

CONTRACT NO. 34-1662-D

VILLAGE OF HARPERS CHOICE

8" SANITARY SEWER AND 12" WATER MAIN

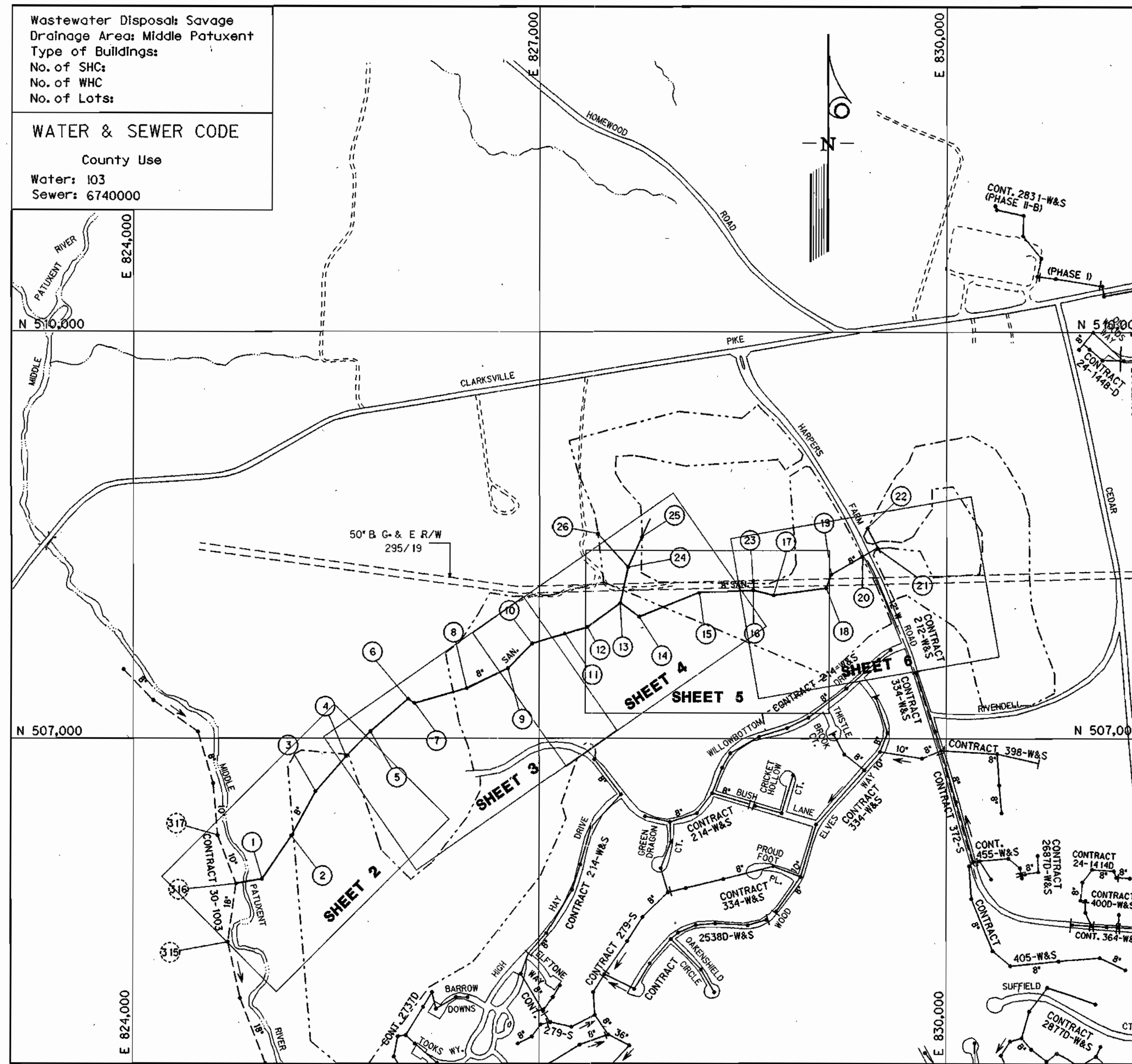
HOWARD COUNTY, MARYLAND

DEPT. OF PUBLIC WORKS

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 THE MARYLAND STATE PLANE COORDINATES SYSTEM REFERENCE HOWARD COUNTY CONTROL POINTS 2739002 & 2739003.
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 12". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED.
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.
7. 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.
8. 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. - 850-4620
 - CONTRACTOR SERVICES - 298-9001
 - UNDERGROUND DAMAGE CONTROL - 859-9004
 - TROUBLE SHOOTING - 298-9001
 - C & P TELEPHONE - 1-800-257-7777
 - MISS UTILITY - 559-0100
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
9. 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.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS WITHIN THE EASEMENTS.
11. ALL SEWER MAINS SHALL BE C.S.P.X., D.I.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
13. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
14. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
15. ALL MANHOLES HAVING A DEPTH OF 18 FT. OR GREATER SHALL BE CONSTRUCTED WITH AN INTERMEDIATE LANDING AS SHOWN ON HOWARD COUNTY STANDARD DETAIL G-5.15.
16. MANHOLES DESIGNATED W.T. IN PLAN AND/OR PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1.5' ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
17. 'FULL TRENCH COMPACTION' REQUIRED FOR ENTIRE LIMITS OF THIS PROJECT.
18. REFER TO 'MARYLAND'S GUIDELINES TO WATERWAY CONSTRUCTION' BY THE WATER RESOURCES ADMINISTRATION (WRA), DATED JANUARY, 1986 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
19. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
20. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3 1/2' COVER UNLESS OTHERWISE NOTED.
21. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
22. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
23. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
24. INSTREAM CONSTRUCTION WILL NOT BE PERMITTED FROM MARCH 1ST. THROUGH MAY 31ST, INCLUSIVE.

QUANTITIES			
ITEM	BID	AS-BUILT	MATERIAL/SUPPLIER
8" SAN. SEWER	5226 L.F.		DIP. United States Pipe
SANITARY MANHOLES	289 V.F.	26 EA	Atlantic Area of Concrete
36" STEEL SLEEVE	100 L.F.	100 LF	
D.I.P. SEWER	1614 L.F.		D.I.P. US PIPE & FOUNDRY CO.
12" WATER	750 L.F.		
12" SLEEVE & SPACER	1 EA.	1 EA	
12" 1/8 BEND	2 EA.	R	DIPUS PIPE & FOUNDRY CO.
12" X 8" TEE	1 EA.	R	DIPUS PIPE & FOUNDRY CO.
8" WATER	75 L.F.	7	
8" 1/8 BEND	1 EA.	1	
12" CAP	1 EA.	1	DIPUS PIPE & FOUNDRY CO.
8" CAP	1 EA.	1	DIPUS PIPE & FOUNDRY CO.
24" STEEL SLEEVE	52.5 L.F.		
12" VALVE	1 EA.	1 EA	DIPUS PIPE & FOUNDRY CO.
8" VALVE	1 EA.	1 EA	" " " " " "



Wastewater Disposal: Savage
 Drainage Area: Middle Potuxent
 Type of Buildings:
 No. of SHC:
 No. of WHC:
 No. of Lots:

WATER & SEWER CODE
 County Use
 Water: 103
 Sewer: 6740000

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

James M. Hester 10/23/87
 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE

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

Stephen L. Fuler 10/23/87
 SIGNATURE DATE
 HOWARD S.C.D.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	
Director of Public Works <i>[Signature]</i> 10/23/87 DATE	Chief - Bureau of Engineering <i>[Signature]</i> 10-23-87 DATE
Chief - Bureau of Utilities <i>[Signature]</i> 10-14-87 DATE	Chief - Land Development Division <i>[Signature]</i> 10-23-87 DATE

KIDDE CONSULTANTS, INC.
 ENGINEERS SURVEYORS PLANNERS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 (301) 321-5500

[Professional Engineer Seal]

DES: J.J.D.			
DRN: A.B./S.J.B.			
CHK: J.E.	J.J.D. 3	ADD M 14-A V.F. PER D.P.W. COMMENTS	10/23/87
DATE: 2/87	J.J.D. 2	DEPT. OF THE ENVIRONMENT COMMENTS	10/16/87
	A.B. 1	COUNTY COMMENTS	8/7/87
	BY NO.	REVISION	DATE

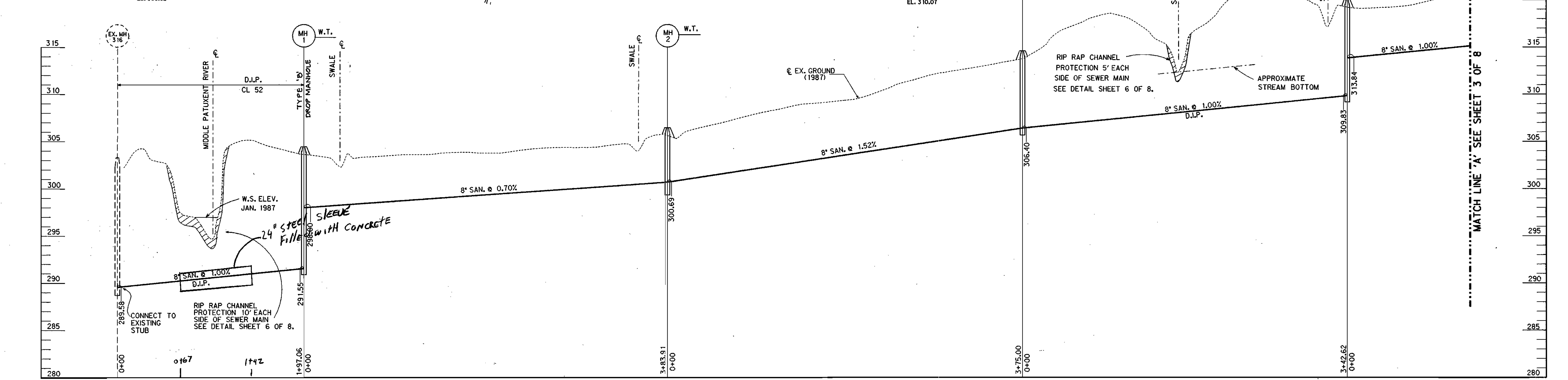
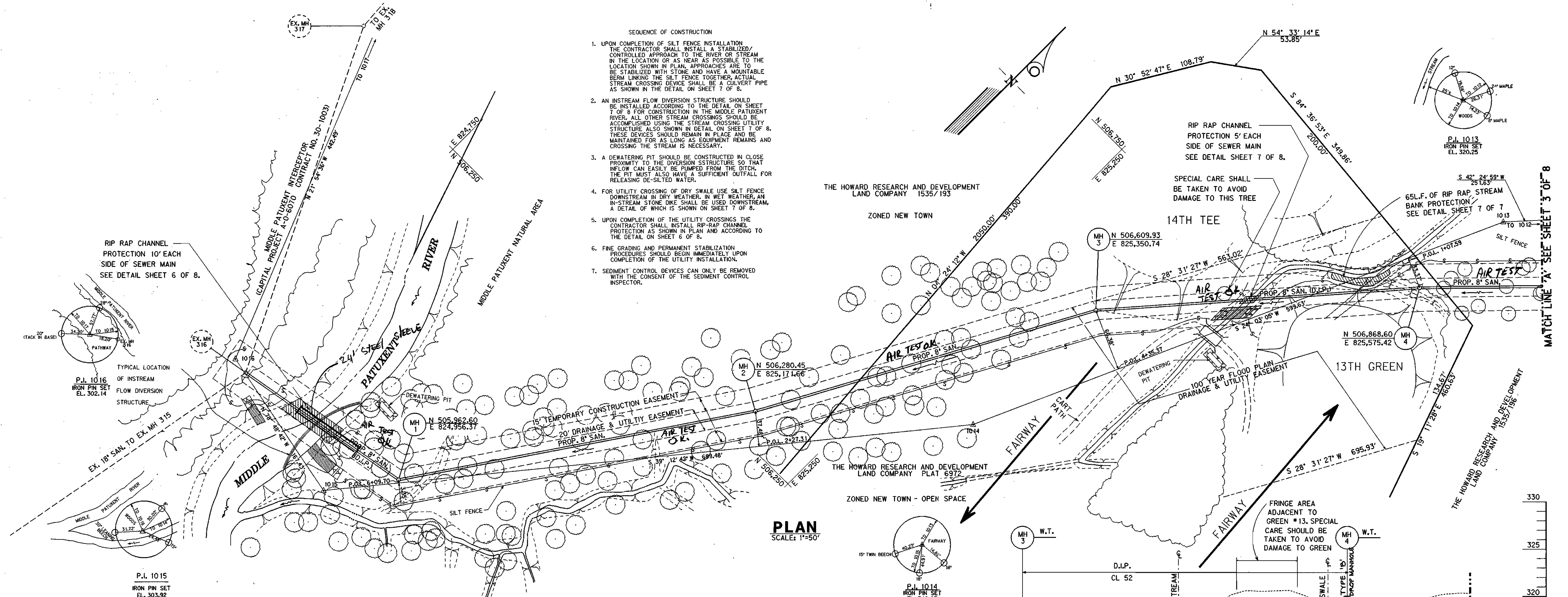
VICINITY MAP AND GENERAL NOTES

60' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

COLUMBIA
VILLAGE OF HARPERS CHOICE
 HOBBITS GLEN GOLF COURSE
 ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1662-D

SCALE AS SHOWN
 SHEET 1 OF 8

- SEQUENCE OF CONSTRUCTION
- UPON COMPLETION OF SILT FENCE INSTALLATION THE CONTRACTOR SHALL INSTALL A STABILIZED/CONTROLLED APPROACH TO THE RIVER OR STREAM IN THE LOCATION OR AS NEAR AS POSSIBLE TO THE LOCATION SHOWN IN PLAN. APPROACHES ARE TO BE STABILIZED WITH STONE AND HAVE A MOUNTABLE BERM LINKING THE SILT FENCE TOGETHER. ACTUAL STREAM CROSSING DEVICE SHALL BE A CULVERT PIPE AS SHOWN IN THE DETAIL ON SHEET 7 OF 8.
 - AN INSTREAM FLOW DIVERSION STRUCTURE SHOULD BE INSTALLED ACCORDING TO THE DETAIL ON SHEET 7 OF 8 FOR CONSTRUCTION IN THE MIDDLE PATUXENT RIVER. ALL OTHER STREAM CROSSINGS SHOULD BE ACCOMPLISHED USING THE STREAM CROSSING UTILITY STRUCTURE ALSO SHOWN IN DETAIL ON SHEET 7 OF 8. THESE DEVICES SHOULD REMAIN IN PLACE AND BE MAINTAINED FOR AS LONG AS EQUIPMENT REMAINS AND CROSSING THE STREAM IS NECESSARY.
 - A DEWATERING PIT SHOULD BE CONSTRUCTED IN CLOSE PROXIMITY TO THE DIVERSION STRUCTURE SO THAT INFLOW CAN EASILY BE PUMPED FROM THE DITCH. THE PIT MUST ALSO HAVE A SUFFICIENT OUTFALL FOR RELEASING DE-SILTED WATER.
 - FOR UTILITY CROSSING OF DRY SWALE USE SILT FENCE DOWNSTREAM IN DRY WEATHER. IN WET WEATHER, AN IN-STREAM STONE DWE SHALL BE USED DOWNSTREAM, A DETAIL OF WHICH IS SHOWN ON SHEET 7 OF 8.
 - UPON COMPLETION OF THE UTILITY CROSSINGS THE CONTRACTOR SHALL INSTALL RIP-RAP CHANNEL PROTECTION AS SHOWN IN PLAN AND ACCORDING TO THE DETAIL ON SHEET 6 OF 8.
 - FINE GRADING AND PERMANENT STABILIZATION PROCEDURES SHOULD BEGIN IMMEDIATELY UPON COMPLETION OF THE UTILITY INSTALLATION.
 - SEDIMENT CONTROL DEVICES CAN ONLY BE REMOVED WITH THE CONSENT OF THE SEDIMENT CONTROL INSPECTOR.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 10/26/87
DATE: 10-14-87

DATE: 10-23-87
DATE: 10-23-87

KIDDE CONSULTANTS, INC.
ENGINEERS SURVEYORS PLANNERS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
(301) 321-5500



DES:	J.D.				
DRN:	A.B. & S.B.				
CHK:	J.E.	J.J.D. 2	DEPT. OF THE ENVIRONMENT COMMENTS	1/10/87	
DATE:	2/87	A.B. 1	COUNTY COMMENTS	8/7/87	
		BY NO.	REVISION	DATE	

PLAN & PROFILE OF SEWER MAIN

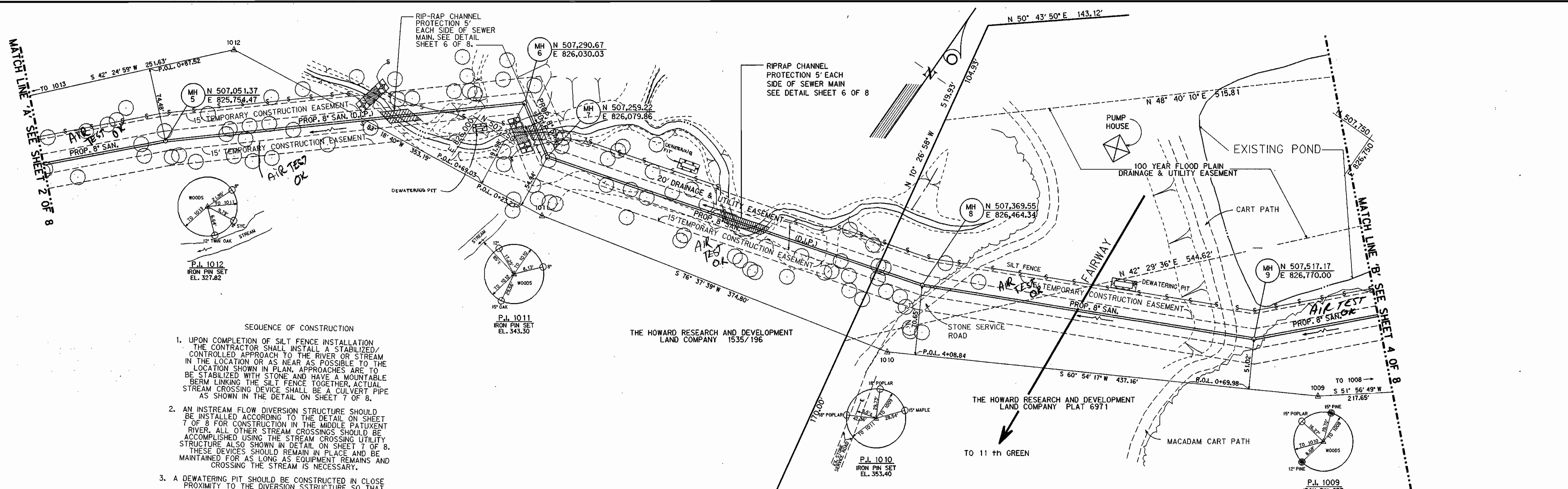
600' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

COLUMBIA
VILLAGE OF HARPERS CHOICE
HOBBITS GLEN GOLF COURSE
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1662-D

SCALE AS SHOWN
SHEET 2 OF 8

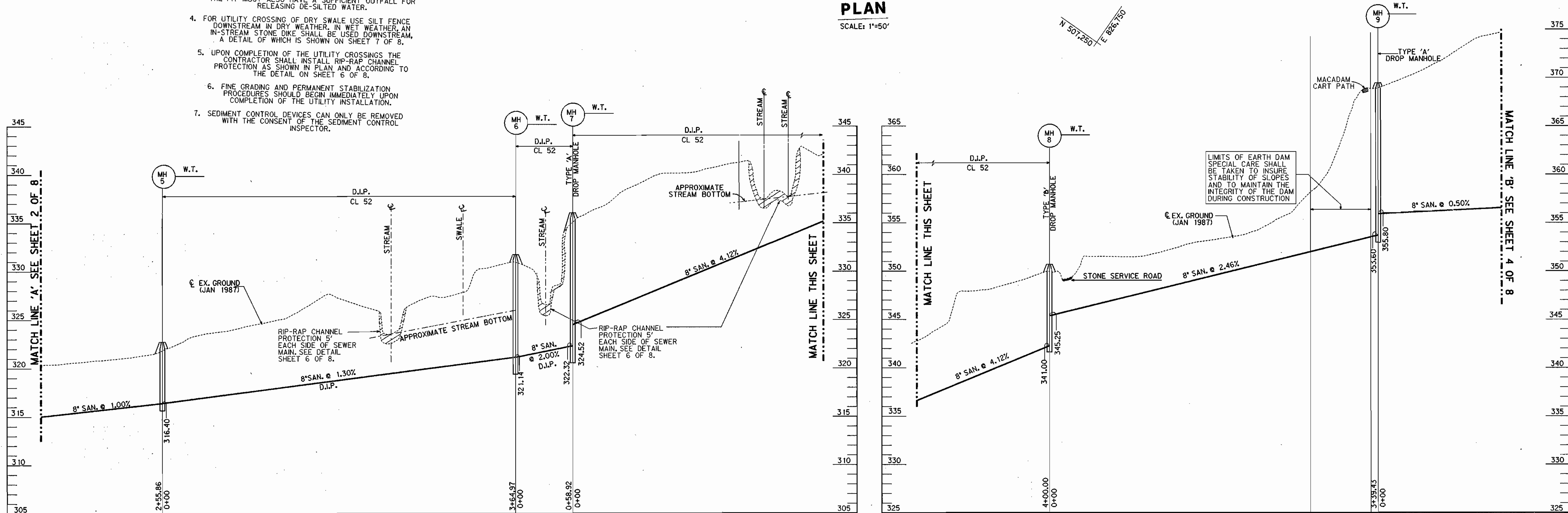
6-6-80 AS-BUILT

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PLAN
SCALE: 1"=50'



PROFILE
HOR.: 1"=50'
VERT.: 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. ...
DIRECTOR OF PUBLIC WORKS
DATE: 10-14-87

Richard A. ...
CHIEF - BUREAU OF UTILITIES

KIDDE CONSULTANTS, INC.
ENGINEERS SURVEYORS PLANNERS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
(301) 321-5500

Michael ...
CHIEF - LAND DEVELOPMENT DIVISION
DATE: 10-23-87



DES: J.J.D.			
DRNA.B./S.J.B.			
CHK: J.E.	J.J.D. 2	DEPT. OF THE ENVIRONMENT COMMENTS	10/16/87
DATE: 2/87	A.B. 1	COUNTY COMMENTS	8/7/87
BY: NO.		REVISION	DATE

