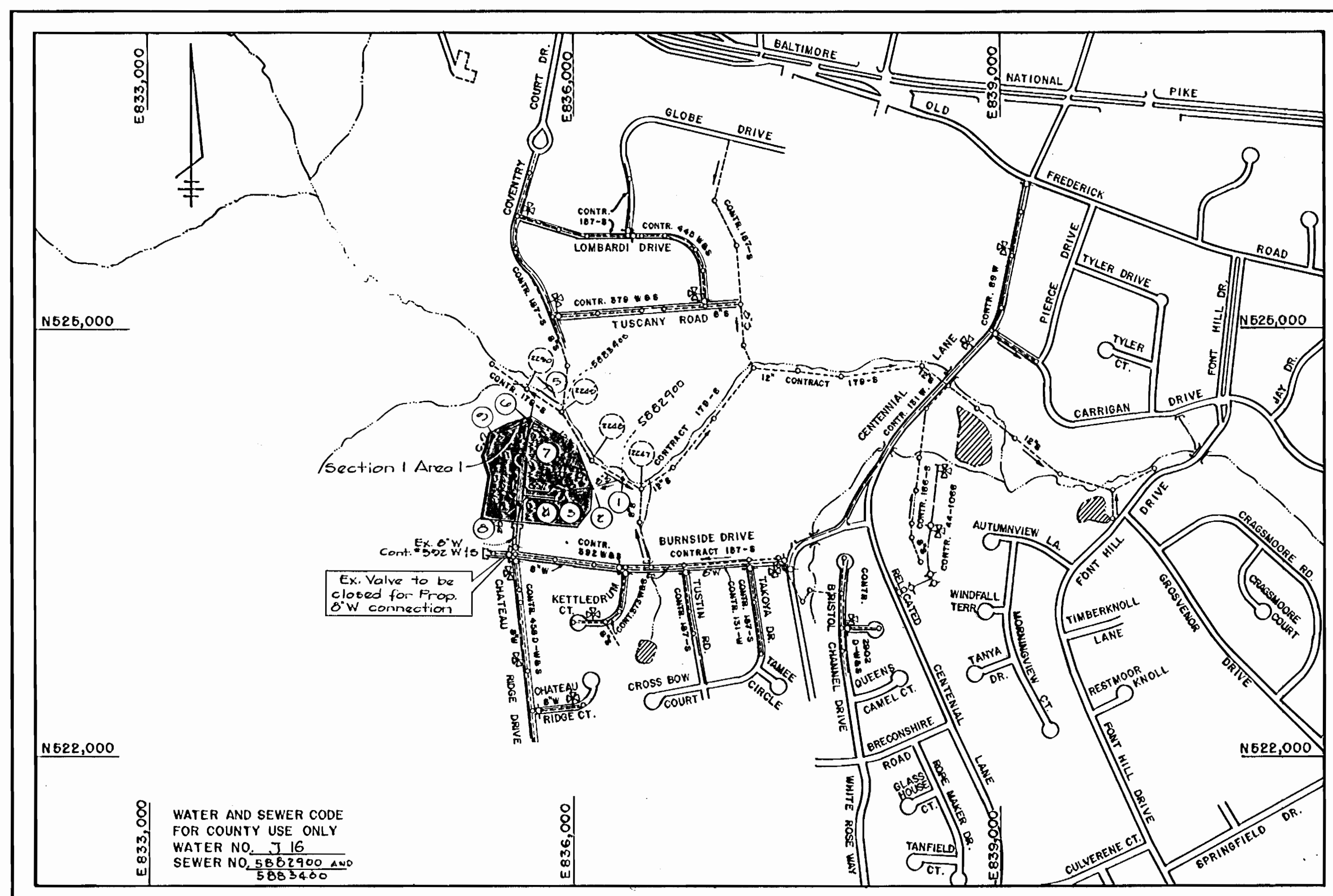


Quantities			
Item	Estimated	As-Built	Supplier
8" Water	7521 L.F.	776 L.F.	AA WATER WORKS
6" Water	270 L.F.	279 L.F.	"
16" Water	10 L.F.	16 L.F.	"
1" Water House Connection	245 L.F.	235 L.F.	"
16" Water House Connection	500 L.F.	225 L.F.	"
8" Valve	1 each	1 EA.	"
6" Valve (excluding Fire Hydrant)	1 each	1 EA.	"
6"x6" F.H. Tee 16" Valve	1 each	1 EA.	"
Fire Hydrant	1 each	1 EA.	"
16" Blow-Off	2 each	1 EA.	"
8" Sewer	1542 L.F.	1514 L.F.	"
6" Sewer	625 L.F.	602 L.F.	"
Manholes	2 each	9 EA.	ATLANTIC PERCAST CONG. CO. 412 C. B&B UTILITY SUPPLY

Manhole Tabulation				
No.	Road Sta.	Distance	Rim	Slope
3	Opposite Linear Prof Sta. 1460.00 Platte Ct.	10'	447.85	
4			442.50	
7	Opposite Linear Prof Sta. 1171.01 Chateau Ridge Drive	10'	440.50	
8	Chateau Ridge Dr.	7' left	475.50	5.50%

Sewer House Connection Invert @ R.			
Station	Lot	Invert @ R.	
8" M1*5	M1*5 to M1*4	456.45	
6" M1*4	20	450.70	
6" M1*4	21	448.80	
6" M1*4	22	450.65	
6" M1*6	M1*6 to M1*5	411.50	
6" M1*7	M1*7 to M1*6	409.70	
6" M1*8	M1*8 to M1*7	402.07	
6" M1*9	M1*9 to M1*8	402.85	
6" M1*10	M1*10 to M1*9	450.85	
6" M1*11	M1*11 to M1*10	451.50	
6" M1*12	M1*12 to M1*11	447.94	
6" M1*13	M1*13 to M1*12	450.55	
6" M1*14	M1*14 to M1*13	441.11	
6" M1*15	M1*15 to M1*14	402.15	
6" M1*16	M1*16 to M1*15	412.70	
6" M1*17	M1*17 to M1*16	411.00	
6" M1*18	M1*18 to M1*17	412.50	

Station	Lot	Invert @ R.
6" M1*10 right	4	454.61
6" M1*10 left	5	457.62



TYPE OF BUILDING	RESIDENTIAL
NUMBER OF LOTS	22 (21 buildable)
NO. OF WATER HOUSE CONNECTIONS	21
NO. OF SEWER HOUSE CONNECTIONS	21
DRAINAGE AREA	Little Potomac

SCALE: 1" = 600'

CONTRACT NO. 24-1456-D

CENTENNIAL MANOR

SECTION 1 AREA 1

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

