


# MISSION ROAD ROUTINE WATER EXTENSION

## HOWARD COUNTY, MARYLAND

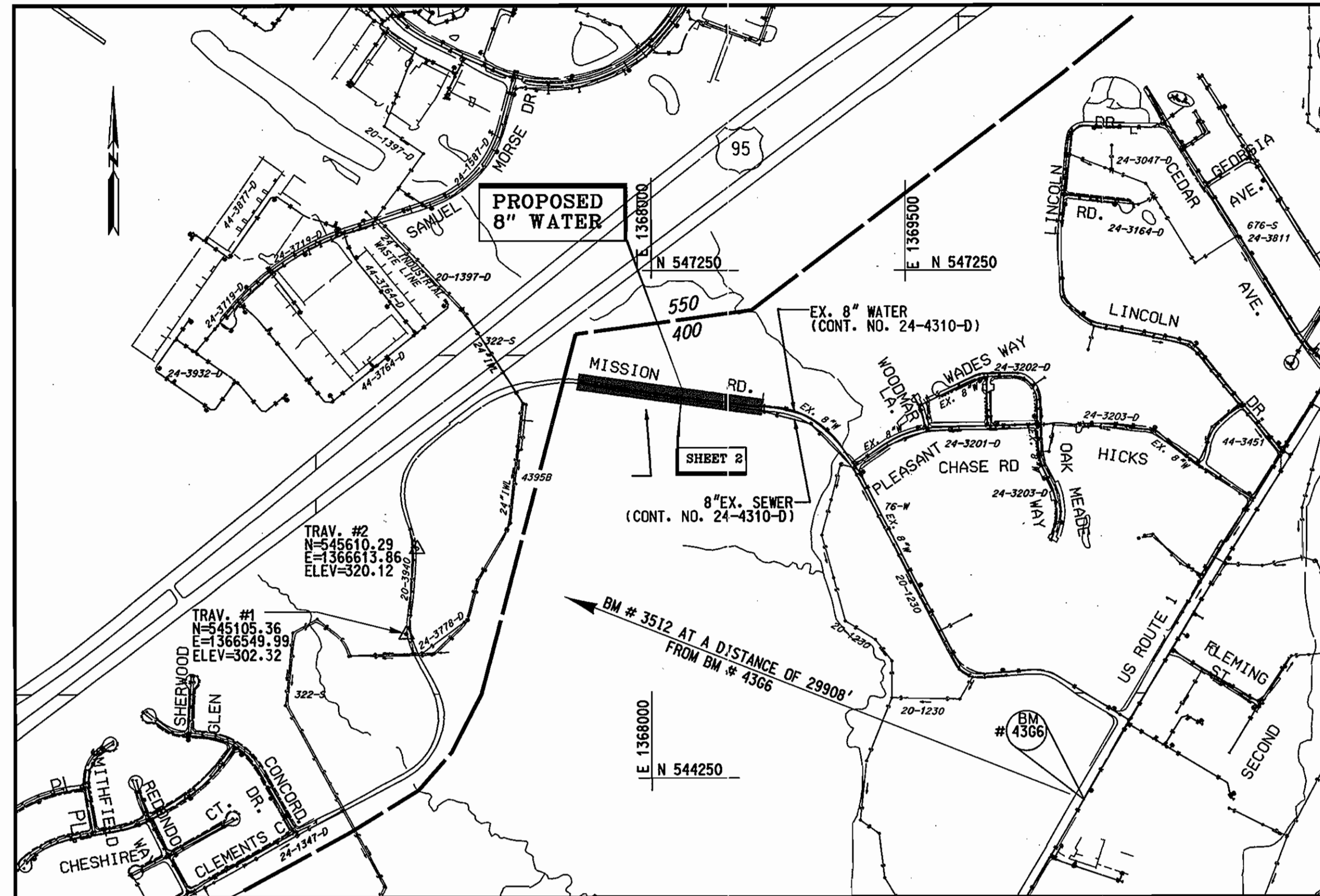
### DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. W-8698  
CONTRACT No. 44-4558

#### GENERAL NOTES

1. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED JANUARY 2008 BY KCI TECHNOLOGIES, INC.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS:  
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 4366 & 3512. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE IRON BARS.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  

AT&T	1-800-252-1133
BGE (CONSTRUCTION SERVICES)	410-850-4620
BGE (EMERGENCY)	410-685-1400
BUREAU OF UTILITIES (DPW)	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033 / 410-224-9210
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.
12. ALL DUCTILE IRON PIPES TO BE USED ON THE PUBLIC WATER SYSTEM SHALL BE CLASS 54. DUCTILE IRON FITTINGS SHALL MEET THE REQUIREMENTS OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FROM CONSTRUCTION AND SHALL BE EXTERIOR EPOXY COATED IN ACCORDANCE WITH ANWA C16.
13. TOPS OF WATER MAIN SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
14. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
15. ALL WATER HOUSE CONNECTIONS SHALL BE COPPER MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. OUTSIDE METER SETTINGS SHALL BE CONSTRUCTED PER STANDARD DETAIL W3-27.
16. EXCEPT AS INDICATED ON THE PLANS AND NOTED ABOVE, ALL PUBLIC WATER MAINS SHALL BE POLYVINYLCHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF ANWA C900 DR18. PRESSURE CLASS 150 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND ALL SUBSEQUENT AMENDMENTS THERETO.
17. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD DETAIL. ALL FIRE HYDRANT LEADS SHALL BE POLYVINYL CHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF ANWA C900 DR18 AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
18. ALL WATER MAINS CONSTRUCTED IN FILL AREAS SHALL BE RESTRAINED DUCTILE IRON PIPE CLASS 54 MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
19. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
20. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
21. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF UTILITIES HOWARD COUNTY, 15 DAYS PRIOR TO WATER MAIN SHUT DOWNS.
22. WATER MAINS SHALL BE FILLED WITH WATER AND BROUGHT TO 150psi FOR 2 HOURS.
23. THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINES, GRADES AND ELEVATION OF THE PROPOSED FACILITIES.
24. CONTINUITY TEST STATION SHALL BE PLACED ADJACENT TO EACH FIRE HYDRANT AND ANCHORAGES SHALL BE INSTALLED UNDER WATER VALVES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATION AND DETAILS.



#### VICINITY MAP




















SCALE: 1" = 500'

TYPE OF BUILDING:	RESIDENTIAL
NUMBER OF PARCELS:	1
NUMBER OF SEWER HOUSE CONNECTIONS:	0
NUMBER OF WATER HOUSE CONNECTIONS:	1
DRAINAGE AREA:	LITTLE PATUXENT
PRESSURE ZONE:	400
WATER TEST GRADIENT:	600

HORIZONTAL AND VERTICAL CONTROL BASED ON MARYLAND NAD83(91) (HORIZONTAL) AND NAVD88 (VERTICAL) DATUM. HOWARD COUNTY GEODETIC SURVEY CONTROL NUMBERS:

NO. 4366	NO. 3512
N 544117.440	N 555100.776
E 1370550.861	E 1342733.049
ELEV. 219.42	ELEV. 329.78

#### LEGEND

	TRAVERSE POINT		DECIDUOUS TREE
	WATER MAIN		CONIFEROUS TREE
	FIRE HYDRANT		EXISTING FIRE HYDRANT
	VALVE		EXISTING VALVE
	LIMIT OF DISTURBANCE		EXISTING WATER MAIN
	WATER HOUSE CONNECTION		EXISTING GAS MAIN
	SEWER HOUSE CONNECTION		EXISTING OVERHEAD ELECTRIC
	TEST STATION		EXISTING UNDERGROUND ELECTRIC
	BORING LOCATION		EXISTING SEWER MAIN
			EXISTING MANHOLE

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 15522 EXPIRATION DATE: 9/12/09

#### INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	MISSION ROAD 8" WATER PLAN AND PROFILE
3	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
4	8" PVC WATER MAIN CORROSION CONTROL LAYOUT
5	CORROSION CONTROL DETAILS 1
6	CORROSION CONTROL DETAILS 2

#### QUANTITIES

ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" WATER (DIP)	L.F.	1077	1078	JMEAGLE / BRS
FH	EA	2	2	MUELLER / BRS
8" V	EA	1	1	"
6" V	EA	2	2	"
1" WHC	L.F.	12	22	READING / BRS

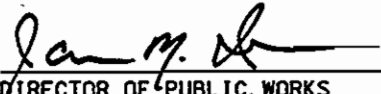

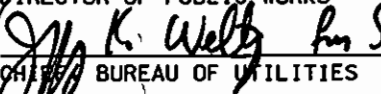

NAME OF UTILITY CONTRACTOR: W.F. WILSON & SONS INC.

CHECKBOX

AS-BUILT DATE:

SURVEY AND DRAFTING DIVISION

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

	6/3/08		5/29/08
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF, BUREAU OF ENGINEERING	DATE
	5/29/08		5-29-08
CHIEF, BUREAU OF UTILITIES	DATE	CHIEF, UTILITY DESIGN DIVISION	DATE

  
ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS  
10 NORTH PARK DRIVE  
HONEY VALLEY, MD 21030  
PHONE: (410) 316-7800  
FAX: (410) 316-7817  
WWW.KCI.COM



