




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 12, 2005

MEMORANDUM TO: Mr. J. J. Swain, Jr., P.E.
Division 13 Engineer

FROM: Philip S. Harris, III, P.E. 
Natural Environment Unit Head
Project Development and
Environmental Analysis Branch

SUBJECT: Buncombe County; I-40 Auxiliary Lanes from West of US 19-23
to the I-2401/I-26 Interchange Asheville; State Work Order
Number 8.1845801; TIP Number I-4401

Attached is the U. S. Army Corps of Engineers Nationwide Permit No. 14 and 33 for the construction of the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

cc: Mr. Art McMillan, P.E.
Mr. Omar Sultan
Mr. Jay Bennett, P.E.
Mr. David Chang, P.E.
Mr. Randy Garris, P.E.
Mr. Greg Perfetti, P.E.
Mr. Mark Staley
Mr. John F. Sullivan, III, FHWA
Mr. Roger Bryan, Division 13 DEO
Mr. Rodger Rochelle, P.E.

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

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.DOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

PROJECT COMMITMENTS

I-40 Auxiliary Lanes

From West of US 19-23 to the I-240/I-26 Interchange

Asheville, Buncombe County

WBS Element 34233.1.1

Federal Aid Project No. NHIMF-40-1 (142) 46

State Project No. 8.1845801

TIP Project No. I-4401

Project Development and Environmental Analysis Branch and Roadway Design Unit

A noise wall is recommended for construction on the south side of I-40, contingent on completion of the project design and the public involvement process.

Traffic Engineering Branch

The timing of the existing signal at the intersection of US 19-23 and the Exit 44 ramp from I-40 will be examined to determine if improvements can be made.

Roadway Design Unit and Division 13

Bridge bents will not be installed in Ragsdale Creek.

The NCDOT shall use Best Management Practices for the Protection of Surface Waters (NCDOT August 2003). Measures should be implemented prior to any ground disturbing activities and maintained on the project site to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 21 days of ground disturbing activities to provide long-term erosion control. Erosion control matting should be used in conjunction with appropriate seeding on disturbed soils in steep slope and riparian areas. Matting should be secured in place with staples, stakes or, wherever possible, live stakes of native trees.

All pipe extensions shall be constructed in a dry work area.

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.

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.

**U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT**

Action ID. 200531478

County: Buncombe

USGS Quad: Enka

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Property Owner / Authorized Agent: Dr.. Gregory Thorpe

Address: NCDOT

1548 Mail Service Center

Raleigh, North Carolina 27699-1548

Telephone No.: (919) 733-7844

Size and location of property (water body, road name/number, town, etc.): The project is located along 2.2 miles of I-40 from SR 1224 (Monte Vista Road) to SR 3412 (Sand Hill Road) in the vicinity of the I-40/US 19/23 interchange, in unnamed tributaries to Ragsdale Creek, in Asheville, Bucombe County, North Carolina. TIP No. I-4401.

Description of projects area and activity: This permit authorizes the discharge of fill material into approximately 156.3 linear feet of perennial stream and 0.038 acre of jurisdictional wetlands as described on page two of the August 29, 2005 cover letter from NCDOT for the widening the existing I-40 route from a four-lane facility to a six-lane facility with deceleration and acceleration lane improvements at the US 19/23 exit.

Applicable Law: Section 404 (Clean Water Act, 33 USC 1344)
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Regional General Permit Number:
Nationwide Permit Number: 14, 33

Special Conditions

1. All work must be performed in strict compliance with the plans received by this office on September 6, 2005, which are a part of this permit. Any modification to the permit plans must be approved by the USACE prior to implementation
2. Failure to institute and carry out the details of these special conditions will result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with the permitted project, or such other remedies and/or fines as the District Engineer or his authorized representatives may seek.
3. 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, and any authorized modifications. A copy of this permit, and any authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.
4. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area.
5. Compensatory mitigation for the unavoidable impacts to 0.014 acres of riverine wetlands (bottomland hardwood) and 156.3 linear feet of stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated February 15, 2005 from William D. Gilmore, EEP Transition Manager. Pursuant to the EEP Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003, the EEP will provide 0.028 acres of restoration equivalent riverine wetlands and 312.6 linear feet of restoration equivalent cool water stream channel in the French Broad River basin (Hydrologic Cataloging Unit 06010105) by one year of the date of this permit. For wetlands, a minimum of 1:1 (impact to mitigation) must be in the form of wetland restoration. The NCDOT shall, within 30 days of the issue date of this permit, certify that sufficient funds have been provided to EEP to complete the required mitigation, pursuant to Paragraph V. of the MOA.

6. All comments from North Carolina Wildlife Resources Commission email of October 7, 2005 are hereby incorporated as special conditions of this permit. They are as follows:

We appreciate the additional avoidance & minimization efforts for this project which have reduced the previously estimated stream and wetland impacts. Our biggest concern is downstream impacts to the French Broad River. The slippershell mussel (*Alasmidonta viridis*), state Endangered, and creeper (*Strophitus undulatus*), state Threatened, are found in the French Broad River not far from the project area. Special efforts should be made to prevent off-site sedimentation and strictly maintain all sedimentation and erosion control measures. Temporary or permanent herbaceous vegetation should be planted on all bare soil as soon as possible and within 15 calendar days of ground disturbing activities.

7. The permittee will report any violation of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act in writing to the Wilmington District, U. S Army Corps of Engineers, within 24 hours of the permittee's discovery of the violation.

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached Nationwide and Special conditions, the attached North Carolina Wildlife Resources Commission conditions, and your submitted plans. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order and/or appropriate legal action.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2007. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit. If prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all new and/or modified terms and conditions. The District Engineer may, at any time, exercise his discretionary authority to modify, suspend, or revoke a case specific activity's authorization under and NWP.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Quality (telephone (919) 733-1786) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management .

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Angie Pennock at 828-271-7980.

Corps Regulatory Official Angie Pennock

Date: **October 26, 2005**

Expiration Date of Verification: **March 18, 2007**

Determination of Jurisdiction:

- Based on preliminary information, there appear to be waters of the US including wetlands within the above described project area. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).
- There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are waters of the US and/or wetlands within the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- The jurisdictional areas within the above described project area have been identified under a previous action. Please reference jurisdictional determination issued ____ Action ID

Basis of Jurisdictional Determination: **The site described above contains wetlands as determined by the 1987 Corps of Engineers Wetland delineation manual and that those wetlands are adjacent to an unnamed tributary to Ragsdale Creek. Ragsdale Creek is a tributary to Hominy Creek, a tributary to the French Broad River which is navigable below the Wilson Bridge crossing on US 276 near River Mile 196.5.**

Corps Regulatory Official: Angie Pennock

Date **October 26, 2005**

Enclosures

SURVEY PLATS, FIELD SKETCH, WETLAND DELINEATION FORMS, PROJECT PLANS, ETC., MUST BE ATTACHED TO THE FILE COPY OF THIS FORM, IF REQUIRED OR AVAILABLE.

Copy Furnished:
Brian Wrenn, DWQ
Marla Chambers, NCWRC

Permit Number: 200531478
Permit Type: NW14, 33
Name of County: Buncombe
Name of Permittee: NCDOT, Dr. Gregory Thorpe
Date of Issuance: October 26, 2005
Project Manager: Angie Pennock

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

U.S. Army Corps of Engineers
Attention: CESAW-RG-A
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006

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

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

Signature of Permittee

Date

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: NCDOT File Number: 200531478 Date: October 26, 2005

Attached is: See Section below

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

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

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

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

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

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

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

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

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

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

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

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

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

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Angie Pennock
151 Patton Ave
RM 208
Asheville, NC 28806
828-271-7980

If you only have questions regarding the appeal process you may also contact:

Mr. Michael Bell, Administrative Appeal Review Officer
CESAD-ET-CO-R
U.S. Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-8801

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

Signature of appellant or agent.

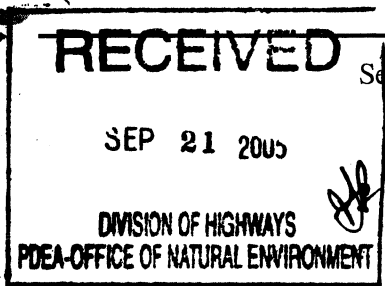
Date:

Telephone number:

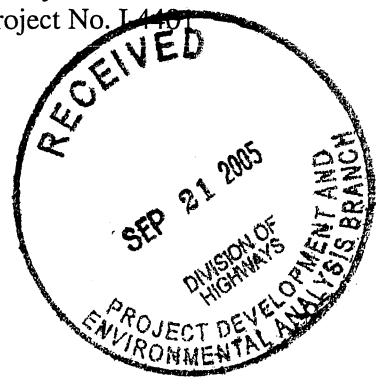
DIVISION ENGINEER:
Commander
U.S. Army Engineer Division, South Atlantic
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-3490



manley



Buncombe County
 DWQ Project No. 20051667
 TIP Project No. I-40



APPROVAL of 401 Water Quality Certification

Dr. Gregory J. Thorpe, PhD., Manager
 Planning and Environmental Branch
 North Carolina Department of Transportation
 1548 Mail Service Center
 Raleigh, North Carolina, 27699-1548

Dear Dr. Thorpe:

You have our approval, in accordance with the attached conditions and those listed below, to place permanent fill material and culverts in 156.3 linear feet of streams and to place permanent fill material in and mechanically clear 0.038 acres of wetlands for the purpose of improving I-40 from SR 1224 (Monte Vista Road to SR 3412 (Sand Hill Road) in Buncombe County. The stream and wetland impacts are approved as presented in the tables below.

Site	Station No.	Wetland Type	Impact Type	Impact (Acres)
1	-L- 166+00 Lt.	Riverine	Mechanized Clearing	0.010
2	-I40WBL- 10+50 Lt.	Riverine	Mechanized Clearing	0.014
			Fill	0.014
Total				0.038

Table 2 - Stream Impacts in the French Broad River Basin

Site	Station No.	Stream Name	Stream Type	Stream Classification/ Index No.	Impact Type	Impacts (Linear Feet)
1	-L- 166+00 Lt.	UT to Ragsdale Creek	Perennial	Class C/6-76-11	Permanent	77.8
2	-L- 184+22 Rt.	UT to Ragsdale Creek	Perennial	Class C/6-76-11	Permanent	19.2
2	-I40WBL- 10+50 Lt.	UT to Ragsdale Creek	Perennial	Class C/6-76-11	Permanent	47.1
2	-I40EBL- 12+41 Rt.	UT to Ragsdale Creek	Intermittent	Class C/6-76-11	Permanent	12.2
Total						156.3

The project shall be constructed in accordance with your application dated August 29, 2005 (received September 1, 2005). After reviewing your application, we have decided that this fill is covered by General Water Quality Certification Number 3404. This certification corresponds to the Nationwide Permit 14 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit, unless otherwise specified in the Water Quality Certification.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the DWQ 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 total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed below and in the attached certification.

1. Construction will be conducted in such a manner as to prevent a significant increase in turbidity outside the area of construction or construction-related discharge. 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 standard.
 - a. The erosion and sediment control measures for the project must equal or exceed the proper design, installation, operation and maintenance outlined in the most recent version of the North Carolina Sediment and Erosion Control Planning and Design Manual. These 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.
 - b. For borrow pit sites, the erosion and sediment control measures must equal or exceed the proper design, installation, operation and maintenance outlined in the most recent version of the North Carolina Surface Mining Manual. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
2. Placement of culverts and other structures in waters, streams, and wetlands must 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 stream beds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ.
3. The NCDOT shall use *Best Management Practices for the Protection of Surface Waters* (NCDOT August 2003) and *Sedimentation and Erosion Control Guidelines for Sensitive Watersheds* [15A NCAC 4B .0124 (a)-(e)]. Measures should be implemented prior to any ground disturbing activities and maintained on the project site to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 10 days of ground disturbing activities to provide long-term erosion control. Erosion control matting should be used in conjunction with appropriate seeding on disturbed soils in steep

slope and riparian areas. Matting should be secured in place with staples, stakes or, wherever possible, live stakes of native trees.

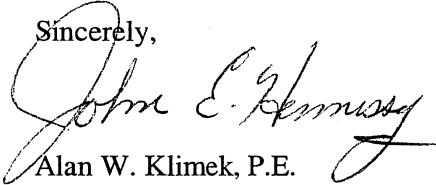
4. All pipe extensions shall be constructed in a dry work area.
5. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
6. The dimension, pattern and profile of the stream above and below the crossing should not be modified. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
7. Any riprap used must not interfere with thalweg performance and aquatic life passage during low flow conditions.
8. Heavy equipment must be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into the stream.
9. 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.
10. Under no circumstances shall rock, sand or other materials be dredged from the wetted stream channel under authorization of this permit, except in the immediate vicinity of the culverts.
11. All work shall be performed during low or normal flow conditions.
12. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
13. A copy of this Water Quality Certification shall be posted on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the on-site project manager.
14. 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.
15. There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit. Should waste or borrow sites be located in wetlands or stream, compensatory mitigation will be required since it is a direct impact from road construction activities.
16. Post-construction as-built drawings shall be submitted to the NCDWQ no later than 60 days after the project is closed out by the NC Department of Transportation.
17. Upon completion of the project, the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401

Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality upon completion of the project.

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, P.O. Box 27447, Raleigh, N.C. 27611-7447. This certification and its conditions are final and binding unless you ask for a hearing.

This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Brian Wrenn at 919-733-5715 or John Hennessy at 919-733-5694.

Sincerely,



Alan W. Klimek, P.E.

Attachment

cc: Angie Pennock, US Army Corps of Engineers Asheville Field Office
Mike Parker, DWQ Asheville Regional Office
Marla Chambers, NC WRC
Marella Buncick, US FWS
Chris Militscher, US EPA
File Copy
Central Files

DWQ 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/Wetlands Unit, North Carolina Division of Water Quality, 1621 Mail Service Center, Raleigh, NC, 27699-1621. This form may be returned to DWQ 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

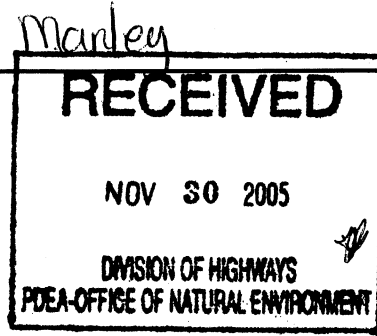
_____ Partial _____ Final

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 _____



November 22, 2005
Buncombe County
DWQ Project No. 20051667

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Correction of APPROVAL of 401 Water Quality Certification

Dr. Gregory J. Thorpe, PhD., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina, 27699-1548

Dear Dr. Thorpe:

Re: Correction to Certification Pursuant to Section 401 of the Federal Clean Water Act,
Correction to Proposed Improvements of I-40 from SR 1224 (Monte Vista Road) to SR 3412 (Sand Hill Road) in Buncombe County, TIP Project No. I-4401

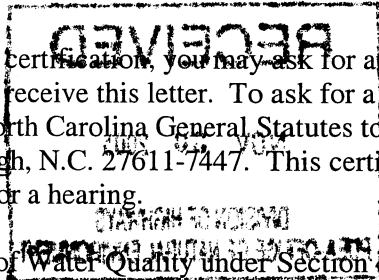
This letter is a correction to the Water Quality Certification (WQC) issued for the referenced project. This letter should be attached to the existing WQC for the referenced project and is valid solely for the correction of Condition 3 of the original WQC issued on September 16, 2005. The 401 WQC is corrected as follows:

3. The NCDOT shall use *Best Management Practices for the Protection of Surface Waters* (NCDOT August 2003). Measures should be implemented prior to any ground disturbing activities and maintained on the project site to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 21 days of ground disturbing activities to provide long-term erosion control. Erosion control matting should be used in conjunction with appropriate seeding on disturbed soils in steep slope and riparian areas. Matting should be secured in place with staples, stakes or, wherever possible, live stakes of native trees.

All the authorized activities and conditions of the certification associated with the original Water Quality Certification dated September 16, 2005 and all other corresponding modifications still apply except where superseded by this certification.


Should your project change, you must notify the DWQ and submit a new application for a WQC modification. 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 total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7).

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, P.O. Box 27447, Raleigh, N.C. 27611-7447. This certification and its conditions are final and binding unless you ask for a hearing.



This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Brian Wrenn at 919-733-5715.

Sincerely,


for Alan W. Klimek, P.E.

Attachment

- cc: Angie Pennock, US Army Corps of Engineers, Asheville Field Office
- Marla Chambers, WRC
- Marella Buncick, US FWS
- Mike Parker, NC DWQ Asheville Regional Office
- Chris Militscher, US EPA
- File Copy

Certification of Completion

DWQ Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of Wetland Permit: _____

Certificate of Completion

Upon completion of all work approved within the **401 Water Quality Certification and Buffer Rules**, and any subsequent modifications, the applicant is required to return this certificate to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to DWQ 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: _____

If this project was designed by a Certified Professional

I, _____, as a duly registered Professional _____ (i.e., Engineer, Landscape Architect, Surveyor, etc.) 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 _____

NATIONWIDE PERMIT 14
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 18, 2002

Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation crossings (e.g., highways, railways, trails, and airport runways and taxiways) in waters of the United States, including wetlands, if the activity meets the following criteria:

1. This nationwide permit is subject to the following acreage and linear limits:
 - a. For linear transportation projects in non-tidal waters, provided the discharge does not cause the loss of greater than $\frac{1}{2}$ acre of waters of the United States; or
 - b. For linear transportation projects in tidal waters, provided the discharge does not cause the loss of greater than $\frac{1}{3}$ acre of waters of the United States.
2. The permittee must notify the District Engineer in accordance with General Condition 13 if any of the following criteria are met:
 - a. The discharge causes the loss of greater than $\frac{1}{10}$ acre of waters of the United States; or
 - b. There is a discharge in a special aquatic site, including wetlands;
 - c. The notification must include a compensatory mitigation proposal to offset permanent losses of waters of the United States to ensure that those losses result only in minimal adverse effects to the aquatic environment and a statement describing how temporary losses of waters will be minimized to the maximum extent practicable;
 - d. For discharges in special aquatic sites, including wetlands and stream riffle and pool complexes, the notification must include a delineation of the affected special aquatic sites;
 - e. The width of the fill is limited to the minimum necessary for the crossing;
 - f. This permit does not authorize stream channelization, and the authorized activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality of any stream (see General Conditions 9 and 21);

g. This permit cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars; and

h. The crossing is a single and complete project for crossing a water of the United States. Where a road segment (i.e., the shortest segment of a road with independent utility that is part of a larger project) has multiple crossings of streams (several single and complete projects) the Corps will consider whether it should use its discretionary authority to require an individual permit. (Sections 10 and 404)

Note: Some discharges for the construction of farm roads, forest roads, or temporary roads for moving mining equipment may be eligible for an exemption from the need for a Section 404 permit (see 33 CFR 323.4).

NATIONWIDE PERMIT GENERAL CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. No activity may cause more than a minimal adverse effect on navigation.
2. Proper Maintenance. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.
3. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
4. Aquatic Life Movements. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
5. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.
6. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its Section 401 Water Quality Certification and Coastal Zone Management Act consistency determination.
7. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a 'study river' for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
8. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
9. Water Quality.
 - a. In certain states and tribal lands an individual 401 Water Quality Certification must be obtained or waived (See 33 CFR 330.4(c)).

b. For NWPs 12, 14, 17, 18, 32, 39, 40, 42, 43, and 44, where the state or tribal 401 certification (either generically or individually) does not require or approve water quality management measures, the permittee must provide water quality management measures that will ensure that the authorized work does not result in more than minimal degradation of water quality (or the Corps determines that compliance with state or local standards, where applicable, will ensure no more than minimal adverse effect on water quality). An important component of water quality management includes stormwater management that minimizes degradation of the downstream aquatic system, including water quality (refer to General Condition 21 for stormwater management requirements). Another important component of water quality management is the establishment and maintenance of vegetated buffers next to open waters, including streams (refer to General Condition 19 for vegetated buffer requirements for the NWPs).

This condition is only applicable to projects that have the potential to affect water quality. While appropriate measures must be taken, in most cases it is not necessary to conduct detailed studies to identify such measures or to require monitoring.

10. Coastal Zone Management. In certain states, an individual state coastal zone management consistency concurrence must be obtained or waived (see 33 CFR 330.4(d)).

11. Endangered Species.

a. No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result of formal or informal consultation with the FWS or NMFS the District Engineer may add species-specific regional endangered species conditions to the NWPs.

b. Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web pages at <http://www.fws.gov/r9endspp/endspp.html> and <http://www.nfms.noaa.gov/protres/overview/es.html> respectively.

12. Historic Properties. No activity that may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District Engineer has complied with the provisions of 33 CFR part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

13. Notification.

a. Timing; where required by the terms of the NWP, the prospective permittee must notify the District Engineer with a preconstruction notification (PCN) as early as possible. The District Engineer must determine if the notification is complete within 30 days of the date of receipt and can request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the District Engineer will notify the prospective permittee that the notification is still incomplete and the PCN review process will not commence until all of the requested information has been received by the District Engineer. The prospective permittee shall not begin the activity:

1. Until notified in writing by the District Engineer that the activity may proceed under the NWP with any special conditions imposed by the District or Division Engineer; or

2. If notified in writing by the District or Division Engineer that an Individual Permit is required; or

3. Unless 45 days have passed from the District Engineer's receipt of the complete notification and the prospective permittee has not received written notice from the District or Division Engineer. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b. Contents of Notification: The notification must be in writing and include the following information:

1. Name, address and telephone numbers of the prospective permittee;

2. Location of the proposed project;

3. Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), Regional General Permit(s), or Individual Permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP (Sketches usually clarify the project and when provided result in a quicker decision.);

4. For NWPs 7, 12, 14, 18, 21, 34, 38, 39, 40, 41, 42, and 43, the PCN must also include a delineation of affected special aquatic sites, including wetlands, vegetated shallows (e.g., submerged aquatic vegetation, seagrass beds), and riffle and pool complexes (see paragraph 13(f));

5. For NWP 7 (Cutfall Structures and Maintenance), the PCN must include information regarding the original design capacities and configurations of those areas of the facility where maintenance dredging or excavation is proposed;

6. For NWP 14 (Linear Transportation Projects), the PCN must include a compensatory mitigation proposal to offset permanent losses of waters of the US and a statement describing how temporary losses of waters of the US will be minimized to the maximum extent practicable;

7. For NWP 21 (Surface Coal Mining Activities), the PCN must include an Office of Surface Mining (OSM) or state-approved mitigation plan, if applicable. To be authorized by this NWP, the District Engineer must determine that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are minimal both individually and cumulatively and must notify the project sponsor of this determination in writing;

8. For NWP 27 (Stream and Wetland Restoration Activities), the PCN must include documentation of the prior condition of the site that will be reverted by the permittee;

9. For NWP 29 (Single-Family Housing), the PCN must also include:

i. Any past use of this NWP by the Individual Permittee and/or the permittee's spouse;

ii. A statement that the single-family housing activity is for a personal residence of the permittee;

iii. A description of the entire parcel, including its size, and a delineation of wetlands. For the purpose of this NWP, parcels of land measuring $\frac{1}{4}$ -acre or less will not require a formal on-site delineation. However, the applicant shall provide an indication of where the wetlands are and the amount of wetlands that exists on the property. For parcels greater than $\frac{1}{4}$ -acre in size, formal wetland delineation must be prepared in accordance with the current method required by the Corps. (See paragraph 13(f));

iv. A written description of all land (including, if available, legal descriptions) owned by the prospective permittee and/or the prospective permittee's spouse, within a one mile radius of the parcel, in any form of ownership (including any land owned as a partner, corporation, joint tenant, co-tenant, or as a tenant-by-the-entirety) and any land on which a purchase and sale agreement or other contract for sale or purchase has been executed;

10. For NWP 31 (Maintenance of Existing Flood Control Facilities), the prospective permittee must either notify the District Engineer with a PCN prior to each maintenance activity or submit a five-year (or less) maintenance plan. In addition, the PCN must include all of the following:

i. Sufficient baseline information identifying the approved channel depths and configurations and existing facilities. Minor deviations are authorized, provided the approved flood control protection or drainage is not increased;

ii. A delineation of any affected special aquatic sites, including wetlands; and,

iii. Location of the dredged material disposal site;

11. For NWP 33 (Temporary Construction, Access, and Dewatering), the PCN must also include a restoration plan of reasonable measures to avoid and minimize adverse effects to aquatic resources;

12. For NWPs 39, 43 and 44, the PCN must also include a written statement to the District Engineer explaining how avoidance and minimization for losses of waters of the US were achieved on the project site;

13. For NWP 39 and NWP 42, the PCN must include a compensatory mitigation proposal to offset losses of waters of the US or justification explaining why compensatory mitigation should not be required. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;

14. For NWP 40 (Agricultural Activities), the PCN must include a compensatory mitigation proposal to offset losses of waters of the US. This NWP does not authorize the relocation of greater than 300 linear feet of existing serviceable drainage ditches constructed in non-tidal streams unless, for drainage ditches constructed in intermittent nontidal streams, the District Engineer waives this criterion in writing, and the District Engineer has determined that the project complies with all terms and conditions of this NWP, and that any adverse impacts of the project on the aquatic environment are minimal, both individually and cumulatively;

15. For NWP 43 (Stormwater Management Facilities), the PCN must include, for the construction of new stormwater management facilities, a maintenance plan (in accordance

with state and local requirements, if applicable) and a compensatory mitigation proposal to offset losses of waters of the US. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;

16. For NWP 44 (Mining Activities), the PCN must include a description of all waters of the US adversely affected by the project, a description of measures taken to minimize adverse effects to waters of the US, a description of measures taken to comply with the criteria of the NWP, and a reclamation plan (for all aggregate mining activities in isolated waters and non-tidal wetlands adjacent to headwaters and any hard rock/mineral mining activities);

17. For activities that may adversely affect Federally-listed endangered or threatened species, the PCN must include the name(s) of those endangered or threatened species that may be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work; and

18. For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

c. Form of Notification: The standard Individual Permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b) (1)-(18) of General Condition 13. A letter containing the requisite information may also be used.

d. District Engineer's Decision: In reviewing the PCN for the proposed activity, the District Engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The prospective permittee may submit a proposed mitigation plan with the PCN to expedite the process. The District Engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. If the District Engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the District Engineer will notify the permittee and include any conditions the District Engineer deems necessary. The District Engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee is required to submit a compensatory mitigation proposal with the PCN, the proposal may be either conceptual or detailed. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the District Engineer will expeditiously review the proposed compensatory mitigation plan. The District Engineer must review the plan within 45 days of receiving a complete PCN and determine whether the conceptual or specific proposed mitigation would ensure no more

than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the District Engineer to be minimal, the District Engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the District Engineer determines that the adverse effects of the proposed work are more than minimal, then the District Engineer will notify the applicant either:

1. That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an Individual Permit;
2. that the project is authorized under the NWP subject to the applicant's submission of a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level; or
3. that the project is authorized under the NWP with specific modifications or conditions. Where the District Engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level. When conceptual mitigation is included, or a mitigation plan is required under item (2) above, no work in waters of the US will occur until the District Engineer has approved a specific mitigation plan.

e. Agency Coordination: The District Engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

For activities requiring notification to the District Engineer that result in the loss of greater than 1/2-acre of waters of the US, the District Engineer will provide immediately (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the District Engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the District Engineer will wait an additional 15 calendar days before making a decision on the notification. The District Engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The District Engineer will indicate in the administrative record associated with each notification that the resource agencies' concerns were considered. As required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, the District Engineer will provide a response to NMFS within 30 days of receipt of any Essential Fish Habitat conservation recommendations.

Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.

f. Wetland Delineations: Wetland delineations must be prepared in accordance with the current method required by the Corps (For NWP 29 see paragraph (b)(9)(iii) for parcels less than $\frac{1}{4}$ -acre in size). The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 45-day period will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

14. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;

b. A statement that any required mitigation was completed in accordance with the permit conditions; and

c. The signature of the permittee certifying the completion of the work and mitigation.

15. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed $\frac{1}{3}$ -acre) .

16. Water Supply Intakes. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.

17. Shellfish Beds. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4.

18. Suitable Material. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).

19. Mitigation. The District Engineer will consider the factors discussed below when determining the acceptability of appropriate and practicable mitigation necessary to offset adverse effects on the aquatic environment that are more than minimal.

a. The project must be designed and constructed to avoid and minimize adverse effects to waters of the US to the maximum extent practicable at the project site (i.e., on site).

b. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

c. Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland impacts requiring a PCN, unless the District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. Consistent with National policy, the District Engineer will establish a preference for restoration of wetlands as compensatory mitigation, with preservation used only in exceptional circumstances.

d. Compensatory mitigation (i.e., replacement or substitution of aquatic resources for those impacted) will not be used to increase the acreage losses allowed by the acreage limits of some of the NWPs. For example, $\frac{1}{4}$ -acre of wetlands cannot be created to change a $\frac{3}{4}$ -acre loss of wetlands to a $\frac{1}{2}$ -acre loss associated with NWP 39 verification. However, $\frac{1}{2}$ -acre of created wetlands can be used to reduce the impacts of a $\frac{1}{2}$ -acre loss of wetlands to the minimum impact level in order to meet the minimal impact requirement associated with NWPs.

e. To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferably in the same watershed.

f. Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., easements, deed restrictions) of vegetated buffers to open waters. In many cases, vegetated buffers will be the only compensatory mitigation required. Vegetated buffers should consist of native species. The width of the vegetated buffers required will address documented water quality or aquatic habitat loss concerns. Normally, the vegetated buffer will be 25 to 50 feet wide on each side of the stream, but the District Engineers may require slightly wider vegetated buffers to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the Corps will determine the appropriate compensatory mitigation (e.g., stream buffers or wetlands compensation) based on what is best for the aquatic environment or, a watershed basis. In cases where vegetated buffers are determined to be the most appropriate form of compensatory mitigation, the District Engineer may waive or reduce

the requirement to provide wetland compensatory mitigation for wetland impacts.

g. Compensatory mitigation proposals submitted with the " notification" may be either conceptual or detailed. If conceptual plans are approved under the verification, then the Corps will condition the verification to require detailed plans be submitted and approved by the Corps prior to construction of the authorized activity in waters of the US.

h. Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases that require compensatory mitigation, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

20. Spawning Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

21. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow.

