

09/28/99

See Sheet 1-A For Index of Sheets

T.I.P. NO.

SHEET NO.

R-2611

UC-1

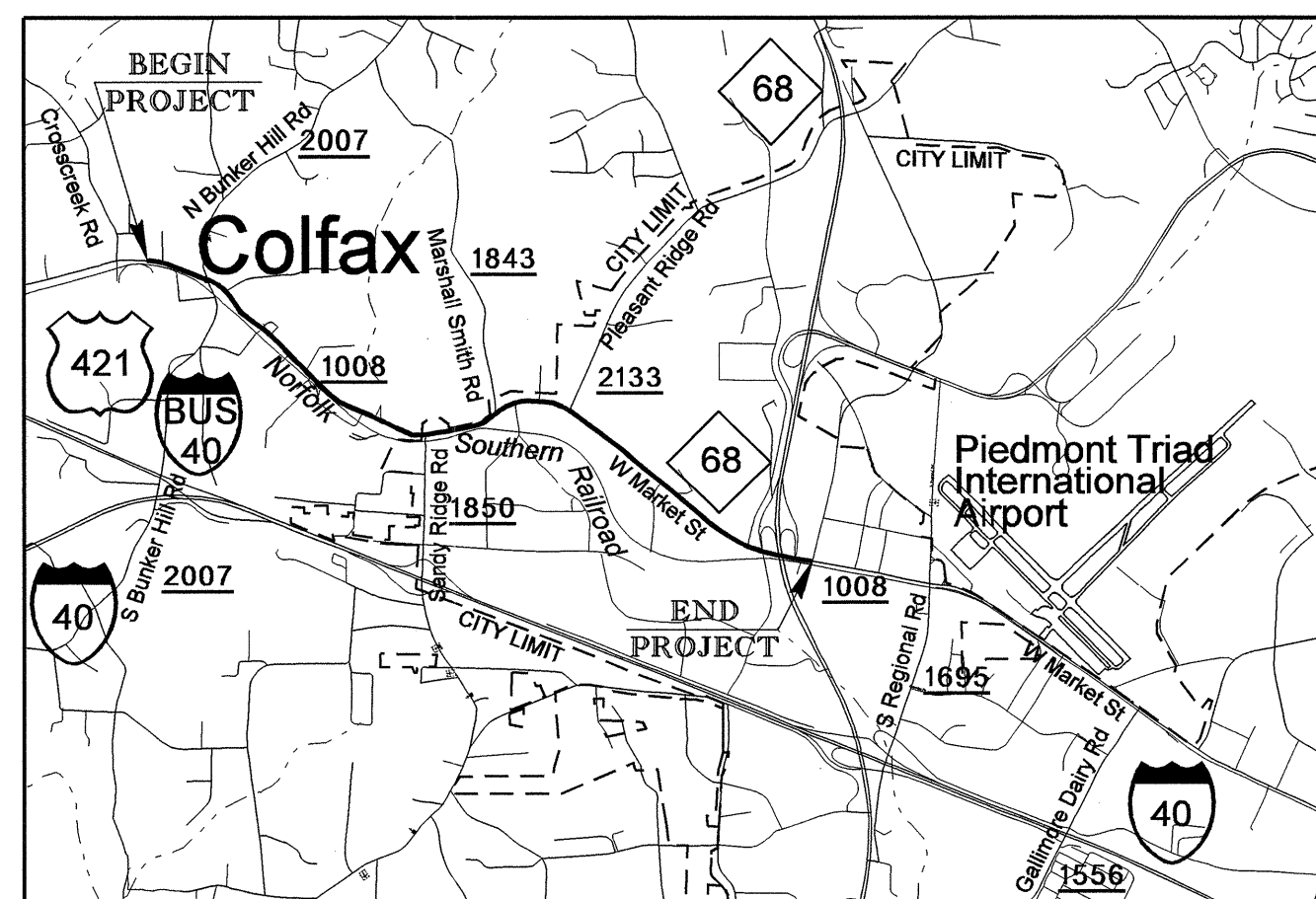
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS GUILFORD COUNTY

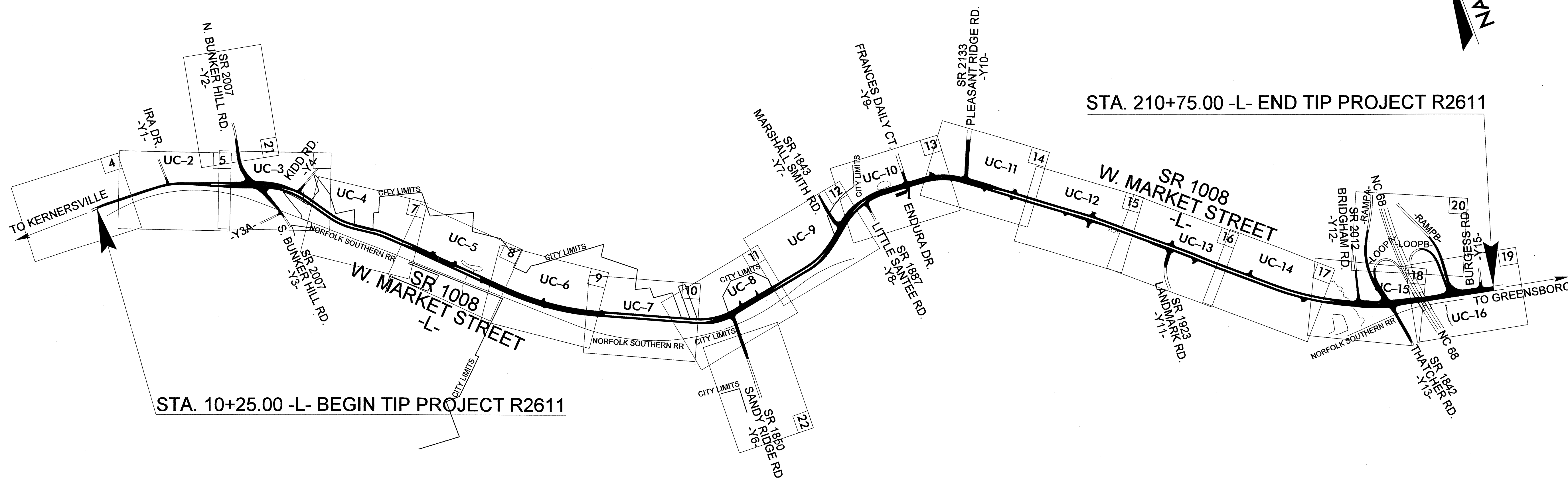
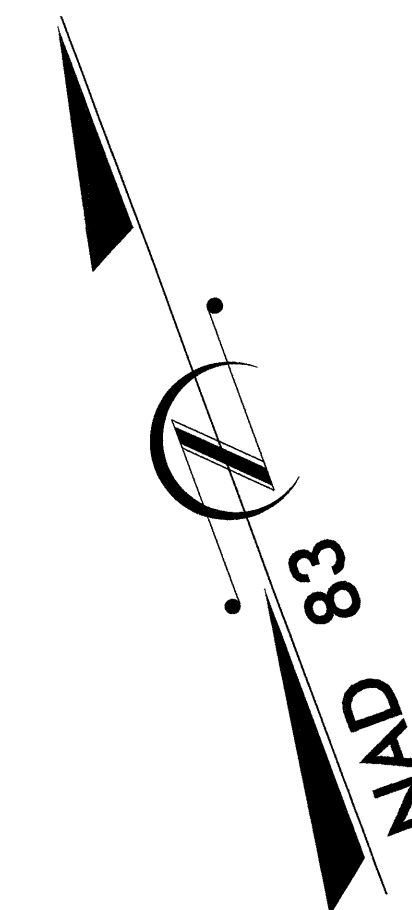
LOCATION: SR 1008 (WEST MARKET STREET) FROM WEST OF SR 2007
(BUNKER HILL RD.) AT COLFAX TO NC 68 IN GREENBORO

TYPE OF WORK: UTILITIES

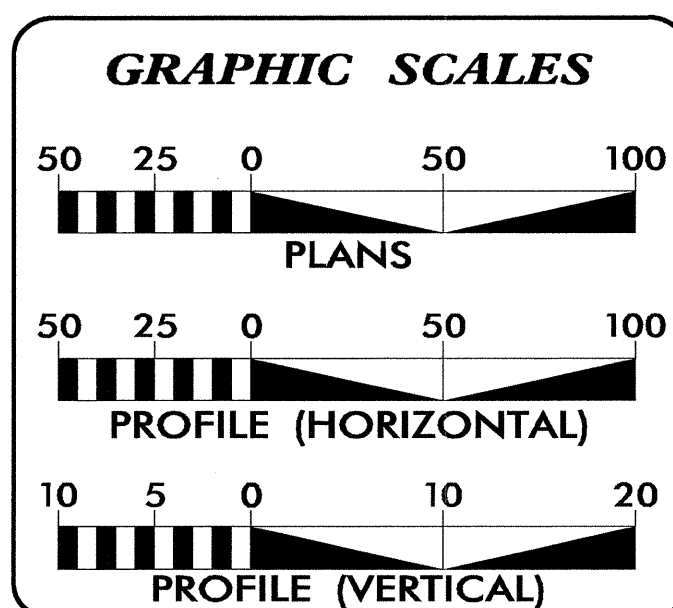
TIP PROJECT: R-2611



VICINITY MAP

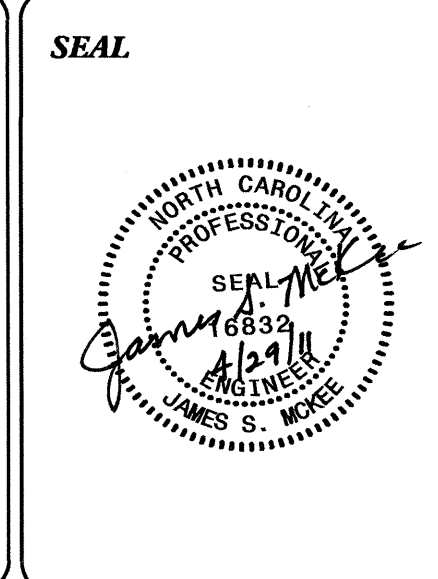


THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF GREENSBORO
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-16	UTILITY CONSTRUCTION PLAN SHEETS
UC-17 & 18	DETAILS SHEETS

WATER AND SEWER OWNERS ON PROJECT	
(1) WATER	CITY OF GREENSBORO
(2) SANITARY SEWER	CITY OF GREENSBORO
(3) 6" FORCE MAIN SEWER	GUILFORD COUNTY EDUCATION.



PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES ENGINEERING
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
Jamshid Hafshejani UTILITIES PROJECT DESIGNER

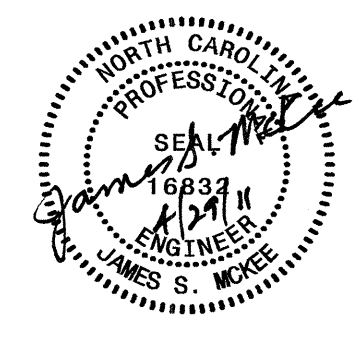
21-APR-2011 13:14
R:\Utilities\RDY\UT\Proj\UC-DGN\R2611-Rdy_UC1-fsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

5/14/99

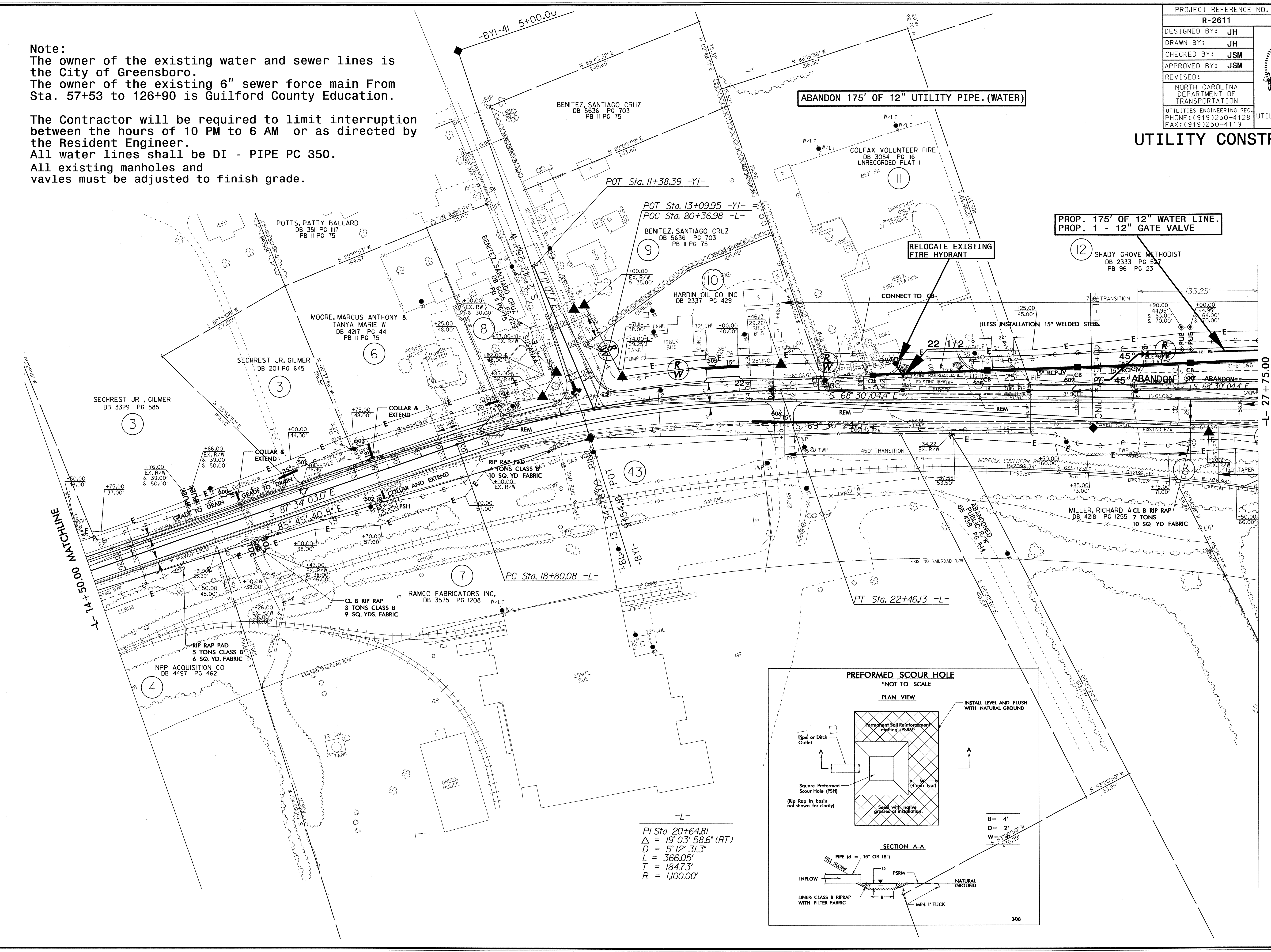
29-APR-2010 10:53 UC-00NAR-2611-r.dwg_UC2-psht5.dgn

Note:
 The owner of the existing water and sewer lines is the City of Greensboro.
 The owner of the existing 6" sewer force main From Sta. 57+53 to 126+90 is Guilford County Education.

The Contractor will be required to limit interruption between the hours of 10 PM to 6 AM or as directed by the Resident Engineer.
 All water lines shall be DI - PIPE PC 350.
 All existing manholes and vavles must be adjusted to finish grade.

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-2
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



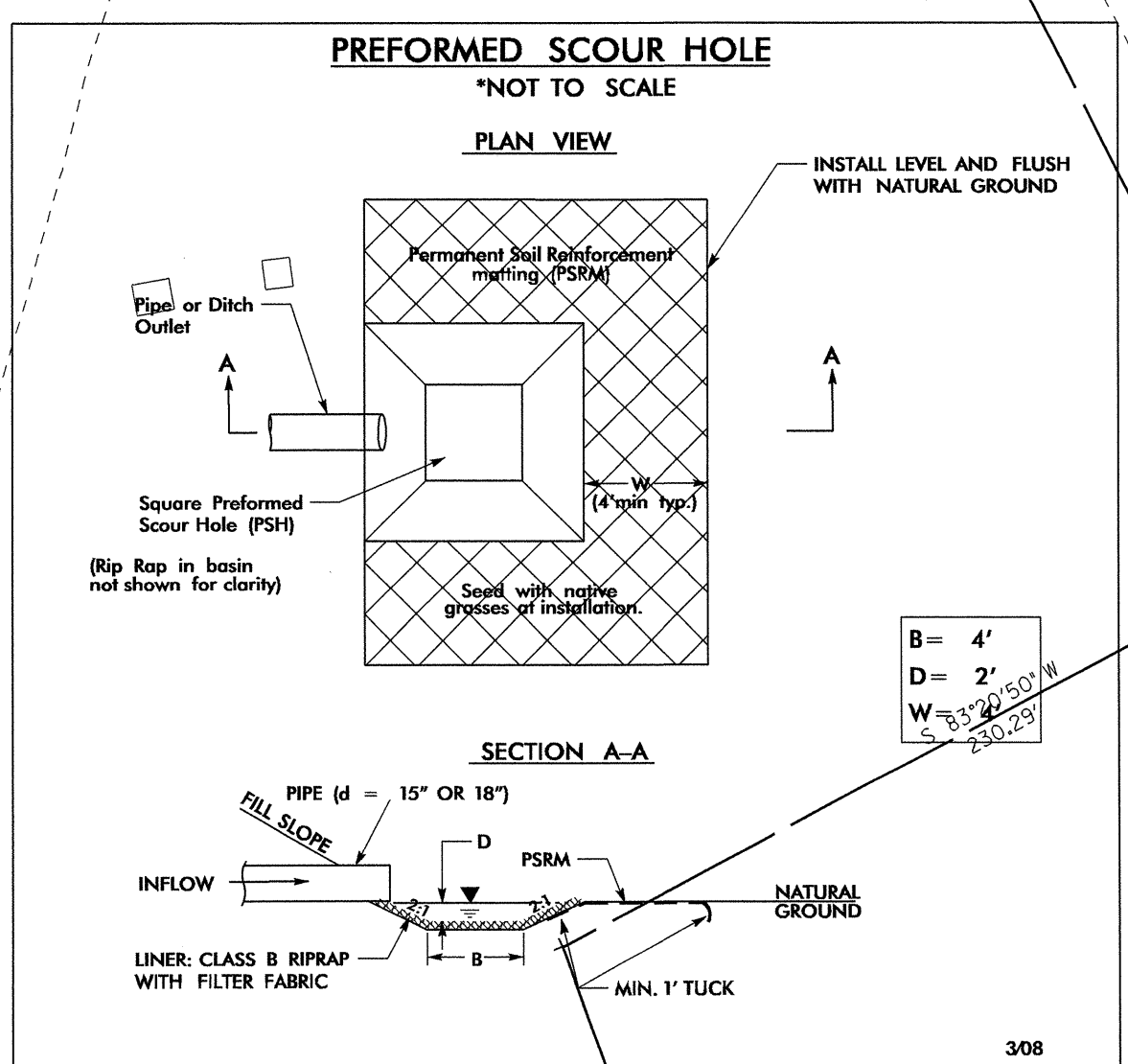
ABANDON 175' OF 12" UTILITY PIPE. (WATER)

PROP. 175' OF 12" WATER LINE.
 PROP. 1 - 12" GATE VALVE

RELOCATE EXISTING FIRE HYDRANT

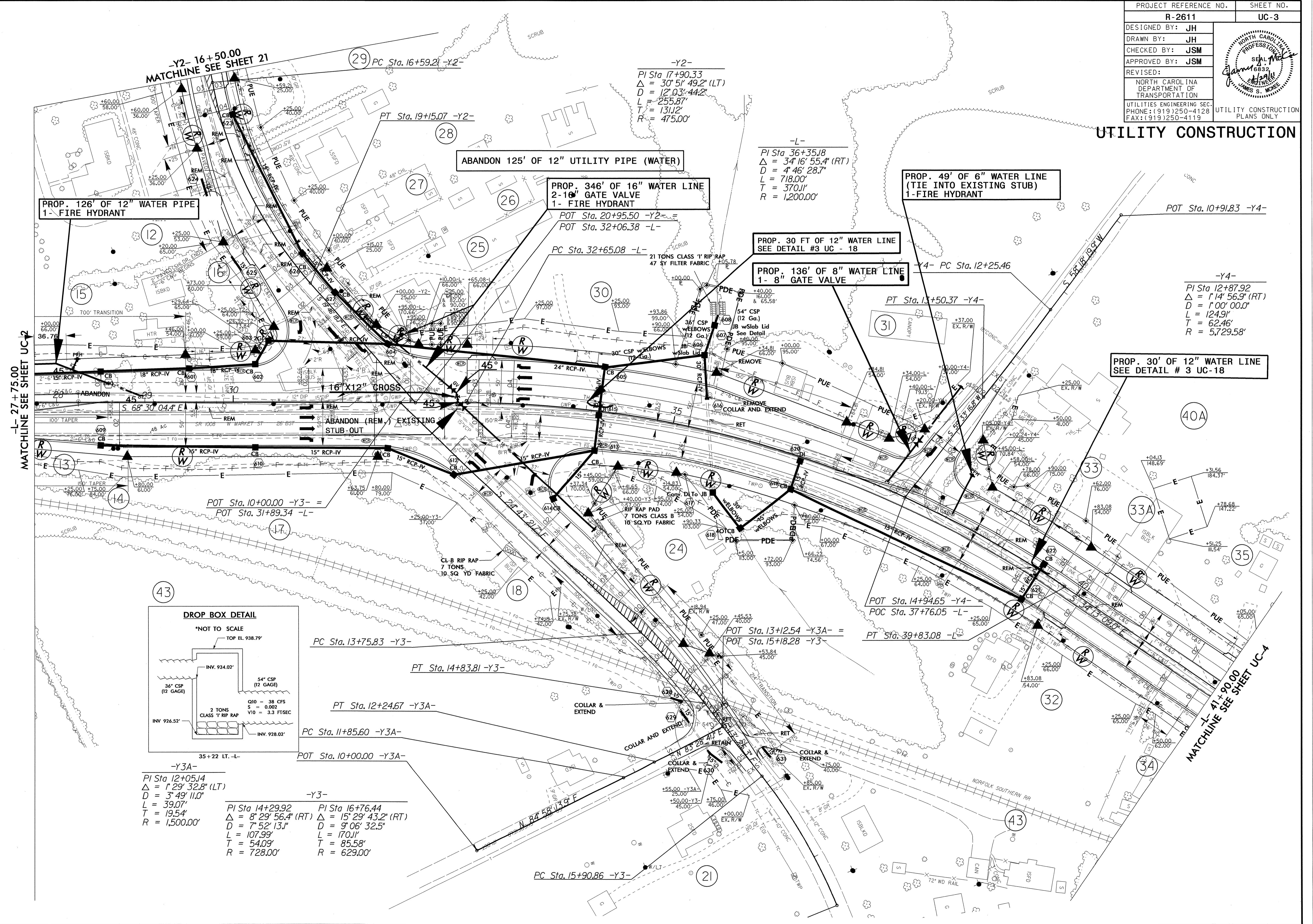
MATCHLINE SEE SHEET UC-3

-L-
 PI Sta 20+64.81
 $\Delta = 19' 03" 58.6" (RT)$
 $D = 5' 12' 31.3"$
 $L = 366.05'$
 $T = 184.73'$
 $R = 1,000.00'$



PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-3
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



PROP. 126' OF 12" WATER PIPE
1- FIRE HYDRANT

ABANDON 125' OF 12" UTILITY PIPE (WATER)

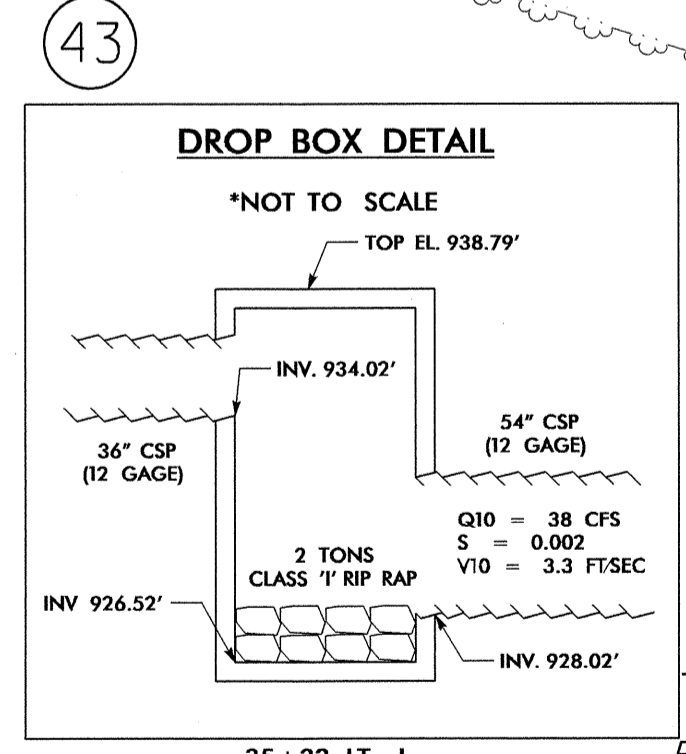
PROP. 346' OF 16" WATER LINE
2-16" GATE VALVE
1- FIRE HYDRANT

PROP. 30 FT OF 12" WATER LINE
SEE DETAIL #3 UC - 18

PROP. 49' OF 6" WATER LINE
(TIE INTO EXISTING STUB)
1-FIRE HYDRANT

PROP. 136' OF 8" WATER LINE
1- 8" GATE VALVE

PROP. 30' OF 12" WATER LINE
SEE DETAIL # 3 UC-18



-Y3A-
PI Sta 12+05.14
Δ = 1° 29' 32.8" (LT)
D = 3' 49' 11.0"
L = 39.07'
T = 19.54'
R = 1,500.00'

PI Sta 14+29.92 Δ = 8° 29' 56.4" (RT) D = 7' 52' 13.1" L = 107.99' T = 54.09' R = 728.00'	PI Sta 16+76.44 Δ = 15° 29' 43.2" (RT) D = 9' 06' 32.5" L = 170.11' T = 85.58' R = 629.00'
--	---

PC Sta. 15+90.86 -Y3-

MATCHLINE SEE SHEET UC-4
L- 41+90.00

UTILITY CONSTRUCTION

-L-

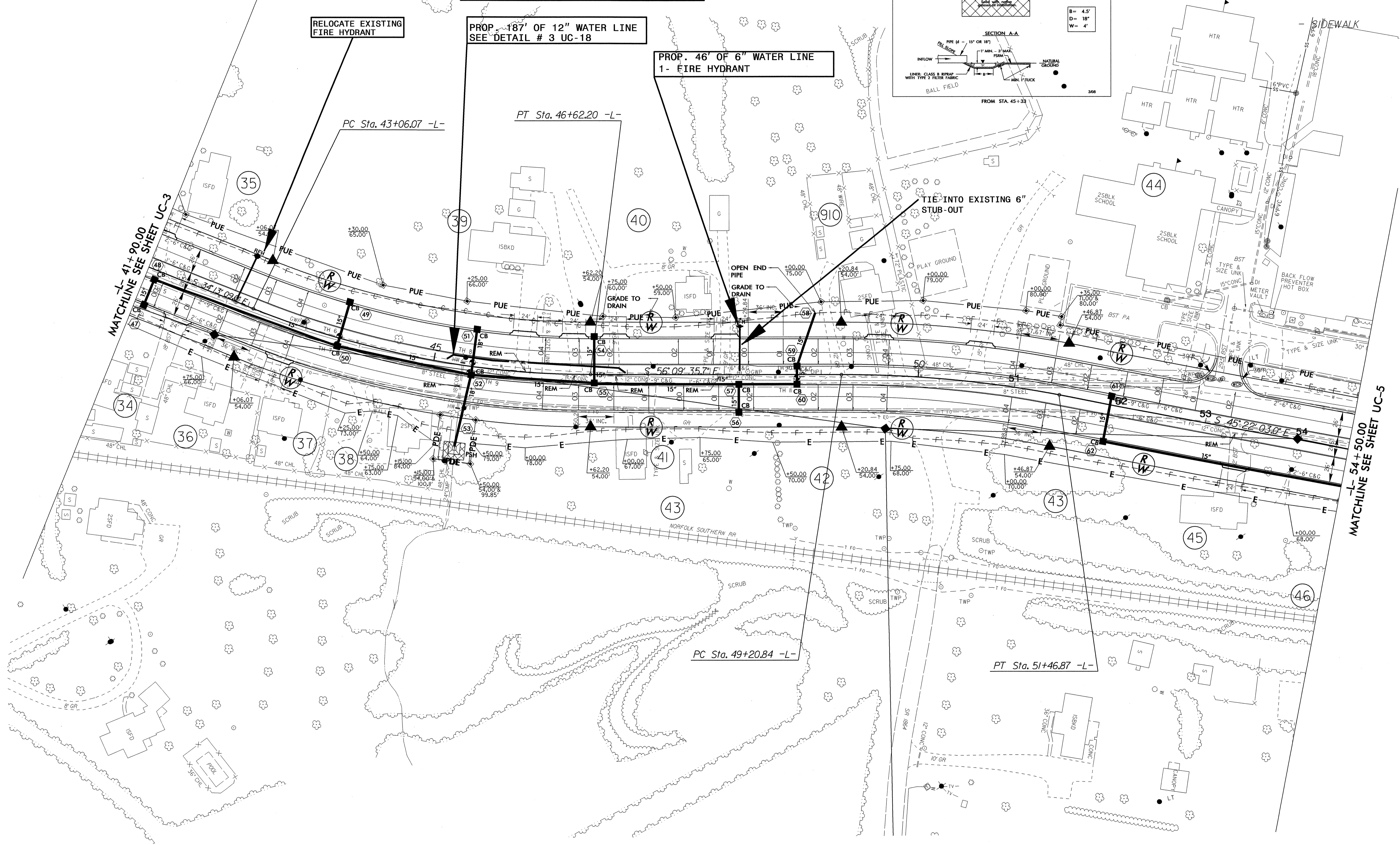
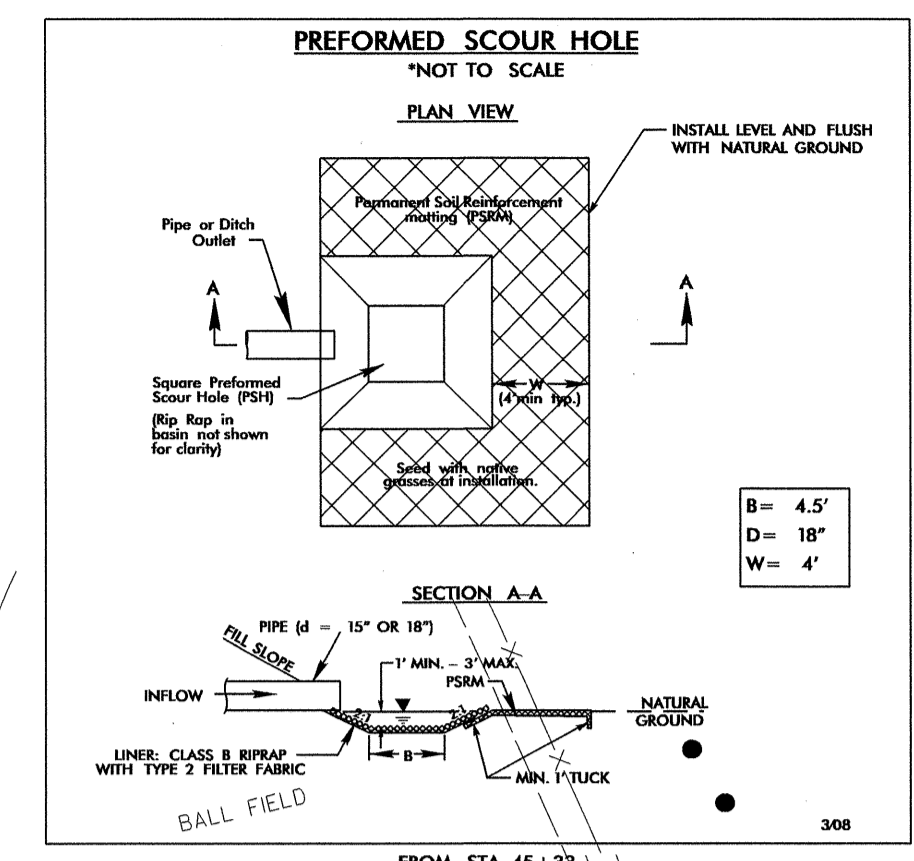
PI Sta 44+86.34	PI Sta 50+34.19
$\Delta = 2^\circ 56' 26.7"$ (LT)	$\Delta = 10^\circ 47' 32.7"$ (RT)
D = 6' 09" 39.0"	D = 4' 46" 28.7"
L = 356.13'	L = 226.04'
T = 180.27'	T = 113.35'
R = 930.00'	R = 1,200.00'

