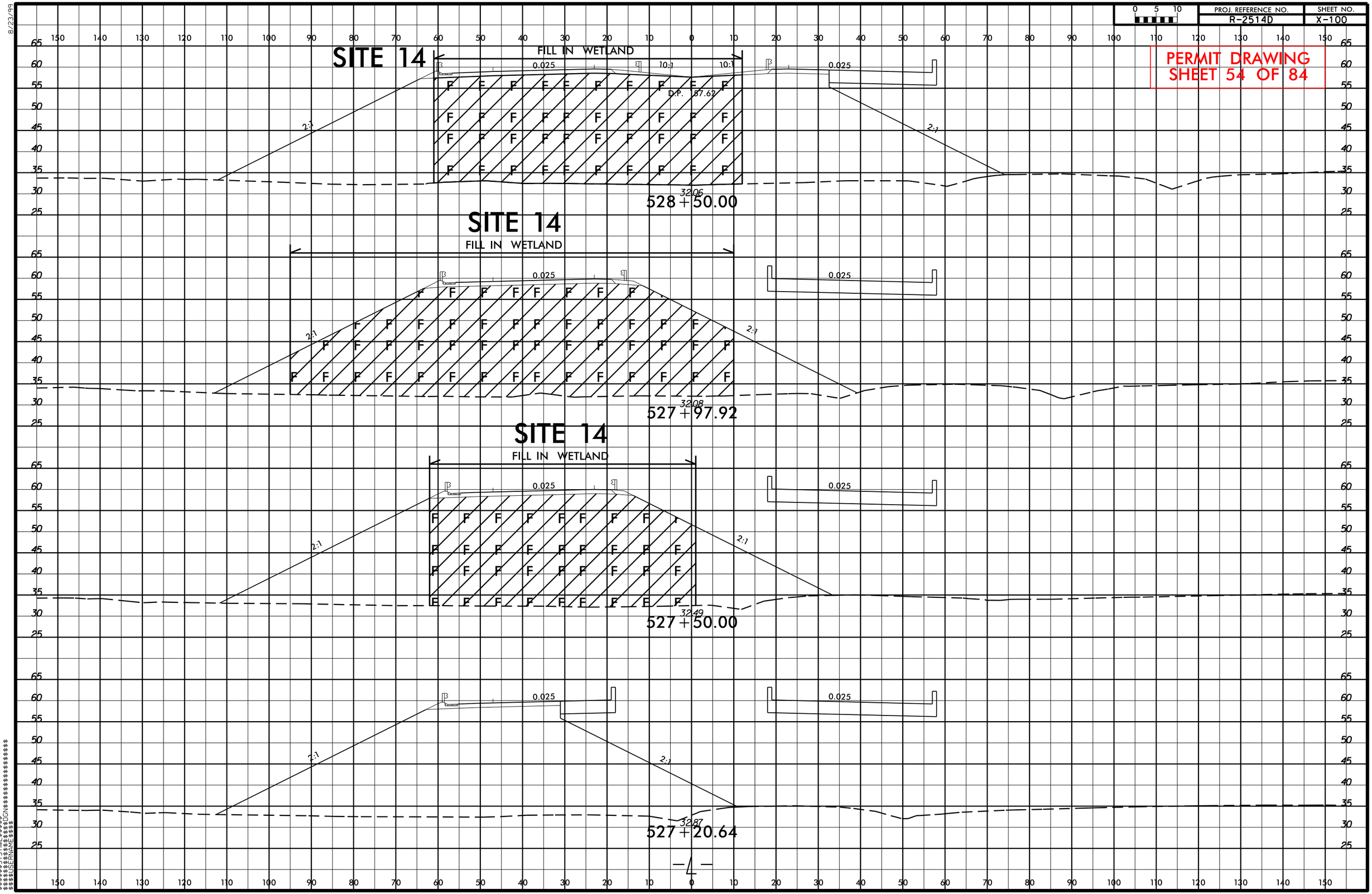
REVISIONS

8/17/99

2/27/2014
rtyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_20X2_SITE14.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERID$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-100

PERMIT DRAWING
SHEET 54 OF 84



8/23/99

3/9/2014
mjyork
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_3.dgn
$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

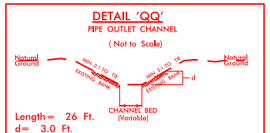
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 55 OF 84

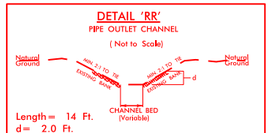
NAD 83/NSRS 2007

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)



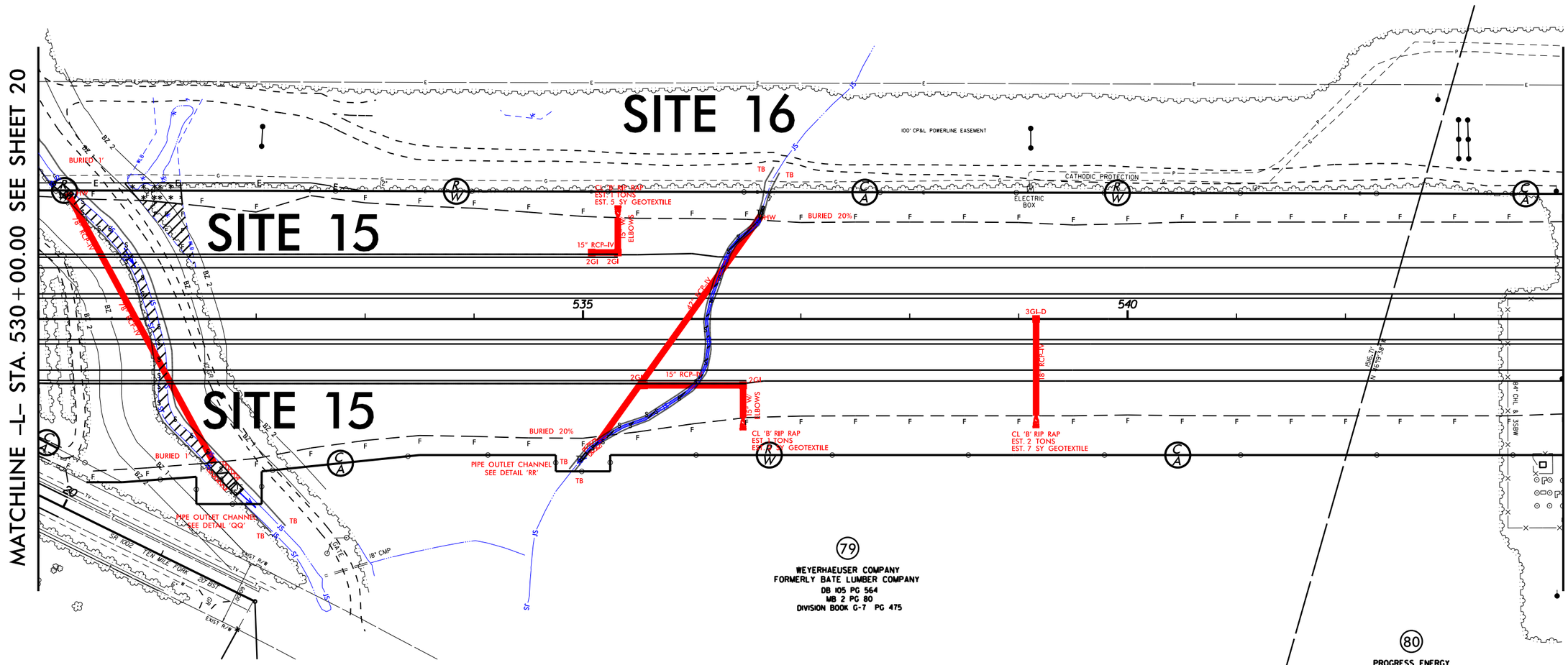
Length = 26 Ft.
d = 3.0 Ft.
Est. = 25 Tons of Class I Rip-Rap
FROM STA. 531+54 TO STA. 531+85 -L-

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



(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

REVISIONS

8/17/99

4/6/2014
mycot
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_21.dgn
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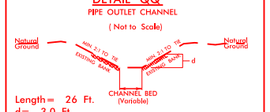
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 56 OF 84

NAD 83/NSRS 2007

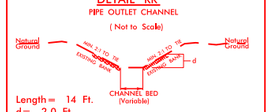
DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 26 Ft.
d = 3.0 Ft.
Est. = 25 Tons of Class I Rip-Rap

FROM STA. 531+54 TO STA. 531+85 -L-

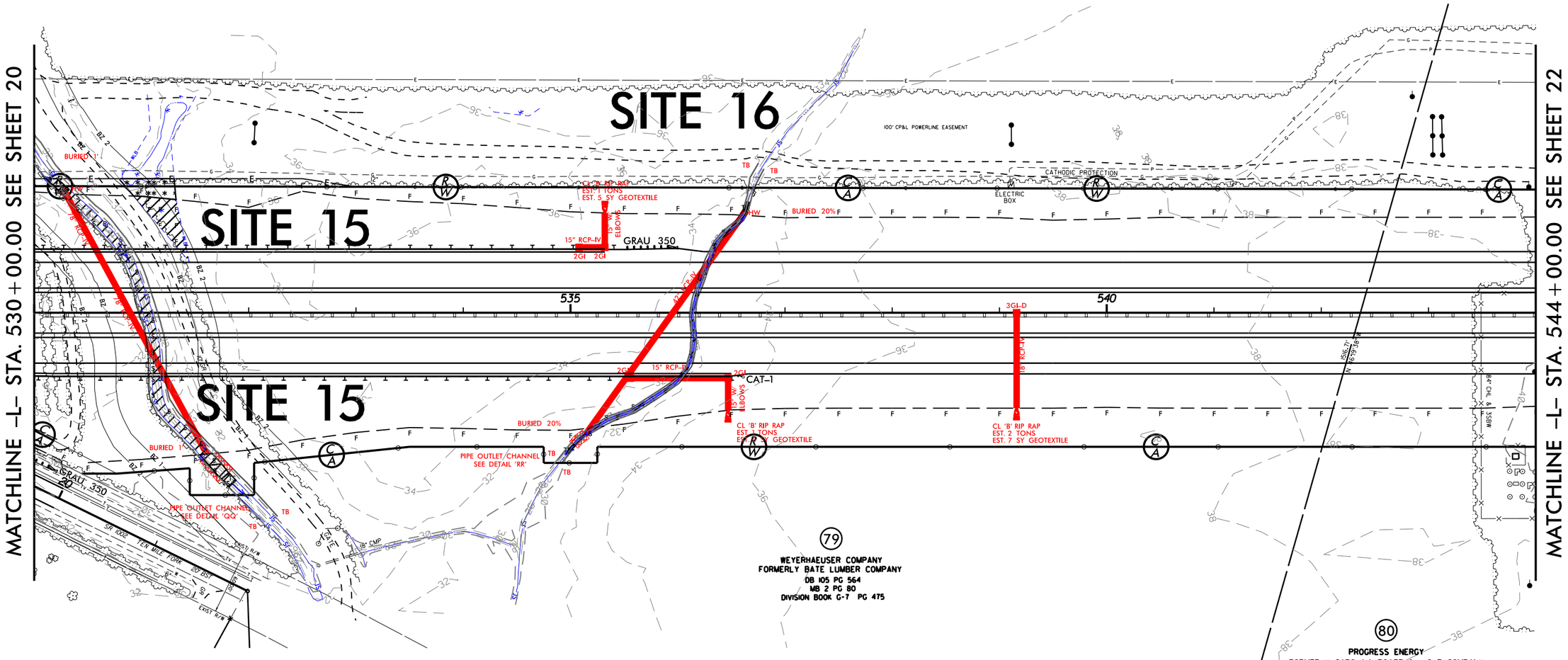
DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)



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



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

REVISIONS

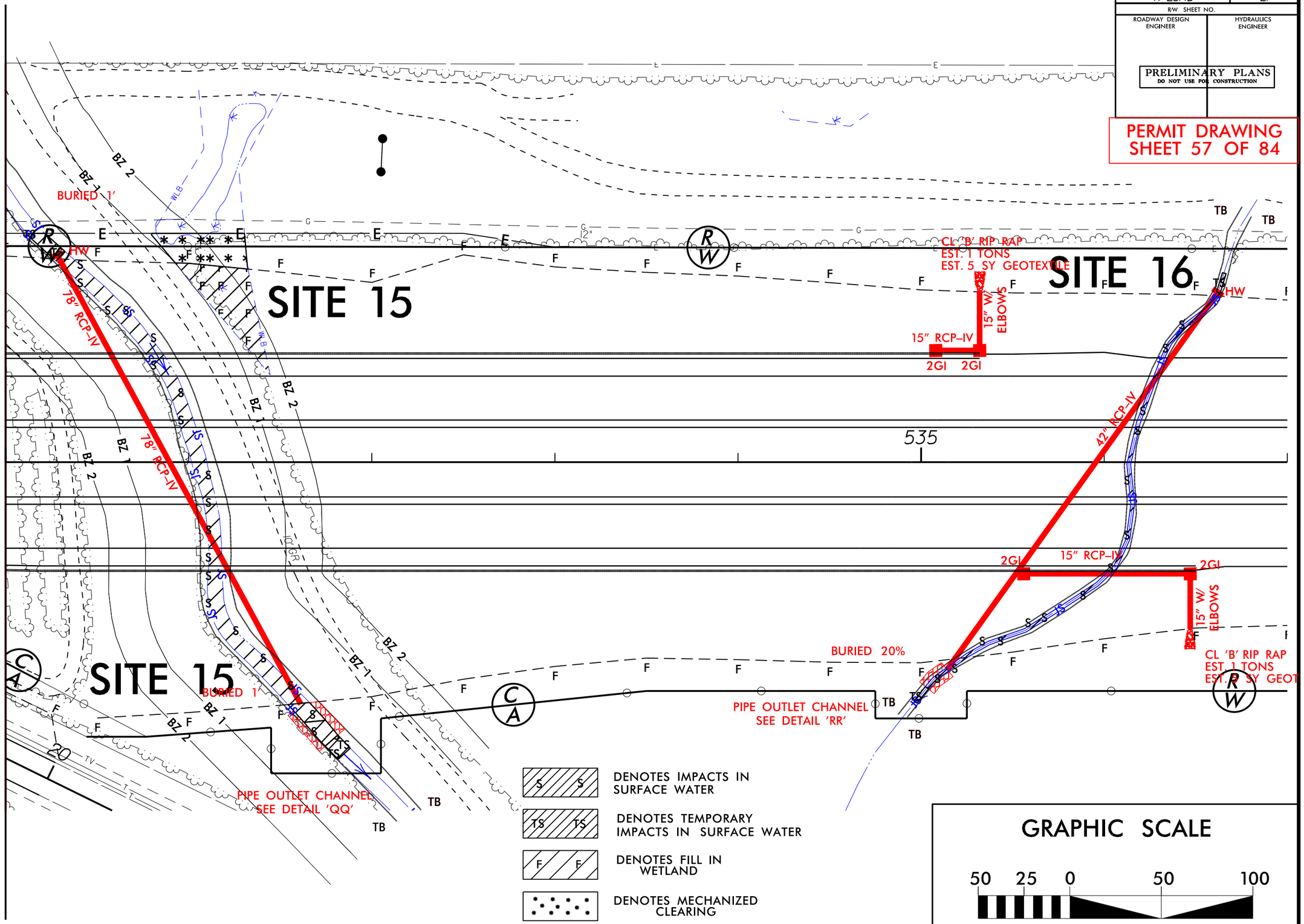
8/17/99

4/6/2014
mlynch
R:\Hydraulics\PERMITS\Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_21_con.dgn
$$$

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



REVISIONS

8/17/99

4/6/2014
mycot
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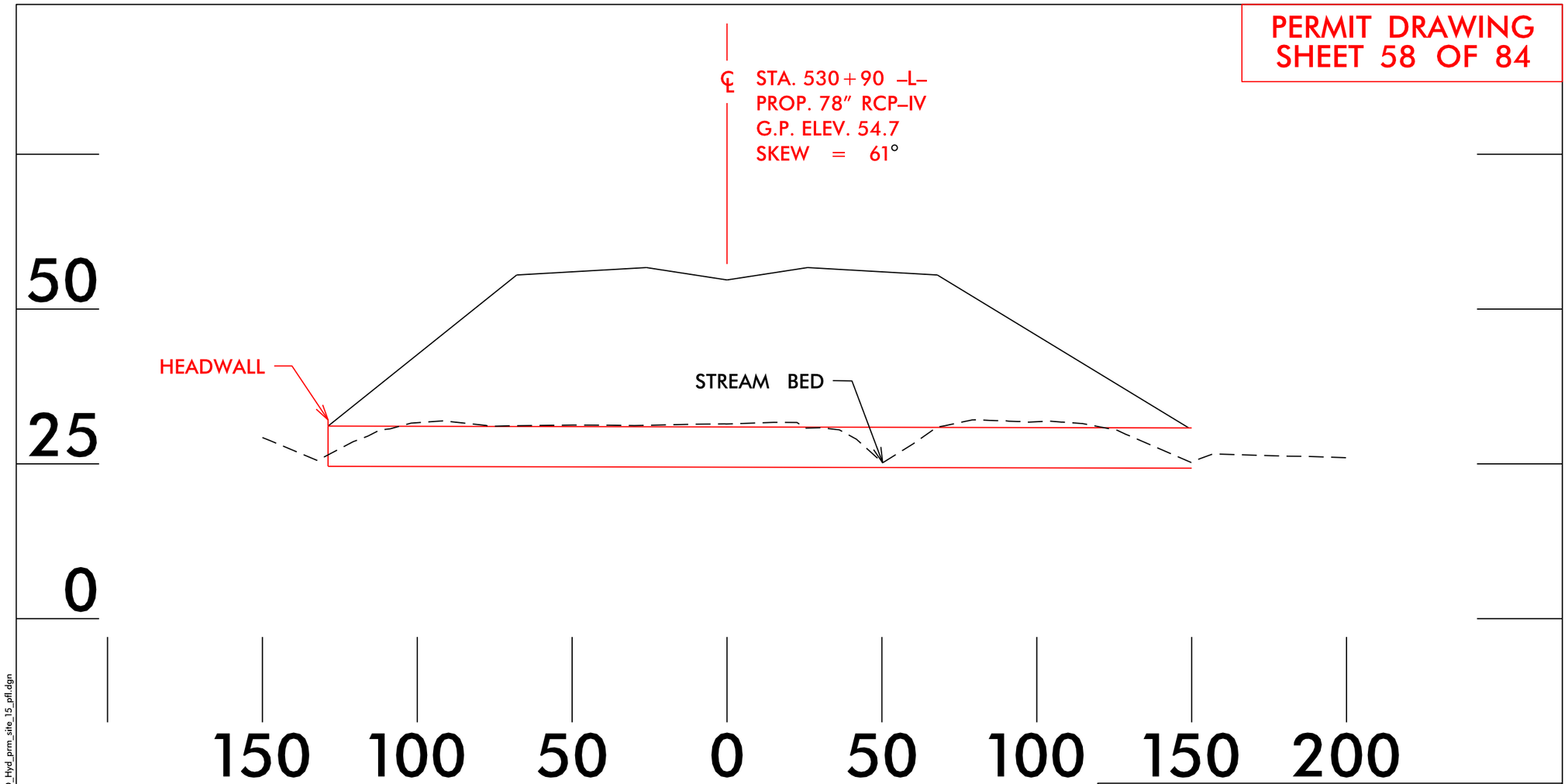
$$$$$$$$$$SYSTIME$$$$$$$$$$
$$$$$$$$$$DGNSIZE$$$$$$$$$$

PERMIT DRAWING
SHEET 58 OF 84



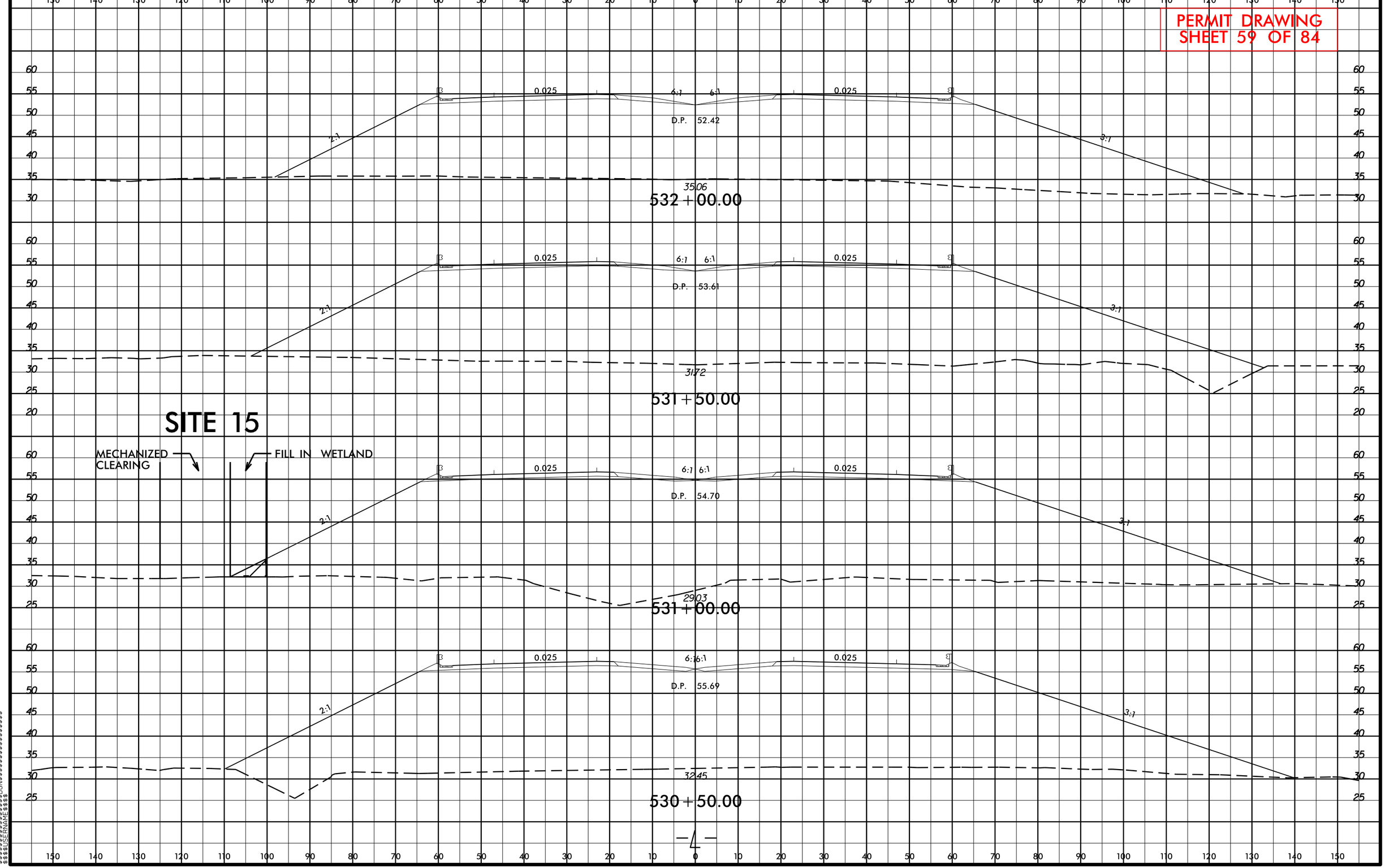
PROFILE

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_site_15_pfl.dgn

PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-102

PERMIT DRAWING
SHEET 59 OF 84



8/23/99

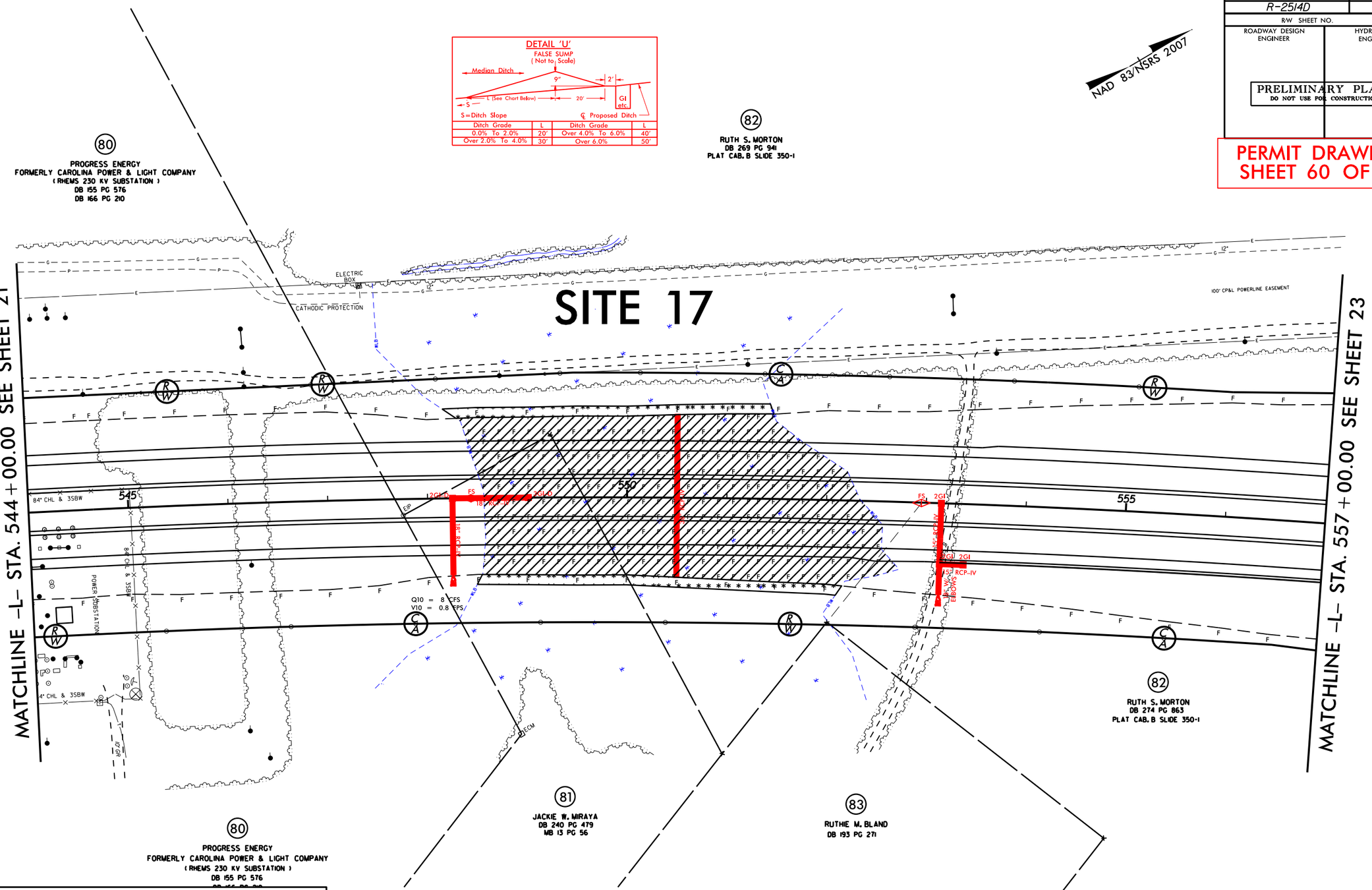
3/19/2014
mjyork
R:\Hydraulics\PERMITS\Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_xpl_L_PART_3.dgn
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$

