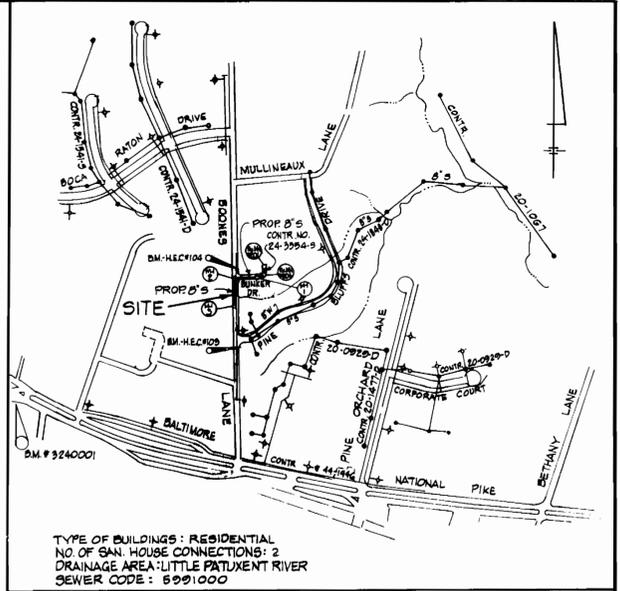
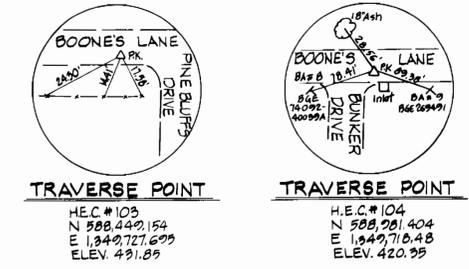
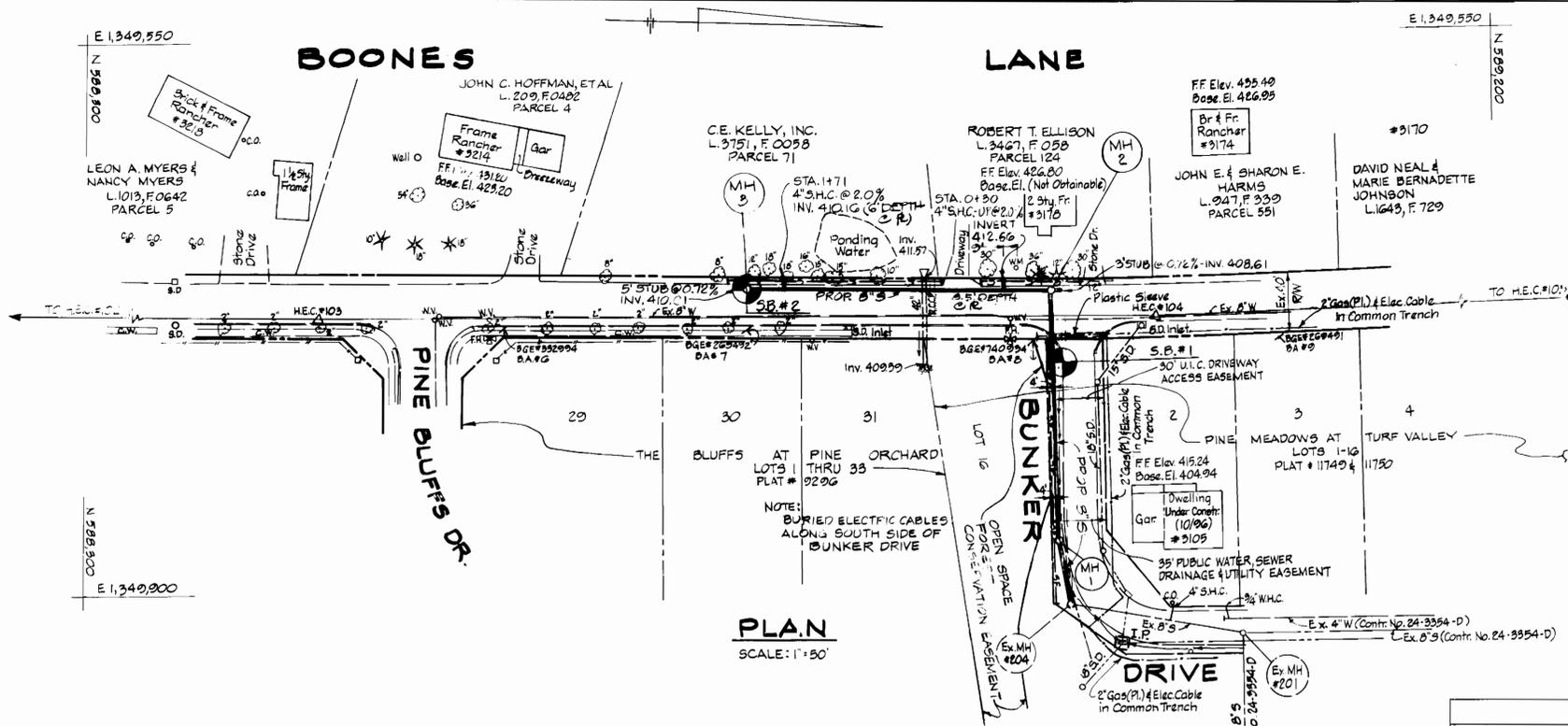