This condition is only applicable to projects that have the potential to affect waterflows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

22. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or the restricting its flow shall be minimized to the maximum extent practicable. This includes structures and work in navigable waters of the US, or discharges of dredged or fill material.

23. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

24. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

25. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers, critical habitat for Federally listed threatened and endangered species, coral reefs, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the District Engineer after notice and opportunity for public comment. The District Engineer may also designate additional critical resource waters after notice and opportunity for comment.

a. Except as noted below, discharges of dredged or fill material into waters of the US are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, and 44 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. Discharges of dredged or fill materials into waters of the US may be authorized by the above NWPs in National Wild and Scenic Rivers if the activity complies with General Condition 7. Further, such discharges may be authorized in designated critical habitat for Federally listed threatened or endangered species if the activity complies with General Condition 11 and the USFWS or the NMFS has concurred in a determination of compliance with this condition.

b. For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with General Condition 13, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The District Engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

26. Fills Within 100-Year Floodplains. For purposes of this General Condition, 100-year floodplains will be identified through the existing Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps or FEMA-approved local floodplain maps.

a. Discharges in Floodplain; Below Headwaters. Discharges of dredged or fill material into waters of the US within the mapped 100-year floodplain, below headwaters (i.e. five cfs), resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, 43, and 44.

b. Discharges in Floodway; Above Headwaters. Discharges of dredged or fill material into waters of the US within the FEMA or locally mapped floodway, resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, and 44.

c. The permittee must comply with any applicable FEMA-approved state or local floodplain management requirements.

27. Construction Period. For activities that have not been verified by the Corps and the project was commenced or under contract to commence by the expiration date of the NWP (or modification or revocation date), the work must be completed within 12-months after such date

(including any modification that affects the project).

For activities that have been verified and the project was commenced or under contract to commence within the verification period, the work must be completed by the date determined by the Corps.

For projects that have been verified by the Corps, an extension of a Corps approved completion date maybe requested. This request must be submitted at least one month before the previously approved completion date.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of a NWP.
2. NWPs do not obviate the need to obtain other Federal, State, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best Management Practices (BMPs): BMPs are policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or nonstructural. A BMP policy may affect the limits on a development.

Compensatory Mitigation: For purposes of Section 10/404, compensatory mitigation is the restoration, creation, enhancement, or in exceptional circumstances, preservation of wetlands and/or other aquatic resources for the purpose of compensating for unavoidable adverse impacts, which remain, after all appropriate and practicable avoidance and minimization has been achieved.

Creation: The establishment of a wetland or other aquatic resource where one did not formerly exist.

Enhancement: Activities conducted in existing wetlands or other aquatic resources that increase one or more aquatic functions.

Ephemeral Stream: An ephemeral stream has *flowing* water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water

table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Farm Tract: A unit of contiguous land under one ownership that is operated as a farm or part of a farm.

Flood Fringe: That portion of the 100-year floodplain outside of the floodway (often referred to as “floodway fringe”).

Floodway: The area regulated by Federal, state, or local requirements to provide for the discharge of the base flood so the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as set by the National Flood Insurance Program) within the 100-year floodplain.

Independent Utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent Stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the US: Waters of the US that include the filled area and other waters that are permanently adversely affected by flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent above-grade, at-grade, or below-grade fills that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the US is the threshold measurement of the impact to existing waters for determining whether a project may qualify for a NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and values. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the US temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, are not included in the measurement of loss of waters of the US. Impacts to ephemeral waters are only not included in the acreage or linear foot measurements of loss of waters of the US or loss of stream bed, for the purpose of determining compliance with the threshold limits of the NWPs.

Non-tidal Wetland: An area that, during a year with normal patterns of precipitation has standing or flowing water for sufficient duration to establish an ordinary high water mark. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. The term “open water” includes rivers, streams, lakes, and ponds. For the purposes of the NWPs, this term does not

include ephemeral waters.

Perennial Stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for the most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Permanent Above-grade Fill: A discharge of dredged or fill material into waters of the US, including wetlands, that results in a substantial increase in ground elevation and permanently converts part or all of the waterbody to dry land. Structural fills authorized by NWPs 3, 25, 36, etc. are not included.

Preservation: The protection of ecologically important wetlands or other aquatic resources in perpetuity through the implementation of appropriate legal and physical mechanisms. Preservation may include protection of upland areas adjacent to wetlands as necessary to ensure protection and/or enhancement of the overall aquatic ecosystem.

Restoration: Re-establishment of wetland and/or other aquatic resource characteristics and function(s) at a site where they have ceased to exist, or exist in a substantially degraded state.

Riffle and Pool Complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Single and Complete Project: The term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers (see definition of independent utility). For linear projects, the “single and complete project” (i.e., a single and complete crossing) will apply to each crossing of a separate water of the US (i.e., a single waterbody) at that location. An exception is for linear projects crossing a single waterbody several times at separate and distant locations; each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies.

Stormwater Management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater Management Facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and BMPs, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the

concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream Channelization: The manipulation of a stream channel to increase the rate of water flow through the stream channel. Manipulation may include deepening, widening, straightening, armoring, or other activities that change the stream cross-section or other aspects of stream channel geometry to increase the rate of water flow through the stream channel. A channelized stream remains a water of the US, despite the modifications to increase the rate of water flow.

Tidal Wetland: A tidal wetland is a wetland (i.e., water of the US) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line (i.e., spring high tide line) and are inundated by tidal waters two times per lunar month, during spring high tides.

Vegetated Buffer: A vegetated upland or wetland area next to rivers, streams, lakes, or other open waters, which separates the open water from developed areas, including agricultural land. Vegetated buffers provide a variety of aquatic habitat functions and values (e.g., aquatic habitat for fish and other aquatic organisms, moderation of water temperature changes, and detritus for aquatic food webs) and help improve or maintain local water quality. A vegetated buffer can be established by maintaining an existing vegetated area or planting native trees, shrubs, and herbaceous plants on land next to openwaters. Mowed lawns are not considered vegetated buffers because they provide little or no aquatic habitat functions and values. The establishment and maintenance of vegetated buffers is a method of compensatory mitigation that can be used in conjunction with the restoration, creation, enhancement or preservation of aquatic habitats to ensure that activities authorized by NWP result in minimal adverse effects to the aquatic environment. (See General Condition 19.)

Vegetated Shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: A waterbody is any area that in a normal year has water flowing or standing above ground to the extent that evidence of an ordinary high water mark is established. Wetlands contiguous to the waterbody are considered part of the waterbody.

FINAL REGIONAL CONDITIONS FOR NATIONWIDE PERMITS IN THE WILMINGTON DISTRICT

1. Waters Excluded from NWP or Subject to Additional Notification Requirements:

a. The Corps identified waters that will be excluded from use of this NWP. These waters are:

1. Discharges into Waters of the United States designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning area are prohibited during the period between February 15 and June 30, without prior written approval from NCDMF or NCWRC and the Corps.

2. Discharges into Waters of the United States designated as sturgeon spawning areas are prohibited during the period between February 1 and June 30, without prior written approval from the National Marine Fisheries Service (NMFS).

b. The Corps identified waters that will be subject to additional notification requirements for activities authorized by this NWP. These waters are:

1. Prior to the use of any NWP in any of the following North Carolina *designated waters*, applicants must comply with Nationwide Permit General Condition 13. In addition, the applicant must furnish a written statement of compliance with all of the conditions of the applicable Nationwide Permit. The North Carolina *designated waters* that require additional notification requirements are “Outstanding Resource Waters” (ORW) and “High Quality Waters” (HQW) (as defined by the North Carolina Division of Water Quality), or “Inland Primary Nursery Areas” (IPNA) (as defined by the North Carolina Wildlife Resources Commission), or contiguous wetlands (as defined by the North Carolina Division of Water Quality), or “Primary Nursery Areas” (PNA) (as defined by the North Carolina Division of Marine Fisheries).

2. Applicants for any NWP in a designated “Area of Environmental Concern” (AEC) in the twenty (20) coastal counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA), must also obtain the required CAMA permit. Construction activities may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – P.O. Box 1890, Wilmington, NC 28402 or Washington Field Office – P.O. Box 1000, Washington, NC 27889) for authorization to begin work.

3. Prior to the use of any NWP on a Barrier Island of North Carolina, applicants must comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable Nationwide Permit.

4. Prior to the use of any NWP in a “Mountain or Piedmont Bog” of North Carolina, applicants shall comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP.

Note: The following wetland community types identified in the N.C. Natural Heritage Program document, "Classification of Natural communities of North Carolina (Michael P. Schafale and Alan S. Weakley, 1990), are subject to this regional condition.

Mountain Bogs

- Swamp Forest-Bog Complex
- Swamp Forest-Bog Complex (Spruce Subtype)
- Southern Appalachian Bog (Northern Subtype)
- Southern Appalachian Bog (Southern Subtype)
- Southern Appalachian Fen

Piedmont Bogs

- Upland Depression Swamp Forest

5. Prior to the use of any NWP in Mountain Trout Waters within twenty-five (25) designated counties of North Carolina, applicants shall comply with Nationwide General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP. Notification will include a letter of comments and recommendations from the North Carolina Wildlife Resources Commission (NCWRC), the location of work, a delineation of wetlands, a discussion of alternatives to working in the Mountain Trout Waters, why other alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to the Mountain Trout Waters. To facilitate coordination with the NCWRC, the proponent may provide a copy of the notification to the NCWRC concurrent with the notification to the District Engineer. The NCWRC will respond both to the proponent and directly to the Corps of Engineers.

The twenty-five (25) designated counties are:

Alleghany	Ashe	Avery	Yancey
Buncombe	Burke	Caldwell	Wilkes
Cherokee	Clay	Graham	Swain
Haywood	Henderson	Jackson	Surry
Macon	Madison	McDowell	Stokes
Mitchell	Polk	Rutherford	
Transylvania	Watauga		

6. Applicants shall notify the NCDENR Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination of the disposal area and allow a temporary shellfish closure to be made. Any disposal of sand to the beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas. If beach disposal was to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swim advisory shall be posted and a press release shall be made. NCDENR Shellfish Sanitation Section must be notified before commencing this activity.

2. List of Final Corps Regional Modifications and Conditions for All Nationwide Permits

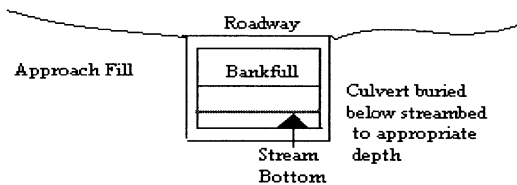
a. Individual or multiple NWPs may not be used for activities that result in the cumulative loss or degradation of greater than 300 total linear feet of perennial streambed or intermittent streambed that exhibits important aquatic function(s).

b. Prior to the use of any NWP (except 13, 27, and 39) for any activity that has more than a total of 150 total linear feet of perennial streambed impacts or intermittent streambed impacts (if the intermittent stream has important aquatic function), the applicant must comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP. Compensatory mitigation is typically required for any impact that requires such notification. [Note: The Corps uses the Intermittent Channel Evaluation Form, located with Permit Information on the Regulatory Program Web Site, to aid in the determination of the intermittent channel stream status. Also, NWPs 13, 27 and 39 have specific reporting requirements.]

c. For all Nationwide Permits which allow the use of concrete as a building material, measures will be taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with waters of the state until the concrete has hardened.

d. For all Nationwide Permits that allow for the use of riprap material for bank stabilization, filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

e. For all NWPs that involve the construction of culverts, measures will be included in the construction that will promote the safe passage of fish and other aquatic organisms. All culverts in the 20 CAMA coastal counties must be buried to a depth of one foot below the

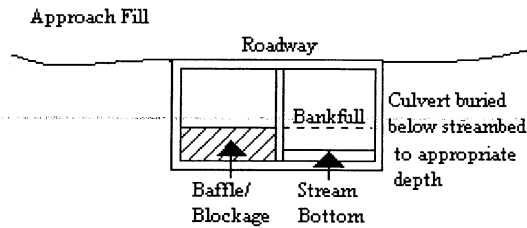


bed of the stream or wetland. For all culvert construction activities, the dimension, pattern, and profile of the stream, (above and below a pipe or culvert), should not be modified by widening the stream channel or by reducing the depth of the stream. Culvert inverts will be buried at least one foot 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. Bottomless arch culverts will satisfy this condition. A waiver from the depth specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional Condition would result in more adverse impacts to the aquatic environment.

3. Additional Regional Conditions Applicable to this Specific Nationwide Permit.

a. Natural channel design must be applied to the maximum extent practicable for stream relocations. The N.C. Wildlife Resources Commission and the N.C. Division of Water Quality provides Guidelines that are available to assist in the planning and design.

b. Bank-full flows (or less) shall be accommodated through maintenance of the

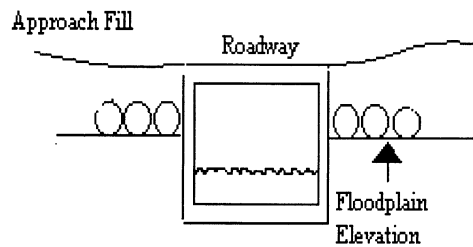


existing bank-full channel cross sectional area. Additional culverts at such crossings shall be allowed **only** to receive flows exceeding bank-full.

c. Flows exceeding bank-full shall be accommodated by installing culverts at the floodplain elevation where adjacent floodplain is available.

d. NWP 14 cannot be used for private projects located in tidal waters or tidal wetlands.

e. The activities associated with NWP 14 require a pre-construction notification if they will result in the loss of greater than 150 total linear feet of perennial streambed or intermittent stream that exhibits important aquatic function(s).



NORTH CAROLINA DIVISION OF WATER QUALITY
GENERAL CERTIFICATION CONDITIONS

GC3375

1. Enumerating and Reporting of Impacts:

a. Streams - Impacts to streams as determined by the Division of Water Quality shall be measured as length of the centerline of the normal flow channel. Permanent and/or temporary

stream impacts shall be enumerated on the entire project for all impacts regardless of which 404 Nationwide Permits are used. Stream relocations and streambed and/or bank hardening are considered to be permanent stream impacts. Any activity that results in a loss of use of stream functions including but not limited to filling, relocating, flooding, dredging and complete shading shall be considered stream impacts. Enumeration of impacts to streams shall include streams enclosed by bottomless culverts, bottomless arches or other spanning structures when a 404 Permit is used anywhere in a project unless the entire structure (including construction impacts) spans the entire bed and both banks of the stream, is only used for a road, driveway or path crossing, and is not mitered to follow the stream pattern. Impacts for dam footprints and flooding will count toward the threshold for stream impacts, but flooding upstream of the dam will not (as long as no filling, excavation, relocation or other modification of the existing stream dimension, pattern or profile occurs) count towards mitigation.

b. Wetlands - Impacts to wetlands as determined by the Division of Water Quality shall be measured as area. Permanent and/or temporary wetland impacts shall be enumerated on the entire project for all impacts regardless of which 404 Nationwide Permits are used. Any activity that results in a loss of use of wetland functions including but not limited to filling, draining, and flooding shall be considered wetland impacts. Enumeration of impacts to wetlands shall include activities that change the hydrology of a wetland when a 404 Permit is used anywhere in a project.

c. Lakes and Ponds – Lake and Pond Impacts Enumeration- Impacts to waters other than streams and wetlands as determined by the Division of Water Quality shall be measured as area. Permanent and/or temporary water impacts shall be enumerated on the entire project for all impacts proposed regardless of which 404 Nationwide Permits are used. Any activity that results in a loss of use of aquatic functions including but not limited to filling and dredging shall be considered waters impacts;

2. Proposed fill or substantial modification of wetlands or waters (including streams) under this General Certification requires application to and prior written concurrence from the Division of Water Quality;

3. Impacts to any stream length in the Neuse, Tar-Pamlico or Randleman River Basins (or any other major river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence for this Certification from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as “exempt” from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse and Tar-Pamlico River Basins shall be limited to “uses” identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;

4. Additional site-specific stormwater management requirements may be added to this Certification at DWQ's discretion on a case-by-case basis for projects that have or are anticipated

to have impervious cover of greater than 30 percent. Site-specific stormwater management shall be designed to remove 85% TSS according to the latest version of DWQ's Stormwater Best Management Practices manual at a minimum. Additionally, in watersheds within one mile and draining to 303(d) listed waters, as well as watersheds that are classified as nutrient sensitive waters (NSW), water supply waters (WS), trout waters (Tr), high quality waters (HQW), and outstanding resource waters (ORW), the Division shall require that extended detention wetlands, bio-retention areas, and ponds followed by forested filter strips (designed according to latest version of the NC DENR Stormwater Best Management Practices Manual) be constructed as part of the stormwater management plan when a site-specific stormwater management plan is required. Alternative designs may be requested by the applicant and will be reviewed on a case-by-case basis by the Division of Water Quality. Approval of stormwater management plans by the Division of Water Quality's other existing state stormwater programs including appropriate local programs are sufficient to satisfy this Condition as long as the stormwater management plans meet or exceed the design requirements specified in this condition. This condition applies unless more stringent requirements are in effect from other state water quality programs.

a. Unless specified otherwise in the approval letter, the final, written stormwater management plan shall be approved in writing by the Division of Water Quality's Wetlands Unit before the impacts specified in this Certification occur.

b. The facilities must be designed to treat the runoff from the entire project, unless otherwise explicitly approved by the Division of Water Quality.

c. Also, before any permanent building or other structure is occupied at the subject site, the facilities (as approved by the Wetlands Unit) shall be constructed and operational, and the stormwater management plan (as approved by the Wetlands Unit) shall be implemented.

d. The structural stormwater practices as approved by the Wetlands Unit as well as drainage patterns must be maintained in perpetuity.

e. No changes to the structural stormwater practices shall be made without written authorization from the Division of Water Quality.

5. Compensatory stream mitigation shall be required at a 1:1 ratio for all perennial and intermittent stream impacts equal to or exceeding 150 feet and that require application to DWQ in watersheds classified as ORW, HQW, Tr, WS-I and WS-II;

6. In accordance with North Carolina General Statute Section 143-215.3D(e), any application for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted and will be the higher of the two fees;

7. In accordance with 15A NCAC 2H .0506 (h) compensatory mitigation may be required for impacts to 150 linear feet or more of streams and/or one acre or more of wetlands. For linear public transportation projects, impacts equal to or exceeding 150 feet per stream may require

mitigation. In addition, buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A determination of buffer, wetland and stream mitigation requirements shall be made for any Certification for this Nationwide Permit. The most current design and monitoring protocols from DWQ shall be followed and written plans submitted for DWQ approval as required in those protocols. When compensatory mitigation is required for a project, the mitigation plans must be approved by DWQ in writing before the impacts approved by the Certification occur, unless otherwise specified in the approval letter. The mitigation plan must be implemented and/or constructed before any permanent building or structure on site is occupied. In the case of public road projects, the mitigation plan must be implemented before the road is opened to the traveling public. Projects may also be implemented once payment is made to a private mitigation bank or other in-lieu fee program, as specified in the written concurrence of 401 Certification for a project. Please note that if a stream relocation is conducted as a stream restoration as defined in *The Internal Technical Guide for Stream Work in North Carolina*, April 2001, the restored length can be used as compensatory mitigation for the impacts resulting from the relocation;

8. For any project involving re-alignment of streams, a stream relocation plan must be included with the 401 application for written DWQ approval. Relocated stream designs should include the same dimensions, patterns and profiles as the existing channel, to the maximum extent practical. The new channel should be constructed in the dry and water shall not be turned into the new channel until the banks are stabilized. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating coir fiber and seedling establishment is allowable. Also, riprap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of riprap coverage requested. If suitable stream mitigation is not practical on-site, then stream impact will need to be mitigated elsewhere;

9. Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed to allow low flow passage of water and aquatic life unless it can be shown to DWQ that providing passage would be impractical. Design and placement of culverts including open bottom or bottomless arch culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in aggradation, degradation or significant changes in hydrology of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested to do so in writing by DWQ. Additionally, when roadways, causeways or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in aggradation, degradation or significant changes in hydrology of streams or wetlands;

10. That 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" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall 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 standard;

11. All sediment and erosion control measures placed in wetlands and waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;

12. That additional site-specific conditions may be added to projects proposed under this Certification in order to ensure compliance with all applicable water quality and effluent standards;

13. Measures shall be taken to prevent live or fresh concrete from coming into contact with waters of the state until the concrete has hardened;

14. If an environmental document is required, this Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse;

15. If this Certification is used to access building sites, all lots owned by the applicant must be buildable without additional fill beyond that explicitly allowed under other General Certifications. For road construction purposes, this Certification shall only be utilized from natural high ground to natural high ground;

16. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed;

17. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Nationwide Permit 14, whichever is sooner.

NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT
STATE CONSISTENCY

Consistent.

Citations:

2002 Nationwide Permits - Federal Register Notice 15 Jan 2002

2002 Nationwide Permits Corrections - Federal Register Notice 13 Feb 2002

2002 Regional Conditions – Authorized 17 May 2002

WQC #3404

**GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR CORPS OF ENGINEERS
NATIONWIDE PERMIT NUMBER 14 (ROAD CROSSINGS) AND REGIONAL GENERAL
PERMIT 198200031 (WORK ASSOCIATED WITH BRIDGE CONSTRUCTION, MAINTENANCE
OR REPAIR CONDUCTED BY NCDOT OR OTHER GOVERNMENT AGENCIES)
AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)**

This General 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 Quality (DWQ) Regulations in 15A NCAC 2H, Section .0500 and 15A NCAC 2B .0200 for the discharge of fill material to waters and adjacent wetland areas or to wetland areas that are not a part of the surface tributary system to interstate waters or navigable waters of the United States (i.e., isolated wetlands) as described in 33 CFR 330 Appendix A (B) (14) of the Corps of Engineers regulations (Nationwide Permit No. 14 and Regional General Permit 198200031) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 2B .0200. The category of activities shall include any fill activity for road crossings and is limited to fill less than one-third acre in tidal waters and less than one-half acre in non-tidal waters. This Certification replaces Water Quality Certification Number 2177 issued on November 5, 1987, Water Quality Certification Number 2666 issued on January 21, 1992, Water Quality Certification Number 2732 issued on May 1, 1992, Water Quality Certification Number 3103 issued on February 11, 1997, Water Quality Certification Number 3289 issued on June 1, 2000 and Water Quality Certification Number 3375 issued March 18, 2002. This WQC is rescinded when the Corps of Engineers re-authorizes Nationwide Permit 14 or Regional General Permit 198200031 or when deemed appropriate by the Director of DWQ.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Conditions of Certification:

1. Enumerating and Reporting of Impacts:

- Streams - Impacts to streams as determined by the Division of Water Quality shall be measured as length of the centerline of the normal flow channel. Permanent and/or temporary stream impacts shall be enumerated on the entire project for all impacts regardless of which 404 Nationwide Permits are used. Stream relocations and stream bed and/or bank hardening are considered to be permanent stream impacts. Any activity that results in a loss of use of stream functions including but not limited to filling, relocating, flooding, dredging and complete shading shall be considered stream impacts. Enumeration of impacts to streams shall include streams enclosed by bottomless culverts, bottomless arches or other spanning structures when a 404 Permit is used anywhere in a project unless the entire structure (including construction impacts) spans the entire bed and both banks of the stream, is only used for a road, driveway or path crossing, and is not mitered to follow the stream pattern. Impacts for dam footprints and flooding will count toward the threshold for stream impacts, but flooding upstream of the dam will not (as long as no filling, excavation, relocation or other modification of the existing stream dimension, pattern or profile occurs) count towards mitigation requirements.
- Wetlands - Impacts to wetlands as determined by the Division of Water Quality shall be measured as area. Permanent and/or temporary wetland impacts shall be enumerated on the entire project for all impacts regardless of which 404 Nationwide Permits are used. Any activity that results in a loss of use of wetland functions including but not limited to filling, draining, and flooding shall be considered wetland impacts. Enumeration of impacts to wetlands shall include activities that change the hydrology of a wetland when a 404 Permit is used anywhere in a project.

WQC #3404

- Lakes and Ponds – Lake and Pond Impacts Enumeration- Impacts to waters other than streams and wetlands as determined by the Division of Water Quality shall be measured as area. Permanent and/or temporary water impacts shall be enumerated on the entire project for all impacts proposed regardless of which 404 Nationwide Permits are used. Any activity that results in a loss of use of aquatic functions including but not limited to filling and dredging shall be considered waters impacts;
2. Proposed fill or substantial modification of wetlands or waters (including streams) under this General Certification requires application to and prior written concurrence from the Division of Water Quality;
 3. Application to and payment of a fee to DWQ is not required for construction of a driveway to a single family lot as long as the driveway impacts less than 25 feet of stream channel including any in-stream stabilization needed for the crossing;
 4. Impacts to any stream length in the Neuse, Tar-Pamlico or Randleman River Basins (or any other major river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence for this Certification from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as “exempt” from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse and Tar-Pamlico River Basins shall be limited to “uses” identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;
 5. Irrespective of other application thresholds in this General Certification, all impacts to perennial waters and their associated buffers require written approval from DWQ since such impacts are allowable as provided in 15A NCAC 2B. 0212 (WS-I), 2B .0213 (WS-II), 2B .0214 (WS-III) and 2B .0215 (WS-IV). Only water dependent activities, public projects and structures with diminimus increases in impervious surfaces will be allowed as outlined in those rules. All other activities require a variance from the delegated local government and/or the NC Environmental Management Commission before the 401 Water Quality Certification can be processed. In addition, a 30 foot wide vegetative buffer for low density development or a 100 foot wide vegetative buffer for high density development must be maintained adjacent to all perennial waters except for allowances as provided under the Water Supply Watershed Protection Rules. For the purposes of this condition, perennial waters are defined as those shown as perennial waters on the most recent USGS 1:24,000 topographic map or as otherwise determined by local government studies;
 6. Additional site-specific stormwater management requirements may be added to this Certification at DWQ's discretion on a case by case basis for projects that have or are anticipated to have impervious cover of greater than 30 percent. Site-specific stormwater management shall be designed to remove 85% TSS according to the latest version of DWQ's Stormwater Best Management Practices manual at a minimum.

Additionally, in watersheds within one mile and draining to 303(d) listed waters, as well as watersheds that are classified as nutrient sensitive waters (NSW), water supply waters (WS), trout waters (Tr), high quality waters (HW), and outstanding resource waters (ORW), the Division shall require that extended detention wetlands, bio-retention areas, and ponds followed by forested filter strips (designed according to latest version of the NC DENR Stormwater Best Management Practices Manual) be constructed as part of the stormwater management plan when a site-specific stormwater management plan is required.

WQC #3404

Alternative designs may be requested by the applicant and will be reviewed on a case-by-case basis by the Division of Water Quality.

Approval of stormwater management plans by the Division of Water Quality's other existing state stormwater programs including appropriate local programs are sufficient to satisfy this Condition as long as the stormwater management plans meet or exceed the design requirements specified in this condition. This condition applies unless more stringent requirements are in effect from other state water quality programs.

- Unless specified otherwise in the approval letter, the final, written stormwater management plan shall be approved in writing by the Division of Water Quality's Wetlands Unit before the impacts specified in this Certification occur.
 - The facilities must be designed to treat the runoff from the entire project, unless otherwise explicitly approved by the Division of Water Quality.
 - Also, before any permanent building or other structure is occupied at the subject site, the facilities (as approved by the Wetlands Unit) shall be constructed and operational, and the stormwater management plan (as approved by the Wetlands Unit) shall be implemented.
 - The structural stormwater practices as approved by the Wetlands Unit as well as drainage patterns must be maintained in perpetuity.
 - No changes to the structural stormwater practices shall be made without written authorization from the Division of Water Quality.
7. Compensatory stream mitigation shall be required at a 1:1 ratio for not only perennial but also intermittent stream impacts that require application to DWQ in watersheds classified as ORW, HQW, Tr, WS-I and WS-II unless the project is a linear, publicly-funded transportation project, which has a 150-foot per-stream impact allowance;
 8. In accordance with North Carolina General Statute Section 143-215.3D(e), any application for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted through the Division of Coastal Management and will be the higher of the two fees;
 9. In accordance with 15A NCAC 2H .0506 (h) compensatory mitigation may be required for impacts to 150 linear feet or more of streams and/or one acre or more of wetlands. For linear public transportation projects, impacts equal to or exceeding 150 feet per stream may require mitigation. In addition, buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A determination of buffer, wetland and stream mitigation requirements shall be made for any Certification for this Nationwide Permit. The most current design and monitoring protocols from DWQ shall be followed and written plans submitted for DWQ approval as required in those protocols. When compensatory mitigation is required for a project, the mitigation plans must be approved by DWQ in writing before the impacts approved by the Certification occur, unless otherwise specified in the approval letter. The mitigation plan must be implemented and/or constructed before any permanent building or structure on site is occupied. In the case of public road projects, the mitigation plan must be implemented before the road is opened to the travelling public. Projects may also be implemented once payment is made to a private mitigation bank or other in-lieu fee program, as specified in the written concurrence of 401 Certification for a project. Please note that if a stream relocation is conducted as a stream restoration as defined in *The Internal Technical Guide for Stream Work in North Carolina*, April 2001, the restored length can be used as compensatory mitigation for the impacts resulting from the relocation;

WQC #3404

10. For any project involving re-alignment of streams, a stream relocation plan must be included with the 401 application for written DWQ approval. Relocated stream designs should include the same dimensions, patterns and profiles as the existing channel, to the maximum extent practical. The new channel should be constructed in the dry and water shall not be turned into the new channel until the banks are stabilized. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating coir fiber and seedling establishment is allowable. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested. If suitable stream mitigation is not practical on-site, then stream impact will need to be mitigated elsewhere;
11. Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed to allow low flow passage of water and aquatic life unless it can be shown to DWQ that providing passage would be impractical. Design and placement of culverts including open bottom or bottomless arch culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in aggradation, degradation or significant changes in hydrology of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested to do so in writing by DWQ. Additionally, when roadways, causeways or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in aggradation, degradation or significant changes in hydrology of streams or wetlands;
12. That 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" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall 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 standard;
13. All sediment and erosion control measures placed in wetlands and waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;
14. That additional site-specific conditions may be added to projects proposed under this Certification in order to ensure compliance with all applicable water quality and effluent standards;
15. Measures shall be taken to prevent live or fresh concrete from coming into contact with freshwaters of the state until the concrete has hardened;
16. If an environmental document is required, this Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse;
17. If this Certification is used to access building sites, all lots owned by the applicant must be buildable without additional fill beyond that explicitly allowed under other General

WQC #3404

Certifications. For road construction purposes, this Certification shall only be utilized from natural high ground to natural high ground;

18. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed;
19. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Nationwide Permit 14 or Regional General Permit 198200031, whichever is sooner.