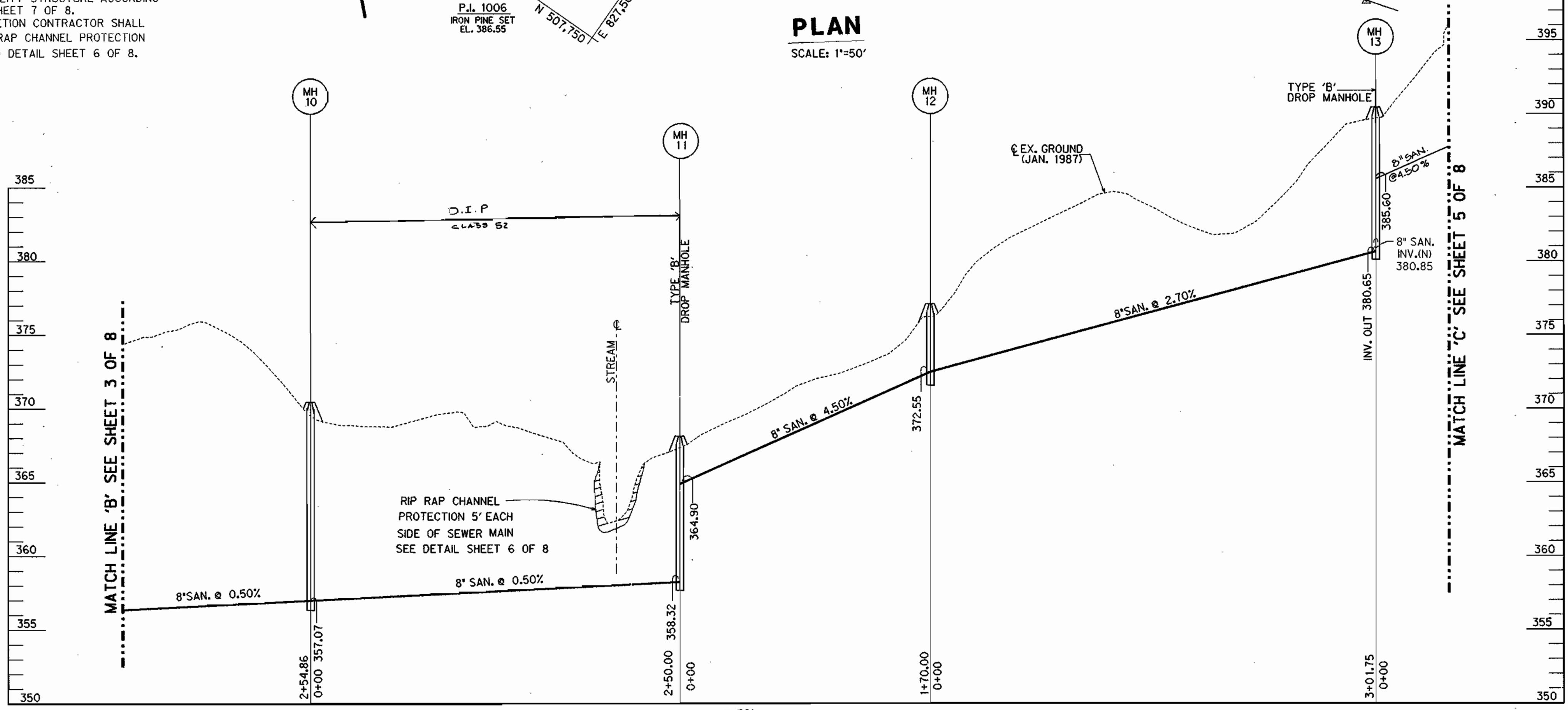
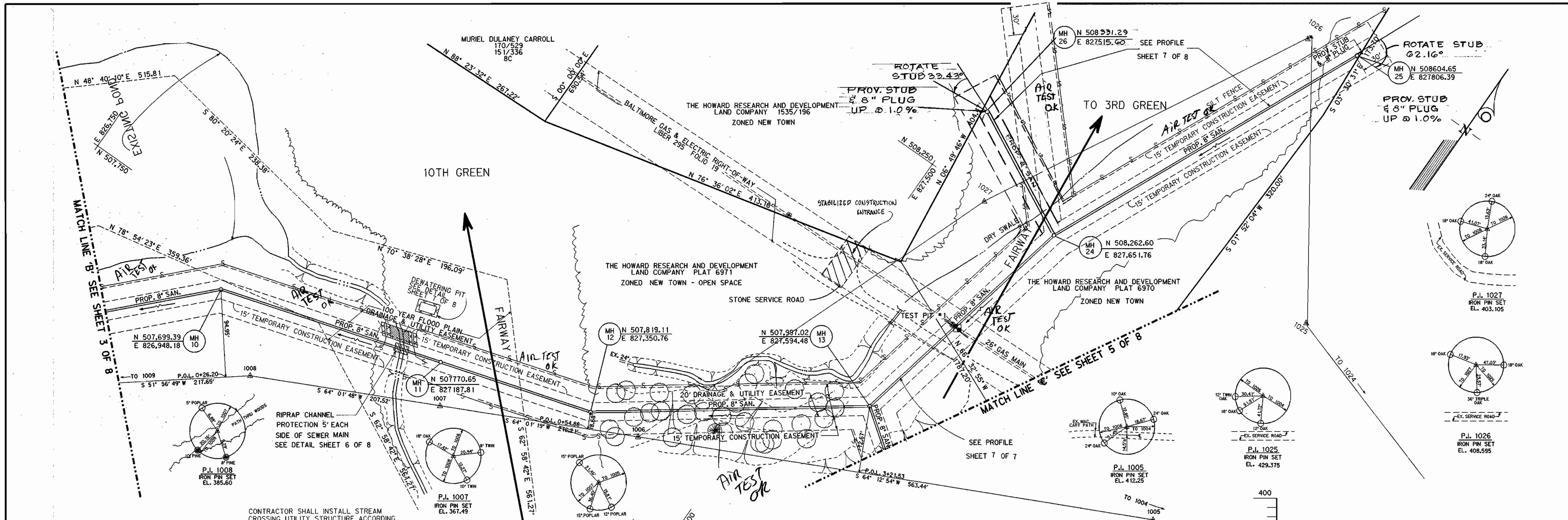
PLAN & PROFILE OF SEWER MAIN

600' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

COLUMBIA VILLAGE OF HARPERS CHOICE
HOBBITS GLEN GOLF COURSE
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1662-D

SCALE AS SHOWN
SHEET 3 OF 8

6-6-88 AS-BUILT



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Lewis
DIRECTOR OF PUBLIC WORKS
DATE: 10/24/87

William J. Kelly
CHIEF - BUREAU OF ENGINEERING
DATE: 10-23-87

Michael A. ...
CHIEF - BUREAU OF UTILITIES
DATE: 10-14-87

...
CHIEF - LAND DEVELOPMENT DIVISION
DATE: 10-23-87

KIDDE CONSULTANTS, INC.
ENGINEERS SURVEYORS PLANNERS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
(301) 321-5500



DES:	J.J.D.
DRN:	A.B./S.J.B.
CHK:	J.E.
DATE:	2/87

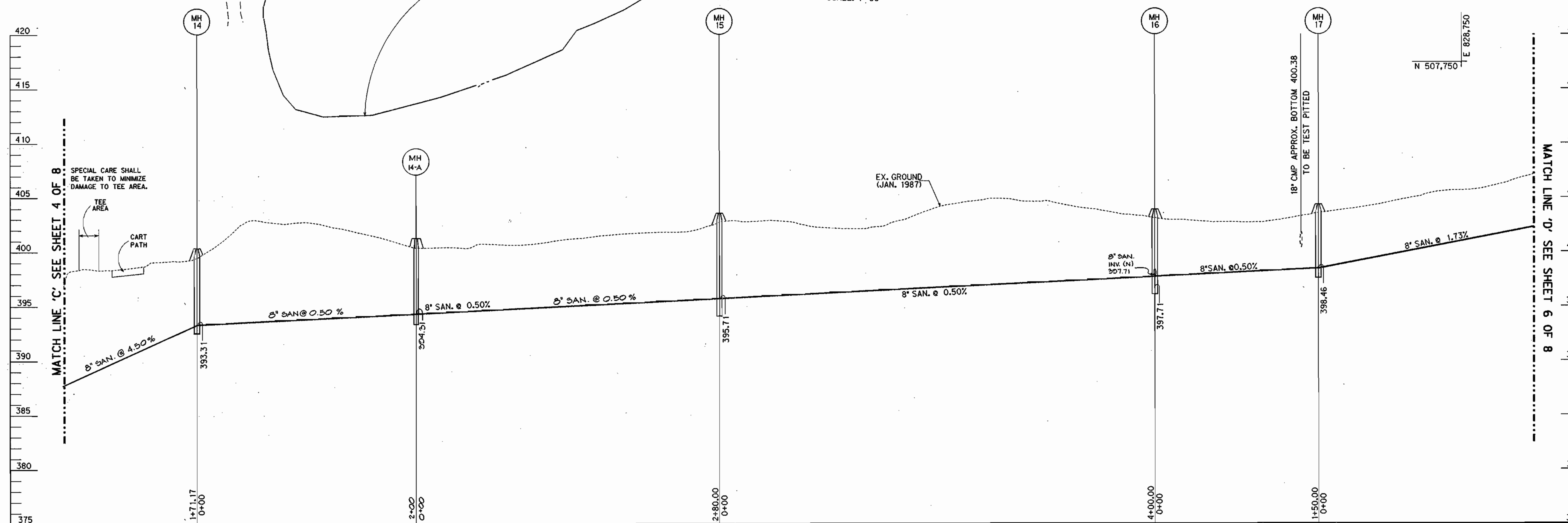
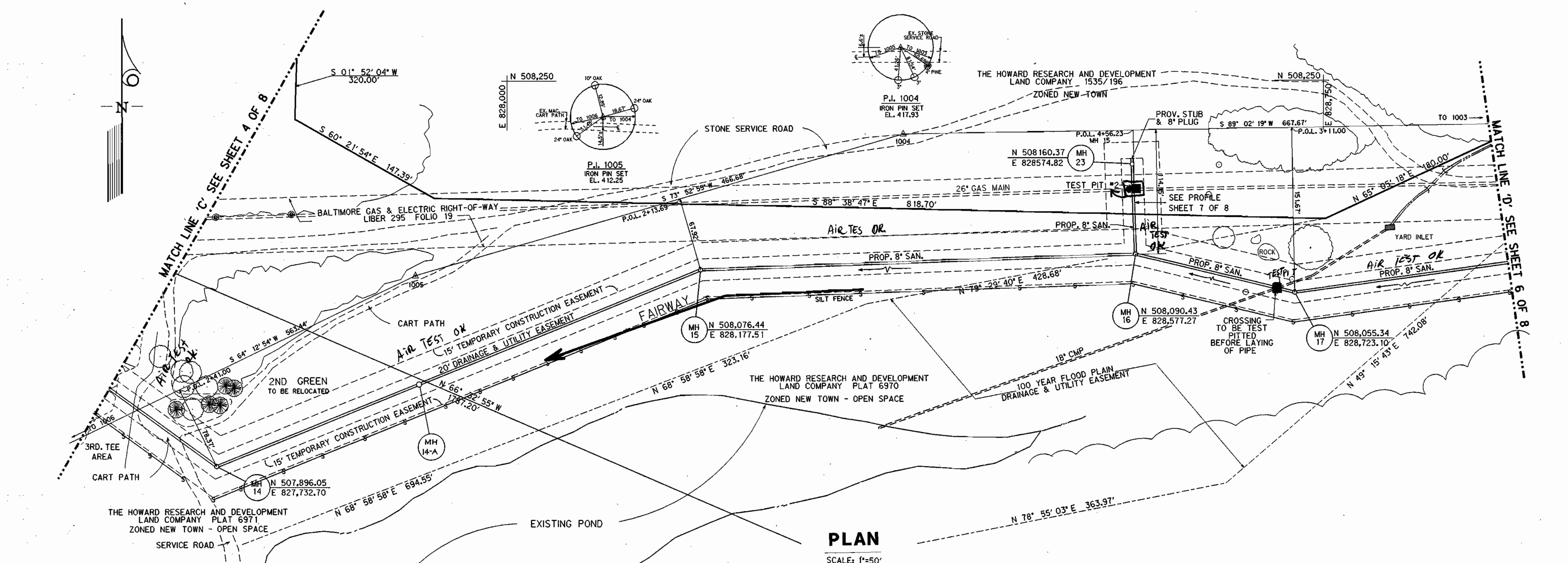
J.J.D.	3	CHANGE SEWER MAIN BTWN MH'S 2 & 3	10/28/87
J.J.D.	2	DEPT. OF THE ENVIRONMENT COMMENTS	10/16/87
A.B.	1	COUNTY COMMENTS	8/1/87
BY:	NO.	REVISION	DATE

