

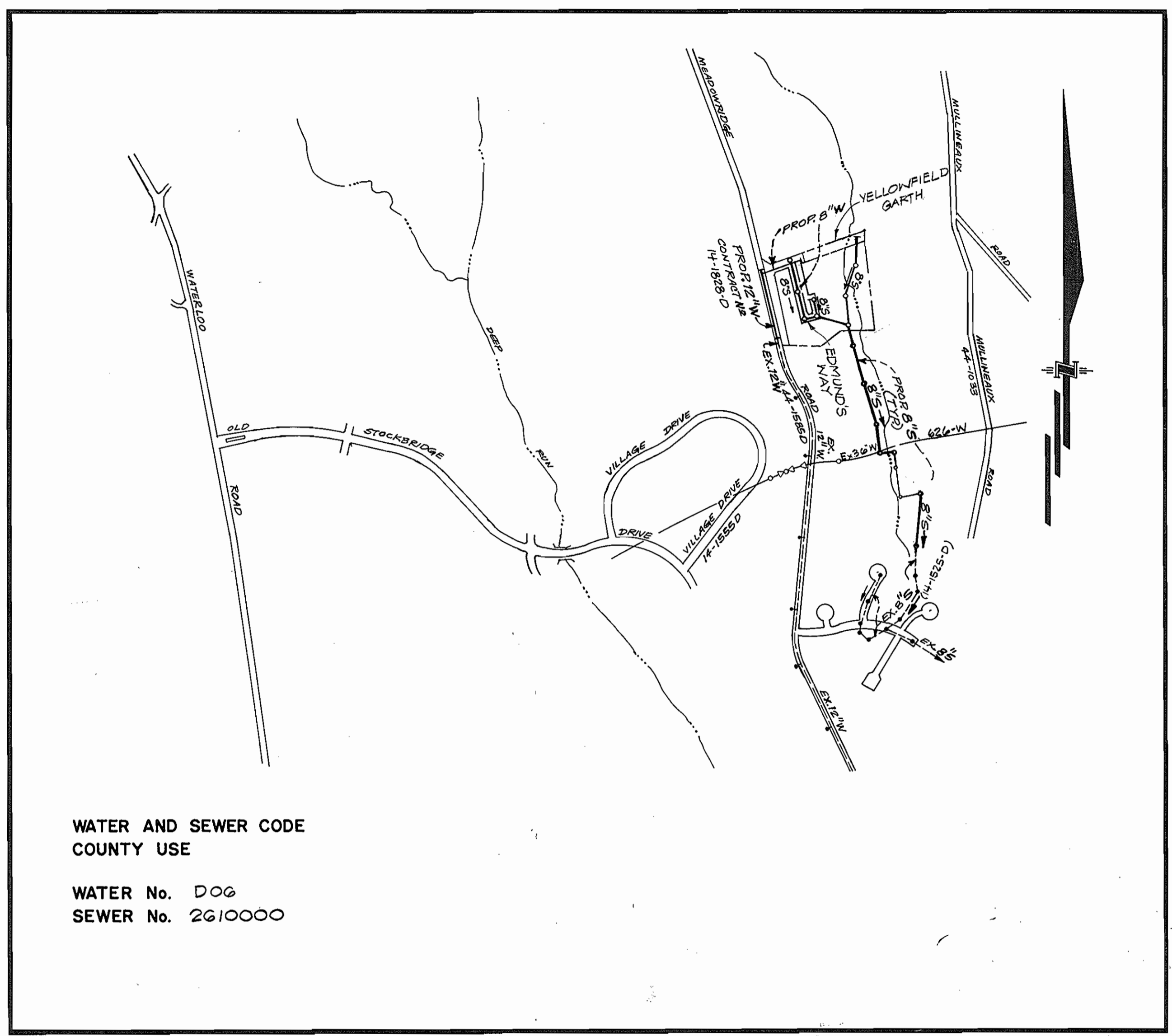
€ SAN.	SHC TABLE		
	LOTS	INVO B.	MIN. C.E.
MH113/114	1+29	1/2	253.37
"	0+89	2/4	251.99
"	0+49	5/6	250.61
Out of MH 115	0+00	7/8	248.85
Out of MH 111	0+00	9/10	244.19
MH110/111	1+12	11/12	243.61
"	0+72	13/14	242.81
"	0+32	15/16	242.01
MH101/112	0+18	17/18	242.02
"	0+58	19/20	243.85
Out of MH 112	0+00	21/22	244.99
MH112/113	0+31	23/24	245.42
"	0+71	25/26	246.06
"	1+11	27/28	246.70
"	1+51	29/30	247.34
Out of MH 113	0+00	31/32	248.33
MH113/114	0+41	33/34	249.78
"	0+81	35/36	251.16
"	1+21	37/38	252.54

TYPE OF BUILDING	TOWNHOUSE
NUMBER OF UNITS	38
NUMBER OF SHC's	38
NUMBER OF W.H.C.'s	38
DRAINAGE AREA	PATAPSCO

GENERAL NOTES

- Approximate locations 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.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on U.S.G.S. Datum.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. Any cost incurred by the contractor for tunneling or bracing at poles shall be included in unit prices bid for construction of the main.
- For details not shown on the drawings, use Howard County Standard Details.
- For materials and construction methods, use Howard County Standard Specifications & Howard County Design Manual, Volume IX. The Contractor shall have a copy of Volume IX on the job.
- Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of proposed utilities, at his own expense.
- Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans.

State Highway Administration	531-5533	Baltimore Gas & Electric Company	
"Miss Utility"	1-559-0100	Contractor Services	561-2585
Chesapeake & Potomac (C&P)		Underground Damage Control	234-5621
Telephone Company	725-9976	Trouble-shooting	298-9013
Colonial Pipeline Company	795-1390	Bureau of Utilities, Howard County	992-2366
- Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the contractor.
- Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in the unit price bid for construction of the main.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- All water mains to be D.I.P., Class 52 Only.
- Top of all water mains to have a minimum of 3'-1/2' cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- Block all fittings with concrete, unless noted otherwise.
- Bury line elevations on fire hydrants shall be set to the elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with standard details. Soil around the fire hydrant to be compacted in accordance with Sections 10.03 and 10.08 of the Standard Specifications.
- All water house connections shall be for an inside meter setting.
- The contractor shall not operate any water main valves on the existing system.
- For all Copper Water House Connections, utilize flared type fittings only.
- All sewer mains shall be C.S.P.X., V.C.P.X., R.C.S.P., P.V.C. or A.C.P.-Class 2400 unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter, unless otherwise noted.
- 12" and 16" manhole wall thicknesses shown on profiles pertain to brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frames and covers. (See Standard Detail G.5.52). Where watertight manhole frame and cover is used, set top of frame 1'-6" above finished grade. (See Standard Detail G.5.41).
- House(s) with the symbol "C.N.S." indicates that cellar cannot be served.
- Water main and water house connection lines must have a minimum of one foot separation from either sanitary sewer or sewer house connections as they cross. Except at crossings, water and sewer lines shall have a minimum horizontal separation of 10'.
- All D.I.P. Fittings shall be in accordance with A.W.W.A. Specification C-153 ductile iron compact fittings, 8-inch through 12-inch for water and other liquids.



