

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. 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.
- 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 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. - UNDER GROUND DAMAGE CONTROL - 234-5621
  - BALTIMORE GAS & ELECTRIC CO. - TROUBLE SHOOTING - 298-9013
  - MISS UTILITY - 1-559-0100
  - COLONIAL PIPELINE CO. - 795-1390
  - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION.
- ALL WATERMAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATERMAINS 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 HYDRANTS SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATERMAIN VALVES ON THE EXISTING WATER SYSTEM.
- 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.
- 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 65.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED. SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 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.

DRAINAGE AREA	LITTLE PATUXENT
NO. OF S.H.C.'S	2
NO. OF W.H.C.'S	8
TYPE OF LOTS	NEW TOWN INDUSTRIAL
NO. OF LOTS	3

ITEM	QUANTITIES		MATERIAL/SUPPLIER
	BID	AS-BUILT	
8" SEWER L.F.	1120	1120	8" PVC / GDR 35 LCP PLASTIC
MANHOLES EA.	9	9	MANHOLES / ATLANTIC CONCRETE
12" WATER L.F.	612	612	12" WATER / CL 52 DIP UG PIPE
8" WATER L.F.	659	659	8" WATER LF / CL 92 DIP UG PIPE
6" WATER L.F.	54	54	6" WATER LF / CL 92 DIP UG PIPE
8" VALVES EA.	10	10	8" VALVES / METRO SEAL UG PIPE
6" VALVES EA.	4	4	6" VALVES / METRO SEAL UG PIPE
FIRE HYDRANT EA.	4	4	FIRE HYDRANT / UG PIPE METRO POLYURETHANE
W.H.C. L.F. 8"	233	233	W.H.C. LF 8" / DUCTILE IRON UG PIPE
S.H.C. L.F. 8"	115	115	S.H.C. LF 8" / GDR 35 LCP PLASTIC
12" X 8" REDUCER	2		UG PIPE

# CONTRACT NO. 24-1482-D VILLAGE OF OWEN BROWN SECTION 5, AREA 1 6TH. ELECTION DISTRICT HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION SEQUENCE  
SEDIMENT CONTROL PROCEDURES

- OBTAIN SEDIMENT CONTROL PERMIT (ARTICLE 15.05-3).
- CONSTRUCT CONTINUOUS SEDIMENT BARRIER FOR ALL DISTURBED AREAS NOT PROTECTED BY SEDIMENT TRAPS.
- CLEAR, GRUB AND STRIP AS REQUIRED TO PROTECT STREAM FROM EROSION OF STORED TOPSOIL. SEPARATE TOPSOIL FROM SUBSOIL.
- CONSTRUCT PIPELINE. COORDINATE WITH GRADING TO BE PERFORMED UNDER GP-86-47 AND FP-87-02.
- ALL EXCAVATED MATERIAL SHALL BE STOCKPILED ON HIGH SIDE OF TRENCH.
- RESTORE EROSION CONTROL STRUCTURES DISTURBED BY SEWER CONSTRUCTION.
- STABILIZE DISTURBED AREAS AS CONSTRUCTION PROGRESSES WITH TEMPORARY SEEDING AND MULCHING (OR PERMANENT RESTORATION).
- COMPLETE PERMANENT RESTORATION WILL BE IN ACCORDANCE WITH ROAD CONSTRUCTION PLANS F-87-02.
- ALL SEDIMENT CONTROL DEVICES SHALL REMAIN IN SERVICE UNTIL REMOVAL IS APPROVED BY THE S.C.S. INSPECTOR.