PLAN & PROFILE OF SEWER MAIN

600' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

COLUMBIA
VILLAGE OF HARPERS CHOICE
HOBBS GLEN GOLF COURSE
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1662-D

SCALE AS SHOWN
SHEET 4 OF 8



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *James M. ...*
Date: 10-14-87

Chief - Bureau of Engineering: *...*
Date: 10-23-87

Chief - Bureau of Utilities: *...*
Date: 10-23-87

Chief - Land Development Division: *...*
Date: 10-23-87

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BALTIMORE, MARYLAND 21204
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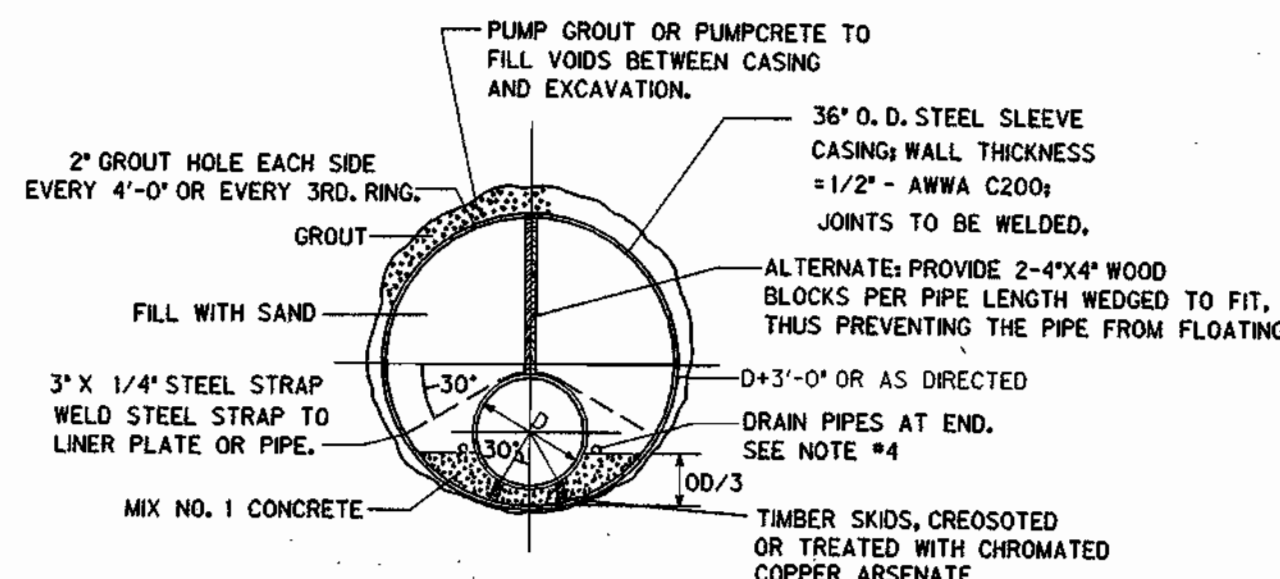
DES:	J.J.D.			
DRN:	A.B. & S.B.			
CHK:	J.E.	J.J.D.	3	ADD MH 14-A PER D.E.W. COMMENTS 10/23/87
		J.J.D.	2	DEPT. OF THE ENVIRONMENT COMMENTS 10/23/87
		A.B.	1	COUNTY COMMENTS 8/7/87
DATE:	2/87	BY:	NO.	REVISION

PLAN & PROFILE OF SEWER MAIN

600' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

COLUMBIA VILLAGE OF HARPERS CHOICE
HOBBITS GLEN GOLF COURSE
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1662-D

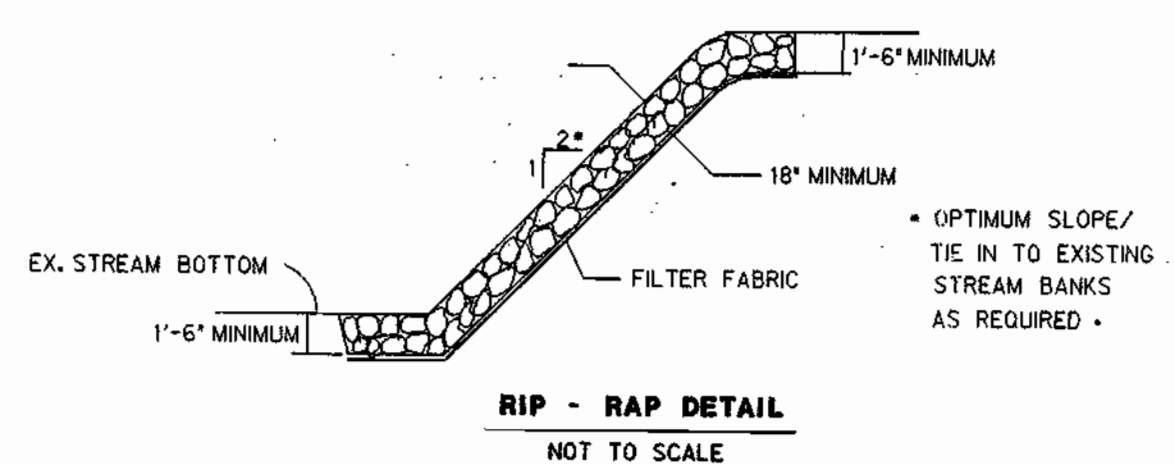
SCALE AS SHOWN
SHEET 5 OF 8



- STEEL TUNNEL LINER PLATES TO CONFORM TO LATEST A.A.S.H.T.O. DESIGN SPECIFICATIONS.
- TUNNEL LINER PLATE TO BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH A.S.T.M. A 123. ALL GALVANIZED SURFACES TO BE TREATED WITH A VINYL WASH PRIMER AND COATED WITH KOPPERS BITUMASTIC 300 M. THERMATEX 48-413 OR EQUAL.
- A JOINT IN THE MAIN PIPE TO BE PROVIDED WITHIN 2' OF EACH OUTSIDE END OF CASING.
- AN 8" BRICK BULKHEAD TO BE PROVIDED AT EACH END OF CASING. TWO 2" DIAMETER PIPES THROUGH BULKHEAD TO BE PROVIDED AT EACH SIDE OF MAIN PIPE AT LOW END OF CASING FOR DRAINAGE. PRIOR TO JACKING WITH GROUT TO BE COATED AS IN NOTE 2 ABOVE.
- ALL STRAPS AND OTHER EXPOSED STEEL TO BE COATED AS IN NOTE 2 ABOVE.
- STEEL CASING INSTALLED BY JACKING TO BE 1/2" MINIMUM THICK. A.W.W.A. C-200-75 WITH COAL TAR ENAMEL COATING, A.W.W.A. C-203 OR C-210. JOINTS TO BE WELDED FULL CIRCUMFERENCE.

DETAIL JACKING AND BORING
8' SEWER - 36' STEEL SLEEVE

NOT TO SCALE



I. Description

This work shall consist of protecting slopes and channels from erosion with coverings of stone in accordance with the plans and specifications shown on this drawing.

II. Material Specifications

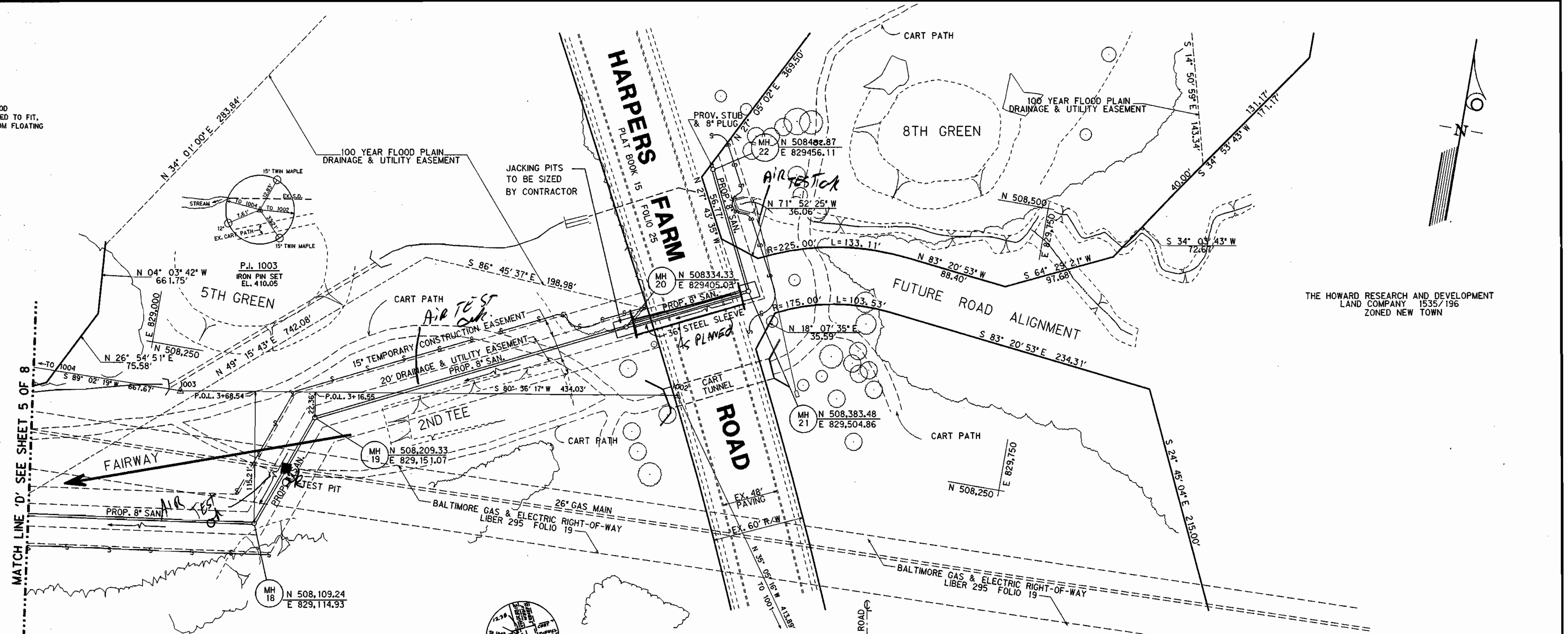
1. Bedding:

Geotextile filter fabric shall be Mirafil 1405 Dupont Typar #3341 or approved equivalent.