VICINITY MAP
SCALE: 1" = 600'

CONTRACT NO. 14-1828-D

BRIGHTFIELD

**SECTION 3
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS**



Sediment Control Measures will be implemented in accordance with Article No. 15 of the Specifications & with Road Construction Plan F. 29-20; Drawings 4+5 of 6 Sediment & Erosion Control, and this plan.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.
James M. Helms, 4/3/89
SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED:
Stephen L. Hahn, 4/3/89
HOWARD S.C.D. DATE

ITEM	QUANTITIES			MATERIAL / SUPPLIER
	ESTIMATED	AS-BUILT		
8" W	909 L.F.	910 L.F.		ATLANTIC STATES PIPE
12" W	460 L.F.	466 L.F.		"
8" S	2618 L.F.	2367 L.F.		J-M. MANUFACTURING CO.
8" D.I.P.	682 L.F.	263 L.F.		ATLANTIC STATES PIPE
4" Dia. MH	15 EA.	14 EA.		ATLANTIC CONCRETE PRODUCTS
F.H.	3 EA.	3 EA.		MUELLER CO.
8" V.	4 EA.	4 EA.		"
3/4" W.H.C.	380 L.F.	625 L.F.		CAMBRIDGE LEE
4" S.H.C.	542 L.F.	814 L.F.		J-M. MANUFACTURING CO.
1" W.H.C.	430 L.F.	409 L.F.		CAMBRIDGE LEE
12" V.	1 EA.	1 EA.		MUELLER CO.
6" V.		3 EA.		"
6" W.		67 L.F.		ATLANTIC STATES PIPE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
James M. Helms, 4-5-89
DIRECTOR OF PUBLIC WORKS DATE
Robert W. Berman, 3-30-89
CHIEF, BUREAU OF UTILITIES DATE
Michael J. Brown, 4-14-89
CHIEF, LAND DEVELOPMENT DIV. DATE

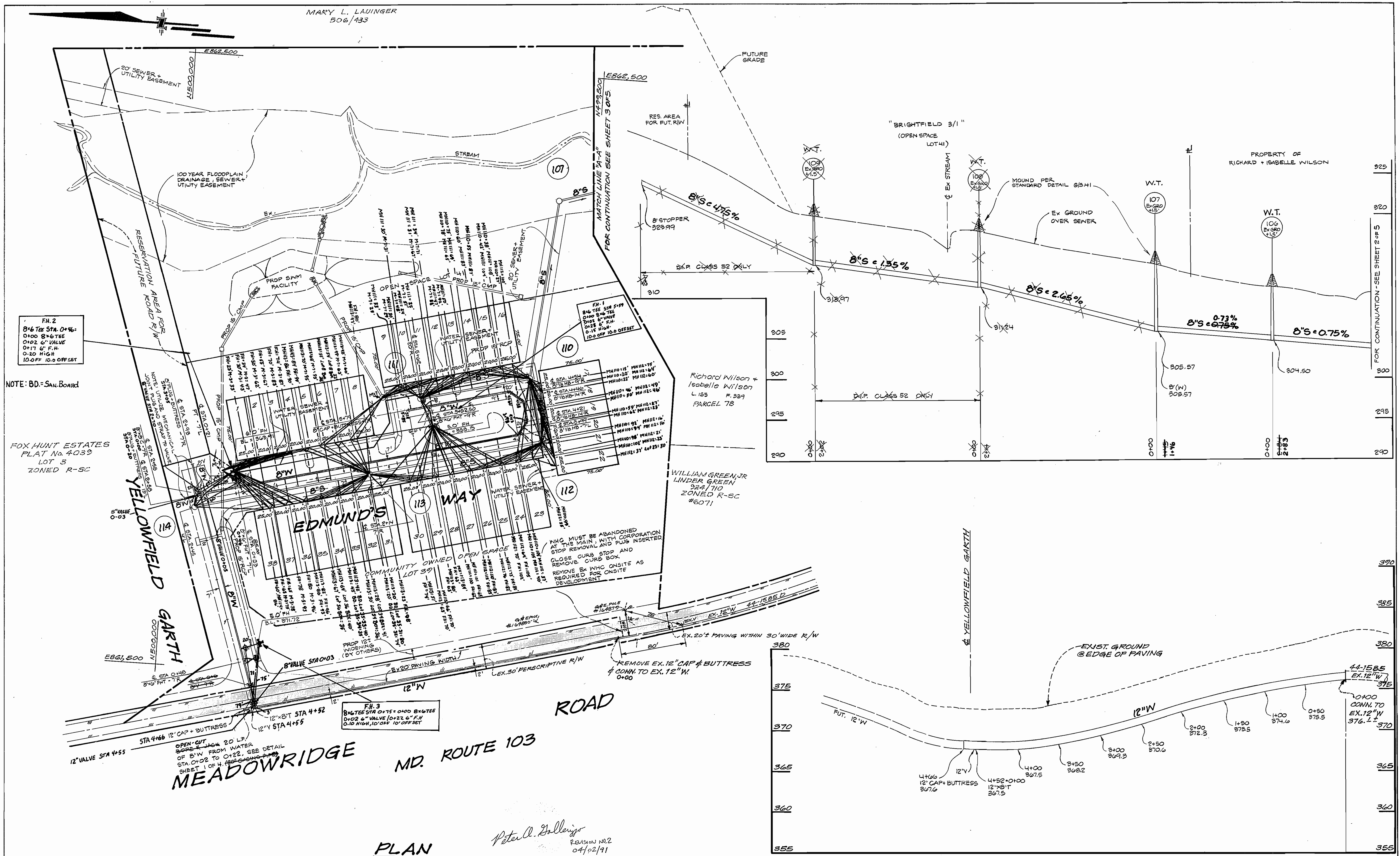
GW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE - SUITE 200 - BURTONTVILLE OFFICE PARK
BURTONTVILLE, MD. 20886
(301) 421-4024



DES: G.P.M.				
DRN: R.R.S.				
CHK: G.R.G.				
DATE: JULY 1988	EJS	REVIS ALIGNMENT MH 101 TO MH 102, QUANTITIES	12-19-90	
	BY	NO.	REVISION	DATE

