



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 10, 2005

Addendum No. 1

RE: Contract ID: C201226
WBS# 34459.3.4
Proposal No. 1
Johnston-Wake Counties (R-2552AA, R-2552AB)
US-70 Bypass (Clayton Bypass) From I-40
To East of NC-42.

May 17, 2005 Letting

To Whom It May Concern:

Please note that the permit drawings for the Clayton Bypass have been posted on the Department's Website under "Doing Business With NCDOT" (see the "Project Letting" link). These drawings have been posted in an 11" X 17" format for easier viewing.

Reference is made to the plans and proposal form recently furnished to you on the above-mentioned project.

The following revisions have been made to the roadway plans:

Sheet No. 3-O (R-2552AA) has been revised to correct the "DDE" quantity. Please void Sheet No. 3-O in your plans and staple the revised Sheet no. 3-O thereto.

On Sheet Nos. TCP-2 and TCP-2A (R-2552AA) notes concerning hauling restrictions were added and the remaining notes were re-lettered. Please void Sheet Nos. TCP-2 and TCP-2A in your plans and staple the revised Sheet Nos. TCP-2 and TCP-2A thereto.

Sheet No. SIGN-2 (R-2552AA) has been revised to correct the "Signs-Summary of Quantities." Please void Sheet No. SIGN-2 in your plans and staple the revised Sheet No. SIGN-2 thereto.

Sheet No. 3-J (R-2552AB) has been revised to correct the "Drainage Ditch Excavation" quantity. Please void Sheet No. 3-J in your plans and staple the revised Sheet No. 3-J thereto.

Page No. 2 (C201226)
Johnston-Wake Counties

Plan Sheet Nos. 8 and 12 (R-2552AB) have been revised to remove the “DDE” quantity from the “Hazardous Spill Basins.” Please void Sheet Nos. 8 and 12 in your plans and staple the revised Sheet Nos. 8 and 12 thereto.

The following revisions are being made to the Sub-Surface plans:

R-2552AA	Sheet 3H	DDE Quantity Corrected
R-2552AB	Sheet 3C	DDE Quantity Corrected

Please void these sheets in your Sub-Surface plans and staple the revised sheets thereto.

The following revisions have been made to the Structure plans:

On Sheet No. S-143, a pay item and note for “Construction Maintenance and Removal of Temporary Access” was added and several foundation notes were revised. Please void Sheet No. S-143 in your plans and staple the revised Sheet No. S-143 thereto.

On Sheet No. S-187, a note concerning temporary work bridge was added and several foundation notes were revised. Please void Sheet No. S-187 in your plans and staple the revised Sheet No. S-187 thereto.

On Sheet Nos. S-408 and S-409 a second bolted field splice was added and the shear studs were revised accordingly. Please void Sheet Nos. S-408 and S-409 in your plans and staple the revised Sheet Nos. S-408 and S-409 thereto.

On Sheet No. S-426, the details for reinforced bridge approach fill have been removed. Please void Sheet No. S-426 in your plans and staple the revised Sheet No. S-426 thereto.

The following revisions have been made to the proposal form:

On Page No. 4 of the proposal the ending time for morning peak hour time restrictions has been revised in ‘Intermediate Contract Time Number 2.’ Please void Page No. 4 in your proposal and staple the revised Page No. 4 thereto.

On Page No. 28, the project special provision entitled “Disposal of Suitable Waste” has been added. Please void Page No. 28 in your proposal and staple the revised Page No. 28 thereto.

On Page No. 93, the project special provision “Hazardous Waste Retention Basin” has been added. Please void Page No. 93 in your proposal and staple the revised Page No. 93 thereto.

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Johnston-Wake Counties

On Page Nos. 103 and 104, the project special provision “Luminaire Retrieval System (LRS) Lighting for Overhead Sign Assembly” has been revised. Please void Page Nos. 103 and 104 in your proposal and staple the revised Page Nos. 103, and 104 thereto.

On Page Nos. 149 and 150, revisions were made to the project special provision entitled “Smart Zone Work Zone System.” Please void Page Nos. 149 and 150 in your proposal and staple the revised Page Nos. 149 and 150 thereto.

On Page Nos. 199, 266 and 267, the project special provision “Construction, Maintenance and Removal of Temporary Access” has been revised to add the reference to “Station 14 + 38.000-L-Rev.” Please void Page Nos. 199, 266 and 267 in your proposal and staple the revised Page Nos. 199, 266 and 267 thereto.

New Page Nos. 408 thru 443 have been added to include the “Buffer Permit Drawings.” Please staple New Page Nos. 408 thru 443 after Page No. 407 in your proposal.

On Page No. 1 of the item sheets, the quantity for line item “16-0134000000-M-240 Drainage Ditch Excavation” has been revised. By copy of this addendum the quantity is hereby reduced from 12,256 M3 to 9,656 M3. The Contractor’s bid price should be based on this revised pay item quantity. The contract will be prepared accordingly.

On Page Nos. 12 and 13 of the item sheets, by copy of this addendum, the following item description and quantity changes are hereby made:

<u>Item Number & Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
186-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy A @ 16+80.00-I1 Y1-)	Lump Sum	1 EA
188-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy D @ I-40/US-70 EBL)	Lump Sum	1 EA
189-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy E @ I-40/US-70 EBL)	Lump Sum	1 EA
190-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy F @I-40/US-70 I-40 EBL)	Lump Sum	1 EA

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Johnston-Wake Counties

192-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy H @ I-40/US-70, US-70 EBL)	Lump Sum	1 EA
193-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy I @ I-40/US-70, US-70 EBL)	Lump Sum	1 EA
194-4360000000-N-SP-Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy J @ I-40/US-70 I-40 WBL)	Lump Sum	1 EA
195-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy K @ I-40/US-70 I-40 WBL)	Lump Sum	1 EA
198-4360000000-N-SP Install LRS Lighting System for Overhead Sign Assembly At Sta. (Assy O @ I-40/US-70 US-70 WBL)	Lump Sum	1 EA

The Contractor's bid price must be based on these revised pay item descriptions and quantities. The Contract will be prepared accordingly.

On Page No. 22 of the item sheets, a new pay item is being added. By copy of this addendum, the following line item is hereby added: "418-2474000000-N-SP Hazardous Waste Retention Basin" (Quantity=Lump Sum). On Page No. 26 of the item sheets, a new pay item is being added. By copy of this addendum, the following line item is hereby added: "419-8017000000-N-SP Construction, Maintenance and Removal of Temporary Access @ Station 14 + 38,000-L Rev-(Quantity=Lump Sum)." The Contractor's bid price must include this new pay item. The Contract will be prepared accordingly.

The Table of Contents has been revised to reflect the above mentioned changes. Please void the Table of Contents in your proposal and staple the revised Table of Contents thereto.

The Expedite file has been updated to reflect these revisions. Please download the Expedite addendum file and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

Sincerely,



R. A. Garris, PE.
Contract Officer

RAG/jag/pa
Attachments

cc: Mr. W. S. Varnedoe, PE
Mr. S. D. DeWitt, PE
Mr. E. C. Powell, PE
Mr. J. H. Trogdon, PE
Ms. D. M. Barbour, PE
Mr. Art McMillan, PE
Mr. J. V. Barbour, PE
Mr. G. R. Perfetti, PE

Mr. Paul Garrett, PE
Mr. Ron King, PE
Mr. Mark Staley (2)
Mr. Aydren Flowers
Mr. R. E. Davenport, Jr., PE
Ms. Marsha Byrd
Ms. Taylor Mishoe
Project File (2)

Revised 5-10-05

CONTRACT: C201226 (R-2552AA-R2552AB)
Johnston & Wake Counties

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INTERMEDIATE CONTRACT TIME NUMBER #2 AND LIQUIDATED DAMAGES:

The Contractor shall complete the required work of installing, maintaining, and removing the traffic control devices for lane closures and restoring traffic to **the existing traffic pattern**. The Contractor shall not close or narrow a lane of traffic on **NC 42** during the following time restrictions:

Monday thru Friday
From 6:00 a.m. to 9:00 a.m.
And
From 3:00 p.m. to 8:00 p.m.

In addition, the Contractor shall not close or narrow a lane of traffic on **NC 42**, detain and/or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS:

1. For any event that creates unusually high traffic volumes, as directed by the Engineer.
2. For **New Year's Day**, between the hours of **12:00 p.m. (noon)** December 31st and **10:00 a.m.** January 2nd. If New Year's Day is on Saturday or Sunday, then until **10:00 a.m.** the following Tuesday.
3. For **Easter**, between the hours of **12:00 p.m. (noon)** Thursday and **10:00 a.m.** Monday.
4. For **Memorial Day**, between the hours of **12:00 p.m. (noon)** Friday and **10:00 a.m.** Tuesday.
5. For **Independence Day**, between the hours of **12:00 p.m. (noon)** the day before Independence Day and **10:00 a.m.** the day after Independence Day.

If **Independence Day** is on a Saturday or Sunday, then between the hours of **12:00 p.m. (noon)** the Thursday before Independence Day and **10:00 a.m.** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **12:00 p.m. (noon)** Friday and **10:00 a.m.** Tuesday.
7. For **Thanksgiving Day**, between the hours of **12:00 p.m. (noon)** Tuesday and **10:00 a.m.** Monday.
8. For **Christmas**, between the hours of **12:00 p.m. (noon)** the Friday **before the week of Christmas Day** and **10:00 a.m.** the following Monday **after the week of Christmas Day**.

Page 1-18 Article 102-16, add the following after Number 15.

16. False information submitted on any application, statement, certification, report, records and/or reproduction.

Conviction of any employee of company, of any applicable state or federal law, may be fully imputed to the business firm with which he is or was associated or by whom he was employed or with the knowledge or approval of the business firm or thereafter ratified by it.

17. Being debarred from performing work with other city, state, and federal agencies.
18. Failure to perform guaranty work within the terms of the contract.

SP1G155

DISPOSAL OF SUITABLE WASTE:

Potential areas are available for disposal of a portion of the suitable waste material within the right of way of the future interchange on the I-40 end of the project. These areas are located left of Fly LE rev. Station 20+00, right of Fly LE rev. Station 12+00, and left of Fly LE rev. Station 15+00. Other areas may be available. The excavation and subsequent placement of suitable waste material in these areas shall be performed in accordance with the applicable provisions of Sections 225 and 802 of the Specifications.

For all permanent seeding and mulching that is satisfactorily completed in accordance with the requirements of Section 1660, "Seeding and Mulching", and within the following percentages of elapsed contract times, an additional payment will be made to the Contractor as an incentive additive. The incentive additive will be determined by multiplying the number of acres of seeding and mulching satisfactorily completed times the contract unit bid price per acre for "Seeding and Mulching" times the appropriate percentage additive.

<u>Percentage of Elapsed Contract Time</u>	<u>Percentage Additive</u>
0% - 30%	30%
30.01% - 50%	15%

Percentage of elapsed contract time is defined as the number of calendar days from the date of availability of the contract to the date the permanent seeding and mulching is acceptably completed divided by the total original contract time.

SP16R01

HAZARDOUS WASTE RETENTION BASIN:

05-18-04

The Contractor shall construct a hazardous waste retention basin in accordance with the detail in the plans, at the location shown in the plans and as directed by the Engineer.

Retention basin shall be constructed to provide the capacity and freeboard shown in the detail.

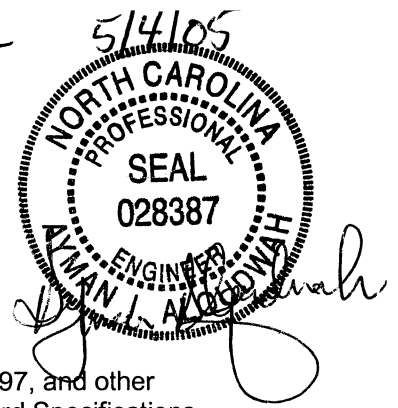
Payment for the work of constructing the hazardous waste retention basin will be made at the contract lump sum price for "Hazardous Waste Retention Basin." Such price and payment will be full compensation for all excavation, hauling and satisfactory disposal of earth material and all incidentals necessary to complete the work.

SPI

Revised 5-10-05

103

**Luminaire Retrieval System (LRS) Lighting
For
Overhead Sign Assembly**



General:

Performance of this work shall comply with the requirements of sections 905, 1097, and other applicable sections of the North Carolina Department of Transportation's Standard Specifications for Roads and Structures.

Luminaire Retrieval System (LRS) Lighting Design and/or installation:

The lighting design shall be engineered to meet the requirements of section 905 and 1097 of the 2002 NC *Standard Specifications for Roads and Structures* in an energy efficient and cost effective manner.

LRS manufacturer shall design the lighting for all structures requiring LRS. The following provisions shall be provided to the LRS manufacturer:

- a) section 905 and 1097 of the 2002 NC *Standard Specifications for Roads and Structures*
- b) structure line drawings for all structures requiring LRS.
- c) The Contractor shall ensure that coordination is established between the OHS assembly and Luminaire Retrieval System Fabricators so that a fully functional sign and lighting system is installed. The Contractor shall be fully responsible for any OHS assembly and Luminaire Retrieval System incompatibilities, or installation of a lighting system not functioning to its intended purpose.

A point-by-point lighting analysis of each overhead assembly lighting system shall be submitted for approval.

Catalog Cut Submittals:

Catalog cut transmittals shall be generated using the NCDOT Signing Section's online qualified products list (SQPL). The online SQPL is located at:

<http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/SIGN/qpl/qpl.html>

If a product complies with the requirements of the NCDOT Standard Specifications for Roads and Structures and isn't contained in the online SQPL, the submittal process guidelines are online at:

http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/SIGN/qpl/equipment_submittal.html

Luminaire retrieval system shop drawings shall be submitted directly to the NCDOT signing section for review and approval.

Luminaire Retrieval System:

Overhead sign structure luminaires are to be installed on a luminaire retrieval system with supports and electrical system designed for track mounted luminaires. The retrieval system must be capable of securely holding all sign luminaires at their designed positions and to allow all luminaires and electrical connections to be maintained from the roadway shoulder without lane closures. Electrical connections for the luminaires are to be arranged to allow each luminaire to be energized while over the shoulder for testing purposes. The system shall be capable of utilizing more than one circuit if required by the plans. A service pole for mounting electric meter, Walkways, handrails and associated equipment will not be required with the luminaire retrieval system.

A possible source of this product is:

Lumi Trak Inc.
P.O. Box 158
Shrewsbury, PA 17361
(717) 235-2863

Compensation for Lighting on Assemblies "C","G","L", and "M":

Luminaire Retrieval System (LRS) is part of the Sign Lighting System and shall not be paid for separately. The work performed as described above shall be paid for at the contract lump sum price for each LRS Lighting System for Overhead Sign Assembly.

Luminaire Retrieval System for overhead Assemblies "C","G","L", and "M" shall be furnished and installed by the contractor.

Payment will be made under:

LRS LIGHTING SYSTEM FOR OVERHEAD SIGN ASSEMBLY "C"	Lump Sum
LRS LIGHTING SYSTEM FOR OVERHEAD SIGN ASSEMBLY "G"	Lump Sum
LRS LIGHTING SYSTEM FOR OVERHEAD SIGN ASSEMBLY "L"	Lump Sum
LRS LIGHTING SYSTEM FOR OVERHEAD SIGN ASSEMBLY "M"	Lump Sum

Compensation for Lighting on Assemblies "A","D","E","F","H","I","J","K", and "O":

Luminaire Retrieval System (LRS) for overhead Assemblies "A","D","E","F","H","I","J","K", and "O" shall be furnished by NCDOT and installed by the contractor. The Contractor shall notify the Resident Engineer in writing of the date he requires any Departmental furnished Luminaire Retrieval Systems (LRS) to be made available. This notification should be made in writing a minimum of 30 days prior to the date the Contractor desires the Department furnished LRS's. The Resident Engineer shall notify the Traffic Engineering Signing Unit as soon as the Contractor has given this notification. The preceding LRS's are stocked at LumiTrak (at the above address) and the Contractor is responsible for delivery.

After notification that the requested Luminaire Retrieval Systems are available, the Contractor shall have a maximum of 90 calendar days to pick up the Department furnished Luminaire Retrieval Systems.

Payment will be made under:

INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "A"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "D"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "E"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "F"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "H"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "I"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "J"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "K"	Each
INSTALL LRS ON OVERHEAD SIGN ASSEMBLY "O"	Each

This project will require the “SMART ZONE” work zone system to notify the Incident Management Staff in Division 4 and 5, Resident Engineer’s office, and Traveler Information Management System (TIMS) once the delay along I-40 exceeds 25 minutes or a mutually agreed upon delay. The contact Incident Management contact in Division 4 is Brian Purvis at 252 296-3543 and in Division 5 is Archie Wells at 919 233-9331. The contact person at the Resident Engineer’s office in Selma is Mike McKeel (MMcKeel@dot.state.nc.us) at 919 934-5863. Contact JoAnn Oerter at 919 233-9331 ext. 233 for integration of SMARTZONE data with the Traveler Information Management System (TIMS).

B. ‘SMART ZONE’ Work Zone system Requirements

The ‘SMART ZONE’ work zone system shall consist of but, not limited to the following (as a minimum): (See Traffic Control Plans, sheet TCP-45 – TCP-47).

The exact locations of all devices shall be submitted to the Resident’s Office for approval prior to installing the system.

- 7 portable changeable message signs remotely controlled via a computer station.
- 10 portable traffic sensors linked to a computer station.
- 4 temporary Closed Circuit Television Cameras (CCTV) be link to the computer station and to the Triangle Regional Traffic Management Center (TRTMC) in Raleigh and the website. These cameras shall provide continuous streaming video imaging at a minimum rate of 10 frames/sec. The DEPARTMENT’s authorized staff shall be able to control the cameras through a full function of pan/tilt/zoom via the projects dedicated website.
- 1 computer station equipped with appropriate software and either wireless or dedicated phone line communications to “link” with the ‘SMART ZONE’ work system.
- 12 pagers to provide notification to designated personnel in the Selma Resident Engineer’s Office (3), Contractors Office (2), SMART ZONE Contractor (1), TRTMC (2), Incident Management Offices in Division 4 and 5 (2), and Traveler Information Management System (TIMS) (2). If personnel prefers, connect to an existing pager.
- Provide a database of accurate real-time data that is accessible to the DEPARTMENT by a secure connection for integration into the www.ncsmartlink.org traveler information website. The database should include, but is not limited to, messages being displayed on portable Changeable Message Signs (CMS), images from the temporary Closed Circuit Television Cameras (CCTV), average travel speed and lane occupancy from the portable detector stations. Coordinate for the integration into www.ncsmartlink.org with Jeffery Dale at 919 715-8628 and David Alford at 919 250-4177.
- Provide a project specific, secure web site for the DEPARTMENT that allows for operation of the equipment included in the SMART WORK ZONE. This web site will provide tiered access that allows the user functions that include, but are not limited to,

pan-tilt-zoom control of the portable CCTV, full messaging control of the portable CMS, and monitoring capabilities of the detection equipment.

- For quality assurance purposes, the 'SMART ZONE' work zone system shall be capable of providing current operational status (i.e. current traffic data and messages, communications system, signs and sensors) via the internet to a dedicated password protected project web-site established for the purpose of monitoring the corridor and the 'SMART ZONE' work zone system equipment.
- The web-site shall have the capability of providing a password protected "link" for approved personnel to have access to retrieve the volume and speed data the system is collecting.
- The website for the monitoring of the 'SMART ZONE' work zone system shall be capable of verifying and validating the real-time messages on the Changeable Message Boards for password approved personnel.
- The 'SMART ZONE' work zone system software shall be configured so that appropriate personnel are notified by pager and email once a malfunction has occurred in the system. The software shall be configured to assess any type of malfunction that has occurred. This assessment includes communication disruption between any device in the system configuration, changeable message board malfunctioning, speed sensor malfunction, etc. The 'SMART ZONE' work zone system shall be capable of notifying the Resident Engineer's office and both the Contractor and SMART ZONE representative about any system malfunction.

C. Materials

All materials used shall meet the manufacturer's specifications and recommendations.

D. Construction Methods

The provisions of Article 1105-3 in the North Carolina Standard Specifications for Roads and Structures (2002) will be applicable to the work covered by this section. In addition, the below requirements are to be met.

- The 'SMART ZONE' work zone system shall utilize North Carolina approved portable Changeable Message Signs (CMS) to convey real-time traffic condition information to motorists.
- The 'SMART ZONE' work zone system shall operate continuously (24 hours, 7 days a week) when deployed on the project. It shall be in the "data collection" mode when the queue sensors aren't activated.
- The "real time" delay information displayed on the CMS's is to be updated every minute.
- To support incident management, the 'SMART ZONE' work zone system shall allow the Division 4 and 5 Incident Management staff to manually override motorists information messages for a user-specified duration, after which automatic operation will resume with display of messages appropriate to the prevailing traffic conditions.

**Project Special Provisions
Structures & Culverts**

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NORTH CAROLINA
 PROFESSIONAL
 SEAL
 18090
 ENGINEER
 THOMAS PAUL GARRETT
Thomas Paul Garrett
 May 1, 2005

**CONSTRUCTION, MAINTENANCE AND REMOVAL
OF TEMPORARY ACCESS AT STATIONS 14+38.000 -L-^{REV} & 40+80.000 -L-**

(2-14-04)

1.0 GENERAL

Construct, maintain, and remove the temporary access required to provide the working area necessary to construct the bridge and, if applicable, remove an existing bridge. Temporary access may include other methods than those outlined in this Special Provision; however, all types of temporary access are required to meet the requirements of all permits, the Standard Specifications, and this Special Provision.

2.0 TEMPORARY ROCK CAUSEWAY [WORKPAD]

If detailed on the plans, construction of a temporary rock causeway [workpad] within the limits shown on the plans is permitted. Build the causeway [workpad] with Class II riprap topped by a layer of Class A riprap or as otherwise designated on the plans or approved by the Engineer. If desired, recycle the Class II riprap used in the causeway [workpad] for placement in the final riprap slope protection as directed by the Engineer. No payment will be made for recycled riprap as this material is considered incidental to the causeway [workpad] placement and removal. If this option is exercised, no adjustment in contract bid price will be allowed due to an underrun in the quantity of "Plain Rip Rap Class II (2'-0" (600 mm) Thick)".