2. Riprap: The stone shall have a minimum diameter of 12 inches and weigh at least 100 lbs. each.

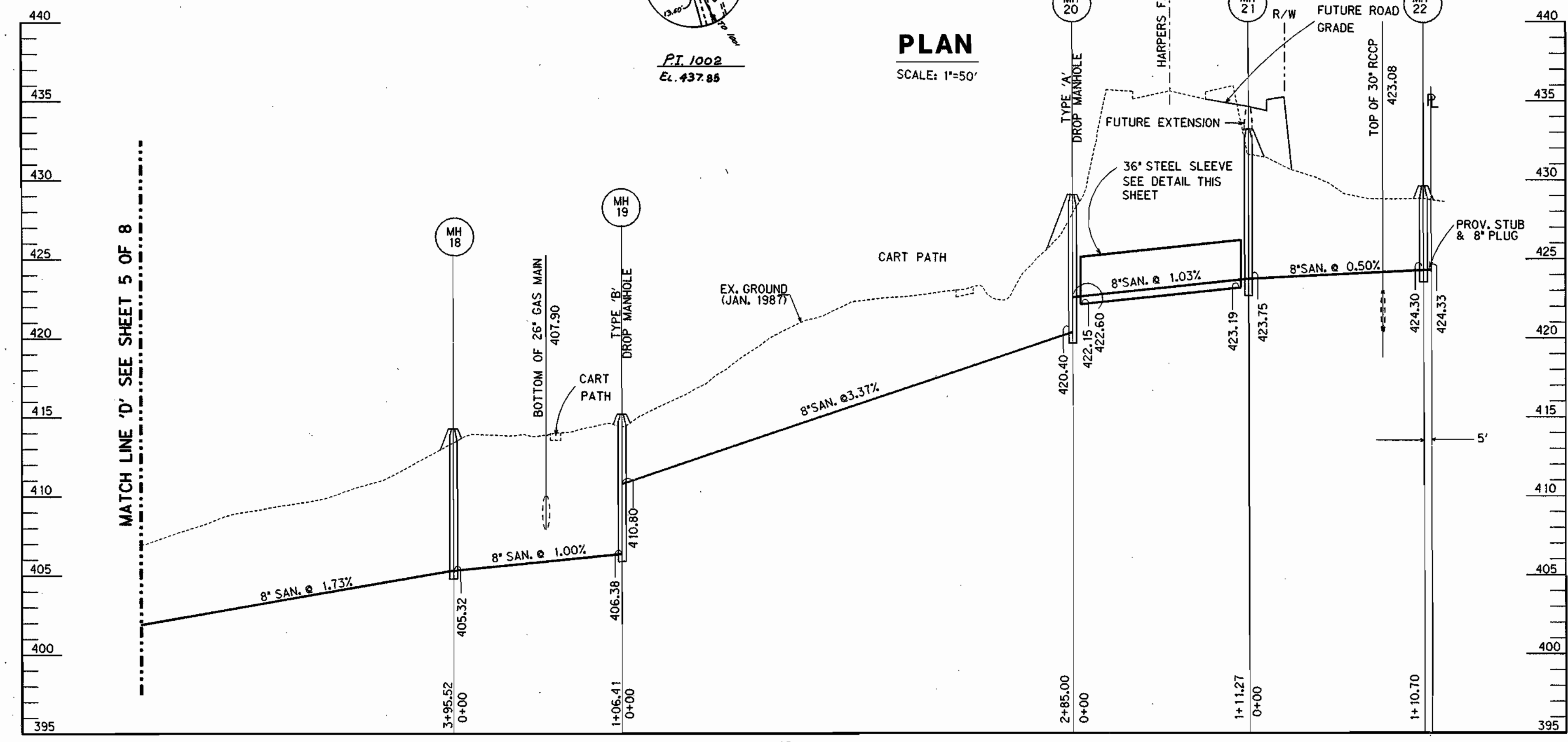
III. Construction Requirements

- The contractor shall install all sediment and erosion control devices as a first order of business.
- Provisions must be made to anchor the riprap at the stream bed so as to provide protection against undermining. If this cannot be accomplished by extending the toe trench as indicated in cross section, an alternative method of protection must be received prior written approval of the Administration.
- Excavation for riprap shall be made in reasonably close conformity with the existing stream slope and bed.
- A filter bedding is required under all riprap. Bedding material shall consist of either a bank run gravel or a geotextile filter fabric meeting the specifications of II. 1B above.
- The placement of riprap shall begin with the toe. The larger stones shall be placed in the toe and along the outside edges of the limits of the slope and channel protection. The riprap shall be placed with suitable equipment in such a manner as to produce a reasonably graded mass of stones with zero drop height. The placing of stones that cause extensive segregation is not allowed.
- Any excavation voids existing along the edges of the completed slope and channel protection shall be back-filled.
- All disturbed areas shall be permanently stabilized in accordance with an approved sediment and erosion control plan.



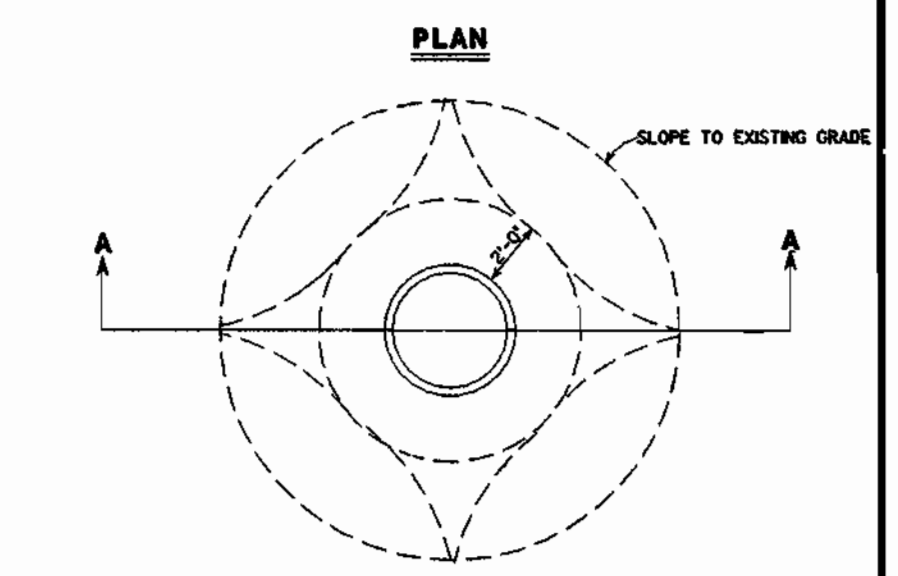
PLAN

SCALE: 1"=50'



PROFILE

HOR.: 1"=50'
VERT.: 1"=5'



SECTION A - A

SPECIAL BACKFILL AT MANHOLES

NOT TO SCALE

- NOTES**
- ALL MANHOLE FRAMES AND COVERS SHALL BE FLUSH WITH GRADE EXCEPT WHEN SHOWN ON PROFILE TO BE SET HIGHER THAN GRADE.
 - MANHOLE FRAME AND COVERS TO BE SET HIGHER THAN GRADE SHALL BE SET IN ACCORDANCE WITH THIS DETAIL.
 - MANHOLE FRAMES AND COVERS TO BE SET LOWER THAN GRADE SHALL BE SET AS NOTED ON THE PROFILE AND IN ACCORDANCE WITH THIS PLAN.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

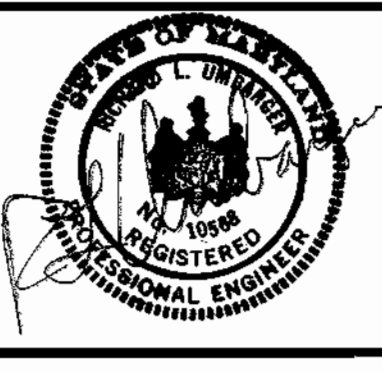
James J. J.D.
DIRECTOR OF PUBLIC WORKS
DATE: 10-23-87

Michael J. J.D.
CHIEF - BUREAU OF ENGINEERING
DATE: 10-14-87

Michael J. J.D.
CHIEF - BUREAU OF UTILITIES
DATE: 10-14-87

Michael J. J.D.
CHIEF - LAND DEVELOPMENT DIVISION
DATE: 10-23-87

KIDDE CONSULTANTS, INC.
ENGINEERS SURVEYORS PLANNERS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
(301) 321-5500



DES:	J.D.				
DRN:	A.B.				
CHK:	J.E.	J.J.D. 3	MH 22 COORDINATE REVISED	11/5/88	
		J.J.D. 2	DEPT. OF THE ENVIRONMENT COMMENTS	10/27/87	
		A.B. 1	COUNTY COMMENTS	8/7/87	
DATE:	2/87	BY:	NO.	REVISION	DATE