DES: GW			
DRN: JM			
CHK: TW			
DATE: FEB. 08	KCI	AS-BUILT DATA ADDED	3/9/08
BY NO.		REVISION	DATE

TITLE SHEET

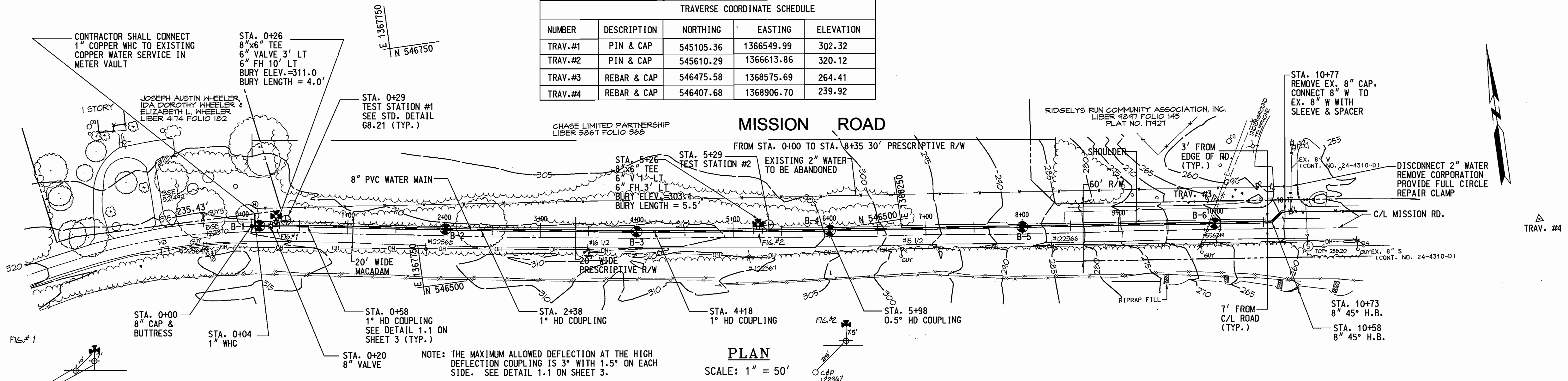
600' SCALE MAP NO. 43 BLOCK NO. 7

MISSION ROAD  
ROUTINE WATER MAIN EXTENSION  
CAPITAL PROJECT No. W-8698  
CONTRACT No. 44-4558

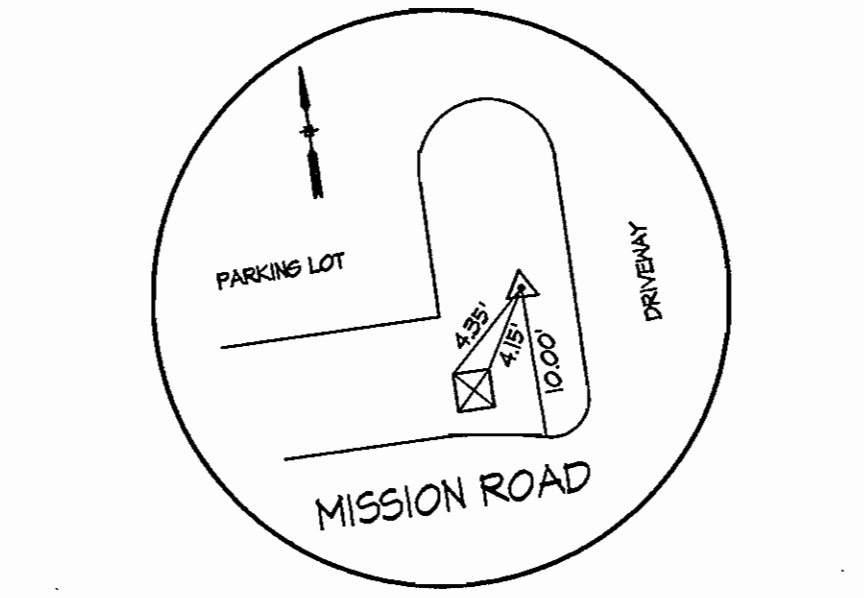
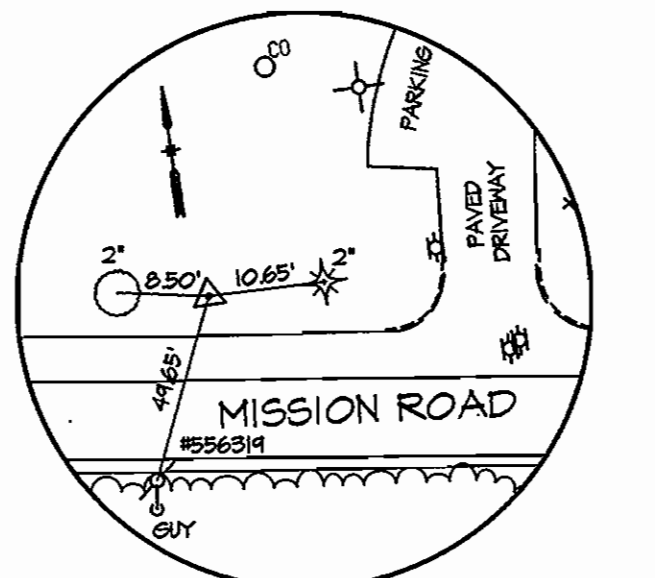
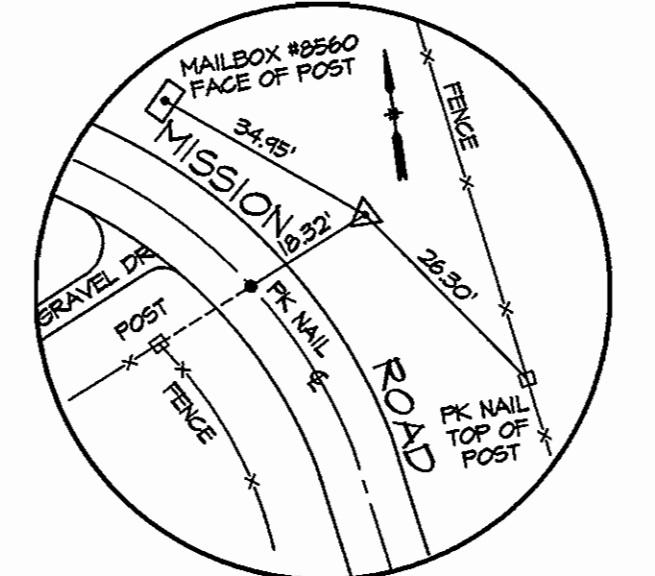
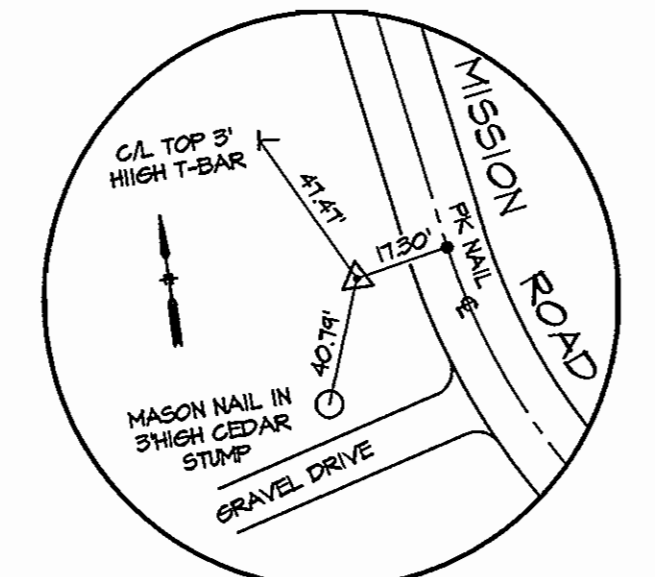
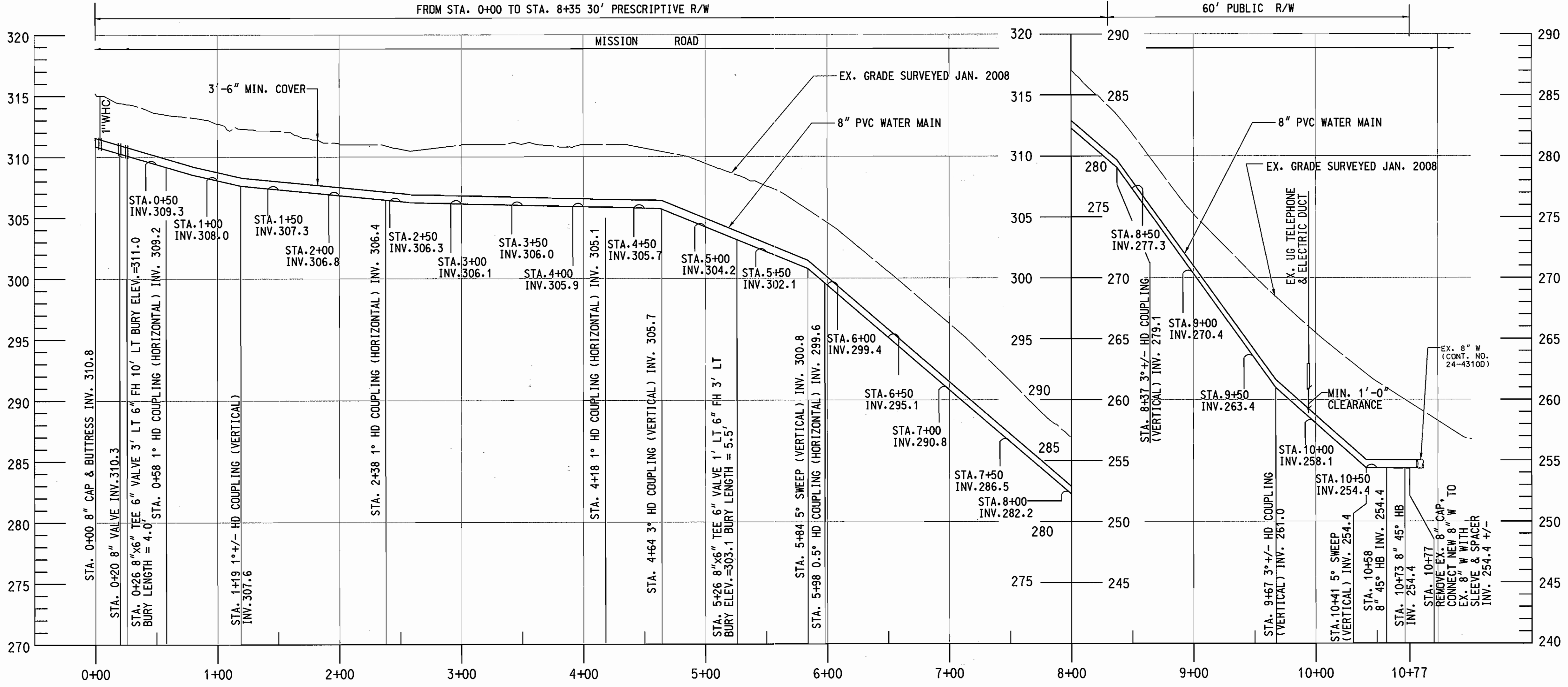
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 1 OF 6

TRAVERSE COORDINATE SCHEDULE				
NUMBER	DESCRIPTION	NORTHING	EASTING	ELEVATION
TRAV.#1	PIN & CAP	545105.36	1366549.99	302.32
TRAV.#2	PIN & CAP	545610.29	1366613.86	320.12
TRAV.#3	REBAR & CAP	546475.58	1368575.69	264.41
TRAV.#4	REBAR & CAP	546407.68	1368906.70	239.92



WATER MAIN STAKEOUT COORDINATE SCHEDULE				
STATION	FITTING	NORTHING	EASTING	
0+00	8" CAP	546587.97	1367582.25	
0+20	8" V	546585.16	1367601.89	
0+26	8"x6" TEE	546584.36	1367607.43	
0+58	1" HD COUPLING (HORIZONTAL)	546579.72	1367639.77	
1+19	1" HD COUPLING (VERTICAL)	546577.98	1367650.40	
2+38	1" HD COUPLING (HORIZONTAL)	546550.33	1367817.50	
4+18	1" HD COUPLING (HORIZONTAL)	546523.37	1367995.26	
4+64	3" HD COUPLING (VERTICAL)	546517.29	1368040.69	
5+26	8"x6" TEE	546509.04	1368102.13	
5+82	5" SWEEP (VERTICAL)	546501.91	1368155.66	
5+98	0.5" HD COUPLING (HORIZONTAL)	546499.46	1368173.96	
8+37	3" HD COUPLING (VERTICAL)	546470.38	1368410.72	
9+67	3" HD COUPLING (VERTICAL)	546454.54	1368539.75	
10+41	5" SWEEP (VERTICAL)	546445.53	1368613.20	
10+58	8" 45° HB	546443.40	1368630.53	
10+73	8" 45° HB	546452.32	1368642.16	
10+77	TIE-IN	546451.85	1368645.65	



**TRAV. #4**  
SCALE=N.T.S.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 5/29/08  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 5-29-08  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 5-29-08  
CHIEF, UTILITY DESIGN DIVISION DATE

**KCI TECHNOLOGIES**

ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

10 NORTH PARK DRIVE  
HUNT VALLEY, MD 21030  
PHONE: (410) 316-7800  
FAX: (410) 316-7817  
WWW.KCI.COM

5/29/08



DES: GW			
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DATE: FEB. 08	KCI	AS-BUILT DATA ADDED	3/4/09
BY	NO.	REVISION	DATE