Non-compliance with or violation of the conditions herein set forth by a specific fill project may result in revocation of this Certification for the project and may also result in criminal and/or civil penalties.

The Director of the North Carolina Division of Water Quality may require submission of a formal application for Individual Certification for any project in this category of activity that requires written concurrence under this certification, if it is determined that the project is likely to have a significant adverse effect upon water quality or degrade the waters so that existing uses of the wetland or downstream waters are precluded.

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

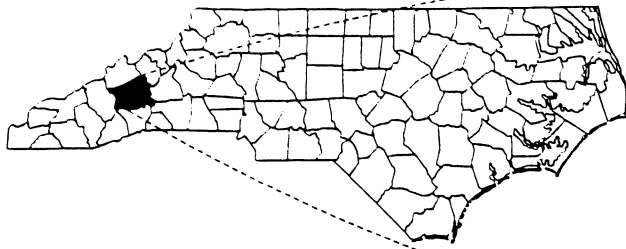
Effective date: March 2003

DIVISION OF WATER QUALITY

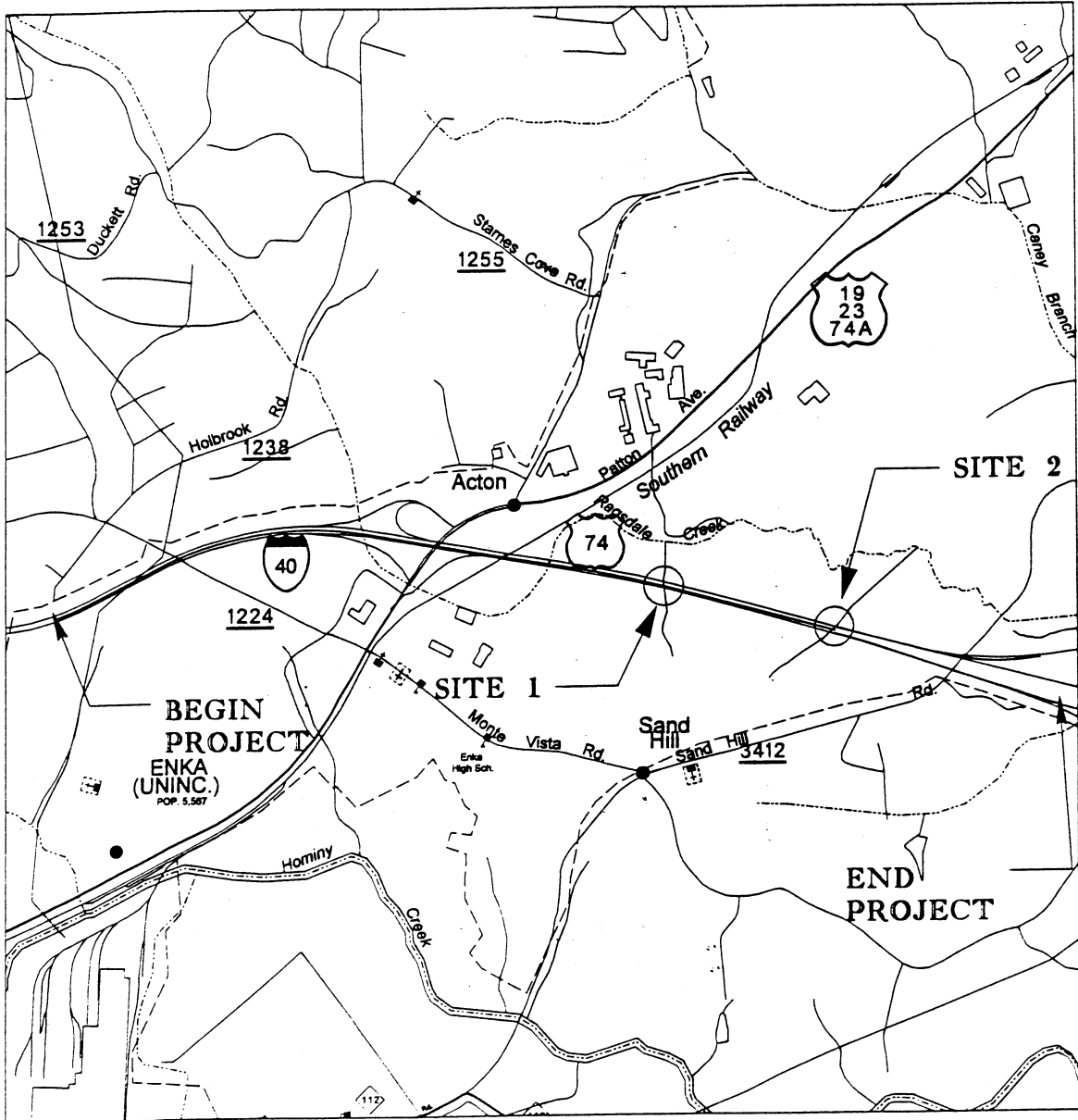
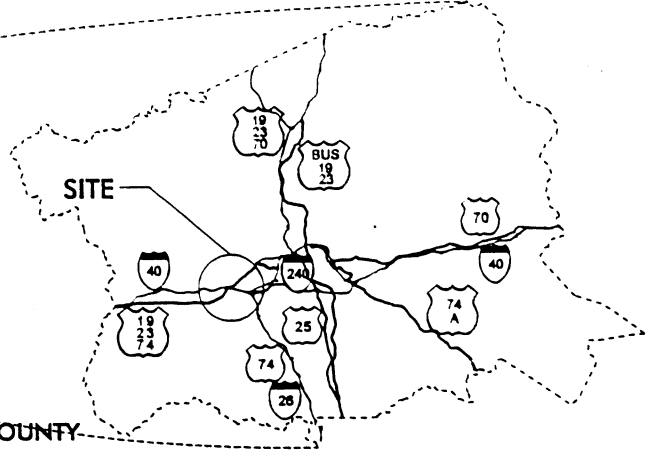
By

Alan W. Klimek, P.E.

Director



BUNCOMBE COUNTY



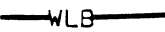
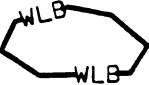


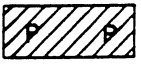

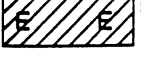
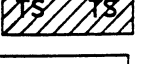








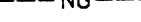
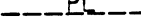


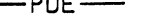


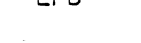
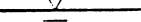
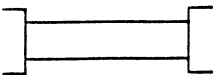
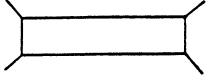
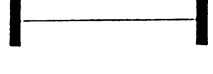



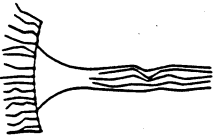



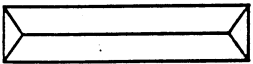
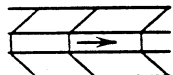
N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

BUNCOMBE COUNTY

I-40 AUXILIARY LANES FROM
 WEST OF US 19-23 (SMOKEY PARK
 HIGHWAY) TO THE
 I-240 / I-26 INTERCHANGE

SHEET OF 8 / 18 / 05

WETLAND LEGEND

<p>  WETLAND BOUNDARY  WETLAND  DENOTES FILL IN WETLAND  DENOTES FILL IN SURFACE WATER  DENOTES FILL IN SURFACE WATER (POND)  DENOTES TEMPORARY FILL IN WETLAND  DENOTES EXCAVATION IN WETLAND  DENOTES TEMPORARY FILL IN SURFACE WATER  DENOTES MECHANIZED CLEARING  FLOW DIRECTION  TOP OF BANK  EDGE OF WATER  PROP. LIMIT OF CUT  PROP. LIMIT OF FILL  PROP. RIGHT OF WAY  NATURAL GROUND  PROPERTY LINE  TEMP. DRAINAGE EASEMENT  PERMANENT DRAINAGE EASEMENT  EXIST. ENDANGERED ANIMAL BOUNDARY  EXIST. ENDANGERED PLANT BOUNDARY  WATER SURFACE  LIVE STAKES  BOULDER  COIR FIBER ROLLS </p>	<p>  PROPOSED BRIDGE  PROPOSED BOX CULVERT  PROPOSED PIPE CULVERT <p style="font-size: small;">(DASHED LINES DENOTE EXISTING STRUCTURES)</p> <p style="font-size: x-small;">12"-48" PIPES 54" PIPES & ABOVE</p>  SINGLE TREE  WOODS LINE  DRAINAGE INLET  ROOTWAD  RIP RAP  ADJACENT PROPERTY OWNER OR PARCEL NUMBER IF AVAILABLE  PREFORMED SCOUR HOLE  LEVEL SPREADER (LS)  DITCH / GRASS SWALE </p>
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N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BUNCOMBE COUNTY
I-40 AUXILIARY LANES FROM
WEST OF US 19-23 (SMOKEY PARK
HIGHWAY) TO THE
I-240/I-26 INTERCHANGE

SHEET OF 7 / 18 / 05

PROPERTY OWNERS
NAMES AND ADDRESSES

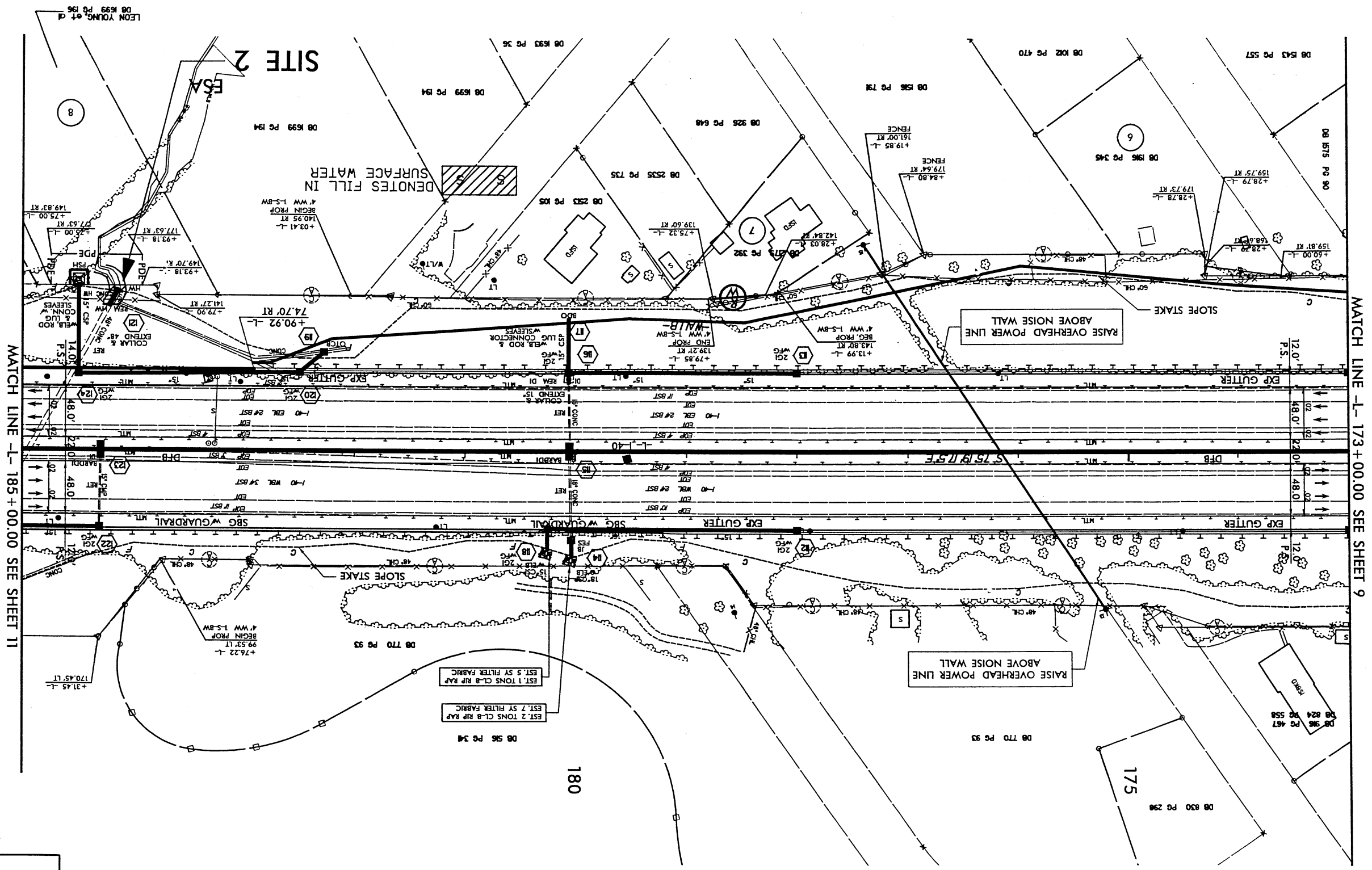
PARCEL NO.	NAMES	ADDRESSES
5	LEONARD B. IRELAN	60 SELWYN RD. ASHEVILLE, NC 28806
8	LEON YOUNG ET AL C/O GAIL DOWNS	16226 WOOLWINE RD. CHARLOTTE, NC 28278
10	RENEE M. BARGER	PO BOX 1854 ENKA, NC 28728

**N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**BUNCOMBE COUNTY
I-40 AUXILIARY LANES FROM
WEST OF US 19-23 (SMOKEY PARK
HIGHWAY) TO THE
I-240/I-26 INTERCHANGE**

CURVE DATA FOR L-
 P1 Sta 160+67.62
 Δ = 4.59 23.0' (RT)
 D = 0.28 38.9'
 L = 1045.0'
 T = 522.85'
 R = 12000.0'
 S_a = NC

ENVIRONMENTALLY SENSITIVE AREA (ESA)
 DOUBLE FACE BARRIER (DFB)
 SINGLE FACE BARRIER (SFB)



MATCH LINE -L- 185+00.00 SEE SHEET 11

MATCH LINE -L- 173+00.00 SEE SHEET 9



PROJECT REFERENCE NO.		1-4401	
SHEET NO.		10	
ROADWAY DESIGN ENGINEER		HYDRAULICS DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

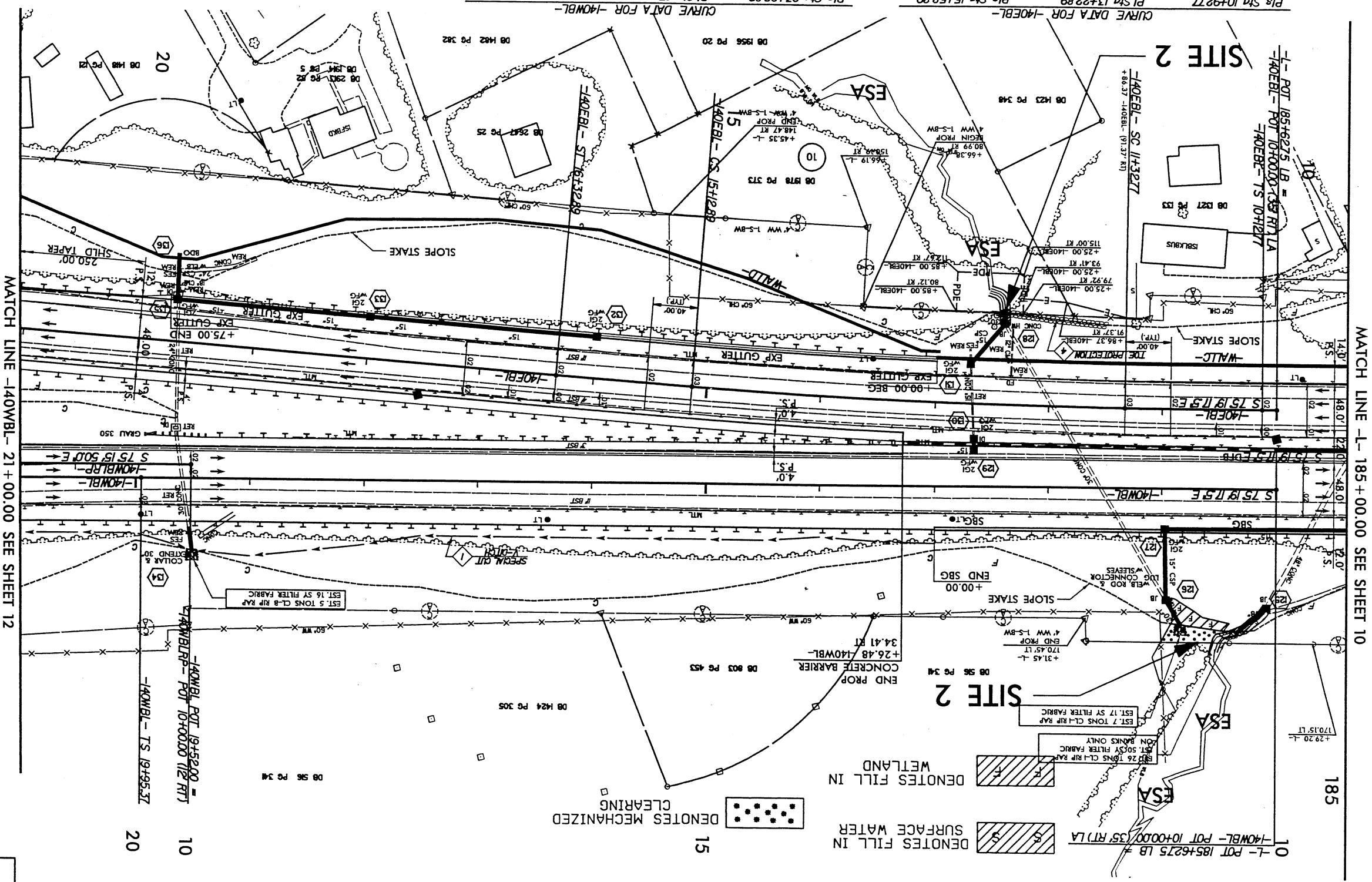
ENGLISH



INTCOR & MURPHY



FLOWERS & HUTCHINSON, INC.
 CIVIL ENGINEERS
 1000 W. HARRIS STREET, SUITE 100
 COLUMBUS, GA 31906



Curve Data for -140EBL-
 Pts Sta 13+22.89 Pts Sta 15+52.89
 $\Delta = 3.24' 10.8" (RT)$ $\theta = 0.32' 13.7"$
 $L = 120.00'$ $ST = 40.00'$
 $D = 0.53' 42.9"$ $\theta = 0.32' 13.7"$
 $L = 380.12'$ $ST = 120.04'$
 $R = 6400.00'$ $ST = 190.12'$
 $S = 0.03'$

Curve Data for -140EBL-
 Pts Sta 23+28.89 Pts Sta 31+47.55
 $\Delta = 5.58' 05.9"$ $\theta = 0.32' 13.7"$
 $L = 500.00'$ $ST = 166.67'$
 $D = 2.23' 14.4"$ $\theta = 0.32' 13.7"$
 $L = 240.00'$ $ST = 80.02'$
 $R = 2400.00'$ $ST = 287.44'$
 $S = 0.06'$

ESAs
 ENVIRONMENTALLY SENSITIVE AREA (ESA)
 SINGLE FACE BARRIER (SFB)
 DOUBLE FACE BARRIER (DFB)

MATCH LINE -140WBL- 21 + 00.00 SEE SHEET 12

MATCH LINE -L- 185 + 00.00 SEE SHEET 10

PROJECT REFERENCE NO.	I-4401
SHEET NO.	11
ROADWAY DESIGN ENGINEER	
HYDRAULICS DESIGN ENGINEER	
DO NOT USE FOR CONSTRUCTION	
PRELIMINARY PLANS	

INTEGRITY
 MAINTAINED BY
HORNBY & HUTTON INC.
 400 WESTERN AVENUE, SUITE 115
 CHARLOTTE, NC 28202
 (704) 375-1111
ENGLISH

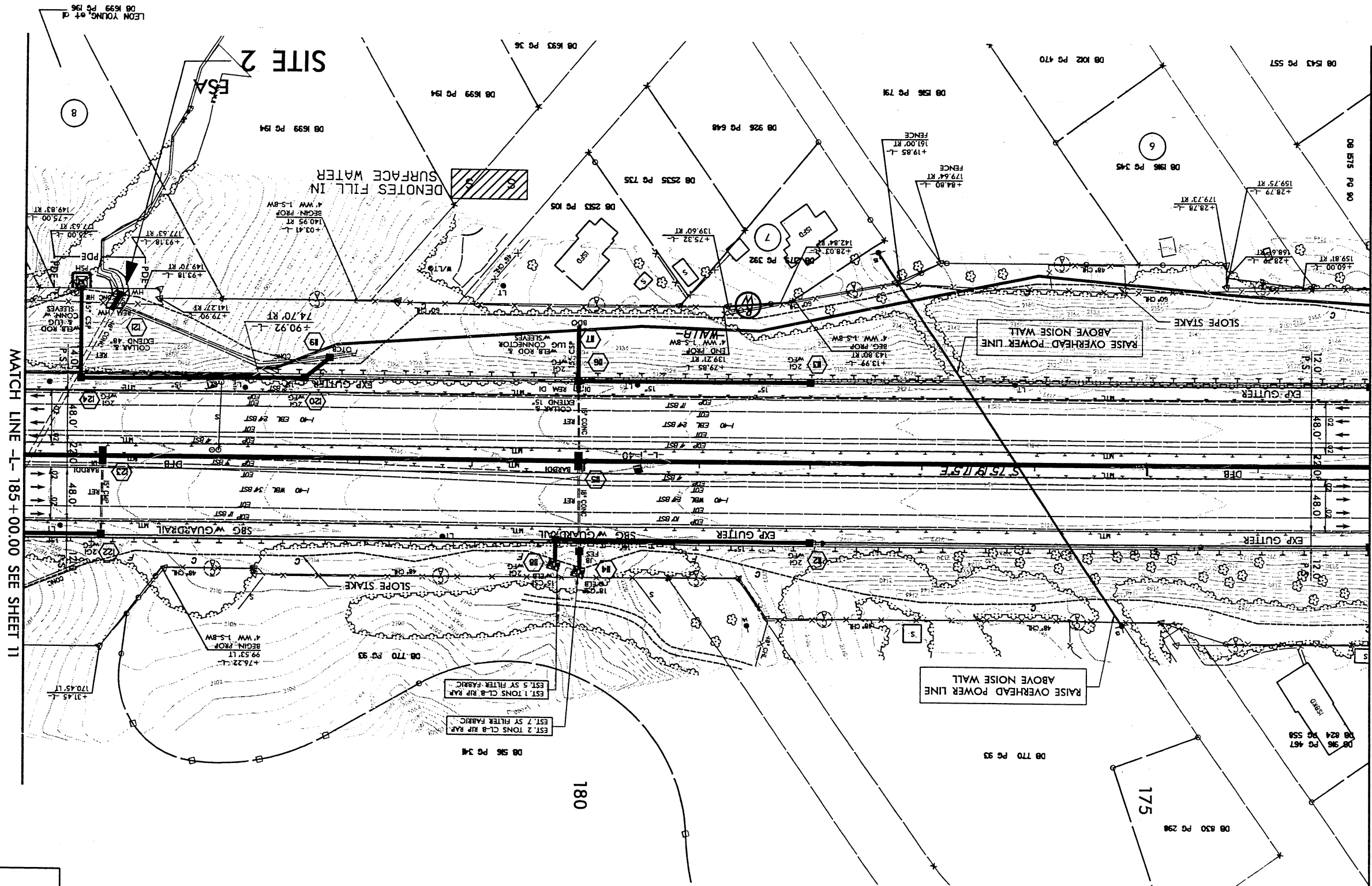
SEE SHEET 20 FOR L-PROFILE
 SEE SHEETS 20 & 21 FOR 140WBL- PROFILE
 SEE SHEET 25 FOR 140WBL- PROFILE

CURVE DATA FOR -L-
 P1 STA 160+67.62
 Δ = 459' 23.0" (RT)
 D = 0' 28" 38.9"
 L = 1045.0'
 T = 522.85'
 R = 12000.00'
 S₀ = NC

ENVIRONMENTALLY SENSITIVE AREA (ESA)

DOUBLE FACE BARRIER (DFB)
 SINGLE FACE BARRIER (SFB)

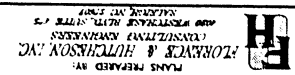

SEE SHEETS 19 & 20 FOR L-PROFILE



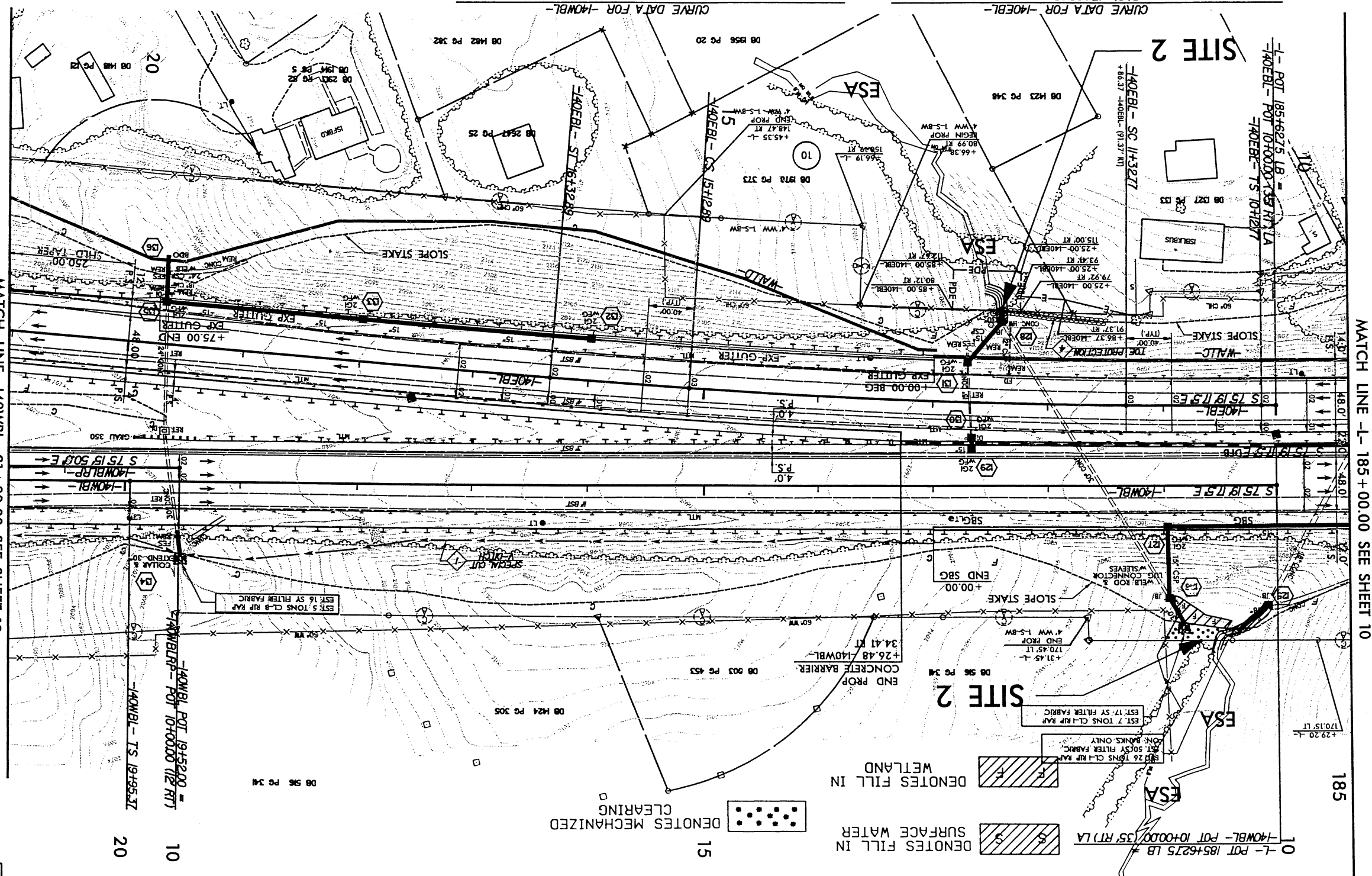
MATCH LINE -L- 173 + 00.00 SEE SHEET 9

MATCH LINE -L- 185 + 00.00 SEE SHEET 11



PROJECT REFERENCE NO. 1-4401		 <p>FLORENCE & HUTCHINSON, INC. ENGINEERS AND ARCHITECTS CONSULTING ENGINEERS AND ARCHITECTS 1000 W. HARRIS AVE. FLORENCE, SC 29502</p>
SHEET NO. 10		
ROADWAY DESIGN ENGINEER		 <p>INDIOR & NUNN, INC. ENGINEERS AND ARCHITECTS CONSULTING ENGINEERS AND ARCHITECTS 1000 W. HARRIS AVE. FLORENCE, SC 29502</p>
HYDRAULICS DESIGN ENGINEER		
DO NOT USE FOR CONSTRUCTION		<p>PRELIMINARY PLANS</p>

ENGLISH



ESA
 ENVIRONMENTALLY SENSITIVE AREA (ESA)
 DOUBLE FACE BARRIER (DFB)
 SINGLE FACE BARRIER (SFB)