AS BUILT AUG 11, 1997



PLAN
SCALE: 1"=50'

VICINITY MAP
SCALE: 1"=600

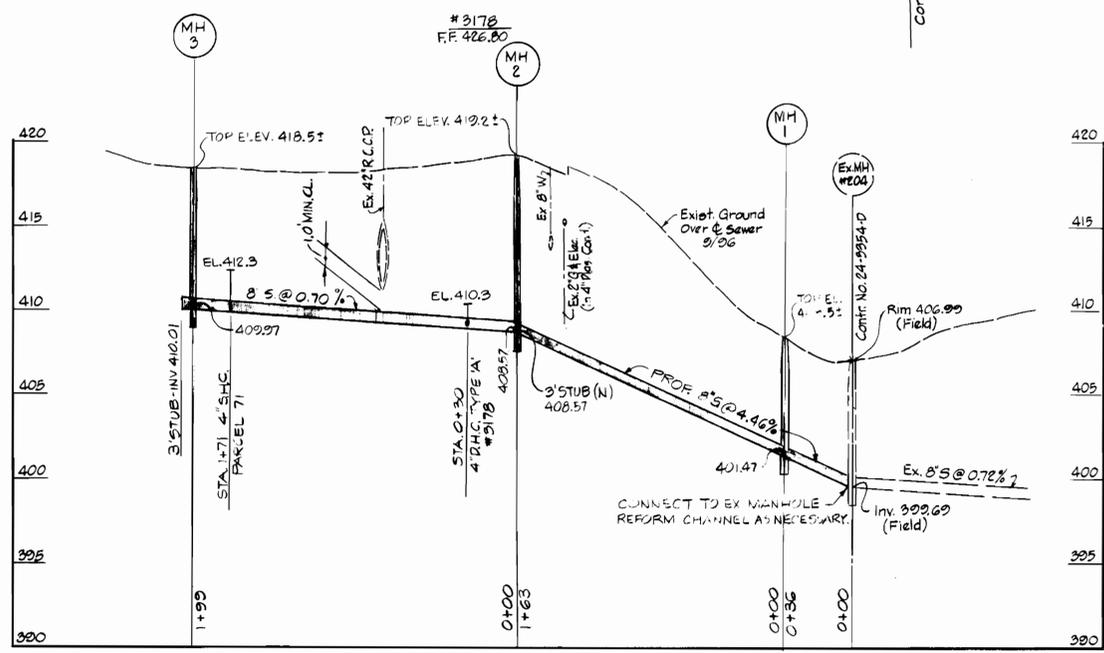
ITEMS	QUANTITIES ESTIMATED	AS BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" SEWER MAIN	392 L.F.	392 L.F.	P.V.C.	J-M MANUFACTURER
4'-0" DIA. M.H.	3 EA.	3	CONCRETE	ATLANTIC CONCRETE
4' SAN. HSE. CONN.	16 L.F.	20 L.F.	P.V.C.	J-M
4' DROP S.H.C.-A	1 EA.	1	P.V.C.	FINKEBURG CONCRETE

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 service. 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 unless otherwise noted on the plans.
- Clear all utilities by a minimum of 6'. Clear all poles by 5'-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, any cost incurred by the owner for 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, Volume IV, Standard Specifications and Details 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 \boxtimes 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 construction operations at his own expense.
- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
 - AT&T 865-3803
 - BG&E - Contractor Services 850-4620
 - BG&E - Underground Damage Control 787-9068
 - Bureau of Utilities (DPW) 313-4900
 - Bell Atlantic - MD, Inc. 597-8585
 - Colonial Pipeline Co. 795-1390
 - Miss Utility 1-800-257-7777
 - State Highway Administration 531-5533
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the Contractor.
- The 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.
- The Contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five working days before any open cut of any County road or trenchless installation operation in county roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114(a) of the Howard County Code.

