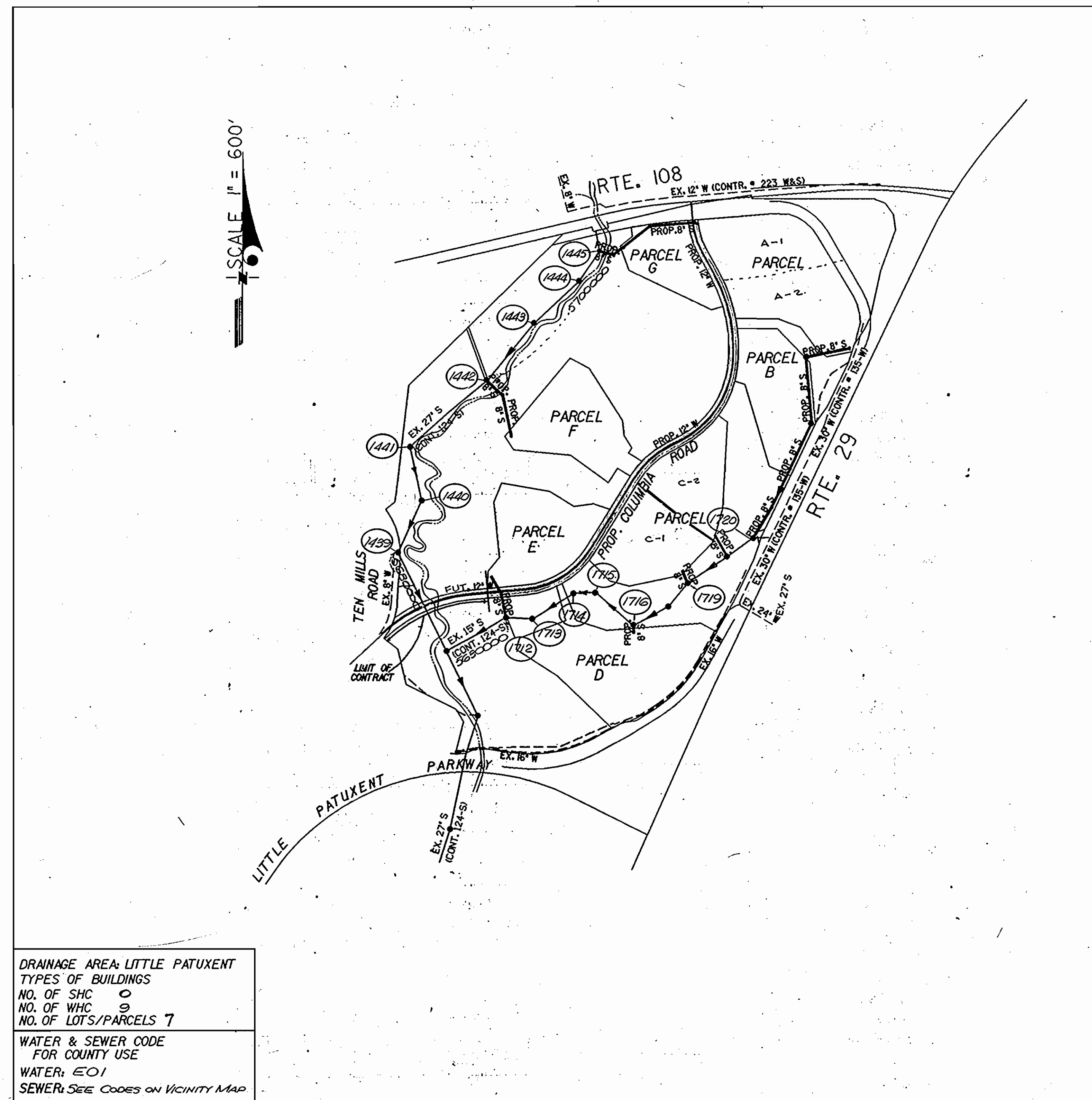


QUANTITIES			
ITEM	UNIT	AS-BUILT	MATERIAL/SUPPLIER
12" WATER	LF	4524	DIP CISEZ GRIFFIN
6" WATER	LF	414	DIP CISEZ GRIFFIN
6" WATER	LF	185	DIP CISEZ GRIFFIN
12" X 12" T.S. & V	EA	1	CLOW
20" STEEL BREECH	EA	230	SEVERN STEEL
12" X 6" T.H.R.	EA	9	M&H VALVE CO.
6" VALVE	EA	0	M&H VALVE CO.
7.0" FIRE HYDRANT	EA	1	" " " "
5.5" FIRE HYDRANT	EA	1	" " " "
5.0" FIRE HYDRANT	EA	2	" " " "
4.5" FIRE HYDRANT	EA	5	" " " "
6" VALVE	EA	1	" " " "
6" 1/2" BEND	EA	2	DIP GRIFFIN
12" X 6" T	EA	10	" " " "
12" VALVE	EA	3	M&H
6" PLUG	EA	10	DIP GRIFFIN
12" 1/2" BEND	EA	10	" " " "
12" 1/2" BEND	EA	1	" " " "
12" CAP	EA	1	" " " "
6" SEWER DIP CL 50	LF	1312	" " " "
6" SEWER	LF	2592	J&M MANF CORR
40" MANHOLES	EA	24	ATLANTIC
DROP CONNECTION TYPE B	EA	2	J&M MANF CORR



DRAINAGE AREA: LITTLE PATUXENT  
 TYPES OF BUILDINGS  
 NO. OF SHC 0  
 NO. OF WHC 3  
 NO. OF LOTS/PARCELS 7  
 WATER & SEWER CODE FOR COUNTY USE  
 WATER: E01  
 SEWER: SEE CODES ON VICINITY MAP

- 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. 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.
  - 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 TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN 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 561-2505
    - BALTIMORE GAS & ELECTRIC CO. - UNDERGROUND DAMAGE CONTROL 234-5621
    - BALTIMORE GAS & ELECTRIC CO. - TROUBLE SHOOTING 290-9013
    - MISS UTILITY - 1-559-0100
    - COLONIAL PIPELINE CO. - 795-1390
    - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
  - 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.
  - ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
  - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2' COVER UNLESS OTHERWISE NOTED.