CURVE DATA FOR -140WBL-
 P1a Sta 13+22.89 Δ = 0.32 (RT) θ = 3.24 10.8 (RT) Ls = 0.57 42.9 T = 190.12 L = 380.12 R = 6400.00 S₀ = 0.03
 P1a Sta 15+52.89 Δ = 5.58 0.59 θ = 1.39 33.8 (LT) Ls = 2.23 14.4 T = 287.44 L = 572.16 R = 2400.00 S₀ = 0.06
 P1a Sta 21+82.81 Δ = 1.39 33.8 (LT) θ = 2.51 53.2 Ls = 2.40 T = 160.02 L = 313.52 R = 1668.4 S₀ = 0.03
 P1a Sta 23+28.89 Δ = 5.58 0.59 θ = 1.39 33.8 (LT) Ls = 2.23 14.4 T = 287.44 L = 572.16 R = 2400.00 S₀ = 0.06

MATCH LINE -140WBL- 21 + 00.00 SEE SHEET 12

MATCH LINE -L- 185 + 00.00 SEE SHEET 10

0 -L- POT 185+627.5 LB =
 -140WBL- POT 10+000.0 (35' RT) LA
 185
 20
 10
 15
 DENOTES FILL IN SURFACE WATER
 DENOTES FILL IN WETLAND
 DENOTES MECHANIZED CLEARING

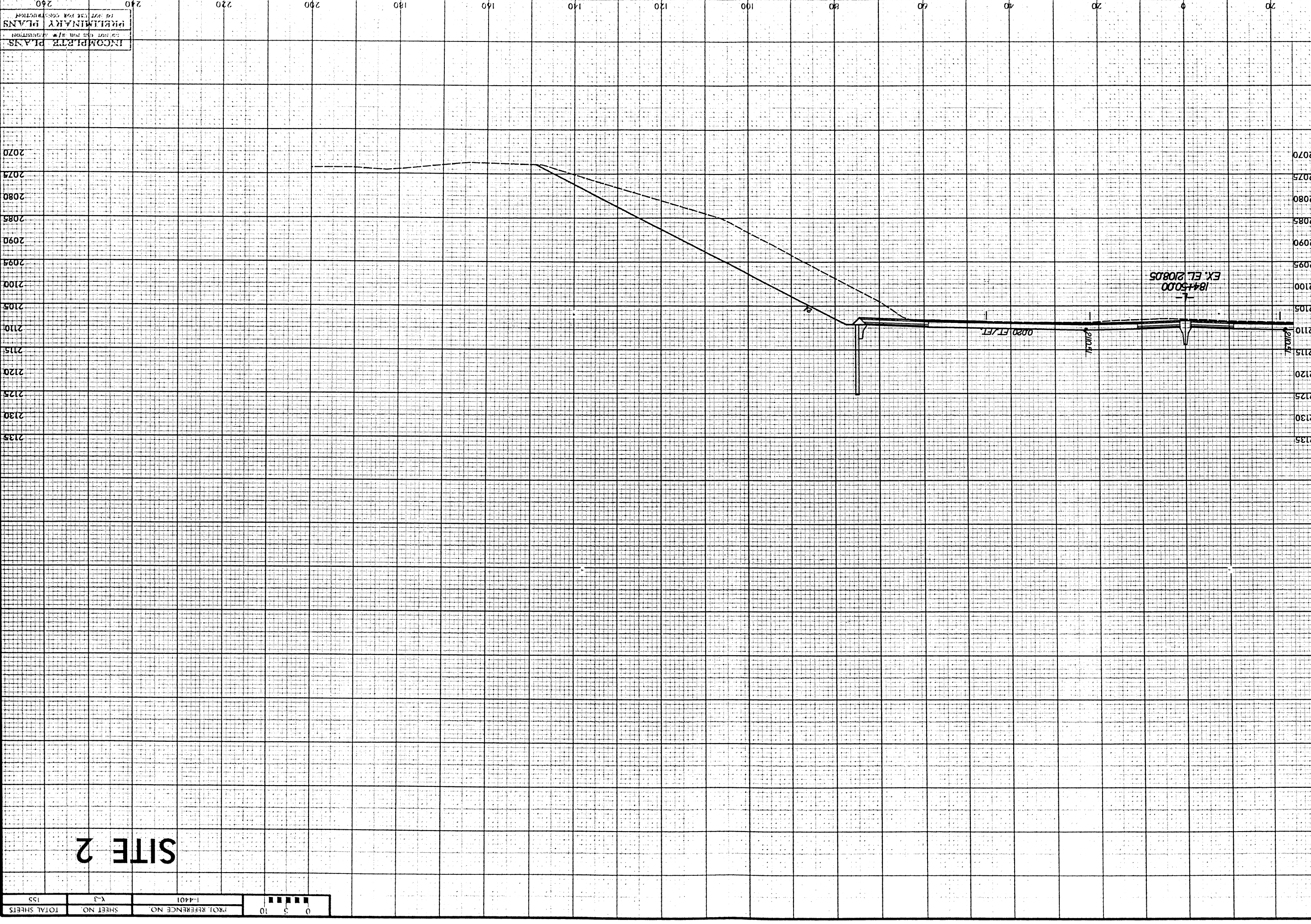


PROJECT REFERENCE NO.	1-4401
SHEET NO.	11
REV SHEET NO.	
ROADWAY DESIGN	
HYDRAULICS DESIGN	
ENGINEER	
HARRISON & HARRISON, INC.	
PLANS PREPARED BY	
HARRISON & HARRISON, INC.	
LANDSCAPE ARCHITECTS	
REGISTERED PROFESSIONAL ENGINEERS	
CLASSIFICATION: 1100	
SCALE: AS SHOWN	
DATE: 03/25/08	
PROJECT NO. 11	
SHEET NO. 11	
DO NOT USE FOR CONSTRUCTION	
PRELIMINARY PLANS	

ENGLISH

SEE SHEET 20 FOR L-PROFILE
 SEE SHEETS 20 & 21 FOR MABEL-PROFILE
 SEE SHEET 25 FOR MABEL-PROFILE

DATE: 09/23/05
TIME: 02:55:08 PM
P:\4401\hudson\civil\pexkus\wp\11\PERMIT\SP1.dwg



INCOMPLETE PLANS
FOR THE PERMIT APPLICATION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
240 220 200 180 160 140 120 100 80 60 40 20 0 20

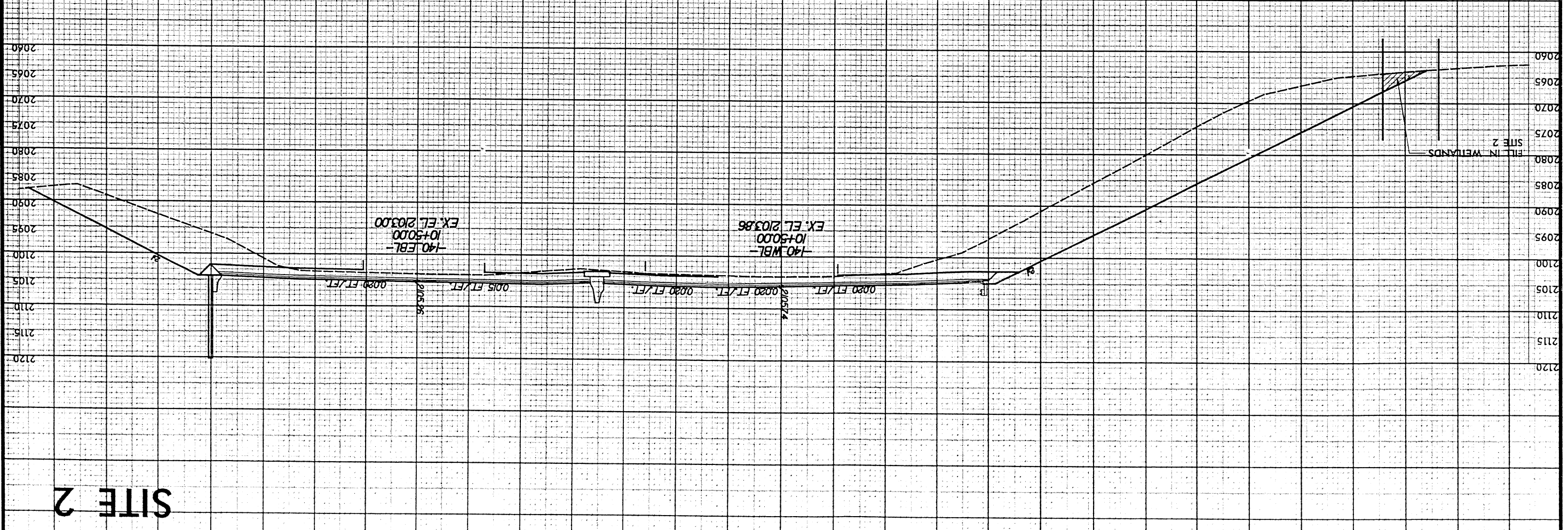
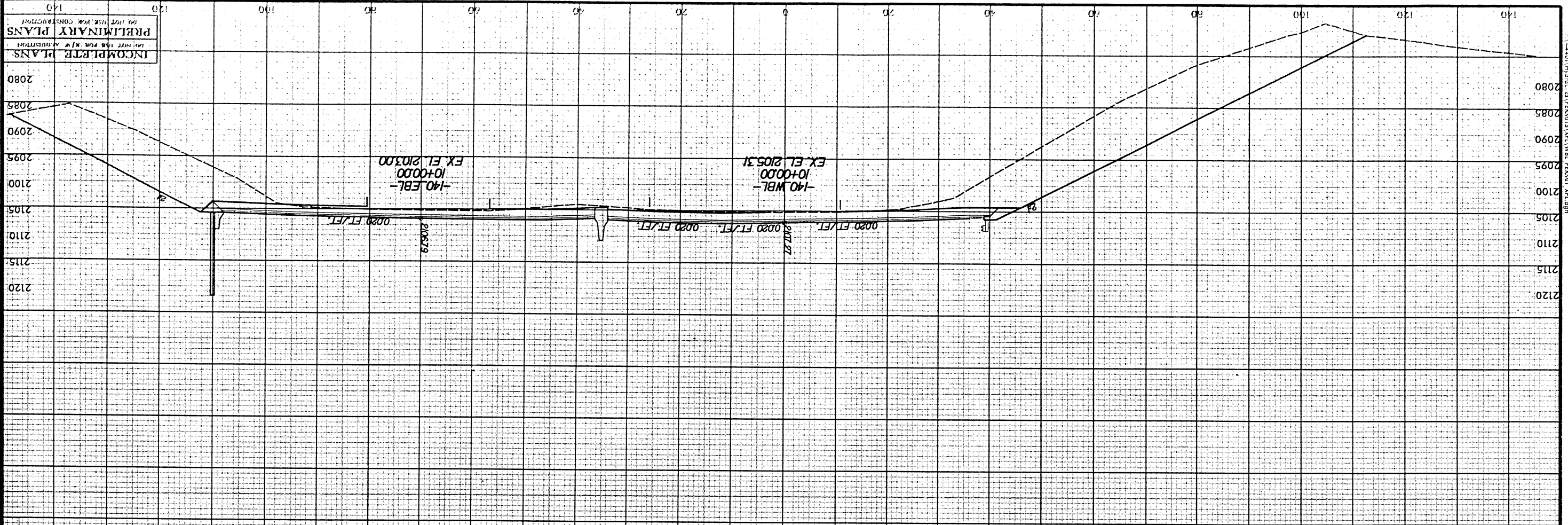
2070
2075
2080
2085
2090
2095
2100
2105
2110
2115
2120
2125
2130
2135

SITE 2

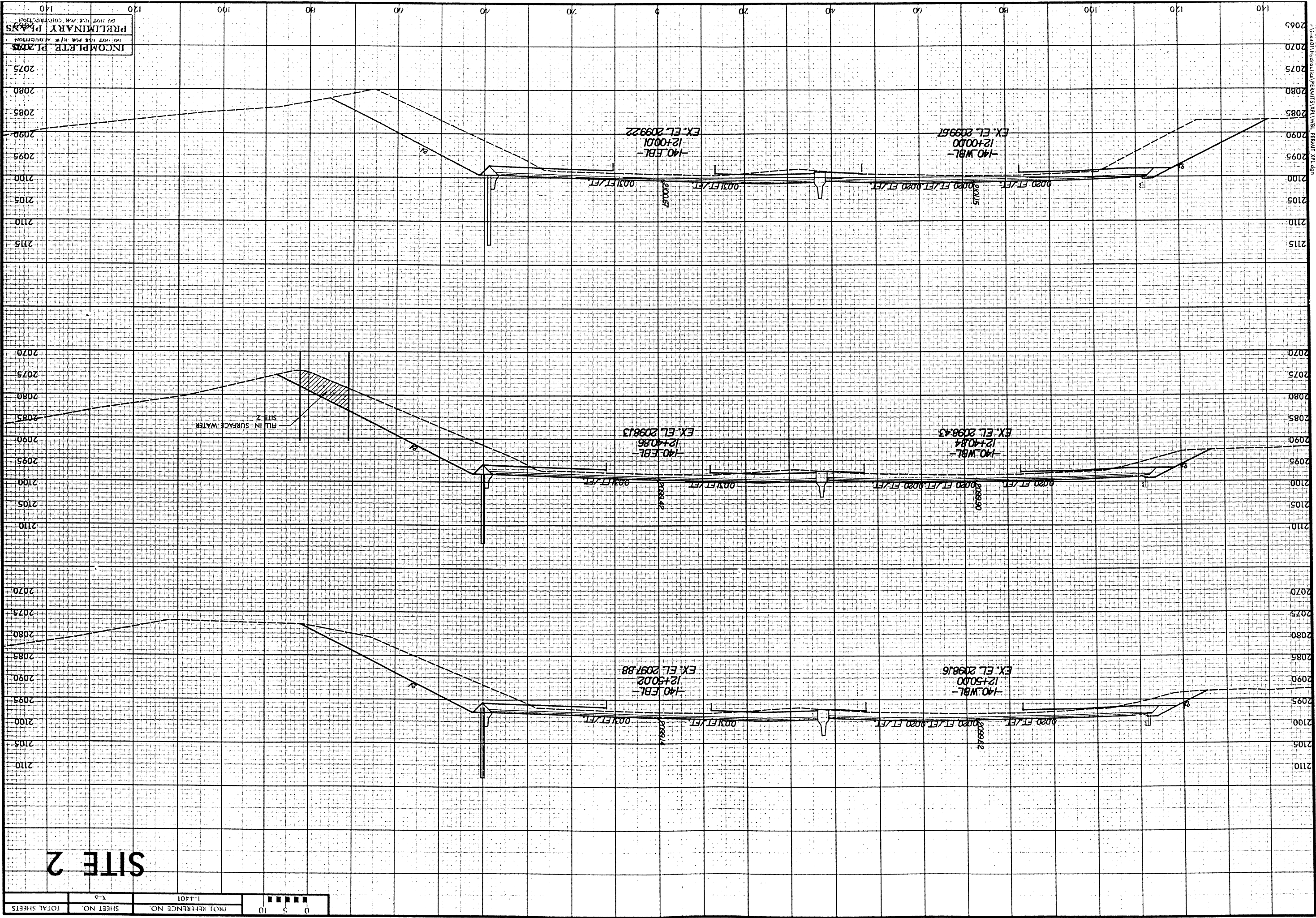
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PROJ. REFERENCE NO. 1-4401
SHEET NO. Y-3
TOTAL SHEETS 155

INCOMPLETE PLANS
 PRELIMINARY PLANS
 GO NOT USE FOR CONSTRUCTION

DATE: 08-18-2018
 TIME: 02:55:28 PM
 C:\Users\jw\OneDrive\Documents\PROJECTS\WEL\WEL_Plan01.dwg



SITE 2



DATE 03/19/2005
 TIME 02:35:42 PM
 C:\A\01\HYDRO\PLAN\REBAR\REBAR_XPL.dwg

INCOMPLETE PLANS
 PRELIMINARY PLANS
 NOT FOR CONSTRUCTION

2075
2080
2085
2090
2095
2100
2105
2110

2070
2075
2080
2085
2090
2095
2100
2105
2110

2070
2075
2080
2085
2090
2095
2100
2105
2110

140 150 160 170

140 150 160 170

140 150 160 170

140 150 160 170

140 150 160 170

140 150 160 170

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140 150 160 170

140 150 160 170

140 150 160 170

140 150 160 170

140 150 160 170

140 150 160 170

SITE 2

PROJ REFERENCE NO. 1-4401
 SHEET NO. 9-9
 TOTAL SHEETS

0 5 10

CONVENTIONAL PLAN SHEET SYMBOLS

PROJECT REFERENCE NO. 1-1401
 SHEET NO. 1-B

PLANS PREPARED BY
INTEGRITY

PLANS CHECKED BY
FLORENCE & HUTCHINSON, INC.
 (TRANSPORTATION DEPARTMENT)
 1000 W. COLLETT ST. SUITE 100
 RALEIGH, NC 27601

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin
- Property Corner
- Property Monument
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing High Quality Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or UG Tank Cap
- Sign
- Wall
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- River Basin Buffer
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge
- RR Signal Milepost
- Switch
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line
- Proposed Temporary Construction Easement
- Proposed Temporary Drainage Easement
- Proposed Permanent Drainage Easement
- Proposed Permanent Utility Easement

ROADS AND RELATED FEATURES:

- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Wheel Chair Ramp
- Curb Cut for Future Wheel Chair Ramp
- Existing Metal Guardrail
- Proposed Guardrail
- Proposed Cable Guiderrail
- Proposed Cable Guiderrail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Vineyard
- Orchard
- Woods Line
- Hedge
- Single Shrub
- Single Tree

EXISTING STRUCTURES:

- MAJOR: Bridge, Tunnel or Box Culvert
- MINOR: Bridge Wing Wall, Head Wall and End Wall
- Head and End Wall
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB
- Paved Ditch Gutter
- Storm Sewer Manhole
- Storm Sewer

UTILITIES:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- UG Power Cable Hand Hole
- H-Frame Pole
- Recorded UG Power Line
- Designated UG Power Line (S.U.E.*)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Booth
- Telephone Pedestal
- Telephone Cell Tower
- UG Telephone Cable Hand Hole
- Recorded UG Telephone Cable
- Designated UG Telephone Cable (S.U.E.*)
- Recorded UG Telephone Conduit
- Designated UG Telephone Conduit (S.U.E.*)
- Recorded UG Fiber Optics Cable
- Designated UG Fiber Optics Cable (S.U.E.*)

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- UG Sanitary Sewer Line
- Above Ground Sanitary Sewer
- Recorded SS Forced Main Line
- Designated SS Forced Main Line (S.U.E.*)

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown UG Line
- UG Tank: Water, Gas, Oil
- AG Tank: Water, Gas, Oil
- UG Test Hole (S.U.E.*)
- Abandoned According to Utility Records
- End of Information

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- Recorded UG Water Line
- Designated UG Water Line (S.U.E.*)
- Above Ground Water Line

TV:

- TV Satellite Dish
- TV Pedestal
- TV Tower
- UG TV Cable Hand Hole
- Recorded UG TV Cable
- Designated UG TV Cable (S.U.E.*)
- Gas Valve
- Gas Meter
- Recorded UG Gas Line
- Designated UG Gas Line (S.U.E.*)
- Above Ground Gas Line

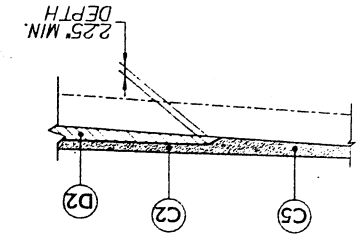
GAS:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- UG Sanitary Sewer Line
- Above Ground Sanitary Sewer
- Recorded SS Forced Main Line
- Designated SS Forced Main Line (S.U.E.*)

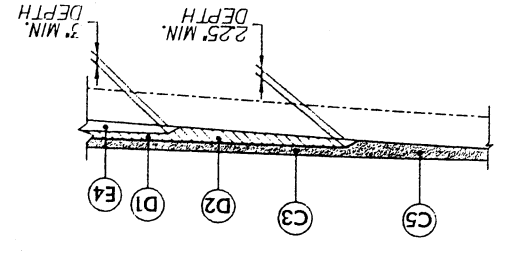
PAVEMENT SCHEDULE

ITEM	DESCRIPTION
(A1)	14" Portland Cement Concrete Pavement Through Lanes (With Dowels)
(A2)	14" Portland Cement Concrete Pavement Through Lanes (WO Dowels)
(C)	Prop. Approx 1.5" Asphalt Concrete Surface Course, Type S9.5B, at an Average Rate of 168 lbs. Per sq. yard.
(C1)	Prop. Approx 3.0" Asphalt Concrete Surface Course, Type S9.5C, at an Average Rate of 168 lbs. Per sq. yard in each of two layers.
(C2)	Prop. Approx 2.0" Asphalt Concrete Surface Course, Type S12.5D, at an Average Rate of 224 lbs. Per sq. yard.
(C3)	Prop. Approx 4.0" Asphalt Concrete Surface Course, Type S12.5D, at an Average Rate of 224 lbs. Per sq. yard in each of two layers.
(C4)	Prop. Var. Depth Asphalt Concrete Surface Course, Type S9.5, at an Average Rate of 112 lbs. Per sq. yard Per 1" Depth, to be placed in layers not to exceed 1.5" in depth.
(C5)	Prop. Var. Depth Asphalt Concrete Surface Course, Type S12.5, at an Average Rate of 112 lbs. Per sq. yard Per 1" Depth, to be placed in layers not to exceed 2.25" in depth.
(D)	Prop. Approx 4.0" Asphalt Concrete Intermediate Course, Type 119.0C, at an Average Rate of 456 lbs. Per sq. yard.
(D1)	Prop. Approx 4.0" Asphalt Concrete Intermediate Course, Type 119.0D, at an Average Rate of 456 lbs. Per sq. yard.
(D2)	Prop. Var. Depth Asphalt Concrete Intermediate Course, Type 119.0, at an Average Rate of 114 lbs. Per sq. yard Per 1" Depth, to be placed in layers not less than 2.25" or greater than 4.0" in depth.
(E)	Prop. Approx 3.0" Asphalt Concrete Base Course, Type B25.0B, at an Average Rate of 342 lbs. Per sq. yard.
(E1)	Prop. Approx 7.0" Asphalt Concrete Base Course, Type B25.0B, at an Average Rate of 399 lbs. Per sq. yard in each of two layers.
(E2)	Prop. Approx 12.0" Asphalt Concrete Base Course, Type B25.0C, at an Average Rate of 456 lbs. Per sq. yard in each of three layers.
(E3)	Prop. Approx 16.5" Asphalt Concrete Base Course, Type B25.0C, at an Average Rate of 627 lbs. Per sq. yard in each of three layers.
(E4)	Prop. Var. Depth Asphalt Concrete Base Course, Type B25.0, at an Average Rate of 114 lbs. Per sq. yard Per 1" Depth, to be placed in layers not less than 3" or greater than 5.5" in depth.
(J)	Prop. Var. Depth Aggregate Base Course
(R1)	Double Face Conc. Barrier (NCDOT Std. 854.02)
(R2)	Shoulder Berm Gutter
(R3)	Expressway Gutter
(R4)	2'-6" Concrete Curb & Gutter
(R5)	Single Face Conc. Barrier
(T)	Earth Material
(U)	Existing Pavement
(V)	MSE Retaining Wall
(W)	Var. Depth Asphalt Pavement
(W1)	Var. Depth Asphalt Pavement
(W2)	Var. Depth Asphalt Pavement
(Y)	3.0" Milling
(Y1)	4.5" Milling

WEDGING DETAIL (W)

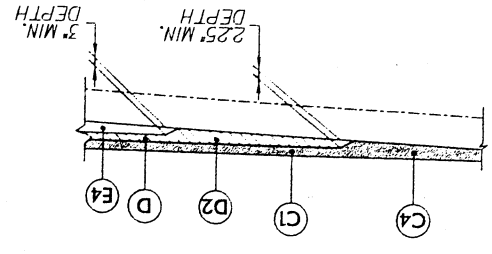


WEDGING DETAIL (W1)

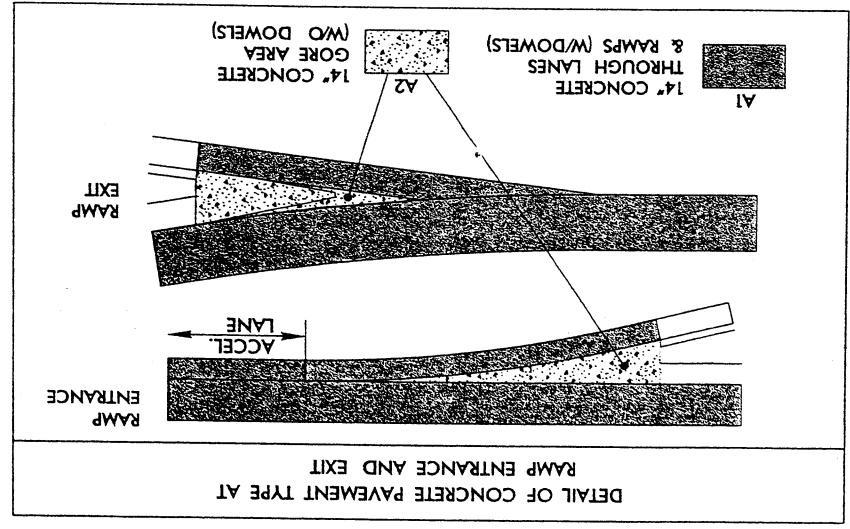


USE IN CONJUNCTION WITH TYPICAL SECTIONS No.4,5,6 & 7

WEDGING DETAIL (W2)

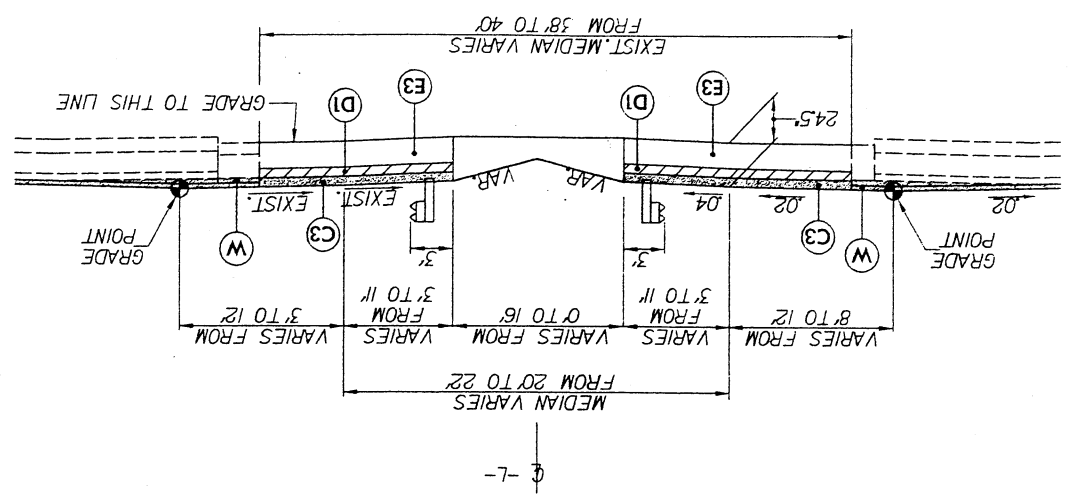


USE IN CONJUNCTION WITH TYPICAL SECTIONS No.10 & 12



PROJECT REFERENCE NO. 1-4401		SHEET NO. 2	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
PLANS PREPARED BY: TAYLOR & MURPHY CONSULTING ENGINEERS 100 HERRING AVE., SUITE 400 CHARLOTTE, NC 28202			
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

TYPICAL SECTION NO. 1A



RESURFACING ONLY FROM -L- 95+50.00 TO -L- 97+00.86
 -L- 95+50.00 TO -L- 97+00.86
 FROM 38' TO 40'

WESTBOUND LANES

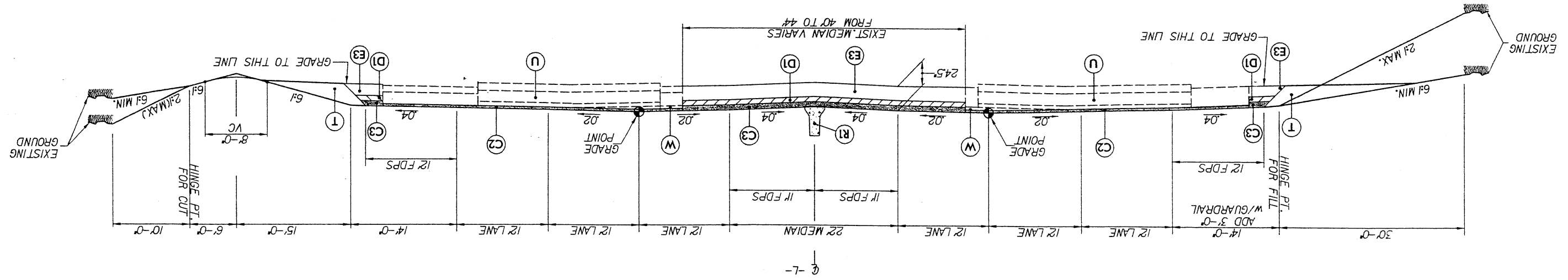
-L- 95+50.00 TO -L- 112+00.00

TYPICAL SECTION NO. 1

MEDIAN WIDTH VARIES FROM 95+50.00 TO 97+00.86 (SEE TYPICAL SECTION NO. 1A)

EASTBOUND LANES

-L- 95+50.00 TO -L- 112+00.00



PAVEMENT SCHEDULE

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
A1	14" PCC w Dowels	C4	Var. depth S9.5	E	3.0" B25.0B	J	Var. depth ABC	R5	Single Face Conc. Barrier	W	Var. Depth Asphalt Pavement	Y	3.0" Milling
C	1.5" S9.5B	C5	Var. depth S12.5	E1	7.0" B25.0B	R1	Double Face Conc. Barrier	T	Earth Material	W1	Var. Depth Asphalt Pavement	Y1	4.5" Milling
C1	3.0" S9.5C	D	4.0" 119.0C	E2	12.0" B25.0C	R2	Shoulder Berm Gutter	U	Existing Pavement	W2	Var. Depth Asphalt Pavement		
C2	2.0" S12.5D	D1	4.0" 119.0D	E3	16.5" B25.0C	R3	Expressway Gutter						
C3	4.0" S12.5D	D2	Var. depth 119.0	E4	Var. depth B25.0	R4	2'-6" Concrete Curb & Gutter						

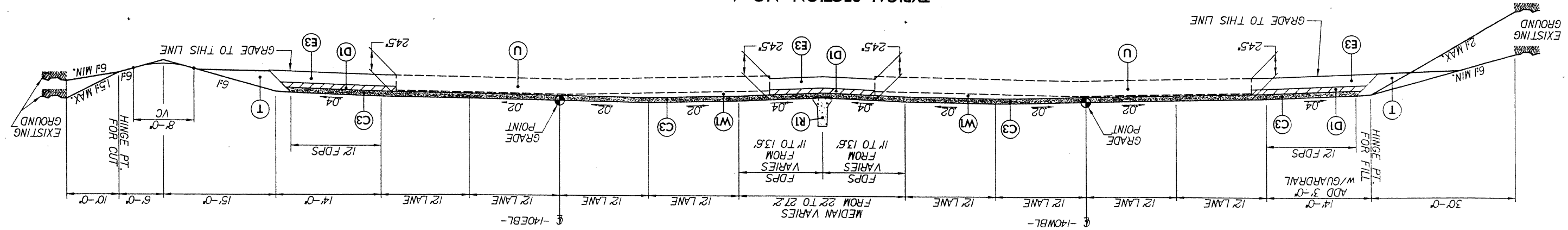
NOTES:
 ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
 SHOULDER ROLLOVER NOT TO EXCEED 0.06 (TYP).

