

WATER AND SEWER EXTENSIONS PATUXENT HEIGHTS 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-3200-D

SHEET INDEX	
No.	DESCRIPTION
1	TITLE SHEET
2	PLAN OF WATER & SEWER MAINS
3	PROFILES OF WATER MAINS
4	PROFILES OF SEWER MAINS

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 supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's 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.
5. Clear all utilities by a minimum of 8". 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 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 Detail 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:

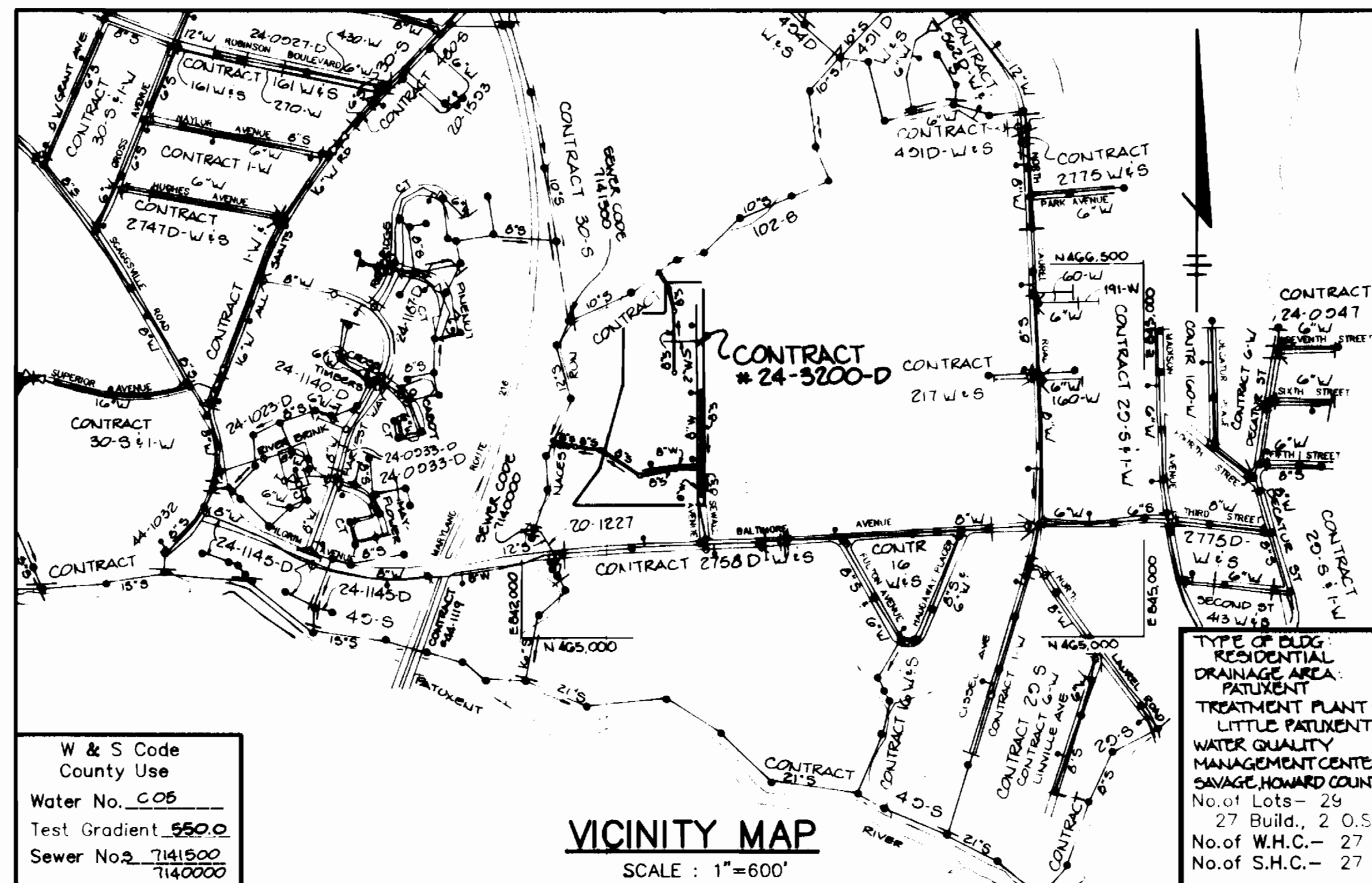
State Highway Administration	531-5533
Baltimore Gas & Electric Co. Contractor Services	850-4620
Baltimore Gas & Electric Co. Underground Damage Control	787-9068
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	795-1390
Bureau of Utilities, Howard County Department of Public Works	313-4900
9. Trees and shrubs are to be protected from damage to 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. All water mains to be D.I.P. Class 52 unless otherwise noted.
12. Tops of all water mains to have a minimum of 3'-1/2" cover unless otherwise noted.
13. Valves adjacent to tees shall be strapped to tees.
14. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
15. Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be maintained as per DETAILS W1.11 and W2.11. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
16. The contractor shall not operate any water main valves on the existing water system.
17. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
18. All sewer mains shall be DIP, RCP, VCPX, CSPX, RCPX and P.V.C. unless otherwise noted.
19. The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
20. All manholes shall be 4'-0" inside diameter unless otherwise noted.
21. Force mains shall be D.I.P. only.
22. Manholes shown with 12" and 18" wells are for brick manholes only.
23. Manholes designated W.T. in plan and profile shall have watertight frames and covers, Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 1'-6" above finished grade unless otherwise noted on the drawings.
24. House(s) with the symbol "C.N.S." indicates that cellar cannot be served.
25. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 215-2450 AT LEAST FIVE WORKING DAYS BEFORE 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 16.114 (a) OF THE HOWARD COUNTY CODE.

