

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

HOWARD COUNTY, MARYLAND

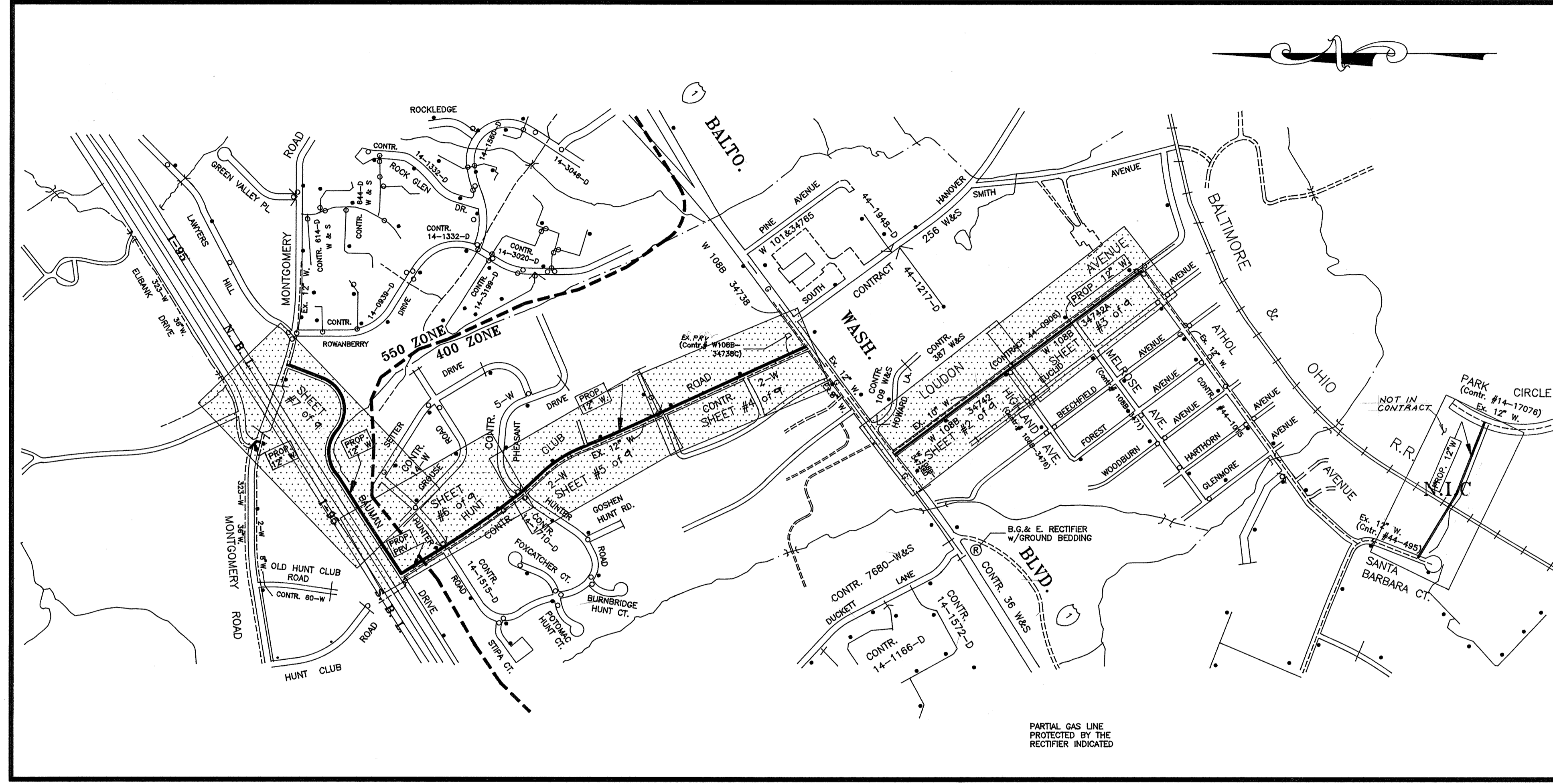
DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. W-8196
CONTRACT No. 44-3298

GENERAL NOTES

1. APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6" CLEAR ALL POLES BY 2'-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.....	865-3803
B&E (CONTRACTOR SERVICES).....	850-4820
B&E - UNDERGROUND DAMAGE CONTROL.....	787-9068
BUREAU OF UTILITIES (DPW).....	313-4900
CHESAPEAKE & POTOMAC TELEPHONE CO.	597-8585
COLONIAL PIPELINE CO.	795-1390
MISS UTILITY.....	1-800-257-7777
STATE HIGHWAY ADMINISTRATION.....	531-5533
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)313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
12. ALL WATER MAINS SHALL BE D.I.P. CLASS S2 UNLESS OTHERWISE NOTED.
13. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
16. 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. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.



TYPE OF BUILDING: N/A
 NUMBER OF PARCELS: N/A
 NUMBER OF HOUSE CONNECTIONS: N/A
 DRAINAGE AREA: PATAPSCO

LOCATION MAP
SCALE: 1" = 600'

INDEX OF SHEETS	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	LOUDBON AVE. STA 0+00 TO STA 11+73
3	LOUDBON AVE. STA 11+73 TO STA 23+44
4	HUNT CLUB RD. STA 0+00 TO STA 14+26
5	HUNT CLUB RD. STA 14+26 TO STA 30+19
6	HUNT CLUB RD. STA 30+19 TO STA 36+39
7	BAUMAN DR. STA 36+39 TO STA 44+78
8	MONTGOMERY RD. STA 0+00 TO 0+82
9	ST. BARBARA CR. TO PARK CIRCLE DR. STA 0+00 TO STA 44+48 N.I.C.
10	PRESSURE REDUCING VALVE VAULT AND NOTES
11	ELECTRICAL PRESSURE REDUCING VAULT DETAILS

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
12" W	L.F.	8111	8090.5	
8" W	L.F.	88	49	
12" V	EA.	67	67	
3/4" AIR RELEASE V	EA.	2	2	
PRV VAULT	EA.	1	1	
12" TS & V	EA.	4	4	
8" TS & V	EA.	2	2	
36"x12" TS & V	EA.	1	1	
6" DRINK FIRE HYDRANT	EA.	1	1	
4" V.	EA.	3	3	
4" DIP	LF	54	52.1	
3" BLOW-OFF HYD.	EA.	3	3	
6" D.I.P.	LF	45	32.5	
6" F.H.	EA.	4	4	
6" V.	EA.	4	4	
8" V.	EA.	1	1	

NAME OF UTILITY CONTRACTOR: GENERAL PAVING

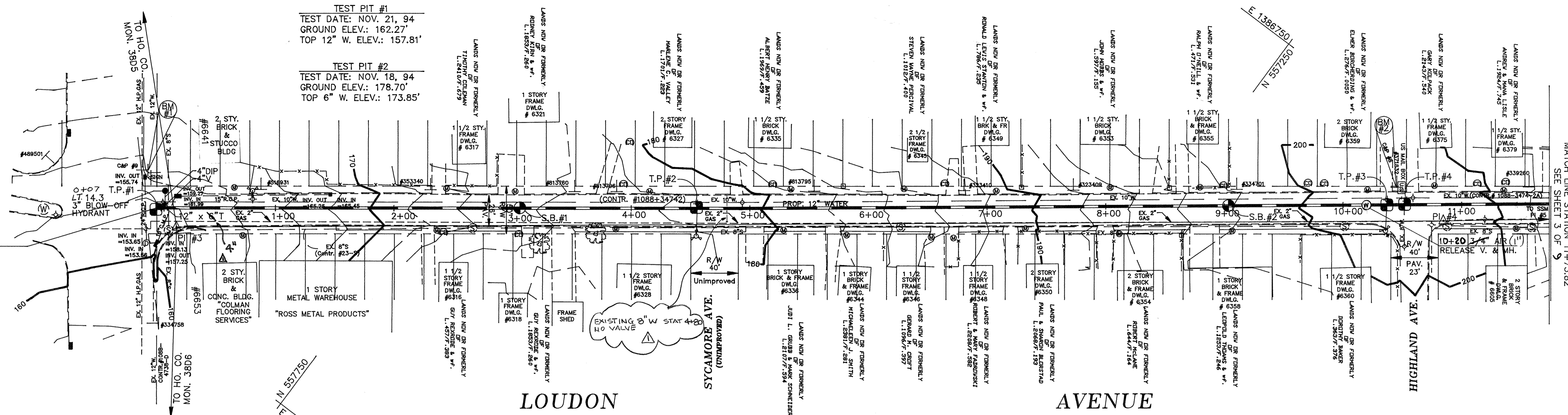
CHECKBOX	T.E.B.
AS-BUILT DATE	12-11-97
SURVEY AND DRAFTING DIVISION	

DEVELOPER'S CERTIFICATION	ENGINEER'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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING OF THE PROJECT. I ALSO WARRANTS PERFORMING ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.	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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING OF THE PROJECT. I ALSO WARRANTS PERFORMING ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
R. J. S. Spotts 3/9/95 BUREAU OF ENGINEERING DEPARTMENT OF PUBLIC WORKS	Timothy W. Wolfe 3/12/95 SPOTTS, STEVENS & MCCOY, INC. 555 FARMOUNT AVENUE, SUITE 230 TOWSON, MARYLAND 21284
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS. Patricia Engle 10.8.3/14/95 U.S. NATURAL RESOURCES CONSERVATION SERVICE	THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. Patricia Engle 3/14/95 U.S. NATURAL RESOURCES CONSERVATION SERVICE

AS-BUILT

By Date 8/21/18

WASHINGTON BLVD.
BALTIMORE



PLAN

SCALE: 1" = 50'

LOUDON AVENUE

LIMIT OF WORK 0+00
12" TAPPING SLEEVE & VALVE TO EXISTING 12" WATER.
INVERT 156.8 +/-
(SEE TEST PIT INFORMATION IN SPECIFICATION.)

TEST PIT #3
TEST DATE: NOV. 17, 94
GROUND ELEV.: 201.38'
TOP 6" W. ELEV.: 196.16'

TEST PIT #4
TEST DATE: NOV. 17, 94
GROUND ELEV.: 201.42'
TOP 8" W. ELEV.: 196.31'

SURVEY CONTROL

1. HOWARD COUNTY STATION 38D6
CONC. MON. ON SE SIDE RTE #1
ATLANTIC SUPPLY CO.
NORTH(83) 557,155.460
EAST (83) 1,384,499.255
ELEV. 174.54

2. HOWARD COUNTY STATION 38D5
CONC. MON. @ N.E. SIDE RTE #1
390± SOUTH FROM HUNT CLUB RD.
NORTH(83) 558,378.575
EAST (83) 1,386,524.193
ELEV. 193.03

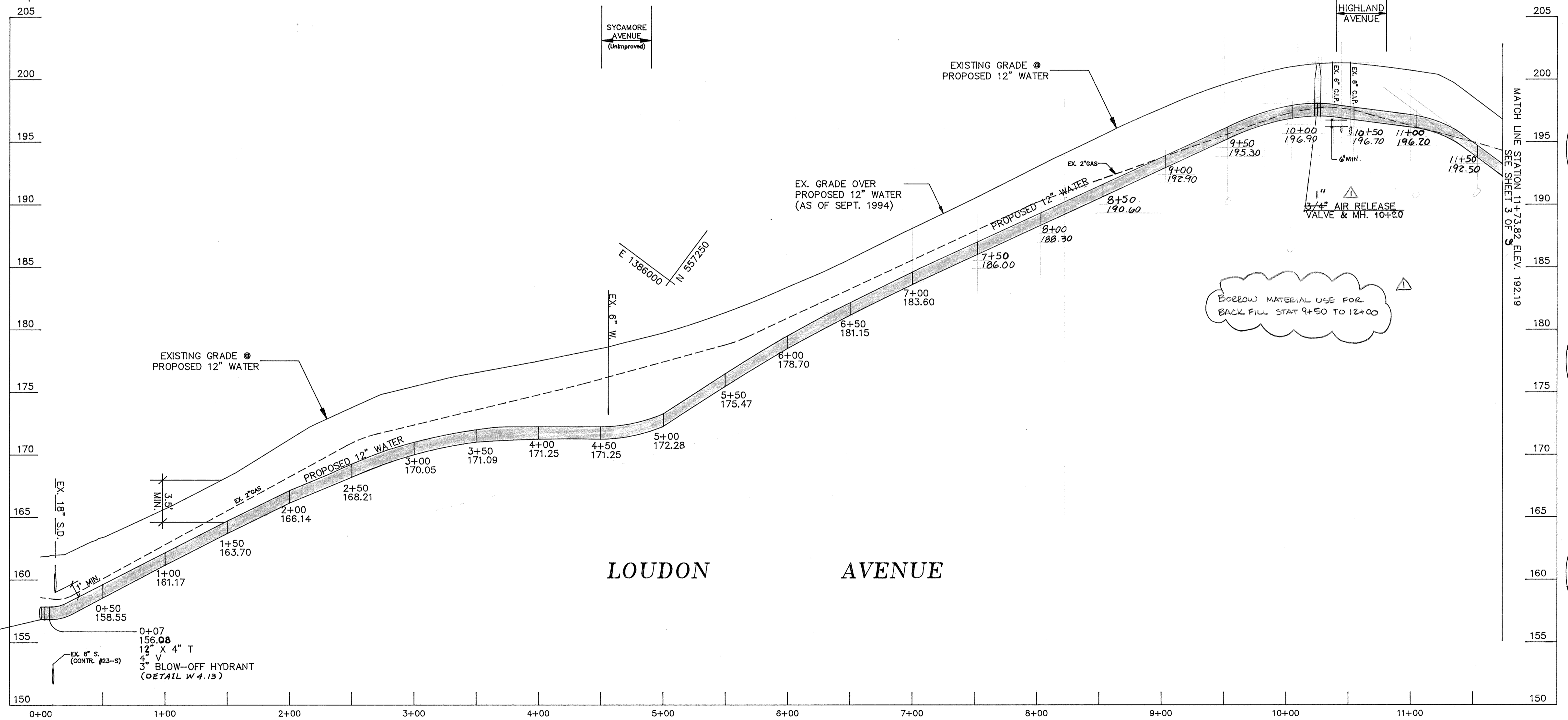
STAKEOUT SCHEDULE		
STRUCTURE	DISTANCE	OFFSET
0+00 12" TAPPING SLEEVE AND VALVE	SSM #3 TO SSM #4 (-) 0+16.62'	Lt. 16.25'
0+07 12" x 4" TEE	SSM #3 TO SSM #4 (-) 0+09.62'	Lt. 16.19'
0+07 3" BLOW-OFF HYDRANT	SSM #3 TO SSM #4 (-) 0+09.62'	Lt. 30.52'
11+05 3/4" AIR RELEASE VALVE	SSM #4 TO SSM #5 0+65.43'	Lt. 12.52'

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
0+00 TO 23+45	2,350 L.F.	PAVING
0+07 3" BLOW-OFF HYDRANT CONNECTION	14 L.F.	PAVING

BENCH MARKS

BM #1: RAILROAD SPIKE IN BASE OF UTILITY POLE C&P #9 @ S.E. CORNER OF LOUDON AVE & BALTIMORE WASHINGTON BLVD.
EL. = 165.37

BM #2: RAILROAD SPIKE IN BASE OF UTILITY POLE C&P #8 ON EAST SIDE OF LOUDON AVE OPPOSITE HIGHLAND AVE.
EL. = 202.10



PROFILE

SCALE: HORIZ.: 1" = 50'
VERT.: 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Chew 3/14/95
DIRECTOR OF PUBLIC WORKS DATE

Paul M. Simpson 3/10/95
CHIEF, BUREAU OF ENGINEERING DATE

Robert W. Reinger 3-13-95
CHIEF, BUREAU OF UTILITIES DATE

Paul M. Simpson 3-9-95
CHIEF, WATER AND SEWER DIVISION DATE

SSM

SPOTTS, STEVENS and McCOY, INC.
ENGINEERS & SURVEYORS • SCIENTISTS
555 FARMINGTON AVENUE, STE. 230
TOWSON, MARYLAND, 21286-5497
(410)484-0500 FAX (410)286-3590



DES: FCL	TEB	AS-BUILT
DRN: RPG		
CHK: TWW		
DATE: FEB. 95		
BY	NO.	REVISION

12-INCH WATER MAIN
LOUDON AVENUE

FROM STATION 0+00
TO STATION 11+73.82

600' SCALE MAP NO. W38 BLOCK NO. 7

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

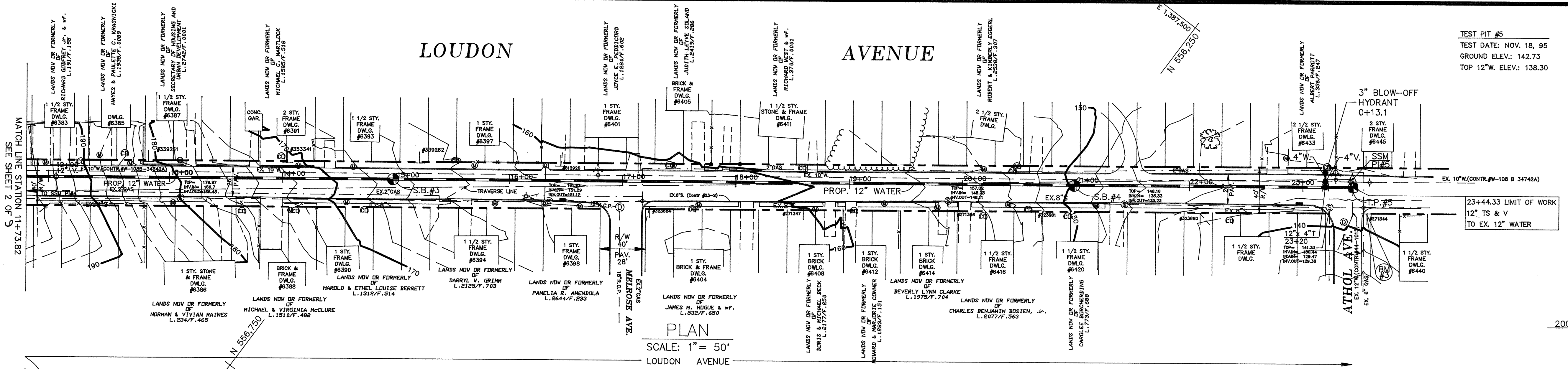
CAPITAL PROJECT No. W-8196
CONTRACT No. 44-3298
ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
SHEET 2 OF 2
FILE NAME: B0092