PLAN & PROFILE OF SEWER MAIN

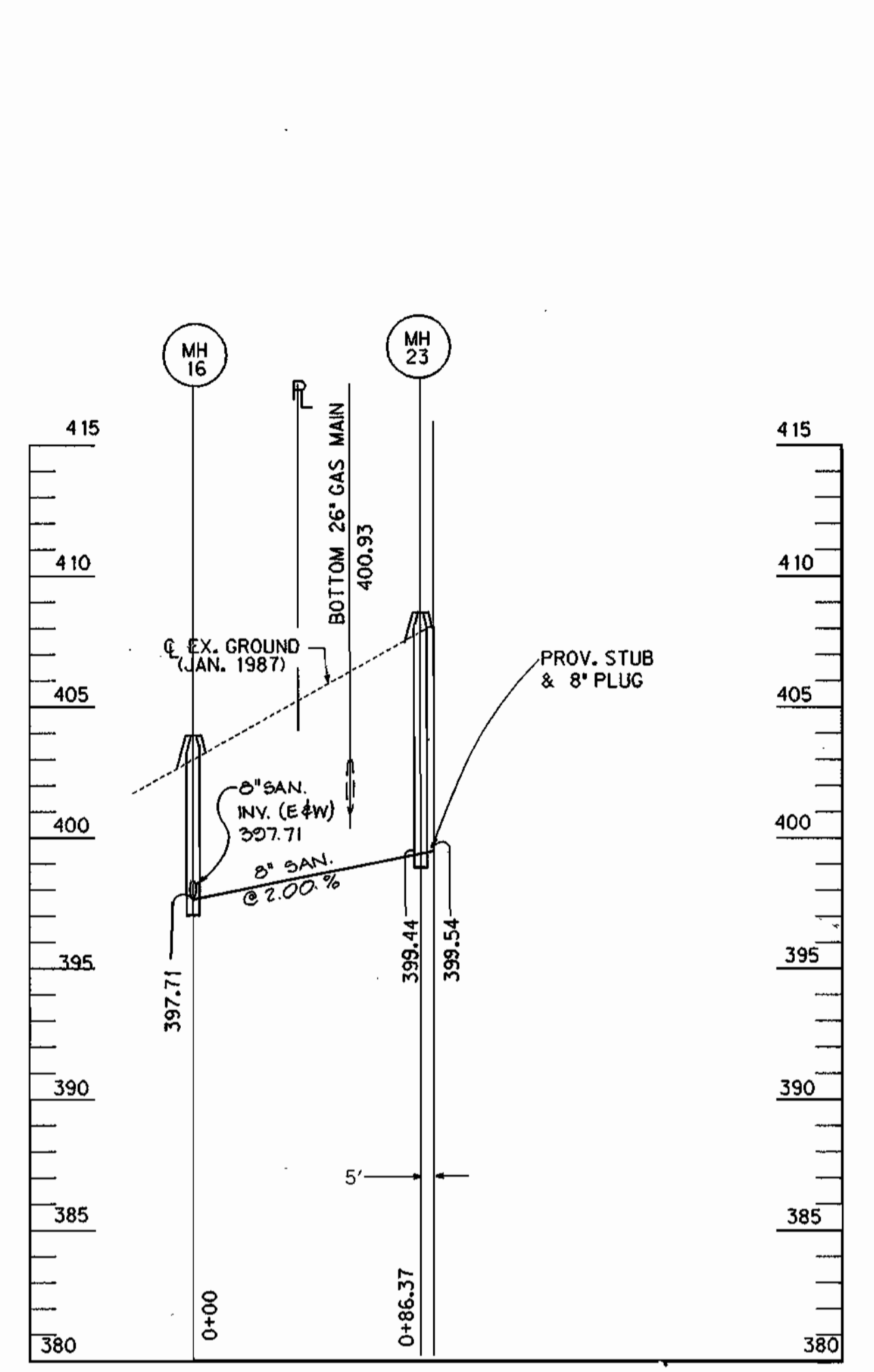
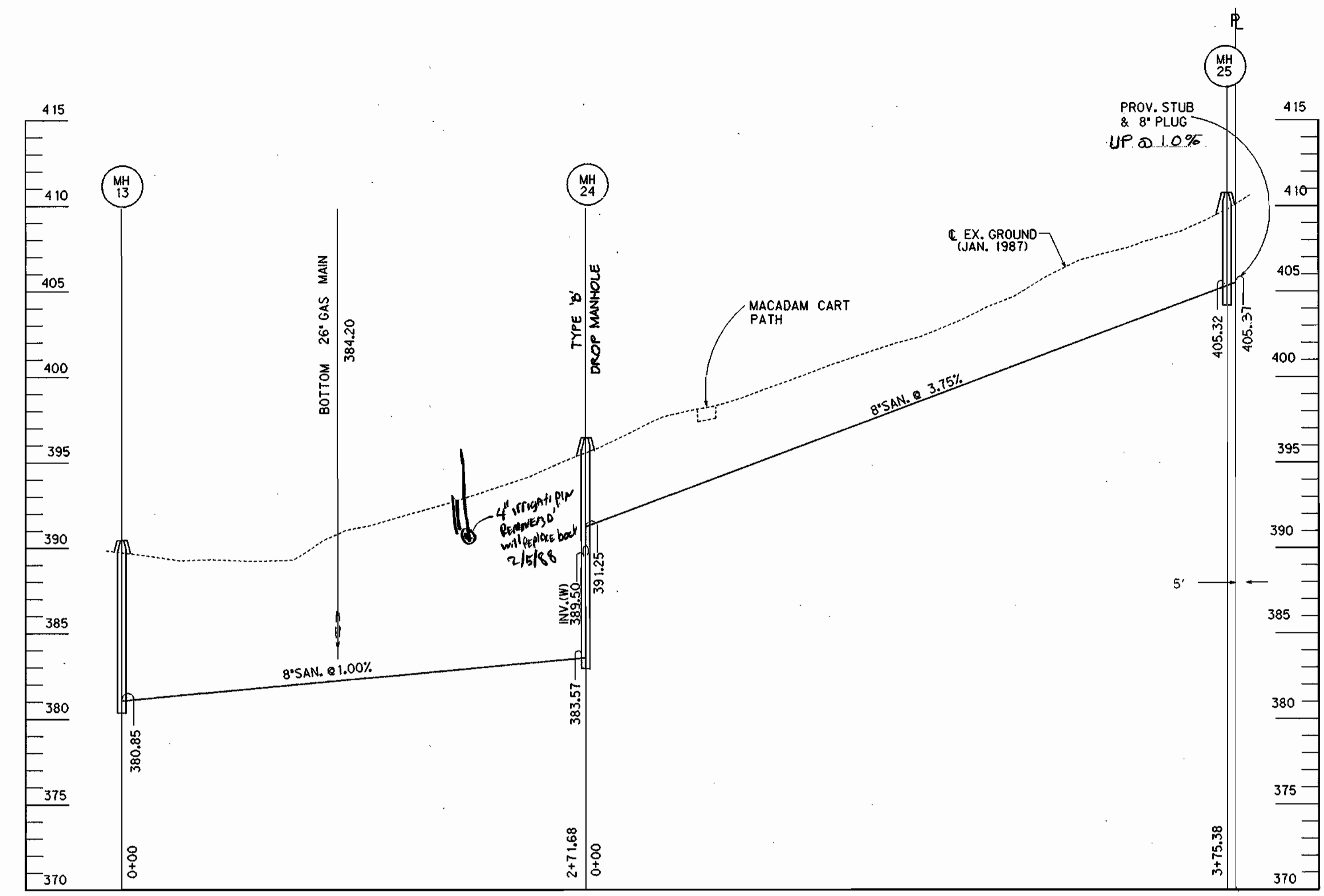
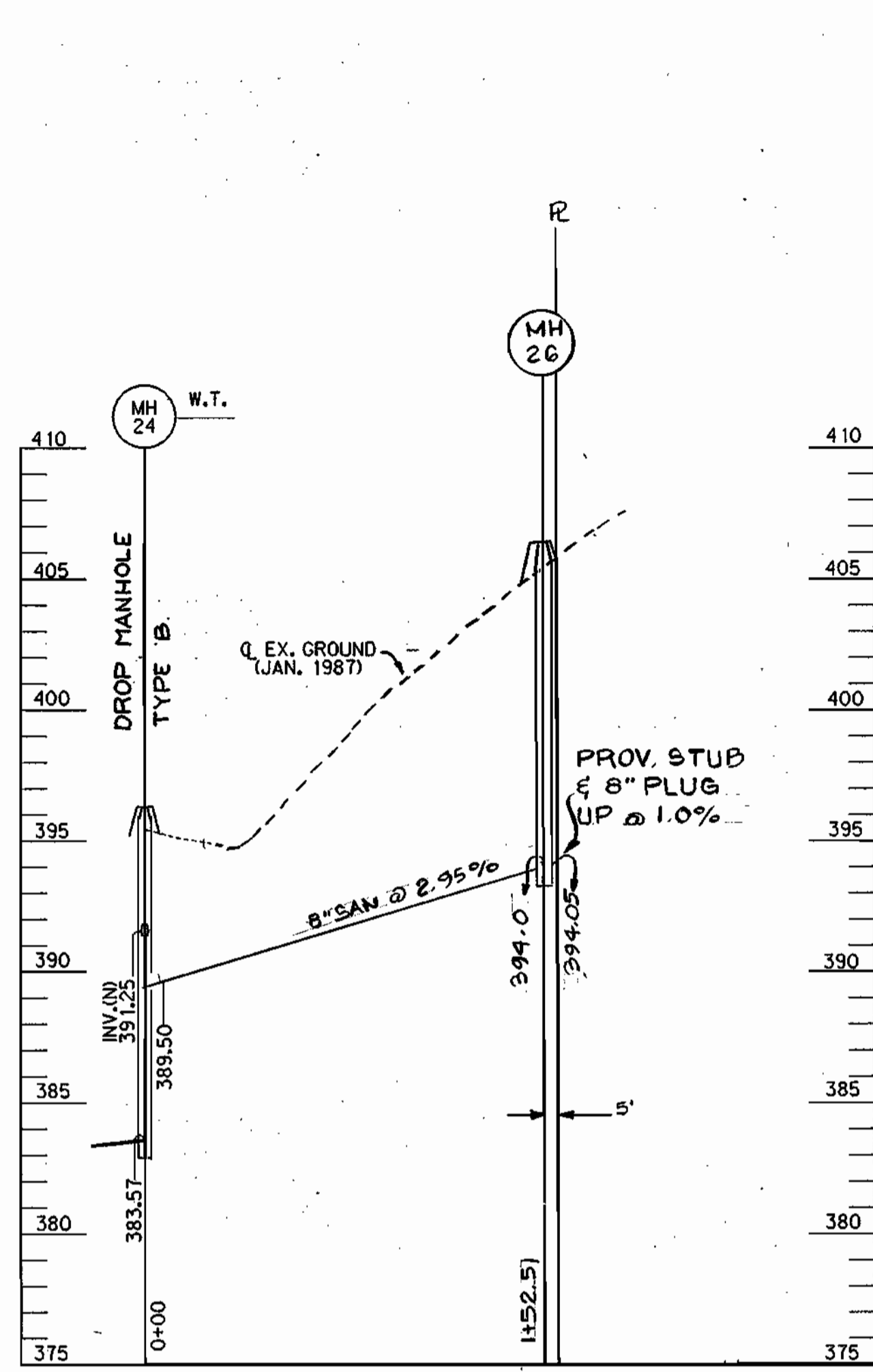
600' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

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HOBBITS GLEN GOLF COURSE
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1662-D

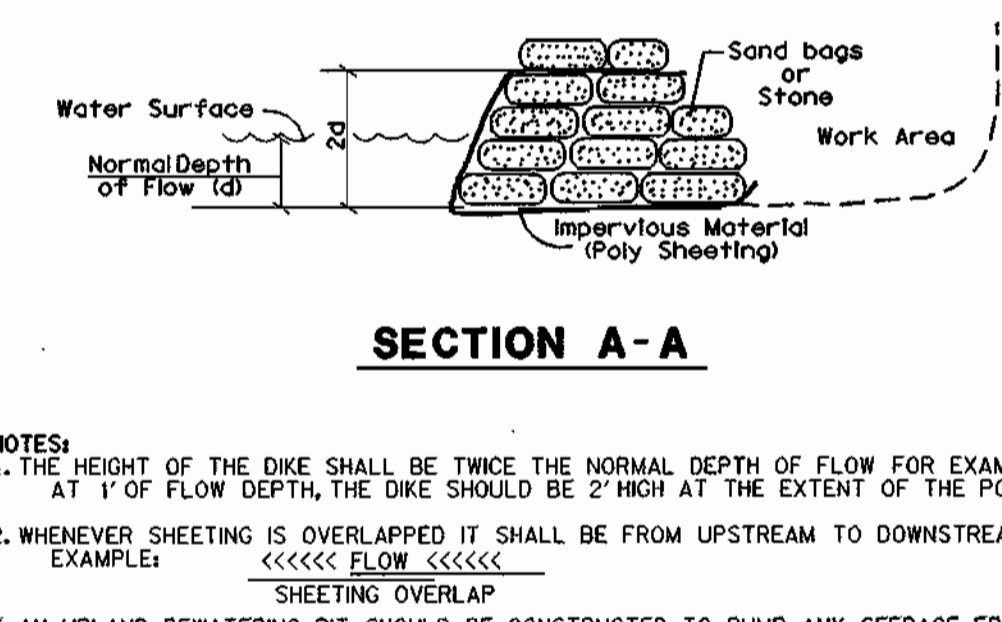
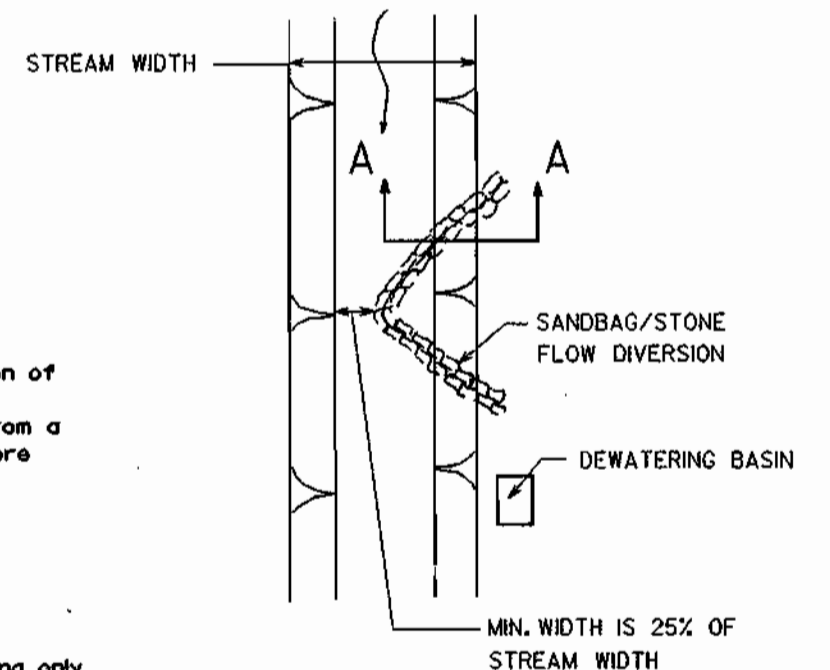
SCALE AS SHOWN

