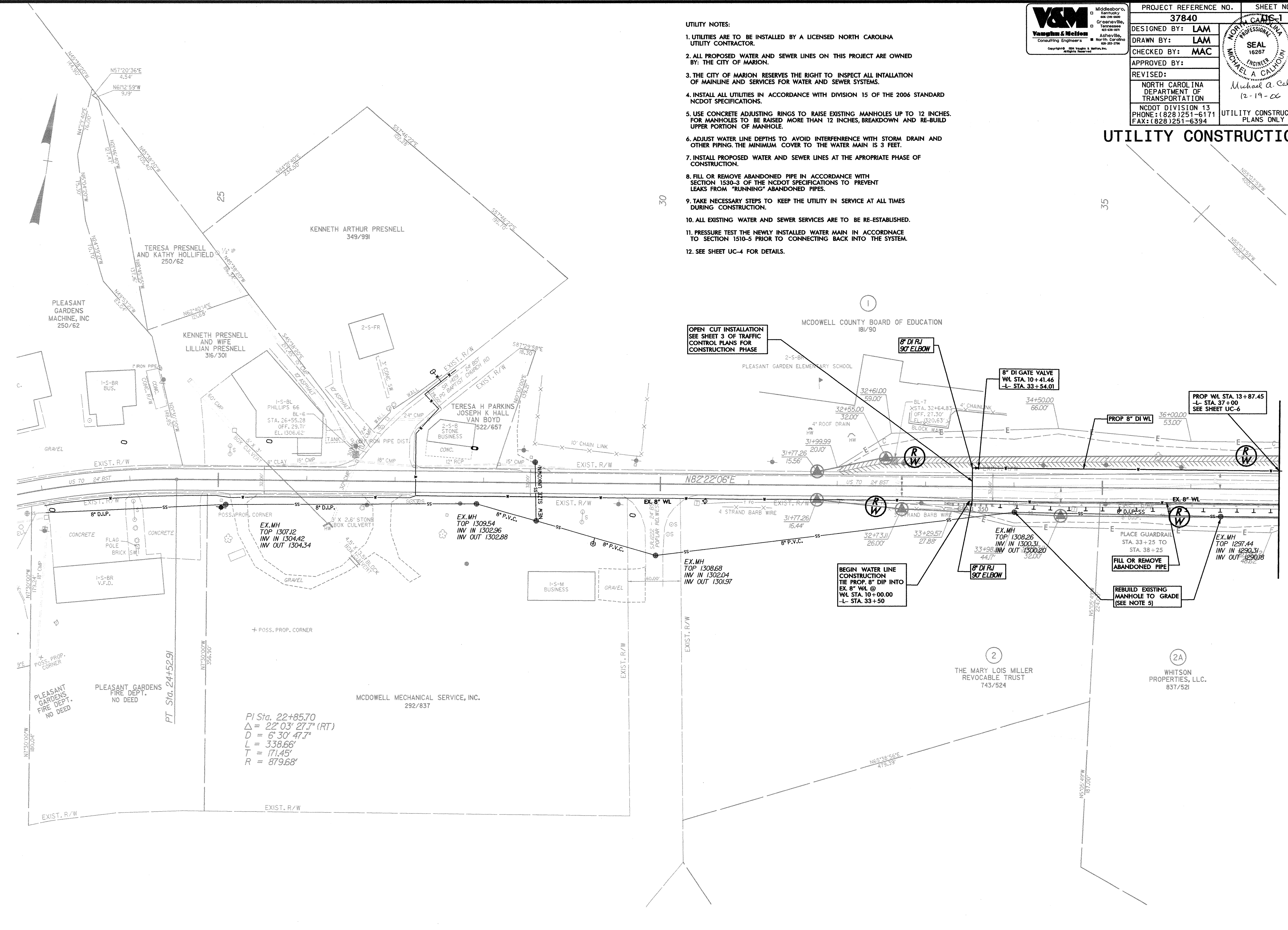


PROJECT REFERENCE NO.	SHEET NO.
37840	16-1
DESIGNED BY: LAM	
DRAWN BY: LAM	
CHECKED BY: MAC	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
NCDOT DIVISION 13 PHONE: (828) 251-6171 FAX: (828) 251-6394	
UTILITY CONSTRUCTION PLANS ONLY	

