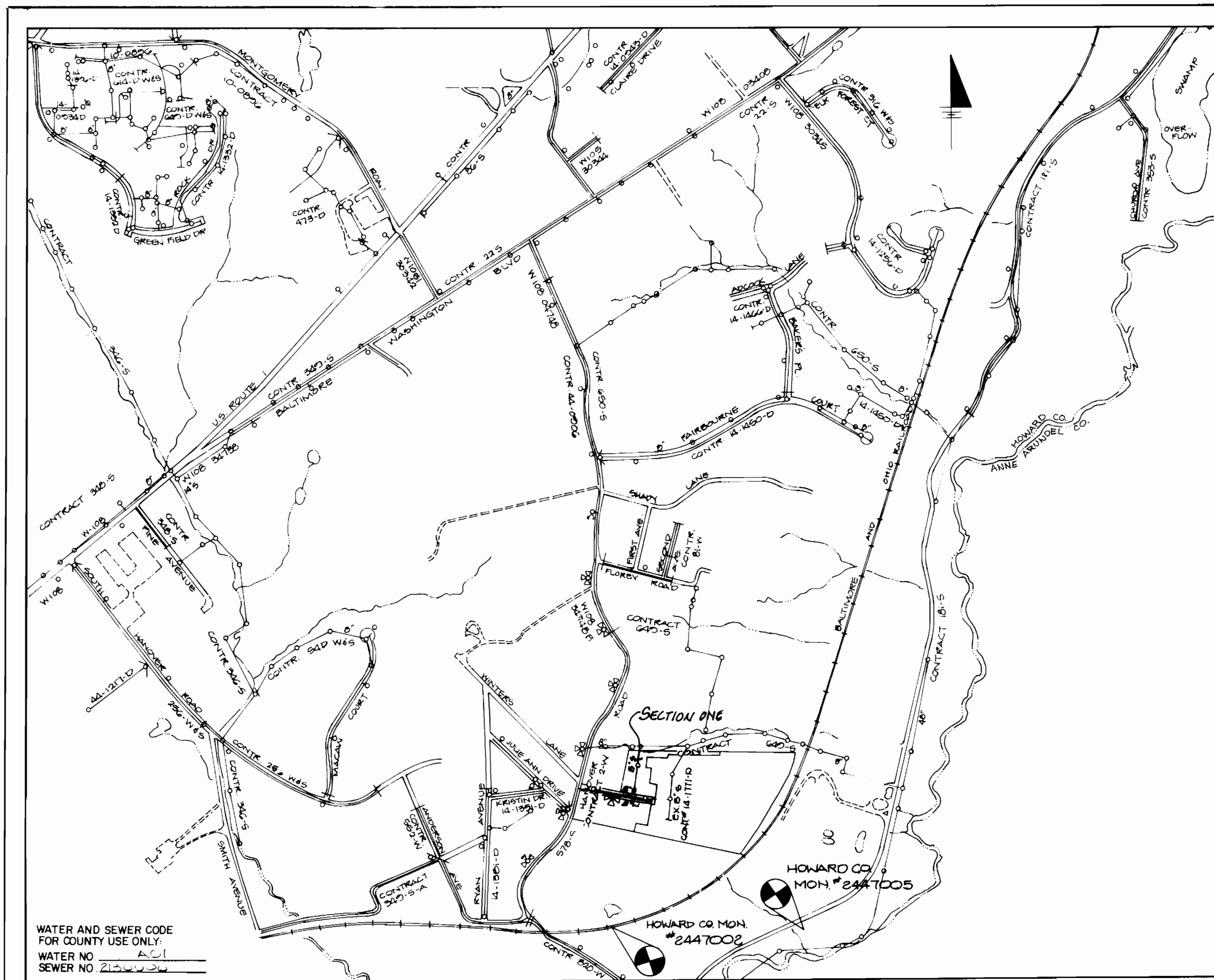


QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
8" SEWER	778 L.F.		
8" WATER	557 L.F.		
6" WATER	10 L.F.		
STD. MH	3 EA.		
TERM. MH	2 EA.		
6" FH	1 EA.		
3" WHC	340 L.F.		
4" SHC	381 L.F.		