ABANDON 171' OF 12" UTILITY PIPE (WATER)

RELOCATE EXISTING FIRE HYDRANT

PROP. 187' OF 12" WATER LINE
SEE DETAIL # 3 UC-18

PROP. 46' OF 6" WATER LINE
1- FIRE HYDRANT



MATCHLINE SEE SHEET UC-3
-L- 41+90.00

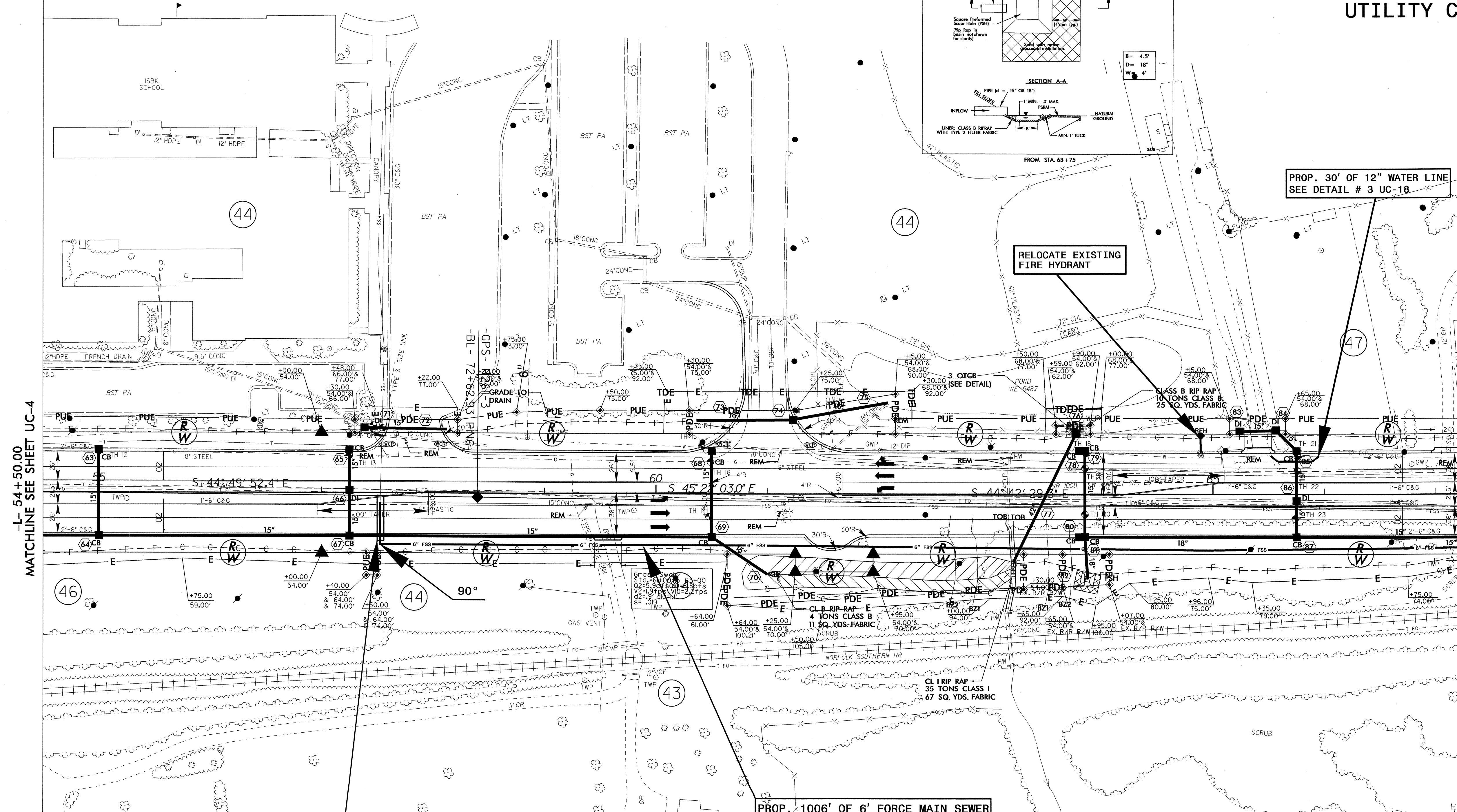
MATCHLINE SEE SHEET UC-5
-L- 54+50.00

6/17/99

29-APR-2010 10:57 UC.DGN v2611.rdy UC5.pah8.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-5
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-L- 54 + 50.00
MATCHLINE SEE SHEET UC-4

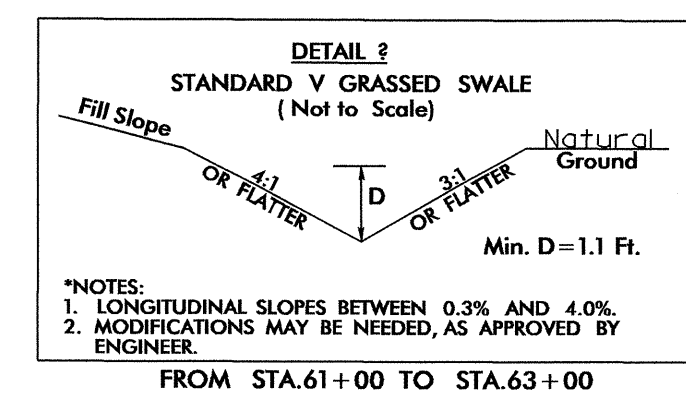
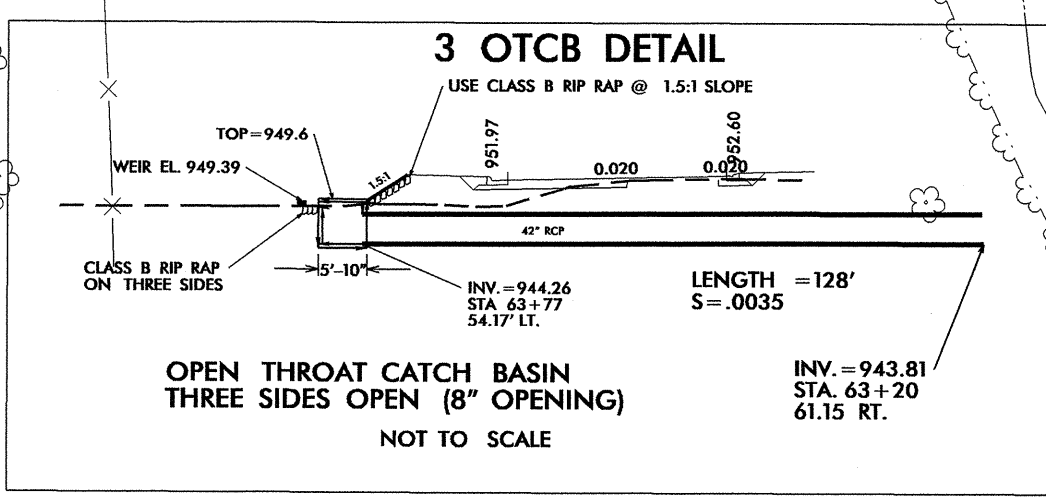
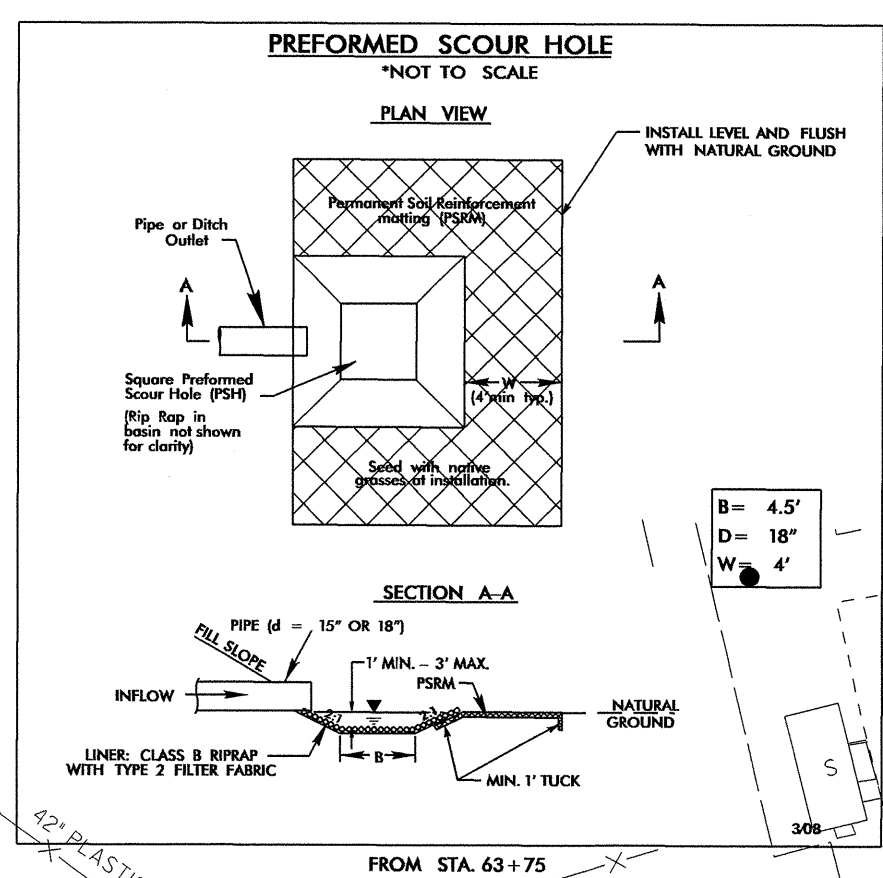
-L- 67 + 20.00
MATCHLINE SEE SHEET UC-6

PROP. 41' OF 12" STEEL ENCASEMENT
 PIPE 0.250" THICKNESS.
 (WELD TO EXISTING ENCASEMENT PIPE)

RELOCATE EXISTING
 FIRE HYDRANT

PROP. 30' OF 12" WATER LINE
 SEE DETAIL # 3 UC-18

PROP. 1006' OF 6' FORCE MAIN SEWER



NOTES:
 1. LONGITUDINAL SLOPES BETWEEN 0.3% AND 4.0%.
 2. MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.
 FROM STA. 61+00 TO STA. 63+00

5/14/99

29-APR-2010 10:58
J:\11\cadd\nc\proj\UC6\DWG\2611.rdy-UC6_psh.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-6
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

ABANDON 62' OF 12" UTILITY PIPE (WATER).

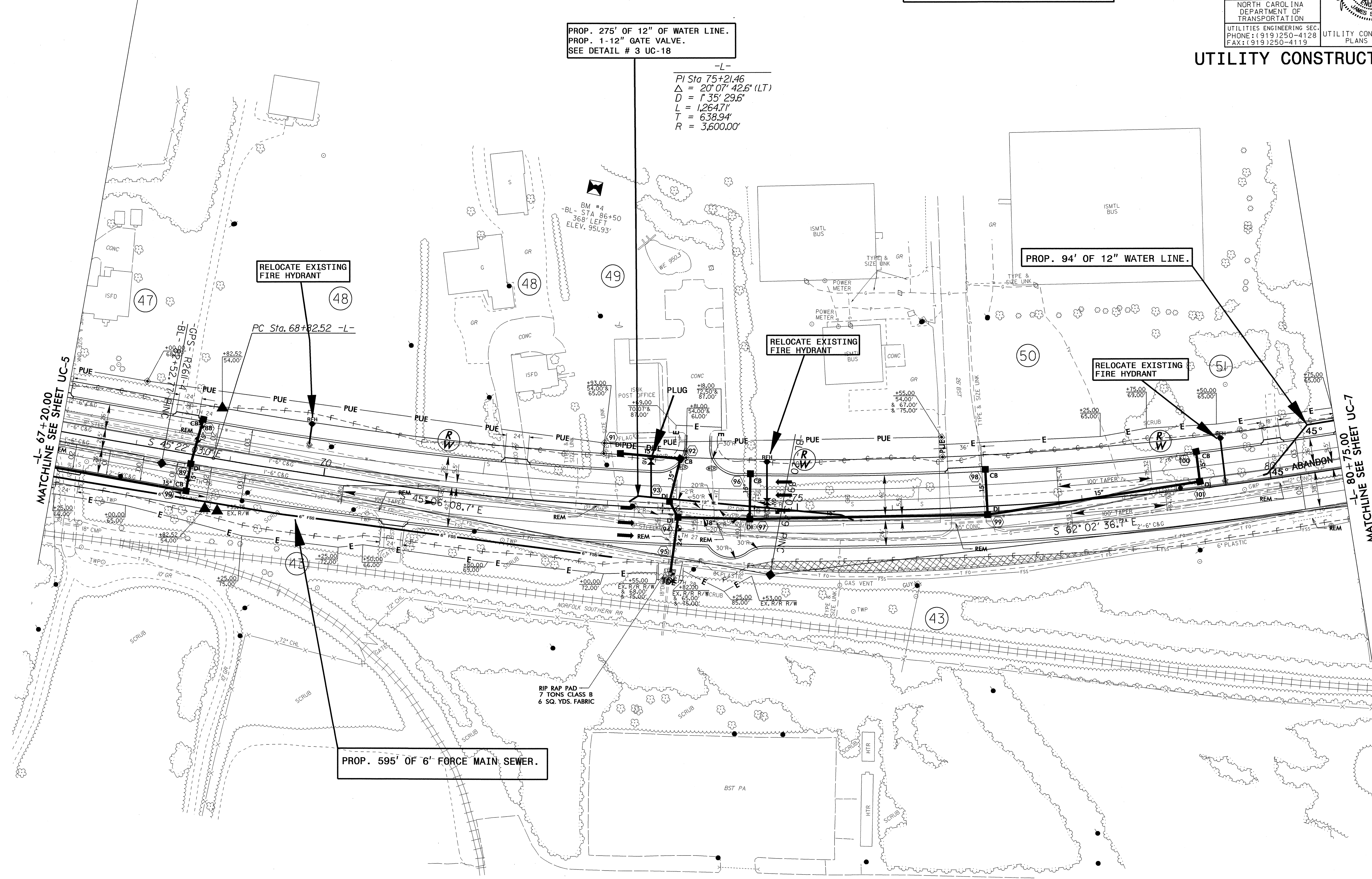
PROP. 275' OF 12" OF WATER LINE.
PROP. 1-12" GATE VALVE.
SEE DETAIL # 3 UC-18

-L-

PI Sta 75+21.46
 $\Delta = 20' 07" 42.6" (LT)$
 $D = 1' 35" 29.6"$
 $L = 1,264.71'$
 $T = 638.94'$
 $R = 3,600.00'$

PROP. 94' OF 12" WATER LINE.

PROP. 595' OF 6" FORCE MAIN SEWER.

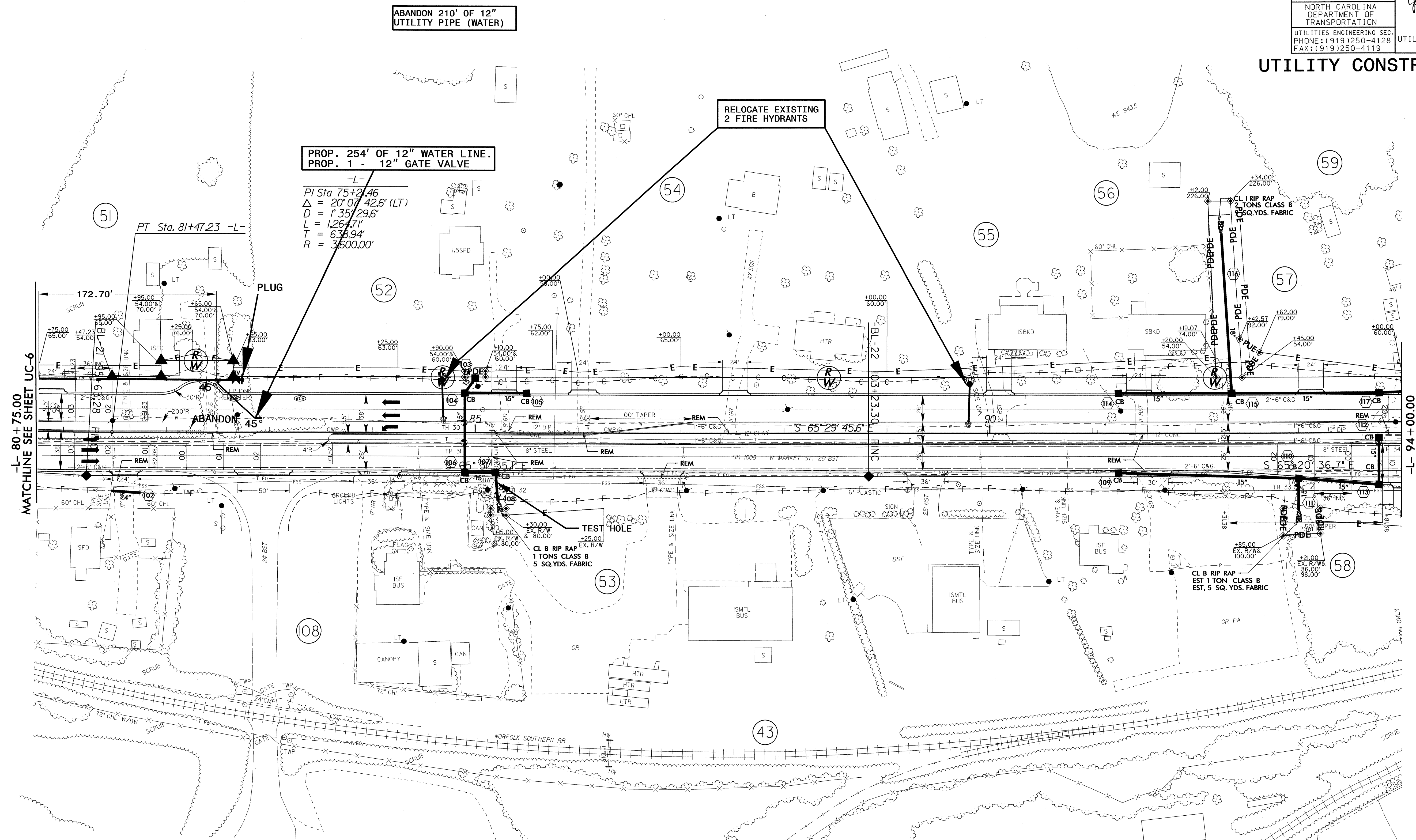


5/14/99

20-APR-2010 10:59 UC_DGN-v2611-rdy_UC7_psh10.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-7
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



ABANDON 210' OF 12" UTILITY PIPE (WATER)

RELOCATE EXISTING 2 FIRE HYDRANTS

PROP. 254' OF 12" WATER LINE.
 PROP. 1 - 12" GATE VALVE

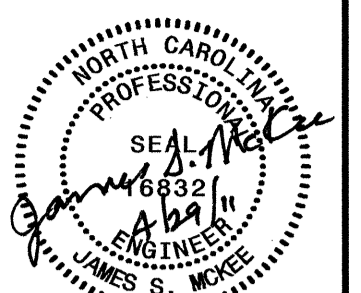
-L-

PI Sta 75+2.46
 $\Delta = 20^{\circ} 07' 42.6" (LT)$
 $D = 1' 35' 29.6"$
 $L = 126.71'$
 $T = 638.94'$
 $R = 3600.00'$

-L- 80+75.00
MATCHLINE SEE SHEET UC-6

-L- 94+00.00
MATCHLINE SEE SHEET UC-8

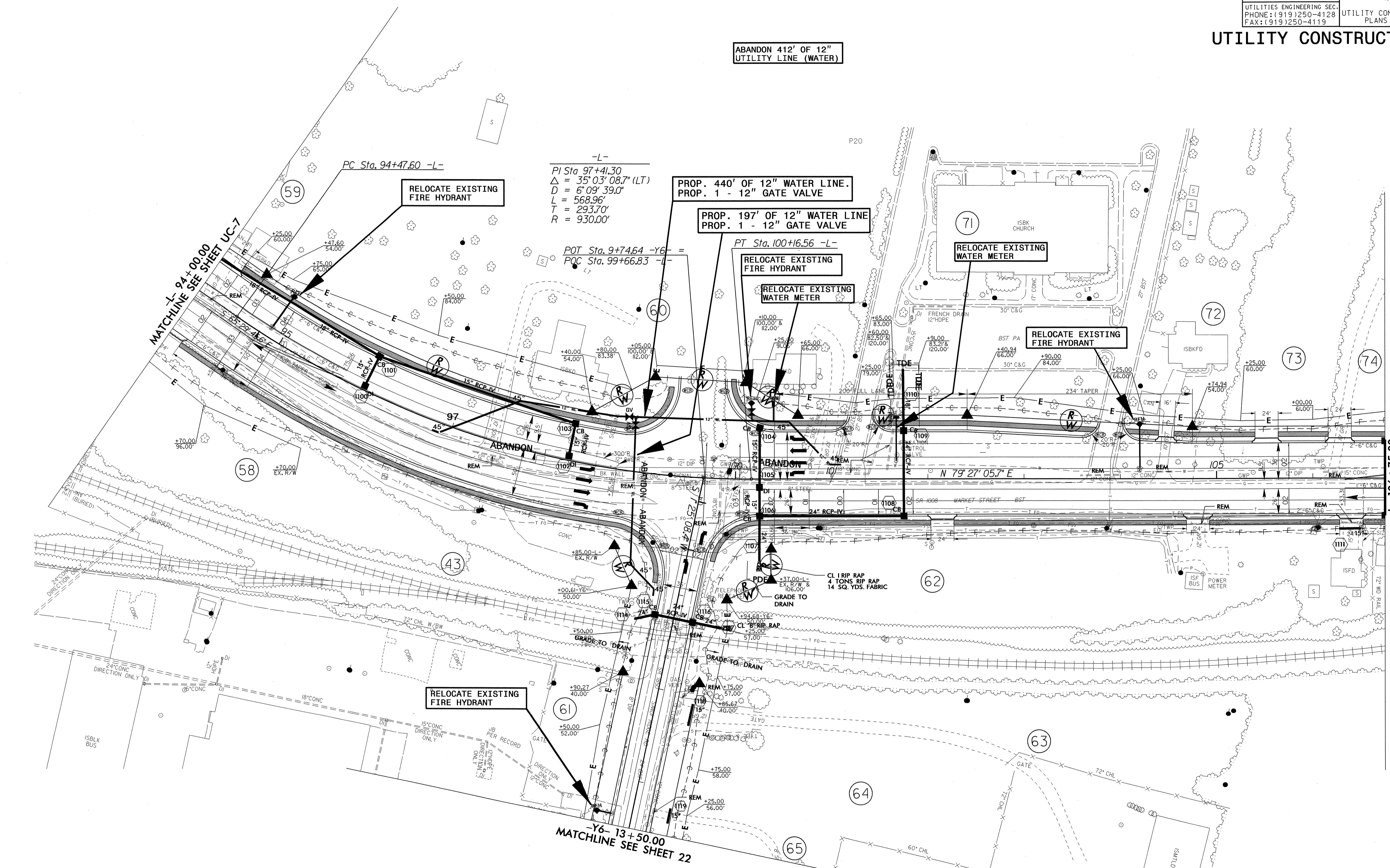
PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-8
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	



UTILITY CONSTRUCTION

5/14/99

02-MAY-2010 08:50
C:\Users\jsh1\OneDrive\Projects\UC-8\UC-8-psht1.dgn
USER NAME: JSH1

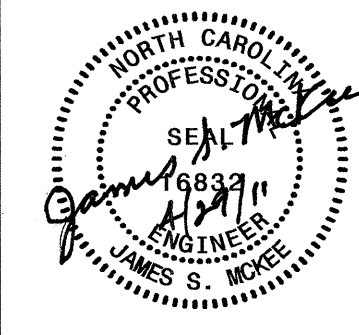


-L- 94+00.00
MATCHLINE SEE SHEET UC-7

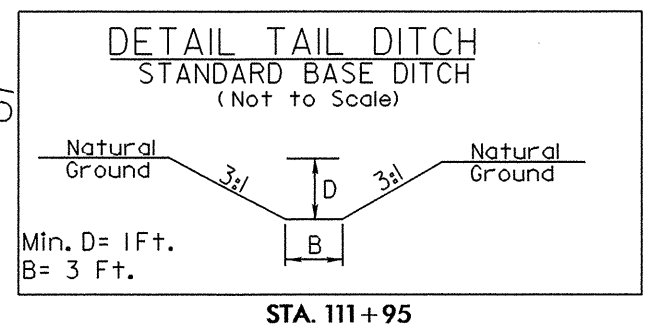
-L- 106+75.00
MATCHLINE SEE SHEET UC-9

5/14/99

29-APR-2001 10:10
F:\Projects\2611\UC\UC-DGN\2611-rdy-UC9_psh12.dgn
USER:JSM

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-9
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

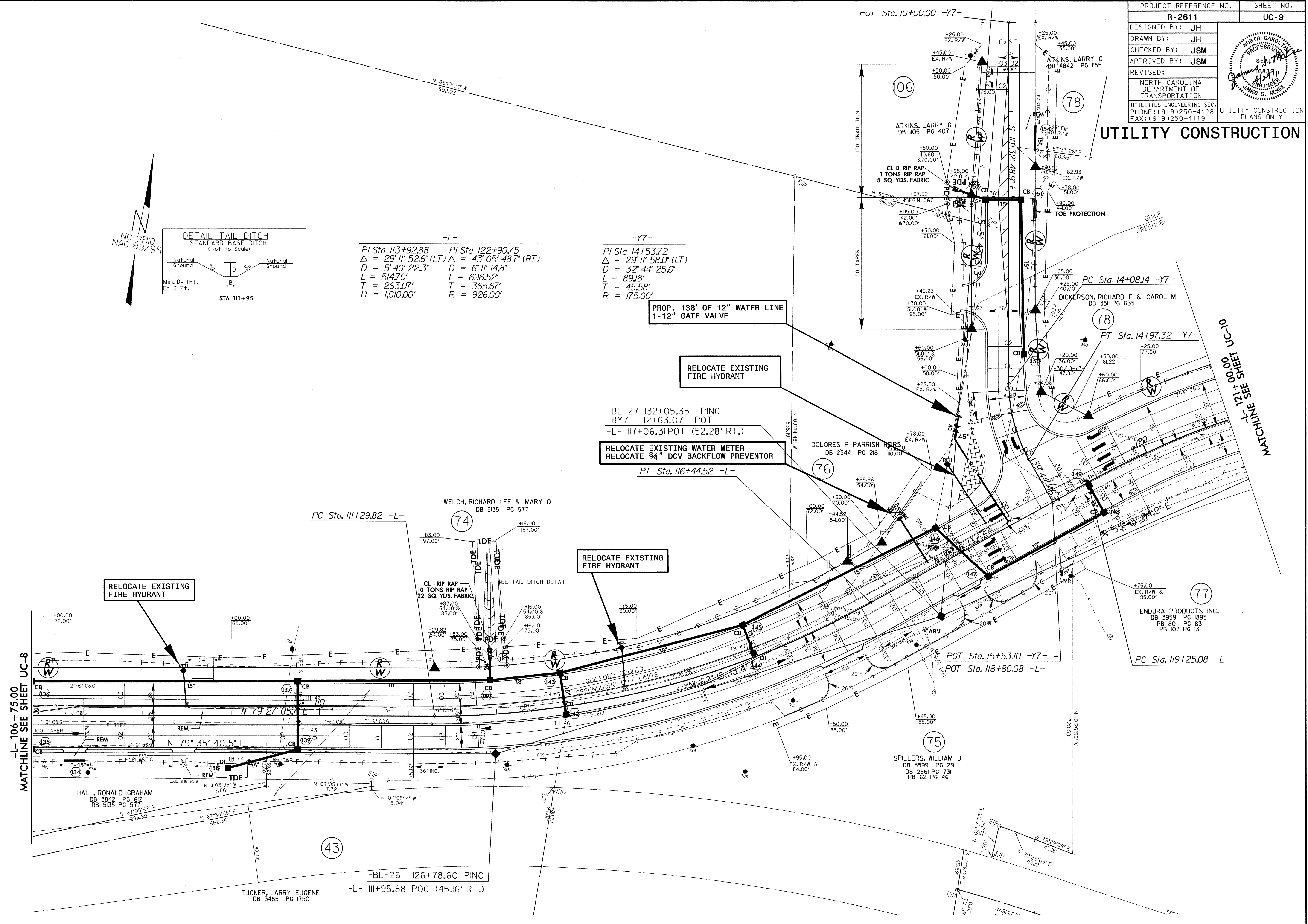


-L-

PI Sta 113+92.88	PI Sta 122+90.75
$\Delta = 29^{\circ} 11' 52.6''$ (LT)	$\Delta = 43^{\circ} 05' 48.7''$ (RT)
D = 5' 40" 22.3"	D = 6' 11" 14.8"
L = 514.70'	L = 696.52'
T = 263.07'	T = 365.67'
R = 1,010.00'	R = 926.00'

-Y7-

PI Sta 14+53.72
$\Delta = 29^{\circ} 11' 58.0''$ (LT)
D = 32' 44" 25.6"
L = 891.8'
T = 45.58'
R = 175.00'



-L- 106+75.00
MATCHLINE SEE SHEET UC-8

MATCHLINE SEE SHEET UC-10
10+00

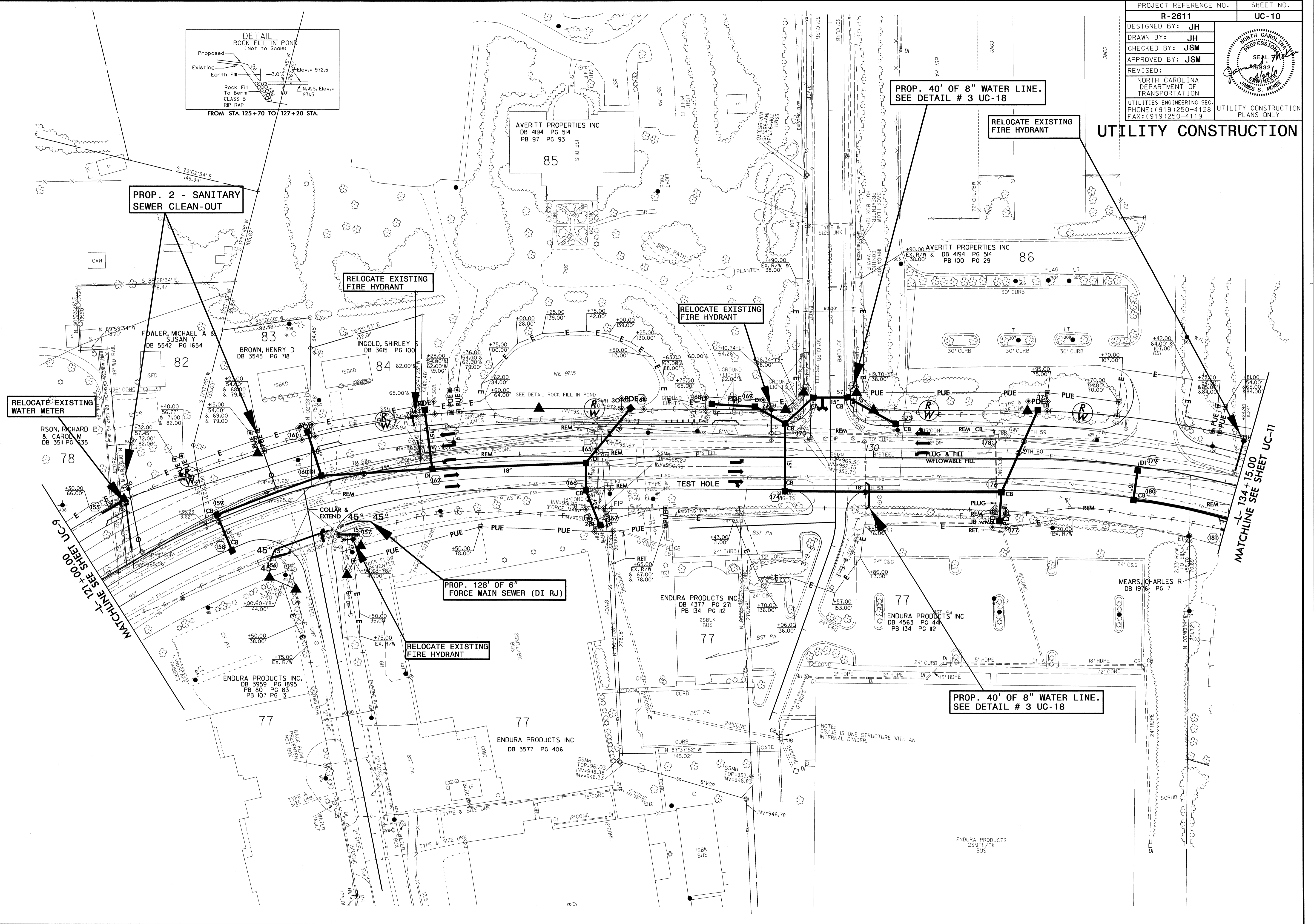
-L- 106+75.00

10+00

5/14/99

29-APR-2011 10:00 AM C:\CGM\2611.rdy_UC10.psh13.cdn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-10
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	



AVERITT PROPERTIES INC
DB 4194 PG 514
PB 97 PG 93

RELOCATE EXISTING
FIRE HYDRANT

UTILITY CONSTRUCTION

PROP. 40' OF 8" WATER LINE.
SEE DETAIL # 3 UC-18

PROP. 2" - SANITARY
SEWER CLEAN-OUT

RELOCATE EXISTING
FIRE HYDRANT

RELOCATE EXISTING
FIRE HYDRANT

RELOCATE EXISTING
WATER METER

PROP. 128' OF 6"
FORCE MAIN SEWER (DI RJ)

RELOCATE EXISTING
FIRE HYDRANT

PROP. 40' OF 8" WATER LINE.
SEE DETAIL # 3 UC-18

NOTE:
CB/JB IS ONE STRUCTURE WITH AN
INTERNAL DIVIDER.