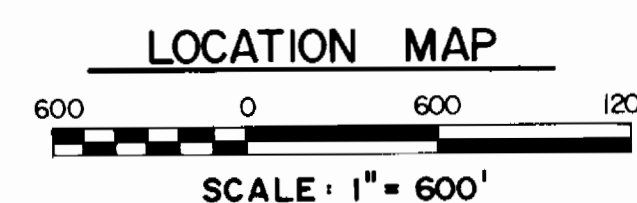
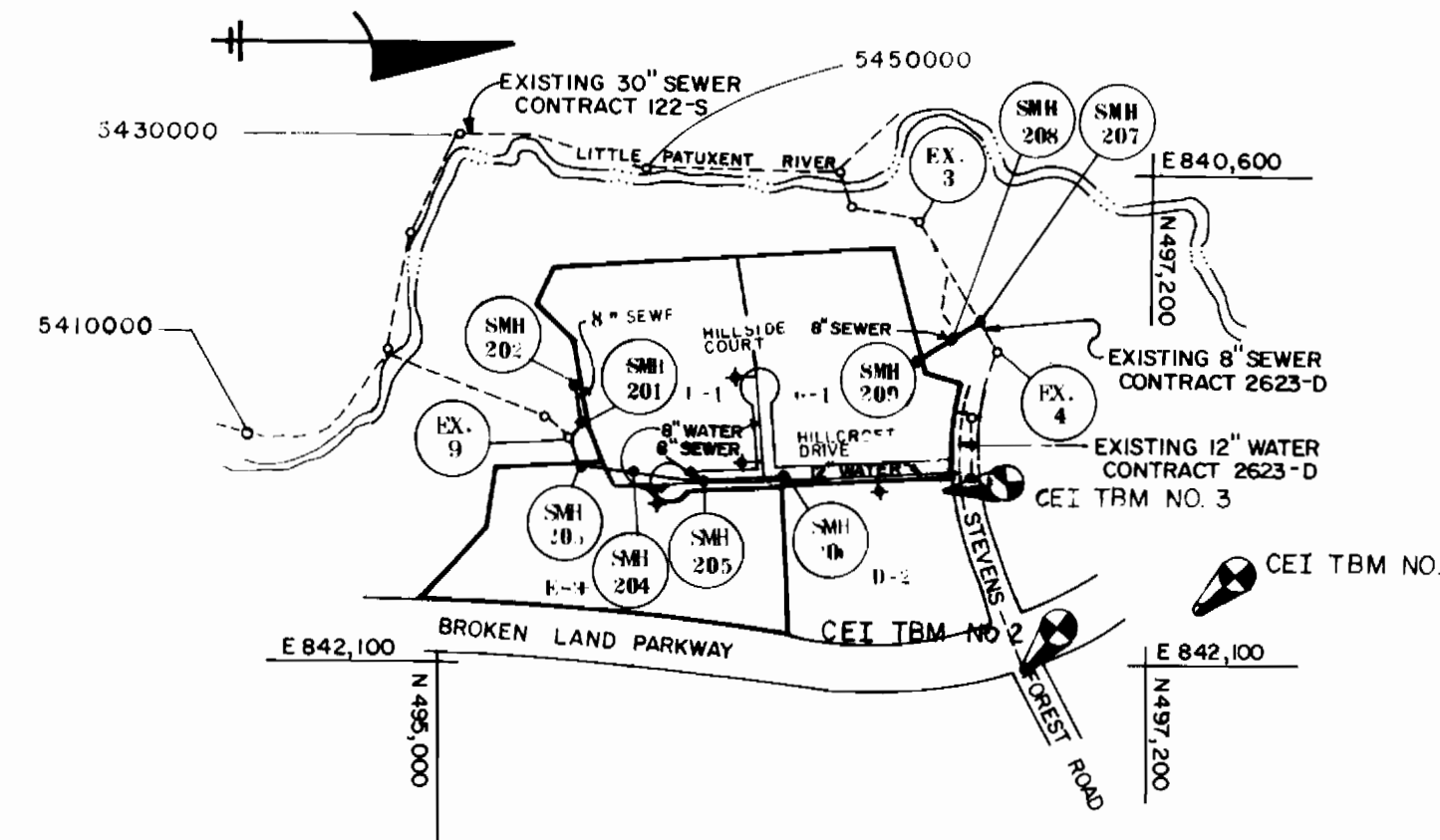
\* RESTORATION (TEMPORARY OR PERMANENT) OF AN AREA BETWEEN MANHOLES SHALL FOLLOW WITHIN ONE WEEK OF PIPE LAYING IN THAT AREA.

Bench Marks

CEI TBM NO. 1 X-CUT ON 2" ANCHOR BOLT OF BG&E POWER POLE #425328  
ELEV. 319.85

CEI TBM NO. 2 X-CUT ON TOP OF CURB AT NOSE OF ISLAND ON STEVENS FOREST ROAD AT THE INTERSECTION WITH BROKEN LAND PARKWAY  
ELEV. 345.79

CEI TBM NO. 3 X-CUT ON TOP OF CURB AT STEVENS FOREST ROAD AND RELIABLE STORE ENTRANCE  
ELEV. 345.86



WATER & SEWER CODE	
SEWER CODE	5410000 & 5430000
WATER CODE	F13

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THE STANDARD SPECIFICATIONS, AND ROAD CONSTRUCTION PLAN F-87-02

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

*[Signature]*  
SIGNATURE DATE 9-8-86

U.S. SOIL CONSERVATION SERVICE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

APPROVED:  
*[Signature]*  
SIGNATURE DATE 9/9/86

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 9-18-86  
DIRECTOR OF PUBLIC WORKS DATE  
*[Signature]* 9-16-86  
CHIEF-BUREAU OF UTILITIES DATE  
*[Signature]*  
CHIEF-LAND DEVELOPMENT DIVISION DATE