SHEET 6 OF 8

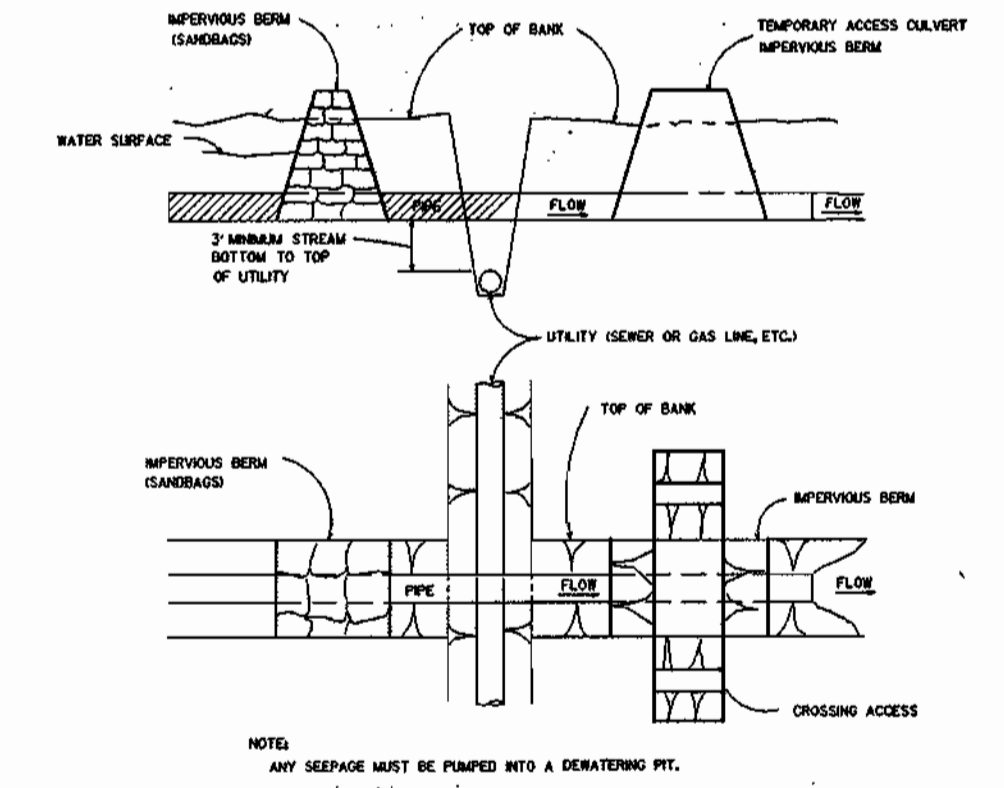
18702306.DGN



PROFILE HOR.: 1"=50' VERT.: 1"=5'



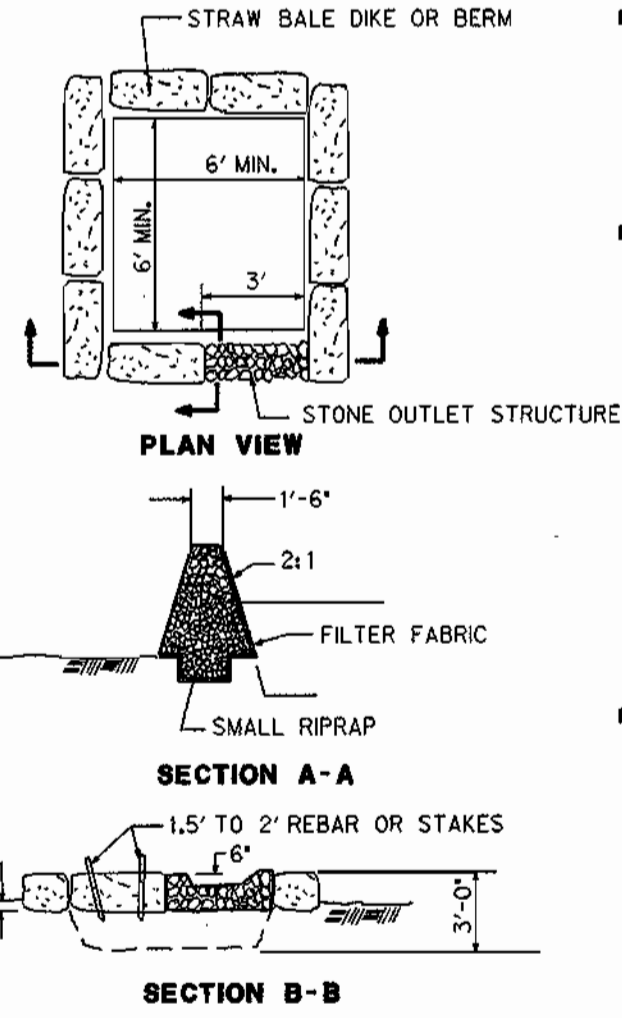
NOTES:
 1. THE HEIGHT OF THE DIKE SHALL BE TWICE THE NORMAL DEPTH OF FLOW FOR EXAMPLE:
 AT 1' OF FLOW DEPTH, THE DIKE SHOULD BE 2' HIGH AT THE EXTENT OF THE POLY SHEETING.
 2. WHENEVER SHEETING IS OVERLAPPED IT SHALL BE FROM UPSTREAM TO DOWNSTREAM.
 EXAMPLE: <<<<< FLOW <<<<<<
 SHEETING OVERLAP
 3. AN UPLAND DEWATERING PIT SHOULD BE CONSTRUCTED TO PUMP ANY SEEPAGE FROM THE WORK AREA.



I. Description
 The work shall consist of installing a flow diversion structure in conjunction with a temporary culvert crossing during in-stream construction such as utility crossings.

II. Construction Requirements

1. All erosion and sediment control devices shall be installed as the first order of business.
2. Pipes must be sized to accommodate normal stream flow.
3. The flow barrier shall be constructed of sandbags, washed riprap, or other approved materials per WPD3.2. The materials shall be sized to withstand normal stream flow velocities.
4. All dewatering of the construction area shall be pumped to a dewatering basin (MDB) prior to re-entering the stream.
5. The temporary culvert crossing shall be constructed in accordance with Standard Detail (TAC-1), 1983 Maryland Standards and Specifications for Sediment and Erosion Control.
6. Sediment control devices shall remain in place until all disturbed areas have been stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.



DEWATERING BASIN
 NOT TO SCALE

I. Description
 The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-laden water pumped from a construction site to allow filtration before the water re-enters the waterway.

II. Material Specifications

1. Riprap: Riprap shall consist of 4-8 inch washed stone or gravel.
2. Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. No # 6 stone (ASTM 57) may be used on the inner-face for filtering instead of fabric.
3. Strawbales: Strawbales shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.

III. Construction Requirements

1. The contractor shall install sediment and erosion control devices as the first order of business.
2. Excavated materials shall be stored such that sediments are prevented from entering the waterway i.e., sediment perimeter controls may be necessary.
3. Excavated subsoil and topsoil shall be kept separate and replaced in their natural order.
4. Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.
5. The dewatering basin shall be excavated to a minimum depth of 3 feet.
6. Once the dewatering basin becomes filled to 1/2 of the excavated depth, accumulated sediment shall be removed and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the MRA.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.

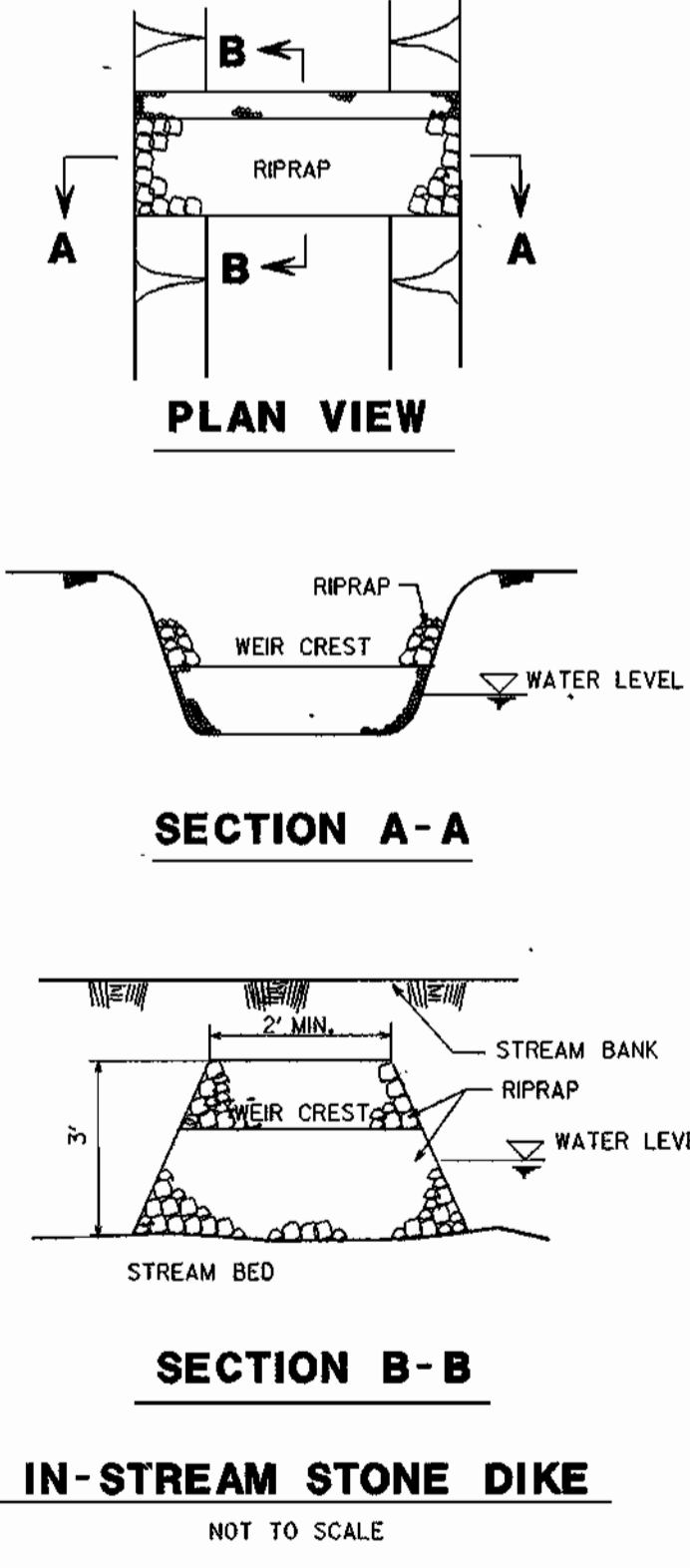
I. Description
 The work shall consist of installing flow diversions for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.

II. Material Specifications

1. Sandbags: Sandbags shall consist of materials which are resistant to ultra-violet radiation, tearing and puncture and woven tightly enough to prevent leakage of fill material, i.e., sand, fine gravel, etc.
2. Stone: Stone shall be washed and have a minimum diameter of 6 inches.
3. Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.

III. Construction Requirements

1. All erosion and sediment control devices shall be installed as the first order of work.
2. The diversion structure shall be installed from upstream to downstream.
3. The height of the diversion structure shall be one half the distance from stream bed to stream bank plus one foot, as indicated on the cross-section view.
4. All excavated materials shall be disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the MRA.
5. All dewatering of the construction area shall be pumped to a dewatering basin prior to re-entering the stream.
6. Sheeting shall be overlapped such that the upstream portion covers the downstream portion with at least an 18-inch overlap.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.



IN-STREAM STONE DIKE
 NOT TO SCALE

I. Description
 The work encompasses the installation of an in-stream stone dike to be used as a sediment filtering device for streams that generally carry wet weather flow.

II. Material Specifications

1. Small Riprap - 8-12 inch washed stone and gravel shall be used.
2. Filter Fabric - The filter cloth shall be a woven or non-woven fabric consisting of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. A one foot layer of 2" washed stone may be used instead of filter fabric.
3. Gabion Baskets - Class I gabion baskets shall meet the requirements listed in WPD3.2.

III. Construction Requirements

1. Structure to be installed in-stream as first order of business to trap sediment generated during construction activities.
2. The top width of the dike is to be from 2-4 feet.
3. The distance between the dike and the disturbance is to be determined by flow rate of the waterway.
4. Gabion baskets may be used in lieu of small riprap as indicated by alternative section.
5. Structure is to remain in place until all disturbed areas have been stabilized in accordance with an approved sediment and erosion control plan.
6. Entrapped sediment is to be excavated periodically and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the MRA.
7. Structure can be removed once approved by inspecting authority.

