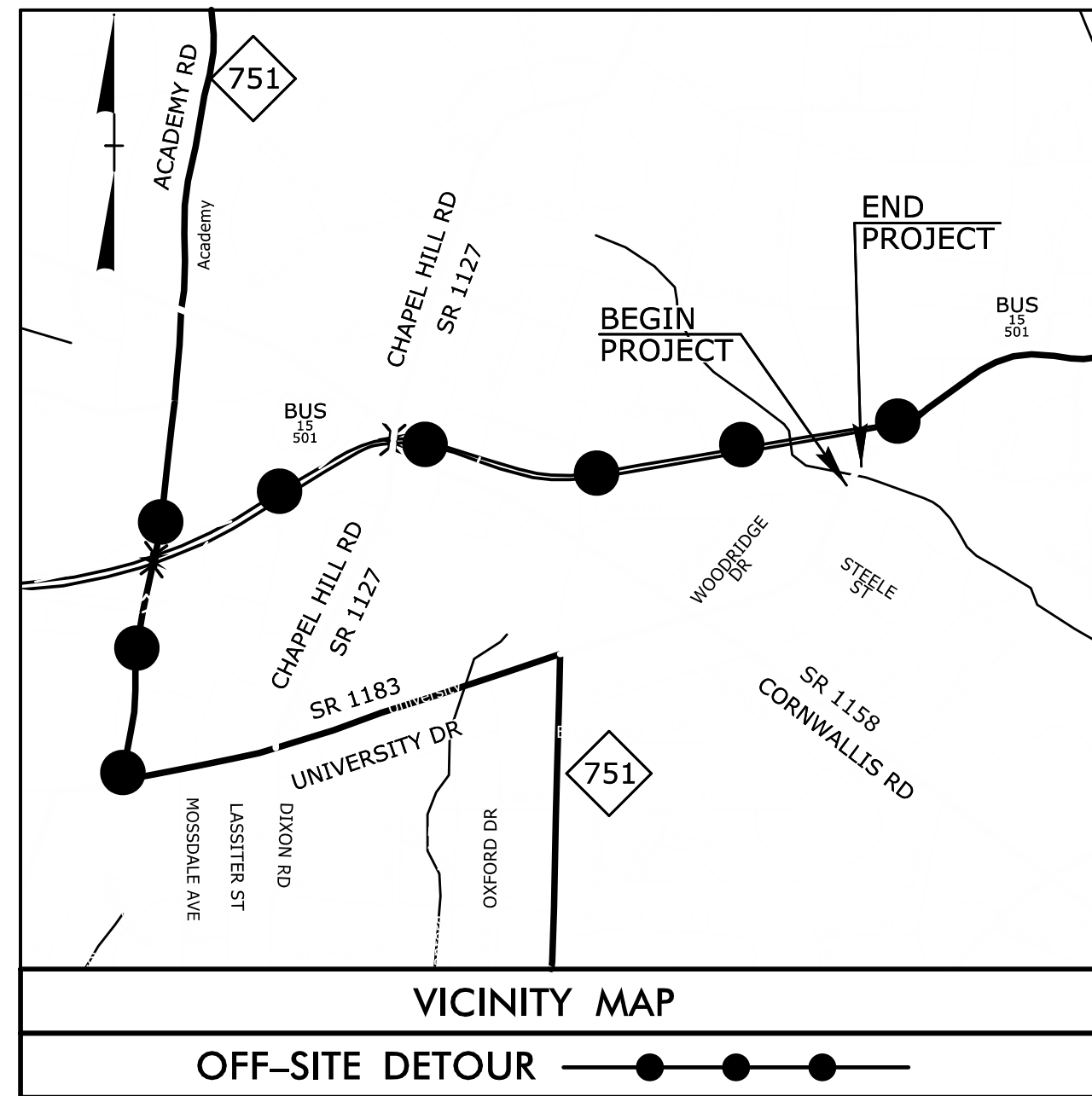


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TIP PROJECT: 17BP.5.C.02



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

