

# DORSEY RUN ROAD WATER MAIN EXTENSION

## MD 175 TO DORSEY RUN INDUSTRIAL CENTER

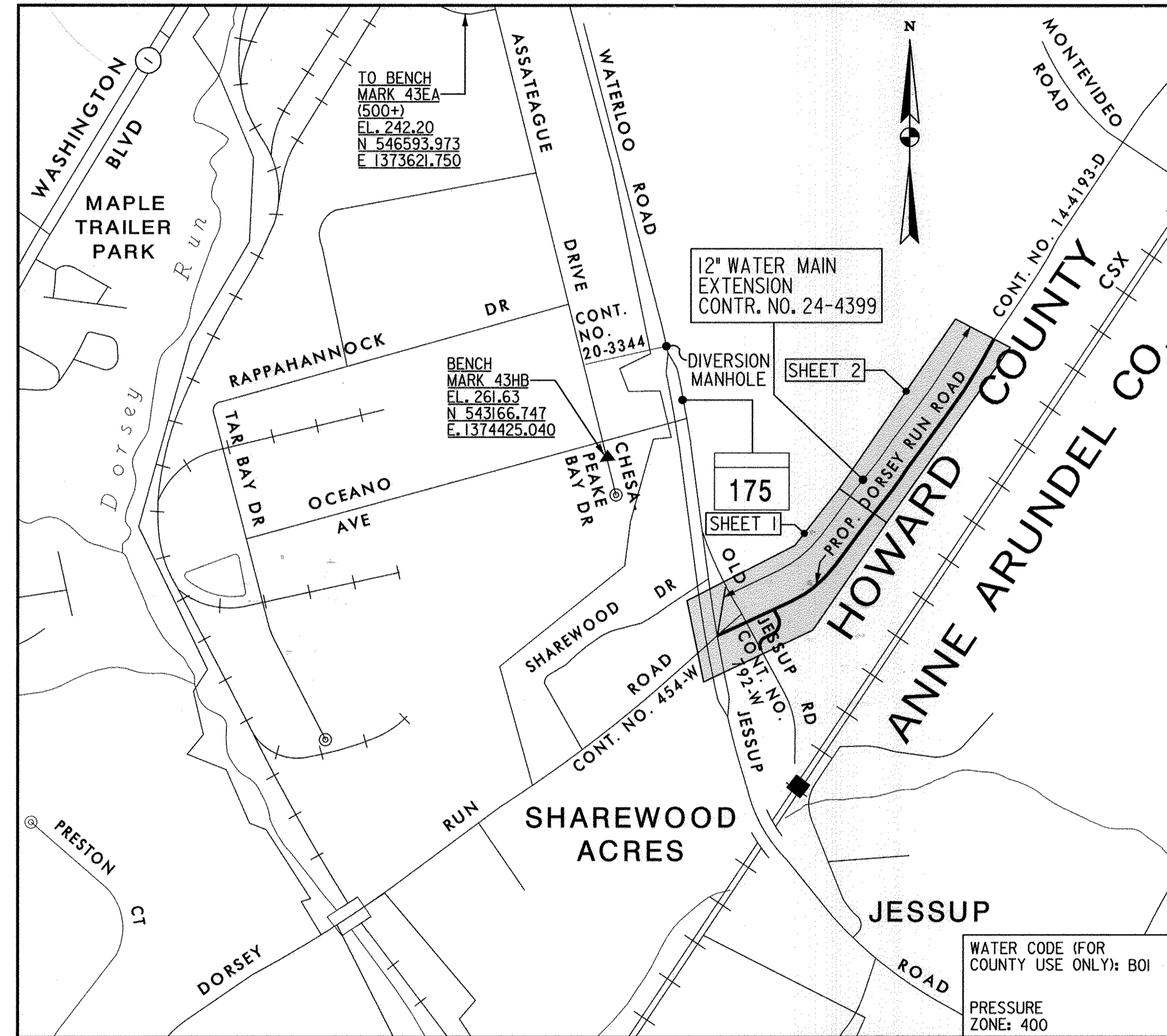
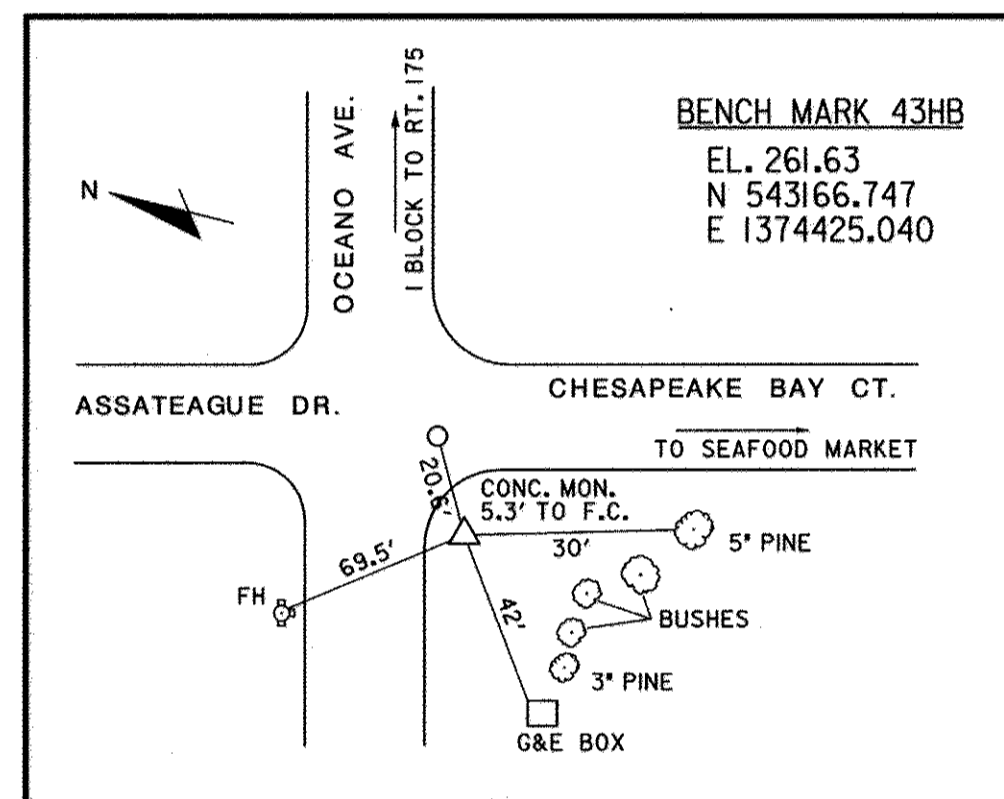
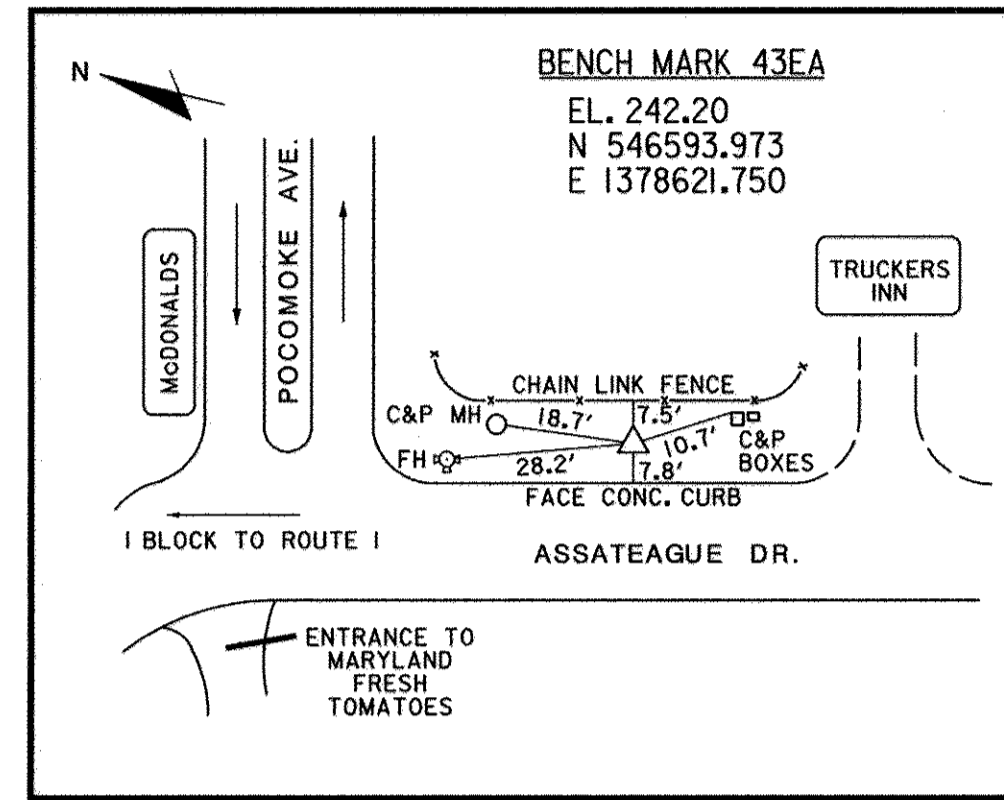
### ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND CAPITAL PROJECT W-8275 CONTRACT NO. 24-4399

#### INDEX OF DRAWINGS

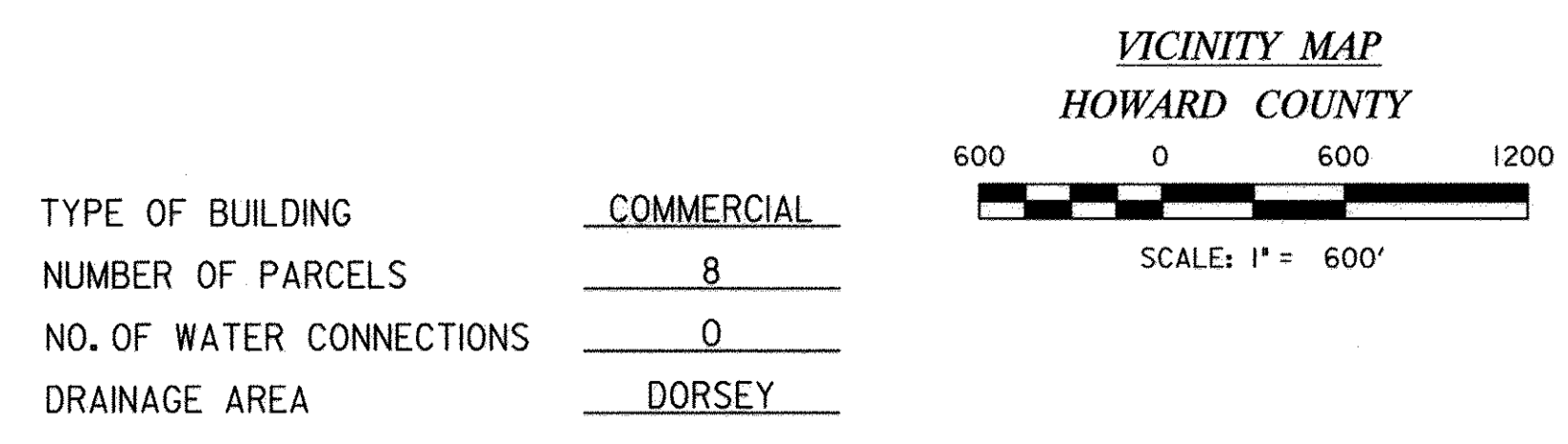
- 1 TITLE SHEET
- △ 2 WATER MAIN & SEWER PLANS
- 3 WATER MAIN PLAN
- 4-5 WATER MAIN PROFILES
- △ 6 WATER MAIN DETAILS & SEWER MAIN PROFILE

#### GENERAL NOTES

1. APPROXIMATE LOCATIONS 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'S EXPENSE.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON JUNE 2005 BY URS CORPORATION.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS: HOR: MARYLAND NAD83 (ADJ 1991)  
VERT: NAV88 NAVD 88
- THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROLS STATIONS NO. 43EA AND NO. 43HB. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE CONCRETE MONUMENTS WITH CROSS CUTS.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UNDERGROUND UTILITIES BY MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTRACTED 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 MONIES 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 DRAWING, 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 LOCATIONS OF THE TEST PITS. 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. THE 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 (CONTRACTOR SERVICES).....410-850-4620
  - BGE (UNDERGROUND DAMAGE CONTROL).....410-685-1400
  - BUREAU OF UTILITIES.....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 SHALL 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. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE 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 OPEN CUTTING OF ANY COUNTY ROAD FOR LAYING WATER 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 54 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 STANDARD HOWARD COUNTY 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 HOWARD COUNTY STANDARD DETAILS. THE 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.



QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
12" D.I.P. WATER	L.F.	3045	2960 -	GRIFFIN PIPE PRODUCTS
6" D.I.P. WATER	L.F.	250	253 -	" " "
12" GATE VALVE & BOX	EA.	4	4 -	HD SUPPLY
6" GATE VALVE & BOX	EA.	8	10 -	" " "
FIRE HYDRANT	EA.	8	8 -	" " "
12" DOUBLE CAP, JACK & BUTTRESS	EA.	3	3 -	" " "
12"x12" M.J. TEE	EA.	5	5 -	" " "
12"x6" M.J. TEE	EA.	8	10 -	" " "
12"-45° M.J. BEND	EA.	7	7 -	" " "
12"-22 1/2° M.J. BEND	EA.	8	8 -	" " "
12" SOLID SLEEVE & SPACER	EA.	4	4 -	" " "
12" AIR RELEASE VALVE & VAULT	EA.	1	1 -	" " "
△ 8" CLASS 52 D.I.P. SEWER	L.F.	390	390 -	" " "
△ SANITARY MANHOLE	EA.	2	2 -	ATLANTIC CONG. PROD.
6" D.I.P. WATER	L.F.	44	44 -	GRIFFIN PIPE PRODUCTS
6" GATE VALVE & BOX	EA.	1	1 -	HD SUPPLY



RECORD DRAWINGS  
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON THE INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.  
URS CORPORATION  
BY: [Signature]

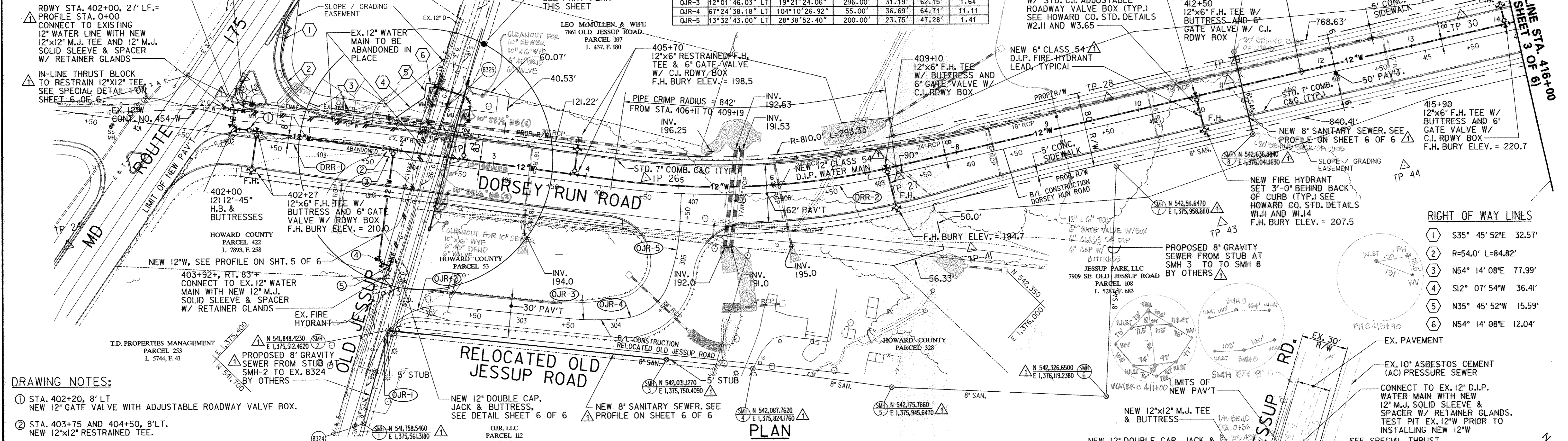
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: [Signature] DATE: 4/27/07 Chief, Bureau of Engineering: [Signature] DATE: 4/27/07 Chief, Bureau of Utilities: [Signature] DATE: 4/27/07 Chief, Utility Design Division: [Signature] DATE: 4/27/07		PREPARED BY <b>URS</b> 4 NORTH PARK DRIVE HUNT VALLEY, MARYLAND TEL: (410) 785-7220	DES: RER DRN: CLD CHK: DTM DATE: 06/06	DTM DTM BY NO.	AS-BUILTS ADDRESSED UTILITY DESIGN DIVISION COMMENTS 1/07 REVISION DATE	TITLE SHEET SCALE MAP NO. N/A BLOCK NO.	DORSEY RUN ROAD EXTENSION MD 175 TO DORSEY RUN INDUSTRIAL CENTER 12" WATER MAIN EXTENSION CAPITAL PROJECT W-8275 CONTRACT NO. 24-4399 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 6
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**CONSTRUCTION NOTE:**

DIG TEST PITS AND LOCATE EX. 4" GAS MAIN & 12" WATER PRIOR TO INSTALLING NEW 12" WATER. PROTECT AND SUPPORT 4" WRAPPED STEEL GAS MAIN AS RECOMMENDED BY BGE.

NEW 12" DOUBLE CAP, JACK & BUTTRESS, SEE DETAIL ON SHEET 6 OF 6

CURVE DATA						
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
<b>DORSEY RUN ROAD</b>						
DRR-1	0°19'55.69"LT	1°54'35.49"	3,000.00'	8.70'	17.39'	0.01
DRR-2	20°44'57.08"LT	6°44'26.45"	850.00'	155.61'	307.82'	14.13
<b>RELOCATED OLD JESSUP ROAD</b>						
DJR-1	12°09'50.80"RT	22°55'05.92"	250.00'	26.64'	53.08'	1.42
DJR-2	66°35'16.75"RT	81°51'04.01"	70.00'	45.97'	81.35'	13.75
DJR-3	12°01'46.03"LT	19°21'24.06"	296.00'	31.19'	62.15'	1.64
DJR-4	67°24'38.18"LT	104°10'26.92"	55.00'	36.69'	64.71'	11.11
DJR-5	13°32'43.00"LT	28°38'52.40"	200.00'	23.75'	47.28'	1.41



**DRAWING NOTES:**

- STA. 402+20, 8' LT NEW 12" GATE VALVE WITH ADJUSTABLE ROADWAY VALVE BOX.
- STA. 403+75 AND 404+50, 8' LT. NEW 12"x12" RESTRAINED TEE.
- NEW 12" M.J. GATE VALVE WITH ADJUSTABLE ROADWAY VALVE BOX.
- (2) NEW 12"-45° HORIZONTAL BENDS AND BUTTRESSES.
- NEW 12"x12" M.J. RESTRAINED TEE.

EXISTING WATER MAINS AND APPURTENANCES MUST BE KEPT ACTIVE DURING ROAD CONSTRUCTION. AFTER PLACING NEW MAINS IN SERVICE, ABANDONED WATER MAIN SHALL HAVE FIRE HYDRANTS (IF ANY) REMOVED AND RETURNED TO THE BUREAU OF UTILITIES, AND ALL ROADWAY VALVE BOXES REMOVED, ACCESS TO THE EXISTING VALVE IN THE INTERSECTION OF OLD JESSUP ROAD AND DORSEY RUN ROAD MAY BE PROVIDED BY A BOTTOMLESS MANHOLE, THAT BECOMES EMBEDDED WITH THE NEW ROAD FILL. AFTER RECOVERING THE VALVE WHEN THE EXISTING WATER MAIN IS ABANDONED, THE MANHOLE SHALL BE ABANDONED BY REMOVING THE MANHOLE TO MINIMUM 1 FOOT BELOW FINISHED GRADE AND FILLING IT WITH CONCRETE OR FLOWABLE FILL.