Completely remove all causeway [workpad] material including pipes and return the entire causeway [workpad] footprint to the original contours and elevations within 90 days of the completion of the deck slab or as otherwise required by permits.

For sites affected by moratoriums of restrictions on in-stream work: Do not construct or remove causeway [workpad] during the moratorium period shown on the permit. If the completion of the deck slab falls within the prohibitive dates for causeway [workpad] construction or removal, begin causeway [workpad] removal immediately following the prohibitive dates.

3.0 TEMPORARY WORK BRIDGE

If noted on the plans, the construction of a temporary work bridge is permitted. Submit details of the temporary work bridge to the Engineer prior to constructing the work bridge to ensure conformance with the plans and all permits. Make certain that the temporary work bridge satisfies all permits. Completely remove the temporary bridge prior to final acceptance or as otherwise required by the permits.

If a causeway [workpad] is detailed on the plans, the construction of a temporary work bridge in lieu of the causeway [workpad] is permitted. If this option is exercised, prepare all necessary documents required for permit modifications, if any.

4.0 BASIS OF PAYMENT

The lump sum price bid for “Construction, Maintenance and Removal of Temporary Access at Station _____” will be full compensation for the above work, or other methods of access, including all material, pipes, work bridge components, equipment, tools, labor, disposal, and incidentals necessary to complete the work.

METRIC STRUCTURAL STEEL**(10-12-01)**

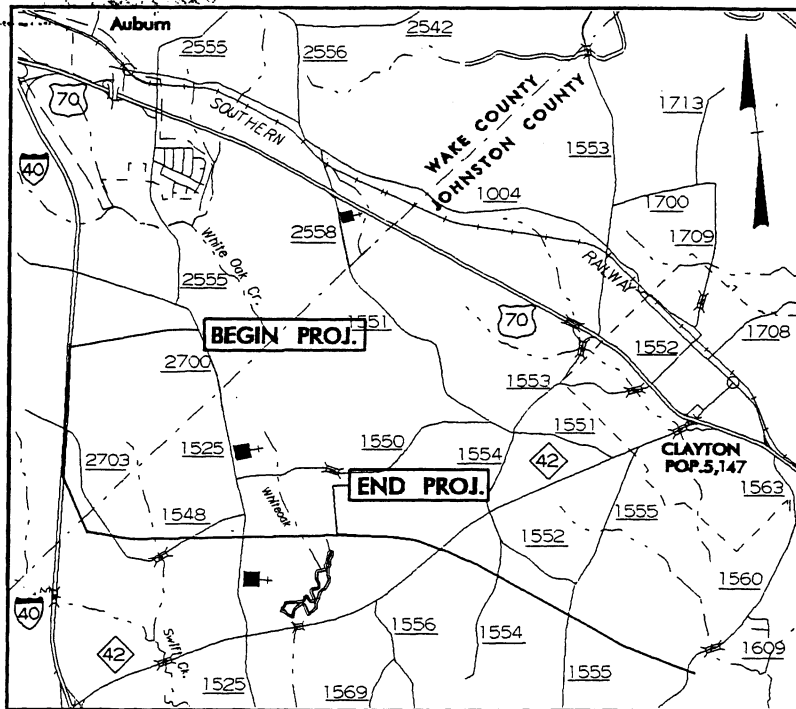
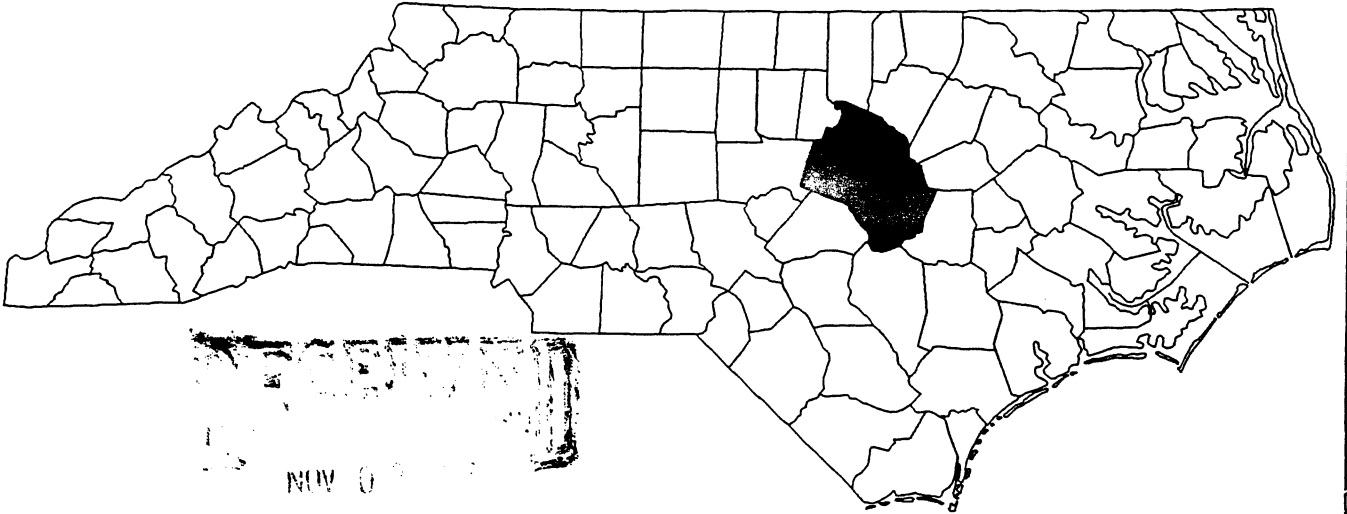
The structural steel for this project is specified in SI (Metric) units with plate thickness designated in millimeters in accordance with AASHTO M160M.

The substitution of structural steel in US Customary nominal thickness is permitted for primary and secondary members defined as follows:

- Primary members - members such as webs and flanges of plate girders, transverse and bearing stiffeners, girder field splice plates, and connector plates for curved girders.
- Secondary members - members such as connector plates for straight girders, bearing plates and miscellaneous hardware.

408

NORTH CAROLINA



NEUSE RIVER BUFFER

VICINITY MAP

NCDOT

DIVISION OF HIGHWAYS

JOHNSTON COUNTY

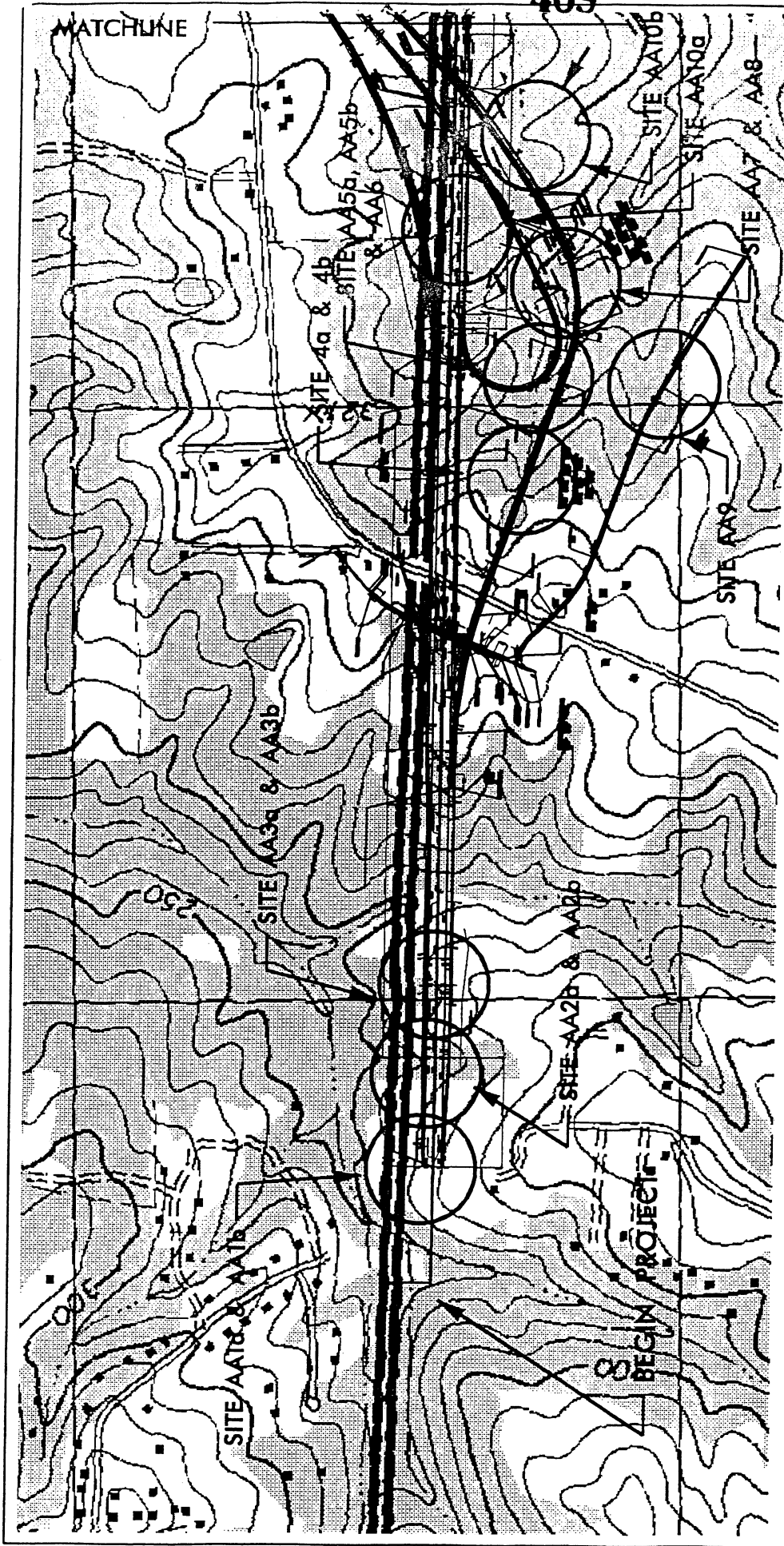
PROJECT: WBS 34459.1.1 (R-2552AA)

US 70 CLAYTON BYPASS

SHEET 1 OF 15

10/01/04

MATCHLINE



NCDOT

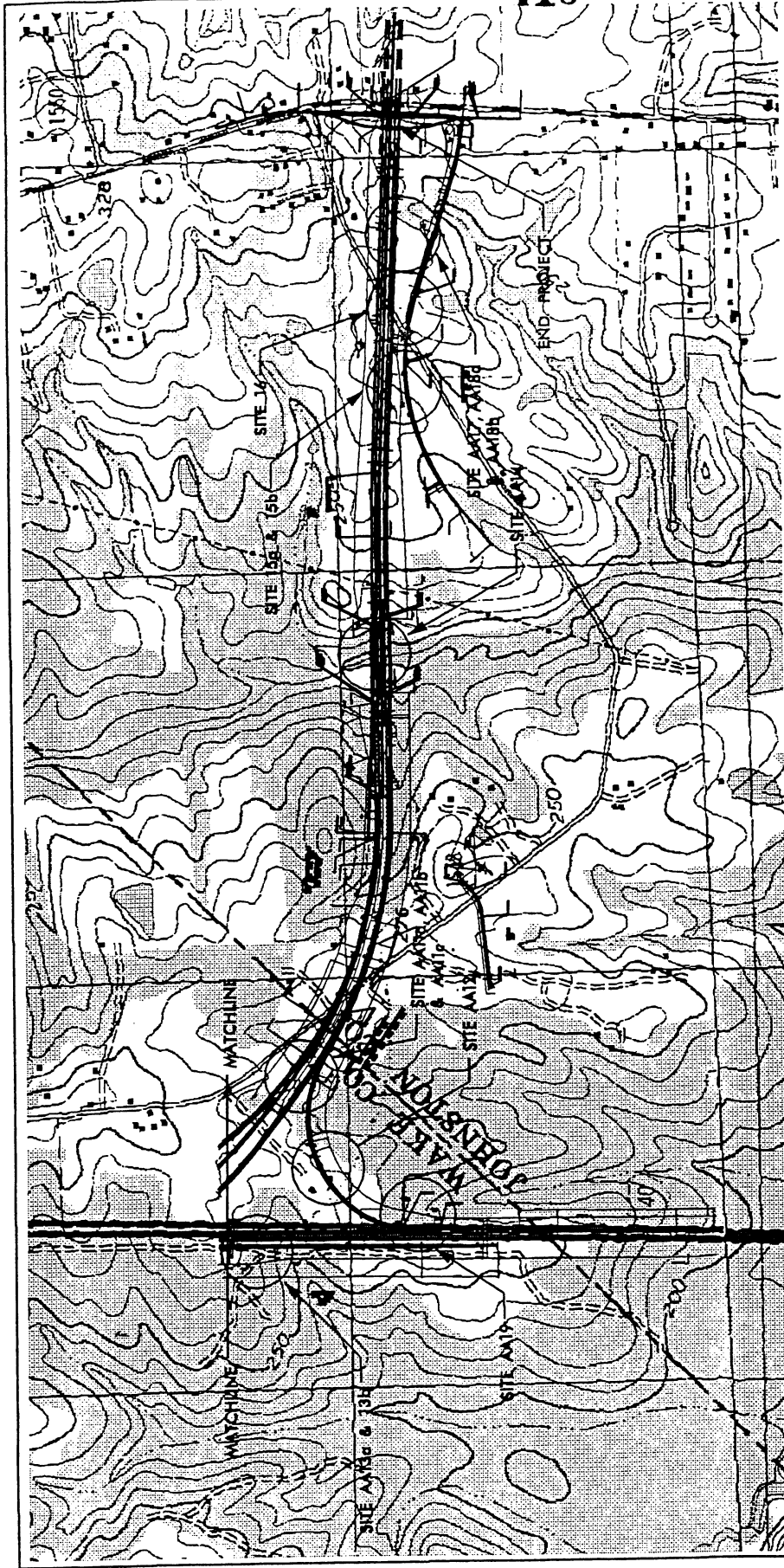
DIVISION OF HIGHWAYS

WAKE/JOHNSTON COUNTY

PROJECT:34459.1.1 (R-252AA)

US 70 CLAYTON BYPASS

SITE MAP



NCDOT

DIVISION OF HIGHWAYS

WAKE / JOHNSTON COUNTY

PROJECT: 34459.1.1 (R-252AA)

US 70 CLAYTON BYPASS

SHEET 3 OF 18 10/01/04

SITE MAP

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT				MITIGABLE				BUFFER REPLACEMENT			
			TYPE		ALLOWABLE		ZONE 1 (ft ²)		ZONE 2 (ft ²)		TOTAL (ft ²)			
			ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)		
AA1a	600 RCP	I1Y1 10+90	X		430.56	2611.00	3041.56							
AA1b	600 RCP	I1Y1 10+90	X		2124.80	1765.28	3890.08							
AA3a	1350 CSP	I1Y1 13+70	X		3717.85	4049.38	7767.23							
AA3b	1350 CSP	I1Y1 13+70	X		4111.81	4391.68	8503.49							
AA4a	750 RCP	I1Y1 20+90	X					11348.39	8144.73	19493.12				
AA4b	900 RCP	FLYLEREV 29+50	X					8830.17	6469.65	15299.82				
AA5a	750 RCP	LPB 21+90	X					41580.88	32338.05	73918.93				
AA5b	900 RCP	FLYLEREV 28+20	X					0.00	10.76	10.76				
AA10a	800 CSP	FLYLRWREV 23+20	X					11797.25	9601.41	21398.66				
AA10b	BRIDGE	FLYLEREV 24+45	X					18155.59	14593.60	32749.19				
TOTAL:					10385.02	12817.34	23202.36	91712.28	71158.20	162870.48				

NOTE : WETLAND IMPACT IN BUFFER ZONES

SITE	1	2
1b	107.60	0.00
4b	107.60	0.00
5b	193.68	107.60
6	107.60	322.80
10a	215.20	0.00
10b	538.00	107.60

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE / JOHNSTON COUNTY
 PROJECT # - WBS 34459.1.1 (R2552AA)
 US 70 - CLAYTON BYPASS
 38278
 SHEET 4 OF 18

BUFFER IMPACTS SUMMARY

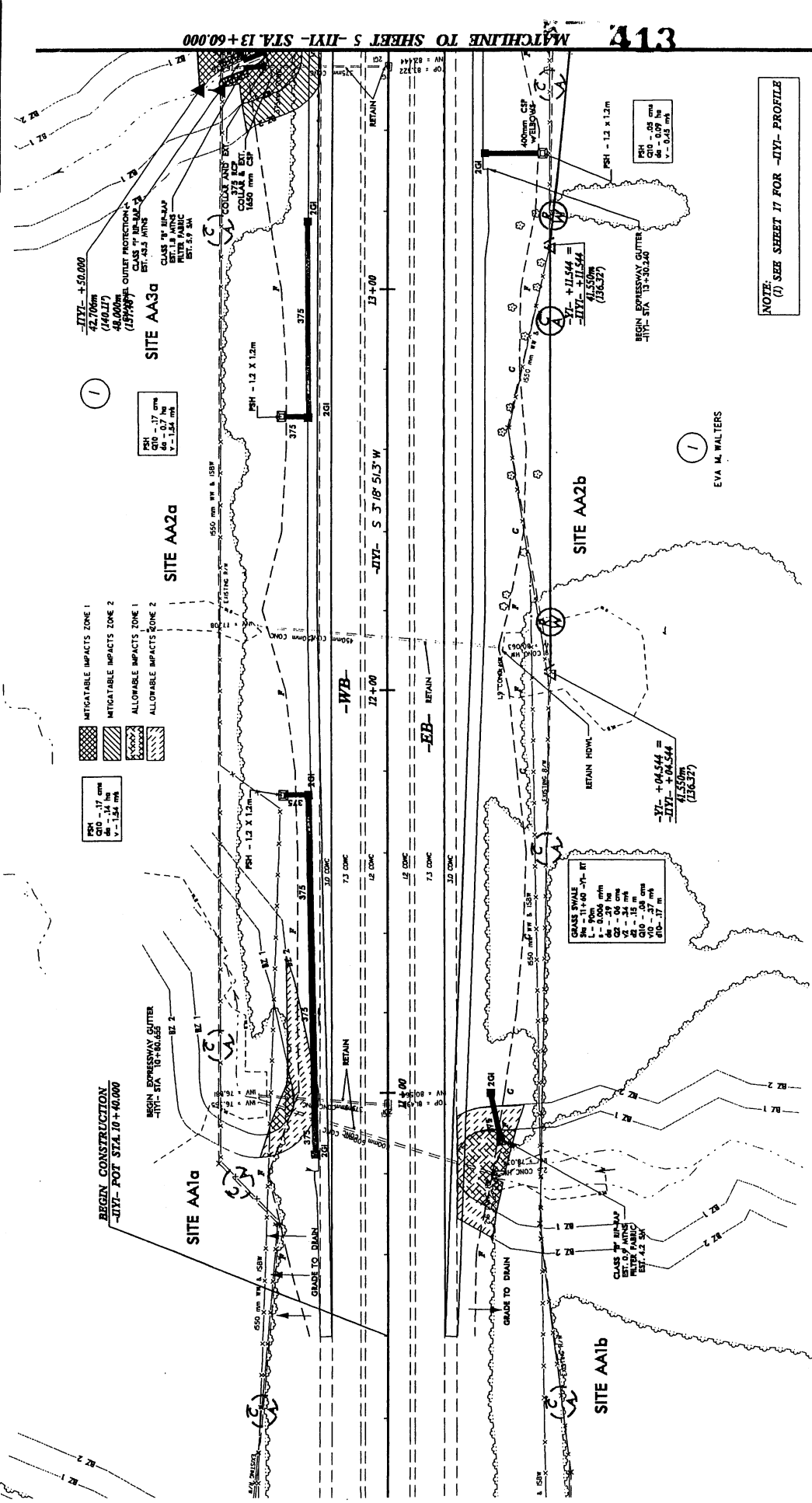
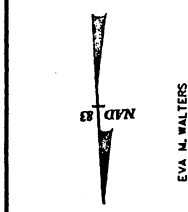
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT				MITIGABLE			BUFFER REPLACEMENT		
			TYPE		ALLOWABLE		TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)						
AA11b	1500 RCP	FLYLEREV 18+00	X				46633.03	32446.41	79079.44			
AA11c	450 RCP	FLYLEREV 18+40 LT	X				SEE AA11b FOR SITE TOTAL					
AA13	600 RCP	11Y1 30+80	X		3719.82	5908.53			9628.35			
AA14	BRIDGE	LREV 14+50	X				18513.82	15333.94	33847.76			
AA15a	1050 RCP	L 21+10	X		5571.94	4047.45			9619.39			
AA15b	1050 RCP	Y2B 12+70	X				6284.08	8147.74	14431.82			
AA16	750 RCP	L 23+00	X				27648.93	19748.98	47397.91			
AA18a	1200 RCP	L 25+80	X				28645.56	18336.32	46981.88			
AA18b	1350 RCP	Y2B 16+00	X				8818.38	6898.70	15717.08			
AA19	750 RCP	11Y1 33+90 LT	X		2164.73	1921.68			4086.41			
TOTAL:					11456.49	11877.66	23334.15	136543.80	100912.09	237455.89		
PROJECT TOTALS					21841.51	24695.00	46536.51	228256.08	172070.29	400326.37		

NOTE : WETLAND IMPACT IN BUFFER ZONES

SITE	11	2
	39338.56	15193.12
	17775.52	11975.88
	2690.00	0.00

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE / JOHNSTON COUNTY
 PROJECT # - WBS 34459.1.1 (R2552AA)
 US 70 - CLAYTON BYPASS

PROJECT REFERENCE NO.	R-255244	SHEET NO.	4
E/W SHEET NO.	43	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			



