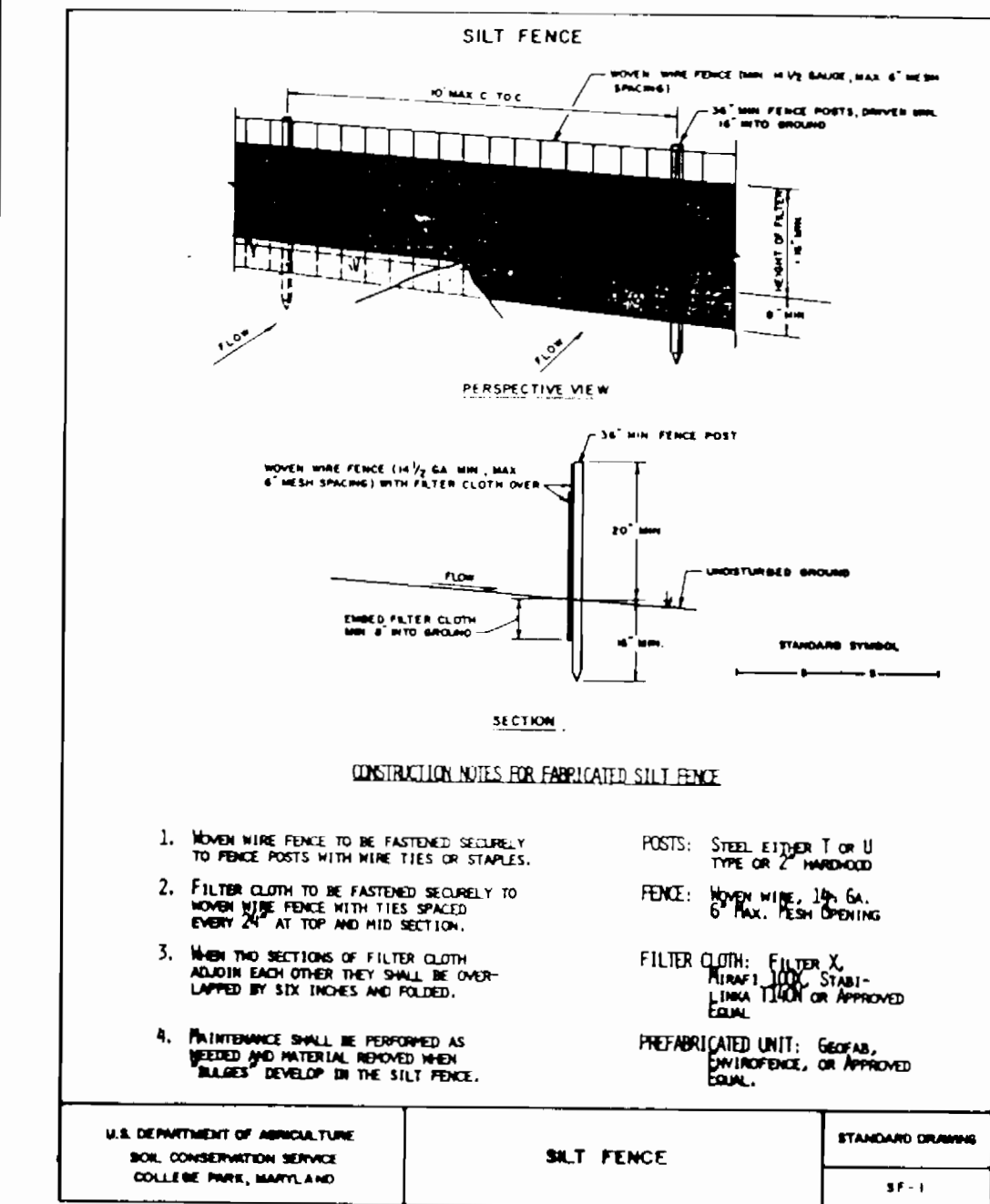


QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
MANHOLE	2		
8" SEWER	346 LF		
4" SHC	62 LF		
MANHOLE DROP CONNECTION	1		

MANHOLE NUMBER	LOCATION	INV IN	INV OUT	RIM ELEV.	TYPE	REMARKS
MH 8	E 20+06.231 LT	436.40	436.30	448.10	STD	G 513
MH 7	E 20+04.7 RT	434.86	434.75	443.9	STD	G 513

MANHOLE TABULATION			
NO	ROAD STA.	OFFSET	RIM EL.
8	20+06	221 LT	448.1
7	20+04	7 RT	443.9
EX. B			



NOTE: ALL FILL MATERIAL IS TO BE PLACED AT THE HIGH SIDE OF TRENCH. THE CONTRACTOR SHALL NOT EXCAVATE MORE TRENCH IN ANY DAY THAN CAN BE INSTALLED AND BACKFILLED IN THE SAME DAY.