LOUDON

AVENUE

TEST PIT #5
 TEST DATE: NOV. 18, 95
 GROUND ELEV.: 142.73
 TOP 12" W. ELEV.: 138.30

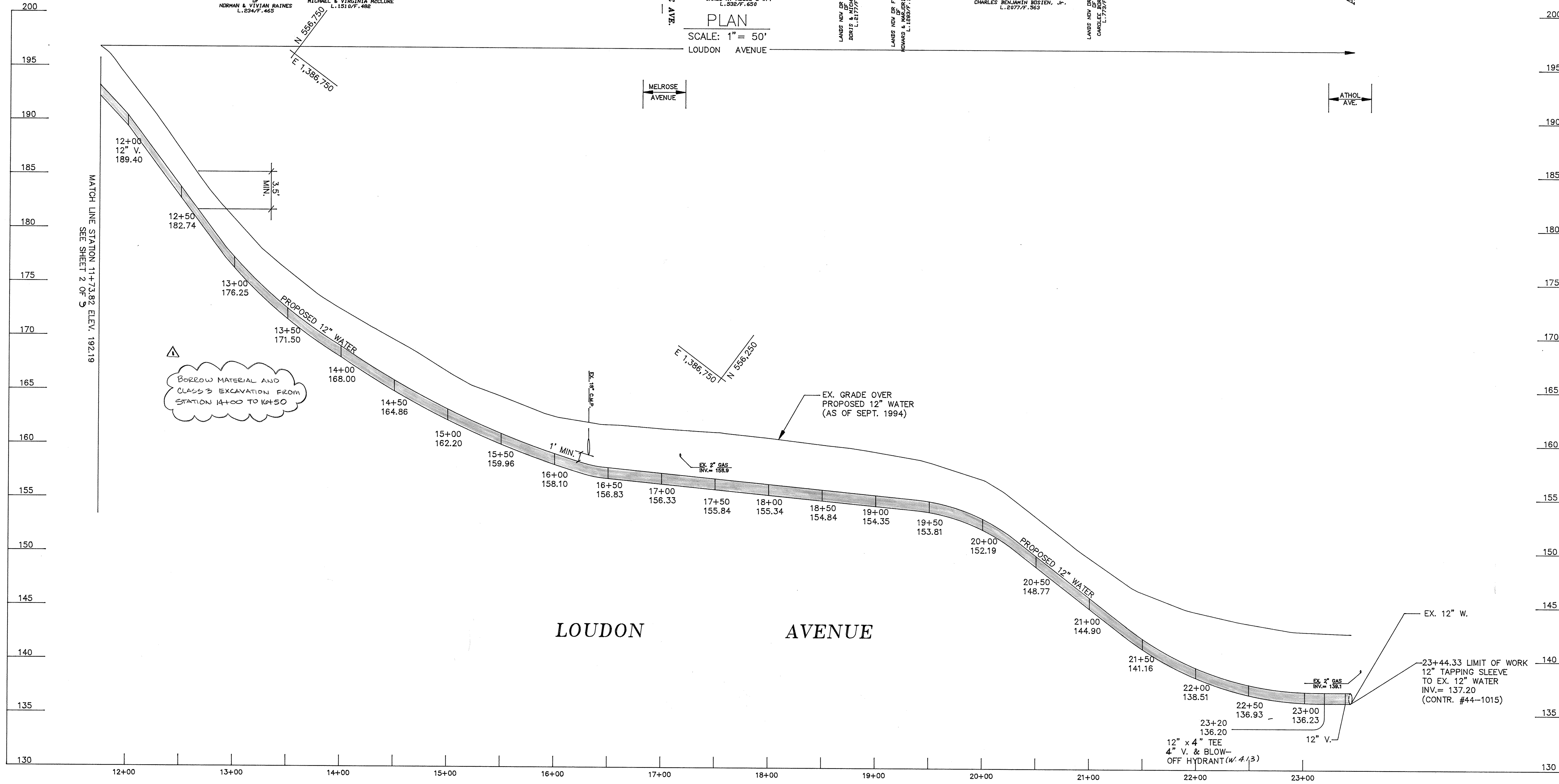


PLAN
 SCALE: 1" = 50'
 LOUDON AVENUE

STAKEOUT SCHEDULE		
STRUCTURE	DISTANCE	OFFSET
12+00 12" V.	SSM #5 TO SSM #4 11+43.77	Lt. 12.37'
23+20 12" x 4" TEE	SSM #5 TO SSM #4 0+23.99	Lt. 6.84'
23+20 3" BLOW-OFF HYDRANT	SSM #5 TO SSM #4 0+23.79	Rt. 6.27'
23+44.33 12" TAPPING SLEEVE & VALVE	SSM #5 TO SSM #4 (-) 0+00.34	Lt. 7.27'

NOTE:
 FOR SURVEY CONTROL, TRAVERSE REFERENCES AND RESTORATION SCHEDULE, SEE SHEET No. 2 of 10.

BENCH MARKS
 BM #3: RAILROAD SPIKE IN BASE OF UTILITY POLE BGE #271344 S.W. CORNER OF LOUDON AVE & ATHOL AVENUE EL= 140.34



PROFILE
 SCALE: HORIZ.: 1" = 50'
 VERT.: 1" = 5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

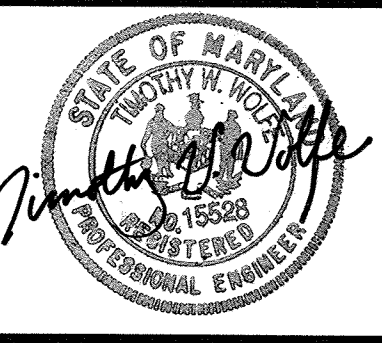
James J. ... 3/13/95
 DIRECTOR OF PUBLIC WORKS DATE

Robert ... 3-9-95
 CHIEF, BUREAU OF UTILITIES DATE

... 3/2/95
 CHIEF, BUREAU OF ENGINEERING DATE

... 3-9-95
 CHIEF, WATER AND SEWER DIVISION DATE

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 555 FARMOUTH AVENUE, STE. 230
 TOWSON, MARYLAND, 21286-5497
 (410)494-0500 FAX (410)296-3580



DES: FCL	TEB	AS-BUILT
DRN: RPG		
CHK: TWW		
DATE: FEB, 95		
BY	NO.	REVISION

12-INCH WATER MAIN
 LOUDON AVENUE
 FROM STATION 11+73.82
 TO STATION 23+44.33

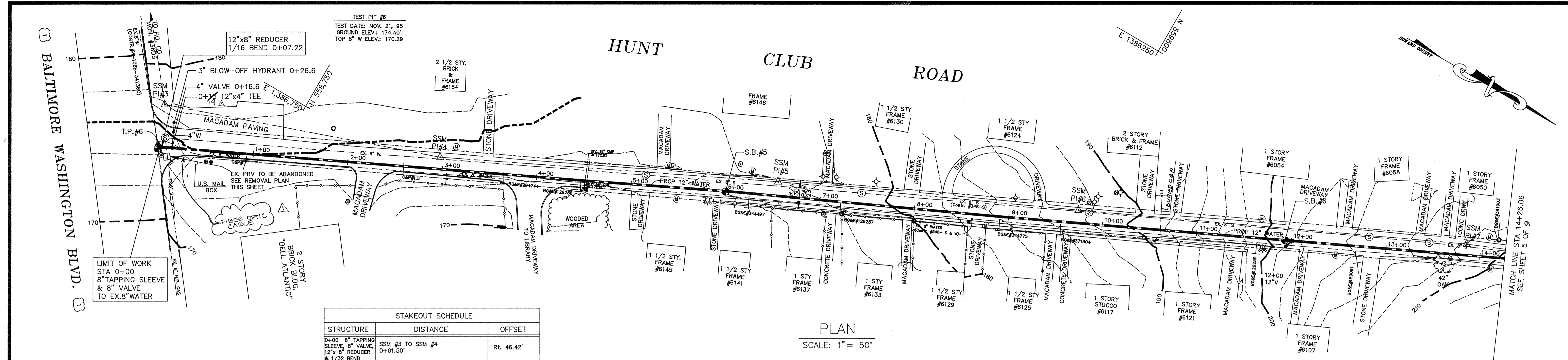
600' SCALE MAP NO. W38 BLOCK NO. 7,8

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

CAPITAL PROJECT No. W-8196
 CONTRACT No. 44-3298
 ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
 SHEET 3 OF 9
 AS-BUILT 12-11-97

FILE NAME: B0093



STAKEOUT SCHEDULE		
STRUCTURE	DISTANCE	OFFSET
0+00 8" TAPPING SLEEVE, 8" VALVE, 12" x 8" REDUCER & 1/32 BEND	SSM #3 TO SSM #4 0+01.50'	Rt. 46.42'
0+07.22 1/16 BEND	SSM #3 TO SSM #4 0+08.35	Rt. 44.14'
0+15 BLOW-OFF HYDRANT	SSM #3 TO SSM #4 0+13.18'	Rt. 16.83'
0+15 6" VALVE	SSM #3 TO SSM #4 0+14.27'	Rt. 26.77'
0+15 12" x 6" TEE	SSM #3 TO SSM #4 0+16.09'	Rt. 43.29'
12+0 12" VALVE	SSM #6 TO SSM #7 2+26.45	Rt. 12.52'

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
0+00 TO 14+26.06	1,426 L.F.	PAVING
0+15 BLOW-OFF HYDRANT CONNECTION	27 L.F.	PAVING
3" BLOW-OFF HYDRANT CONNECTION	19 L.F.	PAVING

SURVEY CONTROL

1. HOWARD COUNTY STATION 38D6
CONC. MON. ON SE SIDE RTE #1
@ ATLANTIC SUPPLY CO.
NORTH(83) 557,155.460
EAST (83) 1,384,499.255
ELEV. 174.54

2. HOWARD COUNTY STATION 38D5
CONC. MON. @ N.E. SIDE RTE #1
390± SOUTH FROM HUNT CLUB RD.
NORTH(83) 558,378.575
EAST (83) 1,386,524.193
ELEV. 193.03

NOTES:

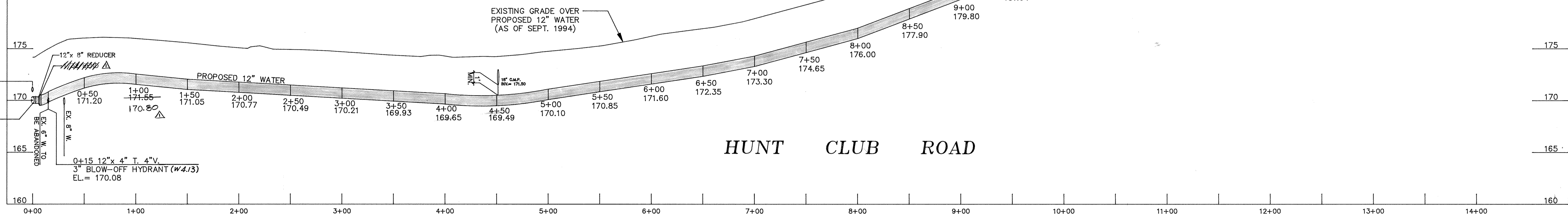
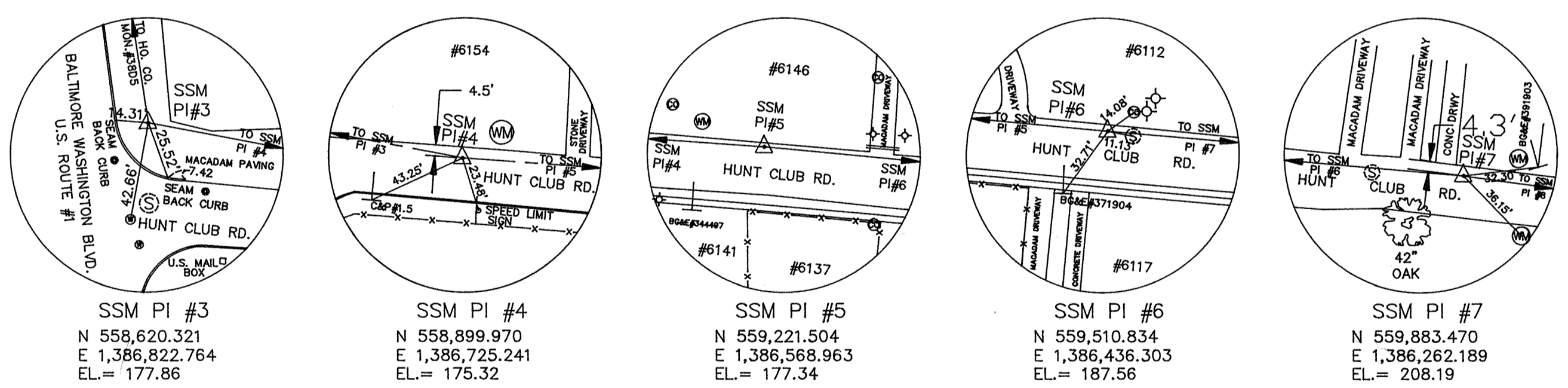
1.) INDICATES PIPING, ETC. TO BE REMOVED.

2.) TURNOVER ALL REMOVED VALVES TO HOWARD COUNTY MAINTENANCE DIVISION UNLESS INSTRUCTED OTHERWISE.

REMOVE 2 EX. 6" VALVES & STRAP 2-6" PLUGS ONTO TEE SEE DETAIL ON SHEET 10 OF 10

REMOVE ALL VALVES & PIPING WITHIN VAULT AND REMOVE TOP SLAB AND BACKFILL WITH FLO-ASH AND RESURFACE ROAD IN KIND

REMOVAL PLAN NTS



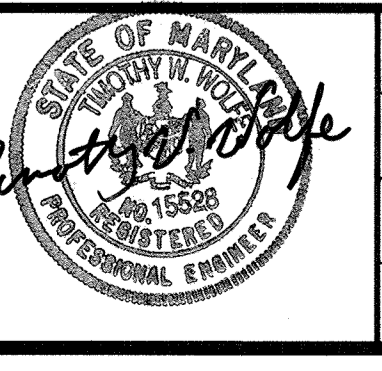
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *Ramon P. Shaw* 3/14/95
Date: 3-13-95

Chief, Bureau of Engineering: *Robert Seaton* 3/19/95
Date: 3-9-95

Chief, Water and Sewer Division: *Q. On Lim* 3-9-95
Date: 3-9-95

SSM
SPOTTIS, STEVENS and McCOY, INC.
ENGINEERS + SURVEYORS + SCIENTISTS
555 FAIRMOUNT AVENUE, STE. 230
TOWSON, MARYLAND, 21286-5497
(410)494-0500 FAX (410)296-3580



DES: FCL	TEB	AS-BUILT
DRN: RPG		
CHK: TWV		
DATE: FEB., '95	BY NO.	REVISION

12-INCH WATER MAIN
HUNT CLUB RD.
FROM STATION 0+00
TO STATION 14+25.46

60' SCALE MAP NO. W38 BLOCK NO. 7.8

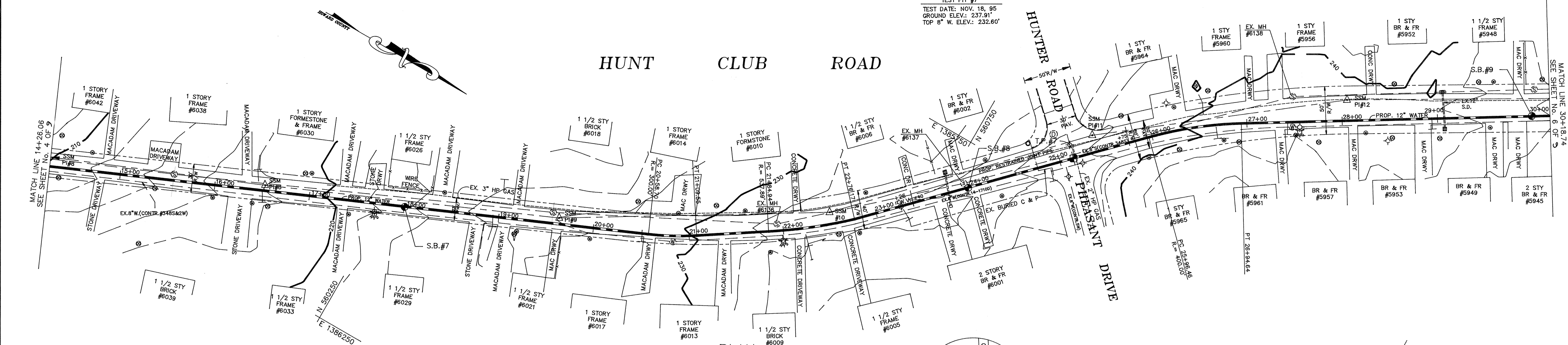
IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

CAPITAL PROJECT No. W-8196
CONTRACT No. 44 - 3298
ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
SHEET 4 OF 9
AS-BUILT 12-11-97

TEST PIT #7
 TEST DATE: NOV. 18, 95
 GROUND ELEV.: 237.91'
 TOP 8" W. ELEV.: 232.60'