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



SBG – "SHOULDER BERM GUTTER"

SEE SHEET 41 FOR -L- PROFILE

REVISIONS

8/17/99

3/6/2014
mlyon
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$$$$$$$$$$CVSDGN$$$$$$
$$$$$$$$$$CELENGUF$$$$

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

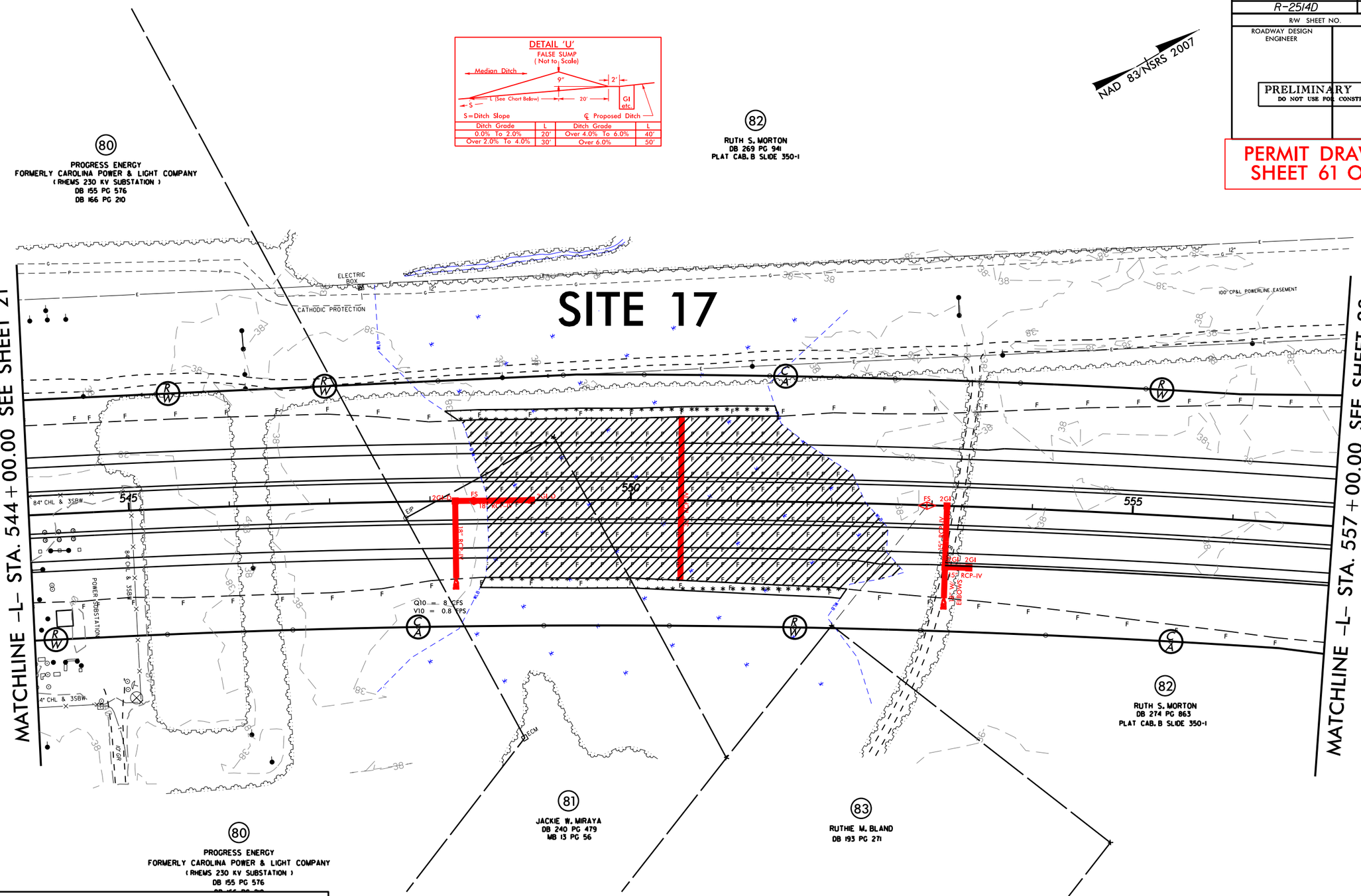
PERMIT DRAWING
SHEET 61 OF 84

NAD 83/NSRS 2007

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'



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

REVISIONS

8/17/99

3/6/2014
mlyon
R:\Hydraulics\PERMITS Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_22_con.dgn
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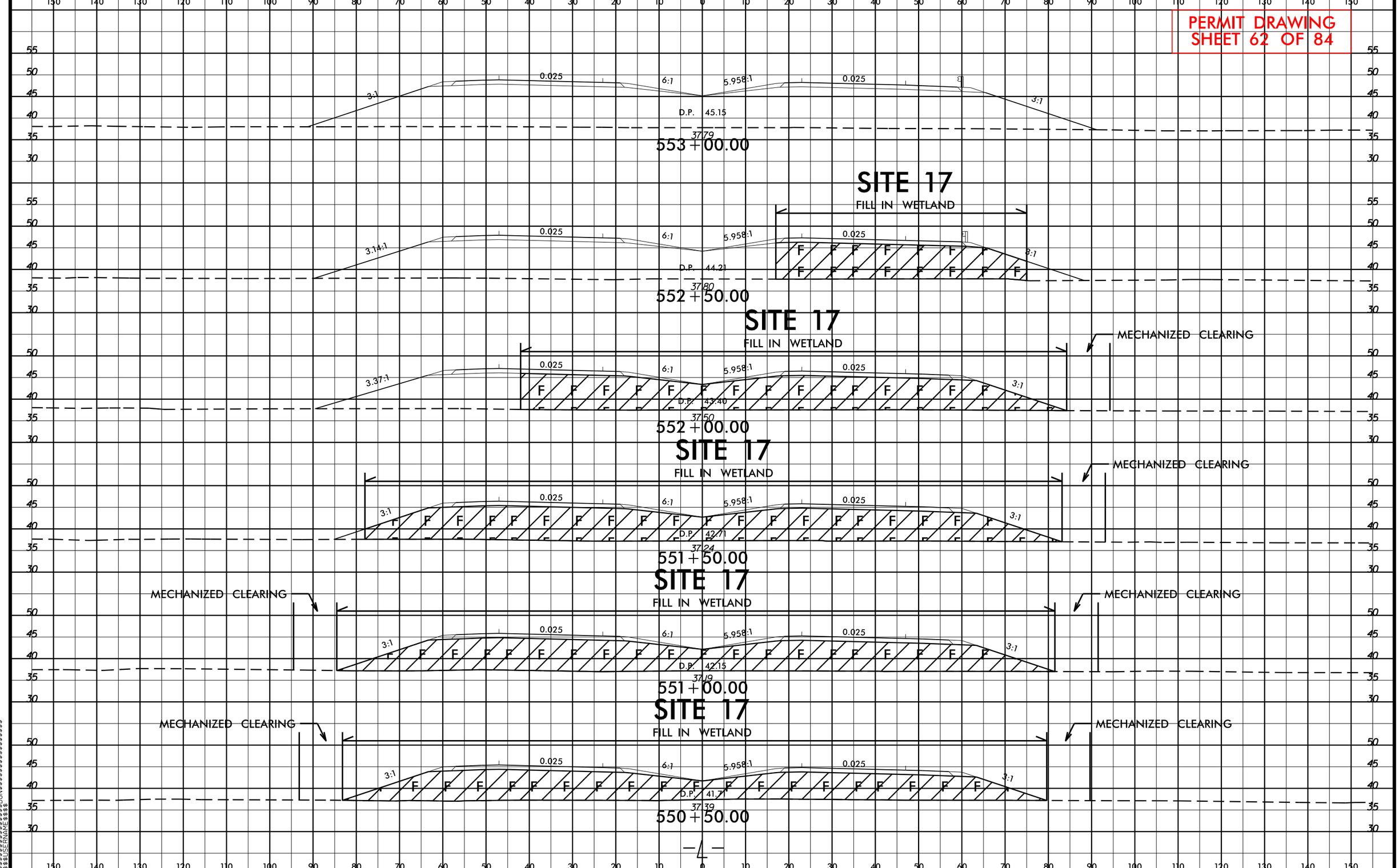
PERMIT DRAWING
SHEET 62 OF 84



8/23/99
3/19/2014
mjyork
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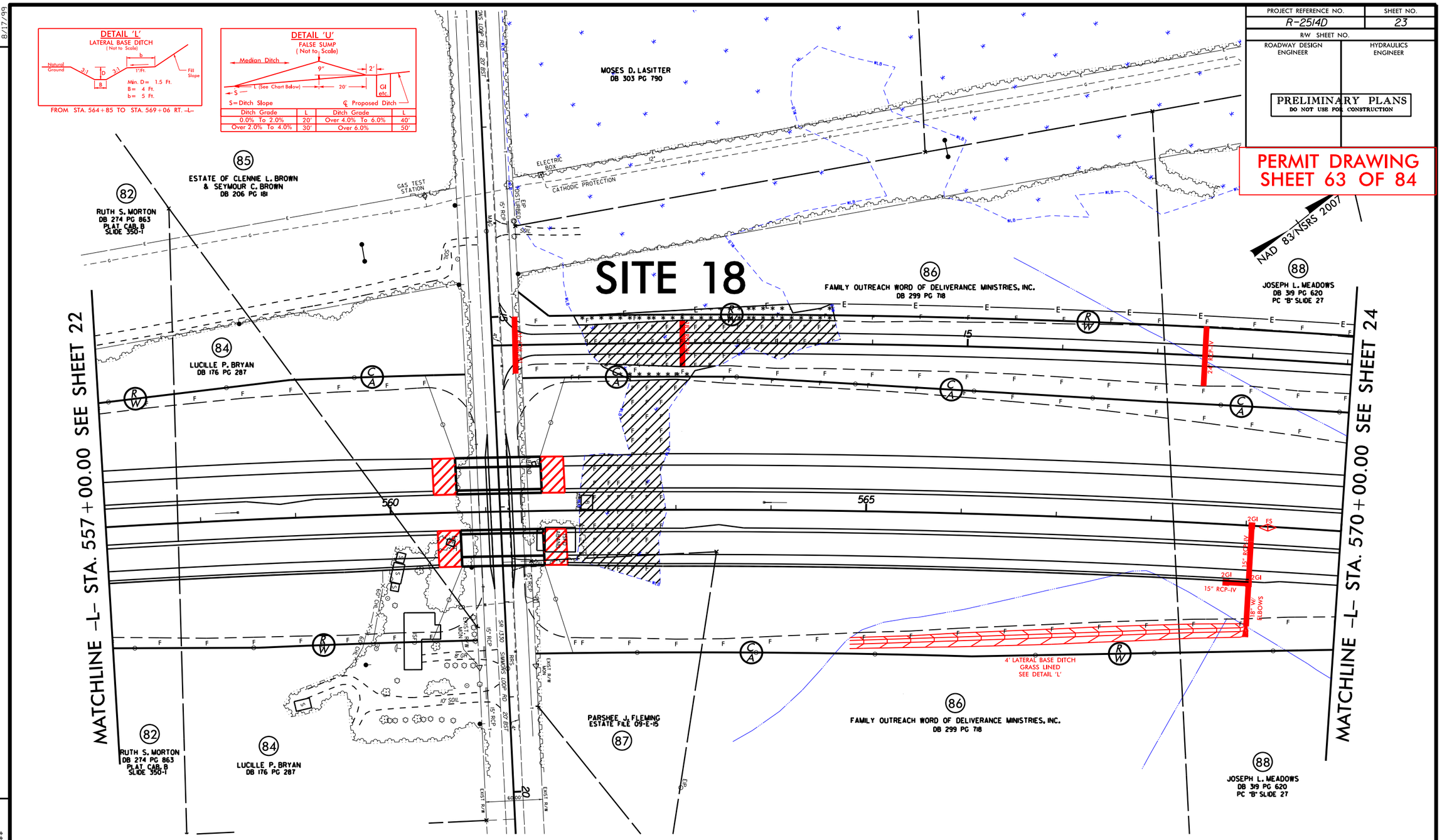
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

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 63 OF 84



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

REVISIONS

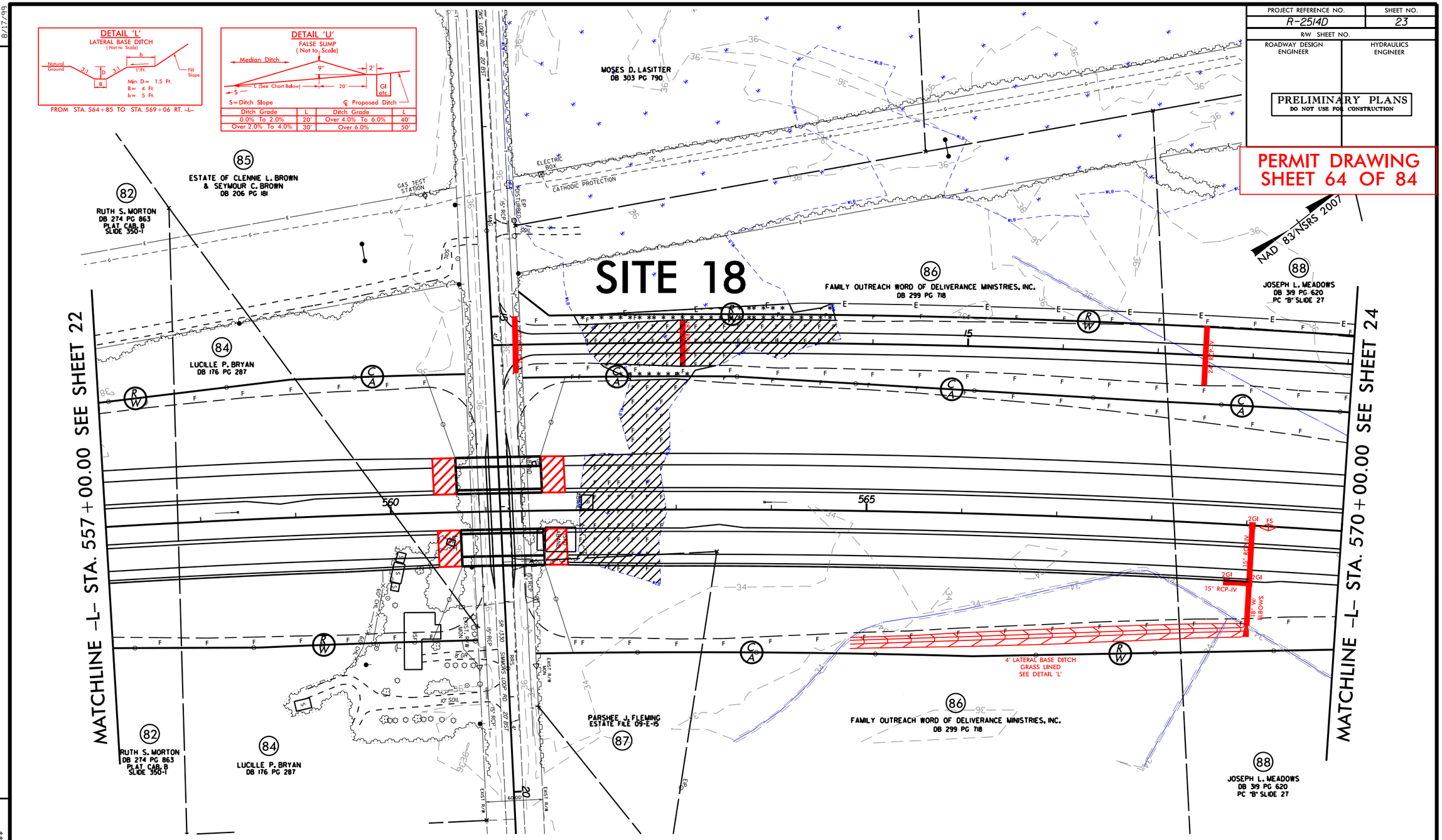
8/17/99

3/24/2014
mjack
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_23.dgn
$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

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



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

REVISIONS

8/17/99

3/24/2014
mjack
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_psh_23_con.dgn
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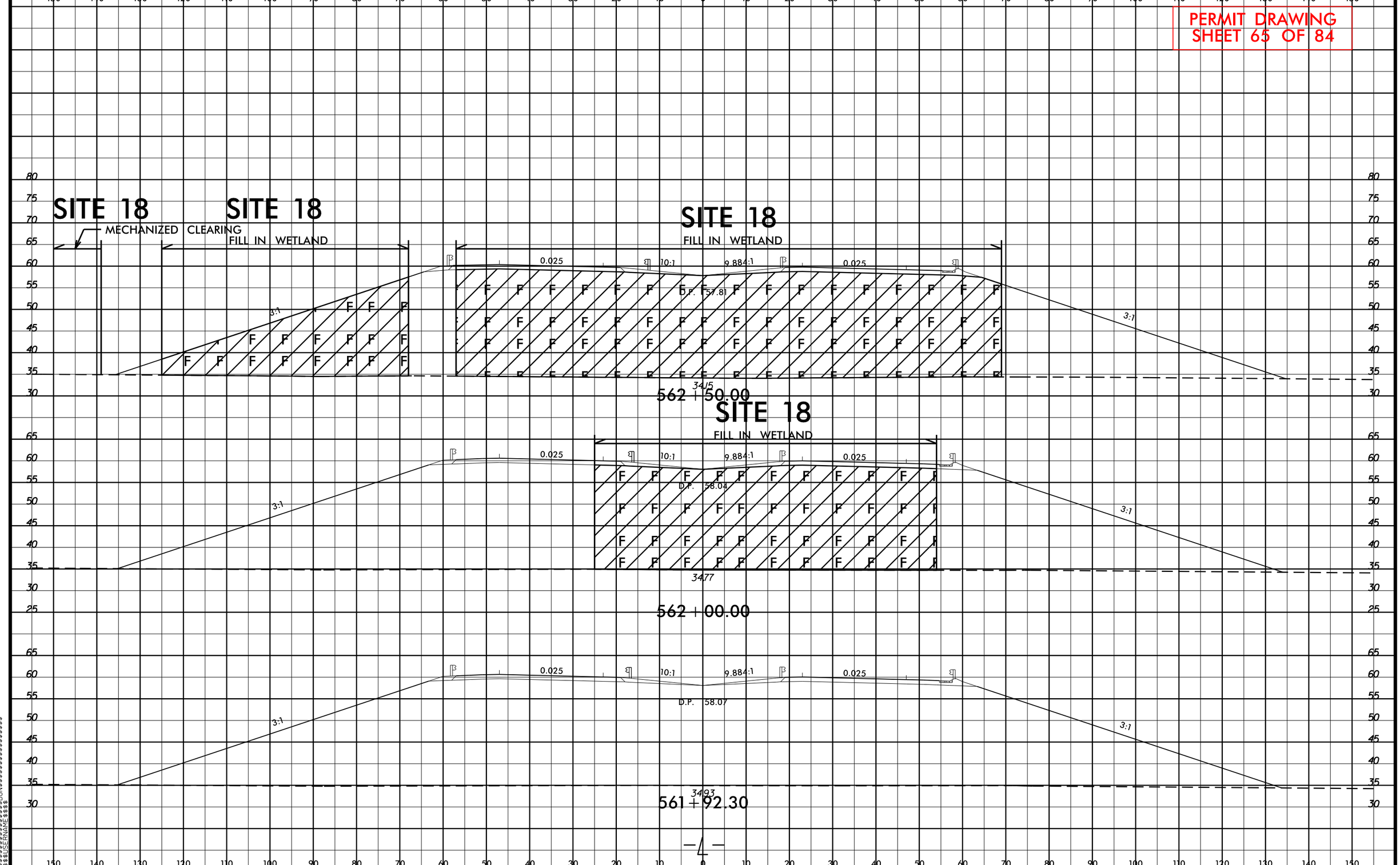
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-115