STAKEOUT DATA			
MAIN FITTING	DISTANCE	OFFSET	
MH-1	H.E.C.#104 TO H.E.C.#103 22'	14" LT.	
MH-2	H.E.C.#104 TO H.E.C.#103 67'	17" RT.	
MH-3	H.E.C.#104 TO H.E.C.#103 261'	19" RT.	

RESTORATION SCHEDULE		
LOCATION	LENGTH	TYPE
8" SANITARY		
EX. MH# 204 TO MH#1	40 L.F.	SEED & MULCH
STA. 0+00 TO STA. 0+40	40 L.F.	SEED & MULCH
MH#1 TO MH#2	160 L.F.	SEED & MULCH
STA. 0+00 TO STA. 1+30	130 L.F.	PAVING
STA. 1+30 TO STA. 1+60	30 L.F.	PAVING
MH#2 TO MH#3	200 L.F.	PAVING
STA. 0+00 TO STA. 1+04	200 L.F.	PAVING



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

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John Polentano 10/30/96
APPROVED, HOWARD COUNTY S.C.D. DATE

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS
Cheryl Summers 10/30/96
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

DEVELOPER'S CERTIFICATION:
I HAVE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
John Polentano 10/18/96
BUREAU OF ENGINEERING DATE
DEPARTMENT OF PUBLIC WORKS.

ENGINEER'S CERTIFICATION:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
Donald E. Hicks, P.E. 10/15/96
DATE
HICKS ENGINEERING COMPANY, INC.
ENGINEERS - SURVEYORS - PLANNERS
200 EAST JOPPA ROAD, SUITE 402
TOWSON, MARYLAND 21286 TEL (410) 494-0001

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
James J. Lee 10/18/96
DIRECTOR OF PUBLIC WORKS DATE
Richard A. Hunnicutt, P.E. 10/23/96
CHIEF, BUREAU OF UTILITIES DATE

HICKS ENGINEERING CO. INC.
ENGINEERS - SURVEYORS - PLANNERS
200 E. JOPPA ROAD, SUITE 402
TOWSON, MARYLAND 21286
Donald E. Hicks, P.E. 10/18/96
DATE