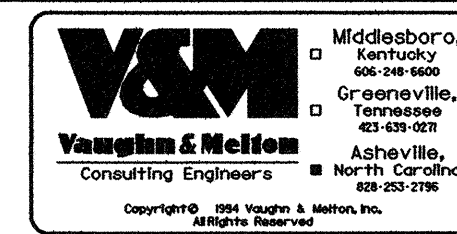
- UTILITY NOTES:
- UTILITIES ARE TO BE INSTALLED BY A LICENSED NORTH CAROLINA UTILITY CONTRACTOR.
 - ALL PROPOSED WATER AND SEWER LINES ON THIS PROJECT ARE OWNED BY: THE CITY OF MARION.
 - THE CITY OF MARION RESERVES THE RIGHT TO INSPECT ALL INSTALLATION OF MAINLINE AND SERVICES FOR WATER AND SEWER SYSTEMS.
 - INSTALL ALL UTILITIES IN ACCORDANCE WITH DIVISION 15 OF THE 2006 STANDARD NCDOT SPECIFICATIONS.
 - USE CONCRETE ADJUSTING RINGS TO RAISE EXISTING MANHOLES UP TO 12 INCHES. FOR MANHOLES TO BE RAISED MORE THAN 12 INCHES, BREAKDOWN AND RE-BUILD UPPER PORTION OF MANHOLE.
 - ADJUST WATER LINE DEPTHS TO AVOID INTERFERENCE WITH STORM DRAIN AND OTHER PIPING. THE MINIMUM COVER TO THE WATER MAIN IS 3 FEET.
 - INSTALL PROPOSED WATER AND SEWER LINES AT THE APPROPRIATE PHASE OF CONSTRUCTION.
 - FILL OR REMOVE ABANDONED PIPE IN ACCORDANCE WITH SECTION 1530-3 OF THE NCDOT SPECIFICATIONS TO PREVENT LEAKS FROM "RUNNING" ABANDONED PIPES.
 - TAKE NECESSARY STEPS TO KEEP THE UTILITY IN SERVICE AT ALL TIMES DURING CONSTRUCTION.
 - ALL EXISTING WATER AND SEWER SERVICES ARE TO BE RE-ESTABLISHED.
 - PRESSURE TEST THE NEWLY INSTALLED WATER MAIN IN ACCORDANCE TO SECTION 1510-5 PRIOR TO CONNECTING BACK INTO THE SYSTEM.
 - SEE SHEET UC-4 FOR DETAILS.

UTILITY CONSTRUCTION



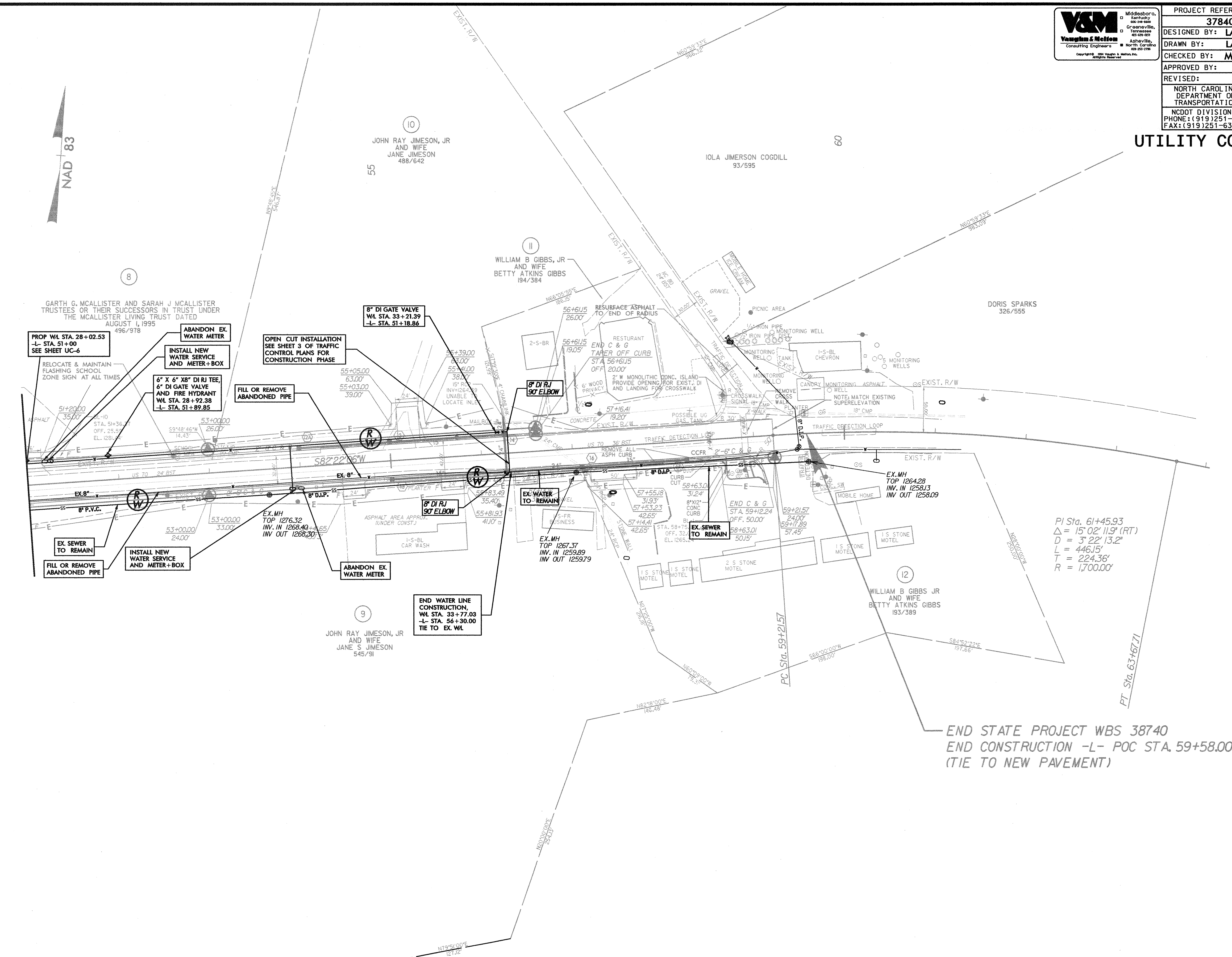
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PROJECT REFERENCE NO.	37840	SHEET NO.	UC-3
DESIGNED BY:	LAM		
DRAWN BY:	LAM		
CHECKED BY:	MAC		
APPROVED BY:		Michael A. Calhoun 12-19-06	
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION NCDOT DIVISION 13 PHONE: (919) 251-6171 FAX: (919) 251-6394	
		UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