E.A.N. AS-BUILT

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
3/4" W	574 L.F.	703 L.F.	"K" COPPER	HOWELL METALS
4" W	218 L.F.	218 L.F.	D.I.P.	GRIFFIN PIPE
6" W	108 L.F.	187 L.F.	D.I.P.	GRIFFIN PIPE
8" W	1235 L.F.	1230 L.F.	D.I.P.	GRIFFIN PIPE
4" S	555 L.F.	630 L.F.	P.V.C. & D.I.P.	GRIFFIN PIPE JM MANUFACTURING
8" S	1650 L.F.	1535 L.F.	P.V.C. & D.I.P.	GRIFFIN PIPE JM MANUFACTURING
4" MANHOLE	115.5 E.A.	12 E.A.	PRE-CAST	ATLANTIC CONCRETE
TYPE "B" DITCH CROWN	3 EACH	3 E.A.	D.I.P.	GRIFFIN PIPE
FIRE HYDRANT	4 EACH	4 E.A.	CAST IRON	O.S. PIPE CO.
6" VALVE	3 EACH	3 E.A.	CAST IRON	MUELLER CO.
6" S	75 L.F.	70 L.F.	P.V.C.	JM MANUFACTURING
8" VALVE	6 EACH	6 E.A.	CAST IRON	MUELLER CO.
1" W	100 L.F.	111 L.F.	"K" COPPER	HOWELL METALS
4" VALVE	1 EACH	1 E.A.	CAST IRON	MUELLER CO.

NAME OF COUNTY CONTRACTOR: CONSOLIDATED CONSTRUCTION SERVICES

CHECKBOX
AS-BUILT DATE
SURVEY AND PLANNING DIVISION



CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS

1. Stockpile and maintain separately the top 6" of topsoil material, to be replaced as the top layer of the backfilled material.
2. Remove excess fill or construction material or debris to an upland disposal area.
3. Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of the nontidal wetlands.
4. Use previously excavated material as backfill, unless it contains waste metal products, unsightly debris, toxic material or any other deleterious substance. Use clean borrow material when excavated material is not suitable for use as backfill.
5. Rectify any nontidal wetlands temporarily impacted by any proposed repair and maintenance activity or installation of the utility line. Wetlands and a 25 foot adjacent buffer within the right-of-way will not be moved or otherwise managed to preclude the re-establishment of the forest vegetation. Stabilization to temporarily impacted areas shall be annual rye or millet and mulch. All temporary fills shall be removed in their entirety on or before the completion of construction.
6. After installation has been completed, make post construction grades and elevations of nontidal wetlands the same as the original grades and elevations.
7. To protect important aquatic species, in-stream work is prohibited as determined by the classification of the stream as follows:
 - a. Class I Wetters. In-stream work may not be conducted during the period March 1 through June 15, inclusive, during any year.

BENCHMARKS

B.M. #1 ELEV. 105.025
 HD. CO. MON. #1741000, LOCATED ON RT. 216 APPROX. 1.100' SOUTH OF THE INTERSECTION WITH ALL SAINTS RD. 15' EAST OF EDGE OF PAVING 1' ± EAST OF GUARD RAIL. N 407,000.000; E 042, 110.705

B.M. #2 ELEV. 107.500
 HD. CO. MON. #1741002, LOCATED ON RT. 216 APPROX. 0.4 MILES SOUTH OF THE INTERSECTION WITH ALL SAINTS RD. 15' ± EAST OF EDGE OF PAVING. N 406,045.100; E 041, 995.700

Sediment control measures for this contract will be implemented in accordance with Section 219 of the specifications and as shown on F-92-76

John L. Blanton 8/17/92
 HOWARD SOIL CONSERVATION DISTRICT

Review for Howard Soil Conservation District and meets technical requirements.

John M. Mullan 8/19/92
 S. SOIL CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John L. Blanton 8/19/92
 HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

<i>Robert B. ...</i> 8-20-92 DIRECTOR OF PUBLIC WORKS	<i>... 8-20-92</i> CHIEF, BUREAU OF ENGINEERING
<i>Robert B. ...</i> 8-18-92 CHIEF, BUREAU OF UTILITIES	<i>... 8-18-92</i> CHIEF, LAND DEVELOPMENT

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering & Surveying Firm
8818 Centre Park Drive • Suite 200 • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282

