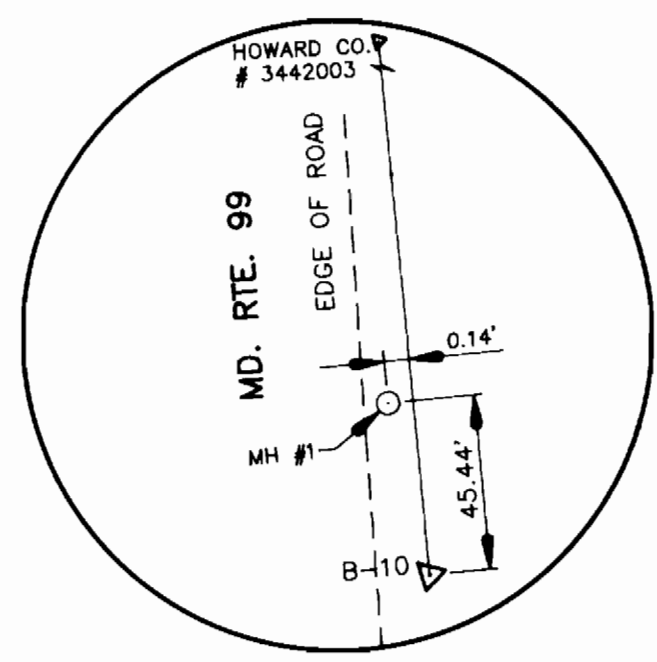
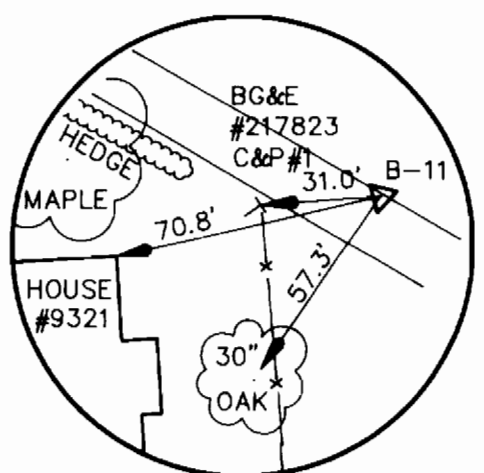