$PI\ Sta. 61+45.93$
 $\Delta = 15' 02" 11.9" (RT)$
 $D = 3' 22" 13.2"$
 $L = 446' 15"$
 $T = 224' 36"$
 $R = 1,700.00'$

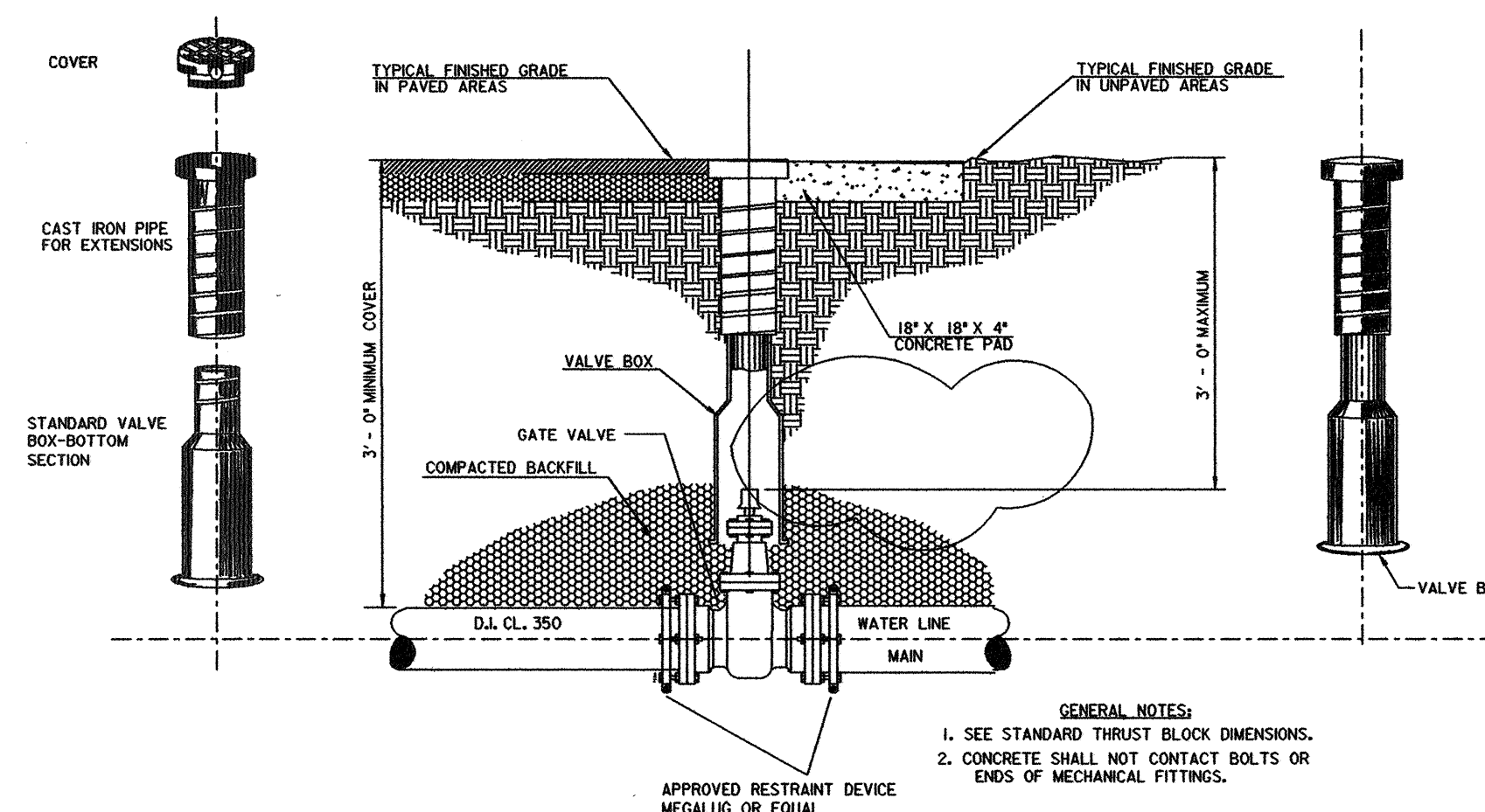