ARTHUR E. MUEGGE #8707

DES: CB					
DRN: CB					
CHK: J.D.P.					
DATE: 2-13-92	BY NO.	REVISION	DATE	600' SCALE MAP NO. 50	BLOCK NO. 3

TITLE SHEET

PATUXENT HEIGHTS
LOTS 1-29
SEWALL AVENUE, NORTH LAUREL PARK
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-3200-D

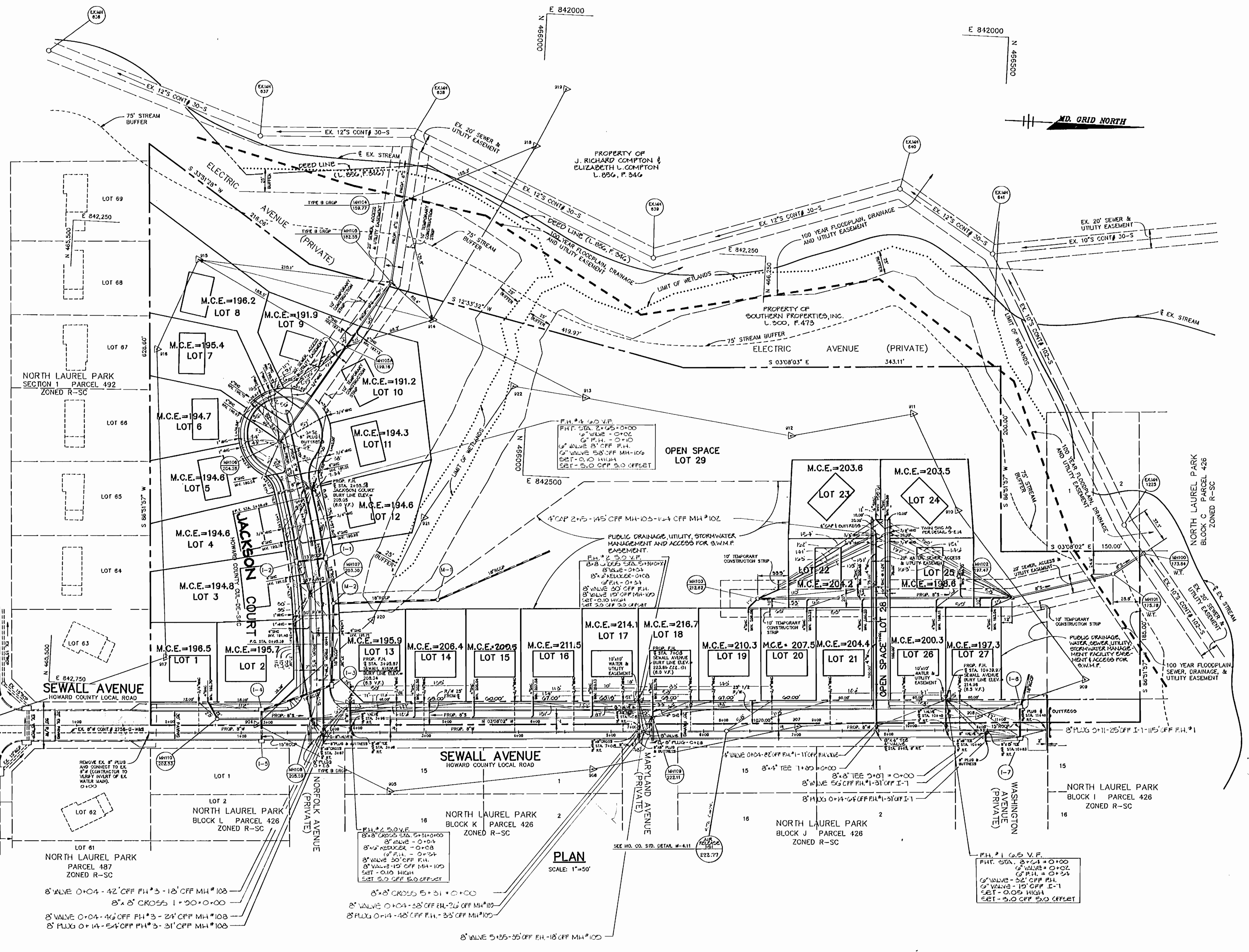
SCALE AS SHOWN
SHEET 1 OF 4

AS-BUILT 1/25/94

TRAVERSE PT No.	NORTHING	EASTING
903	165,416.843	842,801.905
904	165,726.360	842,784.265
905	165,873.713	842,848.573
906	166,091.632	842,813.554
907	166,310.582	842,758.058
908	166,505.268	842,734.335
909	166,618.404	842,689.777
910	166,471.508	842,514.187
911	166,117.829	842,412.238
912	166,287.228	842,442.732
913	166,082.942	842,413.029
914	165,893.805	842,358.808
915	165,637.218	842,285.407
916	165,597.656	842,381.807
917	165,824.818	842,716.946
918	165,995.558	842,143.782
919	166,024.311	842,080.255

MH No.	LOCATION	RIM ELEV.
MH 100	SEE PLAN	173.81
MH 101	SEE PLAN	175.78
MH 102	SEE PLAN	197.47
MH 103	SEE PLAN	212.63
MH 104	SEE PLAN	159.77
MH 105	SEE PLAN	182.55
MH 106	1/4 STA. 3+11 SEWALL CT., 7' LT.	204.25
MH 107	1/4 STA. 1+41.5 SEWALL CT., 5' LT.	203.30
MH 108	1/4 STA. 3+53 SEWALL AVE., 7' LT.	201.85
MH 109	1/4 STA. 7+23 SEWALL AVE., 7' LT.	222.11
MH 110	1/4 STA. 2+32 SEWALL AVE., 7' LT.	205.59

WATER LINE CRIMP RADIUS CURVE DATA
 WATER LINE STA. 0+95.39 TO STA. 2+49.39 SEWALL COURT
 $\Delta = 13^{\circ}00'00''$
 $R = 107.00'$
 $T = 80.55'$
 $L = 160.42'$
 Chord: N 80°21'58" E, 160.07'



Sediment control measures for this contract will be implemented in accordance with Section 215 of the specifications and as shown on F-99.

John P. Roberts 8/19/92
 HOWARD SOIL CONSERVATION DISTRICT

James M. Hahn 8/19/92
 J.S. SOIL CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John P. Roberts 8/19/92
 HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert Beaman 8-20-92
 DIRECTOR OF PUBLIC WORKS

William R. Deary 8-20-92
 CHIEF, BUREAU OF ENGINEERING

Robert Beaman 8-18-92
 CHIEF, BUREAU OF UTILITIES

William R. Deary
 CHIEF, LAND DEVELOPMENT

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 410-997-8900 FAX: 410-997-9282