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 [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 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 CO. - CONTRACTOR SERVICES: 561-2585
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL: 234-5621
 - MISS UTILITY: 1-559-0100
 - COLONIAL PIPELINE COMPANY: 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 992-2366
- 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.
- 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.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS 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.
- 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 STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 AND 1008 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- FOR ALL COPPER WATER HOUSE CONNECTIONS, UTILIZE FLARED TYPED FITTINGS ONLY.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. (STD. DETAIL W.3.21).
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS STANDARD DETAIL G5.52 WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.K., A.C.P. 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 FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 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 F 20-117

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 3-21-86
DATE

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

APPROVED:
[Signature] 3/21/86
DATE

CONTRACT NO. 24-1456-D
CENTENNIAL MANOR
SECTION 1, AREA 1
WATER AND SEWER EXTENSION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

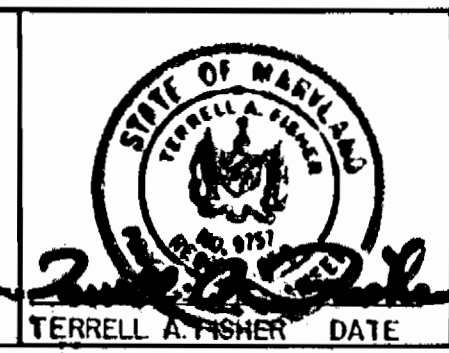
[Signature] 4-7-86
DATE

[Signature] 4-7-86
DATE

FISHER, COLLINS, AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
6386 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043