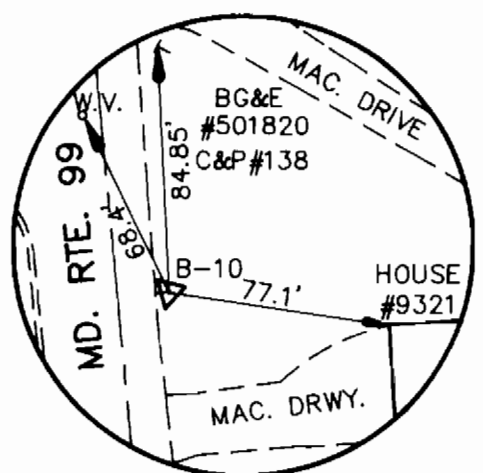
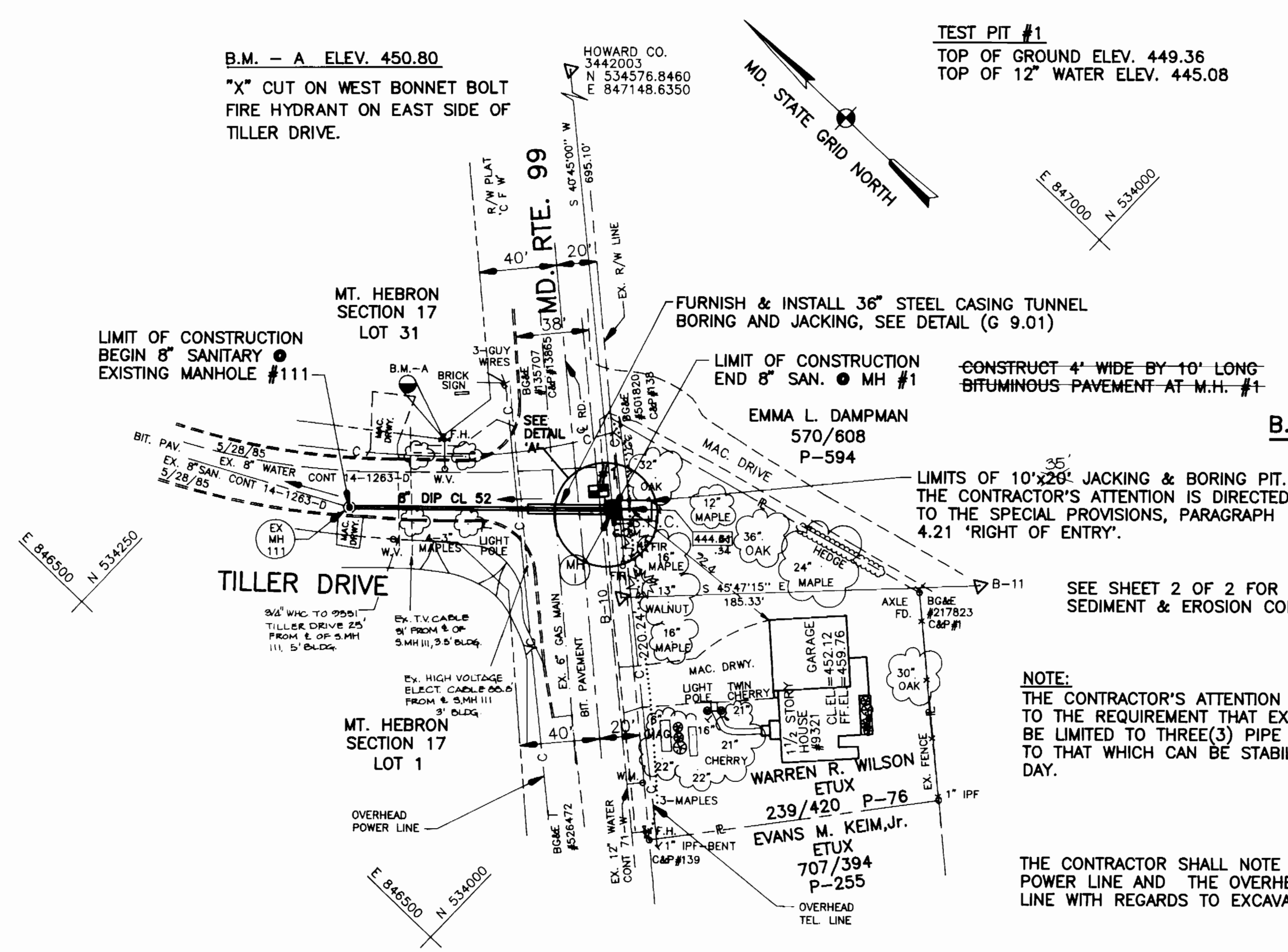


