

ITEM	ESTIMATE	AS BUILT	TYPE MATERIAL	SUPPLIER
6" SEWER	861 L.F.			
MANHOLES	4 E.A.			
MANHOLES OVER 6.5' DEPTH	36 Y.E.			
6" SEWER	273 L.F.			
6" X 6" WYES, TEES, ETC.	1 E.A.			
8" TYPE 'B' DROP CONN.	1 E.A.			

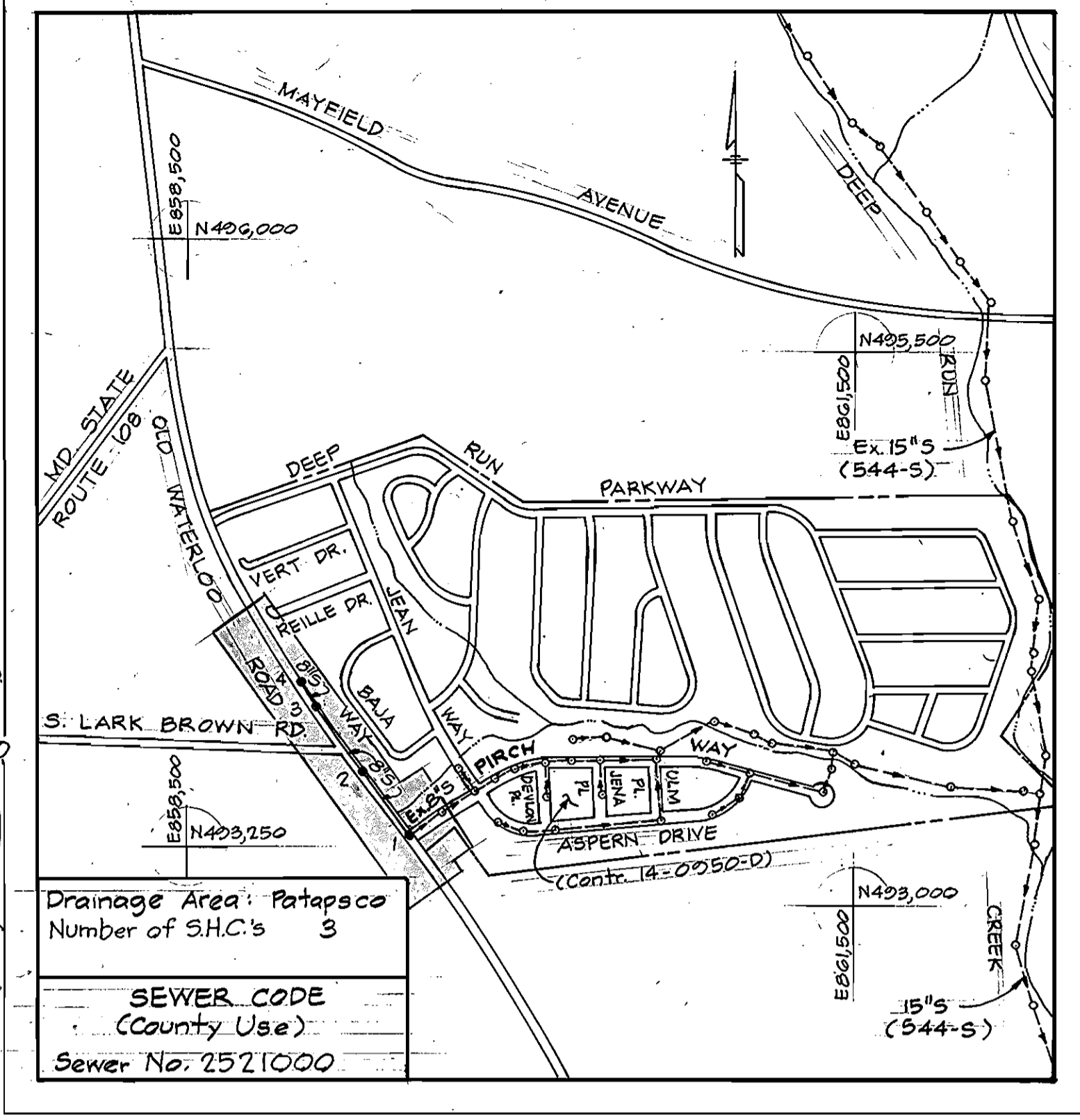
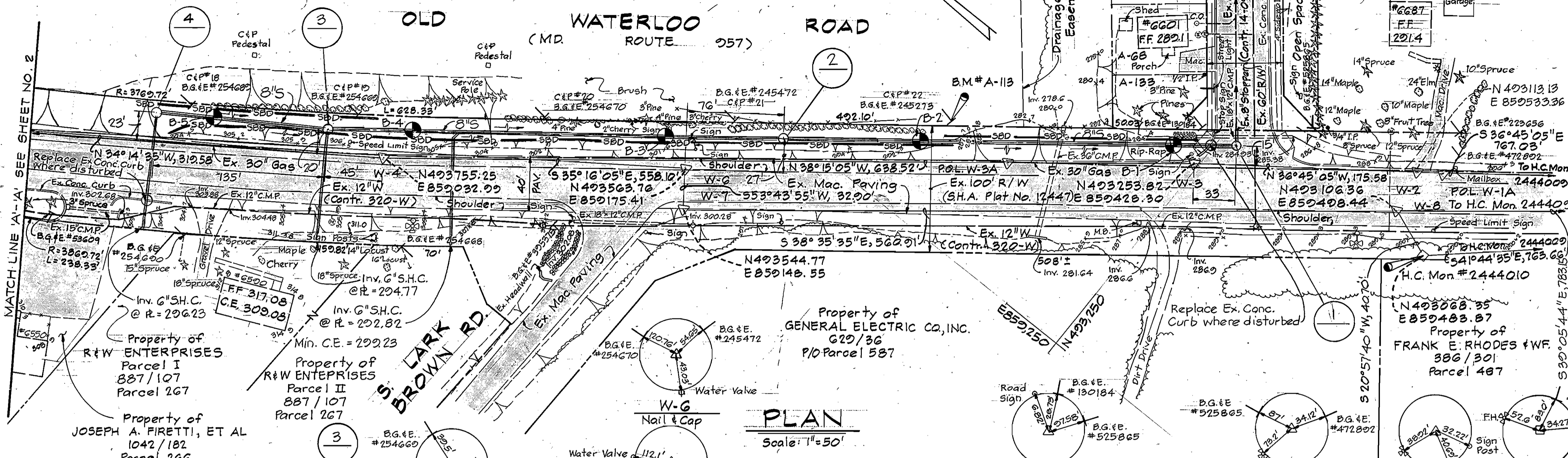
NOTE: Contractor shall take all necessary precautions to avoid interfering with overhead lines in the vicinity of the Project.