**MISSION ROAD**  
**8" WATER MAIN**  
**PLAN & PROFILE**

600' SCALE MAP NO. 43 BLOCK NO. 7

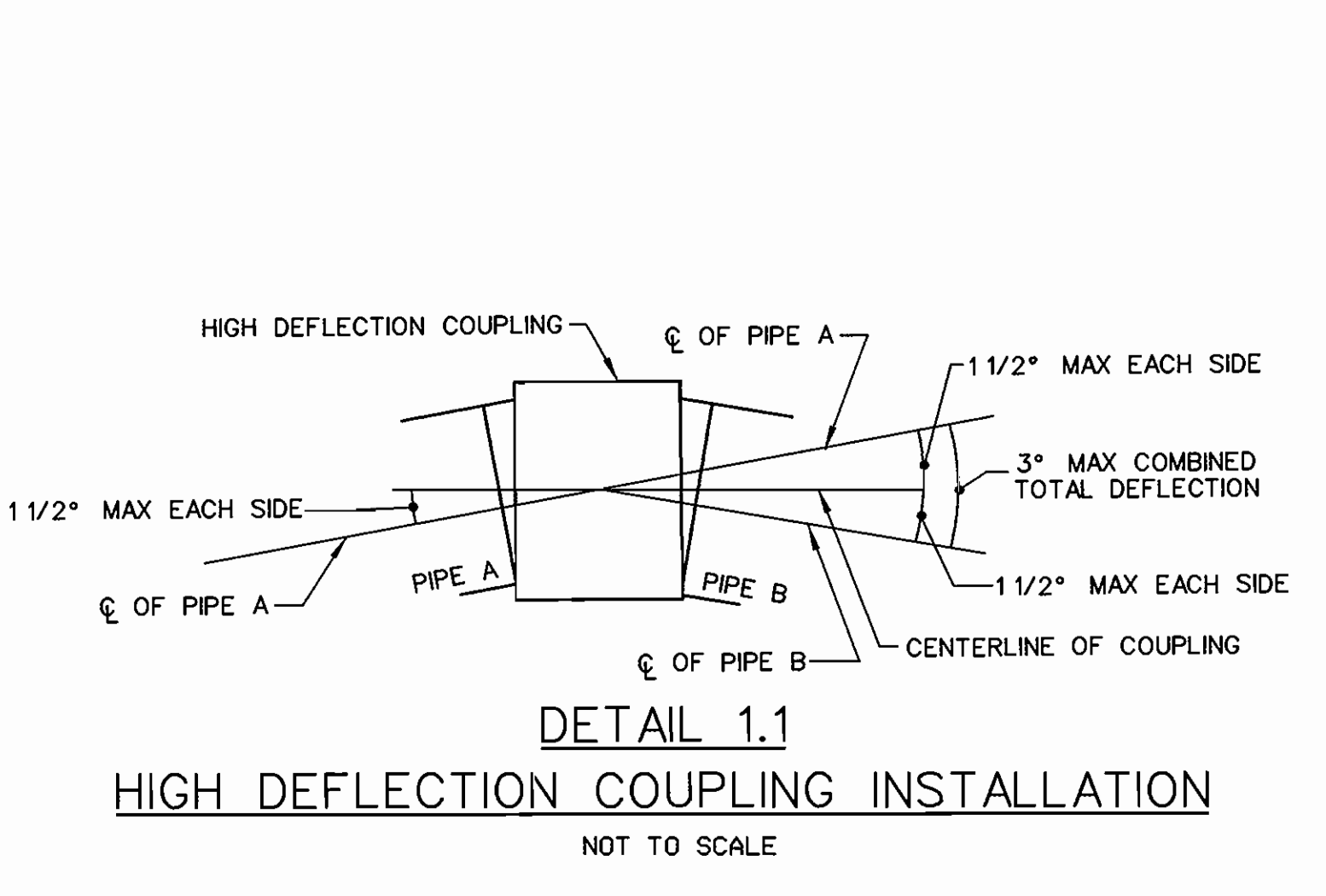
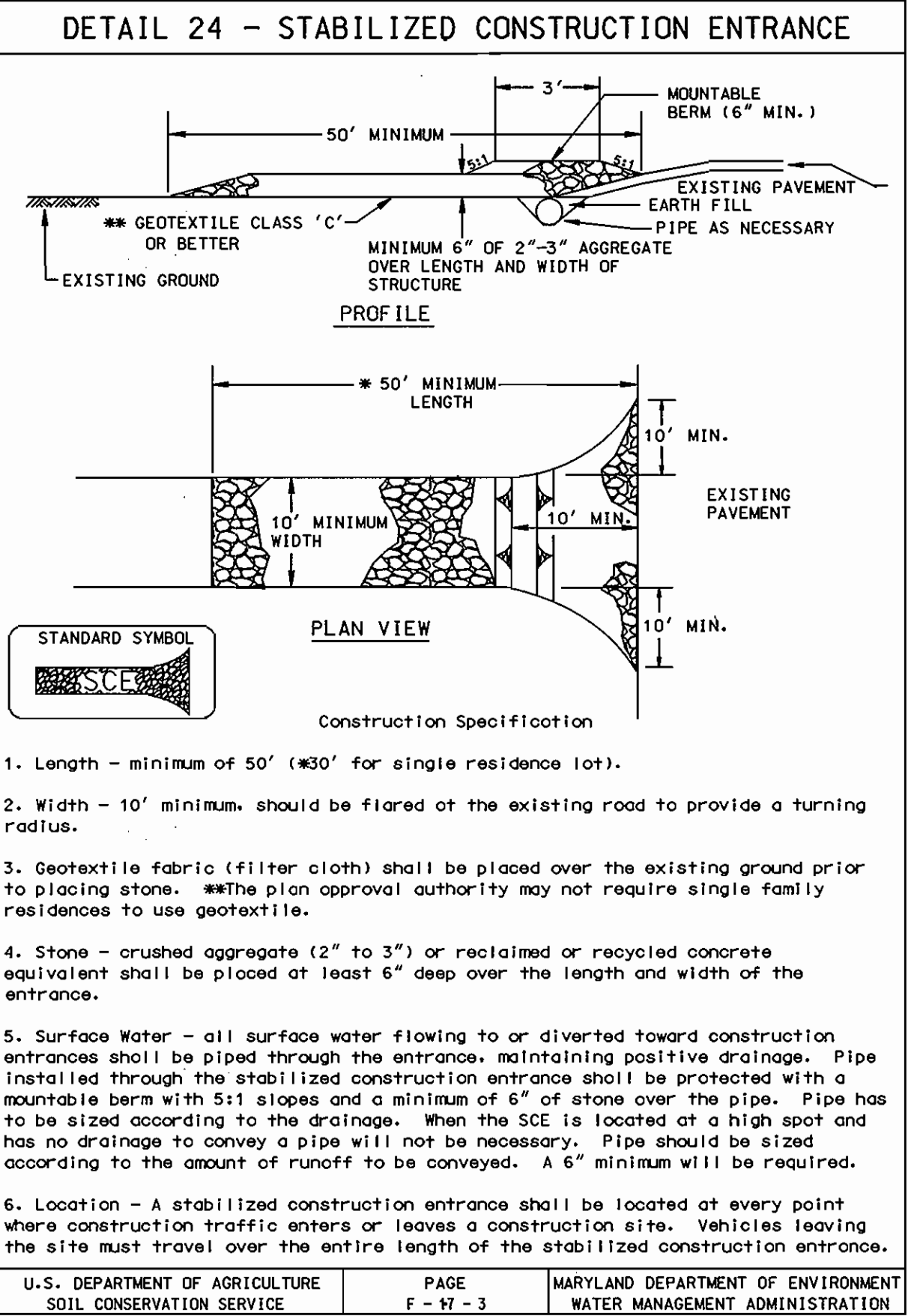
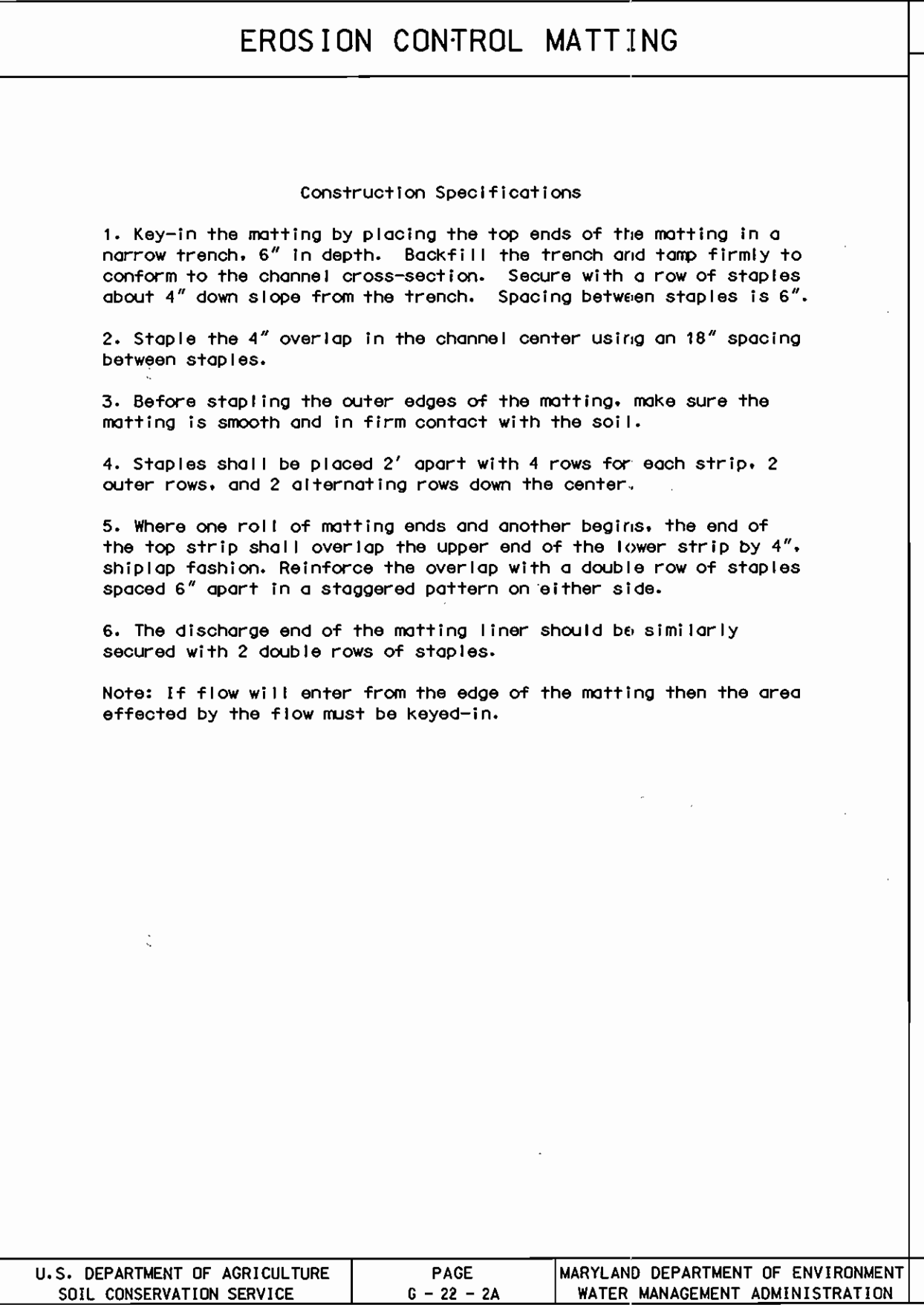
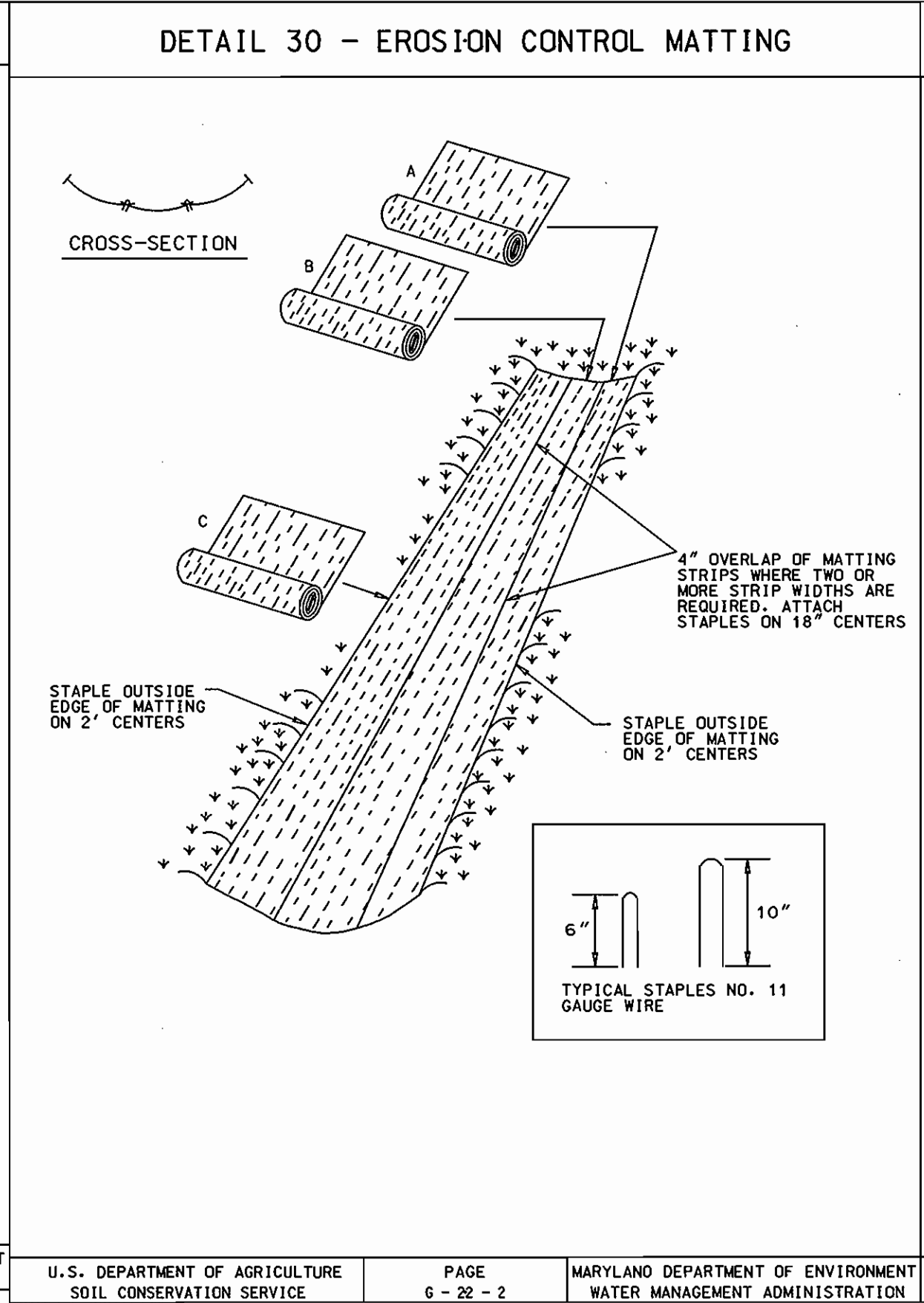
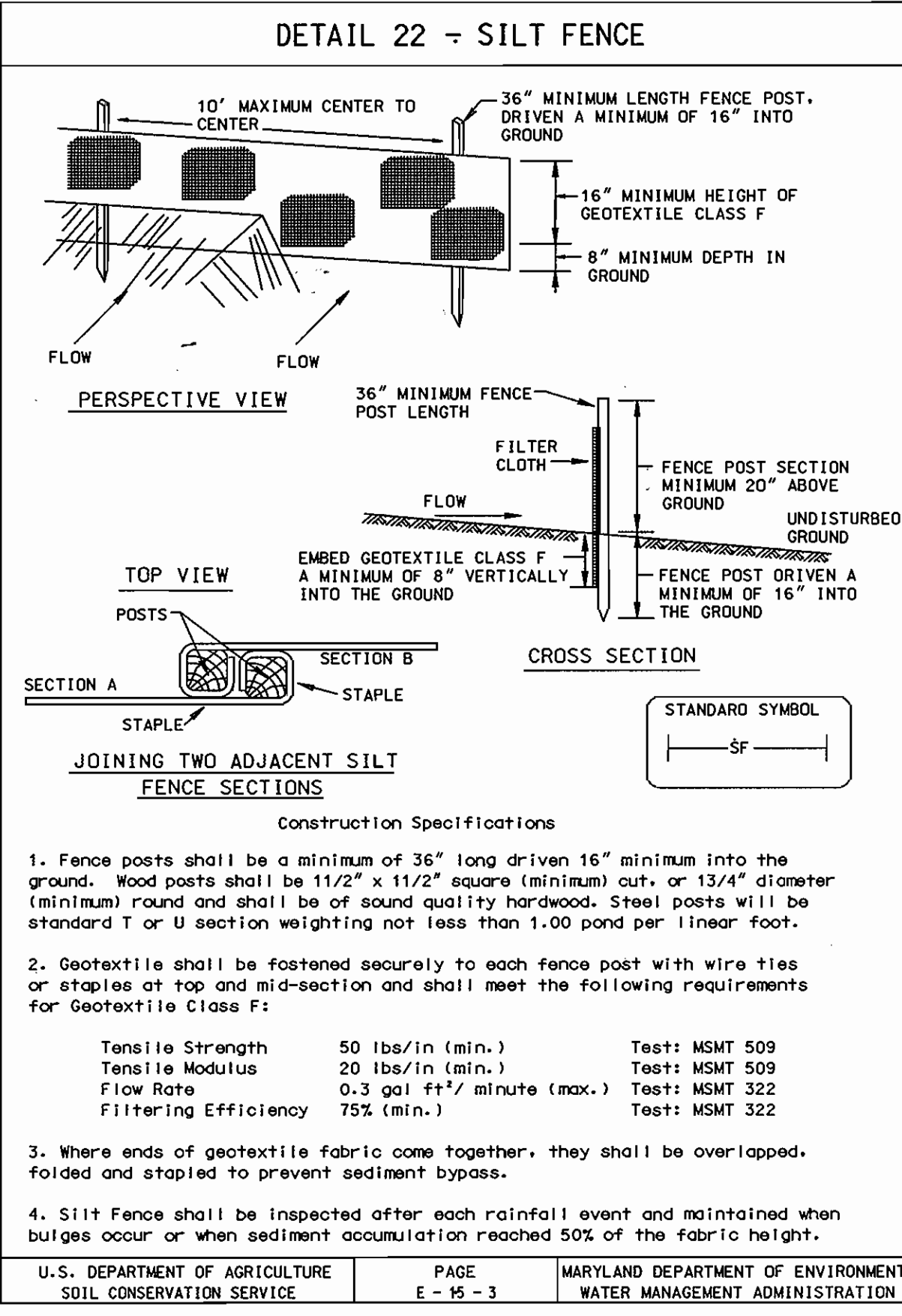
**MISSION ROAD**  
**ROUTINE WATER MAIN EXTENSION**  
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ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 6

PLOTTED: 10:07 AM on Thursday, May 22, 2008  
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\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 13329 EXPIRATION DATE: 9/12/19



### PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

**SEEDBED PREPARATION:** LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

**SOIL AMENDMENTS:** IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 1) PREFERRED -** APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT.).
- 2) ACCEPTABLE -** APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

**SEEDING -** FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (1.05 LBS/1000 SQ FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

**MULCHING -** APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT.) FOR ANCHORING.

**MAINTENANCE -** INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

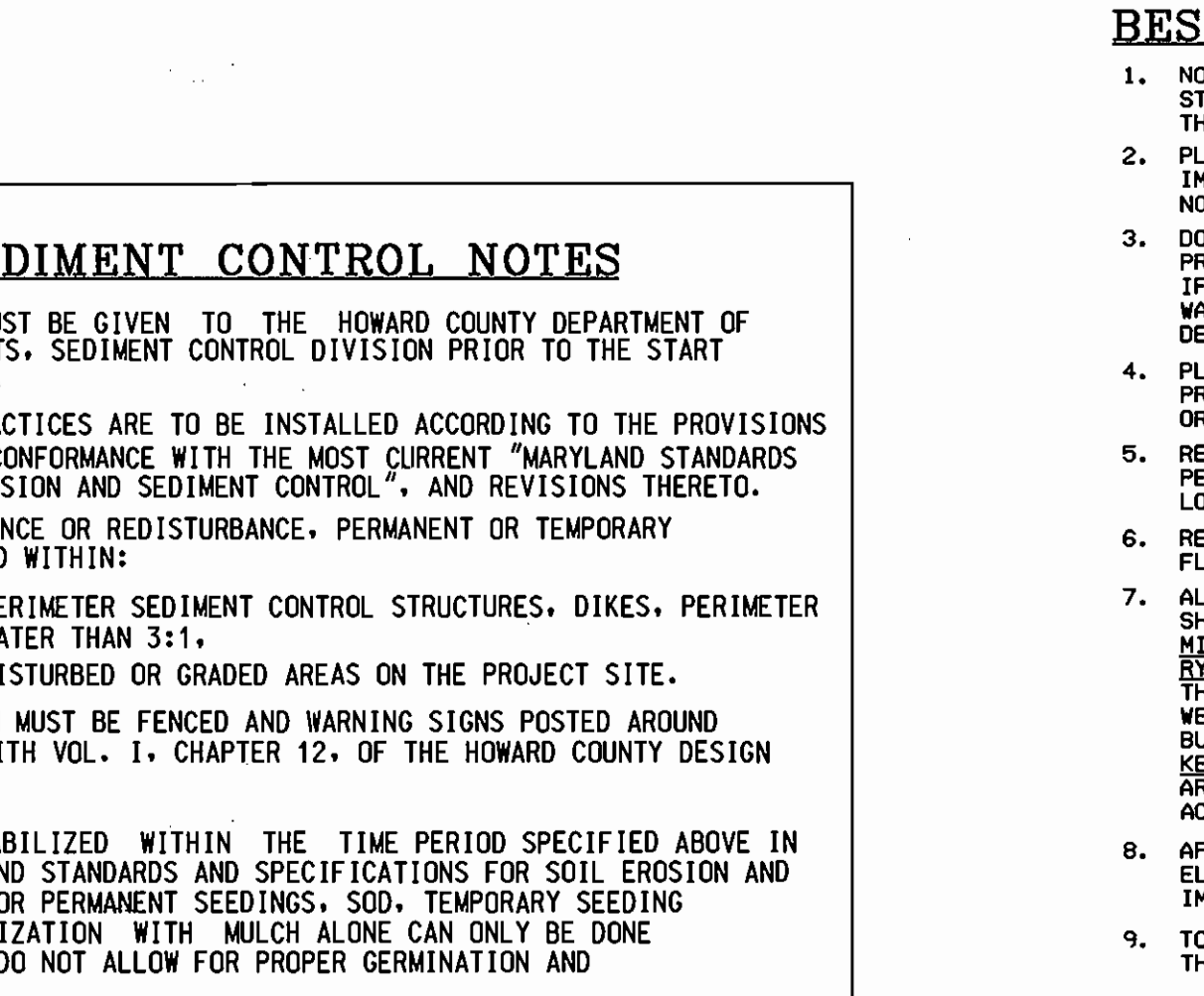
### SEQUENCE OF CONSTRUCTION

- CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE.
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AT THE DIRECTION OF SEDIMENT CONTROL INSPECTOR.
- EXCAVATE AND INSTALL PROPOSED 8" WATER MAIN. RESTORE EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS. (TRENCH TO BE BACKFILLED AND STABILIZED ON SAME DAY) (TOTAL DURATION 45 DAYS)
- RESTORE ALL DISTURBED AREAS WITH PAVEMENT OR PERMANENT SEEDING (45 DAYS).
- UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES. (2 DAYS)

### STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - 7 CALENDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
  - 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (SEC. 620.0) FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING AND MULCHING. TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE	N/A	ACRES
AREA DISTURBED	0.1	ACRES
AREA TO BE ROOFED OR PAVED	0.1	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.01	ACRES
TOTAL CUT	N/A	CU. YDS.
TOTAL FILL	N/A	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF THE DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- CONTRACTOR SHALL PLACE EXCAVATED MATERIALS ON UPHILL SIDE OF TRENCH AND PLACE SILT FENCE ON DOWNHILL SIDE OF TRENCH.