MATCHLINE SEE SHEET UC-9

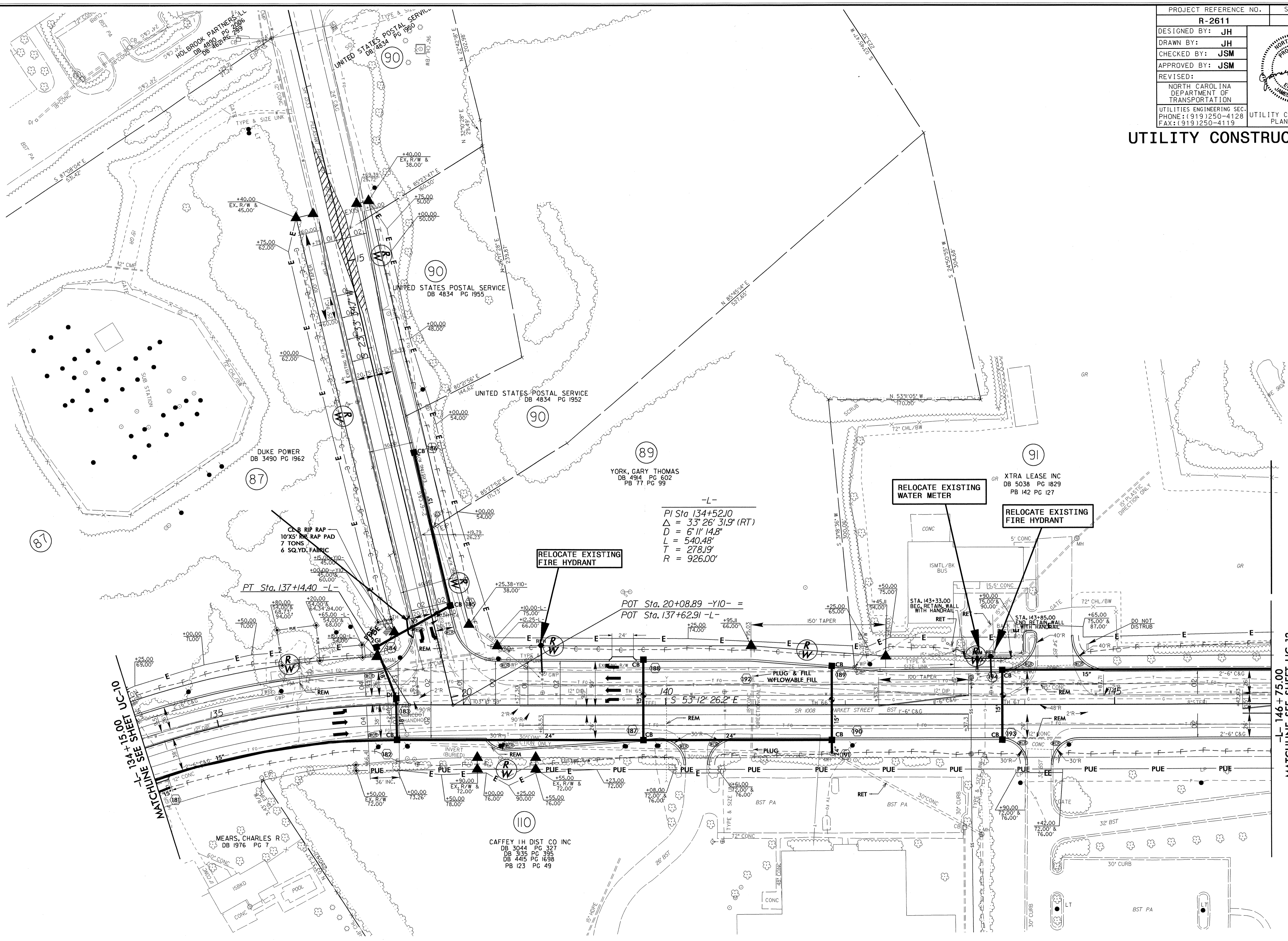
MATCHLINE SEE SHEET UC-11

5/14/99

J:\11\13\29-APR-2011\11\UC.DGN\2611-rdy_UC11.psh14.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-11
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



134+150 UC-10
MATCHLINE - SEE SHEET

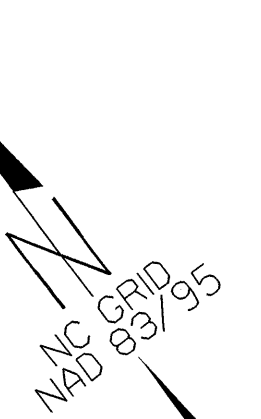
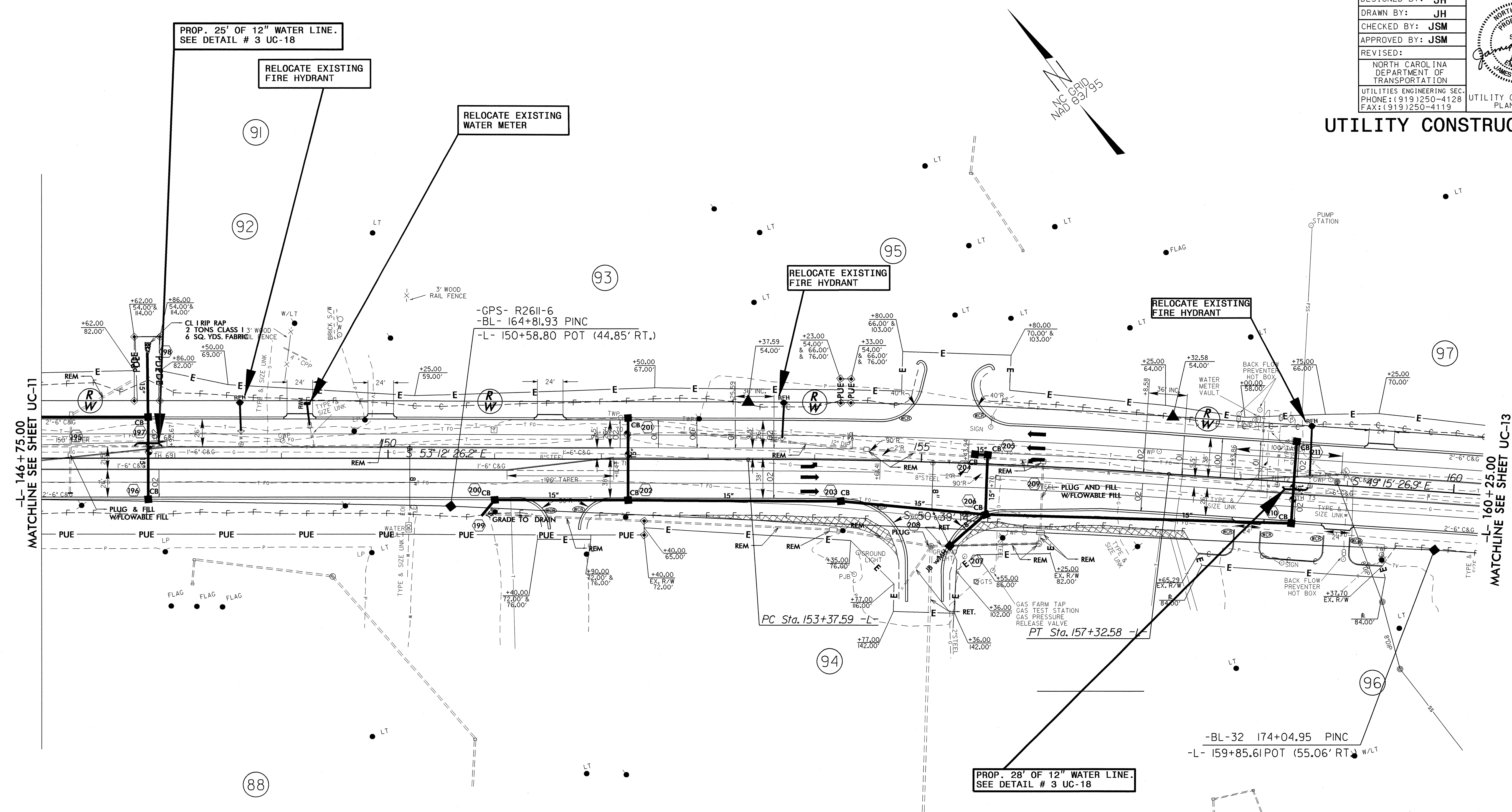
146+75.00
MATCHLINE SEE SHEET UC-12

5/14/99

29-APR-2011 10:28 UC-DGNV-2611-rdy-UC-12-psht5.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-12
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



MATCHLINE SEE SHEET UC-13

MATCHLINE SEE SHEET UC-11

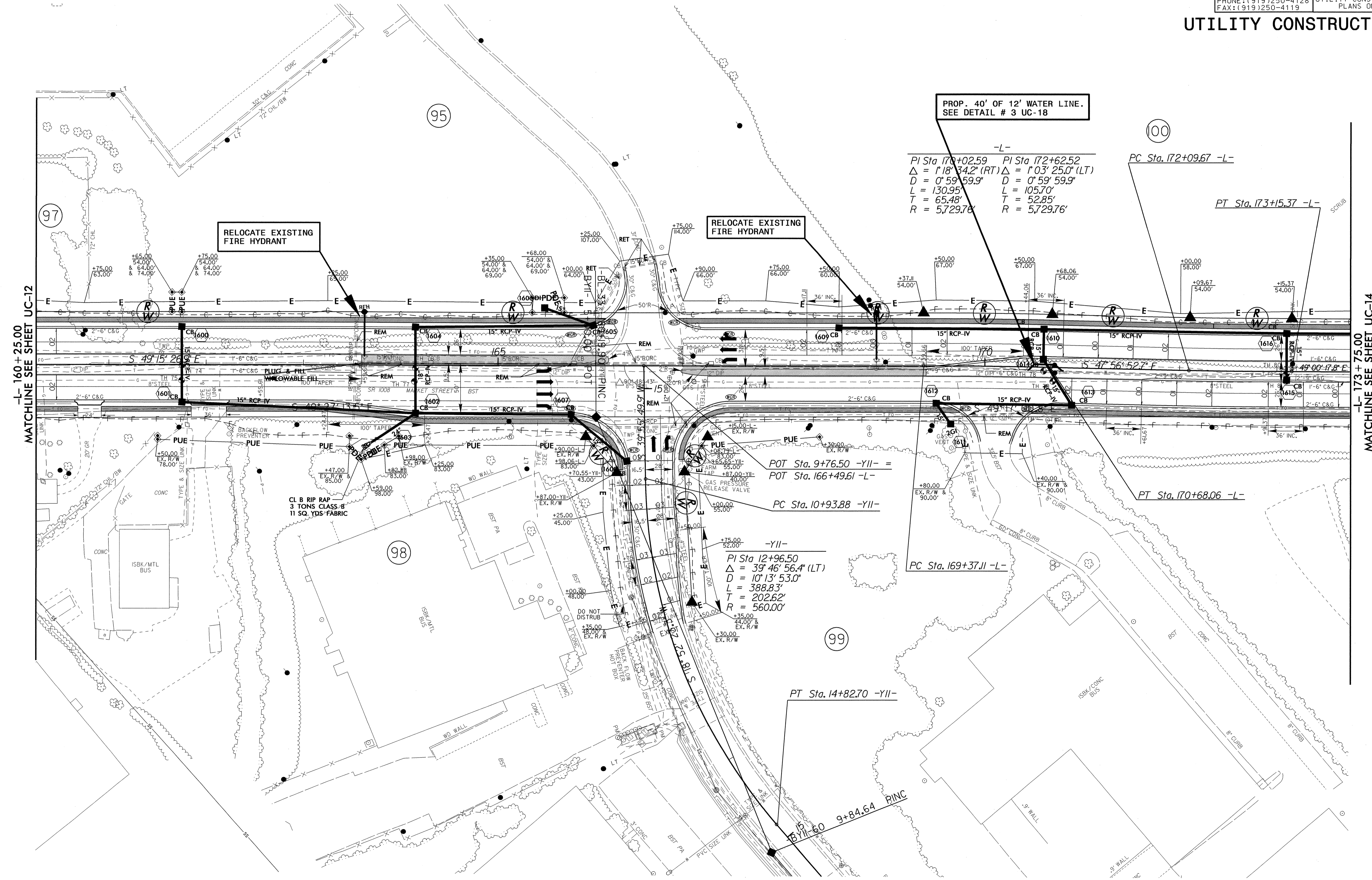
5/14/99

29 APR 2011 11:33 AM UC.DGN V-2611.rdy UC13.pst 16.dgn

BM #8
-BL- STA 178+98
532' LEFT
ELEV. 932.58'

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-13
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-L- 160 + 25.00
MATCHLINE SEE SHEET UC-12

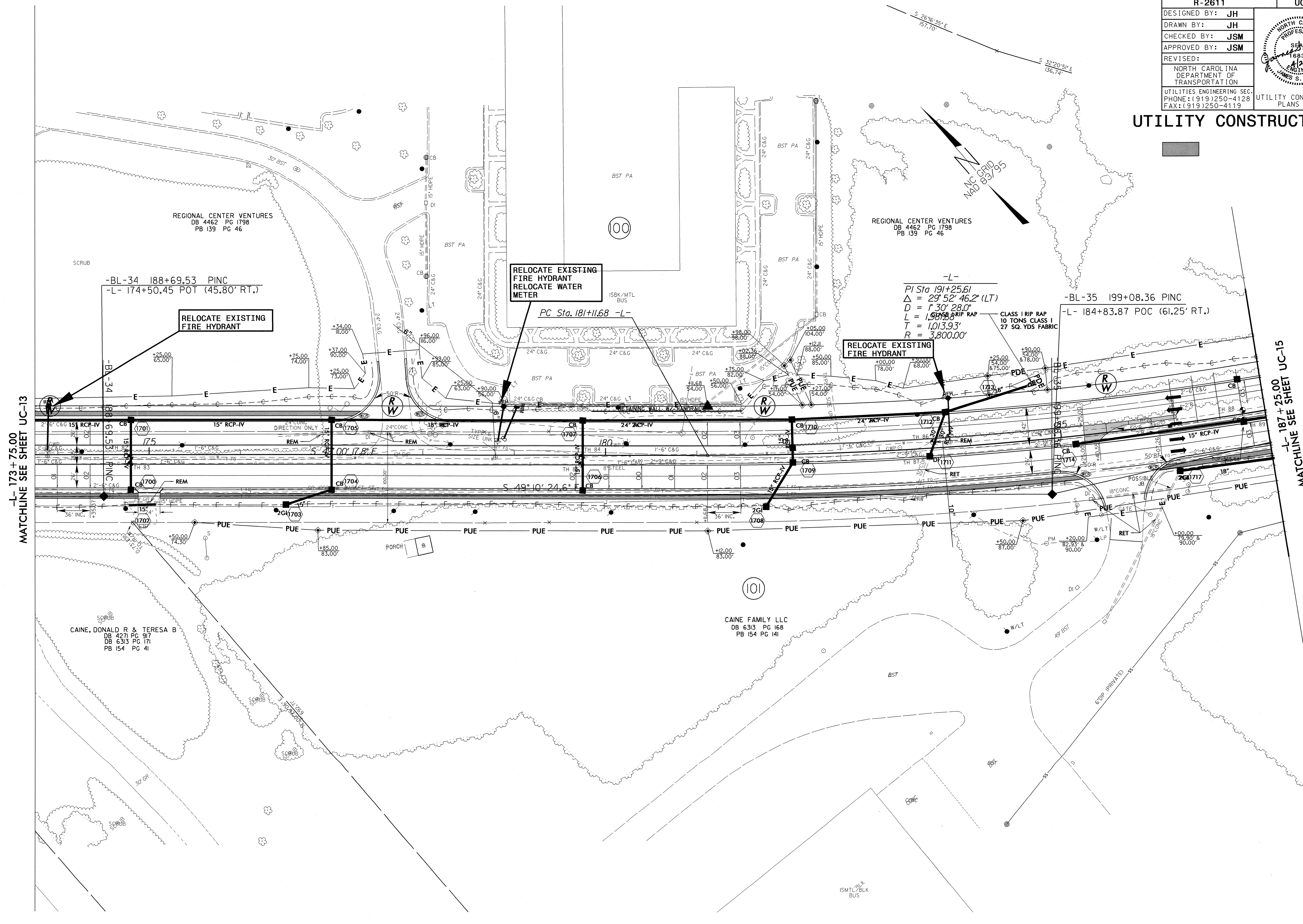
-L- 173 + 75.00
MATCHLINE SEE SHEET UC-14

5/14/99

02-MAY-2011 09:42 UC-DGN-V-2611-rdy-UC14-phs17.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-14
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	

UTILITY CONSTRUCTION



-L- 173+75.00
MATCHLINE SEE SHEET UC-13

-L- 187+25.00
MATCHLINE SEE SHEET UC-15

-BL-34 188+69.53 PINC
-L- 174+50.45 POT (45.80' RT.)

RELOCATE EXISTING
FIRE HYDRANT

RELOCATE EXISTING
FIRE HYDRANT
RELOCATE WATER
METER

PC Sta. 181+11.68 -L-

RELOCATE EXISTING
FIRE HYDRANT

-L-

PI Sta 191+25.61
 $\Delta = 29^{\circ} 52' 46.2''$ (LT)
 $D = 1' 30' 28.0''$
 $L = 1,907.88'$
 $T = 1,013.93'$
 $R = 3,800.00'$

-BL-35 199+08.36 PINC
-L- 184+83.87 POC (61.25' RT.)

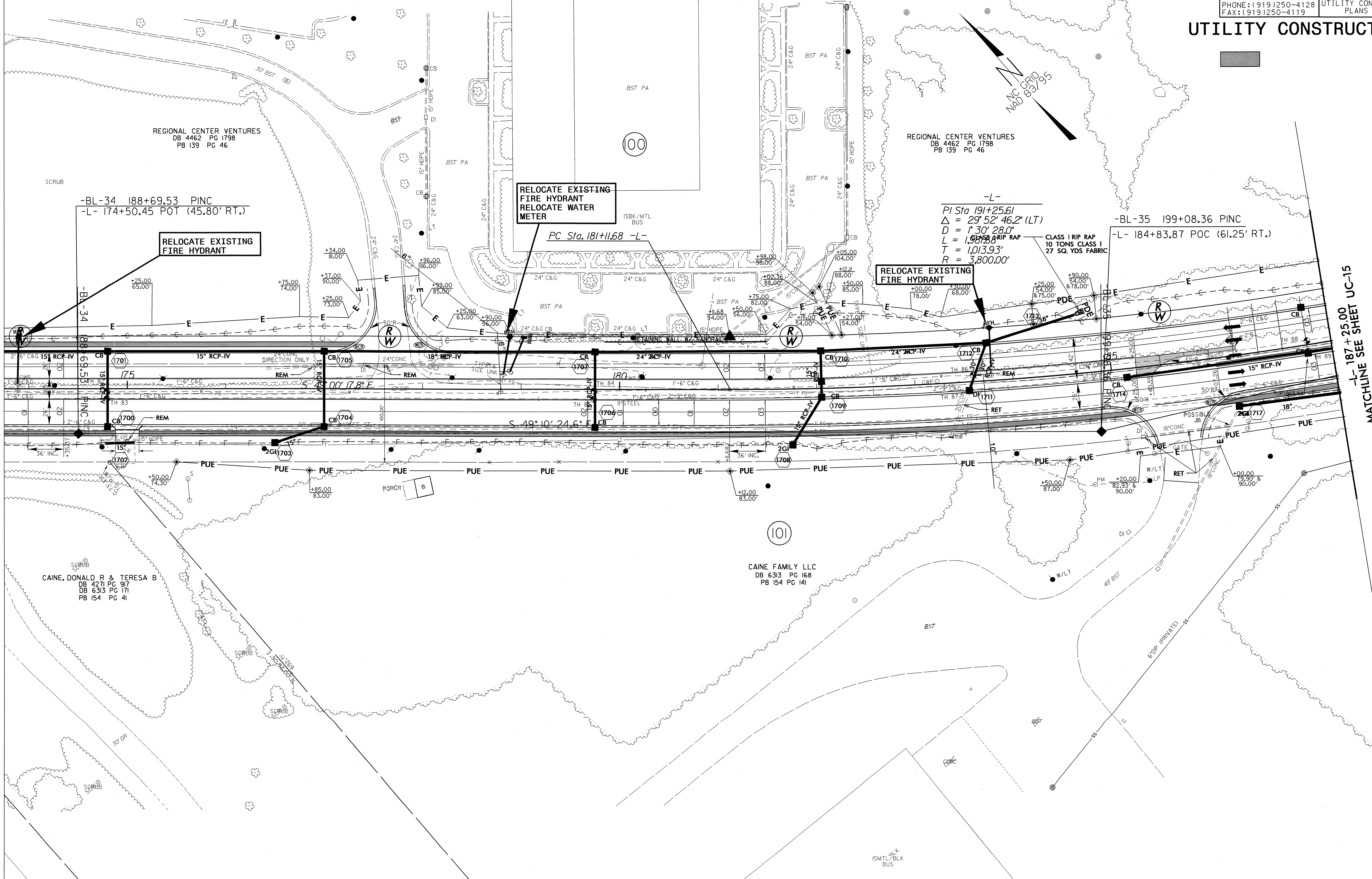
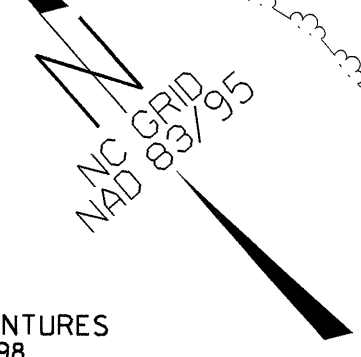
CLASS I RIP RAP
10 TONS CLASS I
27 SQ. YDS. FABRIC

CAINE, DONALD R & TERESA B
DB 4271 PG 917
DB 6313 PG 171
PB 154 PG 41

CAINE FAMILY LLC
DB 6313 PG 168
PB 154 PG 141

REGIONAL CENTER VENTURES
DB 4462 PG 1798
PB 139 PG 46

REGIONAL CENTER VENTURES
DB 4462 PG 1798
PB 139 PG 46

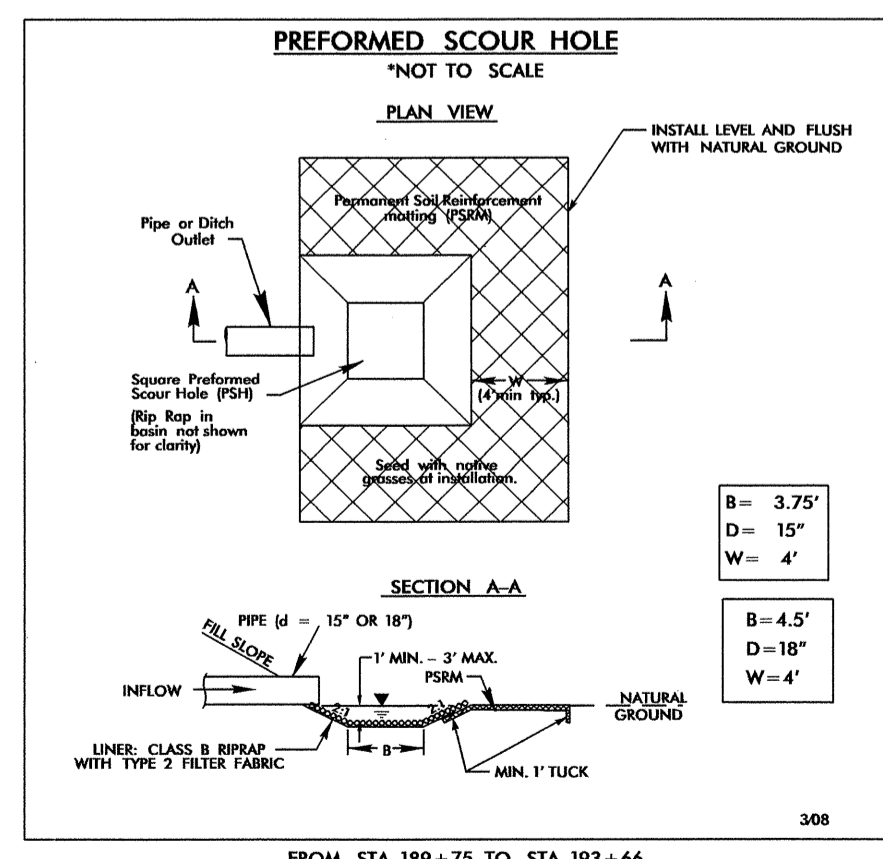
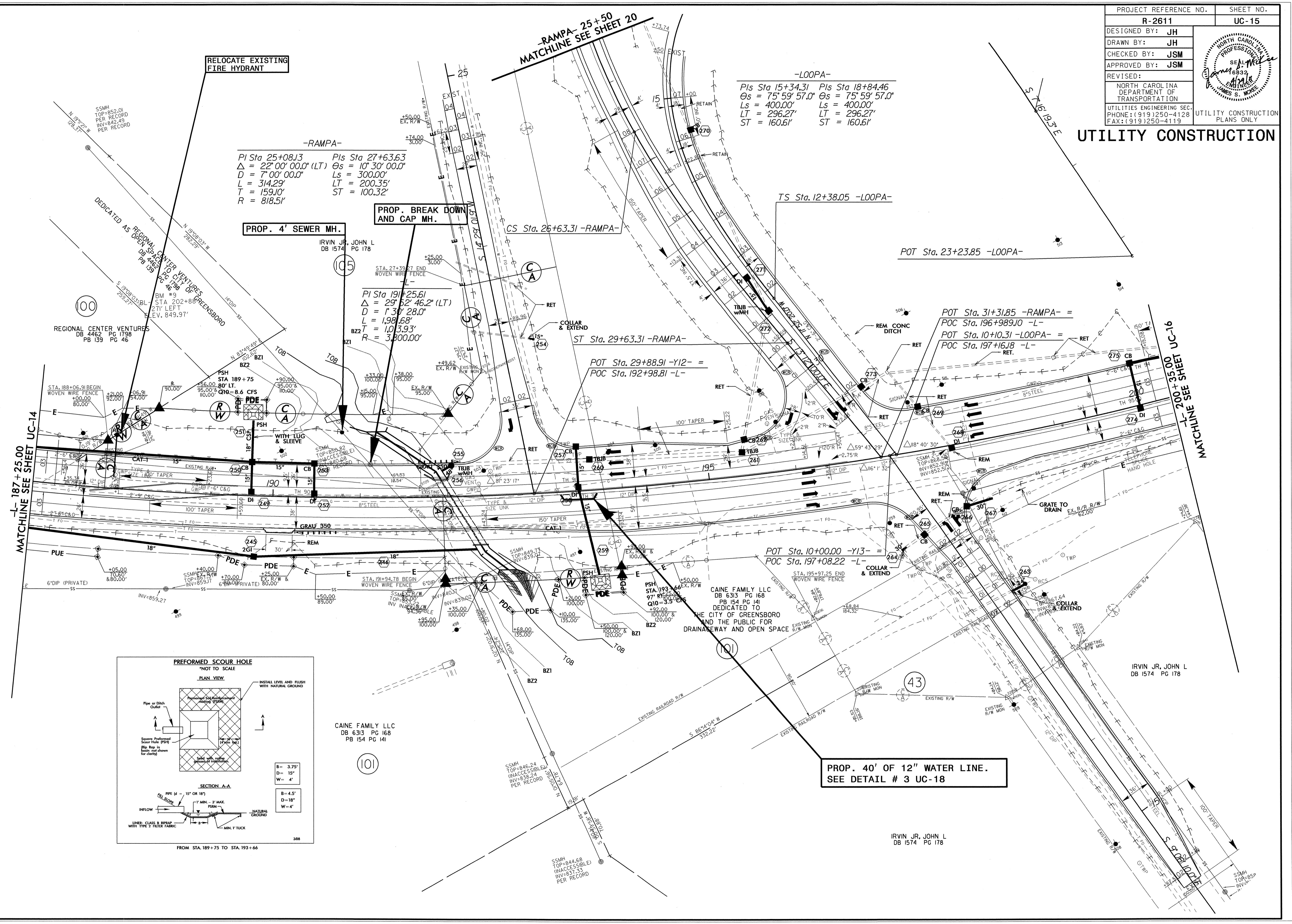