B.M. - A ELEV. 450.80

"X" CUT ON WEST BONNET BOLT
FIRE HYDRANT ON EAST SIDE OF
TILLER DRIVE.

TEST PIT #1
TOP OF GROUND ELEV. 449.36
TOP OF 12" WATER ELEV. 445.08



FURNISH & INSTALL 36" STEEL CASING TUNNEL
BORING AND JACKING, SEE DETAIL (G 9.01)

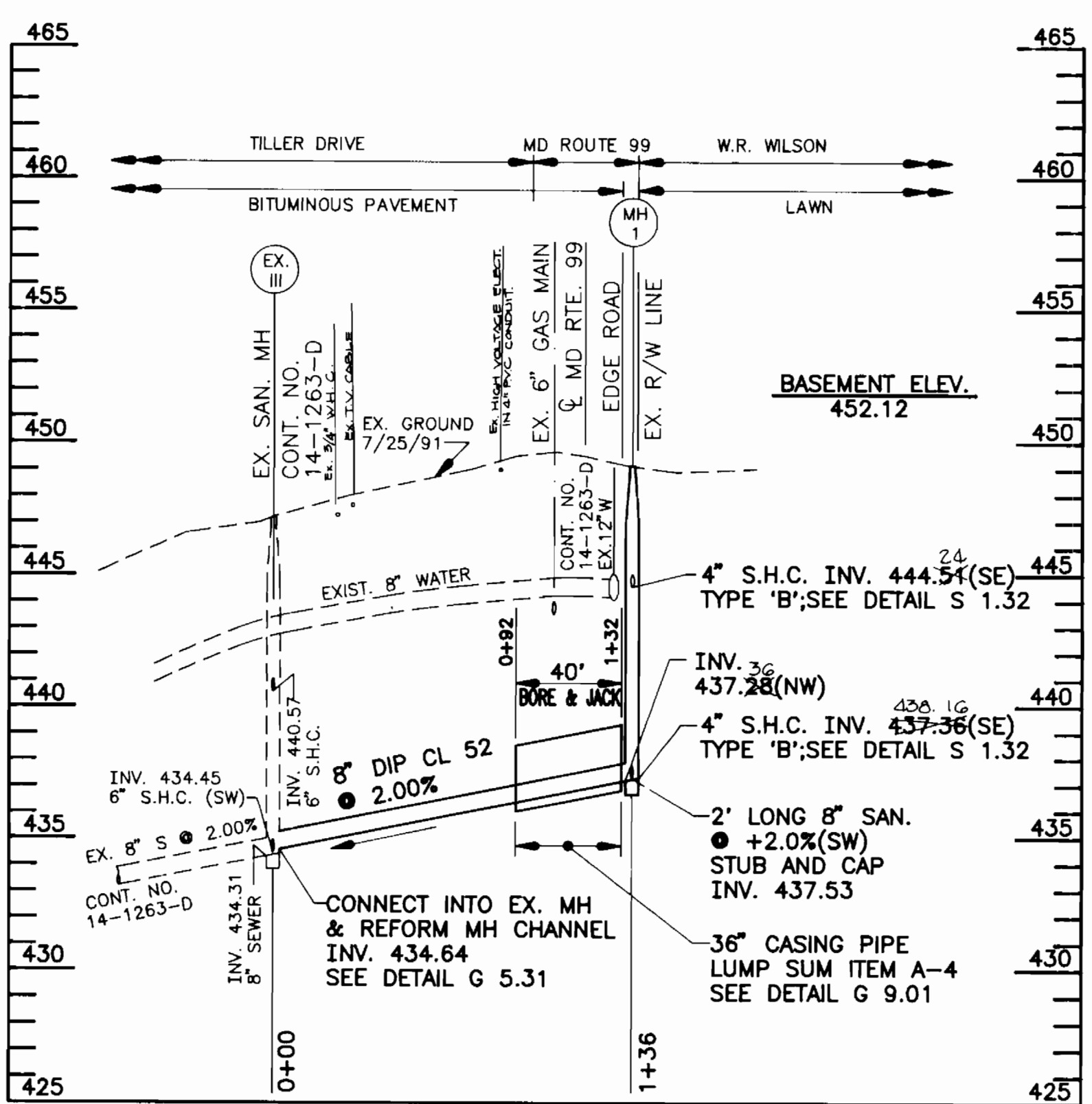
CONSTRUCT 4" WIDE BY 10' LONG
BITUMINOUS PAVEMENT AT M.H. #1

LIMITS OF 10'x20' JACKING & BORING PIT.
THE CONTRACTOR'S ATTENTION IS DIRECTED
TO THE SPECIAL PROVISIONS, PARAGRAPH
4.21 'RIGHT OF ENTRY'.