PERMIT DRAWING
SHEET 65 OF 84



8/23/99
3/20/2014
mjyork
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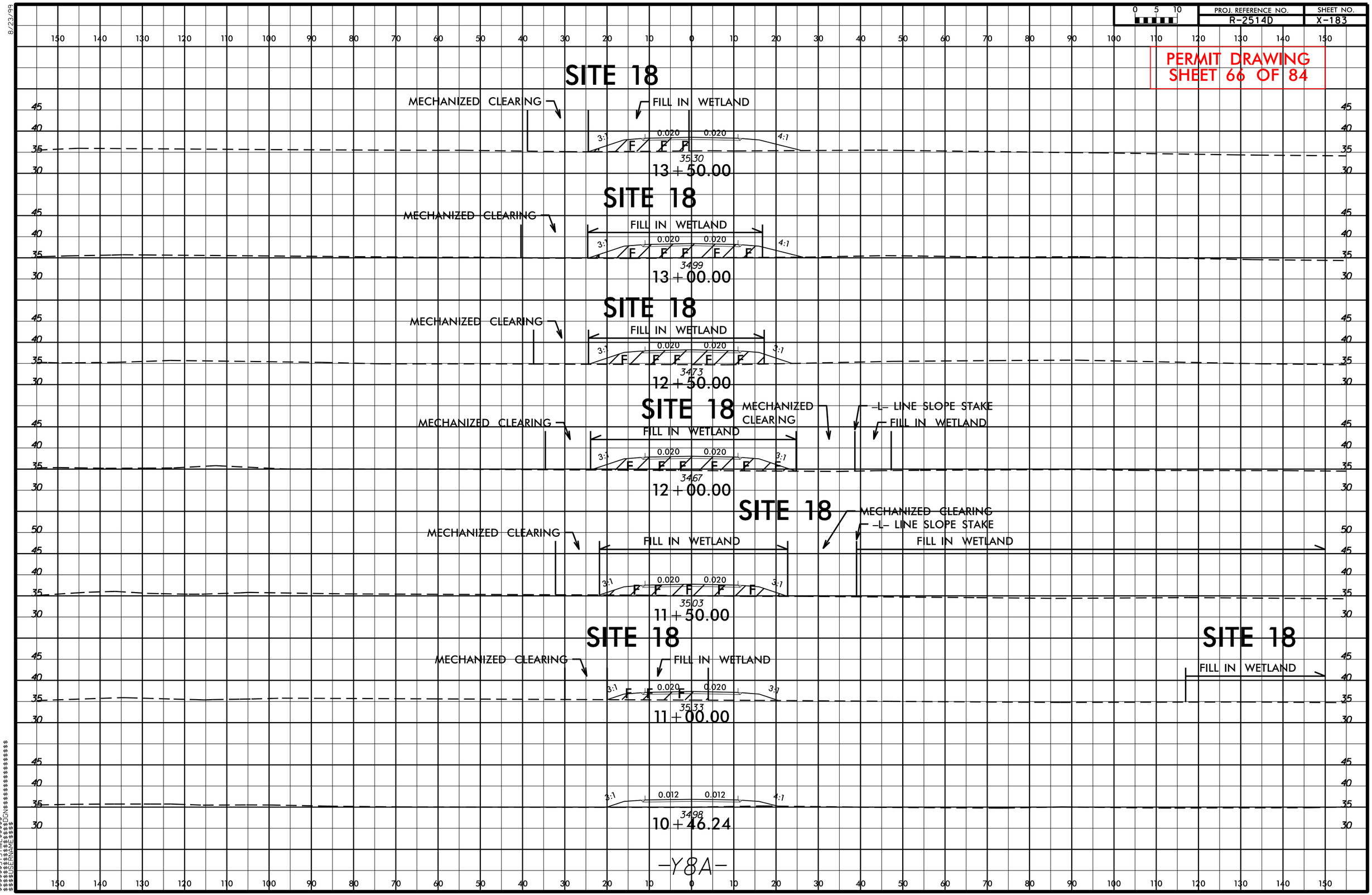
$$$$$$USERNAME$$$$$$

PERMIT DRAWING
SHEET 66 OF 84



8/23/99

3/20/2014
mjyack
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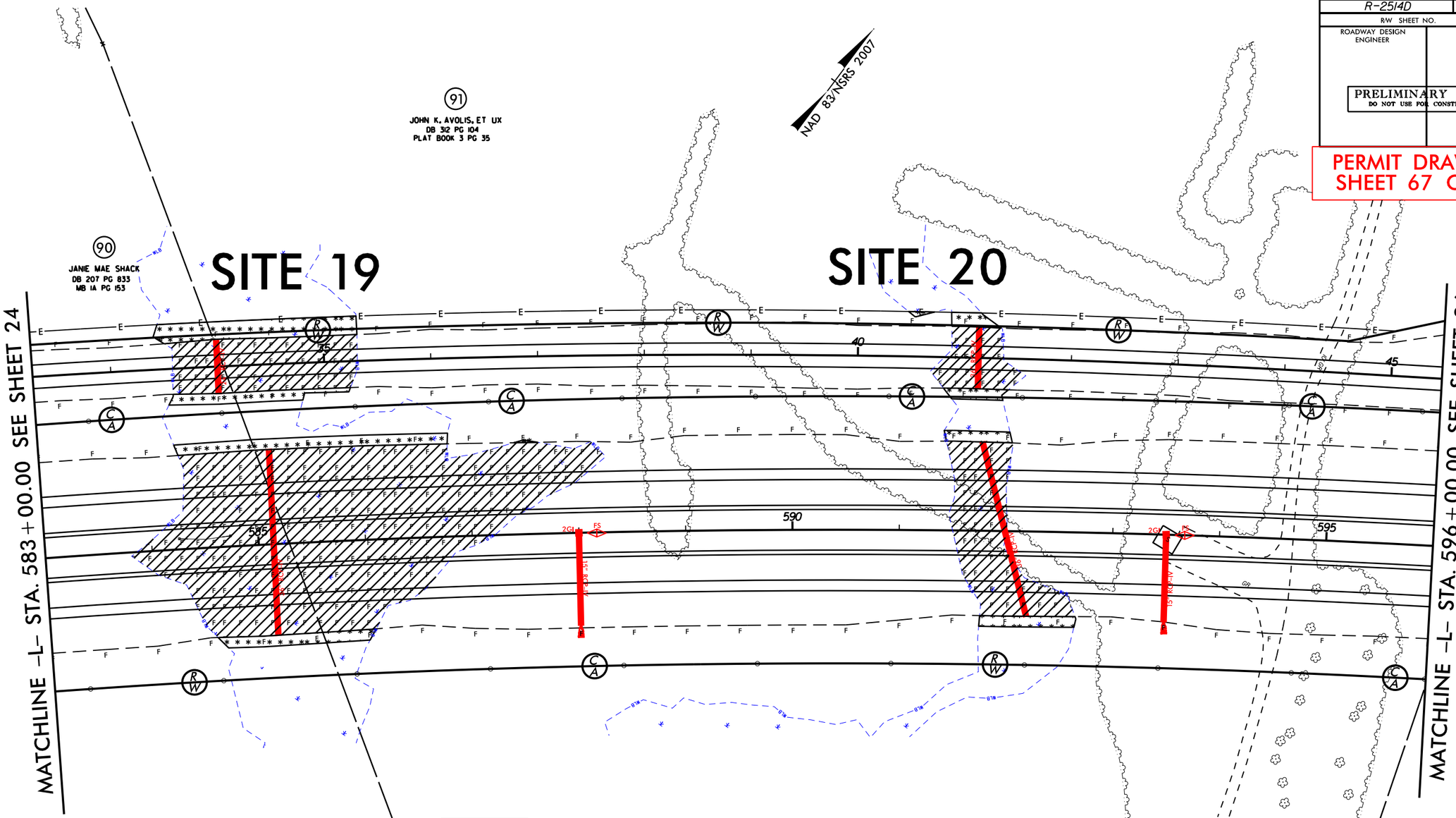
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 67 OF 84



F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

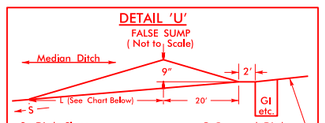
90
JANIE MAE SHACK
DB 207 PG 833
WB 1A PG 153

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)



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 SHEET 43 FOR -L- PROFILE
SEE SHEET 55 AND 56 FOR -Y8A- PROFILE

REVISIONS

8/17/99

2/27/2014
mjyork
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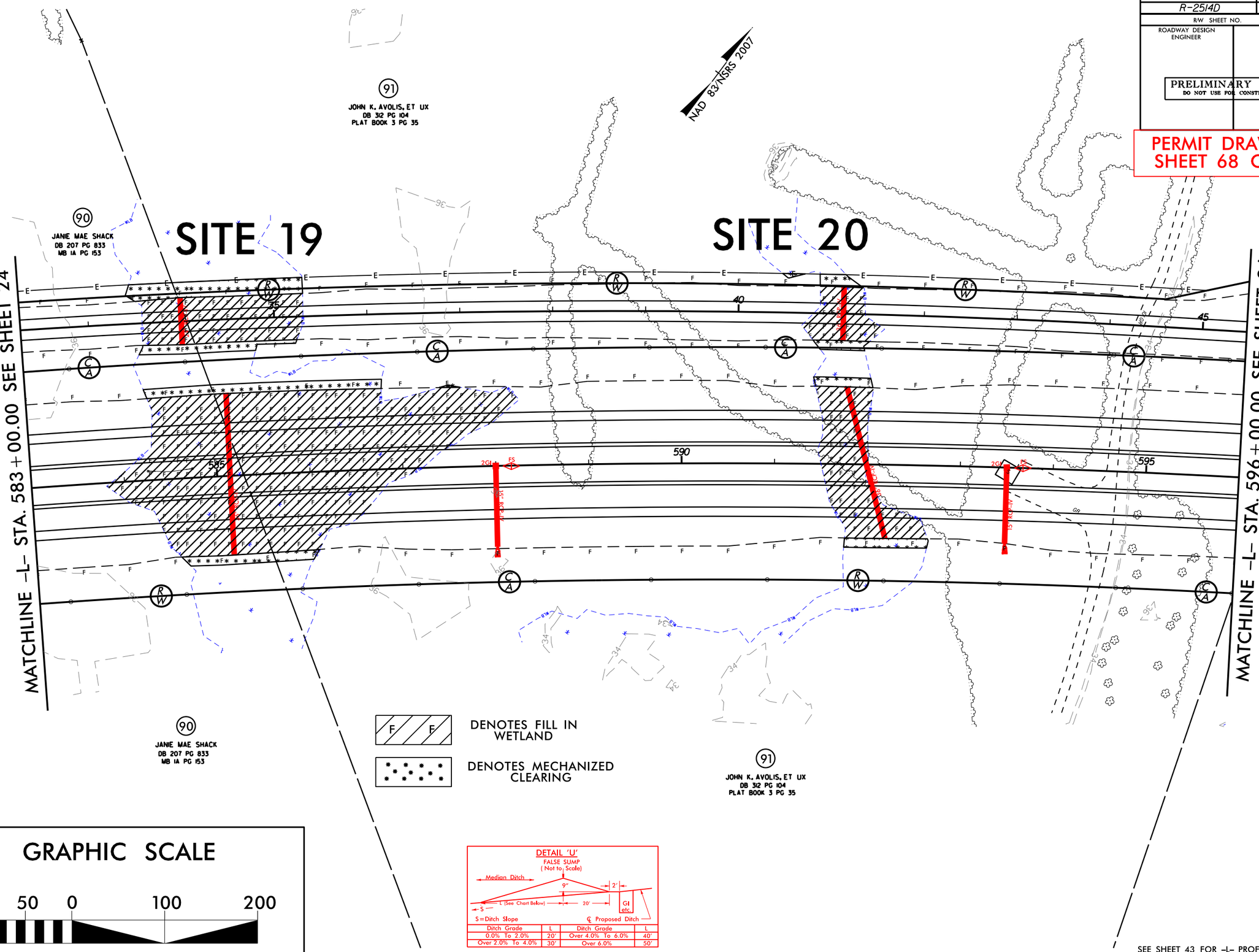
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 68 OF 84



REVISIONS

8/17/99

2/27/2014
mjyork
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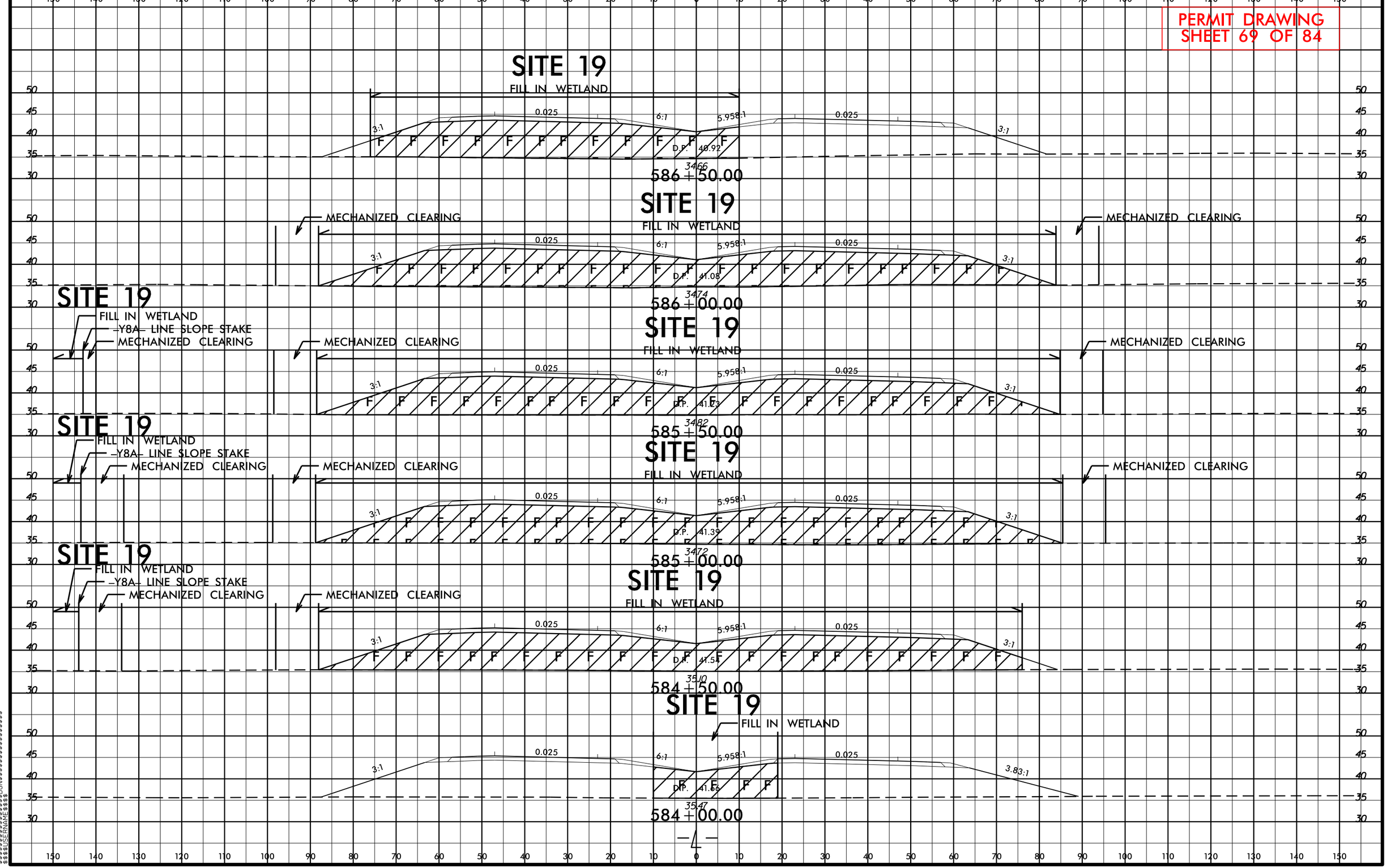
PERMIT DRAWING
SHEET 69 OF 84



8/23/99

3/19/2014
mjyork
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$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
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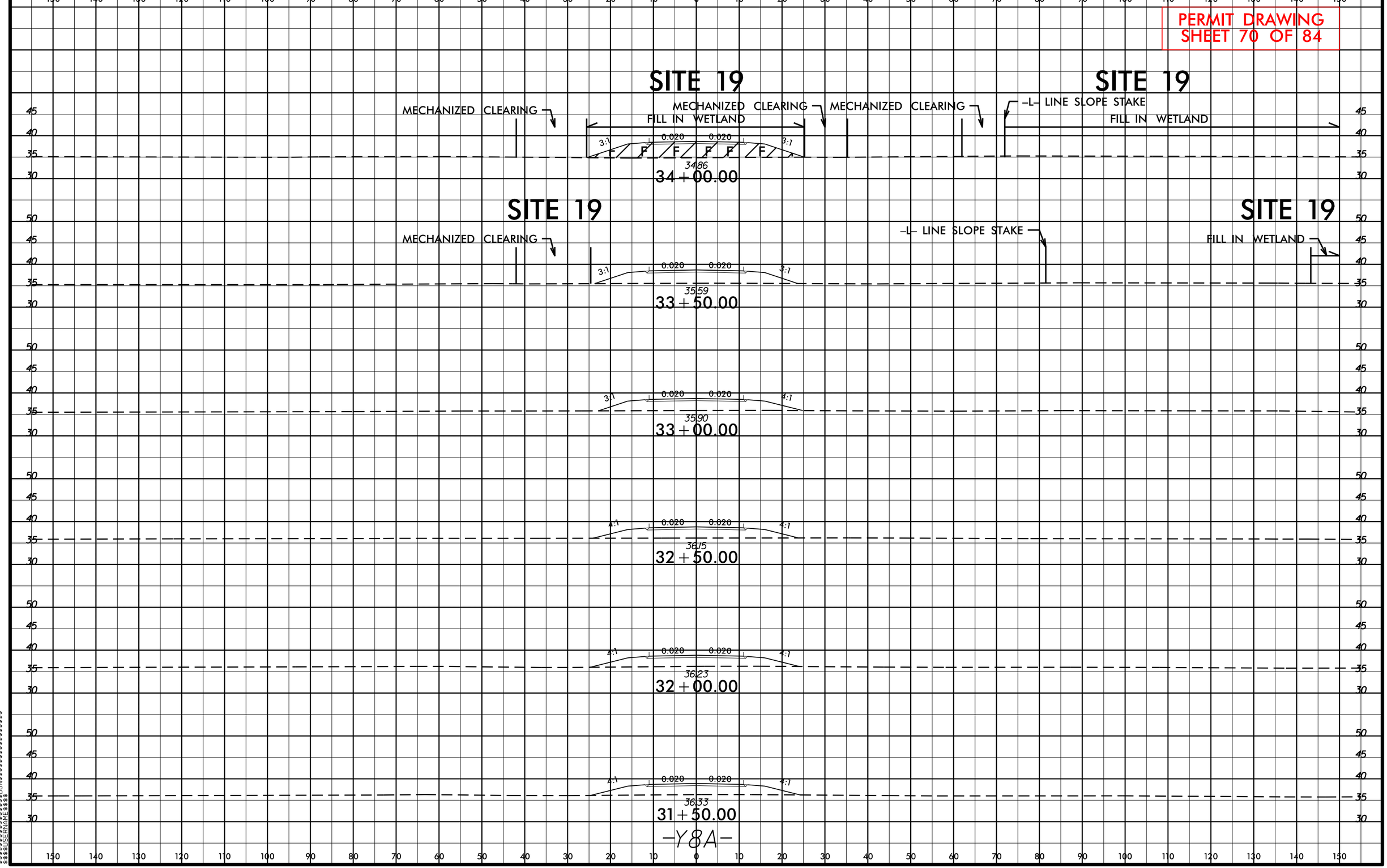
PERMIT DRAWING
SHEET 70 OF 84



8/23/99

3/24/2014
mjyork
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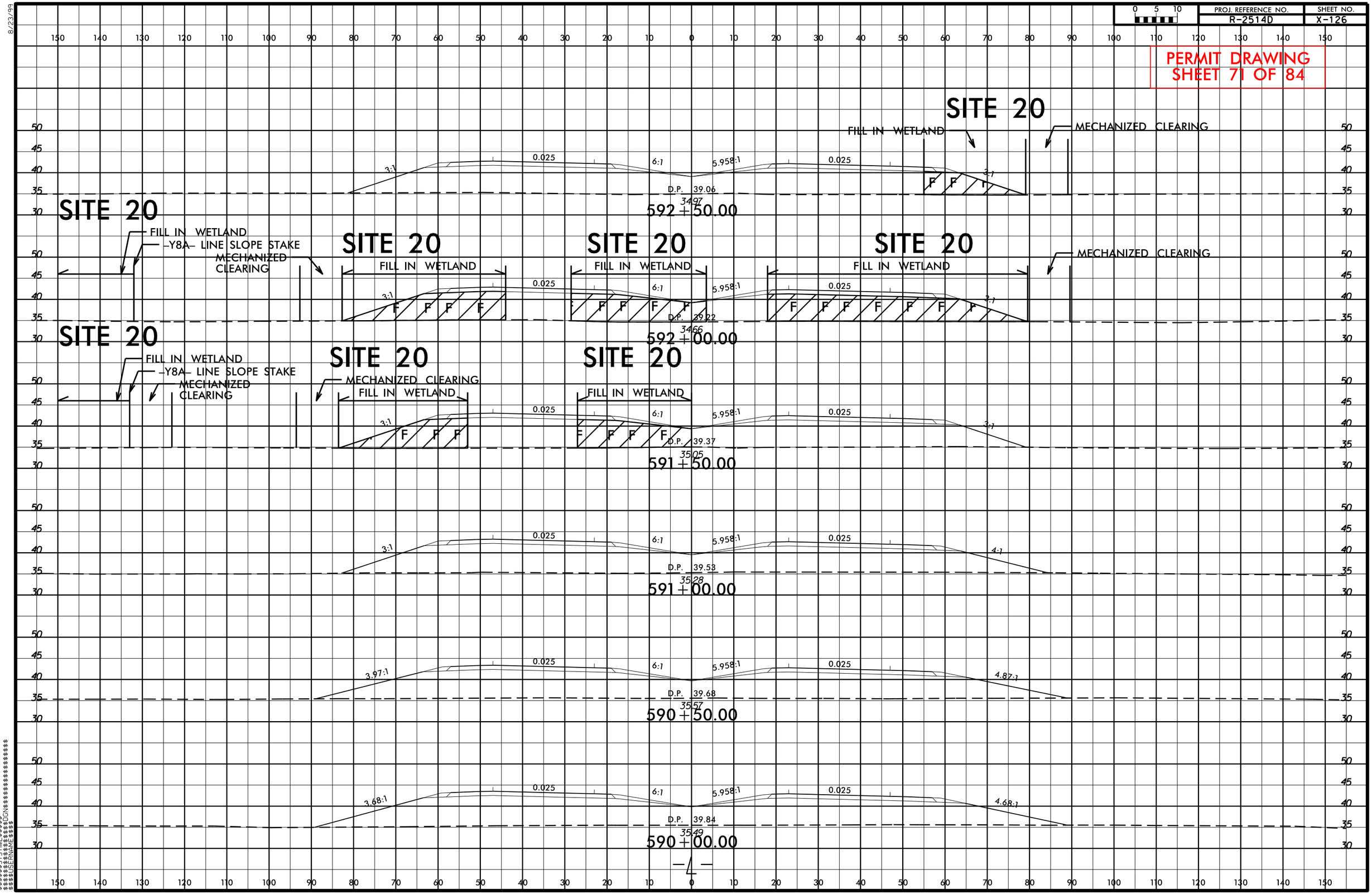
PERMIT DRAWING
SHEET 71 OF 84



8/23/99

3/19/2014
mjyork
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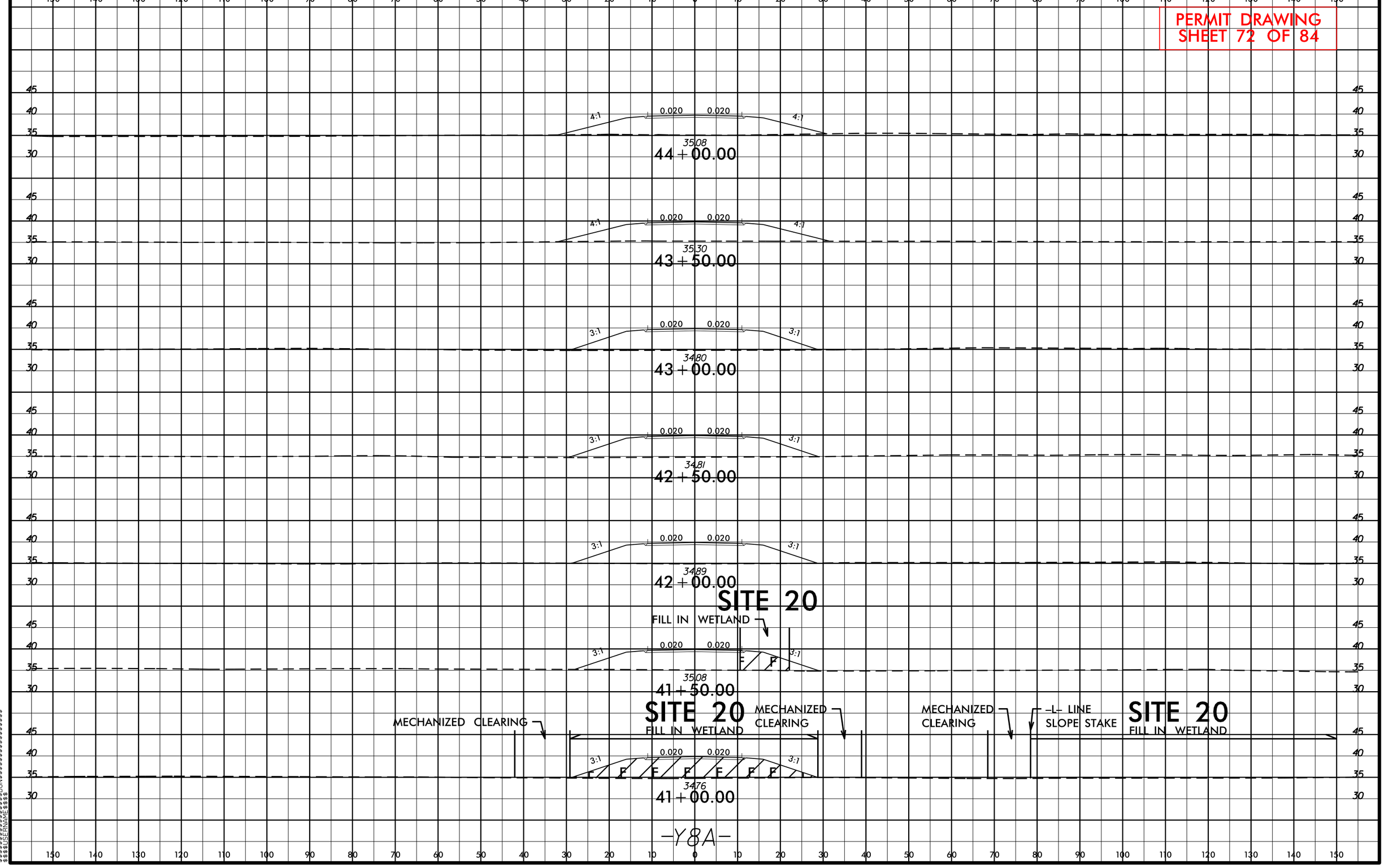
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PERMIT DRAWING
SHEET 72 OF 84