Taylor & Murphy
 PLANS PREPARED BY:
 FLORENCE & JEFFREY
 LANDSCAPE ARCHITECTS
 100 WESTINGHOUSE AVENUE, SUITE 200
 WESTFIELD, NJ 07090

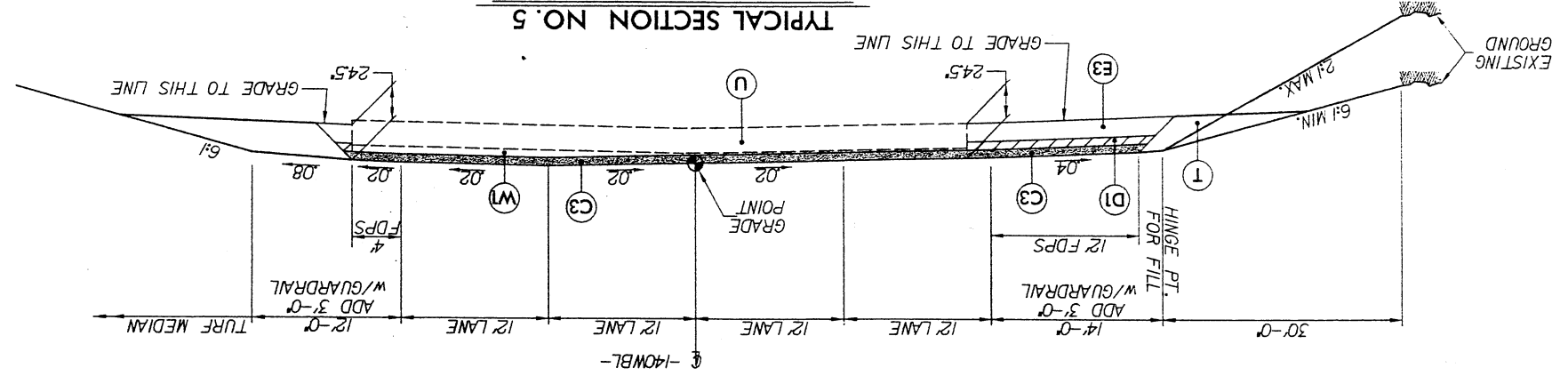
PROJECT REFERENCE NO. I-4401
 SHEET NO. 2-A

PAVEMENT DESIGN ENGINEER
 ROADWAY DESIGN ENGINEER

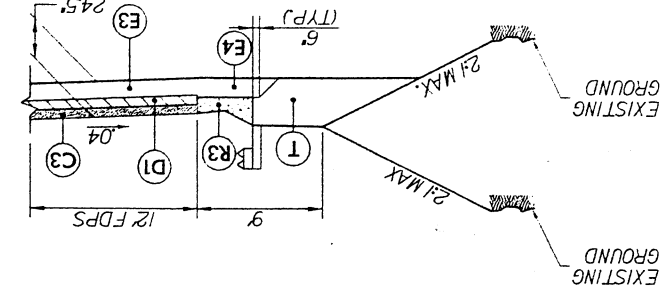
DO NOT USE FOR CONSTRUCTION
PRELIMINARY PLANS



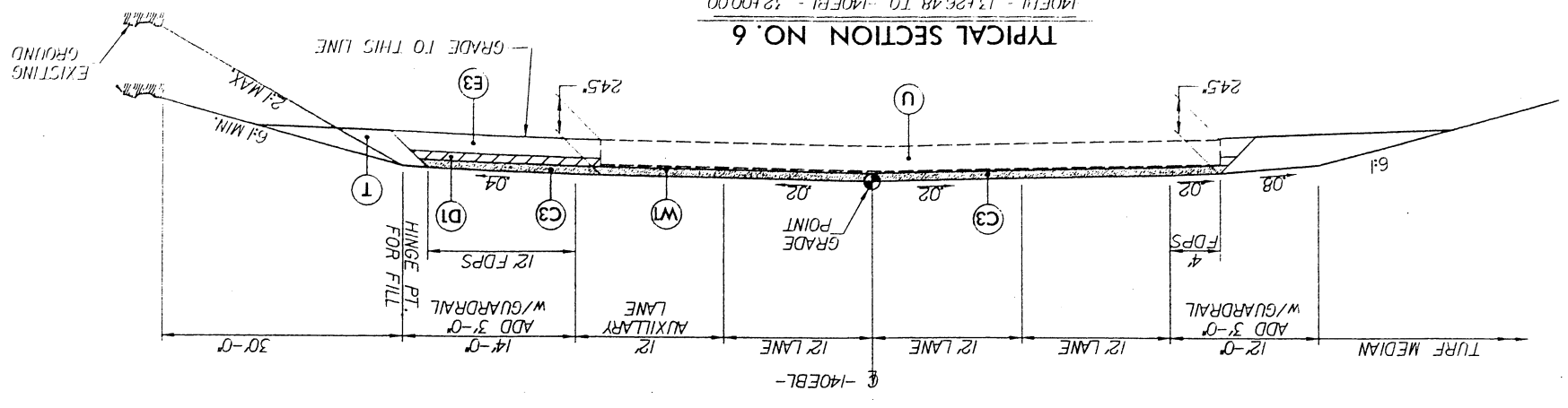
TYPICAL SECTION NO. 4
 -140WBL- 10+00.00 TO -140WBL- 13+27.89
 -140EBL- 10+00.00 TO -140EBL- 13+26.48



TYPICAL SECTION NO. 5
 -140WBL- 13+27.89 TO -140WBL- 19+52.00



SHOULDER BERM GUTTER DETAIL
 -140WBL- 10+00.00 TO -140WBL- 12+50.00
 -140WBL- 26+50.00 TO -140WBL- 34+00.00



TYPICAL SECTION NO. 6
 -140EBL- 13+00.00 TO -140EBL- 19+75.00
 -140WBL- 13+00.00 TO -140WBL- 26+00.00

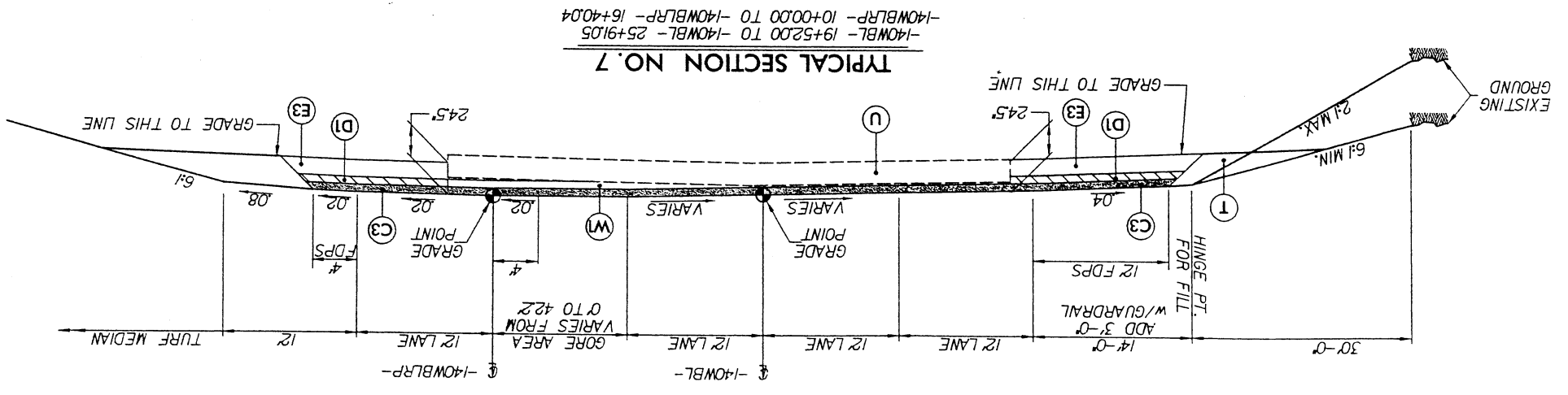
ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
A1	14" PCC w Dowels	C4	Var. depth 59.5	E	3.0" B25.0B	R5	Single Face Conc. Barrier	Y	3.0" Milling	W	Var. Depth Asphalt Pavement	Y	4.5" Milling		
C	1.5" S9.5B	C5	Var. depth S12.5	E1	7.0" B25.0B	R1	Double Face Conc. Barrier	T	Earth Material	W1	Var. Depth Asphalt Pavement	Y1	4.5" Milling		
C1	3.0" S9.5C	D	4.0" 119.0C	E2	12.0" B25.0C	R2	Shoulder Berm Gutter	U	Existing Pavement	W2	Var. Depth Asphalt Pavement				
C2	2.0" S12.5D	D1	4.0" 119.0D	E3	16.5" B25.0C	R3	Expressway Gutter								
C3	4.0" S12.5D	D2	Var. depth 119.0	E4	Var. depth B25.0	R4	2'-6" Concrete Curb & Gutter								

ITEM	DESCRIPTION	ITEM	DESCRIPTION
J	Var. depth ABC	W	Var. Depth Asphalt Pavement
K	Var. depth ABC	X	Var. Depth Asphalt Pavement
L	Var. depth ABC	Y	Var. Depth Asphalt Pavement
M	Var. depth ABC	Z	Var. Depth Asphalt Pavement

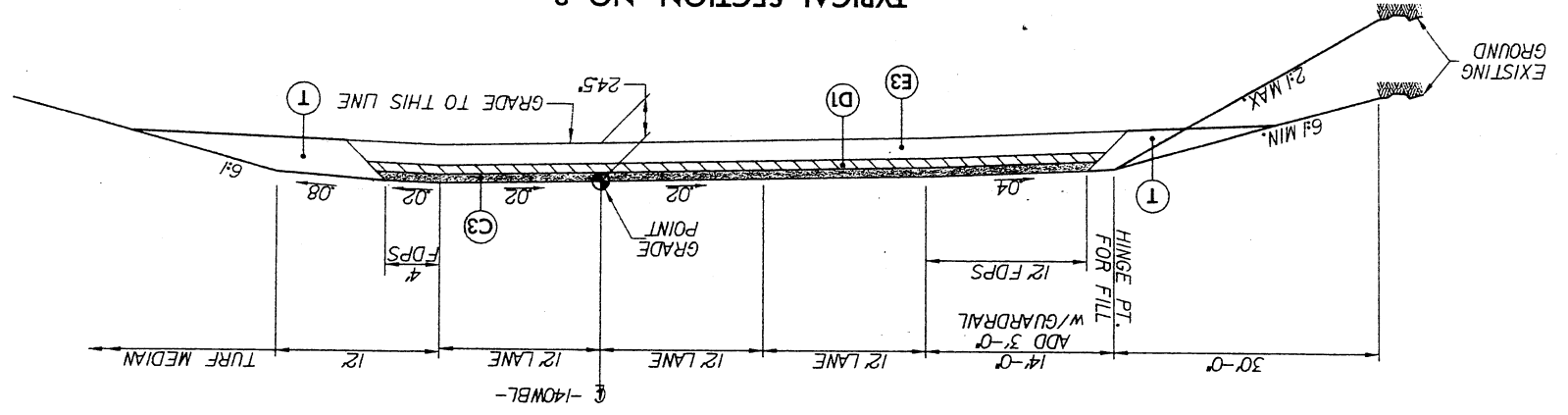
PROJECT REFERENCE NO.	1-4401
SHEET NO.	2-C
ROADWAY DESIGN ENGINEER	
PAVEMENT DESIGN ENGINEER	

TAYLOR & MATHY
 PLANS PREPARED BY:
 TAYLOR & MATHY, INC.
 155 WEST WASHINGTON STREET, SUITE 125
 CHICAGO, ILLINOIS 60604
 NOTES:
 ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
 SHOULDER ROLLOVER NOT TO EXCEED 0.06 (TYP).

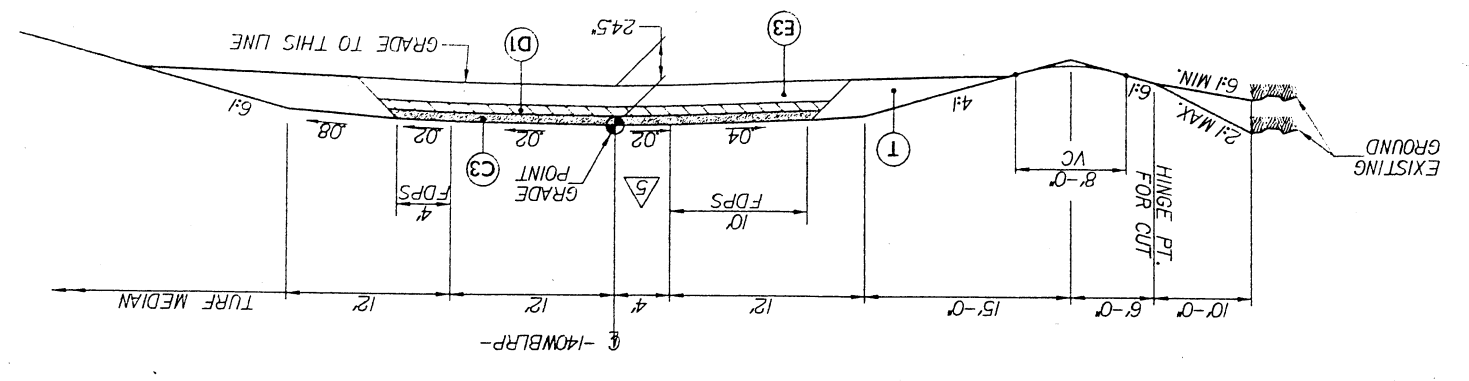
PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION



TYPICAL SECTION NO. 7
 -14QWBL- 19+52.00 TO -14QWBL- 25+91.05
 -14QWBLRP- 10+00.00 TO -14QWBLRP- 16+40.04



TYPICAL SECTION NO. 8
 -14QWBL- 25+91.05 TO -14QWBL- 34+00.00



TYPICAL SECTION NO. 9
 -14QWBLRP- 16+40.04 TO -14QWBLRP- 24+00.00

LANE VARIES FROM 24' TO 16'
 FROM 1780.00 TO 24100.00



PAVEMENT SCHEDULE

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
A1	14" PCC w Dowels	C4	Var. depth S9.5	E	3.0" B25.0B	J	Var. depth ABC	E1	7.0" B25.0B	R1	Double Face Conc. Barrier	T	Earth Material
C	1.5" S9.5B	C5	Var. depth S12.5	E2	4.0" 119.0C	R2	Shoulder Berm Gutter	U	Existing Pavement	W1	Var. Depth Asphalt Pavement	Y1	4.5" Milling
C1	3.0" S9.5C	D	4.0" 119.0C	E3	16.5" B25.0C	R3	Expressway Gutter	W2	Var. Depth Asphalt Pavement	Y2	3.0" Milling		
C2	2.0" S12.5D	D1	4.0" 119.0D	E4	Var. depth 119.0	R4	2'-6" Concrete Curb & Gutter						
C3	4.0" S12.5D	D2	Var. depth 119.0										

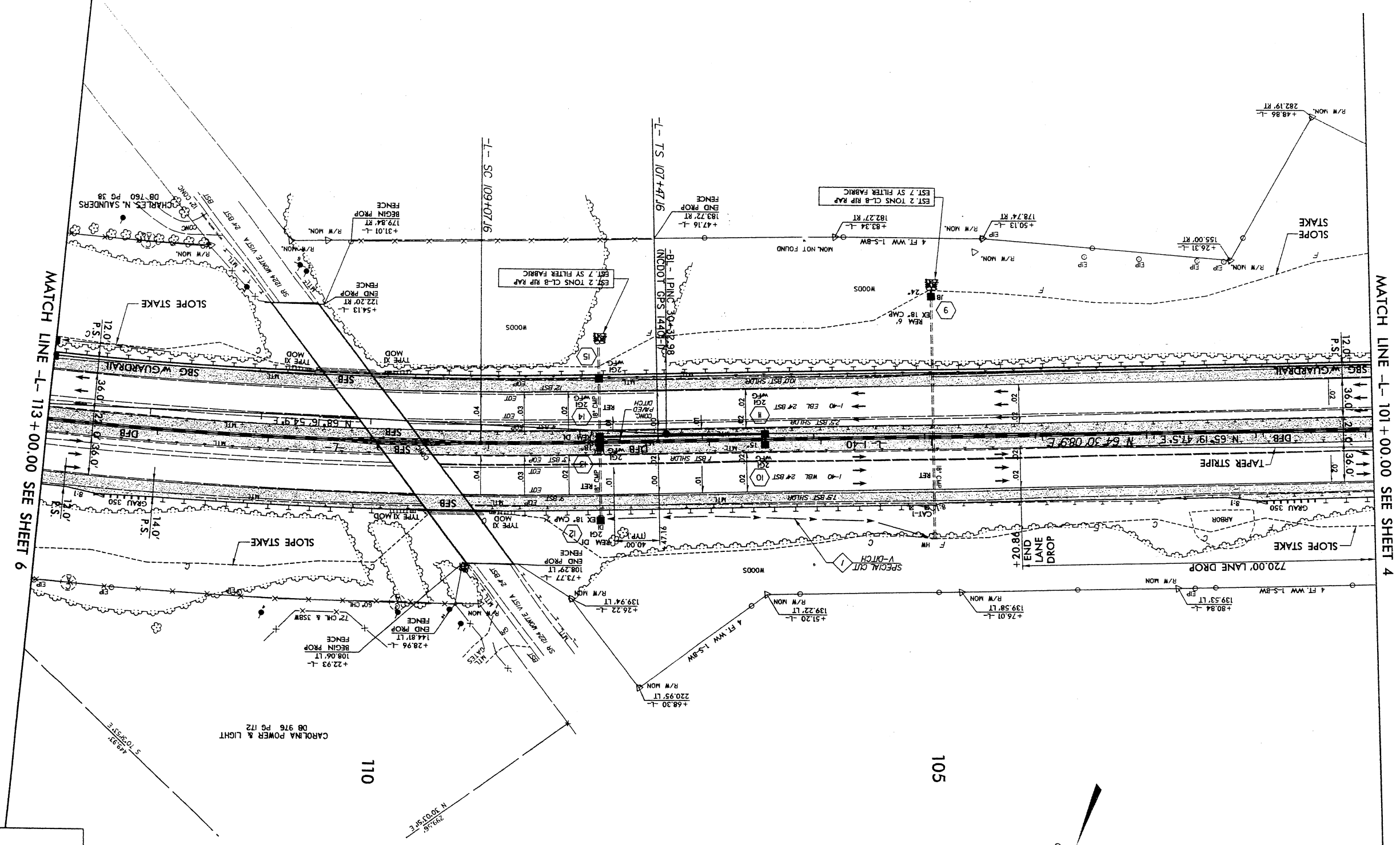
NOTES:
 ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
 SHOULDER ROLL-OVER NOT TO EXCEED 0.06 (TYP).

TINLOR & NURBY
 ENGINEERS & ARCHITECTS
 1401
 PROJECT REFERENCE NO.
 SHEET NO. 2-D
 ROADWAY DESIGN ENGINEER
 PAVEMENT DESIGN ENGINEER
 PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

CURVE DATA FOR -L-
 PIS Sta 108+53.83
 ΔS = 111.597'
 ΔE = 32.47115 (RT)
 Δ = 1.11597
 LS = 160.00'
 LT = 106.67'
 L = 2185.93'
 T = 1123.80'
 ST = 53.34'
 R = 3820.00'
 S_e = 0.04

DOUBLE FACE BARRIER (DFB) 
 SINGLE FACE BARRIER (SFB) 

SEE SHEET 14 FOR L- PROFILE
 SEE SHEET 2-R FOR DITCH DETAILS




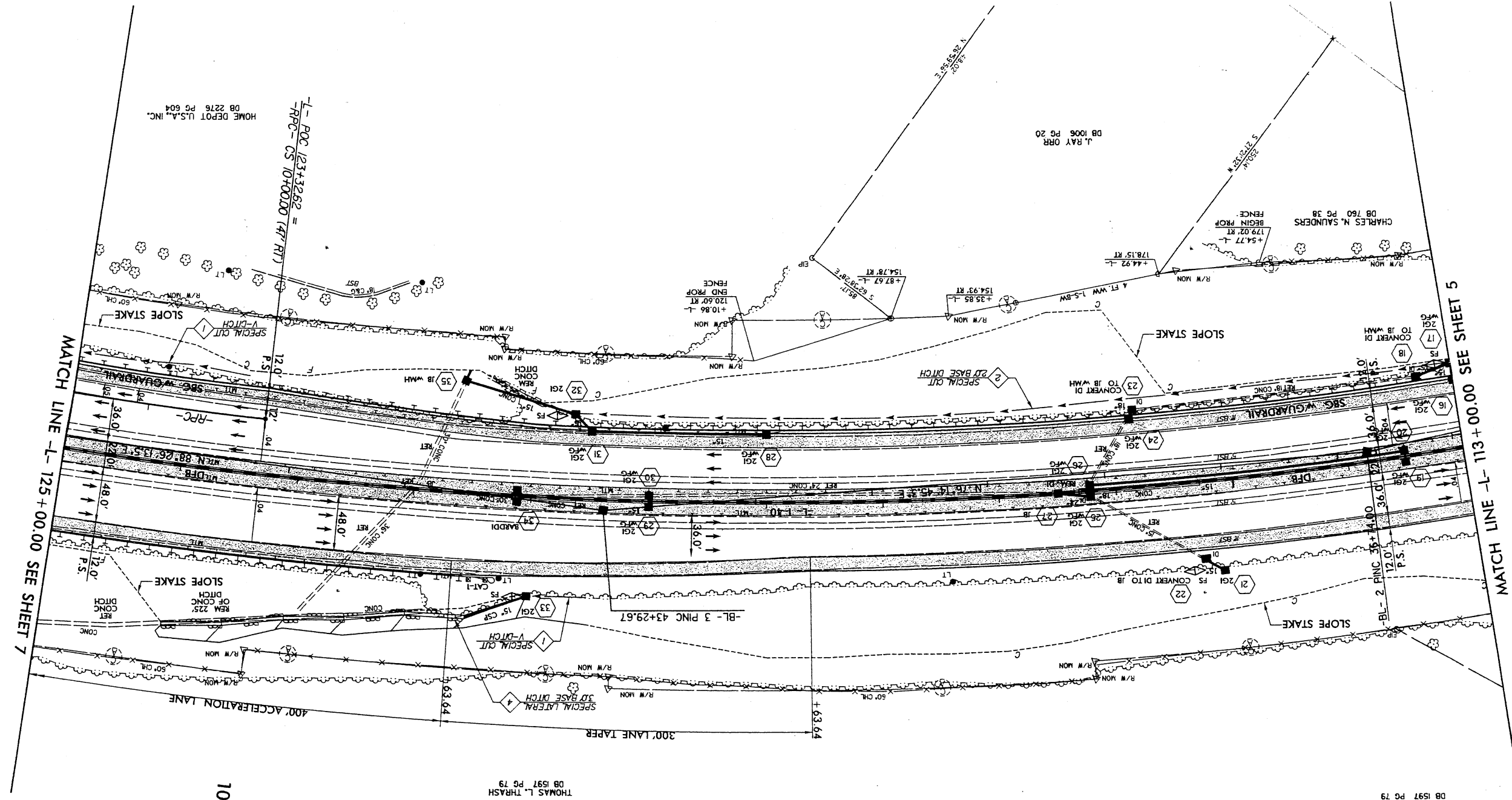
MATCH LINE -L- 113+00.00 SEE SHEET 6

MATCH LINE -L- 101+00.00 SEE SHEET 4



PROJECT REFERENCE NO. I-4401	
SHEET NO. 5	
ROADWAY DESIGN ENGINEER	
HYDRAULICS DESIGN ENGINEER	
DO NOT USE FOR CONSTRUCTION	
PRELIMINARY PLANS	

PLANS PREPARED BY
 TAYLOR & MURPHY
 PLANNING & HIGHWAY, INC.
 1100 WEST LITTLE ROCK AVENUE
 RICHMOND, VA 23220
 PHONE (804) 622-1100
 FAX (804) 622-1101



Curve Data	Station	PI	ST	LT	LS	Δ	OS	ES	PI
CURVE DATA FOR -L-	Sta 108+53.83	120+30.96	131+46.43	111.597'	160.00'	32.47' (116' RT)	111.597'	160.00'	120+30.96
	53.34'	3.82000'	123.80'	2185.93'	160.00'	106.67'	160.00'	129.596'	131+46.43
	50 = 0.04		57 = 53.34'						
CURVE DATA FOR -RPC-	Sta 114+84.21	14+84.21	11+09.8	131.056'	200.00'	3.00' (0.4')	131.056'	200.00'	11+09.8
	14.8421'	16.55' (36.7' RT)	89.12'	110.98'	284.21'	1.91000'	110.98'	284.21'	14+84.21
	11.07'		87.31'	112.54'	200.00'	56.421'	112.54'	200.00'	14+84.21

DOUBLE FACE BARRIER (DFB)

SINGLE FACE BARRIER (SFB)

SEE SHEET 15 FOR L- PROFILE

SEE SHEET 24 FOR RPC PROFILE

SEE SHEET 2 & 3 FOR DITCH DETAILS

MATCH LINE -L- 125 + 00.00 SEE SHEET 7

MATCH LINE -L- 113 + 00.00 SEE SHEET 5

10

THOMAS L. THRASH
DB 1597 PG 79

120

115

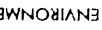


THOMAS L. THRASH
DB 1597 PG 79

PROJECT REFERENCE NO. 1-4401	
SHEET NO. 6	
ROADWAY DESIGN ENGINEER	
HYDRAULICS DESIGN ENGINEER	
DO NOT USE FOR CONSTRUCTION	
PRELIMINARY PLANS	

PLANS PREPARED BY
TAYLOR & MURPHY

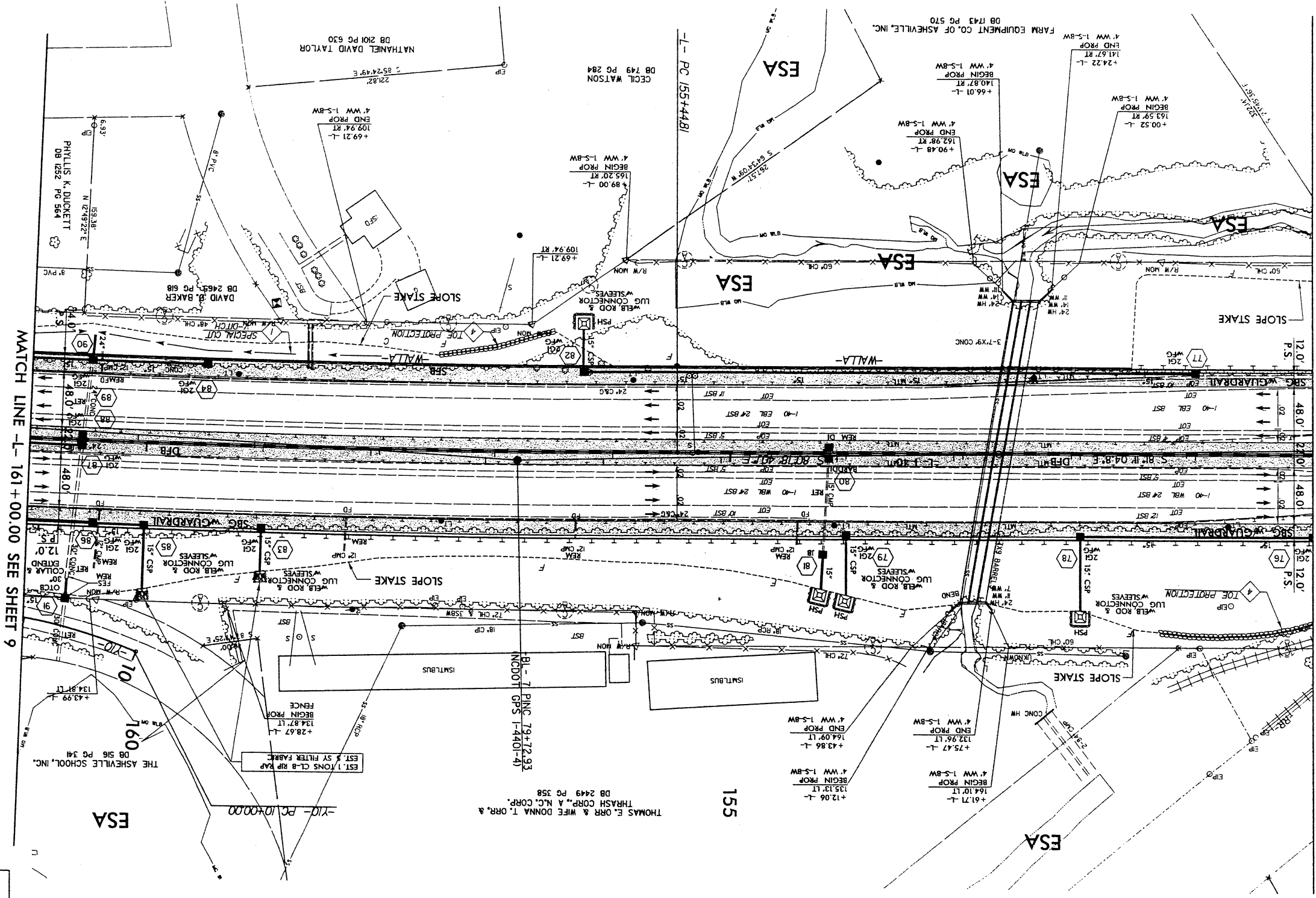
ENGINEERS AND ARCHITECTS
100 WEST 10TH STREET
DURHAM, N.C. 27701

SEE SHEETS 17 & 18 FOR L-1 PROFILE
SEE SHEET 2-A FOR UTCH DETAILS

ENVIRONMENTALLY SENSITIVE AREA (ESA) 
DOUBLE FACE BARRIER (DFB) 
SINGLE FACE BARRIER (SFB) 

CURVE DATA FOR -L-
 P1 STA 10+78.22
 Δ = 19.41 45.9 (LT)
 D = 12.43' 56.6"
 L = 154.69'
 T = 78.12'
 R = 450.00'
 S_a = EXIST.