5/14/99

02-MAY-2010 09:19 UC-DGN-V-2611-rdy-UC-15_psh.18.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-15
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



CAINE FAMILY LLC
DB 633 PG 168
PB 154 PG 141

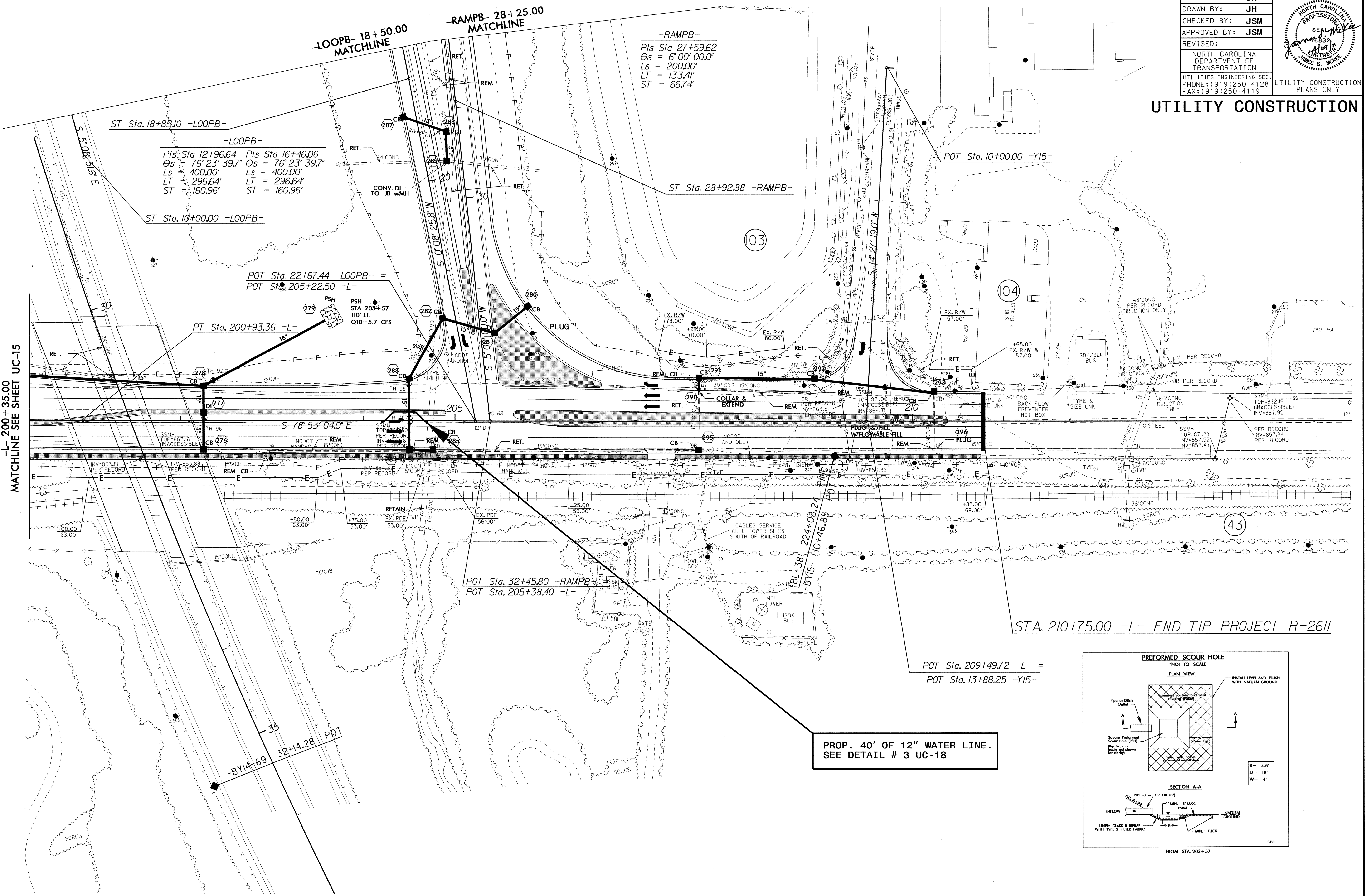
IRVIN JR, JOHN L
DB 1574 PG 178

5/14/99

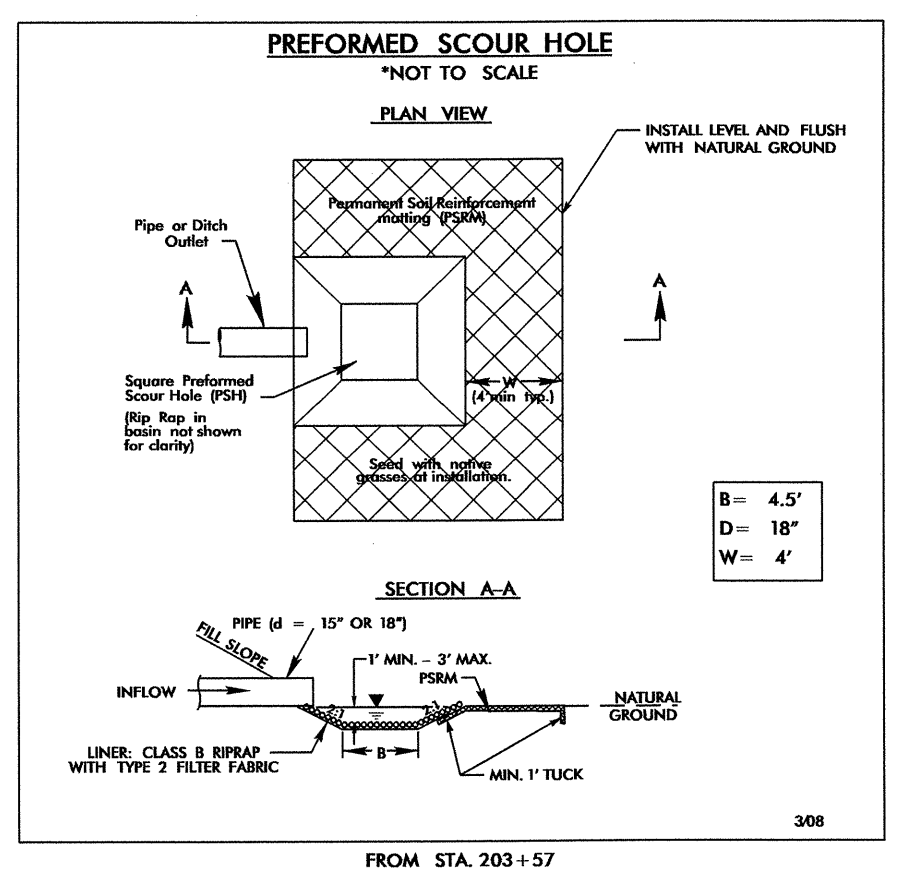
29-APR-2011 11:20 UC.DGN v=2611.rdy UC16.psh19.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-16
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

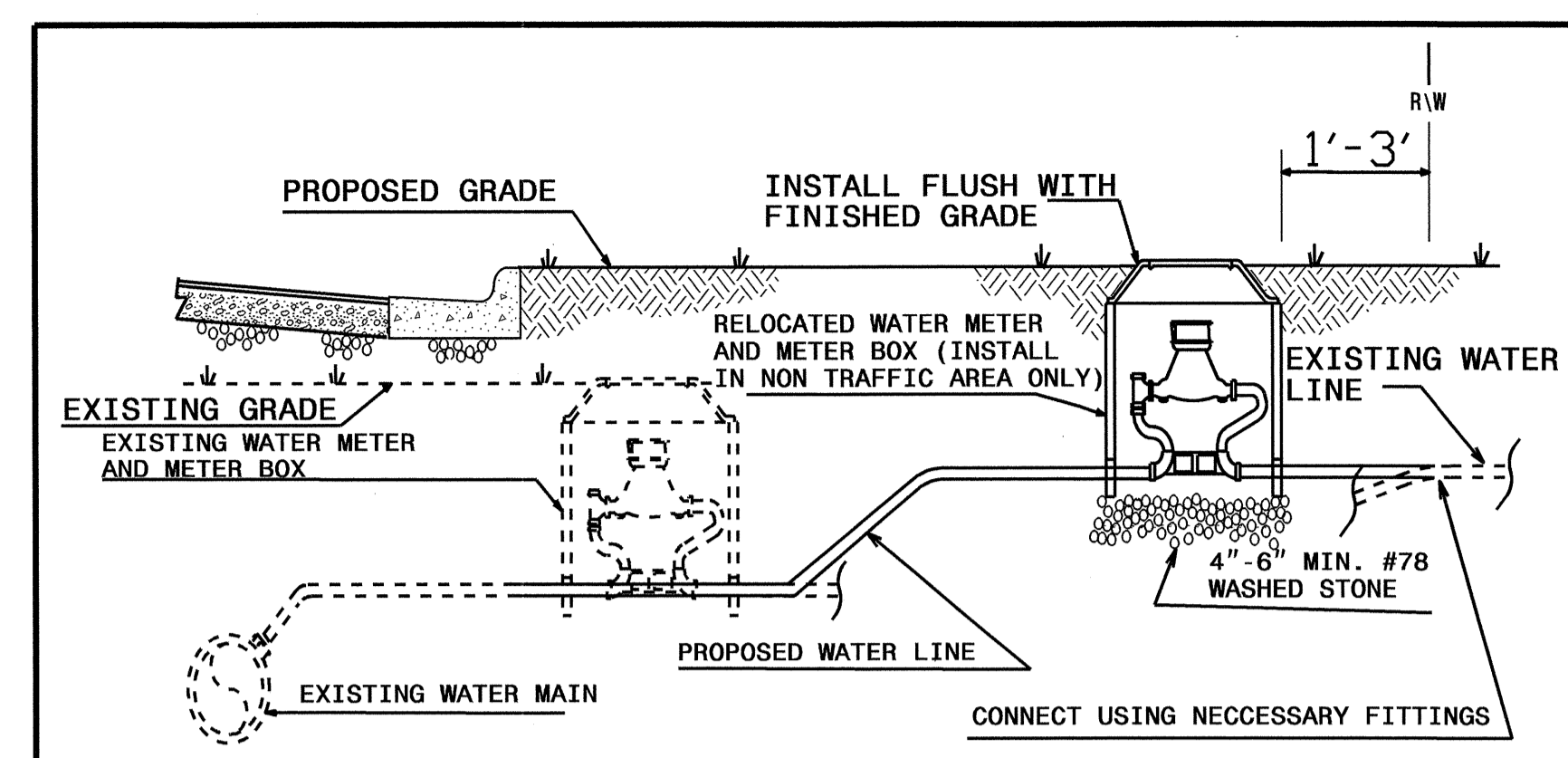


PROP. 40' OF 12" WATER LINE.
SEE DETAIL # 3 UC-18



FROM STA. 203+57

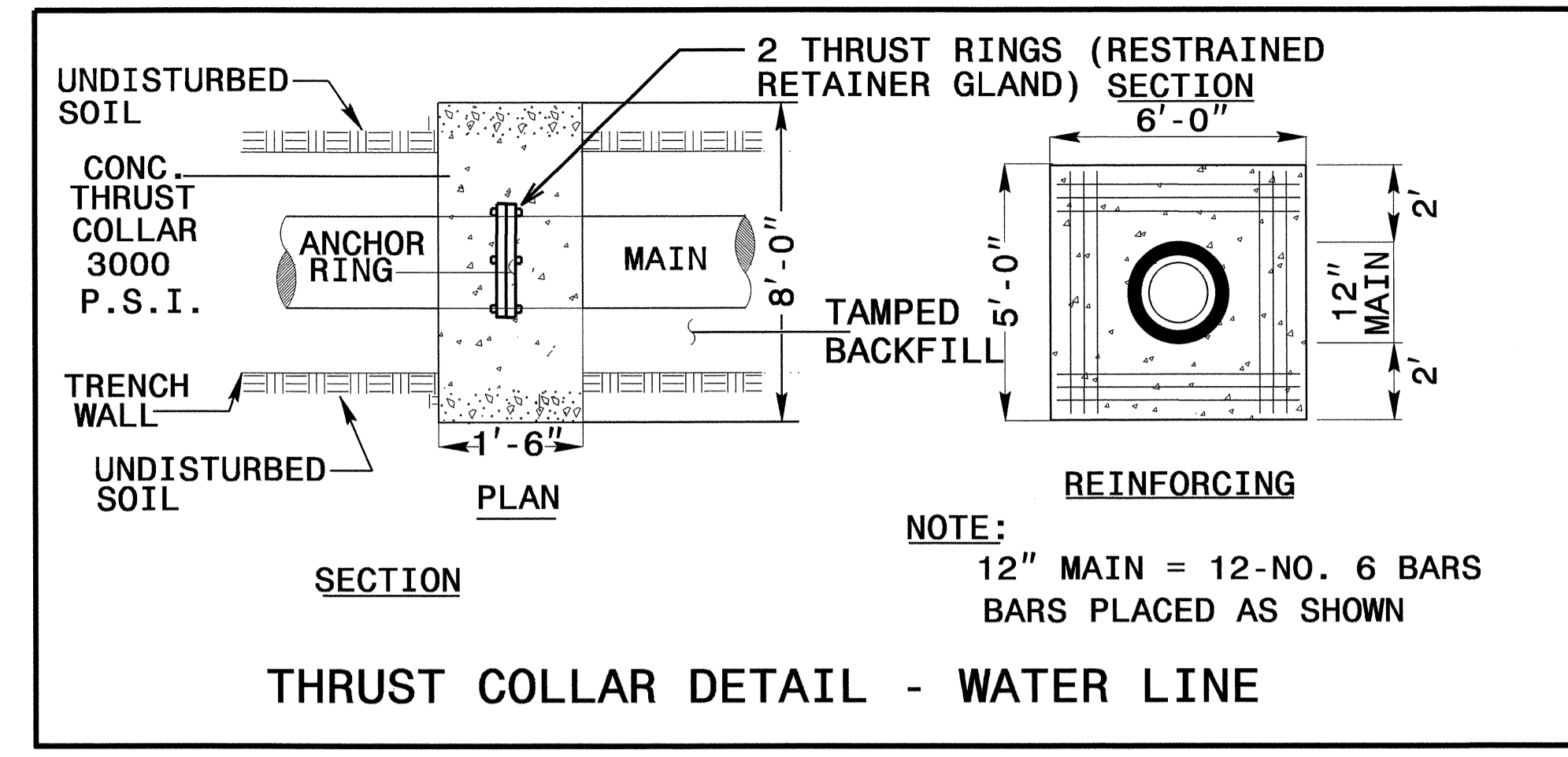
UTILITY CONSTRUCTION



NOTES:

1. RELOCATION SHALL INCLUDE THE REMOVAL AND INSTALLATION AT THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.
2. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

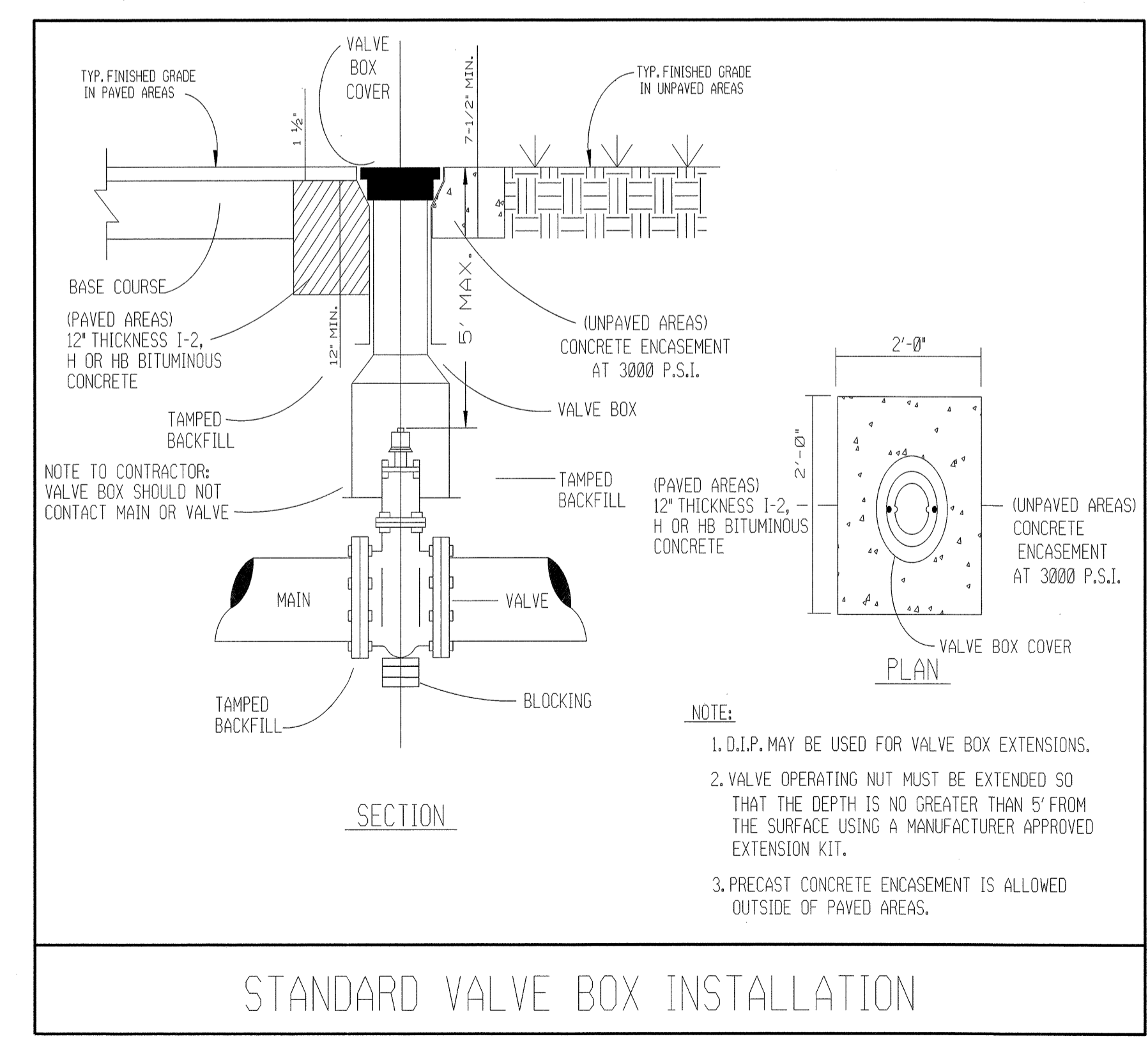
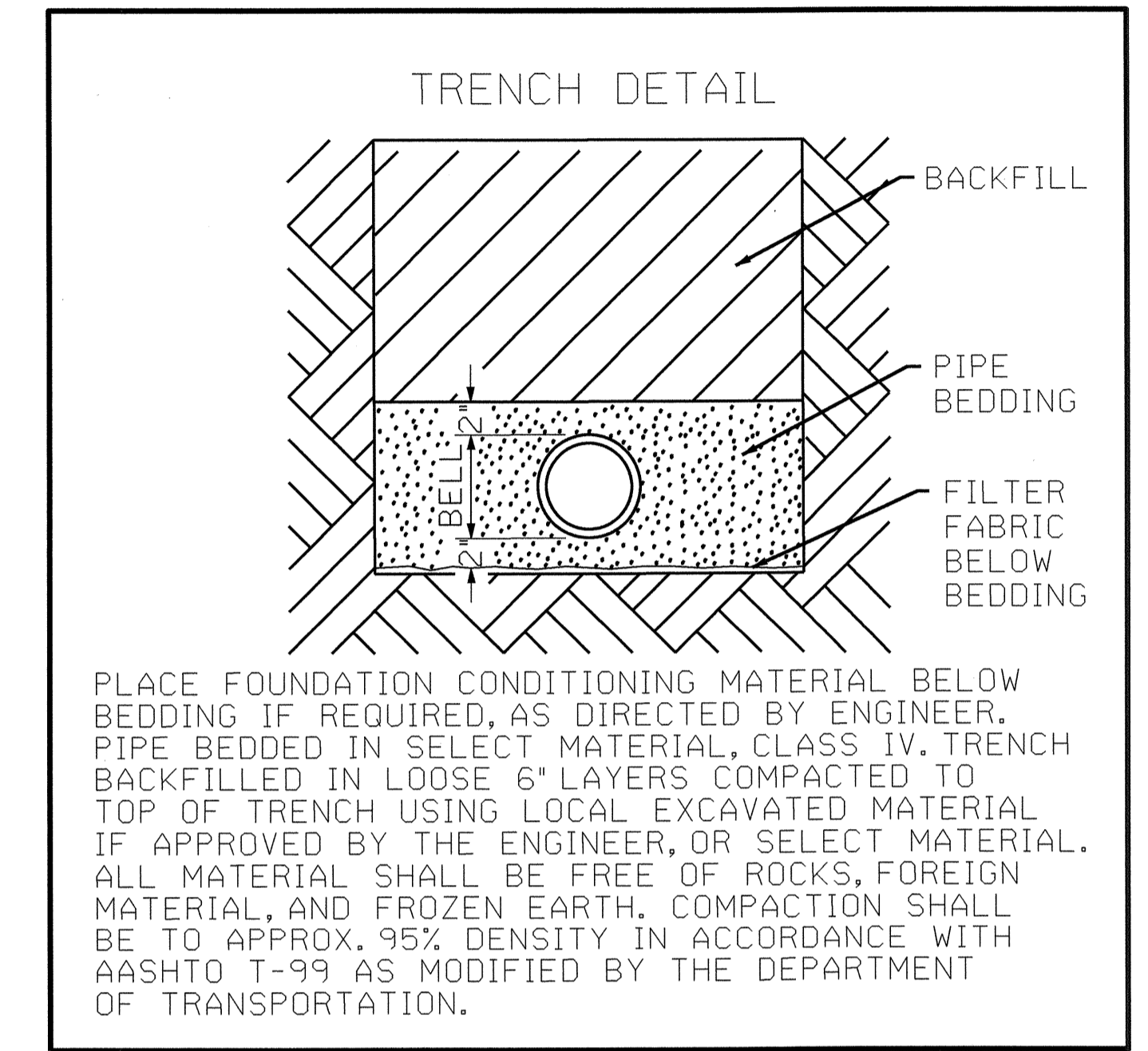
WATER METER RELOCATION DETAIL



NOTE:
 12" MAIN = 12-NO. 6 BARS
 BARS PLACED AS SHOWN

THRUST COLLAR DETAIL - WATER LINE

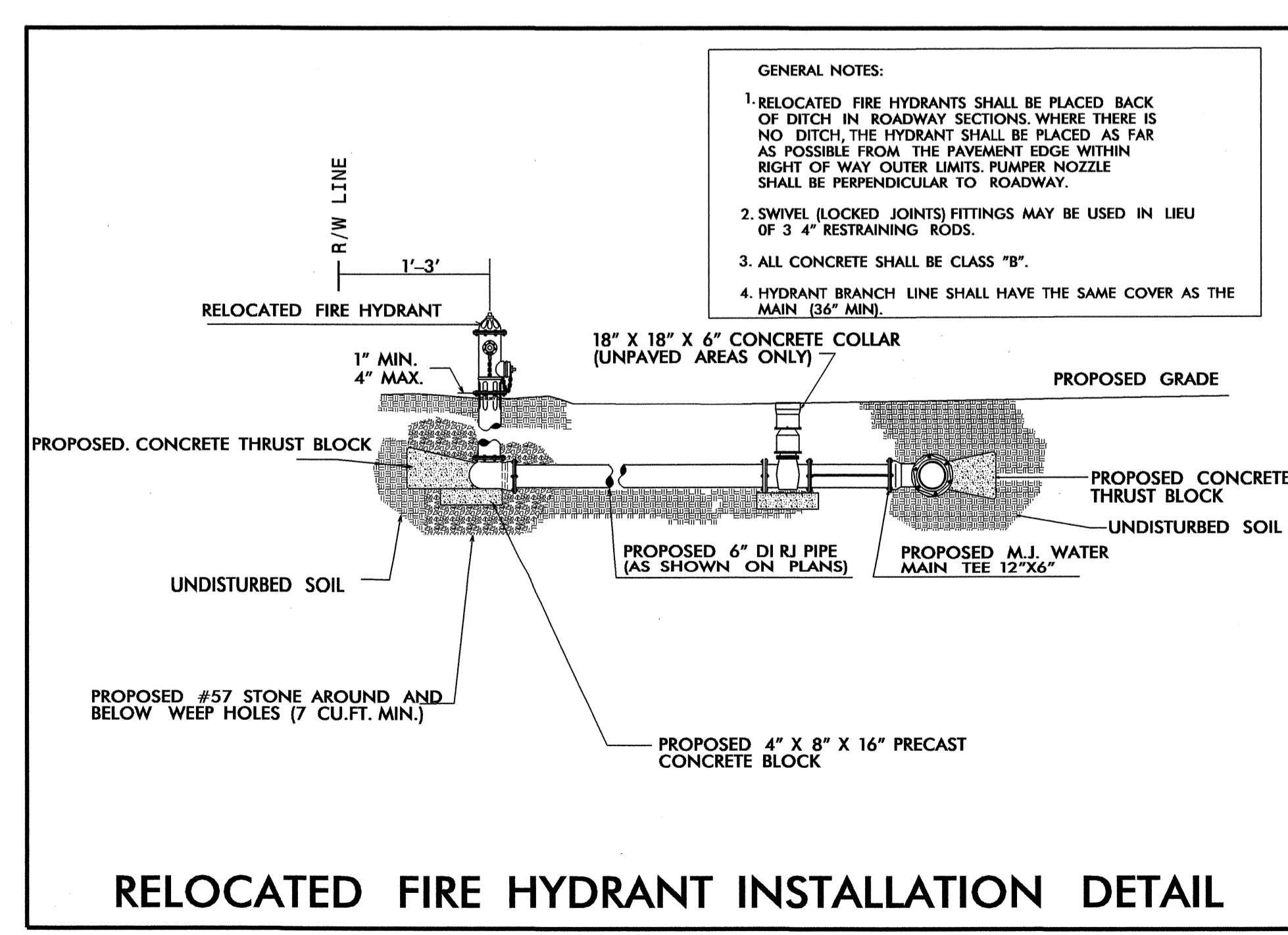
MAXIMUM TRENCH WIDTH AT TOP OF PIPE			
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		



NOTE:

1. D.I.P. MAY BE USED FOR VALVE BOX EXTENSIONS.
2. VALVE OPERATING NUT MUST BE EXTENDED SO THAT THE DEPTH IS NO GREATER THAN 5" FROM THE SURFACE USING A MANUFACTURER APPROVED EXTENSION KIT.
3. PRECAST CONCRETE ENCASUREMENT IS ALLOWED OUTSIDE OF PAVED AREAS.

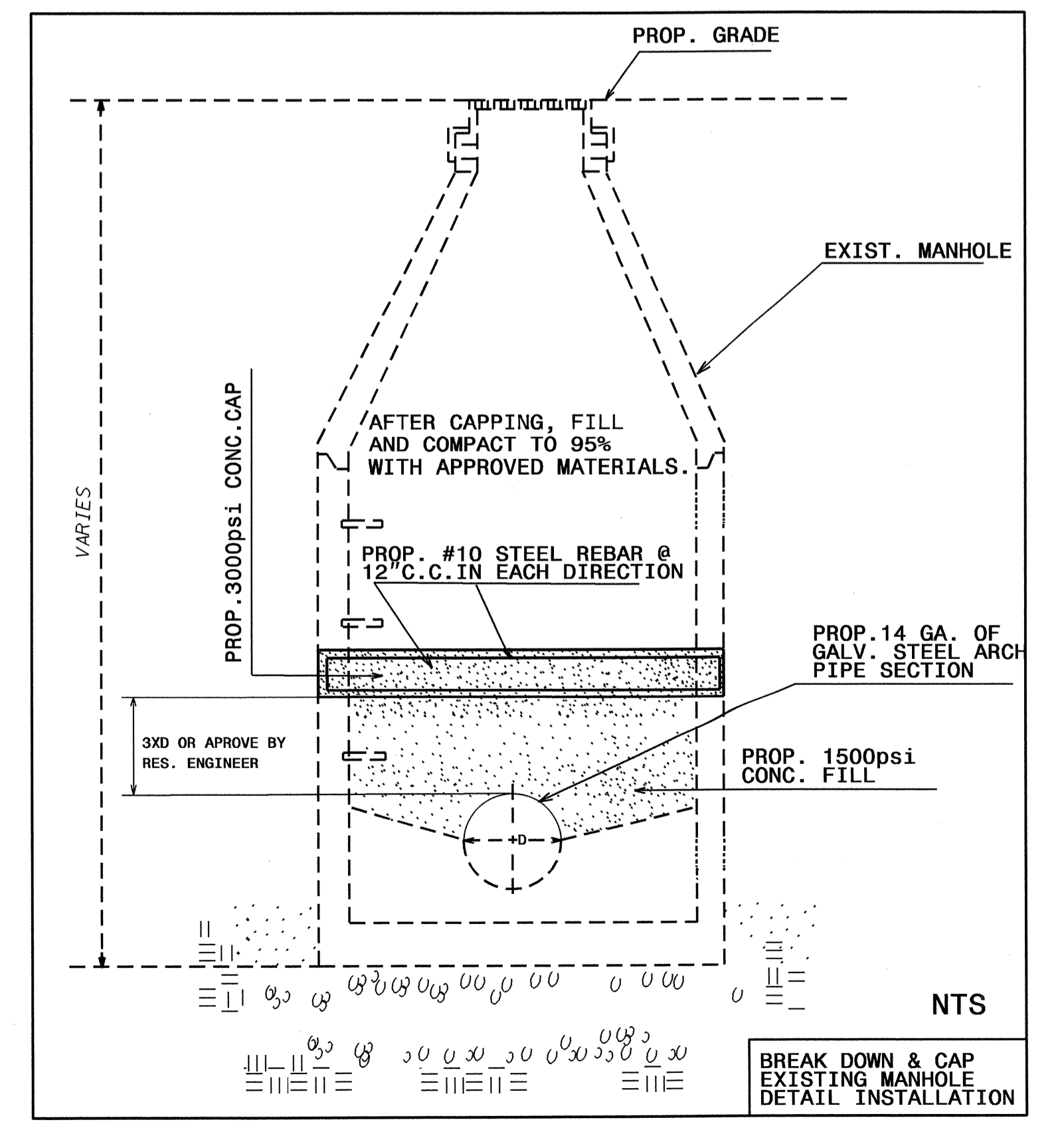
STANDARD VALVE BOX INSTALLATION



GENERAL NOTES:

1. RELOCATED FIRE HYDRANTS SHALL BE PLACED BACK OF DITCH IN ROADWAY SECTIONS WHERE THERE IS NO DITCH, THE HYDRANT SHALL BE PLACED AS FAR AS POSSIBLE FROM THE PAVEMENT EDGE WITHIN RIGHT OF WAY OUTER LIMITS. PUMPER NOZZLE SHALL BE PERPENDICULAR TO ROADWAY.
2. SWIVEL (LOCKED JOINTS) FITTINGS MAY BE USED IN LIEU OF 3/4" RESTRAINING RODS.
3. ALL CONCRETE SHALL BE CLASS "B".
4. HYDRANT BRANCH LINE SHALL HAVE THE SAME COVER AS THE MAIN (36" MIN.).