[Signature] 4-7-86
DATE

[Signature] 4-7-86
DATE



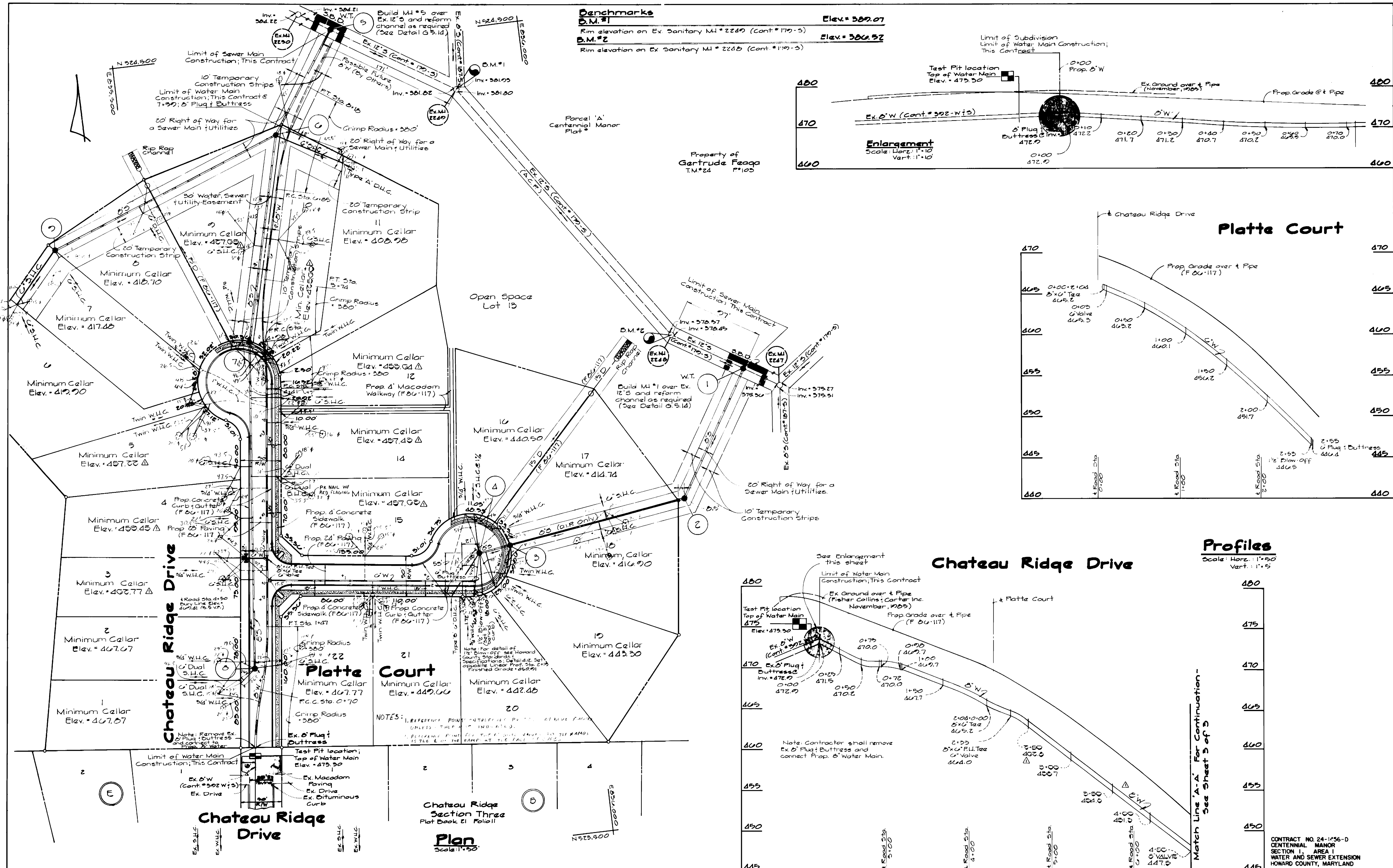
DES. D.E.V.	
DRN. D.E.V.	
CHK. T.A.F.	
DATE: 6/10/86	