DURHAM COUNTY

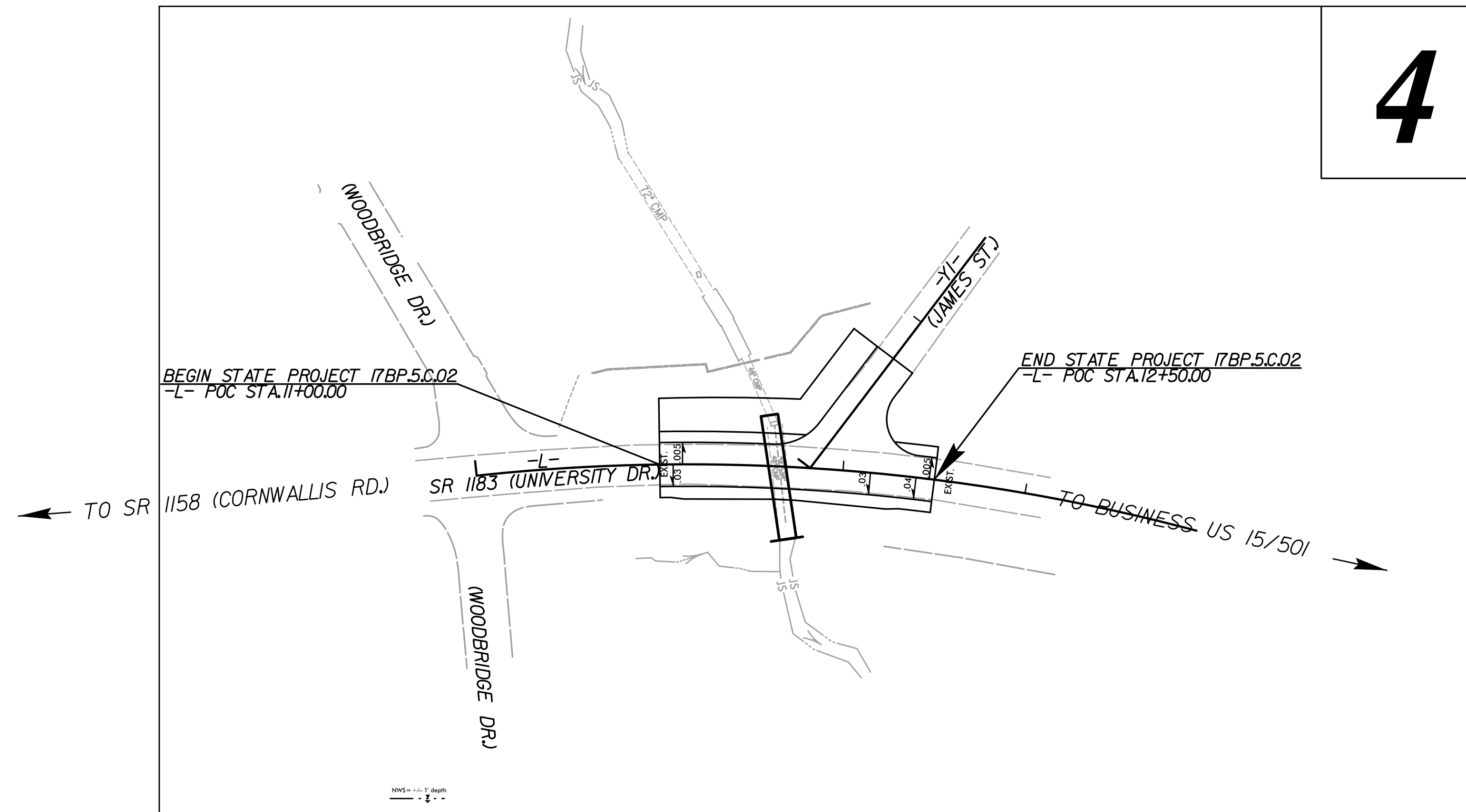
LOCATION: PIPE REPLACEMENT AT SR 1183 UNIVERSITY DR.
AND JAMES RD.