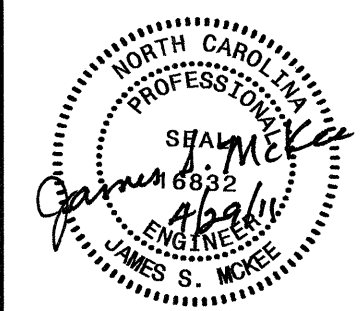
RELOCATED FIRE HYDRANT INSTALLATION DETAIL



BREAK DOWN & CAP EXISTING MANHOLE DETAIL INSTALLATION

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2611	UC-18
DESIGNED BY: JH	
DRAWN BY: JH	
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	



THRUST BLOCKS ARE DESIGNED FOR 200 P.S.I.

HORIZONTAL RESTRAINT (ALL AREAS GIVEN ARE IN SQUARE FEET)								VERTICAL RESTRAINT (ALL VOLUMES GIVEN ARE IN CUBIC YARDS)**								
PIPE SIZE	DEGREE OF BEND	LBS. STATIC THRUST *	ALLOWABLE SOIL BEARING (PSF)								PIPE SIZE	RESTRAINING RODS		DEGREE OF BEND		
			1000	2000	3000	4000	5000	6000	7000	8000		NO. REQ'D	DIA.	11/4°	22 1/2°	45°
4"	11/4°	616	1	1	1	1	1	1	1	1	1	2	1/2"	0.25	0.50	0.75
	22 1/2°	1,226	1	1	1	1	1	1	1	1	1	2	1/2"	0.50	1.0	1.75
	45°	2,405	2	2	2	2	2	2	2	2	2	2	5/8"	0.75	1.50	3.0
	90°	4,444	4	4	4	4	4	4	4	4	4	2	3/4"	1.25	2.25	4.50
6"	TEE/PLUG	3,143	3	3	3	3	3	3	3	3	3	2	7/8"	1.75	3.25	6.50
	11/4°	1,385	2	2	2	2	2	2	2	2	2	4	5/8"	2.25	4.50	8.75
	22 1/2°	2,758	3	3	3	3	3	3	3	3	3	4	3/4"	3.0	6.0	11.50
	45°	5,409	5	5	5	5	5	5	5	5	5	4	3/4"	3.0	6.0	11.50
8"	90°	9,339	10	10	10	10	10	10	10	10	10	4	3/4"	3.0	6.0	11.50
	TEE/PLUG	7,068	7	7	7	7	7	7	7	7	7	4	3/4"	3.0	6.0	11.50
	11/4°	2,424	3	3	3	3	3	3	3	3	3	4	3/4"	3.0	6.0	11.50
	22 1/2°	4,904	5	5	5	5	5	5	5	5	5	4	3/4"	3.0	6.0	11.50
10"	90°	17,773	18	18	18	18	18	18	18	18	18	4	3/4"	3.0	6.0	11.50
	TEE/PLUG	12,568	13	13	13	13	13	13	13	13	13	4	3/4"	3.0	6.0	11.50
	11/4°	3,846	4	4	4	4	4	4	4	4	4	4	3/4"	3.0	6.0	11.50
	22 1/2°	7,691	8	8	8	8	8	8	8	8	8	4	3/4"	3.0	6.0	11.50
12"	45°	15,028	15	15	15	15	15	15	15	15	15	4	3/4"	3.0	6.0	11.50
	90°	27,768	28	28	28	28	28	28	28	28	28	4	3/4"	3.0	6.0	11.50
	TEE/PLUG	19,635	20	20	20	20	20	20	20	20	20	4	3/4"	3.0	6.0	11.50
	11/4°	5,643	6	6	6	6	6	6	6	6	6	4	3/4"	3.0	6.0	11.50
14"	22 1/2°	11,032	11	11	11	11	11	11	11	11	11	4	3/4"	3.0	6.0	11.50
	45°	21,641	22	22	22	22	22	22	22	22	22	4	3/4"	3.0	6.0	11.50
	90°	39,387	40	40	40	40	40	40	40	40	40	4	3/4"	3.0	6.0	11.50
	TEE/PLUG	28,274	28	28	28	28	28	28	28	28	28	4	3/4"	3.0	6.0	11.50
16"	11/4°	7,544	8	8	8	8	8	8	8	8	8	4	3/4"	3.0	6.0	11.50
	22 1/2°	15,016	15	15	15	15	15	15	15	15	15	4	3/4"	3.0	6.0	11.50
	45°	29,455	29	29	29	29	29	29	29	29	29	4	3/4"	3.0	6.0	11.50
	90°	54,222	54	54	54	54	54	54	54	54	54	4	3/4"	3.0	6.0	11.50
16"	TEE/PLUG	38,485	38	38	38	38	38	38	38	38	38	4	3/4"	3.0	6.0	11.50
	11/4°	9,854	10	10	10	10	10	10	10	10	10	4	3/4"	3.0	6.0	11.50
	22 1/2°	19,612	20	20	20	20	20	20	20	20	20	4	3/4"	3.0	6.0	11.50
	45°	38,471	38	38	38	38	38	38	38	38	38	4	3/4"	3.0	6.0	11.50
16"	90°	71,085	71	71	71	71	71	71	71	71	71	4	3/4"	3.0	6.0	11.50
	TEE/PLUG	50,265	50	50	50	50	50	50	50	50	50	4	3/4"	3.0	6.0	11.50

**INCLUDES 1.50 SAFETY FACTOR

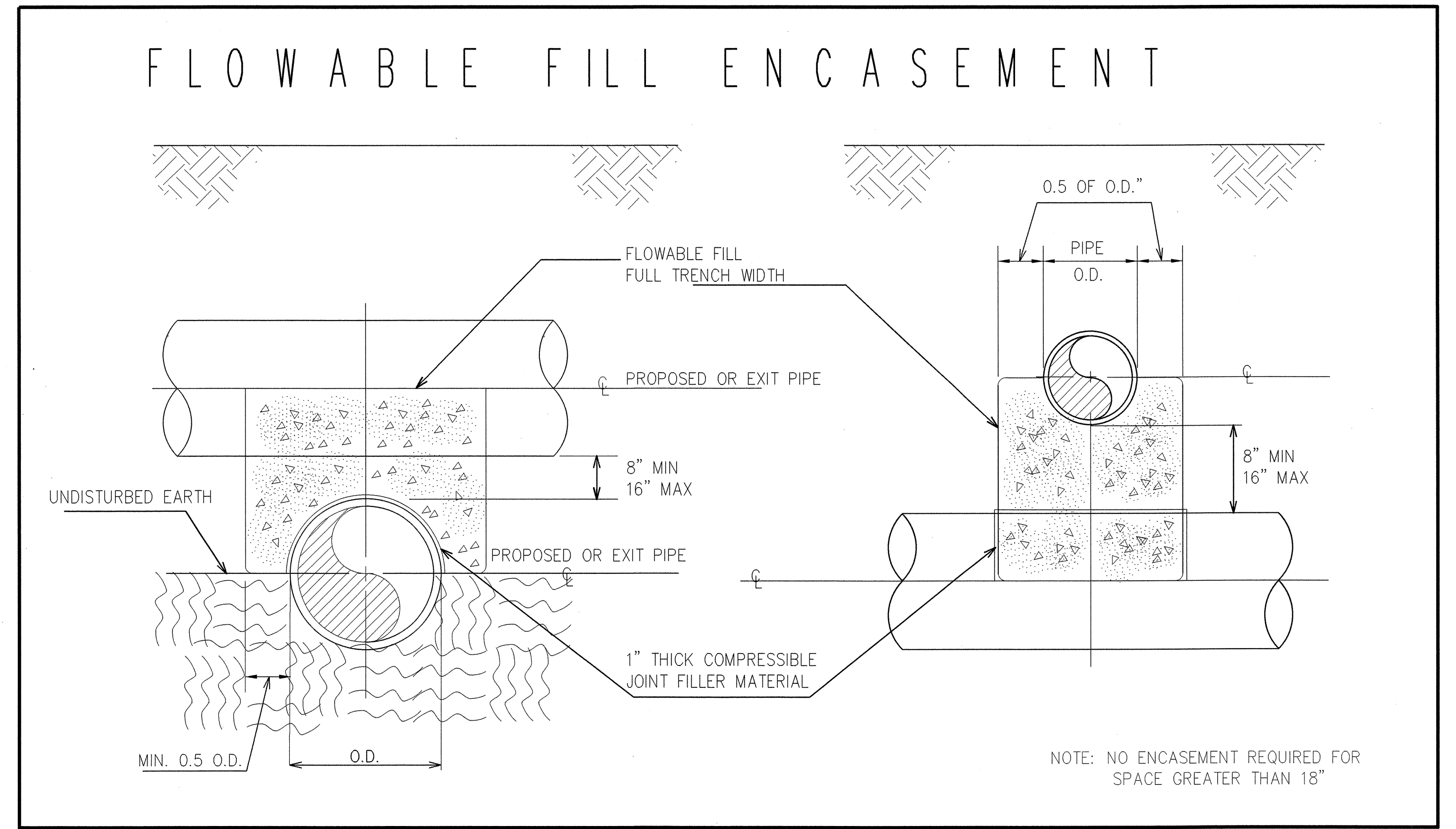
- INCLUDES 1.25 SAFETY FACTOR
- GENERAL NOTES:
 1. CONCRETE SHALL BE CLASS 'B'.
 2. CONCRETE SHALL NOT CONTACT BOLTS ENDS OF MECHANICAL JOINT FITTINGS.
 3. CONSULT WITH ENGINEER FOR CONCRETE REQUIREMENTS ON MAINS LARGER THAN 16 INCHES. (FOR VERTICAL & HORIZONTAL BENDS)
 4. ALLOWABLE SOIL BEARING SHALL BE DETERMINED BY THE ENGINEER.

REVISIONS	
NO.	DESCRIPTION

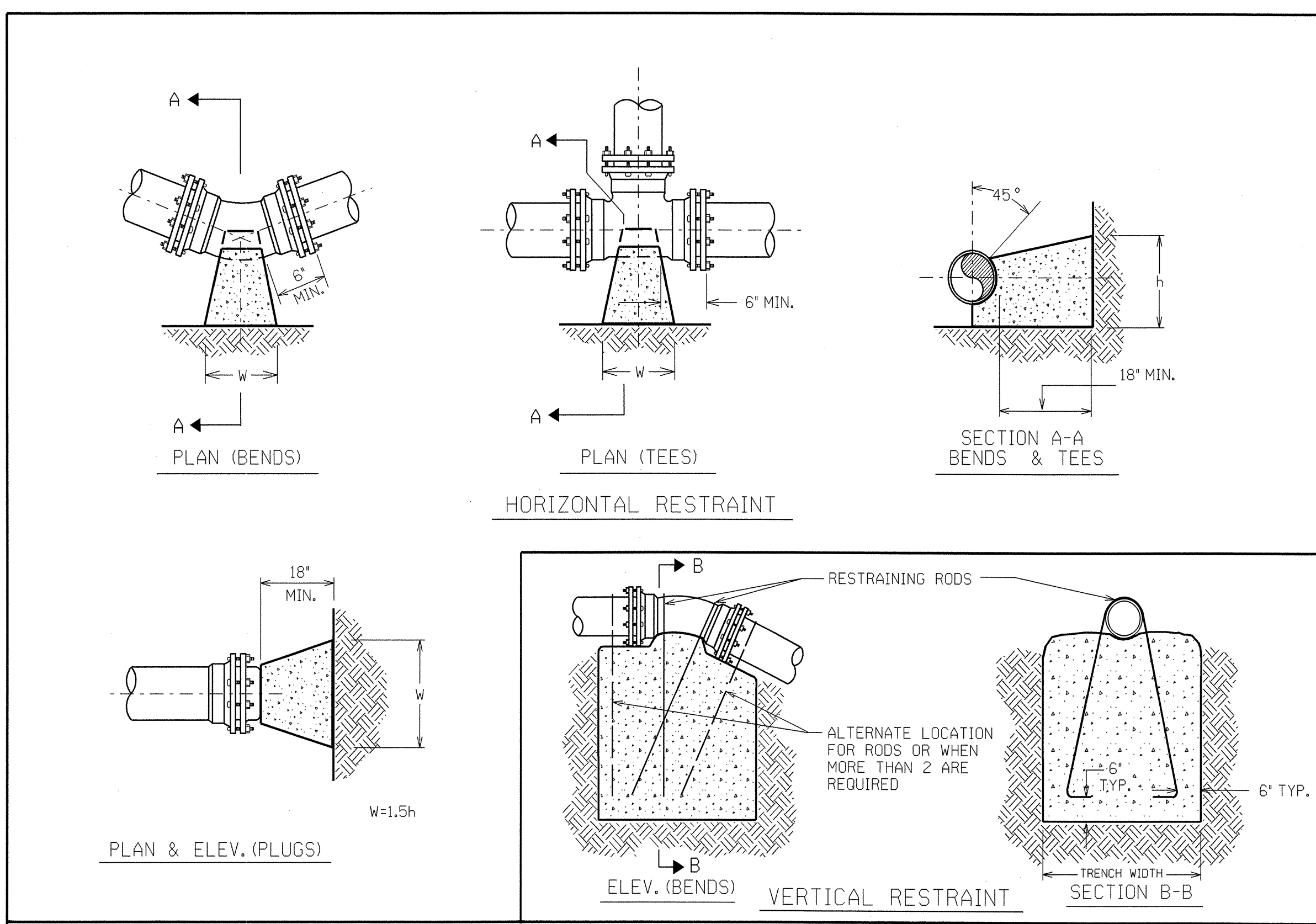
SHEET 2 OF 2

THRUST RESTRAINT FOR WATER MAINS

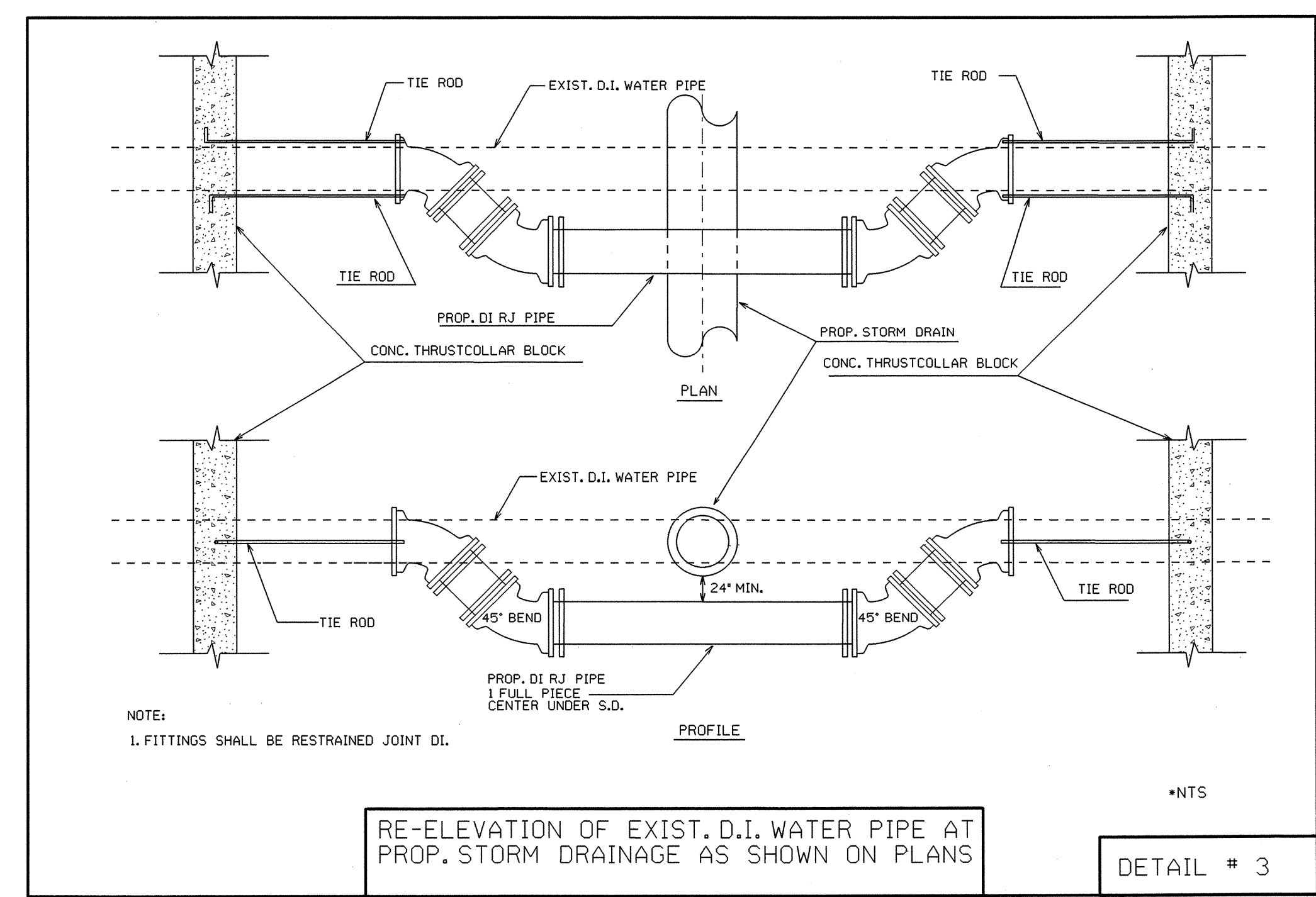
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
RALEIGH, N.C.



NOTE: NO ENCASEMENT REQUIRED FOR SPACE GREATER THAN 18"



THRUST RESTRAINT FOR PIPE LINES



NOTE: 1. FITTINGS SHALL BE RESTRAINED JOINT DI.

*NTS

RE-ELEVATION OF EXIST. D.I. WATER PIPE AT PROP. STORM DRAINAGE AS SHOWN ON PLANS

DETAIL # 3

02-MAY-2001 09:22:11 R:\Utilities\Projects\UC.DGN V-r-2611.rdj-UC18.dgn

09/08/99

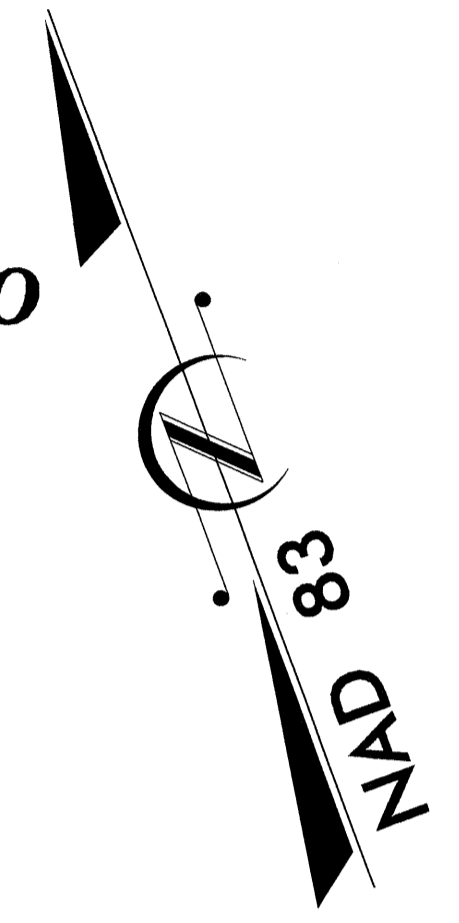
T.I.P. NO.	SHEET NO.
R-2611	UO-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

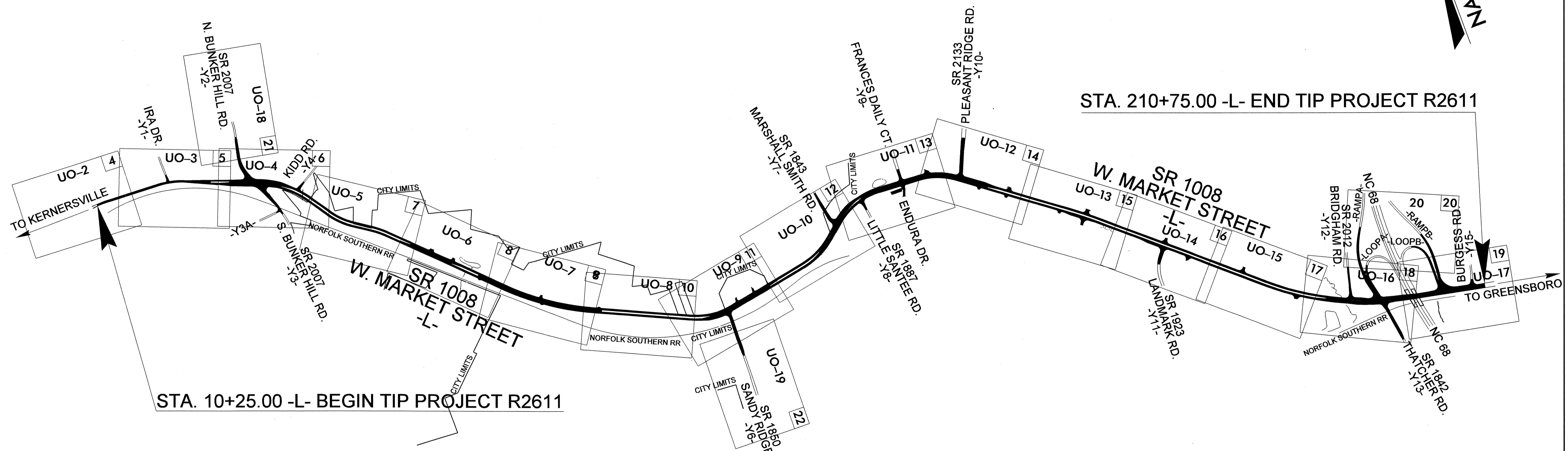
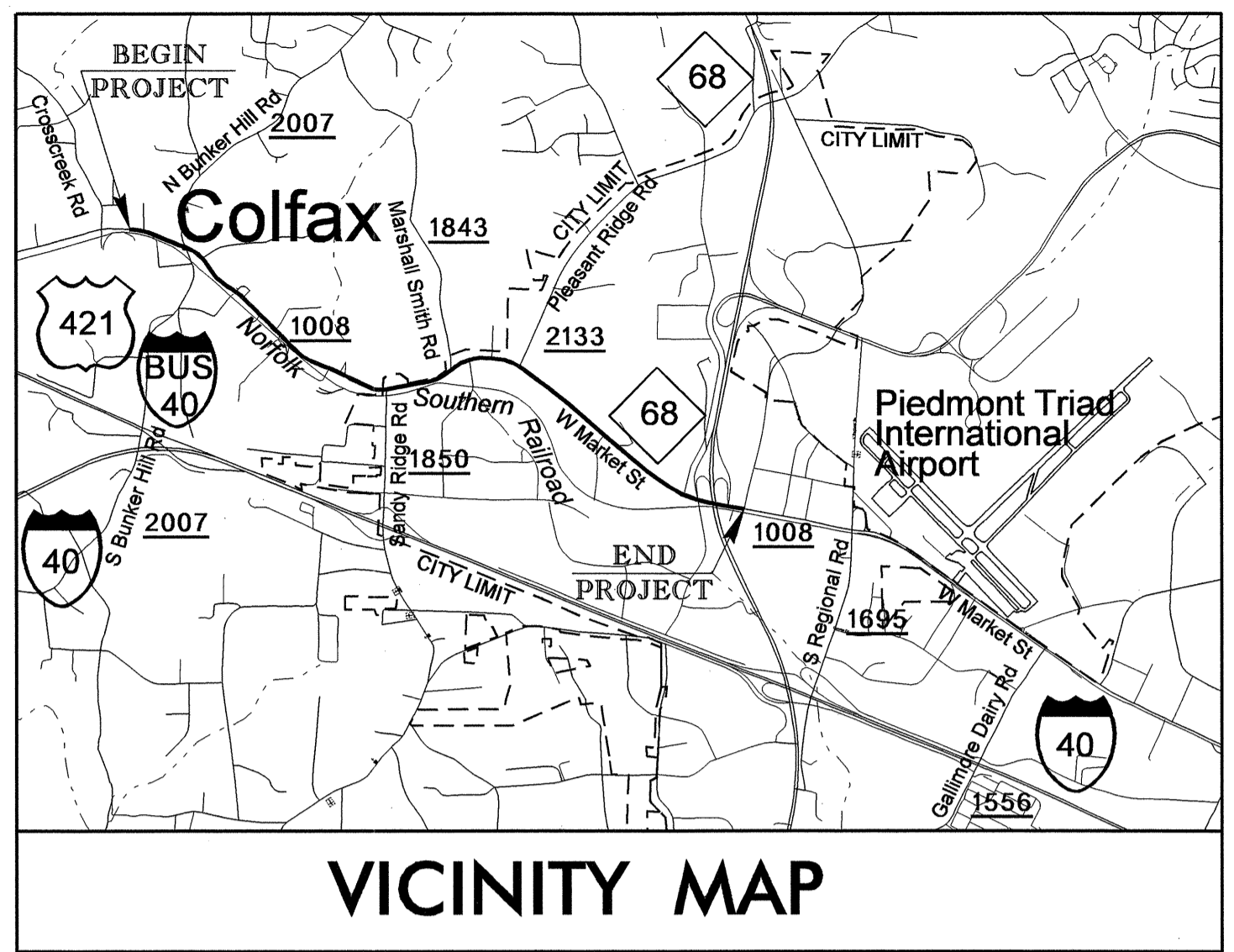
**UTILITIES BY OTHERS PLANS
GUILFORD COUNTY**

**LOCATION: SR 1008 (WEST MARKET STREET) FROM WEST OF SR 2007
(BUNKER HILL RD.) AT COLFAX TO NC 68 IN GREENSBORO**

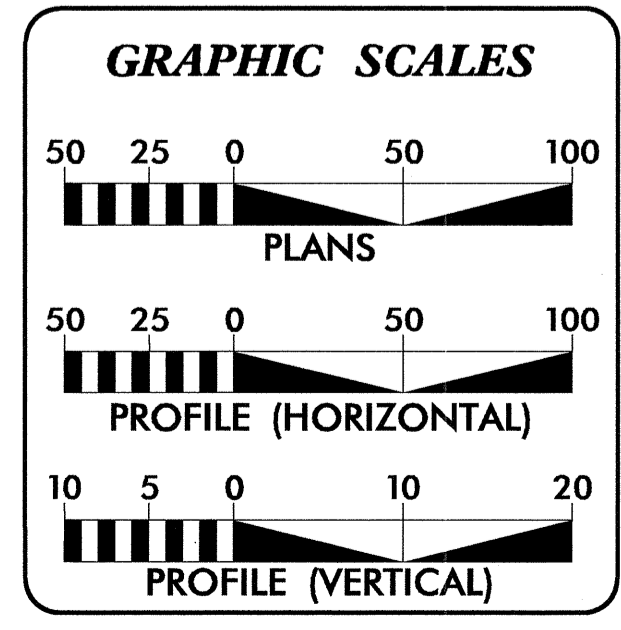
TYPE OF WORK: UTILITIES RELOCATION



TIP PROJECT: R-2611



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF GREENSBORO
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-19	UTILITY BY OTHERS PLAN SHEETS

- UTILITY OWNERS ON PROJECT**
- (1) DUKE ENGINEERING & SERVICE (POWER LINE)
 - (2) AT&T (AERIAL TEL. LINE)
 - (3) TIME WARNER CABLE (AERIAL TV CABLE)
 - (4) CENTURYLINK (UNDERGROUND TEL. CABLE)
 - (5) PIEDMONT NATURAL GAS (UNDERGROUND GAS LINE)

PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES ENGINEERING
SECTION**

1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 250-4128
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER

Steve McKee, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER

Jamshid Hafshejani UTILITIES PROJECT DESIGNER

29-APR-2011 16:04 R:\Utilities\YRDy\UT\Proj\UB0\2611_UO1_rdy_tsh.dgn \$\$\$USERNAME\$\$\$

UTILITIES BY OTHERS

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

NOTE:

THE PROP. U\G. UTILITIES SHALL BE INSTALLED
MIN. 2' UNDER PROPOSED AND EXISTING DRAINAGE
PIPE.