ARTHUR E. MUEGGE 8/10/92
 PROFESSIONAL ENGINEER

DES: CB	DRN: CB	CHK: J.D.P.	DATE: 2-13-92
BY NO.	REVISION	DATE	

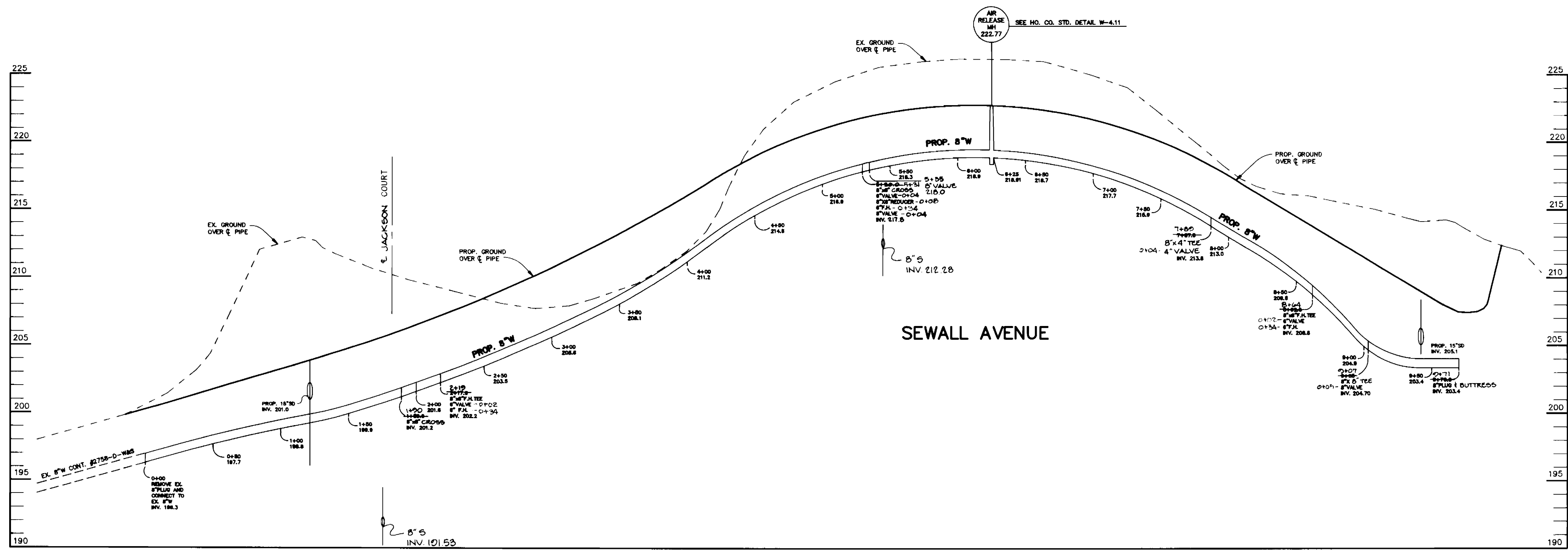
PLAN OF WATER AND SEWER MAINS

600' SCALE MAP NO. 50 BLOCK NO. 3

PATUXENT HEIGHTS
 LOTS 1-29
 SEWALL AVENUE, NORTH LAUREL PARK
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO. 24-3200-D