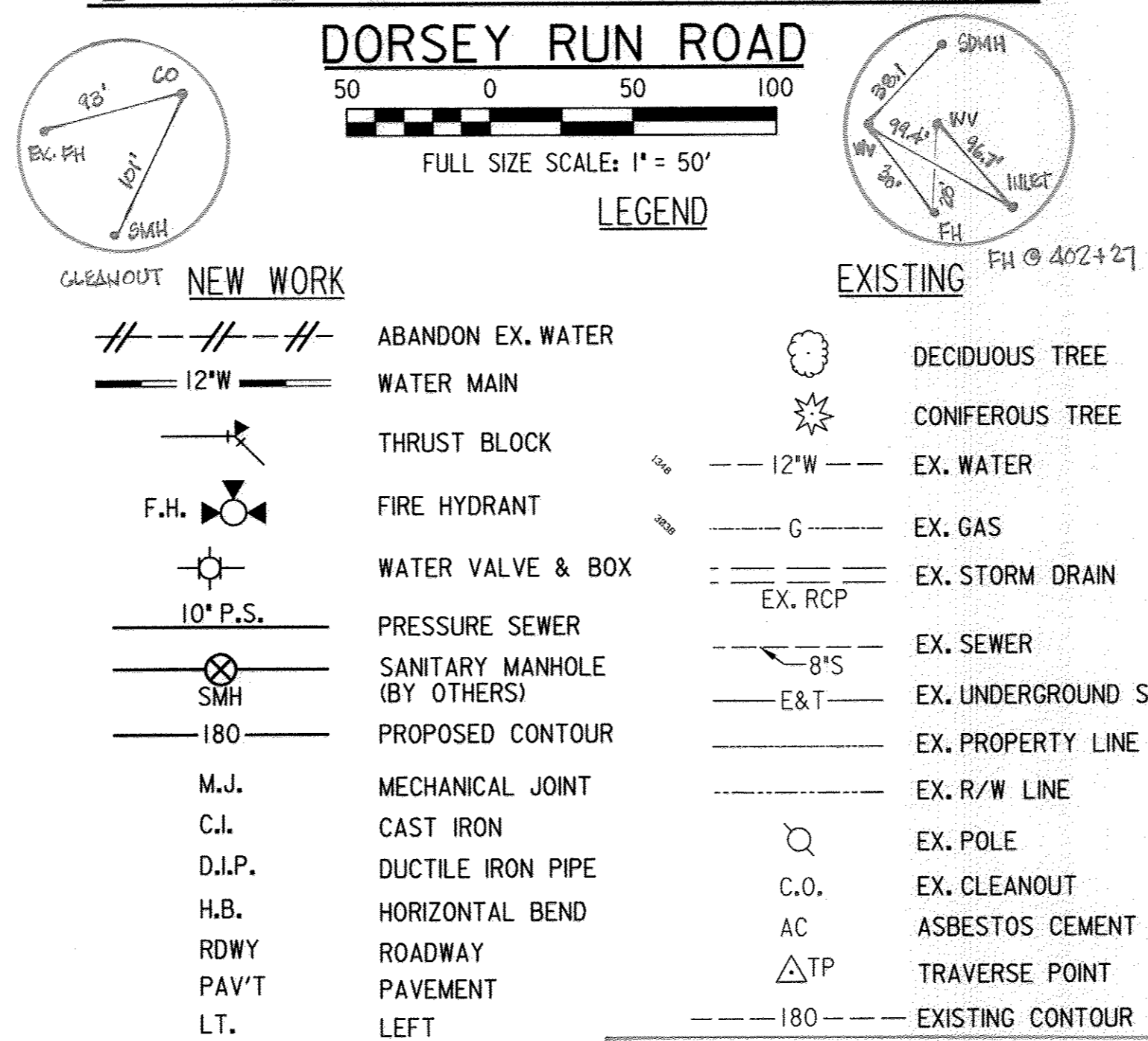
**GENERAL NOTES:**

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- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 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 HOWARD COUNTY SPECIFICATION SECTION 1000 AND SECTION 10.
- REFER TO SHEET 1 OF 6 FOR BENCHMARK INFORMATION.
- HOWARD COUNTY WILL INSTALL 8" SANITARY FROM SMH-2 TO SMH-2A AND 90 LF. OF 24" CONCRETE SLEEVE FROM SMH-7 TO SMH-8. ALL OTHER PROPOSED SANITARY SEWER WILL BE INSTALLED BY OTHERS.

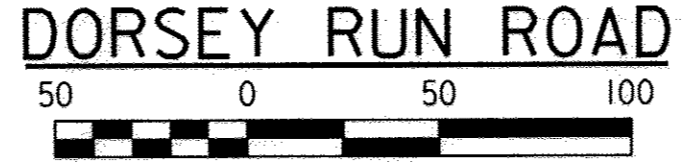
SURVEY TRAVERSE POINTS				
DESIGNATION	ELEVATION	NORTHING	EASTING	
TRAVERSE POINT 12	219.26	541937.0140	1375215.7710	
TRAVERSE POINT 13	198.34	541881.6640	1375476.6840	
TRAVERSE POINT 24	215.46	541678.1229	1375201.3401	
TRAVERSE POINT 25	200.53	542028.1620	1375438.3836	
TRAVERSE POINT 26	196.39	542155.6859	1375600.9109	
TRAVERSE POINT 27	203.36	542343.3987	1375797.2815	
TRAVERSE POINT 28	228.83	542558.7035	1375901.7540	
TRAVERSE POINT 29	229.25	542660.6367	1375983.1349	
TRAVERSE POINT 30	226.85	542882.6069	1376116.2038	
TRAVERSE POINT 41	207.90	542341.8097	1375905.9349	
TRAVERSE POINT 43	227.92	542546.2987	1376081.7465	
TRAVERSE POINT 44	225.98	542724.6177	1376182.1353	

ROADWAY BASELINE COORDINATE TABLE DORSEY RUN ROAD				
DESIGNATION	STATION	NORTHING	EASTING	
POT	400+00.00	541,767.326	1,375,084.424	
PC CURVE DRR-1	402+67.87	541,922.622	1,375,302.686	
PI CURVE DRR-1	402+76.57	541,927.663	1,375,309.771	
PT CURVE DRR-1	402+85.26	541,932.745	1,375,316.827	
PC CURVE DRR-2	406+11.22	542,123.254	1,375,581.320	
PI CURVE DRR-2	407+66.84	542,214.203	1,375,707.590	
PT CURVE DRR-2	409+19.04	542,343.988	1,375,793.449	

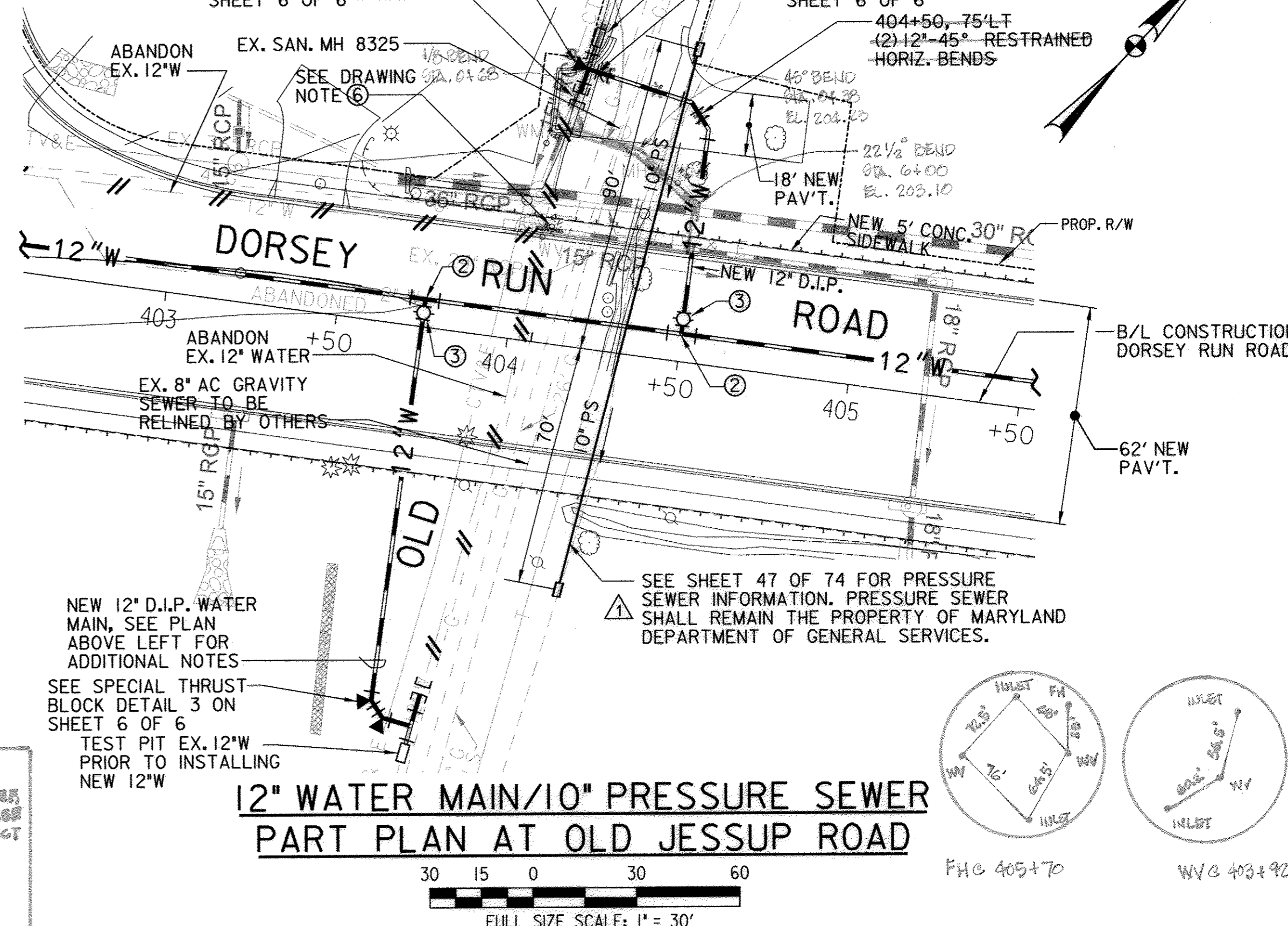
RELOCATED OLD JESSUP ROAD				
POT	STATION	NORTHING	EASTING	
POT	300+00.00	541,713.733	1,375,570.229	
PC CURVE DJR-1	300+82.47	541,787.545	1,375,533.445	
PI CURVE DJR-1	301+09.11	541,811.387	1,375,521.564	
PT CURVE DJR-1	301+35.55	541,837.197	1,375,514.973	
PC CURVE DJR-2	301+35.55	541,837.197	1,375,514.973	
PI CURVE DJR-2	301+81.52	541,881.739	1,375,503.599	
PT CURVE DJR-2	302+16.90	541,909.875	1,375,539.954	
PC CURVE DJR-3	303+47.63	541,989.889	1,375,643.343	
PI CURVE DJR-3	303+78.82	542,008.977	1,375,668.007	
PCC CURVE DJR-3	304+09.78	542,032.786	1,375,688.151	
PI CURVE DJR-4	304+46.47	542,060.794	1,375,711.848	
PT CURVE DJR-4	304+74.49	542,093.432	1,375,695.091	
PC CURVE DJR-5	304+87.42	542,104.935	1,375,689.185	
PI CURVE DJR-5	305+11.17	542,126.064	1,375,678.337	
PT CURVE DJR-5	305+34.70	542,144.065	1,375,662.842	
POT	305+68.94	542,170.010	1,375,640.508	



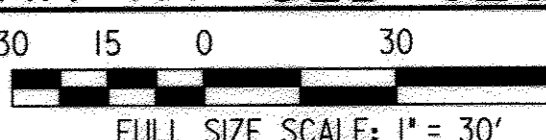
**12" WATER MAIN/10" PRESSURE SEWER**



FULL SIZE SCALE: 1" = 50'



**12" WATER MAIN/10" PRESSURE SEWER PART PLAN AT OLD JESSUP ROAD**

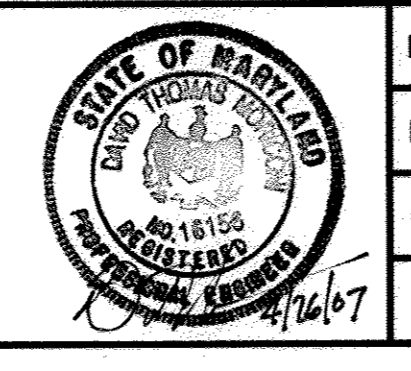


FULL SIZE SCALE: 1" = 30'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

4/26/07  
4/27/07

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES: RER			
DRN: CLD			
CHK: DTM			
DATE: 06/06			

**WATER MAIN & SEWER PLANS**

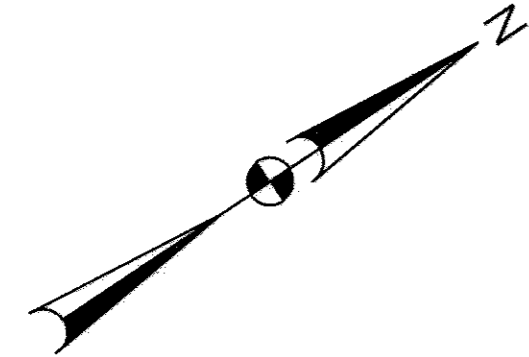
SCALE MAP NO. N/A BLOCK NO.