SEE SHEET 2 OF 2 FOR
SEDIMENT & EROSION CONTROL

NOTE:
THE CONTRACTOR'S ATTENTION IS DIRECTED
TO THE REQUIREMENT THAT EXCAVATION WILL
BE LIMITED TO THREE(3) PIPE LENGTHS OR
TO THAT WHICH CAN BE STABILIZED IN ONE
DAY.

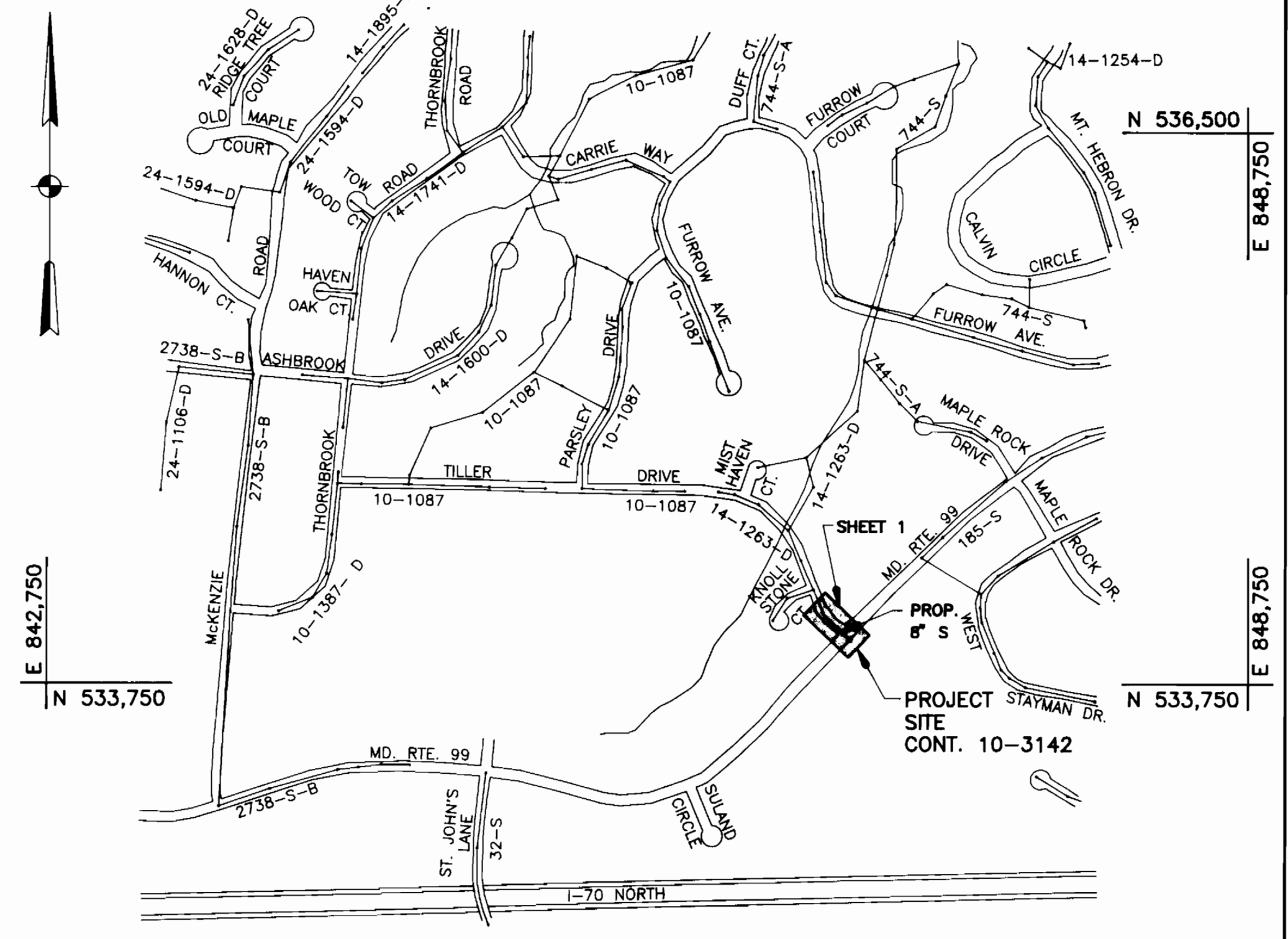
THE CONTRACTOR SHALL NOTE THE OVERHEAD
POWER LINE AND THE OVERHEAD TELEPHONE
LINE WITH REGARDS TO EXCAVATION OPERATIONS.