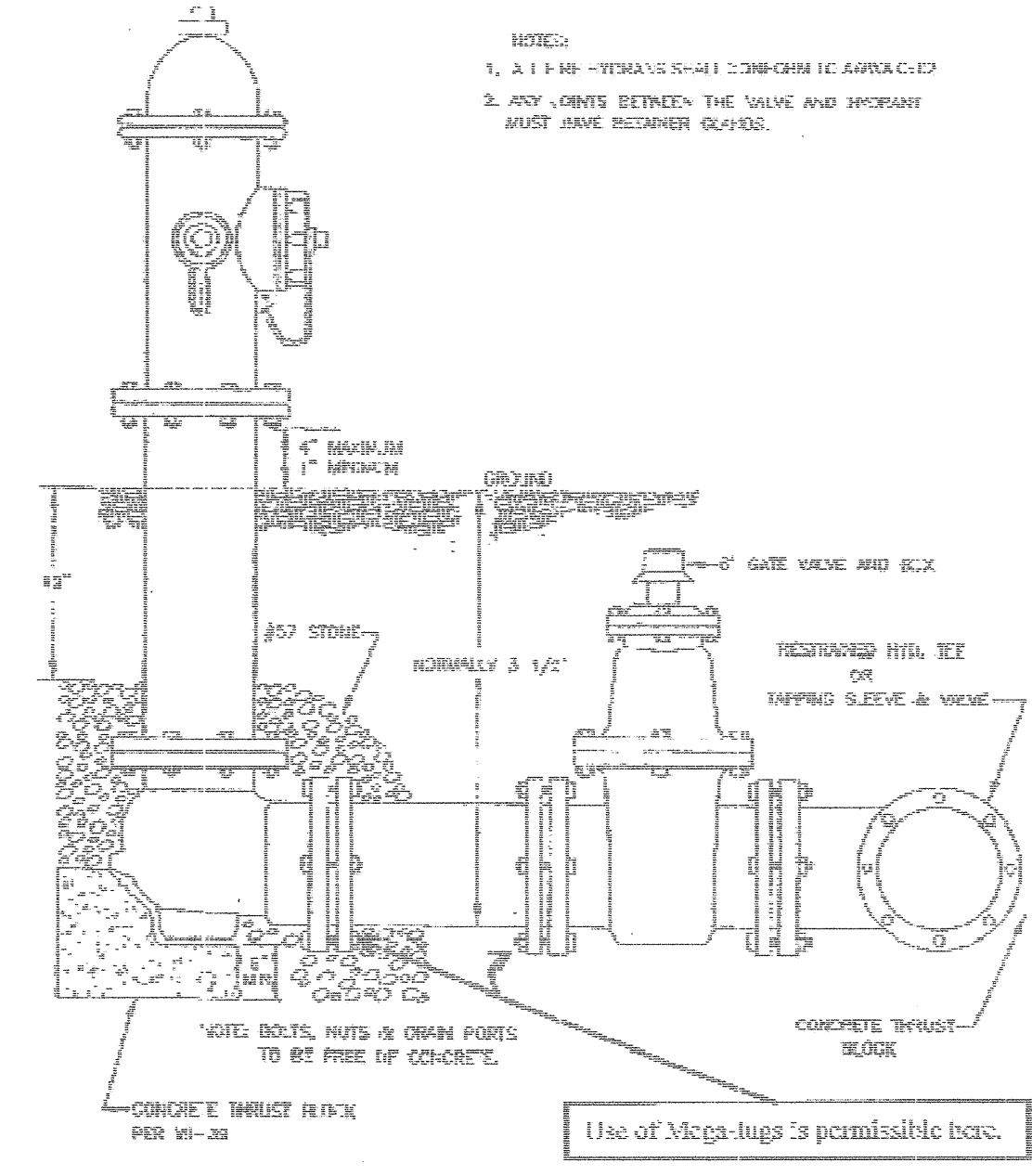
END STATE PROJECT WBS 38740
 END CONSTRUCTION -L- POC STA. 59+58.00
 (TIE TO NEW PAVEMENT)

