

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJUTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4" INCHES AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR 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.

ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIERS
	ESTIMATE	AS BUILT		
8" SEWER	1,533 L.F. X	1531	P.V.C.	JOHNS MANSVILLE
MANHOLES	6	6	PRECAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
MANHOLE DEPTH	64 V.F.	70.2	PRECAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
6" SEWER HOUSE CONN.	322 L.F.	354.0	P.V.C.	JOHNS MANSVILLE
8"x6" WYE'S, TEES, ETC.	10	10	P.V.C.	JOHNS MANSVILLE

* PIPE LENGTH DOES NOT INCLUDE THE DIST. THROUGH THE MANHOLE.

NOTE: SEDIMENT CONTROL TO BE IMPLEMENTED IN ACCORDANCE WITH VOL. 4, ARTICLE 15 OF THE HOWARD COUNTY DESIGN MANUAL AND THESE PLANS.

Reviewed for Howard County S.C.D. and meets technical requirements.

[Signature] Date: 10/23/86

U.S. SOIL CONSERVATION SERVICE

This development plan is approved for soil erosion and sediment control by the Howard County Soil Conservation District.

Approved: *[Signature]* Date: 10/23/86
HOWARD COUNTY S.C.D.

LOCATION	DISTANCE	TYPE
EX. MH #1 TO MH 1	30'	SOD
MH 1 TO MH 2	260'	PAVING
SHC @ 1+00	10'	PAVING
SHC @ 2+10	10'	PAVING
SHC @ 2+55	10'	PAVING

MANHOLE	DISTANCE	OFFSET
1	53' FROM TP 700 TOWARDS TP 701	24' LEFT
2	242' FROM TP 700 TOWARDS FLYQ	4' LEFT
3	374' FROM TP 700 TOWARDS TP 702	26' LEFT
4	270' FROM TP 701 TOWARDS TP 702	27' LEFT
5	12' FROM TP 702 TOWARDS HO. CO. 2040001	31' LEFT
6	168' FROM HO. CO. #2040001 TO FLY 'B'	51.5' LEFT

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."

[Signature] Date: 10-23-86

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

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.