### BEST MANAGEMENT PRACTICE (BMP) NOTES

- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100 YEAR FLOODPLAIN.
- PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100 YEAR FLOODPLAIN.
- DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
- PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100 YEAR FLOODPLAIN.
- REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT MODIFICATION OF THE 100 YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
- RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100 YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
- ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MITLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), GRASS (UNTOLOA SP.) AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
- TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM.
 

USE 1 WATER: IN STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
- STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAYS.
- CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

### TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

**SEEDBED PREPARATION:** LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

**SOIL AMENDMENTS:** - APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT.).

**SEEDING -** FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.07 LBS/1000 SQ FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

**MULCHING -** APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

### DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*John A. Wilcox* 5/29/08 DATE  
 BUREAU OF ENGINEERING  
 DEPARTMENT OF PUBLIC WORKS

### ENGINEER'S CERTIFICATION

"I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

*John K. Richter* 6/1/08 DATE  
 KCI TECHNOLOGIES, INC  
 18 NORTH PARK DRIVE  
 HART VALLEY, MD 21038

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

"I PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15524 EXPIRATION DATE: 9/12/09"

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John A. Wilcox* 6/3/08 DATE  
 DIRECTOR OF PUBLIC WORKS

*John K. Richter* 5/29/08 DATE  
 CHIEF, BUREAU OF ENGINEERING

*John A. Wilcox* 5/29/08 DATE  
 CHIEF, BUREAU OF UTILITIES

ENGINEERS  
 PLANNERS  
 SCIENTISTS  
 CONSTRUCTION MANAGERS

**KCI TECHNOLOGIES**

10 NORTH PARK DRIVE  
 HART VALLEY, MD 21038  
 PHONE: (410) 316-7800  
 FAX: (410) 316-7817  
 WWW.KCI.COM

DES: GW			
DRN: JM			
CHK: TW			
DATE: FEB. 08			
BY NO.			
REVISION			
DATE			

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

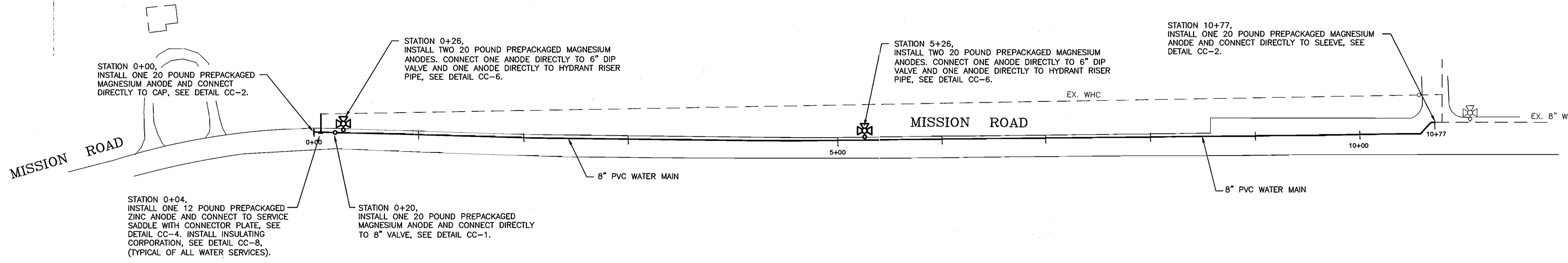
600' SCALE MAP NO. 43 BLOCK NO. 7

MISSION ROAD  
 ROUTINE WATER MAIN EXTENSION  
 CAPITAL PROJECT No. W-8698  
 CONTRACT No. 44-4558

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 3 OF 6

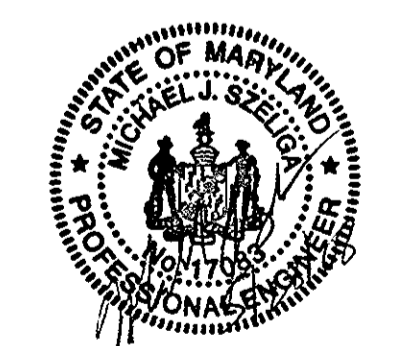
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 BY: John Wilcox  
 FILE: M:\2007\001071378\_02.dwg  
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 PLOT: M:\2007\001071378\_02.dwg



- LEGEND:**
- - - - - NEW WATER MAIN
  - - - - - EXISTING WATER MAIN
  - ⊗ FIRE HYDRANT
  - ▲ SERVICE SADDLE

- NOTES:**
1. ALL NEW DUCTILE IRON TEES AND DUCTILE IRON ELBOWS ALONG THE PVC WATER MAINS ARE TO BE PROVIDED WITH CORROSION PROTECTION (DUCTILE IRON TEES AND ELBOWS NOT SHOWN ON THIS DRAWING), SEE DETAIL CC-2.
  2. ALL PVC PIPE DESIGNATED AS BEING "RESTRAINED JOINT" SHALL HAVE ONE 12 POUND PREPACKAGED ZINC ANODE CONNECTED TO EACH METALLIC RESTRAINING HARNESS, SEE DETAIL CC-3. ALL RESTRAINED JOINT PIPE MAY NOT BE SHOWN ON THIS DRAWING.
  3. ALL WATER SERVICE CONNECTIONS UTILIZING METALLIC SERVICE SADDLES SHALL HAVE ONE 12 POUND PREPACKAGED ZINC ANODE CONNECTED TO THE SERVICE SADDLE (SEE DETAIL CC-4), AND AN INSULATING CORPORATION INSTALLED TO ELECTRICALLY ISOLATE THE COPPER SERVICE FROM THE SERVICE SADDLE (SEE DETAIL CC-8). ALL WATER SERVICES MAY NOT BE SHOWN ON THIS DRAWING.
  4. DO NOT THERMITE WELD TO PVC PIPE.

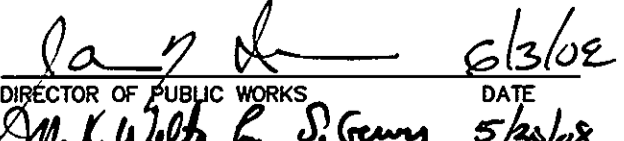
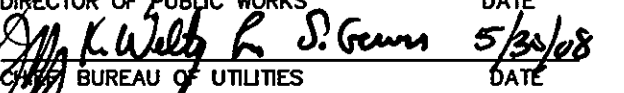
**CORROSION CONTROL LAYOUT**  
SCALE: 1"=50'





"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 17083, Expiration Date: 9/27/2008"

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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

 6/3/08  
 DIRECTOR OF PUBLIC WORKS DATE  
 5/29/08  
 BUREAU OF UTILITIES DATE

 5/29/08  
 CHIEF, BUREAU OF ENGINEERING DATE  
 5-29-08  
 CHIEF, UTILITY DESIGN DIVISION DATE


**KCI**  
 TECHNOLOGIES  
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 SCIENTISTS  
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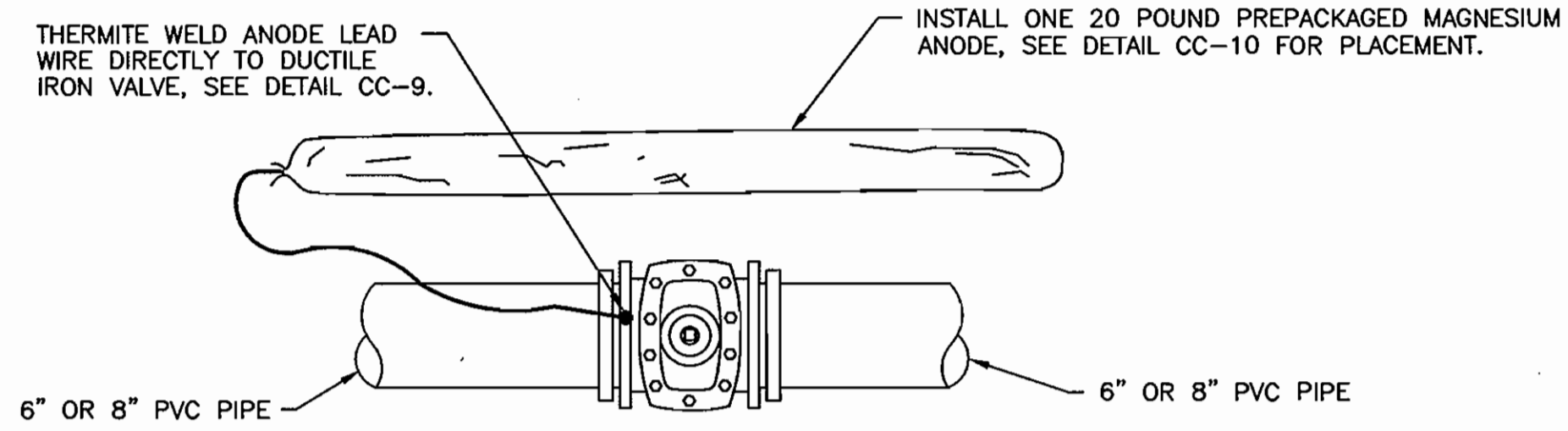
  
 RUSSELL CORROSION CONSULTANTS, INC.  
 Columbia, Maryland

DES: MJS				
DRN: DJD				
CHK: MJS				
DATE: MAY 08				
BY	NO.	REVISION	DATE	600' SCALE MAP NO. 43 BLOCK NO. 7

**8" PVC WATER MAIN  
CORROSION CONTROL  
LAYOUT**

**MISSION ROAD**  
**ROUTINE WATER MAIN EXTENSION**  
 CAPITAL PROJECT No. W-8698  
 CONTRACT No. 44-4558  
 ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE 1"=50'  
 SHEET 4 OF 6