TITLE SHEET
600' SCALE MAP NO. 37 BLOCK NO. 9

BRIGHTFIELD
SECTION 3
LOTS 1 THRU 4
1st ELECTION DISTRICT
CONTRACT NO. 14-1828-D
SCALE AS SHOWN
SHEET 1 OF 5



FN. 2
8" x 6" TEE STA. 0+46 =
0+00 8" x 6" TEE
0+02 6" VALVE
0+17 6" F.H.
0+20 HIGH
10.0 OFF 10.0 OFFSET

NOTE: BD = SAN. BOARD

FOX HUNT ESTATES
PLAT No. 4039
LOT 3
ZONED R-5C

YELLOWFIELD
GARTH

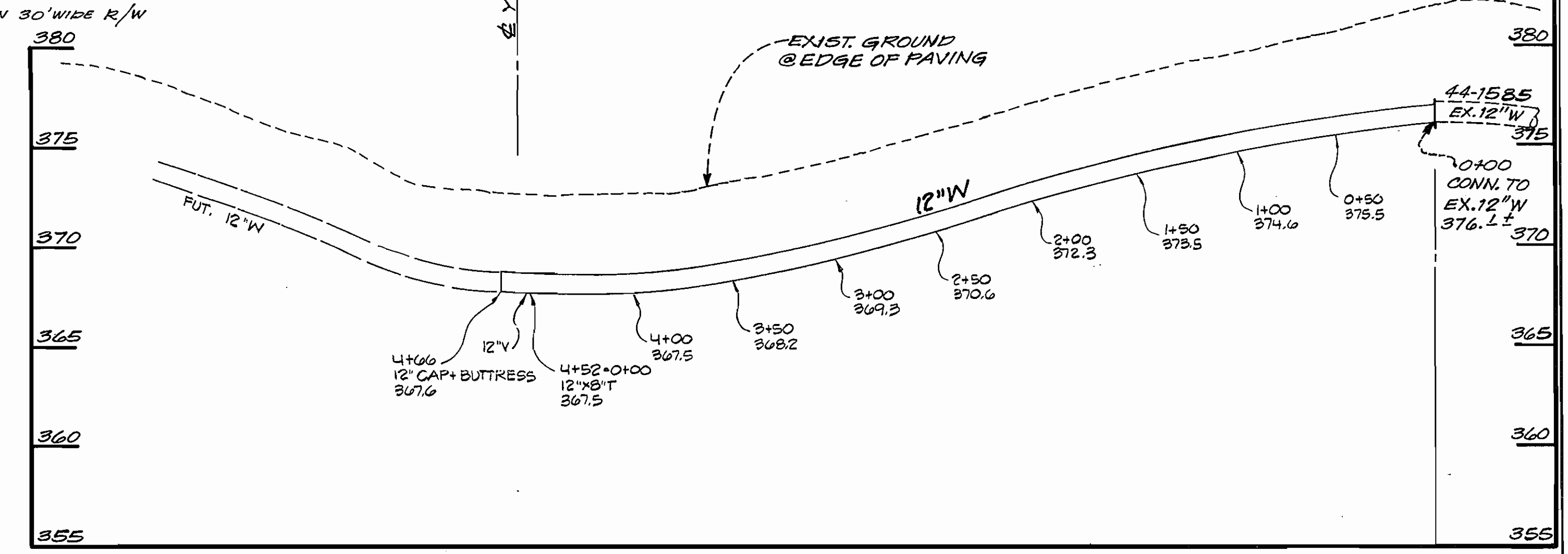
EDMUND'S WAY

ROAD

MEADOWRIDGE
MD. ROUTE 103

PLAN
SCALE: 1" = 50'

Peter L. Gallavio
REVISION NO. 2
04/02/91



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 4/5/89
DATE: 3-30-89

GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MD. 20866
(301) 421-4024

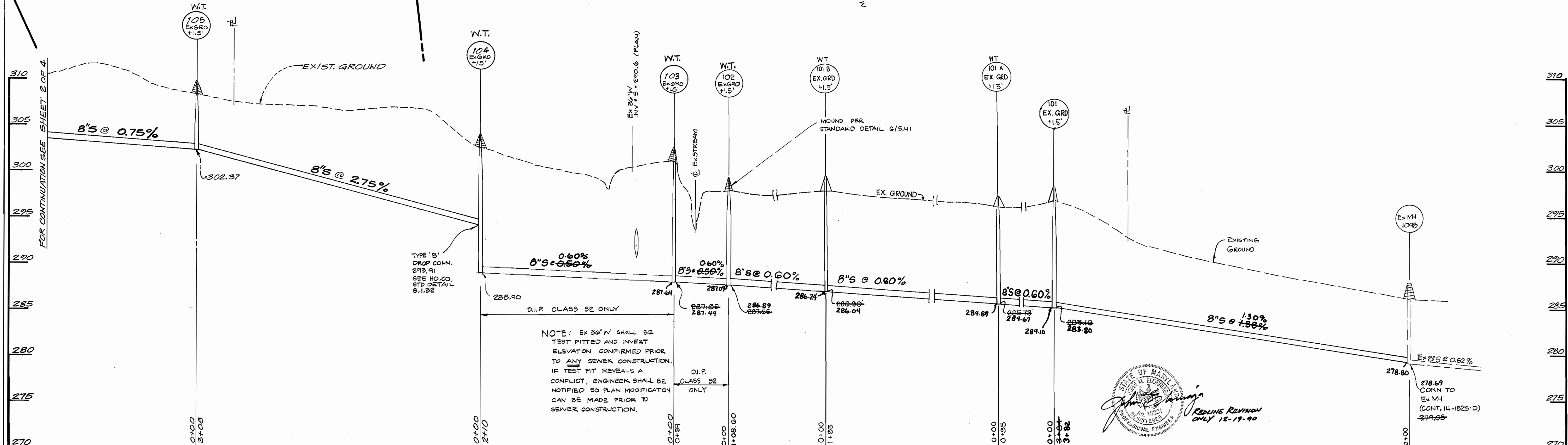
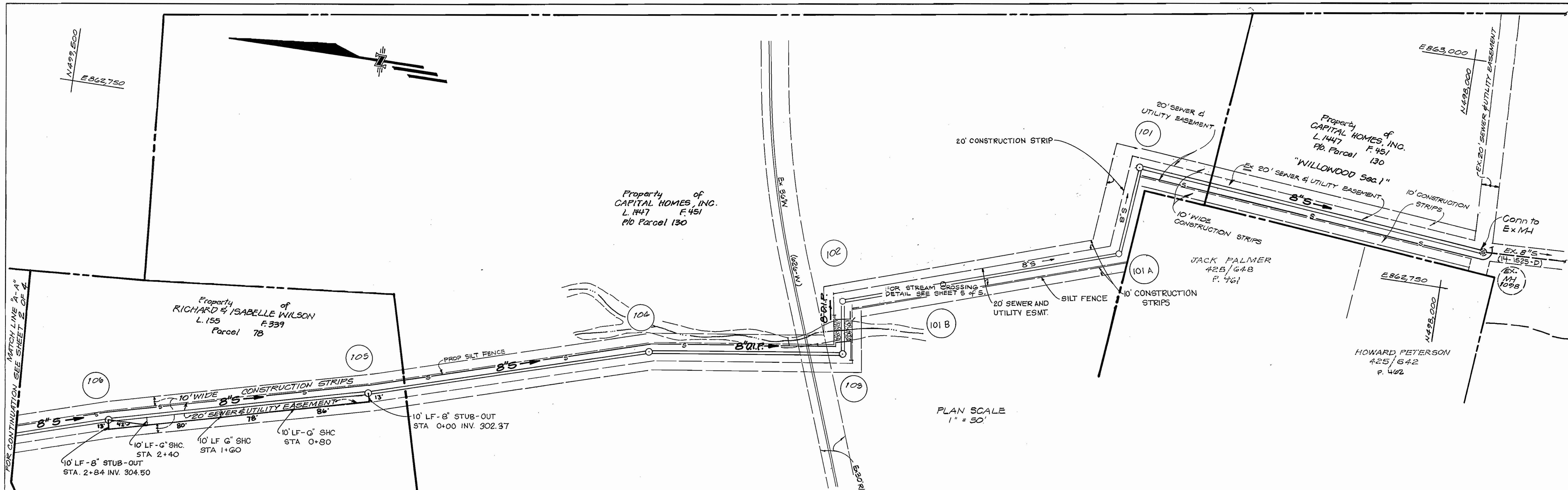