TYPE OF WORK: DRAINAGE AND PAVING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.5.C.02	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.5.C.02	N/A	PE	
17BP.5.C.02	N/A	ROW	
17BP.5.C.02	N/A	UTILITIES	

EROSION AND SEDIMENT CONTROL MEASURES

Sed. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle/Coir Fiber Wattle	WCFW
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB



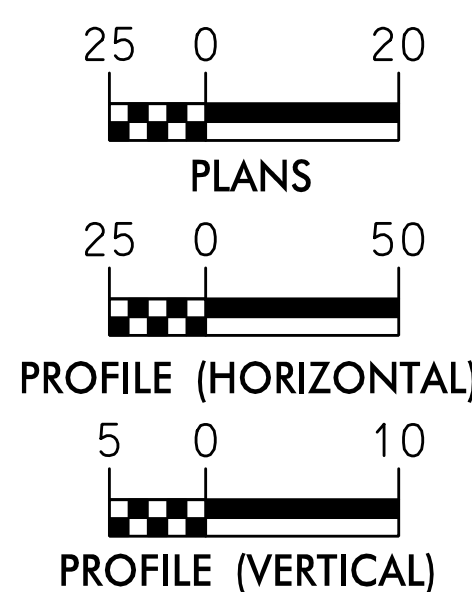
THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT

Refer To E. C. Special Provisions
for Special Considerations.

THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.

GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared In the Office of:



NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway
Suite 101
Cary, NC 27518
(919) 557-0929

Designed by:

REID ROBOL, PE
NAME

3409
LEVEL III CERTIFICATION NO.

Reviewed In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

DONALD PEARSON, EI, CPESC

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

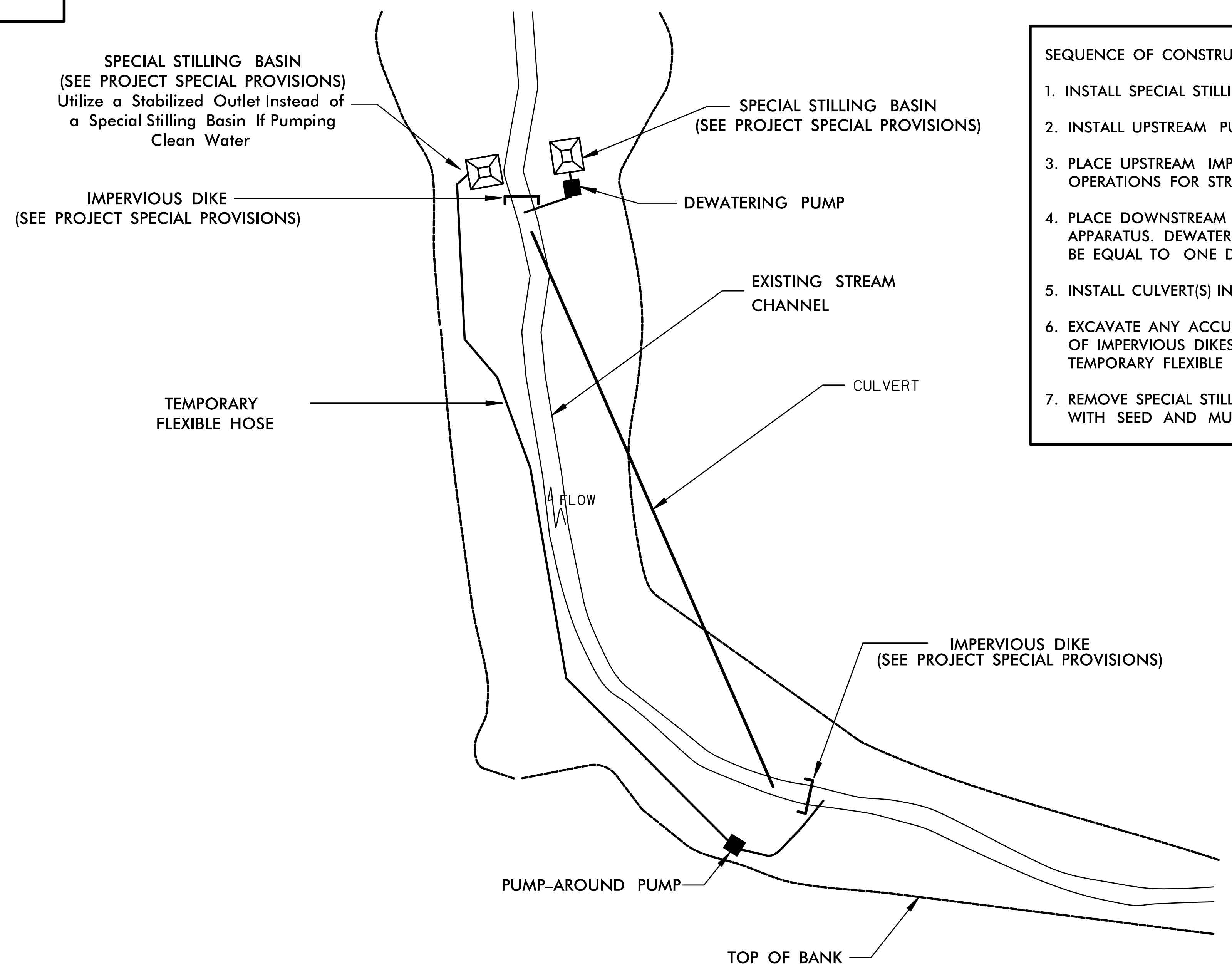
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO.	SHEET NO.
17BP.5.C.02	EC-03
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

