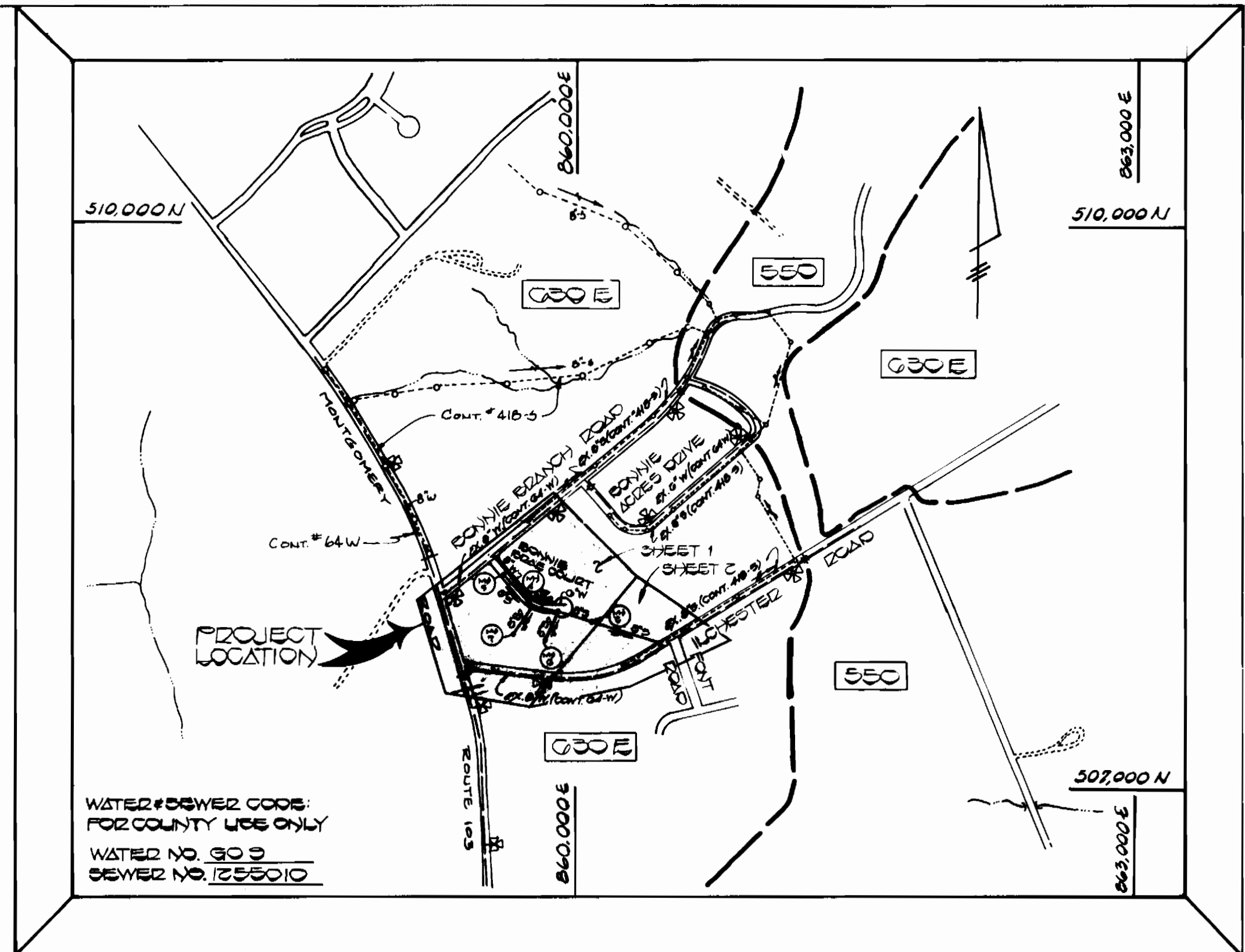


SEWER HOUSE CONNECTION INVERT ELEVATIONS AT PROPERTY LINE		
STATION	LOT	ELEV.
MH*3 TO MH*4		
1+02 LT	LOT 18	454.92
1+07 LT	LOT 18	456.85
1+09 LT	LOT 18	454.87
1+11 LT	LOT 17	456.80
MH*3 TO MH*4		
0+49 LT	LOT 17	456.80
1+07 LT	LOT 17	459.81
1+11 LT	LOT 17	459.81
MH*4 TO MH*5		
0+78 LT	LOT 9	452.79
1+12 LT	LOT 9	452.17
1+16 LT	LOT 9	459.46
1+20 LT	LOT 9	471.05
1+24 LT	LOT 9	477.53
1+28 LT	LOT 9	477.53
MH*4 TO MH*7		
MH*7 LT	LOT 6	471.40
MH*7 RT	LOT 6	471.40
MH*5 TO MH*6		
MH*5 LT	LOT 7	459.80
MH*5 RT	LOT 7	459.80
EX MH*14 TO EX MH*14C		
EX MH*14 LT	LOT 22(1)	469.86
EX MH*14 RT	LOT 22	461.00