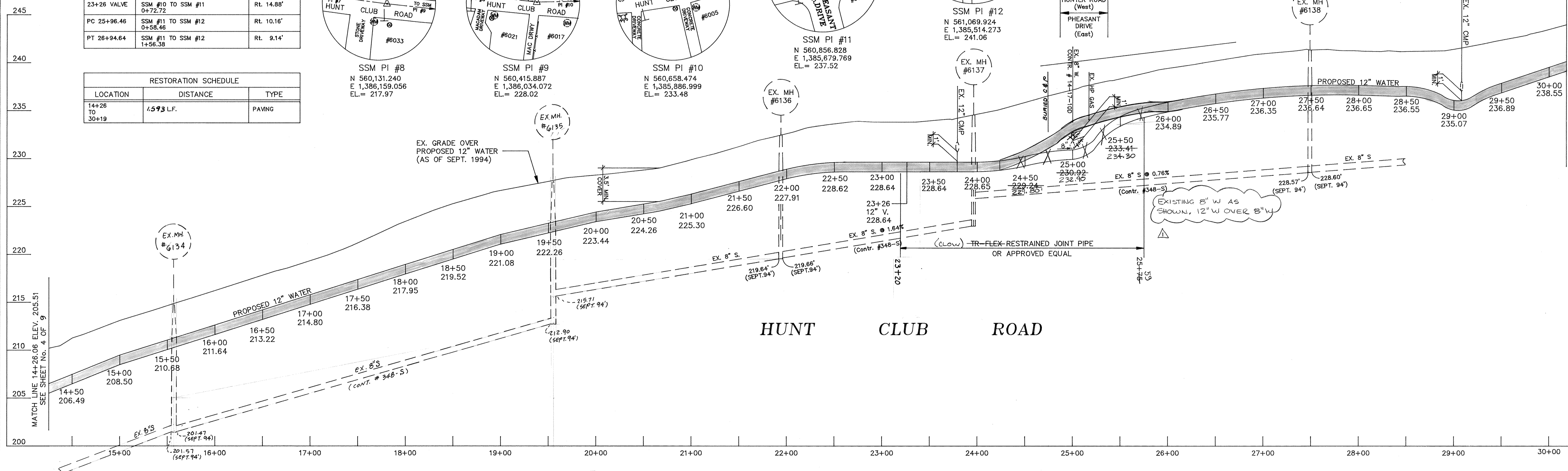
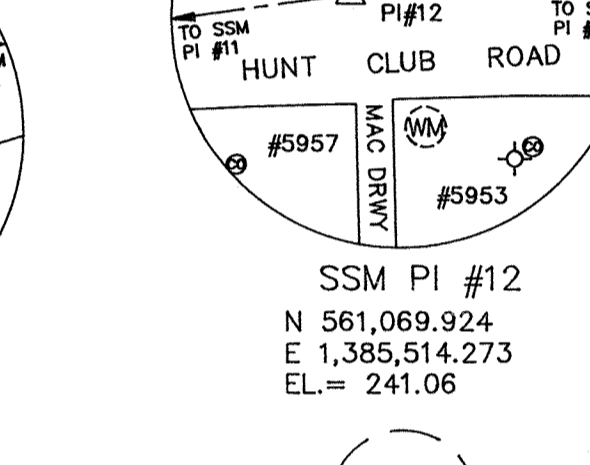
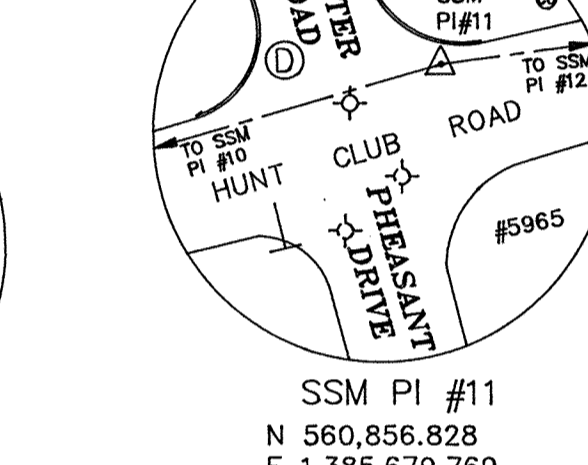
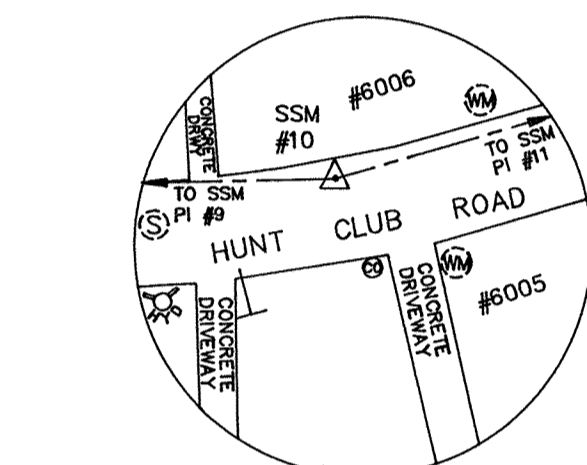
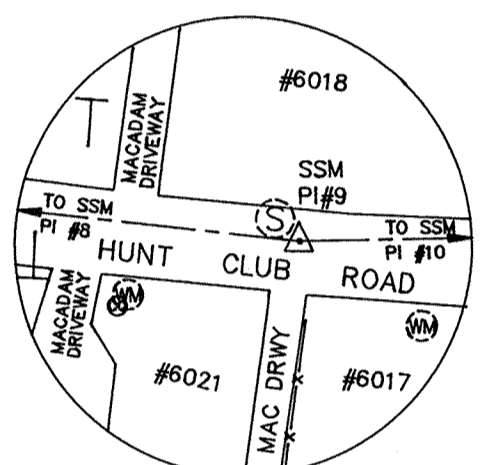
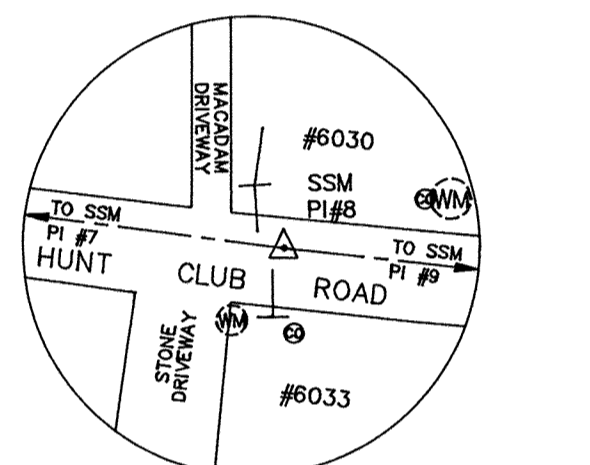
HUNT CLUB ROAD



PLAN
 SCALE: 1" = 30'

STAKEOUT SCHEDULE		
STRUCTURE	DISTANCE	OFFSET
PC 20+58.70	SSM #9 TO SSM #10 0+93.03	Rt. 18.85'
PT 21+09.55	SSM #9 TO SSM #10 1+43.76	Rt. 23.33'
PC 21+84.94	SSM #9 TO SSM #10 2+19.09	Rt. 18.61'
PT 22+76.17	SSM #10 TO SSM #11 0+22.94	Rt. 14.20'
23+26 VALVE	SSM #10 TO SSM #11 0+72.72	Rt. 14.88'
PC 25+96.46	SSM #11 TO SSM #12 0+58.46	Rt. 10.16'
PT 26+94.64	SSM #11 TO SSM #12 1+56.38	Rt. 9.14'

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
14+26 TO 30+19	1593 L.F.	PAVING



PROFILE
 SCALE: HORIZ.: 1" = 50'
 VERT.: 1" = 5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James P. Shaw 3/14/95
 DIRECTOR OF PUBLIC WORKS DATE

Richard S. Brown 3/19/95
 CHIEF, BUREAU OF ENGINEERING DATE

Robert S. Brown 3-13-95
 CHIEF, BUREAU OF UTILITIES DATE

Clayton D. Brown 3-9-95
 CHIEF, WATER AND SEWER DIVISION DATE

SSM
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 (410)484-0500 FAX (410)286-3580



DES: FCL	TEB	AS-BUILT
DRN: RPG		
CHK: TWW		
DATE: FEB. 95		
BY: NO.		REVISION
		DATE

12-INCH WATER MAIN
 HUNT CLUB ROAD
 FROM STATION 14+26.06
 TO STATION 30+18.74

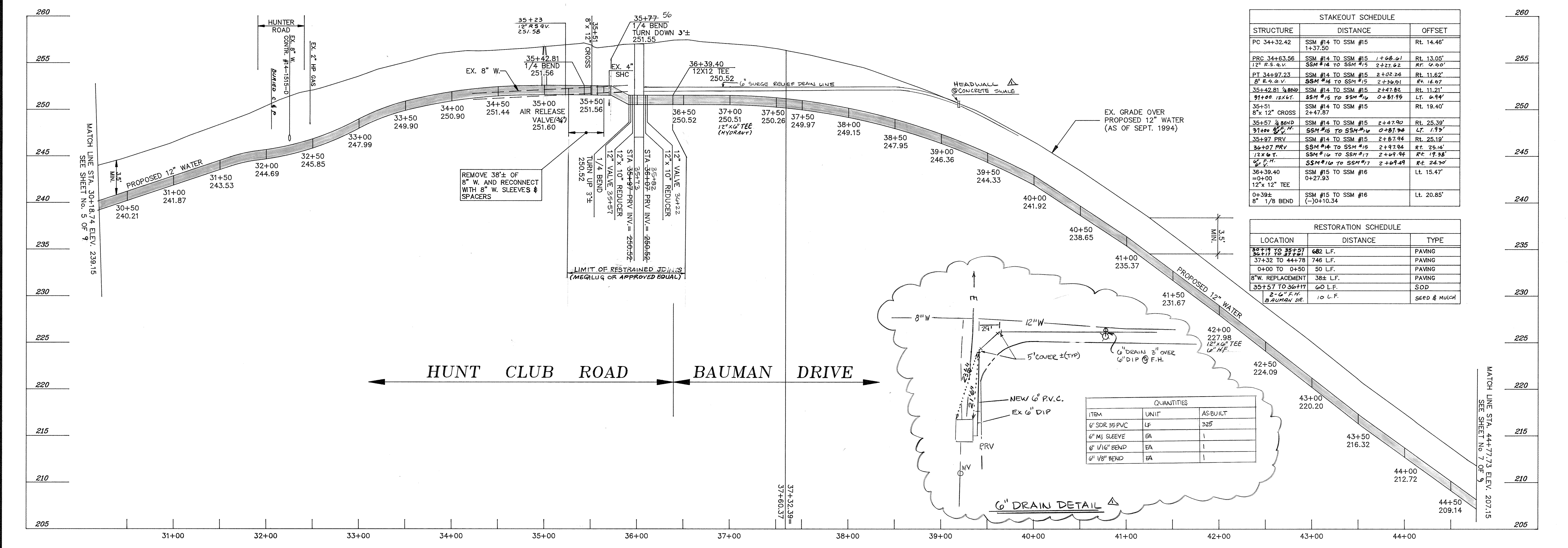
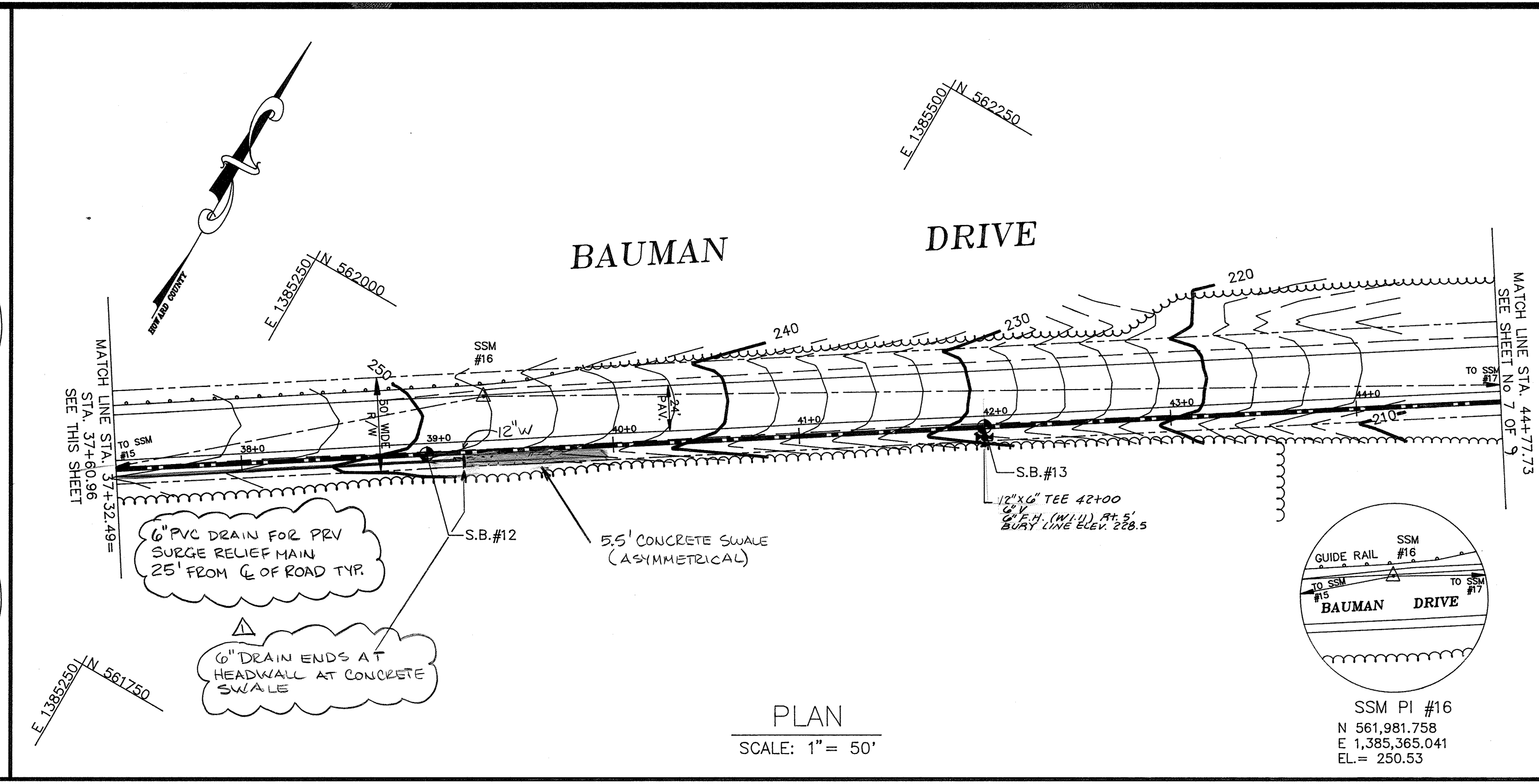
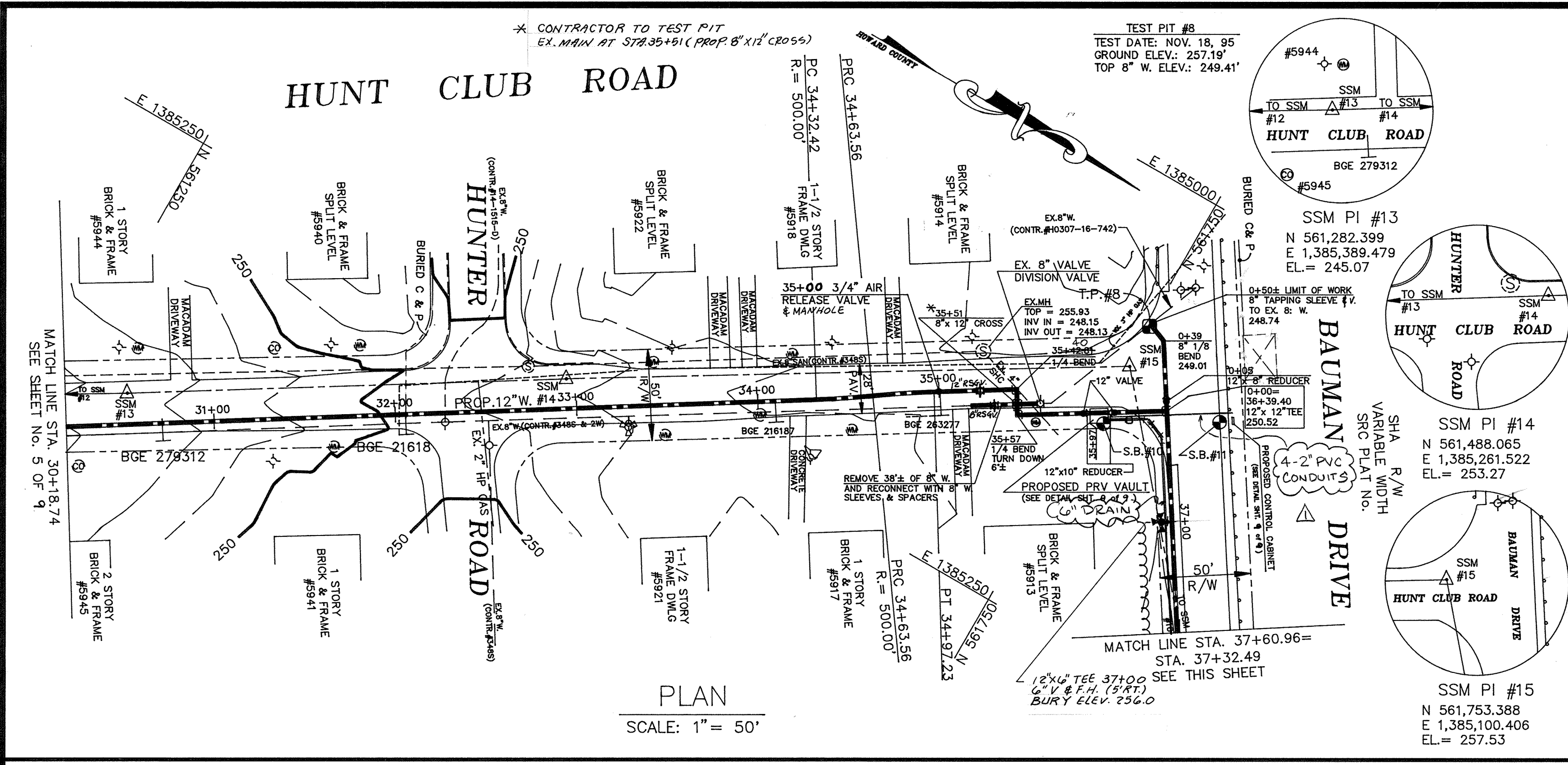
600' SCALE MAP NO. W38 BLOCK NO. 13

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

CAPITAL PROJECT No. W-8196
 CONTRACT No. 44-3298
 ELECTION DISTRICT No. 1 & 2
 ELKBRIDGE, MARYLAND

AS-BUILT 12-11-97

SCALE AS SHOWN
 SHEET 5 OF 9
 FILE NAME: B0095



STAKEOUT SCHEDULE		
STRUCTURE	DISTANCE	OFFSET
PC 34+32.42	SSM #14 TO SSM #15 1+37.50	Rt. 14.46'
PRC 34+63.56	SSM #14 TO SSM #15 1+68.61	Rt. 13.05'
12" R.S.G.V.	SSM #14 TO SSM #15 2+27.62	Rt. 6.90'
PT 34+97.23	SSM #14 TO SSM #15 2+02.24	Rt. 11.62'
8" R.G.V.	SSM #14 TO SSM #15 2+36.51	Rt. 14.67'
35+42.81 1/4 BEND	SSM #14 TO SSM #15 2+47.82	Rt. 11.21'
37+00 12x12 TEE	SSM #15 TO SSM #16 0+81.99	Lt. 6.94'
36+51	SSM #14 TO SSM #15	Rt. 19.40'
8" 12" CROSS	SSM #14 TO SSM #15	Rt. 19.40'
35+57 1/4 BEND	SSM #14 TO SSM #15 2+47.90	Rt. 25.39'
37+00 12x12 TEE	SSM #15 TO SSM #16 0+81.99	Lt. 11.93'
35+97 PRV	SSM #14 TO SSM #15 2+87.94	Rt. 25.19'
36+07 PRV	SSM #14 TO SSM #15 2+97.94	Rt. 25.14'
12x12 TEE	SSM #16 TO SSM #17 2+69.94	Rt. 19.38'
6" F.H.	SSM #16 TO SSM #17 2+69.94	Rt. 24.30'
36+39.40	SSM #15 TO SSM #16 0+27.93	Lt. 15.47'
0+00	SSM #15 TO SSM #16	Lt. 20.85'
8" 1/8 BEND	SSM #15 TO SSM #16 (-)+10.34	Lt. 20.85'

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
30+19 TO 35+27	682 L.F.	PAVING
37+32 TO 44+78	746 L.F.	PAVING
0+00 TO 0+50	50 L.F.	PAVING
8" W. REPLACEMENT	38± L.F.	PAVING
35+57 TO 36+17	60 L.F.	SOD
2" G" F.H. BAUMAN DR.	10 L.F.	SEED & MULCH

QUANTITIES		
ITEM	UNIT	AS-BUILT
6" SDR 35 PVC	LF	325
6" MI SLEEVE	EA	1
6" 1/16" BEND	EA	1
6" 1/8" BEND	EA	1

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

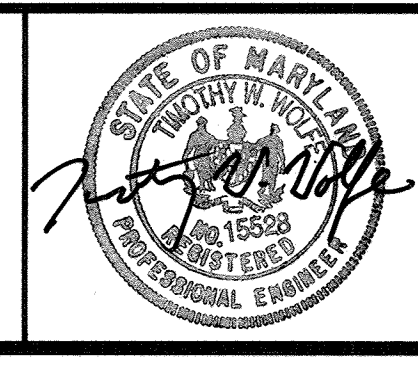
James A. Lewis 2/14/95
DIRECTOR OF PUBLIC WORKS DATE

