

09/08/99

T.I.P. NO.	SHEET NO.
B-4223	UC-1

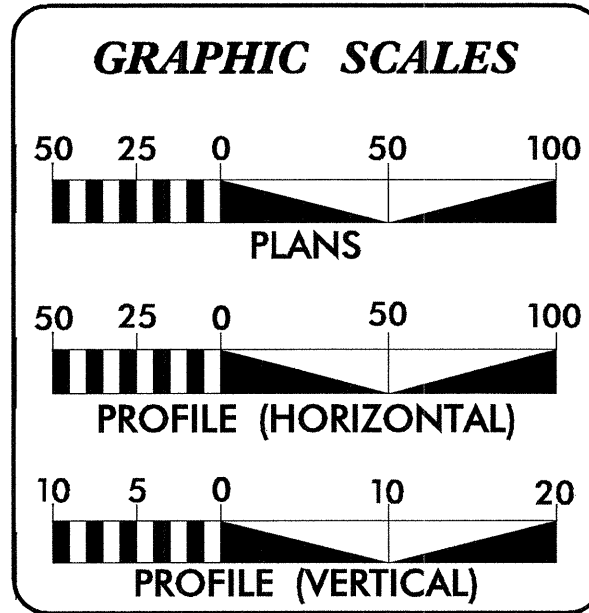
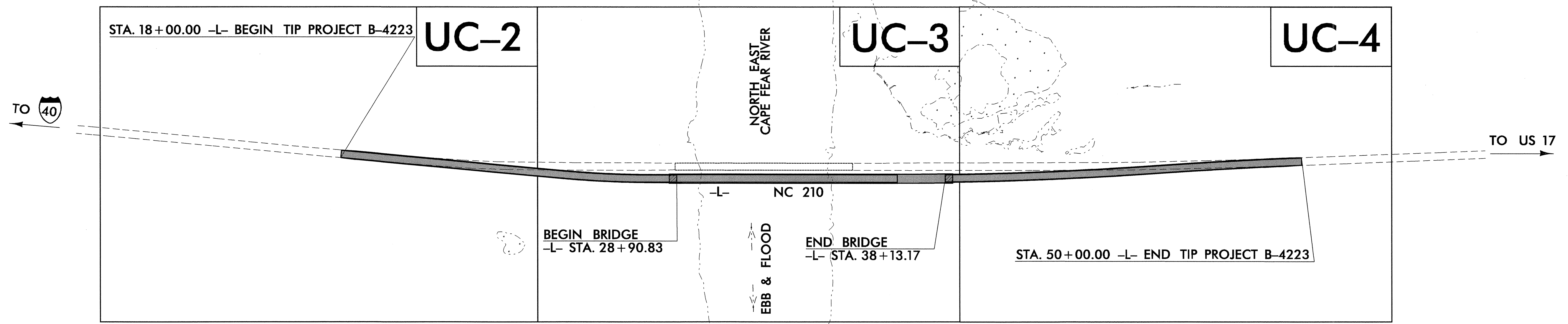
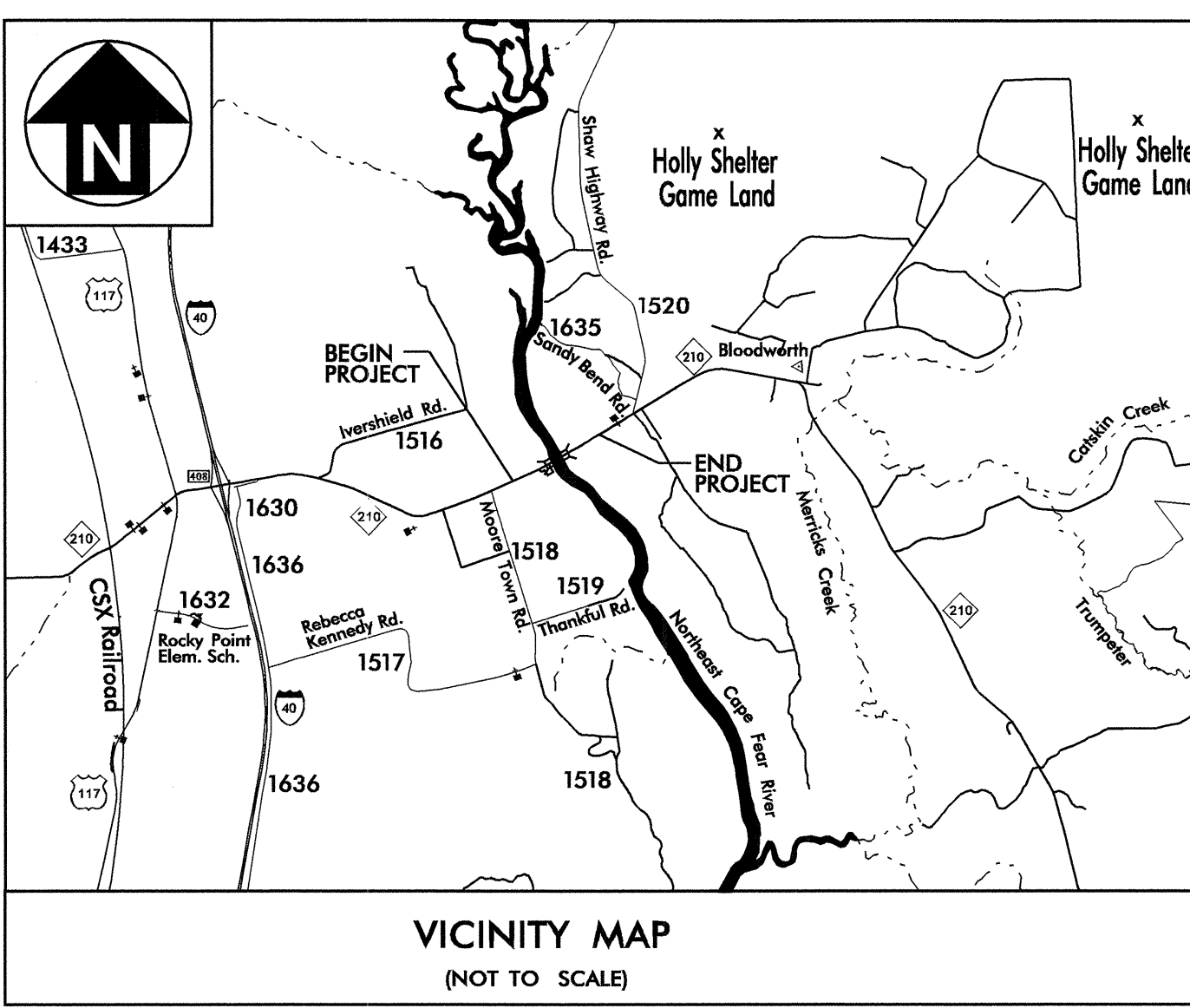
TIP PROJECT: B-4223
CONTRACT: C201483

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
PENDER COUNTY

LOCATION: BRIDGE #21 ON NC 210 OVER NORTH EAST CAPE FEAR RIVER

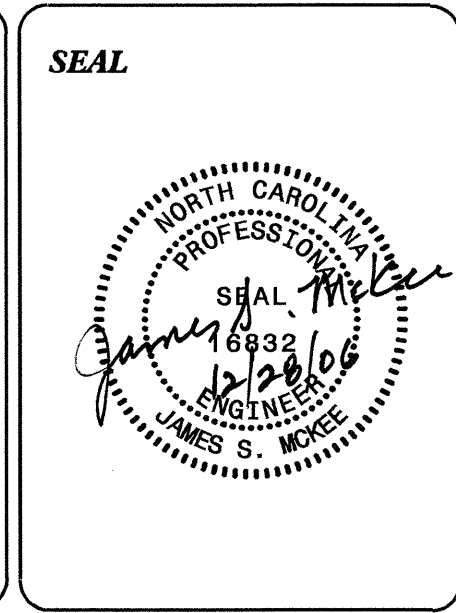
TYPE OF WORK: UTILITIES RELOCATION



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-4	UTILITY CONSTRUCTION PLAN SHEETS
UC-5 THRU UC-6	PROFILE SHEET
UC-7	DETAIL SHEET

WATER AND SEWER OWNERS ON PROJECT

(1) WATER - ROCKY POINT/TOPSAIL WATER AND SEWER DISTRICT



PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
PROJECT SERVICES
UTILITY SECTION

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 254-4128
FAX (919) 254-4119