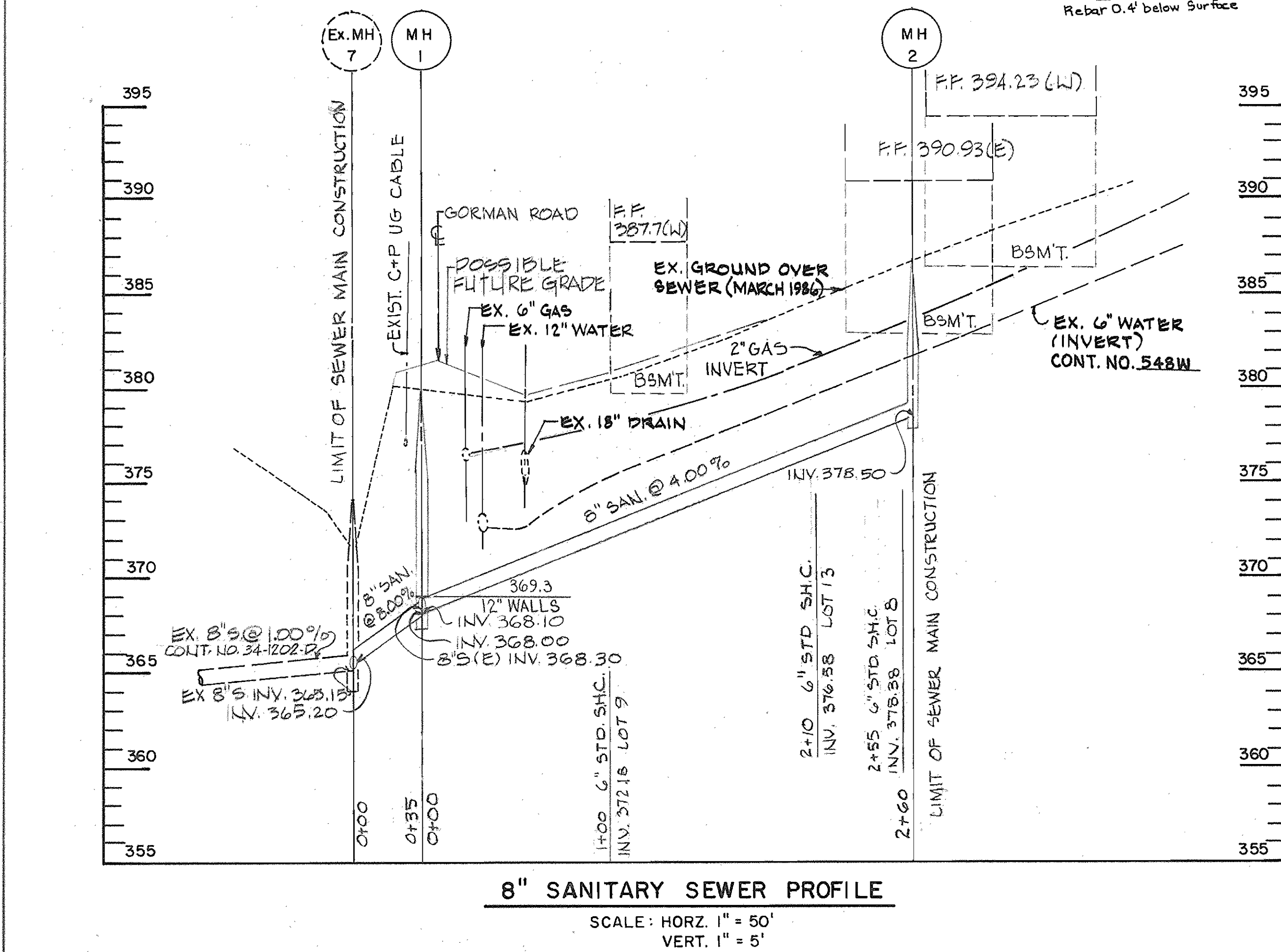
[Signature] Date: _____

WHITNEY, BAILEY, COX & MAGNANI
CONSULTING ENGINEERS
1850 YORK ROAD
TIMONIUM, MD. 21093

SEWER CODE FOR COUNTY USE ONLY:
SEWER NO. 636-0000

TYPE OF BUILDING: SINGLE FAMILY DWELLING
NUMBER OF LOTS: 11
NUMBER OF SEWER HOUSE CONNECTIONS: 10
DRAINAGE AREA: MIDDLE PATUXENT

- 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 IX, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IX ON THE JOB.
 - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL [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 - 850-4020
BALTIMORE GAS & ELECTRIC CO.
UNDER GROUND DAMAGE CONTROL - 850-0004
BALTIMORE GAS & ELECTRIC CO.
TROUBLE SHOOTING - 298-5001
MPS
UTILITY - 1-558-0100
COLONIAL PIPELINE CO. - 795-1390
BUREAU OF UTILITIES, HOWARD COUNTY
DEPARTMENT OF PUBLIC WORKS - 992-2366; C&P 1-800-257-7777
 - 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 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" WALLS ARE FOR BRICK MANHOLES ONLY.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] DATE: 11-2-86
DIRECTOR OF PUBLIC WORKS

[Signature] DATE: _____
CHIEF, BUREAU OF ENGINEERING

[Signature] DATE: _____
CHIEF, UTILITY DIVISION

WHITNEY, BAILEY, COX & MAGNANI
CONSULTING ENGINEERS
1850 York Road
Timonium, Md. 21093
301-252-6060

[Signature]