EX MH*14C RT	LOT 24	470.87

MANHOLE TABLE			
NO.	LOC. STA.	DIST.	BIM.
5	1+17	7' RT	488.50
4	3+07	0' RT	473.00
3	4+71	17' RT	488.00

BENCH MARKS	
B.M.*1	ELEV. 459.80
P.L. NAIL SET IN PAVING, IN FRONT CORNER OF LOT 24 (TRAVERSE STA. 1+0-3)	
B.M.*2	ELEV. 454.80
P.L. NAIL SET IN PAVING, 100' SOUTHWEST OF G#4 POLE #180004 (TRAVERSE STA. 1+0-1)	
B.M.*3	ELEV. 451.00
P.L. NAIL SET IN PAVING, IN FRONT OF LOT G, 40' NORTHWEST OF G#6 POLE #187410 (TRAVERSE STA. 1+0-10)	



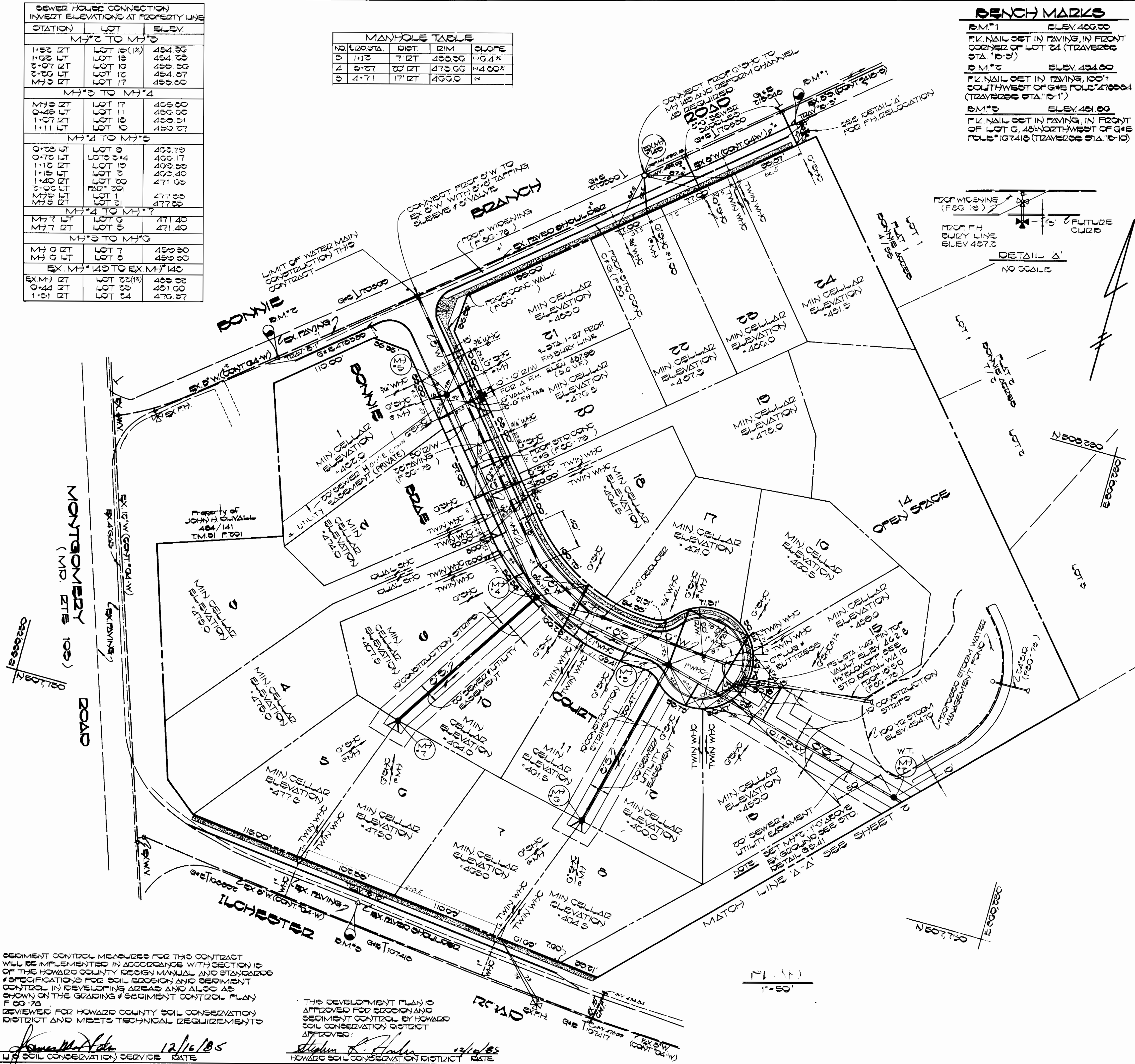
TYPE OF BUILDING: RESIDENTIAL  
 NUMBER OF LOTS: 24 (23 BUILDABLE)  
 NO. OF WATER HOUSE CONN.: 23  
 NO. OF SEWER HOUSE CONN.: 24  
 DRAINAGE AREA: PATAPSCO