CURVE DATA FOR -L-
 P1 STA 160+67.66
 Δ = 4.59 22.6 (RT)
 D = 0.23' 38.9"
 L = 104.502'
 T = 52.284'
 R = 1200.00'
 S_a = MC



MATCH LINE -L- 161+00.00 SEE SHEET 9

MATCH LINE -L- 150+00.00 SEE SHEET 7



PROJECT REFERENCE NO. 1-1401	
SHEET NO. 8	
ROADWAY DESIGN ENGINEER	
HYDRAULICS DESIGN ENGINEER	
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	

PLANS PREPARED BY:
TAYLOR & MURPHY
 ENGINEERS & ARCHITECTS, INC.
 1000 WEST MAIN STREET, SUITE 100
 ASHEVILLE, NORTH CAROLINA 28701
 PHONE: (828) 251-1111
 FAX: (828) 251-1112

THOMAS E. ORR & WIFE DONNA T. ORR, &
 THRASH CORP., A N.C. CORP.,
 DB 2449 PG 358

EST. 1 TONS CL-B RIP RAP
 EST. 5 SY FILTER FABRIC

THE ASHEVILLE SCHOOL, INC.,
 DB 516 PG 341

BL-7 PINC 79-72-93
 NCDOT GPS 1-4401-47

DAVID B. BAKER
 DB 2463 PG 618

PHYLLIS K. DUCKETT
 DB 252 PG 564

CECIL WATSON
 DB 749 PG 284

NATHANIEL DAVID TAYLOR
 DB 2101 PG 630

FARM EQUIPMENT CO. OF ASHEVILLE, INC.
 DB 1743 PG 570

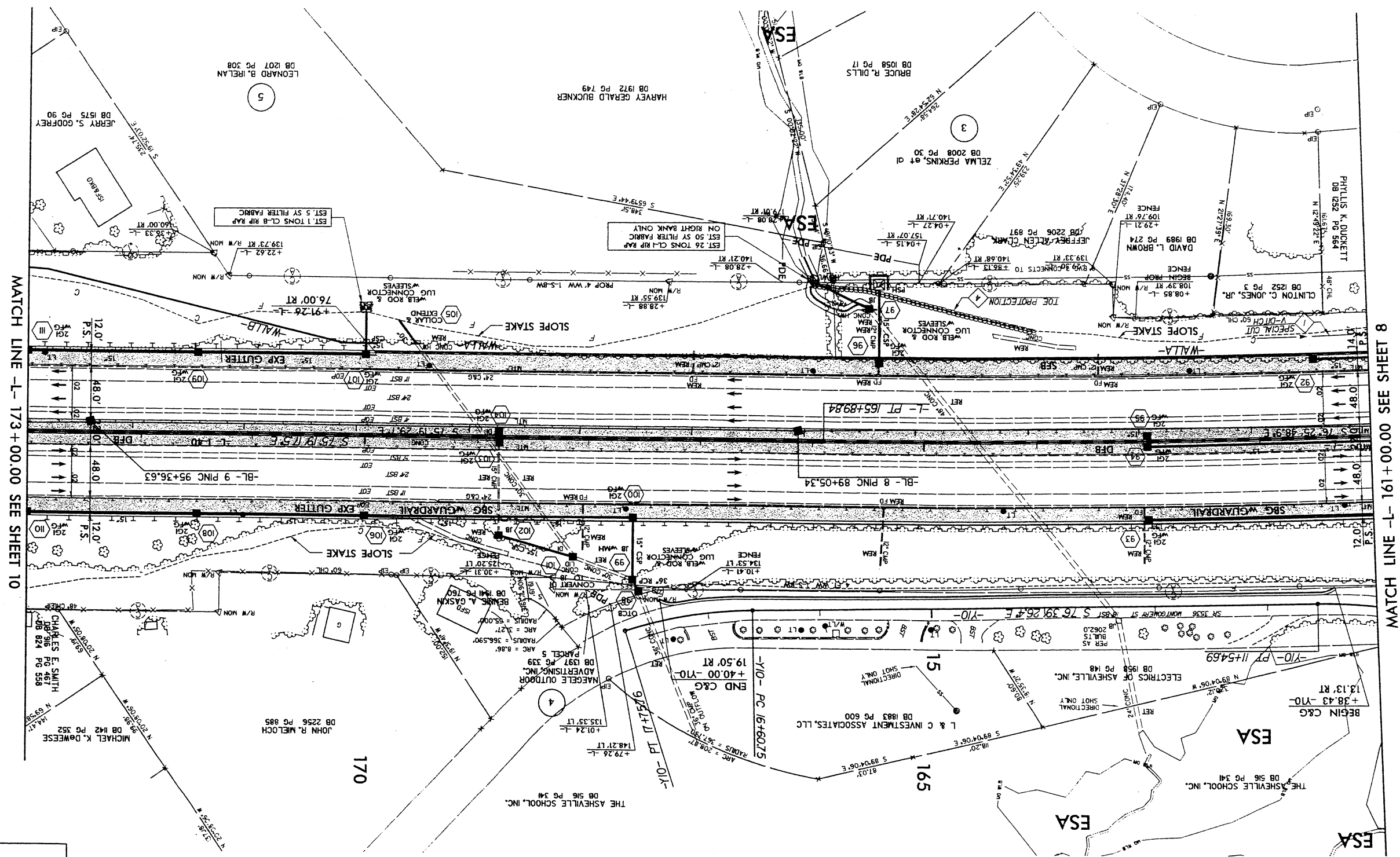
SEE SHEETS 18 & 19 FOR L- PROFILE
SEE SHEET 2 R FOR DITCH DETAILS

ENVIRONMENTALLY SENSITIVE AREA (ESA)
DOUBLE FACE BARRIER (DFB)
SINGLE FACE BARRIER (SFB)

CURVE DATA FOR -L-
 P1 Sta 160+67.66
 Δ = 4.59' 22.6" (LT)
 D = 0' 28' 38.9"
 L = 104.02'
 T = 52.84'
 R = 12000.00'
 S₀ = NC

CURVE DATA FOR -Y10-
 P1 Sta 10+78.12
 Δ = 19' 41' 45.9" (LT)
 D = 12' 43' 56.6"
 L = 154.69'
 T = 78.12'
 R = 450.00'
 S₀ = EXIST.

CURVE DATA FOR -Y10-
 P1 Sta 17+86.5
 Δ = 16' 28' 27.7" (LT)
 D = 14' 19' 26.2"
 L = 115.01'
 T = 57.91'
 R = 400.00'
 S₀ = EXIST.



PROJECT REFERENCE NO. I-4401	
SHEET NO. 9	
ROADWAY DESIGN ENGINEER	
HYDRAULICS DESIGN ENGINEER	
DO NOT USE FOR CONSTRUCTION	
PRELIMINARY PLANS	

PLANS PREPARED BY:
TAYLOR & NURPHY
 ENGINEERS & ARCHITECTS
 1000 W. LENOX AVENUE
 ASHEVILLE, NC 28701
 PHONE: 252-328-1111
 FAX: 252-328-1112

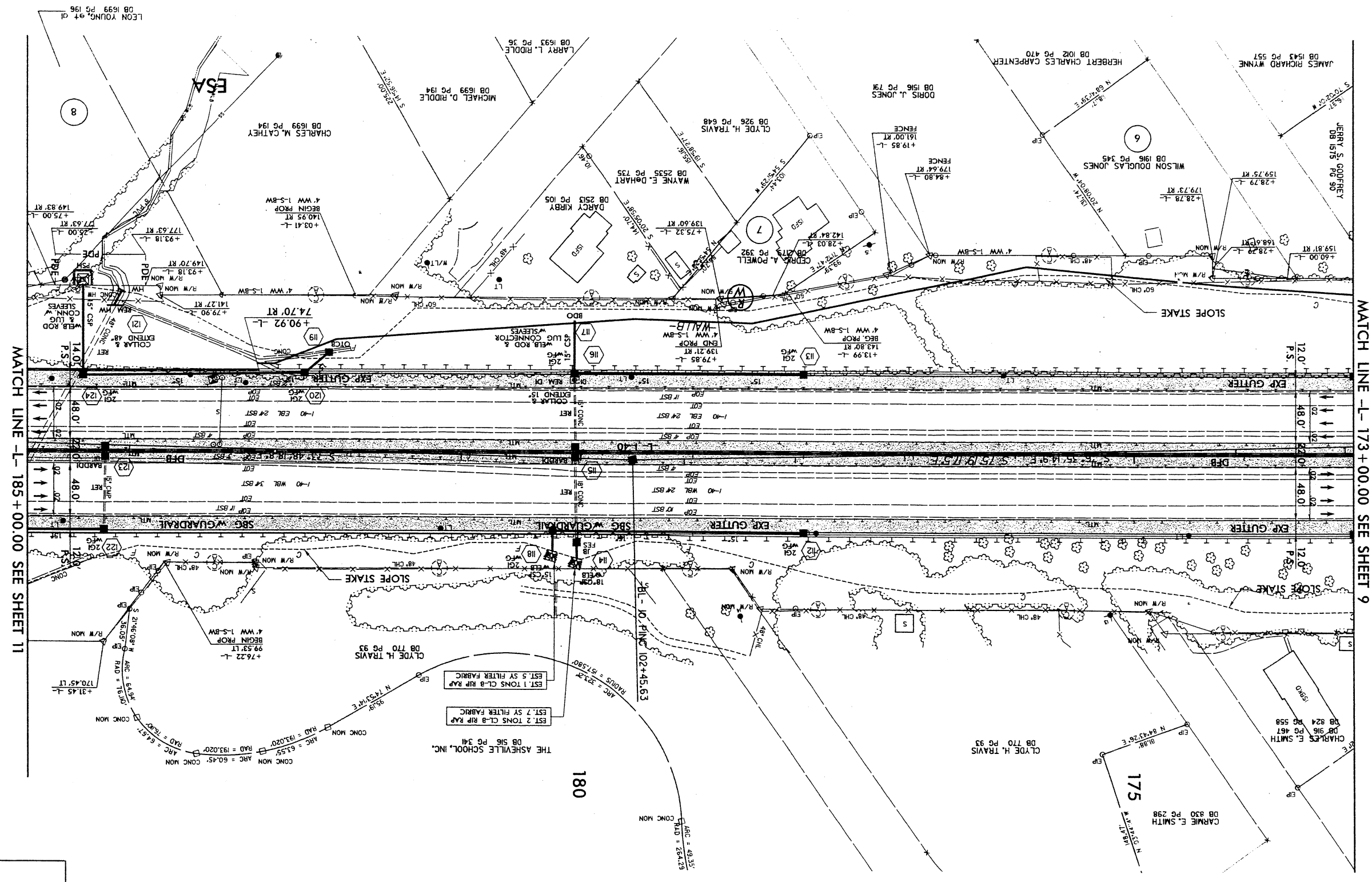
SEE SHEETS 1 & 20 FOR L. PROFILE
SEE SHEET 2 FOR DITCH DETAILS

ENVIRONMENTALLY SENSITIVE AREA (ESA)

DOUBLE FACE BARRIER (DFB)

SINGLE FACE BARRIER (SFB)

CURVE DATA FOR L-
PI STA 160+67.62
Δ = 4 59' 23.0" (RT)
D = 0' 28' 38.9"
L = 1045.04'
T = 522.85'
R = 1200.00'
SB = NC



MATCH LINE L-185+00.00 SEE SHEET 11

MATCH LINE L-173+00.00 SEE SHEET 9

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ROADWAY DESIGN
HYDRAULICS DESIGN
ENGINEER

PLANS PREPARED BY
STORREY & JOHNSON, INC.
100 WEST MAIN ST., SUITE 100
ASHEVILLE, NC 28701
PH: 252-328-1111

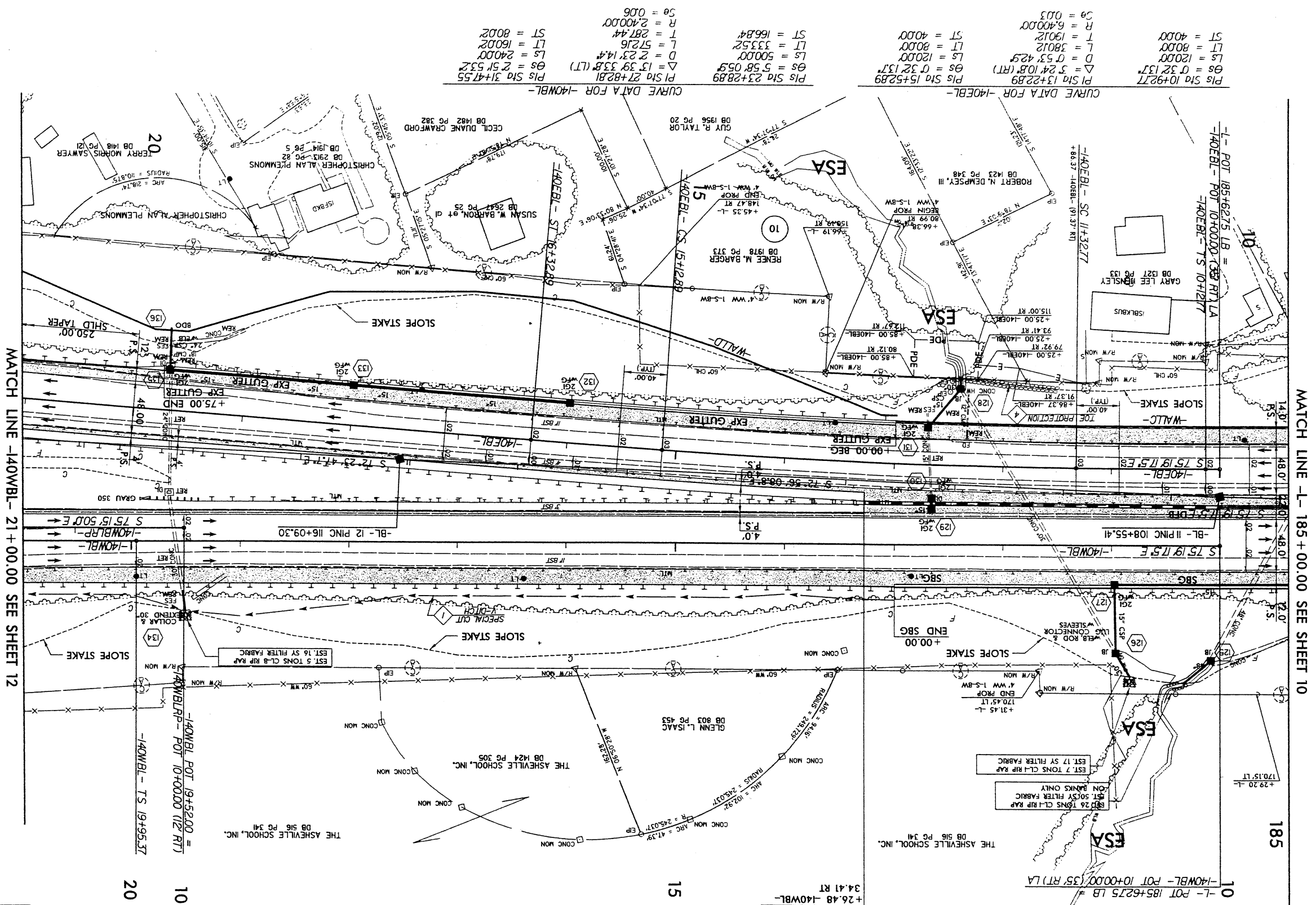


PROJECT REFERENCE NO. I-4401
RW SHEET NO. 10
SHEET NO.



SEE SHEET 20 FOR L-PROFILE
 SEE SHEETS 20 & 21 FOR LAOEBL PROFILE
 SEE SHEETS 20 & 21 FOR LAOWBL PROFILE
 SEE SHEET 2 & 3 FOR DITCH DETAILS

ENVIRONMENTALLY SENSITIVE AREA (ESA)



PIS STA 10+92.27 Δ = 0.32' 13.7"
 Ls = 120.00' LT = 80.00'
 T = 19.012' R = 6400.00'
 ST = 40.00' Ca = 0.03

 PIS STA 13+22.89 Δ = 5.24' 10.8" (RT)
 Ls = 0.53' 42.9"
 LT = 90.00' R = 380.12'
 T = 19.012' R = 6400.00'
 ST = 40.00' Ca = 0.03

 PIS STA 15+52.89 Δ = 0.32' 13.7"
 Ls = 120.00' LT = 80.00'
 T = 19.012' R = 6400.00'
 ST = 40.00' Ca = 0.03

 PIS STA 23+22.89 Δ = 5.58' 05.9"
 Ls = 500.00' LT = 333.52'
 T = 287.44' R = 166.84'
 ST = 166.84'

 PIS STA 27+82.81 Δ = 17.39' 33.8" (LT)
 Ls = 2240.00' LT = 1600.2'
 T = 287.44' R = 2400.00'
 ST = 800.2'

 PIS STA 31+47.55 Δ = 2.51' 53.2"
 Ls = 240.00' LT = 160.00'
 T = 287.44' R = 2400.00'
 ST = 800.2'

MATCH LINE -140WBL- 21 + 00.00 SEE SHEET 12

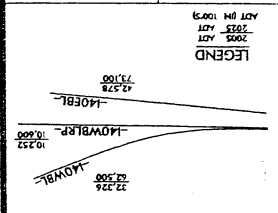
MATCH LINE -1- 185 + 00.00 SEE SHEET 10



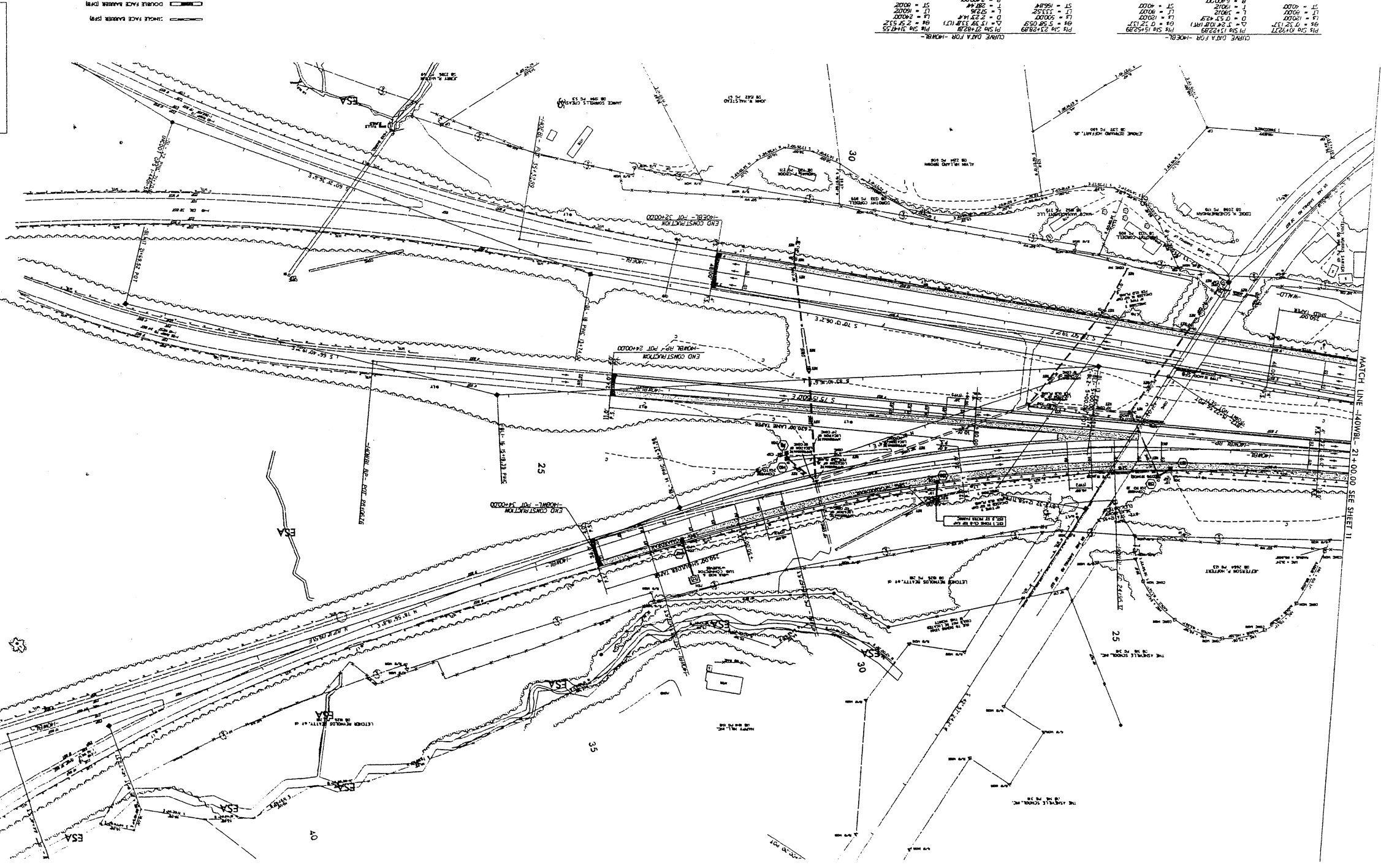
PROJECT REFERENCE NO. I-401	
SHEET NO. 11	
ROADWAY DESIGN HYDRAULICS DESIGN ENGINEER	
DO NOT USE FOR CONSTRUCTION	

TAYLOR & MURPHY
 ENGINEERS, INC.
 1000 WEST 17TH STREET
 DENVER, CO 80202

DATE: 11/15/00
 DRAWN BY: J. J. [unreadable]
 CHECKED BY: [unreadable]
 PROJECT: [unreadable]



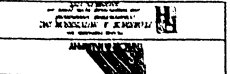
ENVIRONMENTALLY SENSITIVE AREA (ESA)



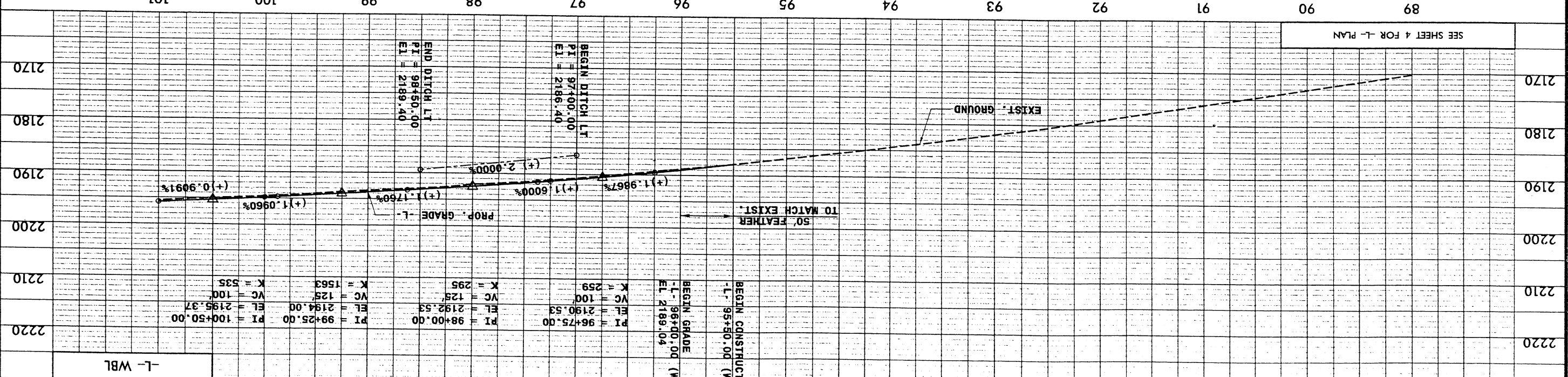
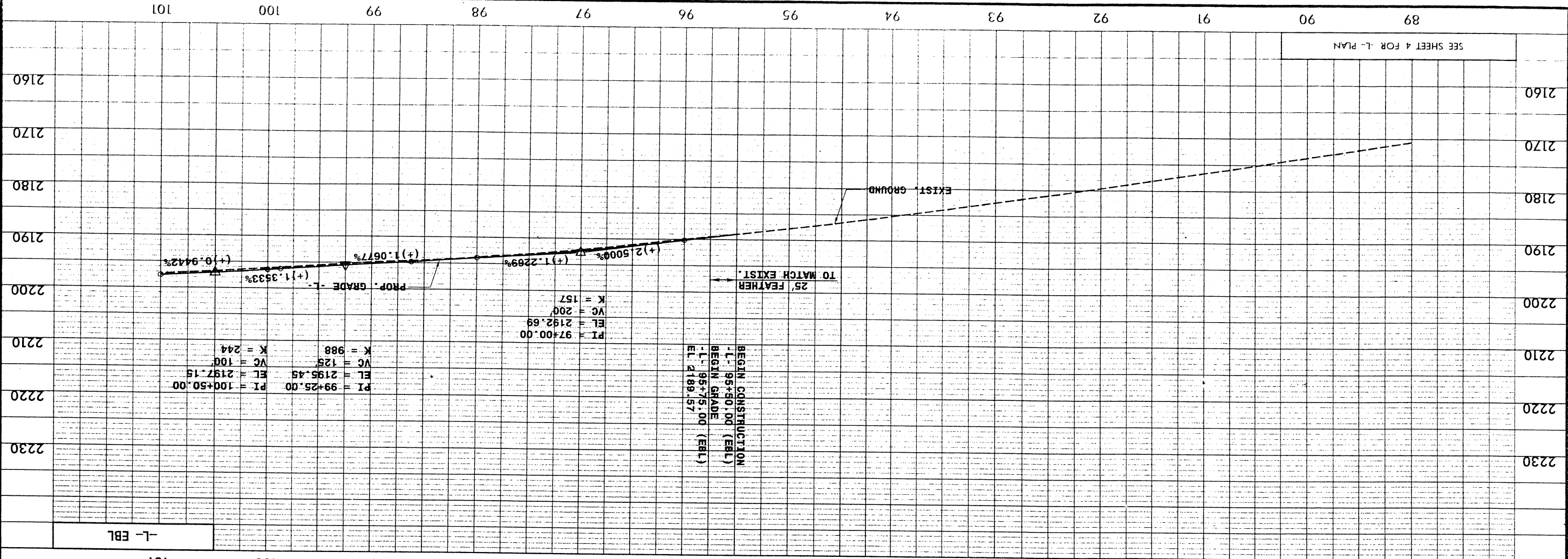
CURVE DATA FOR -140WB-

STATION	20+00	20+50	21+00	21+50	22+00
PI	20+00	20+50	21+00	21+50	22+00
PT	20+00	20+50	21+00	21+50	22+00
TA	20+00	20+50	21+00	21+50	22+00
EA	20+00	20+50	21+00	21+50	22+00
LA	20+00	20+50	21+00	21+50	22+00
SA	20+00	20+50	21+00	21+50	22+00
EA	20+00	20+50	21+00	21+50	22+00
LA	20+00	20+50	21+00	21+50	22+00
SA	20+00	20+50	21+00	21+50	22+00

PRELIMINARY PLANS
 PROJECT: [unreadable]
 SHEET: [unreadable]