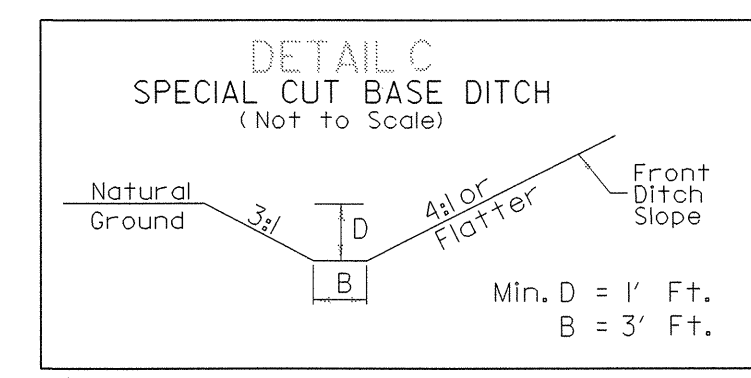
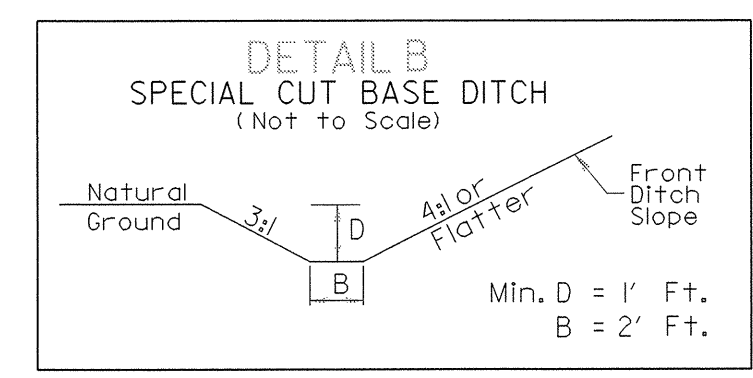
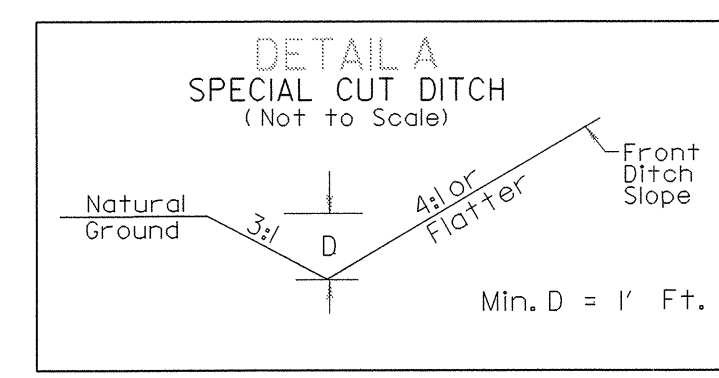
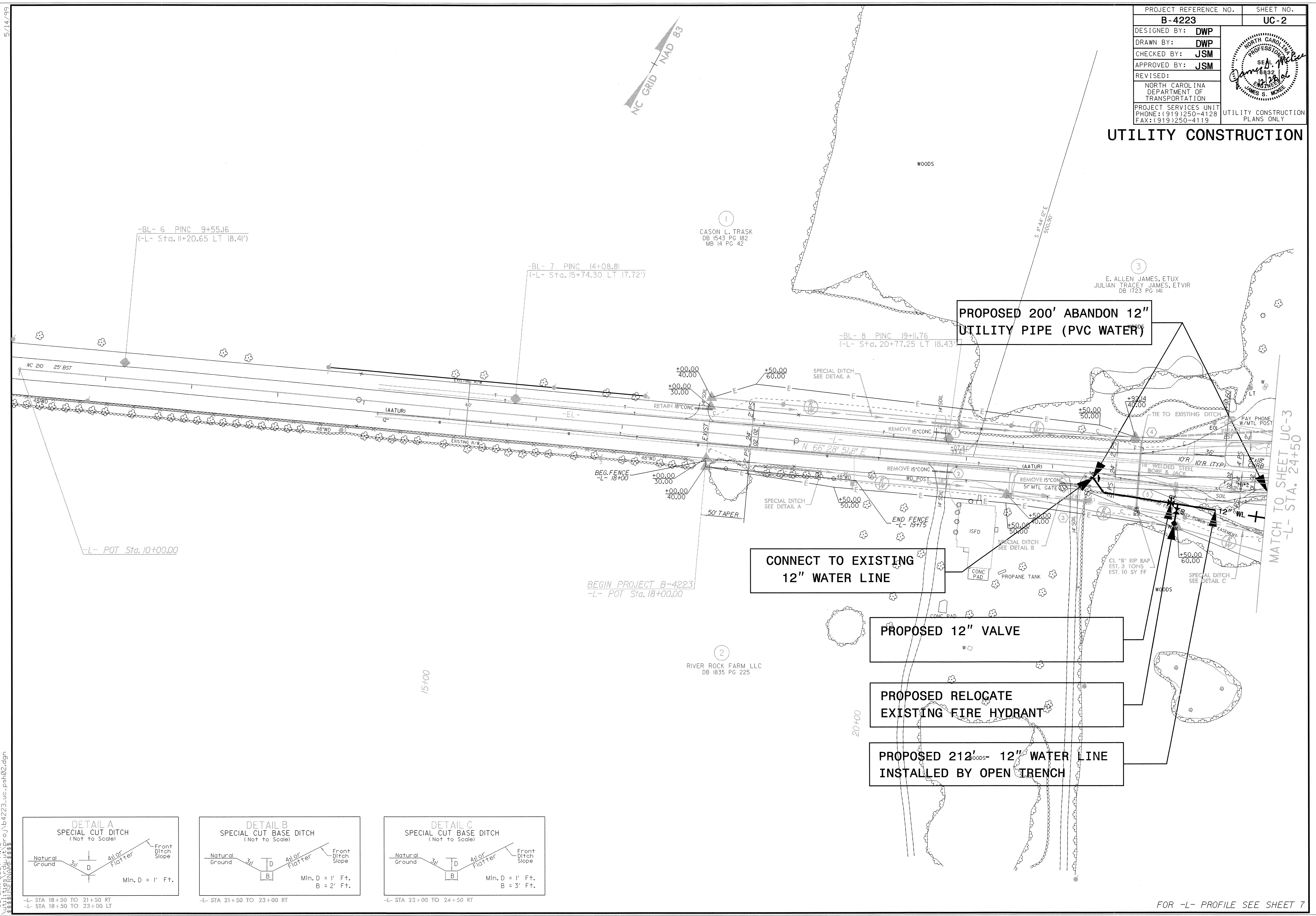
Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Steve McKee, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Donald Proper UTILITIES PROJECT DESIGNER

22-DEC-2006 07:48
F:\Utilities\rcdy_ut\proj\b4223_uc-fsh.dgn
\$\$\$USERNAME\$\$\$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4223	UC-2
DESIGNED BY: DWP	
DRAWN BY: DWP	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISER:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-L- STA 18+50 TO 21+50 RT
-L- STA 18+50 TO 23+00 LT

-L- STA 21+50 TO 23+00 RT

-L- STA 23+00 TO 24+50 RT

03-JAN-2007 14:43
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FOR -L- PROFILE SEE SHEET 7

-L-
 PI Sta 26+88.46 Δ = 5' 16' 18.7" (LT) D = 1' 4' 06.6" L = 312.84' T = 156.53' R = 3,400.00' SE = 04 V = 60 mph
 PI Sta 40+41.84 Δ = 3' 42' 50.0" (LT) D = 0' 28' 38.9" L = 777.84' T = 389.05' R = 12,000.00' SE = 02 V = 60 mph

-DRIVE-
 PI Sta 10+99.76 Δ = 84' 45' 16.5" (LT) D = 114' 35' 29.6" L = 73.96' T = 45.62' R = 50.00'
 PI Sta 13+76.98 Δ = 60' 23' 41.9" (RT) D = 114' 35' 29.6" L = 52.70' T = 29.10' R = 50.00'

PROPOSED (1) RECONNECT EXISTING WATER METER

PROPOSED 450' ABANDON 12" UTILITY PIPE (PVC WATER)

PROPOSED 890' ABANDON 12" UTILITY PIPE (HDPE WATER). THE CONTRACTOR SHALL BE AWARE OF THE EXISTING HDPE WATER PIPE DURING DRILLED SHAFT OPERATIONS. THE EXISTING PIPE BENEATH THE RIVER IS 16" HDPE WITH AN APPROXIMATE 12" INSIDE DIAMETER. IF THE CONTRACTOR ELECTS TO FILL THE EXISTING HDPE WATER PIPE, SAND SHALL BE USED AS FILL MATERIAL INSTEAD OF GROUT OR FLOWABLE FILL.

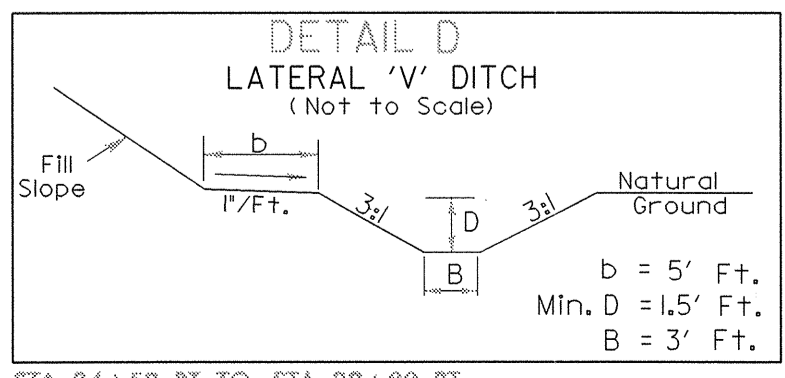
PROPOSED 60' ABANDON 12" UTILITY PIPE (PVC WATER)

PROPOSED 1020' TRENCHLESS INSTALLATION OF 12" WATER LINE IN SOIL. PROPOSED 1020' - 12" WATER LINE. THE MATERIAL USED FOR TRENCHLESS INSTALLATION PIPE INSIDE DIMENSION SHALL BE EQUIVALENT TO 12" INSIDE DIAMETER.

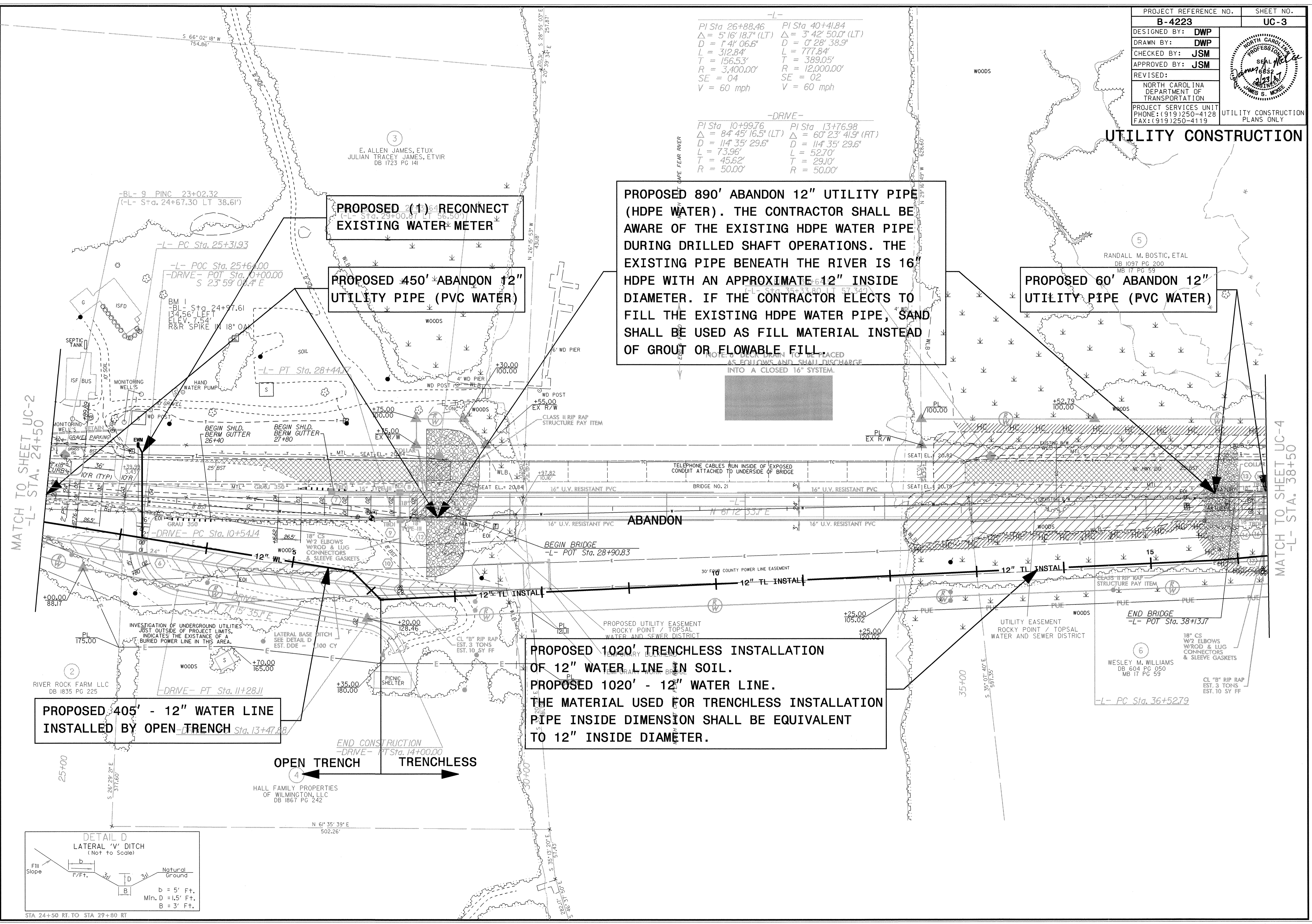
PROPOSED 405' - 12" WATER LINE INSTALLED BY OPEN TRENCH