VICINITY 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"
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY 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 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
  - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9013
  - 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 92 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 WATERTIGHT FRAME AND COVERS STANDARD DETAIL 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.
- 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 FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.

ITEM	EST. QTY	AS QUOT.	SUPPLIER
6" SEWER	1500 LF	1360 LF	ATLANTA STATE (U.I.P.)
6" SEWER	600 LF	571 LF	DELMAR FEEL (U.I.P.)
MANHOLES	7 EA	7 EA	DELMAR FEEL (U.I.P.)
6" SADDLES	0 EA	0 EA	
6" WATER	570 LF	570 LF	ATLANTA STATE
6" WATER	150 LF	150 LF	ATLANTA STATE
PIPE HYD	1 EA	1 EA	ATLANTA STATE
4" W.P.C.	170 LF	170 LF	ATLANTA STATE
1" W.P.C.	205 LF	205 LF	ATLANTA STATE
1 1/2" BLOWOFF	1 EA	1 EA	ATLANTA STATE
PH DELOCATION	1 EA	1 EA	ATLANTA STATE
8" x 8" x 8" V	1 EA	1 EA	ATLANTA STATE



SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 15 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARD SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING & SEDIMENT CONTROL PLAN F 60-78.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

12/16/85

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

12/16/85

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

12-19-85

12-16-85

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

8388 COURT AVENUE  
 ELLICOTT CITY, MARYLAND 21043

12/16/85



LS: D.B.S.	
DRN: D.B.S.	
CHK: T.A.F.	
DATE:	BY NO. REVISION DATE

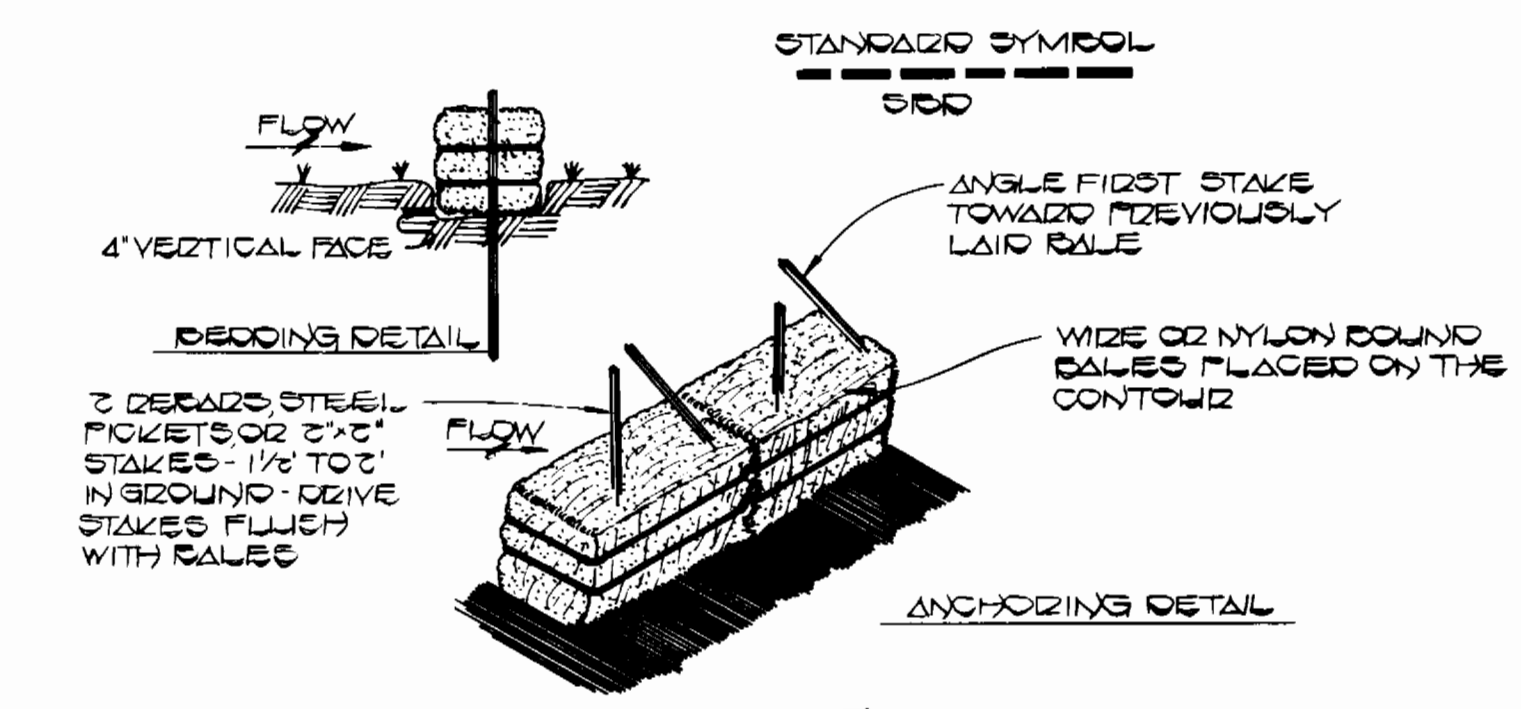
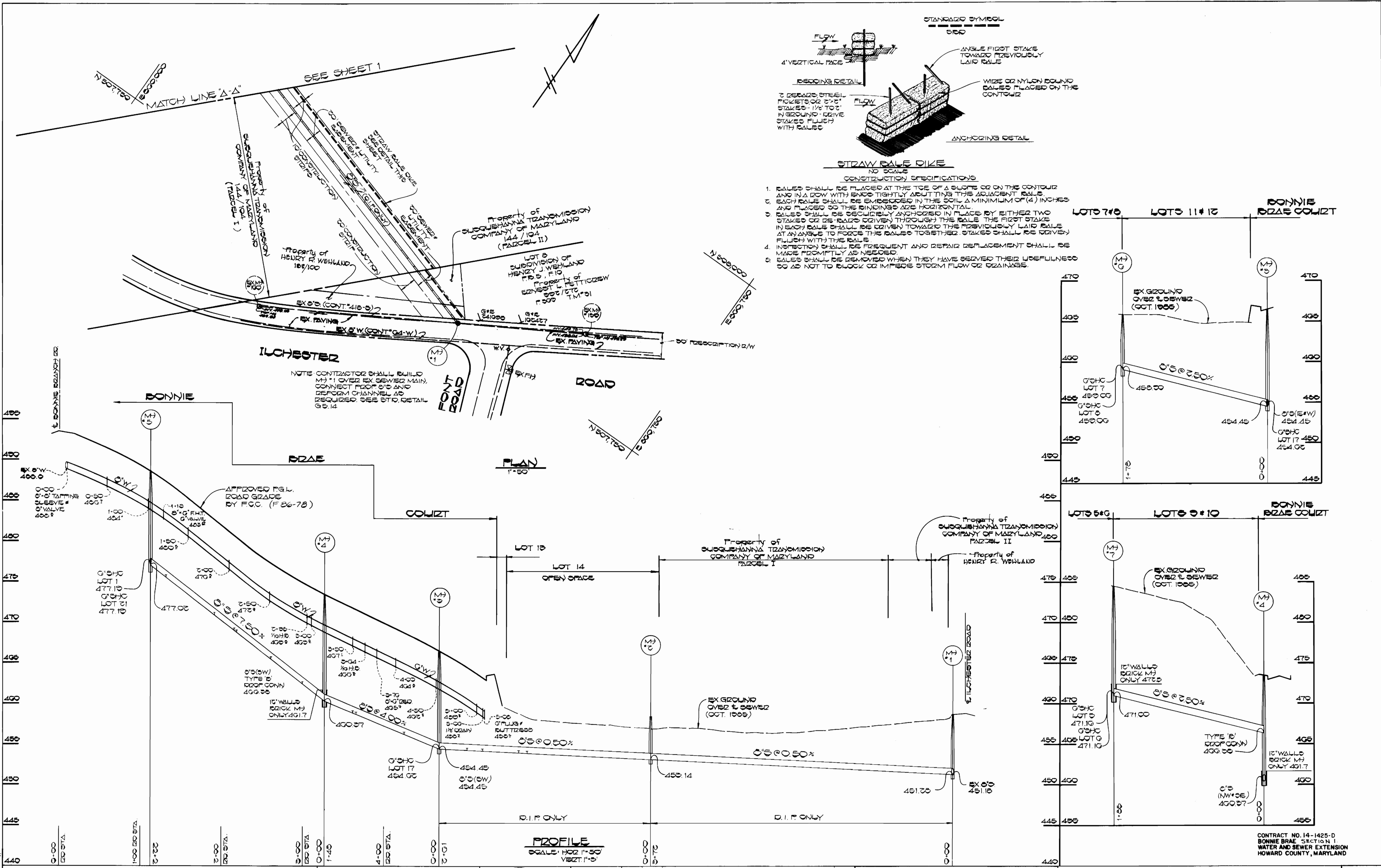
PLAN  
 WATER AND SEWER MAINS