  - VALVES ADJACENT TO TEEs SHALL BE STRAPPED TO TEEs.
  - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
  - FIRE HYDRANTS SHALL BE SET TO THE DURY 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 THE STANDARD SPECIFICATIONS.
  - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
  - ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING, UNLESS OTHERWISE NOTED.
  - EXTEND PIPE AS NECESSARY TO INSTALL PLUG FOR BLOCKING, WHERE WATER MAINS END WITH VALVES.
  - 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.
  - 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 DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL 65.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED 5FT TOP OF FRAME 115' ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - ORIGINAL GROUND OVER WATER AND SEWER WAS TAKEN FROM AERIAL PHOTOGRAPHY PREPARED BY MAPS AND INC. AND VERIFIED BY FIELD SURVEY IN FEBRUARY 1985.
  - STRAW DALE DIKE AND SILT FENCE ARE INTERCHANGEABLE.
  - SEDIMENT CONTROLS TO BE BUILT IN ACCORDANCE WITH P-80-20, ARTICLE 15 & DETAILS SHOWN ON THIS PLAN.
  - THE FOLLOWING MANHOLES SHALL BE WATER TIGHT MANHOLES: 1, 2, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 21, 22 & 23

# VILLAGE OF DORSEY'S SEARCH

SECTION 3 AREA I PHASE I

COLUMBIA, MARYLAND

DEPARTMENT OF PUBLIC WORKS

CONTRACT NO. 24-1361D

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

*J. Helms* 11/1/85 DATE  
 U.S. SOIL CONSERVATION SERVICE

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

*Stephen S. Fisher* 11/1/85 DATE  
 HOWARD S.C.D.

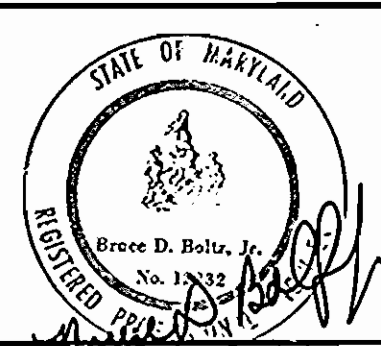
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THE STANDARD SPECIFICATION, AND ROAD CONSTRUCTION PLANS. F-8626