**DORSEY RUN ROAD EXTENSION**  
MD 175 TO DORSEY RUN INDUSTRIAL CENTER  
12" WATER MAIN EXTENSION

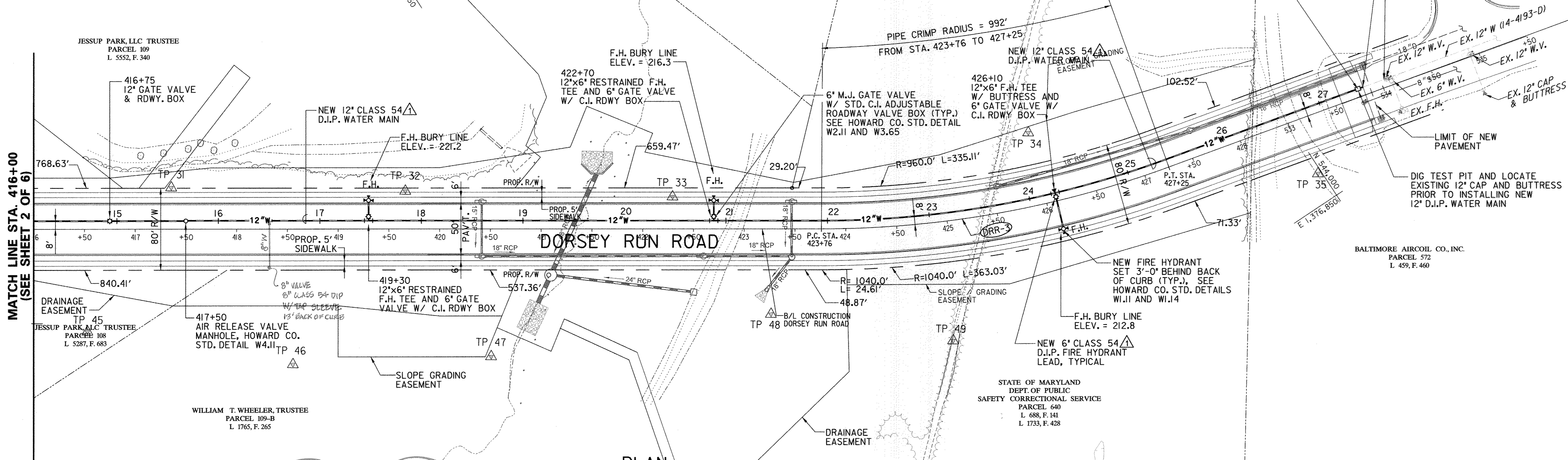
CONTRACT NO. 24-4399

1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

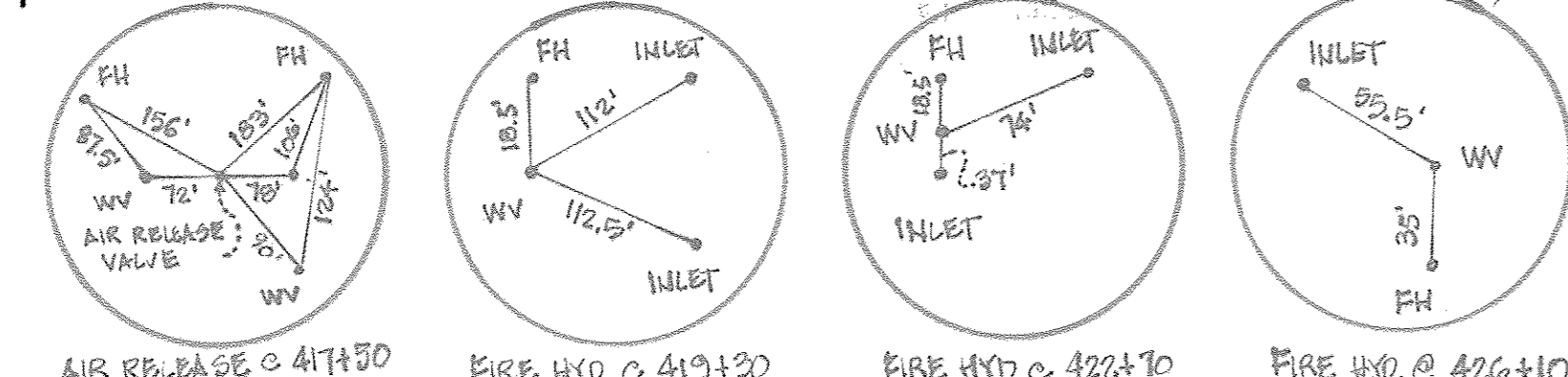
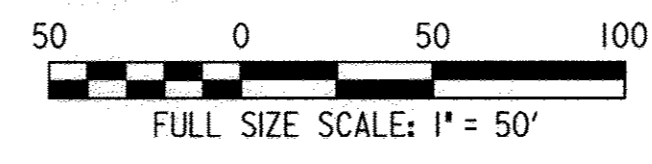
SCALE 1" = 50'  
SHEET 2 OF 6



CURVE DATA						
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
<b>DORSEY RUN ROAD</b>						
DRR-3	19°59'59.96"LT	5°43'46.48"	1,000.00'	176.33'	349.07'	15.43



**PLAN**  
**12" WATER MAIN - DORSEY RUN ROAD**



**GENERAL NOTES:**

1. ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
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6. REFER TO SHEET 1 OF 6 FOR BENCHMARK INFORMATION.

SURVEY TRAVERSE POINTS			
DESIGNATION	ELEVATION	NORTHING	EASTING
TRAVERSE POINT 31	220.25	543047.2923	1376210.0963
TRAVERSE POINT 32	214.04	543237.7113	1376340.2850
TRAVERSE POINT 33	212.61	543454.1161	1376490.1954
TRAVERSE POINT 34	230.74	543780.6342	1376631.3619
TRAVERSE POINT 35	223.09	543996.2933	1376822.3337
TRAVERSE POINT 36	200.12	544353.4860	1376858.9042
TRAVERSE POINT 41	207.90	542341.8097	1375905.9349
TRAVERSE POINT 43	227.92	542546.2987	1376081.7465
TRAVERSE POINT 44	225.98	542724.6177	1376182.1353
TRAVERSE POINT 45	221.89	542900.8037	1376281.9249
TRAVERSE POINT 46	211.64	543051.9054	1376420.4749
TRAVERSE POINT 47	207.22	543218.9628	1376521.9236
TRAVERSE POINT 48	221.51	543471.6760	1376639.4101
TRAVERSE POINT 49	230.41	543606.8943	1376760.1924

ROADWAY BASELINE COORDINATE TABLE			
DORSEY RUN ROAD			
DESIGNATION	STATION	NORTHING	EASTING
PC CURVE DRR-3	423+76.34	543,559.402	1,376,597.500
PI CURVE DRR-3	425+52.67	543,706.461	1,376,694.787
PT CURVE DRR-3	427+25.41	543,877.926	1,376,735.909
EQUALITY	428+50.00=	543,999.080	1,376,764.965
POT	533+00.00		
POT	535+97.26	544,288.142	1,376,834.291

RECORDED DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON THE INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

URS CORPORATION

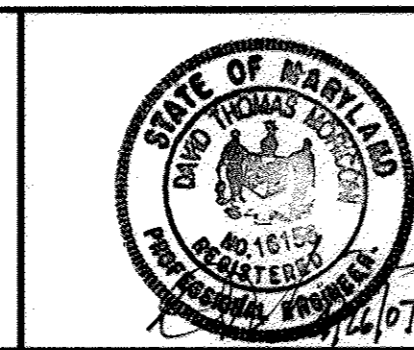
BY: *David T. Miller*  
DAVID T. MILLER (SE)

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert L. Rans* DATE: 4/27/07  
 Chief, Bureau of Engineering: *Robert L. Rans* DATE: 4/26/07  
 Chief, Utility Design Division: *Robert L. Rans* DATE: 4/27/07

PREPARED BY

**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES: RER	
DRN: CLD	
CHK: DTM	6/09
DATE: 06/06	6/09
BY: NO.	

ADDRESSSED UTILITY DESIGN DIVISION COMMENTS: 1/07

REVISION: 1/07

**WATER MAIN PLAN**

SCALE MAP NO. N/A BLOCK NO.

**DORSEY RUN ROAD EXTENSION**  
**MD 175 TO DORSEY RUN INDUSTRIAL CENTER**  
**12" WATER MAIN EXTENSION**

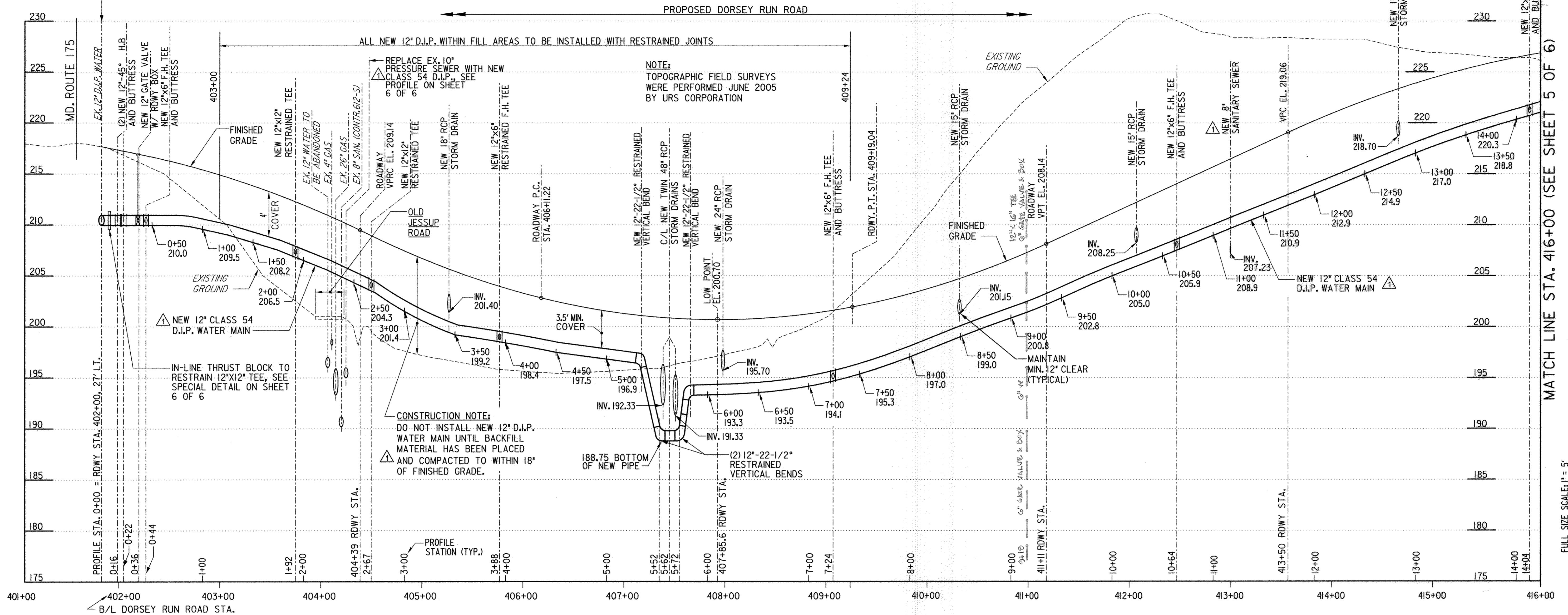
CAPITAL PROJECT W-8275  
CONTRACT NO. 24-4399