- NOTES:
- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
 - 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
 - 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
 - 4) Pumps and hoses shall be of sufficient size to dewater the work area.



- SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA
1. INSTALL SPECIAL STILLING BASIN(S).
 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
 5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
 7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

8/17/99

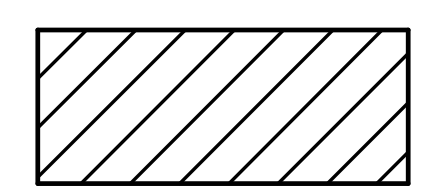
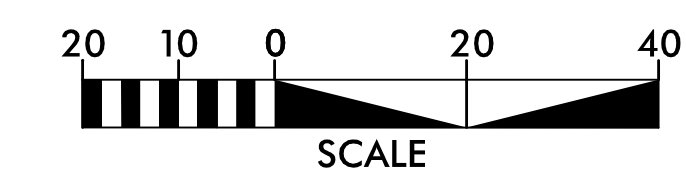
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

ALL EXCAVATED MATERIAL
MUST BE HAULED OFF
AND NOT STOCKPILED
ON SITE.

CONTRACTOR TO SUBMIT A DEWATERING/SEQUENCING
PLAN TO NCDOT PRIOR TO CONSTRUCTION. ADDITIONAL
MEASURES MAY BE REQUIRED BASED ON APPROVED
PLAN. THIS WORK SHALL BE INCIDENTAL TO THE
EROSION CONTROL DEVICES. NO PAYMENT SHALL
BE GRANTED FOR DESIGN OF DEWATERING PLANS.