8/23/99
3242014
mjyock
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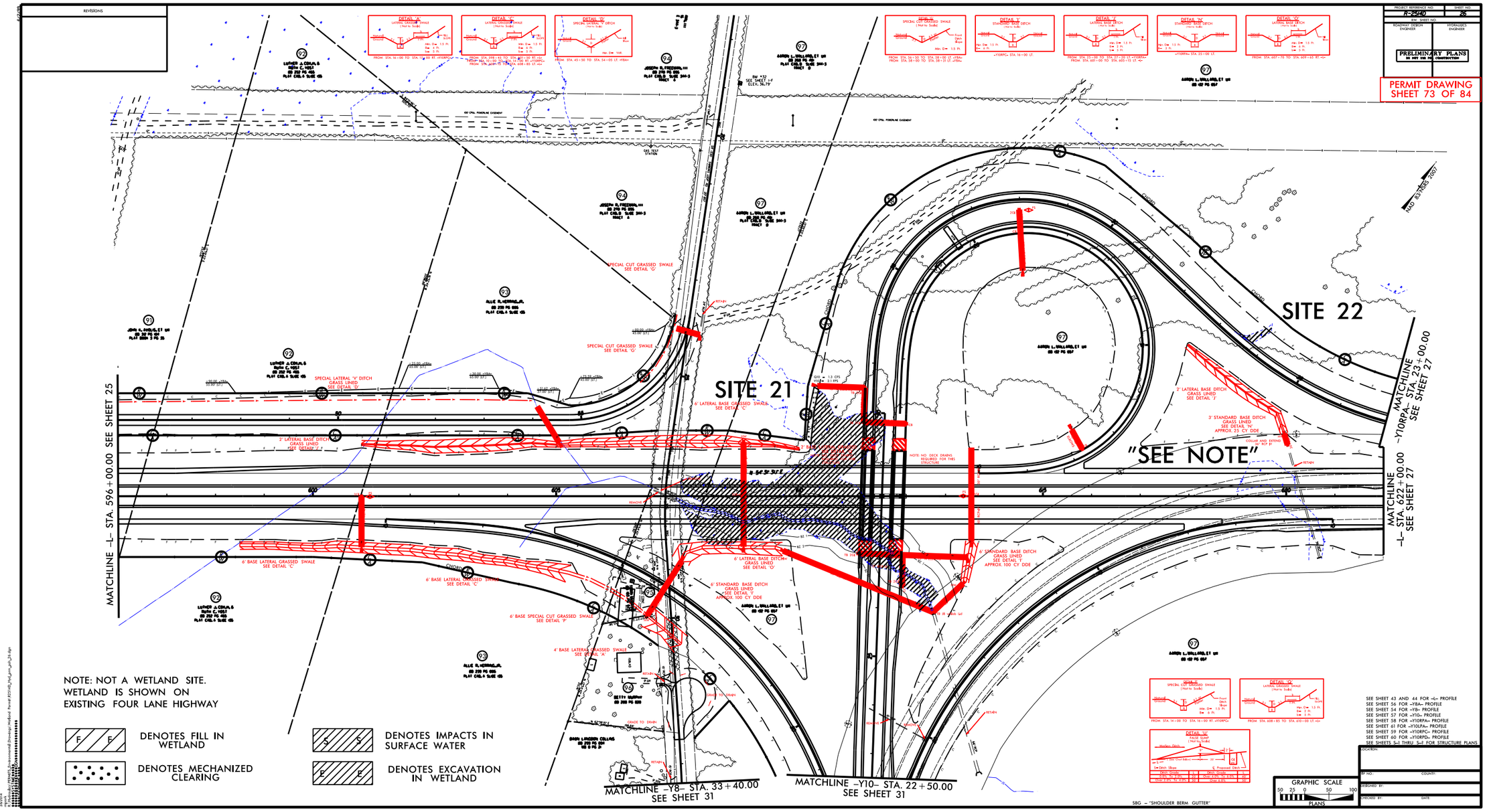
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2940	26
F.A. PROJ.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 73 OF 84



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

SBG - "SHOULDER BERM GUTTER"

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:
TIP NO. | COUNTY:
DESIGNED BY:
CHECKED BY: | DATE:

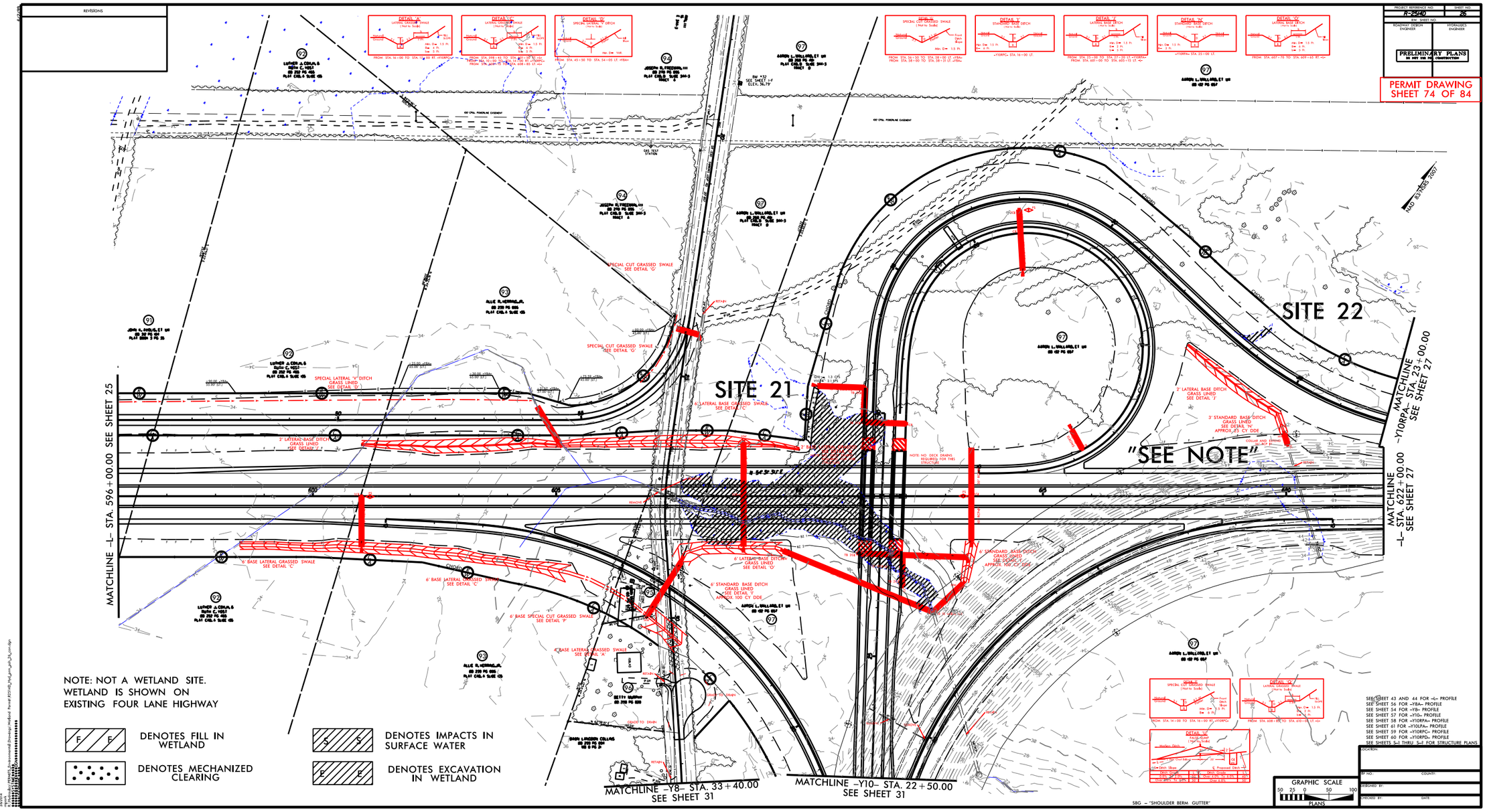
3/5/2014
R:\Hydraulics\Permits\Environmental Drawings\Wetland Permit\R2940_PermitPlans_26.dgn
PW:workspace:jobsmith
$$USER$$

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2940	26
B-4 SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 74 OF 84



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

SBG - "SHOULDER BERM GUTTER"

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:
TIP NO. COUNTY:
DESIGNED BY:
CHECKED BY: DATE:

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

HW
48" RCP-IV

2' BASE LATERAL GRASSED SWALE
SEE DETAIL 'Q'
NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

N 54° 31' 31.1" E

REMOVE
REMOVE
18" RCP
24" RCP
3GI-A
-L-
607
608
609
610
611
612
613
FS
BZ 1
BZ 2
MAG
N 35° 41' 21" W
296.90'
EXIST R/W MON
15" RCP
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" W/ELBOWS
15" RCP-IV
TB 2GI
15" RCP-IV
HW
36" RCP-IV
TB JB w/Slab Lid

GRAPHIC SCALE
50 25 0 50 100

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

REVISIONS

8/17/99

3/6/2014
mlynk
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$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
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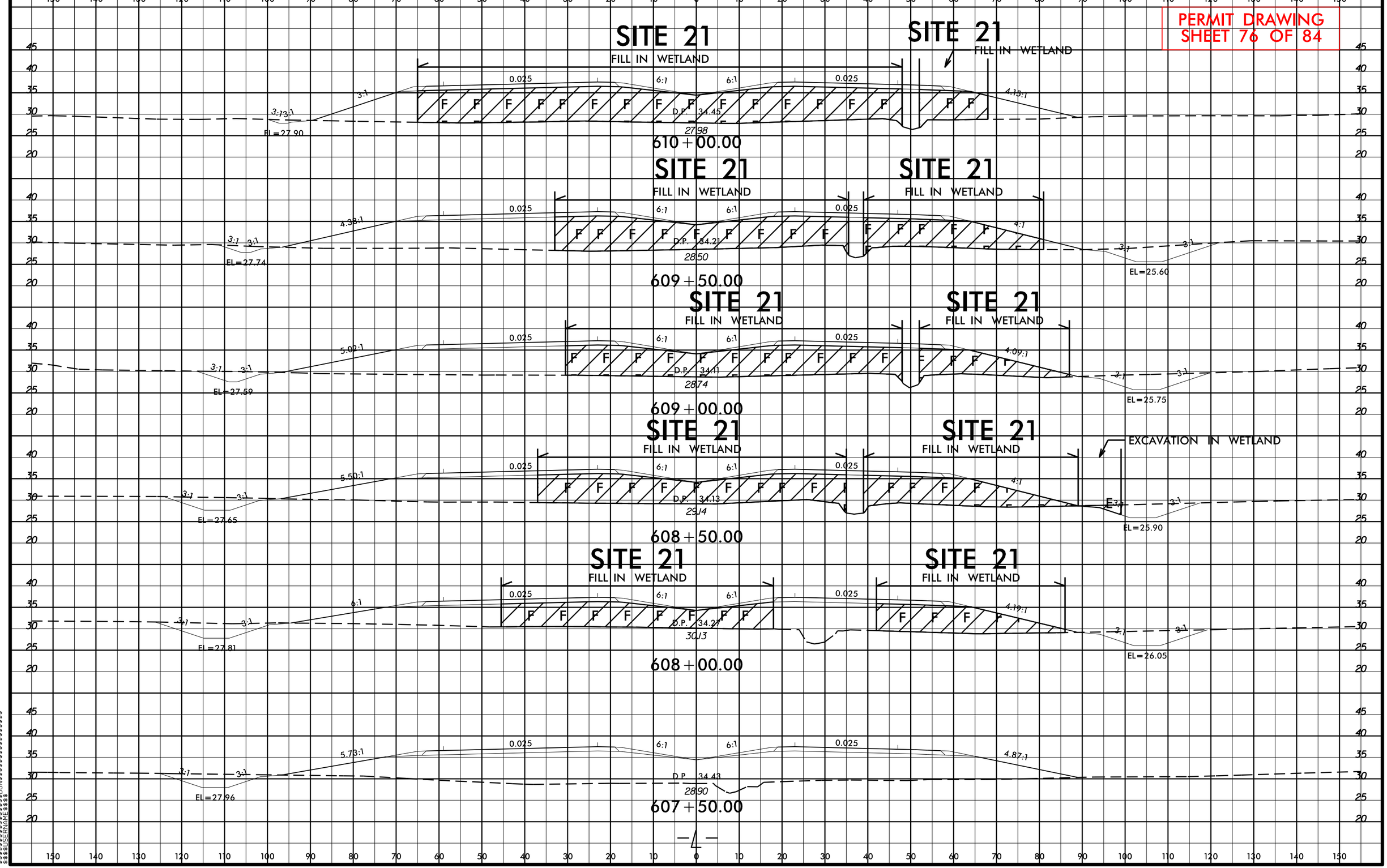
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

PERMIT DRAWING
SHEET 76 OF 84



8/23/99
3/19/2014
mjyack
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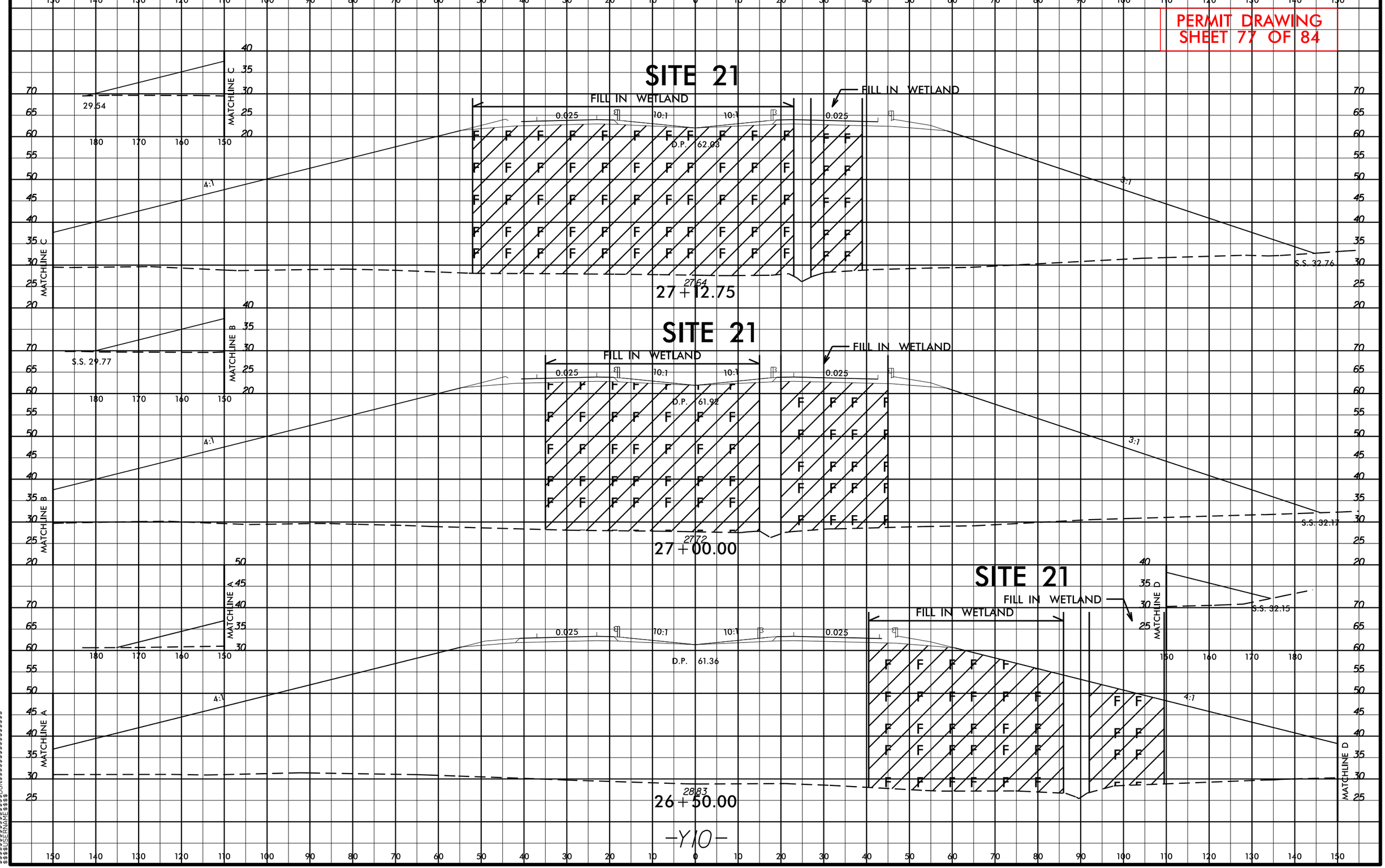
PERMIT DRAWING
SHEET 77 OF 84



-Y10-

8/23/99

3/24/2014
mjyork
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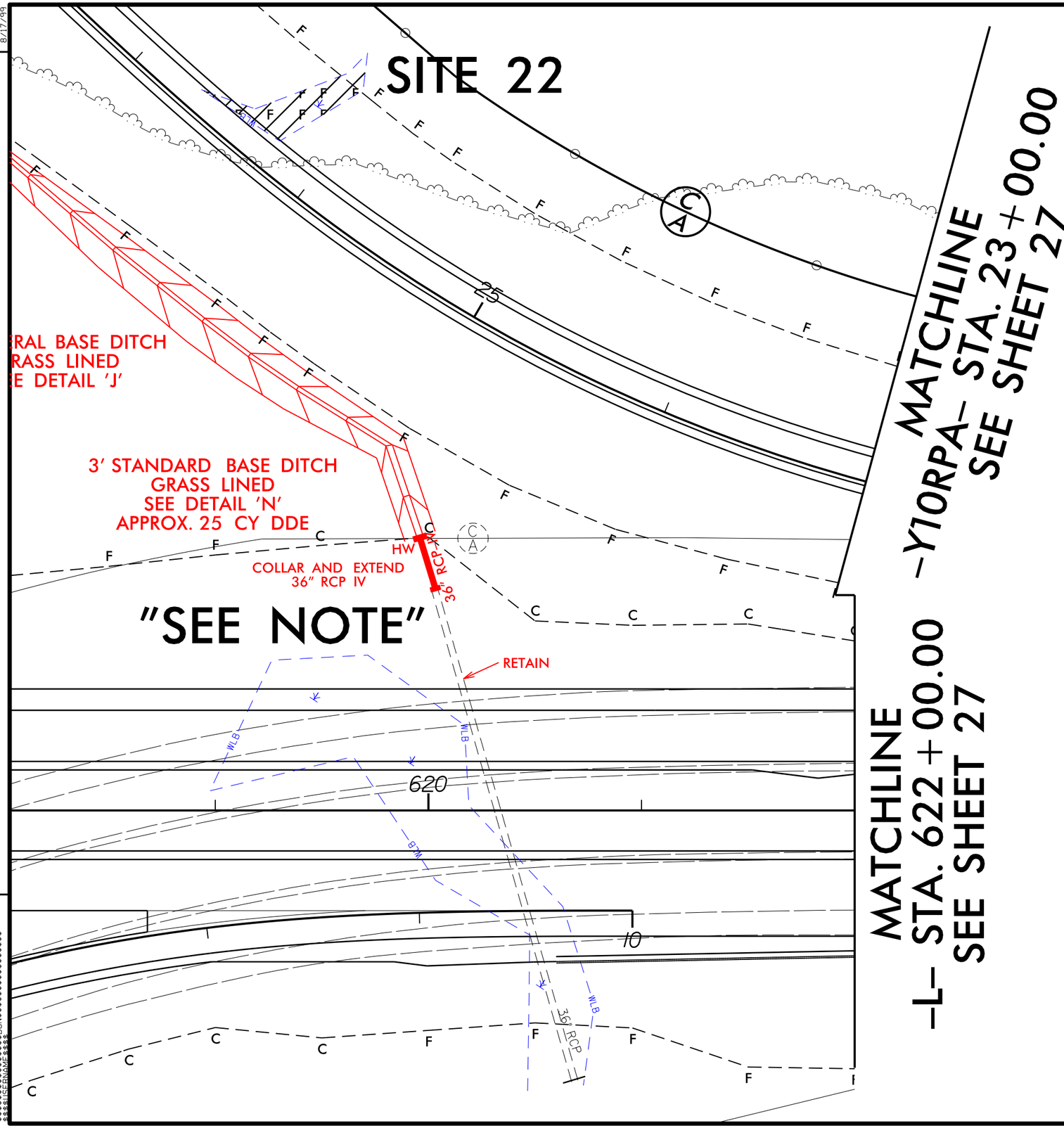
$$$$$$$$$$FILE$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