QUANTITIES				
ITEM	ESTIM.	AS BUILT	MATERIAL	SUPPLIER
8" DIP CL 52 SEWER	94 L.F.	94 L.F.	CL 52 DIP	US PIPE & FOUNDRY
DROP MH TYPE 'B'	1 EA.	1 EA.	PRE-CAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
VERT. FT. DROP MH TYPE 'B'	6 V.F.	6 V.F.	PRE-CAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
STEEL CASING TUNNEL AND 8" DIP CL 52 SEWER BORE & JACK	40 L.F.	40 L.F.	36" O.D. x 50" STEEL PIPE CL 52 DIP	SEVERN STEEL & EQUIPMENT INC. US PIPE & FOUNDRY CO.
4" SAN. HOUSE CON.	5 L.F.	5 L.F.	5DR 35	CHARLOTTE PIPE & FOUNDRY

AS-BUILT

HOWARD COUNTY, MD.
FIELD BOOK #153
SURVEY PERFORMED
7/25,8/07,8/22,10/1/91



TYPE OF BUILDING: RESIDENTIAL
SANITARY HOUSE CONNECTIONS: 1
DRAINAGE AREA: PATAPSCO RIVER

SEWER CODE FOR COUNTY USE ONLY
SEWER NO. 1455800

GENERAL NOTES:

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS, 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. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-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. 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 TESTS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORK DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
STATE HIGHWAY ADMINISTRATION- 531-5533
BALTO. GAS & ELECTRIC CO.- CONTRACTOR SERVICE 850-4620
BALTO. GAS & ELECTRIC CO.- UNDERGROUND DAMAGE CONTROL 859-9004
BALTO. GAS & ELECTRIC CO.- TROUBLE SHOOTING 298-9040
MISS UTILITY- 1-800-257-7777
BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS- 313-4900
CHESAPEAKE AND POTOMAC TELEPHONE CO.- 597-8585
- 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 THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL SEWER MAINS SHALL BE D.I.P. 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.
- INVERTS OF THE SEWER HOUSE CONNECTIONS AT THE PROPERTY LINE ARE INDICATED BY THE SYMBOL: []
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

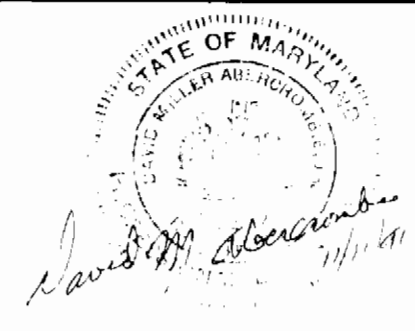
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Lewis 11/9/91
DIRECTOR OF PUBLIC WORKS