VILLAGE OF DEEP RUN SECTION I, AREA I LOTS A-66 TO A-134 PLATS 4006 & 4007

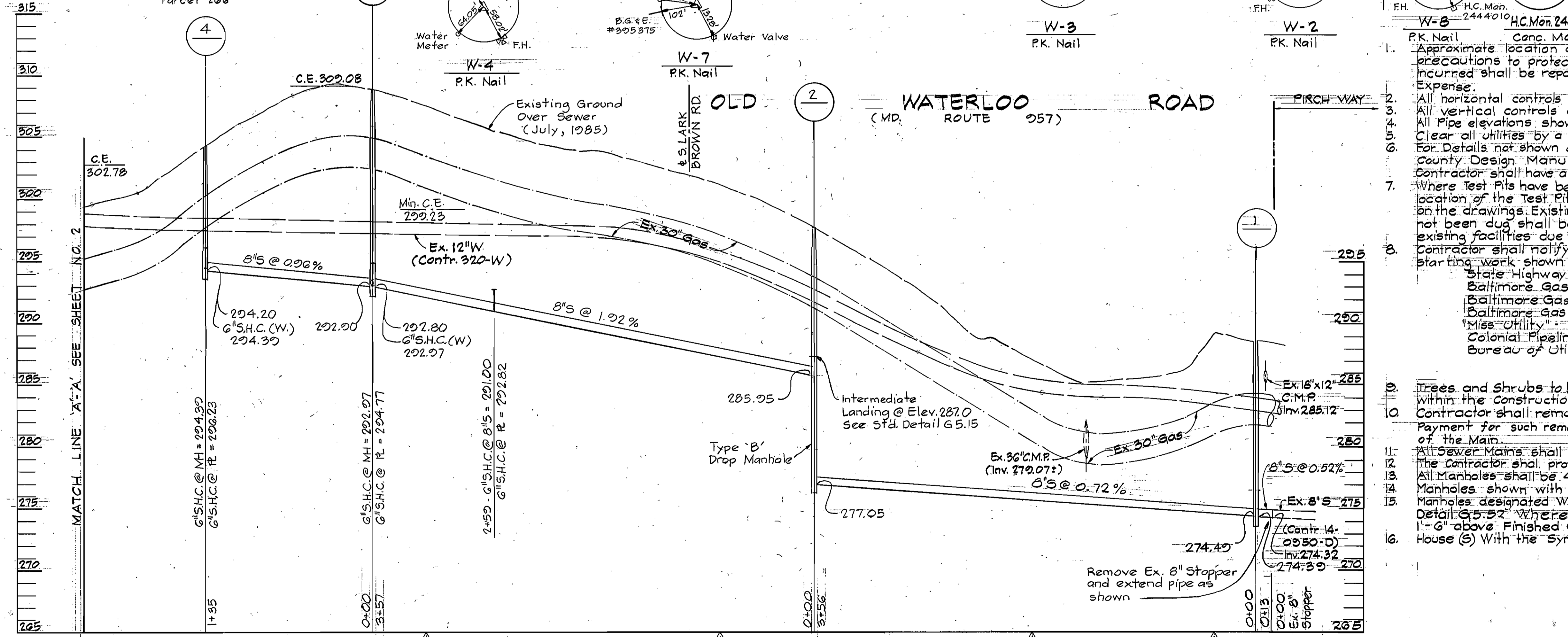
DEEP RUN PARK PARCEL 'B' PLAT 4649

Property of JOHN T. MICHAEL & WIFE 256/403 Parcel 163

20' Drainage & Utility Easement



Drainage Area: Patapsco Number of S.H.C.'s 3
SEWER CODE (County Use)
Sewer No. 2521000