SEQUENCE OF CONSTRUCTION

- OBTAIN NECESSARY PERMIT TO START GRADING.
- CLEAR AND GRUB AREAS NECESSARY TO CONSTRUCT SEDIMENT CONTROL MEASURES (1 WEEK)
- INSTALL TEMPORARY SO' CMP AT ENTRANCE. (3 DAYS)
- CONSTRUCT ALL SEDIMENT CONTROL MEASURES. (1-2 WEEKS)
- CLEAR & GRUB REMAINDER OF SITE AND COMMENCE ROAD GRADING (5 WEEKS)
- STABILIZE ANY DISTURBED AREAS PER H.S.C.D. STANDARDS (1 WEEK)
- INSPECT AND REPAIR MOUNTABLE BERM DAILY AS NECESSARY.
- UPON COMPLETION OF GRADING, COMMENCE CONSTRUCTION OF STORM DRAIN & UTILITIES.
- COMMENCE CONSTRUCTION OF CURB & GUTTER AND PAVING.
- STABILIZE ANY REMAINING DISTURBED AREAS.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 DIRECTOR OF PUBLIC WORKS DATE  
 Robert W. Wood / For KM3 11/8/85  
 CHIEF, BUREAU OF UTILITIES DATE

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
 GREENHORNE AND O'MARA, INC.  
 \*2 RESEARCH PLACE  
 ROCKVILLE, MARYLAND 20850  
 (301) 948-0900