DES: R.J.H.			
DRN: G.G., N.S.			
CHK: J.P.			
DATE: 8/27/86	BY: NO.	REVISION	DATE

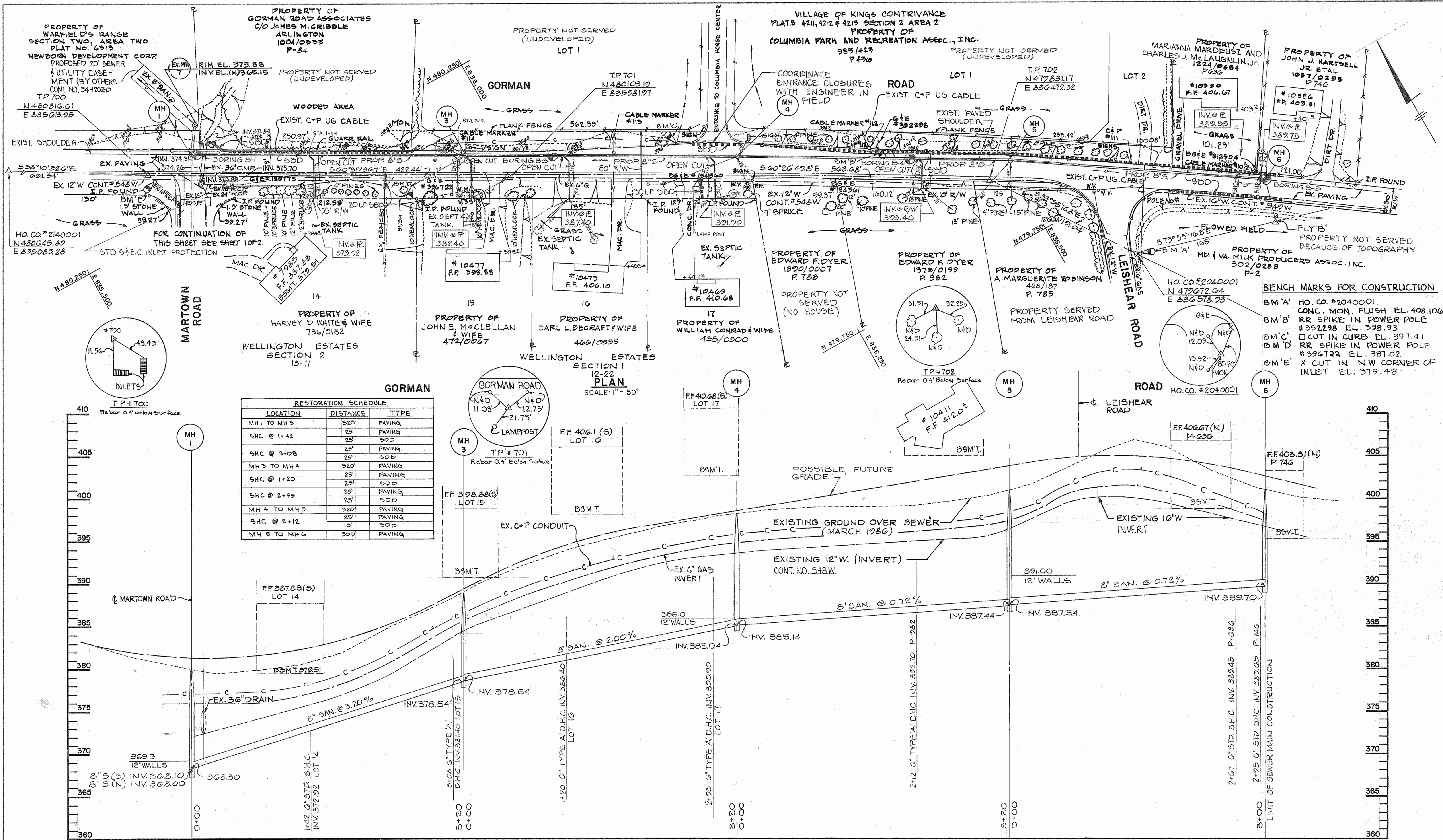
VICINITY MAP
PLAN & PROFILE
OF SEWER EXTENSION

600' SCALE MAP NO. 42 BLOCK NO. 24

AS-BUILT JOHN E. HARMS & ASSOC. SEPT. 30, 1987

MARTOWN ROAD SEWER MAIN
CAPITAL PROJECT S-6143
CONTRACT NO. 30-1532
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 2



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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert M. Deane* 11-3-86
 Chief, Bureau of Engineering: *[Signature]*
 Chief, Bureau of Utilities: *[Signature]*

HITNEY AILEY FOX MAGNANI CONSULTING ENGINEERS
 1850 York Road
 Timonium Md. 21093
 301-252-6060