DES: GPM			
DRN: R.R.S.			
CHK: C.K.G.	IP 2	DELETE 8" S UP STREAM OF MH 107	4-2-91
DATE: JULY 1988	GM 1	LABEL M/S 102, 105 + 106 AS W.T.	724 89
	BY NO.	REVISION	DATE

WATER & SEWER MAINS
PLAN & PROFILES
600' SCALE MAP NO. 37 BLOCK NO. 9

BRIGHTFIELD
SECTION 3
LOTS 1 THRU 4
CONTRACT NO. 14-1828-D
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 5



PLAN SCALE 1" = 50'

PROFILE SCALE Hor. 1" = 50' Vert. 1" = 5'

NOTE: EX 30' W SHALL BE TEST PITTED AND INVERT ELEVATION CONFIRMED PRIOR TO ANY SEWER CONSTRUCTION. IF TEST PIT REVEALS A CONFLICT, ENGINEER SHALL BE NOTIFIED SO PLAN MODIFICATION CAN BE MADE PRIOR TO SEWER CONSTRUCTION.

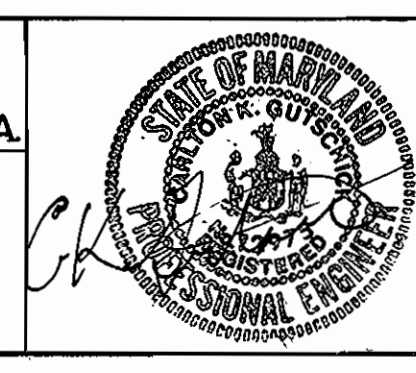
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. ...
DIRECTOR OF PUBLIC WORKS

...
CHIEF, BUREAU OF UTILITIES

GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
BURTONSVILLE, MD. 20886
ES011 421-4024



DES: GPM			
DRN: R.R.S.			
CHK: C.K.G.	EJS	REVISE ALIGNMENT MH 101 TO MH 102, QUANTITIES 12-17-90	
DATE: JULY 1988	GM	LABEL MH'S 102, 105 & 106 AS W.T.	7-24-88
	BY NO.	REVISION	DATE

