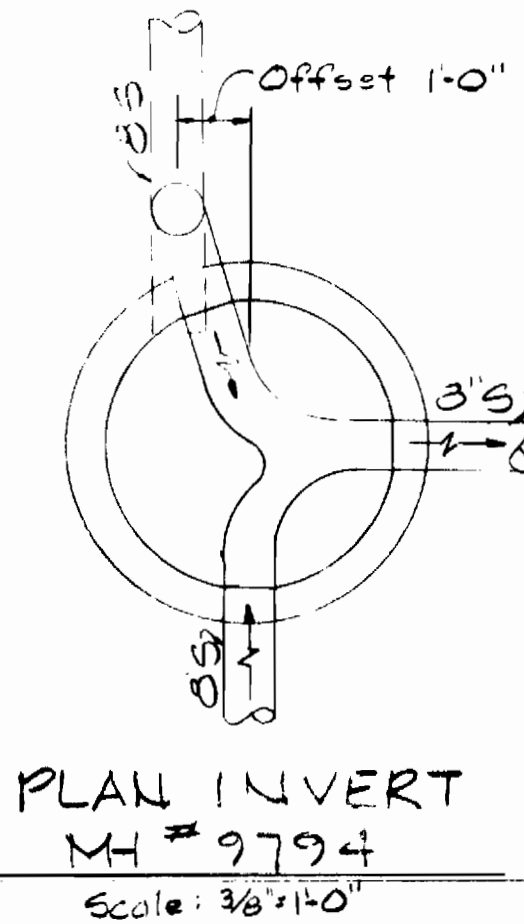


BENCH MARKS

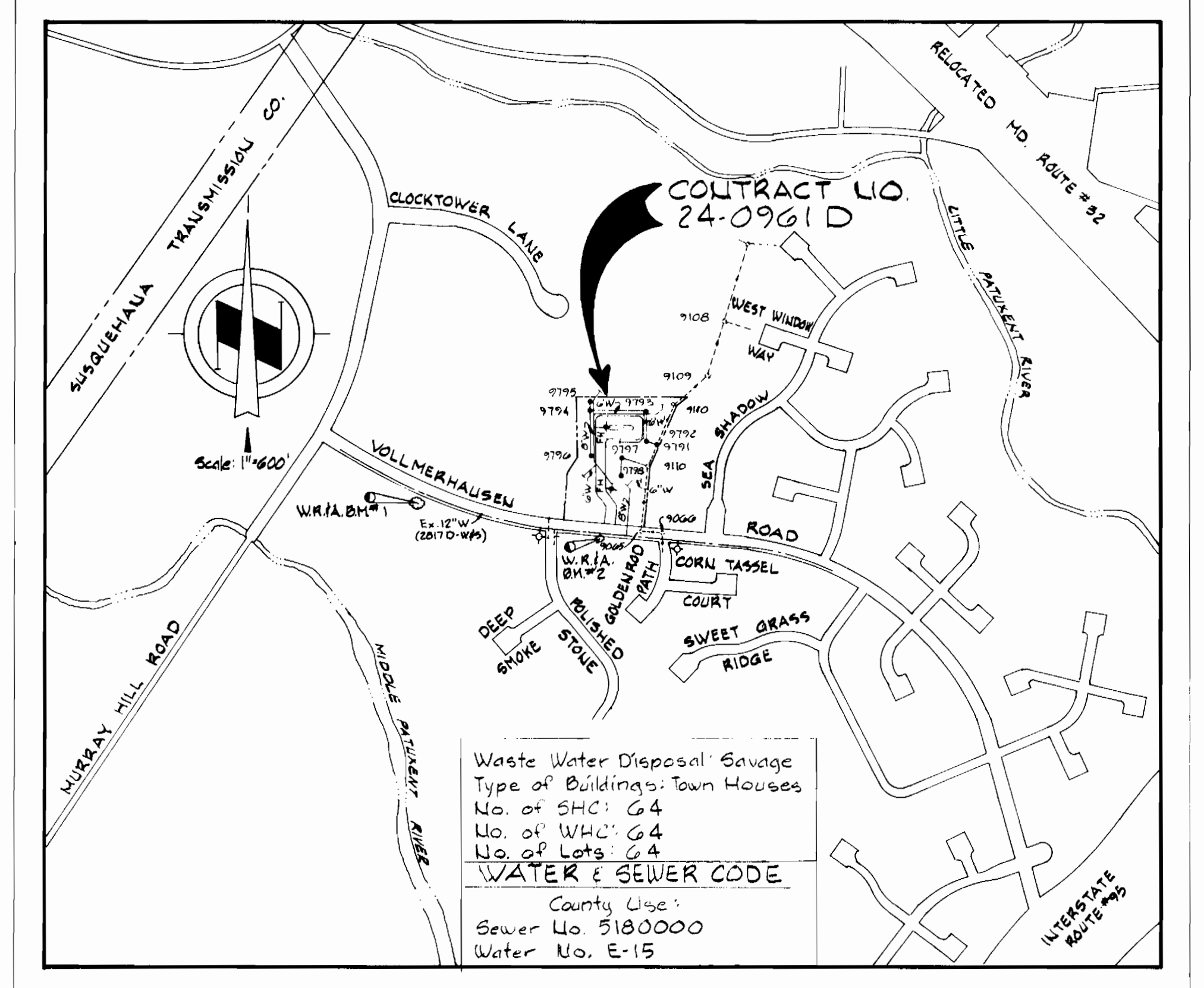
W.R. & A. B.M. #1 Elev. 301.62
R.R. spike at side 18" Poplar, 50' right of & Vollermerhausen Rd. Sta. G+00.