DES: R.J.H.
 DRN: G.G., N.S.
 CHK: J.P.
 DATE: 8/27/86

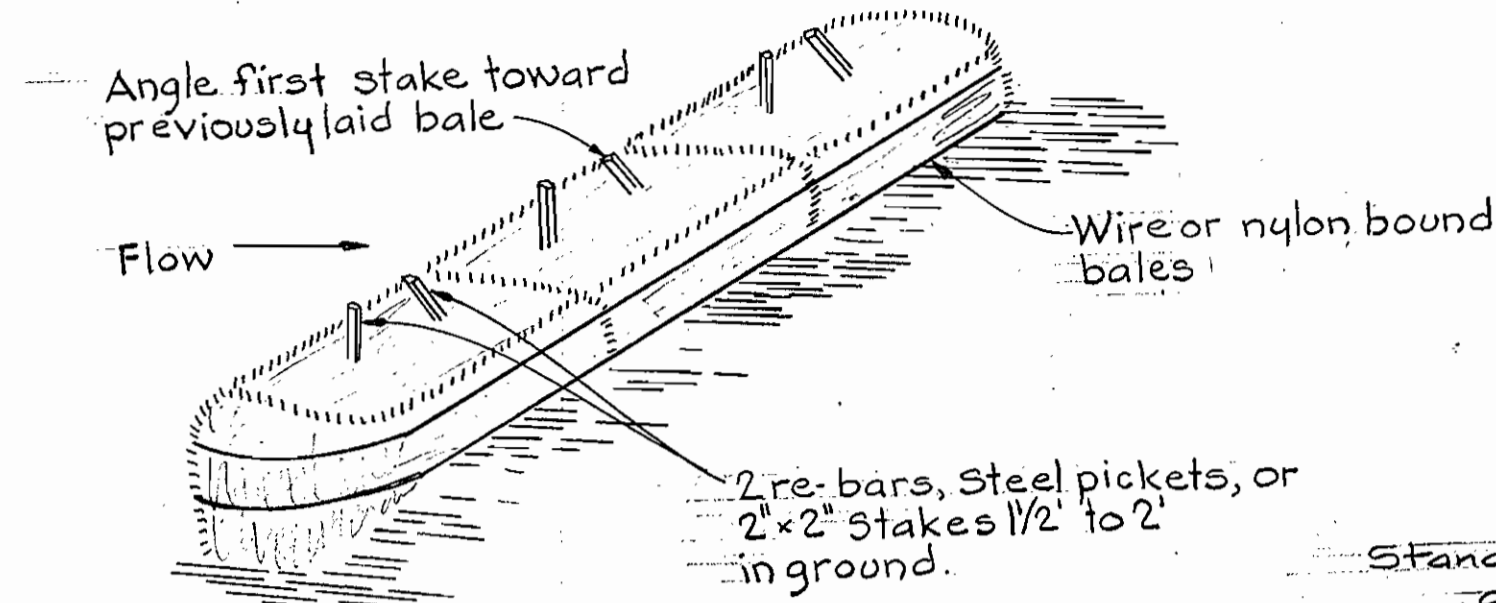
BY: NO. REVISION DATE

PLAN & PROFILE OF SEWER EXTENSION

600' SCALE MAP NO. 42-847 BLOCK NO. 24-81

MARTOWN ROAD SEWER MAIN CAPITAL PROJECT S-6143 CONTRACT NO. 30-1532 ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 2



ANCHORING DETAIL

CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of 4'.
3. 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.
4. Inspection shall be frequent and repair or replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