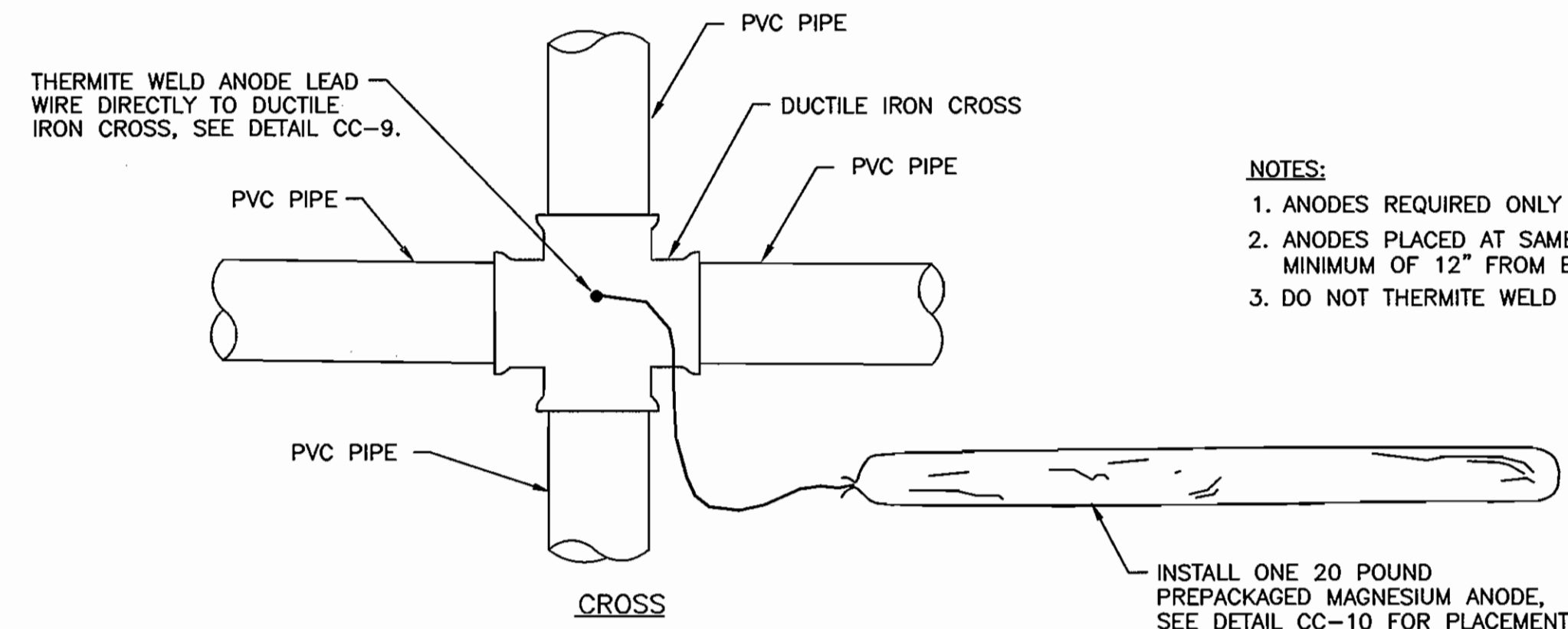
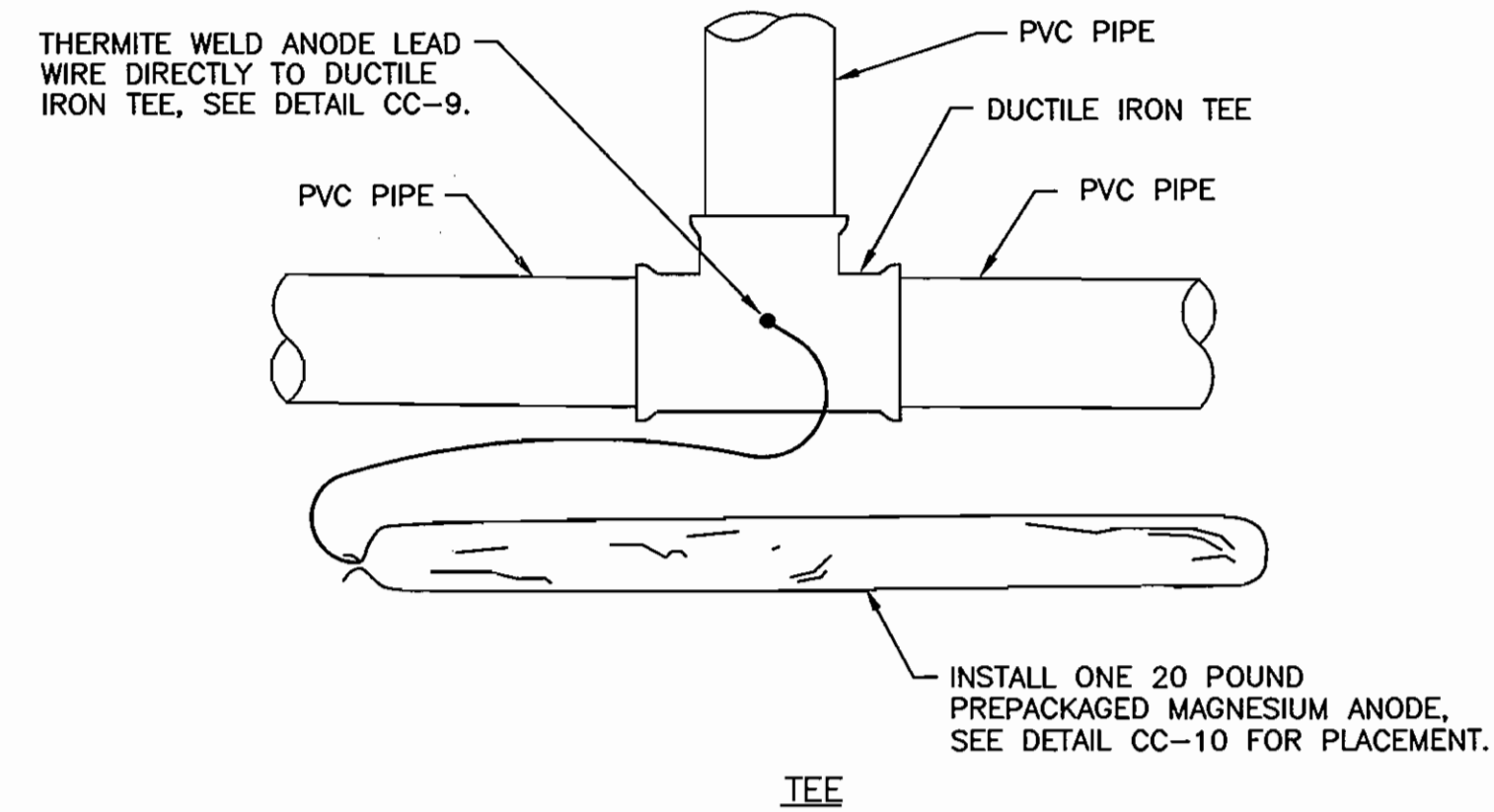
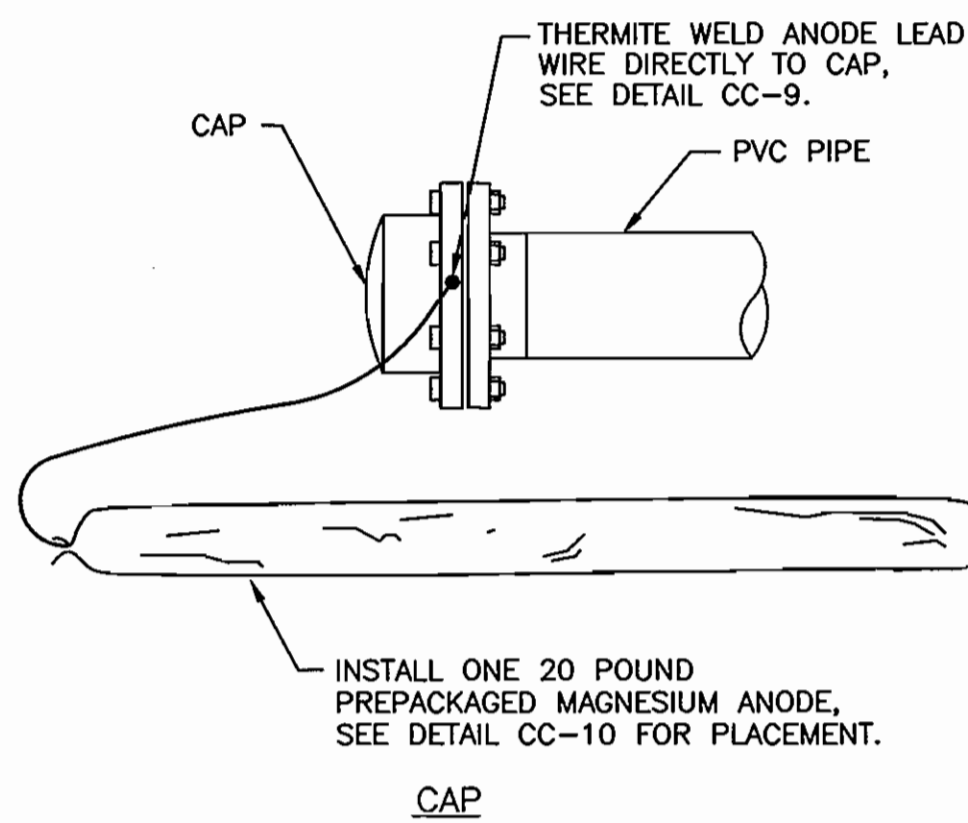
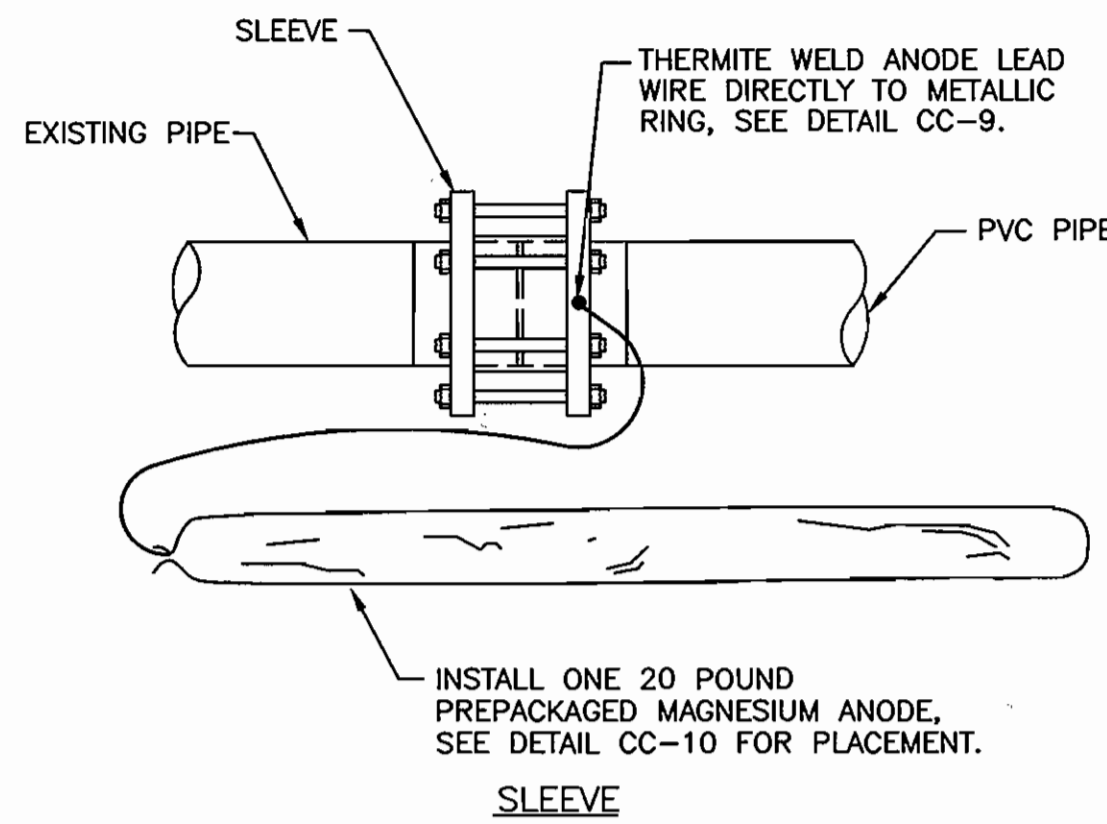


**NOTES:**

1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL CC-10.
2. DO NOT THERMITE WELD TO PVC PIPE.

**CC-1: CORROSION PROTECTION OF DUCTILE IRON VALVES**

NOT TO SCALE

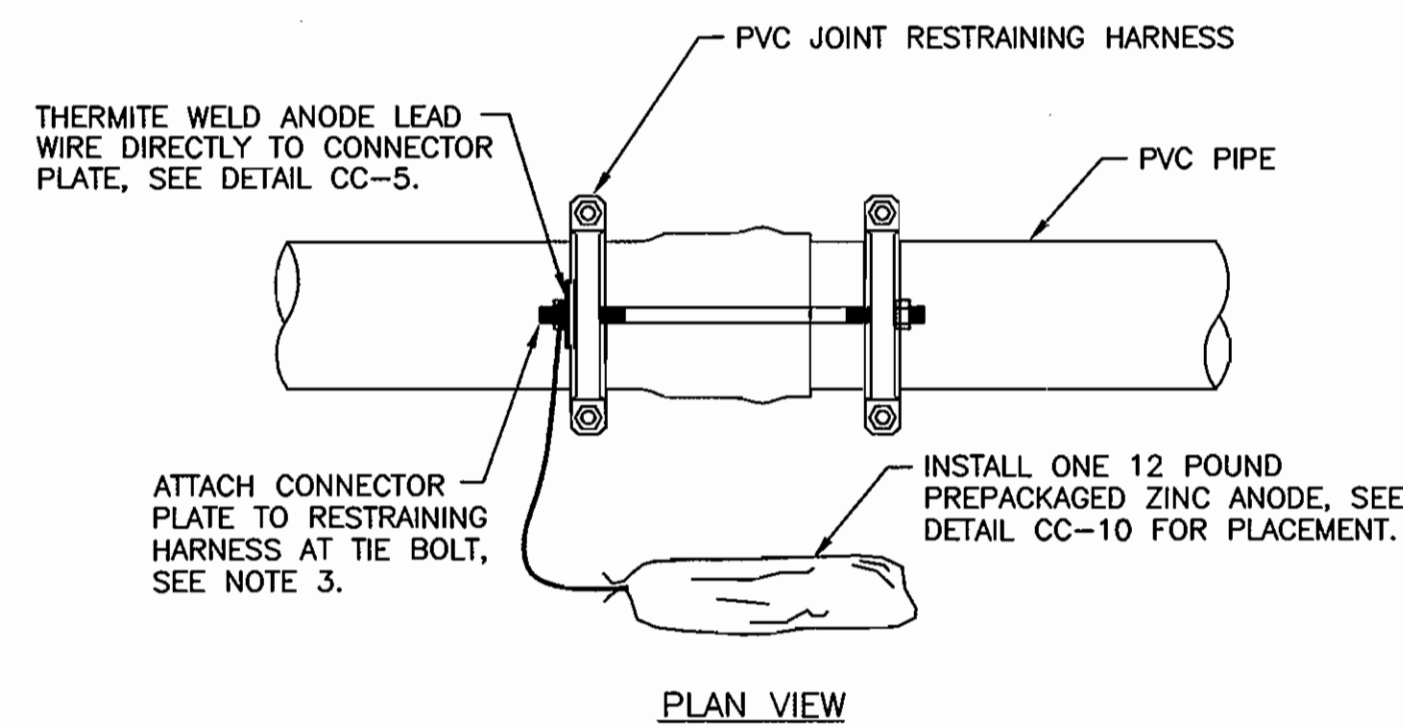
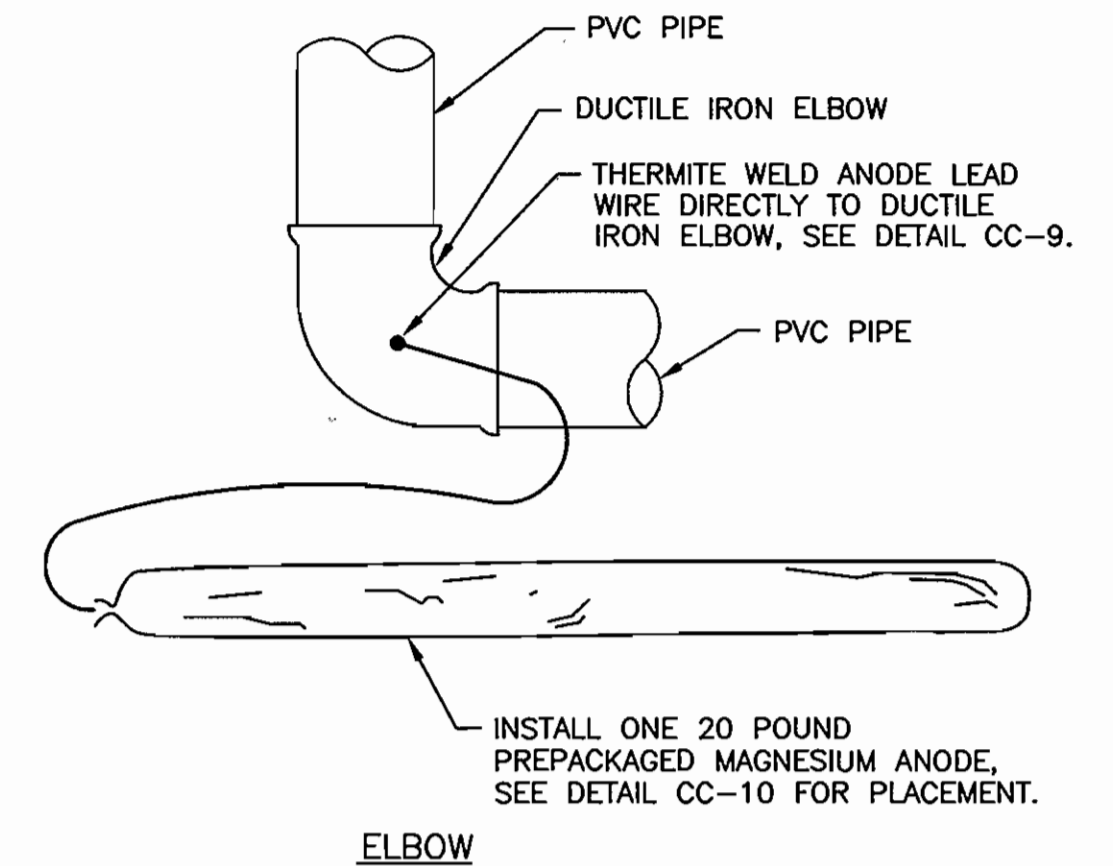