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 78 OF 84



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

REVISIONS

8/17/99

2/27/2014
rtipock
R:\Hydraulics\PERMITS_Environmental\Drawings\Wetland Permit\R2514D_Hyd_prm_pth_26X2_SITE22.dgn
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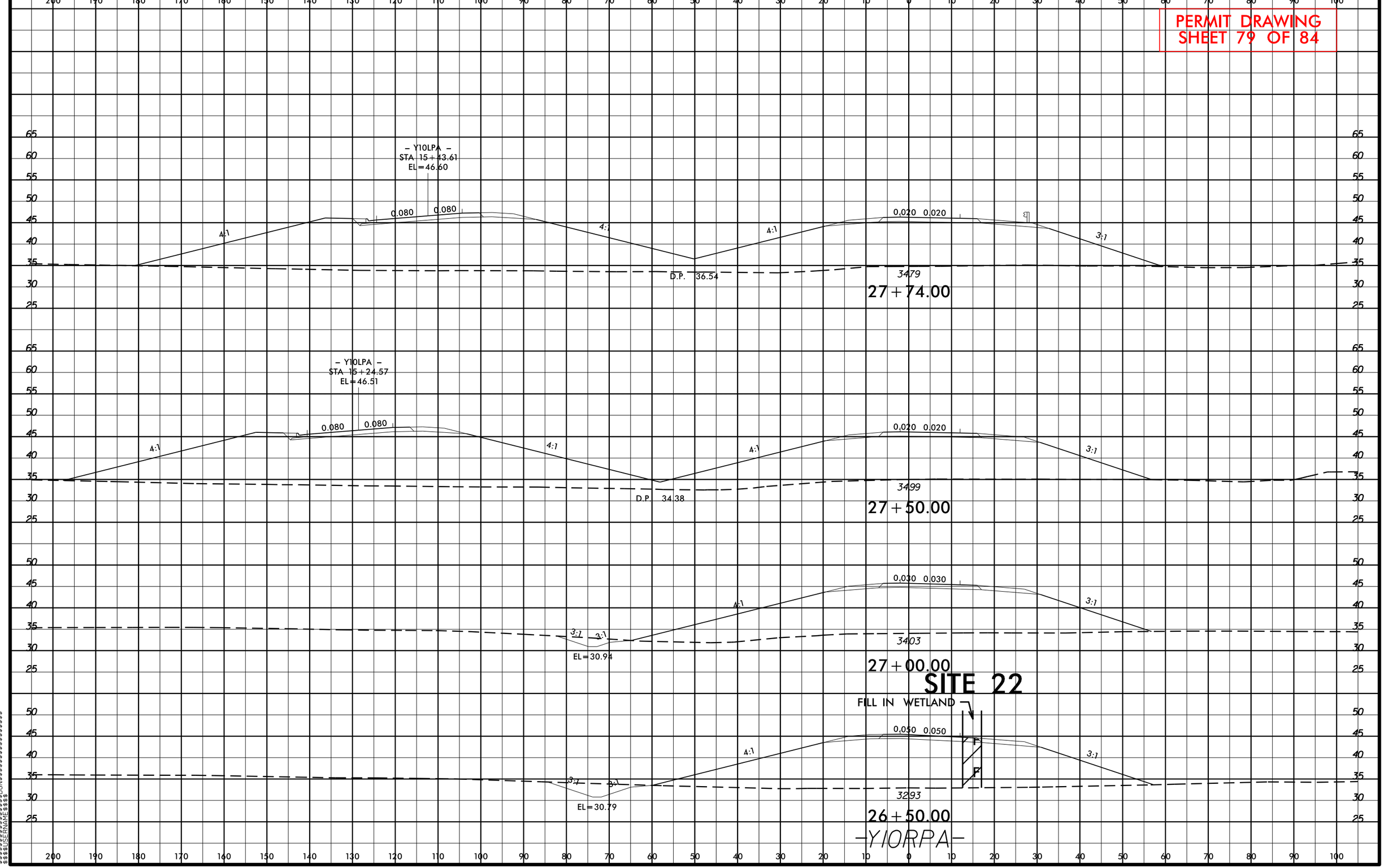
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-213

PERMIT DRAWING
SHEET 79 OF 84



8/23/99

3242014
mjyork
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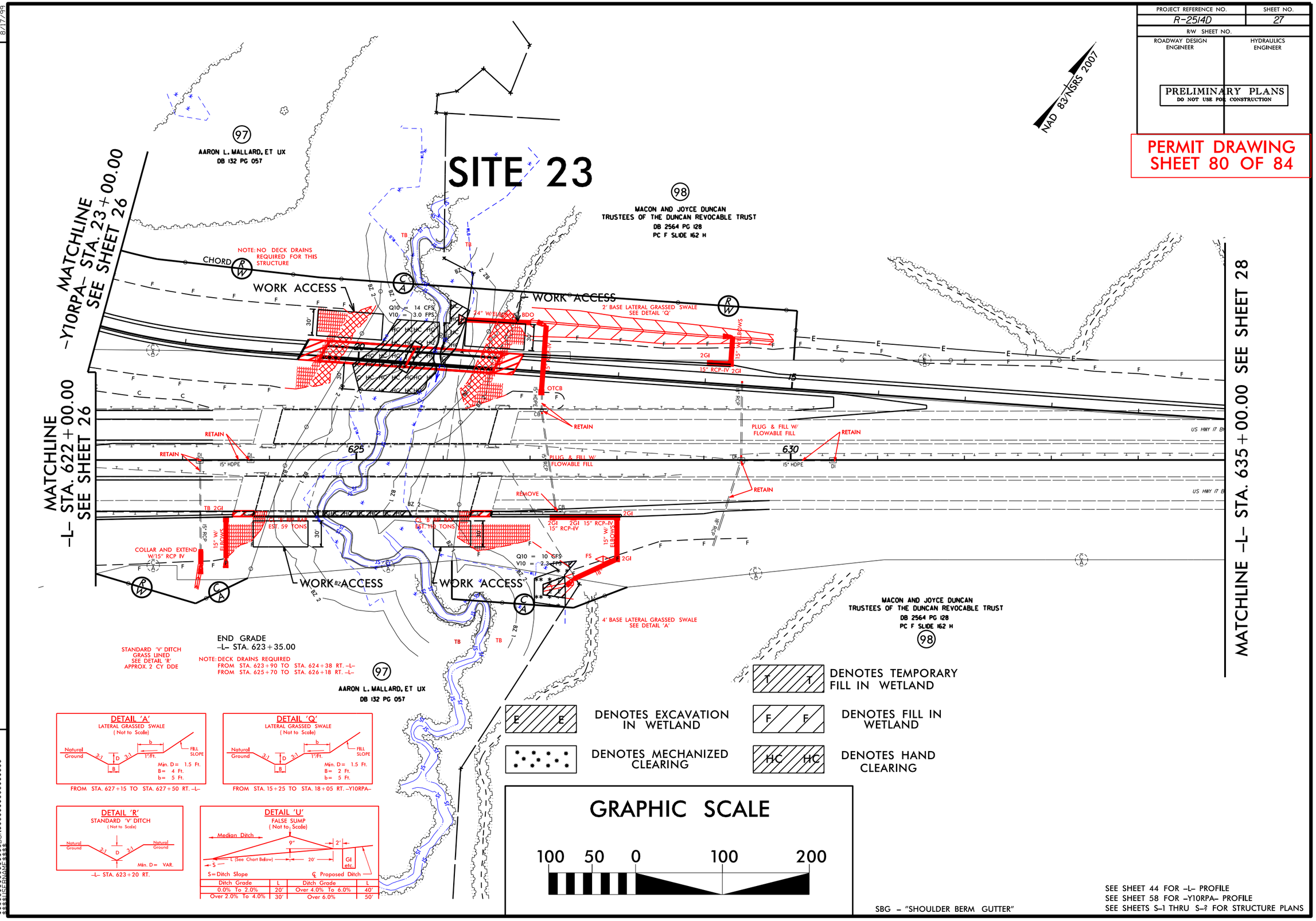
$$$$$$$$$$USERNAME$$$$

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



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
mtyock
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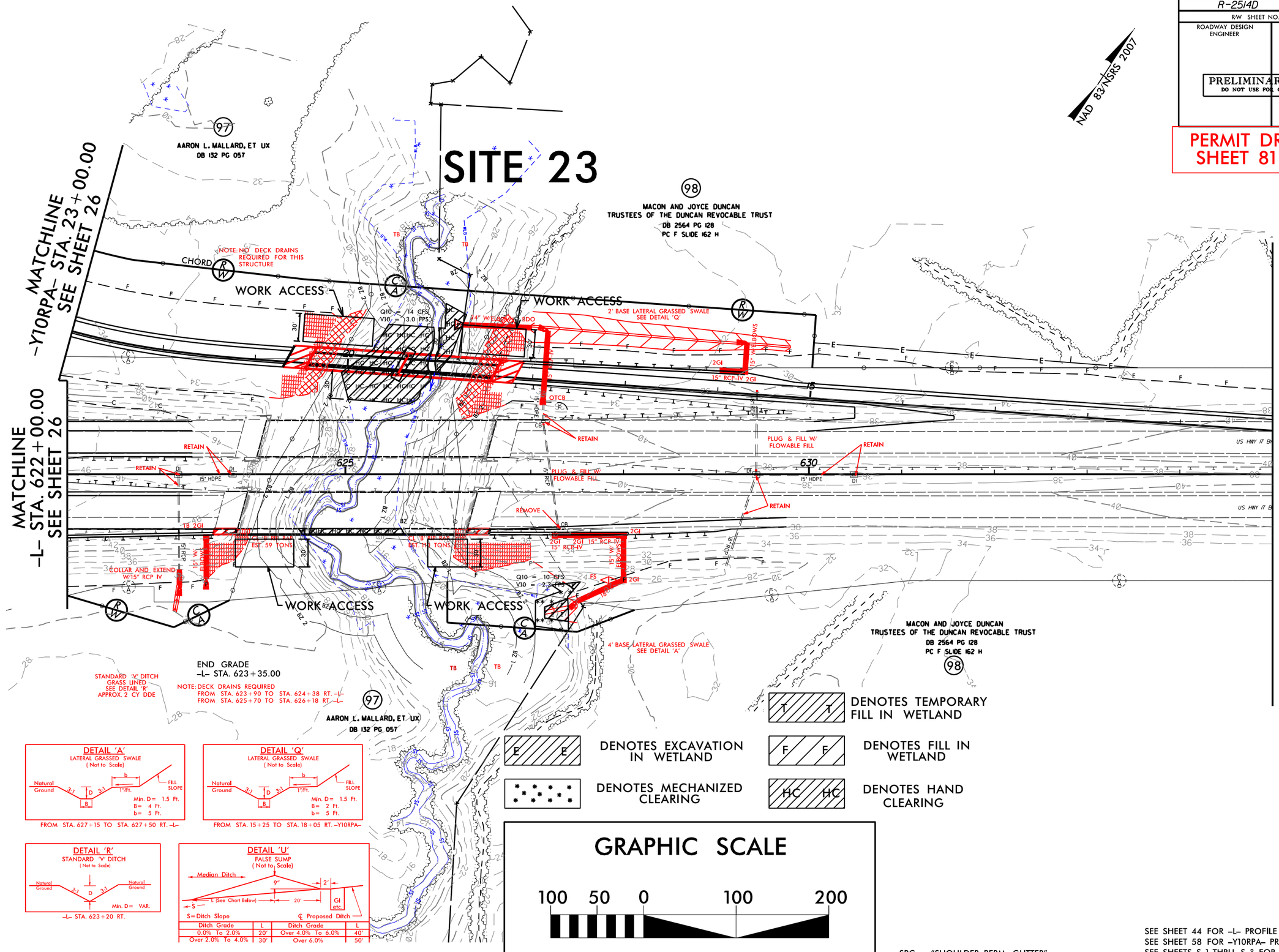
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 81 OF 84



DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)
Natural Ground, 3:1, D, 3:1, B, b, 1"/Ft., FILL SLOPE
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, b, 1"/Ft., FILL SLOPE
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'

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
rtiprck
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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

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

SITE 23

CHORD (R/W)

WORK ACCESS

WORK ACCESS

Q10 = 14 CFS
V10 = 3.0 FPS

24" W/ELBOWS, BDO

2' BASE LATERAL GRASSED SWALE SEE DETAIL 'Q'

-YIORPA-

21 20 18 17 16

2GI

15" RCP-IV

OTCB

15" HDPE

CB

RETAIN

RETAIN

RETAIN

-L-

623 624 625 626 627 628 629

DI

15" HDPE

15" RCP

PLUG & FILL W/ FLOWABLE FILL

REMOVE

TB 2GI

15" RCP

15" W/ ELBOWS

COLLAR AND EXTEND W/15" RCP IV

CL 'B' RIP RAP EST. 59 TONS

CL 'B' RIP RAP EST. 110 TONS

2GI 15" RCP-IV

2GI 15" RCP-IV

15" W/ ELBOWS

18" RCP

Q10 = 10 CFS
V10 = 2.3 FPS

FS

2GI

18"

WORK ACCESS

4' BASE LATERAL GRASSED SWALE SEE DETAIL 'A'

BZ 1

BZ 2

30'

WLB

JS

TB

GRAPHIC SCALE

50 25 0 50 100

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

REVISIONS

8/17/99

6/5/2014
rhyork
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5/28/99

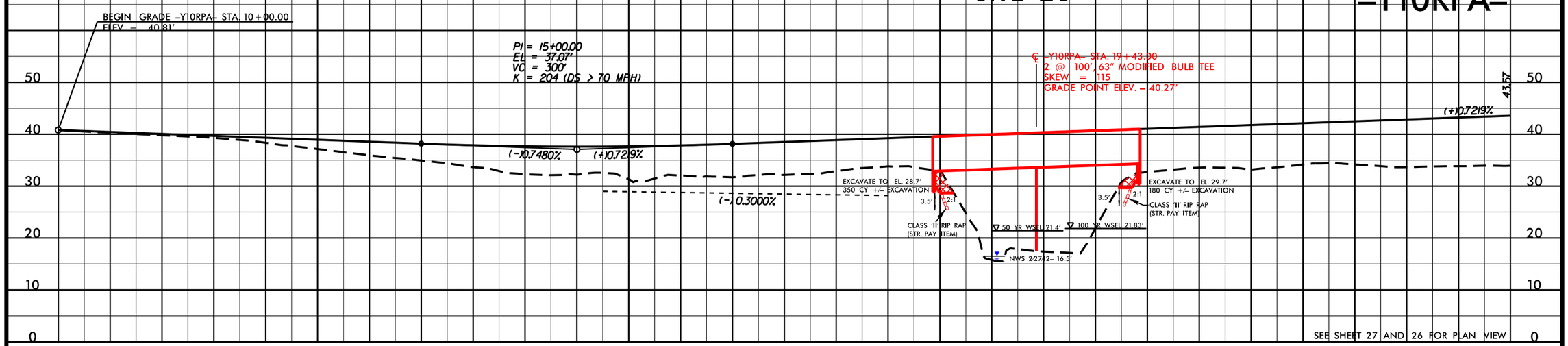
PERMIT DRAWING
SHEET 83 OF 84

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

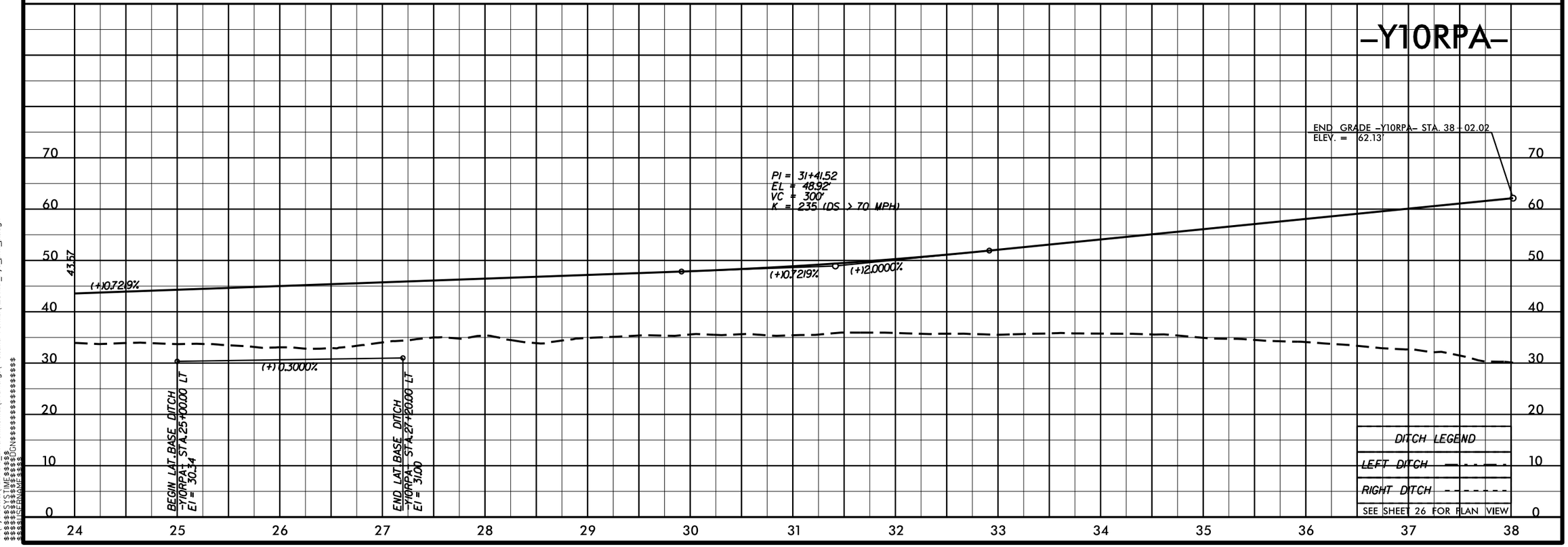
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SITE 26

-Y10RPA-



-Y10RPA-



2/27/2014
mjyork
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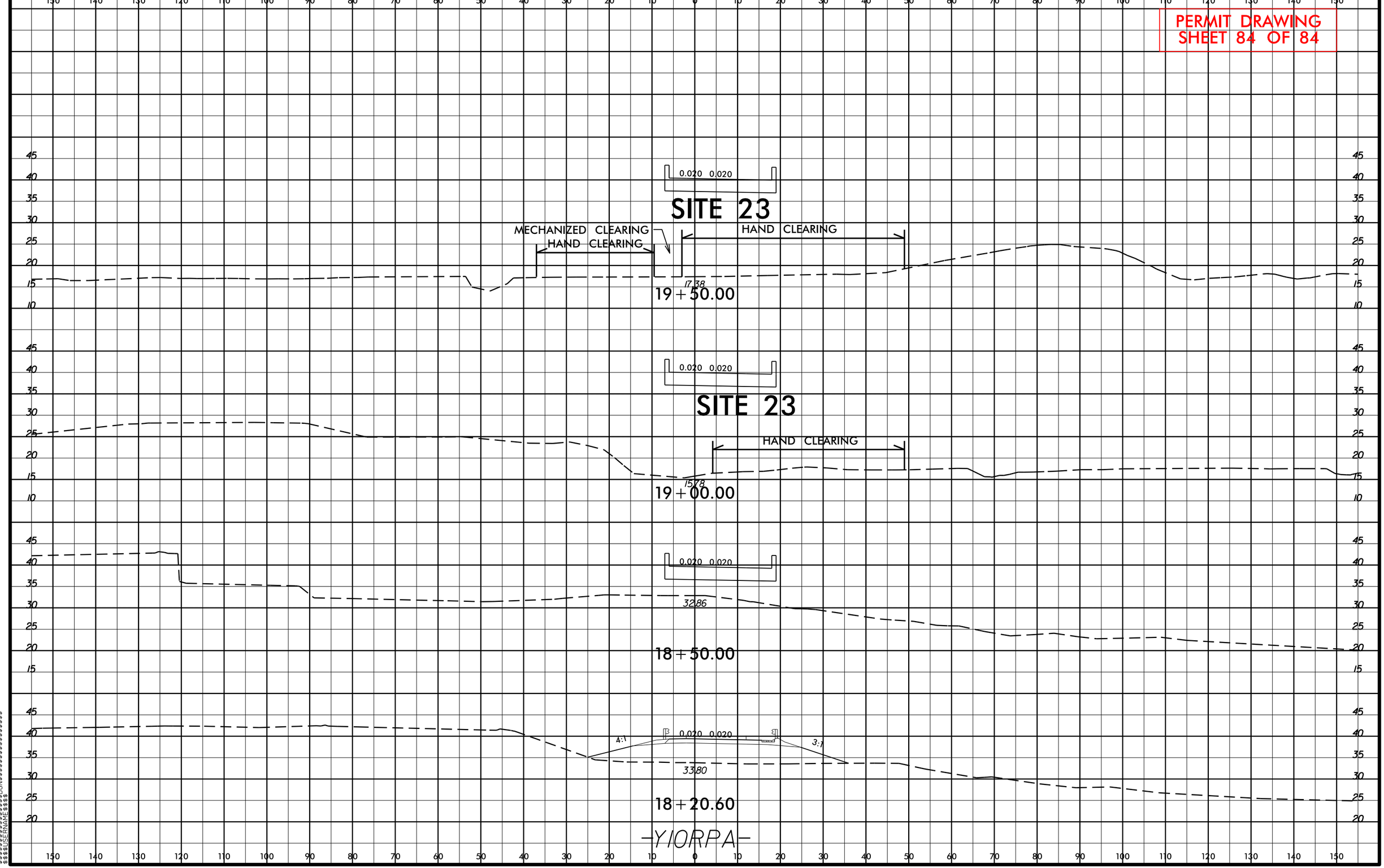
PROJ. REFERENCE NO.	SHEET NO.
R-2514D	X-209

PERMIT DRAWING
SHEET 84 OF 84



8/23/99

4/21/2014
mjyack
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$$$$$$$$$$PROFILE$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$USERNAME$$$$

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

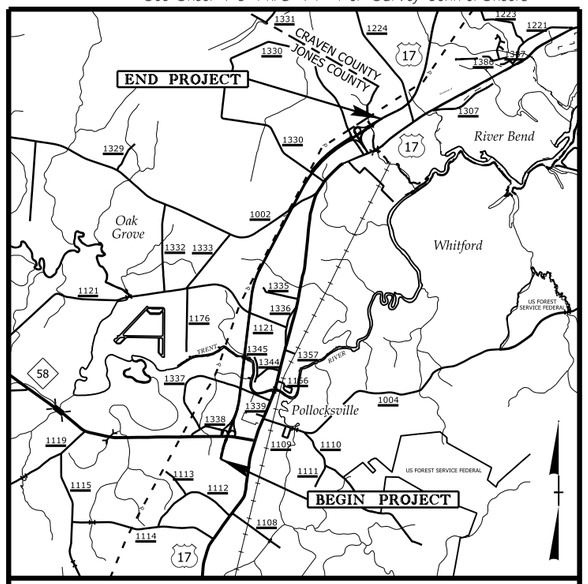
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JONES COUNTY
WBS - 34442.1.1 (R-2514D)

09/08/99

TIP PROJECT: R-2514D

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

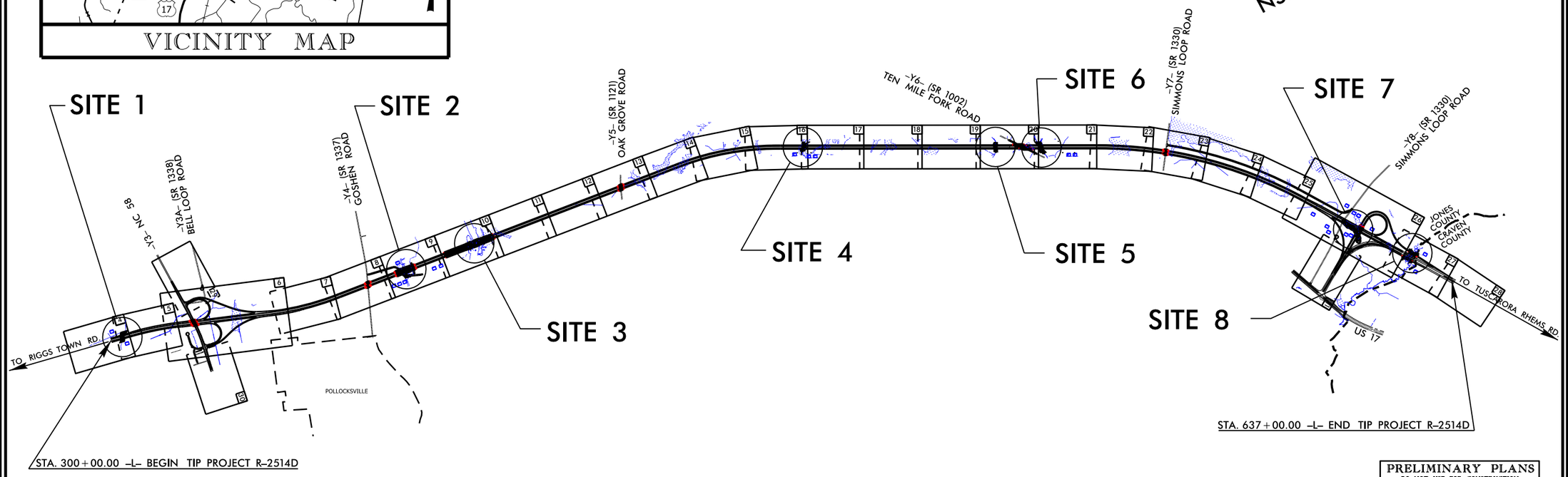
BUFFER DRAWING
SHEET 1 OF 20

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

CONTRACT:

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 = 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
mjyork
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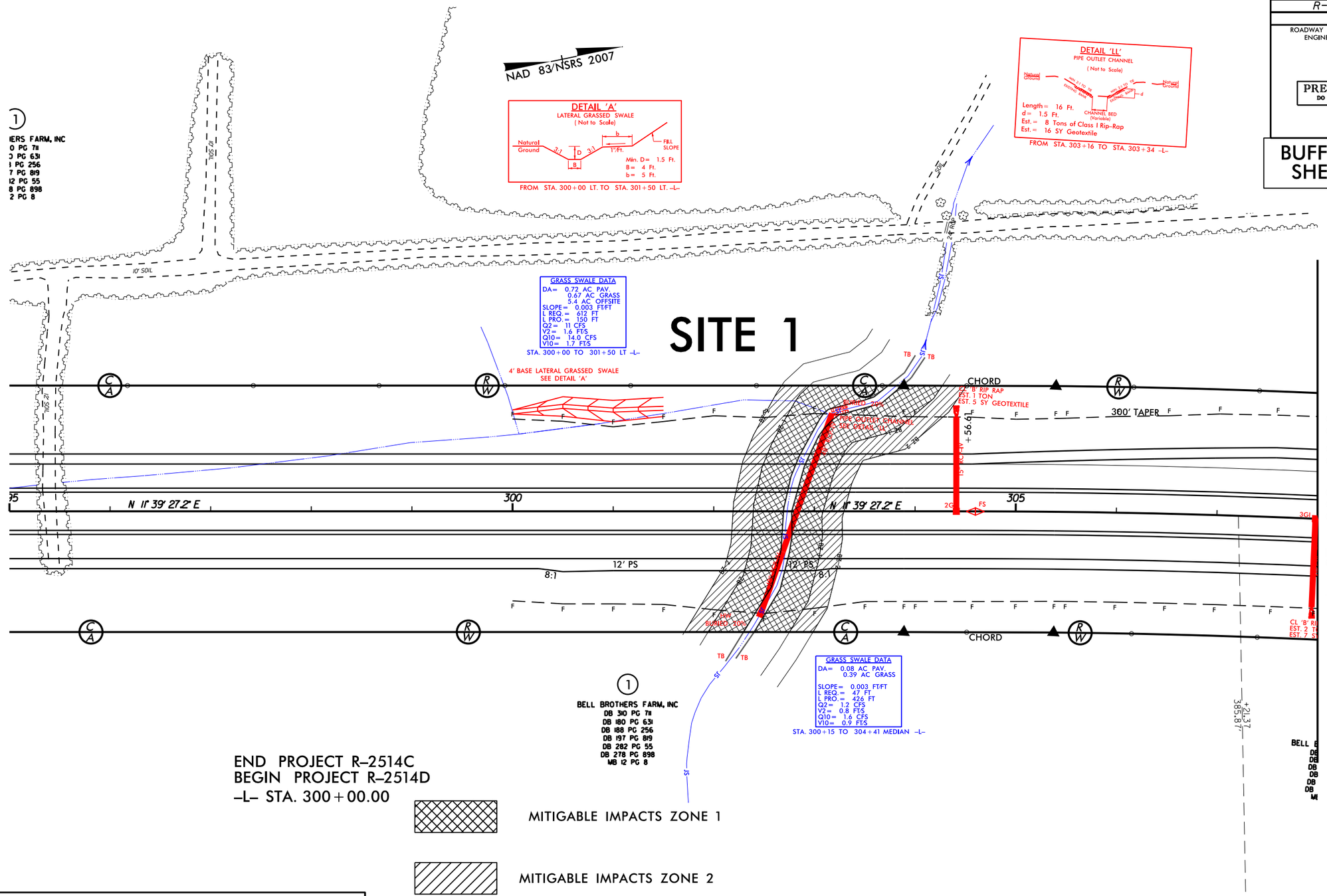
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 2 OF 20



SEE SHEET 32 FOR -L- PROFILE

REVISIONS

8/17/99

4212014
rtyork
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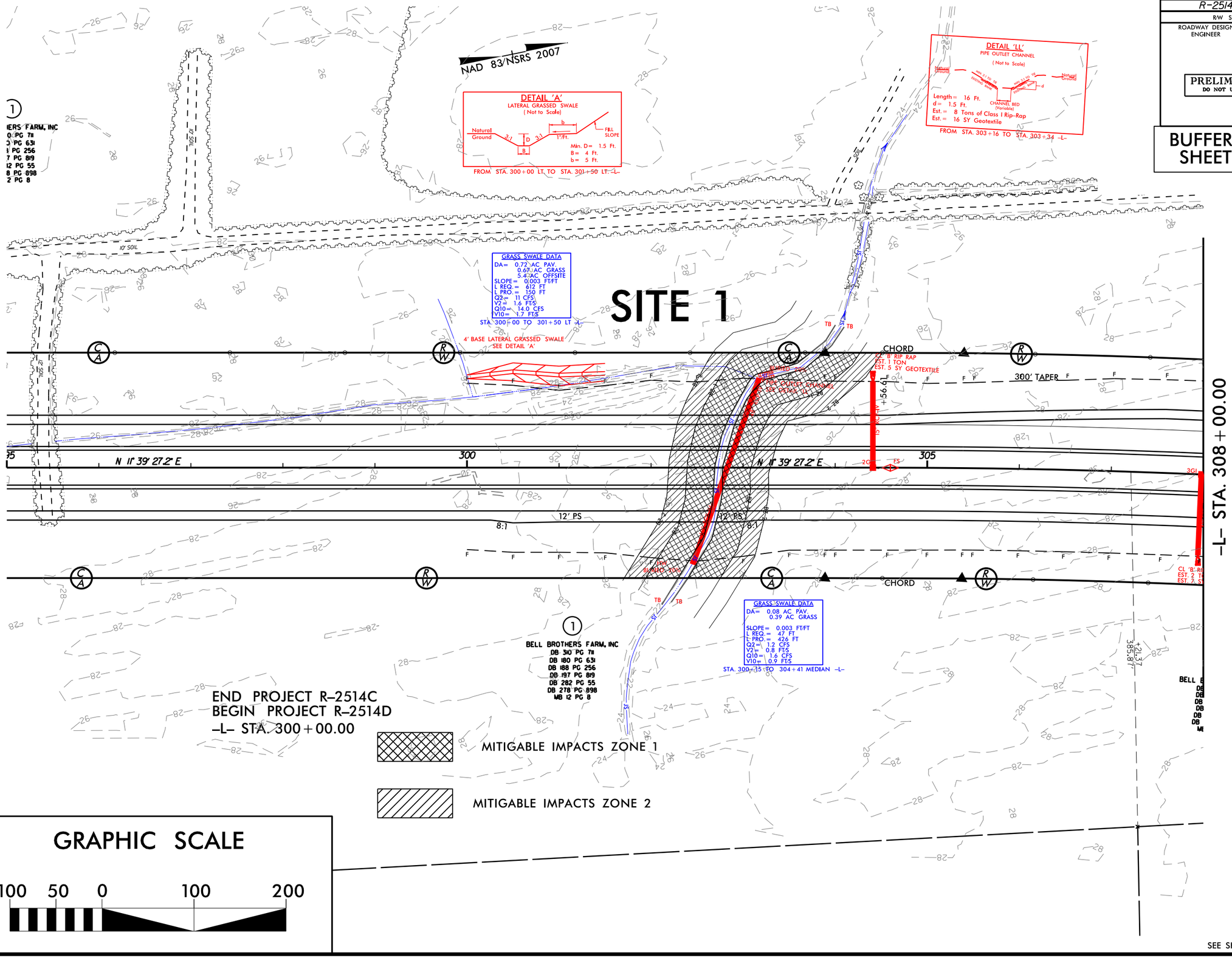
$$$$$$$$USERNAME$$$$$$$$
$$$$$$$$DGN$$$$$$$$

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



SEE SHEET 32 FOR -L- PROFILE

REVISIONS

8/17/99

4212014
mjyork
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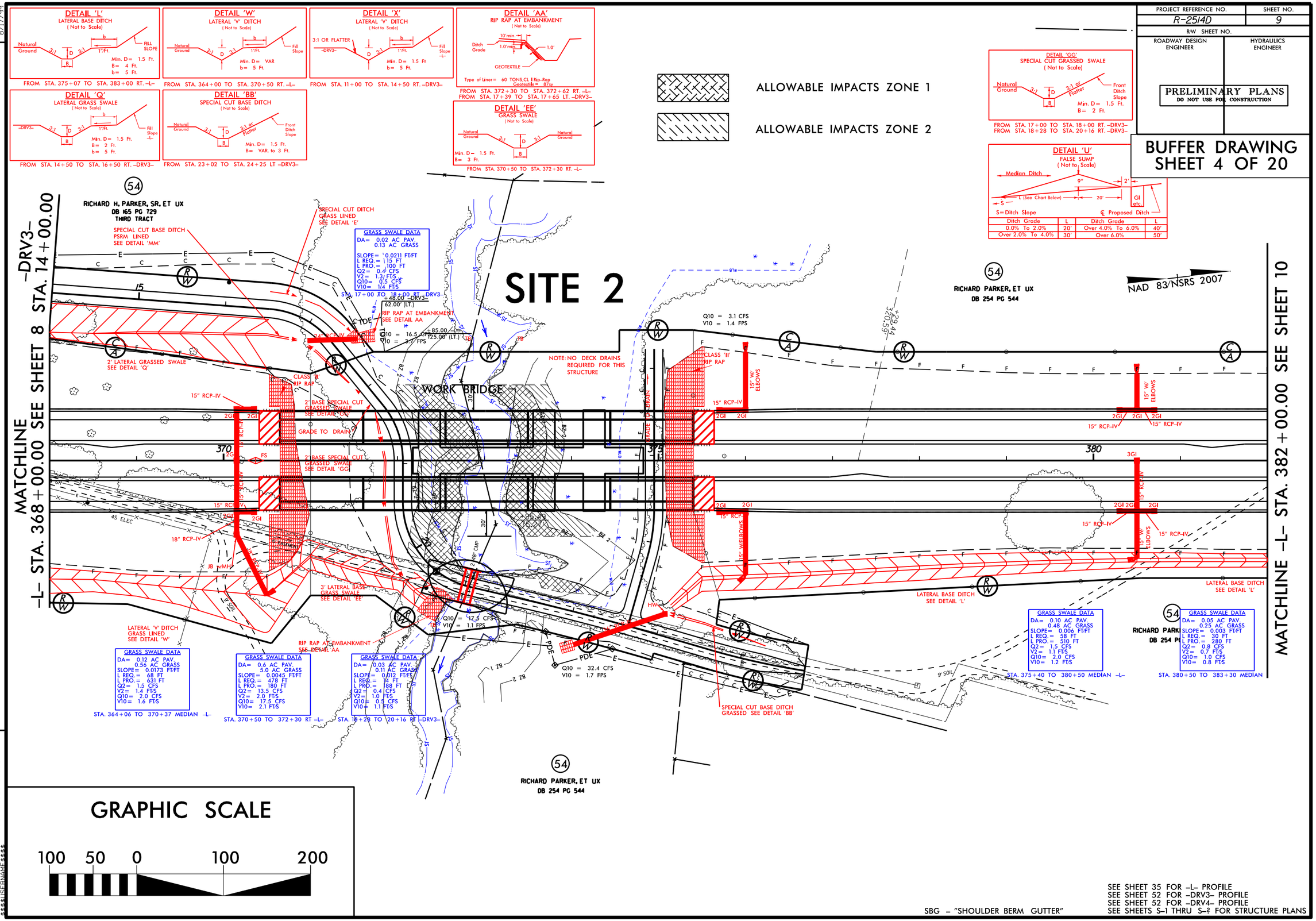
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 4 OF 20



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

SBG – "SHOULDER BERM GUTTER"

REVISIONS

8/17/99

4/21/2014
rhjwk
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$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

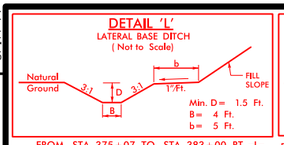
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 5 OF 20

ALLOWABLE IMPACTS ZONE 1

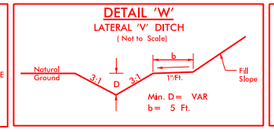
ALLOWABLE IMPACTS ZONE 2

DETAIL 'L'
LATERAL BASE DITCH
(Not to Scale)



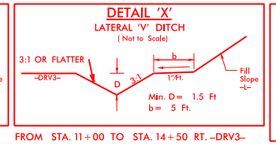
FROM STA. 375+07 TO STA. 383+00 RT. –L–

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



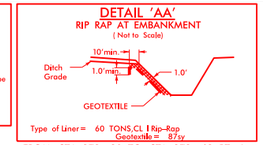
FROM STA. 364+00 TO STA. 370+50 RT. –L–

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



FROM STA. 11+00 TO STA. 14+50 RT. –DRV3–

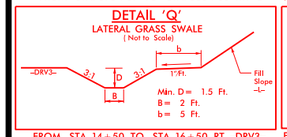
DETAIL 'AA'
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 60 TONS,CL I Rip-Rap
Geotextile= 87sy

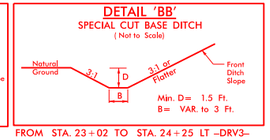
FROM STA. 372+30 TO STA. 372+62 RT. –L–
FROM STA. 17+39 TO STA. 17+65 LT. –DRV3–

DETAIL 'Q'
LATERAL GRASS SWALE
(Not to Scale)



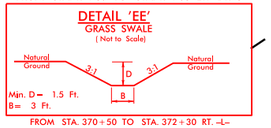
FROM STA. 14+50 TO STA. 16+50 RT. –DRV3–

DETAIL 'BB'
SPECIAL CUT BASE DITCH
(Not to Scale)



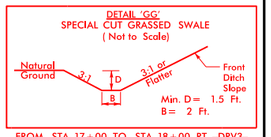
FROM STA. 23+02 TO STA. 24+25 LT –DRV3–

DETAIL 'EE'
GRASS SWALE
(Not to Scale)



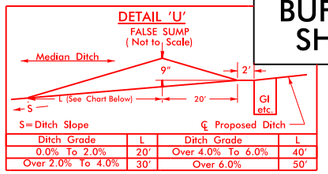
FROM STA. 370+50 TO STA. 372+30 RT. –L–

DETAIL 'GG'
SPECIAL CUT GRASSED SWALE
(Not to Scale)

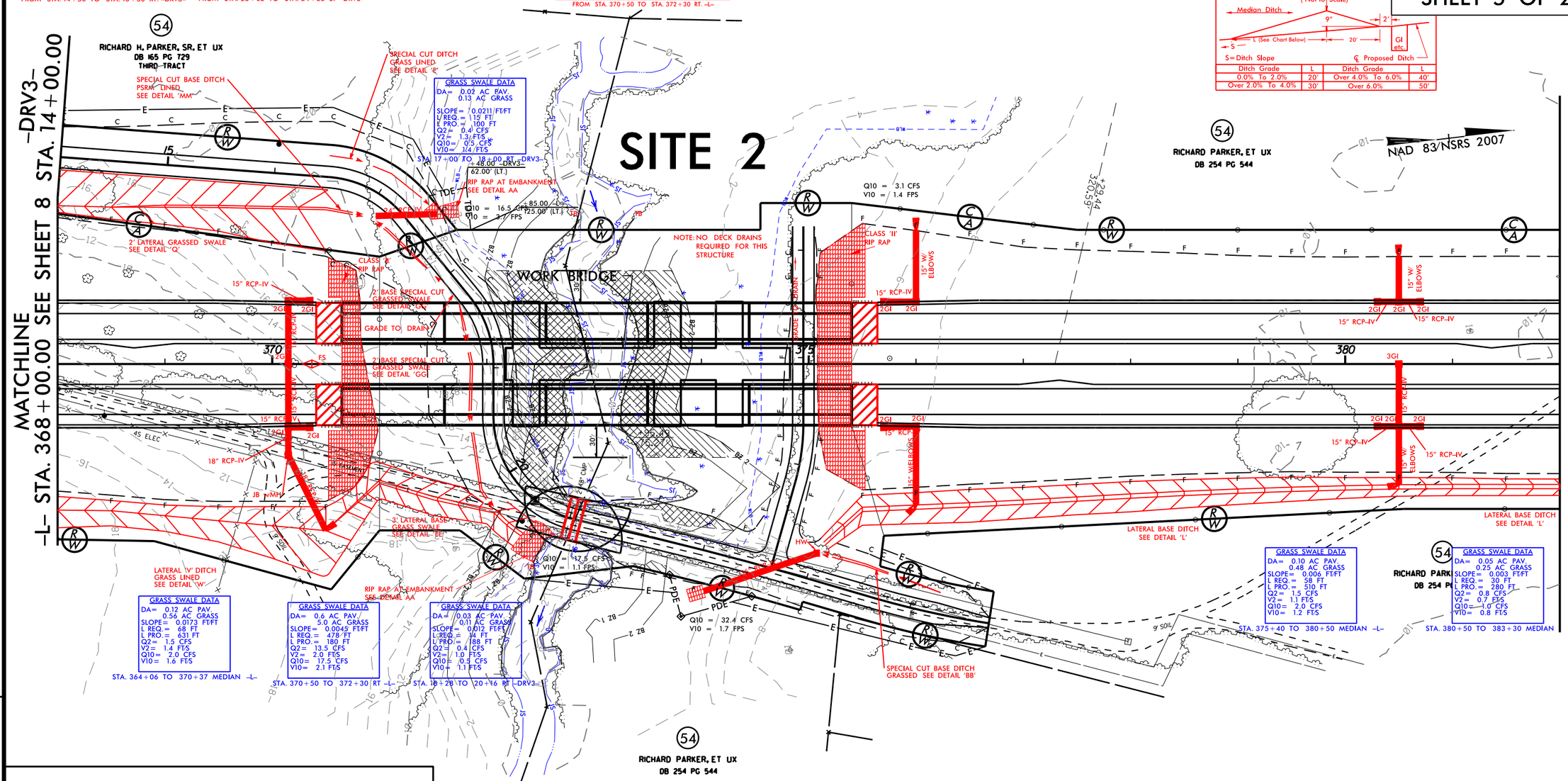


FROM STA. 17+00 TO STA. 18+00 RT. –DRV3–
FROM STA. 18+28 TO STA. 20+16 RT. –DRV3–

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'



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

REVISIONS

8/17/99

4/2/2014
rbyrk
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$$$$$USERNAME$$$$
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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

Q10 = 3.1 CFS
V10 = 1.4 FPS

+48.00 -DRV3-
62.00' (LT.)

+85.00 -L-
25.00' (LT.)

Q10 = 16.5 CFS
V10 = 3.7 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

15" W/ ELBOWS

15" W/ELBOWS

18" RCP-IV

35" RCP-IV

2GI

FS

JB w/MH

HW

2' BASE SPECIAL CUT GRASSED SWALE SEE DETAIL 'GG'

GRADE TO DRAIN

3' LATERAL BASE GRASS SWALE SEE DETAIL 'EE'

48" CMP

15' EASEMENT

-DRV3-

-DRV4-

-L-

370 371 372 373 374 375 376

16 17 18 19 20 21 22 23 24

BZ 1 BZ 2

30'

GRAPHIC SCALE

50 25 0 50 100

8/17/99

REVISIONS

4212014
mpyrek
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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

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

CLASS "II" RIP RAP

CLASS "II" RIP RAP

15" W/ ELBOWS

15" W/ ELBOWS

2GI

2GI

385

390

395

30'

30'

30'

30'

30'

30'

BZ 1

BZ 2

TB

TB TB

TB

TB

TB

TB

TB

TB

ST

JS

F

FRENT RIVER

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

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

REVISIONS

8/17/99

4/21/2014
mjyost
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$$$$$$$$$$DGNNAME$$$$

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

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

CLASS "II" RIP RAP

CLASS "II" RIP RAP

15" W/ ELBOWS

15" W/ ELBOWS

2GI

2GI

385

390

395

30'

30'

30'

30'

30'

30'

TB

BZ 1

BZ 2

BZ

FRENCH RIVER

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

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

REVISIONS

8/17/99

4/21/2014
mjost
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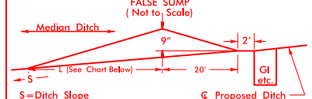
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 9 OF 20

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

SITE 4

-L- STA. 466+00.00

-L- STA. 479+00.00

+76.08
1,396.60

100' CP&L POWERLINE EASEMENT

CHORD
GAS TEST STATION
470
475
2GI
FS
3GI
15" RCP-IV
15" RCP-IV
CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE
CL 'B' RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE
BURIED 15" RCP-IV
PIPE OUTLET CHANNEL
SEE DETAIL 'NN'
TOE PROTECTION
SEE DETAIL 'B'
5' BERM
35.0' TOP EL.
3:1 SIDE SLOPES
APPROX. 7 CY FILL
Q10 = 3.5 CFS
V10 = 1.1 FPS
Q10 = 3.8 CFS
V10 = 1.3 FPS

PERTY)
GE RESTORATION
OFIT CORPORATION
: 96

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-

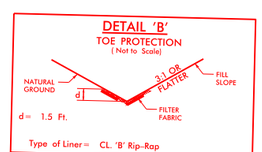
GRASS SWALE DATA
DA= 0.14 AC PAV.
0.66 AC GRASS
SLOPE= 0.003 FT/FT
L REQ.= 80 FT
L PRO.= 736 FT
Q2= 2.1 CFS
V2= 0.9 FT/S
Q10= 2.7 CFS
V10= 1.0 FT/S
STA. 476+00 TO 483+36 MEDIAN -L-

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

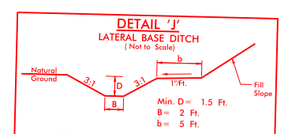
GRAPHIC SCALE
100 50 0 100 200

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

8/17/99
REVISIONS
4/2/2014
mjwork
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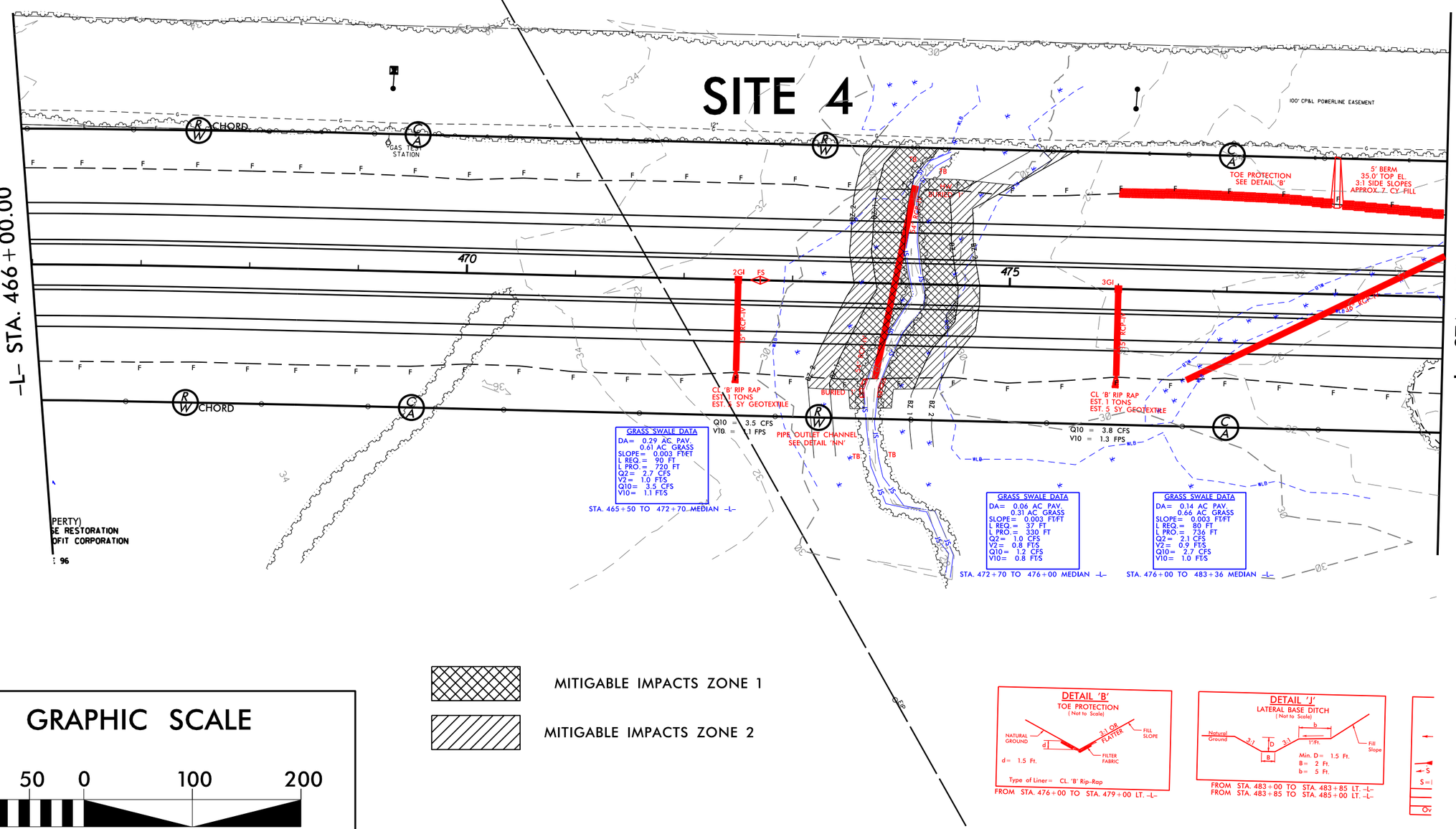
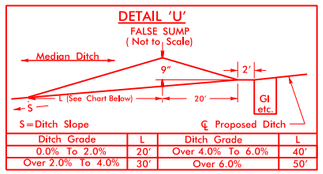
$$$$USERNAME$$$$
$$$$DGNSIZE$$$$