DETAIL STRAW BALE DIKE
No Scale

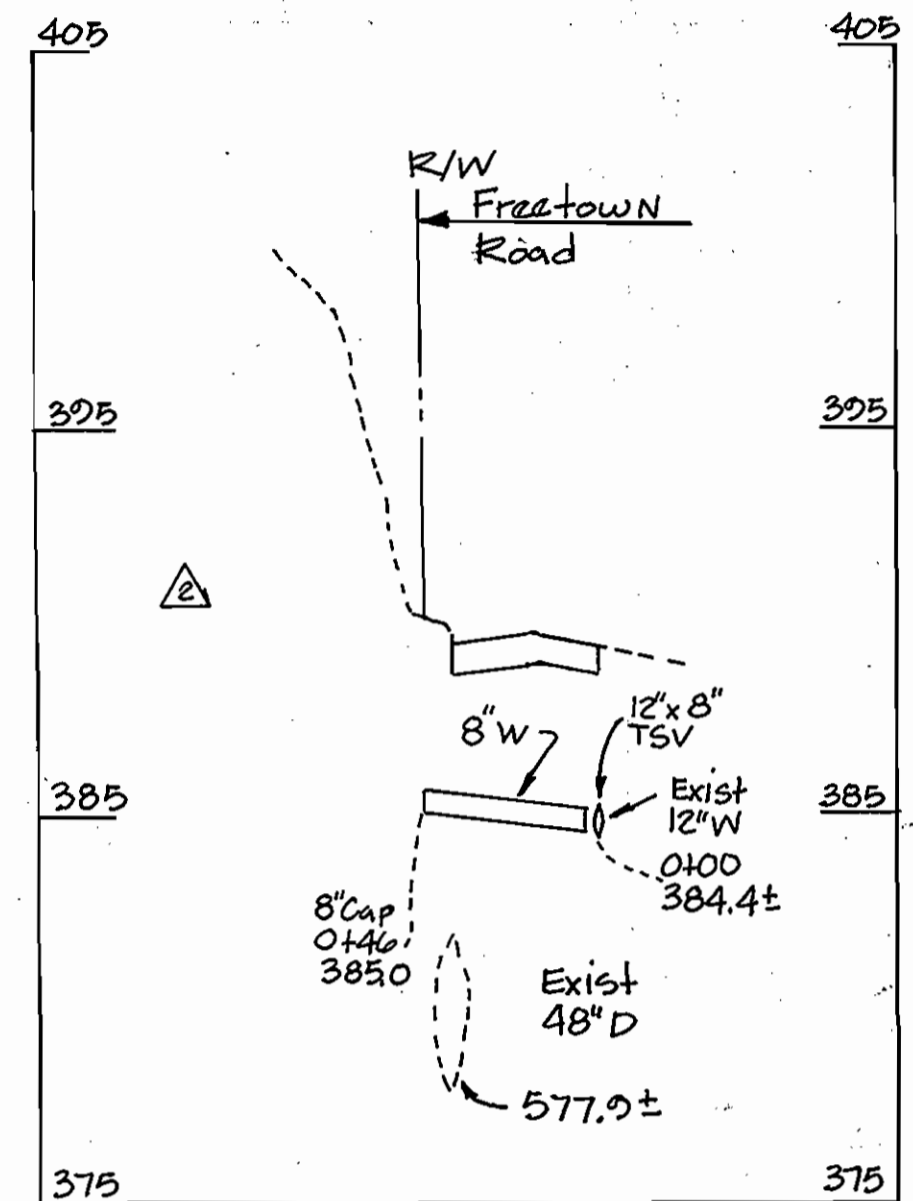
SOIL EROSION AND SEDIMENT CONTROL NOTES

1. The Contractor will comply with all Requirements of Sediment and Erosion Control set forth in the Contract Drawings, 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, and Volume IV - Section 219 of the Howard County Design Manual, Volume IV.
2. The Contractor shall not Pump from Excavated Areas directly into the Howard County Storm Drainage System or any Natural Water Course, Where Ground water 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 or 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 Stream.
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" enclosed in Specifications.
6. Road side Ditches and Drainage Pipes shall be Restored to a condition Equal to or Better than the Original Condition following Completion of Construction.
7. 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.
8. 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.
9. Continuous Inspection and Maintenance of all Sediment and Erosion Control Devices will be Required.
10. The Contractor shall provide Additional Soil Erosion and Sediment Control as Required by the Sediment Control Inspector, as the Work Progresses or Requires.
11. The Contractor shall notify in writing, a Howard County Sediment Control Division Representative at least three (3) days prior to starting Work. Please Contact: Howard County - # 992-2436. Copies shall be provided to the Engineer.
12. The Contractor shall place a Stabilized Construction Entrance as shown in the Howard County Standard Details, G.C.11 where shown on the Plans unless otherwise Directed by the Engineer.
13. Sediment Removal - All Trapped Sediment is to be Removed and Disposed of at the Authorized Landfills prior to Removal of Sediment Control Structures.
14. Following Initial Soil Disturbance, or Redisturbance, Permanent or Temporary Stabilization shall be completed with:
 - A) Seven (7) Calendar days for all Perimeter Sediment Control Structures, Dikes, Swales, Ditches, Perimeter Slopes and all Slopes greater than 3:1.
 - B) Fourteen (14) days as to all other Disturbed or Graded Areas on the Project Site.

TRAVERSE DESCRIPTION

Δ POINT	NORTH	EAST	BEARING	DIST.
2	495320.97	833690.70		
3	495972.79	833808.58	N10°15'04"E	662.39
4	496114.84	833646.99	N48°40'57"W	215.15
5	496162.59	833293.87	N82°17'57"W	356.33
6	496241.73	832845.46	N79°59'28"W	495.34
7	496380.45	832501.07	N68°03'39"W	371.28

