

HOWARD COUNTY, MARYLAND

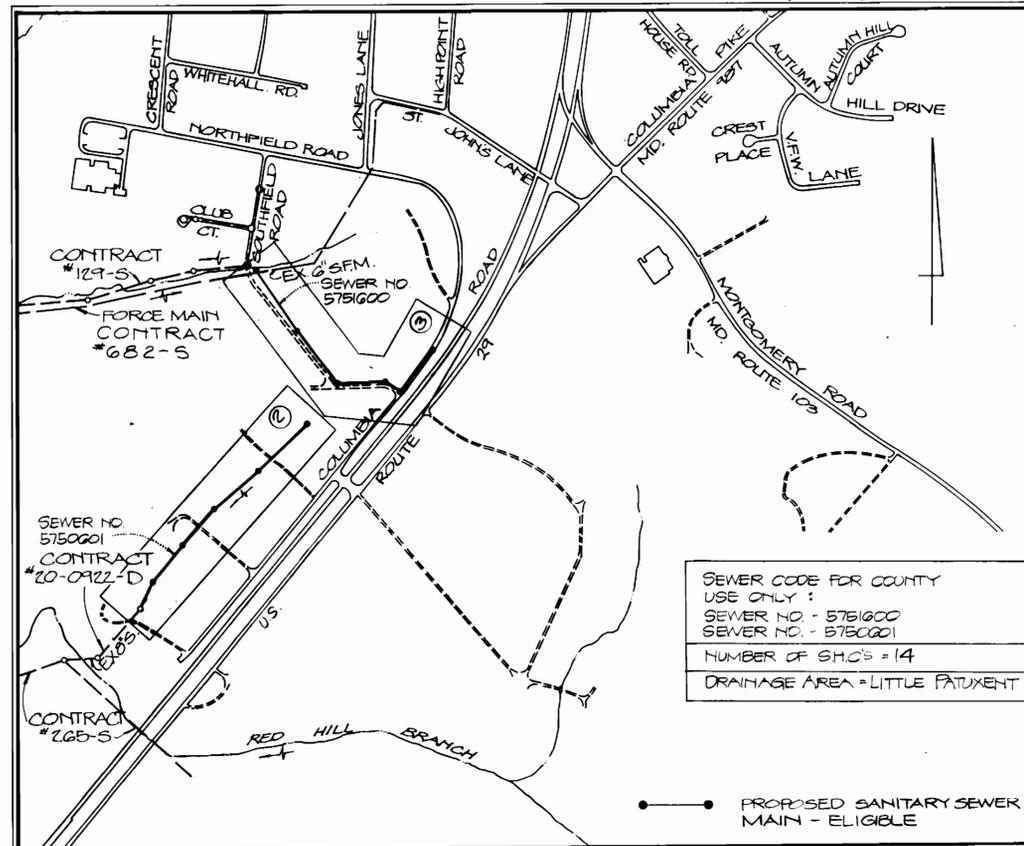
DEPARTMENT OF PUBLIC WORKS

EPA NO. C - 240723 - 07 (.14)

Reviewed for Howard County S.C.D. and meets technical requirements.
James M. Wilson Date: 9/14/82
 U.S. SOIL CONSERVATION SERVICE
 This development plan is approved for soil erosion and sediment control by The Howard County Soil Conservation District.
 Approved: *John T. Rome* Date: 9-14-82
 HOWARD COUNTY S.C.D.

ENGINEER'S CERTIFICATION
 I certify that this plan for erosion & 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 Date: 9/3/82
 KIDDE CONSULTANTS, INC.
 1020 CROMWELL BRIDGE ROAD
 TOWSON, MD 21204

DEVELOPER'S CERTIFICATION
 "I/We 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 Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."
William S. Riley
 BUREAU OF ENGINEERING
 DEPARTMENT OF PUBLIC WORKS



VICINITY MAP
 SCALE: 1"=500'

ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIERS
	ESTIMATE	AS-BUILT		
6" SEWER	7800 LF	2,772.30	P.V.C.	Extrusion Tech.
SAN. SEWER MANHOLES 10" A STD MINIMUM DEPTH OF 6'-0" (4' DIA)	10 EACH	10	PRECAST	Atlantic Precast
VERTICAL FEET OF SAN. SEWER MANHOLES IN EXCESS OF 6'-0" DEPTH.	42 VF	41'-8"	"	"
6" TYPE 'A' DROP CONNECTIONS	1 EACH	1	-	-
6" SHC	700 LF	245	P.V.C.	Extrusion Tech.
6" X 6" WYE - BRANCH OR TEE FITTINGS	14 EACH	14	P.V.C.	ITT Grinnell

