STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	STP-164-1(30)	180	406

DETAILED ESTIMATE

ITEM NUMBER	DESCRIPTION	UNITS	QUANTITY
670-0708	BUTTERFLY VALVE, 12 IN	EA	2
670-1120	WATER MAIN, 12 IN, WELDED STEEL, SCHEDULE 30	LF	300
670-1120	WATER MAIN, 12 IN, SLIP JOINT DIP, CLASS 300	LF	360
670-1120	WATER MAIN, 12 IN, RESTRAINED JOINT DIP, CL 300	LF	160
670-2002	VALVE MARKER	EA	2
500-3200	CONCRETE THRUST BLOCKING - CLASS 'B'	CY	10

NOTES:

1. EXISTING UTILITIES SHOWN ARE APPROXIMATE AND DO NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK. DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. CONTRACTOR SHALL COORDINATE WORK WITH UTILITY COMPANY CONTRACTORS WHERE RELOCATION OF EXISTING UTILITIES ARE REQUIRED.

3. ALL WATER LINE SHALL BE MINIMUM PRESSURE CLASS 300. CEMENT MORTAR LINED. SLIP-ON JOINT, DUCTILE IRON PIPE PER ANSI C151/A21.51. WHERE INDICATED ON THE DRAWINGS, RESTRAINED JOINT DUCTILE IRON PIPE (PER ANSI A21.51) AND FITTINGS (PER ANSI A21.10 & A21.53) SHALL BE USED. WELDED STEEL WATER LINE FOR BRIDGE CROSSING SHALL BE MINIMUM SHEDULE 30, PER AWWA C-200. WITH CEMENT MORTAR LINING PER AWWA C-205. FIELD WELDING OF STEEL WATER LINE SHALL BE IN ACCORDANCE WITH AWWA C-206. EXPOSED STEEL PIPING SHALL RECEIVE A THREE-COAT ALIPHATIC POLYURETHANE PAINT SYSTEM. COST OF PAINTING SHALL BE INCLUDED IN THE UNIT PRICE FOR PIPE.

4. BURIED BUTTERFLY VALVES SHALL HAVE MECHANICAL JOINT CONNECTIONS, RATED FOR 150 PSI SERVICE, AND SHALL BE MANUFACTURED BY DEZURIK OR APPROVED EQUAL. VALVES SHALL BE FITTED WITH 2" SQUARE NUT FOR BURIED SERVICE. VALVE BOXES SHALL BE CAST IRON AND SHALL BE FITTED WITH LIDS INDICATING "WATER". CONCRETE VALVE MARKERS SHALL BE INSTALLED AT EACH VALVE LOCATION.

5. TRANSITION COUPLINGS SHALL BE SUITABLE FOR CONNECTION OF DUCTILE IRON PIPE TO STEEL PIPE AND SHALL ACCOMMODATE LINEAR THERMAL EXPANSION OF STEEL PIPE. COUPLINGS SHALL BE MANUFACTURED BY DRESSER, OR APPROVED EQUAL.

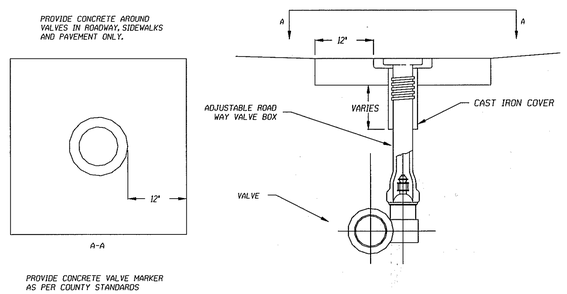
6. WATER LINE SHALL BE FILLED AND PRESSURE TESTED AT 200 PSI FOR TWO HOURS. PIPE AND/OR JOINTS WHICH EXHIBIT PRESSURE LOSS OR LEAKAGE DURING THE TEST SHALL BE REPAIRED AND RETESTED. TEMPORARY THRUST RESTRAINT WILL BE REQUIRED AT ENDS OF WATERLINE. METHOD USED SHALL ALLOW FOR FUTURE TIE-IN BY OTHERS. WATER FOR TESTING SHALL BE SUPPLIED BY FAYETTE COUNTY. CONTRACTOR SHALL PROVIDE NECESSARY PIPING, HOSES, FITTINGS, ETC. AS REQUIRED FOR CONNECTION TO EXISTING WATER MAIN.

7. BACKFILL MATERIALS SHALL BE FREE OF ROCKS, ROOTS, DEBRIS AND OTHER UNSUITABLE MATERIAL. BACKFILL SHALL BE PLACED IN THE TRENCH IN LIFTS AND MECHANICALLY COMPACTED TO MEET D.O.T. SUBGRADE REQUIREMENTS BENEATH ALL PAVEMENTS, SLABS AND/OR FOOTINGS. ALL OTHER AREAS SHALL BE COMPACTED TO A MINIMUM OF 85% STANDARD PROCTOR.

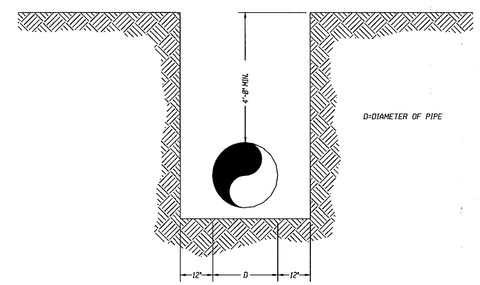
8. SEE BRIDGE PLANS FOR INSTALLATION OF WATER LINE AT BRIDGE CROSSING.