Robert M. Benney 11-18-91
CHIEF, BUREAU OF UTILITIES

11/13/91
CHIEF, UTILITY DESIGN DIVISION

WALLACE, MONTGOMERY & ASSOCIATES
1544 YORK ROAD
LUTHERVILLE, MARYLAND 21093
(301) 494-9093



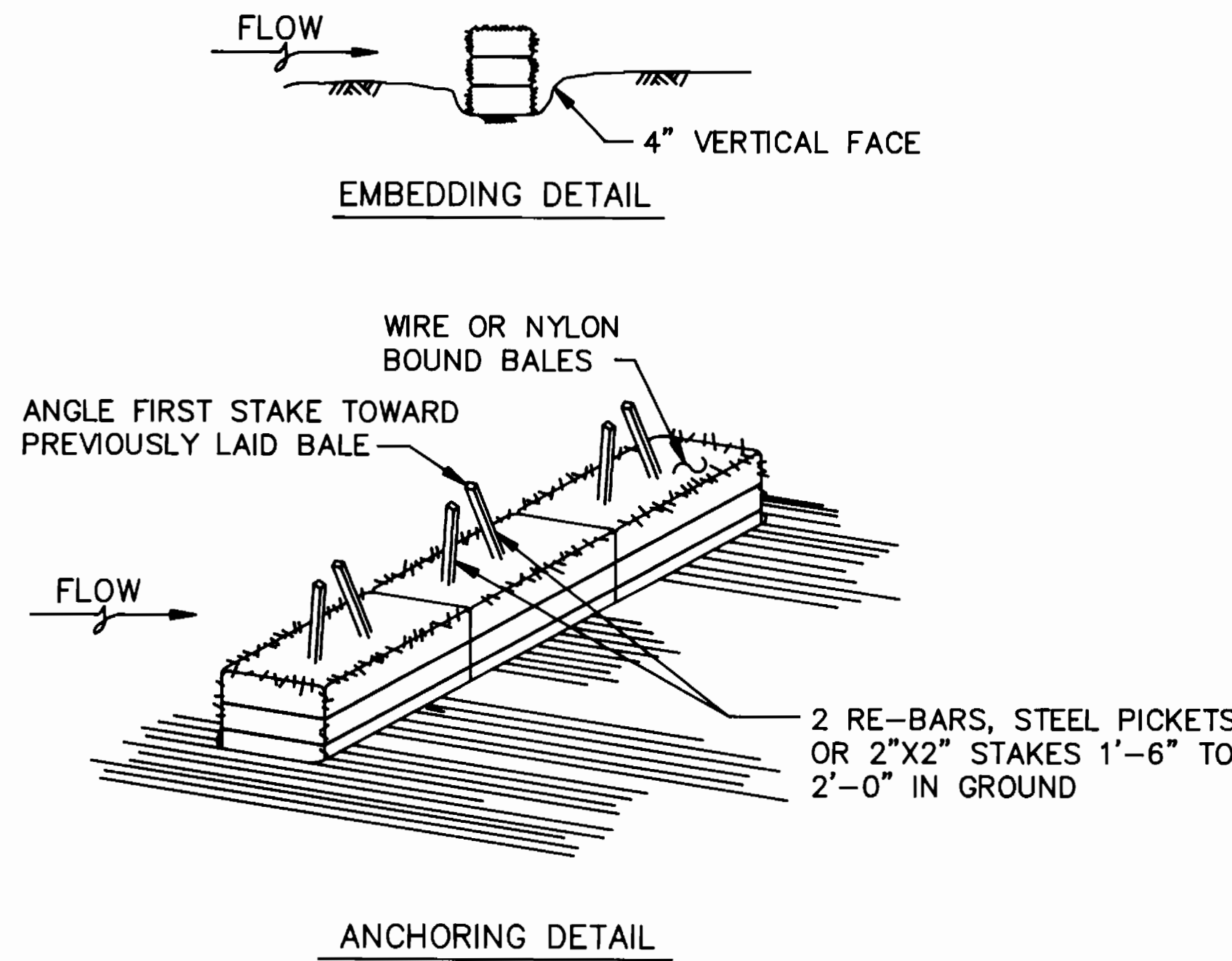
DES: WEA				
DRN: JAD				
CHK: DMA				
DATE: 11/11/91	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 17 BLOCK NO. 10

PLAN AND PROFILE OF
SEWER EXTENSION

TILLER DRIVE SEWER EXTENSION
CAPITAL PROJECT S-6691
CONTRACT NO. 10-3142
ELECTION DISTRICT NO. 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 2