COLUMBIA ROAD COLLECTOR SEWERS

CAPITAL PROJECT NO. S - 6095

CONTRACT NO. 20-1080

ELECTION DISTRICT NO. 2



COLUMBIA ROAD COLLECTOR SEWER
 CAPITAL PROJECT NO. S-6095
 CONTRACT NO. 20-1080

Donald E. Hicks

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
John F. Nunn 9-9-82
 DIRECTOR OF PUBLIC WORKS DATE
Robert Wood 9/9/82
 CHIEF, BUREAU OF UTILITIES DATE

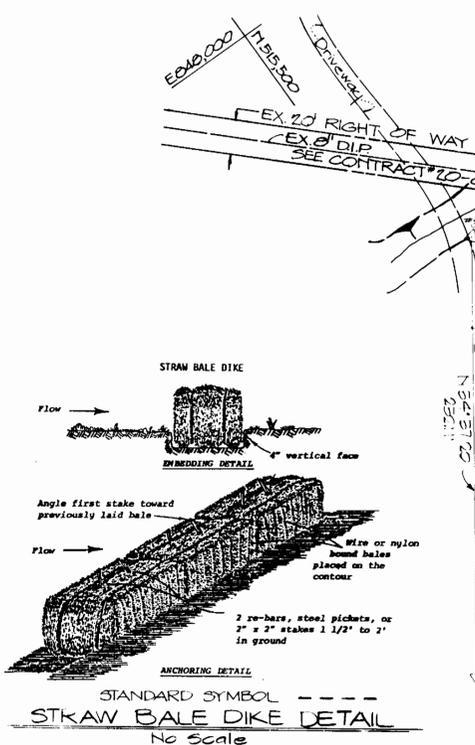
KIDDE CONSULTANTS, INC.
 CONSULTING ENGINEERS
 BALTIMORE, MARYLAND

CONTRACT NO. 20-1080
 CAPITAL PROJECT S-6095

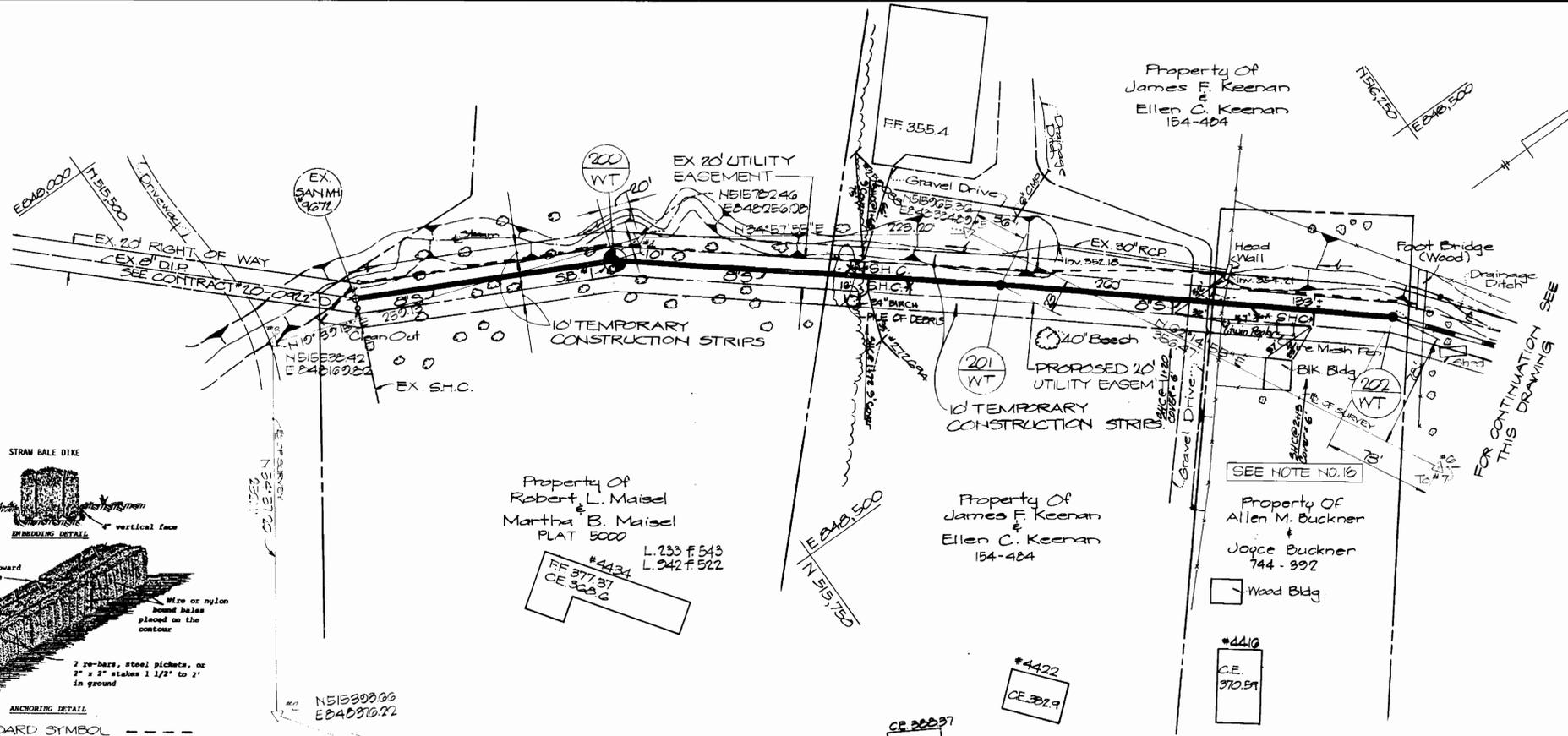
LOCATION MAP OF
 SEWER MAIN EXTENSION

COLUMBIA ROAD COLLECTOR SEWERS
 TITLE SHEET

DRAWING NO. 1 OF 4
 SCALE 1" = 500'
 DES. L.A.W.
 DRN R.E.W.
 CHK. D.E.H.



NOTE: CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING SHEDS.



NOTE: CONTRACTOR SHALL RETAIN A PROFESSIONAL ARBORIST TO PRUNE THE APPLE TREE IN ORDER TO PREVENT DAMAGE TO THE TREE. COST TO BE INCLUDED IN UNIT PRICE.

NOTE: CONTRACTOR TO COORDINATE WITH THE BIO. TEMPORARY FENCING SHALL BE PLACED AROUND TREE.

NOTE: CONTRACTOR TO DETERMINE EXACT LOCATION OF LEACHING BED, BY TEST-PITTING IF NECESSARY.

PLAN
Scale: 1" = 50'
FOR PROFILE SEE SHEET 4 OF 4

CAUTION: APPROX. LOCATION OF EX. ELEC. CABLE TO BE LOCATED AND PROTECTED BY THE CONTRACTOR

- GENERAL NOTES**
- ALL SEWER MAINS SHALL BE VCPA, ACP CLASS 2400 OR PVC UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
 - HOUSES WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CAN NOT BE SERVED.
 - ALL MANHOLES SHALL BE 4'-0" DIAMETER UNLESS OTHERWISE NOTED.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES 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.
 - CONTRACTOR SHALL LOCATE EX. UTILITIES A MINIMUM OF 2 WEEKS IN ADVANCE OF CONSTRUCTION OPERATION. IN THE VICINITY OF PROPOSED UTILITIES, AT HIS OWN EXPENSE, AND NOTE ANY CONFLICTS TO THE ENGINEER.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 288-4435
