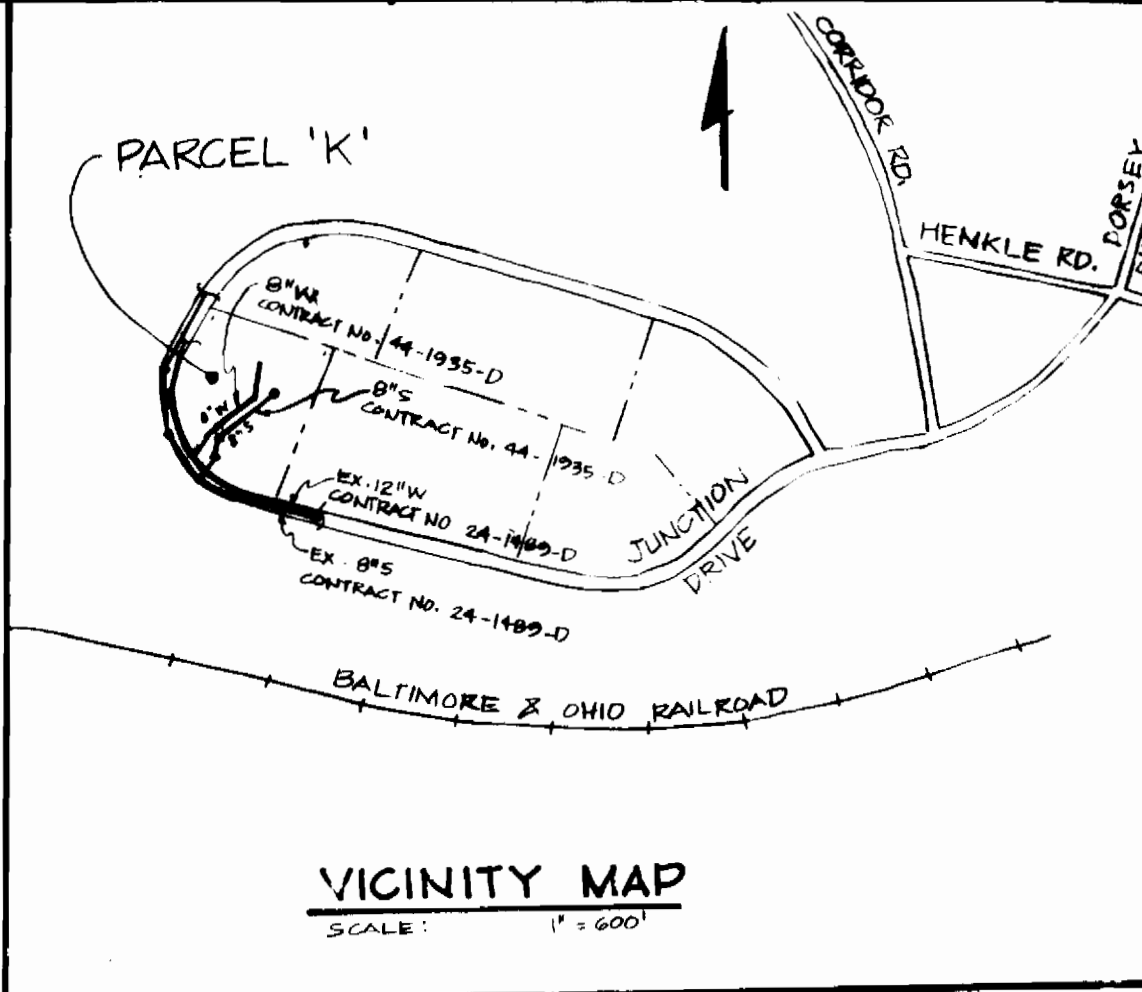


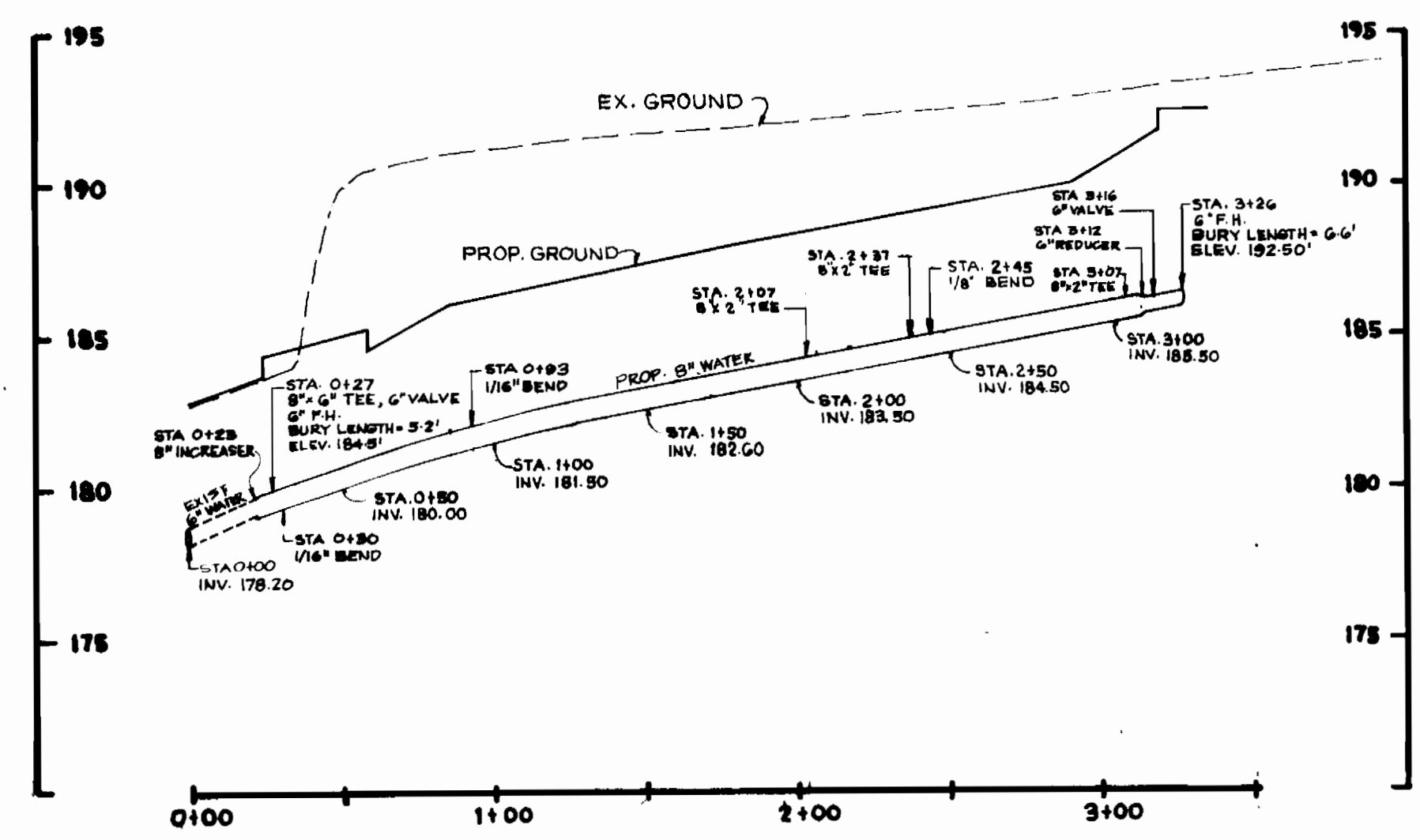
TEMPORARY BENCH MARK (TBM):
 MH-105: RIM ELEV. = 181.64'
 MH-108: RIM ELEV. = 184.41'

PLAN
 SCALE 1"=50'