CENTURY ENGINEERING, INC.  
CONSULTING ENGINEERS · PLANNERS  
TOWSON, MARYLAND 21204

DATE	NO.	DESCRIPTION

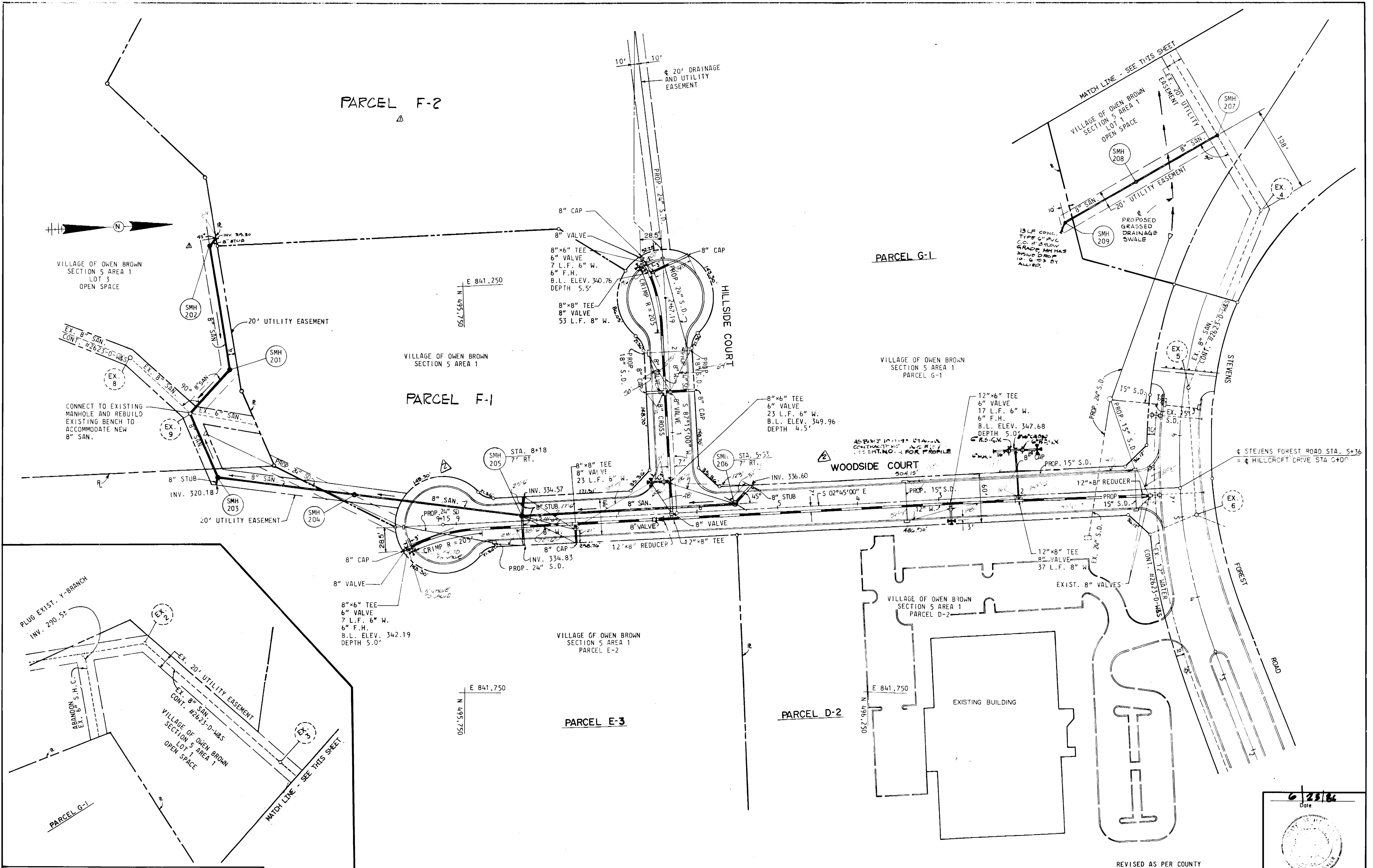
TITLE SHEET

VILLAGE OF OWEN BROWN  
SECTION 5 AREA 1  
CONTRACT NO. 24-1482-D  
6th ELECTION DISTRICT HOWARD CO. MARYLAND

DRAWING NO. 1 OF 4 SCALE AS SHOWN

REVISED AS PER COUNTY COMMENTS DATED 7/21/86

6/25/86  
Date  
*[Signature]*  
Professional Engr. No. 6906



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*John N. Nunn* 9-18-86  
DIRECTOR OF PUBLIC WORKS - DATE

*William P. Conner*  
CHIEF - BUREAU OF ENGINEERING - DATE

*Robert S. Beninger* 9-16-86  
CHIEF - BUREAU OF UTILITIES - DATE

*McHale* 9-18-86  
CHIEF - LAND DEVELOPMENT DIVISION - DATE

CENTURY ENGINEERING, INC.  
CONSULTING ENGINEERS - PLANNERS  
TOWSON, MARYLAND 21204

DATE	NO.	REVISION	DESCRIPTION
5-15-87			Change Road Name & Delete WUC
11-4-86			RELOCATE MH 202 ADDED F-2