**NOTES:**

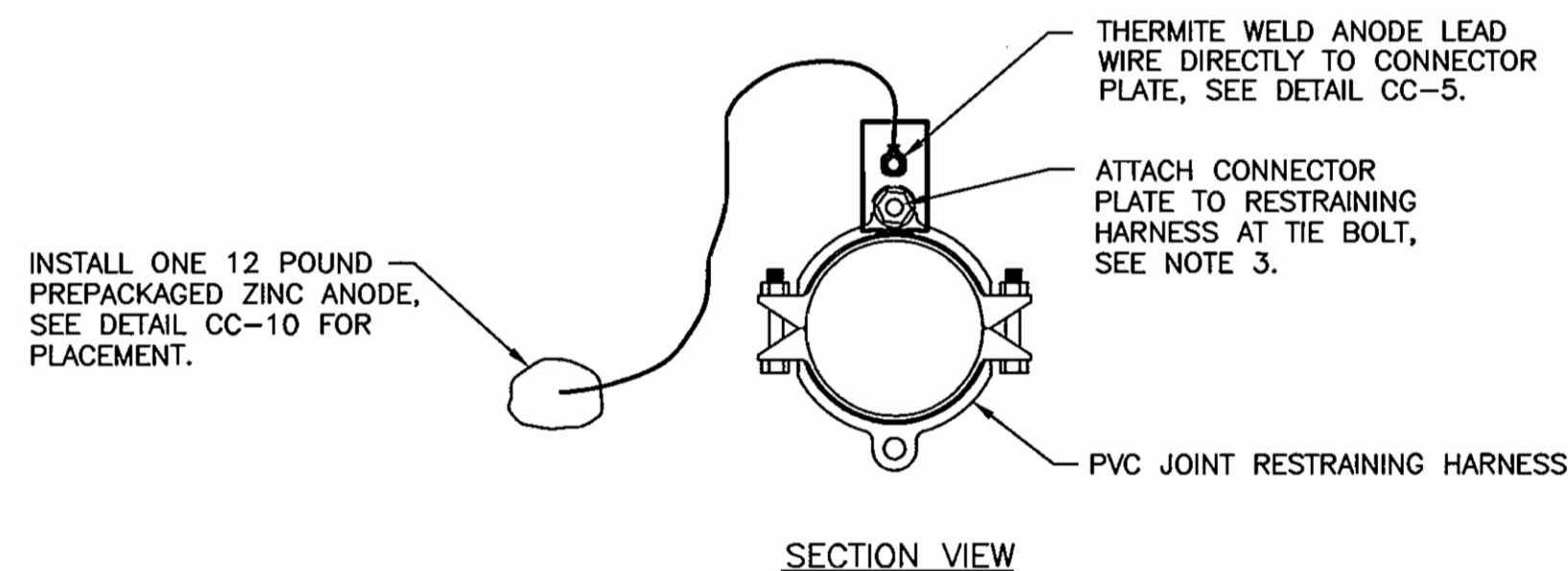
1. ANODES REQUIRED ONLY IF TEE, CROSS, CAP, OR ELBOW IS DUCTILE IRON.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL CC-10.
3. DO NOT THERMITE WELD TO PVC PIPE.

**CC-2: CORROSION PROTECTION OF DUCTILE IRON FITTINGS**

NOT TO SCALE



PLAN VIEW



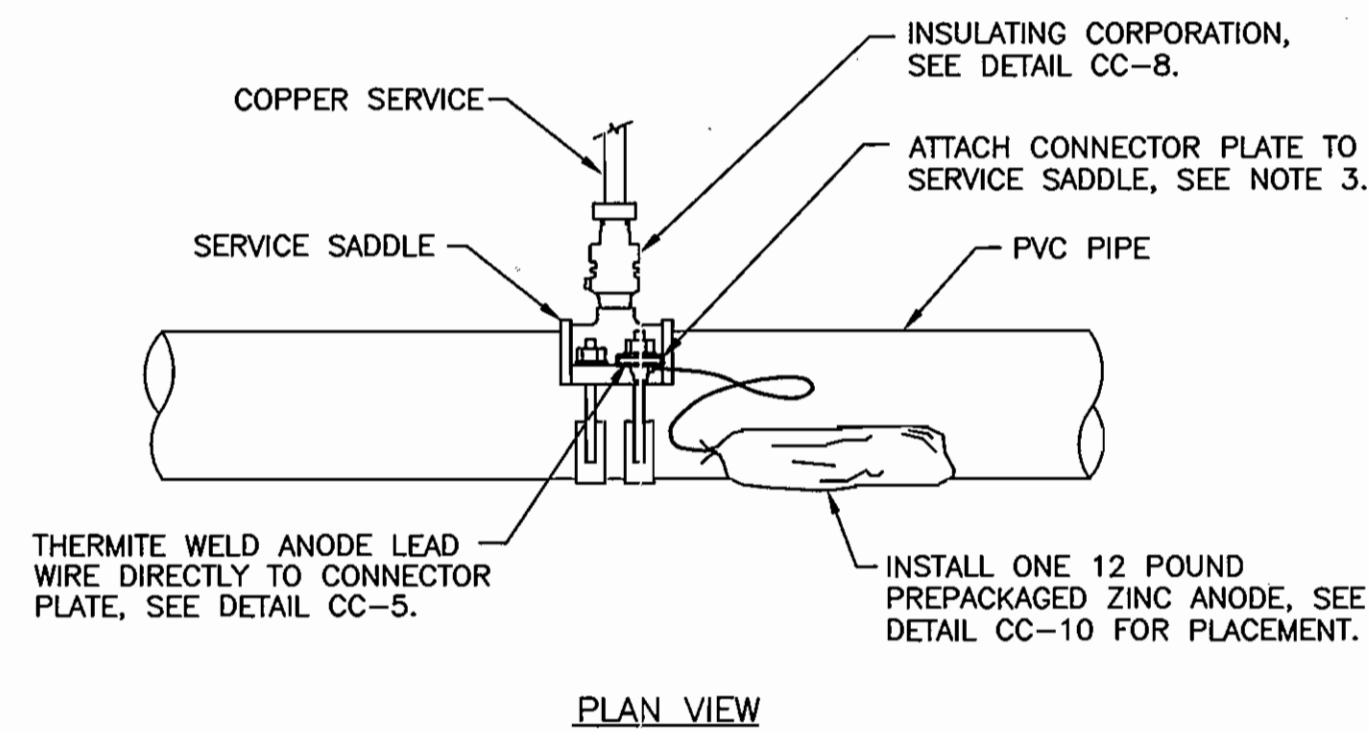
SECTION VIEW

**NOTES:**

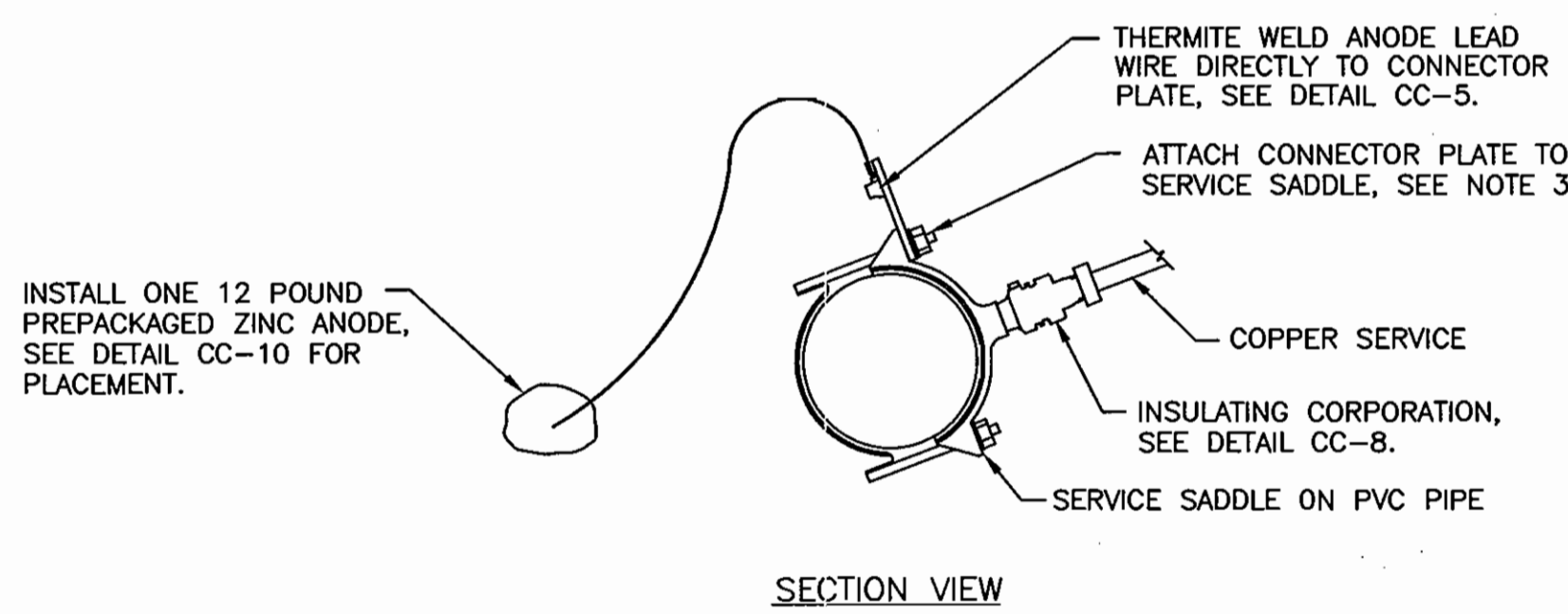
1. CONNECTOR PLATE TO BE THERMITE WELDED TO ANODE LEAD WIRE PRIOR TO ATTACHING CONNECTOR PLATE TO RESTRAINING HARNESS.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL CC-10.
3. REMOVE COATING FROM RESTRAINING HARNESS WHERE CONNECTOR PLATE IS TO BE MOUNTED. REMOVE COATING IMMEDIATELY PRIOR TO ATTACHING THE CONNECTOR PLATE.
4. DO NOT THERMITE WELD TO PVC PIPE.

**CC-3: CORROSION PROTECTION OF RESTRAINING HARNESS**

NOT TO SCALE



PLAN VIEW



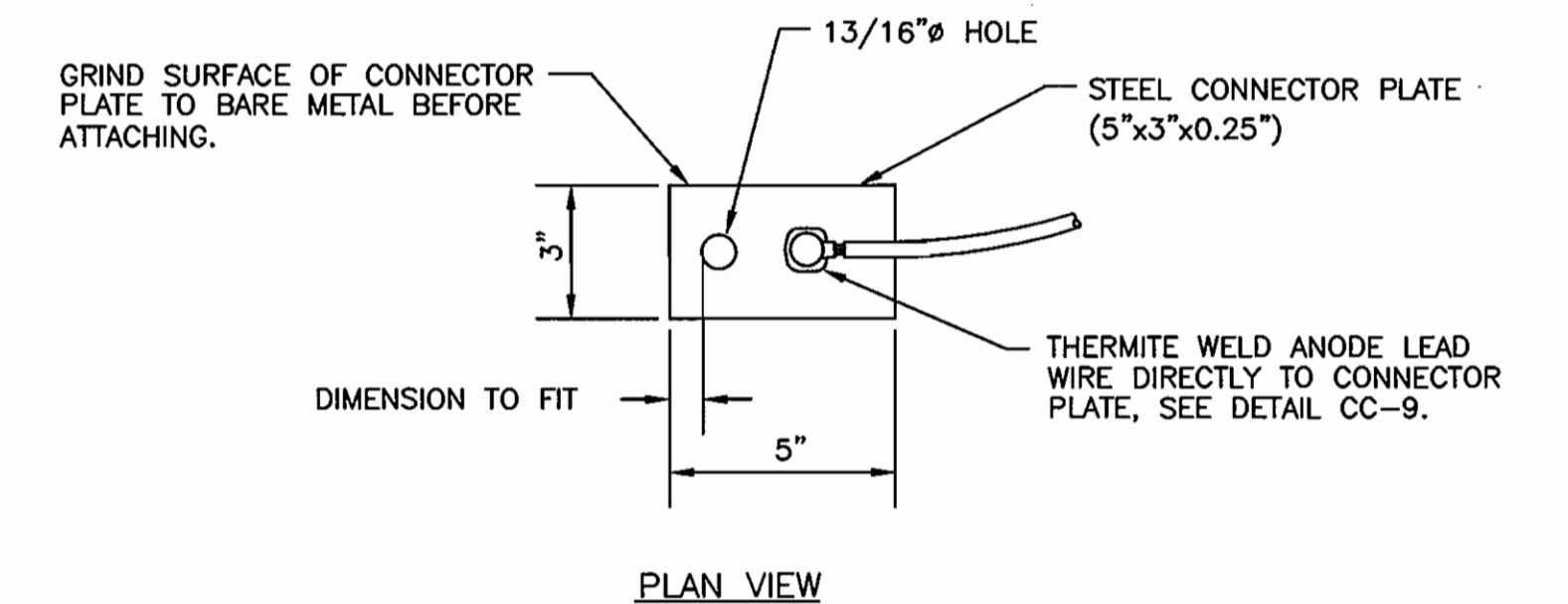
SECTION VIEW

**NOTES:**

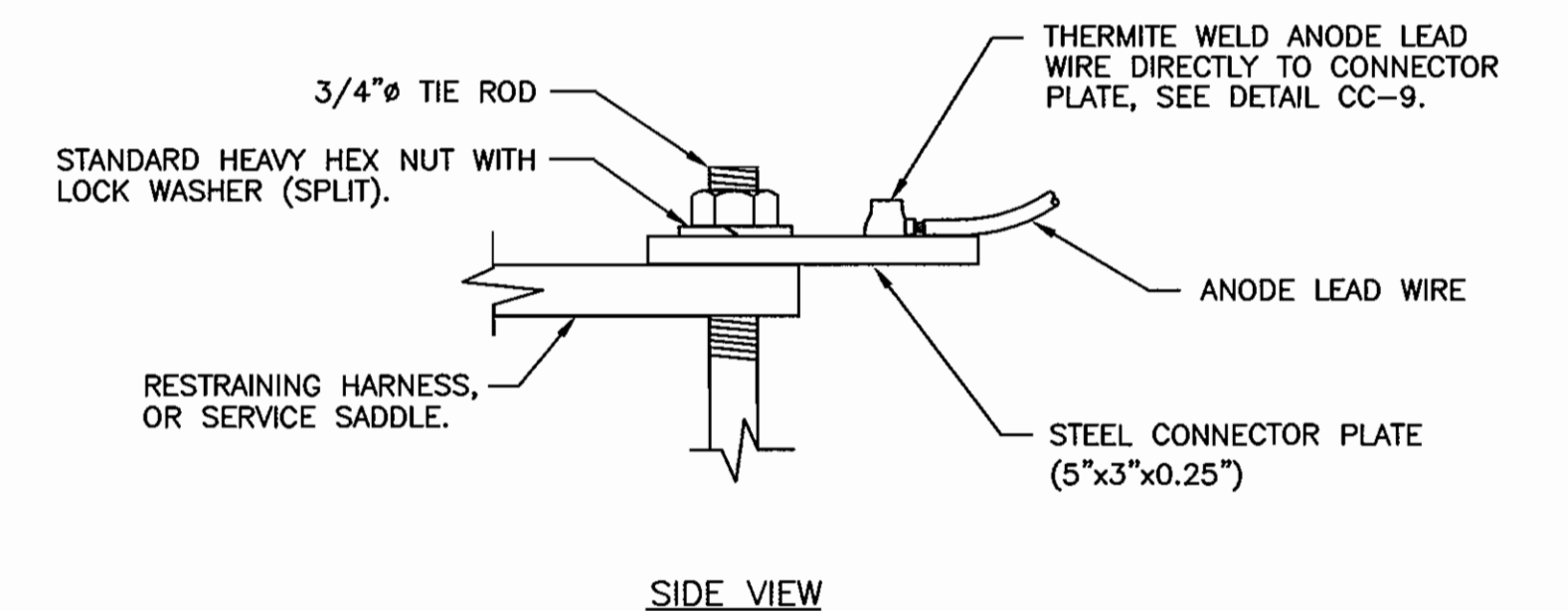
1. CONNECTOR PLATE TO BE THERMITE WELDED TO ANODE LEAD WIRE PRIOR TO ATTACHING CONNECTOR PLATE TO SERVICE SADDLE.
2. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL CC-10.
3. REMOVE COATING FROM SERVICE SADDLE WHERE CONNECTOR PLATE IS TO BE MOUNTED. REMOVE COATING IMMEDIATELY PRIOR TO ATTACHING THE CONNECTOR PLATE.
4. DO NOT THERMITE WELD TO PVC PIPE.