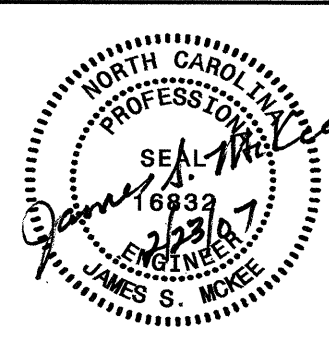
MATCH TO SHEET UC-2
-L- STA. 24+50

MATCH TO SHEET UC-4
-L- STA. 38+50

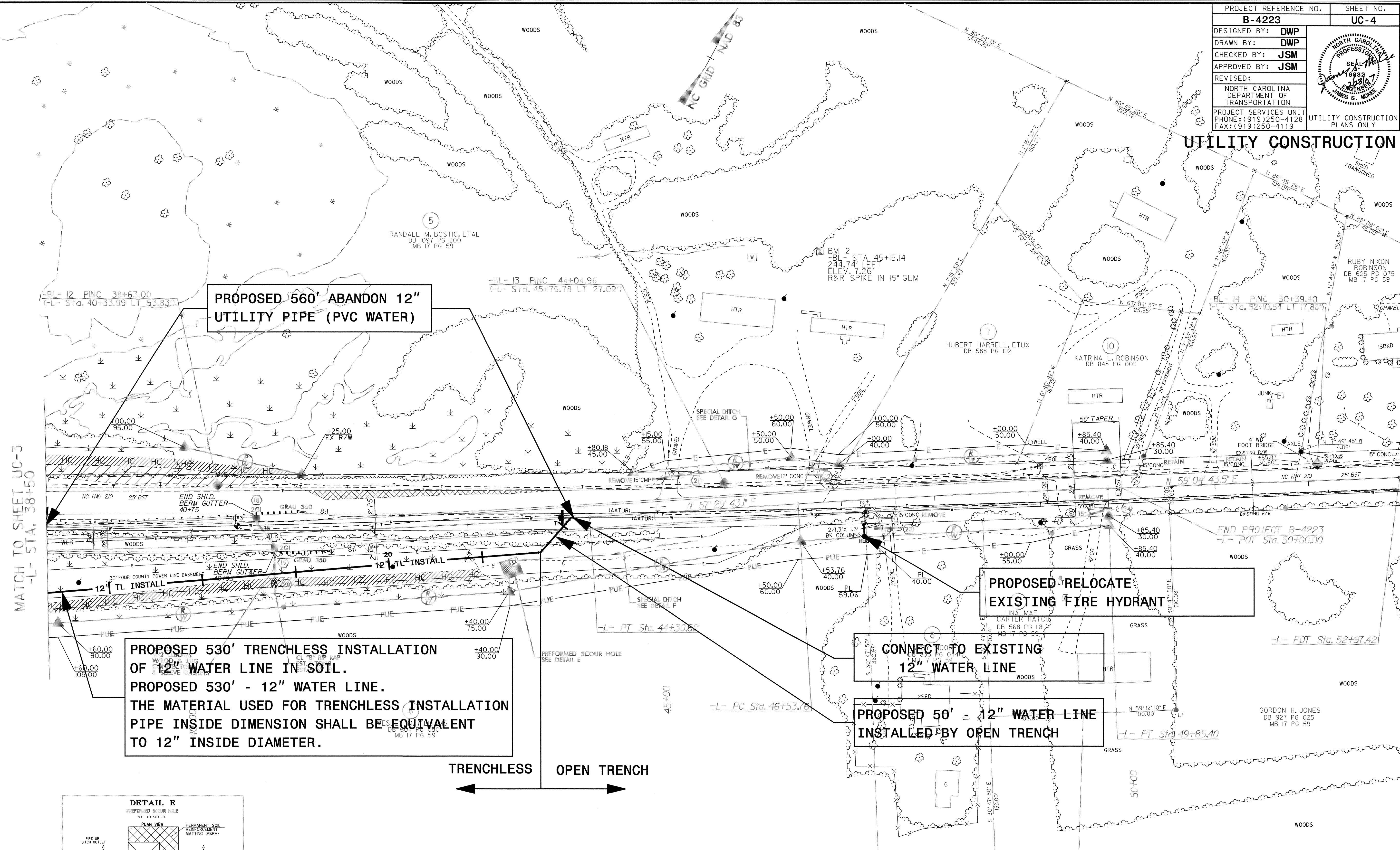


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28-FEB-2007 12:18
Utility Construction Plans
B-4223-uc-ps-h03-rev.dgn





UTILITY CONSTRUCTION



PROPOSED 560' ABANDON 12" UTILITY PIPE (PVC WATER)

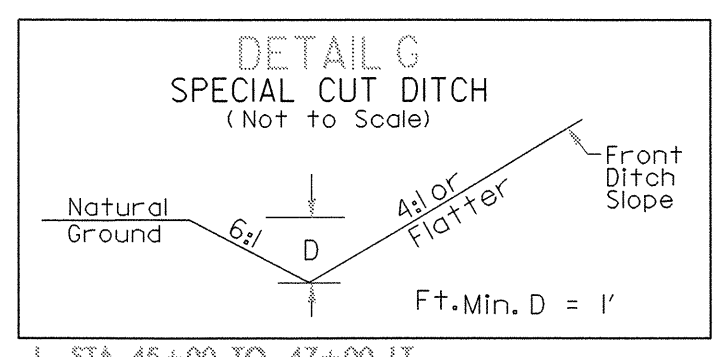
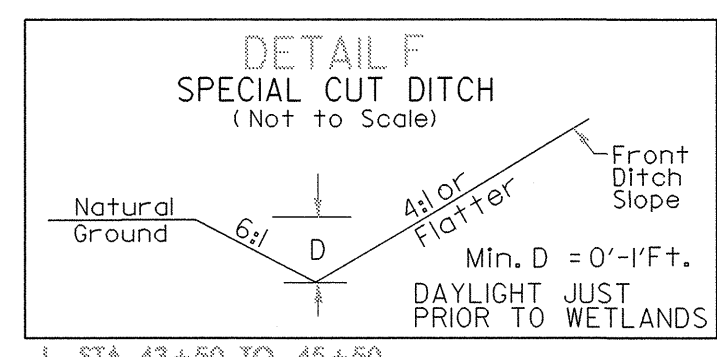
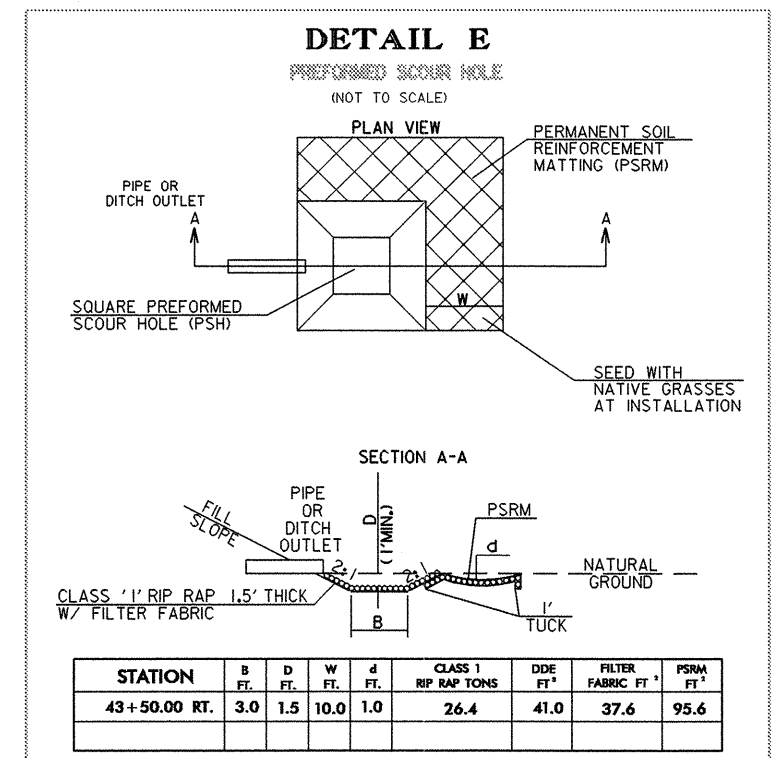
PROPOSED 530' TRENCHLESS INSTALLATION OF 12" WATER LINE IN SOIL. PROPOSED 530' - 12" WATER LINE. THE MATERIAL USED FOR TRENCHLESS INSTALLATION PIPE INSIDE DIMENSION SHALL BE EQUIVALENT TO 12" INSIDE DIAMETER.