STABILIZATION NOTE
 FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN:
 1) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1
 2) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 219 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.

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

Staff 26
 HOWARD CO. S.C.D. DATE 10/16/90

REVIEWED FOR HOWARD CO. S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

James M. ...
 DATE 9-13-90

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. ... 5/90
 DIRECTOR OF PUBLIC WORKS DATE

Richard ... 9-11-90
 CHIEF, BUREAU OF UTILITIES DATE

Richard ... 11/2/90
 CHIEF, LAND DEVELOPMENT DIVISION DATE

DEWBERRY + DAVIS
 200 HARRY S. TRUMAN PKWY.
 ANNAPOLIS, MARYLAND 21403
 841-6811 261-8707 (METRO)



DES:	RAB:	Added note:	sheet	of	DATE
MLH	MLH		2	2	10/16/90
CHK:	GSG/MS				
DATE:	4-17-90				
BY:	NO.	REVISION			

PLAN + PROFILE
 SEWER

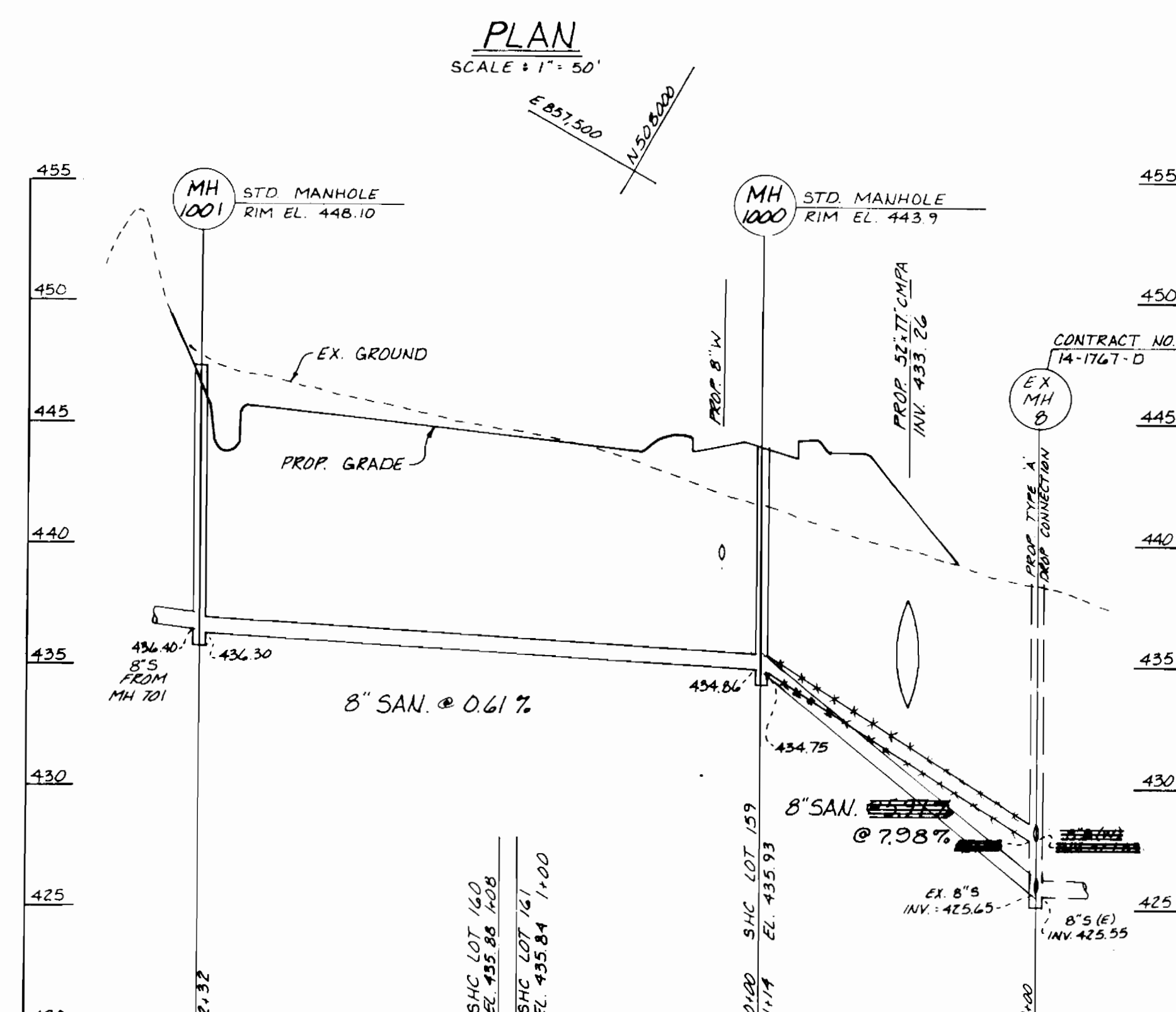
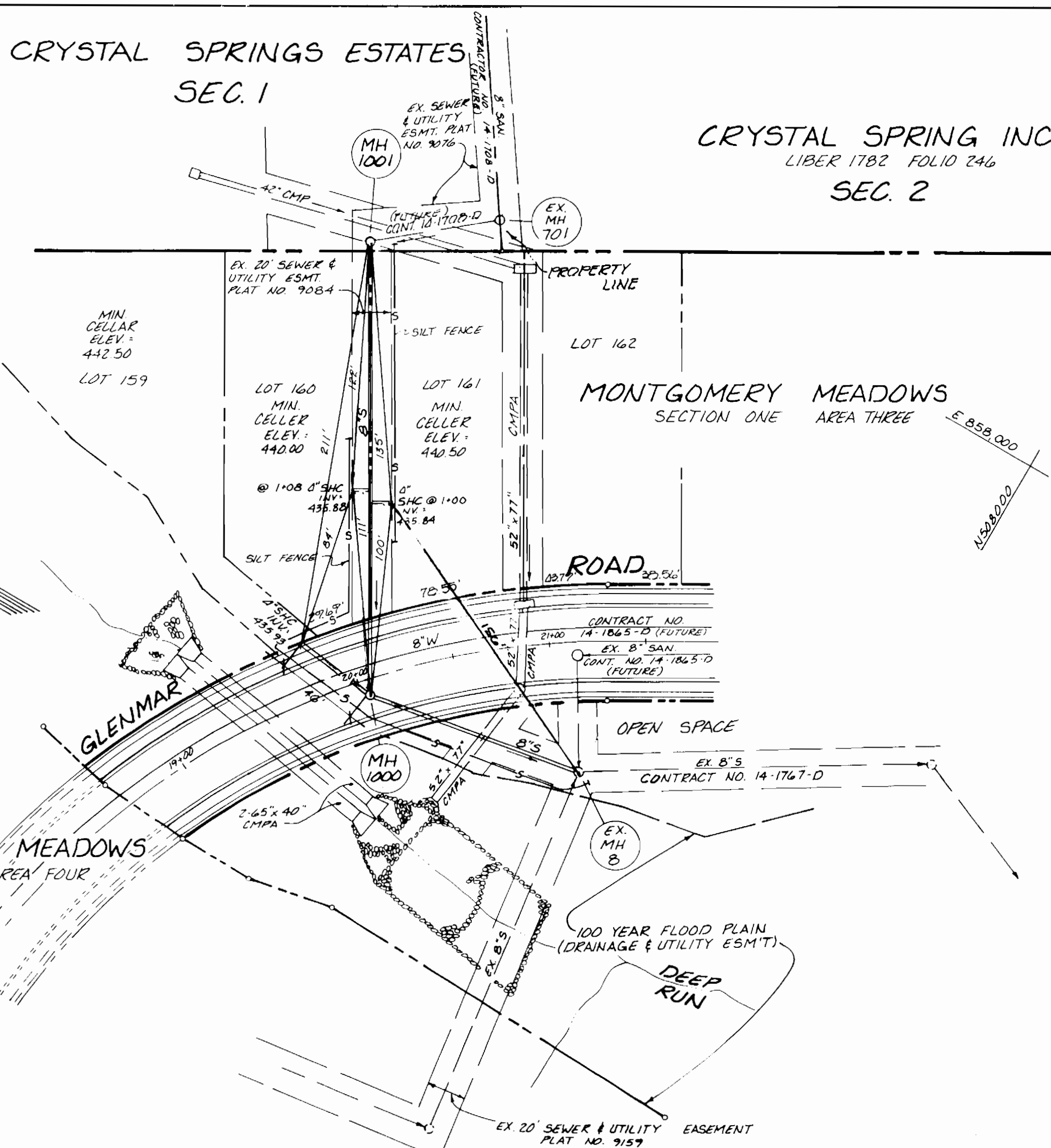
600' SCALE MAP NO. 31 BLOCK NO. 12