**CC-4: CORROSION PROTECTION OF SERVICE SADDLE**

NOT TO SCALE



PLAN VIEW



SIDE VIEW

**NOTES:**

1. CONNECTOR PLATE TO BE THERMITE WELDED TO ANODE LEAD WIRE PRIOR TO ATTACHING CONNECTOR PLATE TO RESTRAINING HARNESS, OR SERVICE SADDLE.
2. THERMITE WELDS SHALL BE COATED WITH A PREFABRICATED ONE PIECE PLASTIC CAP FILLED WITH ELASTOMERIC MATERIAL, ROYSTON HANDY-CAP OR APPROVED EQUAL.

**CC-5: CONNECTION PLATE DETAIL**

NOT TO SCALE



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 17083, Expiration Date: 9/27/2008"

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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 6/13/08  
DIRECTOR OF PUBLIC WORKS  
*[Signature]* 5/6/08  
BUREAU OF UTILITIES

*[Signature]* 5/29/08  
CHIEF, BUREAU OF ENGINEERING  
*[Signature]* 5-29-08  
CHIEF, UTILITY DESIGN DIVISION

ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS  
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FAX: (410) 316-7817  
WWW.KCI.COM

**RUSSELL CORROSION CONSULTANTS, INC.**  
Columbia, Maryland

DES: MJS				
DRN: DJD				
CHK: MJS				
DATE: MAY 08				
BY	NO.	REVISION	DATE	

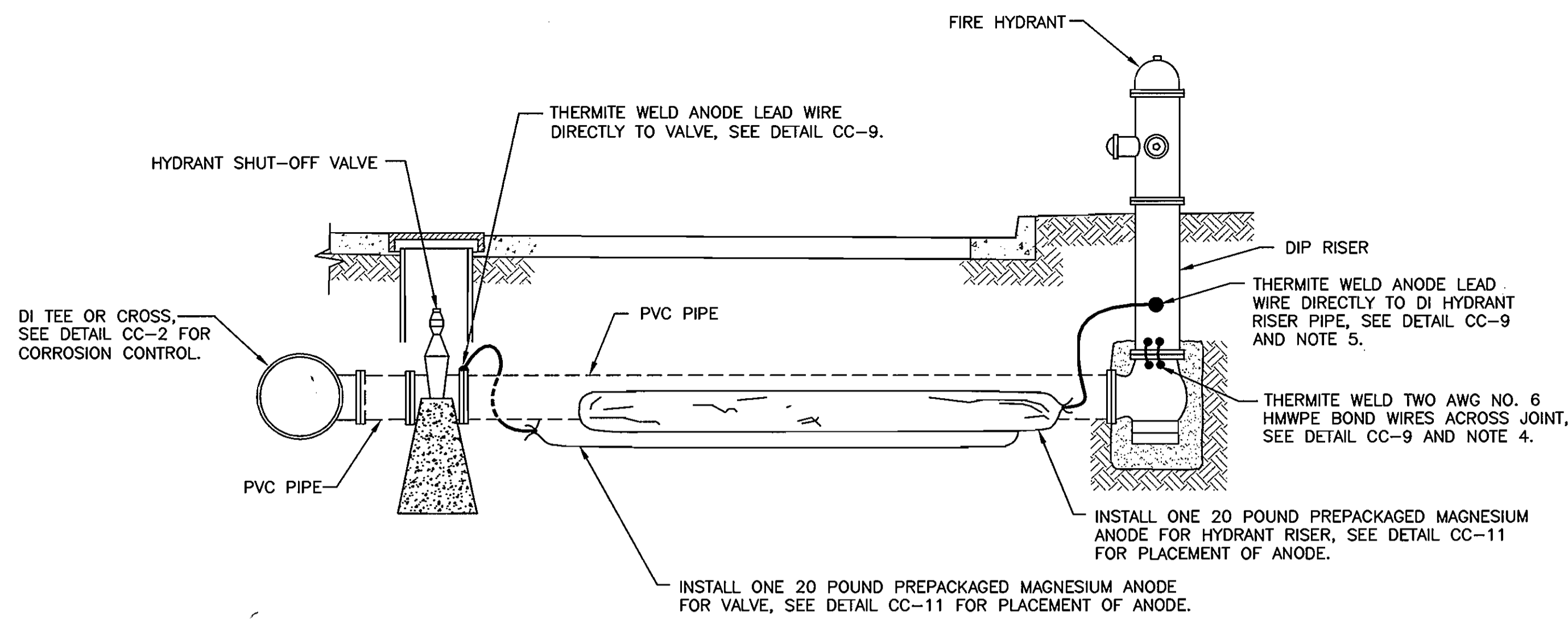
CORROSION CONTROL  
DETAILS 1

600' SCALE MAP NO. 43 BLOCK NO. 7

MISSION ROAD  
ROUTINE WATER MAIN EXTENSION  
CAPITAL PROJECT No. W-8698  
CONTRACT No. 44-4558

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE  
NONE  
SHEET  
5 OF 6

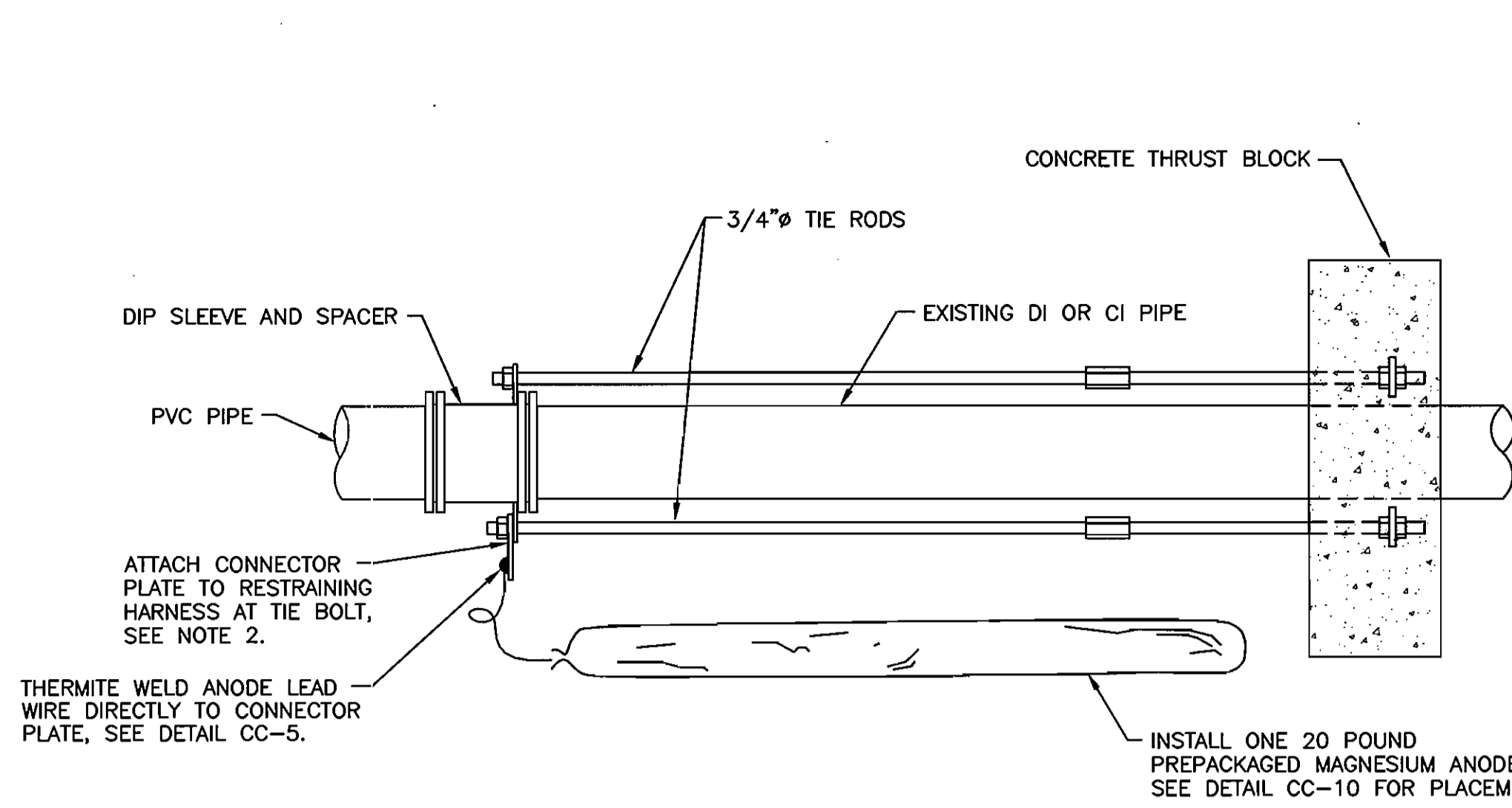


**NOTES:**

1. BOND ALL DUCTILE IRON COMPONENTS TOGETHER WITH AWG NO. 6 HMWPE CABLES. INSTALL A MINIMUM OF TWO BOND CABLES ACROSS EACH DUCTILE IRON PIPE JOINT.
2. INSTALL BOND WIRES ON TOP OF DUCTILE IRON PIPE OR DUCTILE IRON FITTING WHERE POSSIBLE.
3. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12 INCHES FROM EDGE OF PIPE, SEE DETAIL CC-11.
4. INSTALL BOND CABLES ON HYDRANT RISER PIPE AND RISER ELBOW BEFORE INSTALLING HYDRANT.
5. THERMITE WELD ANODE LEAD TO DUCTILE IRON HYDRANT RISER PIPE BEFORE INSTALLING HYDRANT.
6. DO NOT THERMITE WELD TO PVC PIPE.

**CC-6: CORROSION PROTECTION AT FIRE HYDRANT**

NOT TO SCALE

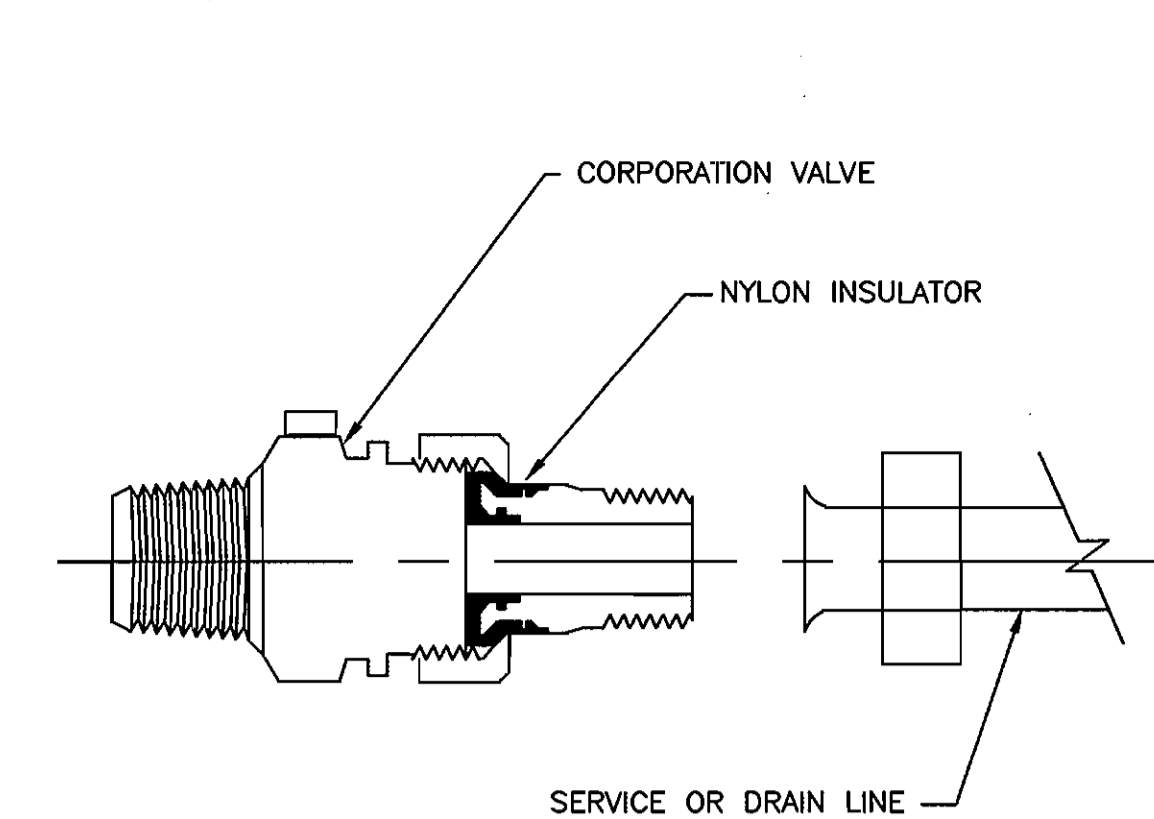


**NOTES:**

1. ANODES PLACED AT SAME DEPTH AS THE BOTTOM OF PIPE AND AT A MINIMUM OF 12" FROM EDGE OF PIPE, SEE DETAIL CC-10.
2. REMOVE COATING FROM RESTRAINING HARNESS WHERE CONNECTOR PLATE IS TO BE MOUNTED. REMOVE COATING IMMEDIATELY PRIOR TO ATTACHING THE CONNECTOR PLATE.
3. DO NOT THERMITE WELD TO PVC PIPE.