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

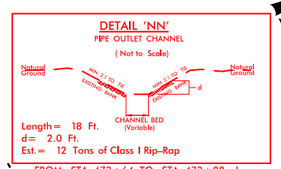
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 10 OF 20





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. 473+64 TO STA. 473+88 -L-

FROM STA. 476+00 TO STA. 479+00 LT. -L-

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

REVISIONS

8/17/99

4/21/2014
mycot
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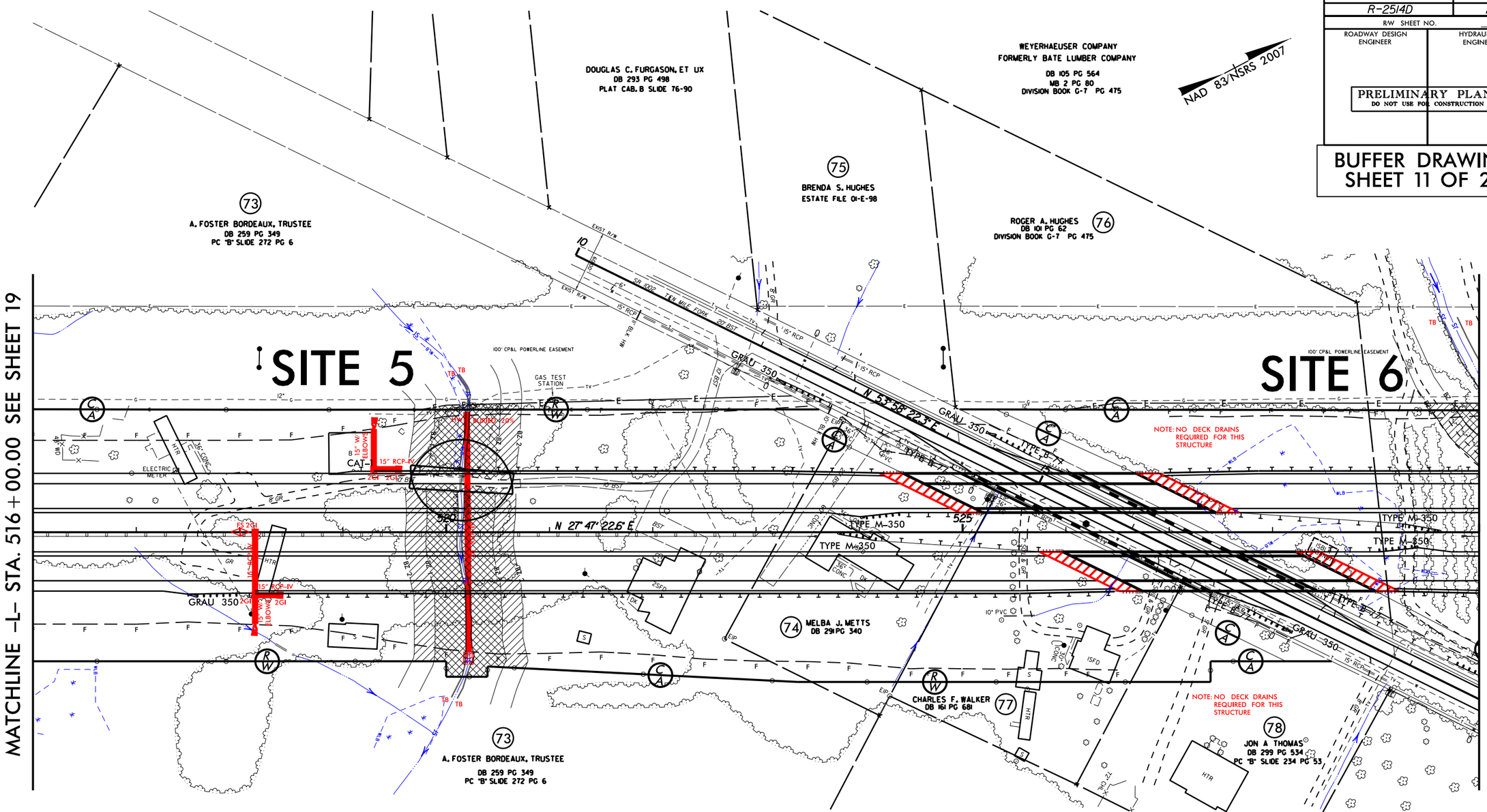
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 11 OF 20



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 TO 3:1 EXISTING SLOPE — CHANNEL BED (Variable) — d — Natural Ground

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

REVISIONS

8/17/99

4/2/2014
rtbyrk
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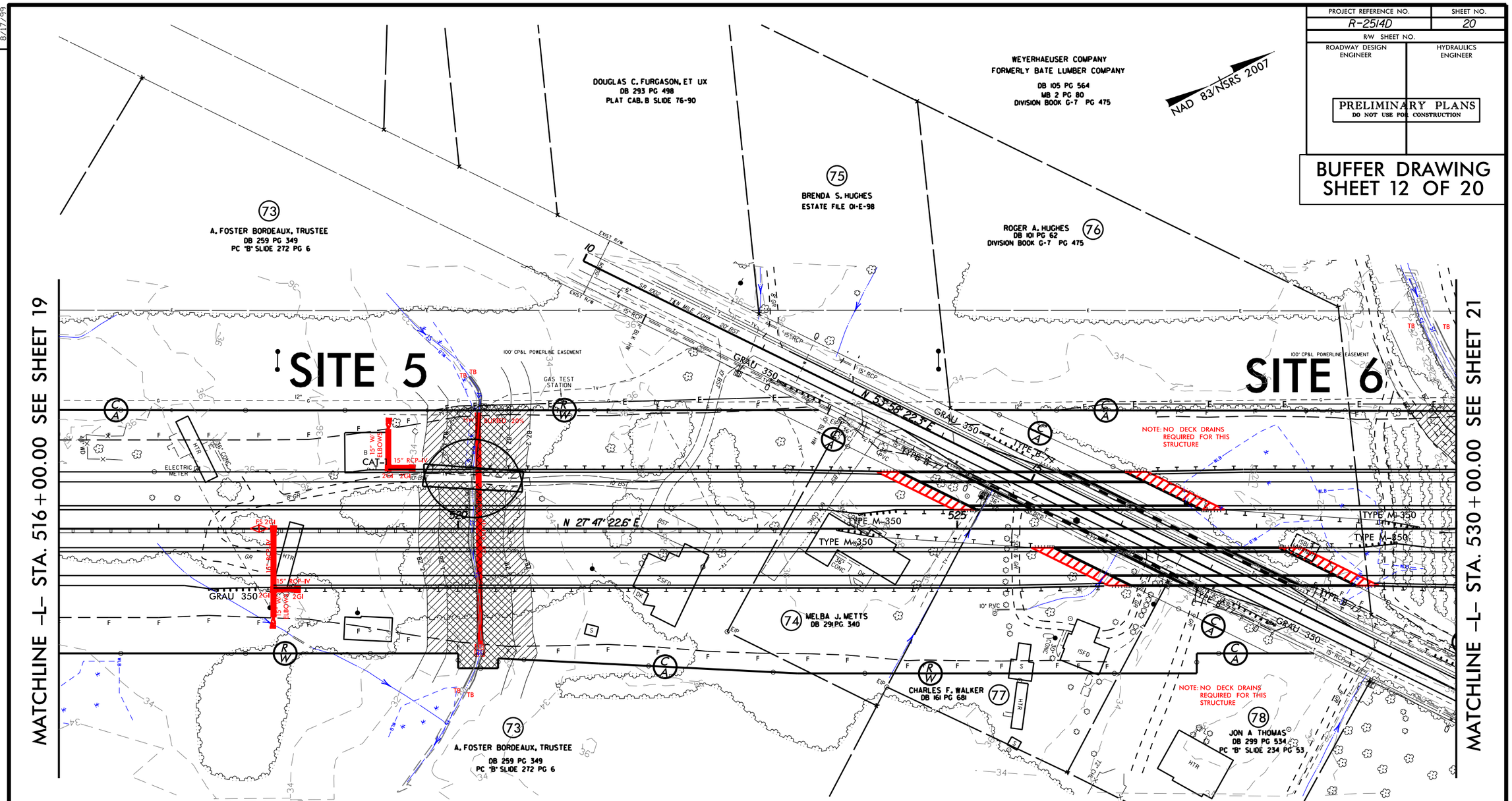
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 12 OF 20



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 TO 3:1 EXISTING SLOPE — CHANNEL BED (Variable) — Min. 2:1 TO 3:1 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. — 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

REVISIONS

8/17/99

4/2/2014
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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

NAD 83/NSRS 2007

ER COMPANY
LUMBER COMPANY
5 PG 564
PG 80
K G-7 PG 475

ES (76)
PG 475

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — MIN 3:1 TO 7:1 EXISTING BANK — MIN 2:1 TO 3:1 EXISTING BANK — d — Natural Ground
CHANNEL BED (Variable)

Length= 26 Ft.
d= 3.0 Ft.
Est.= 25 Tons of Class I Rip-Rap

FROM STA. 531+54 TO STA. 531+85 -L-

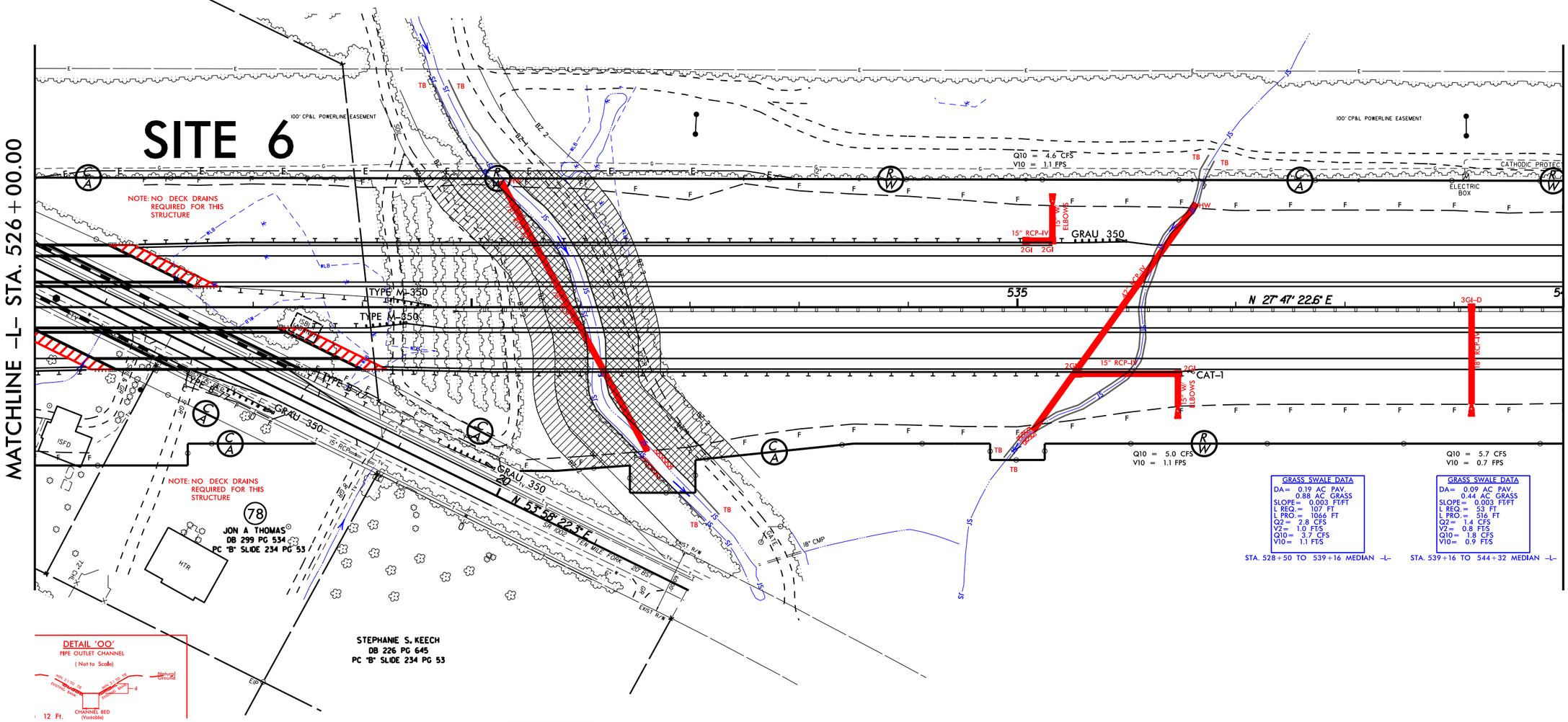
DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — MIN 3:1 TO 7:1 EXISTING BANK — MIN 2:1 TO 3:1 EXISTING BANK — d — Natural Ground
CHANNEL BED (Variable)

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



DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — MIN 3:1 TO 7:1 EXISTING BANK — MIN 2:1 TO 3:1 EXISTING BANK — d — Natural Ground
CHANNEL BED (Variable)

12 Ft.

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

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

4212014
mtovk
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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

NAD 83/NSRS 2007

ER COMPANY
LUMBER COMPANY
5 PG 564
PG 80
K G-7 PG 475

ES (76)
PG 475

DETAIL 'QQ'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — MIN 3:1 TO 1B EXISTING BANK — MIN 2:1 TO 1B EXISTING BANK — d — Natural Ground
CHANNEL BED (Variable)

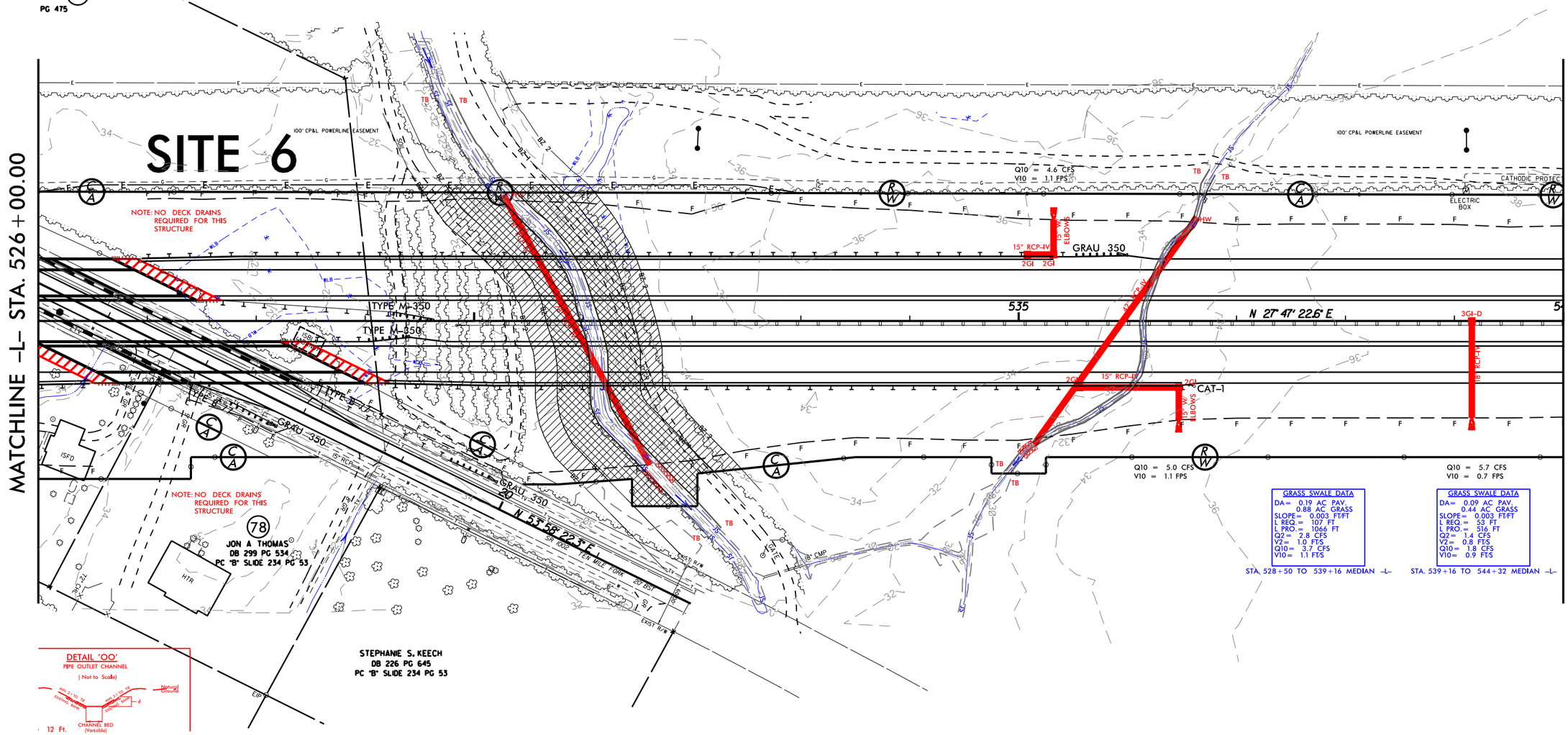
Length= 26 Ft.
d= 3.0 Ft.
Est.= 25 Tons of Class I Rip-Rap
FROM STA. 531+54 TO STA. 531+85 -L-

DETAIL 'RR'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — MIN 3:1 TO 1B EXISTING BANK — MIN 2:1 TO 1B EXISTING BANK — d — Natural Ground
CHANNEL BED (Variable)

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



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-

DETAIL 'OO'
PIPE OUTLET CHANNEL
(Not to Scale)

Natural Ground — MIN 3:1 TO 1B EXISTING BANK — MIN 2:1 TO 1B EXISTING BANK — d
CHANNEL BED (Variable)

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
mtyock
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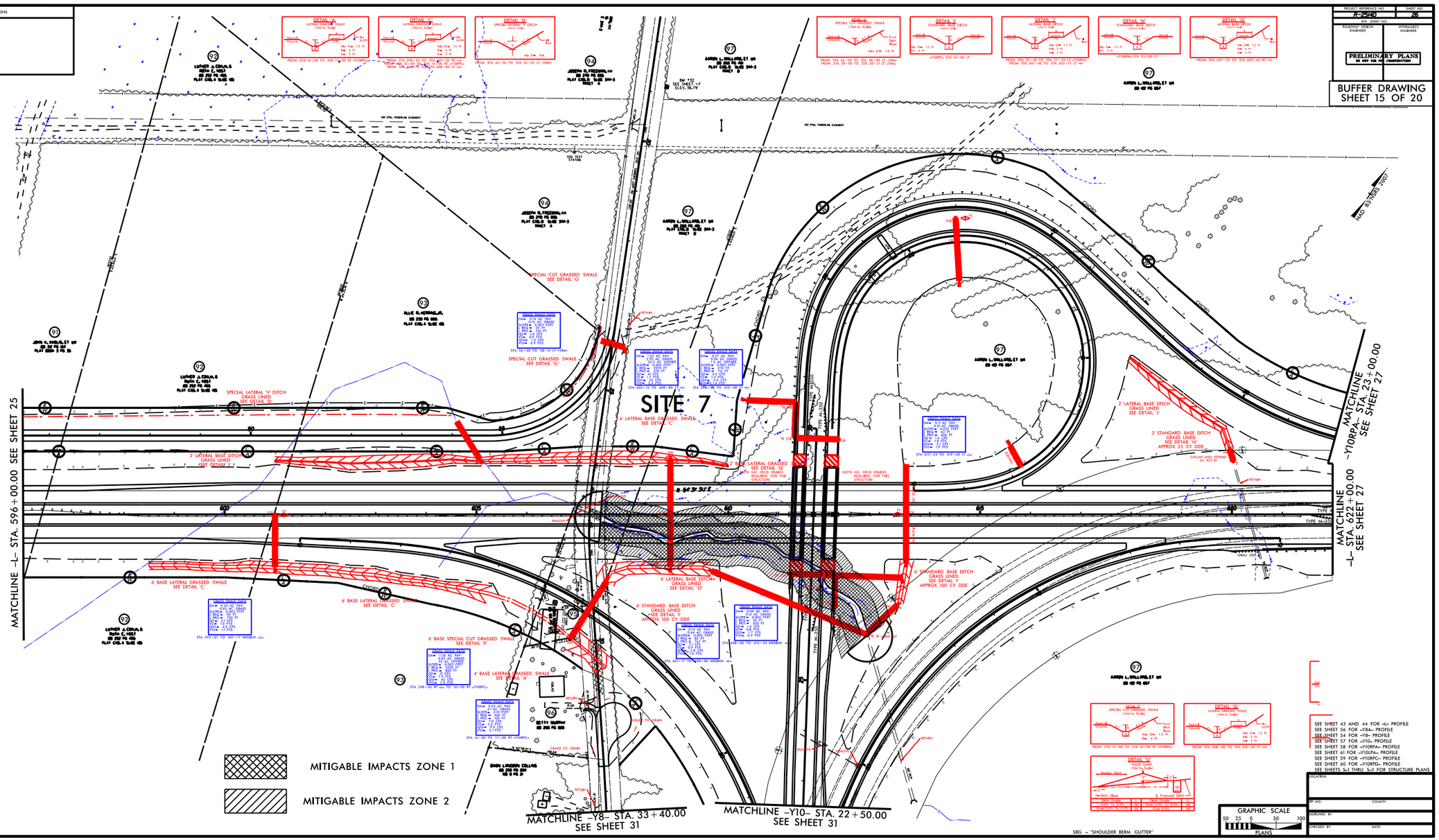
$$$$$$$SYSTIME$$$$$$
$$$$$$$USER$$$$$$
$$$$$$$DGNS$$$$$$
$$$$$$$SELECTION$$$$$$

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2940	25
B-W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 15 OF 20



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 5-4 FOR STRUCTURE PLANS

LOCATION:
TIP NO. COUNTY:
DESIGNED BY:
CHECKED BY: DATE:

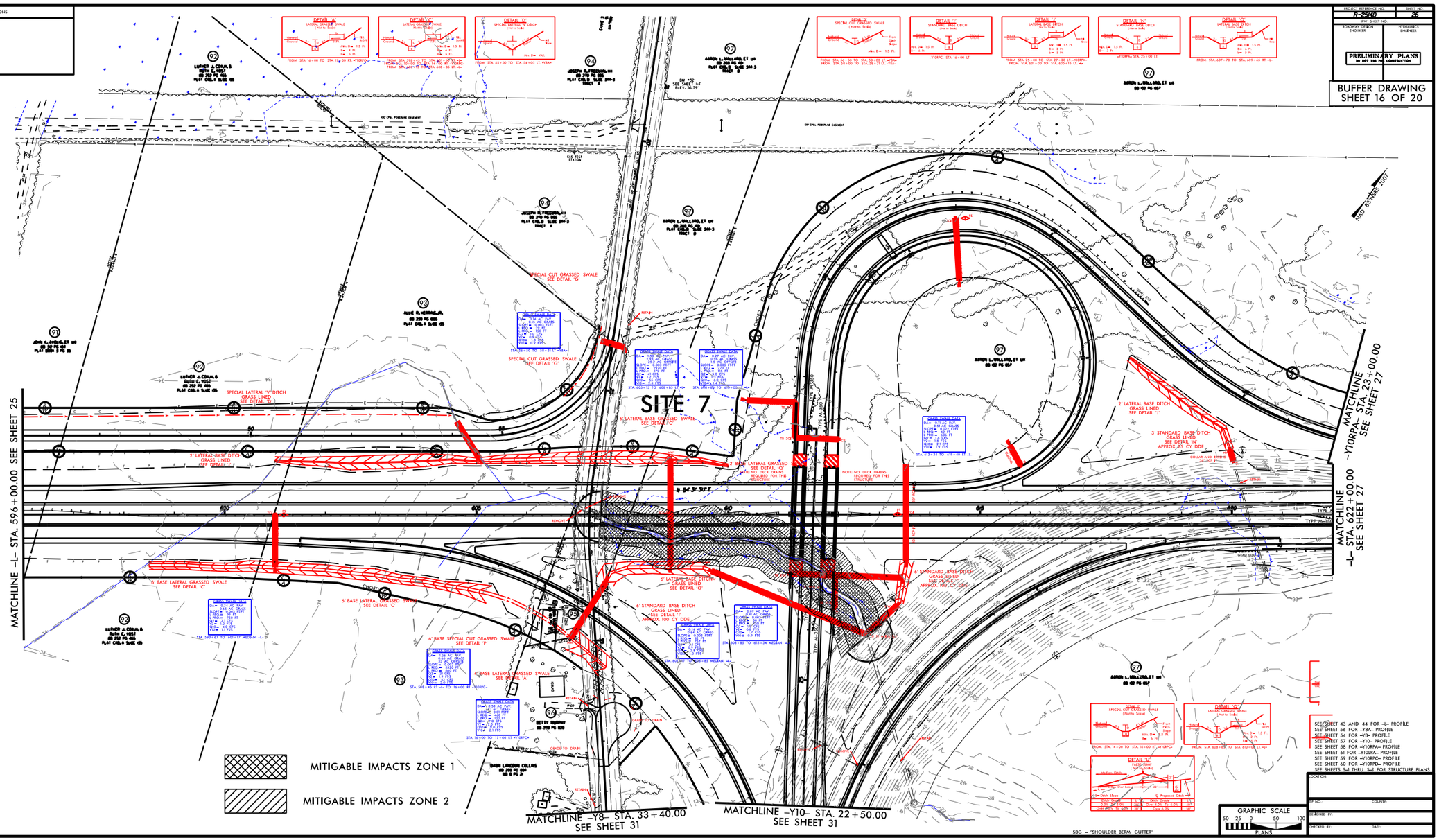
4/21/2014
R-2940_Site7.dgn
Environmental Services, Inc.
Environmental Services, Inc. R2940TS_Environmental Drawings\Buffer Permit\R2940_Site7_Buffer_path_26.dgn

REVISIONS

PROJECT REFERENCED NO:	SHEET NO:
R-2940	26
STATE SHEET NO:	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 16 OF 20



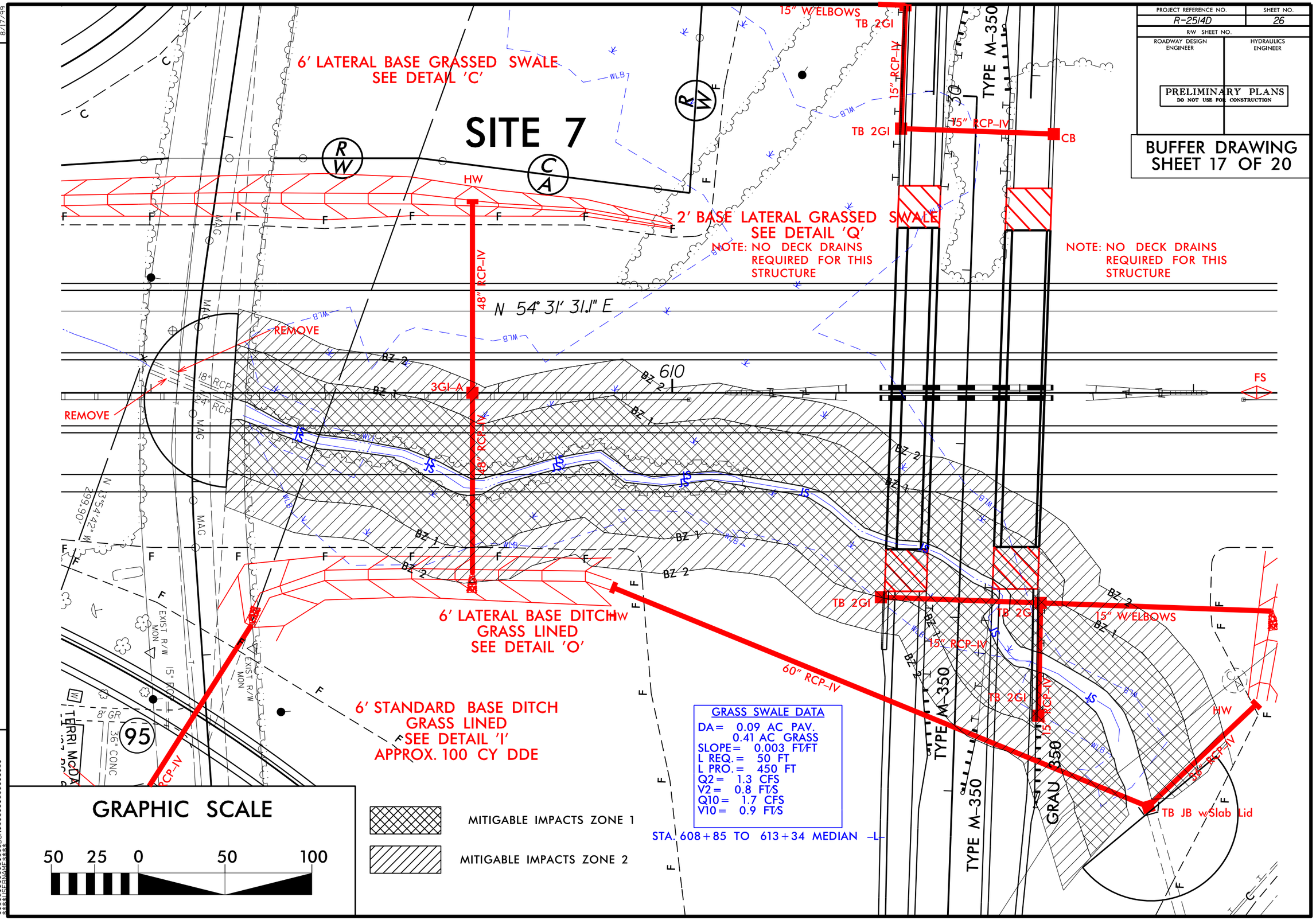
LOCATION:
TIP NO. COUNTY:
DESIGNED BY:
CHECKED BY: DATE:

4/21/2014
R-2940_sht16.dgn
Environmental Services, Inc.
Project Reference No. R2940TS_Environmental Drawings\Buffer Permit\R2940_Permit_Buffer_path_26_conn.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



REVISIONS

8/17/99

4/2/2014
mlynk
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

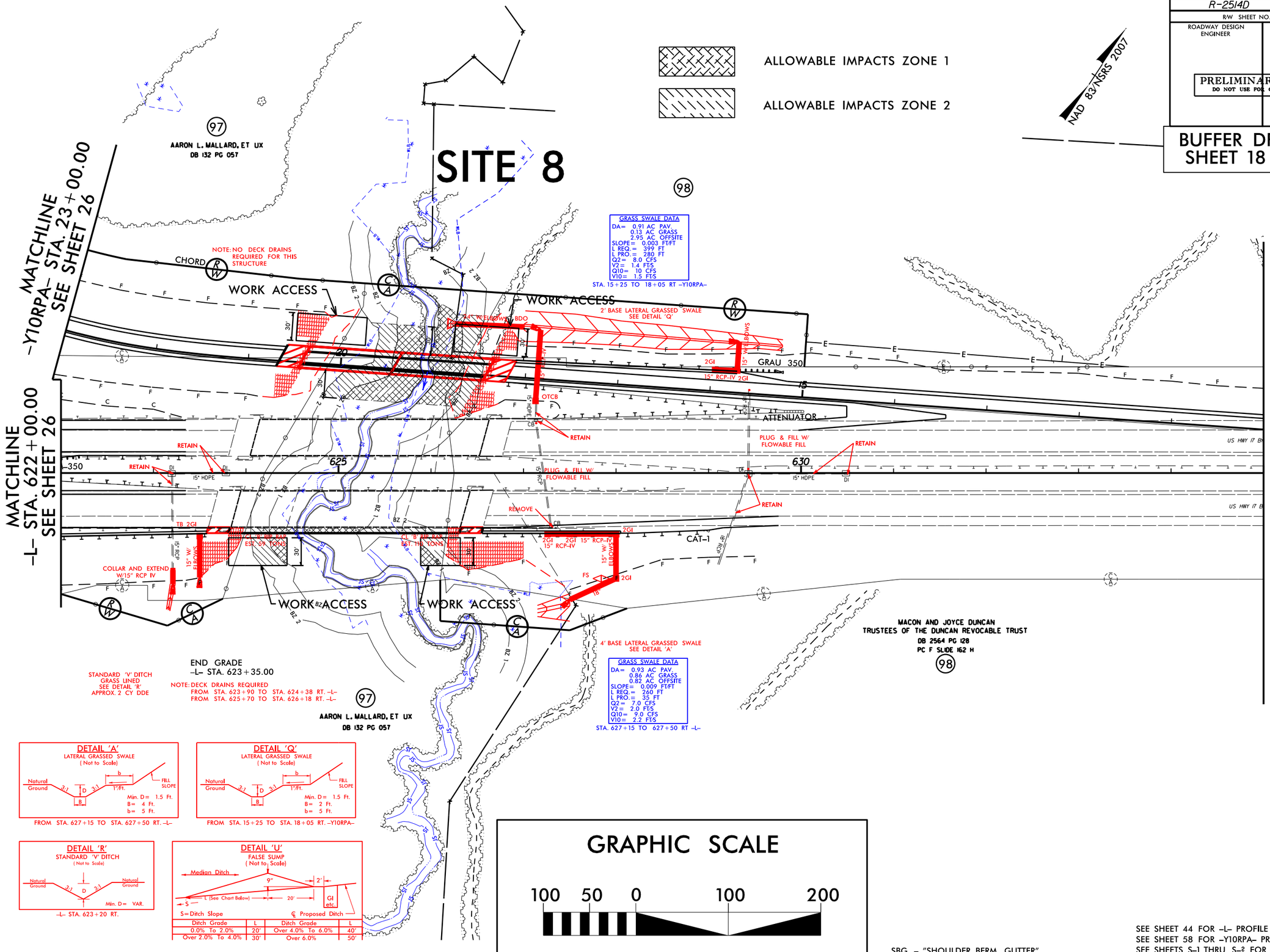
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING SHEET 18 OF 20

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

NAD 83/NSRS 2007



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
mjbeck
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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

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

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

NOTE: NO DECK DRAINS REQUIRED FOR THIS STRUCTURE

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' 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–

WORK ACCESS

ATTENUATOR

CAT-1

RETAIN

PLUG & FILL W/ FLOWABLE FILL

REMOVE

COLLAR AND EXTEND W/15" RCP IV

15" HDPE

15" RCP-IV

15" WI ELBOWS

2GI

OTCB

BDO

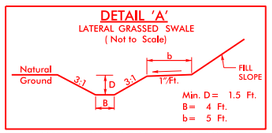
US HWY 17 B

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–

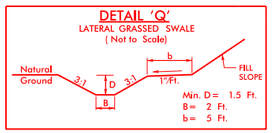
DETAIL 'A'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

FROM STA. 627+15 TO STA. 627+50 RT. –L–

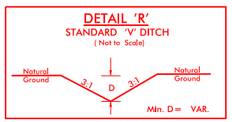
DETAIL 'Q'
LATERAL GRASSED SWALE
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 15+25 TO STA. 18+05 RT. –Y10RPA–

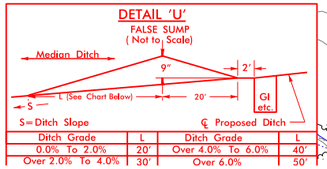
DETAIL 'R'
STANDARD 'V' DITCH
(Not to Scale)



Min. D= VAR.

–L– STA. 623+20 RT.

DETAIL 'U'
FALSE SUMP
(Not to Scale)



S= Ditch Slope
℄ 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
mtyrck
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

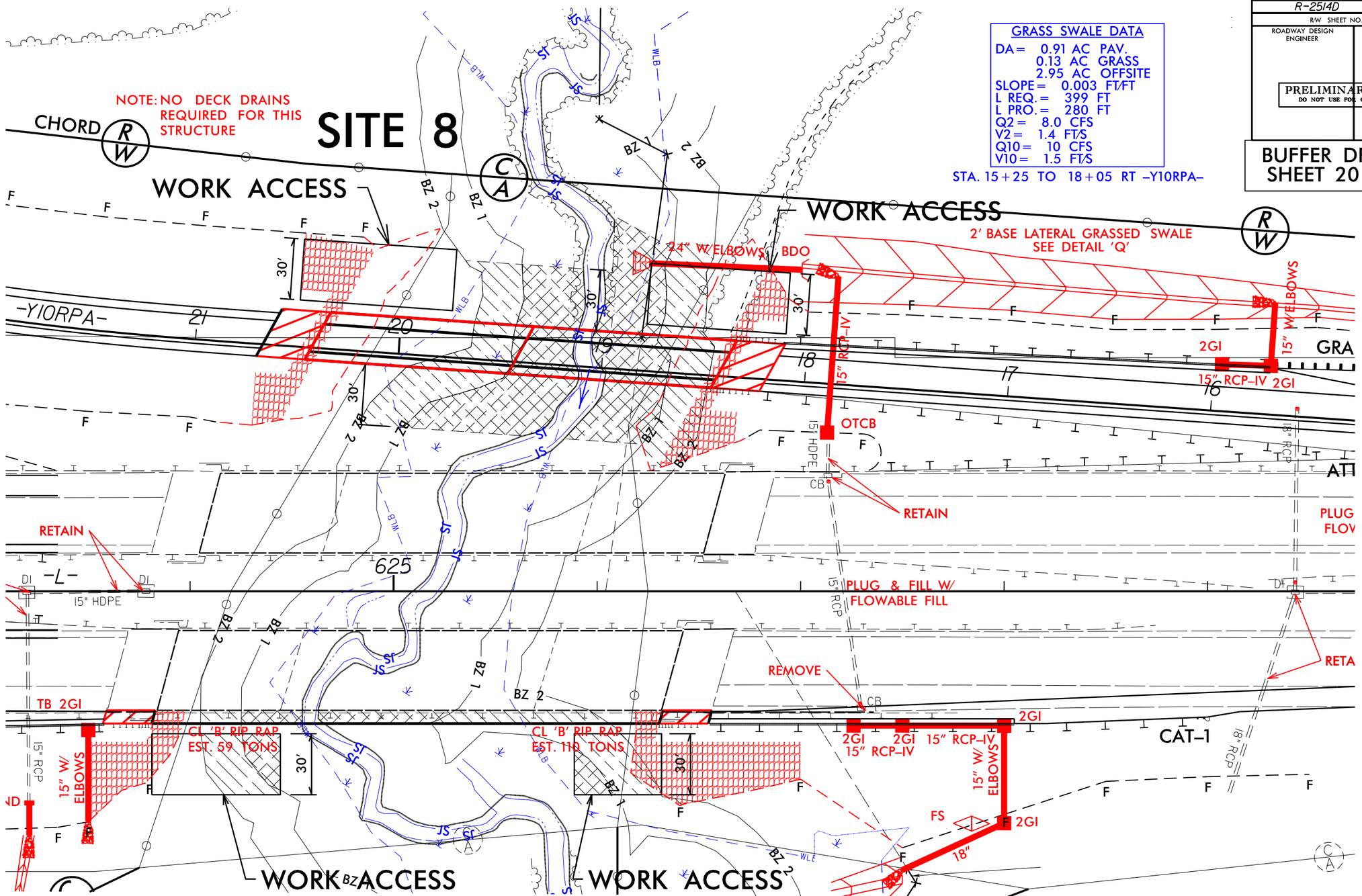
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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–



GRAPHIC SCALE

50 25 0 50 100

REVISIONS

8/17/99

6/5/2014
rtlynch
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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)

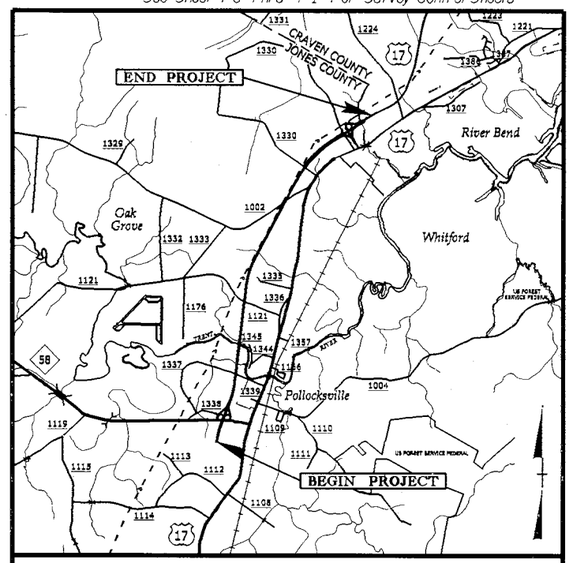
5/29/2014
SHEET 1 OF 1

Rev. Jan 2009

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

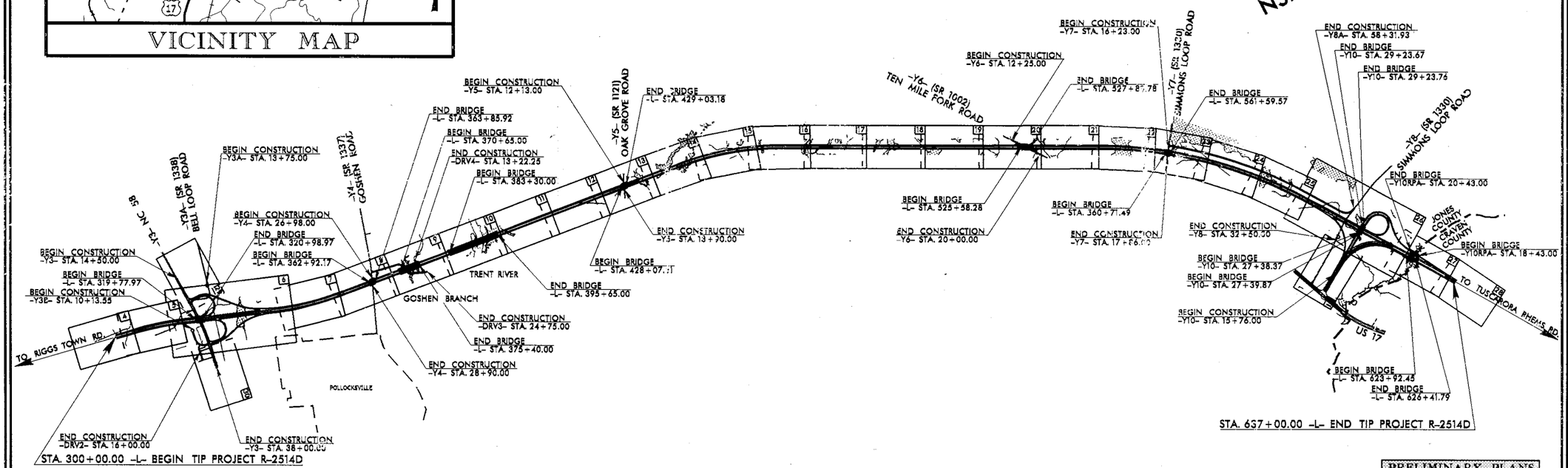
Utility Permit Drawing
Sheet 1 of 3

LOCATION: US 17 FROM SOUTH OF NC 58 TO THE NEW BERN BYPASS

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

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

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

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

14-MAY-2014 17:20
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$$$$USERNAME$$$$

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 (Jan. 23, 2015)

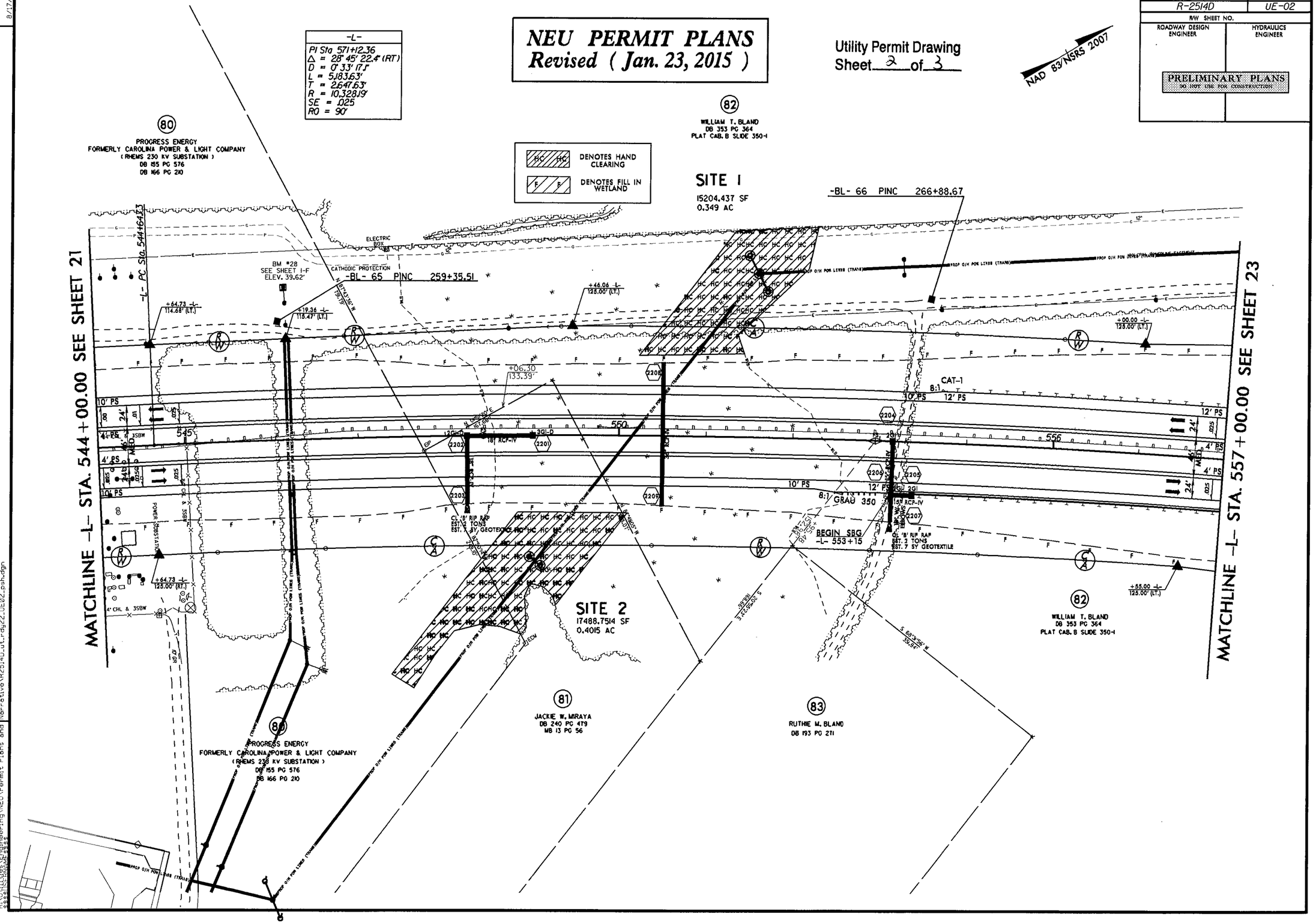
Utility Permit Drawing
Sheet 2 of 3

NAD 83/NSRS 2007

-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 DENOTES HAND CLEARING

F DENOTES FILL IN WETLAND



REVISIONS

8/17/99

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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	-L-550+23 TO 552+23	Aerial Power line (Transmission)					0.35					
2	-L-547+35 TO 550+11	Aerial Power line (Transmission)					0.40					
1	-L-551+57 LT	Power Pole (Transmission)	< 0.01									
2	-L-549+03 RT	Power Pole (Transmission)	< 0.01									
TOTALS:			< 0.01	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00

Note :

Utility Permit Drawing
Sheet 3 of 3
Revised 1/23/15

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
JONES & CRAVEN COUNTIESYY
TIP PROJECT (R-2514D)

ATN Revised 3/31/05

Rev. 01/23/2015