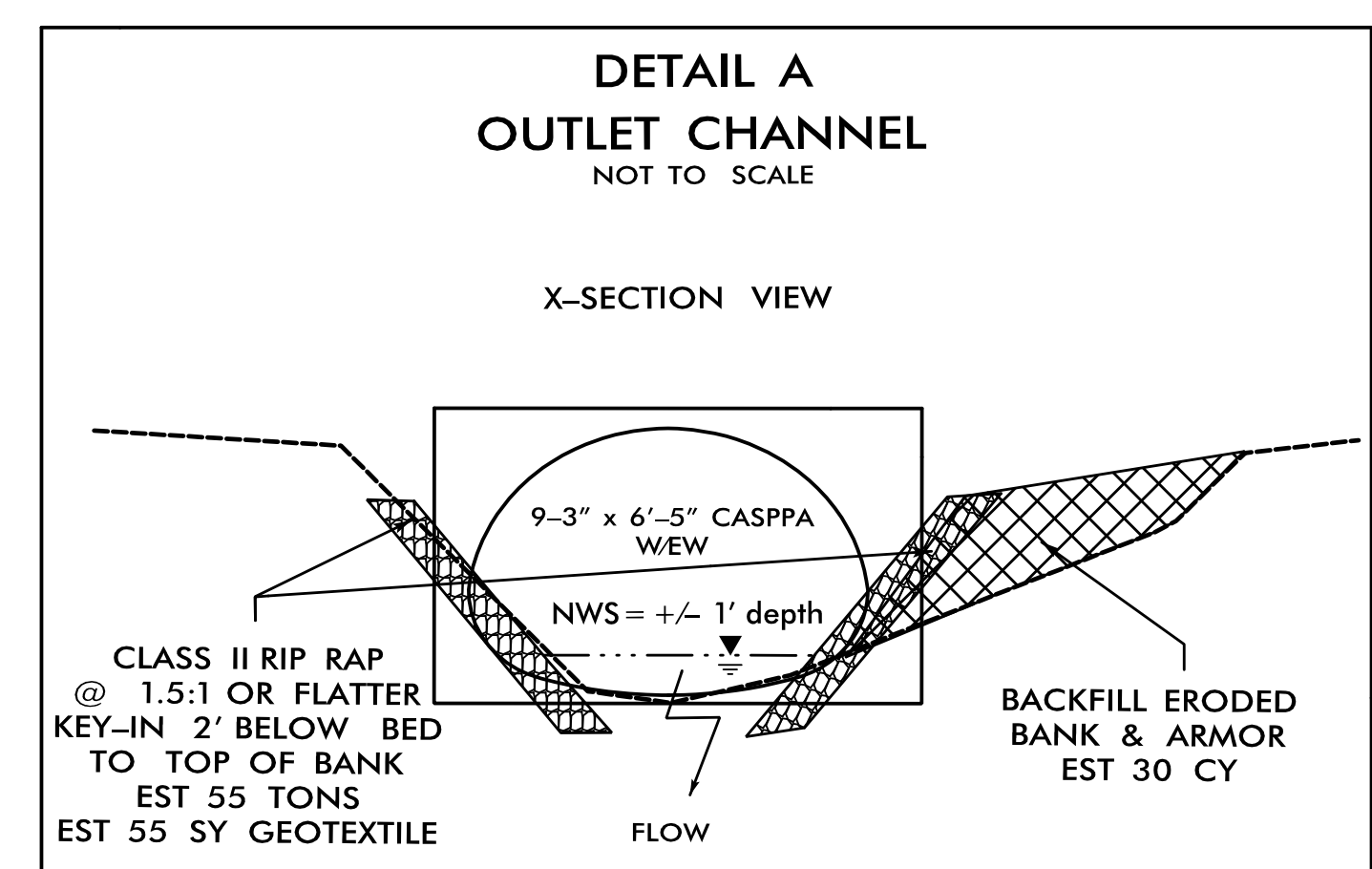
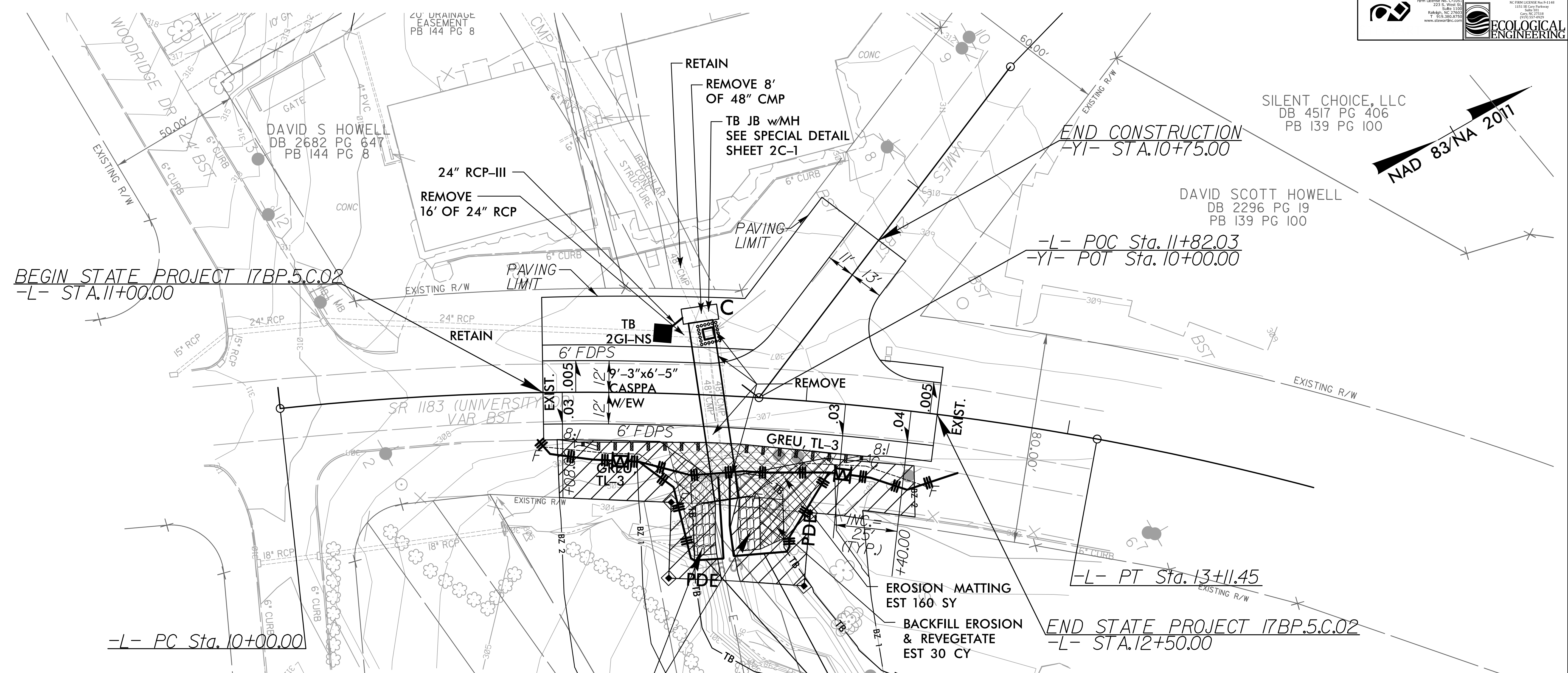
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL
REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY
NEED TO BE INSTALLED AS DIRECTED BY THE
ENGINEER.