MATCH LINE - DRAWN - 21+00.00 SEE SHEET 11

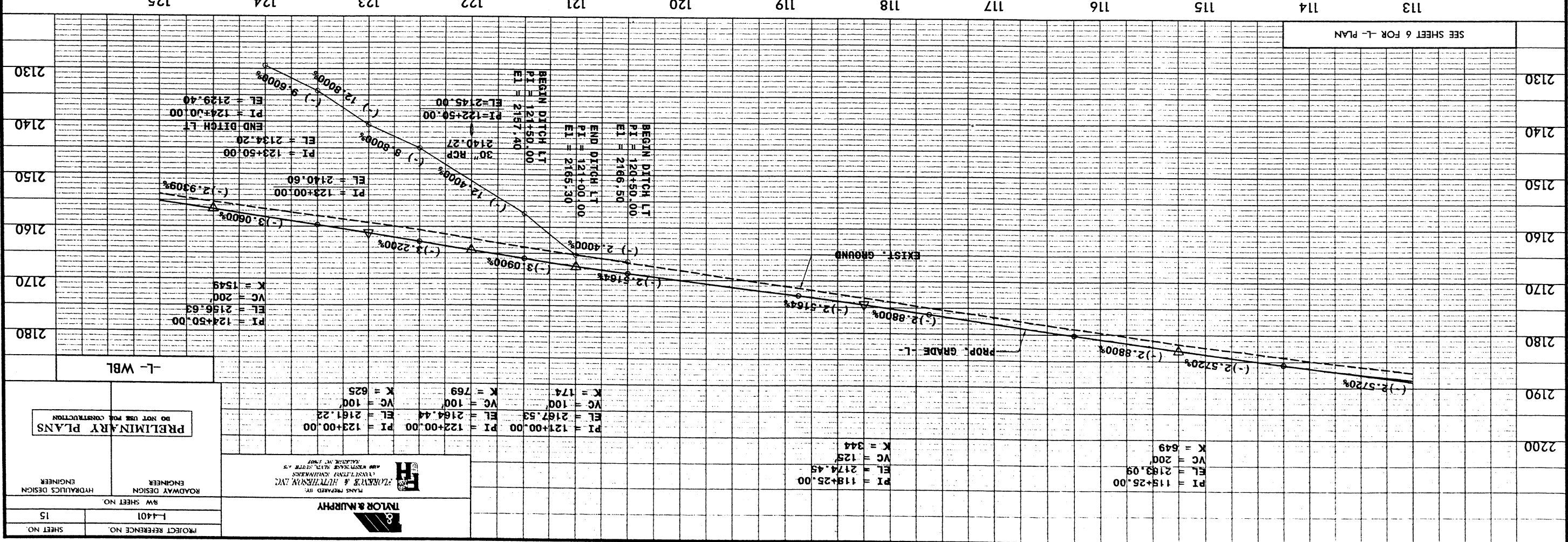
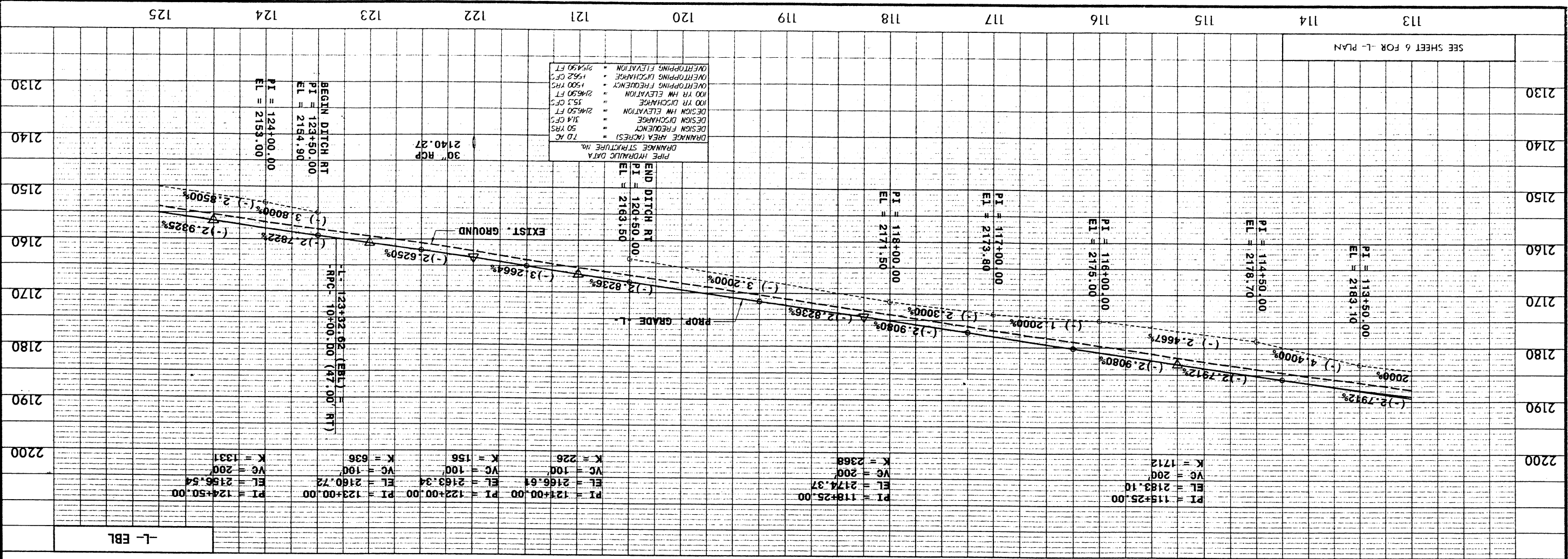


PROJECT REFERENCE NO. 1-1401
 SHEET NO. 13
 ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER
 DO NOT USE FOR CONSTRUCTION
 PRELIMINARY PLANS

PLANS PREPARED BY
TINLOR & MURPHY
 ENGINEERS
 1000 WEST 10TH STREET, SUITE 200
 DENVER, COLORADO 80202
 PHONE: 303.733.1111
 FAX: 303.733.1112

SEE SHEET 4 FOR L-PLAN

SEE SHEET 4 FOR L-PLAN



PROJECT REFERENCE NO. 1-4401
 SHEET NO. 15

ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER

PLANS PREPARED BY
TAYLOR & MURPHY
 ENGINEERS & ARCHITECTS
 100 WEST 42ND STREET, NEW YORK, N.Y. 10018
 PHONE (212) 757-2000

DO NOT USE FOR CONSTRUCTION
 PRELIMINARY PLANS

PIPE HYDRAULIC DATA
 DRAINAGE STRUCTURE NO. 70 MC
 DESIGN FREQUENCY 50 YRS
 DESIGN DISCHARGE 314 CFS
 DESIGN HM ELEVATION 2165.50 FT
 100 YR HM ELEVATION 2165.50 FT
 100 YR DISCHARGE 352 CFS
 OVERTOPPING FREQUENCY 1500 YRS
 OVERTOPPING DISCHARGE 1500 CFS
 OVERTOPPING ELEVATION 2154.50 FT

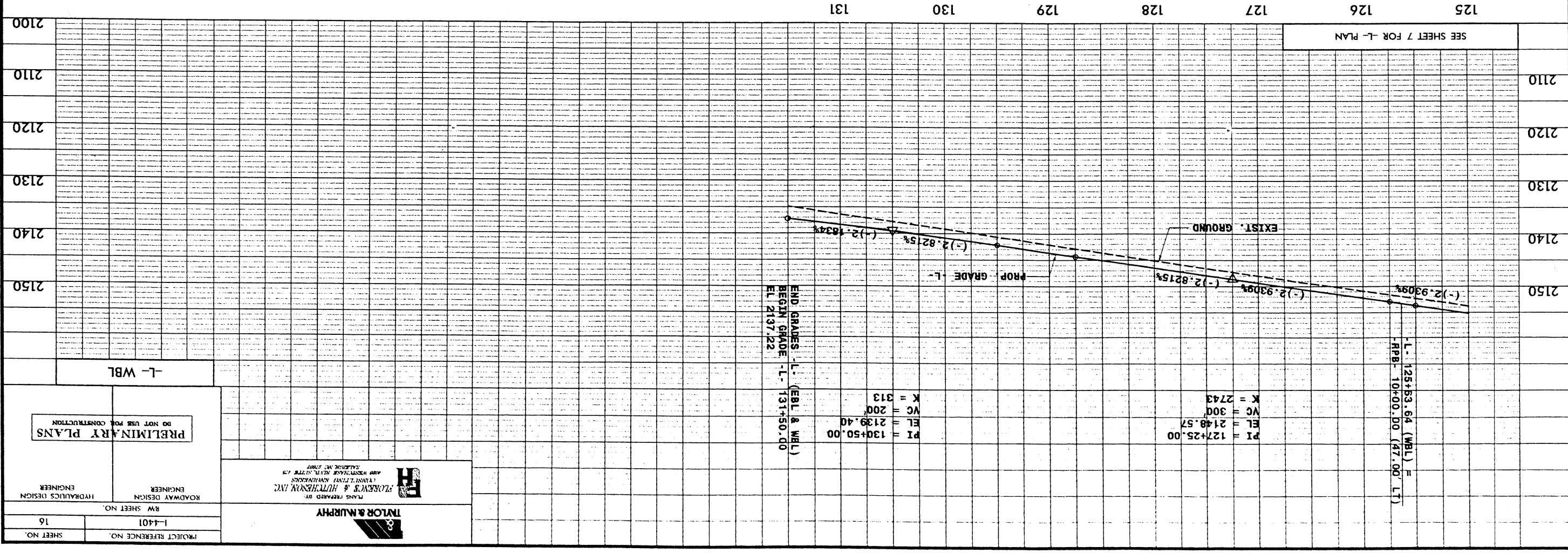
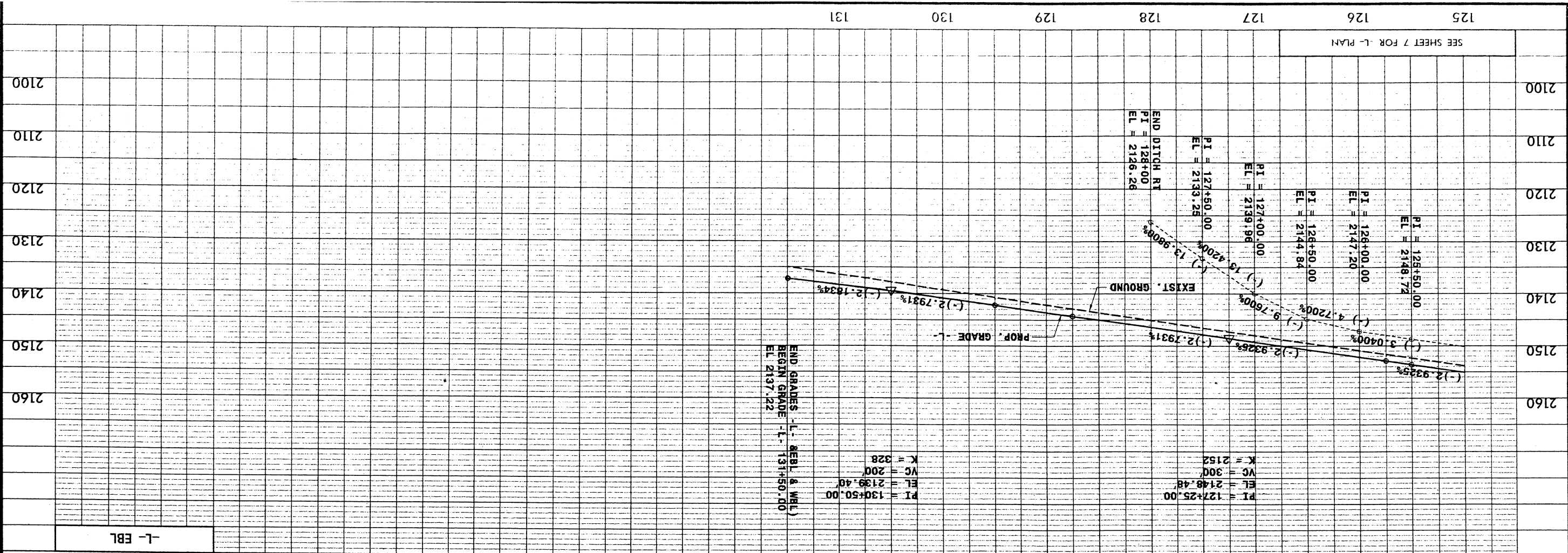
BEGIN DITCH RT
 PI = 123+50.00
 EL = 2164.90
 PI = 124+00.00
 EL = 2153.00

PI = 118+25.00	EL = 2174.37	K = 2368
VC = 200		
EL = 2163.10		
K = 1712		
PI = 118+00.00	EL = 2171.50	K = 226
VC = 100		
EL = 2166.64		
K = 156		
PI = 122+00.00	EL = 2163.34	K = 100
VC = 200		
EL = 2160.72		
K = 636		
PI = 123+00.00	EL = 2160.00	K = 1331
VC = 200		
EL = 2156.54		
K = 1331		
PI = 124+50.00	EL = 2153.00	

SEE SHEET 6 FOR L-PLAN

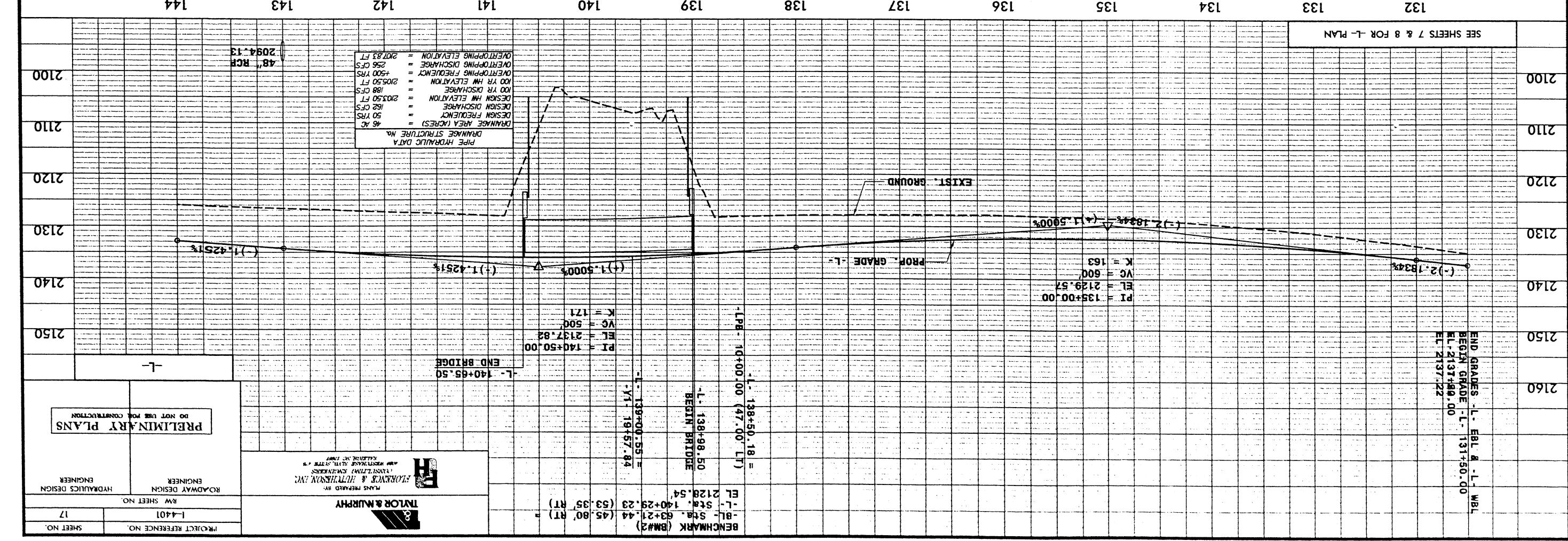
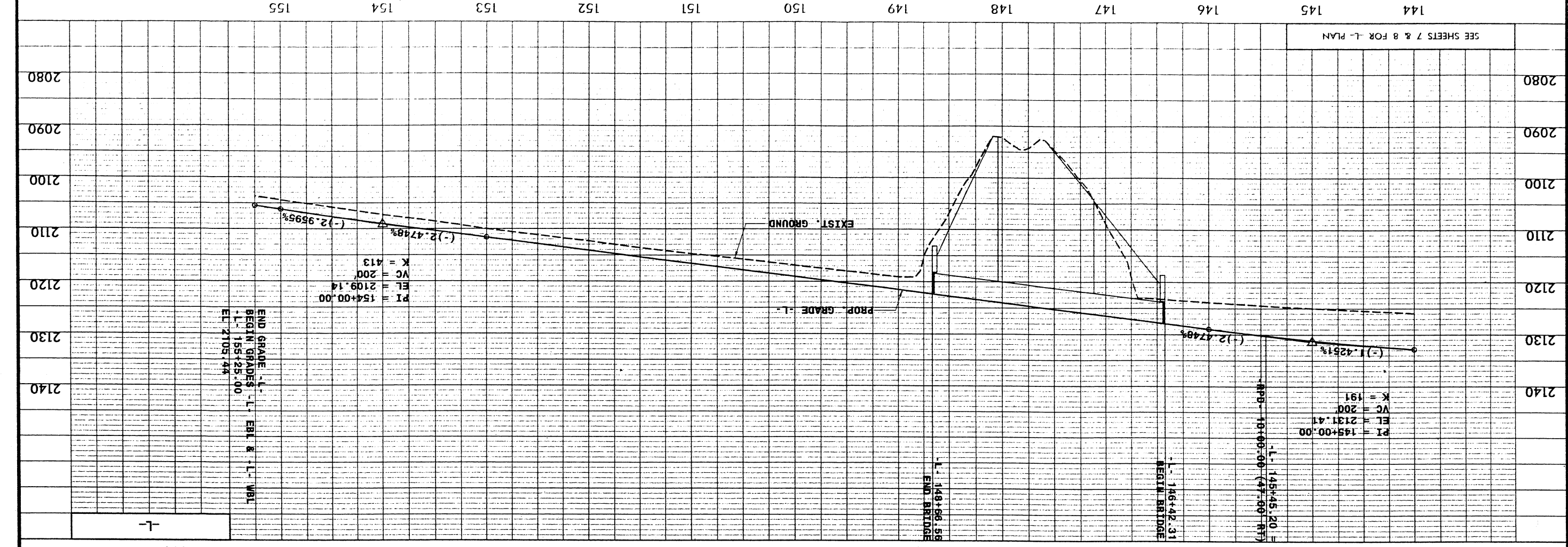
L-EBL

L-WBL



PROJECT REFERENCE NO. I-401
 SHEET NO. 16
 ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER
 PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY
TAYLOR & MURPHY
 ENGINEERS AND ARCHITECTS
 1000 WEST 17TH AVENUE, SUITE 170
 DENVER, COLORADO 80202
 PHONE: 303.733.1100
 FAX: 303.733.1101



PROJECT REFERENCE NO. I-4401
 SHEET NO. 17
 ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER
PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY:
TAYLOR & MURPHY
 ENGINEERS & ARCHITECTS
 100 WEST WASHINGTON STREET, SUITE 400
 ANN ARBOR, MI 48106

155 154 153 152 151 150 149 148 147 146 145 144
 SEE SHEETS 7 & 8 FOR L-PLAN

2080 2090 2100 2110 2120 2130 2140

144 143 142 141 140 139 138 137 136 135 134 133 132

2100 2110 2120 2130 2140 2150 2160
 SEE SHEETS 7 & 8 FOR L-PLAN

BENCHMARK (BM#2)
 -BL- Sta. 63+21.44 (45.80' RT) =
 -L- Sta. 140+29.23 (53.35' RT) =
 EL 2128.54

BEGIN BRIDGE -L- 138+98.50
 END BRIDGE -L- 140+95.50
 -L- 138+50.18 =
 -LPR- 10+00.00 (47.00' LT)
 -L- 139+00.55 =
 -Y- 19+57.84

PI = 135+00.00
 EL = 2129.57
 VC = 600
 K = 163

PI = 140+50.00
 EL = 2137.82
 VC = 500
 K = 171

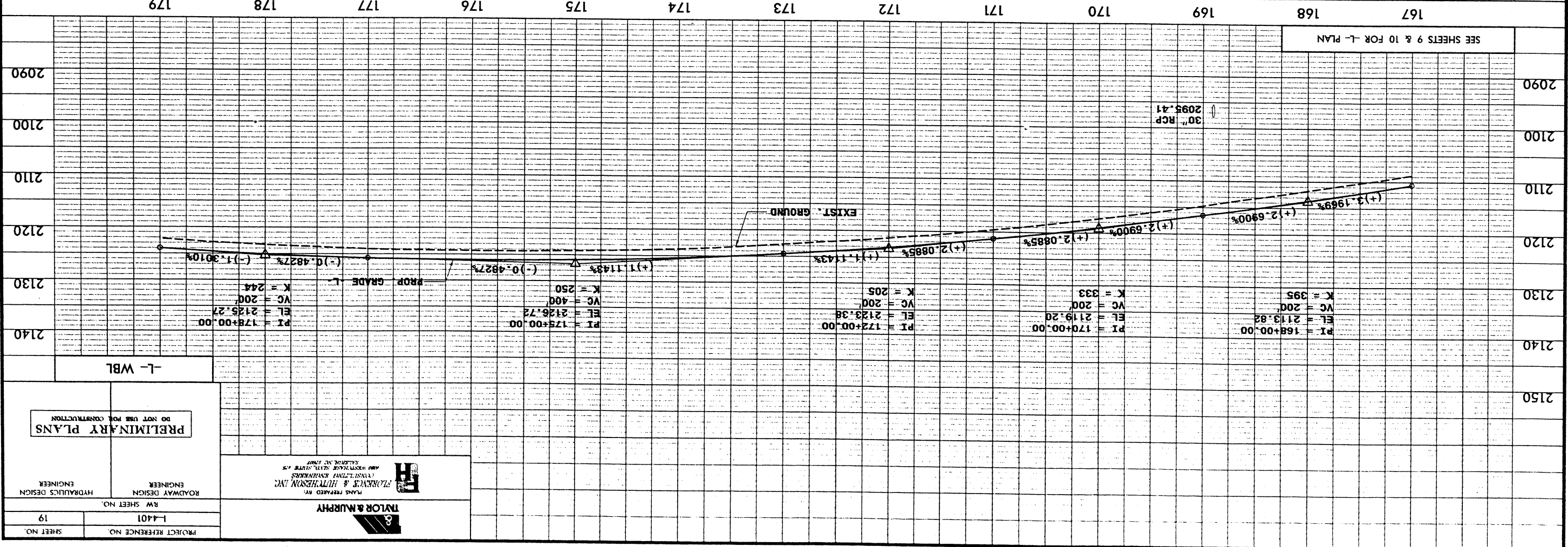
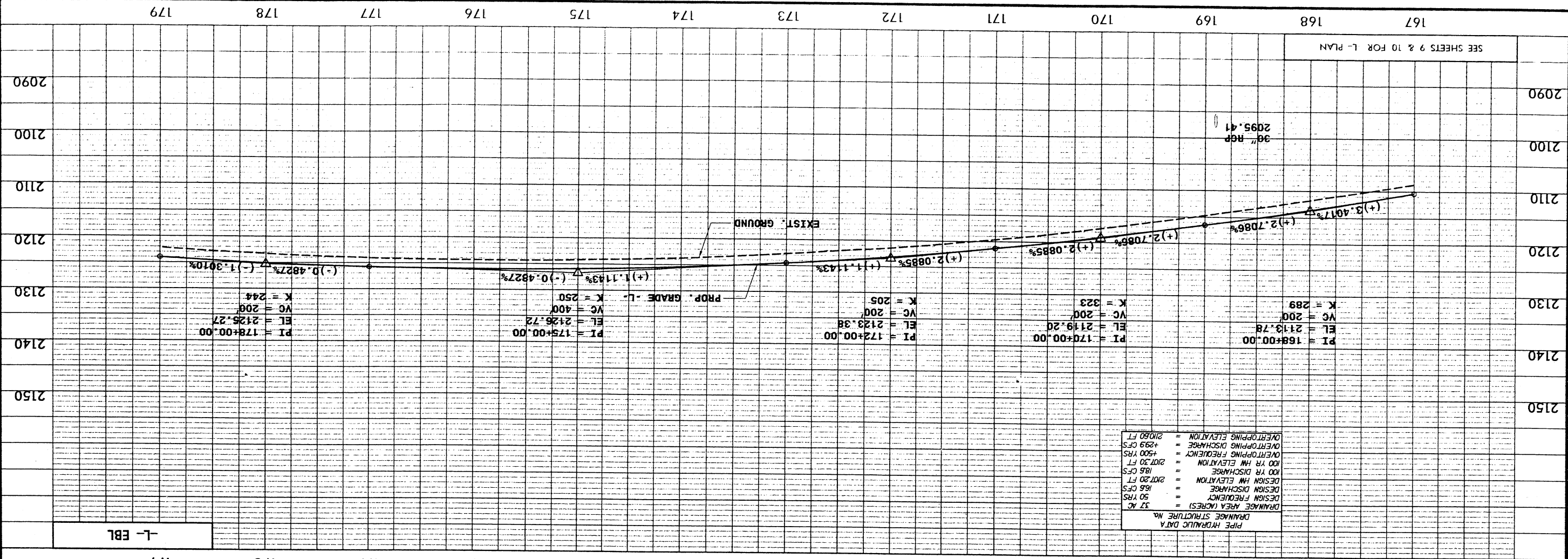
PI = 145+00.00
 EL = 2131.41
 VC = 200
 K = 191

PI = 154+00.00
 EL = 2109.14
 VC = 200
 K = 413

END GRADE -L- EBL & L. WBL
 -L- 155+25.00
 EL 2105.44

BEGIN BRIDGE -L- 146+42.31
 END BRIDGE -L- 148+98.58

APR- 10+00.00 (47.80' RT)
 -L- 145+45.20 =



PROJECT REFERENCE NO. I-4401
 SHEET NO. 19

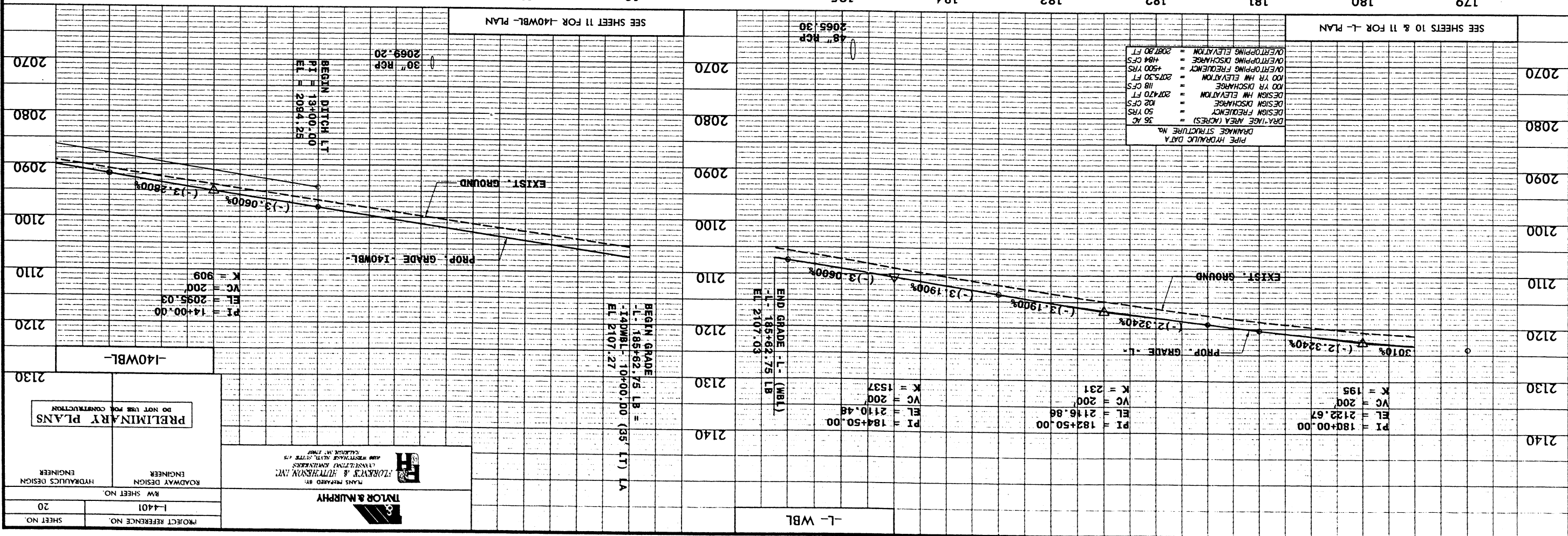
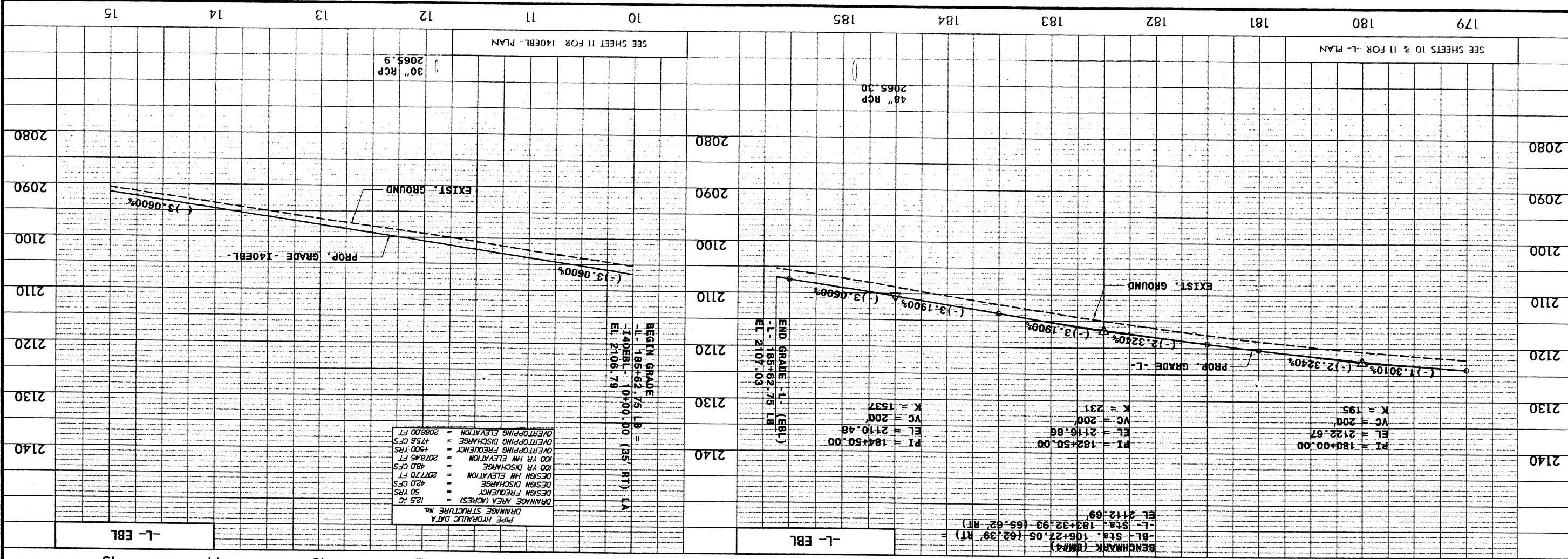
RW SHEET NO. 19