GUILFORD COUNTY
DB 2745 PG 934

NC GRID
NAD 83/95

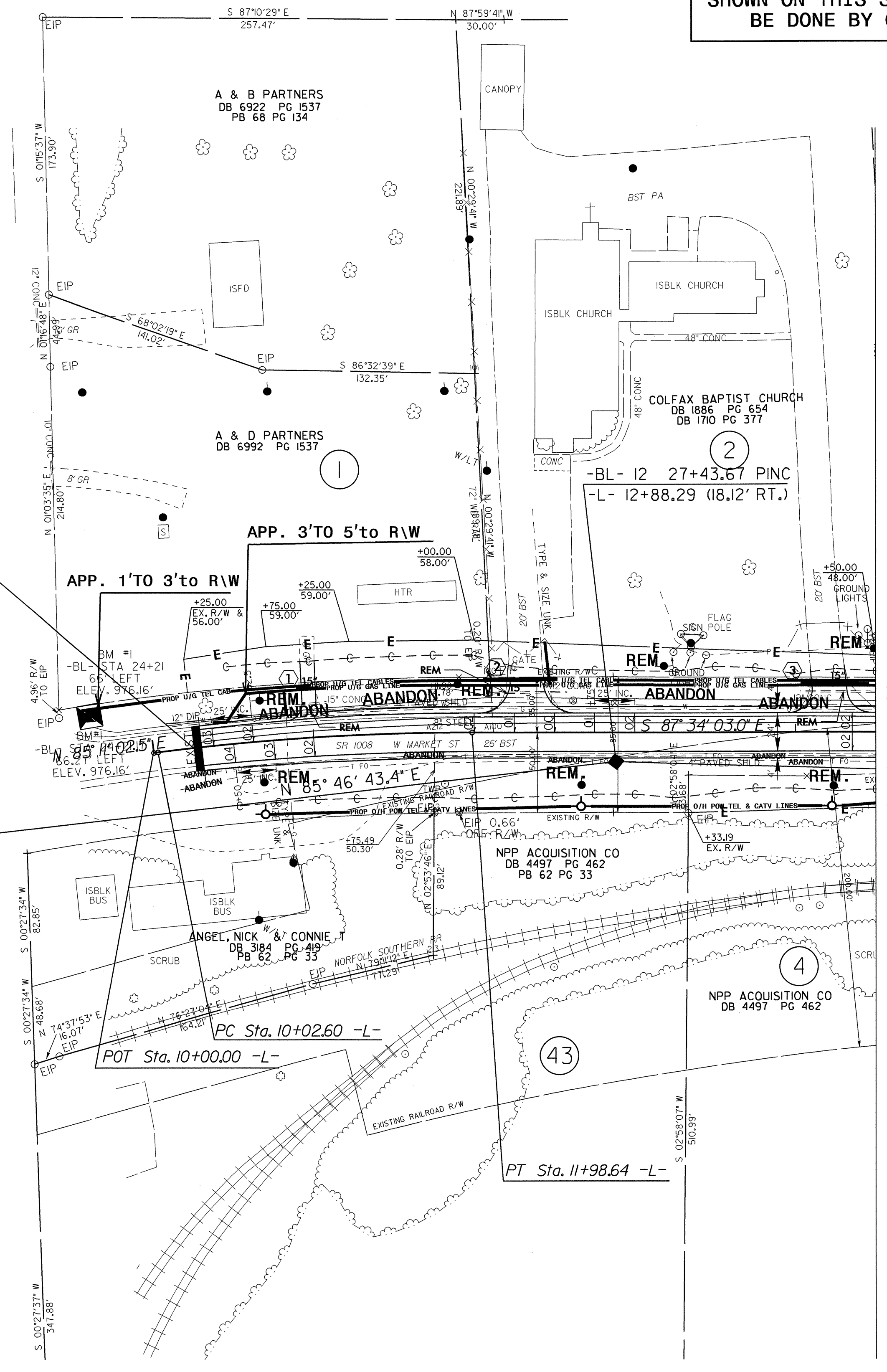
STA. 10+25.00 -L- BEGIN TIP PROJECT R-2611

-BL-11 22+98.03 PINC

-GPS- R2611-2
-BL- 18+47.92 PINC

N 76° 39' 56.4" E

-L-
PI Sta 11+00.75
 $\Delta = 7' 14" 54.5" (RT)$
 $D = 3' 4" 50.9"$
 $L = 196.04'$
 $T = 98.15'$
 $R = 1,549.59'$



-L- 27+75.00
MATCHLINE SEE SHEET NO U0-3

UTILITIES BY OTHERS

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



MATCHLINE - SEE SHEET U0-2

MATCHLINE SEE SHEET U0-4

5/14/99

29-APR-2011 14:10 U:\B0\N2611_U0-3-r-dy_psh5.dgn

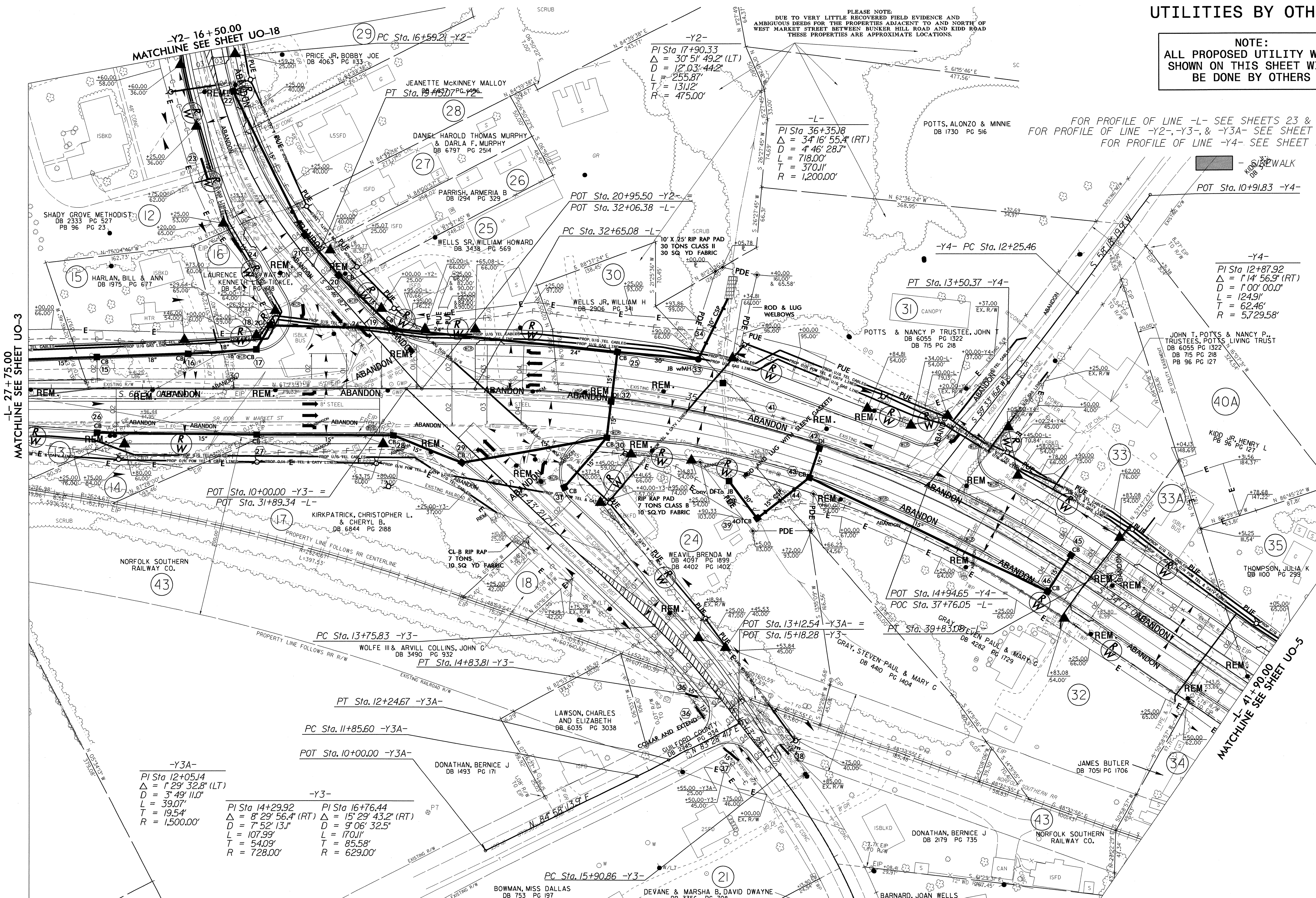
STA. 17+85

308

UTILITIES BY OTHERS

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

FOR PROFILE OF LINE -L- SEE SHEETS 23 & 24
FOR PROFILE OF LINE -Y2-, -Y3-, & -Y3A- SEE SHEET 31
FOR PROFILE OF LINE -Y4- SEE SHEET 32



PLEASE NOTE:
DUE TO VERY LITTLE RECOVERED FIELD EVIDENCE AND AMBIGUOUS DEEDS FOR THE PROPERTIES ADJACENT TO AND NORTH OF WEST MARKET STREET BETWEEN BUNKER HILL ROAD AND KIDD ROAD THESE PROPERTIES ARE APPROXIMATE LOCATIONS.

-Y2-
PI Sta 17+90.33
 $\Delta = 30' 51" 49.2" (LT)$
 $D = 12' 03" 44.2"$
 $L = 255.87'$
 $T = 131.12'$
 $R = 475.00'$

-L-
PI Sta 36+35.18
 $\Delta = 34' 16" 55.4" (RT)$
 $D = 4' 46" 28.7"$
 $L = 718.00'$
 $T = 370.11'$
 $R = 1,200.00'$

-Y4-
PI Sta 12+87.92
 $\Delta = 1' 14" 56.9" (RT)$
 $D = 1' 00" 00.0"$
 $L = 124.91'$
 $T = 62.46'$
 $R = 5,729.58'$

-Y3A-
PI Sta 12+05.14
 $\Delta = 1' 29' 32.8" (LT)$
 $D = 3' 49' 11.0"$
 $L = 39.07'$
 $T = 19.54'$
 $R = 1,500.00'$

-Y3-
PI Sta 14+29.92
 $\Delta = 8' 29' 56.4" (RT)$
 $D = 7' 52' 13.1"$
 $L = 107.99'$
 $T = 54.09'$
 $R = 728.00'$

PI Sta 16+76.44
 $\Delta = 15' 29' 43.2" (RT)$
 $D = 9' 06' 32.5"$
 $L = 170.11'$
 $T = 85.58'$
 $R = 629.00'$

BOWMAN, MISS DALLAS
DB 753 PG 197

DEVANE & MARSHA B, DAVID DWAYNE
DB 3356 PG 708

BARNARD, JOAN WELLS
DB 3000 PG 234

DONATHAN, BERNICE J
DB 2179 PG 735

NORFOLK SOUTHERN RAILWAY CO.

LAWSON, CHARLES AND ELIZABETH
DB 6035 PG 3038

DONATHAN, BERNICE J
DB 1493 PG 171

PC Sta. 11+85.60 -Y3A-

POT Sta. 10+00.00 -Y3A-

PC Sta. 13+75.83 -Y3-

PT Sta. 14+83.81 -Y3-

PT Sta. 12+24.67 -Y3A-

PC Sta. 11+85.60 -Y3A-

POT Sta. 10+00.00 -Y3A-

POT Sta. 13+12.54 -Y3A-

POT Sta. 15+18.28 -Y3-

POT Sta. 14+94.65 -Y4-

POC Sta. 37+76.05 -L-

PT Sta. 39+83.08 -Y4-

PT Sta. 37+76.05 -L-

POT Sta. 14+94.65 -Y4-

POC Sta. 37+76.05 -L-

PT Sta. 39+83.08 -Y4-

PT Sta. 37+76.05 -L-

POT Sta. 14+94.65 -Y4-

POC Sta. 37+76.05 -L-

PT Sta. 39+83.08 -Y4-

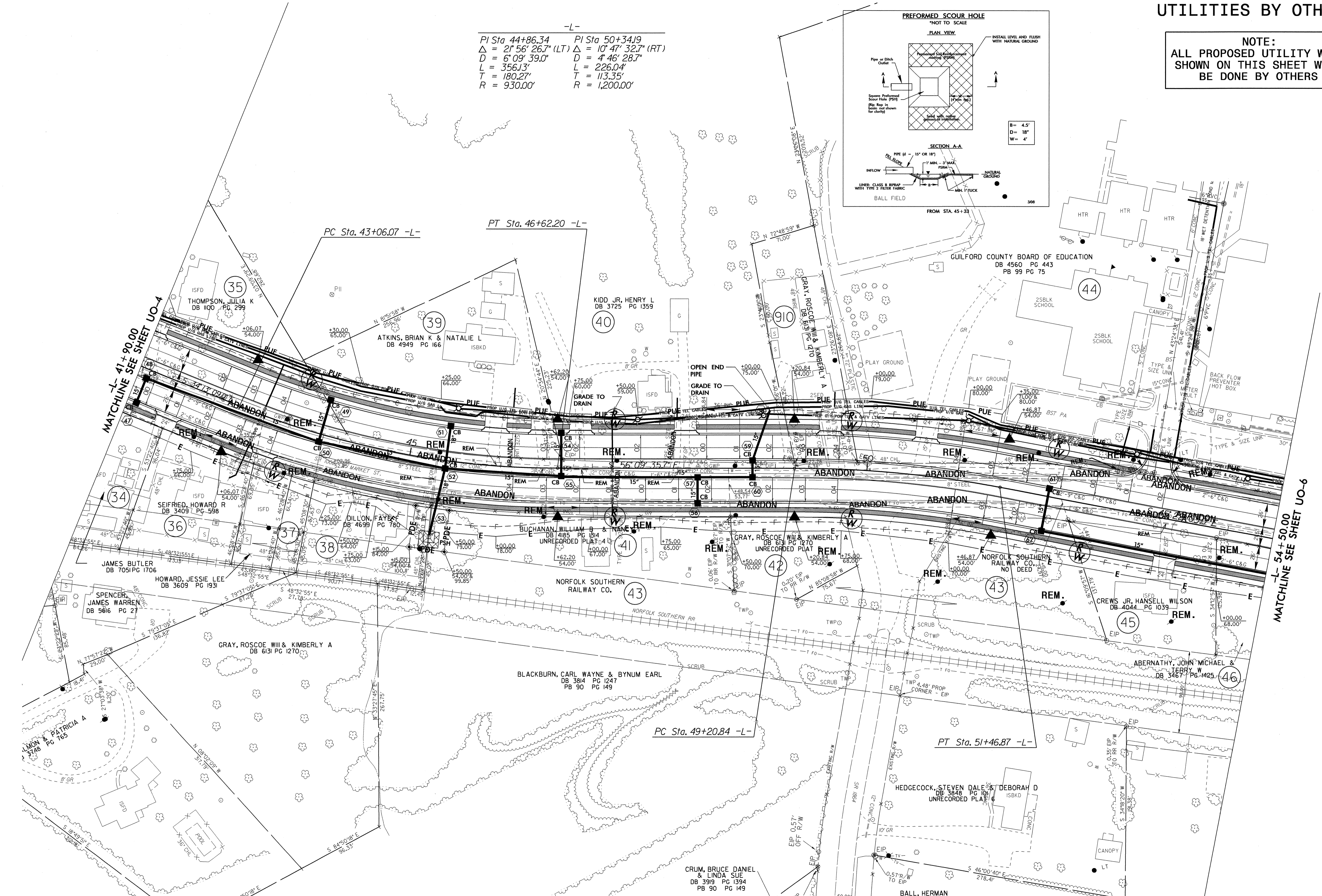
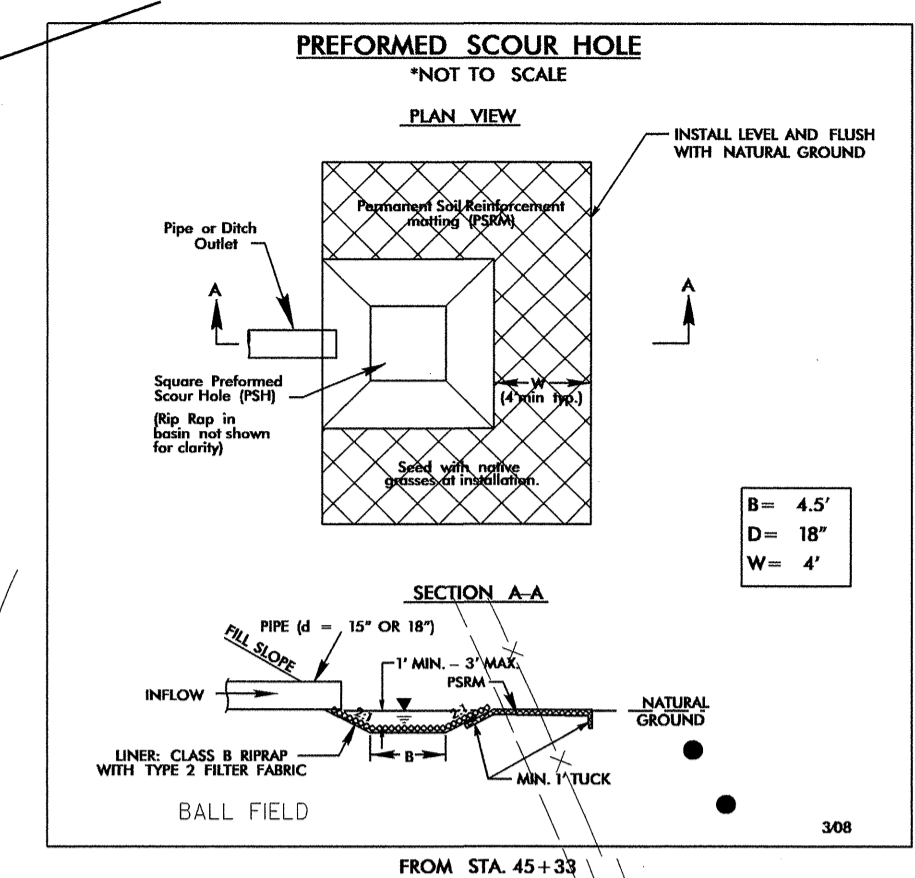
PT Sta. 37+76.05 -L-

UTILITIES BY OTHERS

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

-L-

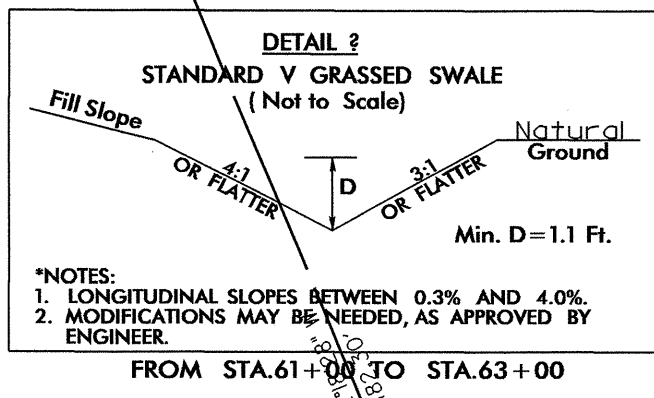
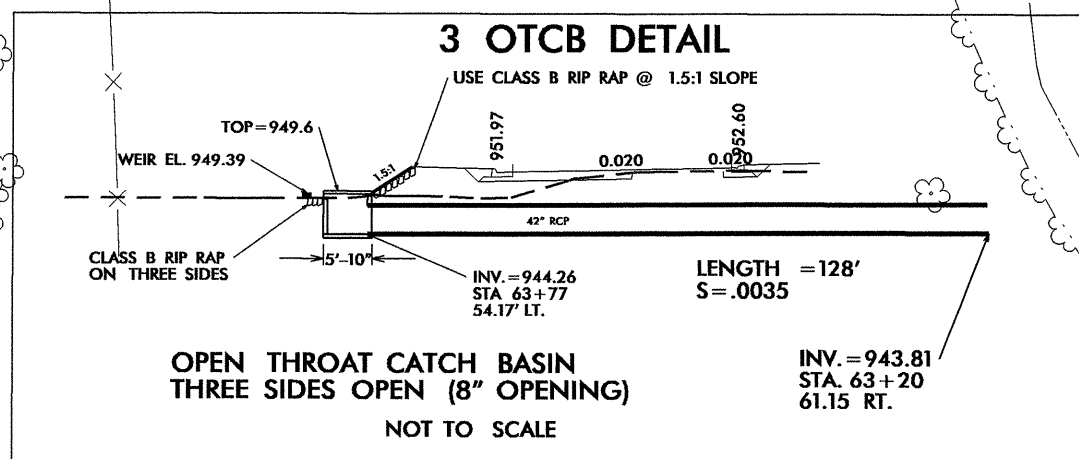
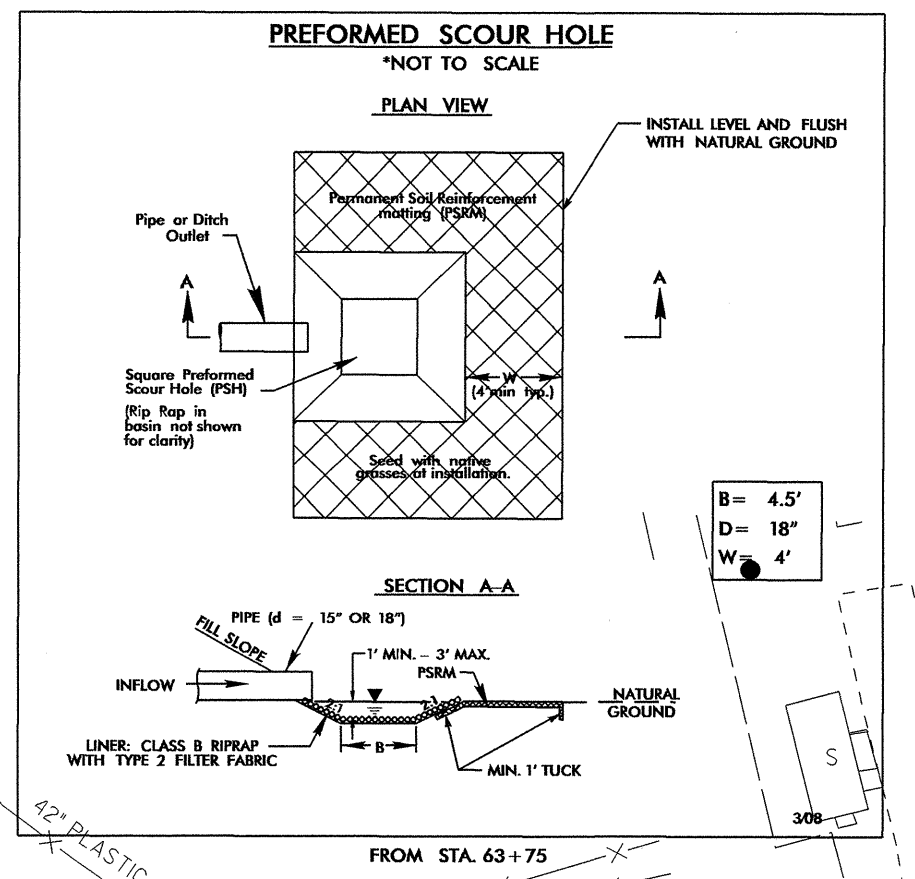
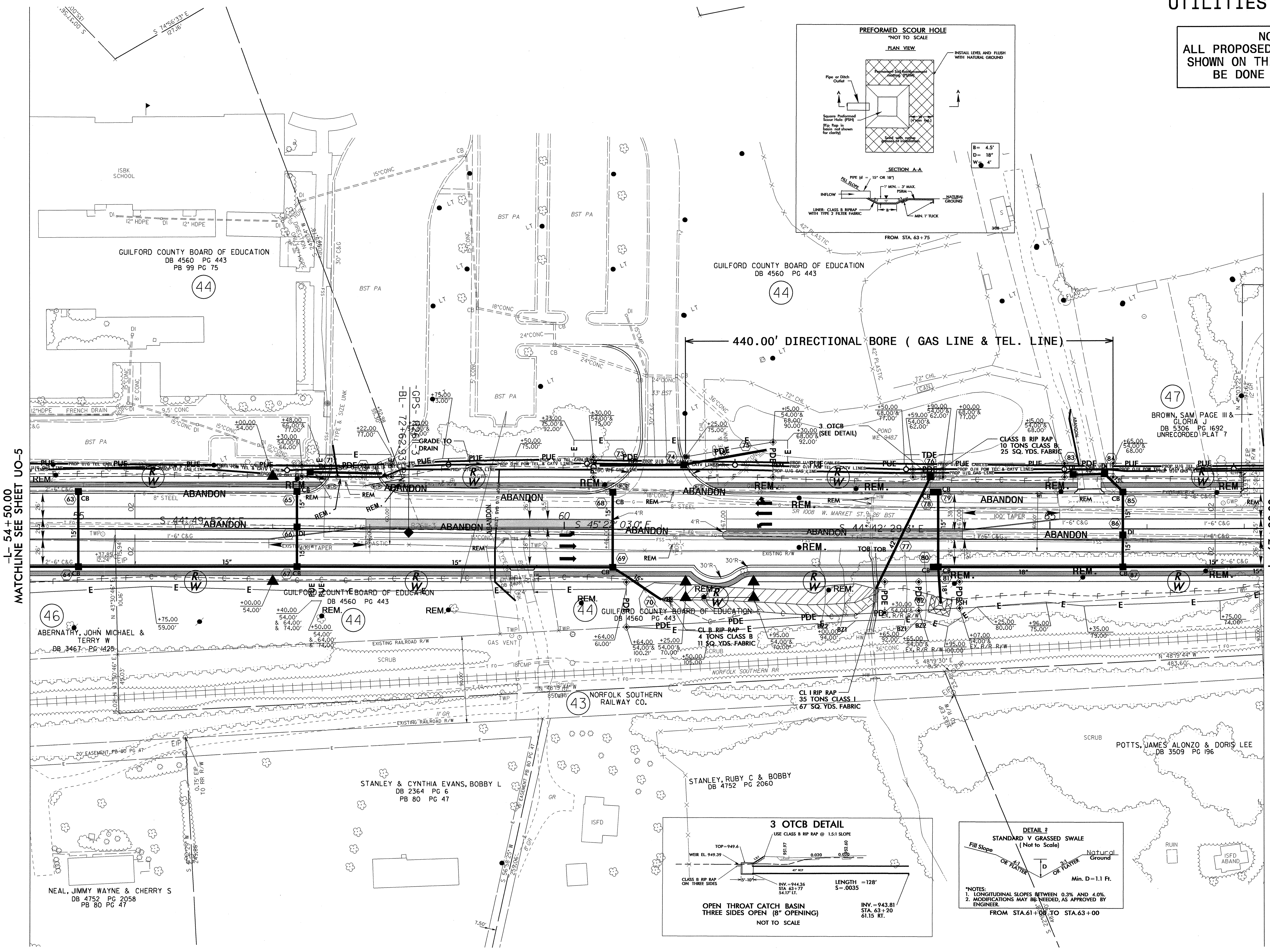
PI Sta 44+86.34	PI Sta 50+34.9
$\Delta = 2^\circ 56' 26.7''$ (LT)	$\Delta = 10^\circ 47' 32.7''$ (RT)
D = 6' 09" 39.0"	D = 4' 46" 28.7"
L = 356.13'	L = 226.04'
T = 180.27'	T = 113.35'
R = 930.00'	R = 1,200.00'



5/14/09
 02-MAY-2010 09:33
 N:\projects\2010\UBO\VR2611_UO-5-rd-j.psh7.dgn
 \$\$\$USER\$\$\$

UTILITIES BY OTHERS

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



—L- 54+50.00
MATCHLINE SEE SHEET UO-5

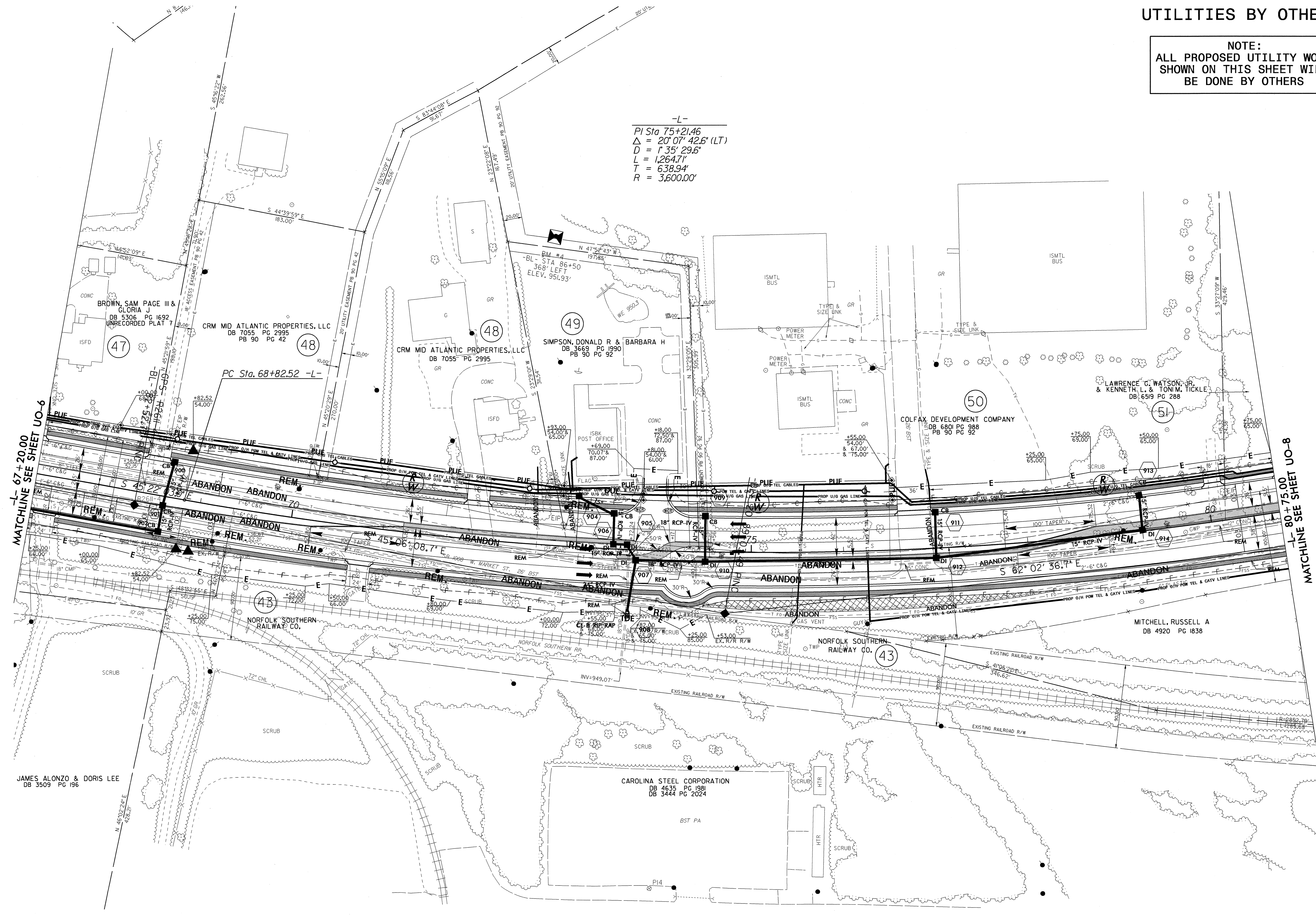
—L- 67+20.00
MATCHLINE SEE SHEET UO-7

5/14/99
29-APR-2011 4:20 UO-6-r-dj-psh8.dgn
3:38 PM
3:38 PM

UTILITIES BY OTHERS

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

-L-
PI Sta 75+21.46
 $\Delta = 20^{\circ} 07' 42.6" (LT)$
 $D = 1' 35' 29.6"$
 $L = 1,264.71'$
 $T = 638.94'$
 $R = 3,600.00'$



MATCHLINE SEE SHEET UO-6
-L- 67+20.00

MATCHLINE SEE SHEET UO-8
-L- 80+75.00

JAMES ALONZO & DORIS LEE
DB 3509 PG 196

CAROLINA STEEL CORPORATION
DB 4635 PG 1981
DB 3444 PG 2024

MITCHELL, RUSSELL A
DB 4920 PG 1838

NORFOLK SOUTHERN
RAILWAY CO. (43)

