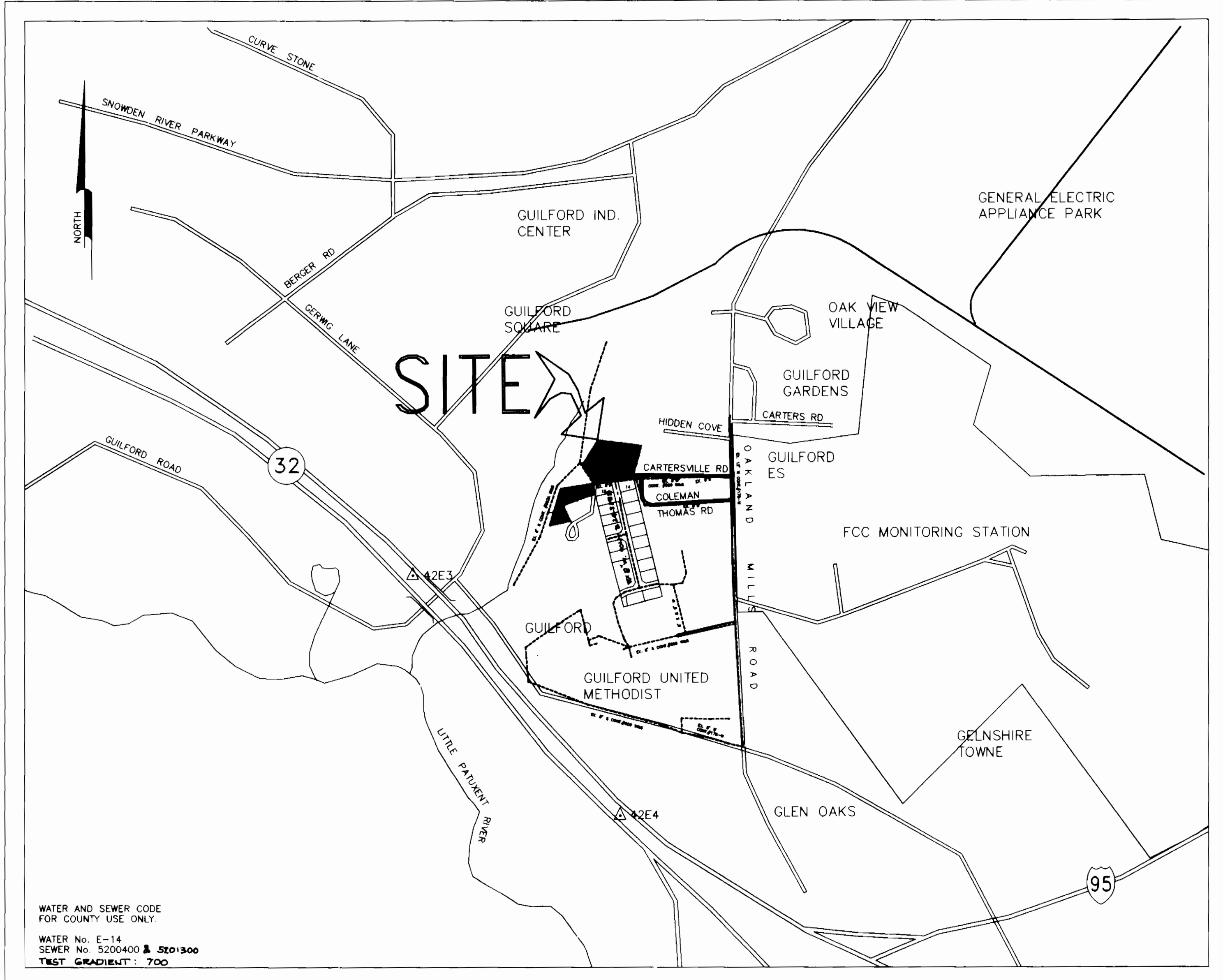


QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS BUILT		MANUFACTURER/SUPPLIER
		QUANTITIES	TYPE	
8" SEWER	586 L.F.	585 L.F.	PVC SDR-35	J.M. MANUFACTURING / BRS
8" WATER	401 L.F.	409 L.F.	DIP CLASS 52	GRIFFIN PIPE PRODUCTS CO.
6" WATER	793 L.F.	800 L.F.	DIP CLASS 52	GRIFFIN PIPE PRODUCTS CO.
1" WHC	20 L.F.	41 L.F.	1/2" COPPER	HOWELL METALS / BRS
3/4" WHC	94 L.F.	133 L.F.	1/2" COPPER	HOWELL METALS / BRS
4" SHC	288 L.F.	310 L.F.	PVC SDR-35	J.M. MANUFACTURING / BRS
FIRE HYDRANT	2 EACH	2 EA.	CANTURION PRECAST	MUELLER CO. / BRS
MANHOLE (TYPE B)	6 EACH	4 EA.	PRECAST	ATLANTIC CONCRETE
BLOW-OFF VALVE	2 EACH	2 EA.	CLASS 350 M.F.	KUPFERLE CO. / BRS
8" x 8" TEE	1 EACH	2 EA.	CLASS 350 M.F.	GRIFFIN PIPE PRODUCTS CO.
8" x 6" TEE	2 EACH	2 EA.	CLASS 350 M.F.	GRIFFIN PIPE PRODUCTS CO.
8" VALVE	2 EACH	2 EA.	GATE VALVE	MUELLER CO. / BRS
6" VALVE	3 EACH	3 EA.	GATE VALVE	MUELLER CO. / BRS

WATER & SEWER STRUCTURE SCHEDULE				
MH No.	ELEVATION	LOCATION		
MH-1	323.23' (RIM)	166899.196	414272.421	
MH-2	334.50' (RIM)	166929.508	414290.537	
MH-3	343.00' (RIM)	166926.104	414350.001	
MH-4	346.50' (RIM)	166913.537	414371.501	
MH-5	307.06' (RIM)	166778.384	414194.512	
MH-6	313.71' (RIM)	166787.435	414216.826	



WATER AND SEWER CODE FOR COUNTY USE ONLY.
 WATER No. E-14
 SEWER No. 5200400 & 5201300
 TEST GRADIENT: 700

LOCATION MAP
 SCALE: 1" = 600'

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'. 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 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.
- For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Vol. IV, Standard Specifications and Detail for Construction (Latest Edition). 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 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 the construction operations at his own expense.
- Contractors 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