TITLE SHEET	
600' SCALE MAP NO. 24	BLOCK NO. 7

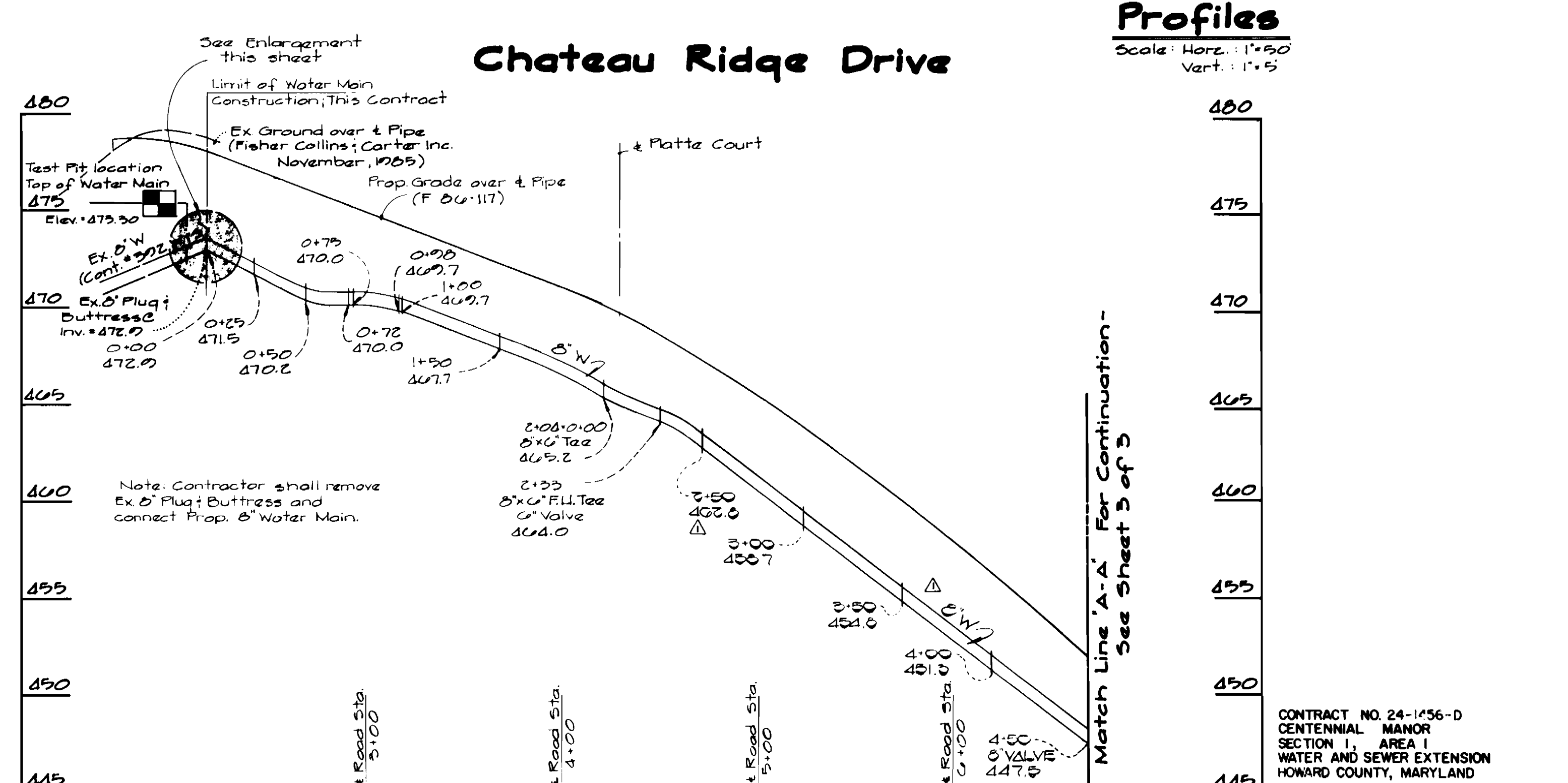
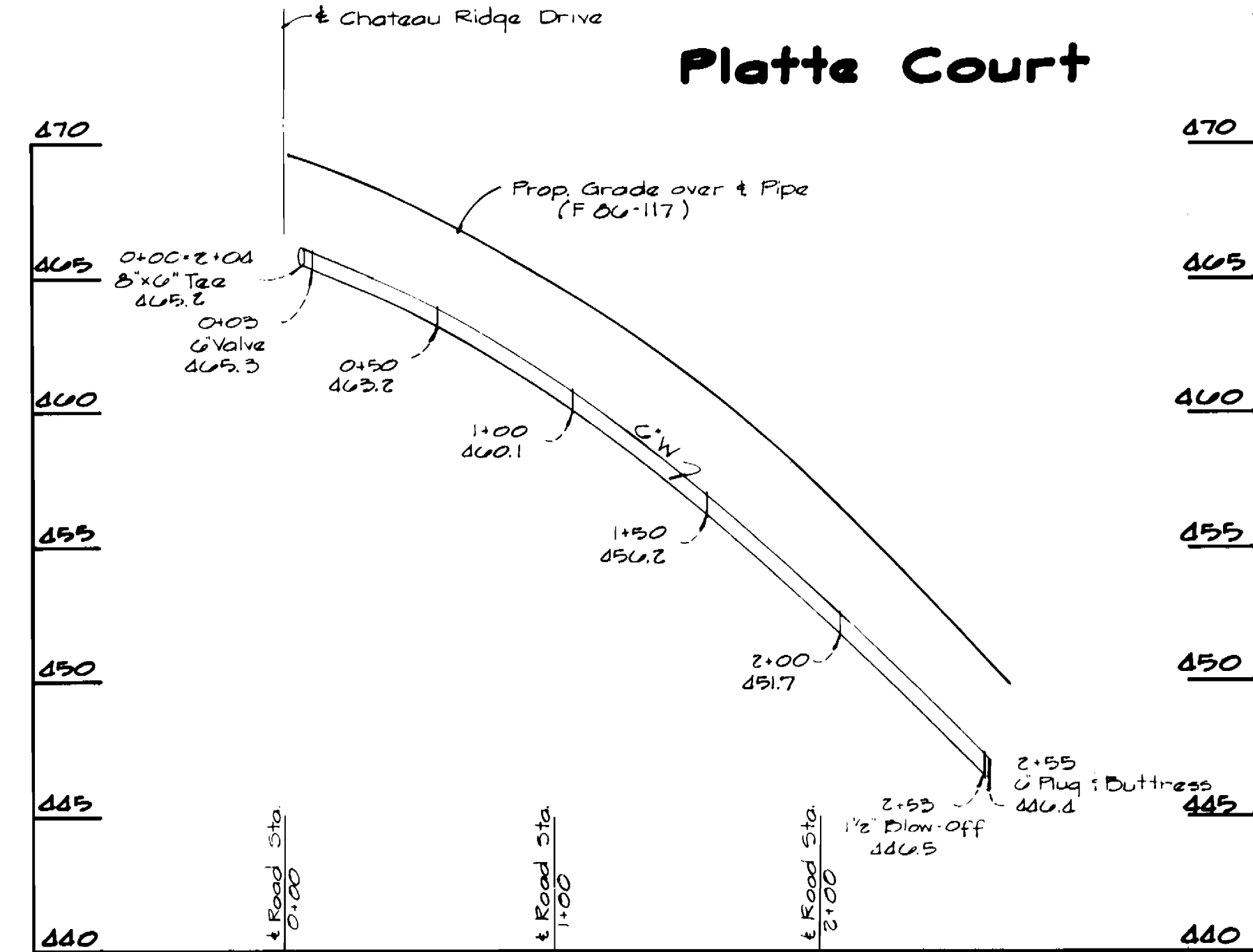