GENERAL NOTES

- 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.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on U.S.G.S data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 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. The Contractor shall have a copy of Volume IV on the job.
- Where Test Pits have been made on existing utilities, they are noted by the symbol \blacksquare 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 verified by the contractor to his own satisfaction. Any damage to existing facilities due to the Contractor's negligence shall be repaired at the Contractor's expense.
- Contractor shall notify the following Utilities or Agencies at least five working days before starting work shown on these Plans:
 - State Highway Administration - 531-5533
 - Baltimore Gas & Electric Company - Contractor Services - 561-2585
 - Baltimore Gas & Electric Company - Underground Damage Control - 234-5621
 - Baltimore Gas & Electric Company - Trouble Shooting - 298-9013
 - Miss Utility - 1-550-0100
 - Colonial Pipeline Company - 705-1300
 - Bureau of Utilities Howard County Department of Public Works - 992-2366
- Trees and Shrubs to be Protected from Damage to Maximum Extent. Trees and Shrubs within the Construction Strip are not to be removed or Damaged by the Contractor. 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 the Construction of the Main.
- All Sewer Mains shall be C.S.P.V.C.P.V.C.P.V.C. Class 2400 or P.V.C. 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.
- Manholes shown with 12" and 16" Walls are Brick Manholes Only.
- Manholes designated W.T. in Plan and Profile shall have Watertight Frame and Covers, Standard Detail G-5.2. Where Watertight Manhole Frame and Cover is used, set top of Frame 1'-6" above Finished Grade unless otherwise noted on the drawing.
- House (S) with the symbol "C.N.S." indicates that Cellar cannot be served.

BENCH MARKS

B.M. #A-113 ELEV. 290.19
60 Penny Nail in B.G. & E. Pole #245273 (C&P #22) E. side of Old Waterloo Road, 300'± S. of S. Lark Brown Road.

B.M. H.C. MON. 2444010 ELEV. 290.41
Concrete Monument 02' below surface W. side of Old Waterloo Road, 150'± S. of Birch Way.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *John F. Neill* 2-5-86
Chief, Bureau of Engineering: *Richard E. Reilly* 1-21-86
Chief, Bureau of Utilities: *Ralph S. ...* 1-23-86

KIDDE CONSULTANTS, INC.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

DES: T.E.S.			
DRN: T.E.S.			
CHK: W.B.H.			
DATE: 10/18/85	BY	NO.	REVISION

PLAN AND PROFILE OF SEWER MAIN

600' SCALE MAP NO. S-37 BLOCK NO. 21

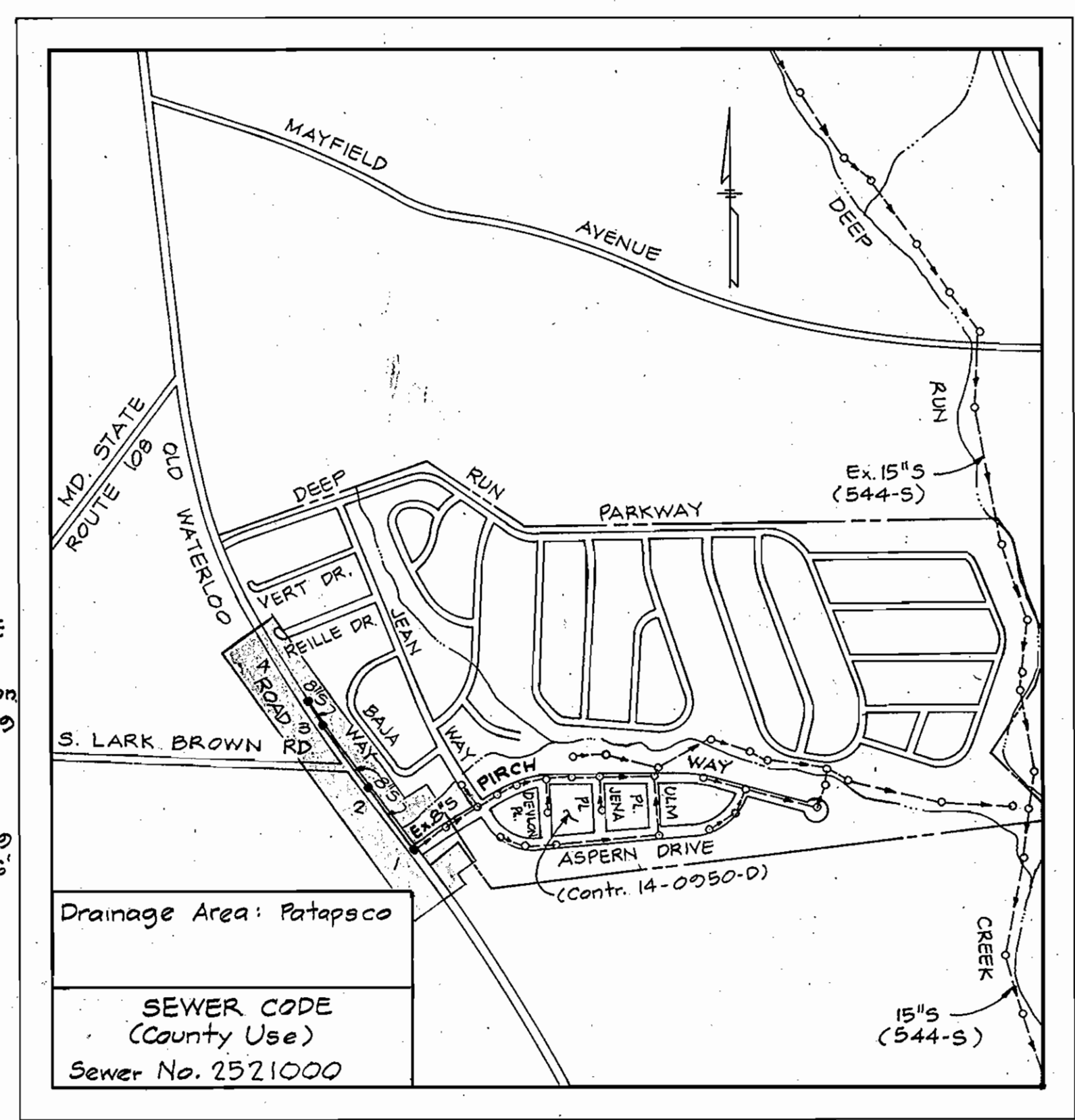
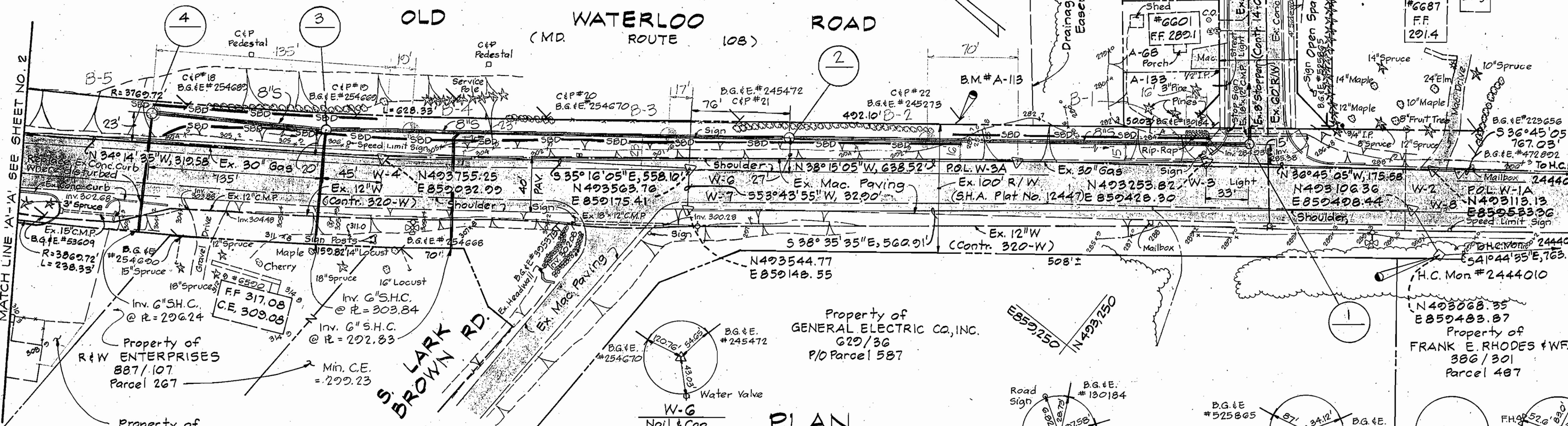
OLD WATERLOO ROAD SEWER EXTENSION
CAPITAL PROJECT S-6685
CONTRACT NO. 10-1413
ELECTION DISTRICT ELKRIDGE NO. 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 2