**CC-7: CORROSION PROTECTION AT IN-LINE THRUST BLOCK**

NOT TO SCALE

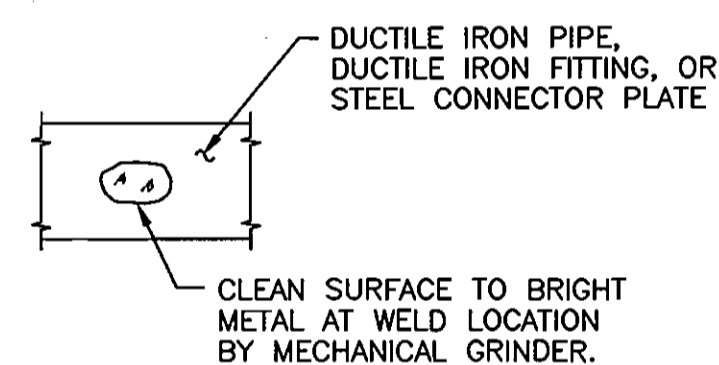


**NOTES:**

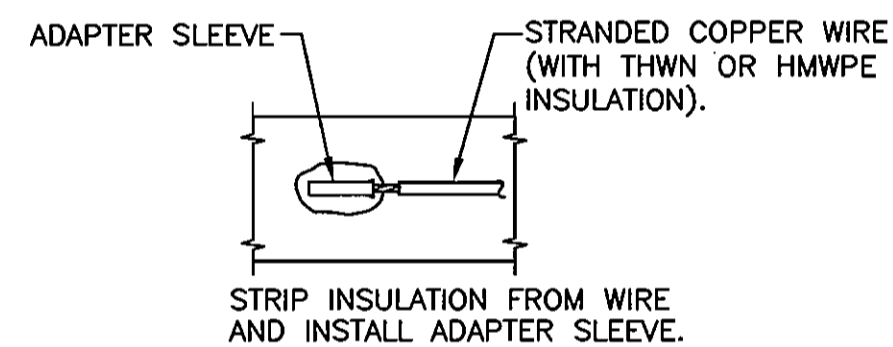
1. INSTALL ELECTRICAL ISOLATION ON ALL WATER SERVICE AND DRAIN LINE CONNECTIONS TO MAIN.
2. COAT EXTERIOR OF CORPORATION STOP, AND SERVICE PIPING AND/OR DRAIN LINE FOR A DISTANCE OF 12 INCHES WITH MASTIC COATING (ROYSTON ROSKOTE R28). MASTIC COATING TO BE MINIMUM OF 20 MILS IN THICKNESS.
3. INSULATED CORPORATION NOT REQUIRED FOR PLASTIC SERVICES.

**CC-8: INSULATING CORPORATION**

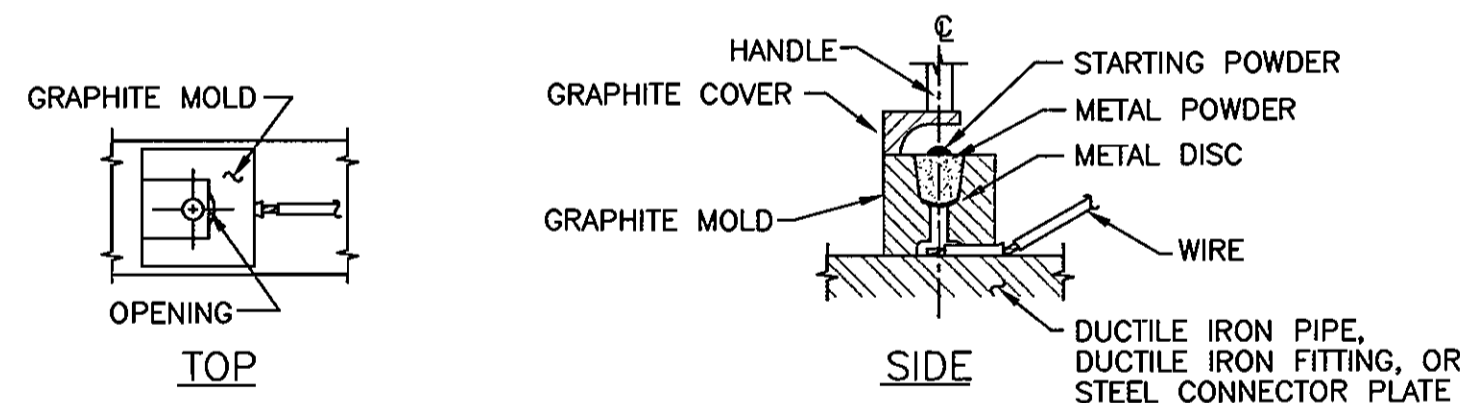
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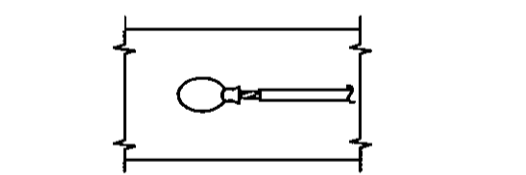
**STEP 1**



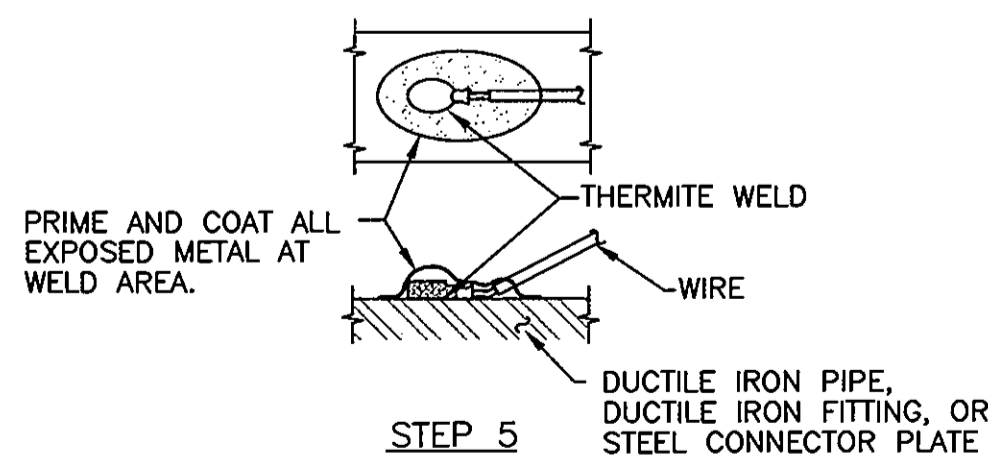
**STEP 2**



**STEP 3**



**STEP 4**



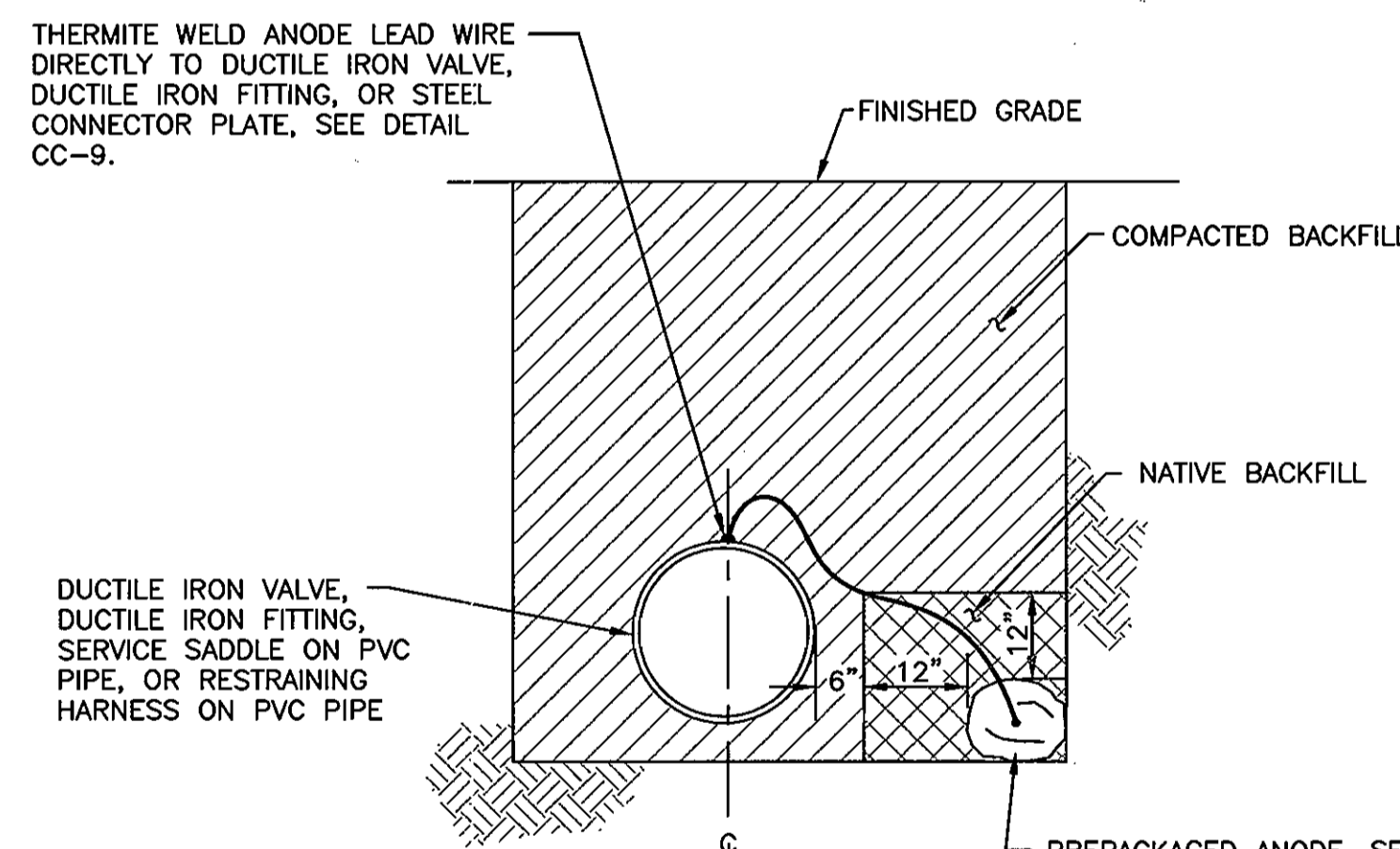
**STEP 5**

**NOTES:**

1. THERMITE WELDS SHALL BE COATED WITH A PREFABRICATED ONE PIECE PLASTIC CAP FILLED WITH ELASTOMERIC MATERIAL, ROYSTON HANDY-CAP OR APPROVED EQUAL.
2. DO NOT THERMITE WELD TO PVC PIPE.

**CC-9: TYPICAL THERMITE WELD**

SCALE: NONE

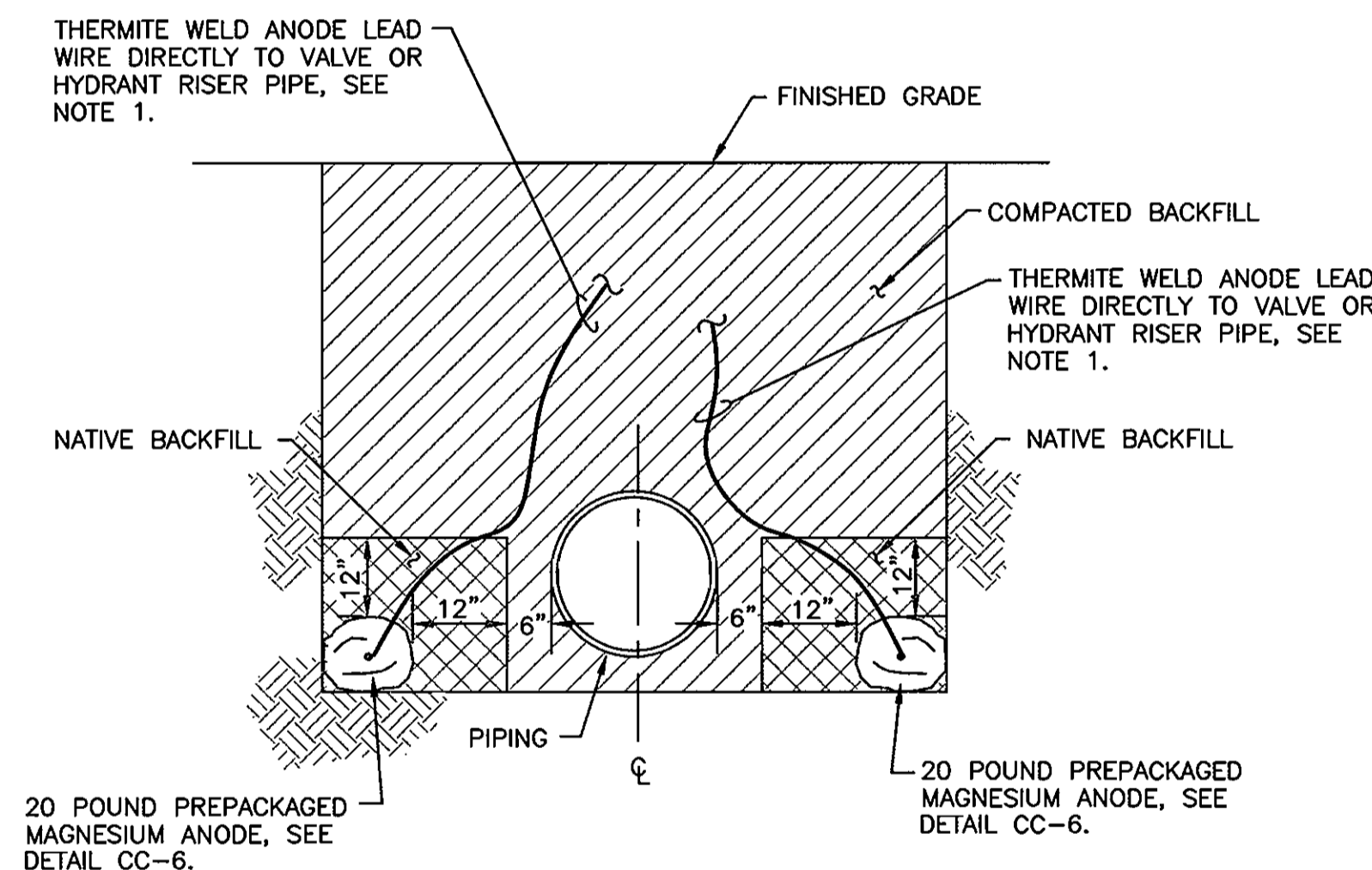


**NOTES:**

1. INSTALL ANODE IN NATIVE SOIL. DO NOT BACKFILL ANODE WITH SAND OR STONE.
2. DO NOT THERMITE WELD TO PVC PIPE.

**CC-10: SINGLE ANODE PLACEMENT**

NOT TO SCALE



**NOTES:**

1. WHEN INSTALLING ANODES AT HYDRANTS, ATTACH ONE ANODE LEAD TO SHUT-OFF VALVE, AND ONE ANODE LEAD TO HYDRANT RISER PIPE, SEE DETAIL CC-6.
2. INSTALL ANODES A MINIMUM OF 12 INCHES FROM PIPE.
3. BACKFILL ANODES WITH NATIVE SOIL FOR A MINIMUM OF 12 INCHES ON ALL SIDES. DO NOT BACKFILL ANODES WITH SAND OR STONE.
4. DO NOT THERMITE WELD TO PVC PIPE.

**CC-11: DOUBLE ANODE PLACEMENT**

NOT TO SCALE

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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works  
5/23/08  
5/23/08

Chief, Bureau of Engineering  
5/23/08  
5-23-08

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PHONE: (410) 316-7800  
FAX: (410) 316-7817  
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RUSSELL CORROSION CONSULTANTS, INC.  
Columbia, Maryland

DES: MJS				
DRN: DJD				
CHK: MJS				
DATE: MAY 08				
BY	NO.	REVISION	DATE	

CORROSION CONTROL  
DETAILS 2

600' SCALE MAP NO. 43 BLOCK NO. 7

MISSION ROAD  
ROUTINE WATER MAIN EXTENSION  
CAPITAL PROJECT No. W-8698  
CONTRACT No. 44-4558

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE  
NONE  
SHEET  
6 OF 6



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 17083, Expiration Date: 9/27/2008"