AS-BUILT 9-18-92



TRAVERSE DESCRIPTION				
POINT NO.	NORTH	EAST	BEARING	DISTANCE
H.C. 3442003	534576.8460	847148.6350		
B-10	534050.2850	846894.9060	S 40° 45' 00" W	695.10'
B-11	533921.0300	846827.7430	S 45° 47' 15" E	185.33'

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (880-3450)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH SEC. 219 OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- 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 3:1, b) 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. 1, 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 "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). 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 1.36 ACRES
 AREA DISTURBED 0.0141 ACRES
 AREA TO BE ROOFED OR PAVED 0.0102 ACRES
 AREA TO BE VEGETATIVELY STABILIZED 0.0039 ACRES
 TOTAL CUT 291 CU. YDS.
 TOTAL FILL 291 CU. YDS.
 OFFSITE WASTE/BORROW AREA LOCATION NONE
- 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.
- ALL TRENCH MATERIAL SHOULD BE PLACED ON THE HIGHER SIDE OF THE TRENCH, ABOVE THE TOP-OF-CURB.

CONSTRUCTION SPECIFICATIONS

- BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THRU THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STANDARD SYMBOL - _____ S.B.D. _____

STRAW BALE DIKE DETAIL

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE.
- INSTALL SEDIMENT CONTROL DEVICE (STRAW BALES) FOR SEWER MAIN PERPENDICULAR TO THE CURB ON THE DOWN-SLOPE SIDE OF CONSTRUCTION AND ON THE PERIMETER OF THE JACKING PIT.
- JACK AND BORE STEEL CASING TUNNEL, INSTALL 8" SEWER.
- EXCAVATE DITCH TO THE GRADE SPECIFIED ON THE PROFILE.
- INSTALL SEWER LINE.
- BACKFILL TRENCH AND RESURFACE WITH TEMPORARY BITUMINOUS PAVING WHERE NEEDED.
- INSTALL PERMANENT PAVEMENT, CLEAN UP CONSTRUCTION SITE.
- REMOVE SEDIMENT CONTROL DEVICES AFTER PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR.

RESTORATION SCHEDULE		
LOCATION	LENGTH	MATERIAL
STA. 0+00 TO STA. 0+92	92'	BITUMINOUS PAVEMENT
STA. 1+32 TO STA. 1+36	4'x10'	BITUMINOUS PAVEMENT
JACKING PIT	10'x20'	SODDING

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, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED** - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 800 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM 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 DISK 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 (1.4 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 AND 2 LBS PER ACRE (0.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, 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 1-1/2 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 ANCHORING.

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

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - APPLY 60 LBS PER ACRE 10-10-10 FERTILIZER (1.4 LBS/1000 SQ.FT.).

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 1-1/2 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 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

REFER OT THE "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR RATE AND METHODS NOT COVERED.

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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DATE _____

SIGNATURE OF DEVELOPER
PRINT NAME BELOW SIGNATURE

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."

DATE 11/11/91

WALLACE, MONTGOMERY & ASSOCIATES
1544 YORK ROAD
LUTHERVILLE, MARYLAND 21093
(301) 494-9093

APPROVED _____ DATE 11/11/91
HOWARD S.C.D.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: _____ DATE 11/19/91 Chief, Bureau of Engineering: _____ DATE 11/13/91 Chief, Bureau of Utilities: _____ DATE 11/18/91 Chief, Utility Design Division: _____ DATE 11/13/91	WALLACE, MONTGOMERY & ASSOCIATES 1544 YORK ROAD LUTHERVILLE, MARYLAND 21093 (301) 494-9093		DES: WEA DRN: JAD CHK: DMA DATE: 11/11/91	SEDIMENT CONTROL MEASURES & TRAVERSE INFORMATION 600' SCALE MAP NO. 17 BLOCK NO. 10	TILLER DRIVE SEWER EXTENSION CAPITAL PROJECT S-6691 CONTRACT NO. 10-3142 ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 2
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