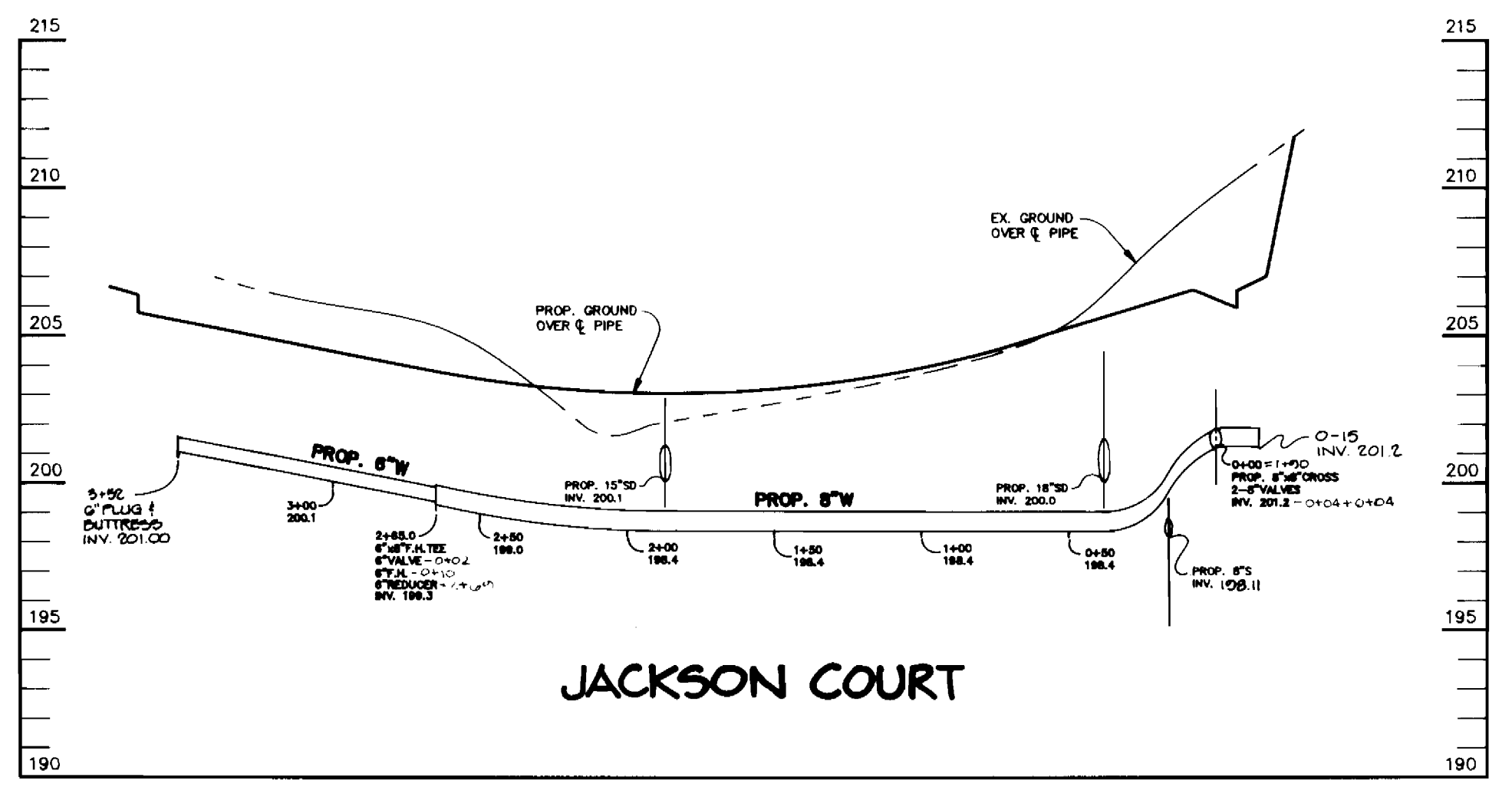
SCALE AS SHOWN
 SHEET 2 OF 4

AS-BUILT 1/25/04



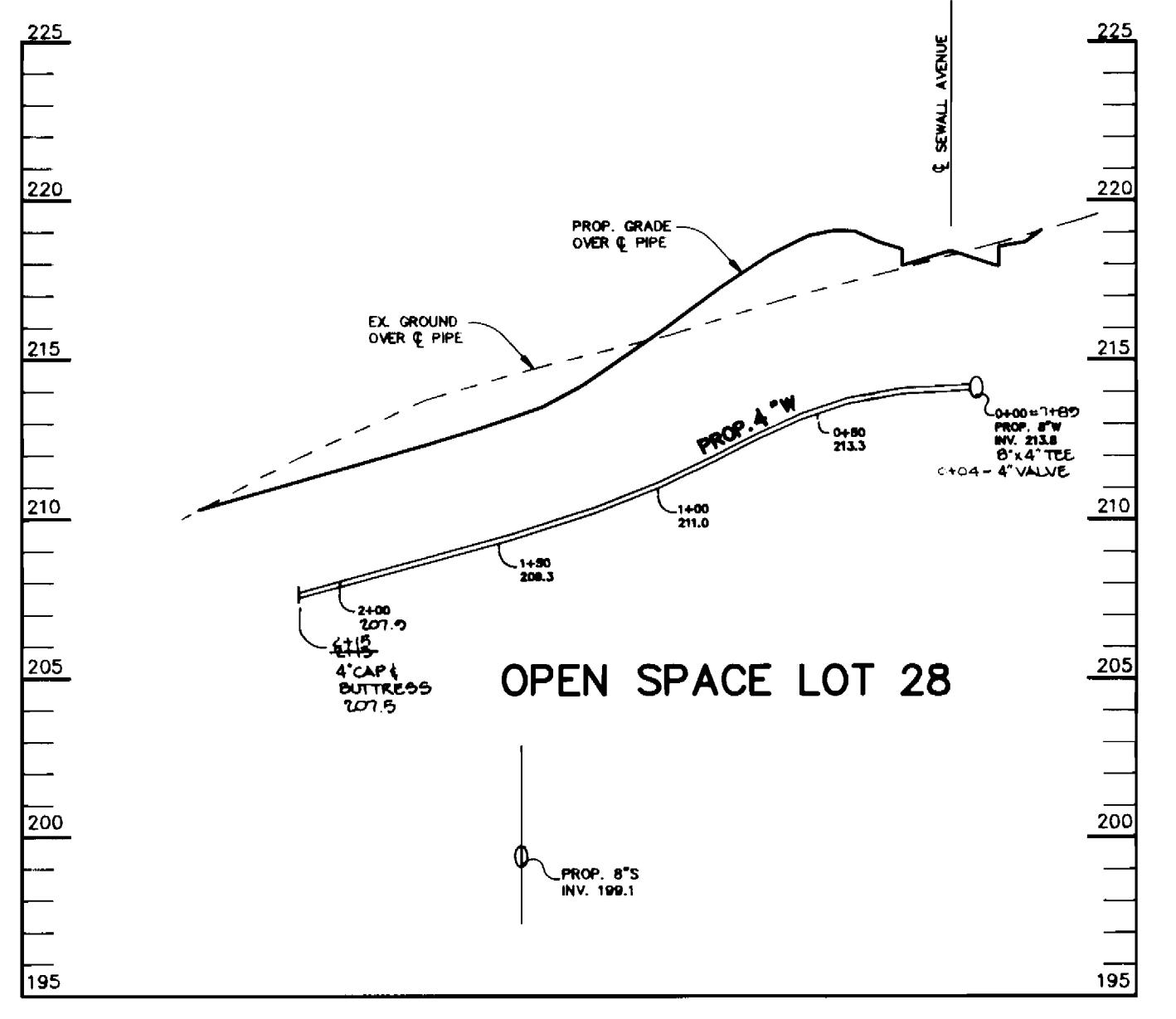
WATER PROFILE

SCALE:
HOR.—1"=50'
VERT.—1"=5'



WATER PROFILE

SCALE:
HOR.—1"=50'
VERT.—1"=5'



WATER PROFILE

SCALE:
HOR.—1"=50'
VERT.—1"=5'

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-92-76

John R. Robertson 8/19/92
HOWARD SOIL CONSERVATION DISTRICT

Review for Howard Soil Conservation District and meets technical requirements.