 - ATTN: MR. CHARLIE K. WATKINS, DISTRICT UTILITY ENG.
 - BALTO. GAS & ELECTRIC CO. (UNDERGROUND) GAS & ELECTRIC DISTRIBUTION, CUSTOMER SERVICE - 605-0123
 - ENGINEERING - "DAMAGE CONTROL" - 234-5621
 - "MISS UTILITY" - 1-550-0100
 - CHESAPEAKE & POTOMAC (CAP) TELEPHONE CO. - 725-9970
 - AMERICAN TELEPHONE & TELEGRAPH -
 - CABLE LOCATION DIVISION - 293-3553
 - COLONIAL PIPELINE COMPANY - 701-4641
 - BUREAU OF UTILITIES HOWARD COUNTY - 992-2366
 - ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
 - ALL VERTICAL CONTROLS ARE BASED ON UGSS DATUM.
 - PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION & MAINTENANCE OPERATIONS.
 - FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS FOR CONSTRUCTION.
 - MATERIALS & CONSTRUCTION METHOD SHALL BE IN STRICT ACCORDANCE WITH HOWARD COUNTY STD. SPECIFICATIONS.
 - 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 & TRANSPORT FROM THE SITE, TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE PIPE AS APPLICABLE.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
 - MANHOLES DESIGNATED WATERTIGHT IN PLAN & PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER. STD. DETAIL S1-45, WHERE WATERTIGHT MANHOLE FRAME & COVER IS USED, SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE. CLEAR ALL UTILITIES BY A MINIMUM OF 6 INCHES. CLEAR ALL ROLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ALL COSTS INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT ROLES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR CONSTRUCTION OF THE MAIN.
 - FURNISH AND INSTALL TEMPORARY FENCING AS NECESSARY, TO CONTAIN LIVESTOCK. CONTRACTOR SHALL SUBMIT PLANS INDICATING TYPE OF MATERIALS TO BE USED, LOCATIONS AND SCHEDULE OF TEMPORARY FENCING FOR THE ENGINEER'S APPROVAL.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 9/1/84
DIRECTOR OF PUBLIC WORKS: [Signature]