RIGHT OF WAY REVISION 92/01

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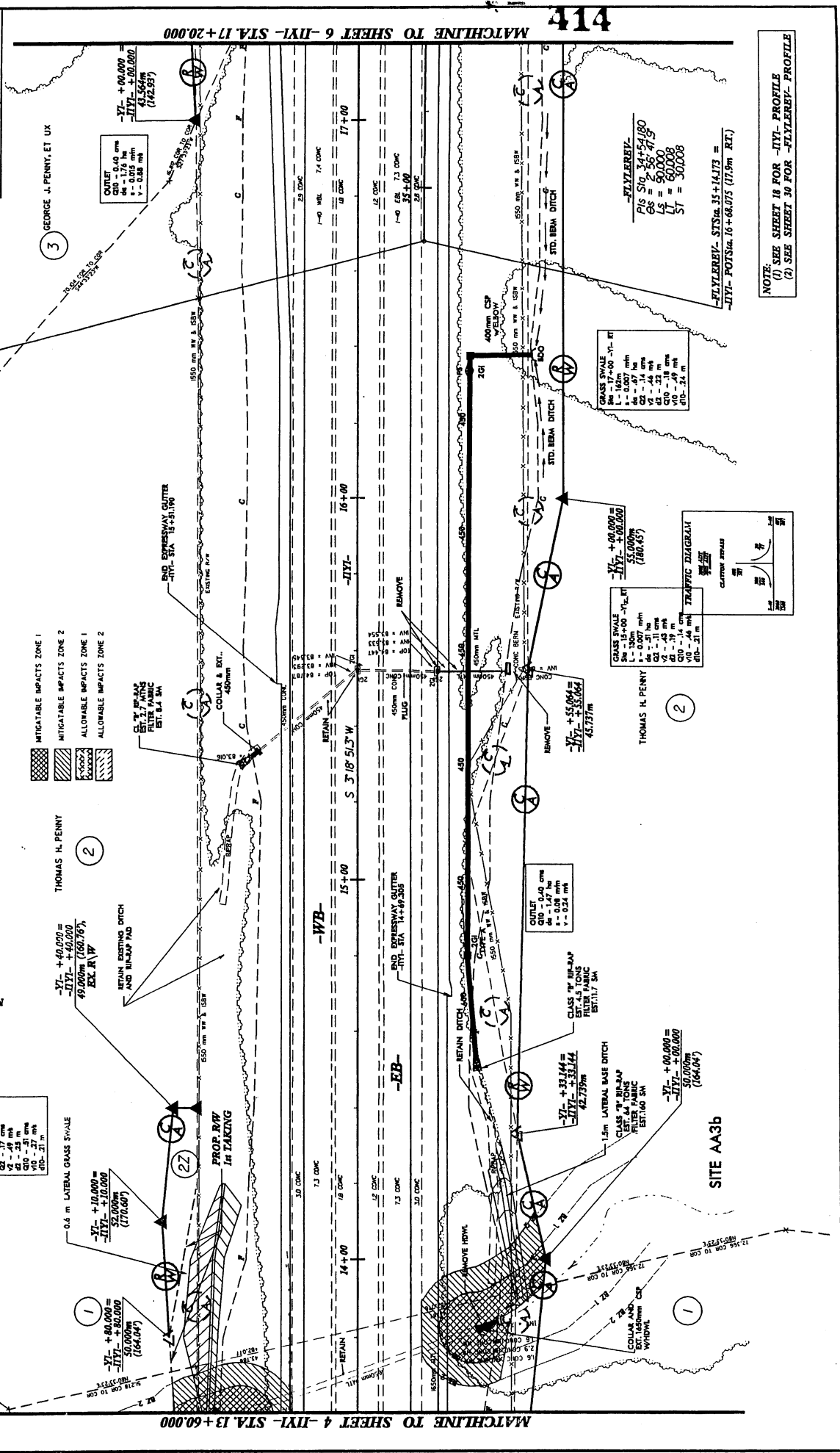
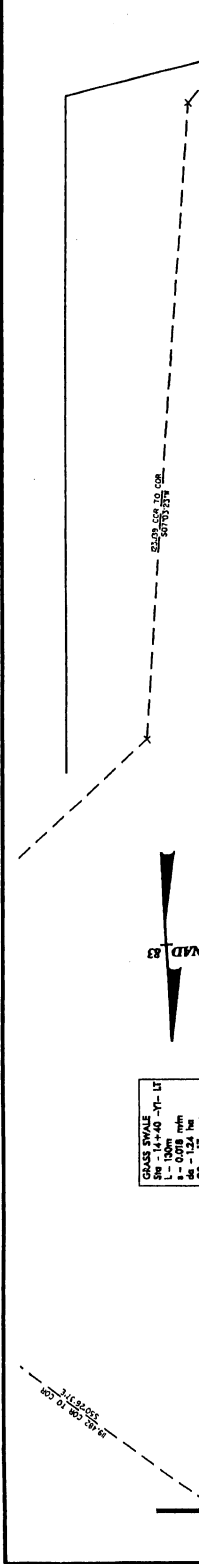
NOTE: (1) SEE SHEET 17 FOR -IYY- PROFILE

METRIC

PROJECT REFERENCE NO. **24357A**
 SHEET NO. **3**
 ROADWAY DESIGN ENGINEER
 HYDRAULICS ENGINEER

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

CONST. REV.
 R/W REV.



GRASS SWALE

SW	-14.40	-11.17
L	0.007 m	
W	1.24 m	
V	-2.21 m	
C10	-2.21 m	
V10	-2.21 m	
EO	-2.21 m	

0.6 m LATERAL GRASS SWALE

-VI	+10.000
-VII	+10.000
EX. R/W	49.000m (160.76')

REIN. BASE DITCH AND IN-TAKING

-VI	+40.000
-VII	+40.000
EX. R/W	49.000m (160.76')

REIN. BASE DITCH AND IN-TAKING

-VI	+40.000
-VII	+40.000
EX. R/W	49.000m (160.76')

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-VI	+40.000
-VII	+40.000
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REIN. BASE DITCH AND IN-TAKING

-VI	+40.000
-VII	+40.000
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-VI	+40.000
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EX. R/W	49.000m (160.76')

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-VI	+40.000
-VII	+40.000
EX. R/W	49.000m (160.76')

REIN. BASE DITCH AND IN-TAKING

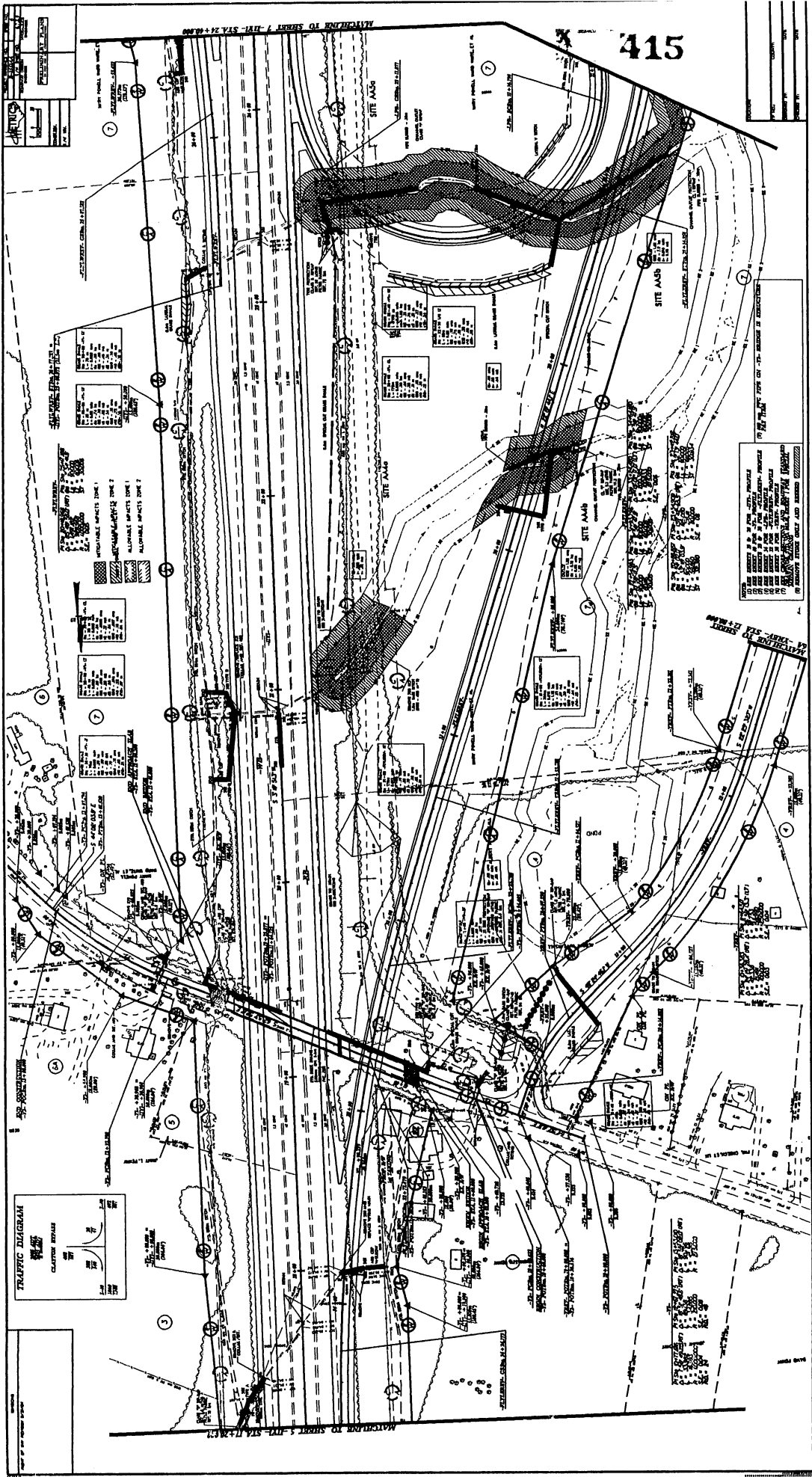
-VI	+40.000
-VII	+40.000
EX. R/W	49.000m (160.76')

REIN. BASE DITCH AND IN-TAKING

-VI	+40.000
-VII	+40.000
EX. R/W	49.000m (160.76')

REIN. BASE DITCH AND IN-TAKING

-VI	+40.000
-VII	+40.000
EX. R/W	49.000m (160.76')



NOTES

1. ALL UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY.
2. ALL UTILITIES SHALL BE DEEPENED TO A MINIMUM OF 48" BELOW FINISHED GRADE.
3. ALL UTILITIES SHALL BE PROTECTED BY CONCRETE CURBS AND RAILS.
4. ALL UTILITIES SHALL BE MARKED WITH PIPES AND CAPS.
5. ALL UTILITIES SHALL BE MAINTAINED AT ALL TIMES.
6. ALL UTILITIES SHALL BE REPAIRED IMMEDIATELY IN THE EVENT OF DAMAGE.
7. ALL UTILITIES SHALL BE REINSTALLED TO ORIGINAL OR BETTER CONDITION.
8. ALL UTILITIES SHALL BE PROTECTED BY CONCRETE CURBS AND RAILS.
9. ALL UTILITIES SHALL BE MARKED WITH PIPES AND CAPS.
10. ALL UTILITIES SHALL BE MAINTAINED AT ALL TIMES.
11. ALL UTILITIES SHALL BE REPAIRED IMMEDIATELY IN THE EVENT OF DAMAGE.
12. ALL UTILITIES SHALL BE REINSTALLED TO ORIGINAL OR BETTER CONDITION.

PERMISSIBLE IMPACTS DUNE 1

IMPACT	PERMISSIBLE
1. EROSION	NO
2. SEDIMENTATION	NO
3. SLOPE FAILURE	NO
4. LANDSLIDE	NO
5. COLLAPSE	NO
6. SLURRING	NO
7. SCOUR	NO
8. CHANNEL ENLARGEMENT	NO
9. CHANNEL OBSTRUCTION	NO
10. CHANNEL BLOCKAGE	NO
11. CHANNEL DEPLETION	NO
12. CHANNEL INFILTRATION	NO
13. CHANNEL COLLAPSE	NO
14. CHANNEL EROSION	NO
15. CHANNEL SEDIMENTATION	NO
16. CHANNEL SLOPE FAILURE	NO
17. CHANNEL LANDSLIDE	NO
18. CHANNEL COLLAPSE	NO
19. CHANNEL SLURRING	NO
20. CHANNEL SCOUR	NO
21. CHANNEL ENLARGEMENT	NO
22. CHANNEL OBSTRUCTION	NO
23. CHANNEL BLOCKAGE	NO
24. CHANNEL DEPLETION	NO
25. CHANNEL INFILTRATION	NO
26. CHANNEL COLLAPSE	NO
27. CHANNEL EROSION	NO
28. CHANNEL SEDIMENTATION	NO
29. CHANNEL SLOPE FAILURE	NO
30. CHANNEL LANDSLIDE	NO
31. CHANNEL COLLAPSE	NO
32. CHANNEL SLURRING	NO
33. CHANNEL SCOUR	NO
34. CHANNEL ENLARGEMENT	NO
35. CHANNEL OBSTRUCTION	NO
36. CHANNEL BLOCKAGE	NO
37. CHANNEL DEPLETION	NO
38. CHANNEL INFILTRATION	NO
39. CHANNEL COLLAPSE	NO
40. CHANNEL EROSION	NO
41. CHANNEL SEDIMENTATION	NO
42. CHANNEL SLOPE FAILURE	NO
43. CHANNEL LANDSLIDE	NO
44. CHANNEL COLLAPSE	NO
45. CHANNEL SLURRING	NO
46. CHANNEL SCOUR	NO
47. CHANNEL ENLARGEMENT	NO
48. CHANNEL OBSTRUCTION	NO
49. CHANNEL BLOCKAGE	NO
50. CHANNEL DEPLETION	NO
51. CHANNEL INFILTRATION	NO
52. CHANNEL COLLAPSE	NO
53. CHANNEL EROSION	NO
54. CHANNEL SEDIMENTATION	NO
55. CHANNEL SLOPE FAILURE	NO
56. CHANNEL LANDSLIDE	NO
57. CHANNEL COLLAPSE	NO
58. CHANNEL SLURRING	NO
59. CHANNEL SCOUR	NO
60. CHANNEL ENLARGEMENT	NO
61. CHANNEL OBSTRUCTION	NO
62. CHANNEL BLOCKAGE	NO
63. CHANNEL DEPLETION	NO
64. CHANNEL INFILTRATION	NO
65. CHANNEL COLLAPSE	NO
66. CHANNEL EROSION	NO
67. CHANNEL SEDIMENTATION	NO
68. CHANNEL SLOPE FAILURE	NO
69. CHANNEL LANDSLIDE	NO
70. CHANNEL COLLAPSE	NO
71. CHANNEL SLURRING	NO
72. CHANNEL SCOUR	NO
73. CHANNEL ENLARGEMENT	NO
74. CHANNEL OBSTRUCTION	NO
75. CHANNEL BLOCKAGE	NO
76. CHANNEL DEPLETION	NO
77. CHANNEL INFILTRATION	NO
78. CHANNEL COLLAPSE	NO
79. CHANNEL EROSION	NO
80. CHANNEL SEDIMENTATION	NO
81. CHANNEL SLOPE FAILURE	NO
82. CHANNEL LANDSLIDE	NO
83. CHANNEL COLLAPSE	NO
84. CHANNEL SLURRING	NO
85. CHANNEL SCOUR	NO
86. CHANNEL ENLARGEMENT	NO
87. CHANNEL OBSTRUCTION	NO
88. CHANNEL BLOCKAGE	NO
89. CHANNEL DEPLETION	NO
90. CHANNEL INFILTRATION	NO
91. CHANNEL COLLAPSE	NO
92. CHANNEL EROSION	NO
93. CHANNEL SEDIMENTATION	NO
94. CHANNEL SLOPE FAILURE	NO
95. CHANNEL LANDSLIDE	NO
96. CHANNEL COLLAPSE	NO
97. CHANNEL SLURRING	NO
98. CHANNEL SCOUR	NO
99. CHANNEL ENLARGEMENT	NO
100. CHANNEL OBSTRUCTION	NO