Robert W. Beatty 3-13-95
CHIEF, BUREAU OF UTILITIES DATE

Richard J. Spom 3/19/95
CHIEF, BUREAU OF ENGINEERING DATE

Q. J. O'Neil 3-2-95
CHIEF, WATER AND SEWER DIVISION DATE

SSM
SPOTTS, STEVENS and McCOY, INC.
ENGINEERS • SURVEYORS • SCIENTISTS
555 FAIRMOUNT AVENUE, STE. 230
TOWSON, MARYLAND, 21286-6497
(410)494-0500 FAX (410)296-3580



DES:	DRN:	CHK:	DATE:	BY:	NO.	REVISION	DATE:
FCL	RPG	TWW	FEB. 95				

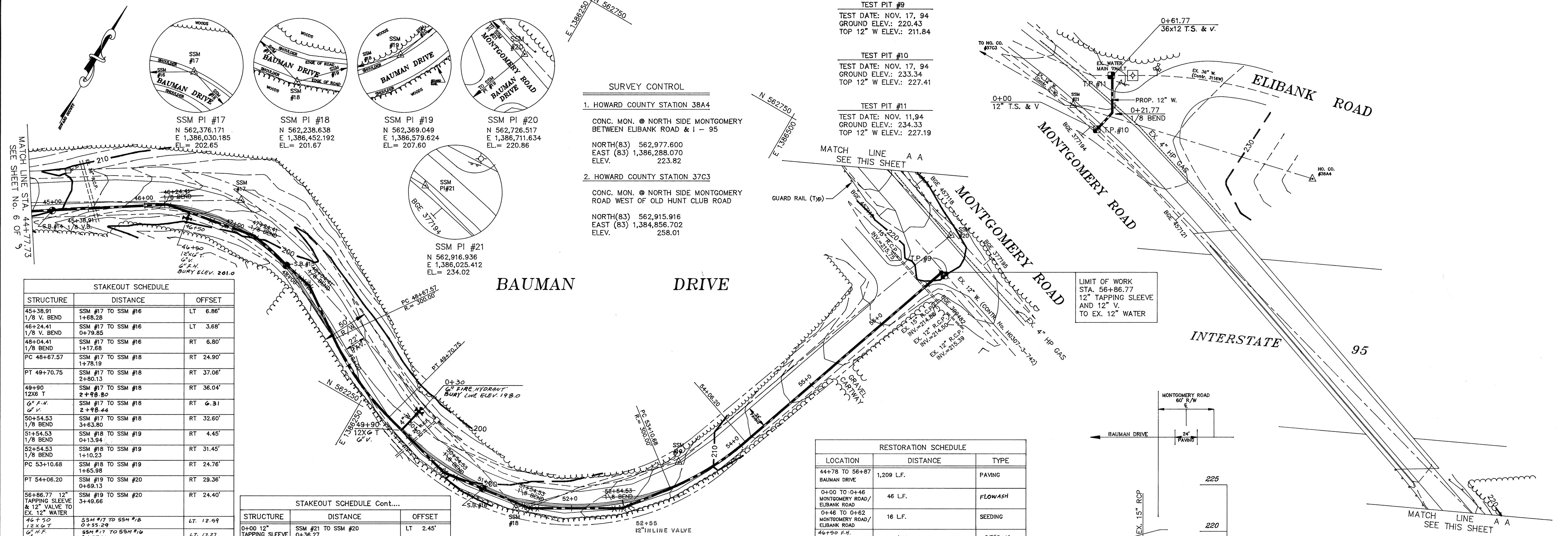
12-INCH WATER MAIN
HUNT CLUB ROAD & BAUMAN DRIVE
FROM STATION 30+18.74 HUNT CLUB ROAD
TO STATION 44+77.73 BAUMAN DRIVE

600' SCALE MAP NO. W38 BLOCK NO. 13.19

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

CAPITAL PROJECT No. W-8196
CONTRACT No. 44-3298
ELECTION DISTRICT No. 1 & 2
ELK RIDGE, MARYLAND

SCALE AS SHOWN
SHEET 6 OF 9
FILE NAME: B0060



STRUCTURE	DISTANCE	OFFSET
45+38.91 1/8" V. BEND	SSM #17 TO SSM #16 1+68.28	LT 6.88'
46+24.41 1/8" V. BEND	SSM #17 TO SSM #16 0+79.85	LT 3.68'
48+04.41 1/8" BEND	SSM #17 TO SSM #16 1+17.68	RT 6.80'
PC 48+67.57	SSM #17 TO SSM #18 1+78.19	RT 24.90'
PT 49+70.75	SSM #17 TO SSM #18 2+80.13	RT 37.06'
49+90 12X6 T	SSM #17 TO SSM #18 2+98.80	RT 36.04'
6" F.H. 4" V.	SSM #17 TO SSM #18 2+98.44	RT 6.31'
50+54.53 1/8" BEND	SSM #17 TO SSM #18 3+63.80	RT 32.60'
51+54.53 1/8" BEND	SSM #18 TO SSM #19 0+13.94	RT 4.45'
52+54.53 1/8" BEND	SSM #18 TO SSM #19 1+10.23	RT 31.45'
PC 53+10.68	SSM #18 TO SSM #19 1+65.98	RT 24.76'
PT 54+06.20	SSM #19 TO SSM #20 0+69.13	RT 29.36'
56+86.77 12" TAPPING SLEEVE & 12" VALVE TO EX. 12" WATER	SSM #19 TO SSM #20 3+49.66	RT 24.40'
42+50 12X6 T	SSM #17 TO SSM #18 0+55.29	LT 12.99'
4" F.H. 4" V.	SSM #17 TO SSM #16 0+97.61	LT 12.27'

STRUCTURE	DISTANCE	OFFSET
0+00 12" TAPPING SLEEVE & 12" VALVE TO EX. 12" WATER	SSM #21 TO SSM #20 0+36.27	LT 2.45'
0+21.77 1/8" BEND	SSM #21 TO SSM #20 0+35.12	LT 24.19'
0+61.77 36x12 TAPPING SLEEVE & 12" VALVE TO EX. 36" WATER	SSM #21 TO SSM #20 0+06.59	LT 52.22'

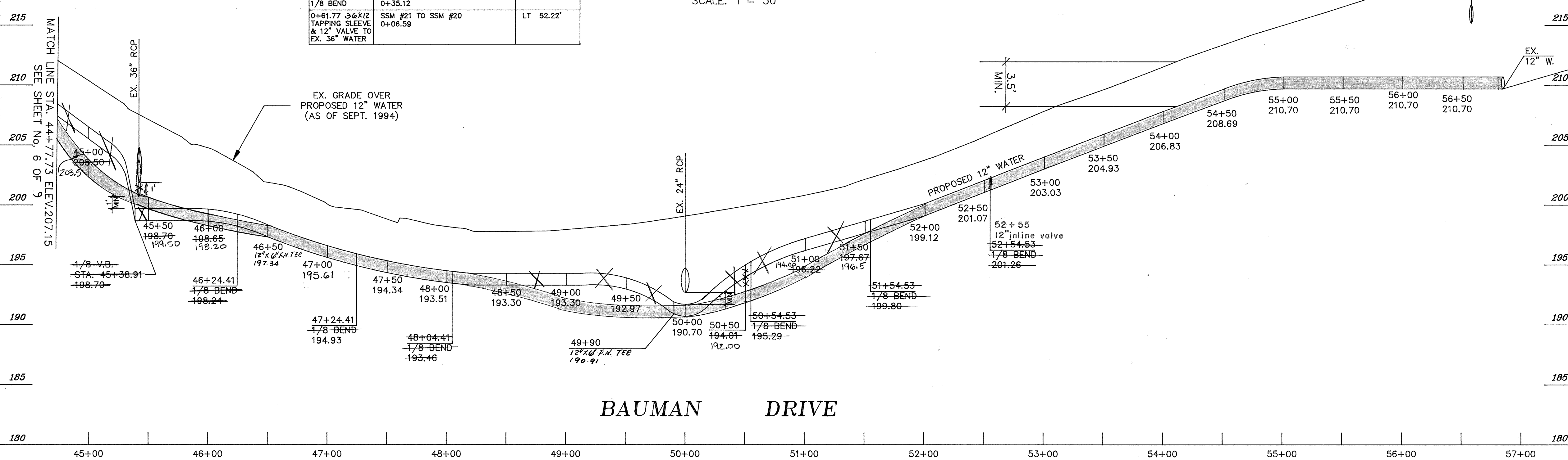
LOCATION	DISTANCE	TYPE
44+78 TO 56+87 BAUMAN DRIVE	1,209 L.F.	PAVING
0+00 TO 0+46 MONTGOMERY ROAD/ ELIBANK ROAD	46 L.F.	FLOWASH
0+46 TO 0+82 MONTGOMERY ROAD/ ELIBANK ROAD	16 L.F.	SEEDING
46+90 F.H. 42+90 F.H. BAUMAN DRIVE	11 L.F.	SEEDING

SURVEY CONTROL

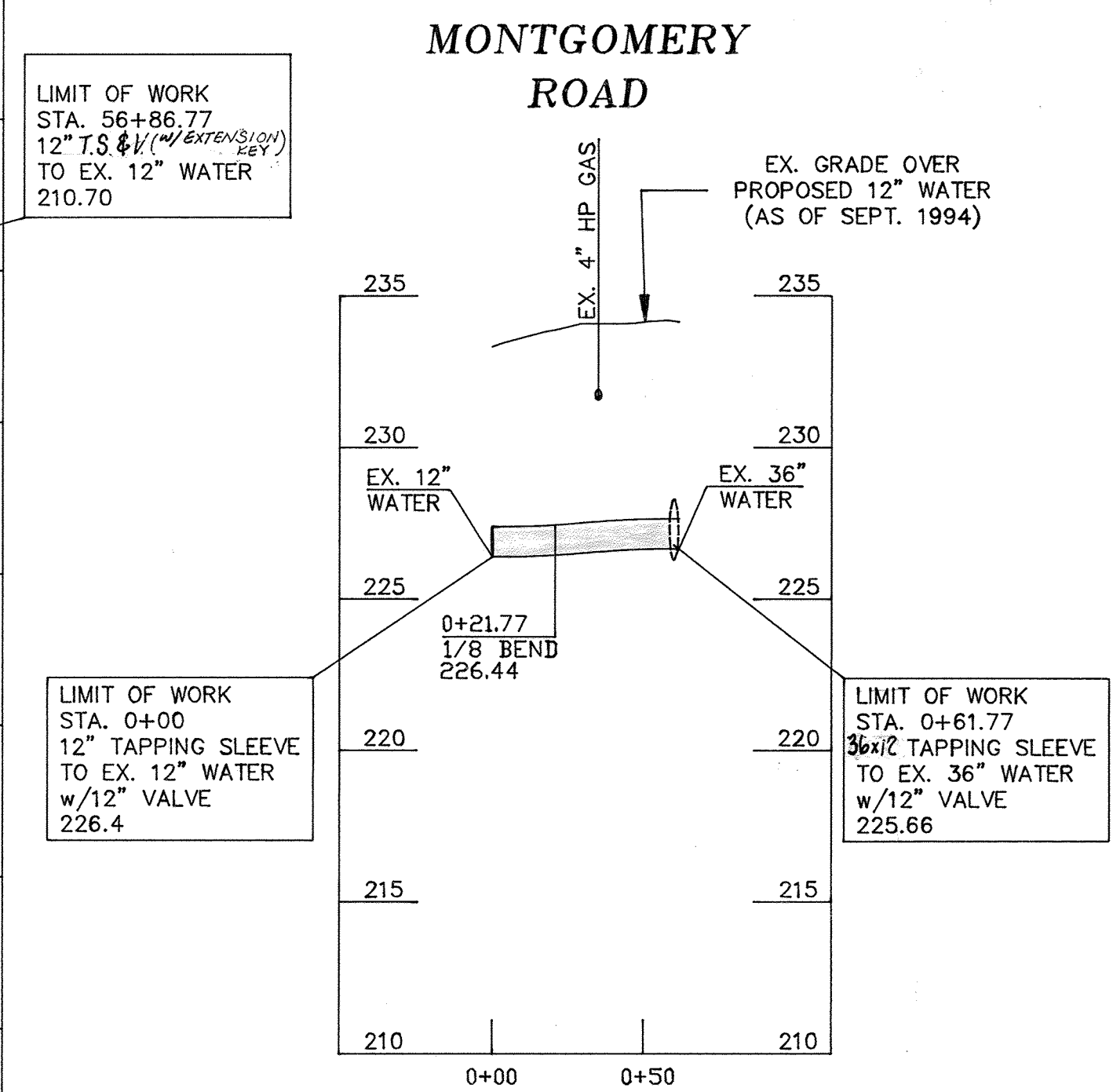
1. HOWARD COUNTY STATION 38A4
CONC. MON. @ NORTH SIDE MONTGOMERY ROAD BETWEEN ELIBANK ROAD & I - 95
NORTH(83) 562,977.600
EAST (83) 1,386,288.070
ELEV. 223.82

2. HOWARD COUNTY STATION 37C3
CONC. MON. @ NORTH SIDE MONTGOMERY ROAD WEST OF OLD HUNT CLUB ROAD
NORTH(83) 562,915.916
EAST (83) 1,384,856.702
ELEV. 258.01

PLAN
SCALE: 1" = 50'



PROFILE
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'

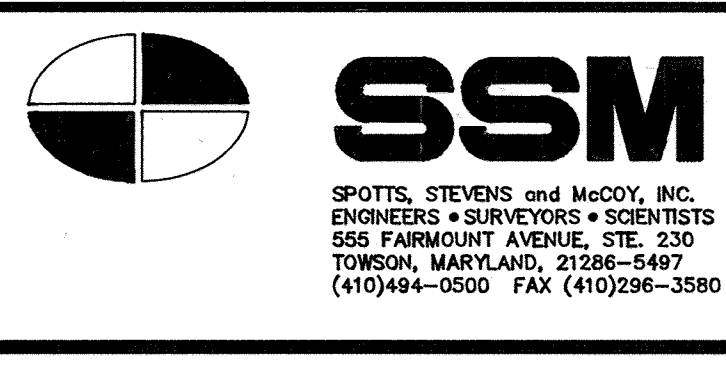


AS-BUILT PROFILE
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *James J. ...* 3/14/95
Chief, Bureau of Utilities: *John ...* 3-13-95

Chief, Bureau of Engineering: *Paul ...* 3/2/95
Chief, Water and Sewer Division: *...* 3-2-95



DES: FCL
DRN: RPG
CHK: TWW
DATE: FEB.,95

BY	NO.	REVISION	DATE

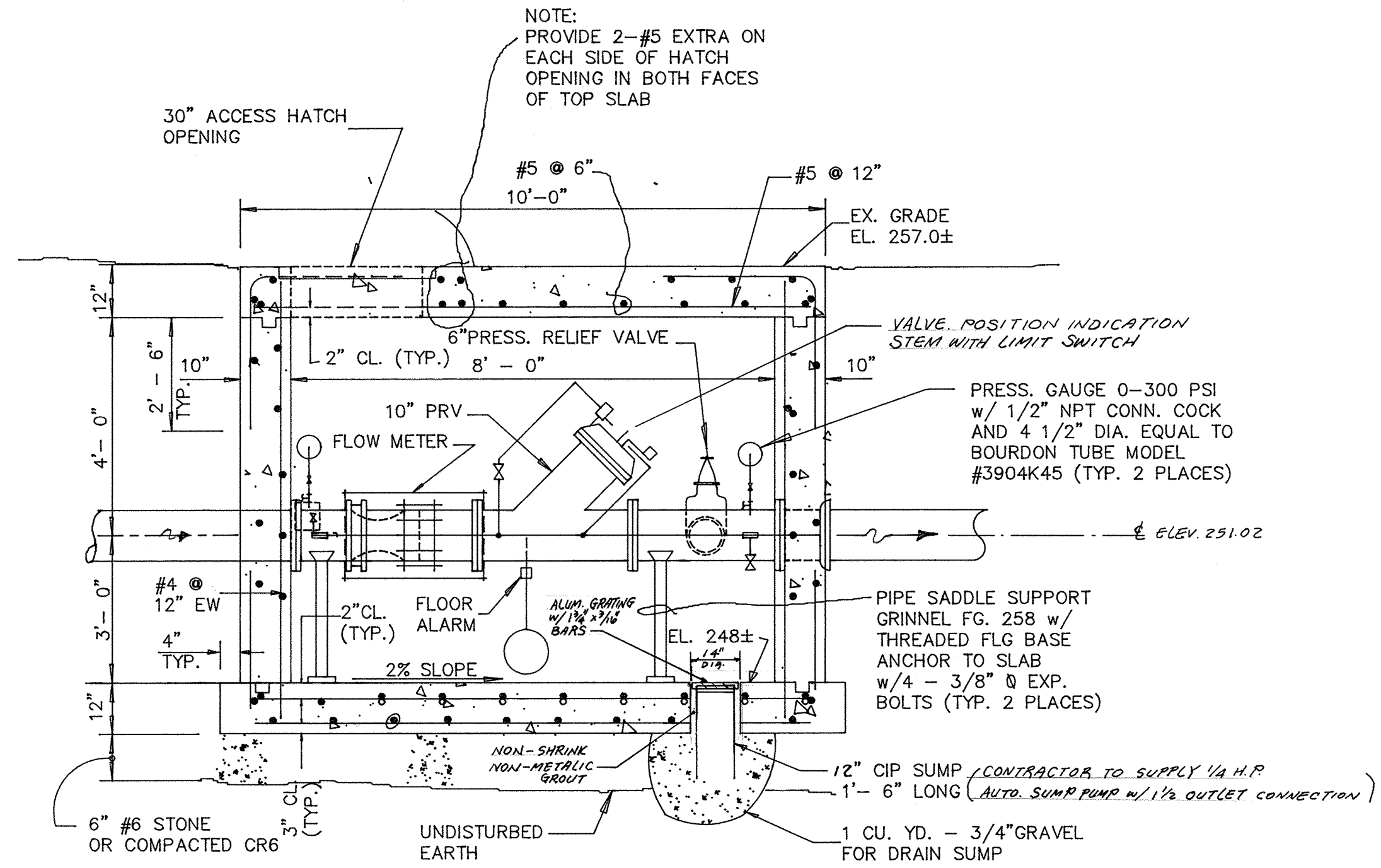
12-INCH WATER MAIN
BAUMAN DRIVE
FROM STATION 44+77.3 TO STATION 56+86.77
&
MONTGOMERY ROAD
FROM STATION 0+00 TO STATION 0+61.77