DATE: 9/1/84
CHIEF, BUREAU OF ENGINEERING: [Signature]

DATE: 9/1/84
CHIEF, BUREAU OF UTILITIES: [Signature]

DATE: 9/1/84
CHIEF, UTILITY DIVISION: [Signature]

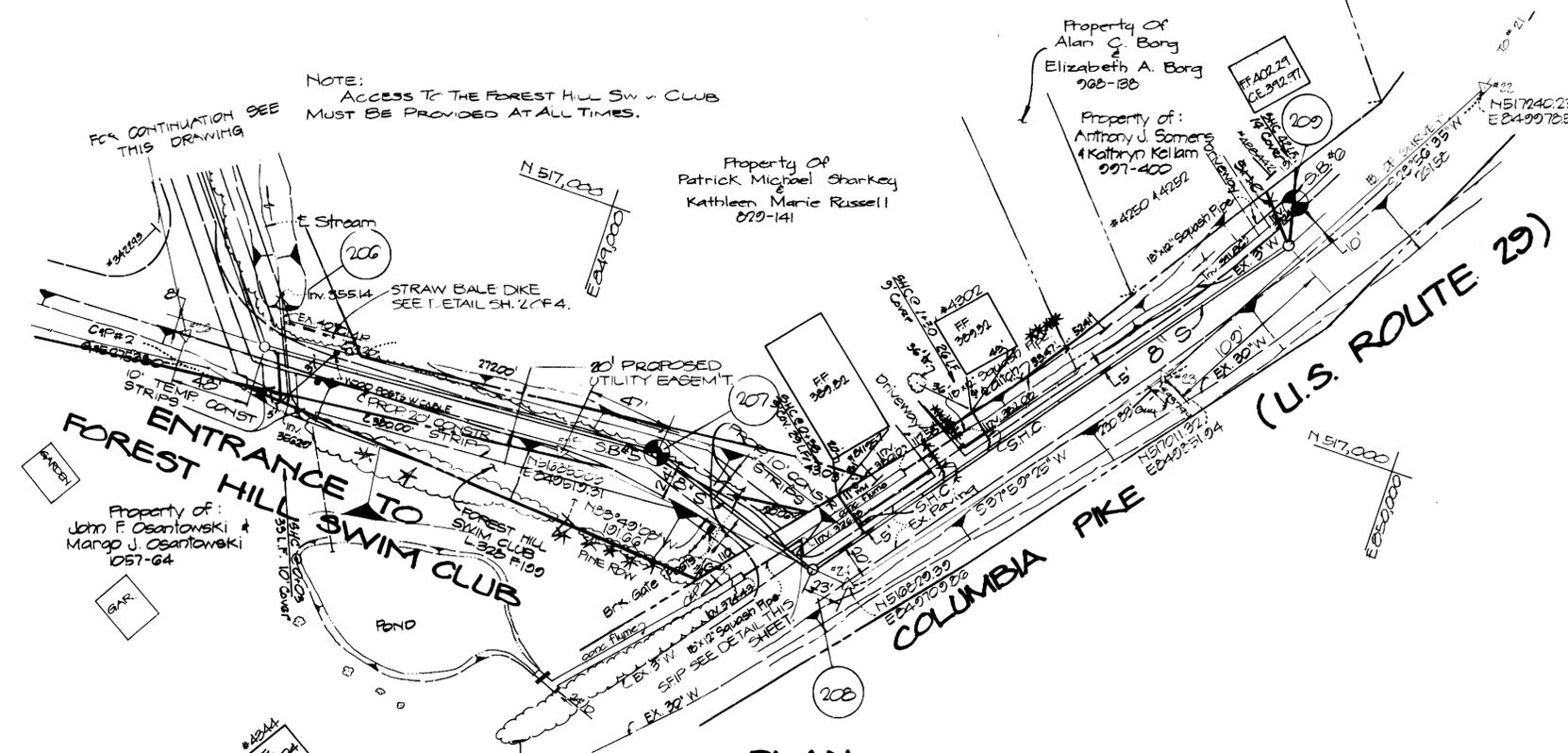
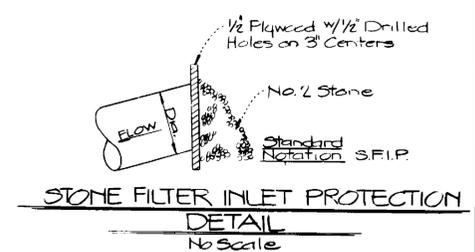