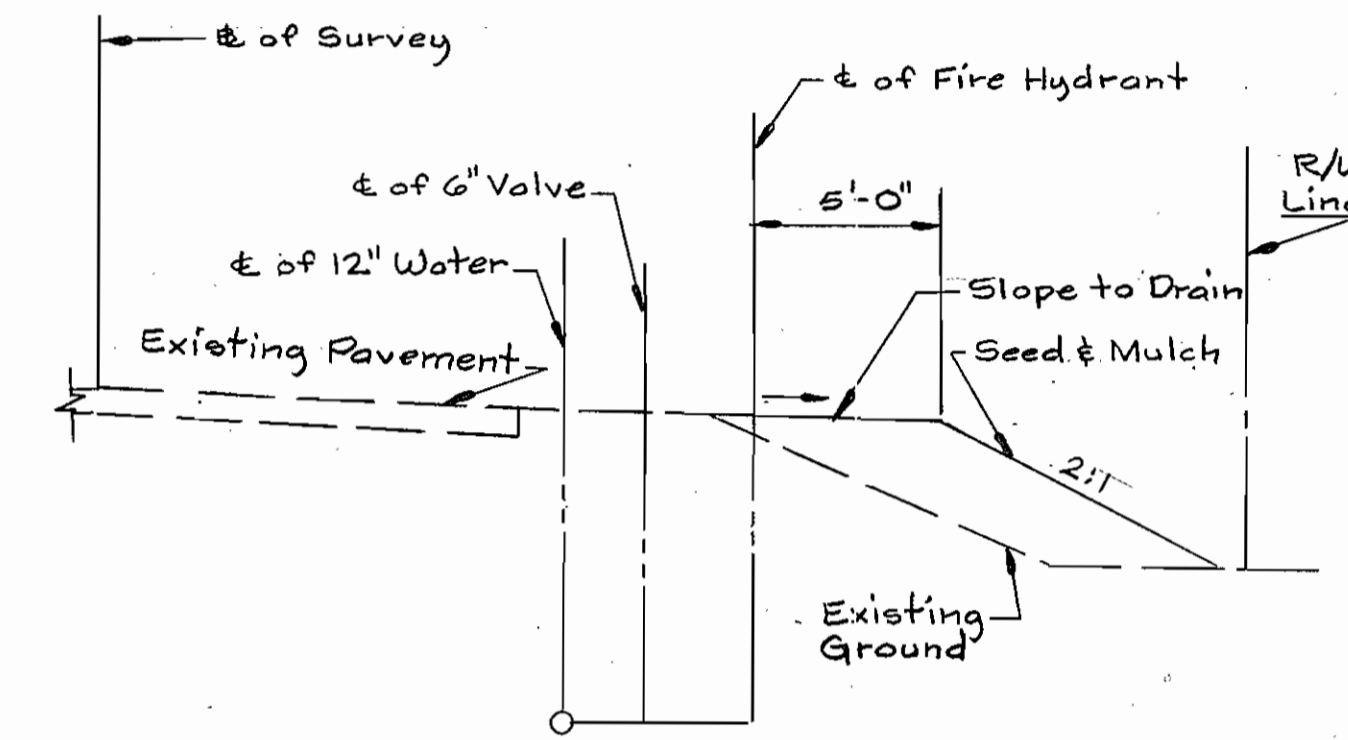
ITEM	QUANTITIES		TYPE MATERL	SUPPLIER
	ESTIM.	AS BUILT		
12" WATER	2060 L.F.	2038 L.F.	CL-52 D.I.P.	GRIFFIN PIPE CO.
12" VALVE	3 EA.	3 EA.	A126 CLASS B	MFC SALES INC
FIRE HYDRANT	4 EA.	4 EA.	"	"
3/4" W.H.C.	10 L.F.	10 L.F.	TYPE 'K' CORR.	"