600' SCALE MAP NO. W38 BLOCK NO. 19

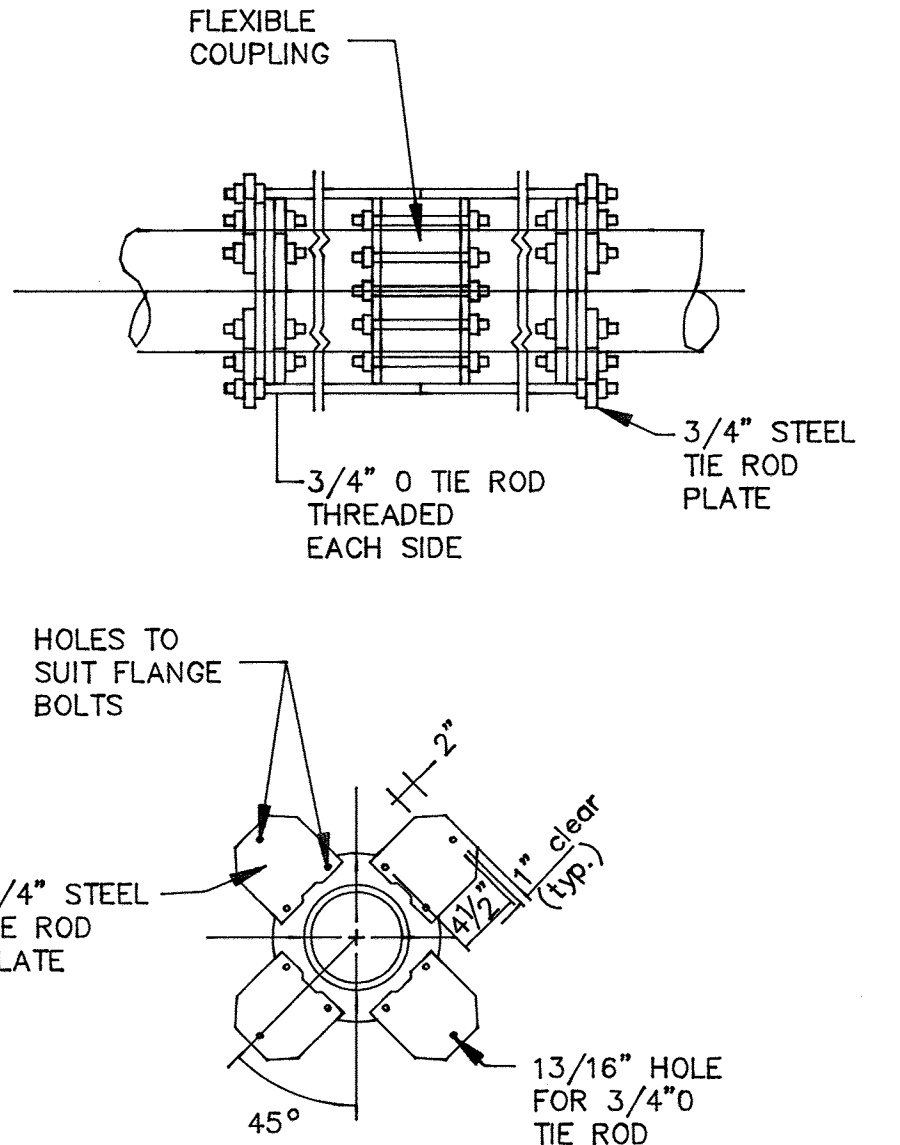
IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

CAPITAL PROJECT No. W-8196
CONTRACT No. 44 - 3298
ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
SHEET 2 OF 2
FILE NAME: BO09B



SECTION A - A
NOT TO SCALE



TIE ROD ASSEMBLY - DETAIL
NOT TO SCALE

- NOTES:
- LADDER SHALL BE FABRICATED OF 6061-T6 ALUMINUM WITH STANDARD MILL FINISH. CONFIRM TO SSHA/ANSI A14.3.
 - TELESCOPING SAFETY POLE SHALL BE TELESCOPING TUBULAR HOT DIP GALV. STEEL TUBE THAT AUTOMATICALLY LOCKS WHEN FULLY EXTENDED POLE SHALL BE CONTROLLED BY ALLOY SPRING BALANCING MECHANISM AND SHALL BE ANCHORED TO WALL W/ 3/4" GALV. EXP. ANCHORS. SAFETY POLE SHALL BE BILCO LADDER-UP OR EQUAL.
 - ALL METAL PIPING SUPPORTS, TIE RODS, COUPLINGS AND CONTROL VALVE SHALL BE PAINTED WITH TWO COATS OF MAB/PENNSBUY 44 SERIES PLY-MASTIC EPOXY COATING, 10-14 MILS DFT. SURFACE PREPARATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL COPPER TUBING SHALL BE EXCLUDED. COLOR SUBMITTED TO BE APPROVED BY THE COUNTY.
 - ONE (1) FIVE (5) GALLON LOT OF THE PLY-MASTIC COATING MATERIAL MATCHING SHALL BE PROVIDED TO THE COUNTY FOR TOUCH-UP.
 - ONE (1) MATCHED SET OF QDTR-QDTR-20 ANALOG/DIGITAL TRANSMITTER/RECEIVER CARDS FOR TELEMETRY.

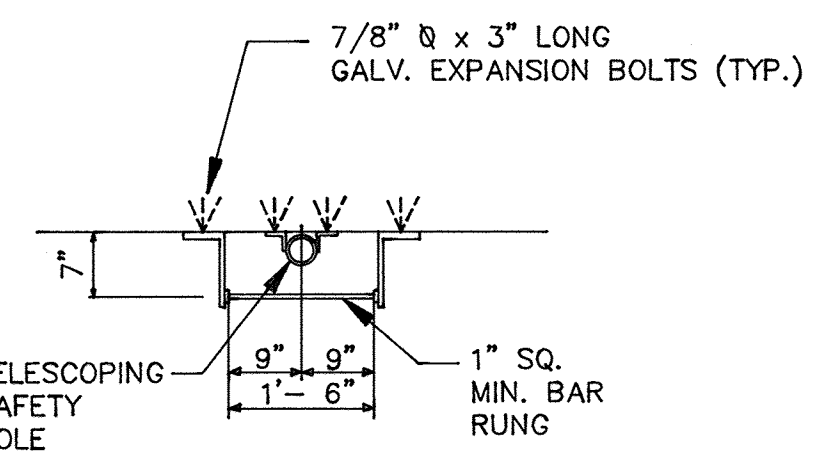
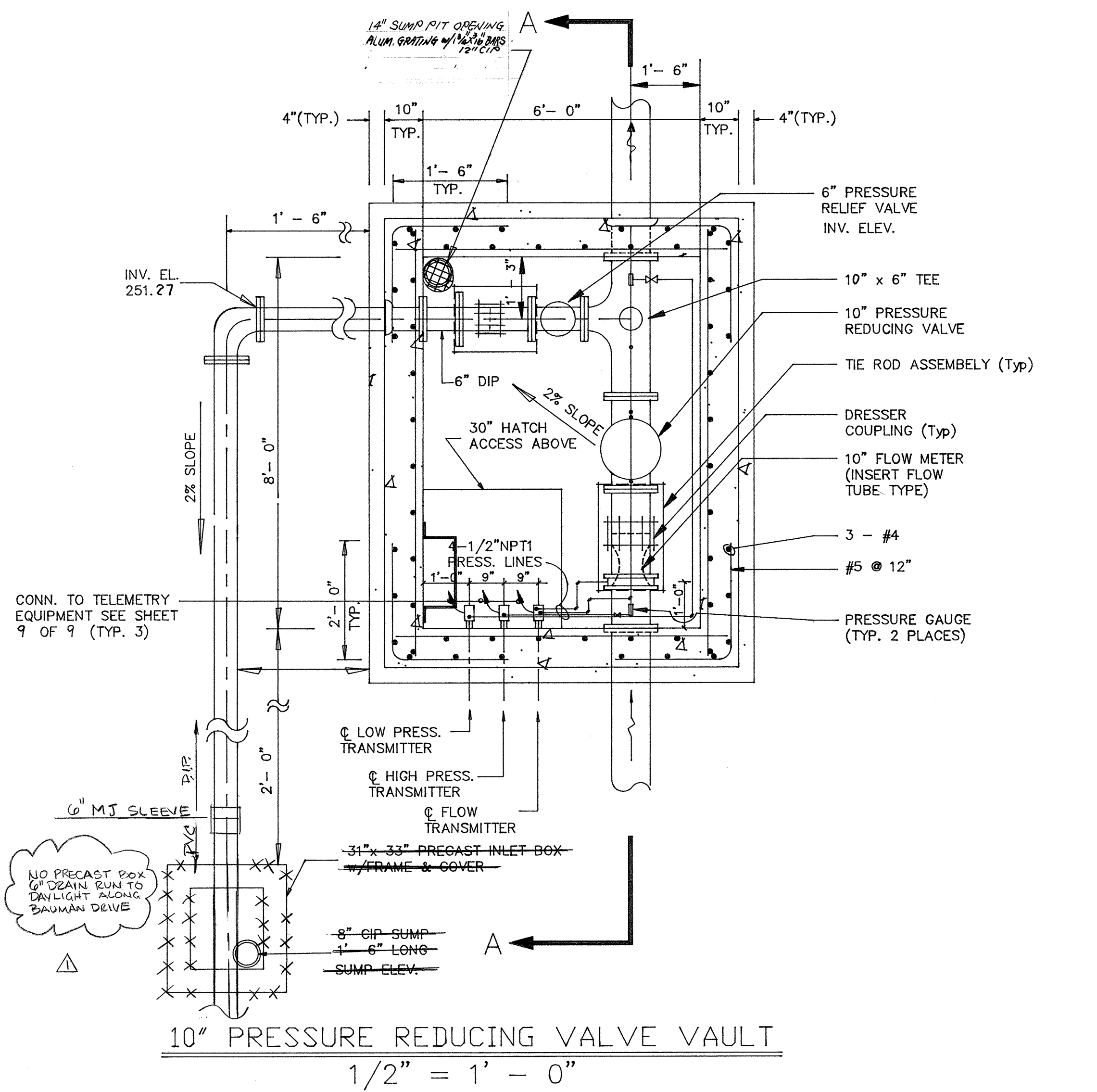
SEQUENCE OF CONSTRUCTION AND REMOVAL

- NOTIFY HOWARD CO. BUREAU OF UTILITIES (992-2366) AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK.
- LAYOUT ALIGNMENT AT SITE.
- INSTALL SEDIMENT CONTROL DEVICE (STRAW BALES) PERPENDICULAR TO THE CURB AND THE EDGE OF ROAD ON THE DOWN-SLOPE SIDE OF CONSTRUCTION.
- EXCAVATE DITCH TO GRADE SPECIFIED OF THE PROFILE.
- (a) INSTALL THE PROPOSED WATER MAIN AND PRV.
(b) REMOVE THE EXISTING PRV BEFORE THE CONNECTION OF PROPOSED WATER MAIN TO THE EXISTING 8" WATER AT U.S. ROUTE 1 AND HUNT CLUB ROAD AS PER SHEET 4.
(c) PROVIDE TEMPORARY 8" WATER TO THE EXISTING 8" WATER AT HUNT CLUB ROAD STATION 35+16, RIGHT 8.0' FOR THE DURATION OF WATER SUPPLY INTERRUPTION DUE TO THIS CONSTRUCTION.
- BACKFILL TRENCH AND RESTORE SURFACE COMPLETE IN PLACE.
- CLEAN UP CONSTRUCTION SITE.
- REMOVE SEDIMENT CONTROL DEVICES AFTER PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR.

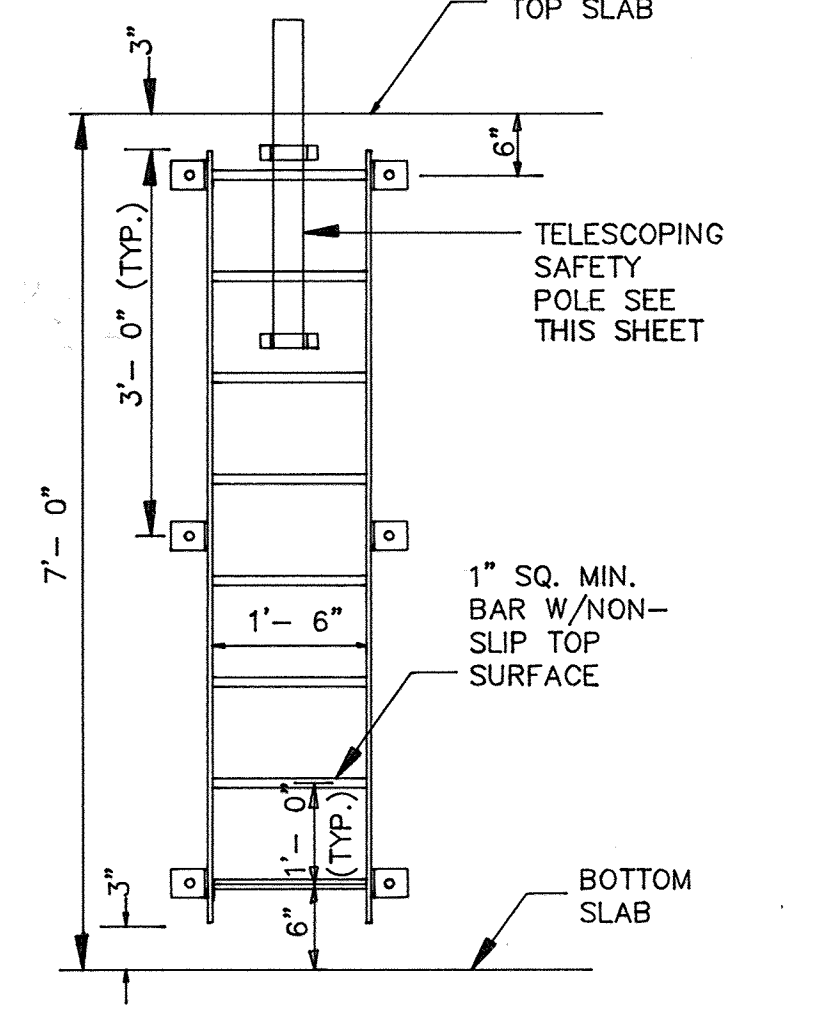
PERMANENT SEEDING NOTES

- 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:
- 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.).
 - 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 (.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.
- 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 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 (.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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

TEMPORARY SEEDING NOTES

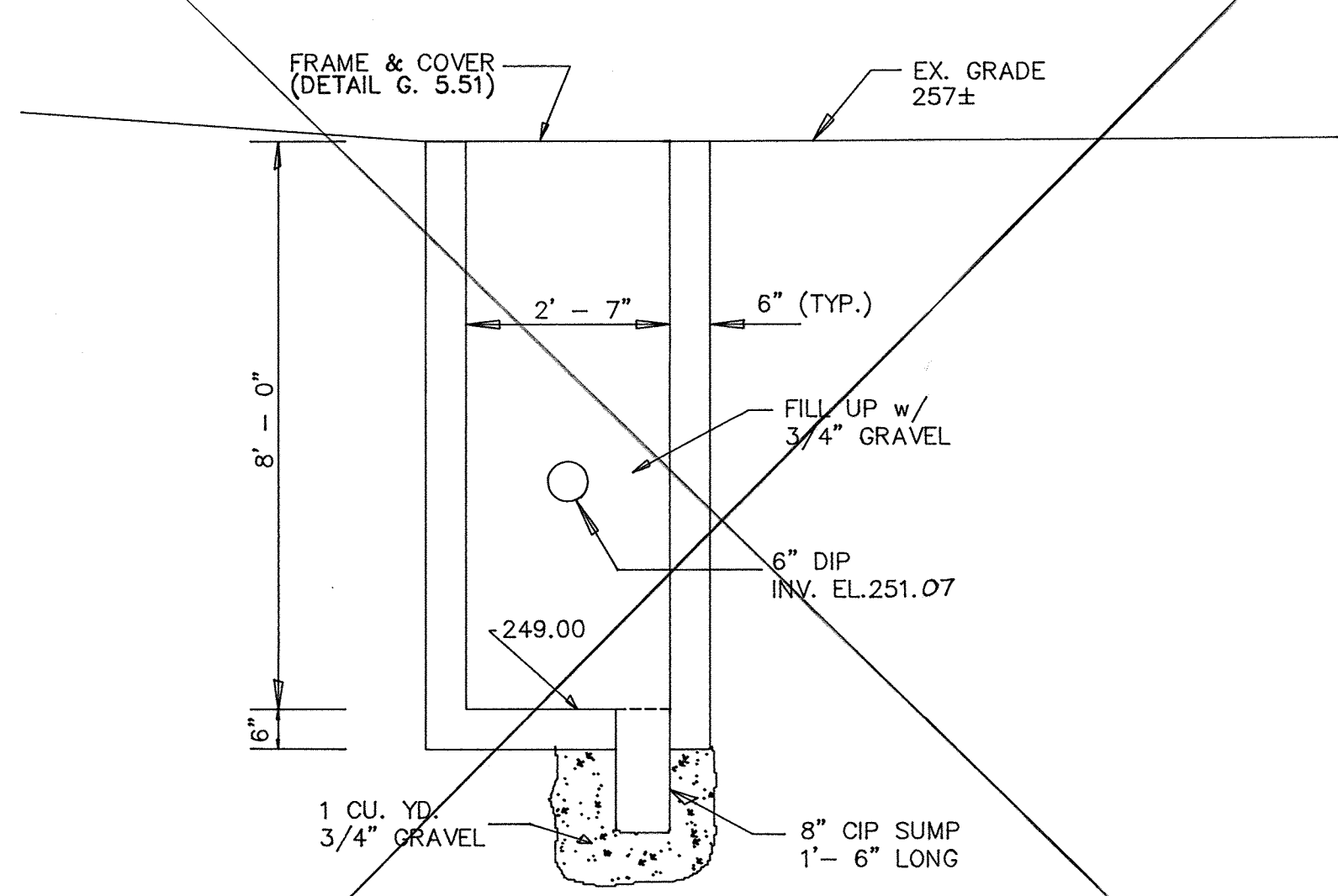


PLAN



ELEVATION

LADDER DETAIL
NOT TO SCALE



MODIFIED 31" x 33" PRECAST INLET BOX
NOT TO SCALE

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 VEGETIVE 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. I, 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (SEC. G20.0) 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	NA	ACRES
AREA DISTURBED	0.7623	ACRES
AREA TO BE ROOTED OR PAVED	0.7567	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.0056	ACRES
TOTAL CUT	0.160	CU. YDS.
TOTAL FILL	0.136	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	NA	
- 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.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jamie J. Allen 3/14/95
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Berman 3-13-95
CHIEF, BUREAU OF UTILITIES DATE

Robert J. Spon 3/13/95
CHIEF, WATER AND SEWER DIVISION DATE

SSM
SPOTTIS, STEVENS and McCOY, INC.
ENGINEERS • SURVEYORS • SCIENTISTS
555 FARMOUNT AVENUE, STE. 230
TOWSON, MARYLAND, 21286-5497
(410)484-0500 FAX (410)296-3580