1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE  
1" = 50'

SHEET  
3 OF 6

CONNECT TO EX. 12"W  
WITH NEW 12"x12" TEE  
AND BUTTRESS



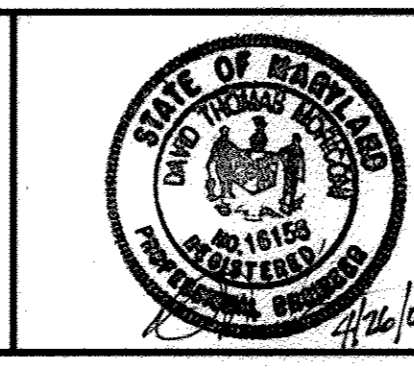
**12" D.I.P. WATER MAIN PROFILE - DORSEY RUN ROAD**

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

RECORDED DRAWINGS  
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URS CORPORATION  
BY: DAVID T. MARRAS

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS: [Signature] 4/26/07  
CHIEF, BUREAU OF ENGINEERING: [Signature] 4/26/07  
CHIEF, BUREAU OF UTILITIES: [Signature] 4/27/07  
CHIEF, UTILITY DESIGN DIVISION: [Signature] 4/27/07

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HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220

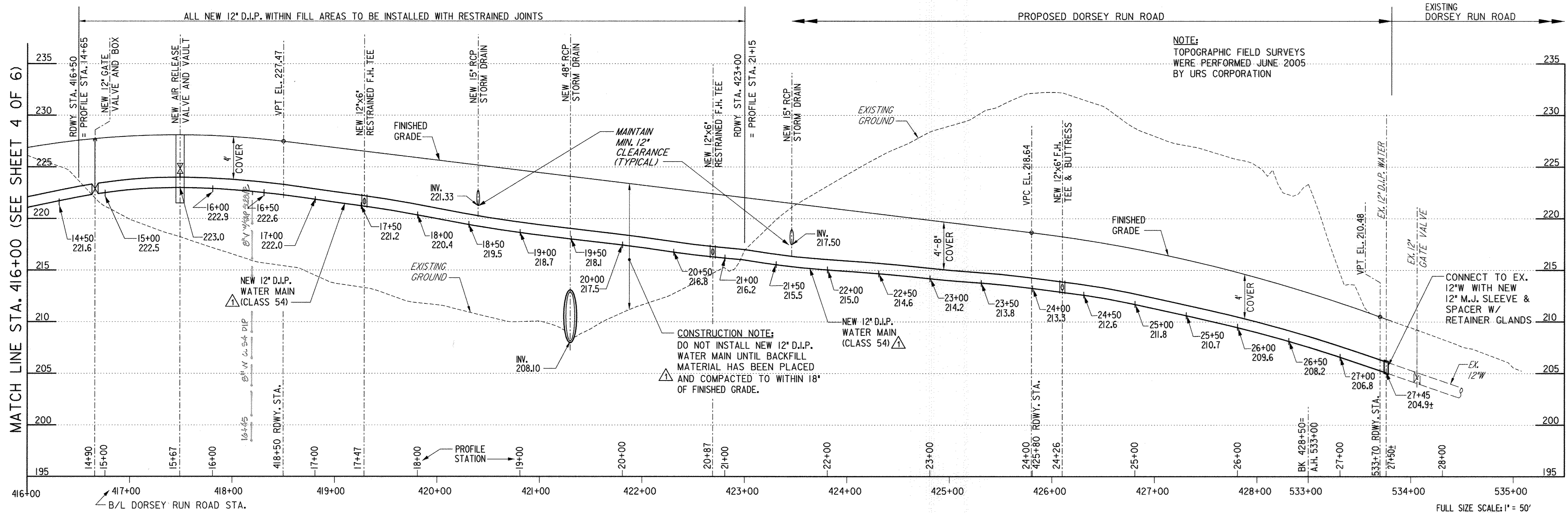


DES: RER			
DRN: CLD			
CHK: DTM	DTM	AS-BUILT	6/09
DATE: 06/06	DTM	ADDRESSED UTILITY DESIGN DIVISION COMMENTS	1/07
BY: [Signature]	NO.	REVISION	DATE

**WATER MAIN PROFILE**  
SCALE MAP NO. N/A BLOCK NO.

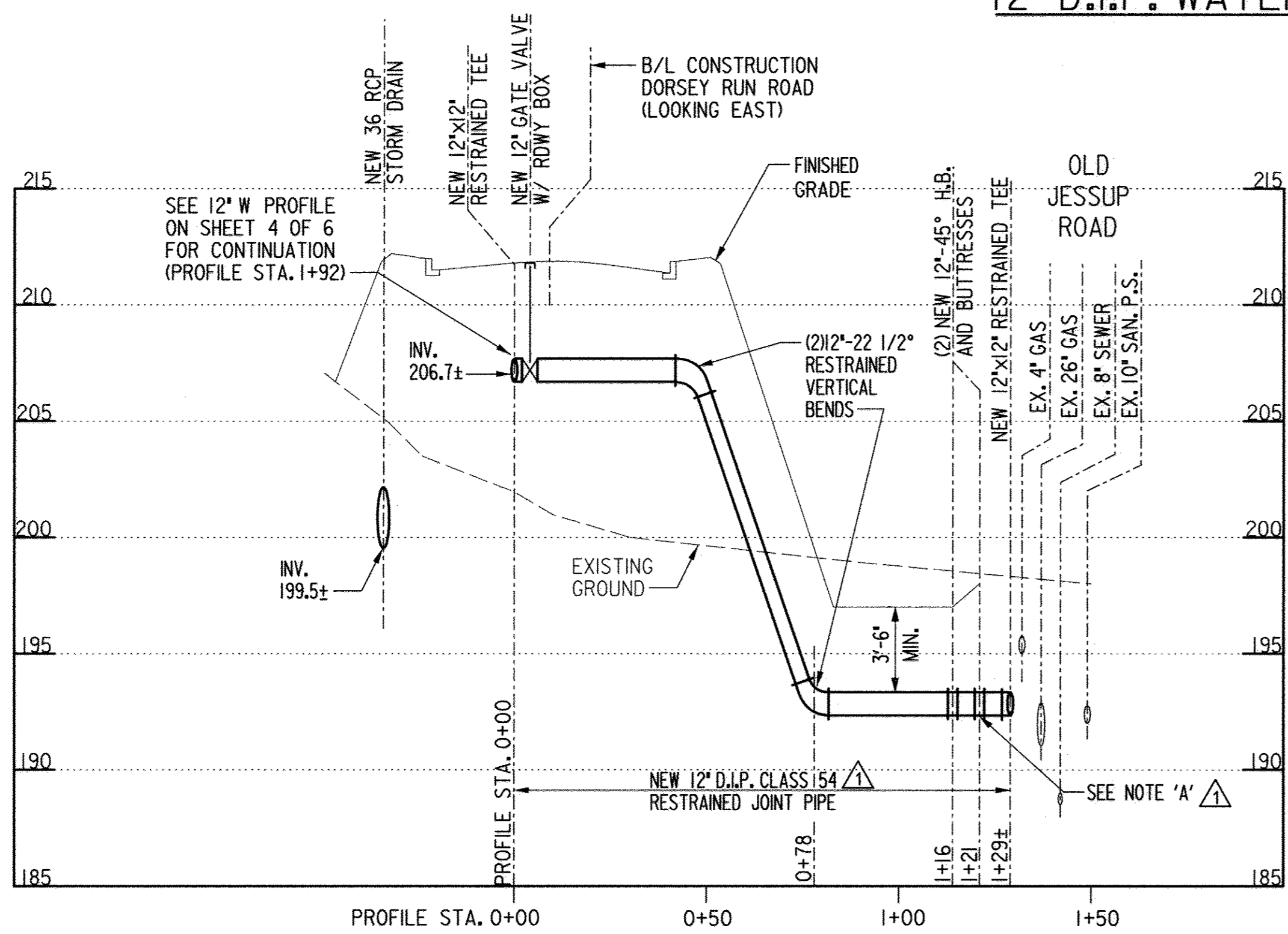
**DORSEY RUN ROAD EXTENSION  
MD 175 TO DORSEY RUN INDUSTRIAL CENTER  
12" WATER MAIN EXTENSION**  
CAPITAL PROJECT W-8275  
CONTRACT NO. 24-4399  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 6

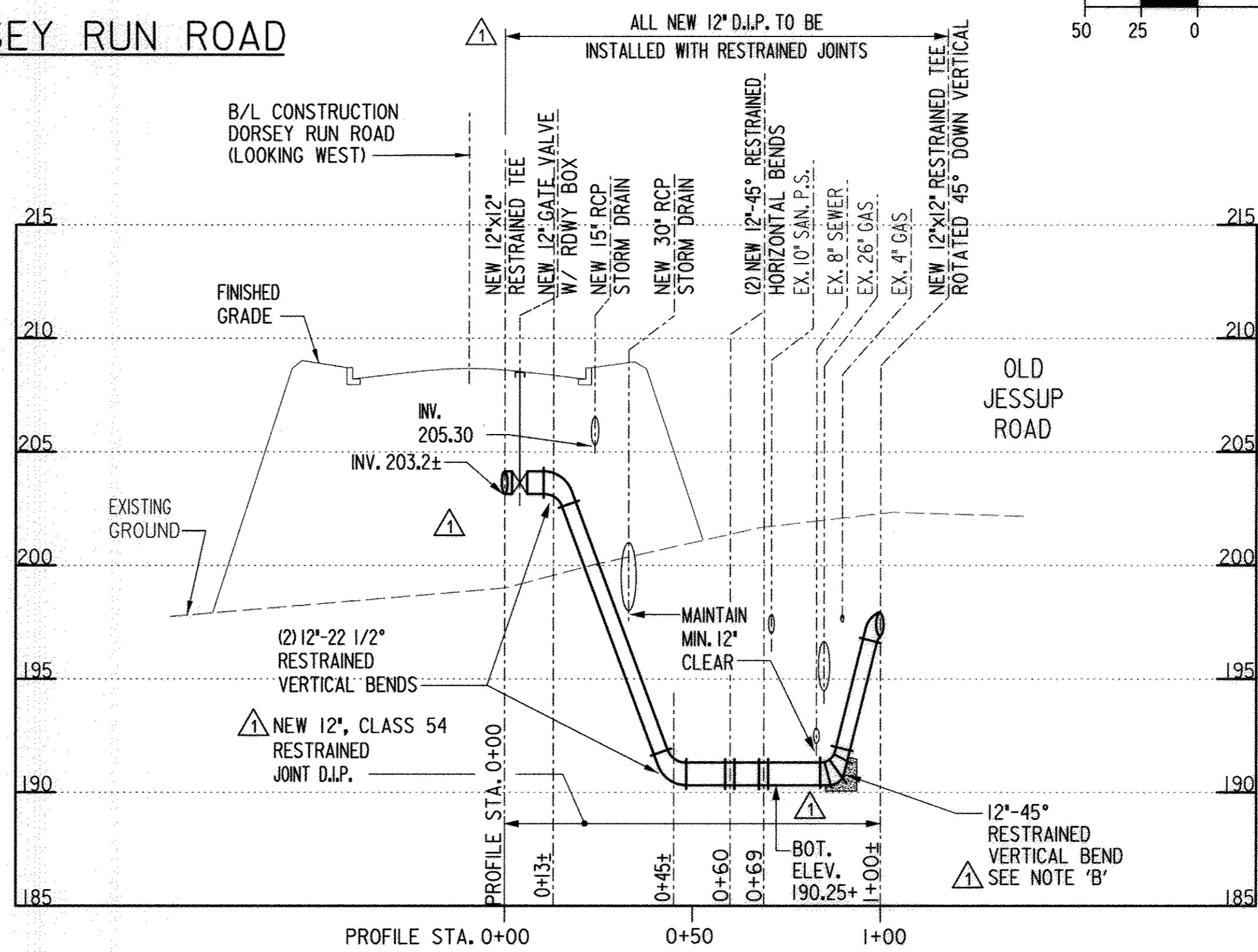


**12" D.I.P. WATER MAIN PROFILE - DORSEY RUN ROAD**

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



**SOUTH TIE-IN  
12" D.I.P. WATER MAIN PROFILE  
STA. 403+75 DORSEY RUN ROAD AT OLD JESSUP ROAD**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'