CONTRACT NO. 17-30762-10
 CRYSTAL SPRING ESTATES
 SECTION ONE

TAX MAP 31
 1ST ELECTION DISTRICT
 SCALE: 1" = 50'

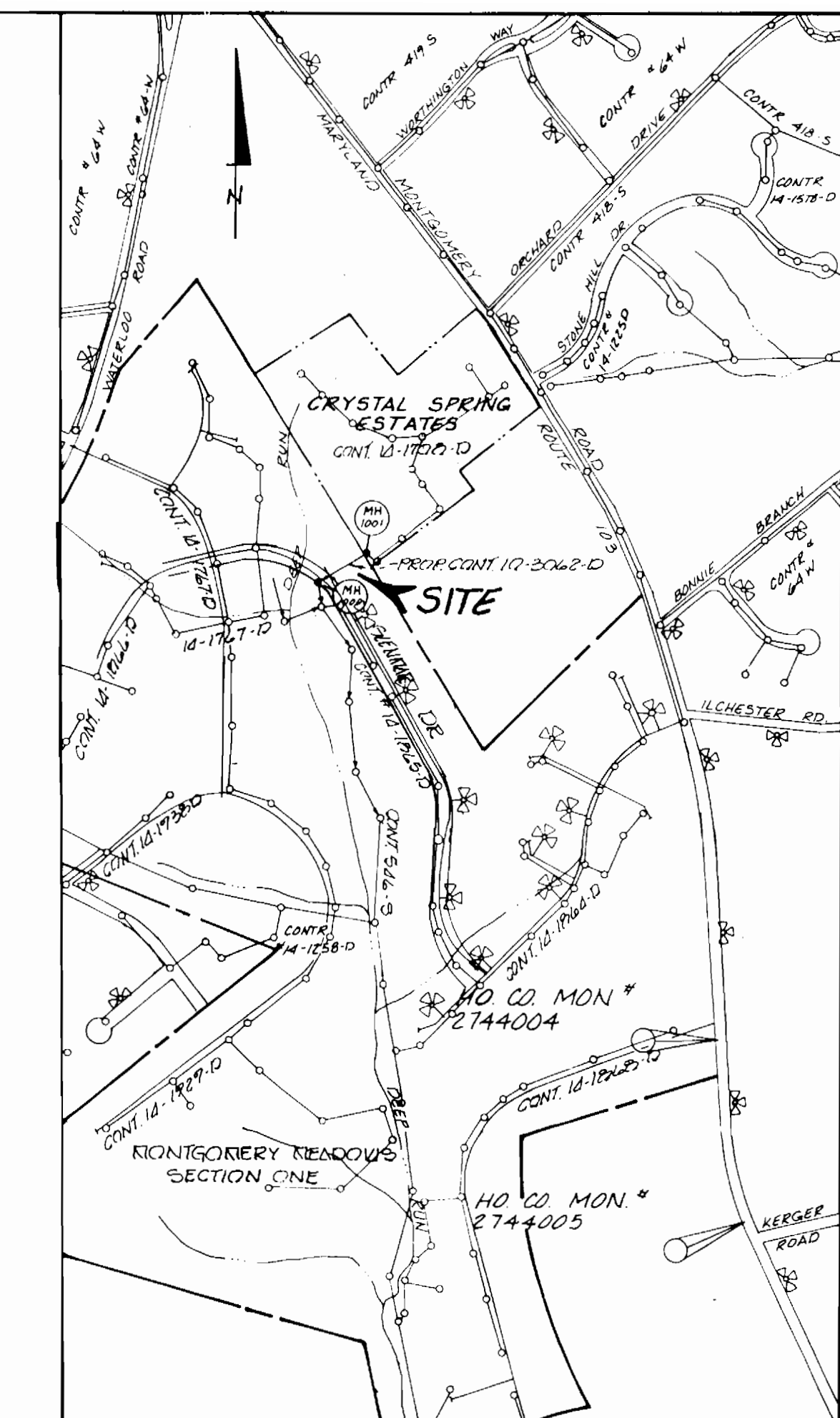
PARCEL 175
 HOWARD COUNTY, MARYLAND
 DATE MARCH, 1990