STATE OF MARYLAND
JAMES W. WOODS
REGISTERED PROFESSIONAL ENGINEER
NO. 5528

DES: FCL	TEB	AS-BUILT
DRN: RPG		
CHK: TWW		
DATE: FEB. '95	BY	NO.
	REVISION	DATE

PRESSURE REDUCING VALVE VAULT

&

NOTES

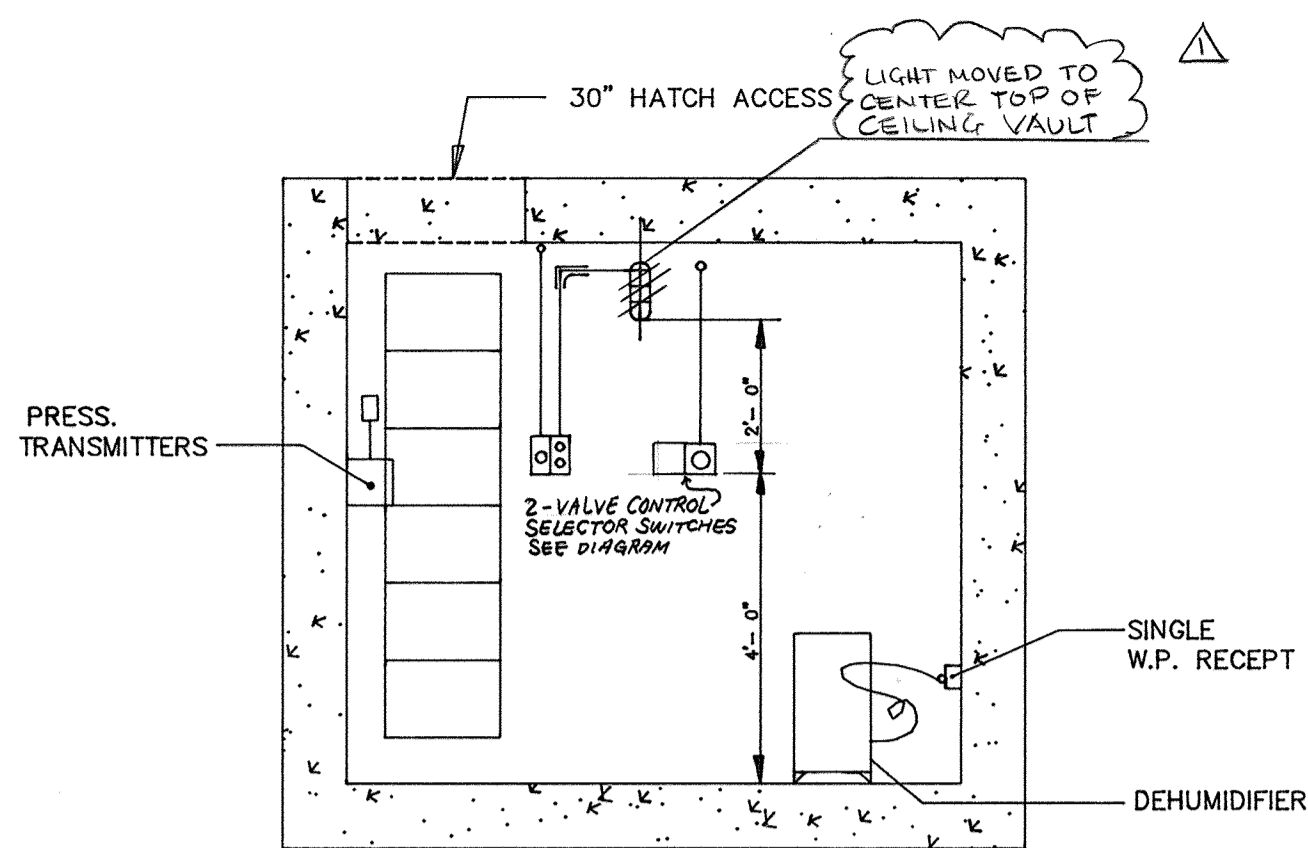
600' SCALE MAP NO. _____ BLOCK NO. _____

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

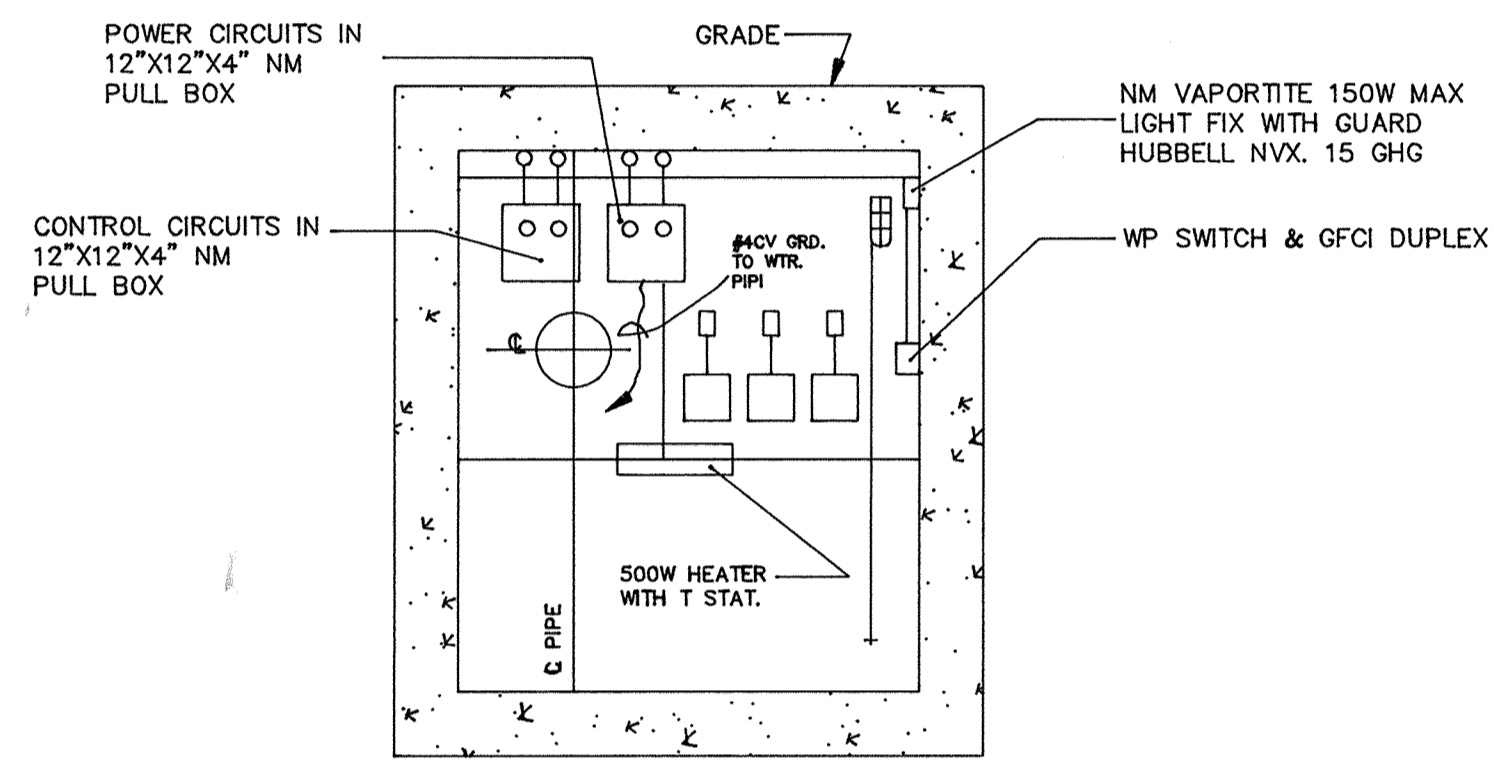
CAPITAL PROJECT No. W-8196
CONTRACT No. 44 - 3298
ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
SHEET 2 OF 2
As-Built 12-11-97

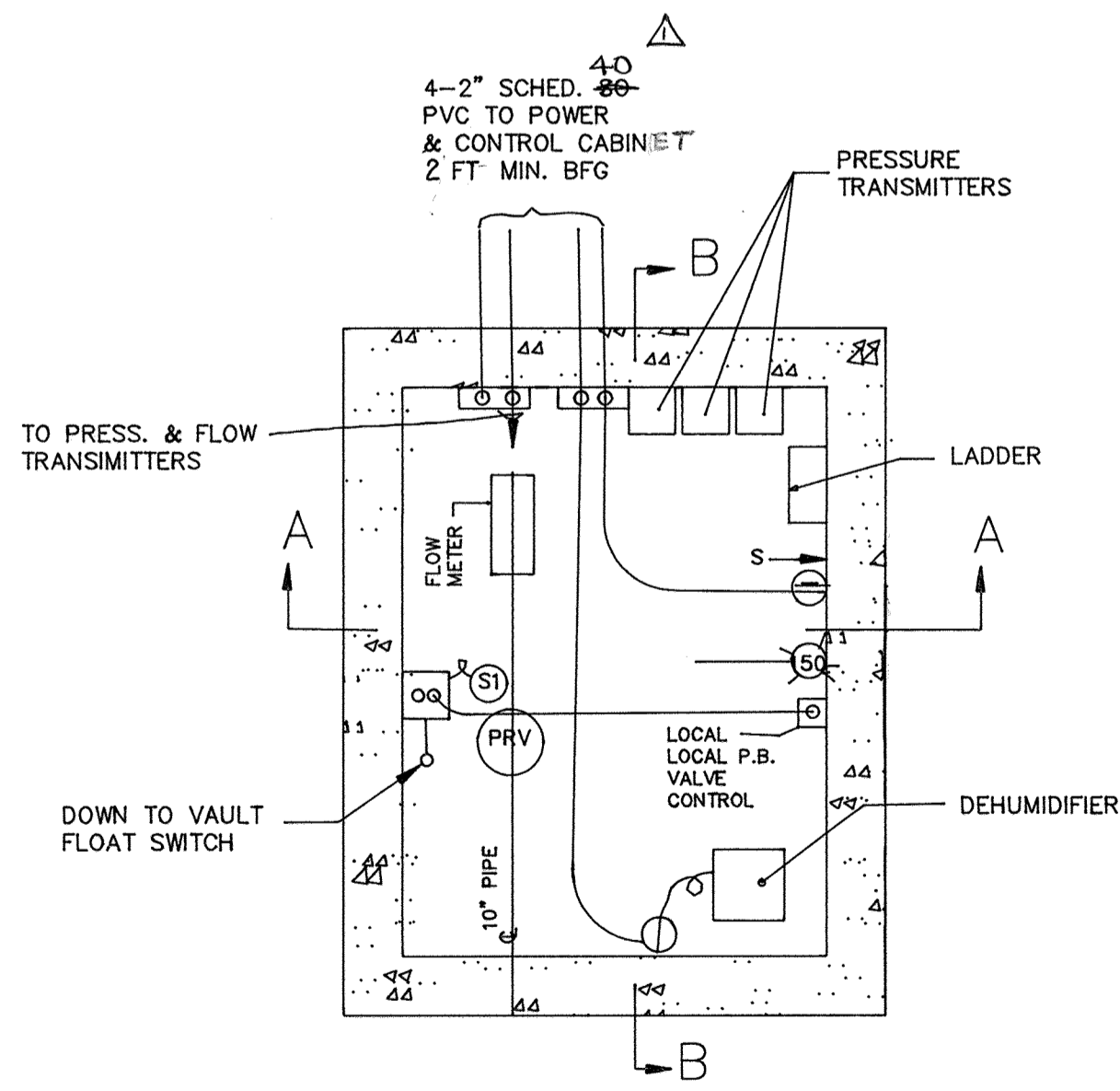
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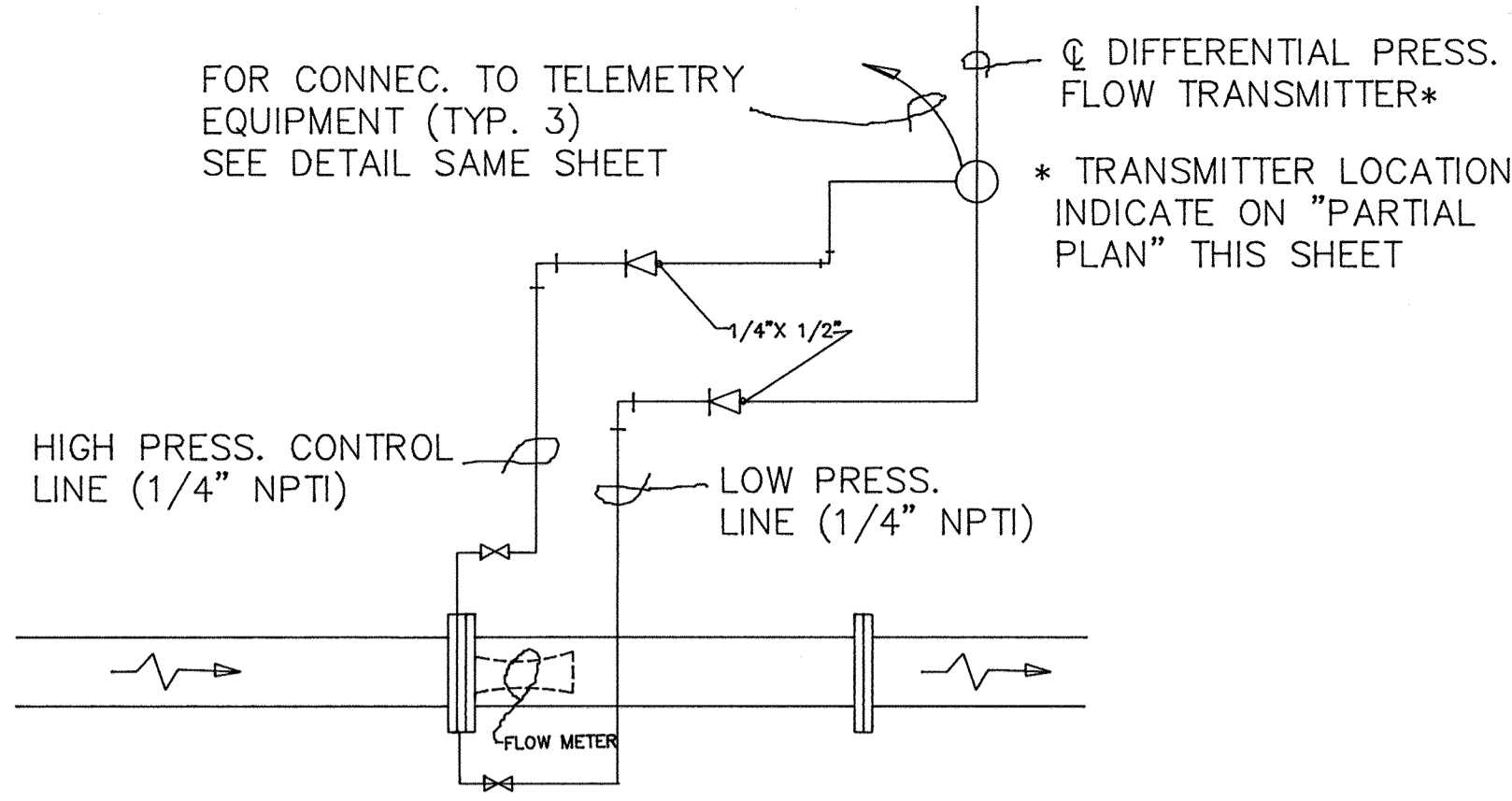
SECTION B - B
NOT TO SCALE