**NORTH TIE-IN  
12" D.I.P. WATER MAIN PROFILE  
STA. 404+50 DORSEY RUN ROAD AT OLD JESSUP ROAD**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

**RECORD DRAWINGS**  
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON THE INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.  
URS CORPORATION  
BY: DAVID T. MARLETT

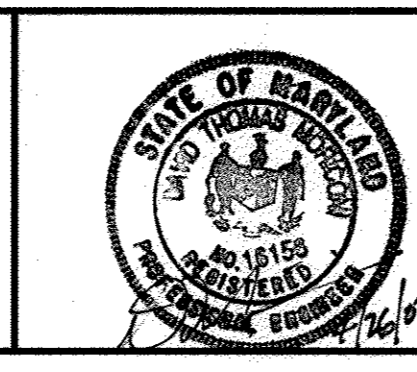
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature] 4/26/07  
Date: 4/27/07

Chief, Bureau of Engineering: [Signature] 4/27/07  
Date: 4/27/07

Chief, Bureau of Utilities: [Signature] 4/27/07  
Date: 4/27/07

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES: RER			
DRN: CLD			
CHK: DTM			
DATE: 06/06			
BY: [Signature]	NO. 0109	DATE: 06/06	
ADDRESS UTILITY DESIGN DIVISION COMMENTS 1/07			
REVISION			

**WATER MAIN PROFILE**

SCALE MAP NO. N/A BLOCK NO.

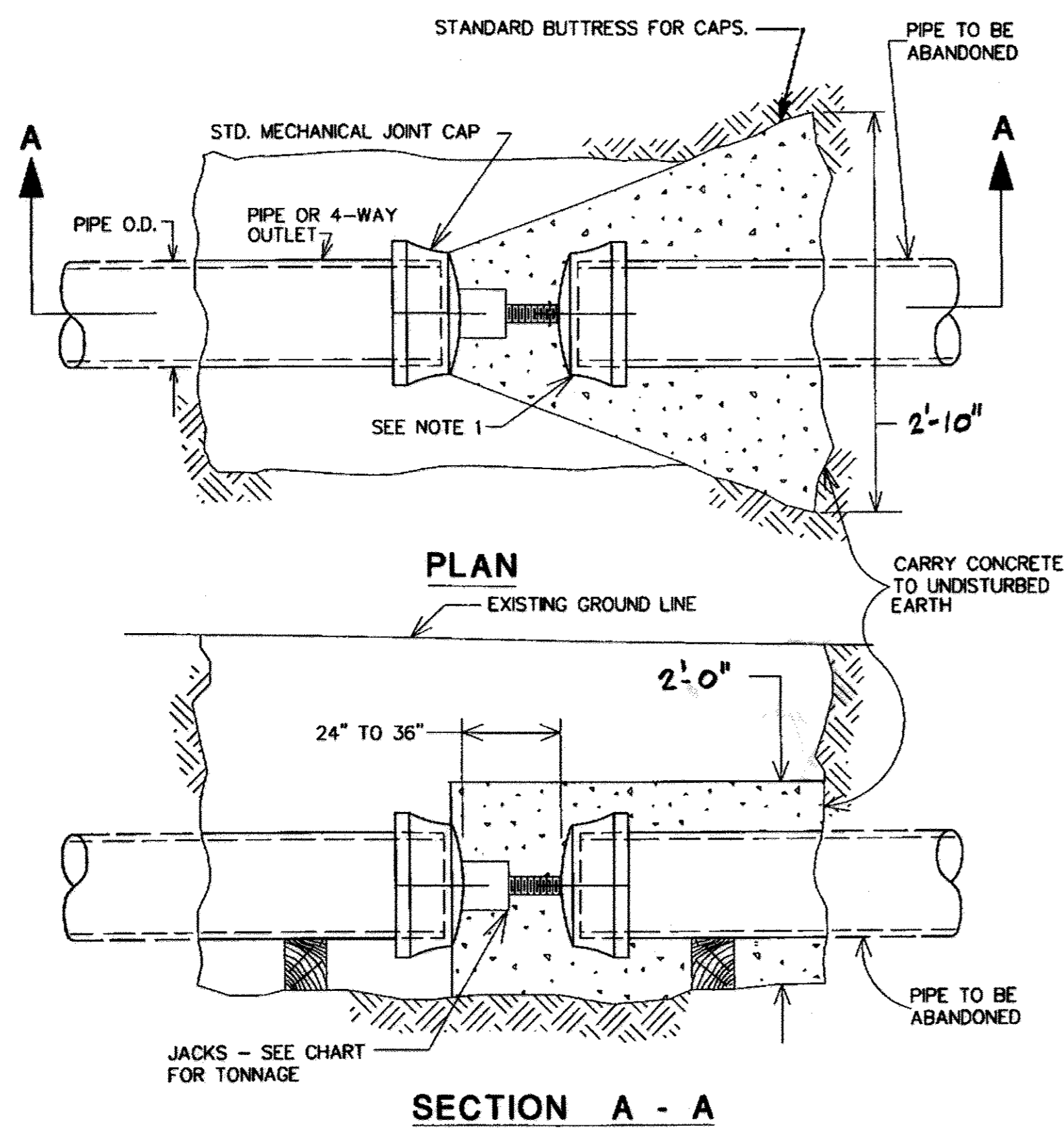
**DORSEY RUN ROAD EXTENSION  
MD 175 TO DORSEY RUN INDUSTRIAL CENTER  
12" WATER MAIN EXTENSION**