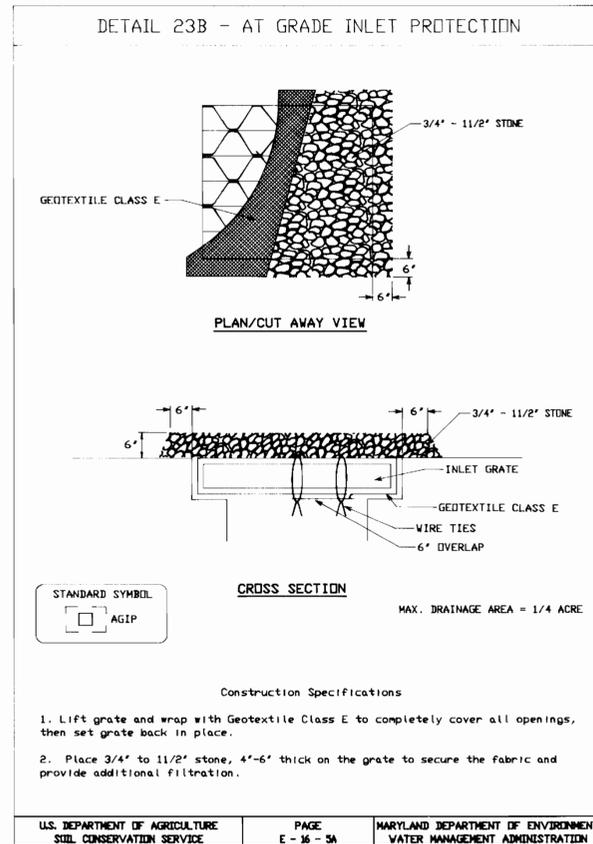
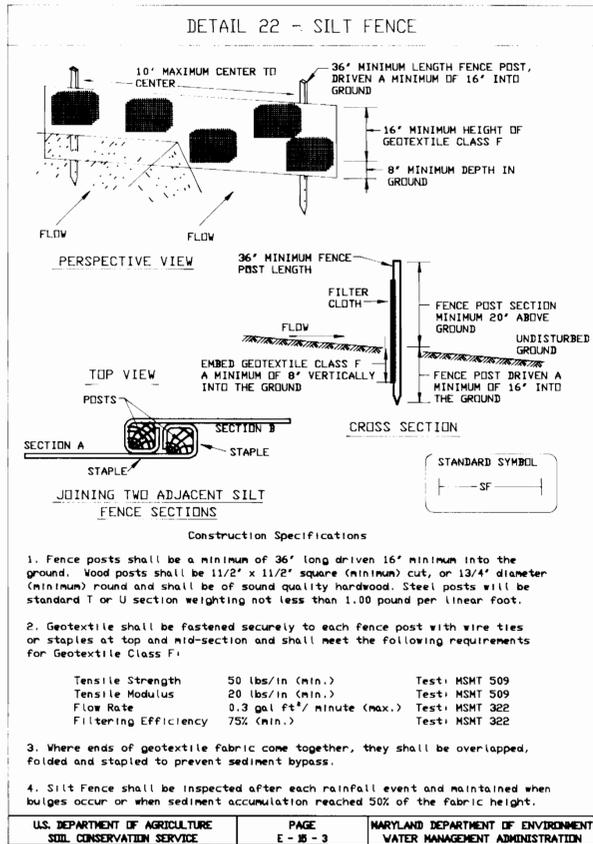
DES: F.W.	F.W.	1.	MOVED 8" SAN. 10' SOUTH, ADDED MH #1
DRN: R.W.			
CHK: D.E.H.			
DATE: 10/96	BY: NO.	REVISION	DATE

600' SCALE MAP NO. 17/24 BLOCK NO. 12/1

PLAN & PROFILE
8 INCH SEWER MAIN

BOONES LANE SEWER MAIN
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT S-6195
CONTRACT NO. 20-3574

SCALE AS SHOWN
SHEET 1 OF 2



SEQUENCE OF CONSTRUCTION	TIME TO COMPLETE
1. OBTAIN A GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS	0.5 WEEK
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION (313-1880) PRIOR TO STARTING DATE.	0.5 WEEK
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV.	1.0 WEEK
4. EXCAVATE AND INSTALL PROPOSED 8" SEWER MAIN.	2.0 WEEKS
5. RESTORE PAVING AND EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS.	1.0 WEEK
6. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES.	0.5 WEEK
7. FINE GRADE ALL DISTURBED AREAS AND STABILIZE WITH PERMANENT SEEDING.	0.5 WEEK

UTILITY NOTES

- OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY.
- PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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% BY 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING AND MULCHING. TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 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.
- SITE ANALYSIS:

TOTAL AREA OF SITE	N/A	ACRES
AREA TO BE ROOFED OR PAVED	0.14	ACRES±
AREA TO BE VEGETATIVELY STABILIZED	0.05	ACRES±
TOTAL CUT	750	CU. YDS.
TOTAL FILL	750	CU. YDS.
- OFFSITE WASTE/BORROW AREA LOCATION-TO BE DETERMINED BY THE CONTRACTOR.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED 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 SCHEDULES:

- 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.).
- 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 (14 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 (105 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 SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1.5 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 ANCHERING.

MAINTENANCE - INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sam A. Lee 10/29/96
DIRECTOR OF PUBLIC WORKS DATE

Michael Giovanniello 10/29/96
CHIEF, BUREAU OF UTILITIES DATE

Paul J. Spon 10/18/96
CHIEF, BUREAU OF ENGINEERING DATE

Debra 10-18-96
CHIEF, WATER & SEWER DESIGN DIV. DATE

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD - SUITE 402
TOWSON, MARYLAND 21286-3160
(410) 494-0001

[Signature]

DES: F.W.					
DRN: L.C.					
CHK: D.E.H.					
DATE: 10/96	BY	NO.	REVISION	DATE	600' SCALE MAP NO. 17.24 BLOCK NO. 2/1

DETAIL SHEET

BOONES LANE SEWER MAIN
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT S-6195
CONTRACT NO. 20-3574

SCALE AS SHOWN

SHEET 2 OF 2