PLAN  
SEWER AND WATER MAINS

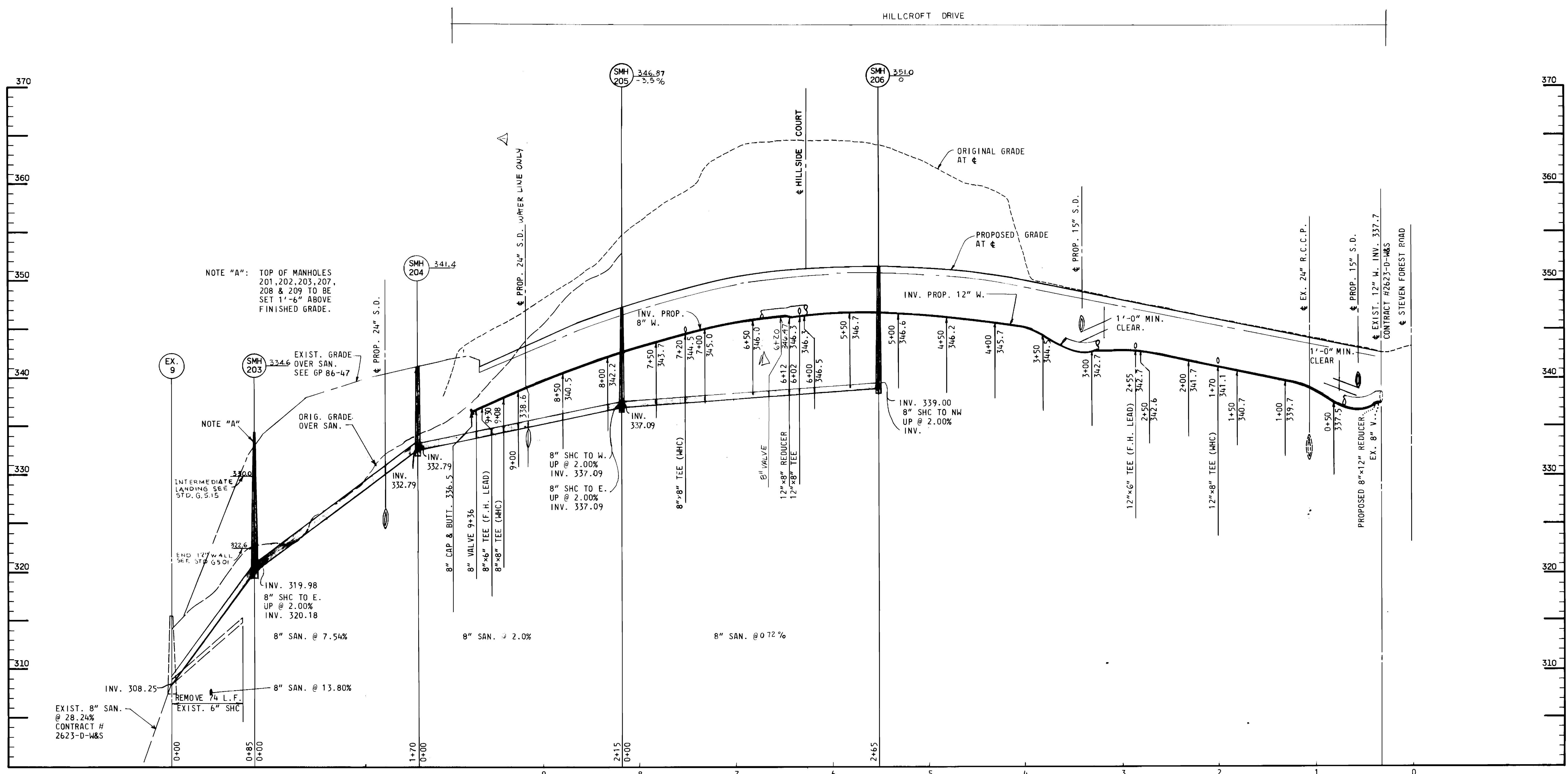
VILLAGE OF OWEN BROWN  
SECTION 5 AREA 1  
CONTRACT NO. 24-1482-D  
6th ELECTION DISTRICT  
HOWARD CO. MARYLAND

DRAWING NO. 2 OF 4  
SCALE 1" = 50'

6/23/86  
Date

*James P. Keenan*  
Professional Eng. No. 6906

REVISED AS PER COUNTY COMMENTS DATED 7/21-86



NOTE "A": TOP OF MANHOLES 201, 202, 203, 207, 208 & 209 TO BE SET 1'-6" ABOVE FINISHED GRADE.

NOTE "A": ORIG. GRADE OVER SAN.