CAPITAL PROJECT W-8275  
CONTRACT NO. 24-4399

1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 5 OF 6

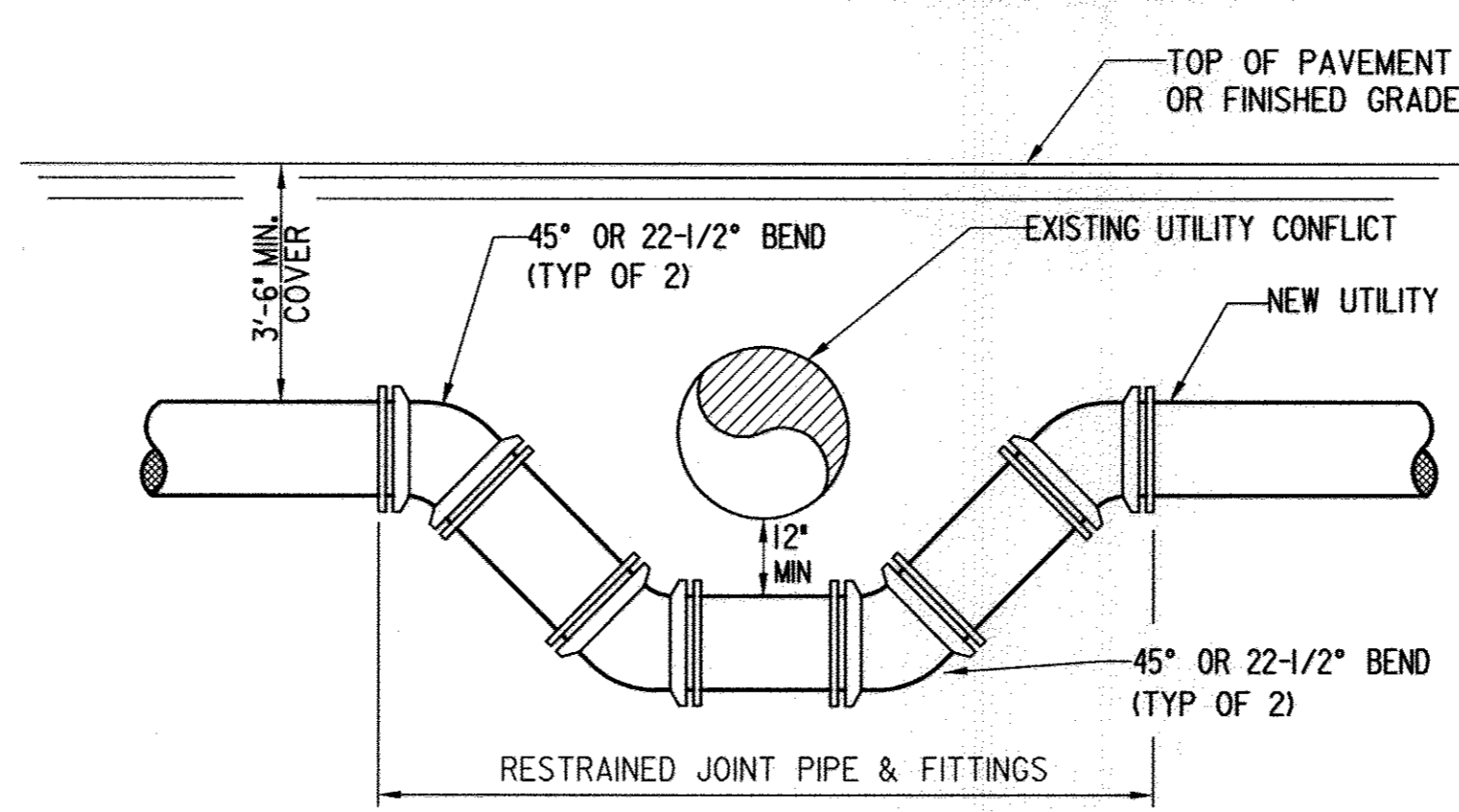


**NOTES**

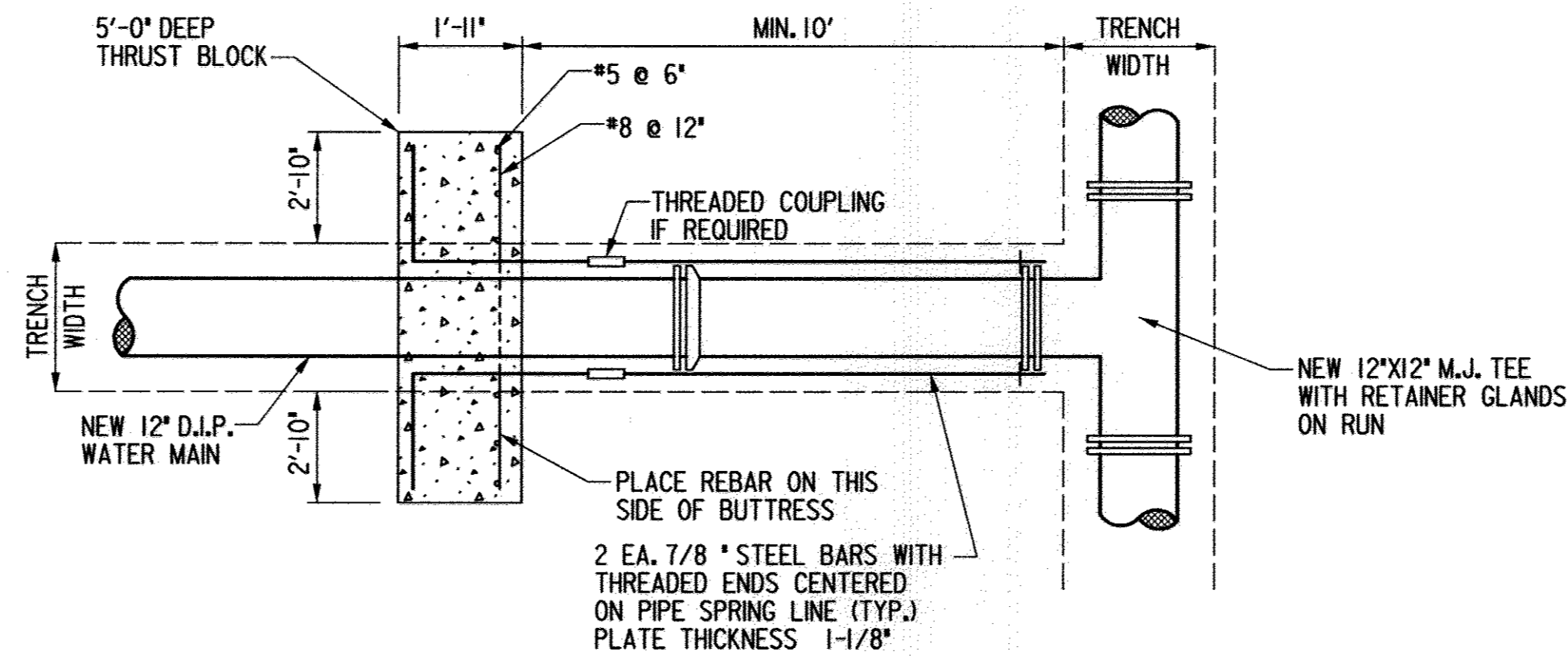
- GLAND, BOLTS AND GASKET NOT REQUIRED ON THIS CAP UNLESS LEAKAGE IS PRESENT IN ABANDONED PIPE. FOR CAP DIAMETER > 12", JACK LOAD WITH BLOCKING ON CAPS.
- O.D. MEASURED IN INCHES.
- IN LIEU OF JACK, STEEL BLOCKING OF SAME CAPACITY MAY BE USED.

JACK TONNAGE CHART	
JACK TONNAGE @ 100 psi	$\frac{O.D.^2}{25}$ TONS
JACK TONNAGE @ 150 psi	$\frac{O.D.^2}{16}$ TONS
JACK TONNAGE @ 200 psi	$\frac{O.D.^2}{12}$ TONS

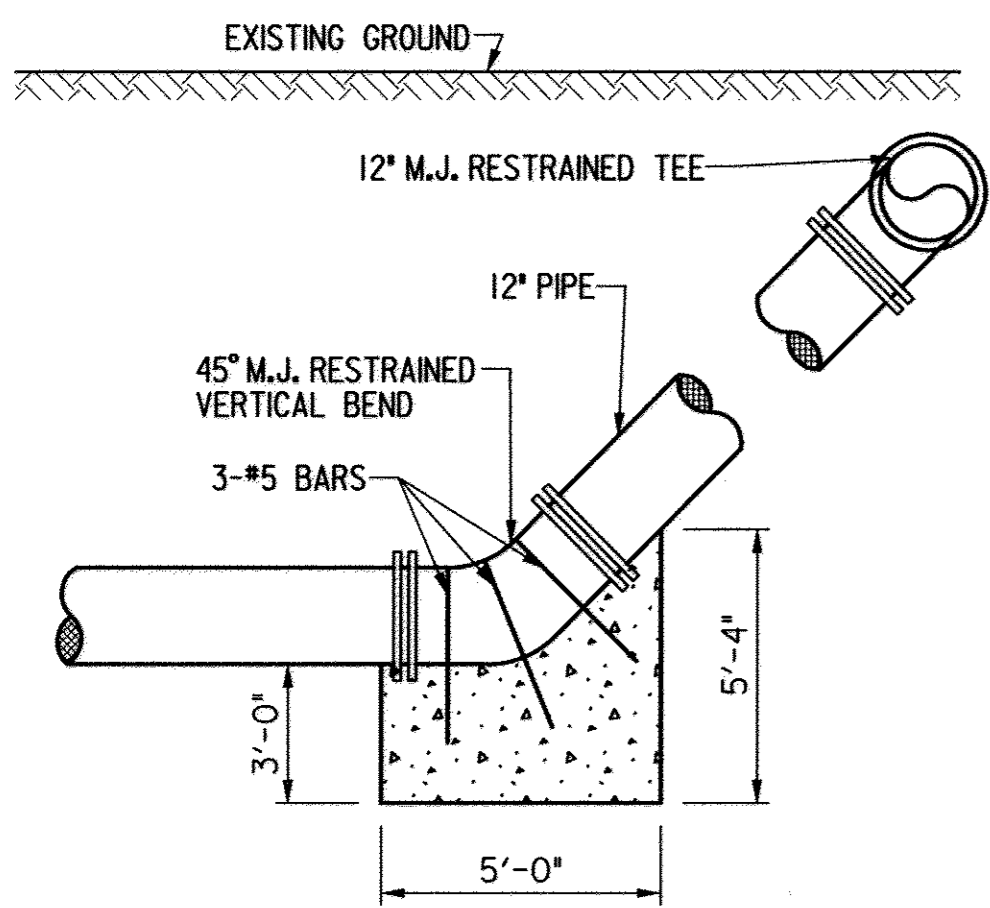
**DOUBLE CAPS, JACK AND BUTTRESS DETAIL**  
NOT TO SCALE



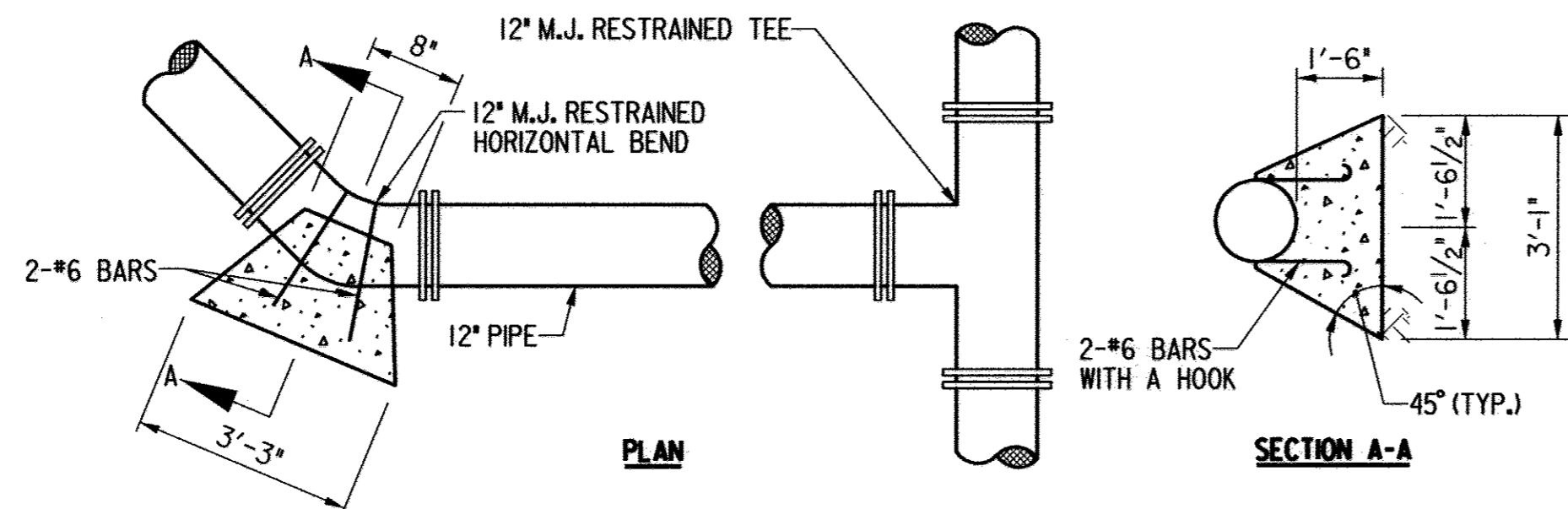
**CONTINGENT UTILITY CONFLICT DETAIL**  
(TO BE USED ONLY TO AVOID UNFORESEEN CONFLICT WITH EXISTING UTILITY)  
NOT TO SCALE



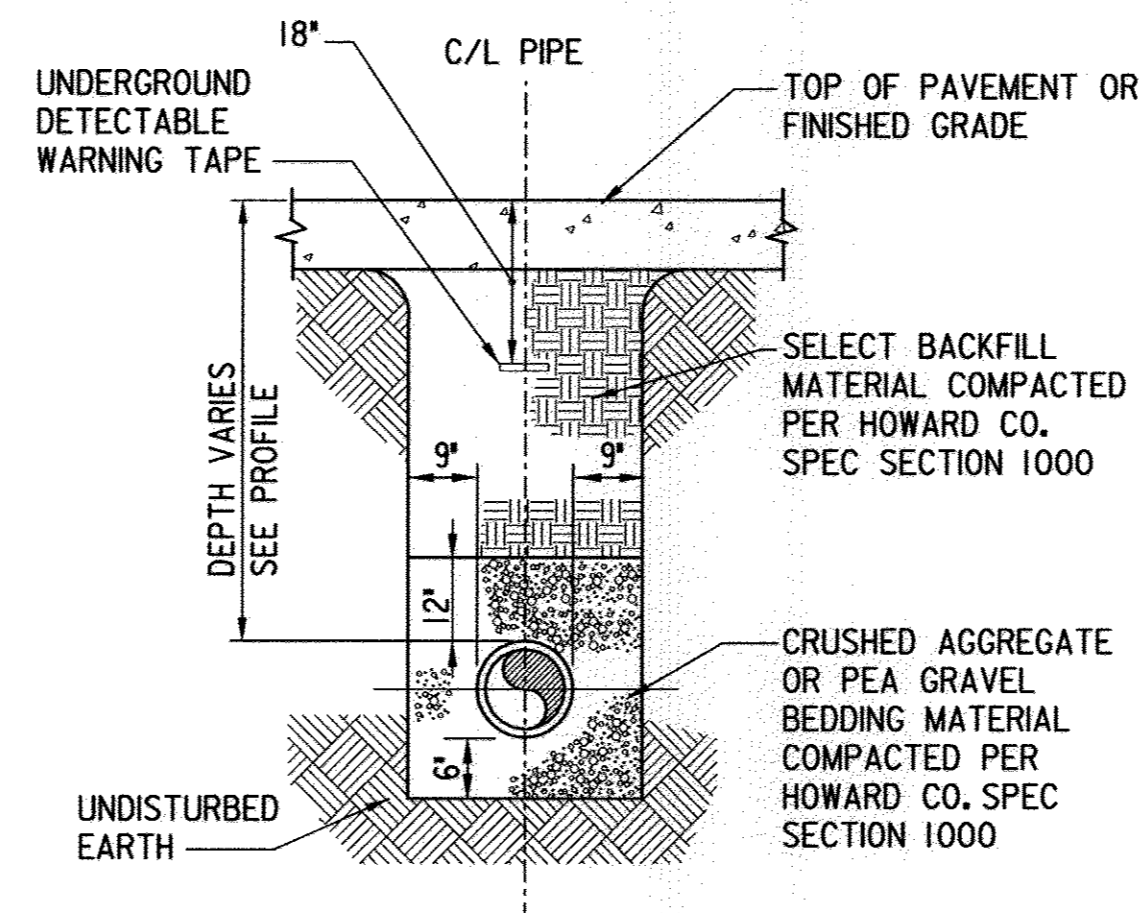
**SPECIAL DETAIL 1**  
**IN-LINE THRUST BLOCK TO RESTRAIN 12" TEE**  
NOT TO SCALE