PERMISSIBLE IMPACTS DUNE 2

1. EROSION

2. SEDIMENTATION

3. SLOPE FAILURE

4. LANDSLIDE

5. COLLAPSE

6. SLURRING

7. SCOUR

8. CHANNEL ENLARGEMENT

9. CHANNEL OBSTRUCTION

10. CHANNEL BLOCKAGE

11. CHANNEL DEPLETION

12. CHANNEL INFILTRATION

13. CHANNEL COLLAPSE

14. CHANNEL EROSION

15. CHANNEL SEDIMENTATION

16. CHANNEL SLOPE FAILURE

17. CHANNEL LANDSLIDE

18. CHANNEL COLLAPSE

19. CHANNEL SLURRING

20. CHANNEL SCOUR

21. CHANNEL ENLARGEMENT

22. CHANNEL OBSTRUCTION

23. CHANNEL BLOCKAGE

24. CHANNEL DEPLETION

25. CHANNEL INFILTRATION

26. CHANNEL COLLAPSE

27. CHANNEL EROSION

28. CHANNEL SEDIMENTATION

29. CHANNEL SLOPE FAILURE

30. CHANNEL LANDSLIDE

31. CHANNEL COLLAPSE

32. CHANNEL SLURRING

33. CHANNEL SCOUR

34. CHANNEL ENLARGEMENT

35. CHANNEL OBSTRUCTION

36. CHANNEL BLOCKAGE

37. CHANNEL DEPLETION

38. CHANNEL INFILTRATION

39. CHANNEL COLLAPSE

40. CHANNEL EROSION

41. CHANNEL SEDIMENTATION

42. CHANNEL SLOPE FAILURE

43. CHANNEL LANDSLIDE

44. CHANNEL COLLAPSE

45. CHANNEL SLURRING

46. CHANNEL SCOUR

47. CHANNEL ENLARGEMENT

48. CHANNEL OBSTRUCTION

49. CHANNEL BLOCKAGE

50. CHANNEL DEPLETION

51. CHANNEL INFILTRATION

52. CHANNEL COLLAPSE

53. CHANNEL EROSION

54. CHANNEL SEDIMENTATION

55. CHANNEL SLOPE FAILURE

56. CHANNEL LANDSLIDE

57. CHANNEL COLLAPSE

58. CHANNEL SLURRING

59. CHANNEL SCOUR

60. CHANNEL ENLARGEMENT

61. CHANNEL OBSTRUCTION

62. CHANNEL BLOCKAGE

63. CHANNEL DEPLETION

64. CHANNEL INFILTRATION

65. CHANNEL COLLAPSE

66. CHANNEL EROSION

67. CHANNEL SEDIMENTATION

68. CHANNEL SLOPE FAILURE

69. CHANNEL LANDSLIDE

70. CHANNEL COLLAPSE

71. CHANNEL SLURRING

72. CHANNEL SCOUR

73. CHANNEL ENLARGEMENT

74. CHANNEL OBSTRUCTION

75. CHANNEL BLOCKAGE

76. CHANNEL DEPLETION

77. CHANNEL INFILTRATION

78. CHANNEL COLLAPSE

79. CHANNEL EROSION

80. CHANNEL SEDIMENTATION

81. CHANNEL SLOPE FAILURE

82. CHANNEL LANDSLIDE

83. CHANNEL COLLAPSE

84. CHANNEL SLURRING

85. CHANNEL SCOUR

86. CHANNEL ENLARGEMENT

87. CHANNEL OBSTRUCTION

88. CHANNEL BLOCKAGE

89. CHANNEL DEPLETION

90. CHANNEL INFILTRATION

91. CHANNEL COLLAPSE

92. CHANNEL EROSION

93. CHANNEL SEDIMENTATION

94. CHANNEL SLOPE FAILURE

95. CHANNEL LANDSLIDE

96. CHANNEL COLLAPSE

97. CHANNEL SLURRING

98. CHANNEL SCOUR

99. CHANNEL ENLARGEMENT

100. CHANNEL OBSTRUCTION

PERMISSIBLE IMPACTS DUNE 3

1. EROSION

2. SEDIMENTATION

3. SLOPE FAILURE

4. LANDSLIDE

5. COLLAPSE

6. SLURRING

7. SCOUR

8. CHANNEL ENLARGEMENT

9. CHANNEL OBSTRUCTION

10. CHANNEL BLOCKAGE

11. CHANNEL DEPLETION

12. CHANNEL INFILTRATION

13. CHANNEL COLLAPSE

14. CHANNEL EROSION

15. CHANNEL SEDIMENTATION

16. CHANNEL SLOPE FAILURE

17. CHANNEL LANDSLIDE

18. CHANNEL COLLAPSE

19. CHANNEL SLURRING

20. CHANNEL SCOUR

21. CHANNEL ENLARGEMENT

22. CHANNEL OBSTRUCTION

23. CHANNEL BLOCKAGE

24. CHANNEL DEPLETION

25. CHANNEL INFILTRATION

26. CHANNEL COLLAPSE

27. CHANNEL EROSION

28. CHANNEL SEDIMENTATION

29. CHANNEL SLOPE FAILURE

30. CHANNEL LANDSLIDE

31. CHANNEL COLLAPSE

32. CHANNEL SLURRING

33. CHANNEL SCOUR

34. CHANNEL ENLARGEMENT

35. CHANNEL OBSTRUCTION

36. CHANNEL BLOCKAGE

37. CHANNEL DEPLETION

38. CHANNEL INFILTRATION

39. CHANNEL COLLAPSE

40. CHANNEL EROSION

41. CHANNEL SEDIMENTATION

42. CHANNEL SLOPE FAILURE

43. CHANNEL LANDSLIDE

44. CHANNEL COLLAPSE

45. CHANNEL SLURRING

46. CHANNEL SCOUR

47. CHANNEL ENLARGEMENT

48. CHANNEL OBSTRUCTION

49. CHANNEL BLOCKAGE

50. CHANNEL DEPLETION

51. CHANNEL INFILTRATION

52. CHANNEL COLLAPSE

53. CHANNEL EROSION

54. CHANNEL SEDIMENTATION

55. CHANNEL SLOPE FAILURE

56. CHANNEL LANDSLIDE

57. CHANNEL COLLAPSE

58. CHANNEL SLURRING

59. CHANNEL SCOUR

60. CHANNEL ENLARGEMENT

61. CHANNEL OBSTRUCTION

62. CHANNEL BLOCKAGE

63. CHANNEL DEPLETION

64. CHANNEL INFILTRATION

65. CHANNEL COLLAPSE

66. CHANNEL EROSION

67. CHANNEL SEDIMENTATION

68. CHANNEL SLOPE FAILURE

69. CHANNEL LANDSLIDE

70. CHANNEL COLLAPSE

71. CHANNEL SLURRING

72. CHANNEL SCOUR

73. CHANNEL ENLARGEMENT

74. CHANNEL OBSTRUCTION

75. CHANNEL BLOCKAGE

76. CHANNEL DEPLETION

77. CHANNEL INFILTRATION

78. CHANNEL COLLAPSE

79. CHANNEL EROSION

80. CHANNEL SEDIMENTATION

81. CHANNEL SLOPE FAILURE

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83. CHANNEL COLLAPSE

84. CHANNEL SLURRING

85. CHANNEL SCOUR

86. CHANNEL ENLARGEMENT

87. CHANNEL OBSTRUCTION

88. CHANNEL BLOCKAGE

89. CHANNEL DEPLETION

90. CHANNEL INFILTRATION

91. CHANNEL COLLAPSE

92. CHANNEL EROSION

93. CHANNEL SEDIMENTATION

94. CHANNEL SLOPE FAILURE

95. CHANNEL LANDSLIDE

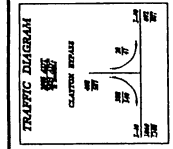
96. CHANNEL COLLAPSE

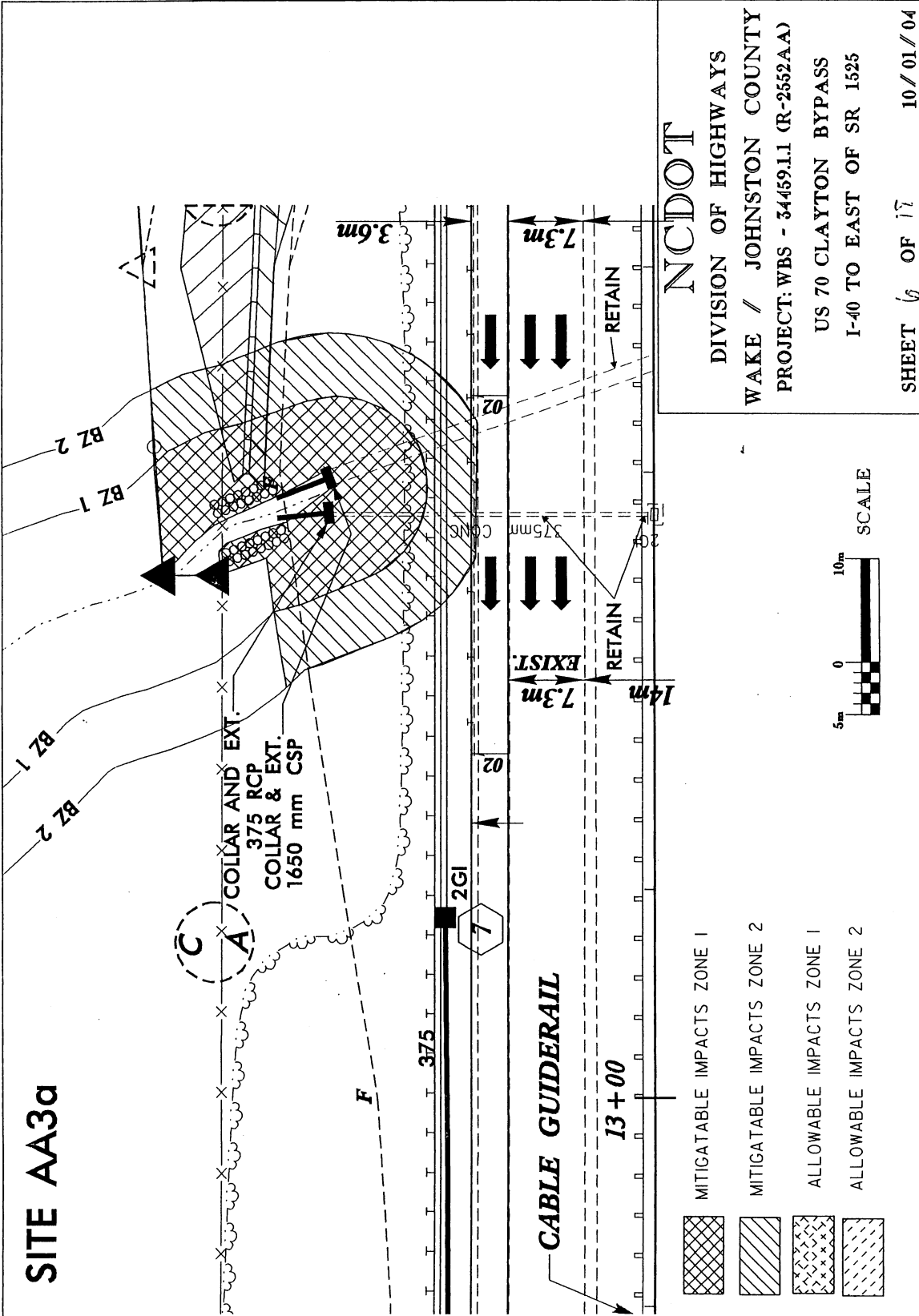
97. CHANNEL SLURRING

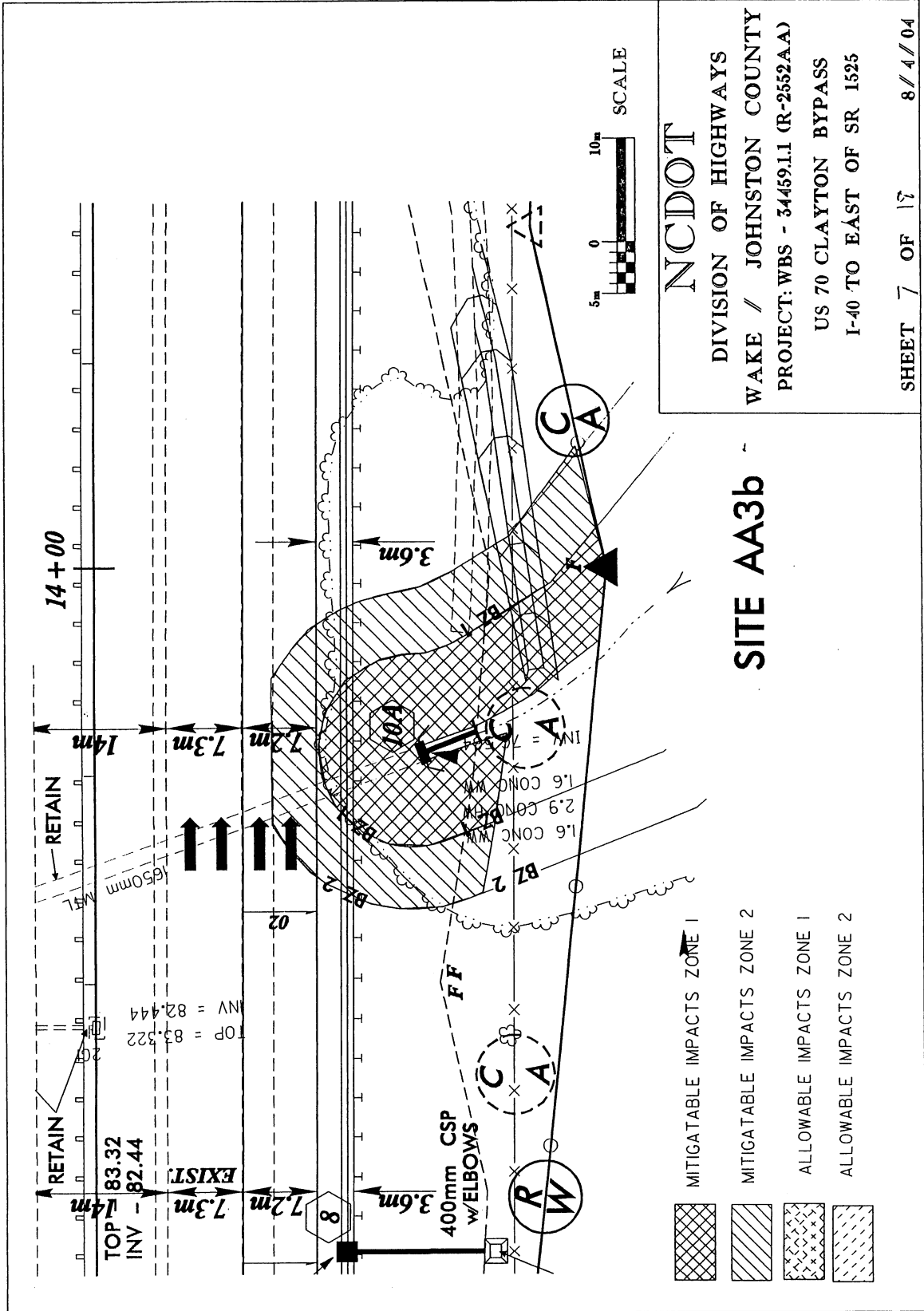
98. CHANNEL SCOUR

99. CHANNEL ENLARGEMENT

100. CHANNEL OBSTRUCTION



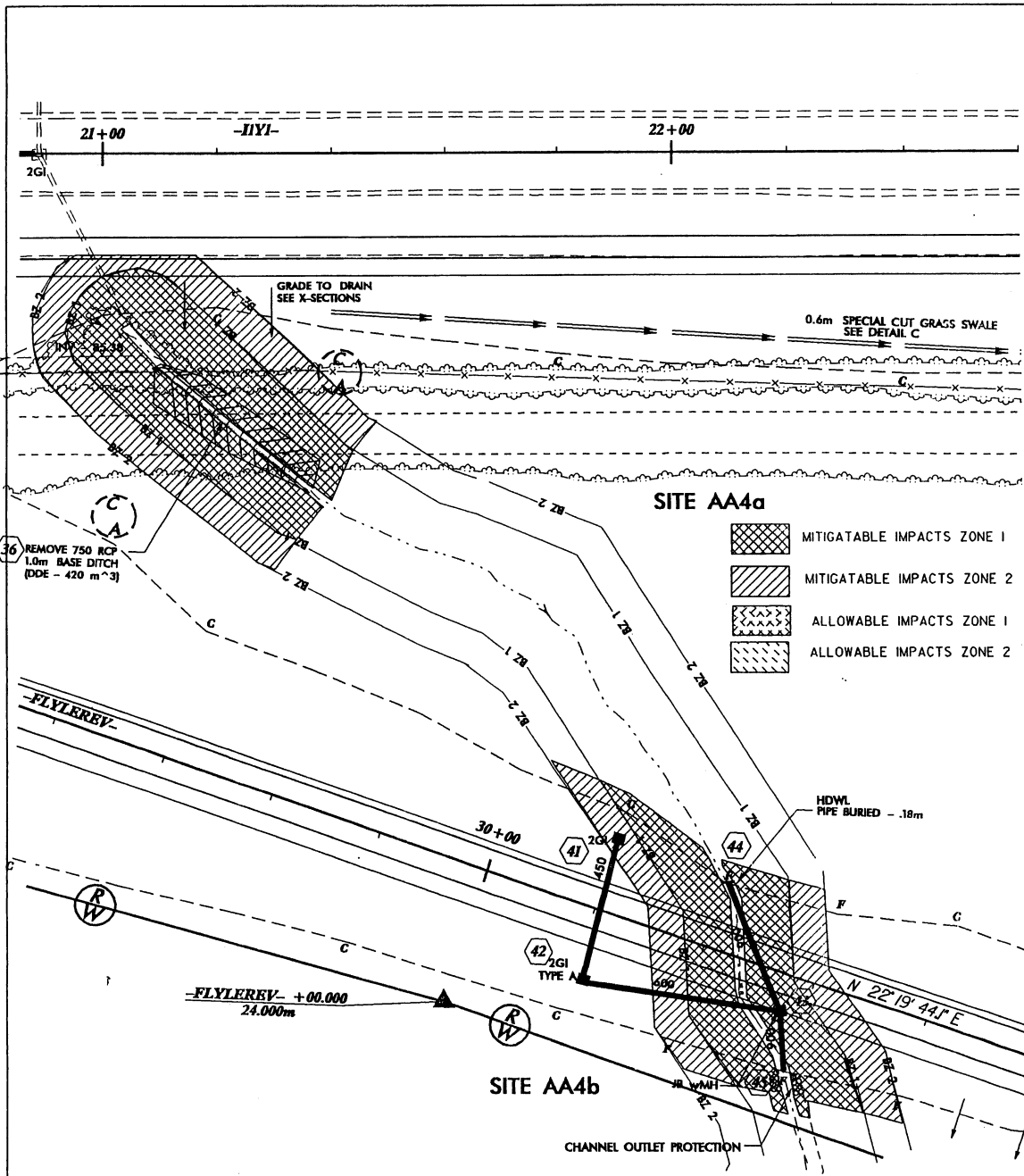








NCDOT
 DIVISION OF HIGHWAYS
 WAKE / JOHNSTON COUNTY
 PROJECT: WBS - 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525
 SHEET 7 OF 17 8/4/04

SITE AA3b

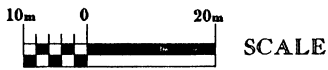
- MITIGATABLE IMPACTS ZONE 1
- MITIGATABLE IMPACTS ZONE 2
- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2



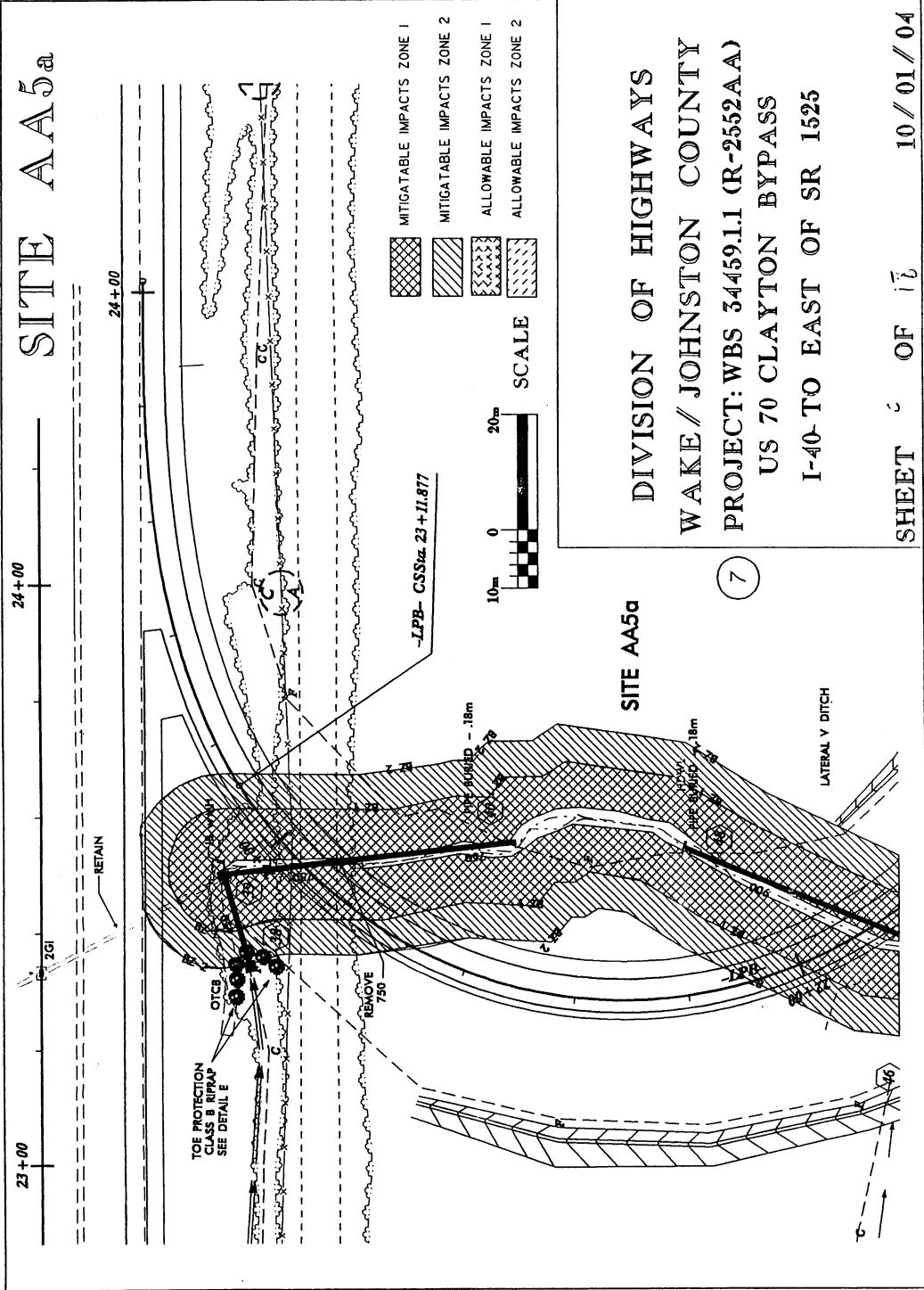
SITE AA4a

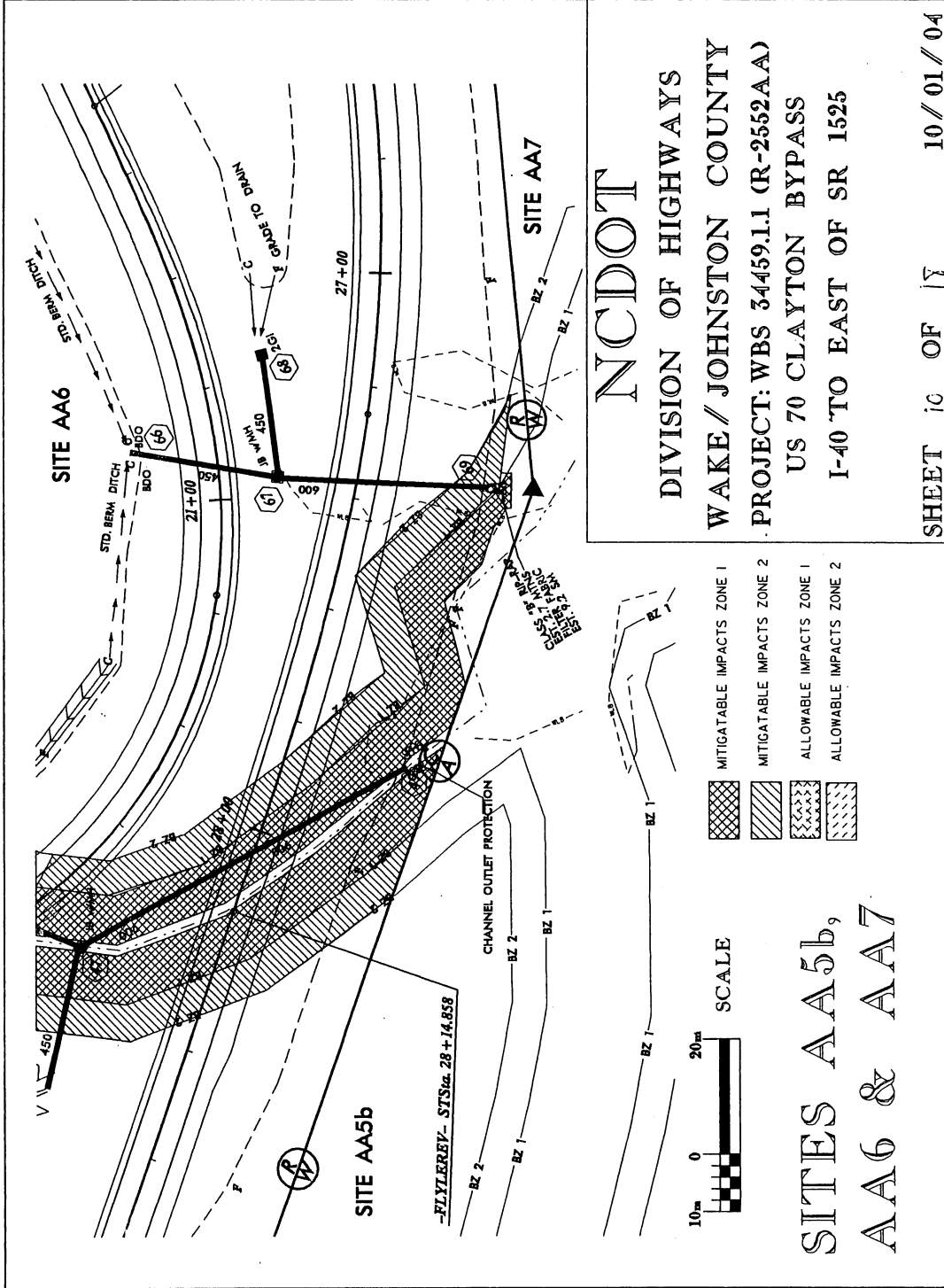
-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