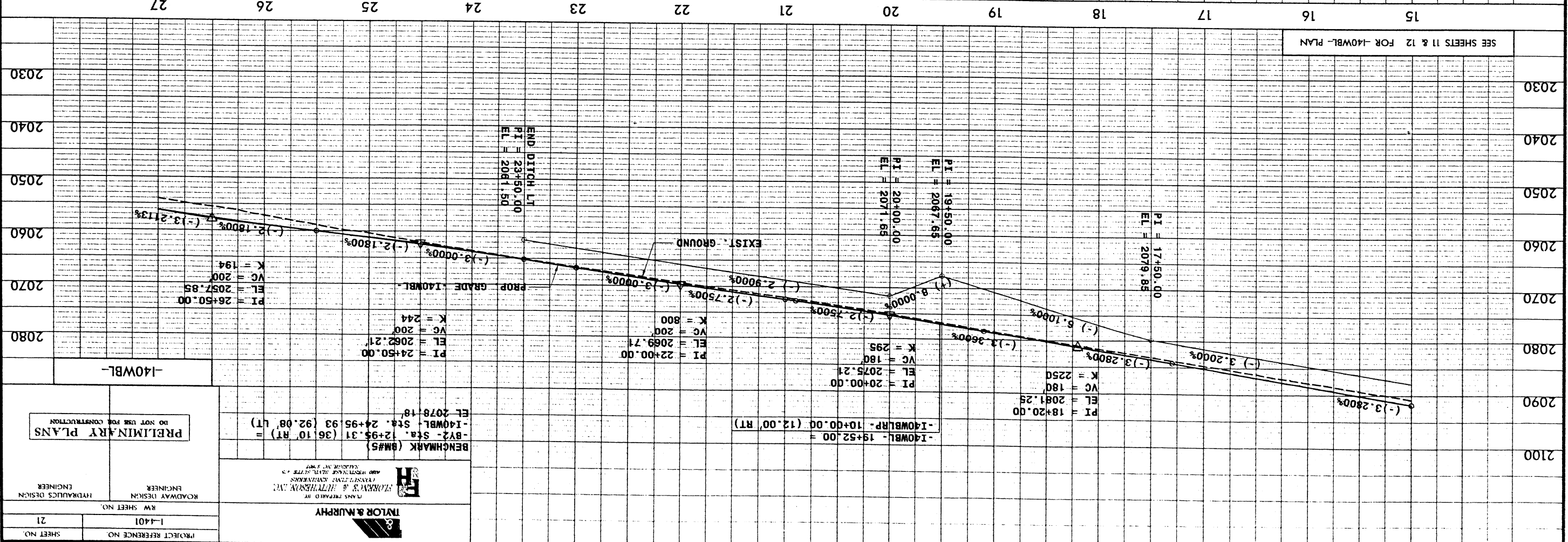
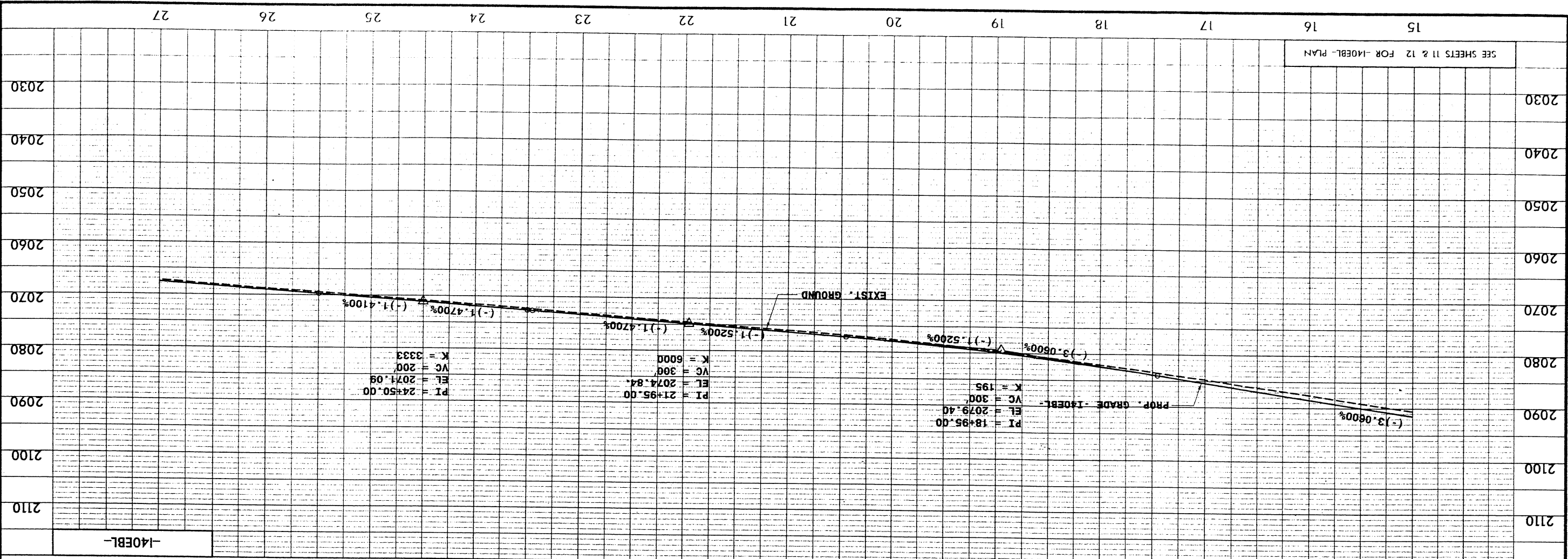
ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY
TAYLOR & MURPHY

FLORIAN & HITCHCOCK, INC.
 CIVIL ENGINEERS
 1101 WEST 17TH AVENUE, SUITE 200
 DENVER, COLORADO 80202





PROJECT REFERENCE NO. I-1401
 SHEET NO. 21

ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

TAYLOR & MURPHY
 ENGINEERS & ARCHITECTS
 1000 WEST 10TH AVENUE
 DENVER, COLORADO 80202

BENCHMARK (BM#5) = 2+95.31 (36.10' RT) = 2495.93 (92.08' LT)
 END DITCH LT
 PI = 23+50.00
 EL = 2061.50

BENCHM#5
 STA. 12+95.31 (36.10' RT) = 2495.93 (92.08' LT)

-140WBL- 19+52.00 =
 PI = 20+00.00
 EL = 2075.21
 VC = 180
 K = 295

-140WBL- 10+00.00 (12.00' RT)
 PI = 18+20.00
 EL = 2081.25
 VC = 180
 K = 2250

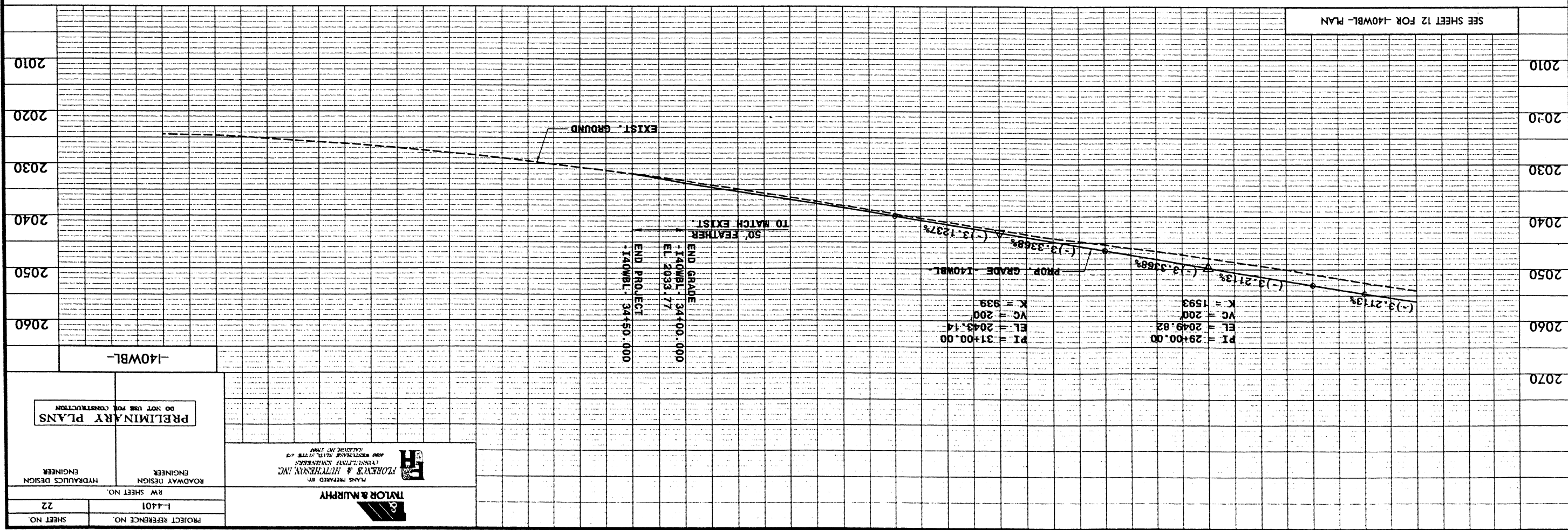
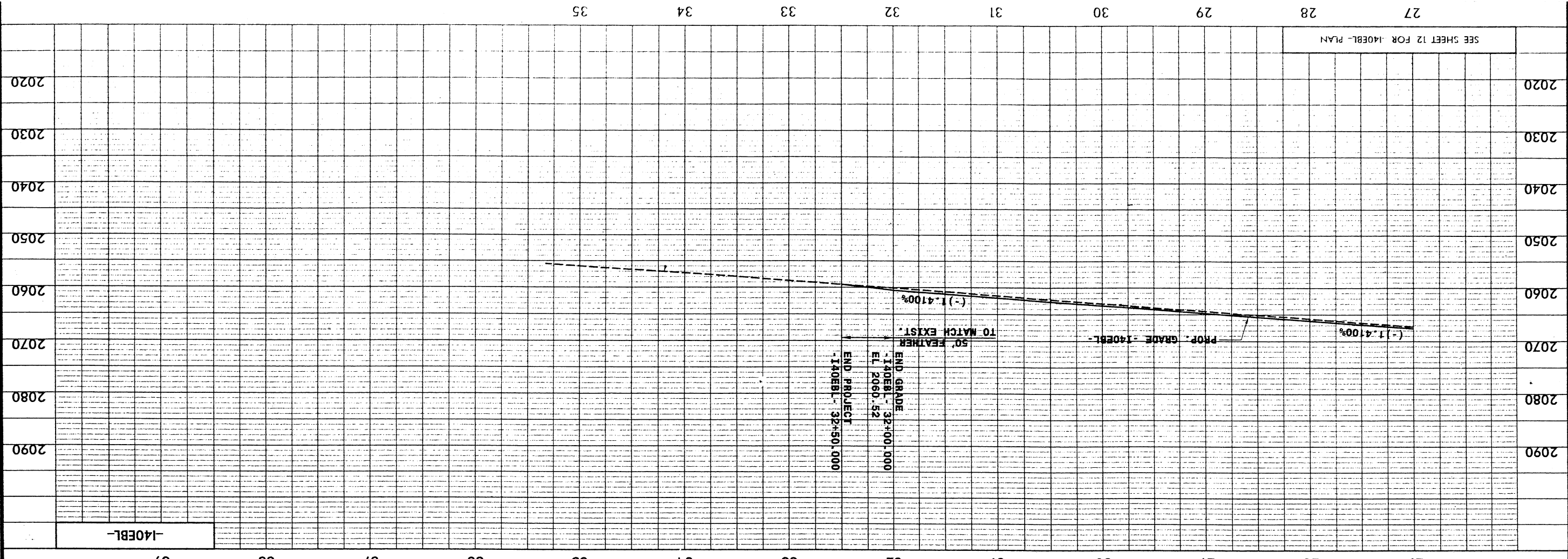
-140WBL- 17+50.00
 PI = 17+50.00
 EL = 2079.85

-140WBL- 20+00.00
 PI = 20+00.00
 EL = 2071.65
 VC = 180
 K = 295

-140WBL- 22+00.00
 PI = 22+00.00
 EL = 2069.71
 VC = 200
 K = 800

-140WBL- 24+50.00
 PI = 24+50.00
 EL = 2062.21
 VC = 200
 K = 244

-140WBL- 26+50.00
 PI = 26+50.00
 EL = 2057.85
 VC = 200
 K = 194



PROJECT REFERENCE NO. I-4401

SHEET NO. 22

RW. SHEET NO. -140WBL-

ROADWAY DESIGN ENGINEER

HYDRAULICS DESIGN ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY:

TAYLOR & MURPHY

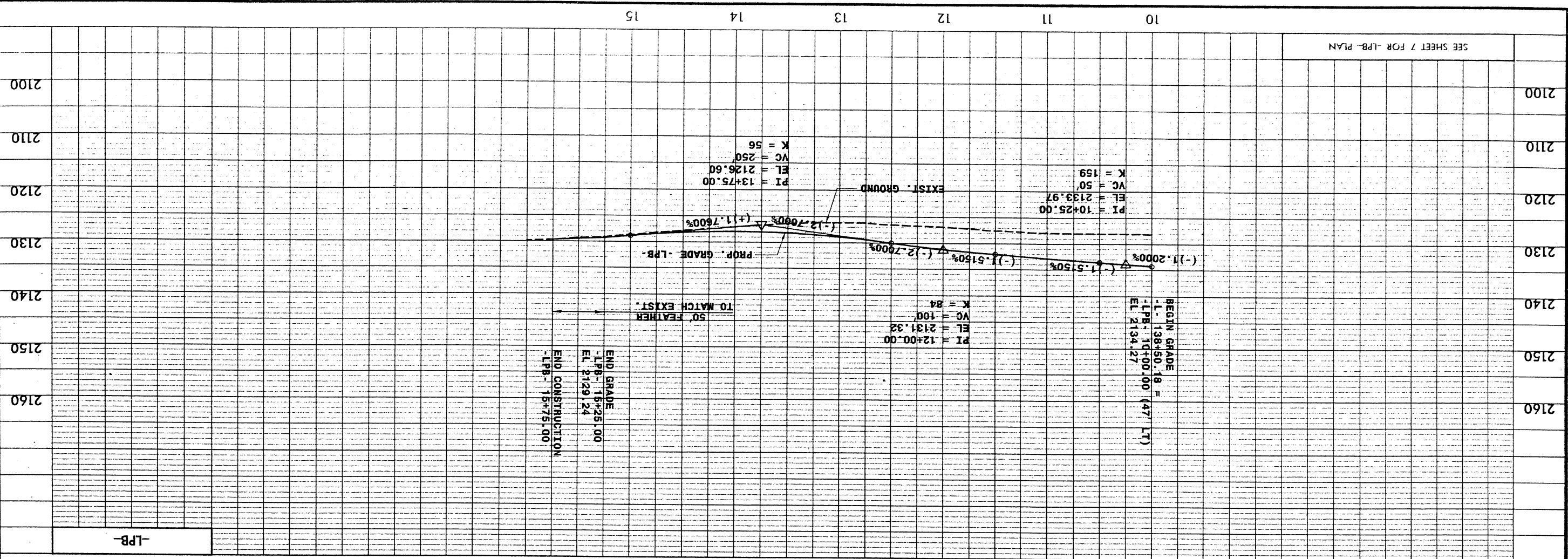
FLOWER & HUTTON, INC.

REGISTERED PROFESSIONAL ENGINEERS

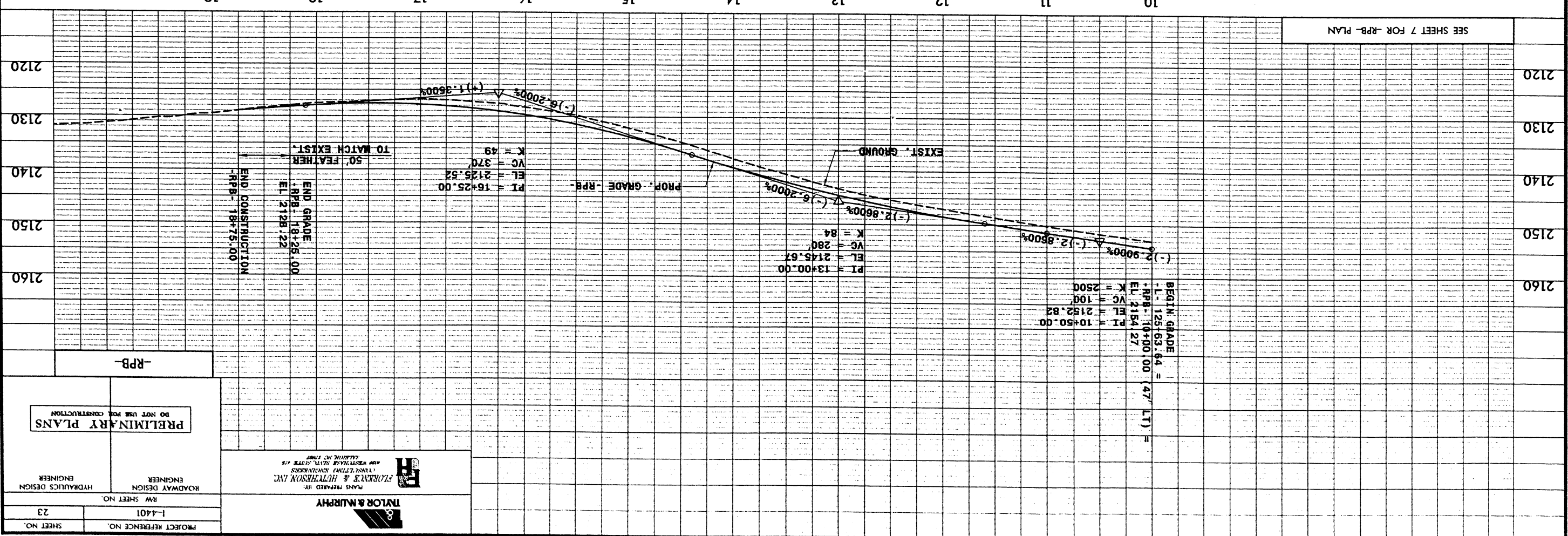
AND ARCHITECTS

100 WEST 17TH STREET, SUITE 100

ANN ARBOR, MICHIGAN 48106



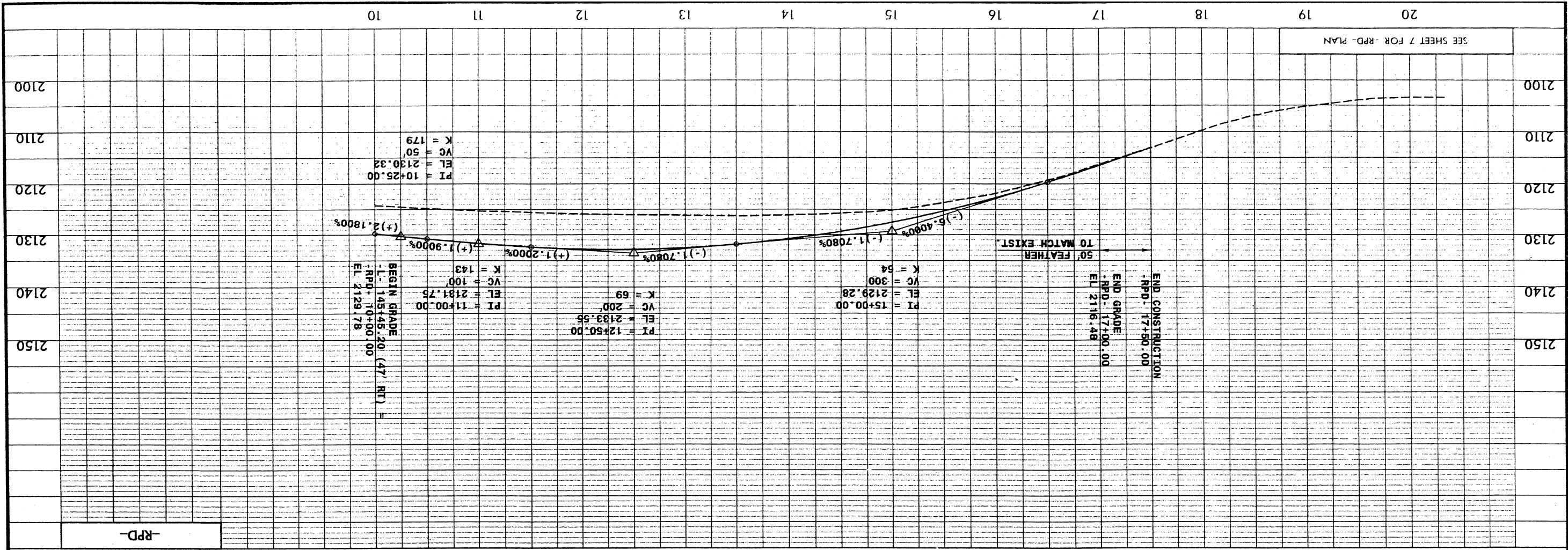
SEE SHEET 7 FOR LPB-PLAN



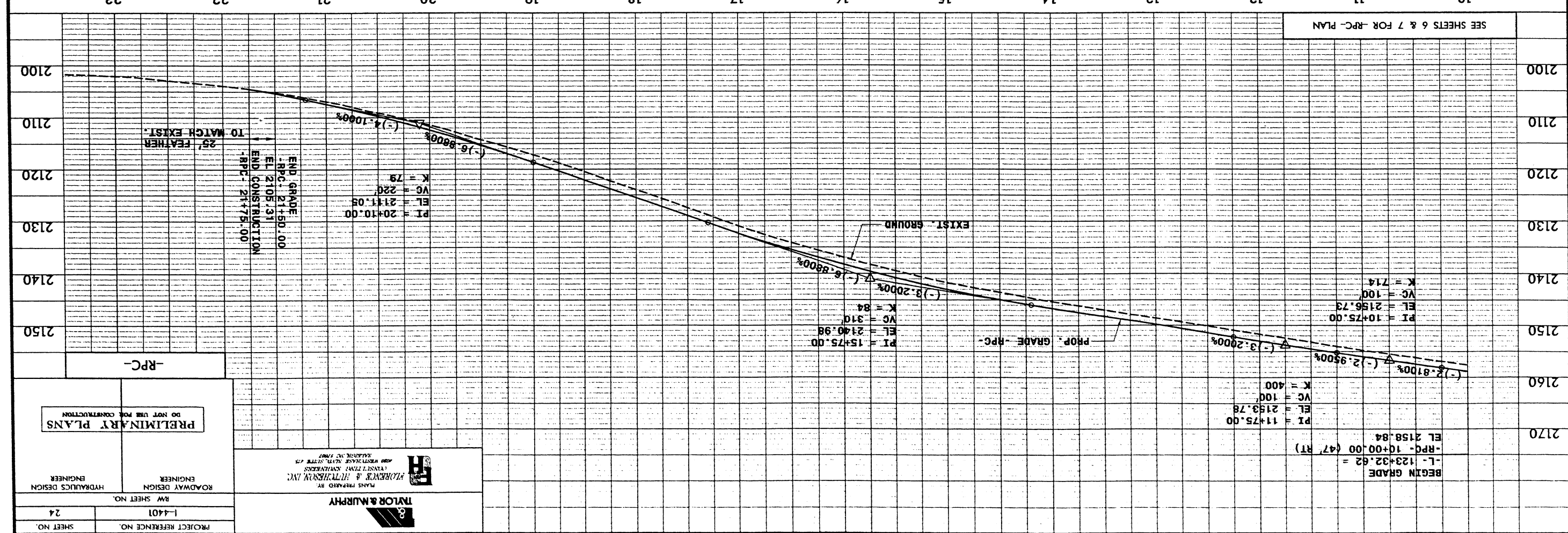
SEE SHEET 7 FOR RPB-PLAN

PROJECT REFERENCE NO. 1-1401
 SHEET NO. 23
 ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER
PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY
TAYLOR & MURPHY
 ENGINEERING & ARCHITECTURE
 1100 WEST 10TH AVENUE
 DENVER, CO 80202
 PHONE: 303.733.1100
 FAX: 303.733.1101



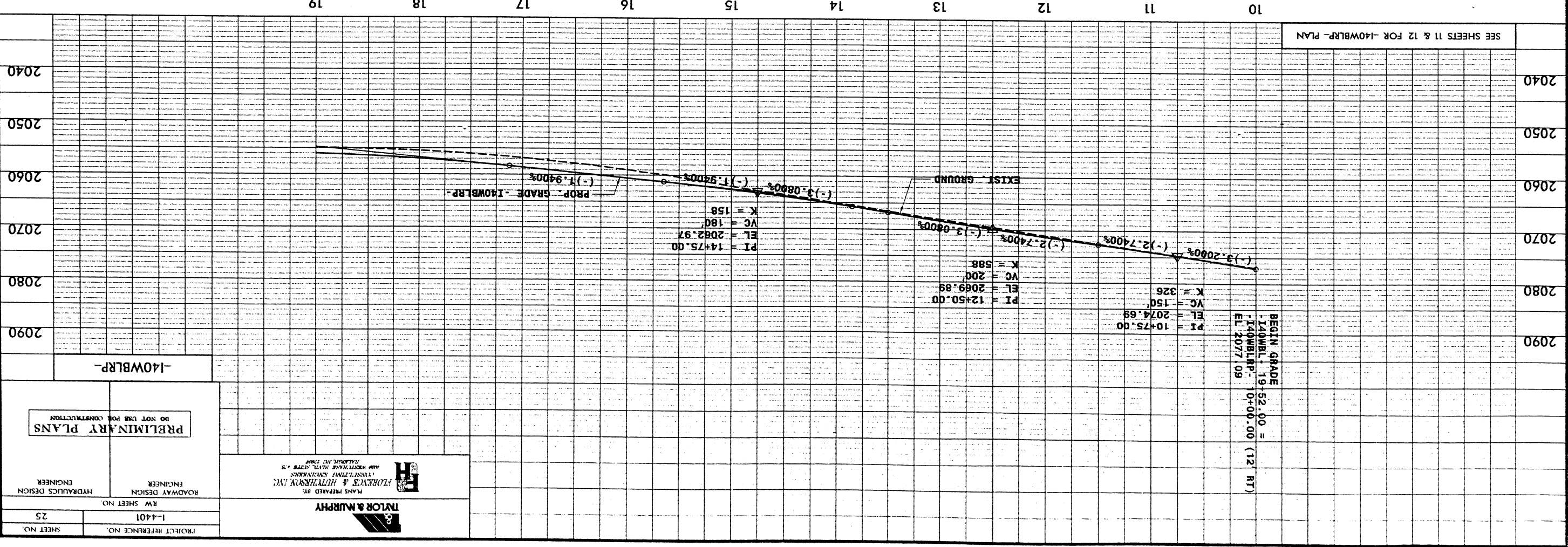
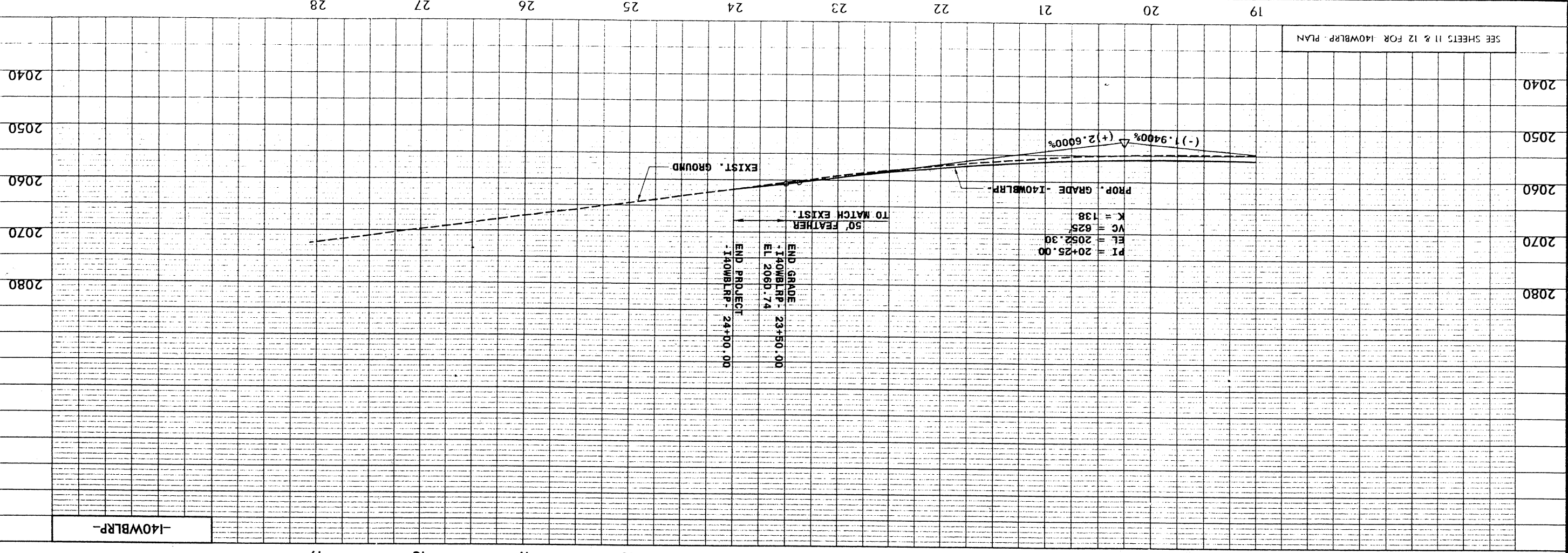
SEE SHEET 7 FOR RPD-PLAN



SEE SHEETS 6 & 7 FOR RPC-PLAN

PROJECT REFERENCE NO. I-4401
 SHEET NO. 24
 ROADWAY DESIGN ENGINEER
 HYDRAULICS DESIGN ENGINEER
 PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY
TAYLOR & MURPHY
 ENGINEERS & ARCHITECTS
 100 WEST BROAD STREET, SUITE 700
 RICHMOND, VA 23260
 AND WEST BROAD STREET, SUITE 700
 RICHMOND, VA 23260



PROJECT REFERENCE NO. 1-4401
SHEET NO. 25

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PLANS PREPARED BY:
TAYLOR & MURPHY

PLANNING & DESIGN ENGINEERS
REGISTERED PROFESSIONAL ENGINEERS
STATE OF NEW YORK

100 WEST 42ND STREET, SUITE 500
NEW YORK, NY 10018