OUTFALL SEWER
PLAN & PROFILE

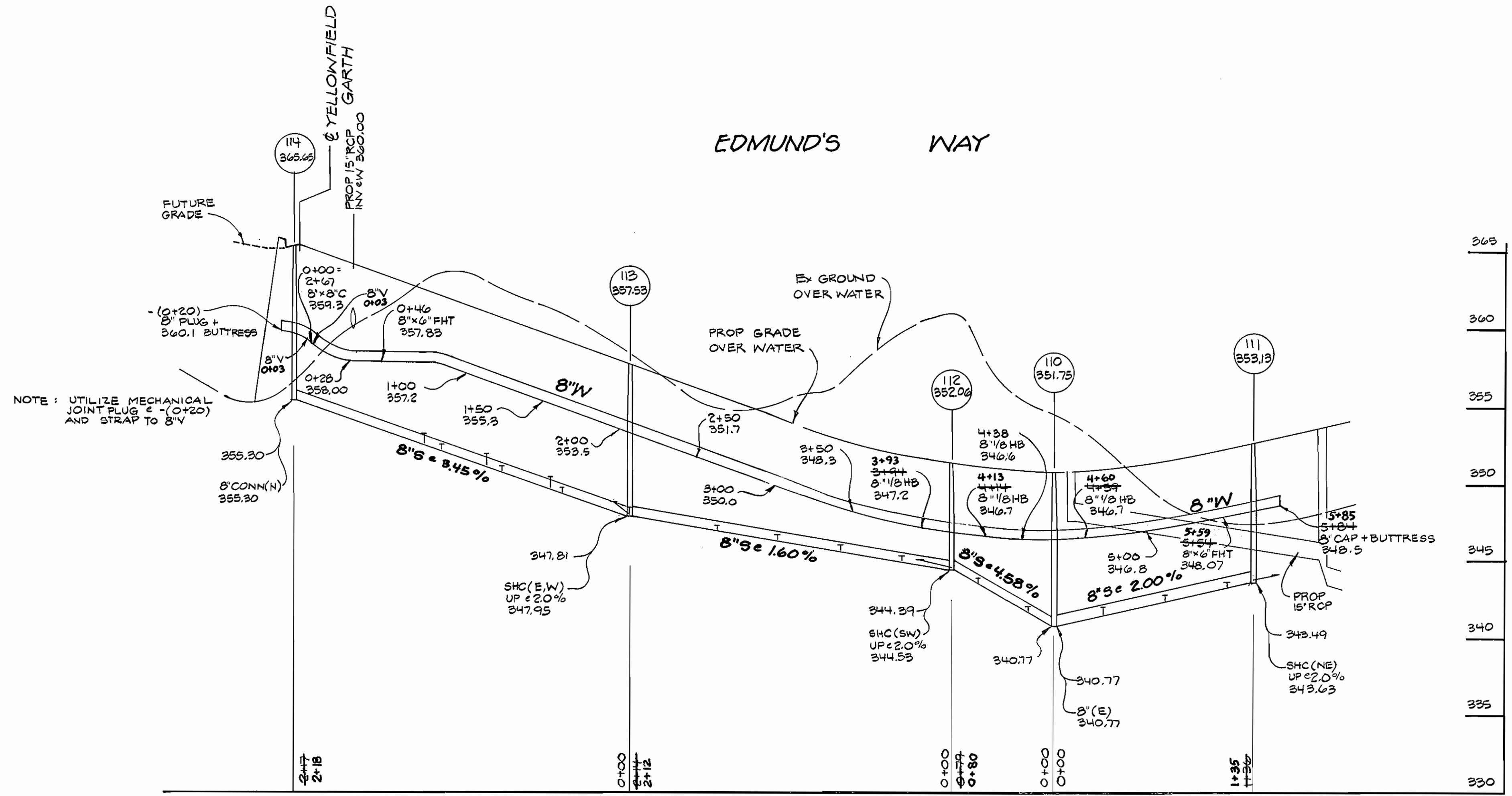
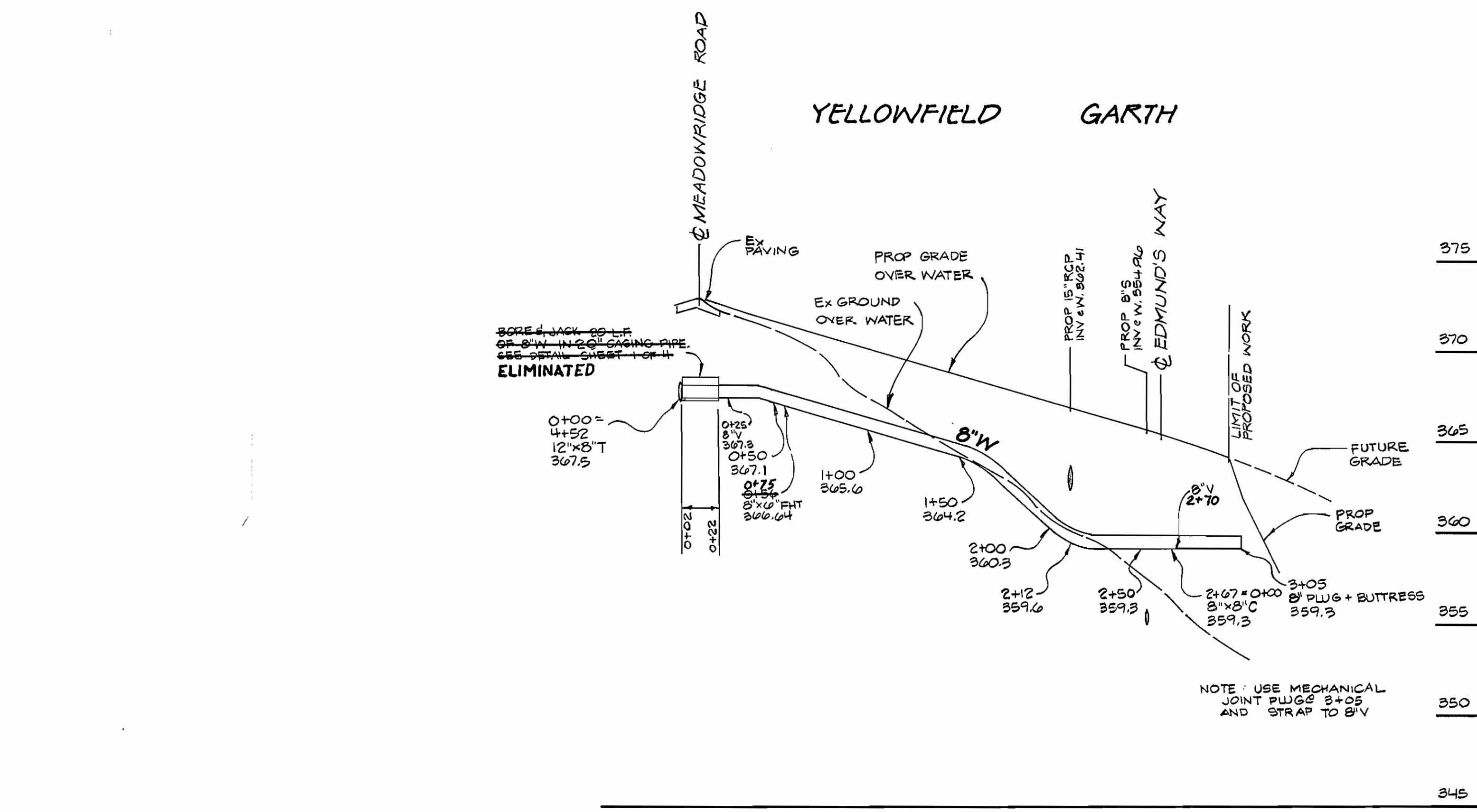
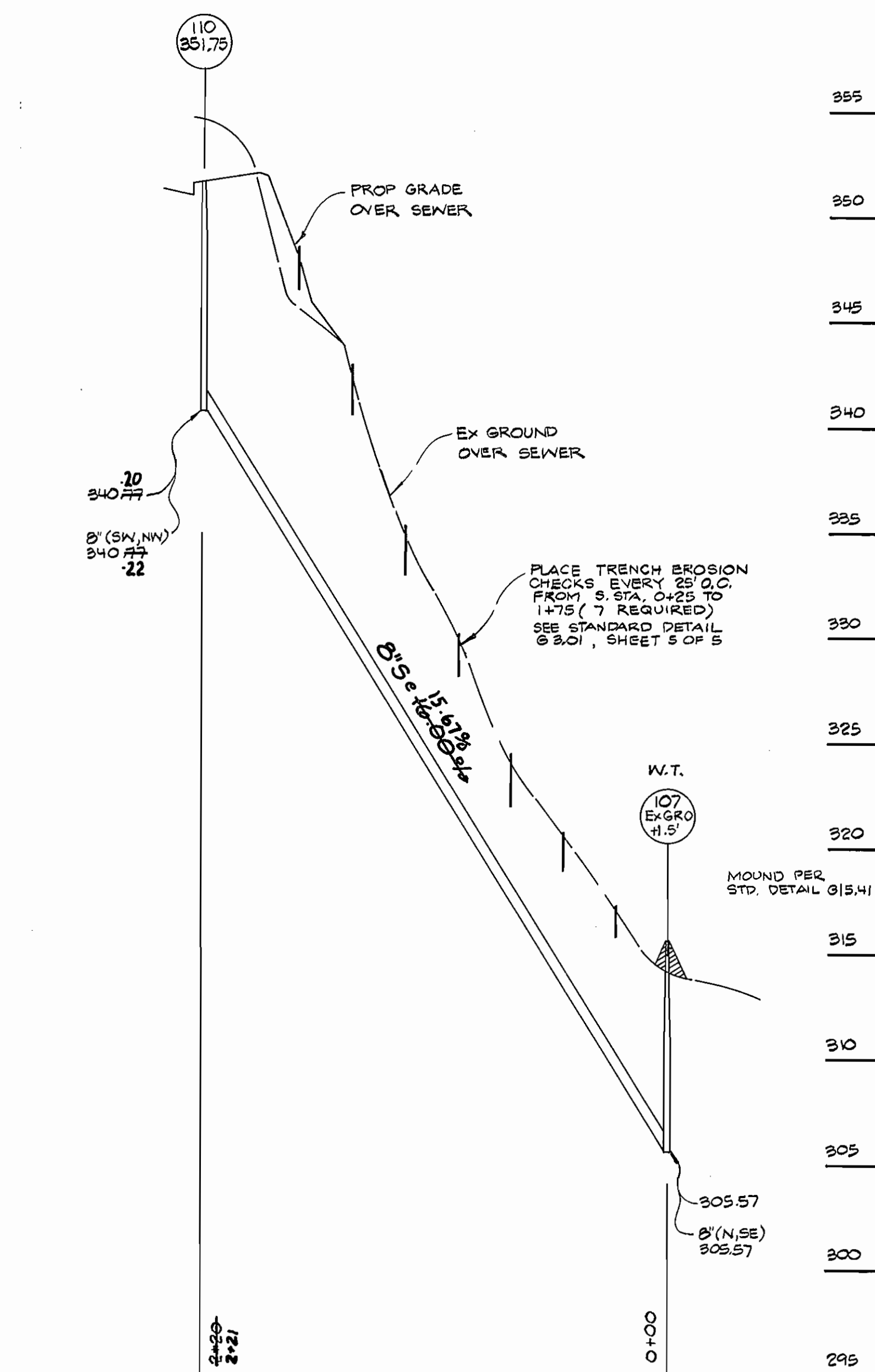
600' SCALE MAP NO. 37 BLOCK NO. 9