PROPOSED RELOCATE EXISTING FIRE HYDRANT

CONNECT TO EXISTING 12" WATER LINE

PROPOSED 50' 12" WATER LINE INSTALLED BY OPEN TRENCH

TRENCHLESS OPEN TRENCH



-L-
 PI Sta 40+41.84 PI Sta 48+9.59
 $\Delta = 3^{\circ}42'50.0''$ (LT) $\Delta = 1^{\circ}35'00.4''$ (RT)
 $D = 0^{\circ}28'38.9''$ $D = 0^{\circ}28'38.9''$
 $L = 777.84'$ $L = 331.64'$
 $T = 389.05'$ $T = 165.83'$
 $R = 12,000.00'$ $R = 12,000.00'$
 $SE = 02$ $SE = 02$
 $V = 60$ mph $V = 60$ mph

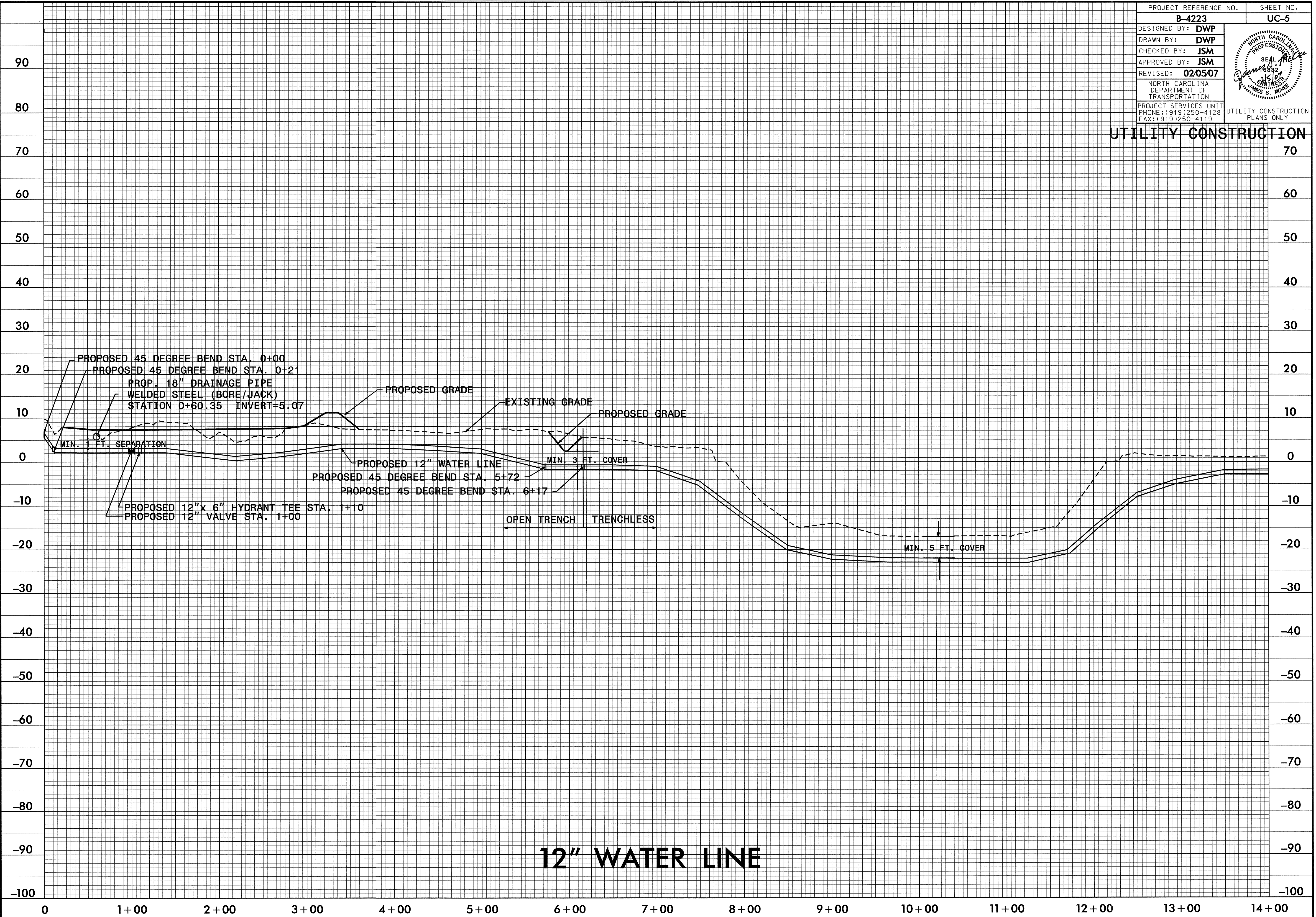
- HAND CLEARING AREA
- PAVEMENT REMOVAL
- MITIGATION EXCAVATION

5/14/99
22-FEB-2007 16:35
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PROJECT REFERENCE NO.	SHEET NO.
B-4223	UC-5
DESIGNED BY: DWP	
DRAWN BY: DWP	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED: 02/05/07	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

5/14/99

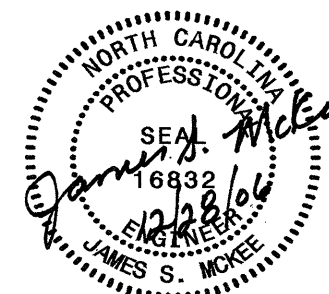


12" WATER LINE

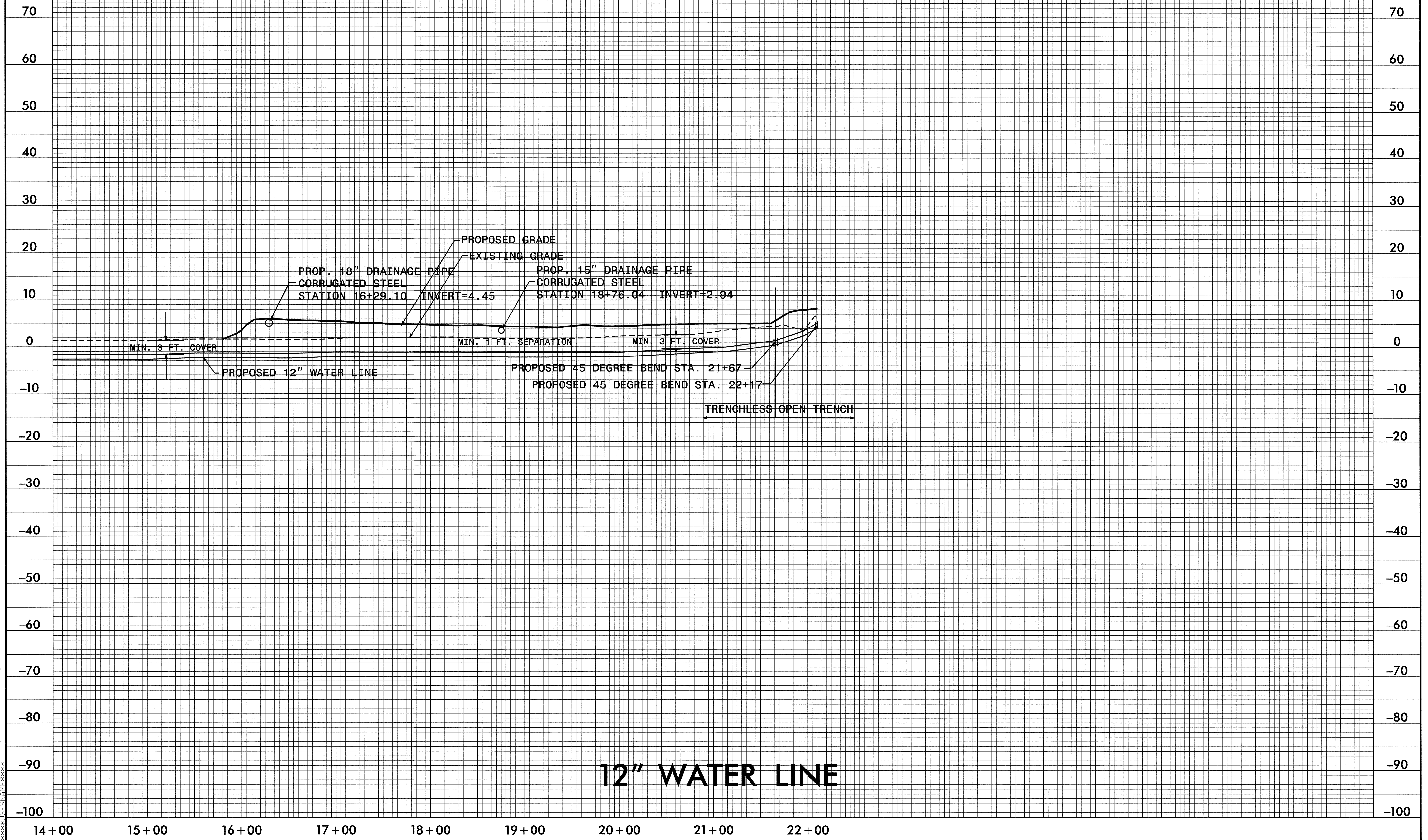
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PROJECT REFERENCE NO.	SHEET NO.
B-4223	UC-6
DESIGNED BY: DWP	
DRAWN BY: DWP	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISER:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