SITES AA4a & AA4b







NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525

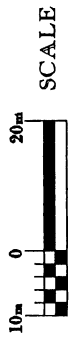




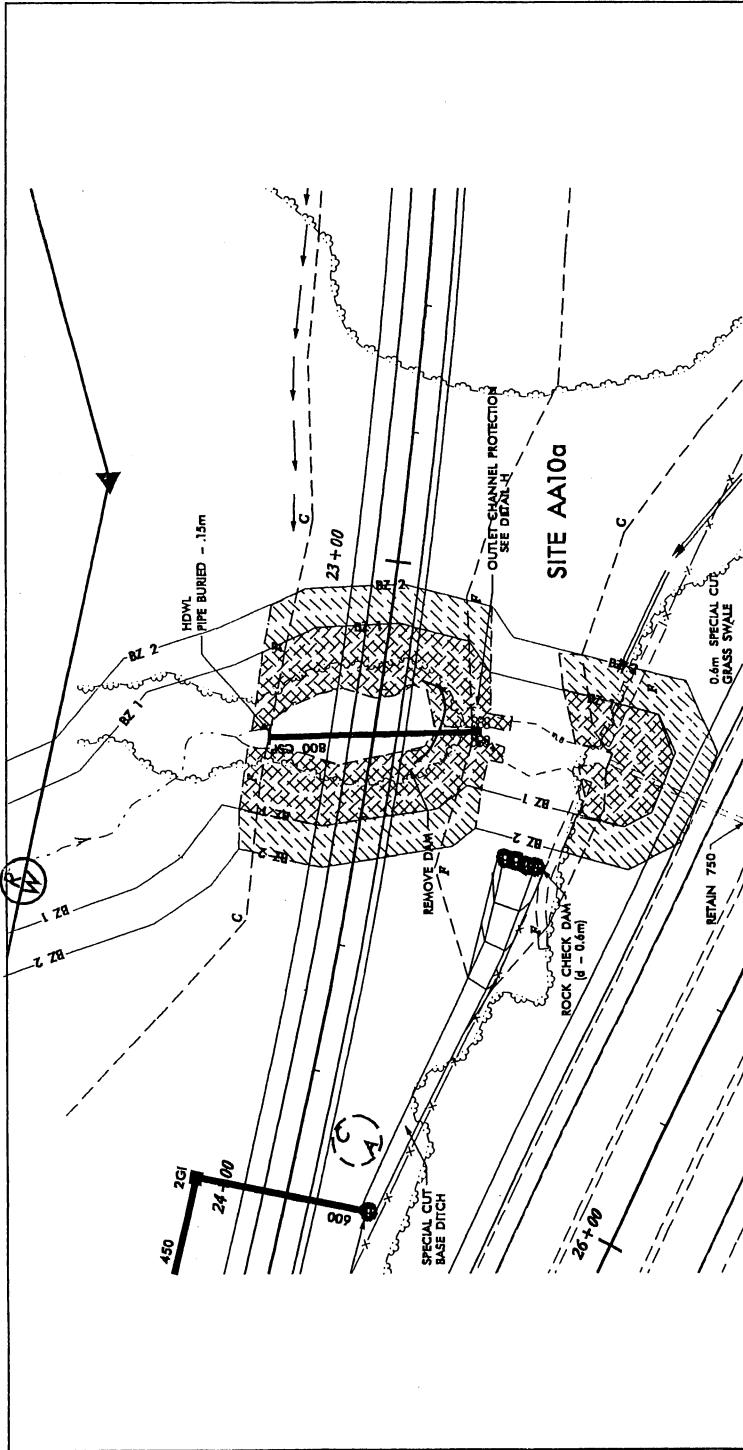
NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525

SHEET 10 OF 17 10/01/04

-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2



SITES AA5b,
 AA6 & AA7



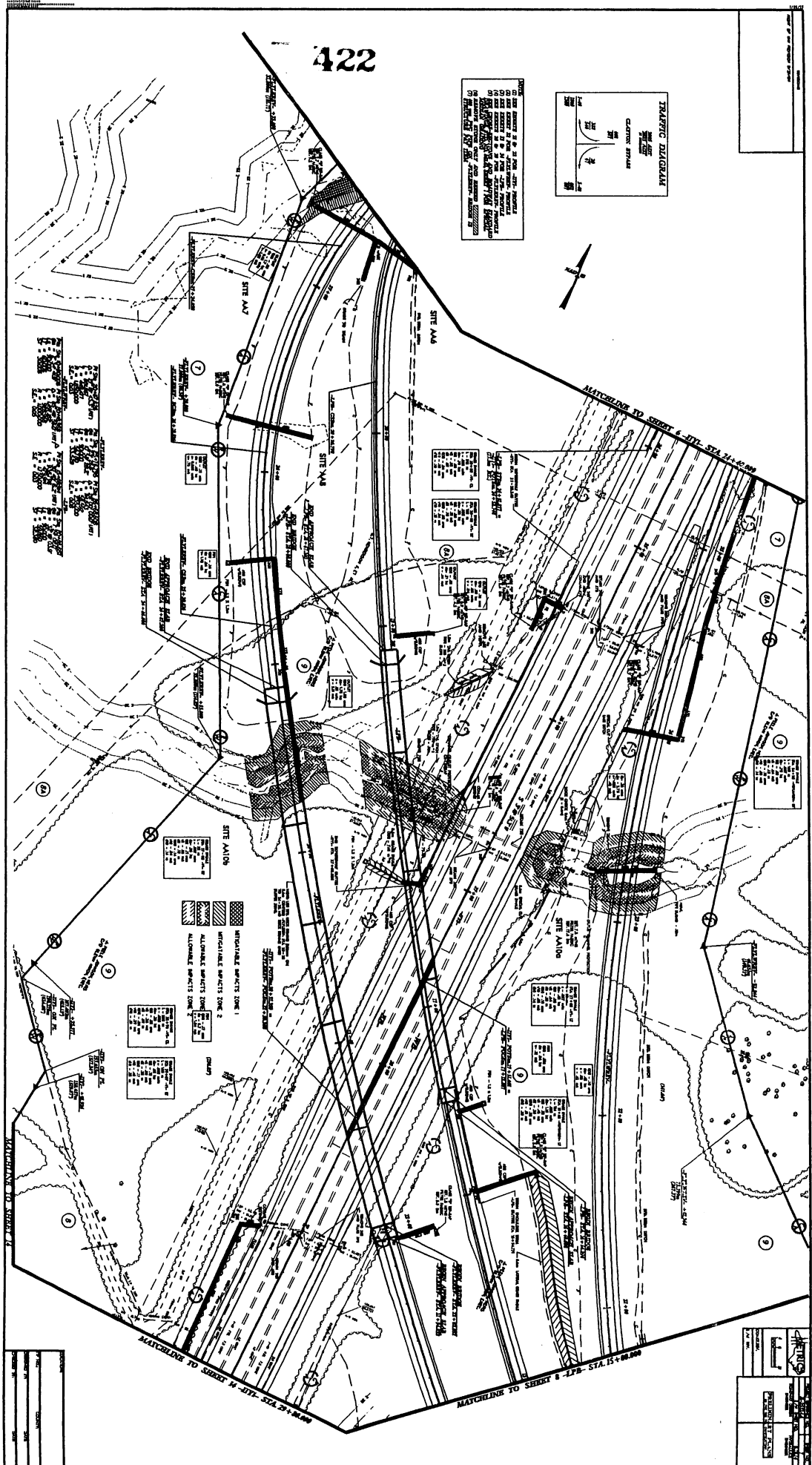
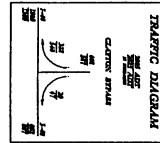
SITE AA10^a

NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS

SHEET 1 OF 18 10/01/04

422

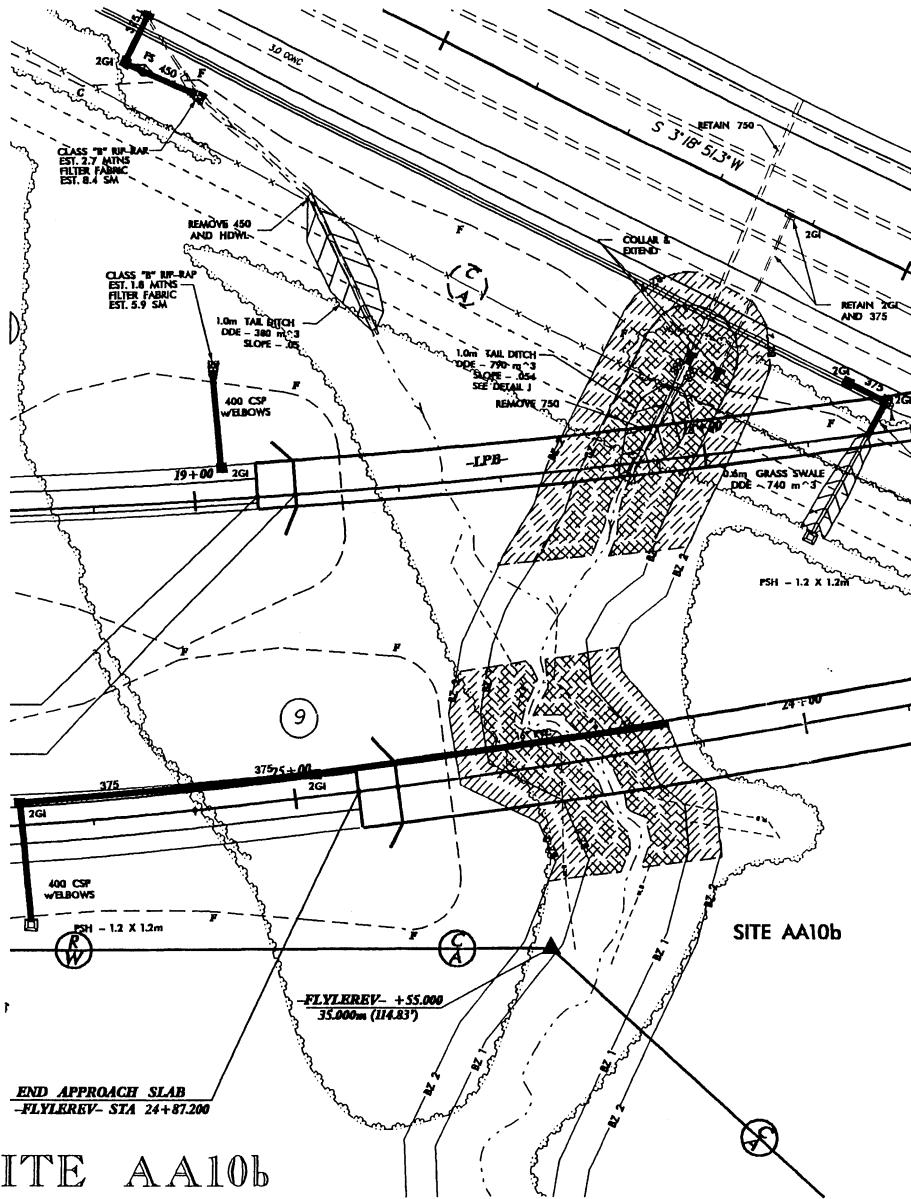
NOTES: THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE GENERAL NOTES AND SPECIFICATIONS FOR THE PROJECT. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AND EROSION CONTROL MEASURES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL MAINTAIN ADEQUATE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.







- THREATIC SHEATHING ZONE 1
- THREATIC SHEATHING ZONE 2
- ALUMINUM SHEATHING ZONE 1
- ALUMINUM SHEATHING ZONE 2

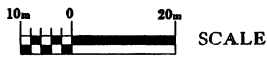
DATE:	
SCALE:	
PROJECT:	
DRAWN BY:	
CHECKED BY:	

DATE:	
SCALE:	
PROJECT:	
DRAWN BY:	
CHECKED BY:	

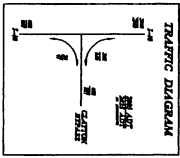
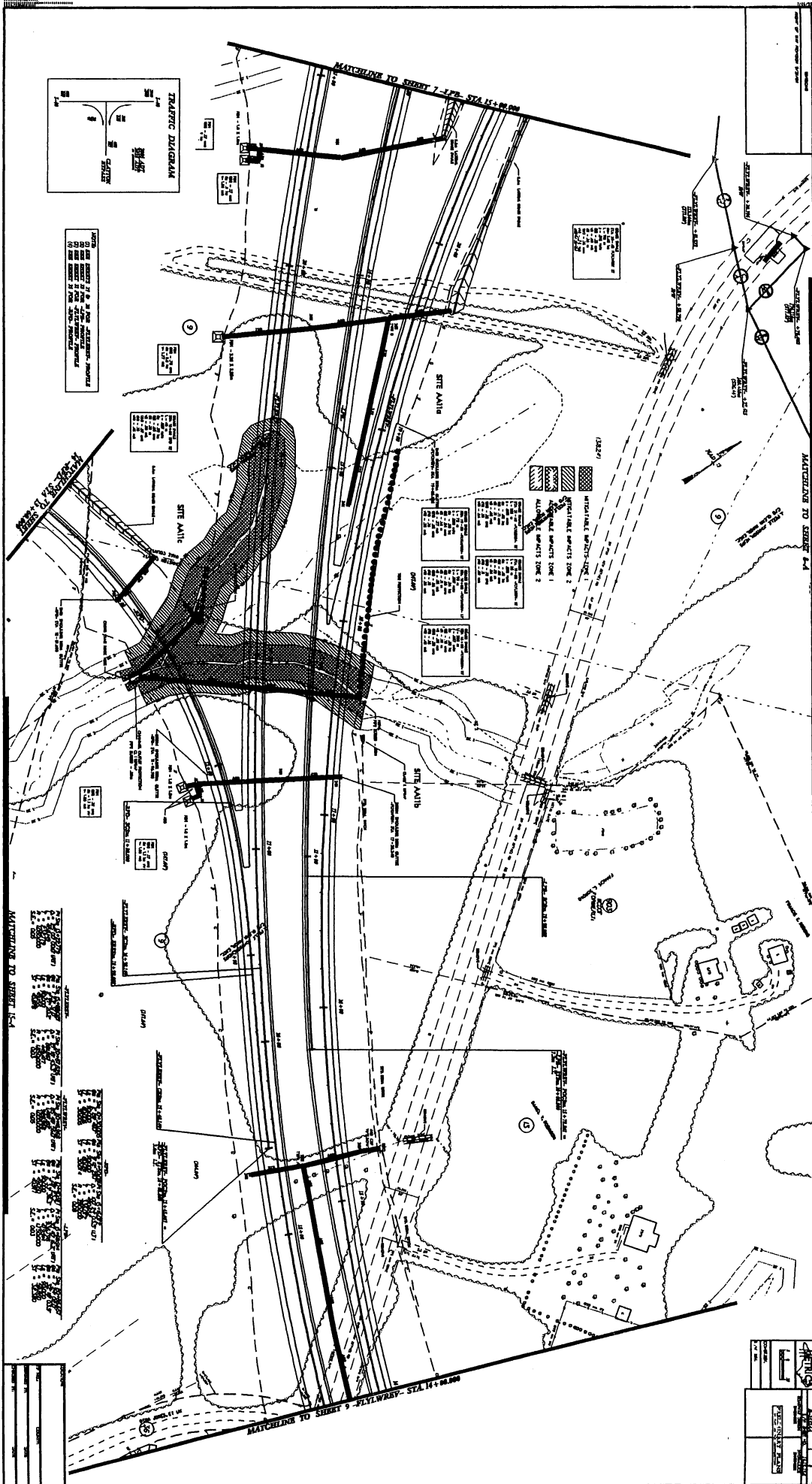


SITE AA10b

-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2



NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS



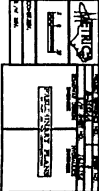
NOTE: THE PROPOSED ROADWAY AND UTILITY LINES SHOWN ON THIS PLAN ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL AID ROAD DISTRICT NO. 1, AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL AID ROAD DISTRICT NO. 2.

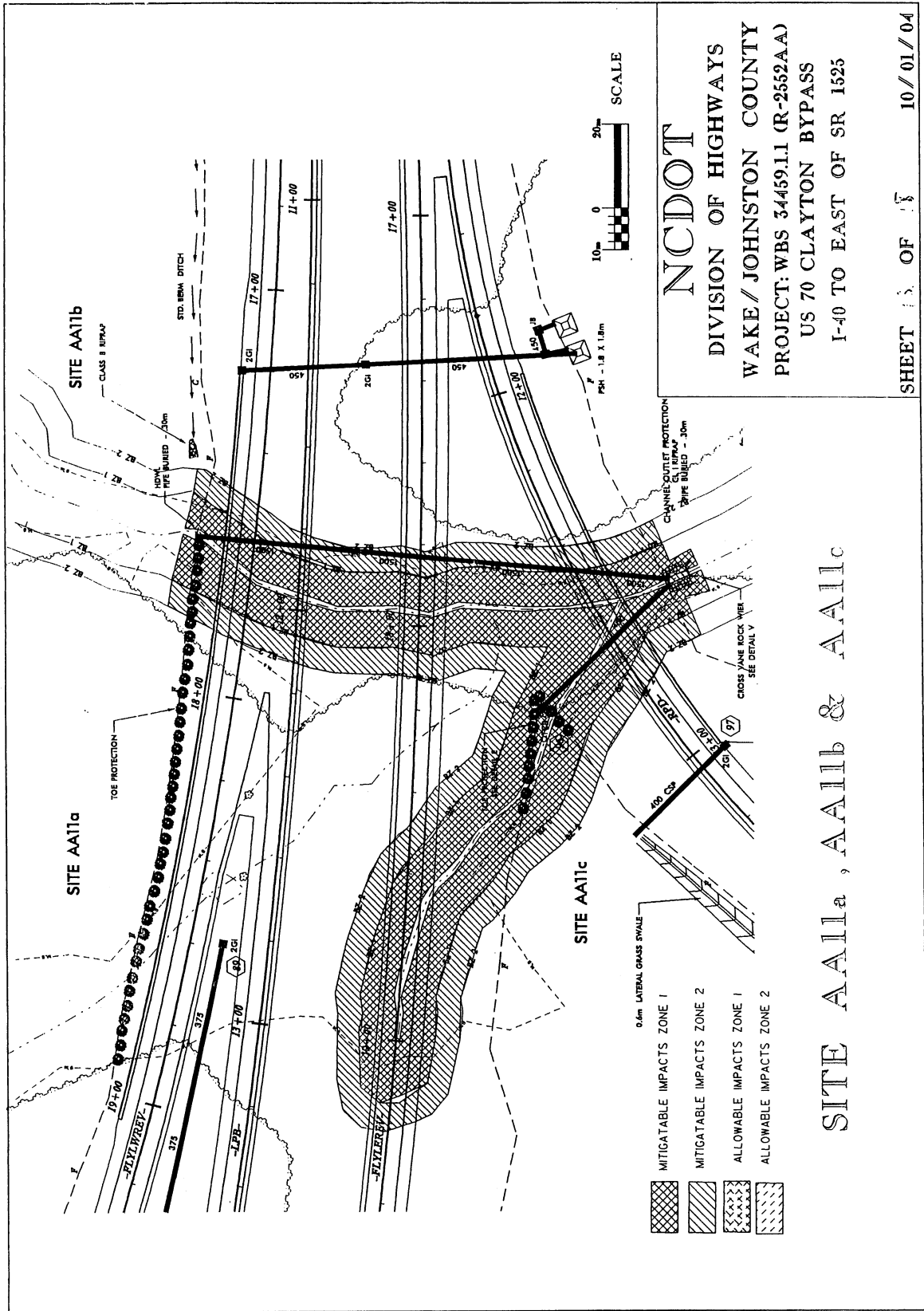
Symbol	Description
[Symbol]	PROPOSED ROADWAY
[Symbol]	EXISTING ROADWAY
[Symbol]	PROPOSED UTILITY LINE
[Symbol]	EXISTING UTILITY LINE

Symbol	Description
[Symbol]	PROPOSED UTILITY TRENCH
[Symbol]	EXISTING UTILITY TRENCH
[Symbol]	PROPOSED UTILITY TRENCH 1
[Symbol]	PROPOSED UTILITY TRENCH 2
[Symbol]	PROPOSED UTILITY TRENCH 3

MATCHLINE TO SHEET 1/4

MATCHLINE TO SHEET 9 PATHWAY- STA 14+66.00





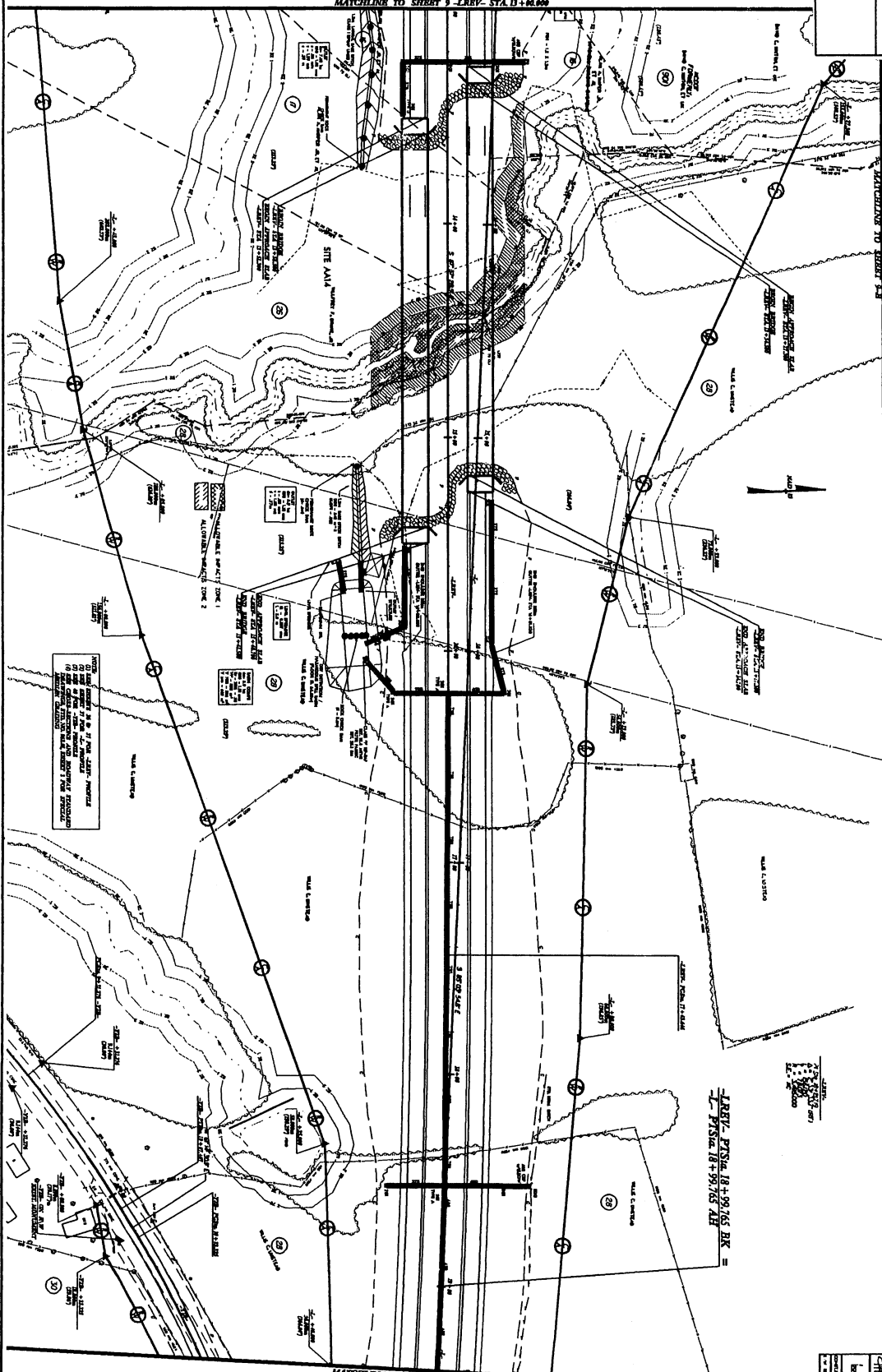
NCDOT
 DIVISION OF HIGHWAYS
 WAKE / JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525