TYPE OF BUILDING	SINGLE FAMILY
NUMBER OF LOTS	17
NO OF WATER HOUSE CONNECTIONS	15
NO OF SEWER HOUSE CONNECTIONS	15
DRAINAGE AREA	HANOVER RIVER

LOCATION MAP
SCALE: 1" = 600'

CONTRACT NO. 14-1789 D HANOVER CROSSING SECTION ONE WATER AND SEWER MAIN EXTENSION HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

BENCHMARKS

- HOWARD CO. MON. #2447002 ELEV. 89.819
CONCRETE MON. NORTHEAST CORNER RAILROAD TRACKS & HANOVER ROAD .3' BELOW SURFACE.
- HOWARD CO. MON. #2447005 ELEV. 49.478
REBAR ON WEST SIDE RACE ROAD OPP. P.T. OF CURVE IN ROAD, 2' OFF EDGE M.C. .2' BELOW SURFACE.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 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, F 89-1B

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

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
[Signature] 5/1/91
U.S. SOIL CONSERVATION SERVICE DATE

APPROVED:
[Signature] 5/12/91
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

ENGINEERING CONSULTANTS & ASSOCIATES
6400 BALTIMORE NATIONAL PIKE
SUITE 170-A-121
BALTIMORE, MARYLAND 21228
(301) 747-3491



DES. W.E.O.	WEI	1	REVISION NO. 1/11/89	11/1/89
DRN. W.E.O.				
CHK. W.L.B.				
DATE: JULY, 1989	BY	NO.	REVISION	DATE

TITLE SHEET

600' SCALE MAP NO. 300 BLOCK NO. 100

HANOVER CROSSING
SECTION ONE
LOTS 1 THRU LOTS 17
TAX MAP 38 PARCEL 266
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 3