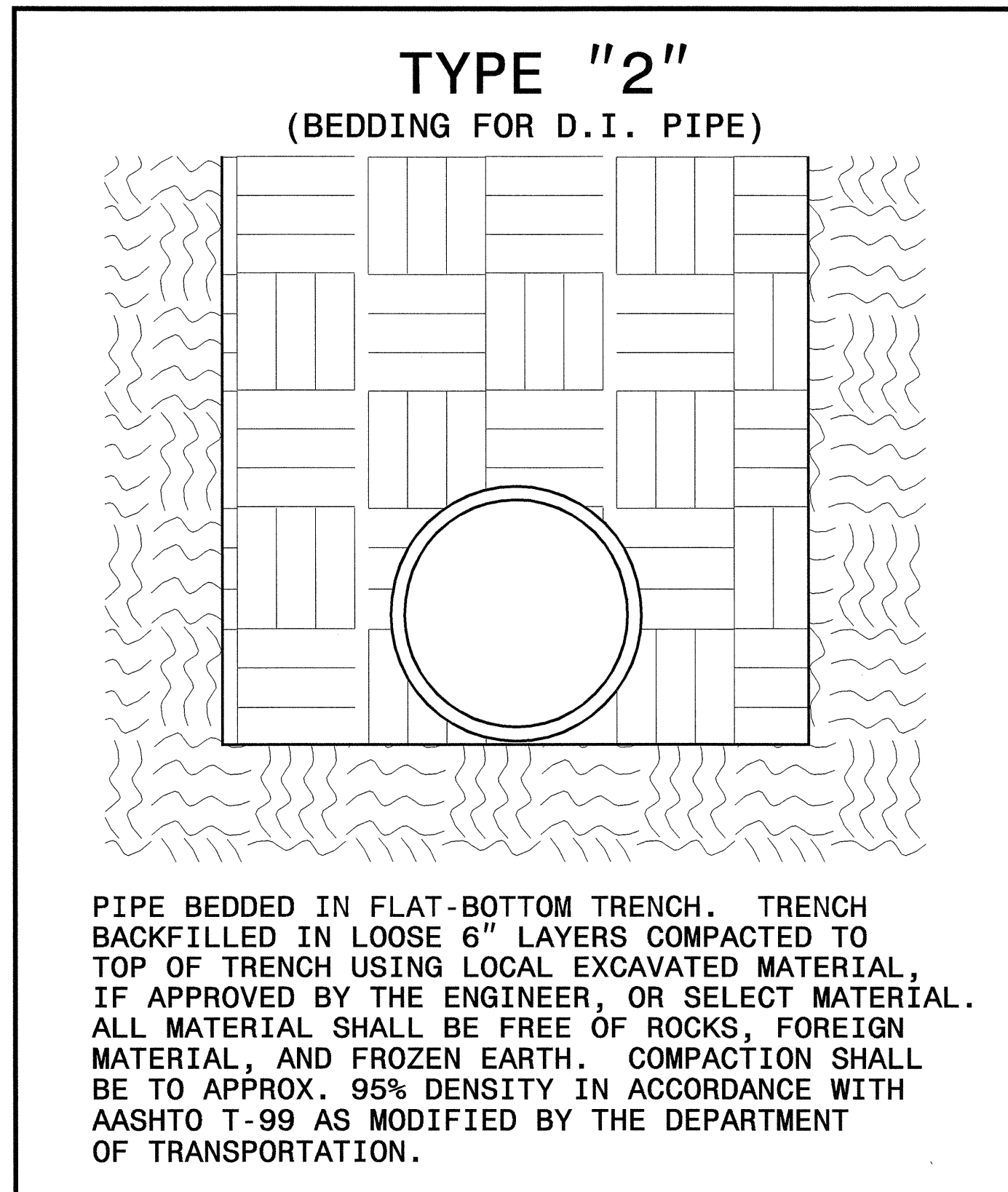
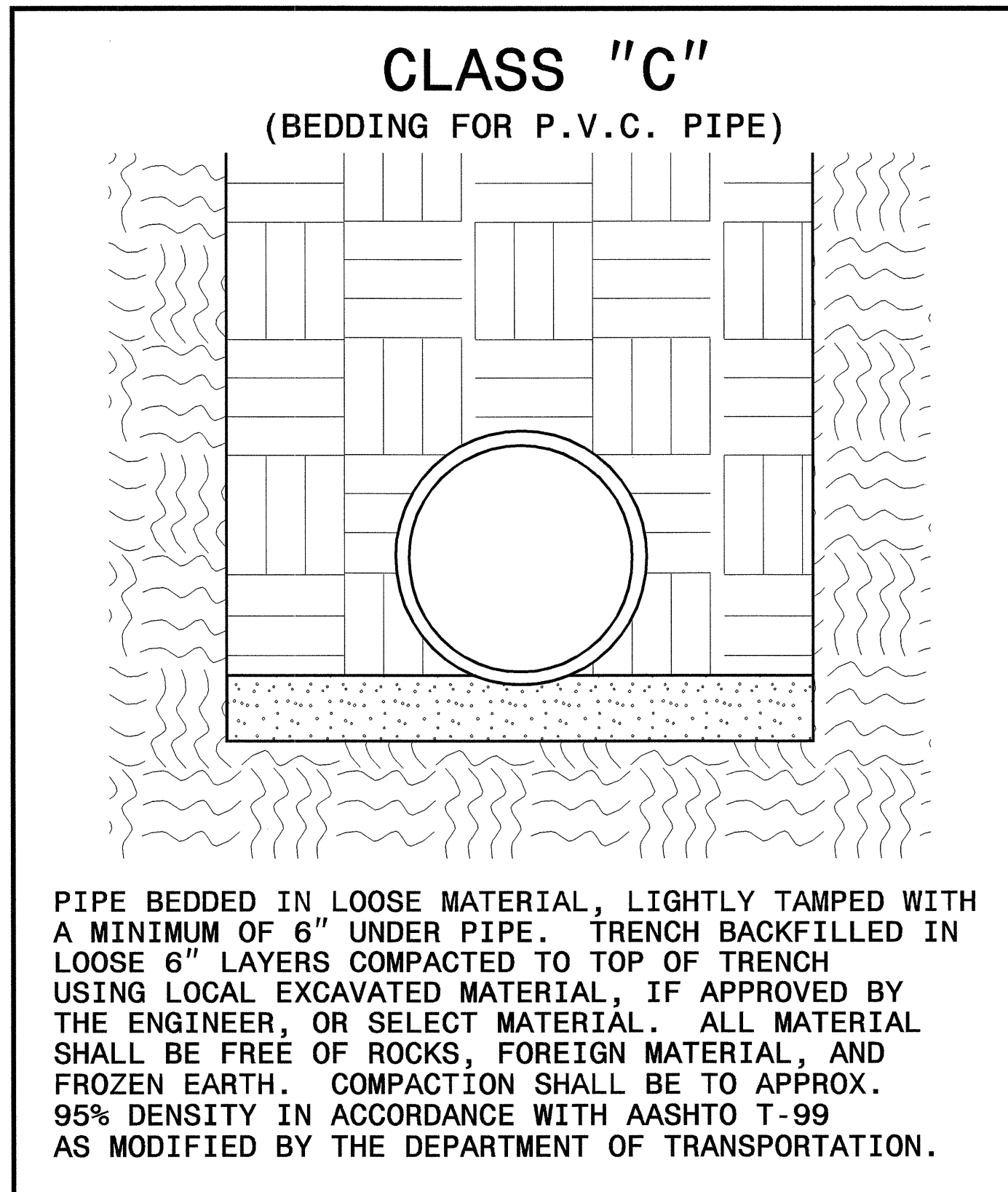
12" WATER LINE

8/17/99

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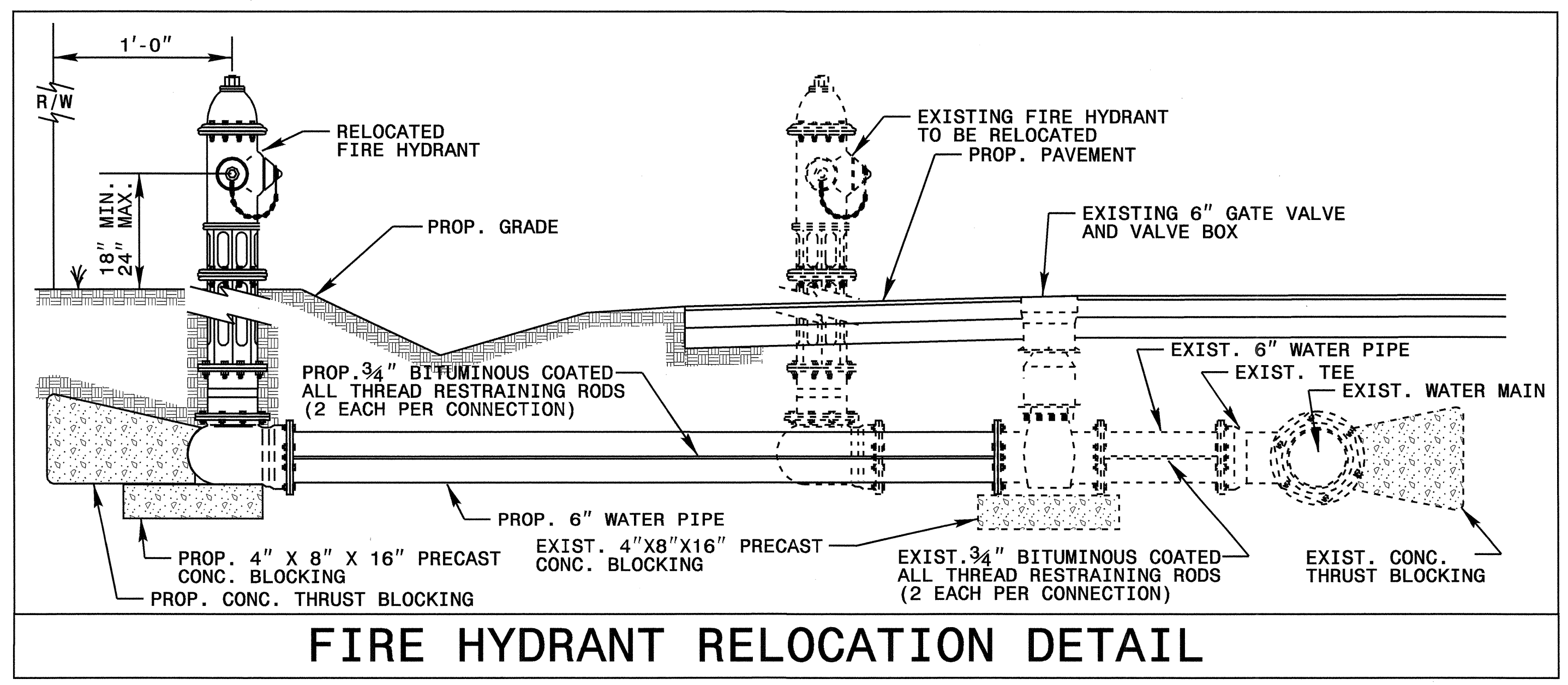
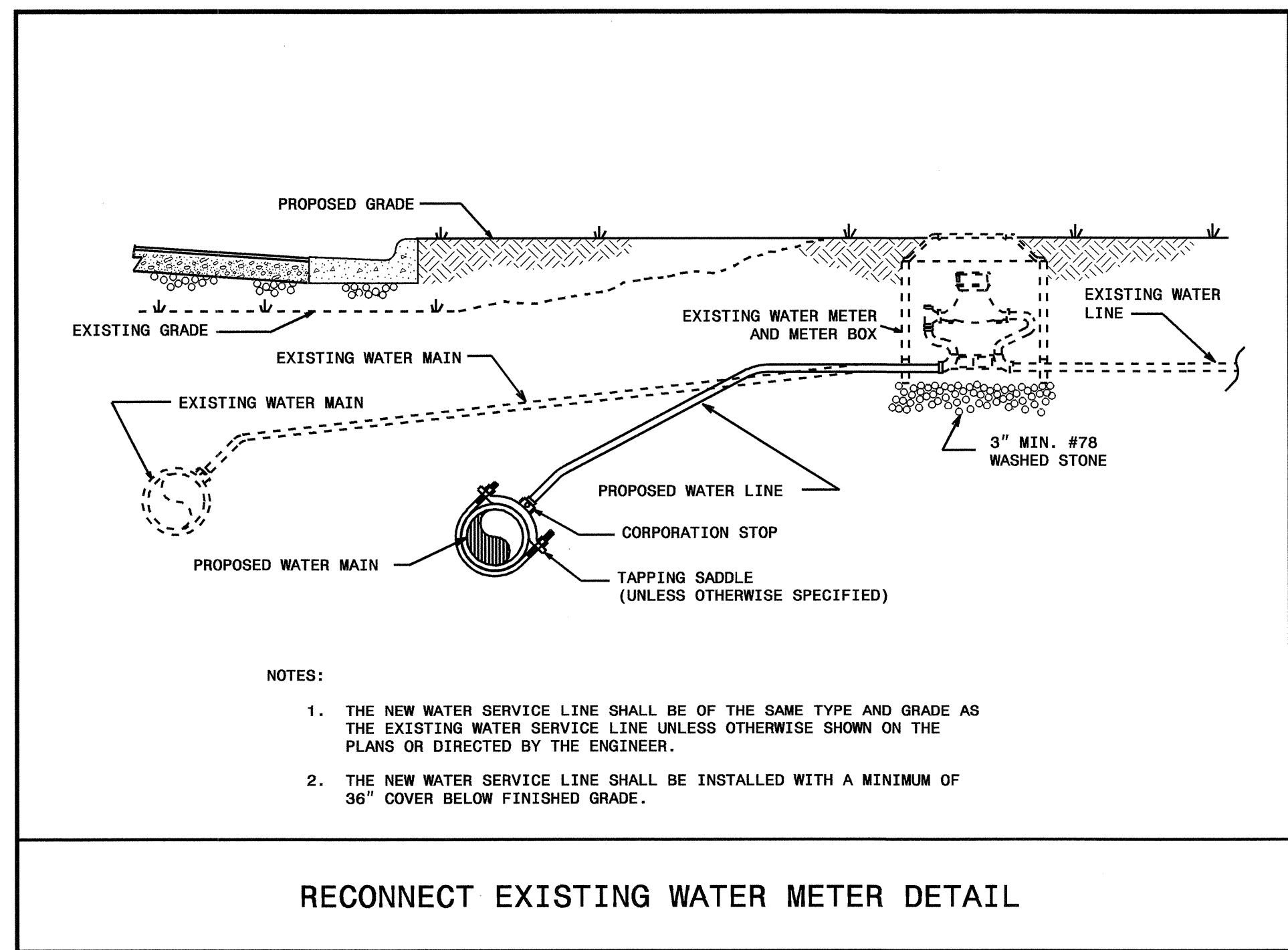
PROJECT REFERENCE NO.	SHEET NO.
B-4223	UC-7
DESIGNED BY: DWP	
DRAWN BY: DWP	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DESIGN SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