SHEET 13 OF 18 10/01/04

SITE AA11a, AA11b & AA11c

MATCHLINE TO SHEET 9 - REV. STA. 13+00.00

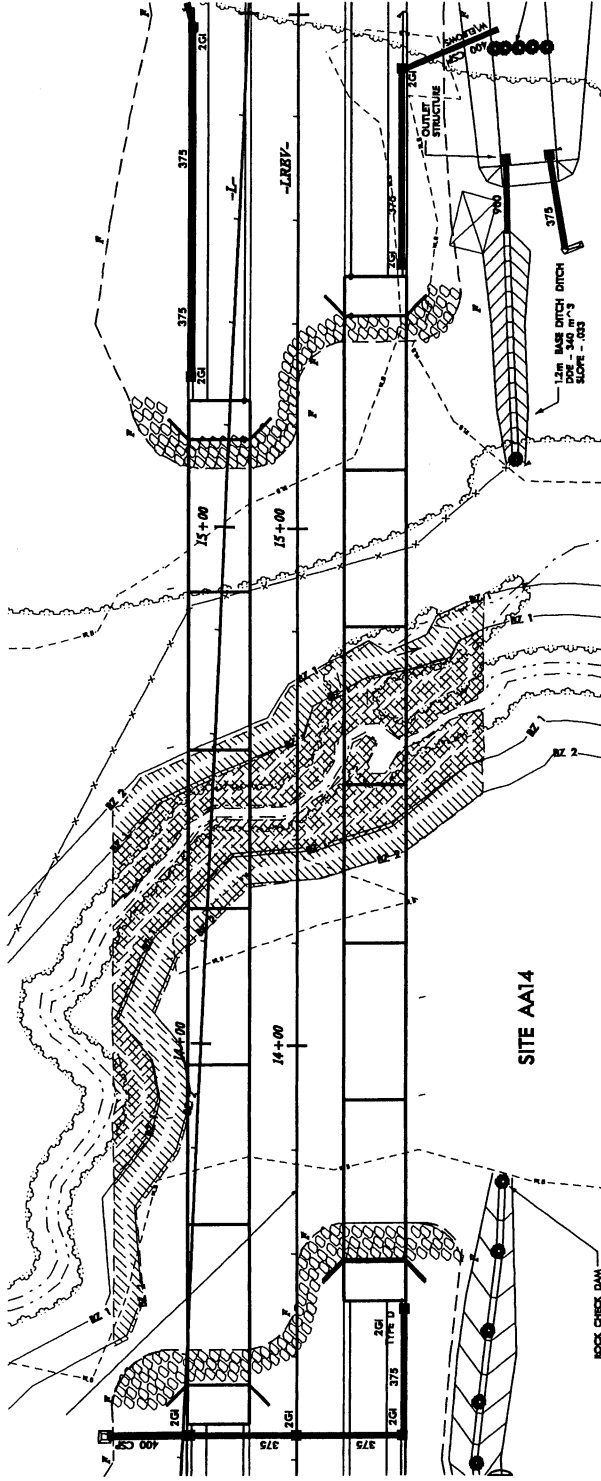
MATCHLINE TO SHEET 10 - REV. STA. 18+00.00



REV. P1516 18+00.00 BK =
P1516 18+00.00 BK =

MATCHLINE TO SHEET 11 - L - STA. 19+00.00





DATE	
SCALE	
PROJECT	
DESIGNER	
CHECKER	
APPROVER	



SITE AA14

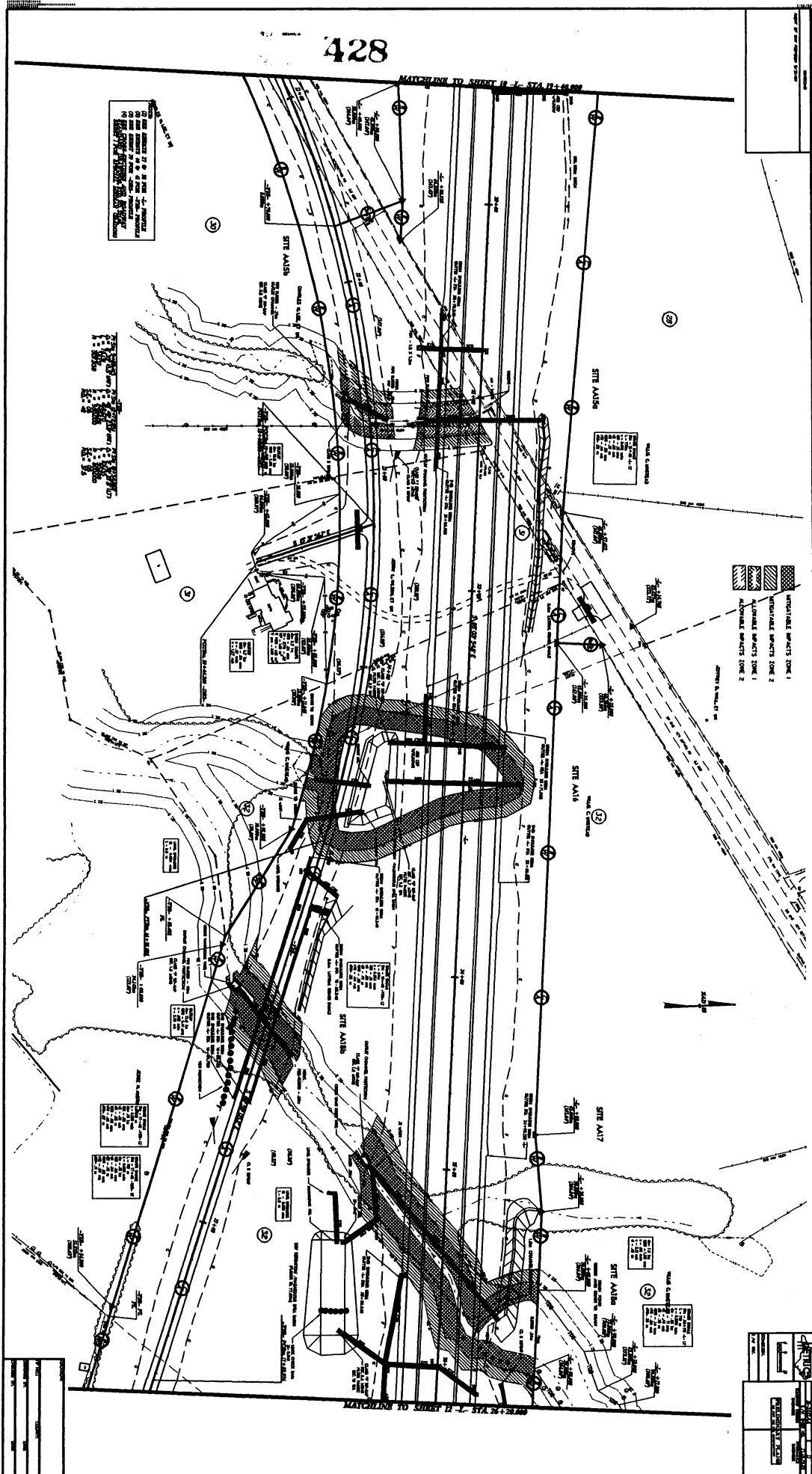
NCDOT

DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.11 (R-2551AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525

-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

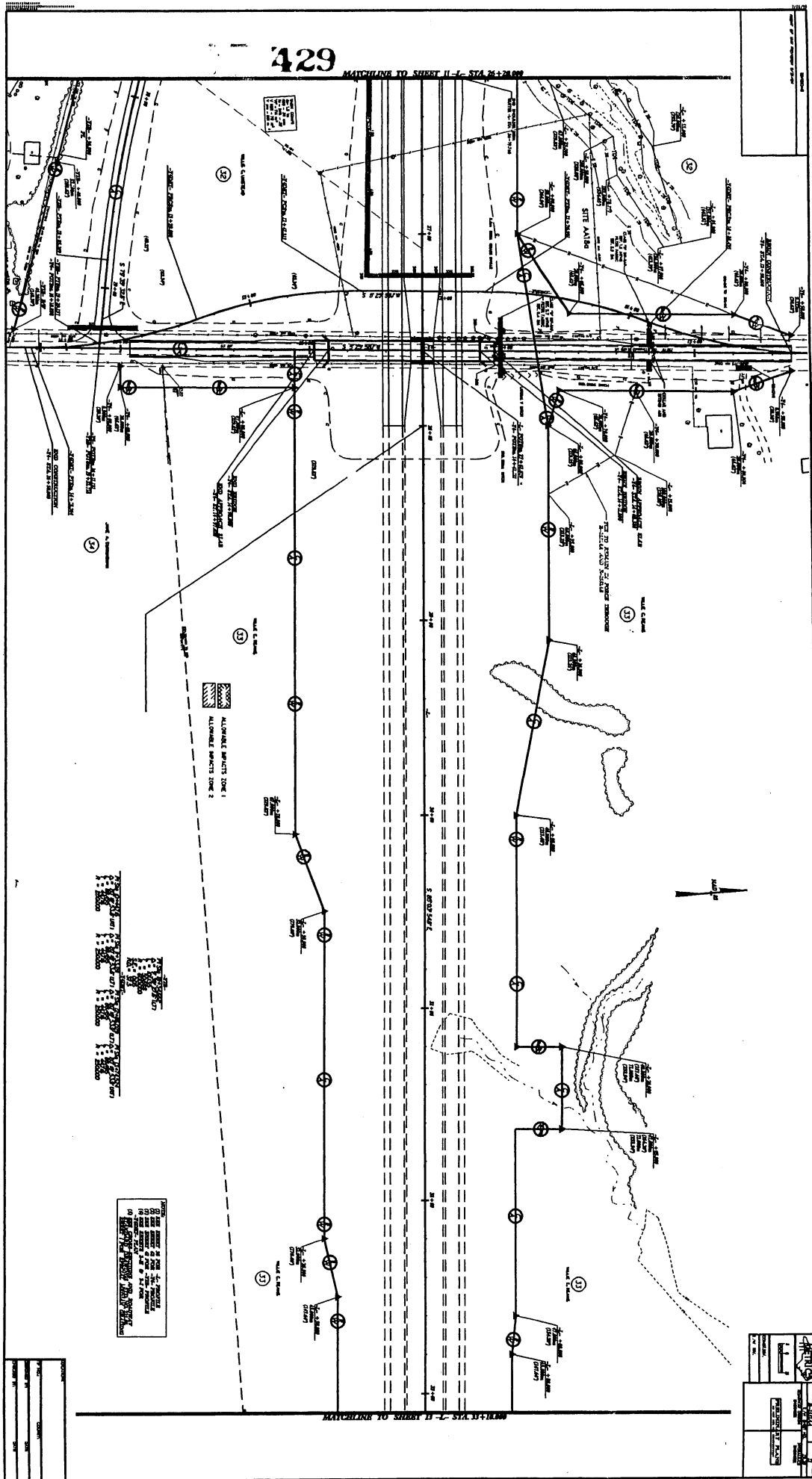


428



429

MATCHLINE TO SHEET U.S. STA. 2+200

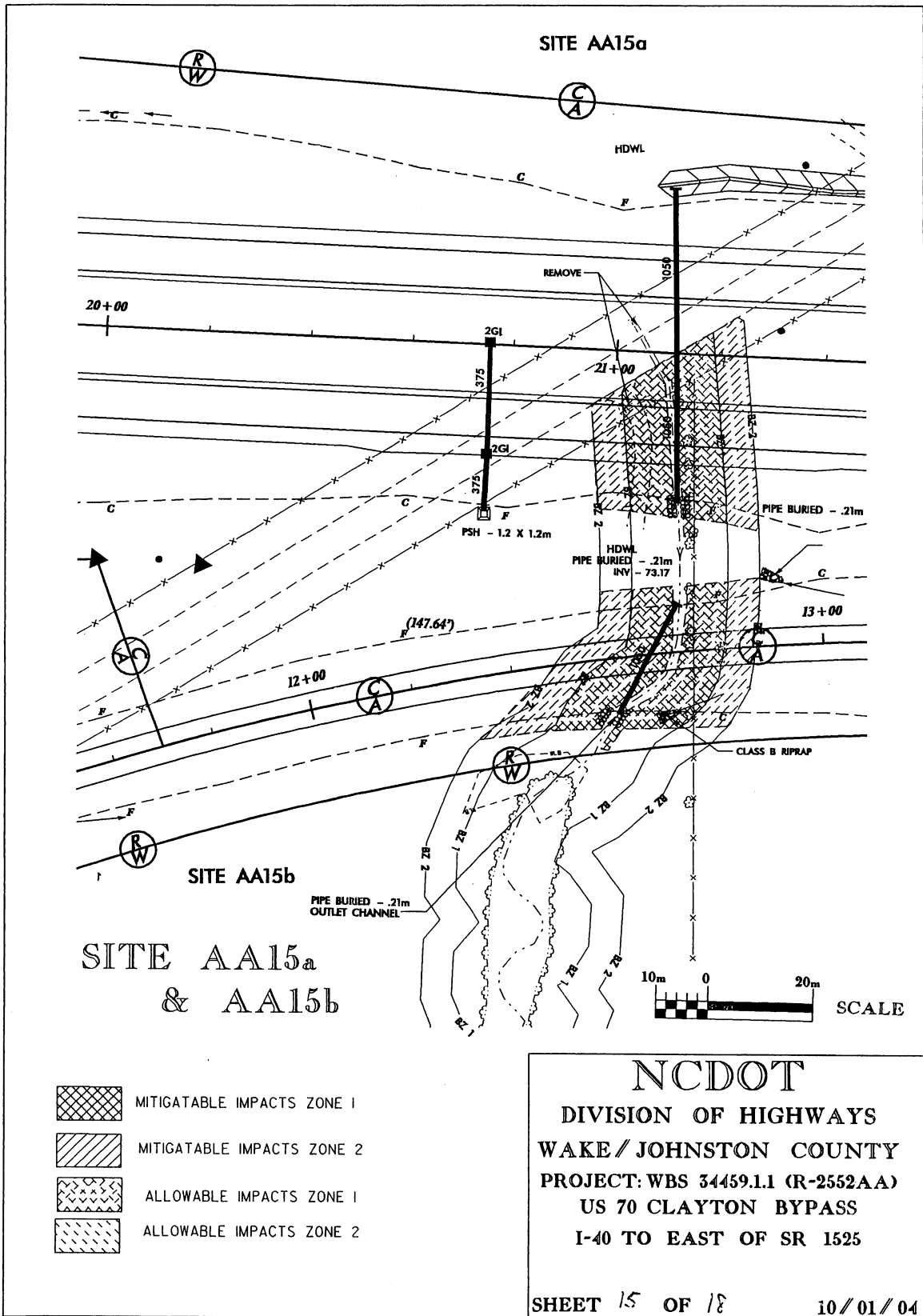


MATCHLINE TO SHEET U.S. STA. 2+000





DATE	
DRAWN BY	
CHECKED BY	
APP. BY	

PROPOSED 18" DIAMETER WATER MAIN
PROPOSED 12" DIAMETER WATER MAIN
PROPOSED 8" DIAMETER WATER MAIN
PROPOSED 6" DIAMETER WATER MAIN
PROPOSED 4" DIAMETER WATER MAIN
PROPOSED 3" DIAMETER WATER MAIN
PROPOSED 2" DIAMETER WATER MAIN
PROPOSED 1 1/2" DIAMETER WATER MAIN
PROPOSED 1" DIAMETER WATER MAIN
PROPOSED 3/4" DIAMETER WATER MAIN
PROPOSED 1/2" DIAMETER WATER MAIN
PROPOSED 1/4" DIAMETER WATER MAIN

PROJECT NO.	
DATE	
DRAWN BY	
CHECKED BY	
APP. BY	

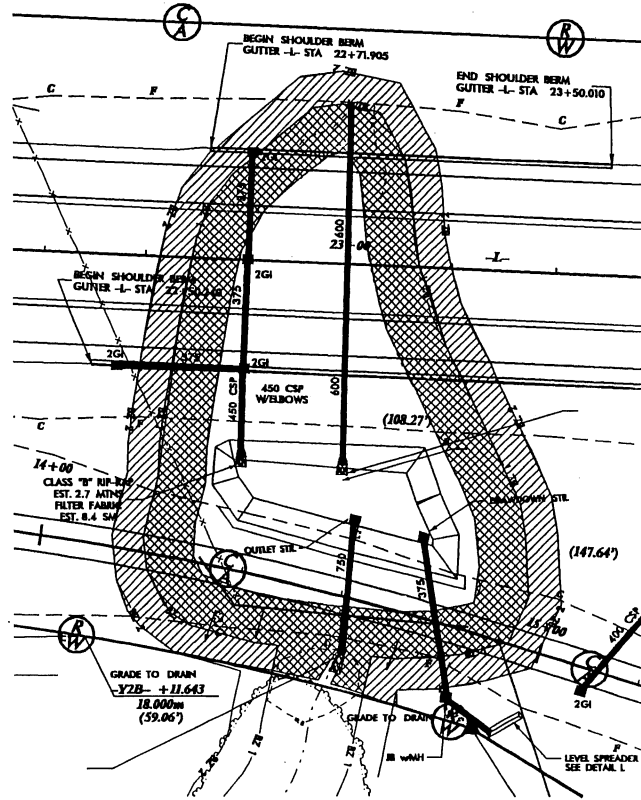


SITE AA15a
& AA15b





-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

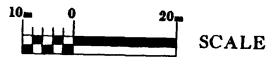
NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525