BO&E Co. Contractor Services	850-4520
BO&E Co. Under Ground Damage Control	787-9068
Miss Utility	800 257-7777
Colonial Pipeline Co.	795-1390
Howard County Department of Public Works Bureau of Utilities	313-4900
- 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.
- Contractors 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.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Taps of all water mains to have a minimum of 3 1/2" cover otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete in accordance with the 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 restrained in accordance with detail W.1-11 and W.2-13. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- All sewer mains shall be D.I.P. and P.V.C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains with in 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated W.I. in plan and profile shall have watertight frame and covers, Standard Details 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.
- House(s) with the symbol "C.N.S" indicates that cellar cannot be served.
- Horizontal and vertical data are based on Maryland State coordinate system as projected by Howard County station (NAD 83) and

BENCHMARKS

BENCHMARK # 1	TOP OF STONE FOUND	ELEV. 325.30'
BENCHMARK # 2	TOP OF NUT OF FH	ELEV. 368.33'

MATTHEWS WOODS
 CONTRACT No. 24-3461-D
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN T-16-18

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT.

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 Patricia English / JPC 2/8/96
 U.S. NATURAL RESOURCES CONSERVATION SERVICE

APPROVED:
 John R. Robinson 2/8/96
 HOWARD SOIL CONSERVATION DISTRICT



OWNER: MAPLE COLEMAN
 9276 CARTERSVILLE RD.
 COLUMBIA, MD. 21046

DEVELOPER: LAND DESIGN & DEVELOPMENT INC.
 10805 HICKORY RIDGE RD.
 COLUMBIA, MD. 21044

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert A. Bennett 2-7-96
 CHIEF, BUREAU OF UTILITIES