ITEM	ESTIMATE	AS BUILT	TYPE MATERIAL	SUPPLIER
8" SEWER	848 L.F.			
MANHOLES	4 E.A.			
MANHOLES UP TO 6.5' DEPTH	26 V.F.			
MANHOLES OVER 6.5' DEPTH	38 V.F.			
6" SEWER	273 L.F.			
8" X 6" WYES, TEES, ETC.	1 E.A.			
8" TYPE 'B' DROP CONN.	1 E.A.			

NOTE: Contractor shall take all necessary precautions to avoid interfering with overhead lines in the vicinity of the Project.

VILLAGE OF DEEP RUN SECTION I, AREA I LOTS A-66 To A-134 PLATS 4906 & 4907



PLAN Scale: 1"=50'

VICINITY MAP Scale: 1"=600'

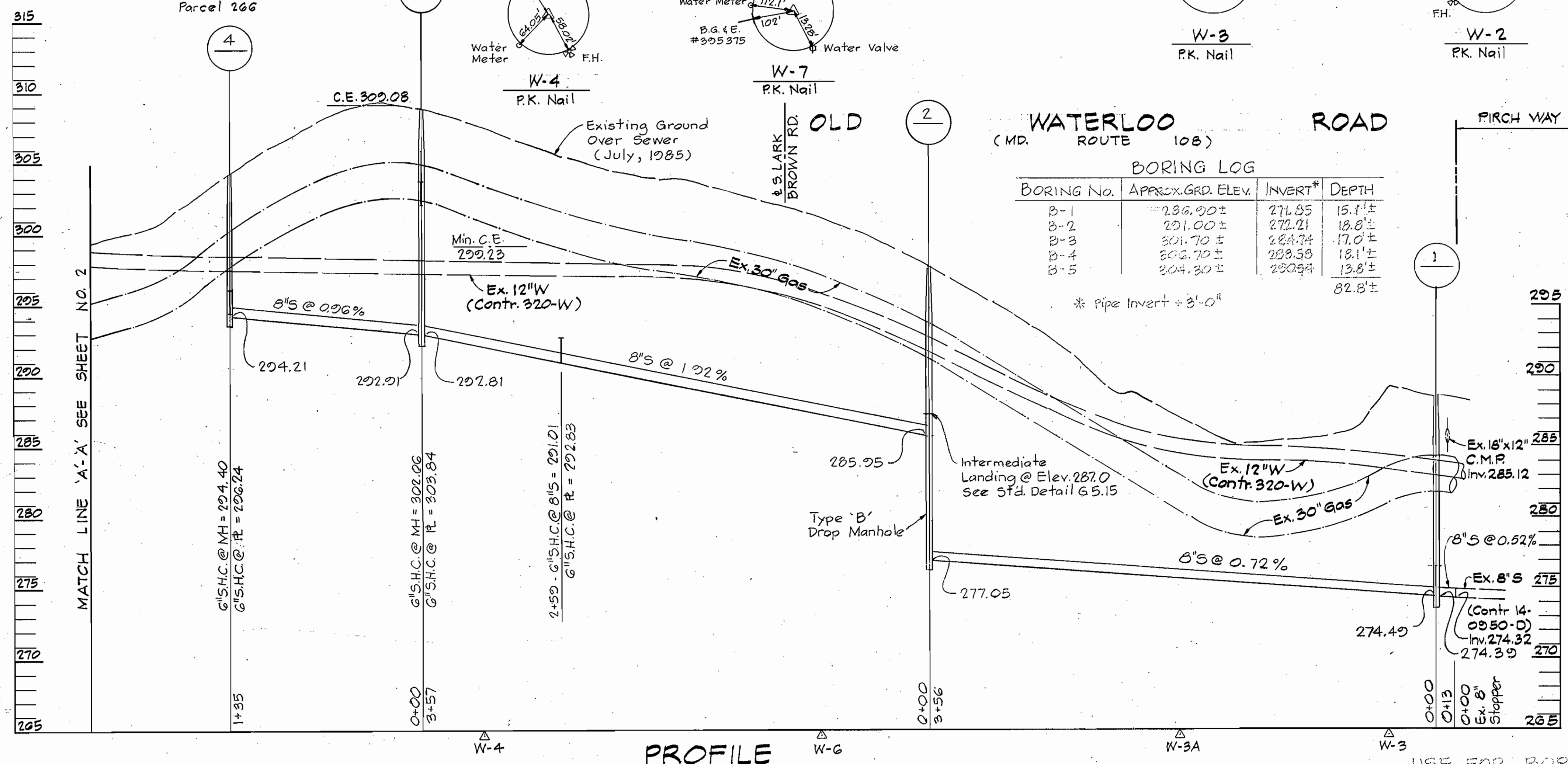
GENERAL NOTES

1. Approximate location of existing mains and services 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 6".
6. For details not shown on the Drawings, and for materials and construction methods, use Howard County Design Manual, Volume IX, Standard Specifications and Details for Construction. The Contractor shall have a copy of Volume IX on the job.
7. Where Test Pits have been made on existing utilities, they are noted by the symbol \square 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 verified by the contractor to his own satisfaction. Any damage to existing facilities due to the Contractor's negligence shall be repaired at the Contractor's expense.
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10. Contractor shall remove Trees, Stumps and Roots along the line of Excavation. Payment for such removal shall be included in the Unit Price.
11. Bid for the Construction of the Main.
12. All Sewer Mains shall be C.S.P.X, R.C.S.P.V.C.P.X, A.C.P. Class 2400 or P.V.C. unless otherwise noted.
13. The Contractor shall provide a joint in all Sewer Mains within 2'-0" of Exterior Manhole Wall.
14. All Manholes shall be 4'-0" Inside Diameter unless otherwise noted.
15. Manholes shown with 12" and 16" Walls are Brick Manholes Only.
16. Manholes designated W.T. in Plan and Profile shall have Watertight Frame and Covers, Standard Detail G.5.52. Where Watertight Manhole Frame and Cover is used, set top of Frame 1'-6" above Finished Grade unless otherwise noted on the drawing.
17. House (S) With the Symbol "C.N.S." indicates that Cellar cannot be served.

BORING LOG

BORING No.	APPROX. GRD. ELEV.	INVERT*	DEPTH
B-1	286.90 ±	271.55	15.1 ±
B-2	291.00 ±	272.21	18.8 ±
B-3	301.70 ±	284.74	17.0 ±
B-4	306.70 ±	283.38	18.1 ±
B-5	304.30 ±	280.54	19.8 ±

* Pipe Invert +3'-0"



PROFILE Scale: Hor. 1"=50' Vert. 1"=5'

BENCH MARKS

- B.M.#A-113 ELEV. 290.10
60 Penny Nail in B.G. & E. Pole #245273 (C&P #22) E. side of Old Waterloo Road, 300'± S. of S. Lark Brown Road.
- B.M. H.C. MON. 2444010 ELEV. 290.41
Concrete Monument 0.2' below surface W. side of Old Waterloo Road, 150'± S. of Birch Way.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____

CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, BUREAU OF UTILITIES _____ DATE _____