MAXIMUM TRENCH WIDTH AT TOP OF PIPE

NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		

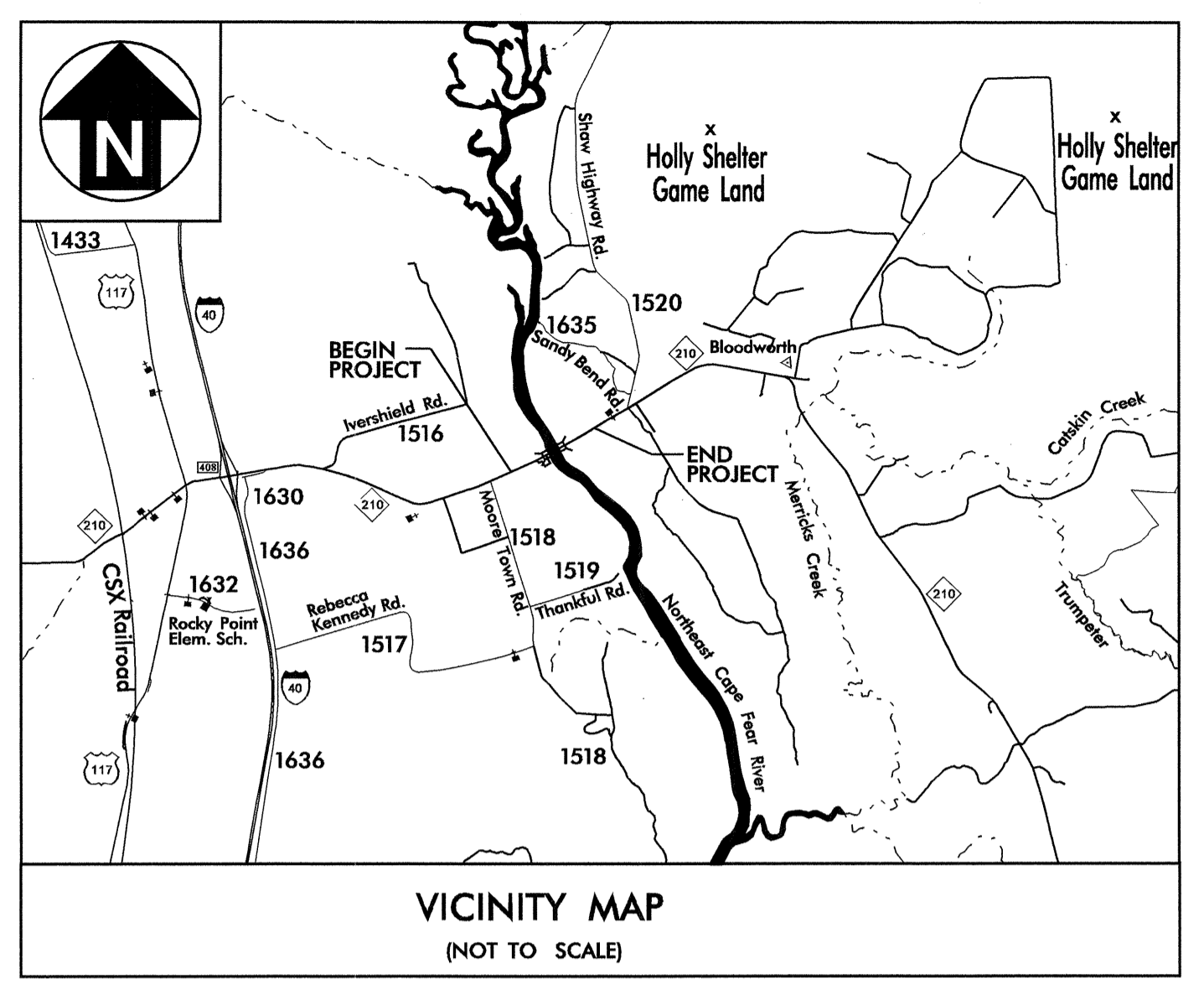


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS
PENDER COUNTY**

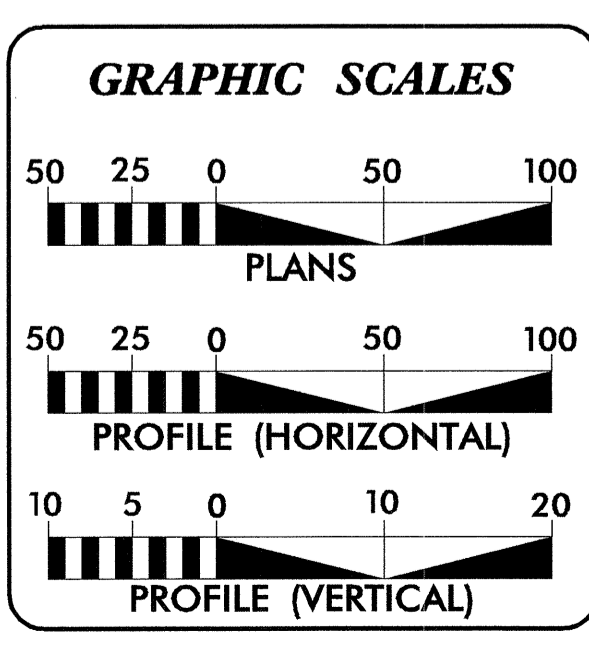
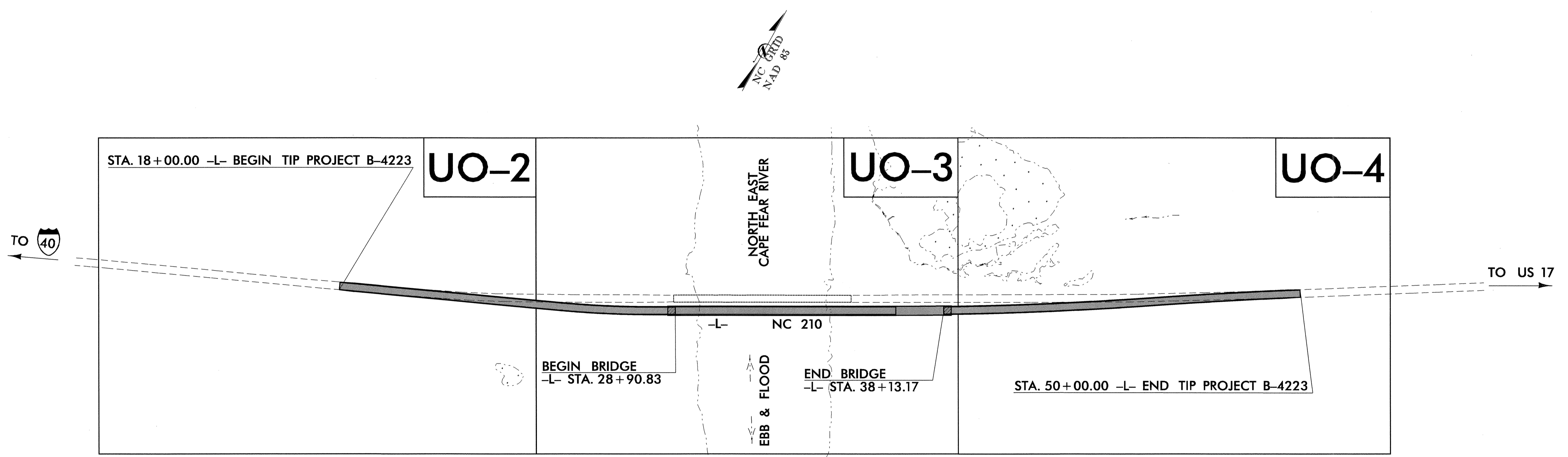
LOCATION: BRIDGE #21 ON NC 210 OVER NORTH EAST CAPE FEAR RIVER

TYPE OF WORK: UTILITIES RELOCATION



TIP PROJECT: B-4223

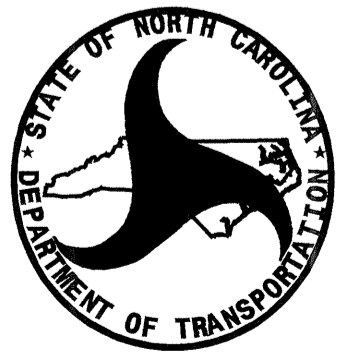
CONTRACT: C201483



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-4	UTILITIES BY OTHERS PLAN SHEETS

- UTILITY OWNERS ON PROJECT**
- (1) FOUR COUNTY ELECTRIC MEMBERSHIP CORPORATION - ELECTRIC
 - (2) BELLSOUTH - TELEPHONE
 - (3) PROGRESS ENERGY - ELECTRIC