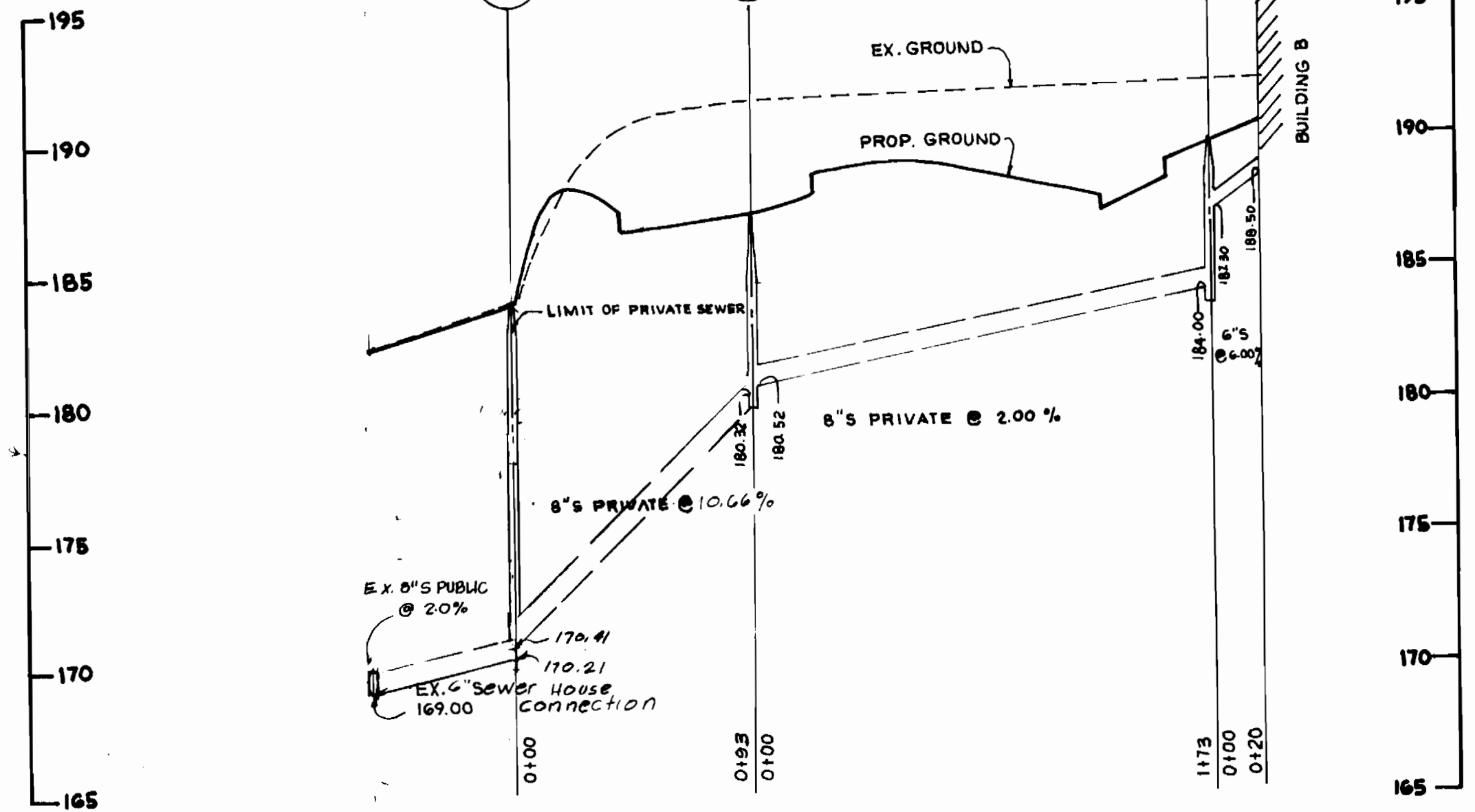
QUANTITIES			
ITEM	PROPOSED	AS BUILT	MATERIAL SUPPLIES
8" WATER MAIN	287 L.F.		
6" WATER MAIN	30 L.F.		
2" WATER HOUSE CONNECTION	30 L.F.		
FIRE HYDRANTS	2 EA.		
6" VALVE	2 EA.		
1/16 BEND	2 EA.		
1/8 BEND	1 EA.		
8" x 6" TEE	1 EA.		
6" REDUCER	2 EA.		



VICINITY MAP
 SCALE: 1"=600'



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



SEWER PROFILE
 SCALE HORIZ. 1"=50'
 VERT. 1"=5'

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 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. 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 52 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 M.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 WATER-TIGHT FRAME AND COVERS STANDARD DETAIL GS.52 WHERE WATER-TIGHT 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 GS.51.
- ALL WATER HOUSE CONN ARE FOR INSIDE METER SETTING.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153 DUCTILE IRON COMPACT FITTING, 5" THROUGH 12" FOR WATER AND OTHER LIQUIDS.

SEDIMENT CONTROL MEASURES FROM THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THE SPECIFICATIONS AND AS SHOWN ON SDP-01-47

HOWARD SOIL CONSERVATION DISTRICT REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James Mitchell 7/6/89
 U.S. SOIL CONSERVATION SERVICE DATE

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

Stephen ... 7/6/89
 HOWARD SOIL CONSERVATION DISTRICT DATE



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James ... 7/10/89
 DIRECTOR OF PUBLIC WORKS DATE

... 7/10/89
 CHIEF BUREAU OF ENGINEERING DATE

... 7/10/89
 CHIEF BUREAU OF UTILITIES DATE

... 7/10/89
 CHIEF LAND DEVELOPMENT DIVISION DATE

LORIA ENGINEERING, INC.
 3230 BETHANY LAKE
 ELICOTT CITY, MD 21043
 (301) 465-7777

DESIGN BY			
DRAWN BY			
CHECKED BY			
DATE			
BY	NO	REVISION	DATE

PLAN & PROFILE
WATER & SEWER
 Contract No.: 44-1935-D

JUNCTION INDUSTRIAL PARK
 SECTION 2, PARCEL-K, TAX MAP 48
 6TH ELECTION DISTRICT, HOWARD CO. MD.

OWNER
 EMORY HILL & ASSOCIATES
 7240 PARKWAY DRIVE
 HANOVER, MARYLAND, 21076

SCALE AS SHOWN

SHEET 1 OF 1