James M. Hala/MLK 8/19/92
U.S. SOIL CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John R. Robertson 8/19/92
HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B. Berman 8-20-92
DIRECTOR OF PUBLIC WORKS DATE

Michael J. Berman 8-20-92
CHIEF, BUREAU OF ENGINEERING DATE

Robert B. Berman 8-18-92
CHIEF, BUREAU OF UTILITIES DATE

Michael J. Berman 8-18-92
CHIEF, LAND DEVELOPMENT DATE

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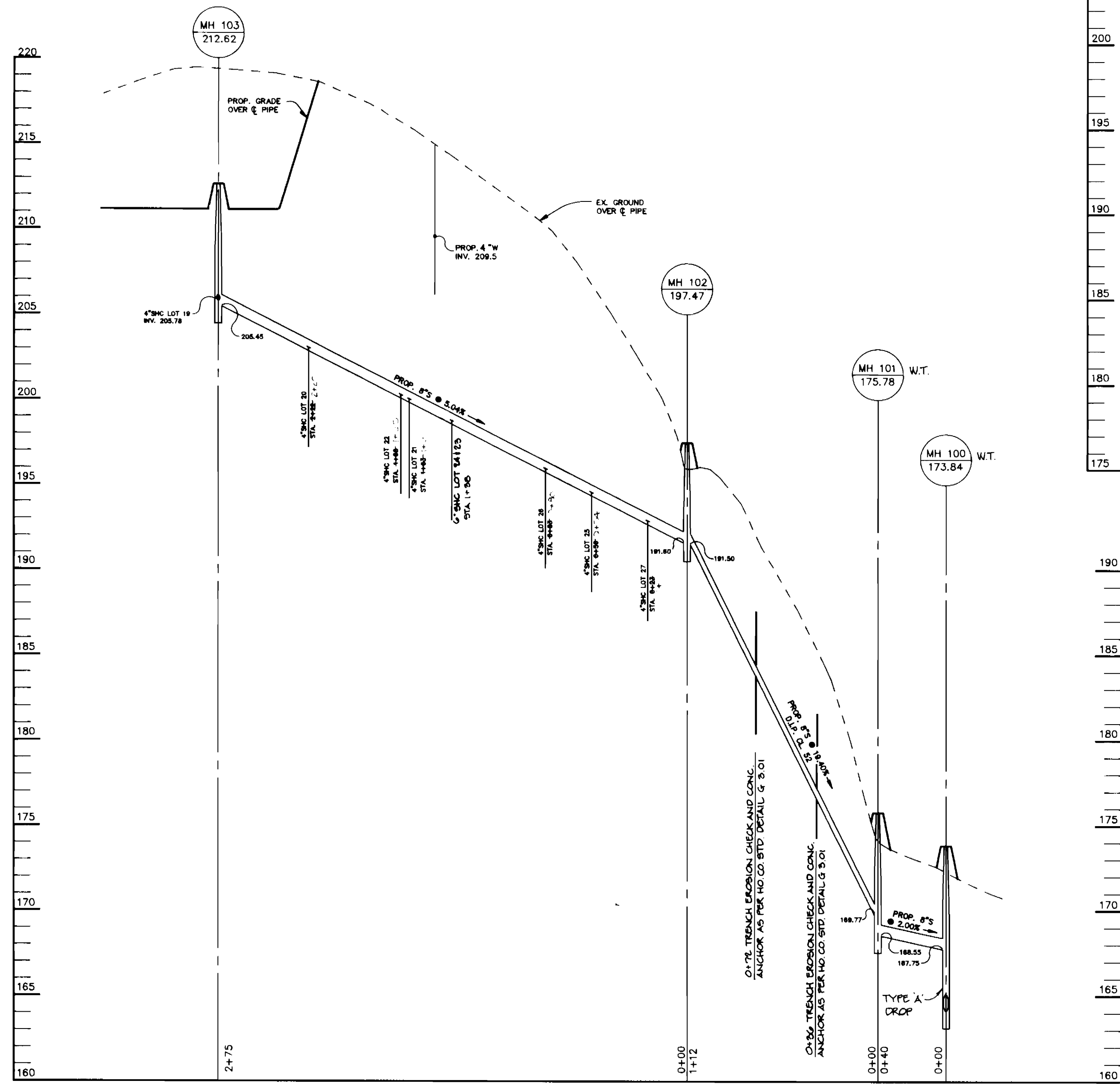
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DRN:	CB				
CHK:	J.P.P.				
DATE:	2-13-92	BY:	NO.	REVISION	DATE