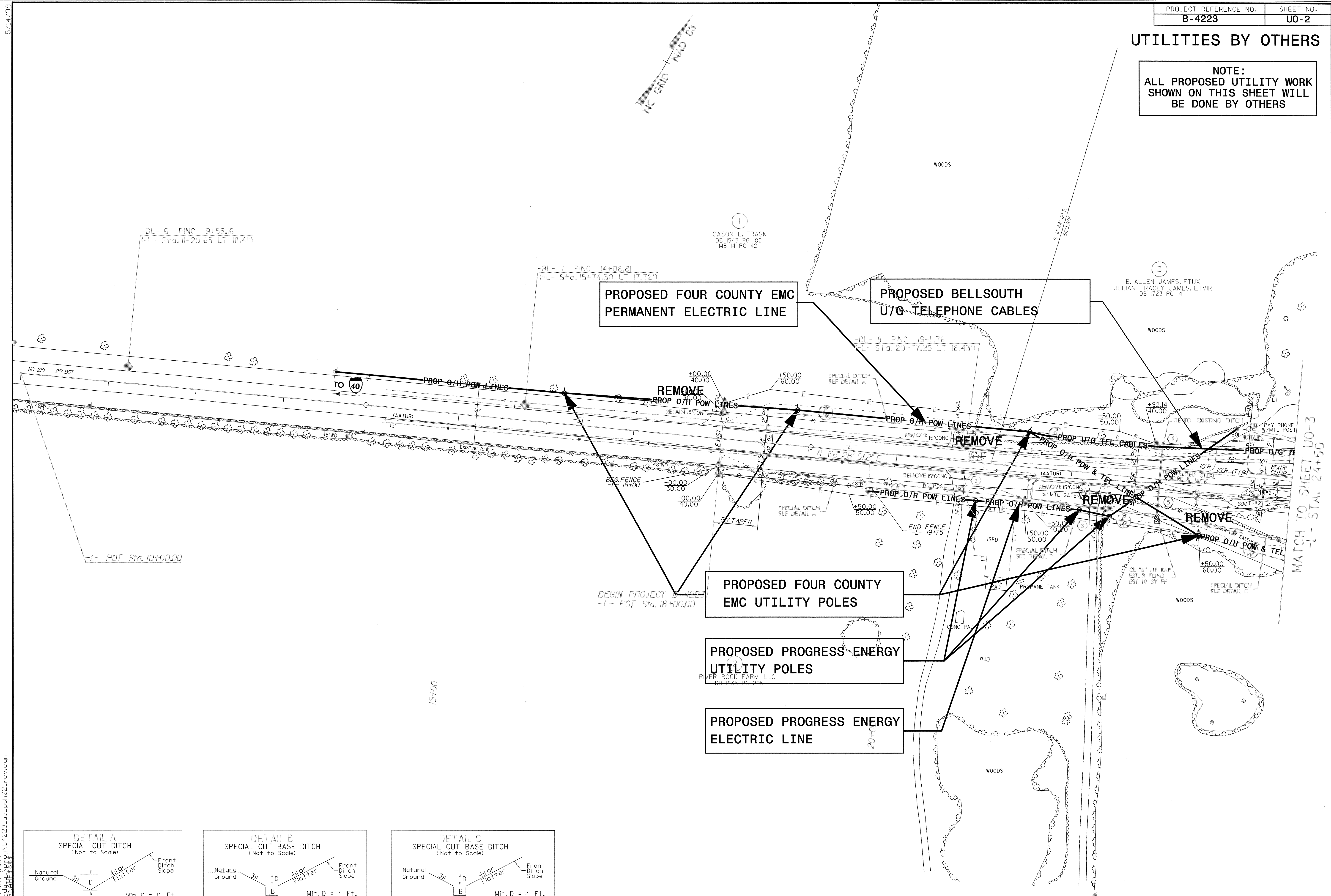
PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
PROJECT SERVICES
UTILITY SECTION**

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 250-4128
FAX (919) 250-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Steve McKee, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Donald Proper UTILITIES PROJECT DESIGNER

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



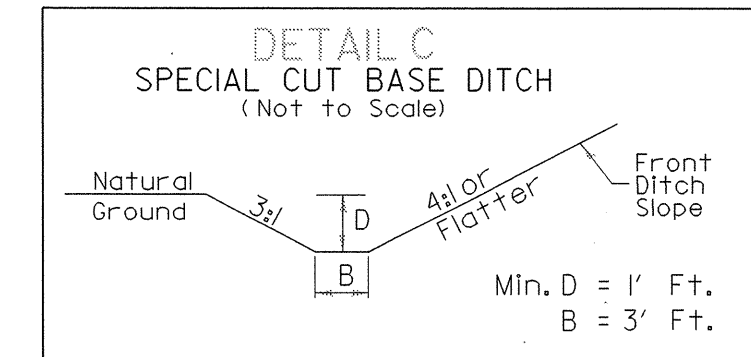
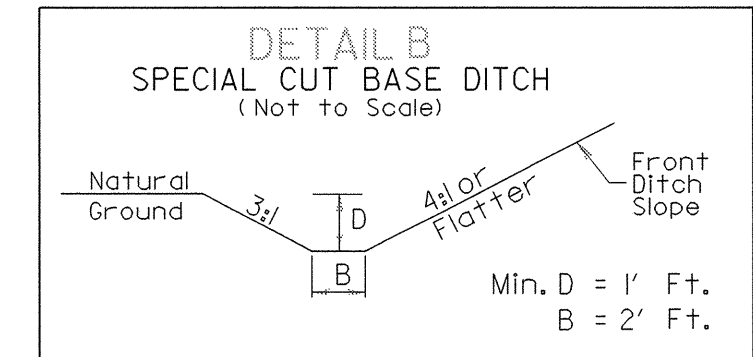
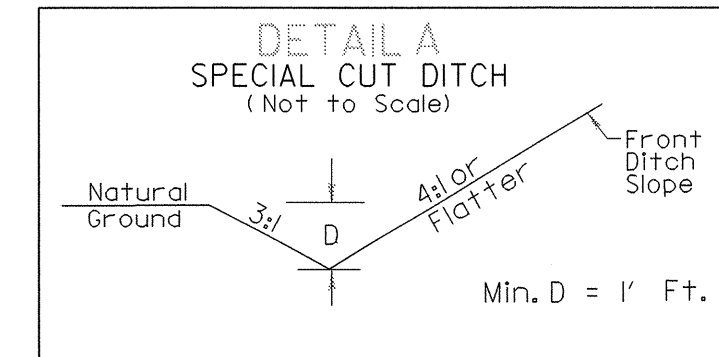
PROPOSED FOUR COUNTY EMC
PERMANENT ELECTRIC LINE

PROPOSED BELLSOUTH
U/G TELEPHONE CABLES

PROPOSED FOUR COUNTY
EMC UTILITY POLES

PROPOSED PROGRESS ENERGY
UTILITY POLES

PROPOSED PROGRESS ENERGY
ELECTRIC LINE



-L- STA 18+50 TO 21+50 RT
-L- STA 18+50 TO 23+00 LT

-L- STA 21+50 TO 23+00 RT

-L- STA 23+00 TO 24+50 RT

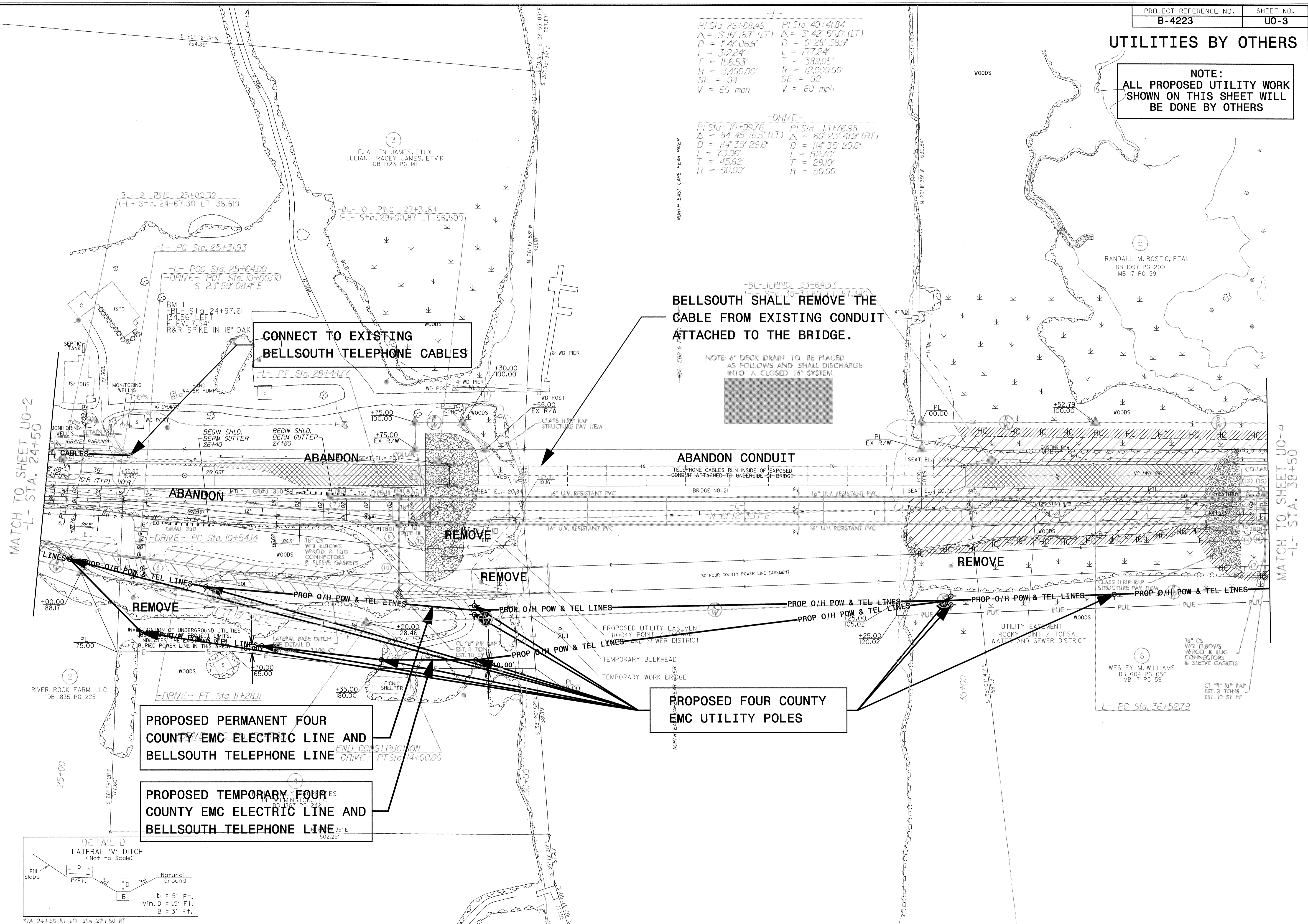
FOR -L- PROFILE SEE SHEET 7

5/14/99
28-MAR-2007 10:54
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UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

-L-	
PI Sta 26+88.46	PI Sta 40+41.84
$\Delta = 5' 16'' 18.7''$ (LT)	$\Delta = 3' 42'' 50.0''$ (LT)
D = 1' 4'' 06.6"	D = 0' 28'' 38.9"
L = 312.84'	L = 777.84'
T = 156.53'	T = 389.05'
R = 3,400.00'	R = 12,000.00'
SE = 04	SE = 02
V = 60 mph	V = 60 mph
-DRIVE-	
PI Sta 10+99.76	PI Sta 13+76.98
$\Delta = 84' 45'' 16.5''$ (LT)	$\Delta = 60' 23'' 41.9''$ (RT)
D = 11' 35'' 29.6"	D = 11' 35'' 29.6"
L = 73.96'	L = 52.70'
T = 45.62'	T = 29.10'
R = 50.00'	R = 50.00'



CONNECT TO EXISTING
BELLSOUTH TELEPHONE CABLES

BELLSOUTH SHALL REMOVE THE
CABLE FROM EXISTING CONDUIT
ATTACHED TO THE BRIDGE.