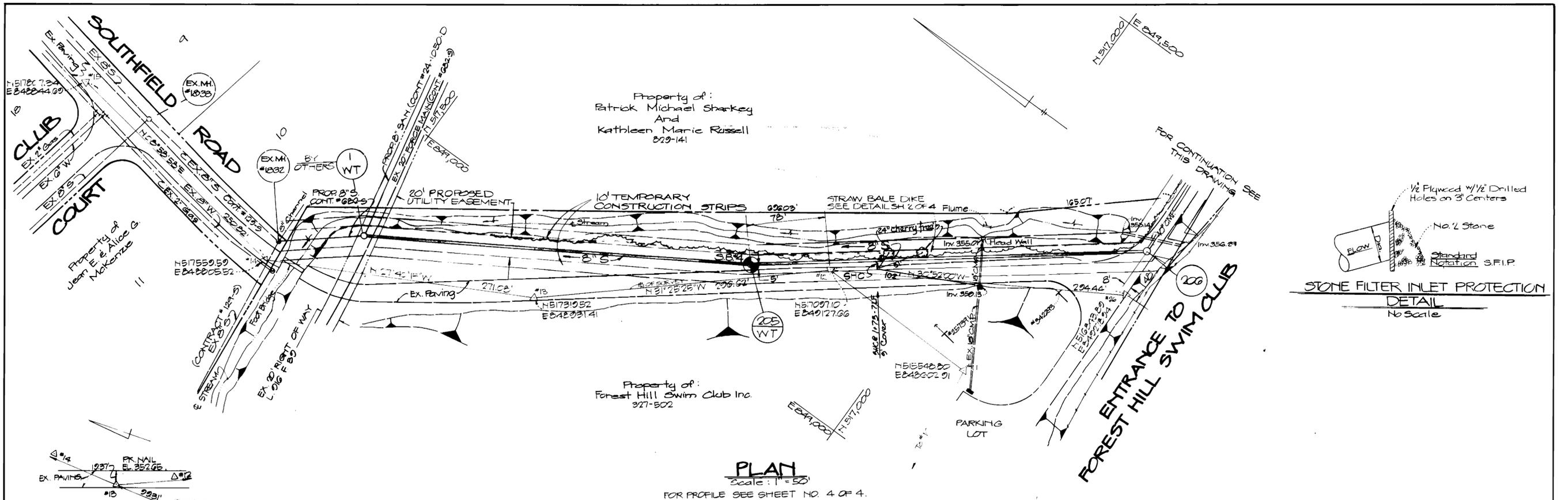
KIDDE CONSULTANTS, INC.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

CONTRACT NO. 20-1080
CAPITAL PROJECT S-6095

PLAN OF SEWER MAIN

COLUMBIA ROAD COLLECTOR SEWERS

DRAWING NO. 2 OF 4
SCALE 1" = 50'
DES. LAW ORN. E.A.B. CHK. DEH.