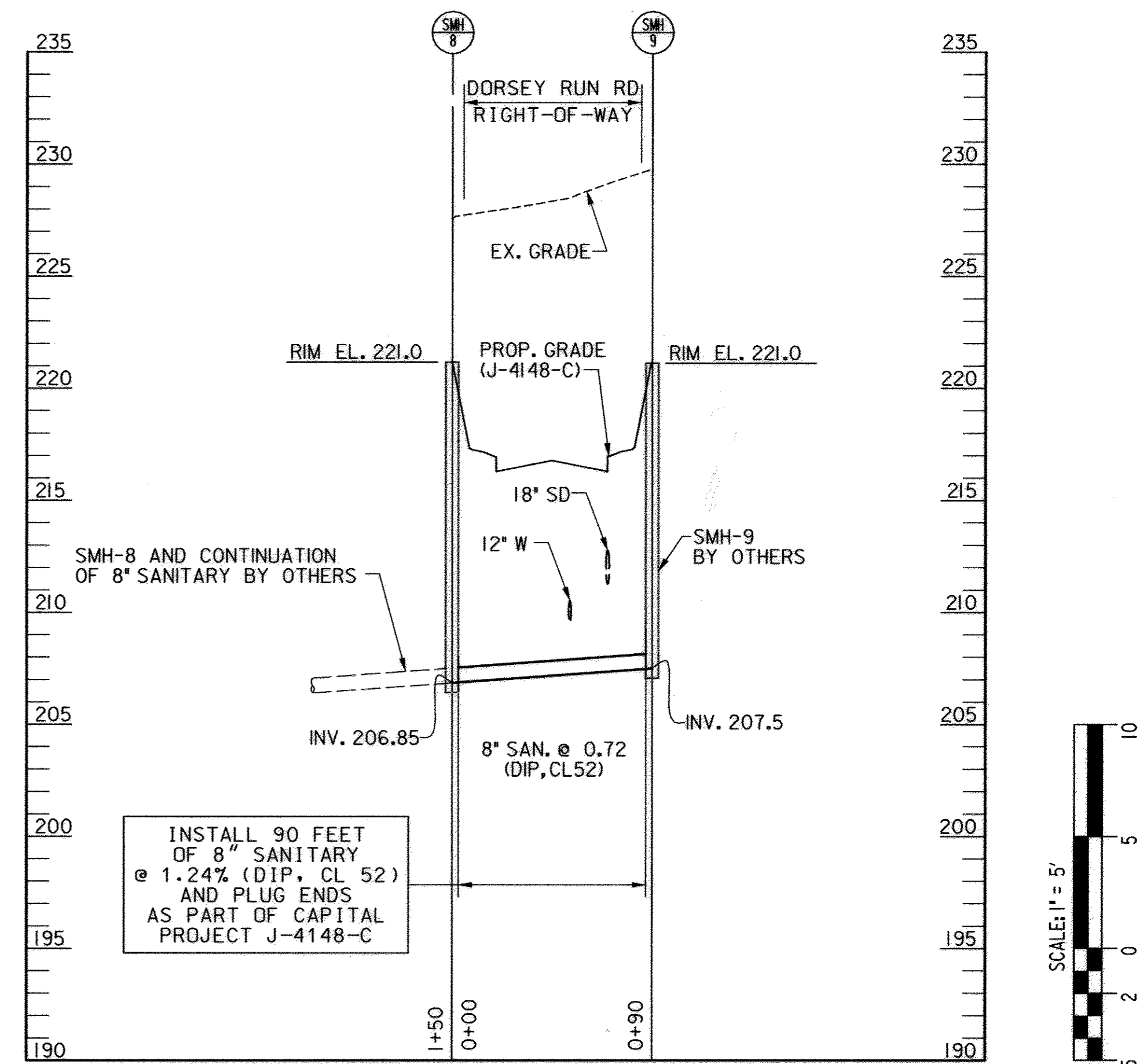
**SPECIAL DETAIL 2**  
**VERTICAL ANCHOR TO RESTRAIN 12" TEE**  
NOT TO SCALE



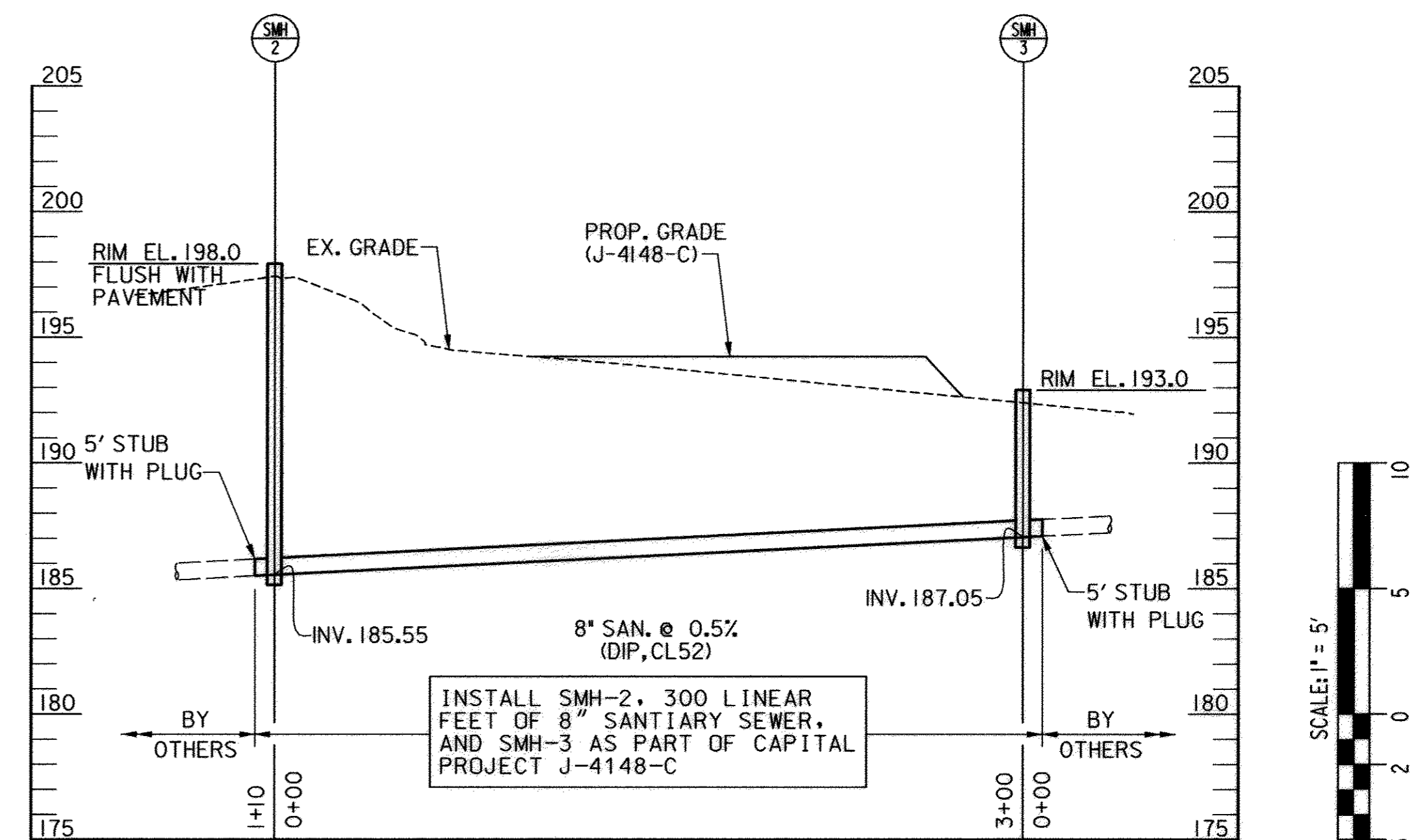
**SPECIAL DETAIL 3**  
**HORIZONTAL BUTTRESS TO RESTRAIN 12" TEE**  
NOT TO SCALE



**TYPICAL PIPE TRENCH DETAIL**  
NOT TO SCALE



**SEWER MAIN PROFILE**  
SCALE: HORIZ.: 1"=30'  
VERT.: 1"=5'

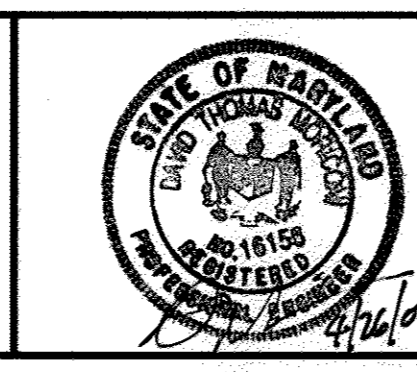


**SEWER MAIN PROFILE**  
SCALE: HORIZ.: 1"=50'  
VERT.: 1"=5'

RECORD DRAWINGS  
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON THE INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.  
URS CORPORATION  
BY: [Signature]

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS: [Signature] DATE: 4/26/07  
CHIEF, BUREAU OF ENGINEERING: [Signature] DATE: 4/27/07  
CHIEF, BUREAU OF UTILITIES: [Signature] DATE: 4/27/07  
CHIEF, UTILITY DESIGN DIVISION: [Signature] DATE: 4/27/07

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
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DES: RER			
DRN: CLD			
CHK: DTM	DTM	AS-BUILT	6/09
DATE: 06/06	DTM	ADDRESSED UTILITY DESIGN DIVISION COMMENTS	1/07
BY: NO.		REVISION	DATE

**WATER MAIN DETAILS & SEWER MAIN PROFILE**  
SCALE MAP NO. N/A BLOCK NO.

**DORSEY RUN ROAD EXTENSION**  
**MD 175 TO DORSEY RUN INDUSTRIAL CENTER**  
**12" WATER MAIN EXTENSION**  
CAPITAL PROJECT W-8275  
CONTRACT NO. 24-4399  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 6 OF 6