INTERMEDIATE LANDING SEE STD. G.S.15

END 12" WALL SEE STD. G.S.15

INV. 319.98  
8" SHC TO E.  
UP @ 2.00%  
INV. 320.18

8" SAN. @ 7.54%

REMOVE 74 L.F. EXIST. 6" SHC

8" SAN. @ 13.80%

EXIST. 8" SAN. @ 28.24% CONTRACT # 2623-D-W&S

8" CAP & BUTT. 336.5

8" VALVE 9+36

8"x6" TEE (F.H. LEAD)

8"x8" TEE (MHC)

8" SHC TO W. UP @ 2.00% INV. 337.09

8" SHC TO E. UP @ 2.00% INV. 337.09

8" SAN. @ 2.00%

8" SAN. @ 0.72%

8"x8" TEE (MHC)

8" VALVE

12"x8" REDUCER

12"x8" TEE

8" & 12" WATER MAIN  
8" SANITARY SEWER

HILLCROFT DRIVE

PROFILE

SCALE: HOR. 1" = 50'  
VER. 1" = 5'

REVISED AS PER COUNTY COMMENTS DATED 7/21/86

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert Quinn* 9/16/86  
DIRECTOR OF PUBLIC WORKS DATE

*Robert Quinn* 9/16/86  
CHIEF - BUREAU OF UTILITIES DATE

*Robert Quinn* 9/16/86  
CHIEF - BUREAU OF UTILITIES DATE

*Robert Quinn* 9/16/86  
CHIEF - BUREAU OF UTILITIES DATE

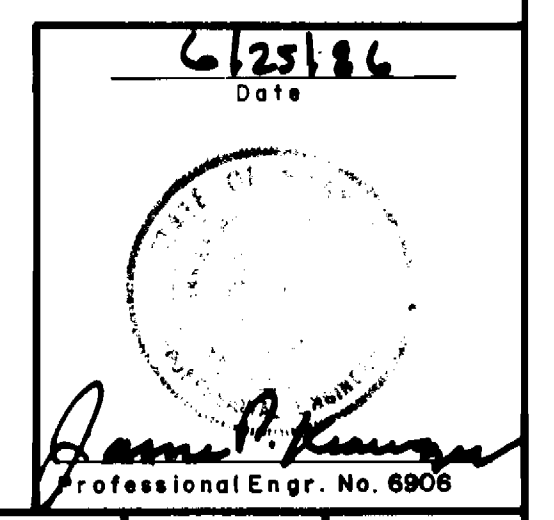
CENTURY ENGINEERING, INC.  
CONSULTING ENGINEERS - PLANNERS  
TOWSON, MARYLAND 21204

DATE	NO.	REVISION DESCRIPTION
11/20/86	1	Change dimensions

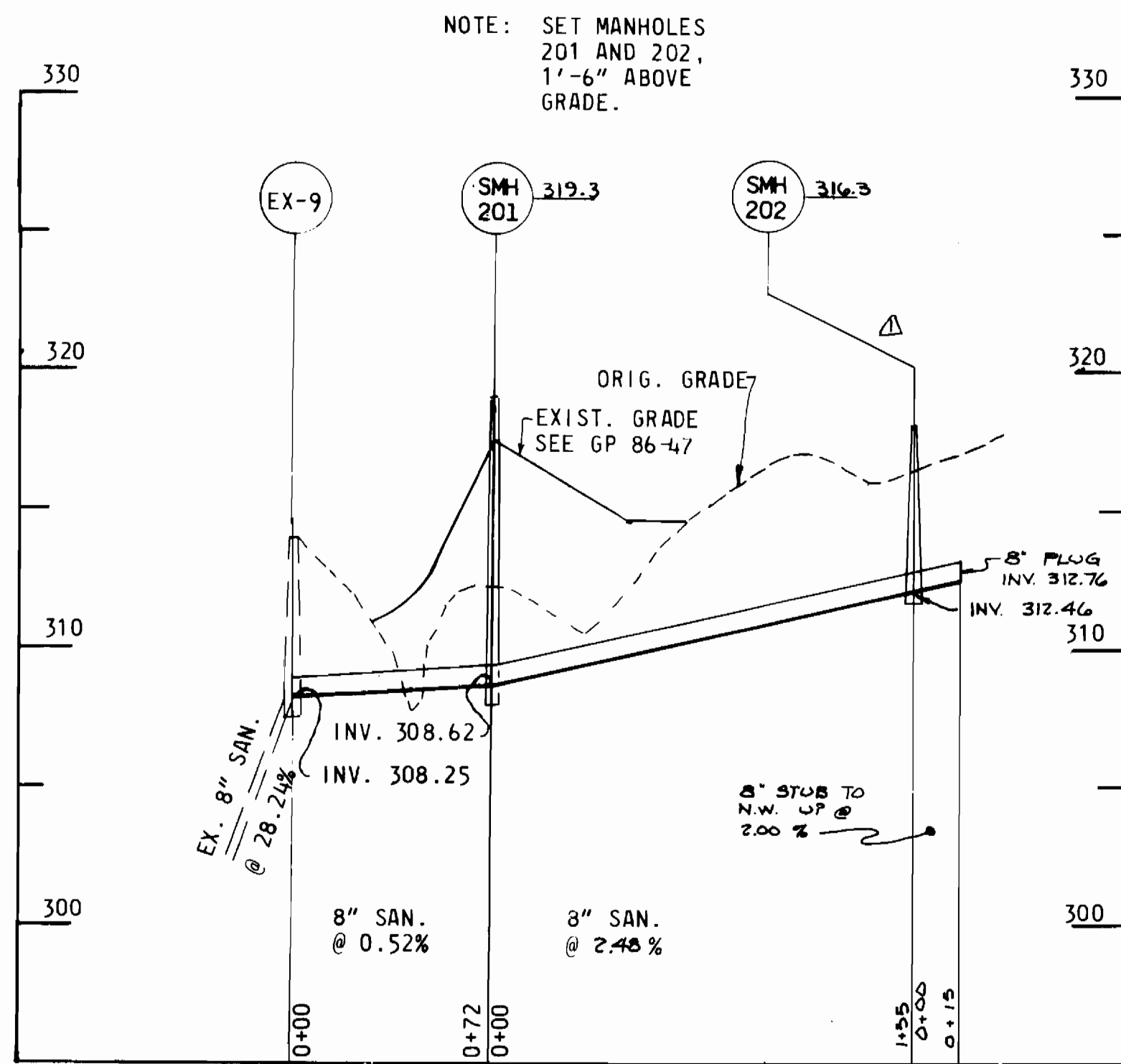
8" WATER MAIN  
8" SANITARY SEWERS  
PROFILES