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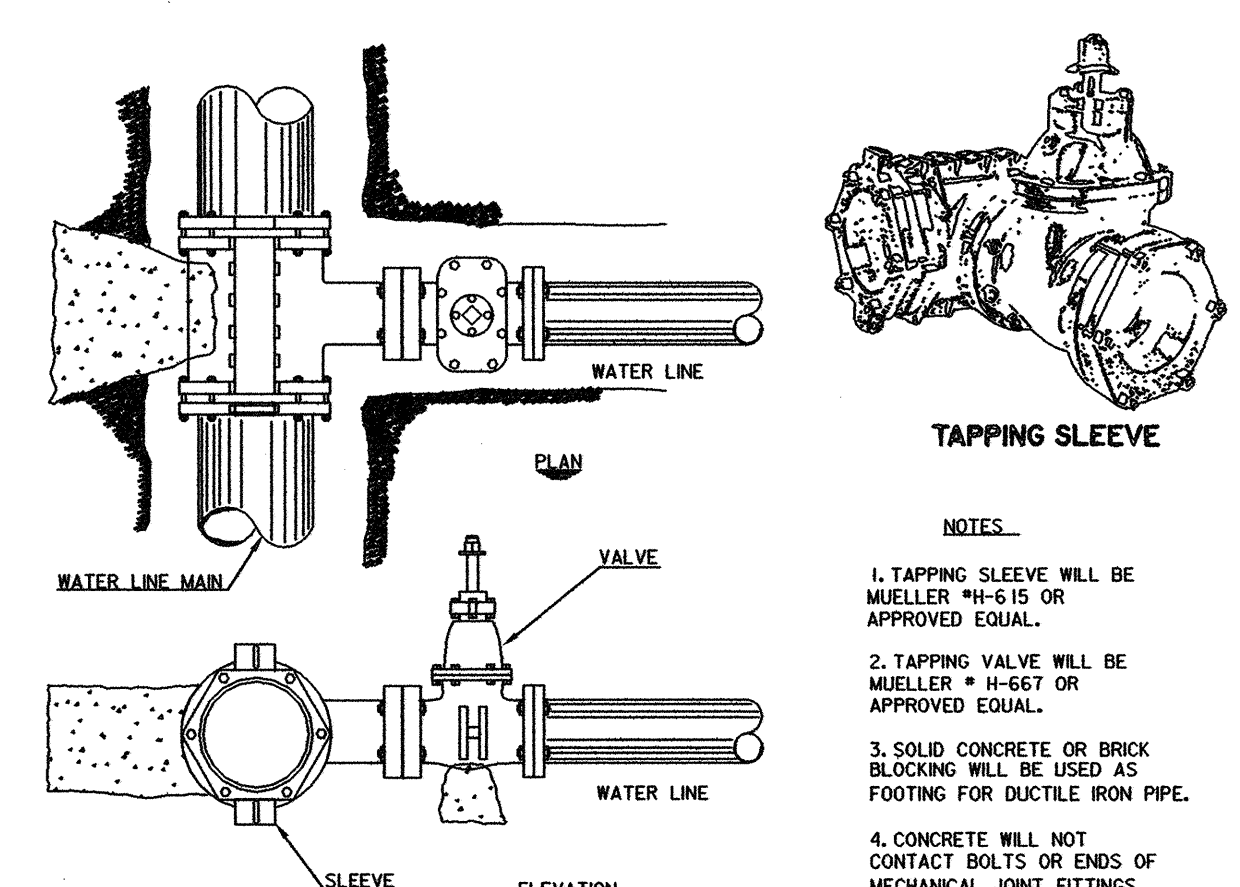
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 Consulting Engineers
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PROJECT REFERENCE NO. 37840 SHEET NO. 116-4
 DESIGNED BY: SSK
 DRAWN BY: SSK
 CHECKED BY: MAC
 APPROVED BY: [Signature]
 REVISED:
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 NCDOT DIVISION 13
 PHONE: (919) 251-6171
 FAX: (919) 251-6394
 UTILITY CONSTRUCTION PLANS ONLY