COLFAX DEVELOPMENT COMPANY
DB 6801 PG 988
PB 90 PG 92

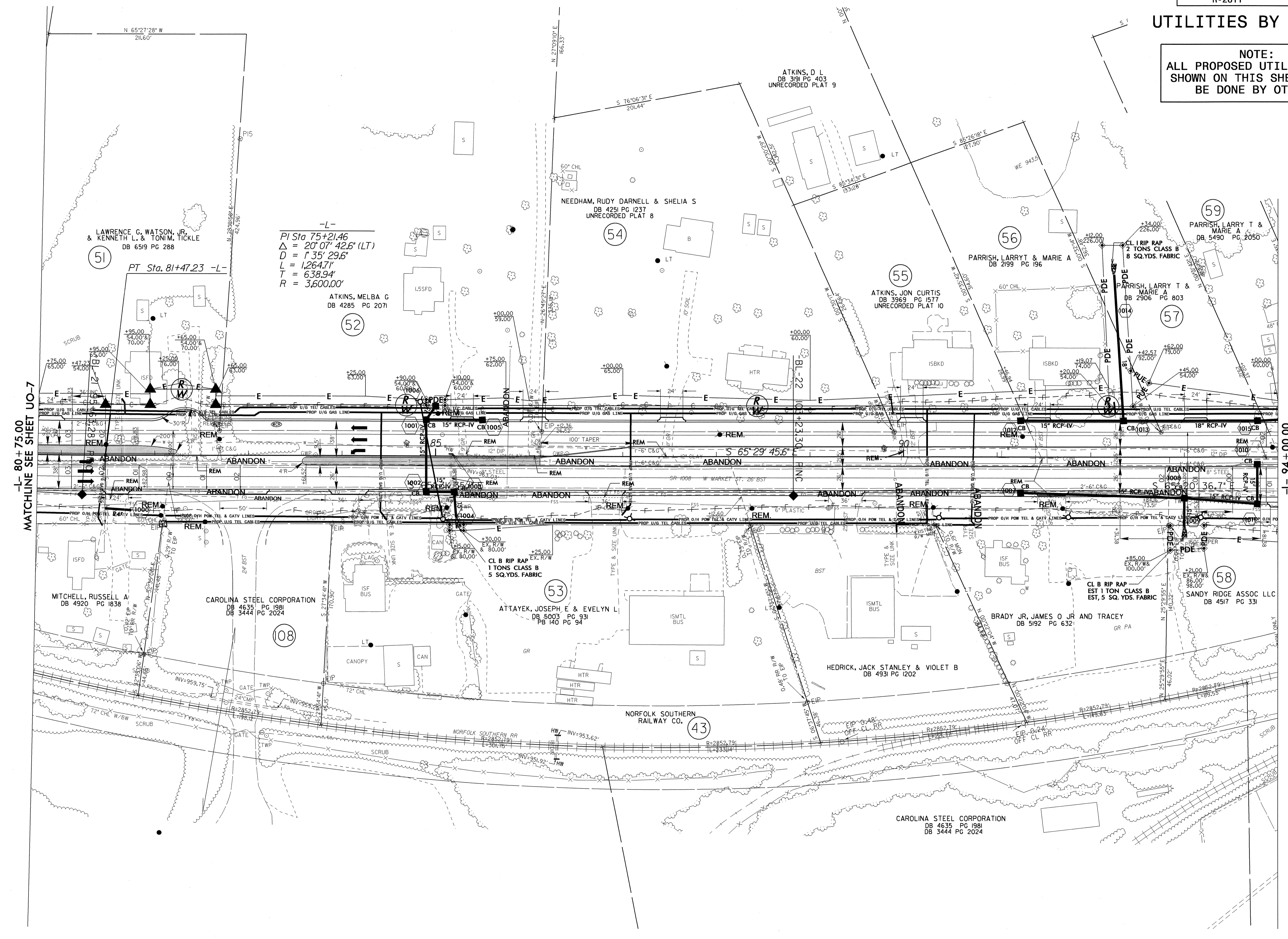
SIMPSON, DONALD R & BARBARA H
DB 3669 PG 1990
PB 90 PG 92

CRM MID ATLANTIC PROPERTIES, LLC
DB 7055 PG 2995
PB 90 PG 42

BROWN, SAM PAGE III & GLORIA J
DB 5306 PG 1692
UNRECORDED PLAT 7

UTILITIES BY OTHERS

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



MATCHLINE SEE SHEET UO-7

MATCHLINE SEE SHEET UO-9

-L-
PI Sta 75+21.46
 $\Delta = 20^{\circ} 07' 42.6''$ (LT)
 $D = 1' 35' 29.6''$
 $L = 1264.71'$
 $T = 638.94'$
 $R = 3600.00'$

LAWRENCE G. WATSON, JR.
& KENNETH L. & TONI M. TICKLE
DB 6519 PG 288

NEEDHAM, RUDY DARNELL & SHELIA S
DB 4251 PG 1237
UNRECORDED PLAT 8

ATKINS, MELBA G
DB 4285 PG 2071

ATKINS, D L
DB 3191 PG 403
UNRECORDED PLAT 9

PARRISH, LARRY T & MARIE A
DB 2199 PG 196

PARRISH, LARRY T & MARIE A
DB 5490 PG 2050

MITCHELL, RUSSELL A
DB 4920 PG 1838

CAROLINA STEEL CORPORATION
DB 4635 PG 1981
DB 3444 PG 2024

ATTAYEK, JOSEPH E & EVELYN L
DB 5003 PG 931
PB 140 PG 94

CL B RIP RAP
EST 1 TON CLASS B
5 SQ. YDS. FABRIC

SANDY RIDGE ASSOC LLC
DB 4517 PG 331

HEDRICK, JACK STANLEY & VIOLET B
DB 4931 PG 1202

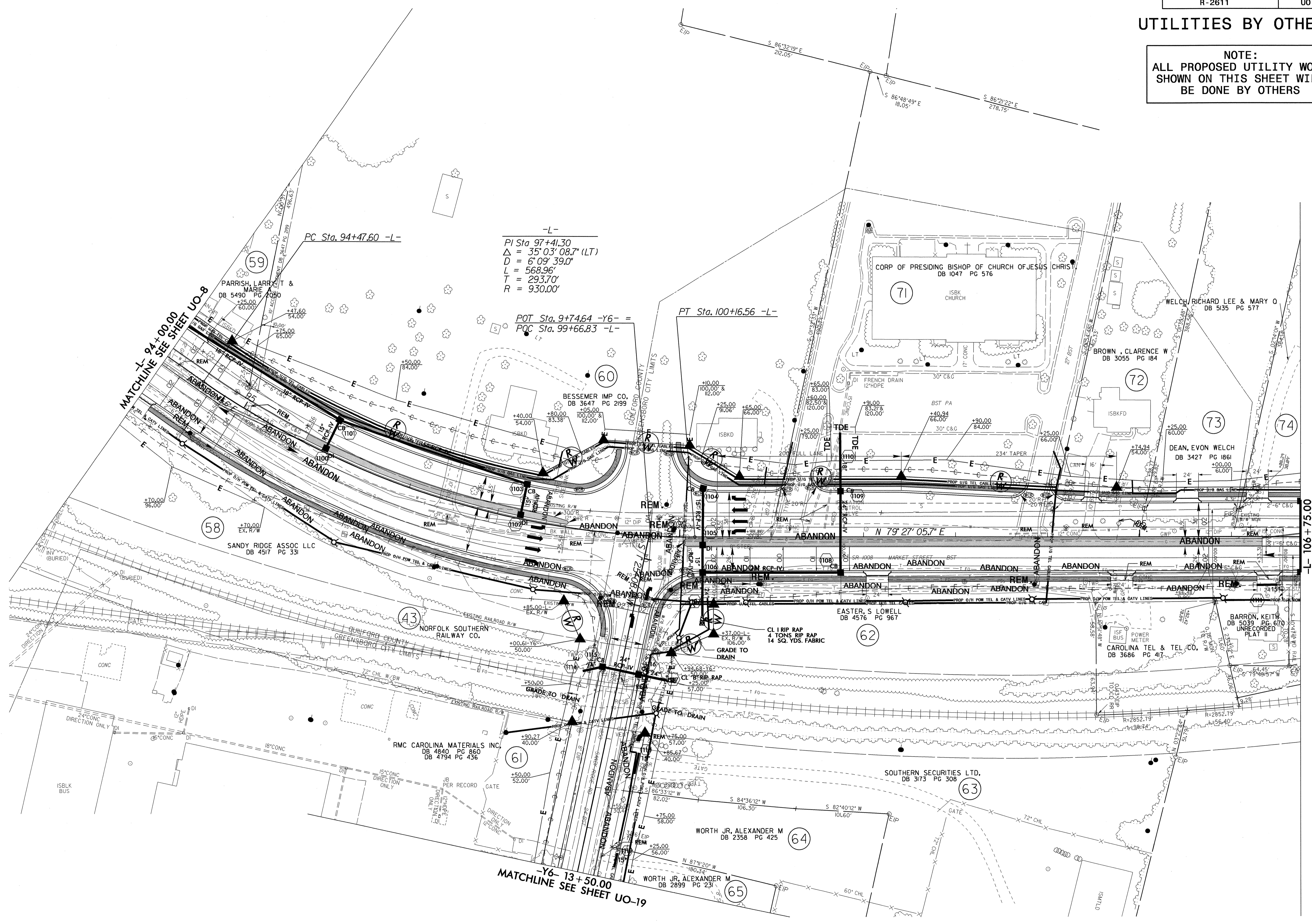
NORFOLK SOUTHERN RAILWAY CO.

CAROLINA STEEL CORPORATION
DB 4635 PG 1981
DB 3444 PG 2024

5/14/99
02-MAY-2010 10:00
U:\Projects\2611-UO-8-rdy-psh10.dgn
U:\Projects\2611-UO-8-rdy-psh10.dgn

UTILITIES BY OTHERS

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



-L-
 PI Sta. 97+41.30
 $\Delta = 35^{\circ} 03' 08.7''$ (LT)
 $D = 6^{\circ} 09' 39.0''$
 $L = 568.96'$
 $T = 293.70'$
 $R = 930.00'$

POT Sta. 9+74.64 -Y6- =
 POC Sta. 99+66.83 -L-

L- 94+00.00
 MATCHLINE SEE SHEET UO-8

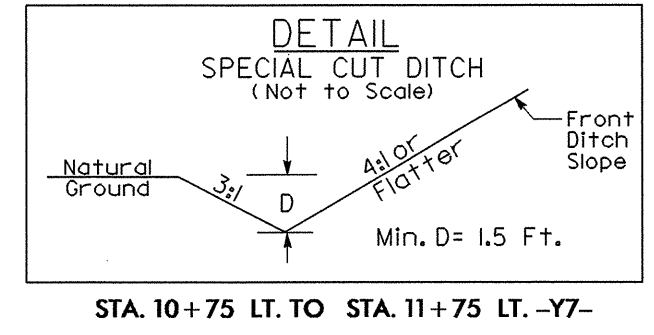
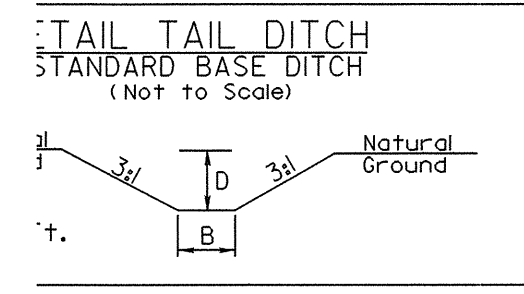
L- 106+75.00
 MATCHLINE SEE SHEET UO-10

-Y6- 13+50.00
 MATCHLINE SEE SHEET UO-19

5/14/99
 29-APR-2011 14:04
 U:\GIS\Projects\2611\UO-9-rdy-ph11.dgn
 11:58:33 AM
 11:58:33 AM

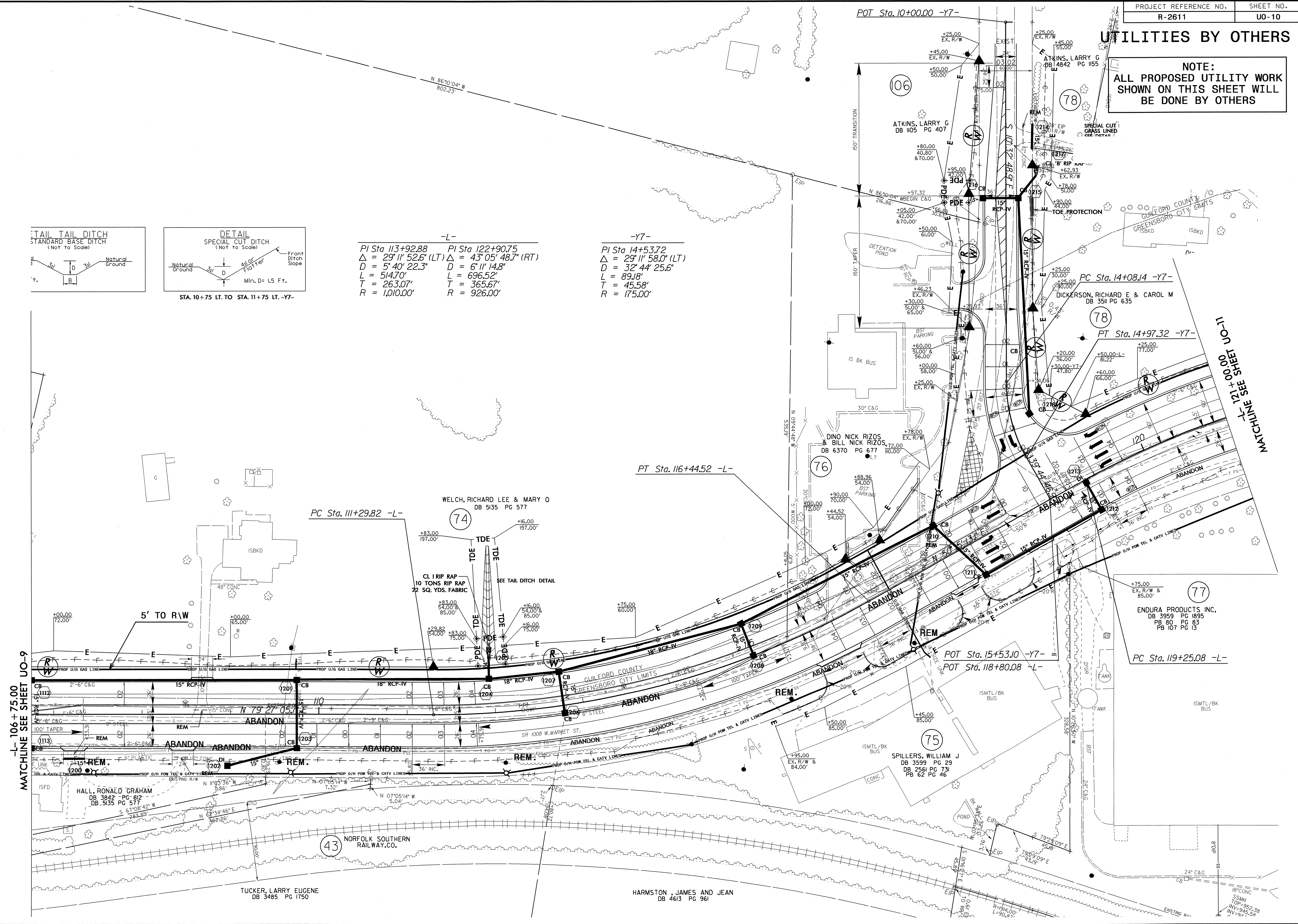
UTILITIES BY OTHERS

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



-L-
 PI Sta 113+92.88 PI Sta 122+90.75
 $\Delta = 29^{\circ} 11' 52.6''$ (LT) $\Delta = 43^{\circ} 05' 48.7''$ (RT)
 $D = 5^{\circ} 40' 22.3''$ $D = 6^{\circ} 11' 14.8''$
 $L = 514.70'$ $L = 696.52'$
 $T = 263.07'$ $T = 365.67'$
 $R = 1,010.00'$ $R = 926.00'$

-Y7-
 PI Sta 14+53.72
 $\Delta = 29^{\circ} 11' 58.0''$ (LT)
 $D = 32^{\circ} 44' 25.6''$
 $L = 89.18'$
 $T = 45.58'$
 $R = 175.00'$



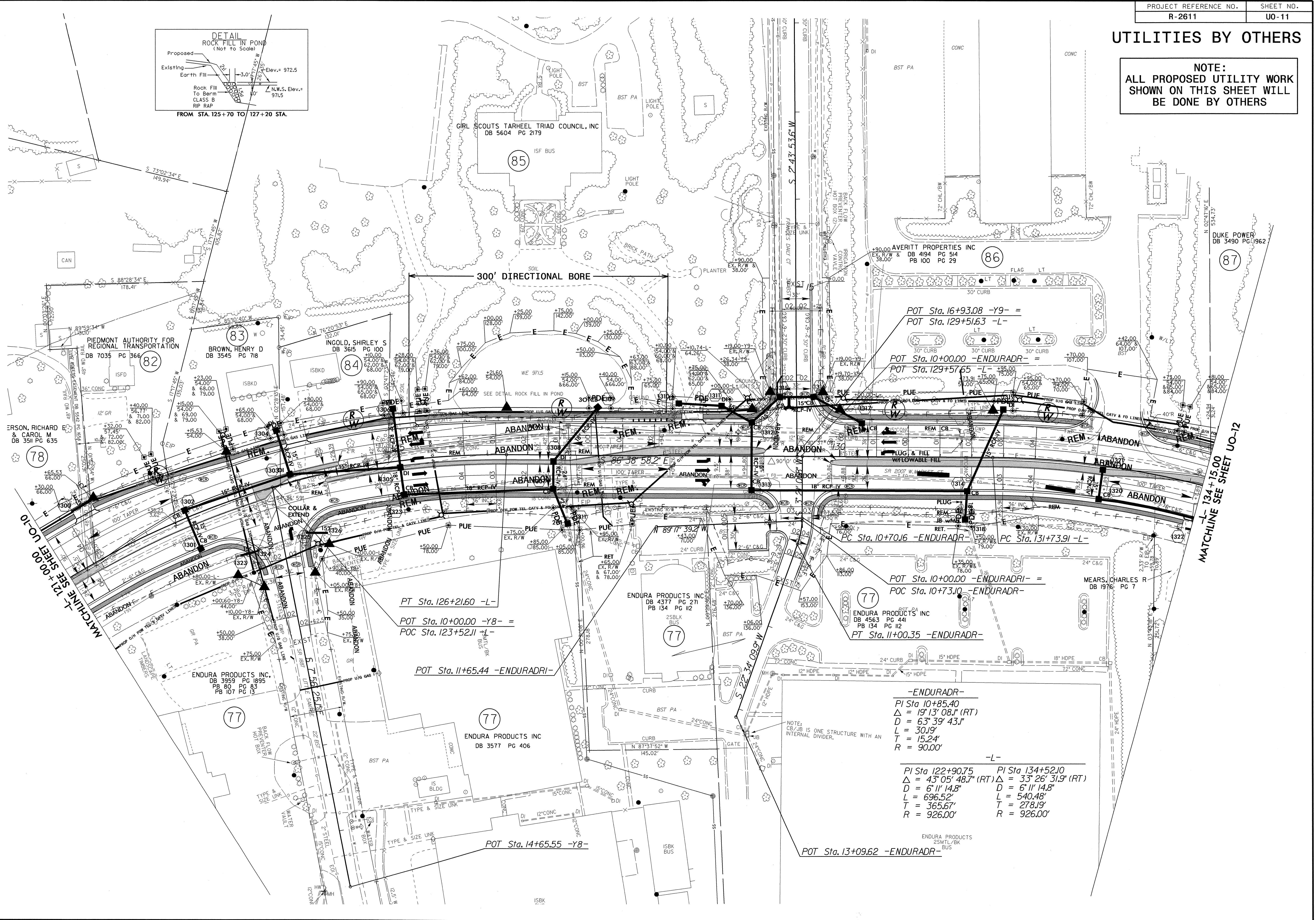
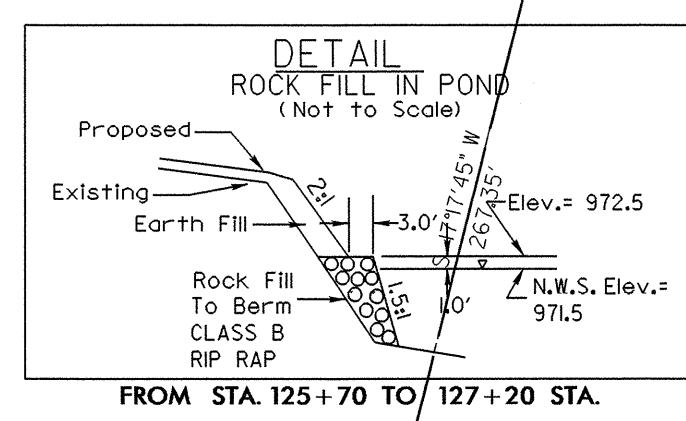
L-106+75.00
MATCHLINE SEE SHEET UO-9

MATCHLINE SEE SHEET UO-11
L-121+00.00

5/14/99
29-APR-2011 14:02
Util:\ees\jg\luc\proj\UO-10-rdy.pah12.dgn

UTILITIES BY OTHERS

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



-ENDURADR-
 PI Sta 10+85.40
 $\Delta = 19' 13' 08.1''$ (RT)
 $D = 63' 39' 43.1''$
 $L = 301.9'$
 $T = 15.24'$
 $R = 90.00'$

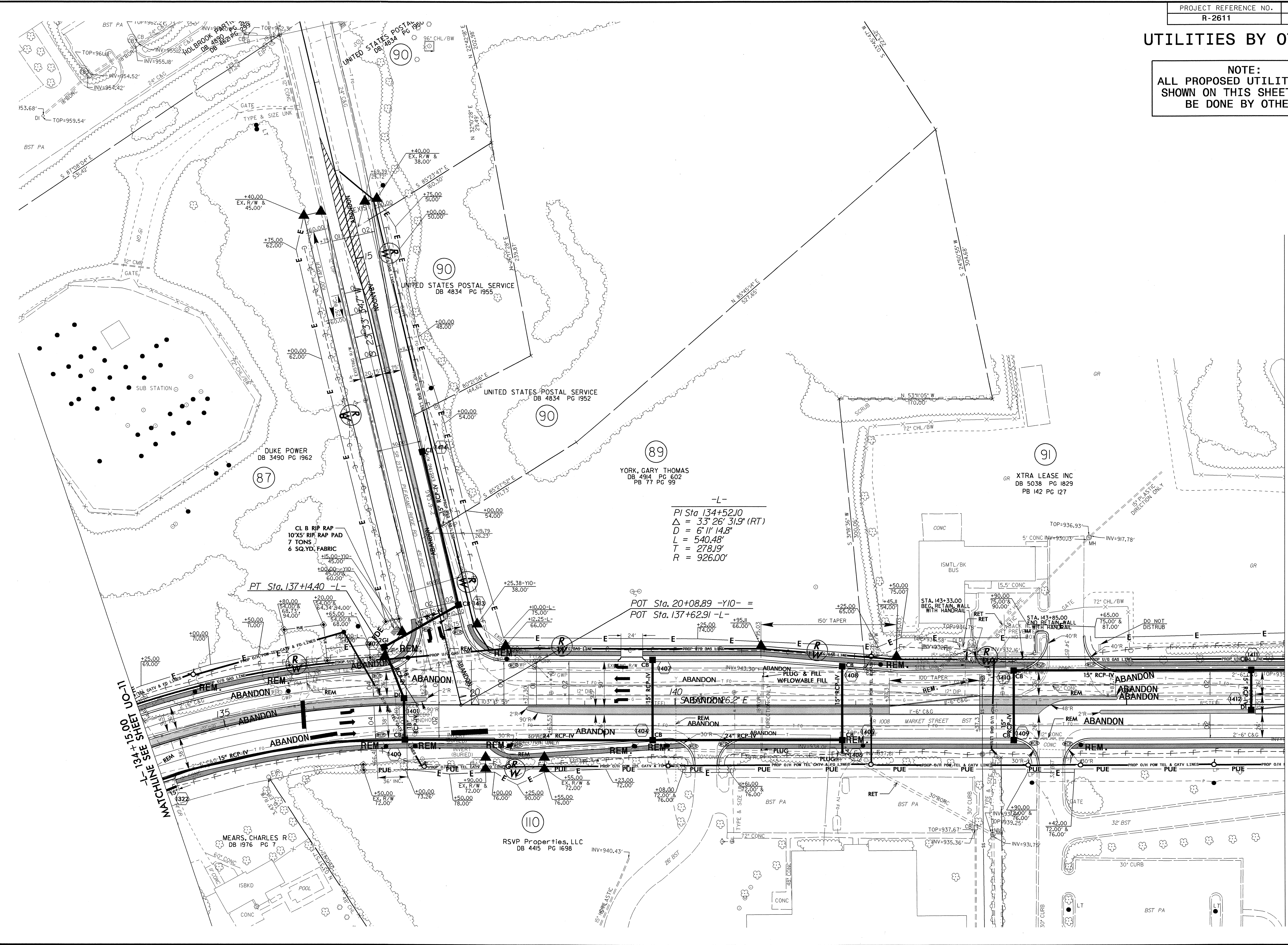
-L-
 PI Sta 122+90.75 PI Sta 134+52.10
 $\Delta = 43' 05' 48.7''$ (RT) $\Delta = 33' 26' 31.9''$ (RT)
 $D = 6' 11' 14.8''$ $D = 6' 11' 14.8''$
 $L = 696.52'$ $L = 540.48'$
 $T = 365.67'$ $T = 278.19'$
 $R = 926.00'$ $R = 926.00'$

NOTE:
CB/JB IS ONE STRUCTURE WITH AN
INTERNAL DIVIDER.

02-MAY-2011 10:05 JBO VR2611-U0-11.rdy-ph13.dgn
 5/14/09

UTILITIES BY OTHERS

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



(89)
YORK, GARY THOMAS
DB 4914 PG 602
PB 77 PG 99

(91)
XTRA LEASE INC
DB 5038 PG 1829
PB 142 PG 127

(87)
DUKE POWER
DB 3490 PG 1962

(110)
RSVP Properties, LLC
DB 4415 PG 1698

-L-
PI Sta 134+52.10
 $\Delta = 33^{\circ} 26' 31.9''$ (RT)
D = 6' 11" 14.8"
L = 540.48'
T = 278.19'
R = 926.00'

POT Sta. 20+08.89 -Y10- =
POT Sta. 137+62.91 -L-

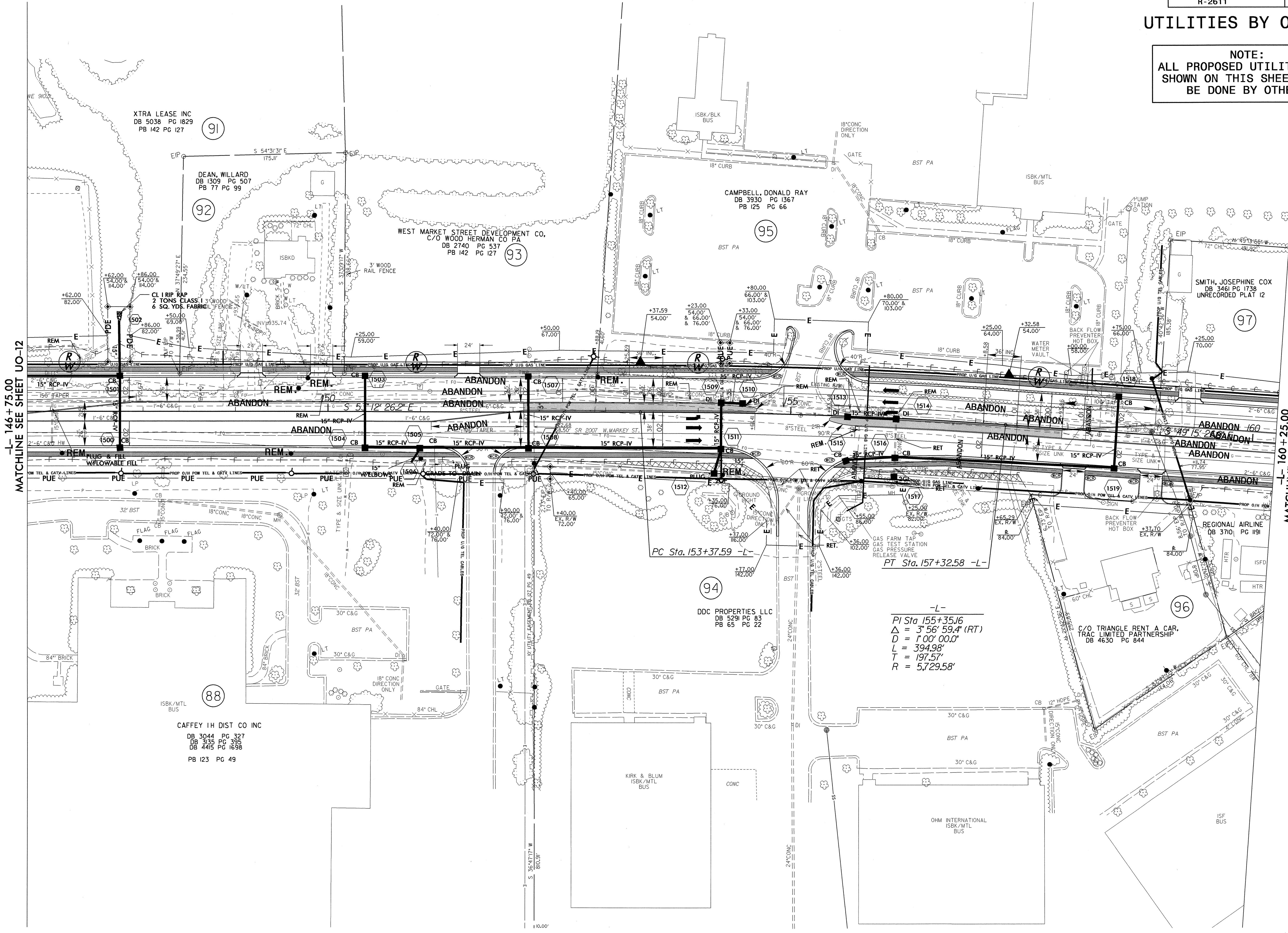
MATCHLINE SEE SHEET UO-11
11-134+15.00 UO-11

MATCHLINE SEE SHEET UO-13
-L- 146+75.00 UO-13

5/14/99
29-APP-20113459
U:\tbl\p1es\rcu\UO-12-rdy_psh14.dgn
\$\$\$\$\$USERSNAME\$\$\$\$\$

UTILITIES BY OTHERS

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



-L- 146+75.00
MATCHLINE SEE SHEET UO-12

-L- 160+25.00
MATCHLINE SEE SHEET UO-14

XTRA LEASE INC
DB 5038 PG 1829
PB 142 PG 127

91

DEAN, WILLARD
DB 1309 PG 507
PB 77 PG 99

92

WEST MARKET STREET DEVELOPMENT CO.
C/O WOOD HERMAN CO PA
DB 2140 PG 537
PB 142 PG 127

93

CAMPBELL, DONALD RAY
DB 3930 PG 1367
PB 125 PG 66

95

SMITH, JOSEPHINE COX
DB 3461 PG 1738
UNRECORDED PLAT 12

97

ISBK/MTL BUS

88

CAFFEY IH DIST CO INC
DB 3044 PG 327
DB 5135 PG 355
DB 4415 PG 1698
PB 123 PG 49

94

DDC PROPERTIES LLC
DB 5291 PG 83
PB 65 PG 22

96

-L-
PI Sta 155+35.16
 $\Delta = 3^{\circ} 56' 59.4'' (RT)$
 $D = 1^{\circ} 00' 00.0''$
 $L = 394.98'$
 $T = 197.57'$
 $R = 5,729.58'$