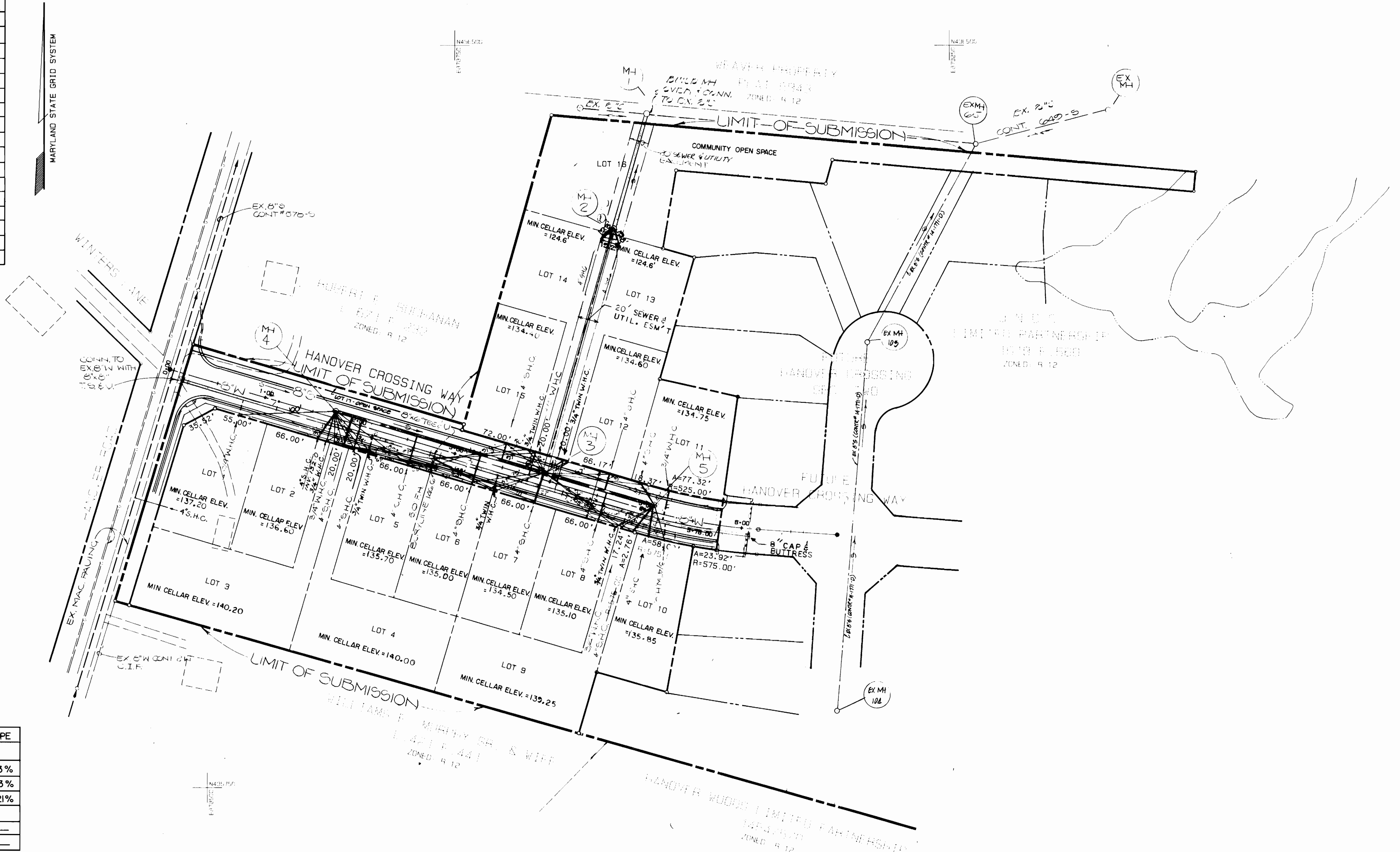
GENERAL NOTES

1. 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. 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.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS, 1989 AMENDMENTS.
7. FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS.
8. 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.
9. 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
 - "MISS UTILITY" 1-559-0100
 - CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY 725-9976
 - AMERICAN TELEPHONE AND TELEGRAPH - CABLE LOCATION DIVISION 393-3533
 - COLONIAL PIPELINE COMPANY 795-1390
 - BUREAU OF UTILITIES HOWARD COUNTY 313-4900
10. 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.
11. 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.
12. 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.
13. TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2' COVER UNLESS OTHERWISE NOTED.
14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
15. BLOCK ALL FITTINGS WITH CONCRETE.
16. BURYLINE ELEVATIONS ON ALL 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 SECTIONS 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
17. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING.
18. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
19. ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., OR P.V.C. UNLESS OTHERWISE NOTED.
20. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'0" OF EXTERIOR MANHOLE WALL.
21. ALL MANHOLES SHALL BE 4'0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
22. FORCE MAINS SHALL BE D.I.P. ONLY.
23. MANHOLES SHOWN WITH 12" & 16" WALLS ARE BRICK MANHOLES ONLY.
24. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G. 5.52. WHERE WATER TIGHT MANHOLE FRAME AND COVER IS USED, SET A TOP OF FRAME 1'-6" ABOVE FINISHED GRADE, STANDARD DETAIL G. 5.41.
25. HOUSE (S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
26. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153 DUCTILE IRON COMPACT FITTINGS, 3"-12" WATER AND OTHER LIQUIDS.

CONTRACT NO. 14-1789-D
HANOVER CROSSING
SECTION ONE
WATER & SEWER MAIN
EXTENSION

**SEWER HOUSE CONNECTION
INVERT ELEVATION @**

LOT NO.	LOCATION	INVERT @ R.
HANOVER CROSSING WAY		
1	MH 4	132.80
2	-MH 4	132.00
3	1+90 MH 3 - MH 4	131.70
4	2+00 MH 3 - MH 4	131.60
5	2+59 MH 3 - MH 4	131.00
6	3+25 MH 3 - MH 4	130.32
7	MH 3	129.84
8	4+59 MH 3 - MH 5	130.39
12	4+56 MH 3 - MH 5	130.09
15	3+47 MH 3 - MH 5	129.81
9	MH 5	130.89
10	MH 5	130.99
11	MH 5	130.85
13	MH 2	122.80
14	MH 2	122.80



NO.	RD. STATION	DISTANCE	RIM	SLOPE
HANOVER CROSSING WAY				
3	3+92	7' LEFT	140.32	2.3%
4	1+07	7' LEFT	148.40	2.3%
5	5+06	7' LEFT	139.35	1.21%
OUTFALL				
1	---	---	131.20	---
2	---	---	129.99	---

PLAN
SCALE: 1" = 50'

OWNER	DEVELOPER
J.N.D.C. LIMITED PARTNERSHIP SUITE 201 5570 STERRETT PLACE COLUMBIA, MD. 21044 (301) 997-3815	NEWBURN DEVELOPMENT CORP. SUITE 201 5570 STERRETT PLACE COLUMBIA, MD. 21044 (301) 997-3815

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert H. Switzer* 5/15/91
Chief, Bureau of Utilities: *Robert H. Switzer* 4-23-91

Chief, Bureau of Engineering: *William P. Murphy* 5-15-91
Chief, Land Development Division: *William P. Murphy* 5/14/91