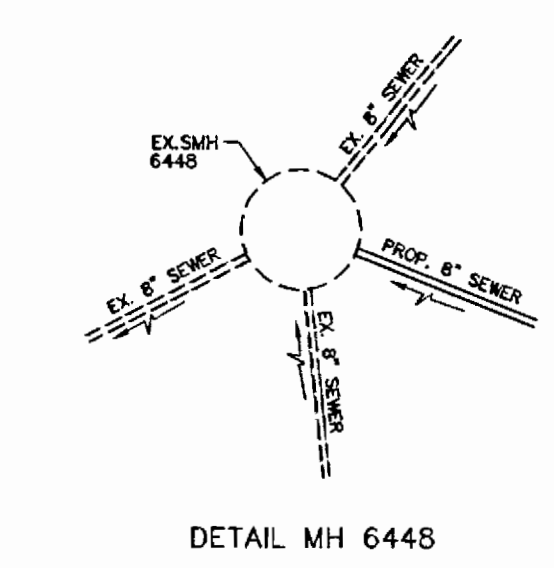
DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Howard Robinson 2/8/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Voria Engineering Inc.
 CONSULTING ENGINEERS
 8307 MAIN ST., HISTORIC ELLICOTT CITY, MD.
 TEL 410-465-0400 FAX 410-465-0489

DESIGN: MLL	
DRAWN: AVG	
CHECK: MLL	
DATE:	