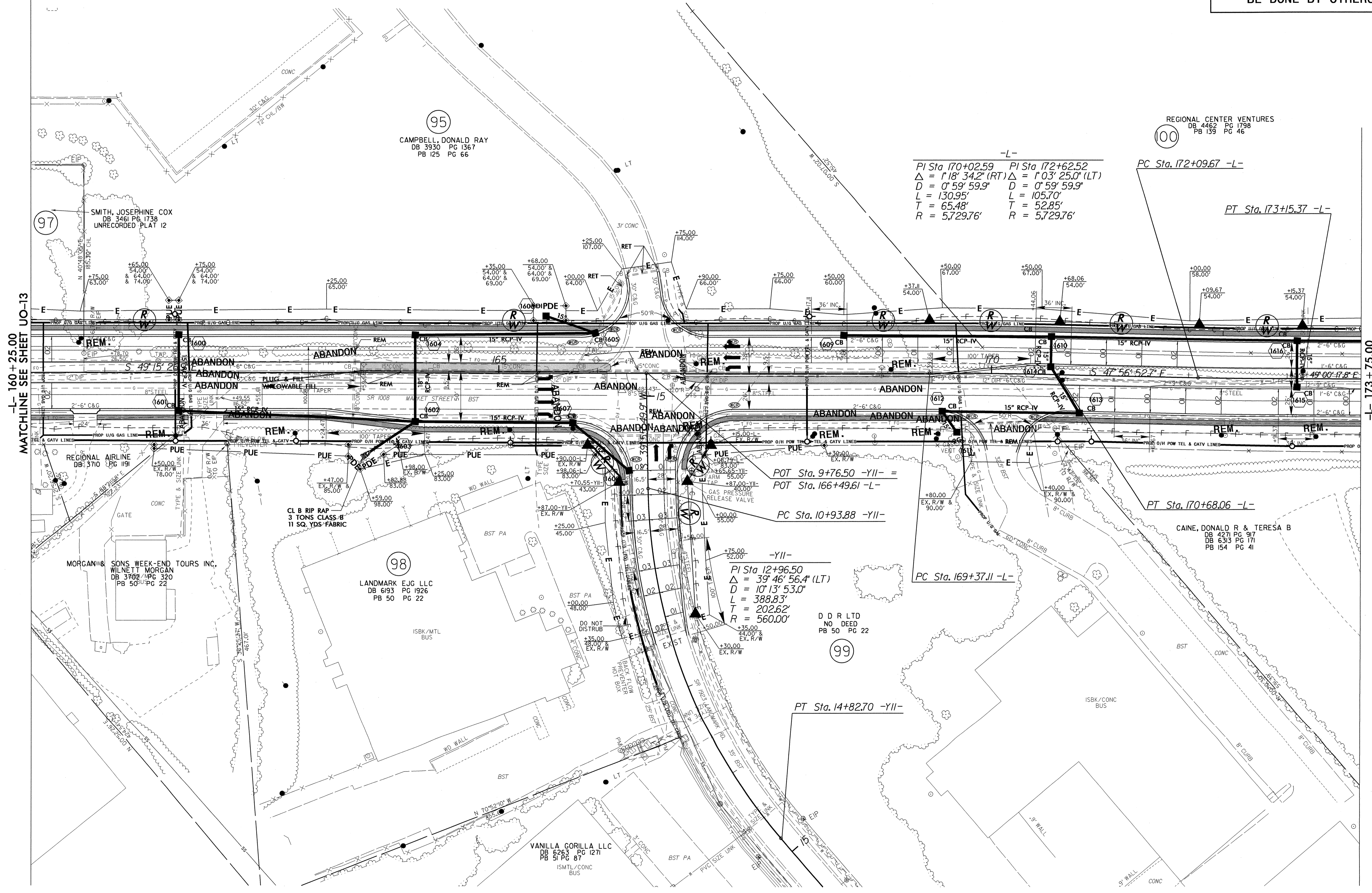
C/O TRIANGLE RENT A CAR,
TRAC LIMITED PARTNERSHIP
DB 4630 PG 844

5/14/99

U:\a11\29-APR-2011\558_U00\RC2611_UO-13_rdy_psh15.dgn

UTILITIES BY OTHERS

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



95
CAMPBELL, DONALD RAY
DB 3930 PG 1367
PB 125 PG 66

97
SMITH, JOSEPHINE COX
DB 3461 PG 1738
UNRECORDED PLAT 12

100
REGIONAL CENTER VENTURES
DB 4462 PG 1798
PB 159 PG 46

REGIONAL AIRLINE
DB 3710 PG 191

MORGAN & SONS WEEK-END TOURS INC,
WILNETT MORGAN
DB 3902 PG 320
PB 50 PG 22

98
LANDMARK E,J G LLC
DB 6193 PG 1926
PB 50 PG 22

VANILLA GORILLA LLC
DB 6263 PG 1271
PB 51 PG 87

99
D D R LTD
NO DEED
PB 50 PG 22

CAINE, DONALD R & TERESA B
DB 4271 PG 917
DB 6313 PG 171
PB 154 PG 41

-L-
PI Sta 170+02.59 PI Sta 172+62.52
 $\Delta = 1' 18" 34.2" (RT)$ $\Delta = 1' 03" 25.0" (LT)$
 $D = 0' 59' 59.9"$ $D = 0' 59' 59.9"$
 $L = 130.95'$ $L = 105.70'$
 $T = 65.48'$ $T = 52.85'$
 $R = 5,729.76'$ $R = 5,729.76'$

POT Sta. 9+76.50 -YII- =
POT Sta. 166+49.61 -L-

PC Sta. 10+93.88 -YII-

-YII-
PI Sta 12+96.50
 $\Delta = 39' 46' 56.4" (LT)$
 $D = 10' 13' 53.0"$
 $L = 388.83'$
 $T = 202.62'$
 $R = 560.00'$

PC Sta. 169+37.11 -L-

PT Sta. 14+82.70 -YII-

PC Sta. 172+09.67 -L-

PT Sta. 173+15.37 -L-

PT Sta. 170+68.06 -L-

-L- 160+25.00
MATCHLINE SEE SHEET UO-13

-L- 173+75.00
MATCHLINE SEE SHEET UO-15

UTILITIES BY OTHERS

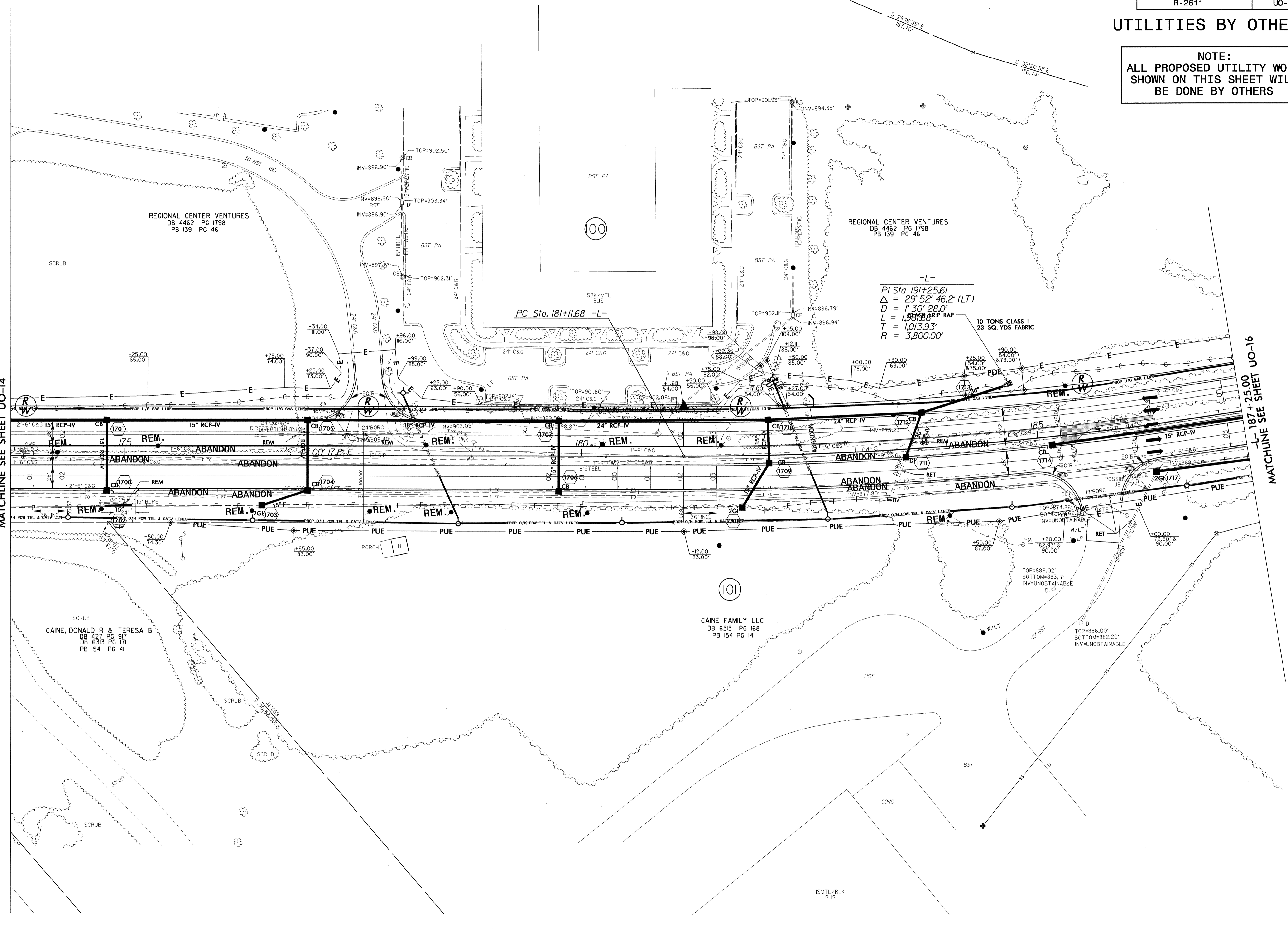
NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

5/14/09

02-MAY-2010 08:40:00 U:\001\PROJECTS\2611\UO-15.rdy_psh17.dgn

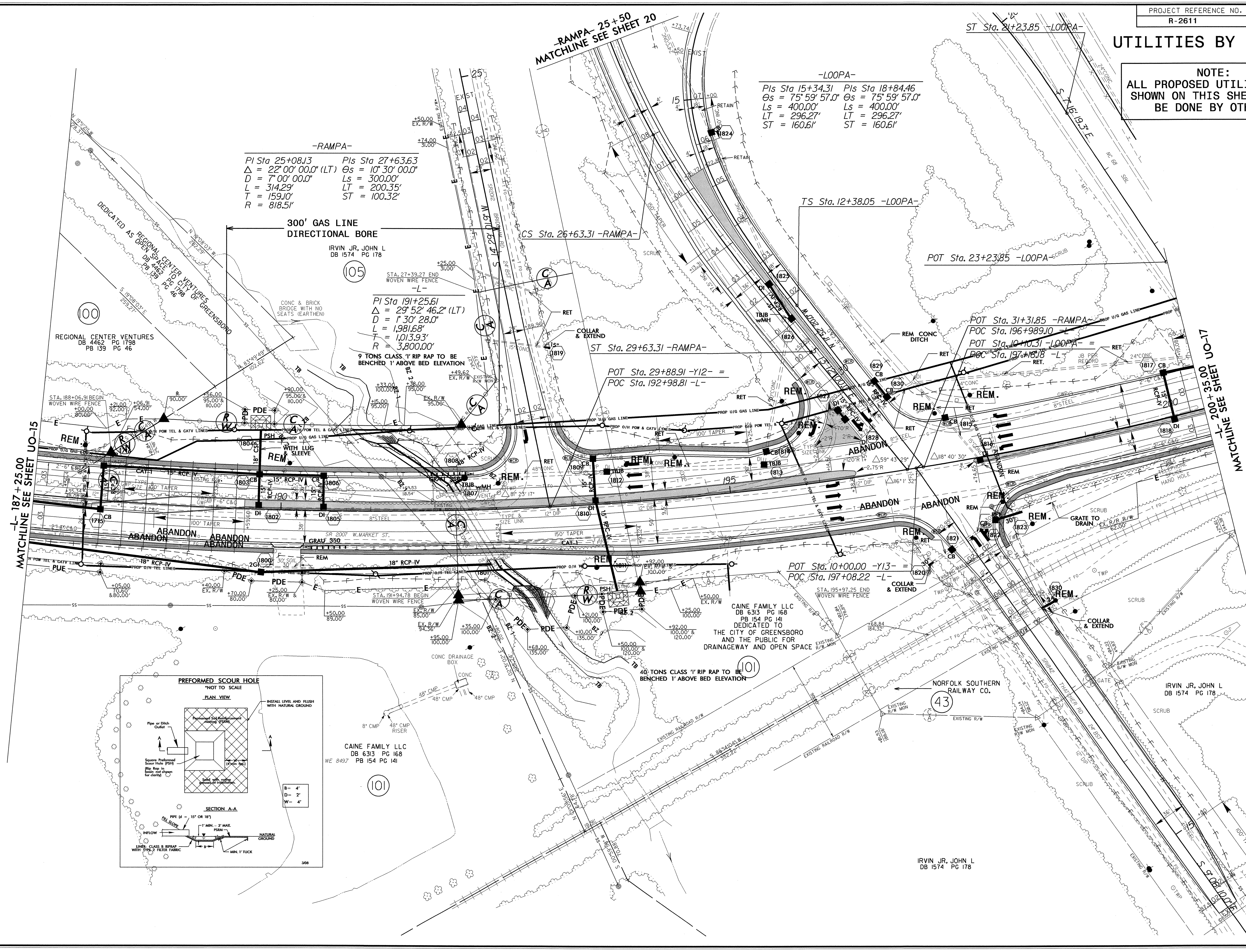
-L- 173 + 75.00
MATCHLINE SEE SHEET UO-14

-L- 187 + 25.00 UO-16
MATCHLINE SEE SHEET UO-16



UTILITIES BY OTHERS

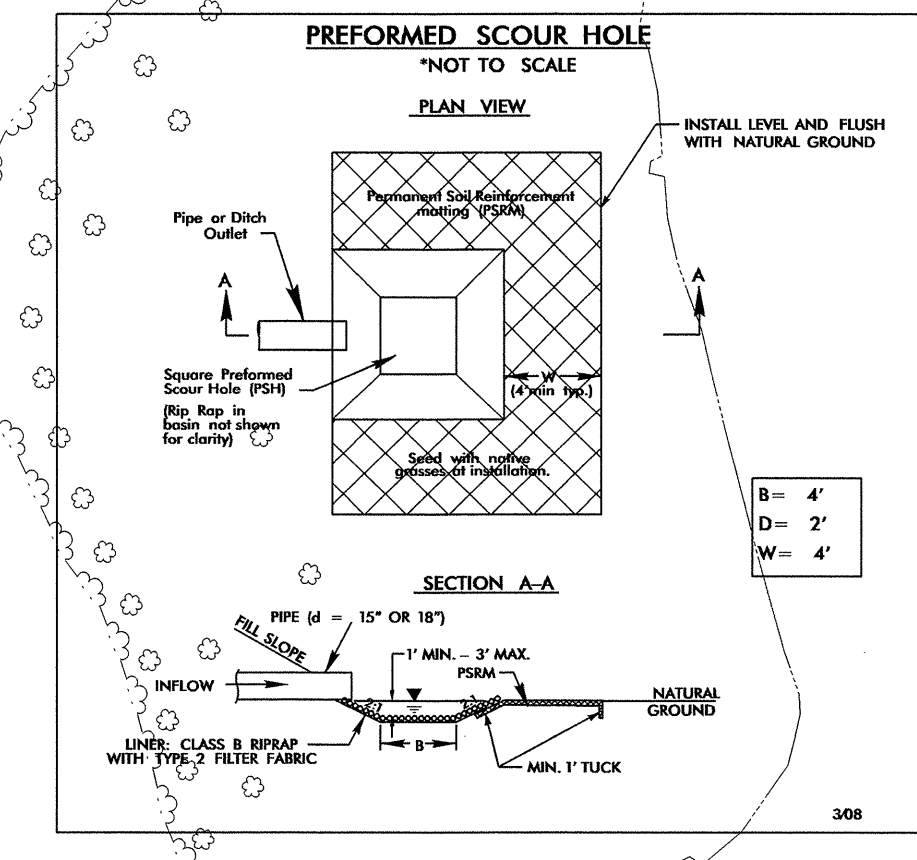
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



-RAMP A-
 PI Sta 25+08.13 Pls Sta 27+63.63
 $\Delta = 22^\circ 00' 00.0''$ (LT) $\Theta_s = 10^\circ 30' 00.0''$
 $D = 7^\circ 00' 00.0''$ $L_s = 300.00'$
 $L = 314.29'$ $LT = 200.35'$
 $T = 159.10'$ $ST = 100.32'$
 $R = 818.51'$

-LOOP A-
 Pls Sta 15+34.31 Pls Sta 18+84.46
 $\Theta_s = 75^\circ 59' 57.0''$ $\Theta_s = 75^\circ 59' 57.0''$
 $L_s = 400.00'$ $L_s = 400.00'$
 $LT = 296.27'$ $LT = 296.27'$
 $ST = 160.61'$ $ST = 160.61'$

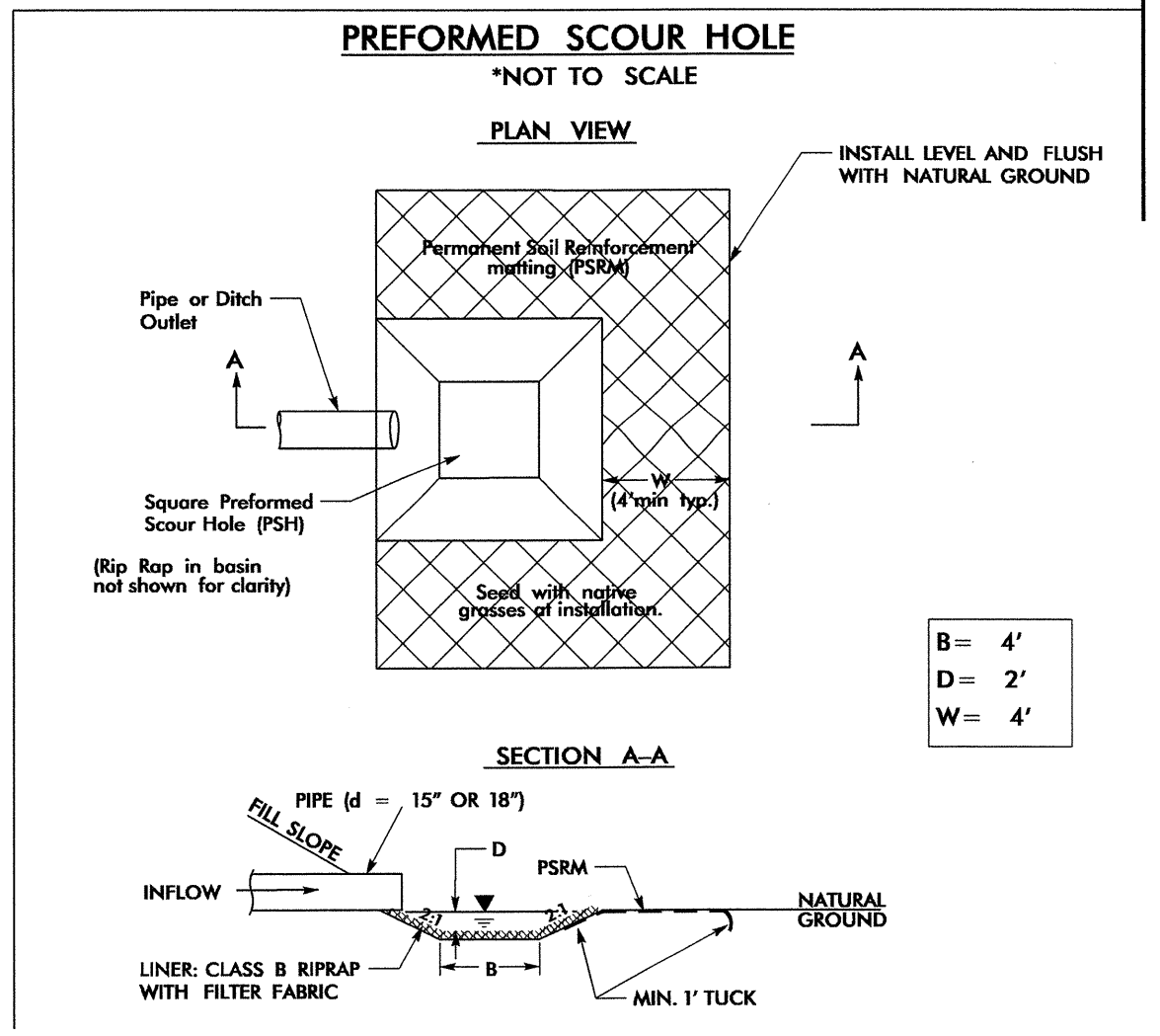
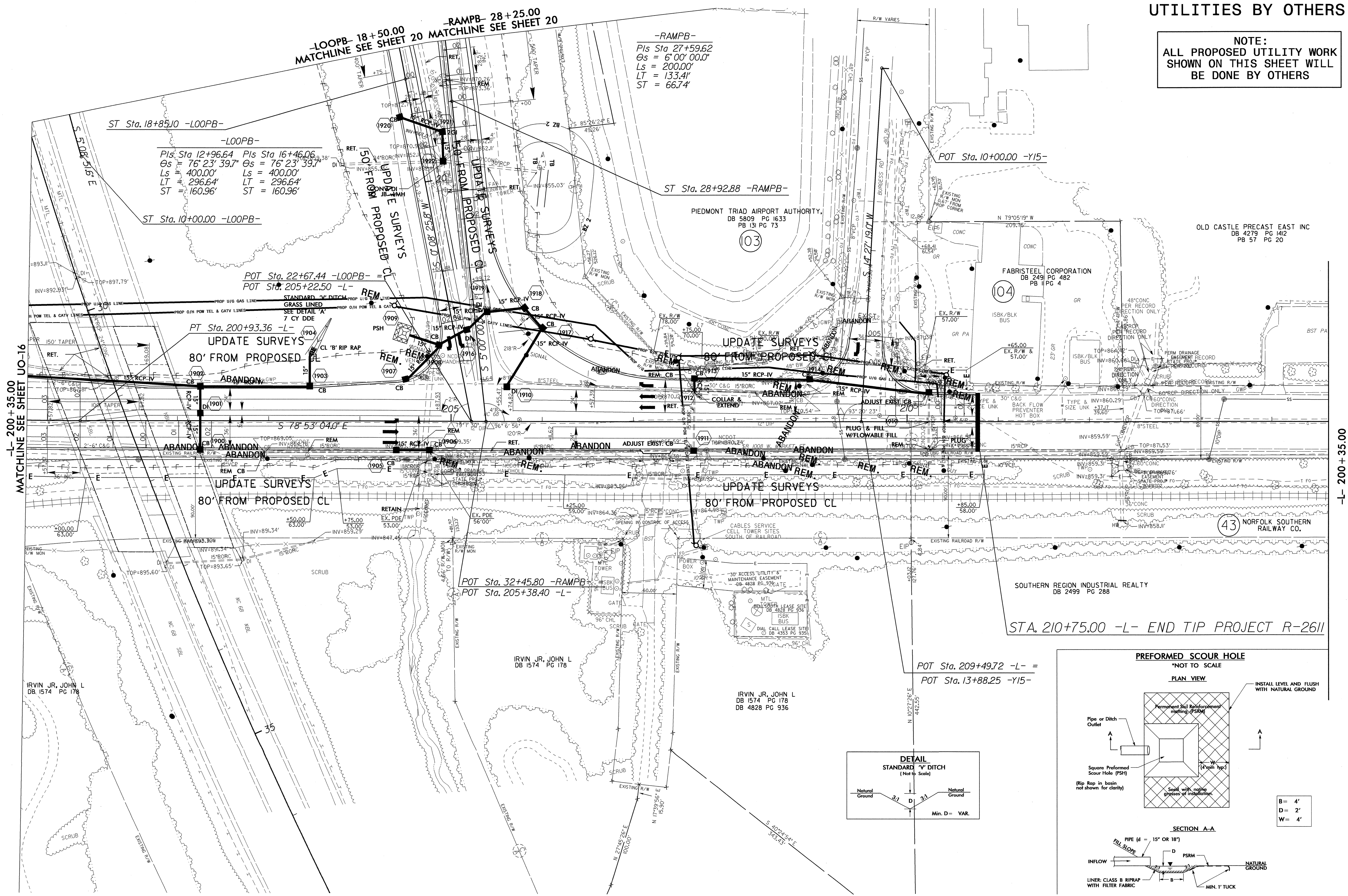
-L-
 PI Sta 191+25.61
 $\Delta = 29^\circ 52' 46.2''$ (LT)
 $D = 1^\circ 30' 28.0''$
 $L = 1,981.68'$
 $T = 1,013.93'$
 $R = 3,800.00'$
 9 TONS CLASS 1' RIP RAP TO BE
 BENCHED 1' ABOVE BED ELEVATION



5/14/99
 29-APR-2015 2:25 U00VR2611_UO-16_rdy_psh18.dgn
 U0011 3:58:51 PM (DATE) (TIME)

UTILITIES BY OTHERS

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



5/14/1999
02 MAY 2011 040 \LUBO\R2611_UO17_rdy_psh19.dgn

UTILITIES BY OTHERS

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

5/14/99

C:\paw\proj\1800\R2611_U018.dwg

29- APR 2001 3:55



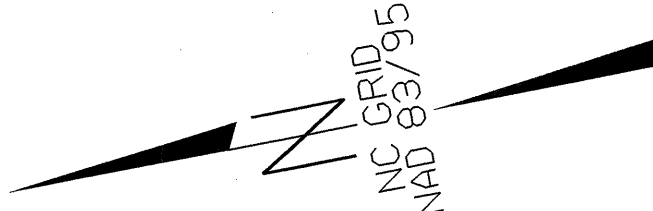
POT Sta. 10+00.00 -Y2-

PI Sta 12+21.91
 $\Delta = 15' 15'' 20.4''$ (RT)
 $D = 6' 21'' 58.3''$
 $L = 239.64'$
 $T = 120.53'$
 $R = 900.00'$

-BY2-42 5+00.00 POT
 -Y2- 11+68.23 POC (18.15' LT.)

PT Sta. 13+41.02 -Y2-

PC Sta. 11+01.38 -Y2-

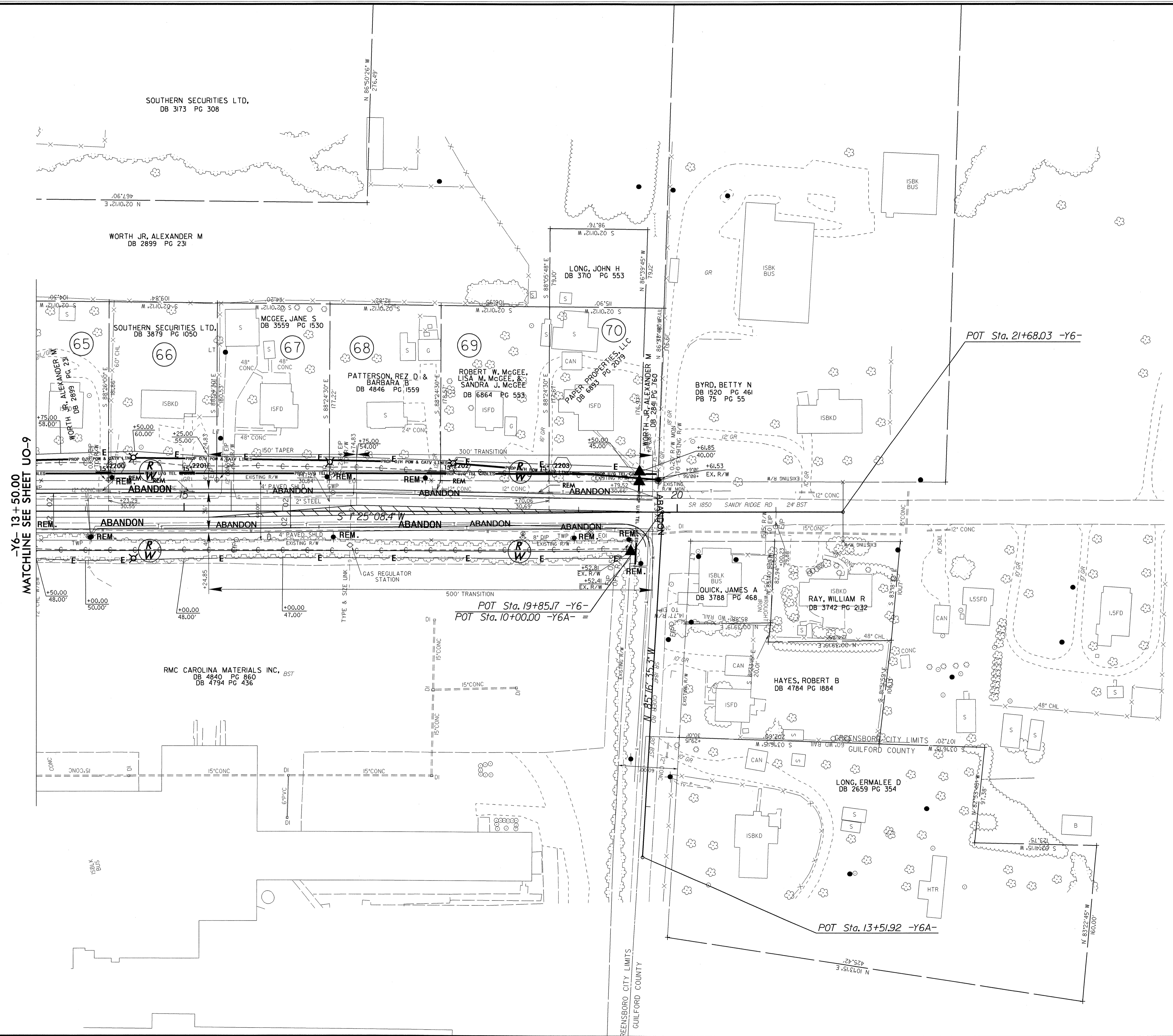


BM #14
 -BL- STA 41+79
 1218' LEFT
 ELEV. 968.46'

-Y2- 16 + 50.00
 MATCHLINE SEE SHEET U0-4

UTILITIES BY OTHERS

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



MATCHLINE SEE SHEET UO-9

5/14/99

02-MAY-2011 10:41
U:\projects\RES\UO\UO-19.dwg
\$\$\$\$\$USERRNHF\$\$\$\$\$