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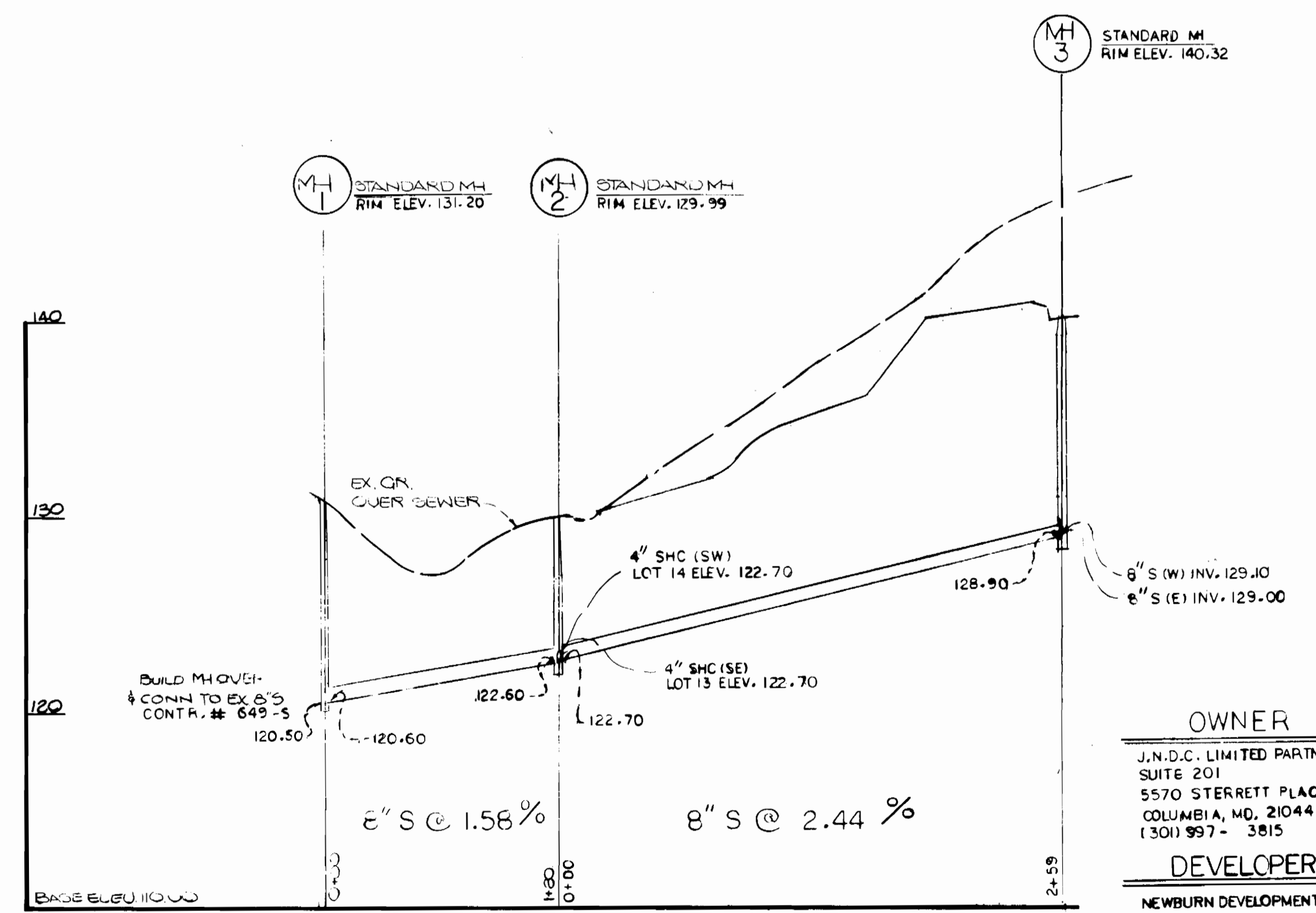
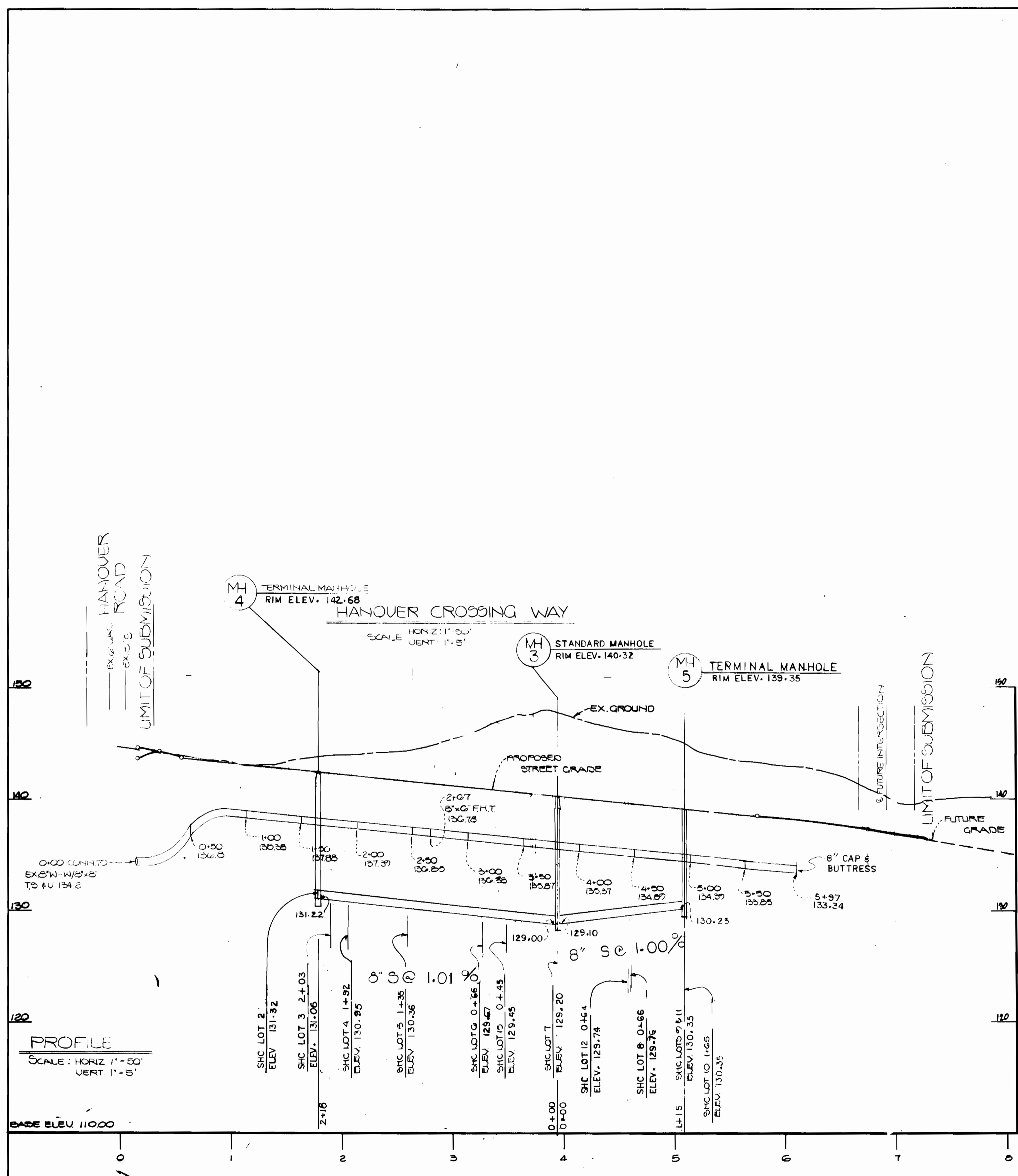
DES: W.E.C.	W.E.C.	REVISED AS PER COMMENTS DRW. #11/1/90
DRN: W.E.C.		
CHK: W.L.S.		
DATE: July 1990	BY NO.	REVISION