BENCH MARK #13
NO SCALE

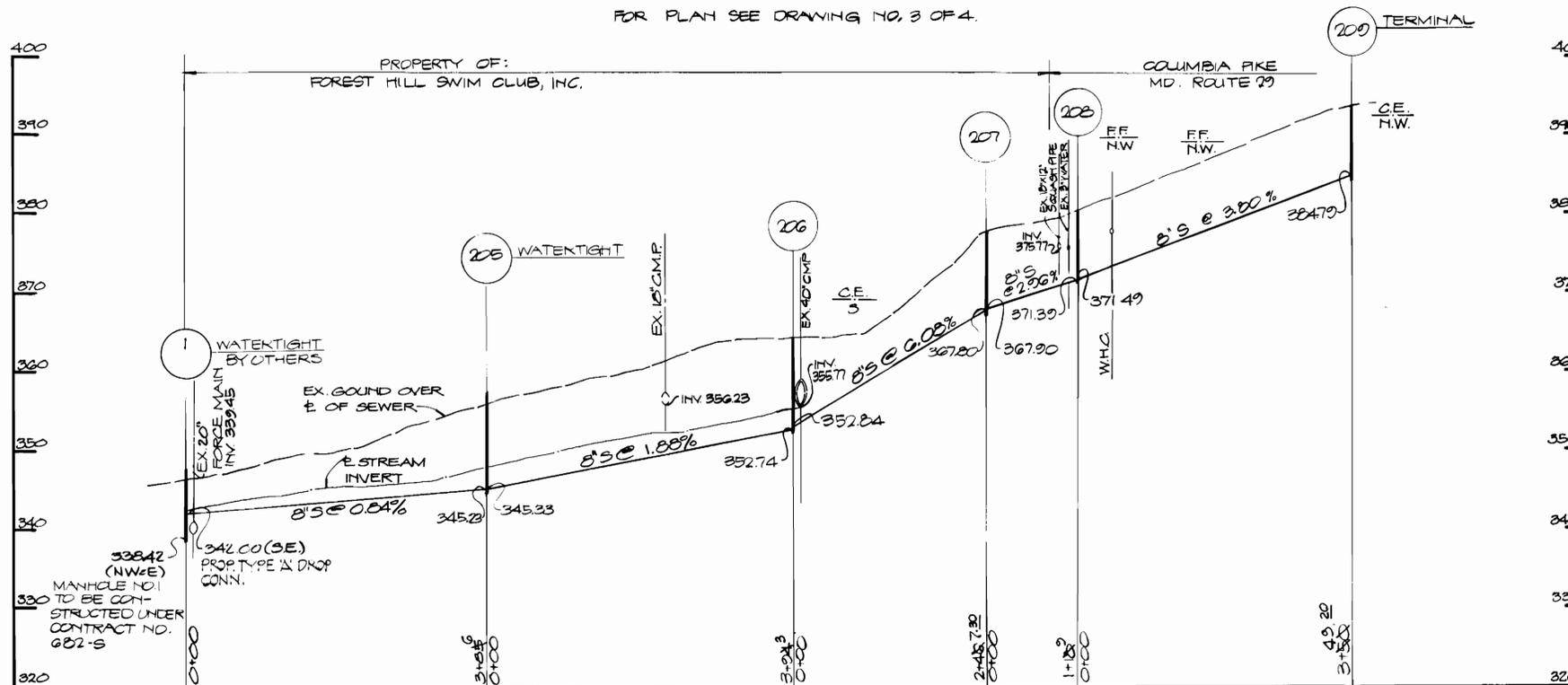
BENCH MARK #23
NO SCALE



COLUMBIA ROAD COLLECTOR SEWER
CAPITAL PROJECT NO. S-6095
CONTRACT NO. 20-1080

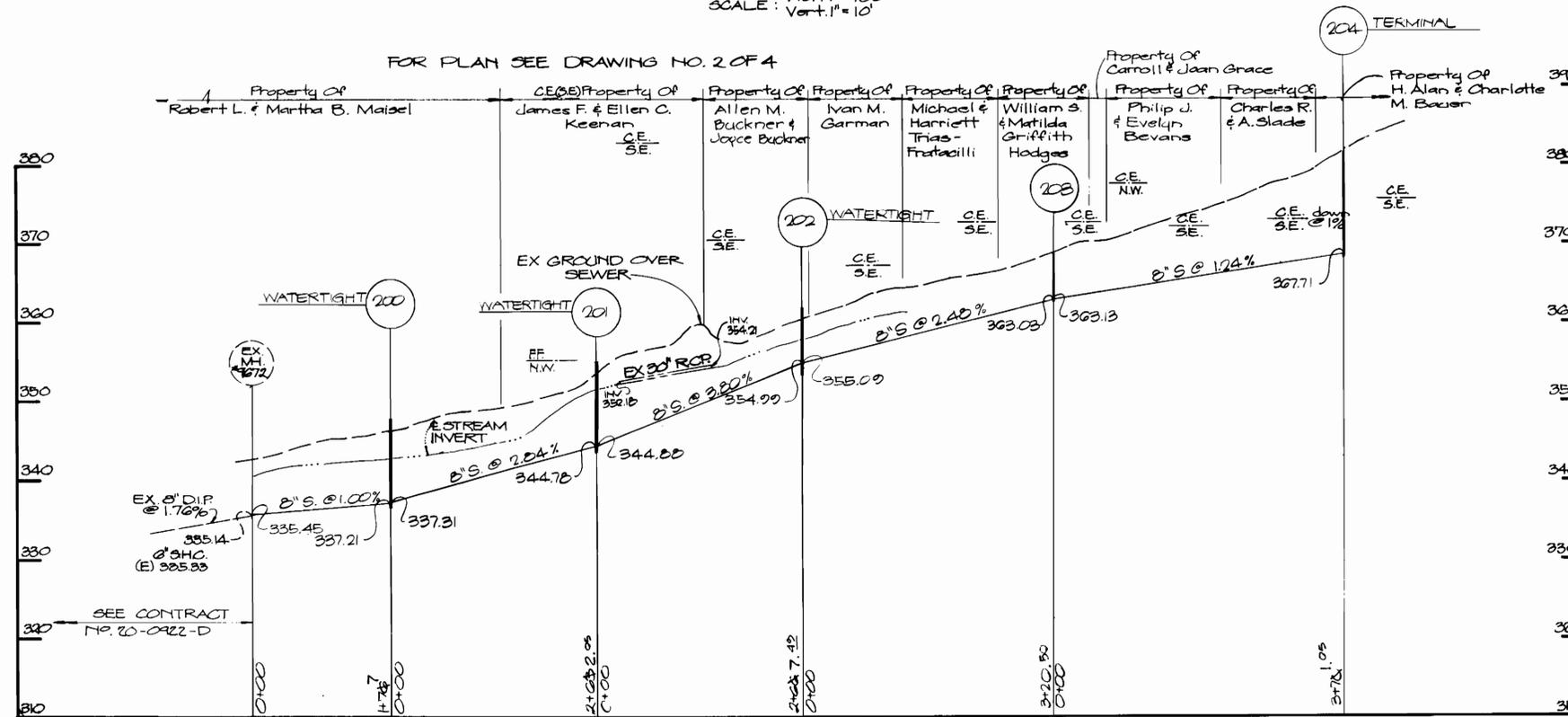
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS: [Signature] CHIEF, BUREAU OF UTILITIES: [Signature]		KIDDE CONSULTANTS, INC. CONSULTING ENGINEERS BALTIMORE, MARYLAND		CONTRACT NO. 20-1080 CAPITAL PROJECT S-6095	PLAN OF SEWER MAIN	COLUMBIA ROAD COLLECTOR SEWERS	DRAWING NO. 3 OF 4	SCALE 1" = 50'	DES. LAW DRN. E.A.B. CHK. DEH.
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AS BUILT 12/84 G-5-83



PROFILE

Hor. 1" = 100'
Vert. 1" = 10'



PROFILE

Hor. 1" = 100'
Vert. 1" = 10'