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO. 17BP.5.C.02	SHEET NO. EC-04/CONST.04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CLASS II RIP RAP
SEE DETAIL A
EST 55 TONS
EST 55' SY GEOTEXTILE

①
PETRA DINGHAUS
DB 619 PG 709
PB 120 PG 129

②
ROCKWOOD
CENTER, LLC
DB 4883 PG 164

③
ROCKWOOD CENTER, LLC
DB 4792 PG 662

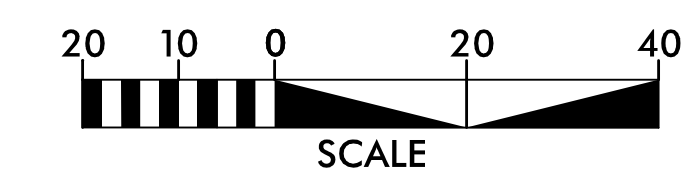
OVERHEAD POWER LINES RUNNING ALONG THE EAST SIDE OF
ROADWAY WILL REMAIN IN PLACE DURING CONSTRUCTION.
CONTRACTOR SHALL PLAN FOR INSTALLATION OF CULVERT THAT
WILL ACCOMMODATE THIS CONSTRAINT.

FOR -L- PROFILE, SEE SHEET 5

FOR -YI- PROFILE, SEE SHEET 5

REVISIONS

R:\145 PM Environmental\Design\Nana_EC_PSH_CG.dgn



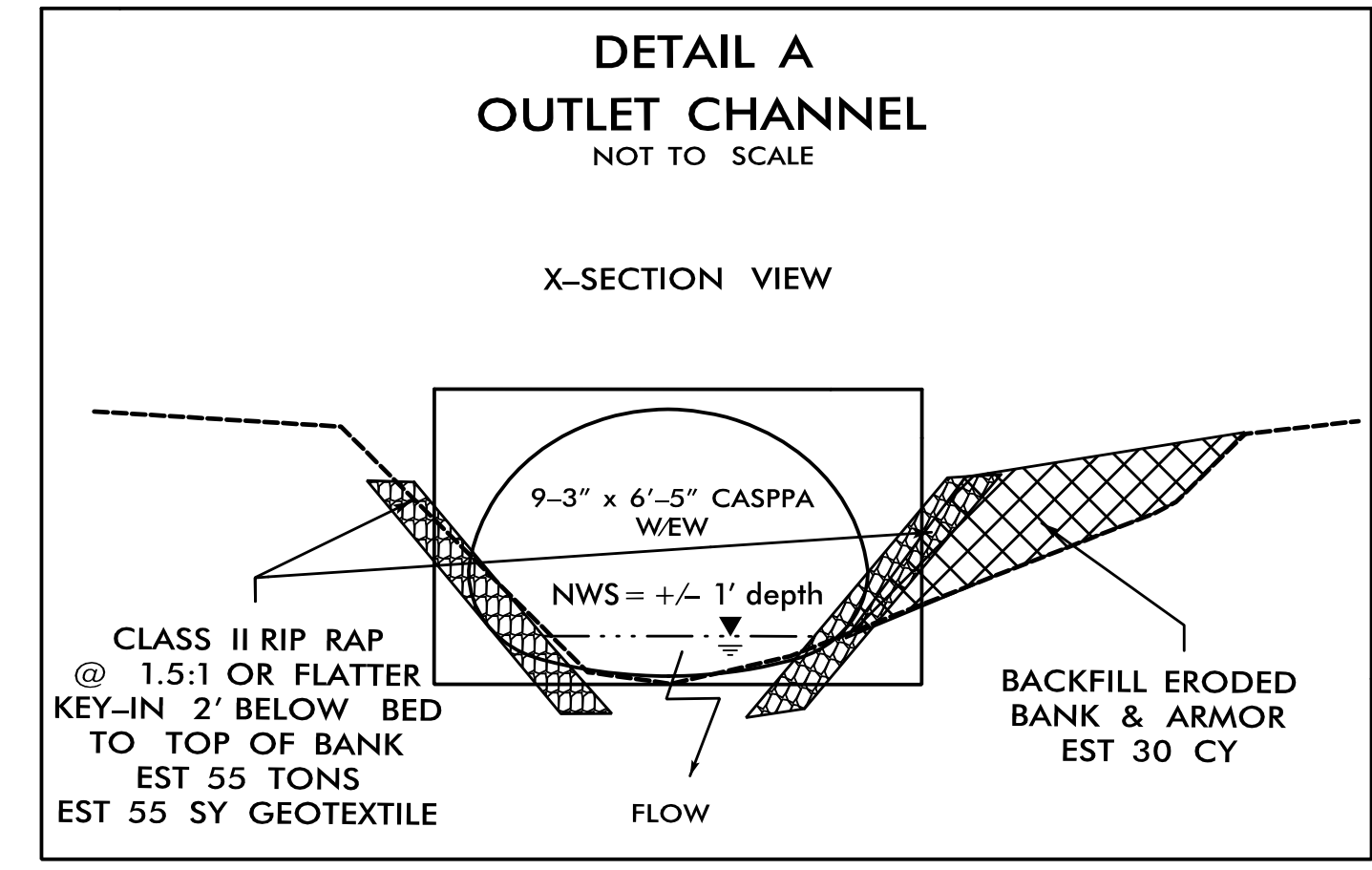
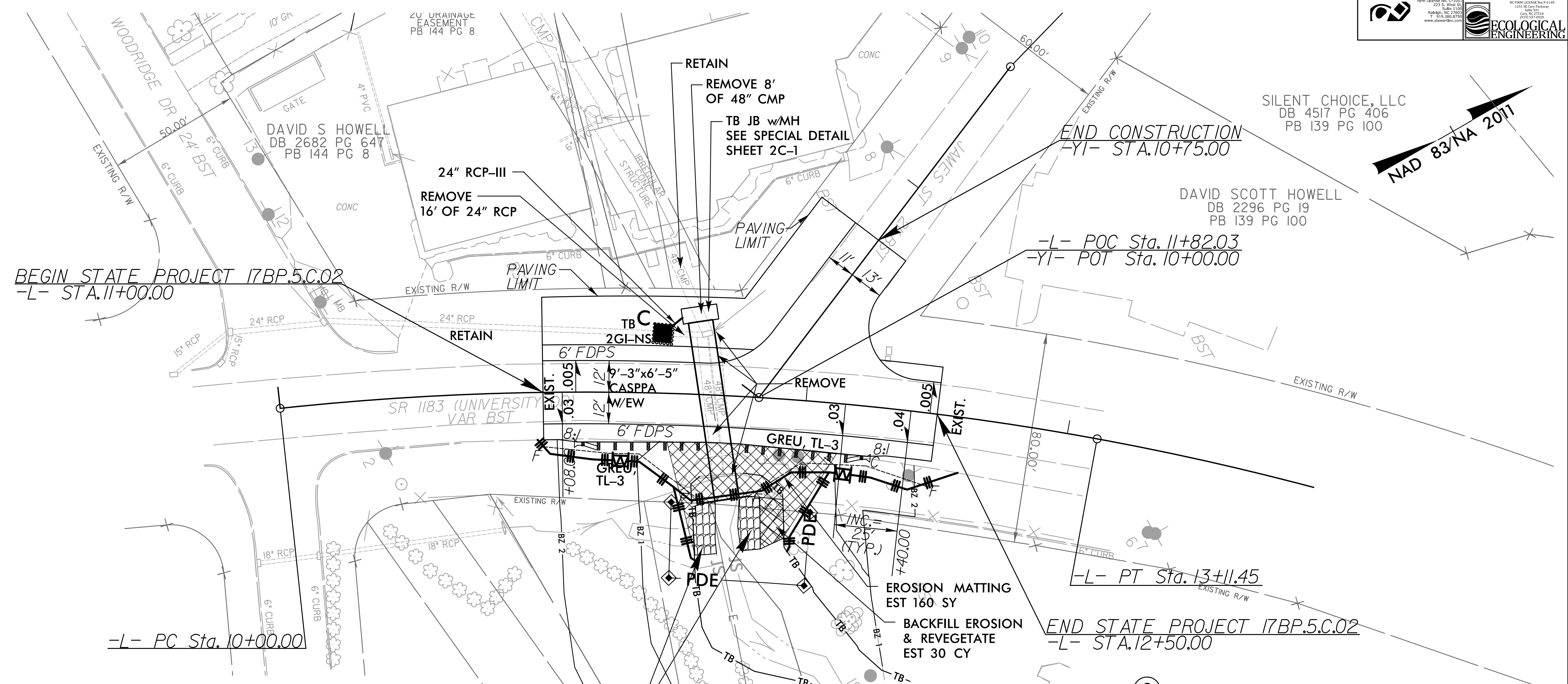
PROJECT REFERENCE NO. 17BP.5.C.02	SHEET NO. EC-05/CONST.04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ALL EXCAVATED MATERIAL MUST BE HAULED OFF AND NOT STOCKPILED ON SITE.