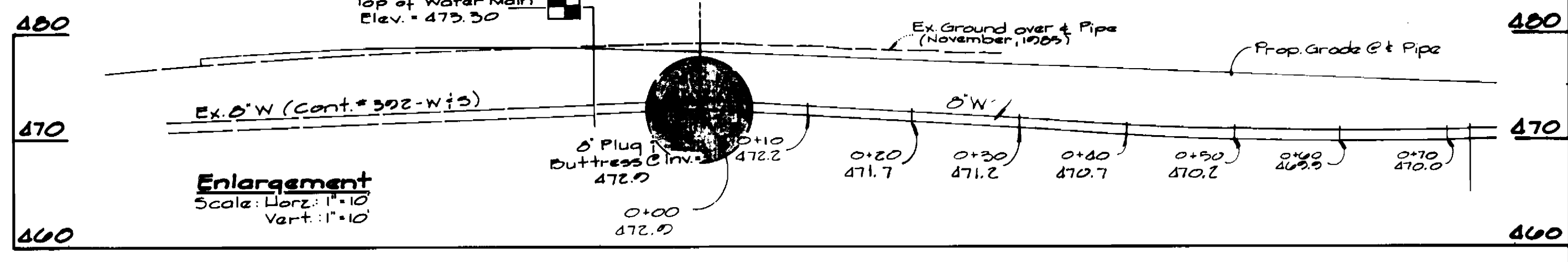
CENTENNIAL MANOR
SECTION 1, AREA 1
CONTRACT NO. 24-1456-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 3