PROFILES OF WATER MAINS

600' SCALE MAP NO. 50 BLOCK NO. 3

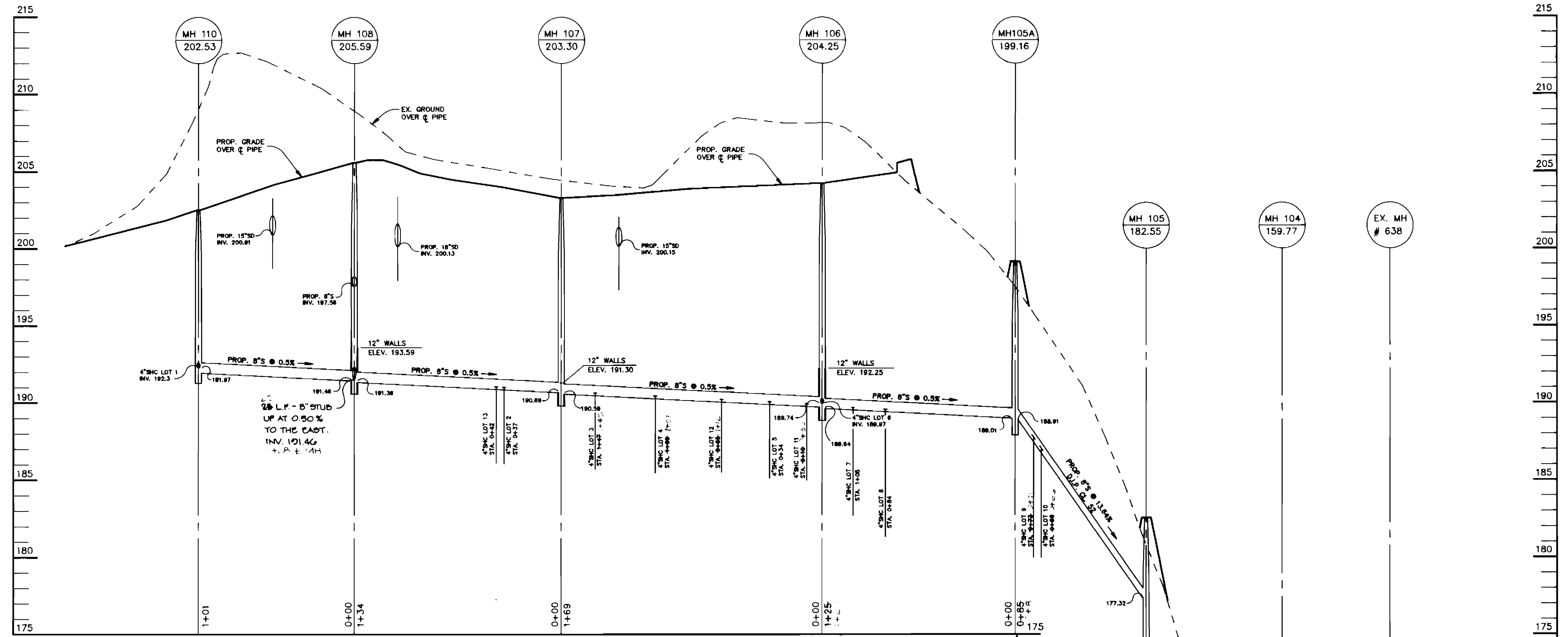
PATUXENT HEIGHTS
LOTS 1-29
SEWALL AVENUE, NORTH LAUREL PARK
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-3200-D

SCALE AS SHOWN
SHEET 3 OF 4



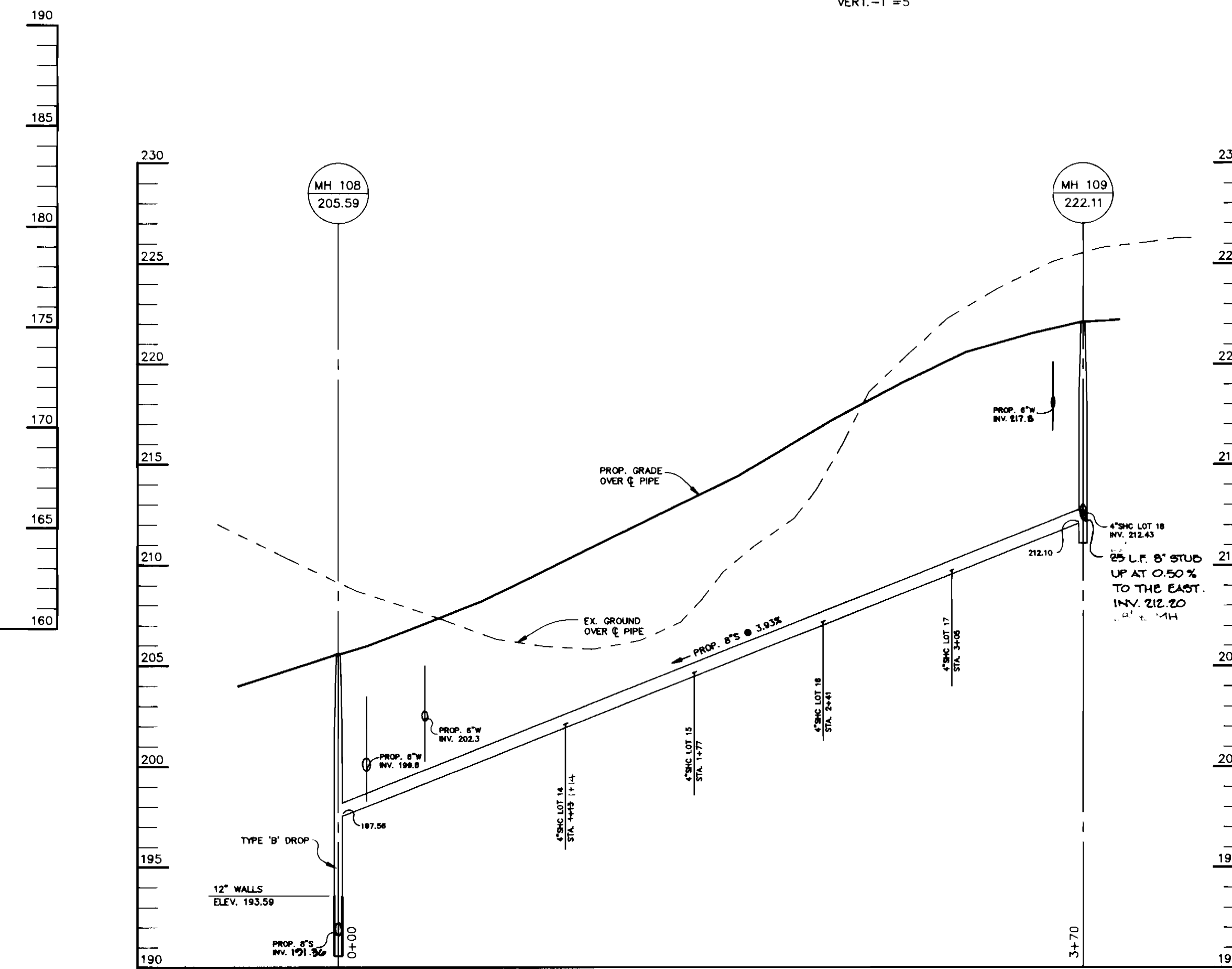
SEWER PROFILE

SCALE:
HOR. - 1" = 50'
VERT. - 1" = 5'