CONTRACTOR TO SUBMIT A DEWATERING/SEQUENCING PLAN TO NCDOT PRIOR TO CONSTRUCTION. ADDITIONAL MEASURES MAY BE REQUIRED BASED ON APPROVED PLAN. THIS WORK SHALL BE INCIDENTAL TO THE EROSION CONTROL DEVICES. NO PAYMENT SHALL BE GRANTED FOR DESIGN OF DEWATERING PLANS.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



CLASS II RIP RAP
SEE DETAIL A
EST 55 TONS
EST 55 SY GEOTEXTILE

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PETRA DINGHAUS
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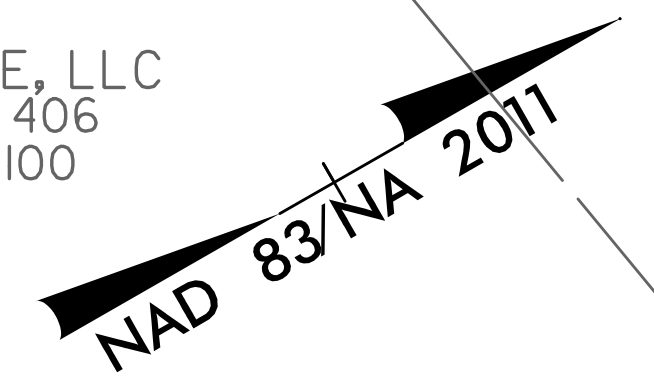
②
ROCKWOOD CENTER, LLC
DB 4883 PG 164

③
ROCKWOOD CENTER, LLC
DB 4792 PG 662

OVERHEAD POWER LINES RUNNING ALONG THE EAST SIDE OF ROADWAY WILL REMAIN IN PLACE DURING CONSTRUCTION. CONTRACTOR SHALL PLAN FOR INSTALLATION OF CULVERT THAT WILL ACCOMODATE THIS CONSTRAINT.

FOR -L- PROFILE, SEE SHEET 5

FOR -YI- PROFILE, SEE SHEET 5



SILENT CHOICE, LLC
DB 4517 PG 406
PB 139 PG 100

DAVID SCOTT HOWELL
DB 2296 PG 19
PB 139 PG 100

-L- POC Sta. 11+82.03
-YI- POT Sta. 10+00.00

-L- PT Sta. 13+11.45

END STATE PROJECT 17BP.5.C.02
-L- STA. 12+50.00

BEGIN STATE PROJECT 17BP.5.C.02
-L- STA. 11+00.00

REVISIONS

8/17/99
R:\Projects\17BP.5.C.02\17BP.5.C.02_17BP.5.C.02_EC-05_PSH_Final.dgn