CHIEF, UTILITY DIVISION _____ DATE _____

KIDDE CONSULTANTS, INC.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

DES: T.E.S. _____

DRN: T.E.S. _____

CHK: W.B.H. _____

DATE: 10/18/85

BY	NO.	REVISION	DATE

PLAN AND PROFILE OF SEWER MAIN

600' SCALE MAP NO. S-37 BLOCK NO. 21

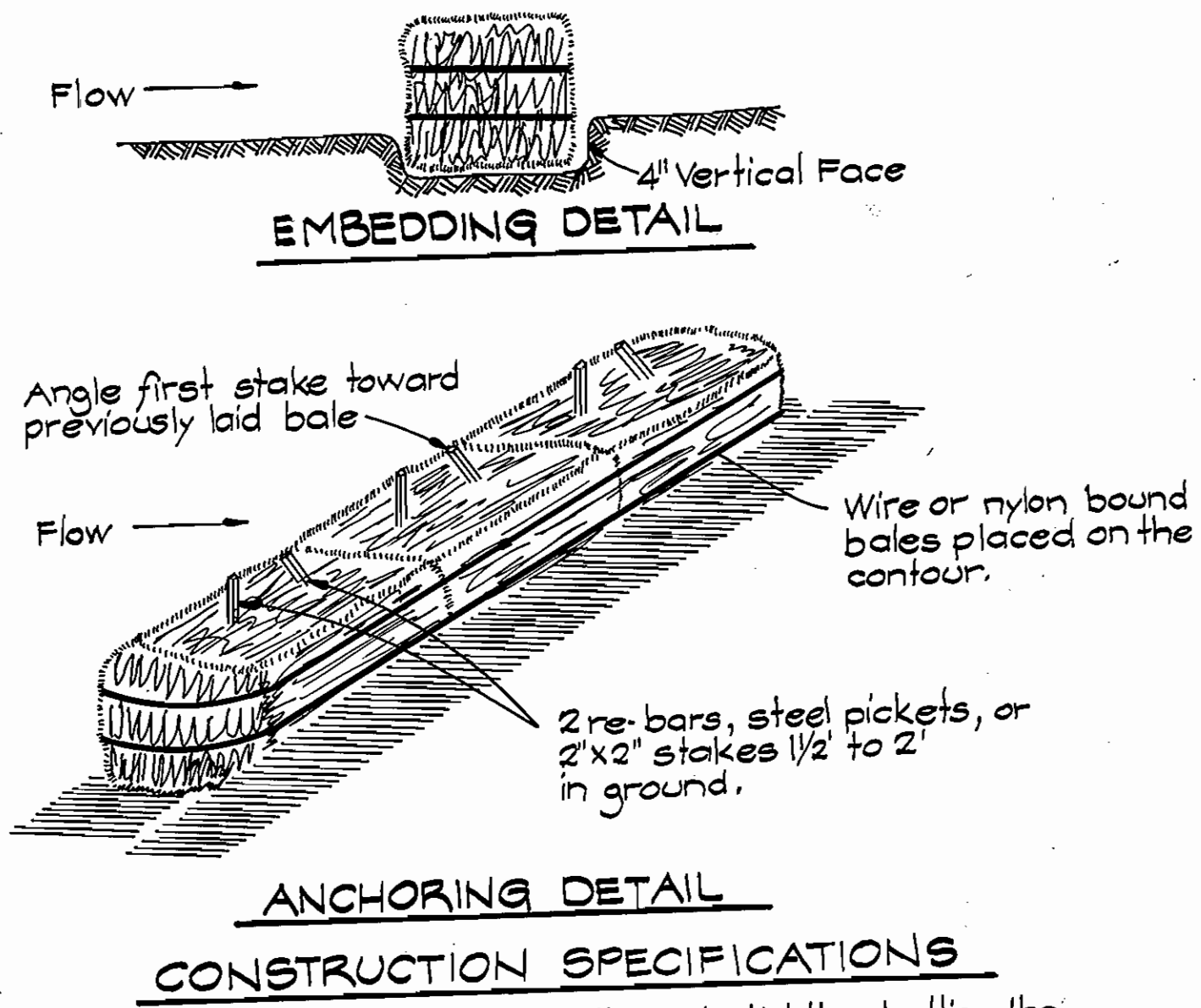
OLD WATERLOO ROAD SEWER EXTENSION
CAPITAL PROJECT S-6685
CONTRACT NO. 10-1413
ELECTION DISTRICT ELKRIDGE NO. 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 1A