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR WILL COMPLY WITH ALL REQUIREMENTS OF SEDIMENT AND EROSION CONTROL AS SET FORTH IN THE CONTRACT DRAWINGS, THE USDA SOIL CONSERVATION SERVICE MANUAL, "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS", AND VOLUME IV-SECTION 15 OF THE HOWARD COUNTY DESIGN MANUAL.
2. THE CONTRACTOR SHALL NOT PUMP FROM EXCAVATED AREAS DIRECTLY INTO THE HOWARD COUNTY STORM DRAINAGE SYSTEM OR ANY NATURAL WATER COURSE. WHERE GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PORTABLE OR EXCAVATED SEDIMENT TRAPS TO PREVENT SILTED TRENCH WATER FROM ENTERING STORM DRAINAGE SYSTEMS OR NATURAL WATERWAYS.
3. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH WHENEVER POSSIBLE, AND CONFINED TO AN AREA WHERE IT WILL NOT OBSTRUCT THE NORMAL FLOW OF DRAINAGE COURSES.
4. ALL SWALES SHALL BE EQUIPPED WITH A SEDIMENT RETENTION DEVICE TO TRAP SEDIMENT AND FILTER WATER LEAVING THE RIGHT-OF-WAY PRIOR TO ENTERING ANY RUNNING STREAMS.
5. THE CONTRACTOR SHALL PROVIDE STRAW BALE DIKES NORMAL TO SURFACE WATER FLOW AROUND ALL VEHICLE AND EQUIPMENT STAGING AREAS AS SHOWN IN "DETAIL OF A STRAW BALE DIKE" ON SHEET 2 OF 4.
6. ROADSIDE DITCHES AND DRAINAGE PIPES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION FOLLOWING COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT STABILIZED BY BUILDINGS, PAVING, OR WALKS SHALL BE STABILIZED IMMEDIATELY FOLLOWING COMPLETION OF TRENCH BACKFILL OPERATIONS AS FOLLOWS:
SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL ON FLAT AREAS AND SLOPES UP TO 3 TO 1 GRADE. ON STEEP SLOPES, LOOSEN ONLY TOP 1-3 INCHES BY DISCING, RAKING OR OTHER ACCEPTABLE MEANS.
SOIL AMENDMENTS: APPLY 2 TONS PER ACRE OF DOLIMITIC LIMESTONE AND 600 LBS. PER ACRE OF 0-20-20 FERTILIZER. HARROW OR DISC LIME AND FERTILIZER INTO SEED BED. AT THE TIME OF SEEDING, APPLY 400 LBS. PER ACRE OF 38-0-0 UREAFORM FERTILIZER AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER.
SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE OF KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT THE SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - SOD (DELAY UNTIL NEXT PERIOD, IF GROUND IS FROZEN).
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW UNIFORMLY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 5 GALLONS PER 1000 SQ. FT. OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8' OF HIGHER USE 8 GALLONS PER 1000 SQ. FT. FOR ANCHORING.

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8. THE CONTRACTOR SHALL DISPOSE OF SPOILS IN ACCORDANCE WITH GOOD SOIL CONSERVATION PRACTICE AND IN SUCH A MANNER THAT NONE CAN BE CARRIED INTO ANY DRAINAGE FACILITY OR WATER COURSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL SPOIL OR EXCESS EXCAVATED MATERIAL ON A SITE APPROVED BY THE SOIL CONSERVATION DISTRICT. DOCUMENTATION OF APPROVAL AND SITE SHALL BE PROVIDED TO THE ENGINEER PRIOR TO BEGINNING WORK.
9. THE HOWARD COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING, BY THE CONTRACTOR AS TO WHERE EXCESS MATERIAL WILL BE DISPOSED OR BORROW MATERIAL WILL BE OBTAINED PRIOR TO BEGINNING ANY WORK ON THIS PROJECT. COPIES SHALL BE PROVIDED TO THE ENGINEER.
10. CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL DEVICES WILL BE REQUIRED.
11. THE CONTRACTOR SHALL NOTIFY IN WRITING, THE HOWARD COUNTY SEDIMENT CONTROL DIVISION REPRESENTATIVE AT LEAST THREE (3) DAYS PRIOR TO STARTING WORK. PLEASE CONTACT MR. WILLIAM FILBERT -- 922-2436. COPIES SHALL BE PROVIDED TO THE ENGINEER.
12. THE CONTRACTOR SHALL PLACE A STABILIZED CONSTRUCTION ENTRANCE AS SHOWN IN THE HOWARD COUNTY STANDARD DETAILS, SD-9.11, WHERE SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
13. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SOIL EROSION AND SEDIMENT CONTROLS AS REQUIRED BY THE ENGINEER OR SEDIMENT CONTROL INSPECTOR, AS WORK PROGRESSES OR REQUIRES.
14. SEDIMENT REMOVAL-ALL TRAPPED SEDIMENT IS TO BE REMOVED & DISPOSED OF AT THE AUTHORIZED LANDFILLS PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.



COLUMBIA ROAD COLLECTOR SEWER
CAPITAL PROJECT NO. S-6095
CONTRACT NO. 20-1080

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

William F. Nunn 9/4/82
DIRECTOR OF PUBLIC WORKS DATE

William E. Riley 9/1/82
CHIEF, BUREAU OF ENGINEERING DATE

Robert W. Wood 9/1/82
CHIEF, BUREAU OF UTILITIES DATE

Allen S. Brown 9/1/82
CHIEF, UTILITY DIVISION DATE

KIDDE CONSULTANTS, INC.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

CONTRACT NO. 20-1080
CAPITAL PROJECT S-6095

PROFILE OF SEWER MAINS

COLUMBIA ROAD COLLECTOR SEWERS

DRAWING NO. 4 OF 4
SCALE AS SHOWN

DES. L.A.W.
DRN. E.A.B.
CHK. D.E.H.

AS BUILT 12/84 G-5-B3