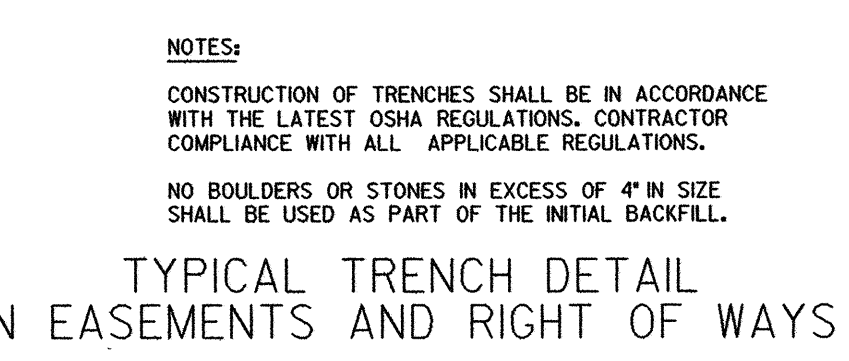
HYDRANT AND VALVE INSTALLATION



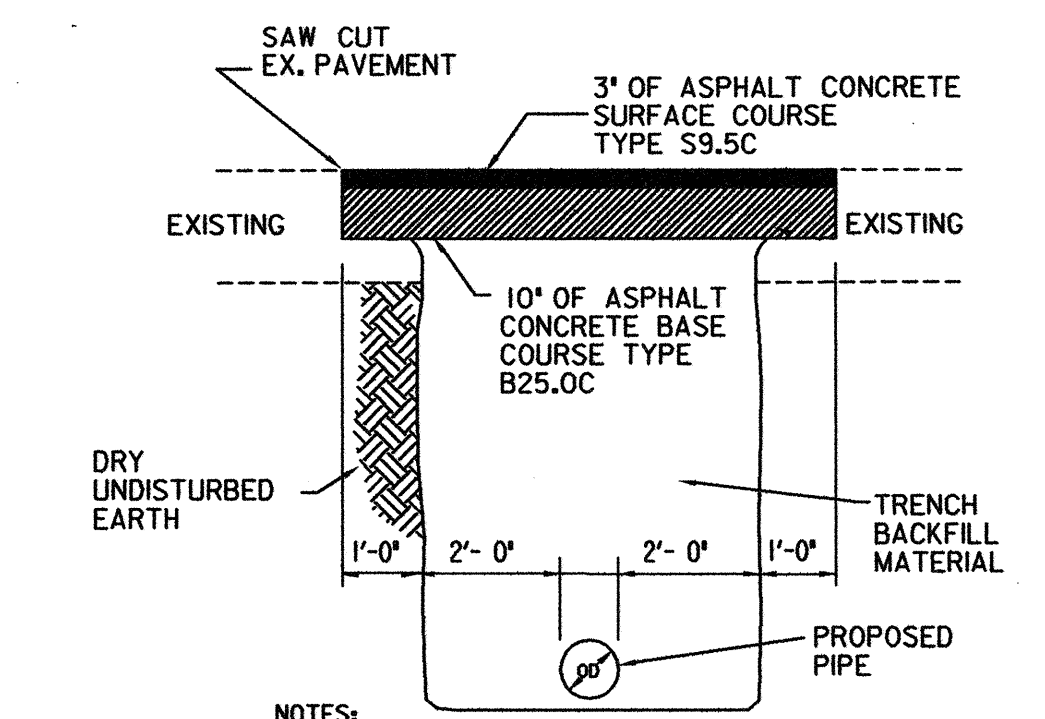
TYPICAL VALVE & VALVE BOX INSTALLATION



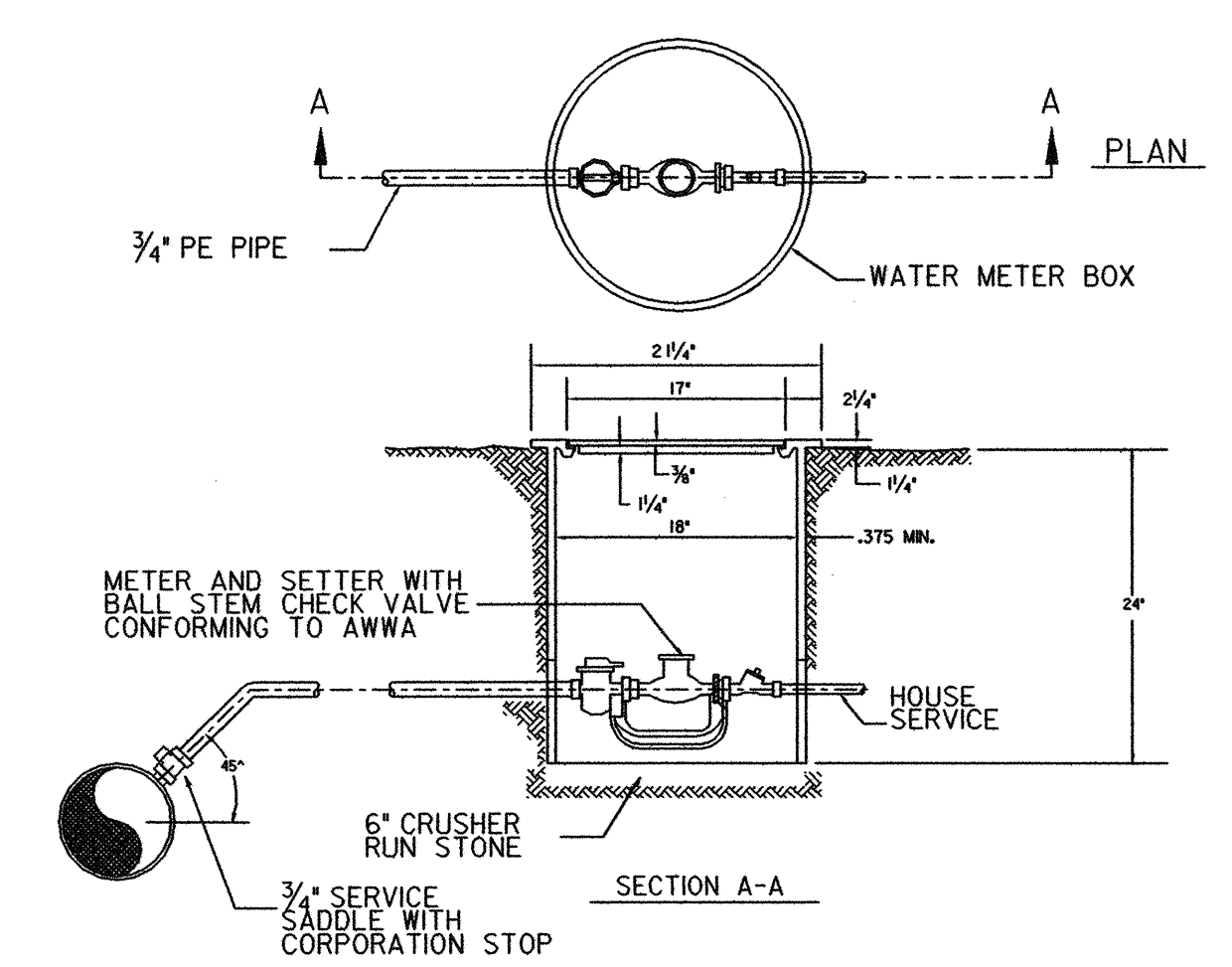
TAPPING SLEEVE AND VALVE ASSEMBLY



TYPICAL TRENCH DETAIL IN EASEMENTS AND RIGHT OF WAYS

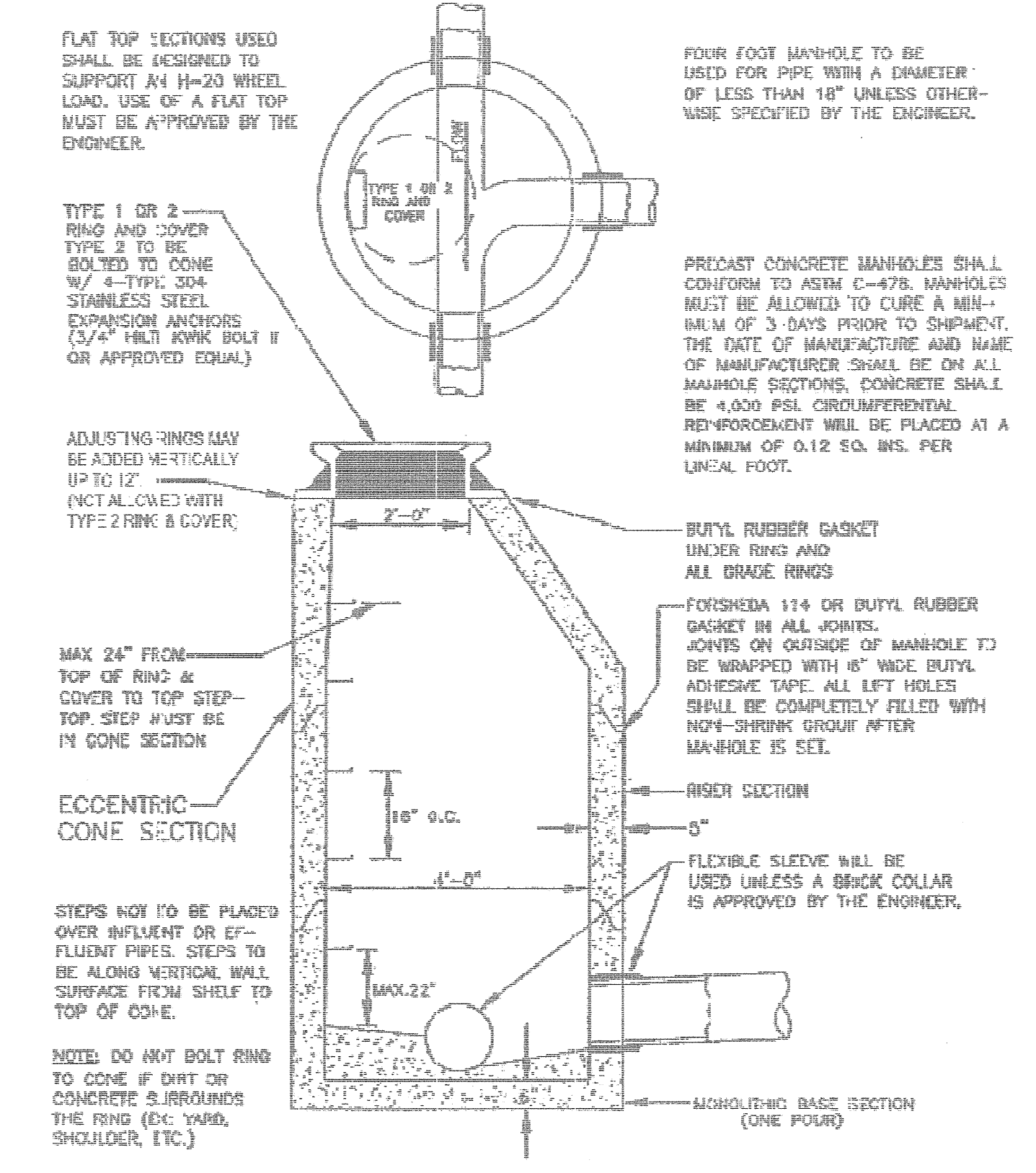


PAVEMENT REPAIR