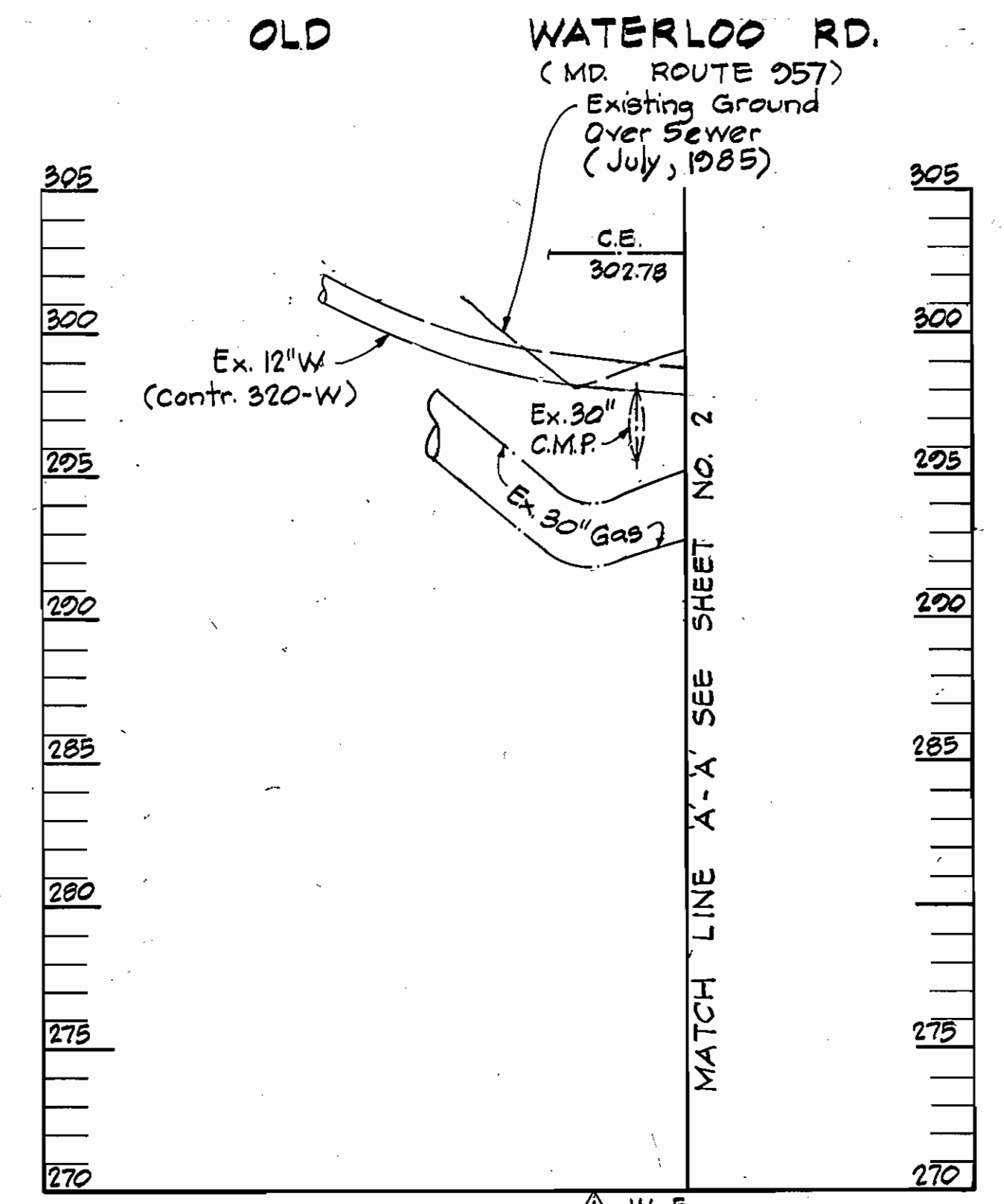
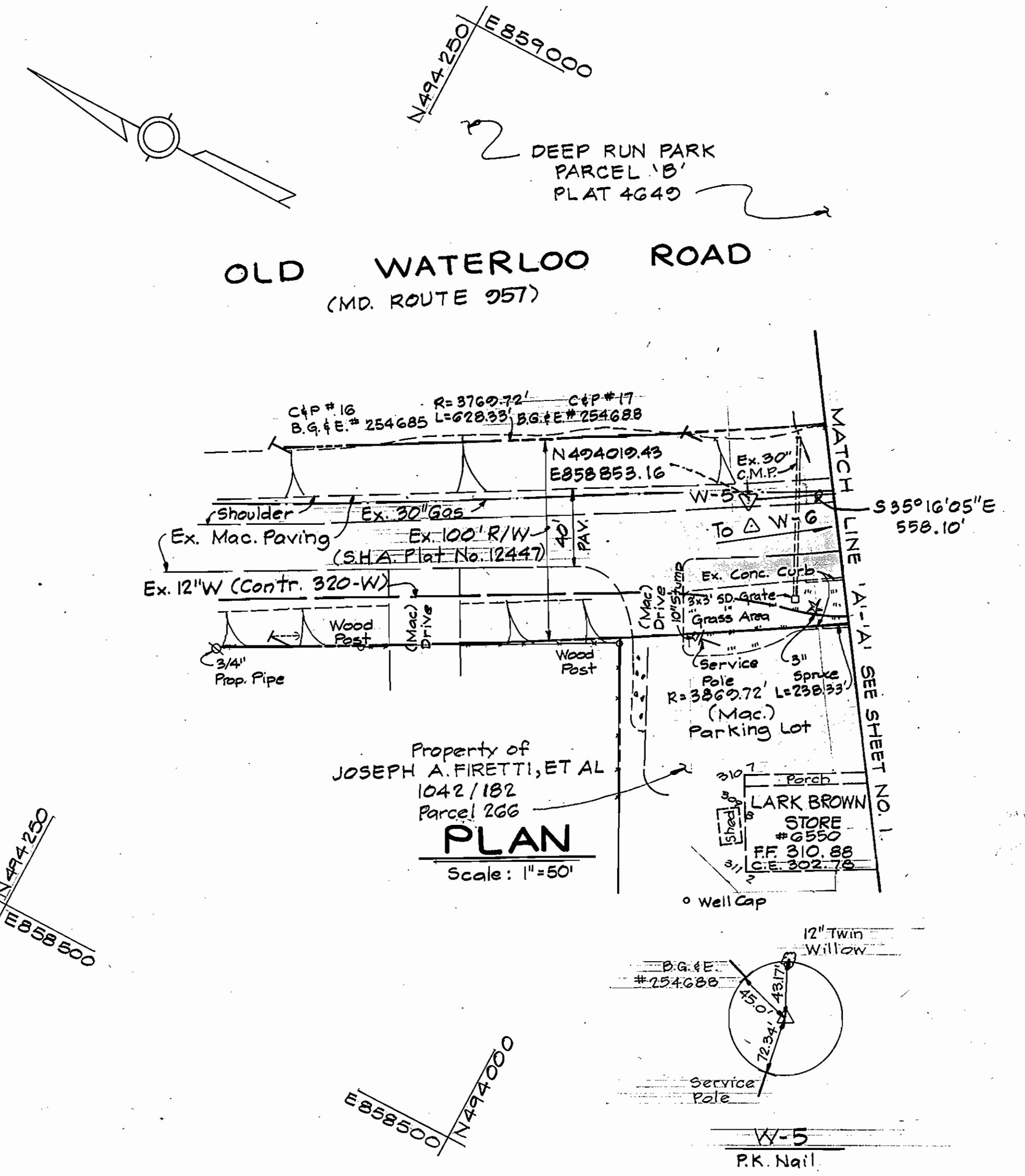
SOIL EROSION AND SEDIMENT CONTROL NOTES