BRIGHTFIELD
SECTION 3
LOTS 1 THRU 41
CONTRACT NO. 14-1828-D
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 5

AS-BUILT 3-18-91



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

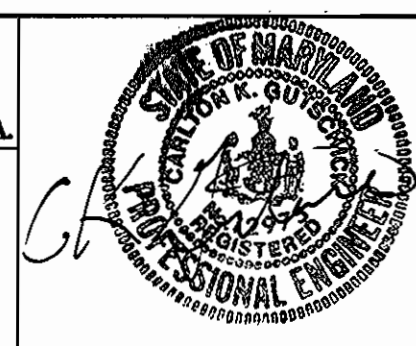
James H. ... 4/5/89
DIRECTOR OF PUBLIC WORKS DATE

... 4/16/89
CHIEF, BUREAU OF ENGINEERING DATE

... 7-30-89
CHIEF, BUREAU OF UTILITIES DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3909 NATIONAL DRIVE, SUITE 230 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MD. 20866
1301 421-4024



DES: GPM			
DRN: R.R.S.			
CHK: C.K.G.			
DATE: JULY 1988	BY	NO.	REVISION

WATER & SEWER MAINS
PROFILES & DETAILS

600' SCALE MAP NO. 37 BLOCK NO. 9

BRIGHTFIELD SECTION 3
LOTS 1 THRU 4
CONTRACT NO. 14-1828-D
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 5

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, unless 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 November 15, seed with 2-1/2 bushel per acre of annual ryegrass (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 feet 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.

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, unless previously loosened.