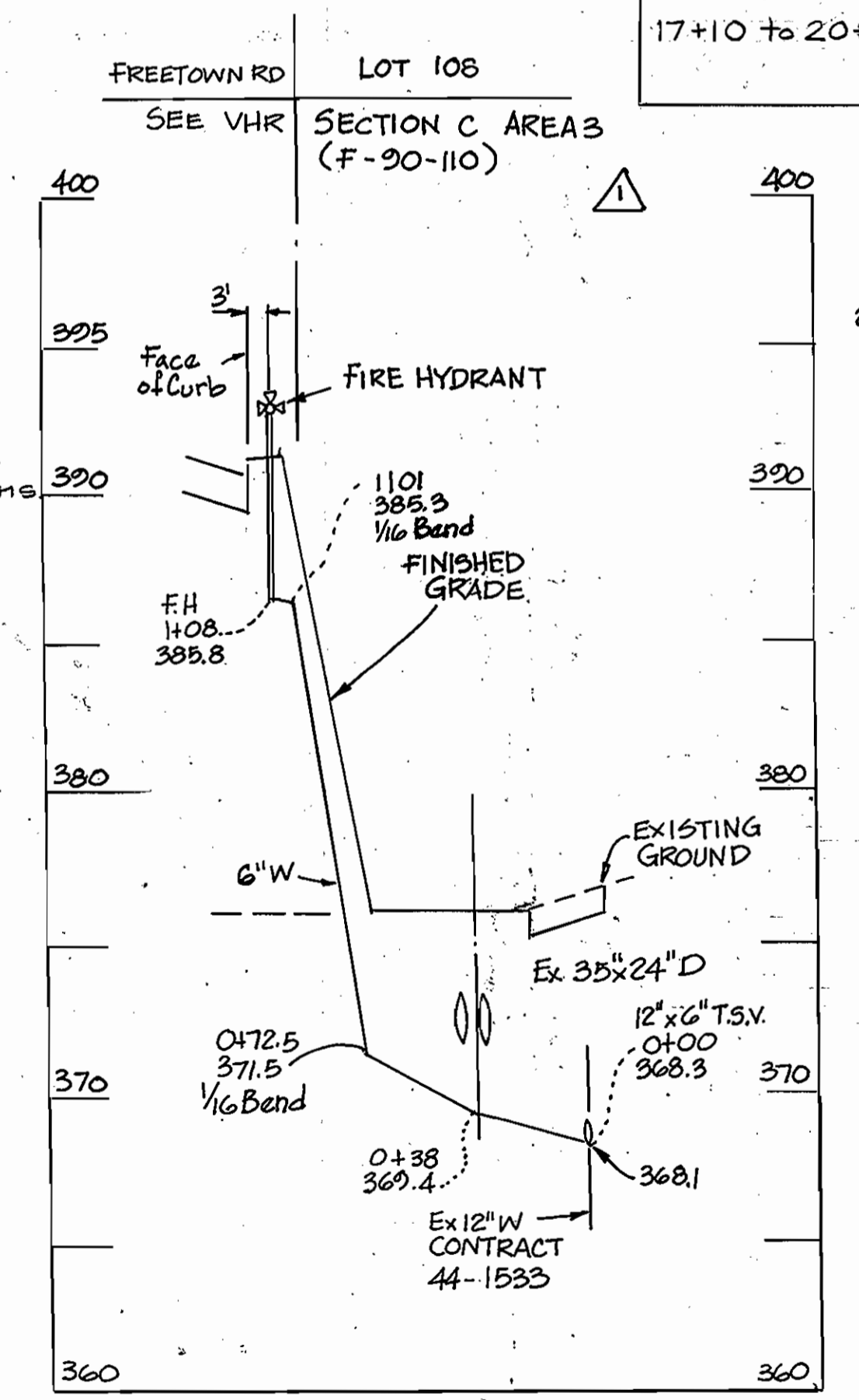
PROFILE - 8" WATER MAIN
SCALE: 1"=50' 1"=5'

RESTORATION SCHEDULE

STATION	MATERIAL
0+00 to 3+70	Roadway - Bituminous Concrete Shoulder Area - Gravel Grassed Area - Sod
3+70 to 6+70	Roadway - Bituminous Concrete Shoulder Area - Gravel Grassed Area - Seed & Mulch
6+70 to 17+10	Roadway - Bituminous Concrete Shoulder Area - Gravel Grassed Area - Sod
17+10 to 20+60	Roadway - Bituminous Concrete Shoulder Area - Tar & Chip Grassed Area - Sod