SCALE AS SHOWN
 SHEET 1 OF 2



- GENERAL NOTES:**
- APPROPRIATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL MAKE 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.C.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. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR CONSTRUCTION OF THE MAIN.
 - FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS.
 - FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS.
 - CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 STATE HIGHWAY ADMINISTRATION 531-5533
 BALTIMORE GAS AND ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE 685-0123
 BALTIMORE GAS AND ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE 685-0123
 ENGINEERING - "DAMAGE CONTROL" 234-5611
 "WATER UTILITIES" 1-800-0100
 CHESAPEAKE AND POTOMAC (CAP) TELEPHONE COMPANY 725-9976
 AMERICAN TELEPHONE AND TELEGRAPH - CABLE LOCATION DIVISION 393-3533
 COLONIAL PIPELINE COMPANY 795-1390
 BUREAU OF UTILITIES HOWARD COUNTY 992-2366
 - TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES 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 AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 - PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE.
 - THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITH 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 WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL G.S.52. WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE, STANDARD DETAIL G.S.4-1.
 - ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153 EXCELLE DEEM COMPACT FITTINGS, 3-INCH THROUGH 12 INCH WITH OTHER LIQUIDS.

AS-BUILT
 COMPLETED 7-15-91



VICINITY MAP
 SCALE: 1" = 600'
 WATER CODE: N/A SEWER CODE: 8900000

TYPE OF BUILDING: SINGLE FAMILY - RESIDENTIAL
 NUMBER OF LOTS: _____
 NO. OF SINGLE HOUSES: _____
 NO. OF CONDOMINIUMS: _____
 DRAINAGE AREA: _____

PERMANENT SEEDING NOTES:
 APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
SEEDING PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULE:
 1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA/FORM FERTILIZER (9 LBS/1000 SQ. FT.).
 2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.
SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE 500. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

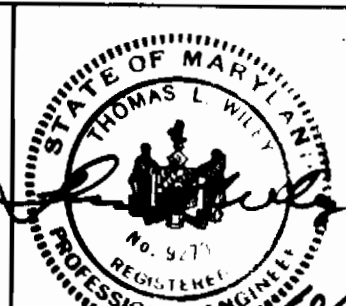
SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT
2. INSTALL SILT FENCE
3. CLEAR AND GRUB AREA NECESSARY TO INSTALL SEWER LINE
4. INSTALL SEWER LINE
5. REGRADE AREA DISTURBED TO EXISTING GRADE
6. STABILIZE WITH A PERMANENT VEGETATIVE COVER
7. REMOVE SILT FENCE UPON PERMISSION OF INSPECTOR

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51) AND (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	0.16 ACRES
AREA DISTURBED	0.16 ACRES
AREA TO BE ROOFED OR PAVED	0.03 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.13 ACRES
TOTAL CUT	180 ACRES
TOTAL FILL	180 ACRES
OFFSITE WASTE/BORROW AREA LOCATION	N/A
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>[Signature]</i> 11/5/90 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>[Signature]</i> 11-1-90 CHIEF, BUREAU OF UTILITIES DATE</p>	<p>DEWBERRY & DAVIS ARCHITECTS-ENGINEERS-PLANNERS-SURVEYORS 200 HARRY S. TRUMAN PARKWAY ANNAPOLIS, MD. 21401 (301) 261-8707</p>		<p>DES: _____</p> <p>DRN: _____</p> <p>CHK: _____</p> <p>DATE: _____</p>	<p>SEDIMENT CONTROL NOTES</p>	<p>CONTRACT NO. 107-30762-D</p> <p>CRYSTAL SPRING ESTATES SECTION ONE</p> <p>TAX MAP 31 1ST ELECTION DISTRICT SCALE: 1" = 50'</p> <p>PARCEL 175 HOWARD COUNTY, MARYLAND DATE MARCH, 1990</p>	<p>SCALE AS SHOWN</p> <p>SHEET 2 OF 2</p>								
			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>BY</th> <th>NO.</th> <th>REVISION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	DATE	BY	NO.	REVISION					<p>600' SCALE MAP NO. 31 BLOCK NO. 12</p>		
DATE	BY	NO.	REVISION											

JLT AS BUILT