SITE AA16



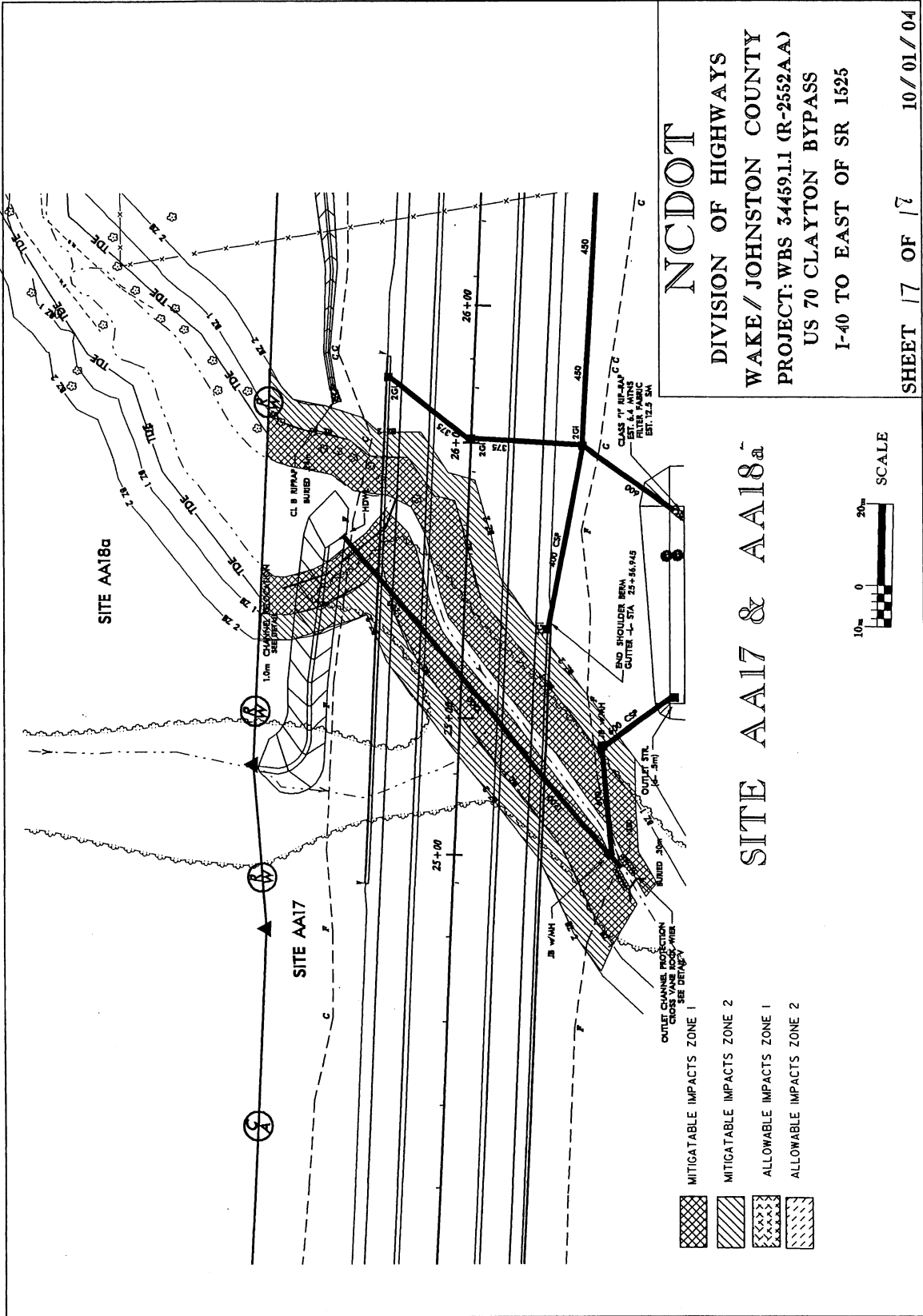
SITE AA16

-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2



NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525

SHEET 16 OF 18 10/01/04



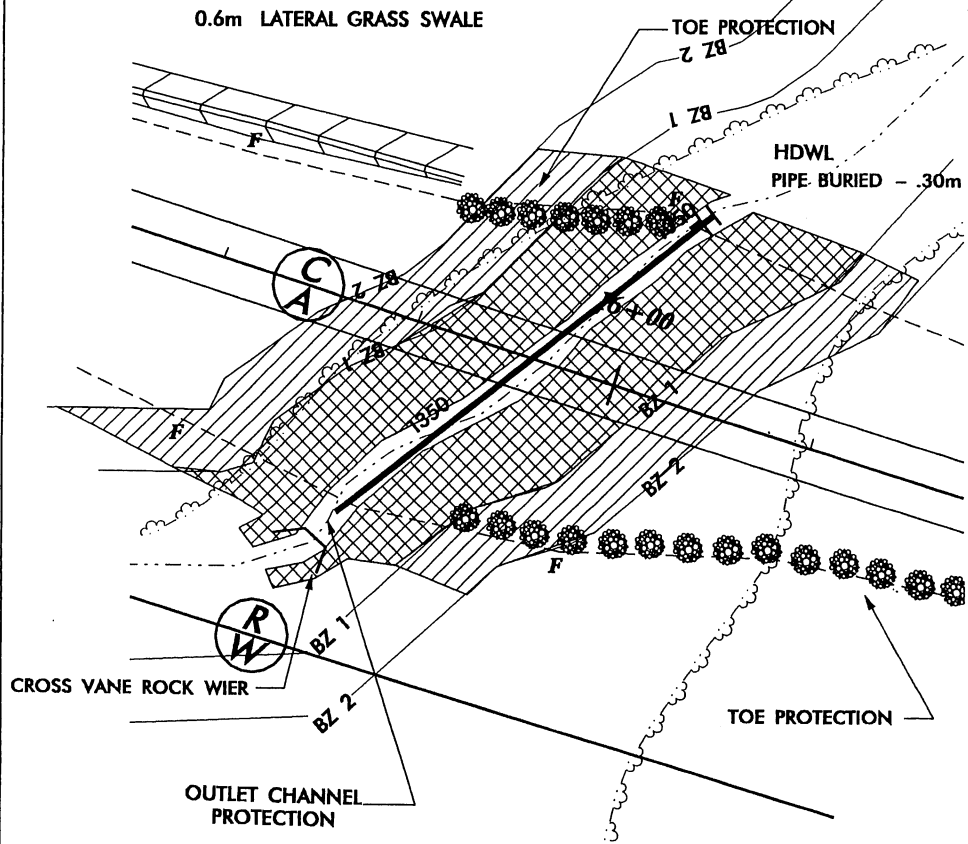
NCDOT

DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AA)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525




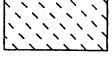
SITE AA17 & AA18a

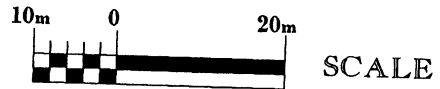
SHEET 17 OF 17 10/01/04

SITE AA18b

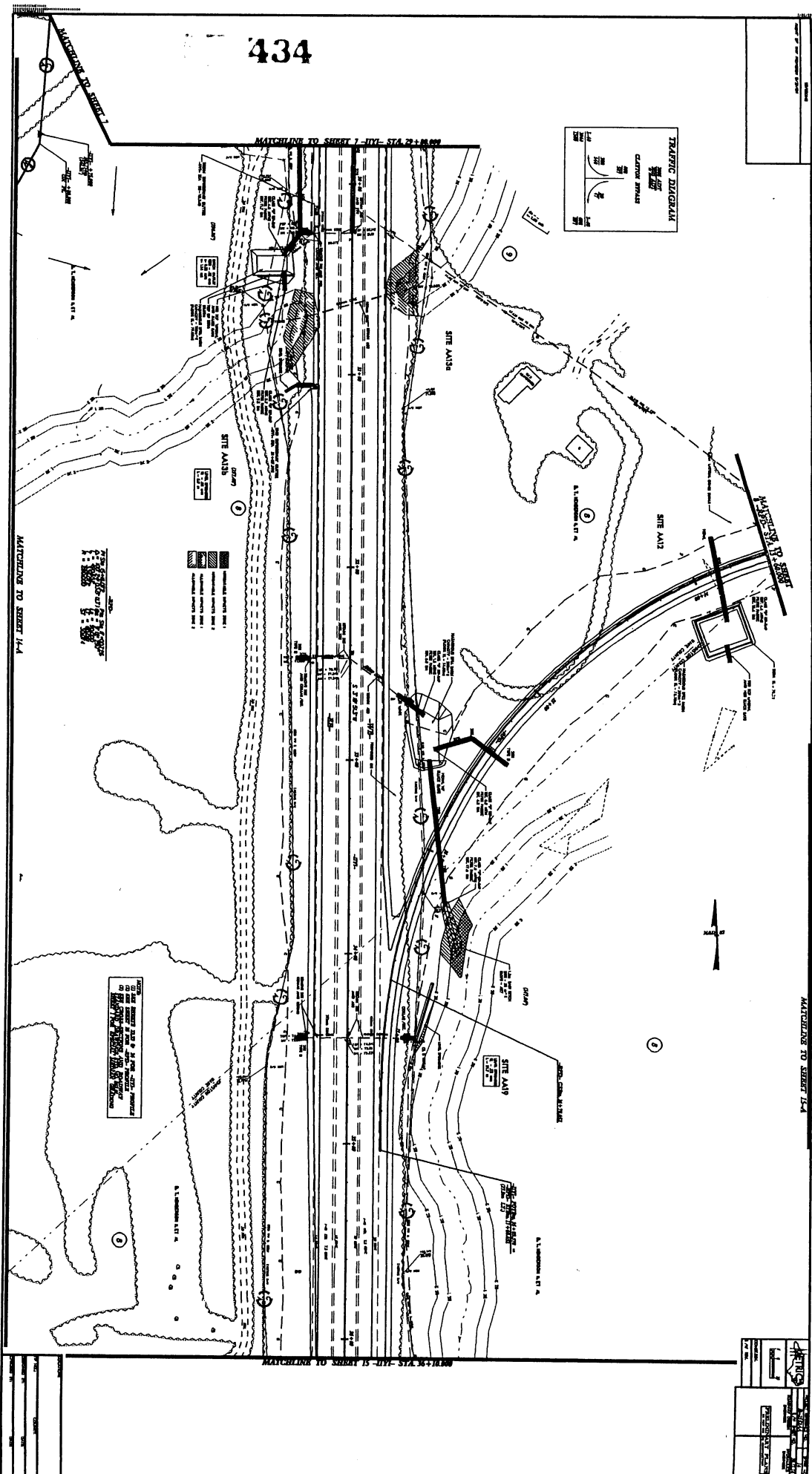
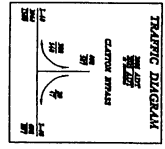


SITE AA18b

-  MITIGATABLE IMPACTS ZONE 1
-  MITIGATABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

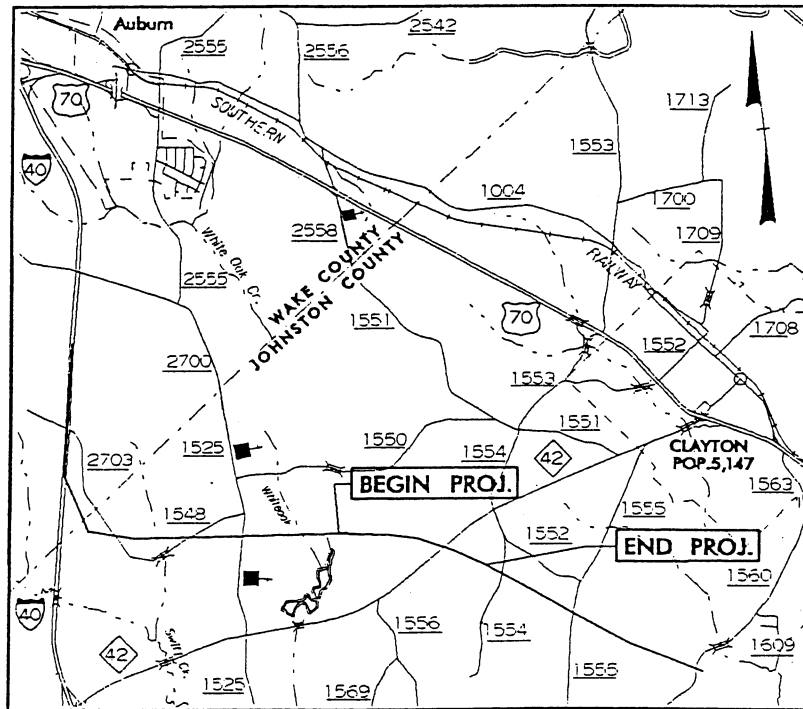
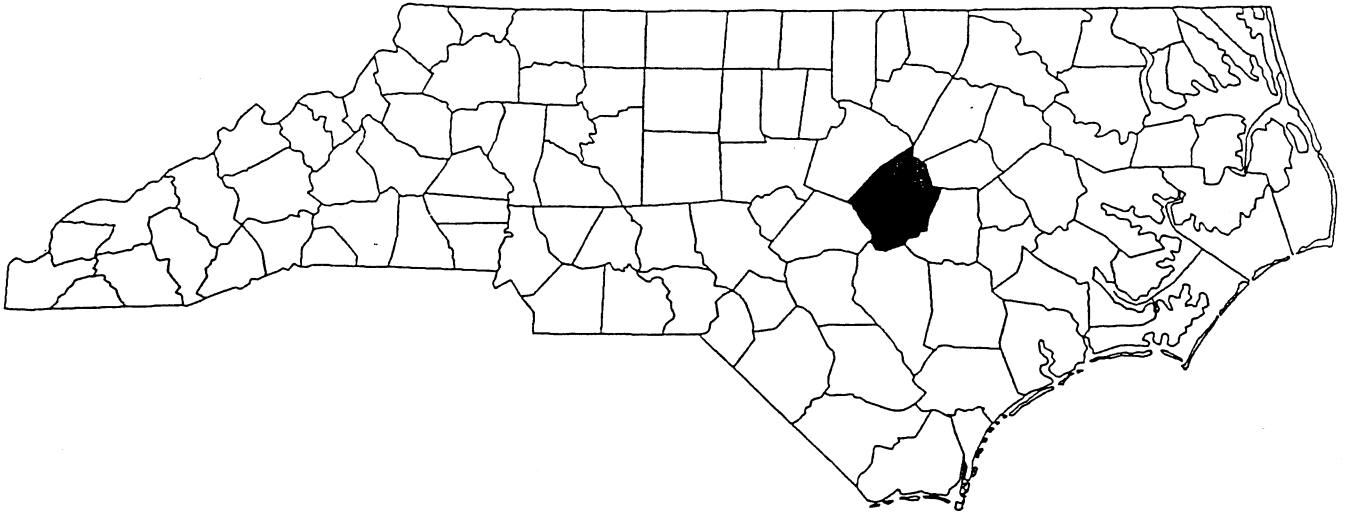


NCDOT
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: 8.2661601 (R-2246C)
 US 70 CLAYTON BYPASS
 I-40 TO EAST OF SR 1525



NO.	DATE	BY	CHKD

NORTH CAROLINA

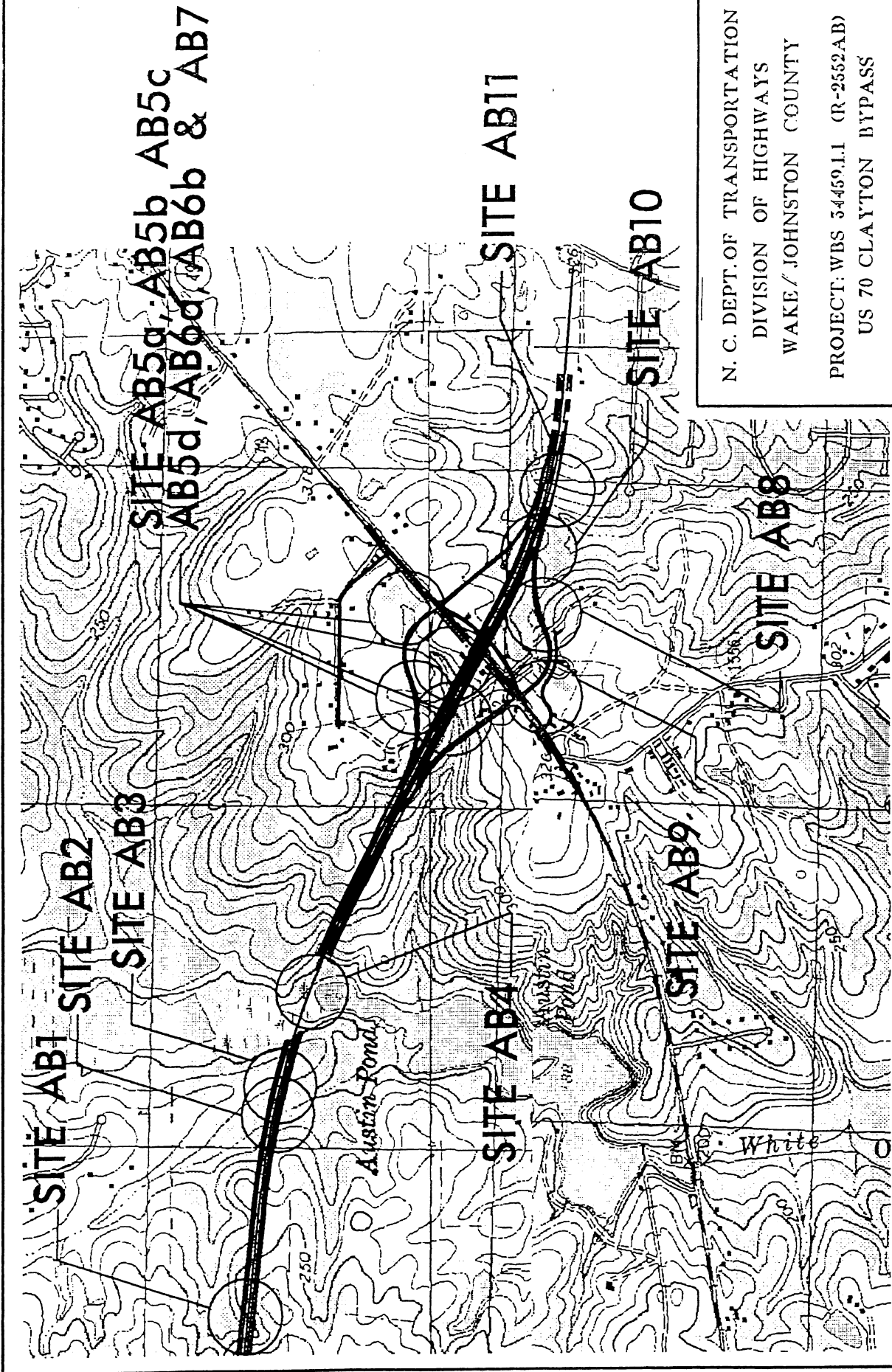


NEUSE RIVER BUFFER

VICINITY MAP

NCDOT
DIVISION OF HIGHWAYS

JOHNSTON COUNTY
PROJECT: WBS 34459.1.1 (R-2552AB)
US 70 CLAYTON BYPASS



N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE/JOHNSTON COUNTY
 PROJECT: WBS 3-4459.1.1 (R-2552AB)
 US 70 CLAYTON BYPASS

SITE MAP

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT				BUFFER REPLACEMENT				
			TYPE		ALLOWABLE		MITIGABLE		REPLACEMENT		
			ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	
AB2	RCBC	L 37+10	X				24211.05	15173.35	39384.40		
AB4	BRIDGE	L	X			18477.87	13015.94	31493.81			
AB5c	1050 RCP	IY1 13+70	X			58508.96	44229.66	102738.62			
AB5d	1350 CSP	IY1 13+70	X			SEE AB5c FOR SITE TOTAL					
AB8	1350 RCP	IY1 20+90	X		7294.38	4831.17	12125.55				
AB11	RCBC	FLYLEREV 29+50	X				20325.60	13774.79	34100.39		
PROJECT TOTAL:					7294.38	4831.17	12125.55	121523.48	86193.74	207717.22	