PLAN & PROFILE OF
 WATER & SEWER MAINS
 CONTRACT NO. 24-3461-D
 600' SCALE MAP NO. 42 BLOCK

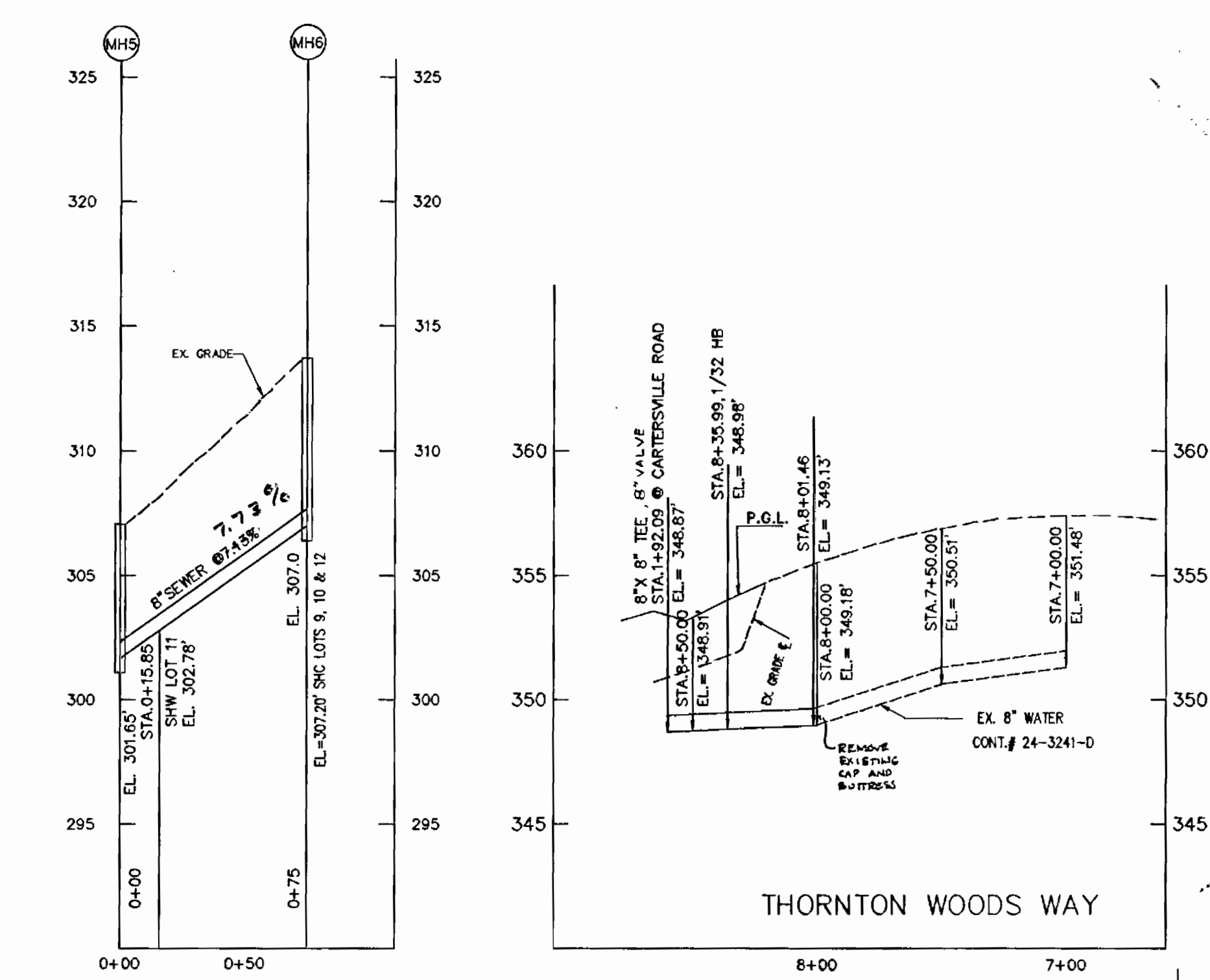
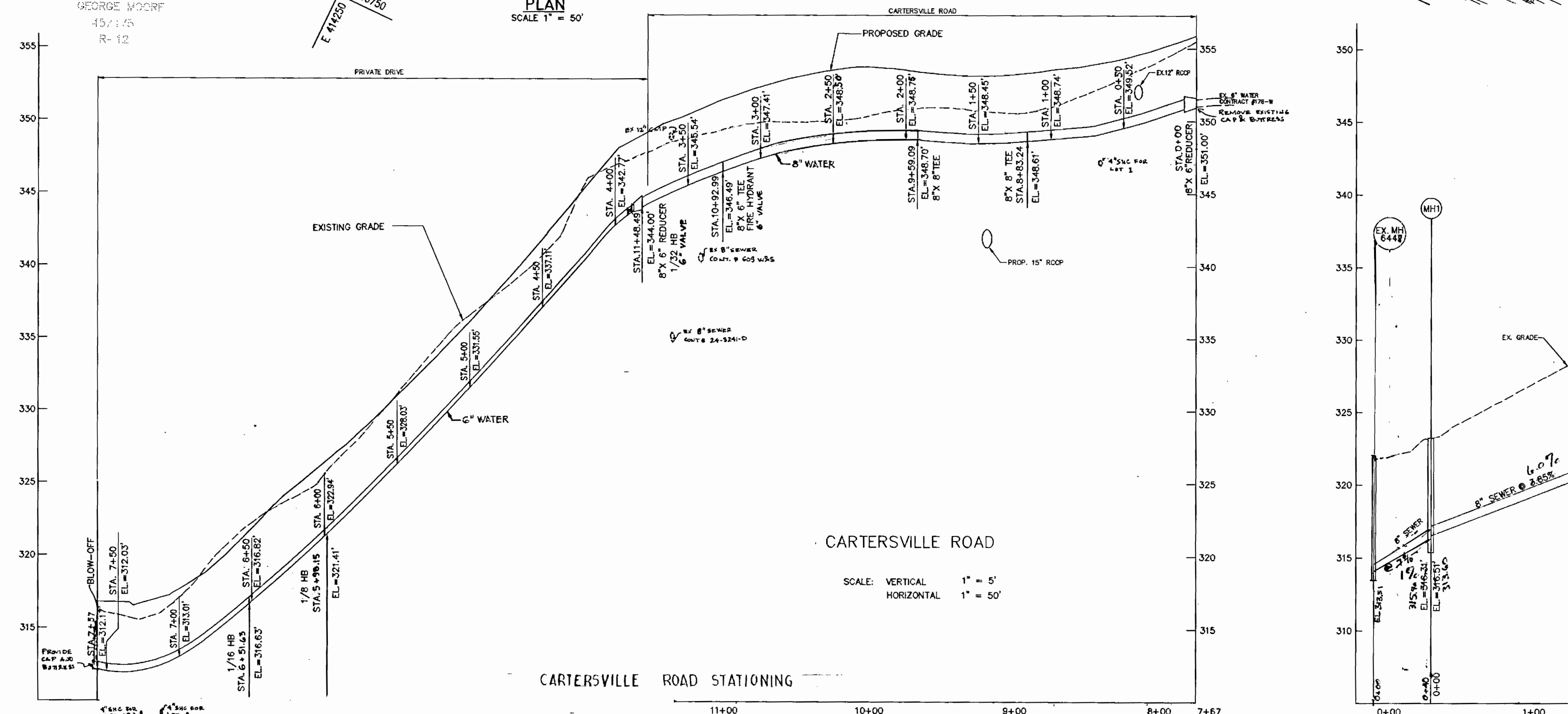