BLOCKING DIMENSIONS

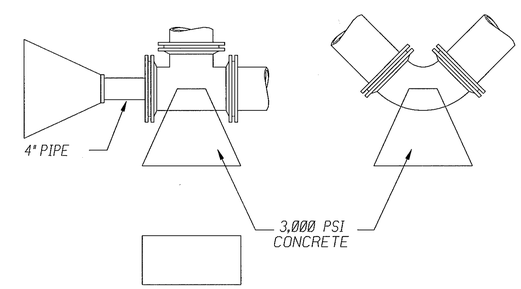
X	A	B	C	D	X	A	B	C	D
90° BEND					TEES 16" RUN				
16"	14"	3'-0"	4'-6"	4'-3"	16"	12"	3'-0"	3'-8"	3'-8"
12"	12"	2'-6"	3'-4"	3'-4"	12"	10"	2'-6"	2'-9"	2'-9"
10"	8"	2'-6"	3'-0"	2'-6"	10"	10"	2'-6"	2'-6"	2'-3"
8"	8"	2'-0"	2'-6"	2'-0"	8"	10"	2'-0"	1'-9"	2'-0"
6"	6"	2'-0"	1'-10"	1'-6"	6"	8"	2'-0"	1'-4"	1'-6"
45° BEND					TEES 12" RUN				
16"	14"	3'-0"	3'-6"	3'-0"					
12"	12"	2'-6"	2'-6"	2'-6"	12"	10"	2'-6"	2'-9"	2'-9"
10"	8"	2'-6"	2'-3"	2'-0"	10"	10"	2'-6"	2'-6"	2'-3"
8"	8"	2'-0"	1'-8"	1'-8"	8"	10"	2'-0"	1'-9"	2'-0"
6"	6"	2'-0"	1'-3"	1'-3"	6"	8"	2'-0"	1'-4"	1'-6"
22 1/2° BEND					TEES 10" RUN				
16"	12"	2'-6"	2'-4"	2'-4"					
12"	8"	2'-0"	1'-9"	1'-9"					
10"	8"	2'-0"	1'-6"	1'-6"	10"	10"	2'-6"	2'-6"	2'-3"
8"	6"	2'-0"	1'-3"	1'-3"	8"	10"	2'-0"	1'-9"	2'-0"
6"	6"	1'-6"	1'-0"	1'-0"	6"	8"	2'-0"	1'-4"	1'-6"
11 1/4° BEND					TEES 8" RUN				
16"	8"	2'-0"	1'-8"	1'-8"	8"	10"	2'-0"	1'-9"	2'-0"
12"	6"	2'-0"	1'-3"	1'-3"	6"	8"	2'-0"	1'-4"	1'-6"
10"	6"	1'-6"	1'-0"	1'-0"	TEES 6" RUN				
8"	6"	1'-6"	1'-0"	1'-0"	6"	8"	2'-0"	1'-4"	1'-4"
6"	6"	1'-6"	1'-0"	1'-0"					



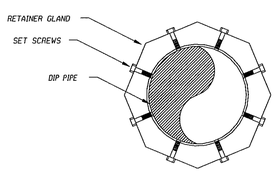
TYPICAL VALVE DETAIL
(NOT TO SCALE)



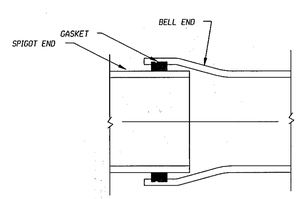
TYPICAL TRENCH DETAIL
(NOT TO SCALE)



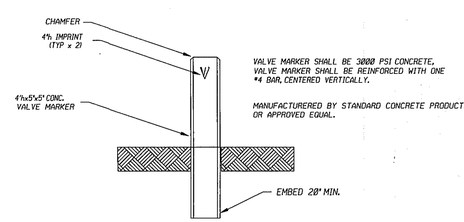
THRUST BLOCKING DETAIL
(NOT TO SCALE)



DETAIL - RESTRAINED JOINT
(NOT TO SCALE)



DETAIL - SLIP JOINT PIPE
(NOT TO SCALE)



DETAIL - VALVE MARKER
(NOT TO SCALE)

GEORGIA REGISTERED No. 17687 PROFESSIONAL ENGINEER DAVID W. JAEGER

Mallett Consulting, Inc.
ENGINEERING - SURVEYING - PROJECT MANAGEMENT
1158 BRADFORD SQUARE
FAYETTEVILLE, GA 30215
770-719-3333
770-719-3377 (fax)

DATE	REVISIONS	DATE	REVISIONS

GEORGIA
DEPARTMENT OF TRANSPORTATION
WATERLINE RELOCATION PLAN
PROJ. STP-164-1(30) COWETA & FAYETTE CO.
DATE 1/20/04 SH 2 OF 2

DGN$SPECIFICATION$$$$$$$$$$$$$$$$$$$$$$
SHOWDATETIME$$$$$$

...\WaterDetail1S20.dgn 01/19/2004 10:42:15 AM