- The Contractor will comply with all Requirements of Sediment and Erosion Control set forth in the Contract Drawings, the U.S.D.A. Soil Conservation Service Manual, "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas", and Volume IV - Article 15 of the Howard County Design Manual, Volume IX.
- The Contractor shall not Pump from Excavated Areas directly into the Howard County Storm Drainage System or any Natural Water Course. Where ground water is encountered during Construction, the Contractor shall provide Portable or Excavated Sediment Traps to prevent Silted Trench Water from entering Storm Drainage Systems or Natural Waterways.
- All Excavated Material shall be placed on the high side of the Trench whenever possible, and confined to an area where it will not obstruct the Normal Flow or Drainage Courses.
- All Swales shall be equipped with a Sediment Retention Device to Trap Sediment and Filter Water leaving the Right-of-Way prior to entering any Running Streams.
- The Contractor shall provide Straw Bale Dikes normal to Surface Water Flow around all Vehicle and Equipment Staging Areas as shown in "Detail of a Straw Bale Dike" enclosed in Specifications.
- Road side Ditches and Drainage Pipes shall be Restored to a condition Equal to or Better than the Original Condition following Completion of Construction.
- The Contractor shall Dispose of Spoils in accordance with Good Soil Conservation practice and in such a manner that none can be carried into any Drainage Facility or Water Course. The Contractor shall be responsible for disposing of all Spoil or Excess Excavated Material on a Site approved by the Soil Conservation District. Documentation of approval and site shall be provided to the Engineer prior to Beginning Work.
- The Howard County Soil Conservation District must be Notified in writing by the Contractor as to Where Excess Material will be Disposed or Borrow Material will be obtained. Prior to beginning any Work on this Project, copies shall be provided to the Engineer.
- Continuogus Inspection and Maintenance of all Sediment and Erosion Control Devices will be Required.
- The Contractor shall provide Additional Soil Erosion and Sediment Control as Required by the Sediment Control Inspector, as the Work Progresses or Requires.
- The Contractor shall Notify in Writing a Howard County Sediment Control Division Representative at least three (3) days prior to starting Work. Please Contact: Howard County - # 992-2436. Copies shall be provided to the Engineer.
- The Contractor shall place a Stabilized Construction Entrance as shown in the Howard County Standard Details, @G.11, where shown on the Plans unless otherwise Directed by the Engineer.
- Sediment Removal - All Trapped Sediment is to be Removed and Disposed of at the Authorized Land fills prior to Removal of Sediment Control Structures.
- Following Initial Soil Disturbance or Redisturbance, Permanent or Temporary Stabilization shall be completed within:
 - Seven (7) Calendar days for all Perimeter Sediment Control Structures, Dikes, Swales, Ditches, Perimeter Slopes and all Slopes greater than 3:1.
 - Fourteen (14) days as to all other Disturbed or Graded Areas on the Project Site.



- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
- Each bale shall be embedded in the soil a minimum of 4" vertically.
- Bales shall be securely anchored in place by stakes or re-bars driven thru the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

DETAIL STRAW BALE DIKE
No Scale



Reviewed for Howard County S.C.D. and meets technical requirements. <i>J. Helton</i> Date: 2/4/86 U.S. SOIL CONSERVATION SERVICE This development plan is approved for soil erosion and sediment control by the Howard County Soil Conservation District. Approved: <i>Stephen L. Huber</i> Date: 2/4/86 HOWARD COUNTY S.C.D.	ENGINEER'S CERTIFICATION I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District. <i>Walter B. Schuman</i> Date: 10/8/85 KIDDE CONSULTANTS, INC. 1020 CROMWELL BRIDGE ROAD TOWSON, MD 21204	DEVELOPER'S CERTIFICATION "I/We certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project." Date: _____ BUREAU OF ENGINEERING DEPARTMENT OF PUBLIC WORKS
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>Walter B. Schuman</i> 2-5-86 Chief, Bureau of Engineering: <i>Walter B. Schuman</i> 1-21-86 Chief, Bureau of Utilities: <i>Robert B. ...</i> 1-23-86 Chief, Utility Division: <i>...</i> 1-21-86	KIDDE CONSULTANTS, INC. CONSULTING ENGINEERS BALTIMORE, MARYLAND	DES: T.E.S. DRN: T.E.S. CHK: W.B.H. DATE: 10/8/85	PLAN AND PROFILE OF SEWER MAIN AND DETAILS 600' SCALE MAP NO. S-37 BLOCK NO. 21	OLD WATERLOO ROAD SEWER EXTENSION CAPITAL PROJECT S-6685 CONTRACT NO. 10-1413 ELECTION DISTRICT ELKRIDGE NO. 1 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 2
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