STREAM CROSSING - UTILITY (DIVERTING THE STREAM FLOW)
 NOT TO SCALE

INSTREAM FLOW DIVERSION STRUCTURE
 NOT TO SCALE

IN-STREAM STONE DIKE
 NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Judd, Director of Public Works
 10/26/87
 Michael A. Brown, Chief - Bureau of Utilities
 10-14-87

Richard S. R. Judd, Chief - Bureau of Engineering
 10-23-87
 Michael J. Judd, Chief - Land Development Division
 10-23-87

KIDDE CONSULTANTS, INC.
 ENGINEERS SURVEYORS PLANNERS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 (301) 321-5500

Professional Engineer Seal

DES:	J.J.D.				
DRN:	A.B./S.J.B.	J.J.D. 4	CHANGE SEWER MAIN BTWN MH'S 24 & 23. PROV. STUBS PLUG @ MH 25	10/87	
CHK:	J.E.	J.J.D. 3	DRAFTING	11/87	
DATE:	2/87	J.J.D. 2	DEPT. OF THE ENVIRONMENT COMMENTS	10/87	
		A.B. 1	COUNTY COMMENTS	8/1/87	
		BY NO.	REVISION	DATE	

600' SCALE MAP NO. 29 BLOCK NO. 15, 16 & 21

PROFILES & DETAILS

COLUMBIA VILLAGE OF HARPERS CHOICE
 HOBBITS GLEN GOLF COURSE
 ELECTION DISTRICT NO.
 CONTRACT NO. 34-1662-D

SCALE AS SHOWN
 SHEET 7 OF 8

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

- 1. CLASS OF TURFOSS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR HAWAIIAN OR VIRGINIA STATE APPROVED SOD.
2. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH PLUS OR MINUS 1/4 INCH AT THE TIME OF CUTTING...

SEDIMENT CONTROL NOTES

- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permit prior to the start of any construction.
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION SEDIMENT CONTROL.

TEMPORARY SEEDING NOTES

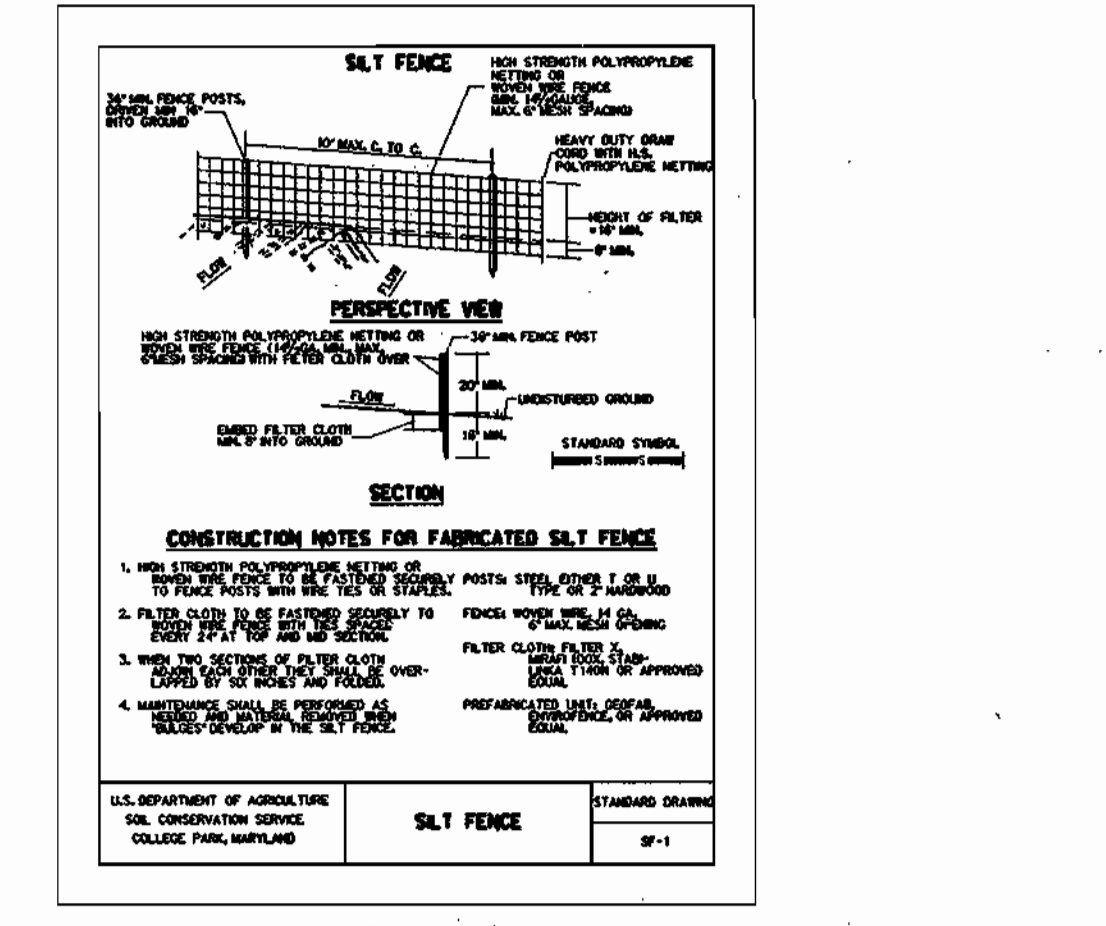
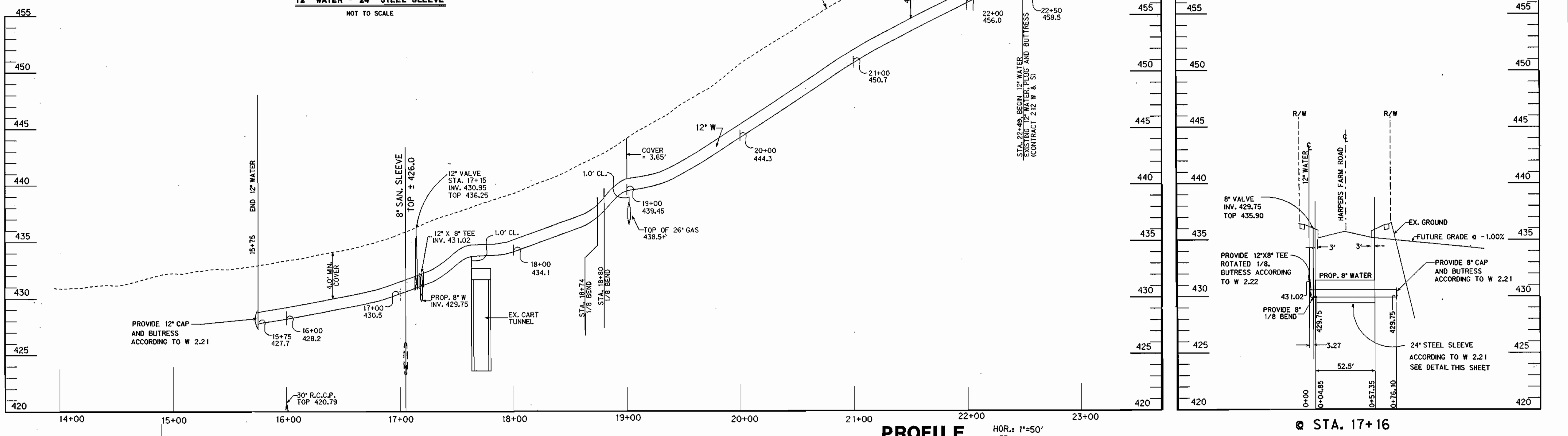
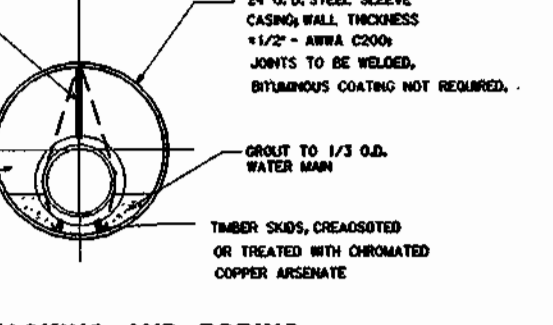
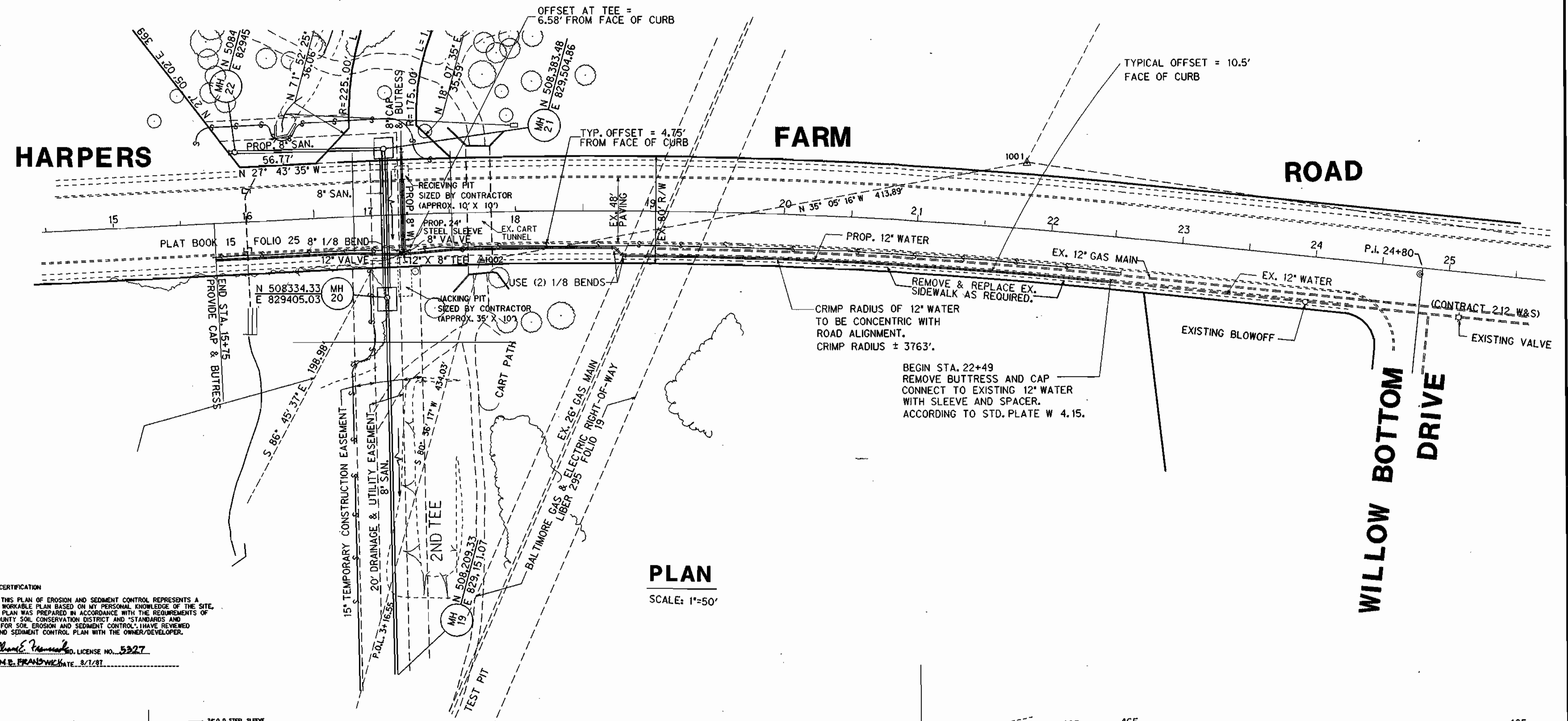
- SEEDING PREPARATION: LOOSEN UPPER 3 INCHES BY DISCING, RAKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE (14 LBS./1,000 SQ. FT.) OF 10-10-10 FERTILIZER.

PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
SEEDING PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBILITY INCURRED BY THE OWNER/DEVELOPER...



- SEQUENCE OF CONSTRUCTION
1. OBTAIN A GRADING PERMIT.
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES.
3. CLEAR AND GRUB FOR SEDIMENT CONTROL FEATURES ONLY.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND. KIDDE CONSULTANTS, INC. ENGINEERS SURVEYORS PLANNERS. WATER PLAN PROFILES & DETAILS. COLUMBIA VILLAGE OF HARPERS CHOICE HOBBITS GLEN GOLF COURSE ELECTION DISTRICT NO. CONTRACT NO. 34-1662-D. SCALE AS SHOWN SHEET 8 OF 8.