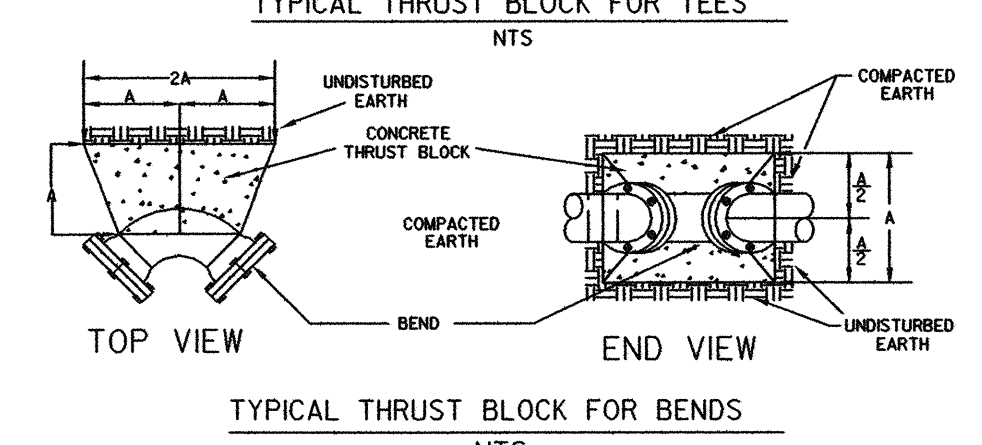
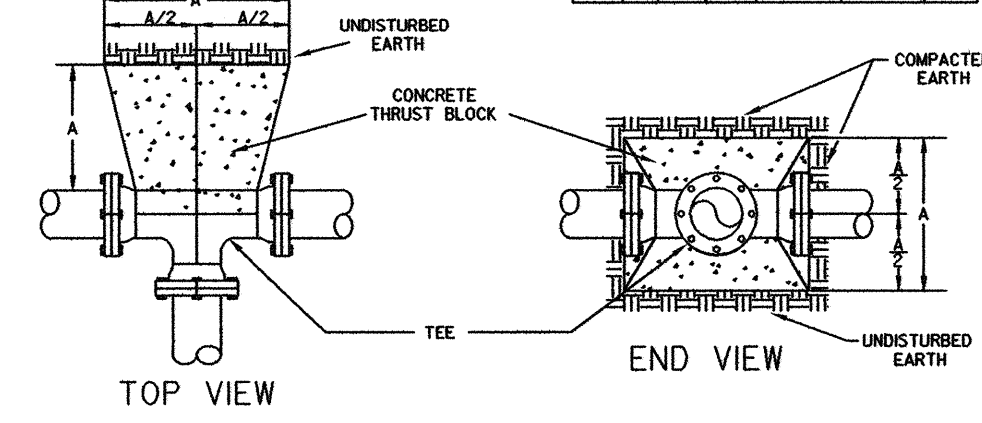
WATER SERVICE CONNECTION

4 FT. PRECAST REINFORCED CONCRETE MANHOLE



NOTES:
 1. MEGALUGS ARE MANDATORY ON ALL BENDS.
 2. CONCRETE SHALL HAVE 3000 P.S.I. COMPRESSIVE STRENGTH.
 3. FITTING JOINTS SHALL BE KEPT FREE OF CONCRETE. A LAYER OF POLYETHYLENE PLASTIC SHALL BE PLACED BETWEEN THE FITTING AND THE CONCRETE.

BEND	TABLE OF "A" DIMENSIONS (ON FEET)							
	90	45	22 1/2	11 1/4	TEE	1.0	1.2	1.6
6	1.4	1.1	1.0	1.0	1.2			
8	1.9	1.5	1.5	1.5	1.6			
10	2.4	1.8	1.8	1.8	2.0			
12	2.8	2.1	2.0	2.0	2.4			
16	3.8	2.8	2.5	2.5	2.8			
24	5.6	4.2	3.0	3.0	4.5			



THRUST BLOCKS FOR FITTINGS

8/17/99
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