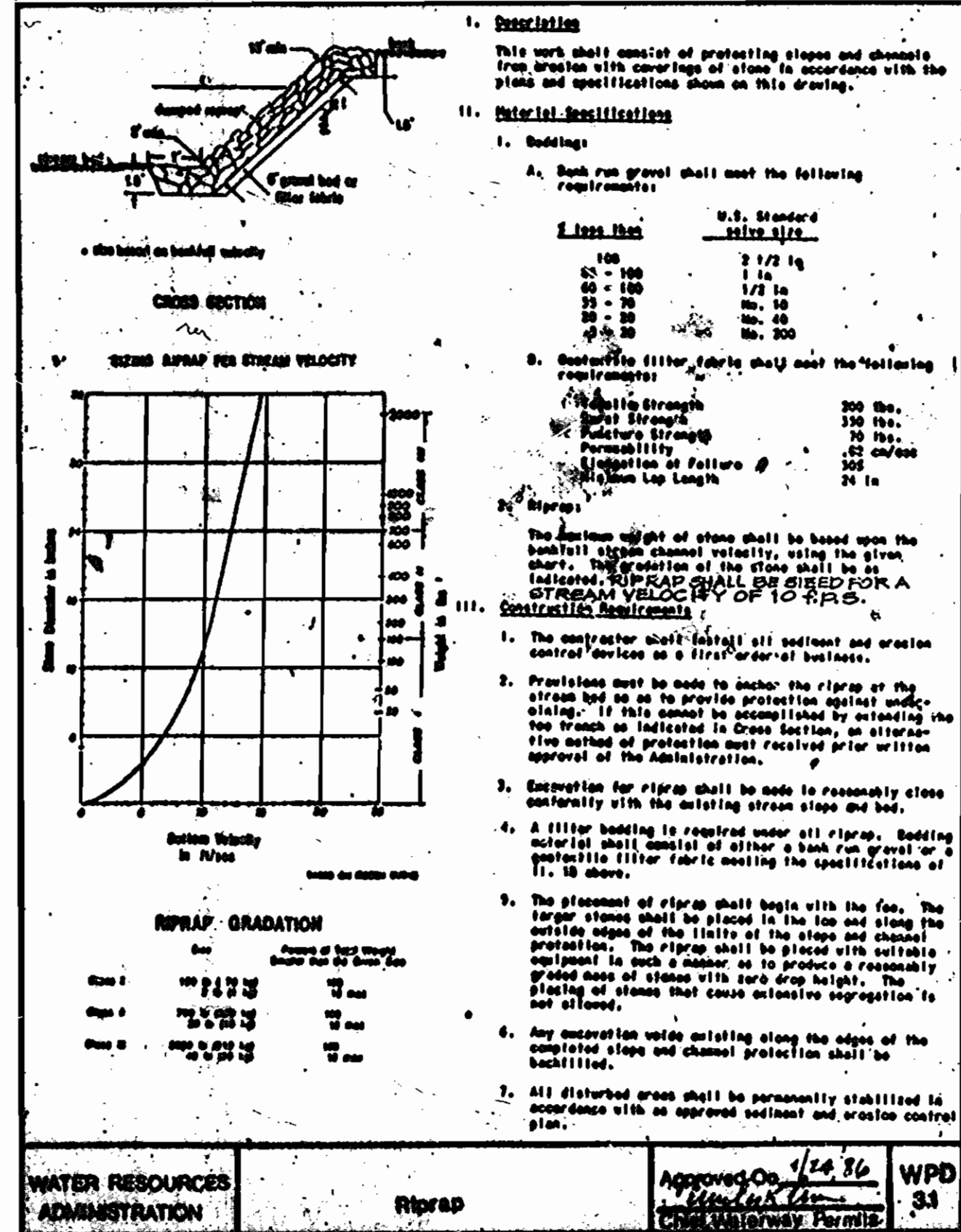
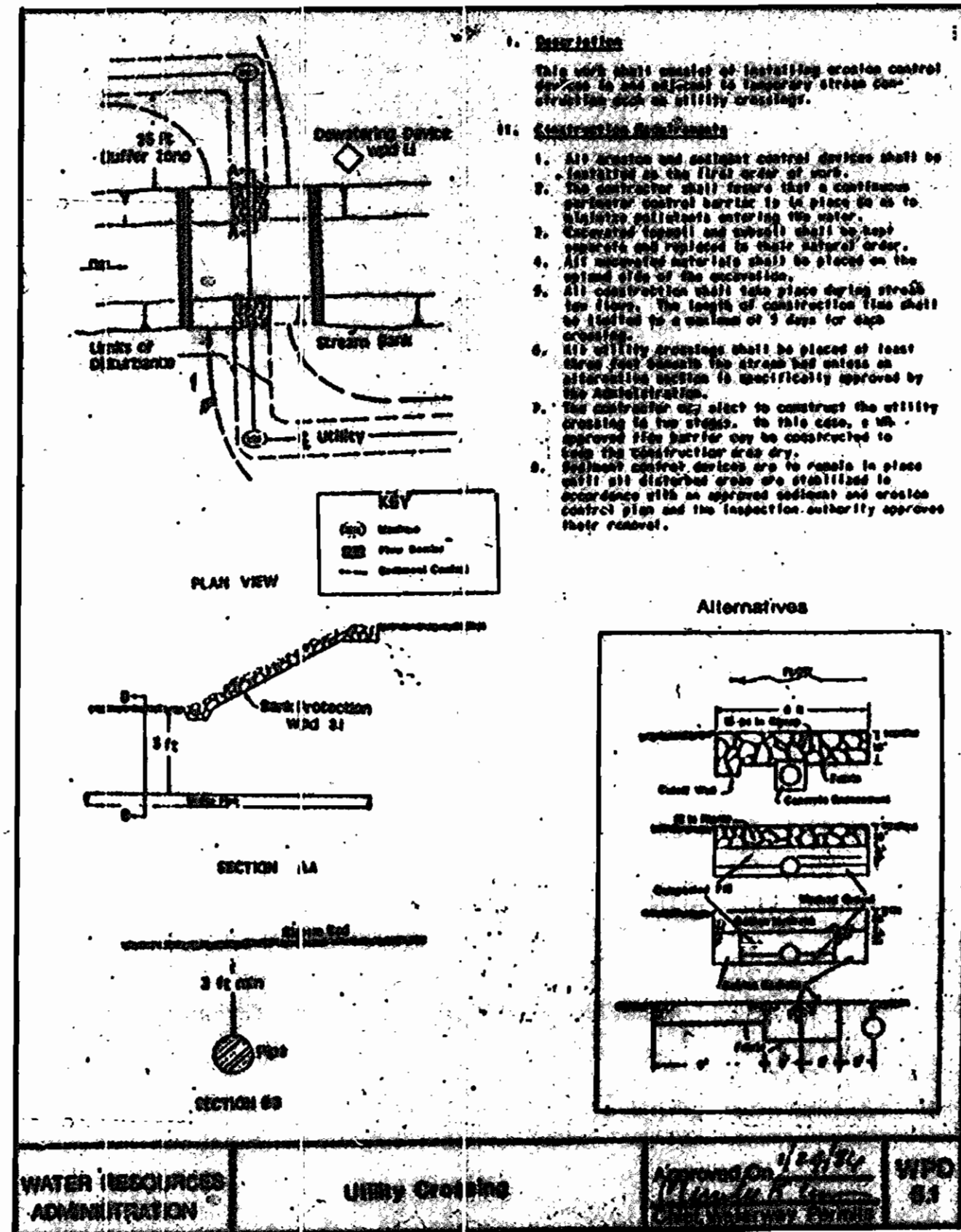
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc 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 disc 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.