**WATER AND SEWER MAIN
PLAN**

CONTRACT NO.: 14-1789-D
600' SCALE MAP NO. 35 BLOCK NO. 15

HANOVER CROSSING
SECTION ONE
LOTS 1 THRU LOTS 17
TAX MAP 38 PARCEL 266
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 3



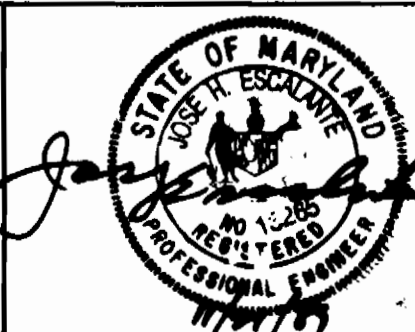
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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert Berman* DATE: 4-23-91
 Chief, Bureau of Engineering: *John M. Pappas* DATE: 5/15/91
 Chief, Land Development Division: *John M. Pappas* DATE: 5/15/91

ENGINEERING CONSULTANTS & ASSOCIATES
 6400 BALTIMORE NATIONAL PIKE
 SUITE 170-A-121
 BALTIMORE, MARYLAND 21228



DES: <i>WAO, K</i>	WED	1	REVISED AS PER 8/18/98 D.P.W. COMMENTS	<i>WJ/ML</i>
DRN: <i>DP, HGO</i>				
CHK: <i>K</i>				
DATE: 11/87	BY: NO.		REVISION	DATE

WATER AND SEWER MAIN PROFILE

CONTRACT NO.: 14-1109-D
 600' SCALE MAP NO. 35 BLOCK NO. 15

HANOVER CROSSING
 SECTION ONE
 LOTS 1 THRU LOTS 17
 TAX MAP 38 PARCEL 266
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 3 OF 3

BRUNING 44-132 691 90