VILLAGE OF OWEN BROWN  
SECTION 5 AREA 1  
CONTRACT NO. 24-1482-D  
6th ELECTION DISTRICT HOWARD CO. MARYLAND

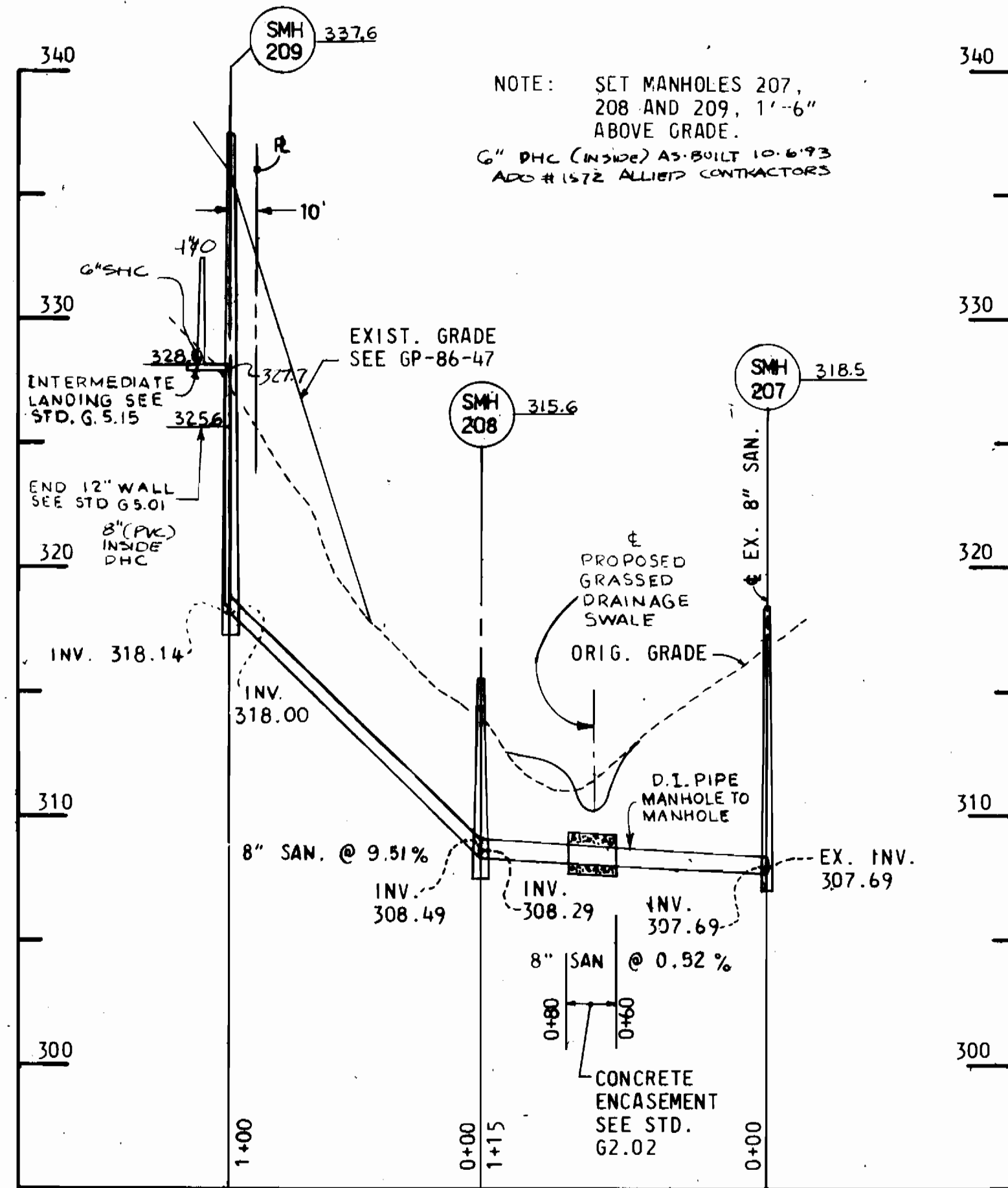
DRAWING NO. 3 OF 4  
SCALE AS SHOWN



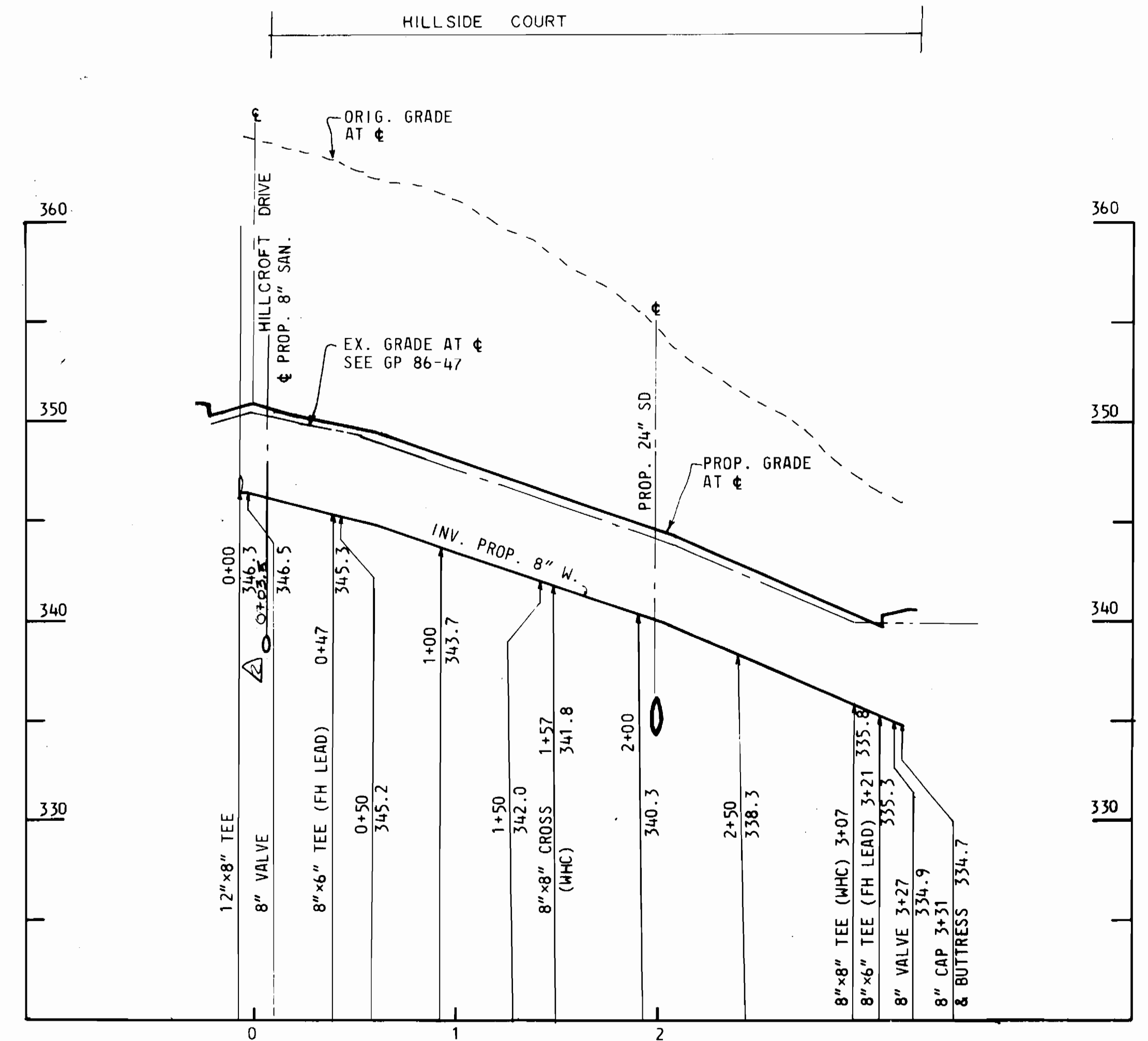




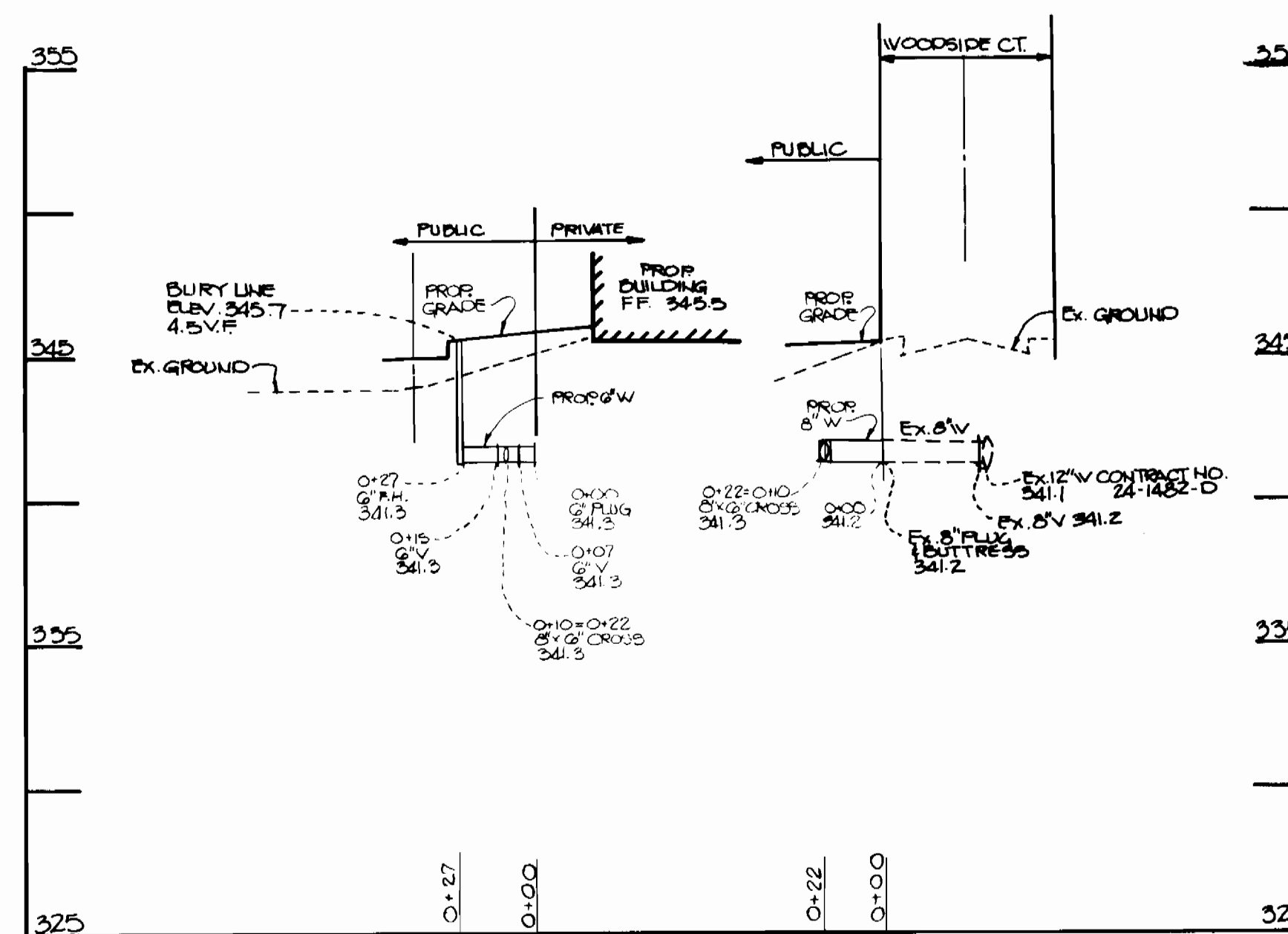
**8" SANITARY SEWER  
PROFILE**  
SCALE: HOR. 1" = 50'  
VER. 1" = 5'



**8" SANITARY SEWER  
PROFILE**  
SCALE: HOR. 1" = 50'  
VER. 1" = 5'



**8" WATER MAIN  
HILLSIDE COURT  
PROFILE**  
SCALE: HOR. 1" = 50'  
VER. 1" = 5'



**WATER PROFILE**  
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

REVISED AS PER COUNTY  
COMMENTS DATED 7/21/86

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Director of Public Works: *George F. Nummy* 9-14-86  
Chief - Bureau of Engineering: *William A. Ray* 9-14-86  
Chief - Bureau of Utilities: *Robert J. ...* 9-14-86  
Chief - Land Development Division: *...* 9-14-86

CENTURY ENGINEERING, INC.  
CONSULTING ENGINEERS - PLANNERS  
TOWSON, MARYLAND 21204

DATE	NO.	REVISION DESCRIPTION
11-24-84	1	change pipe.
11-4-86	2	RELOCATED SMH # 202
		REVISION DESCRIPTION

8" WATER MAIN  
8" SANITARY SEWERS  
PROFILES

VILLAGE OF OWEN BROWN  
SECTION 5  
AREA 1  
CONTRACT NO. 24-1482-D  
6th ELECTION DISTRICT  
HOWARD CO. MARYLAND

DRAWING NO. 4 OF 4  
SCALE AS SHOWN

6/25/86  
Date  
STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
*James T. ...*  
Professional Eng. No. 6906

AS BUILT 11-9-83