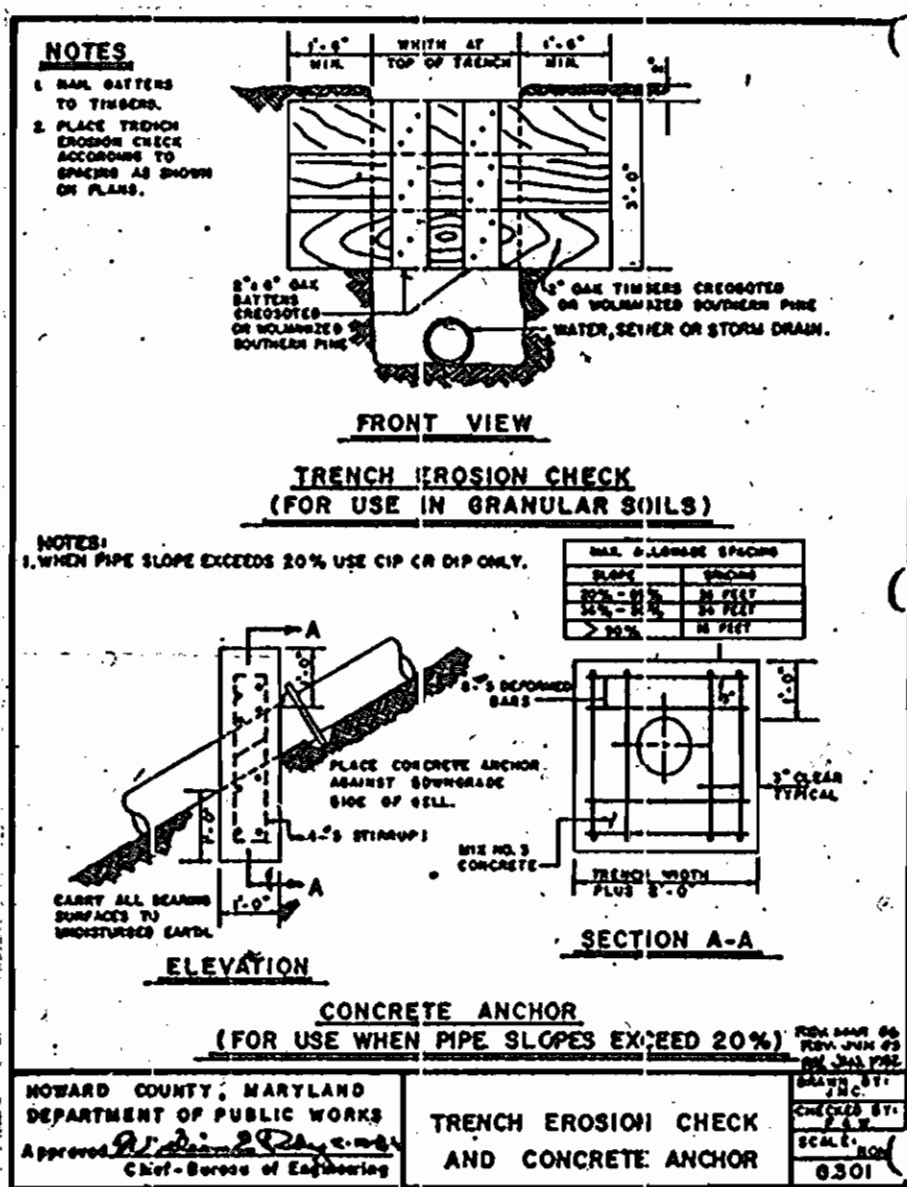
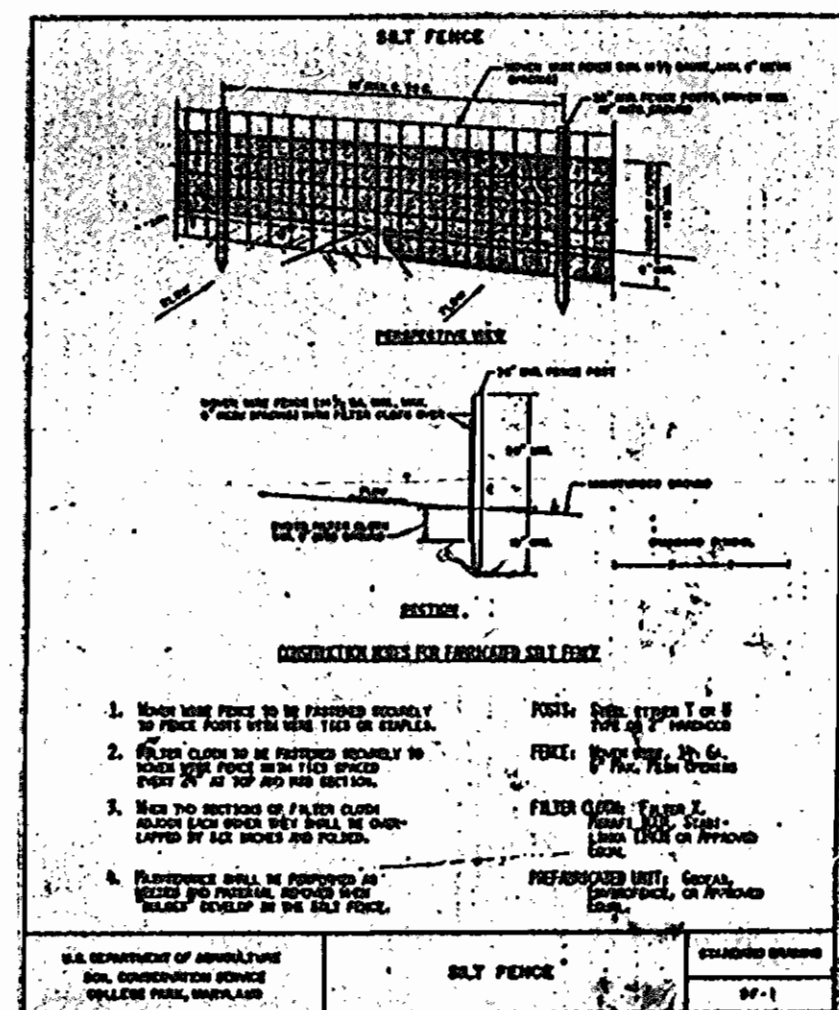
Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance - Inspect all seeded areas and make needed repairs, replacements and reseeding.



SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within a 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, 14 days as to all other disturbed or graded areas on the project site.
4. 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.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (Sec 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates do not allow for proper germination and establishment of grasses.
6. All sediment-control structures are to remain in place and are to be maintained in operating condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:
 Total Area of Site: 10.7 Acres
 Area Disturbed: 6.0 Acres
 Area to be roofed or paved: 1.7 Acres
 Area to be vegetatively stabilized: 4.3 Acres
 Total Fill: 24,500 Cu. Yds.
 Offsite waste/borrow area location: N/A
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
10. 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.
11. If houses are to be constructed on an "As-Built" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
12. All pipes to be blocked at the end of each day (see detail below).
13. The total amount of straw bale dikes/silt fences equals 1,480 L.F.



SEQUENCE OF CONSTRUCTION FOR OUTFALL SEWER (Ex. MH 1098 to MH 10+211') (MH 108 to MH 111)

1. Install sediment control measures as required for outfall sewer construction.
2. Install outfall sewer.
3. Stabilize areas disturbed by outfall sewer per stabilization details, sheet 3 of 5.
4. Remove sediment control measures with approval of sediment control inspector.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Williams, Director of Public Works
 Robert M. Perry, Chief, Bureau of Utilities
 Kenneth J. Kelly, Chief, Bureau of Engineering
 Charles E. Jones, Chief, Land Development Div.

G&W GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3908 NATIONAL DRIVE - SUITE 250 - BERTHOVILLE OFFICE PARK
BERTHOVILLE, MD 21034
(301) 421-4024



DES: GPM				
DRN: GPM				
CHK: CKG				
DATE: AUG 1988	BY	NO.	REVISION	DATE

**SEWER OUTFALL
DETAILS**

600' SCALE MAP NO. 37 BLOCK NO. 9

BRIGHTFIELD
Section 8
Lots 1-41
Contract # H-1828-D
1st Election District
Howard County, Maryland

SCALE AS SHOWN
SHEET 5 OF 5