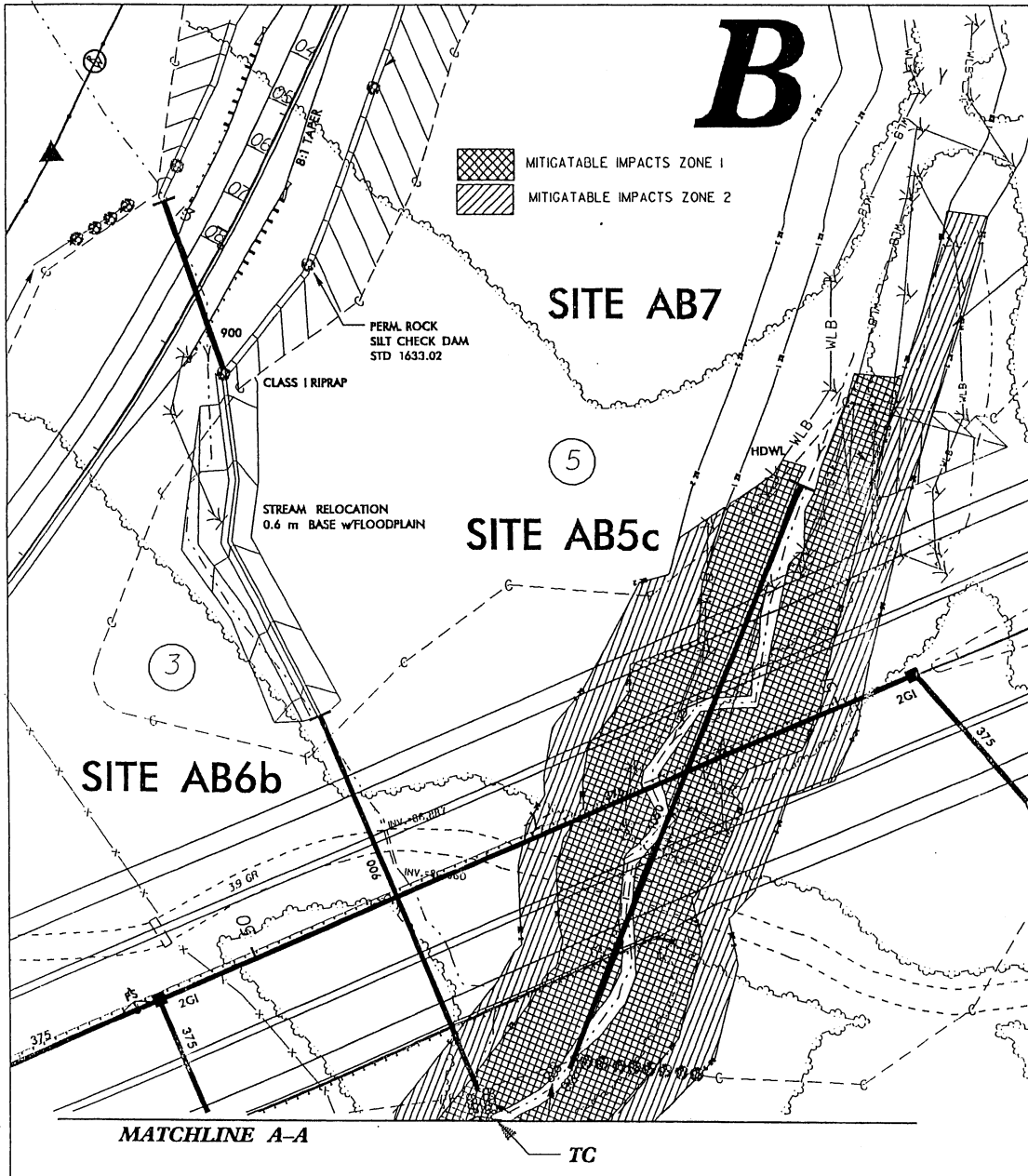
NOTE : WETLAND IMPACT IN BUFFER ZONES



	1	2
- SITE AB4	8179.27	0.00
SITE AB7	9272.26	0.00
- SITE AB11	14760.87	0.00

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

WAKE / JOHNSTON COUNTY
PROJECT # - WBS 34469.1.1 (R2552AB)
US 70 - CLAYTON BYPASS

B



 MITIGATABLE IMPACTS ZONE 1
 MITIGATABLE IMPACTS ZONE 2

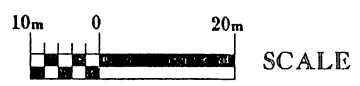
SITE AB7

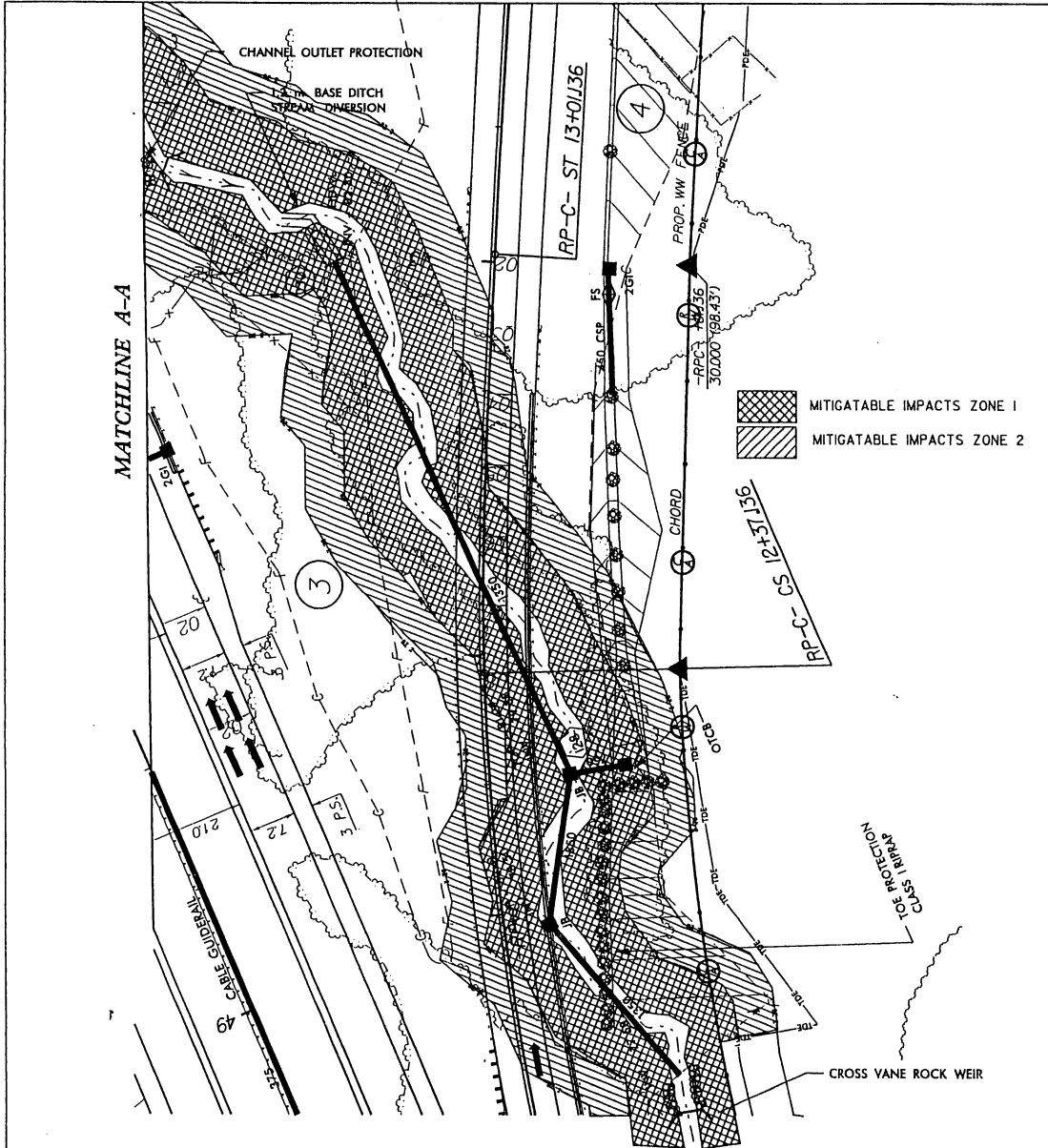
SITE AB5c

SITE AB6b

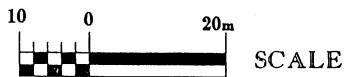
SITES AB5c, AB6a,
AB6b & AB7

NCDOT
 DIVISION OF HIGHWAYS
 JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AB)
 US 70 CLAYTON BYPASS



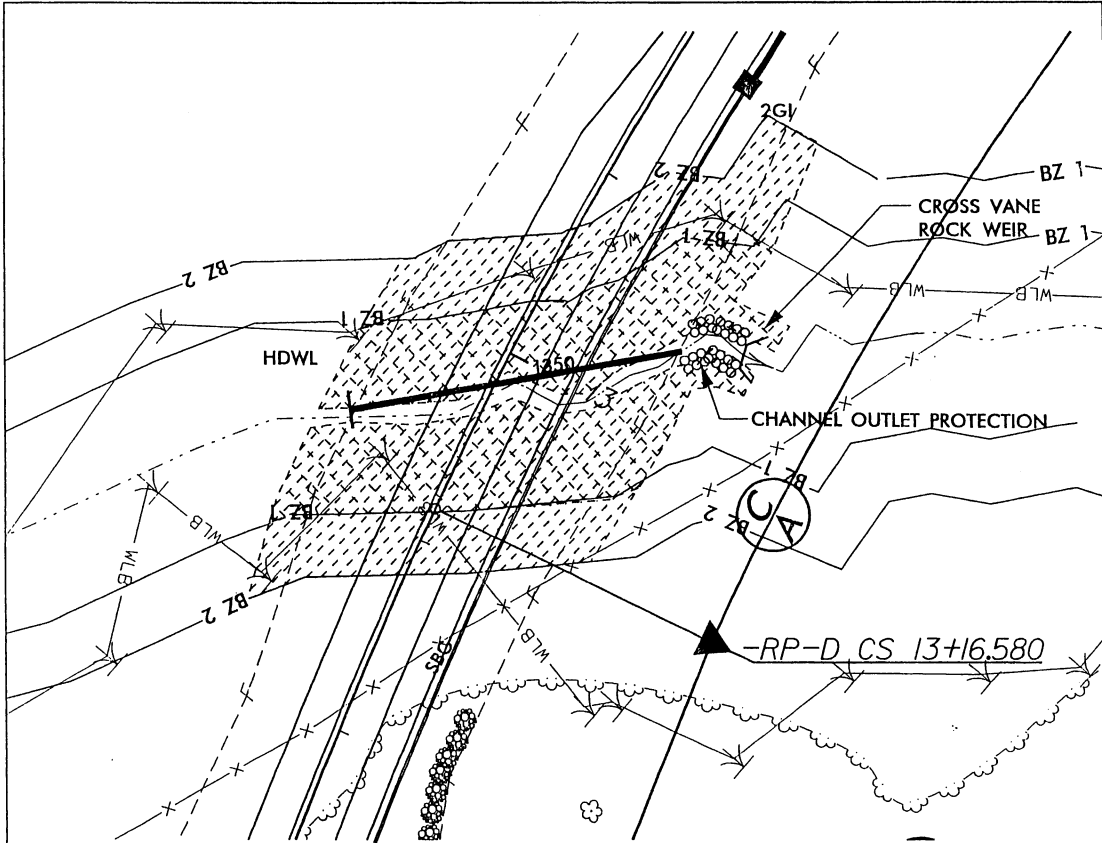


SITES AB51

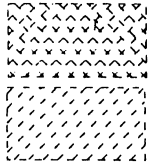


NCDOT
 DIVISION OF HIGHWAYS
 JOHNSTON COUNTY
 PROJECT: WBS 34459.1.1 (R-2552AB)
 US 70 CLAYTON BYPASS

SHEET 5 OF 6 10/01/04

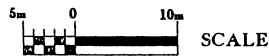


SITE AB8



ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

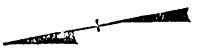


NCDOT
DIVISION OF HIGHWAYS
JOHNSTON COUNTY
PROJECT: WBS 34459.1.1 (R-2552AB)
US 70 CLAYTON BYPASS

PROJECT REFERENCE NO. R-2552AB
 SHEET NO. 7
 R/W SHEET NO. R-252AA 17 & 22
 METRICS
 ROAD DESIGN ENGINEER
 PRELIMINARY PLANS
 TO NOT BE USED FOR CONSTRUCTION

CONST. REV.
 R/W REV.

PI = 33+91.53
 $\Delta = 20^\circ 47' 45''$ (RT)
 $L = 65.237$
 $P = 27.000$
 $SE = 10.3$
 $V_{max} = 110 \text{ km/hr}$



MITIGATABLE IMPACTS ZONE 1
 MITIGATABLE IMPACTS ZONE 2
 WILLE C. REAMS

BEGIN CULVERT
 -L- POC 37+12.233

END CULVERT
 -L- POC 37+12.233

(R-2552AA)
 L = 45.000m
 L = 16.000m
 60.000m
 (147.641)
 (196.657)

SITE AB2

PROPOSED STREAM IMPROVEMENTS
 SEE DETAIL AA

TOE PROTECTION
 CLASS 'B' R/W
 SEE DETAIL BB

MATCH LINE SEE SHEET 6 STA. 35+60.000

MATCH LINE SEE SHEET 8 STA. 38+65.000

441

ROW	ROW	ROW	ROW	ROW
A	17	A2	18	A3
B	19	B2	20	B3
C	21	C2	22	C3
D	23	D2	24	D3
E	25	E2	26	E3

(R-2552AA)
 L = 45.000m
 L = 20.000m
 65.000m
 (147.641)
 (206.657)

(R-2552AA)
 L = 45.000m
 L = 20.000m
 65.000m
 (147.641)
 (206.657)

TOE PROTECTION
 CLASS 'B' R/W
 SEE DETAIL BB

PROPOSED STREAM IMPROVEMENTS
 SEE DETAIL AA

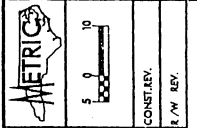
WILLE C. REAMS

JANE A. CUNNINGHAM

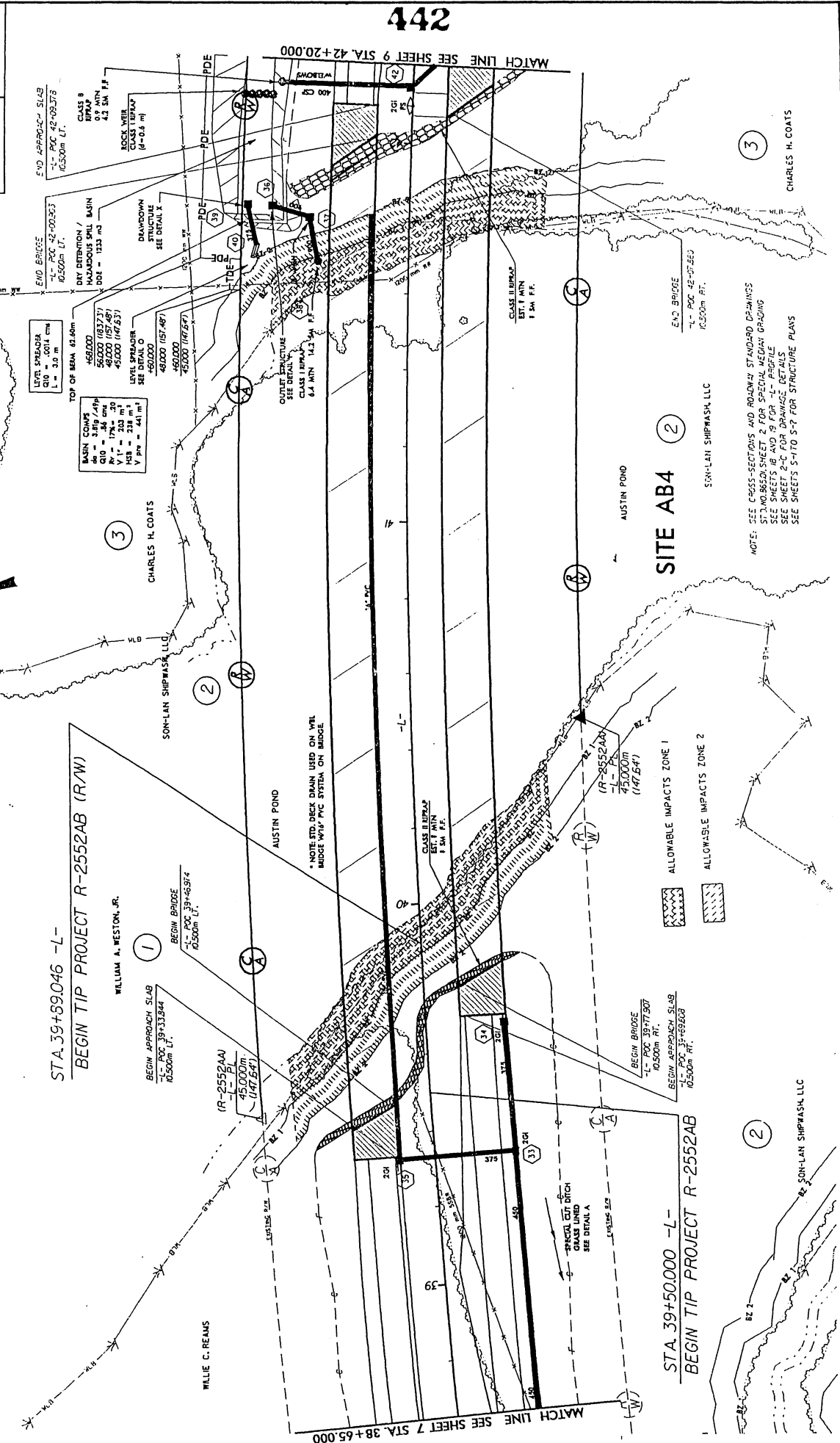
REFER TO CROSS-SECTIONS AND ROWWAY STITCHED DRAWING FOR ROAD GRADING. SEE SHEET 17 AND 18 FOR DRAINAGE DETAILS. SEE SHEET 17 TO 18 FOR CULVERT PLANS.

REVISIONS

PROJECT REFERENCE NO.	R-2552AB	SHEET NO.	B
T/W SHEET NO.	R-2552A, 2B & R-252AB 1, 2	DATE	11/15/17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	PRELIMINARY PLANS	DO NOT USE FOR CONSTRUCTION



$P = 39+61.623$
 $\Delta = 80.44$ AT 5' (RT)
 $L = 905.237$
 $R = 2550.000$
 $SE = 0.3$
 $V_{MAX} = 110 \text{ km/hr}$



LEVEL SPREADER
 C10 = .0014 cm
 C15 = .35 m

TOP OF BASIN 61.6m
 450000
 500000 (183.71)
 480000 (187.48)
 450000 (147.63)

LEVEL SPREADER
 SEE DETAIL O
 480000 (187.48)
 450000 (147.63)

BASEIN CONOPS
 46 = 3.8g / 4g
 47 = 4.4g / 4g
 48 = 1.7g / 4g
 49 = 2.0g / 4g
 50 = 2.3g / 4g
 51 = 2.3g / 4g
 52 = 2.3g / 4g
 53 = 2.3g / 4g
 54 = 2.3g / 4g
 55 = 2.3g / 4g
 56 = 2.3g / 4g
 57 = 2.3g / 4g
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 80 = 2.3g / 4g
 81 = 2.3g / 4g
 82 = 2.3g / 4g
 83 = 2.3g / 4g
 84 = 2.3g / 4g
 85 = 2.3g / 4g
 86 = 2.3g / 4g
 87 = 2.3g / 4g
 88 = 2.3g / 4g
 89 = 2.3g / 4g
 90 = 2.3g / 4g
 91 = 2.3g / 4g
 92 = 2.3g / 4g
 93 = 2.3g / 4g
 94 = 2.3g / 4g
 95 = 2.3g / 4g
 96 = 2.3g / 4g
 97 = 2.3g / 4g
 98 = 2.3g / 4g
 99 = 2.3g / 4g
 100 = 2.3g / 4g

OUTLET STRUCTURE
 SEE DETAIL A
 6.4 MIN 14.3 MIN
 6.4 MIN 14.3 MIN

CLASS II BRICK
 EST. 1 MIN
 1.5M F.F.

END BRIDGE
 L= POC 42+02.275
 10500m FT.

CLASS II BRICK
 EST. 1 MIN
 1.5M F.F.

END BRIDGE
 L= POC 42+02.275
 10500m FT.

STA 39+59.046 -L-
 BEGIN TIP PROJECT R-2552AB (R/W)

BEGIN BRIDGE
 L= POC 39+45.974
 10500m FT.

BEGIN BRIDGE
 L= POC 39+45.974
 10500m FT.

BEGIN BRIDGE
 L= POC 39+45.974
 10500m FT.

BEGIN BRIDGE
 L= POC 39+45.974
 10500m FT.

BEGIN BRIDGE
 L= POC 39+45.974
 10500m FT.

BEGIN BRIDGE
 L= POC 39+45.974
 10500m FT.

STA 39+50.000 -L-
 BEGIN TIP PROJECT R-2552AB

BEGIN BRIDGE
 L= POC 39+77.907
 10500m FT.

BEGIN BRIDGE
 L= POC 39+77.907
 10500m FT.

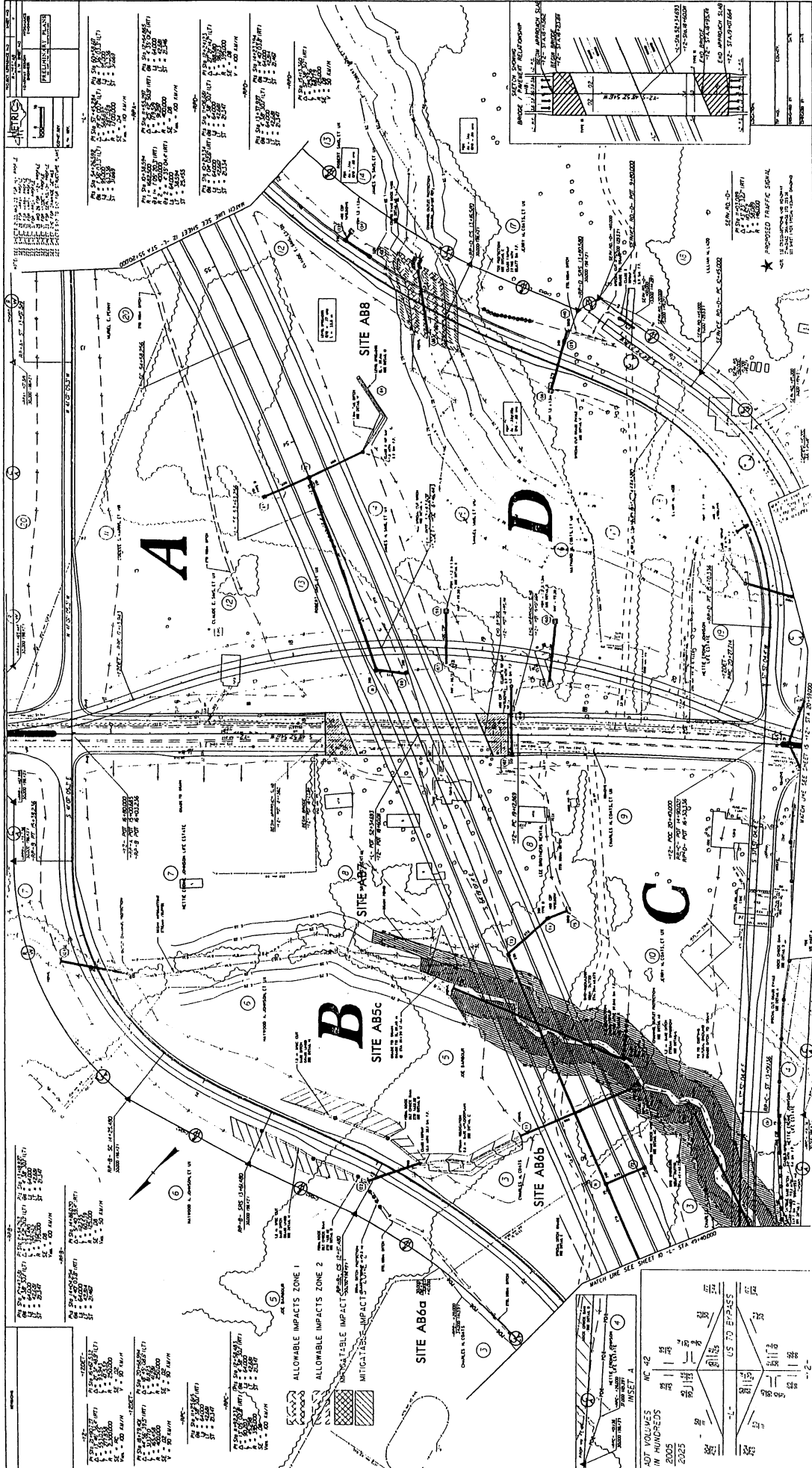
NOTE: SEE CROSS-SECTIONS AND ROADWAY STANDARD DRAWINGS
 STA 39+50.000 SHEET 2 FOR SPECIALty GRADING
 SEE SHEETS 4-1 TO 4-7 FOR PARAPET DETAILS
 SEE SHEETS 5-1 TO 5-7 FOR STRUCTURE PLANS

CHARLES H. COATS

SON-LAN SHIPWASH, LLC

SON-LAN SHIPWASH, LLC

MATCH LINE SEE SHEET 9 STA. 42+20.000
 MATCH LINE SEE SHEET 7 STA. 38+65.000



REVISIONS

NO.	DESCRIPTION	DATE
1	REVISIONS	

SITE AB8

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE AB6a

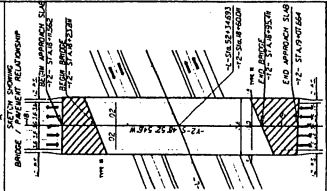
EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE AB6b

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE AB5c

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	



SITE A

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE B

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE C

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE D

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE AB6a

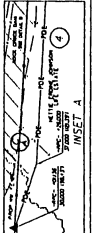
EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE AB6b

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	

SITE AB5c

EXIST. LOT AREA	62,000
EXIST. LOT FRONTAGE	110
EXIST. LOT DEPTH	563
EXIST. LOT WIDTH	110
EXIST. LOT HEIGHT	563
EXIST. LOT VOLUME	34,906
EXIST. LOT PERMITS	
EXIST. LOT USE	



ADT VOLUMES IN HUNDREDS

Year	North-South	East-West	US 70 BRIDGE
2005	180	120	100
2015	200	140	120
2025	220	160	140

MC 42

US 70 BRIDGE

ADT	100	120	140
MT	100	120	140
HT	100	120	140
LT	100	120	140
RT	100	120	140
BT	100	120	140

MC 42

ADT	100	120	140
MT	100	120	140
HT	100	120	140
LT	100	120	140
RT	100	120	140
BT	100	120	140