AS-BUILT 9/4/86



D Benchmarks
D.M.#1 Elev. = 569.07
 Rim elevation on Ex. Sanitary M.H.# 2249 (Cont.# 170-3)
D.M.#2 Elev. = 566.92
 Rim elevation on Ex. Sanitary M.H.# 2248 (Cont.# 170-3)



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: [Signature] 4-7-86
 Chief, Bureau of Engineering: [Signature] 4-7-86
 Chief, Bureau of Utilities: [Signature] 4-7-86
 Chief, Land Development Division: [Signature] 4-7-86

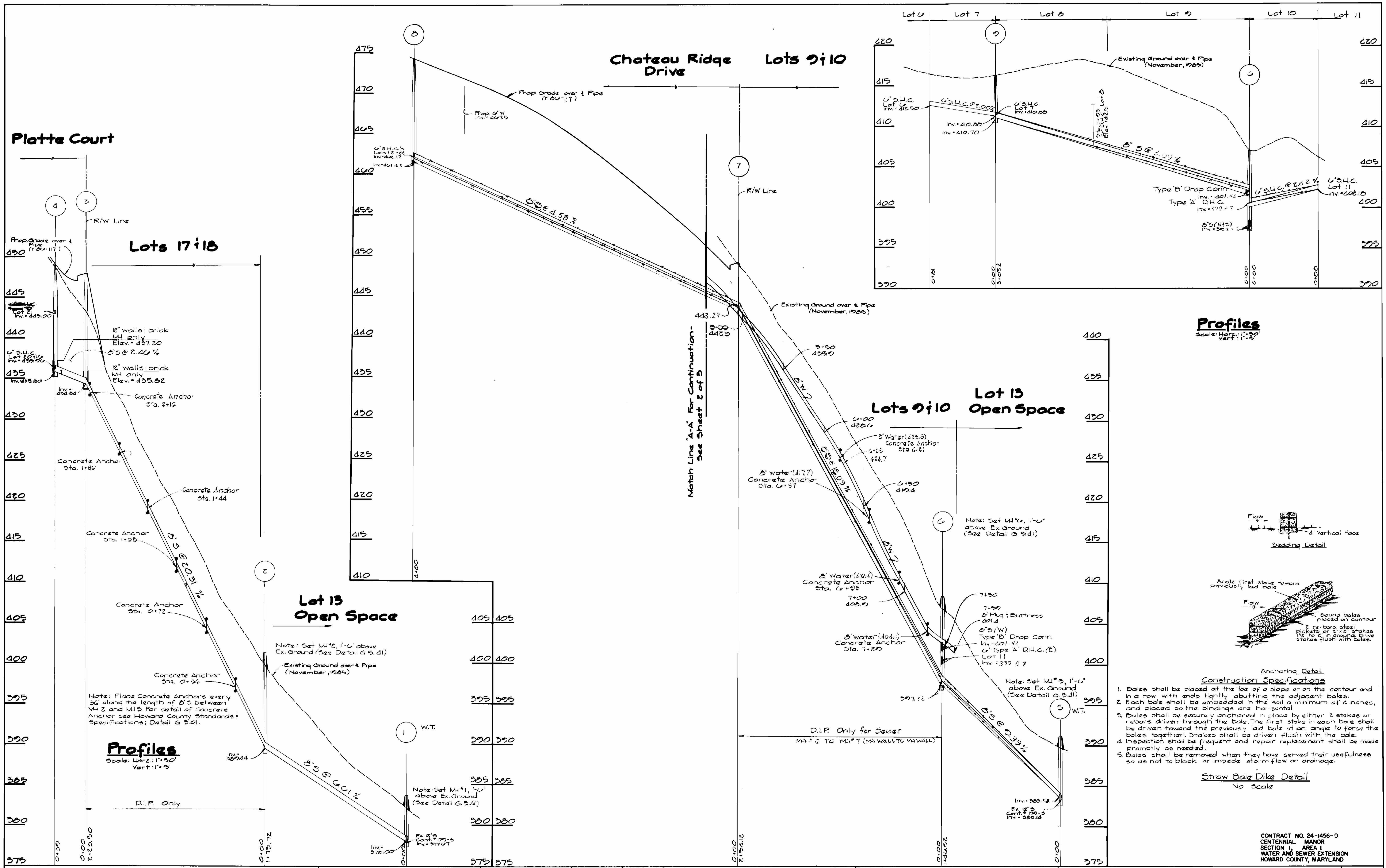
FISHER, COLLINS AND CARTER, INC.
 CONSULTING ENGINEERS AND LAND SURVEYORS
 8368 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043
 Terrell A. Fisher, Date: 3/10/86

DES: D.E.V.	
DRN: D.E.V.	
CHK: T.A.F.	
DATE: 3/10/86	
BY: [Signature]	
N.O.	
REVISION	

WATER & SEWER MAINS
PLAN & PROFILES
 600' SCALE MAP NO. 24 BLOCK NO. 7

CENTENNIAL MANOR
 SECTION 1, AREA 1
 CONTRACT NO. 24-1456-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 2 OF 3

AS-BUILT 3/2/86



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James C. ... 4-7-86
 DIRECTOR OF PUBLIC WORKS DATE

Robert ... 4-7-86
 CHIEF, BUREAU OF UTILITIES DATE

... 4-7-86
 CHIEF, BUREAU OF ENGINEERING DATE

... 4-7-86
 CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS AND CARTER, INC.
 CONSULTING ENGINEERS AND LAND SURVEYORS

8388 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043

...
 TERRELL A. FISHER DATE

DES: D.E.V.	
DRN: D.E.V.	
CHK: T.A.F.	
DATE: 3/10/86	
BY NO.	
REVISION	
DATE	

SEWER MAINS PROFILES

600' SCALE MAP NO. 24 BLOCK NO. 7

CENTENNIAL MANOR
 SECTION I, AREA I
 CONTRACT NO. 24-1456-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 3

AS-BUILT 9-4-86