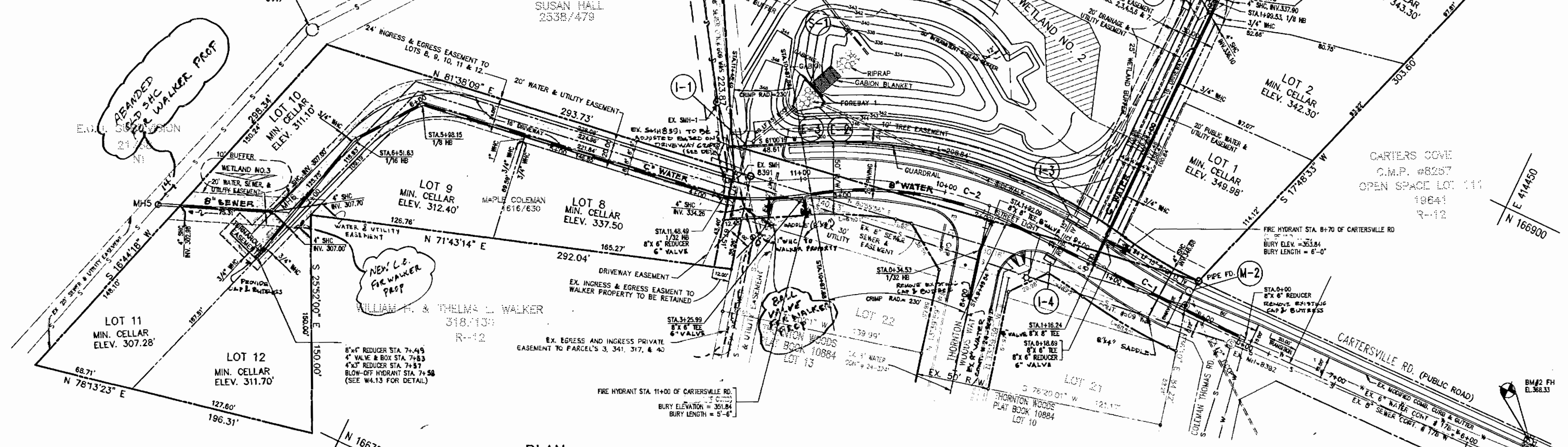
COVER SHEET
 MATTHEWS WOODS
 LOTS 1 THRU 13
 TAX MAP 42 PARCEL 40, 341, & 318
 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 1 OF 2