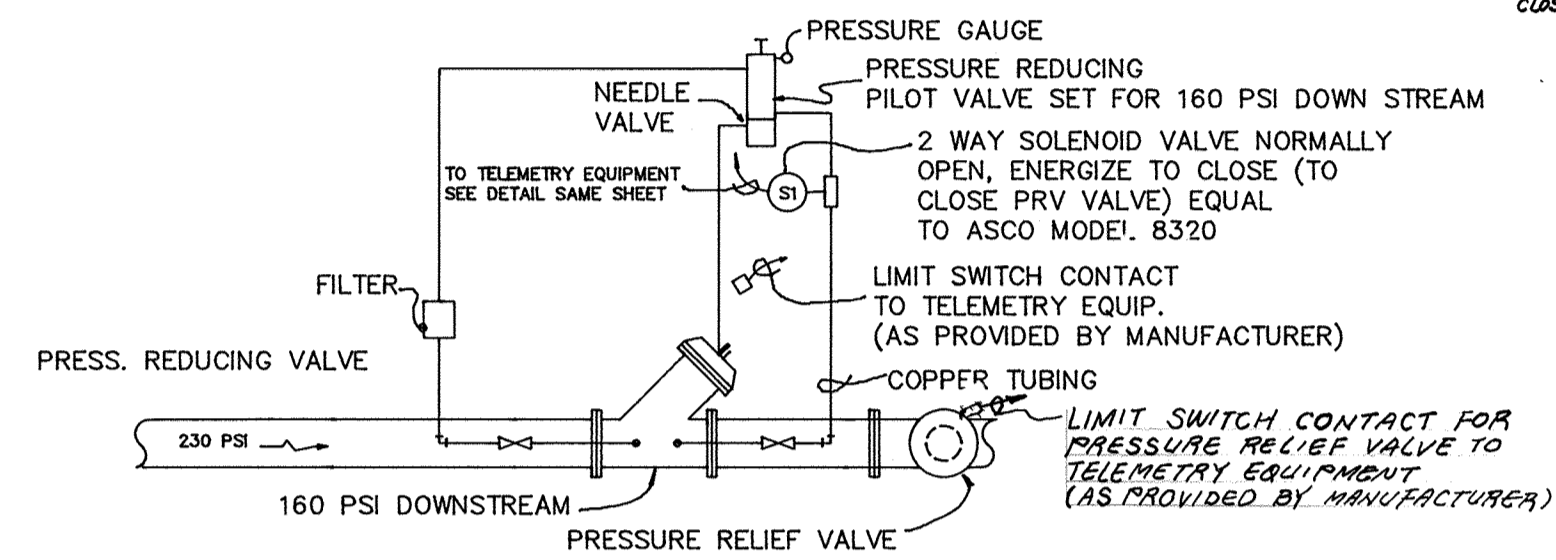
SECTION A - A
NOT TO SCALE



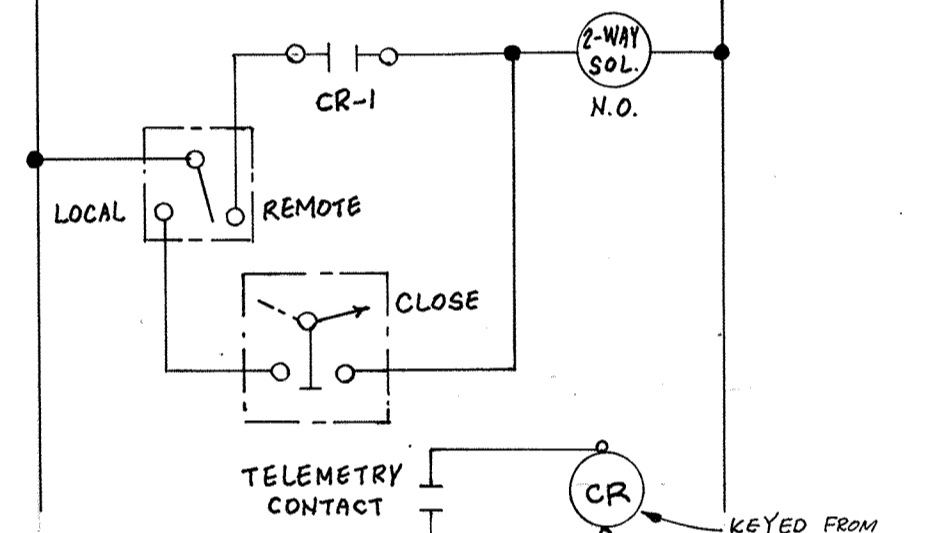
PLAN VIEW
NOT TO SCALE



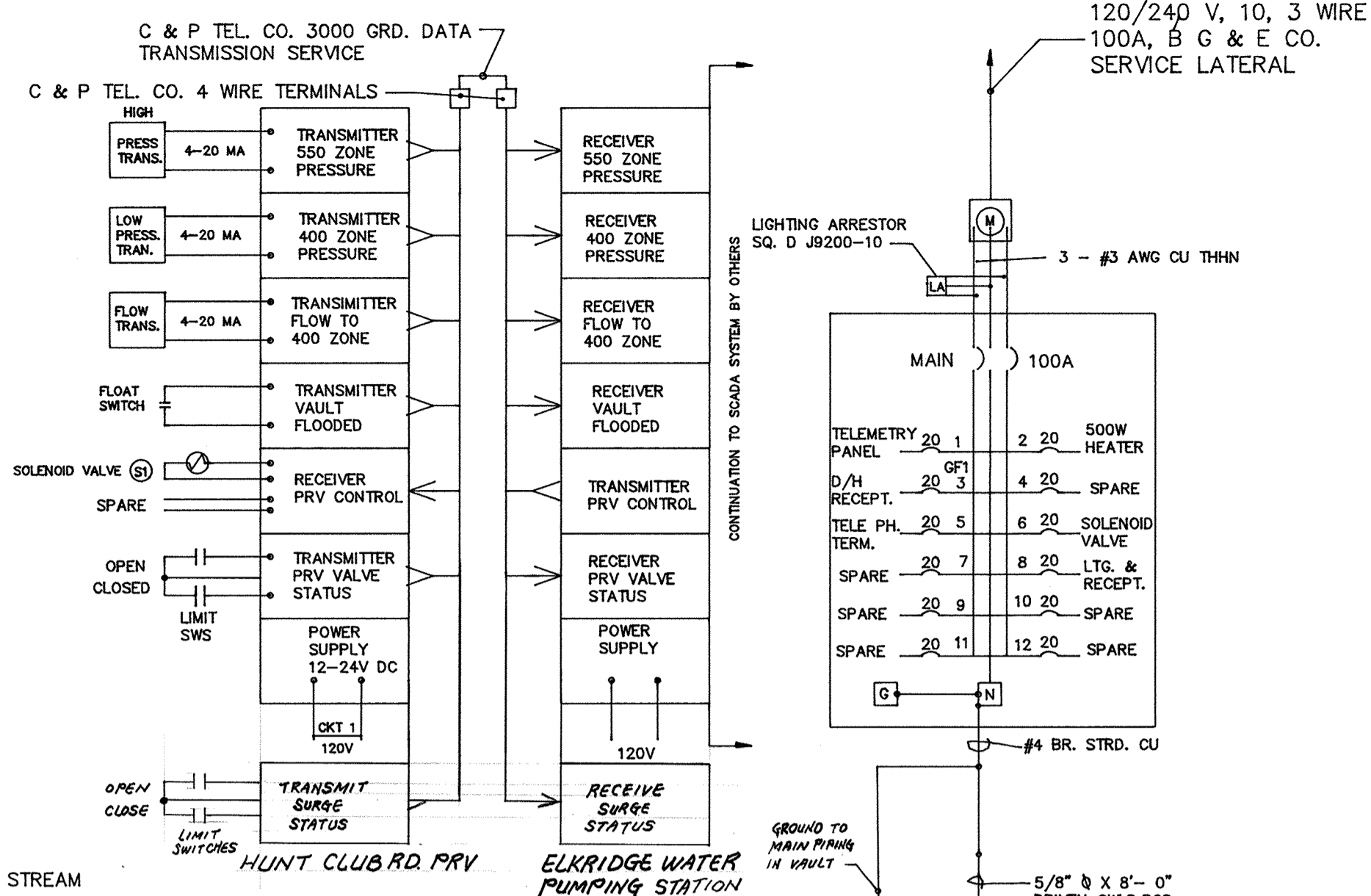
FLOW METER CONTROL DIAGRAM
NOT TO SCALE



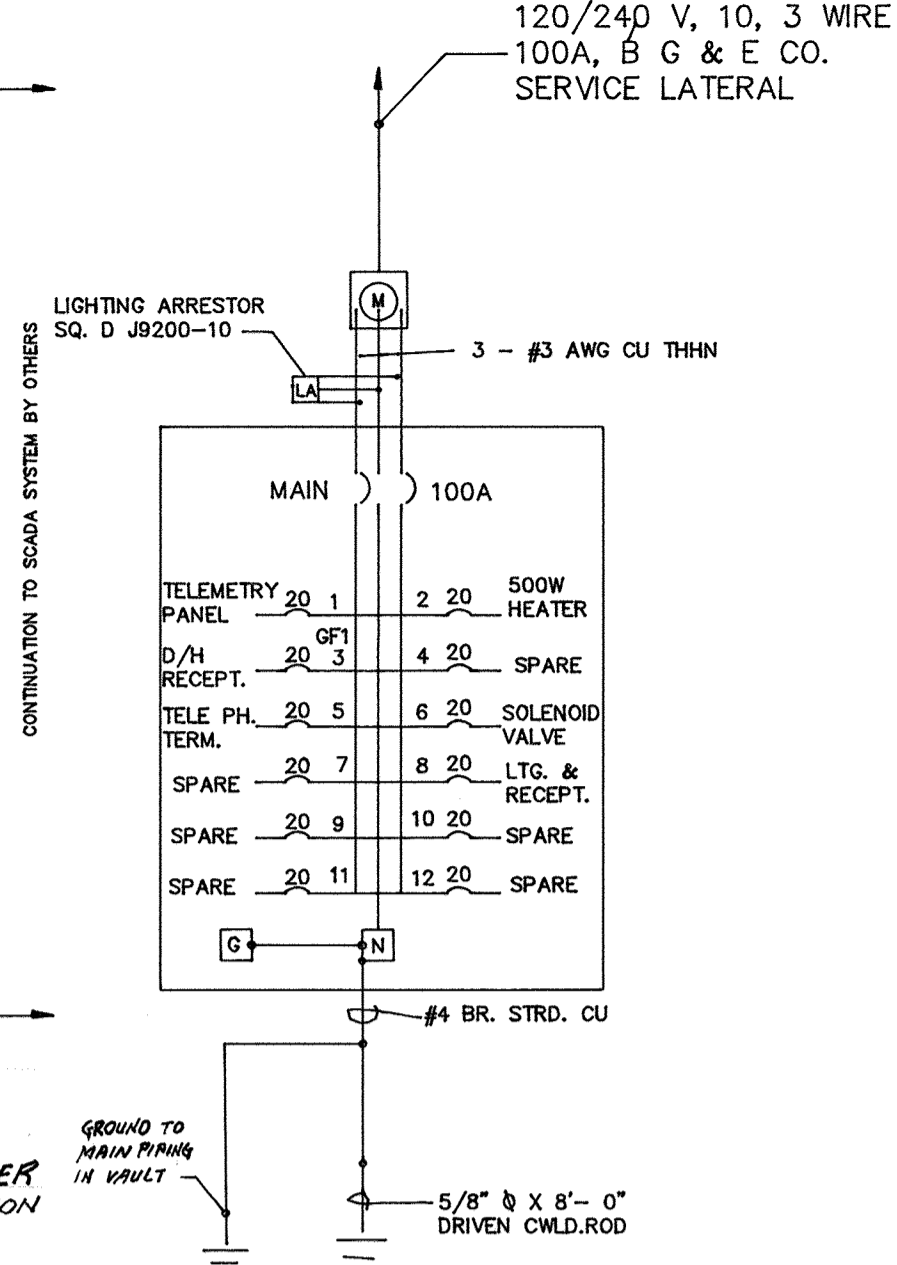
PRESSURE REDUCING VALVE CONTROL DIAGRAM
NOT TO SCALE



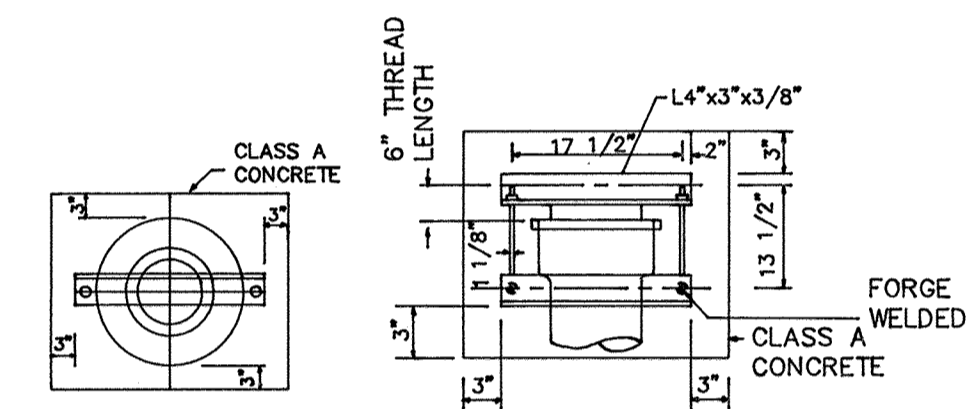
SCHEMATIC PRV SOLENOID CONTROL
NOT TO SCALE



TELEMETRY DIAGRAM
NOT TO SCALE

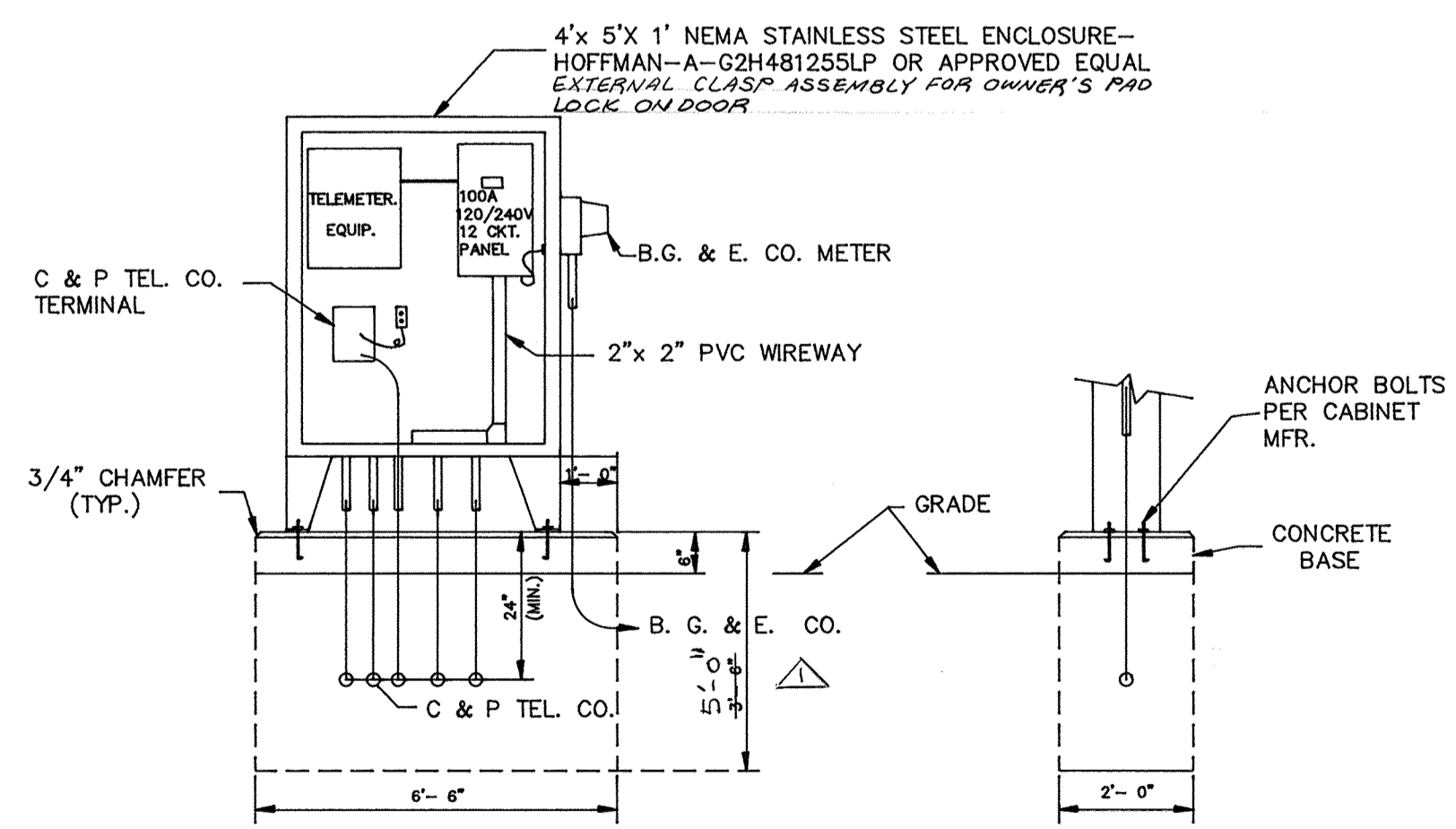


POWER PANEL
NOT TO SCALE

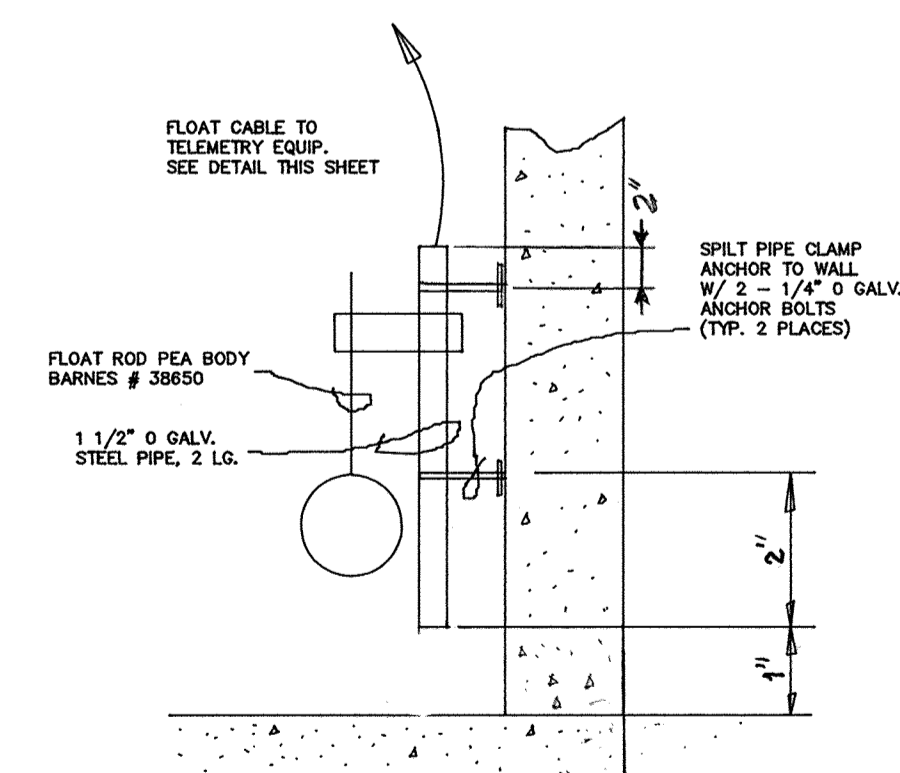


STRAP DETAIL
NOT TO SCALE

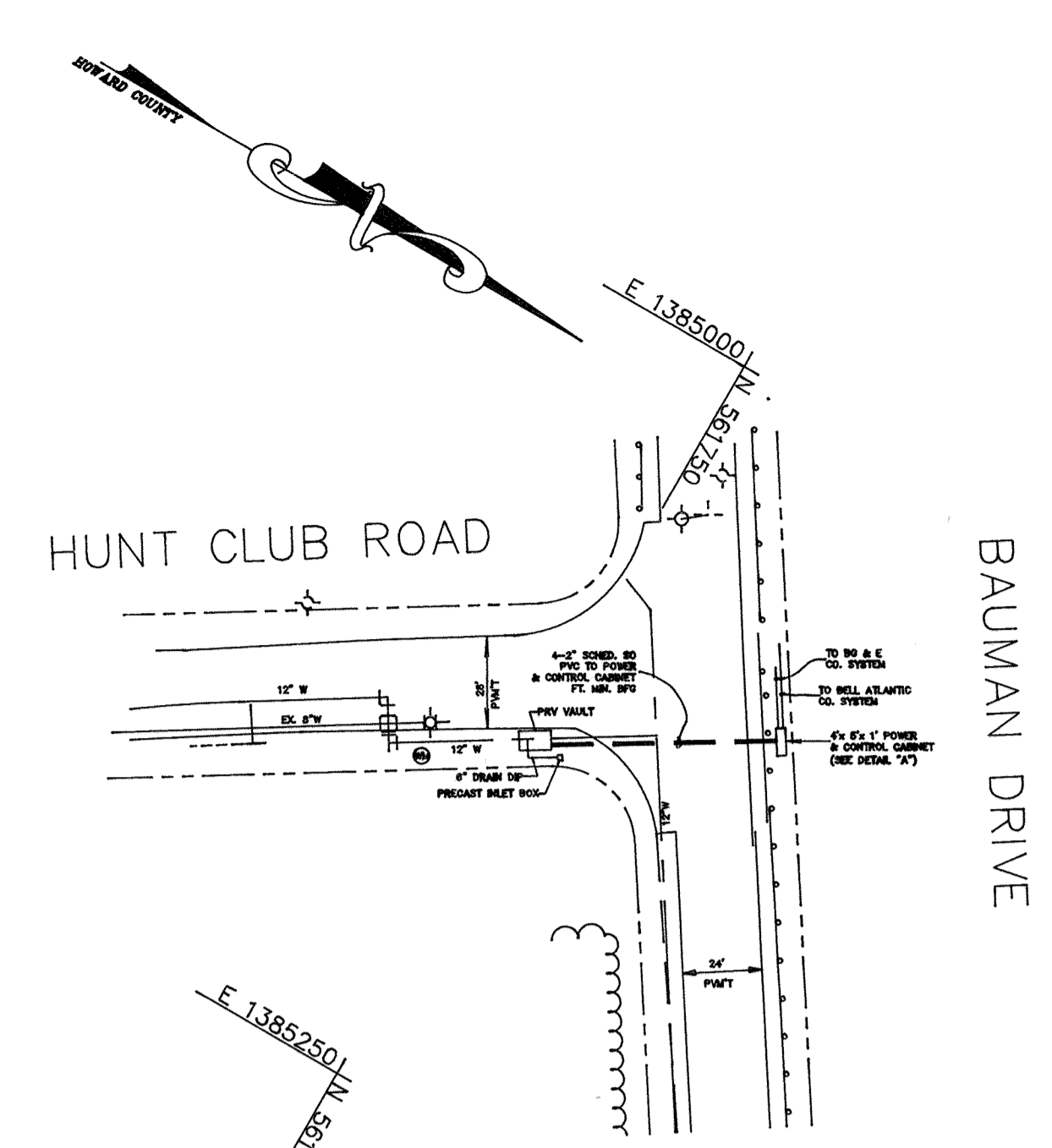
NOTE: MAKE HOLES IN ANGLE 1/8" LARGER THAN DIA. OF BOLT
7" U.S. THREADS/INCHES.