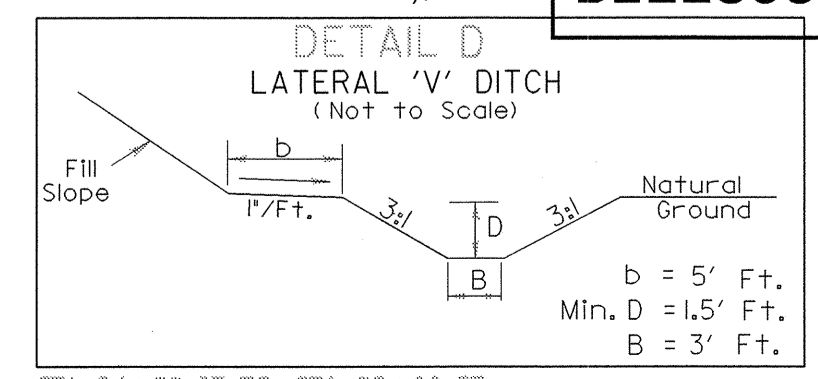
NOTE: 6" DECK DRAIN TO BE PLACED
AS FOLLOWS AND SHALL DISCHARGE
INTO A CLOSED 16" SYSTEM.

ABANDON CONDUIT
TELEPHONE CABLES RUN INSIDE OF EXPOSED
CONDUIT ATTACHED TO UNDERSIDE OF BRIDGE

PROPOSED FOUR COUNTY
EMC UTILITY POLES

PROPOSED PERMANENT FOUR
COUNTY EMC ELECTRIC LINE AND
BELLSOUTH TELEPHONE LINE

PROPOSED TEMPORARY FOUR
COUNTY EMC ELECTRIC LINE AND
BELLSOUTH TELEPHONE LINE



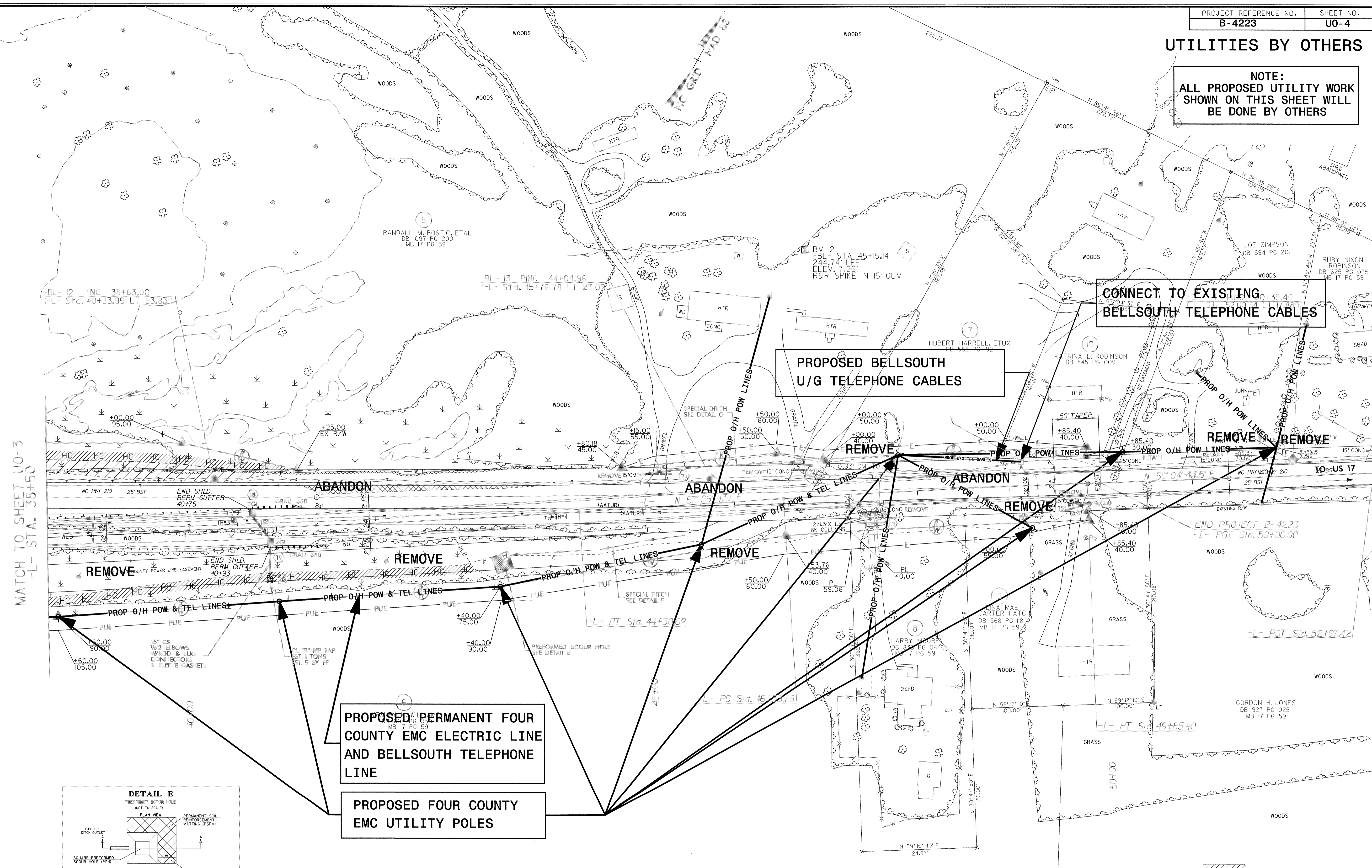
MATCH TO SHEET U0-2
-L- STA. 24+50

MATCH TO SHEET U0-4
-L- STA. 38+50

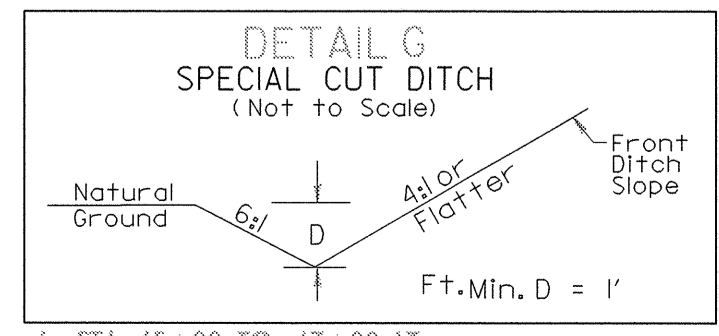
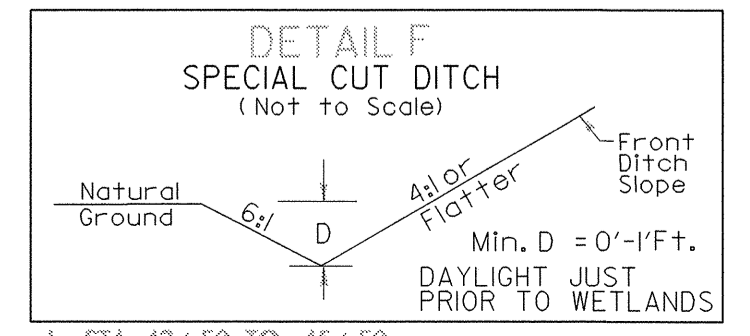
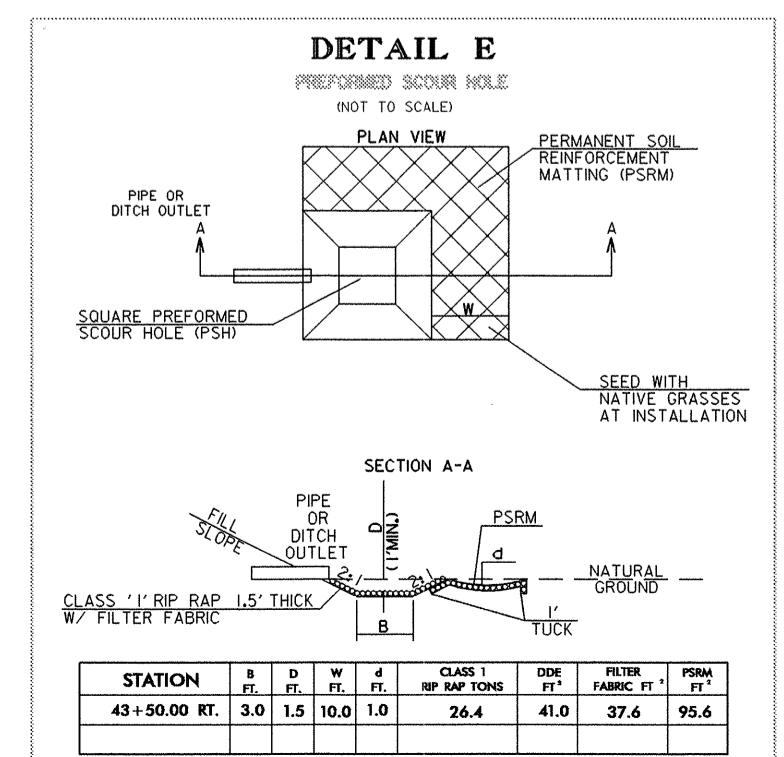
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UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



MATCH TO SHEET U0-3
-L- STA. 38+50



PI Sta 40+41.84
Δ = 3° 42' 50.0" (LT)
D = 0' 28' 38.9"
L = 777.84'
T = 389.05'
R = 12,000.00'
SE = 02
V = 60 mph

PI Sta 48+19.59
Δ = 1° 35' 00.4" (RT)
D = 0' 28' 38.9"
L = 331.64'
T = 165.83'
R = 12,000.00'
SE = 02
V = 60 mph

- HAND CLEARING AREA
- PAVEMENT REMOVAL
- MITIGATION EXCAVATION

FOR -L- PROFILE SEE SHEET 8

5/14/99
28-MAR-2007 10:56
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