DETAIL MH 6448



MH CONNECTION DETAIL



SCALE: VERTICAL 1" = 5'
HORIZONTAL 1" = 50'

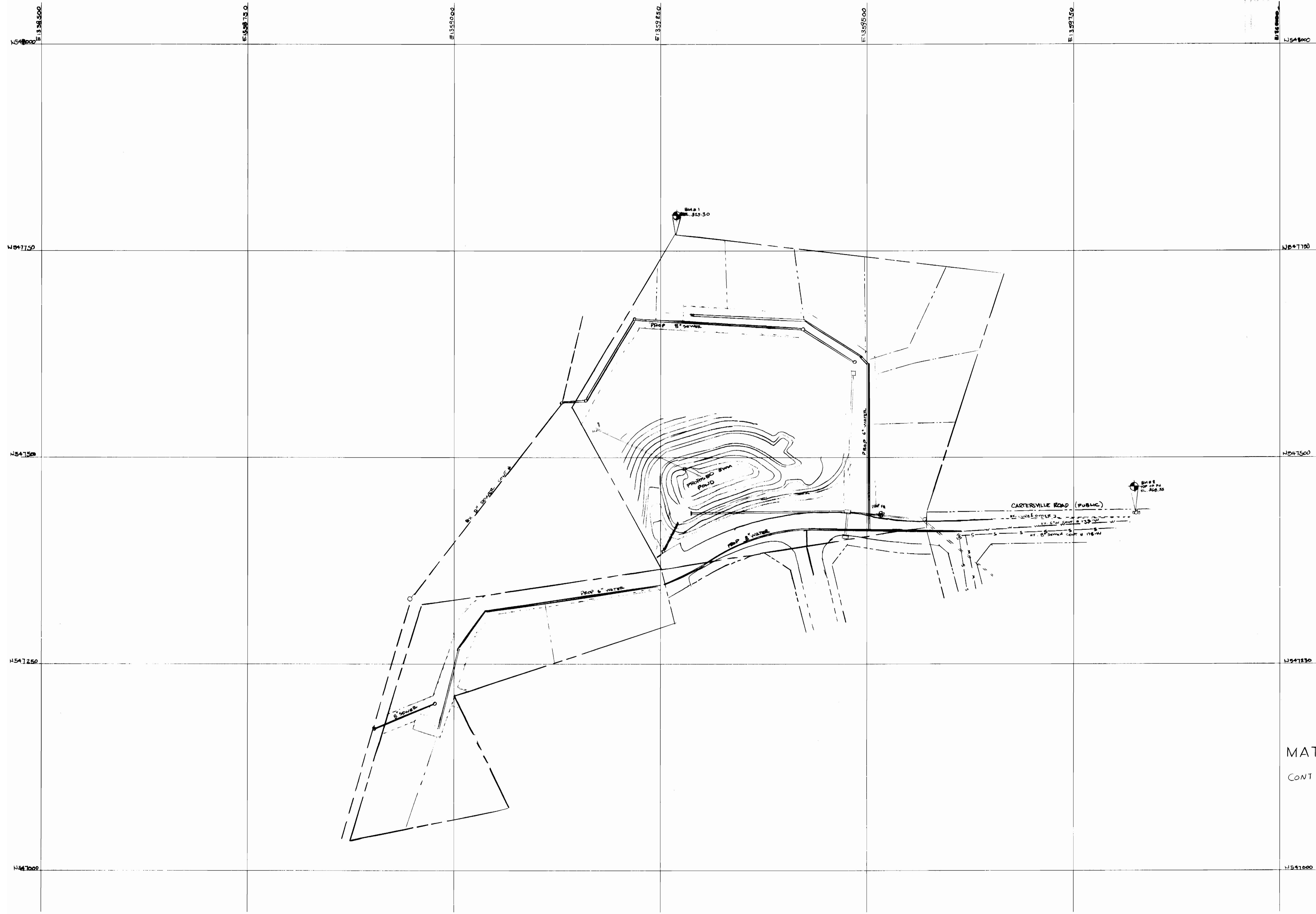
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND	Gloria Engineering Inc. CONSULTING ENGINEERS 8307 MAIN ST., HISTORIC ELLICOTT CITY, MD. TEL 410-465-0400 FAX 410-465-0489	DESIGN : MLL DRAWN : AVG CHECK : MLL DATE :	BY NO. REVISION	DATE
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**PLAN & PROFILE OF
WATER & SEWER MAINS**
CONTRACT NO. 64-34610
600' SCALE MAP NO. 42 BLOCK

MATTHEWS WOODS
LOTS 1 THRU 13
TAX MAP 42 PARCEL 40, 341, & 318
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SHEET 2 OF 2

SEWER & WATER (AS-BUILT)

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MATTHEWS WOODS
 LOTS 1 THRU 13
 CONT 24-3461-D

HOWARD COUNTY
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 SURVEY & DRAFTING DIVISION

Scale : 1" = 50'

Map No. 42