600' SCALE MAP NO. 31 BLOCK NO.

BONNIE BRAE  
 CONTRACT NO. 14-1425-D  
 1 ST. ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2



- STRAW BALE DIKE**  
NO SCALE
- CONSTRUCTION SPECIFICATIONS**
- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJUTING THE ADJACENT BALES.
  - EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES AND PLACED SO THE BINDINGS ARE HORIZONTAL.
  - BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR DEBRAZ DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
  - INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
  - BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPHSE STORM FLOW OR DRAINAGE.

NOTE CONTRACTOR SHALL BUILD M#1 OVER EX. SEWER MAIN. CONNECT FROM 0'S AND REFORM CHANNEL AS REQUIRED. SEE STD. DETAIL G-14.

CONTRACT NO. 14-1425-D  
BONNIE BRAE SECTION I  
WATER AND SEWER EXTENSION  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Director*  
DIRECTOR OF PUBLIC WORKS  
DATE: 12-14-85

*Chief*  
CHIEF BUREAU OF UTILITIES  
DATE: 12-16-85

FISHER, COLLINS AND CARTER, INC.  
CONSULTING ENGINEERS AND LAND SURVEYORS  
8368 COURT AVENUE  
ELLCOTT CITY, MARYLAND 21043

*Terrell A. Fisher*  
TERRELL A. FISHER  
DATE: 12-1-85



DES: D.B.S.	
DRN: D.B.S.	
CHK: T.A.F.	
T.A.F.	ADD LOCATION OF WELSHLAND PROPERTY
BY: N.O.	REVISION
DATE:	DATE: 1/1/86

**PLAN, PROFILES & DETAILS**  
**WATER AND SEWER MAINS**

600' SCALE MAP NO. 31 BLOCK NO. \_\_\_\_\_

**BONNIE BRAE**  
CONTRACT NO. 14-1425-D  
1 ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2