DETAIL "A"
POWER AND CONTROL CABINET
NOT TO SCALE



VAULT FLOODED ALARM
NOT TO SCALE



SITE PLAN
1" = 50'

- SYMBOL LIST**
- INCANDESCENT FIXTURE
 - Ⓜ 125V, 20A, DUPLEX RECEPTACLE
 - Ⓜ 125V, 20A, SINGLE RECEPTACLE
 - S 125V, 20A, 1 PH. SWITCH
 - 1/3 MOTOR WITH HORSEPOWER NOTED
 - WP WEATHER PROOF
 - GFI GROUND FAULT INTERRUPTING
 - Ⓜ GROUND
 - JUNCTION OR PULL BOX (NM)
 - NM NON METALLIC, CARLON OR EQUAL
 - Ⓜ BG & E KWH METER

- EQUIPMENT LIST**
- DEHUMIDIFIER: WHITE-WESTINGHOUSE-MODEL ED508K, 2.1 PINTS/HR. MOISTURE REMOVAL RATE, 7.5 AMPS, 115/1/60, FROST CONTROL, ADJUSTABLE HUMIDISTAT, SET POINT- 60% R.H.-, WT.-42LBS.
 - ELECTRIC HEATER: BERKO-MODEL PHT-500-A-120V @ 4.2 AMPS-500 WATTS-1708 BTUH, INTEGRAL THERMOSTAT WITH MOUNTING BRACKET.

- CONSTRUCTION NOTES:**
1. ALL WIRING SHALL BE MINIMUM # 12 AWG, THHN, UNLESS OTHERWISE NOTED.
 2. ALL CIRCUITS SHALL BE INSTALLED IN NON-METALLIC (SCH. 40 OR EQUAL) RACEWAYS AND BOXES UNLESS NOTED OTHERWISE.
 3. ALL CONDUIT SHALL BE 3/4" MINIMUM UNLESS NOTED OTHERWISE.
 4. WIRING AND CIRCUIT ROUTING NOT SHOWN ON DRAWINGS SHALL BE DETERMINED BY CONTRACTOR ACCORDING TO FIELD CONDITIONS.
 5. FULL SIZE EQUIPMENT GROUNDING CONDUCTORS SHALL BE ROUTED WITH ALL CIRCUITS.
 6. ALL GROUNDING ELECTRODE CONDUCTOR CONNECTIONS SHALL BE MADE WITH THERMOWELDED OR 2-BOLT COPPER LUG CONNECTORS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

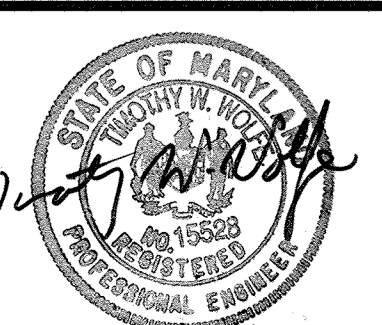
Robert W. Beaman 3/14/95
DIRECTOR OF PUBLIC WORKS DATE

Robert W. Beaman 3-9-95
CHIEF, BUREAU OF UTILITIES DATE

Robert W. Beaman 3/19/95
CHIEF, BUREAU OF ENGINEERING DATE

Robert W. Beaman 3-9-95
CHIEF, WATER AND SEWER DIVISION DATE

SSM
SPOTTS, STEVENS and McCOY, INC.
ENGINEERS • SURVEYORS • SCIENTISTS
555 FARMGROVE AVENUE, STE. 230
TOWSON, MARYLAND, 21286-5467
(410)494-0500 FAX (410)296-3580



DES: FCL	TEG	AS-BUILT
DRN: RPG		
CHK: TWW		
DATE: FEB., '95		
BY	NO.	REVISION

ELECTRICAL
PRESSURE REDUCING
VALVE VAULT
DETAILS

600' SCALE MAP NO. _____ BLOCK NO. _____

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM

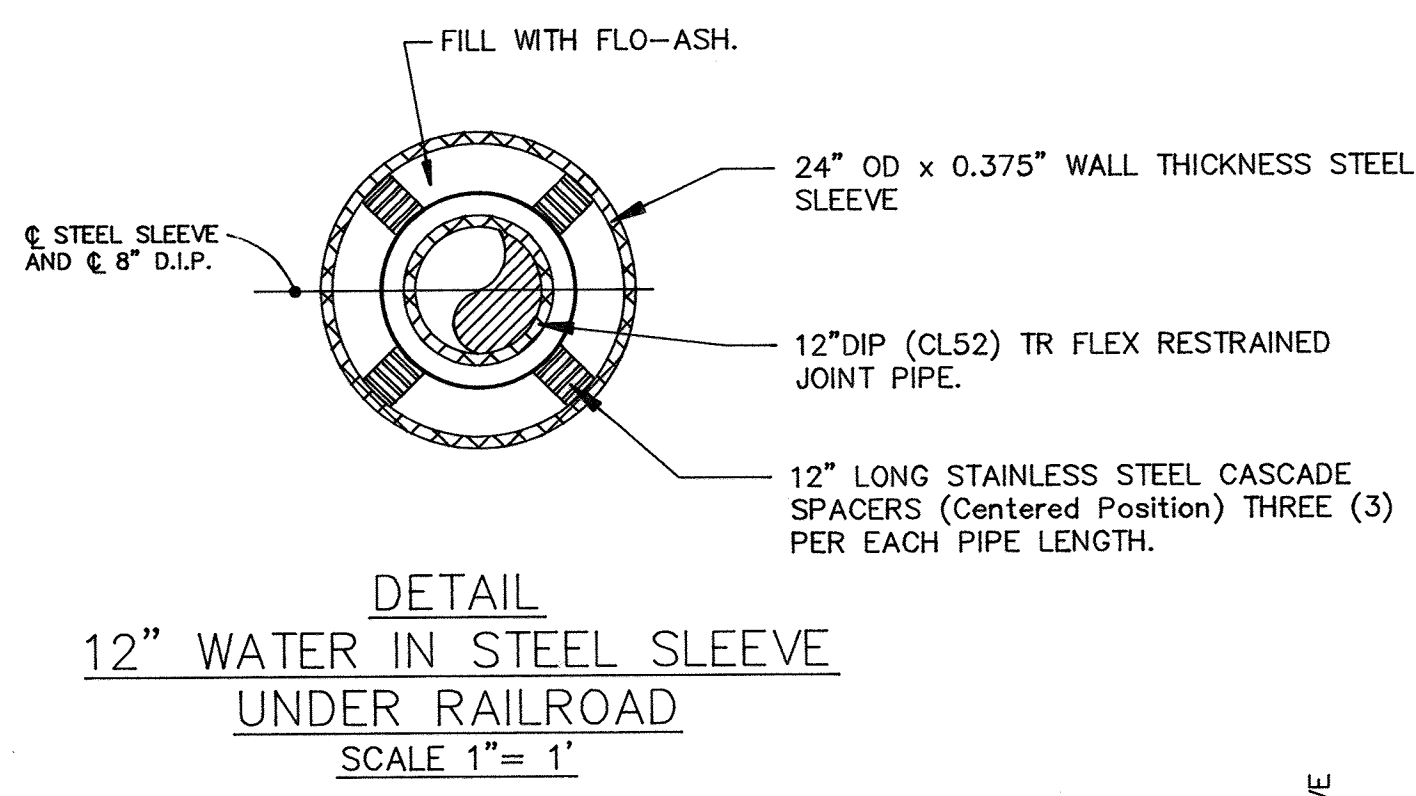
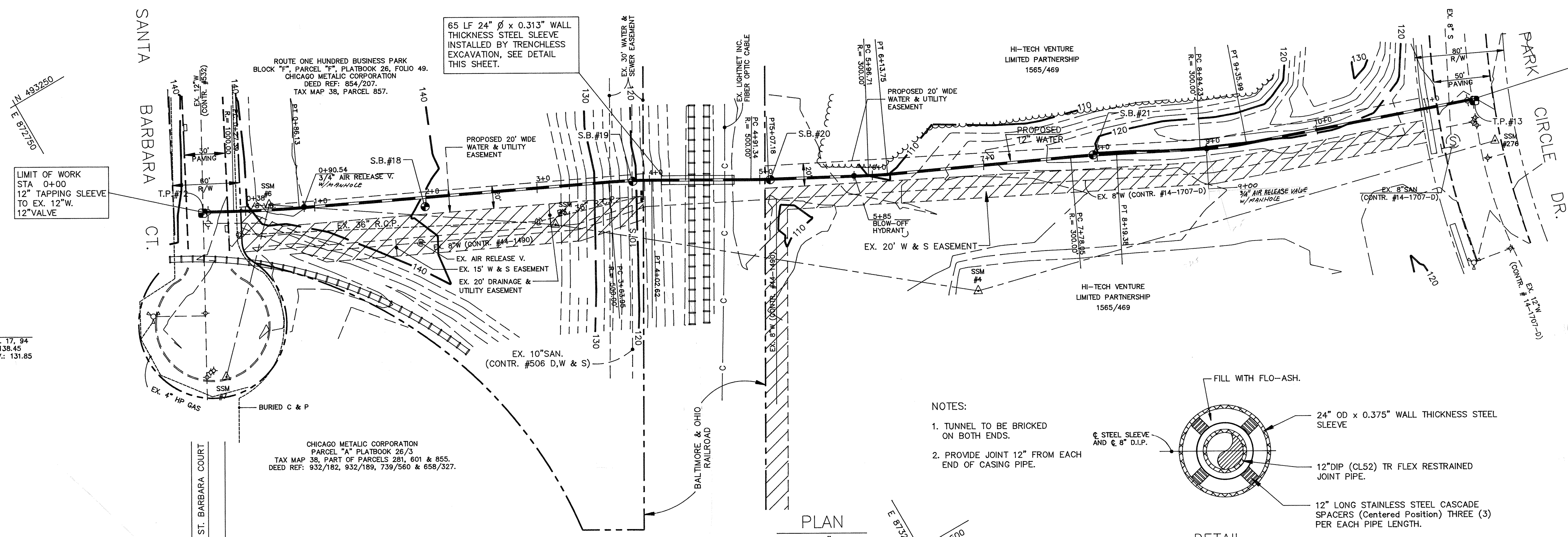
CAPITAL PROJECT No. W-8196
CONTRACT No. 44 - 3298
ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
SHEET 9 OF 9
AS-BUILT 12-11-97

400 Zone Water System

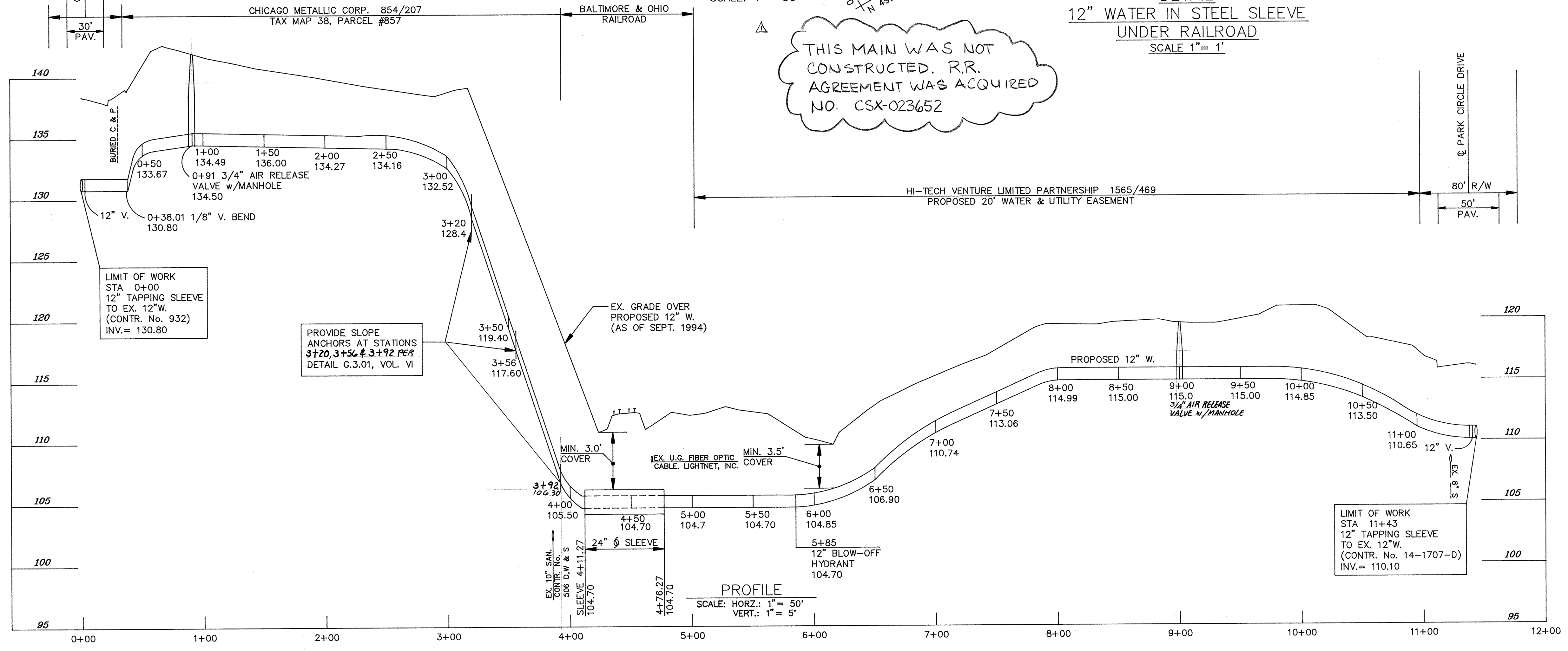
w5/1

3298



- NOTES:
- TUNNEL TO BE BRICKED ON BOTH ENDS.
 - PROVIDE JOINT 12" FROM EACH END OF CASING PIPE.

THIS MAIN WAS NOT CONSTRUCTED. R.R. AGREEMENT WAS ACQUIRED NO. CSX-023652



RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
0+00 TO 0+23 SANTA BARBARA CT.	23 LF.	PAVING
0+23 TO 4+12	389 LF.	SEEDING
4+77 TO 11+10	633 LF.	SEEDING
11+10 TO 11+43	33 LF.	PAVING

STAKEOUT SCHEDULE		
STRUCTURE	DISTANCE	OFFSET
0+00 12" TAPPING SLEEVE TO EX. 12" W. w/12" VALVE	SSM #7 TO SSM #6 1+37.32	LT 55.86'
PC 0+27.39	SSM #7 TO SSM #6 1+44.57	LT 29.44'
0+38 1/8" V. BEND	SSM #7 TO SSM #6 1+47.43	LT 19.23'
PT 0+86.13	SSM #6 TO SSM #5 0+26.97	RT 0.93'
0+90.54 3/4" AIR RELEASE V. w/MH	SSM #6 TO SSM #5 0+31.35	RT 0'
PC 3+63.96	SSM #5 TO SSM #4 0+40.99	LT 44.61'
PT 4+02.62	SSM #5 TO SSM #4 0+76.91	LT 51.92'
4+11.27 BEG. 24" DIA. SLEEVE	SSM #5 TO SSM #4 0+87.42	LT 53.62'
4+76.27 END 24" DIA. SLEEVE	SSM #5 TO SSM #4 1+51.61	LT 63.99'
PC 4+91.34	SSM #5 TO SSM #4 1+56.47	LT 66.39'
PT 5+07.18	SSM #5 TO SSM #4 1+82.07	LT 69.17'
5+85 12" BLOW-OFF HYDRANT	SSM #5 TO SSM #4 2+57.22	LT 83.42'
PC 5+96.71	SSM #5 TO SSM #4 2+59.96	LT 86.24'
PT 6+13.75	SSM #5 TO SSM #4 2+86.59	LT 89.96'
PC 7+78.05	SSM #4 TO SSM #276 1+12.03	LT 91.64'
PT 8+19.38	SSM #4 TO SSM #276 1+52.47	LT 83.09'
PC 8+94.23	SSM #4 TO SSM #276 2+25.36	LT 66.10'
PT 9+35.99	SSM #4 TO SSM #276 2+66.96	LT 59.47'
11+43.14 12" TAPPING SLEEVE TO EX. 12" W. w/12" VALVE	SSM #4 TO SSM #276 4+71.60	LT 41.01'

LIMIT OF WORK
STA 11+41.86
12" TAPPING SLEEVE TO EX. 12" W. 12" VALVE

LIMIT OF WORK
STA 0+400
12" TAPPING SLEEVE TO EX. 12" W. 12" VALVE

CHICAGO METALIC CORPORATION
PARCEL "A" PLATBOOK 26/3
TAX MAP 38, PART OF PARCELS 281, 601 & 855.
DEED REF: 932/182, 932/189, 739/560 & 658/327.

LIMIT OF WORK
STA 0+00
12" TAPPING SLEEVE TO EX. 12" W. (CONTR. No. 932)
INV. = 130.80

LIMIT OF WORK
STA 11+43
12" TAPPING SLEEVE TO EX. 12" W. (CONTR. No. 14-1707-D)
INV. = 110.10

TEST PIT #13
TEST DATE: NOV. 17, 94
GROUND ELEV.: 116.14
TOP 12" W. ELEV.: 111.13

SSM PI #276
N 492,554.239
E 873,877.286
EL. = 116.78

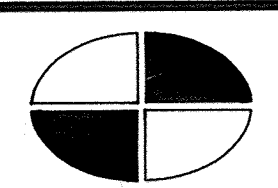
SSM PI #4
N 492,672.054
E 873,410.902
EL. = 119.17

SSM PI #6
N 492,914.021
E 873,113.979
EL. = 143.20

SSM PI #5
N 493,058.553
E 872,901.544
EL. = 138.85

SSM PI #7
N 492,945.449
E 872,791.243
EL. = 136.39

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND



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DES: FCL	TEG	12" W NOT CONSTRUCTED
DRN: RPG		
CHK: TWW		
DATE: FEB. '95	BY: NO.	REVISION

12-INCH WATER MAIN
SANTA BARBARA COURT
TO
PARK CIRCLE DRIVE
STA. 0+00 TO STA. 11+43.15

IMPROVEMENTS TO THE 400 ZONE WATER SYSTEM
CAPITAL PROJECT No. W-8196
CONTRACT No. 44 - 3298
ELECTION DISTRICT No. 1 & 2

SCALE AS SHOWN
SHEET 2 OF 2
FILE NAME: B0100

Director of Public Works: *James J. Blum* 3/14/95
Date: 3-13-95
Chief, Bureau of Engineering: *Robert J. Seaman* 3/13/95
Date: 3-9-95
Chief, Water and Sewer Division: *Robert J. Seaman* 3-9-95
Date: 3-9-95