W.R. & A. B.M. #2 Elev. 334.54
R.R. spike at side 18" Twin Poplar, 40' right of & Vollermerhausen Rd. Sta. 15+35.



ITEM	BID	AS-BUILT	MATERIAL/SUPPLIER
8" Sewer - L.F.	950	276	CLAY PIPE / LOGAN INC.
Manholes - Ea.	8	8	PVC PIPE / J.M. IUC.
8" Water - L.F.	845	812	ATLANTIC MANHOLES
6" Water - L.F.	820	813	D.I.P. GAFFIN INC.
8" Valves - Ea.	1	1	D.I.P. GAFFIN INC.
6" V (Excluding FHV)	5	5	M&H INC.
Fire Hydrants - Ea.	2	2	U.S.P. INC.
12" x 8" T.S. F.V.	1	1	U.S.P. INC.
8" x 6" Saddle	6	6	A & P INC.

NOTE:
All W.H.C.'s shall be 3/4" diameter unless otherwise noted.



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 PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF UTILITIES AT HIS EXPENSE.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, USE HOWARD COUNTY STANDARD DETAILS.
- FOR MATERIALS AND CONSTRUCTION REQUIREMENTS, USE HOWARD COUNTY STANDARD SPECIFICATIONS.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON USGS DATUM.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE COST FOR TUNNELING OR BRACING POLES SHALL BE INCLUDED IN APPROPRIATE UNIT PRICES BID.
- 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 & ELECTRIC COMPANY
 - UNDERGROUND ELECTRIC AND GAS DISTRIBUTION-CUSTOMER SERVICE - 685-0123
 - DAMAGE CONTROL - 234-5621
 - "MISS UTILITY" - 1-559-0100
 - CHESAPEAKE & POTOMAC TELEPHONE COMPANY - 725-9976
 - AMERICAN TELEPHONE AND TELEGRAPH - CABLE LOCATION DIVISION - 393-3553
 - 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 APPROPRIATE UNIT PRICES BID.
- 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 OPERATIONS.
- ALL WATER MAINS TO BE C.I.P. OR D.I.P. UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3 1/2 FEET OF COVER UNLESS OTHERWISE NOTED.
- VALVES SHALL BE STRAPPED WHERE APPLICABLE.
- BLOCK ALL FITTINGS WITH CONCRETE.
- BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE 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 TO BE COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., A.C.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- MANHOLES SHOWN WITH 12" WALLS ARE FOR BRICK MANHOLES ONLY.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

James M. Helmforfer 4-1-81
SIGNATURE DATE
U.S. SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard County Conservation District

APPROVED:
William J. Ramey 4-1-81
HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Shirley F. Neuman 4-6-81
DIRECTOR OF PUBLIC WORKS - DATE

Robert W. Brumby 4-6-81
CHIEF - BUREAU OF UTILITIES - DATE

Kristin D. Rain 4-18-81
CHIEF - BUREAU OF ENGINEERING - DATE

William J. Ramey 4-8-81
CHIEF - LAND DEVELOPMENT DIVISION - DATE

PLAN
Scale: 1"=50'

Sediment Control Measures for this Contract will be implemented in accordance with Article 15 of the Standard Specifications and SDP 81-111