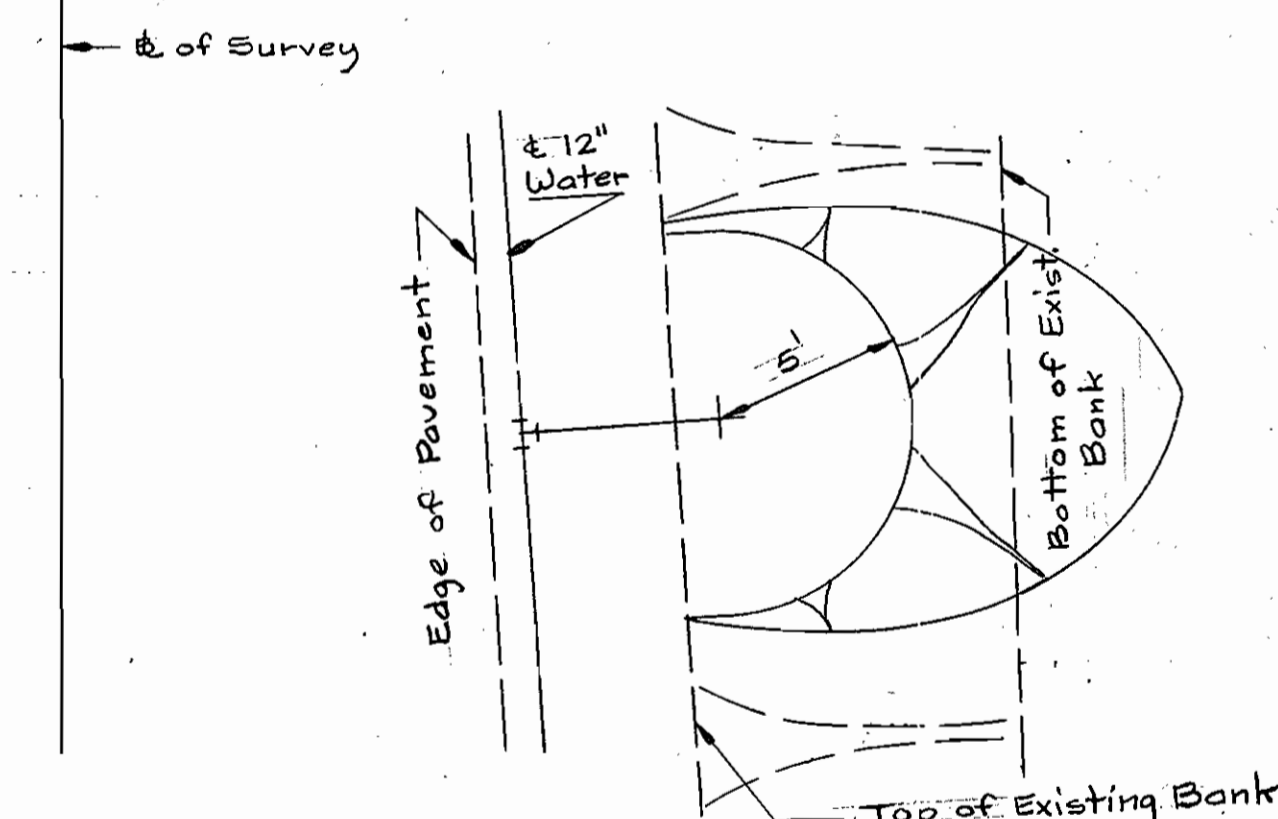
PROFILE



PROFILE - FIRE HYDRANT RELOCATION
SCALE 1"=50' 1"=5'

GENERAL NOTES
(SEE SHEETS 142)

1. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
2. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-158 DUCTILE IRON COMPACT FITTINGS 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
3. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE NOTED.
4. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
5. ALL FITTINGS SHALL BE BUTTRESSED AND ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWING.
6. 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 OF THE STANDARD SPECIFICATIONS.
7. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
8. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTINGS UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPEC.
9. ALL W.H.C.'S SHALL BE 3/4" UNLE OTHERWISE NOTED.



DETAIL FOR FIRE HYDRANT @ STA. 5+60
SCALE 1"=5'

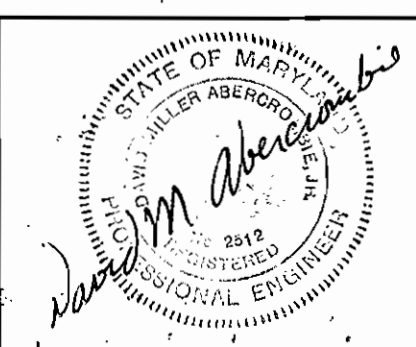
DEVELOPER'S CERTIFICATION
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
DATE: 1-13-87
BUREAU OF ENGINEERING & ASSOCIATES
DEPARTMENT OF PUBLIC WORKS

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 HOWARD COUNTY SOIL CONSERVATION DISTRICT.
DATE: 10/1/86
WALLACE MONTGOMERY & ASSOCIATES
9 W 29 TH STREET
BALTIMORE, MD. 21218
301-235-7600

REVIEWED FOR HOWARD COUNTY S.C.D. MEETS TECHNICAL REQUIREMENTS.
DATE: 1-20-87
U.S. SOIL CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.
DATE: 1-20-87
HOWARD COUNTY S.C.D.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS: 1-26-87
CHIEF, BUREAU OF ENGINEERING: 1-13-87
CHIEF, BUREAU OF UTILITIES: 1/16/87
CHIEF, UTILITY DIVISION: 1/12/87

WALLACE, MONTGOMERY & ASSOCIATES
9 W. 29 TH STREET
BALTIMORE, MD. 21218
301-235-7600



DES: H.K.			
DRN: P.B.			
CHK: D.A.	RP	Added 8" Water Main Profile	1/25/91
	RP	Added Profile of Fire Hydrant Relocation	1/16/91
DATE: 10/21/86	BY NO.	REVISION	DATE

DETAILS OF WATER MAIN
600' SCALE MAP NO. 35 BLOCK NO. 17 & 18

FREETOWN WATER MAIN CAPITAL PROJECT W-8147
CONTRACT NO. 44-1533
ELECTION DISTRICT NO. 5
HOWARD COUNTY MD.
SCALE AS SHOWN
SHEET 3 OF 3