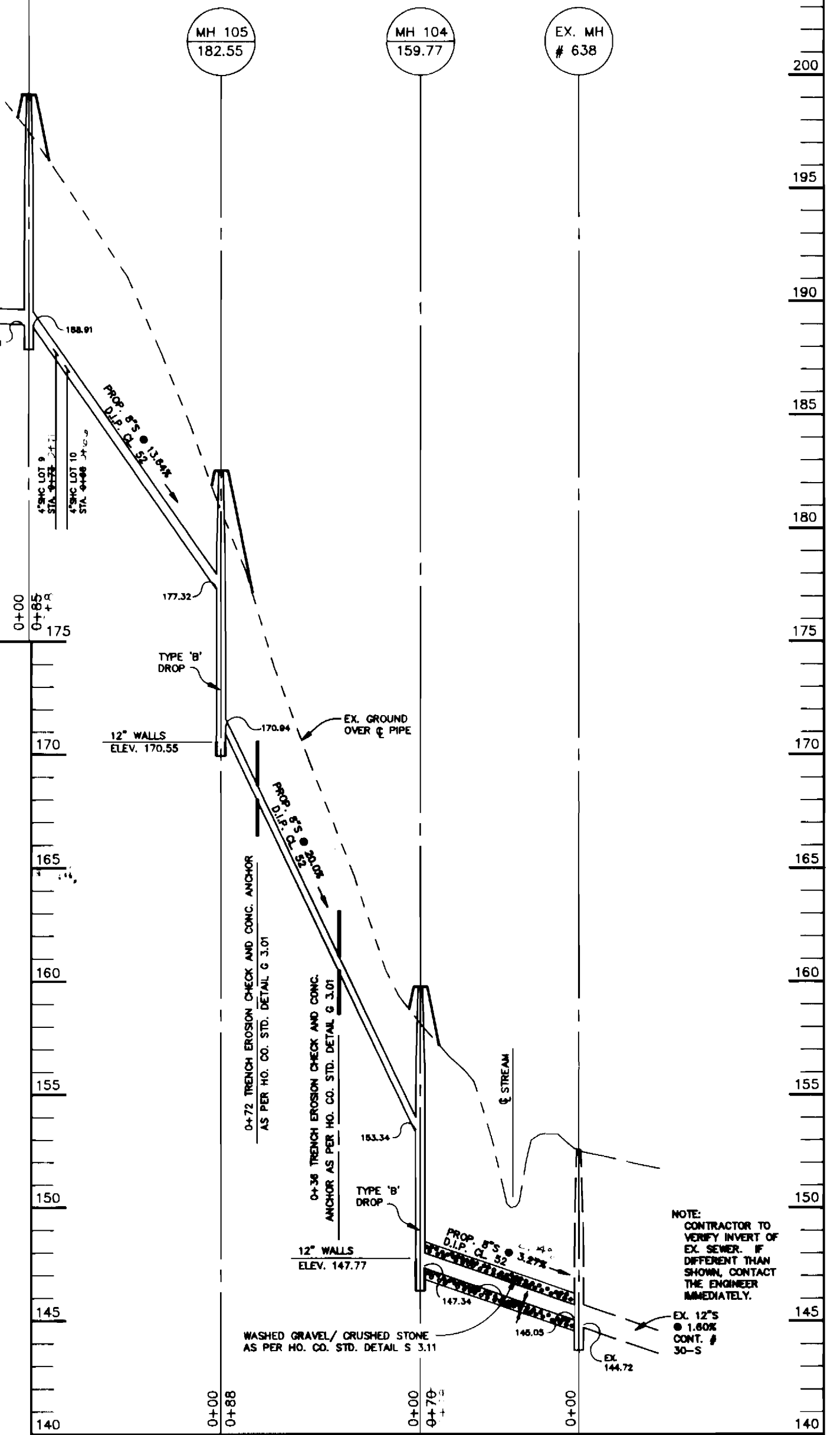
SEWER PROFILE

SCALE:
HOR. - 1" = 50'
VERT. - 1" = 5'



SEWER PROFILE

SCALE:
HOR. - 1" = 50'
VERT. - 1" = 5'



NOTE:
CONTRACTOR TO VERIFY INVERT OF EX. SEWER. IF DIFFERENT THAN SHOWN, CONTACT THE ENGINEER IMMEDIATELY.

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specification as shown on F-92.
John K. Robertson 8/19/92
HOWARD SOIL CONSERVATION DISTRICT

Review for Howard Soil Conservation District and meets technical requirements.
James M. Hehn 8/19/92
S.S. SOIL CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
John K. Robertson 8/19/92
HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert W. Bauman 8-20-92
DIRECTOR OF PUBLIC WORKS DATE

William B. Ray 8-20-92
CHIEF, BUREAU OF ENGINEERING DATE

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DES: CB
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BY	NO.	REVISION	DATE

PROFILES OF
SEWER MAINS

PATUXENT HEIGHTS
LOTS 1-29
SEWALL AVENUE, NORTH LAUREL PARK
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-3200-D

SCALE
AS
SHOWN
SHEET
4 OF 4