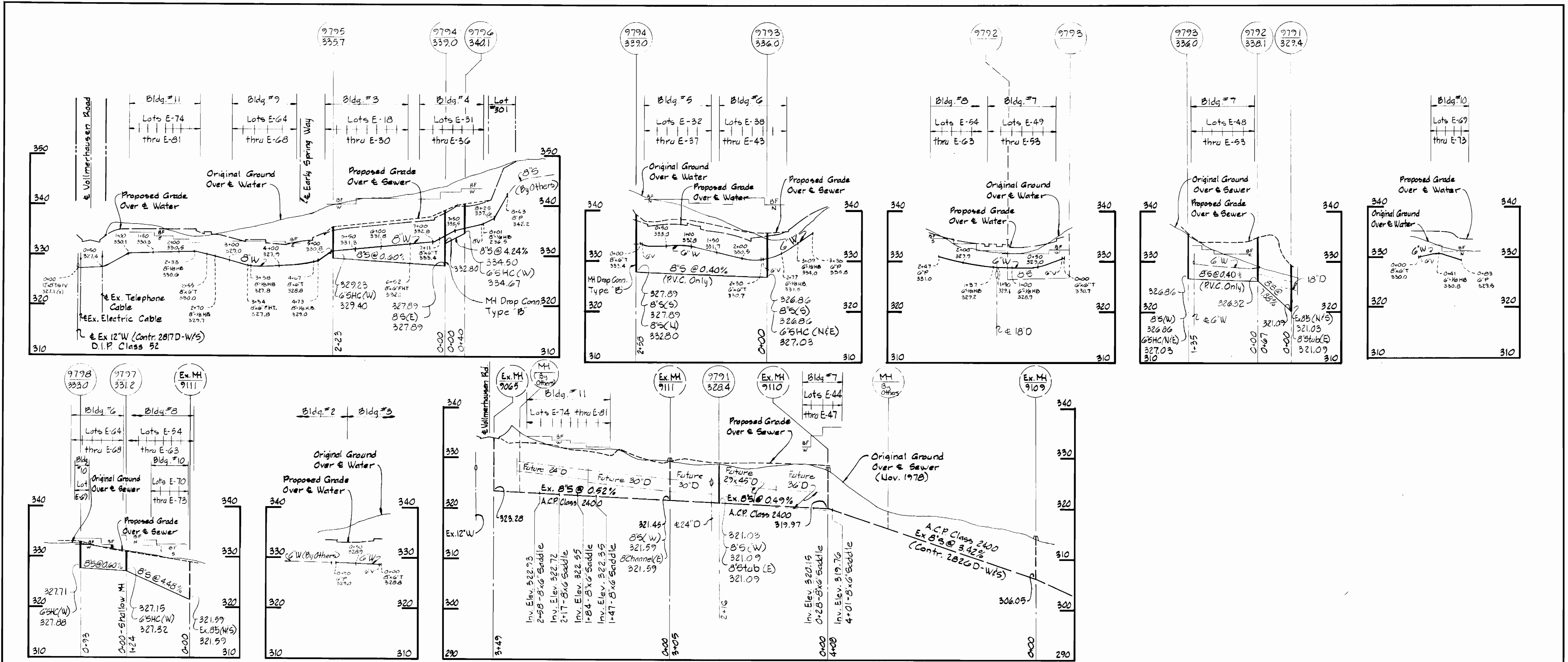
WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
2315 ST. PAUL ST.
BALTIMORE, MARYLAND

CONTRACT NO. 24-0961D

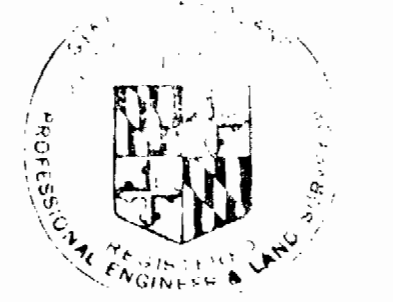
PLAN OF
WATER & SEWER MAINS

COLUMBIA
VILLAGE OF KINGS CONTRIVANCE
ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 1 OF 2
SCALE AS SHOWN



NOTE
Original Ground over Water & Sewer was taken from Aerial Photography prepared by Maps and Inc., and verified by field survey in March, 1981.



Whitman, Requardt and Associates, Inc.

Village of Kings Contrivance
Section 3, Areal
Parcel "E"
Part 1
Contract No. 24-0961-D

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director: *W. F. Nelmis*
Chief - Bureau of Engineering - Date: *4/8/81*
Chief - Bureau of Utilities - Date: *4-6-81*
Chief - Land Development Division - Date: *4-8-81*

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
2315 ST. PAUL ST.
BALTIMORE, MARYLAND

CONTRACT NO. 24-0961D

PROFILES OF
WATER & SEWER MAINS

COLUMBIA
VILLAGE OF KINGS CONTRIVANCE
ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 2 OF 2
SCALE H: 1"=100'
V: 1"=10'