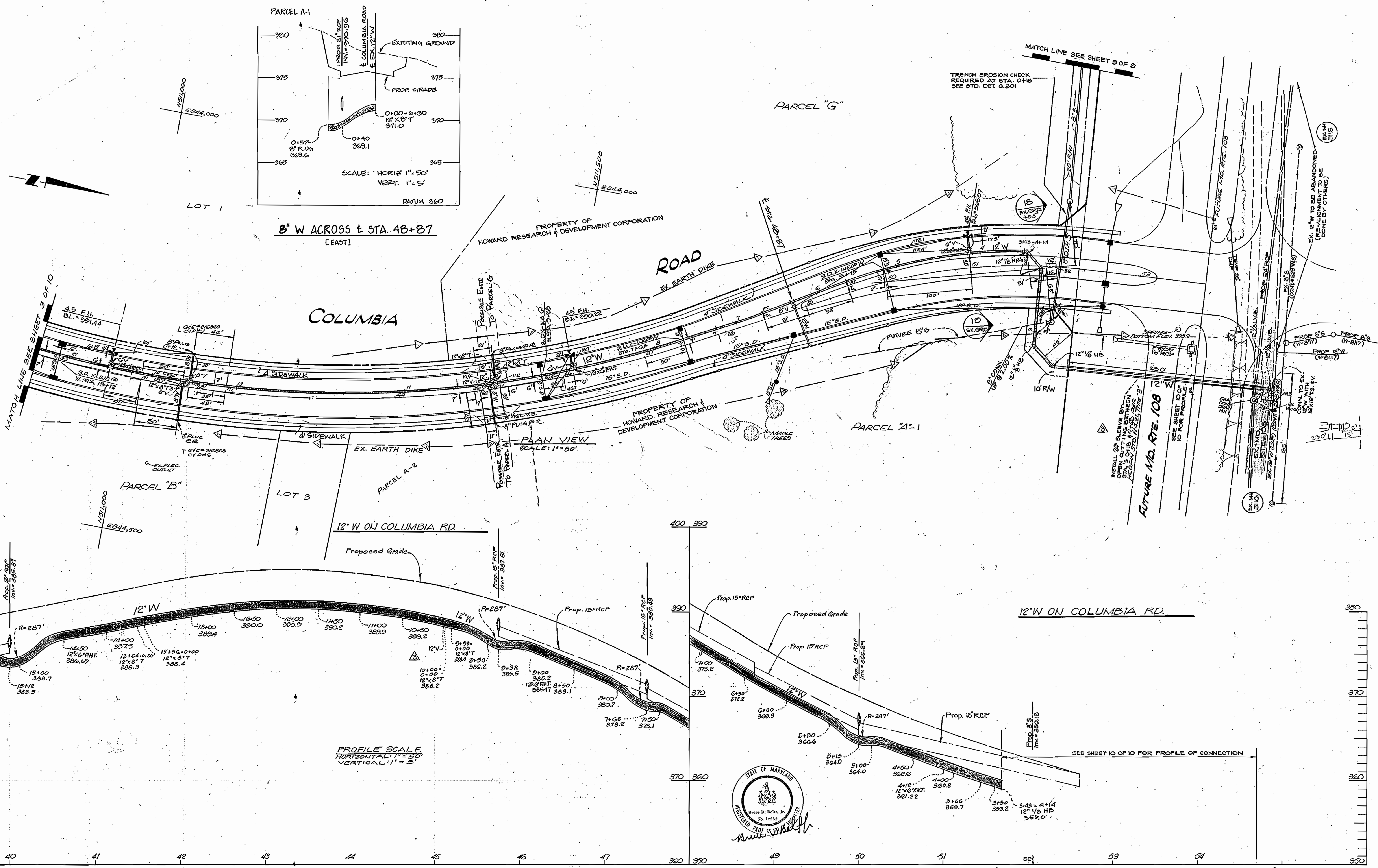


DES:	TAD		
DRN:	TAD		
CHK:	RHM	J.C. 2	REVISED QUANTITIES
DATE:	7-85	BLP 1	REVISED MANHOLE NO. & NOTE #12
BY:	NO.		REVISIONS
			DATE

VICINITY MAP AND GENERAL NOTES  
 600' SCALE MAP NO.30 BLOCK NO.

VILLAGE OF DORSEY'S SEARCH  
 SECTION 3 AREA I PHASE I  
 5th ELECTION DISTRICT  
 PARCELS A-1, A-2, B, C-1, C-2, F, G, AND LOT NO.3  
 CONTRACT NO. 24-1361D

SCALE AS SHOWN  
 SHEET  
 Lof 10



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
GREENHORNE AND O'MARA, INC.  
#2 RESEARCH PLACE  
ROCKVILLE, MARYLAND 20850

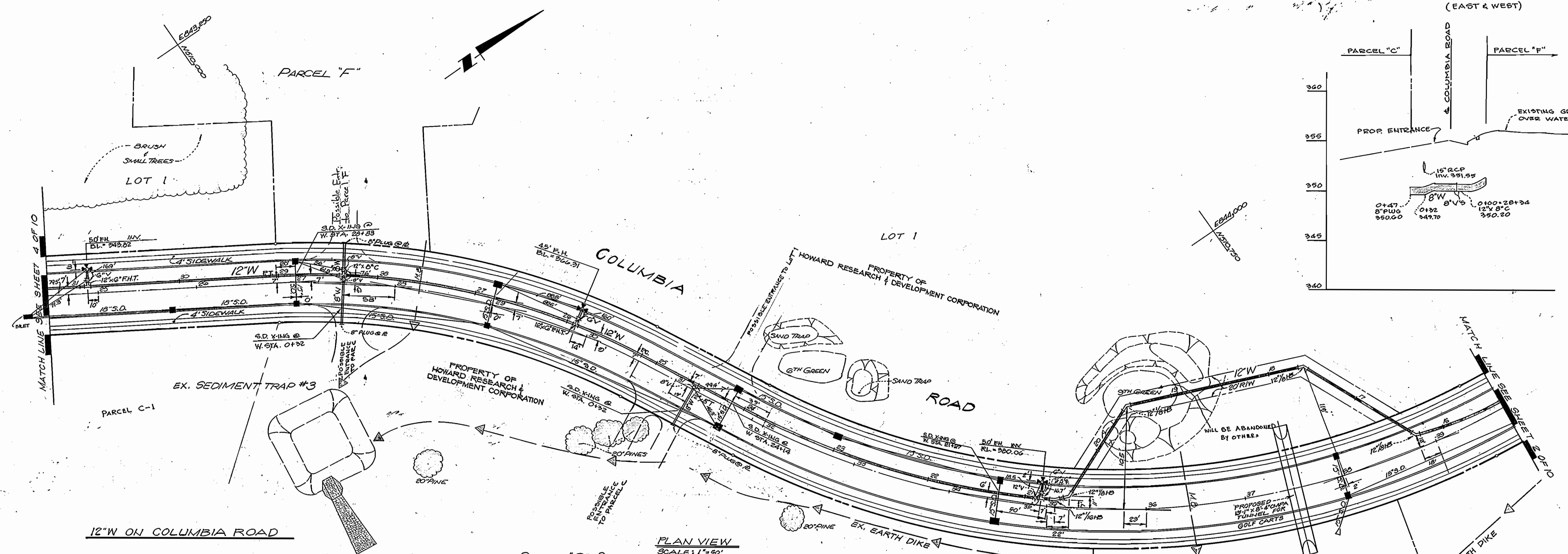
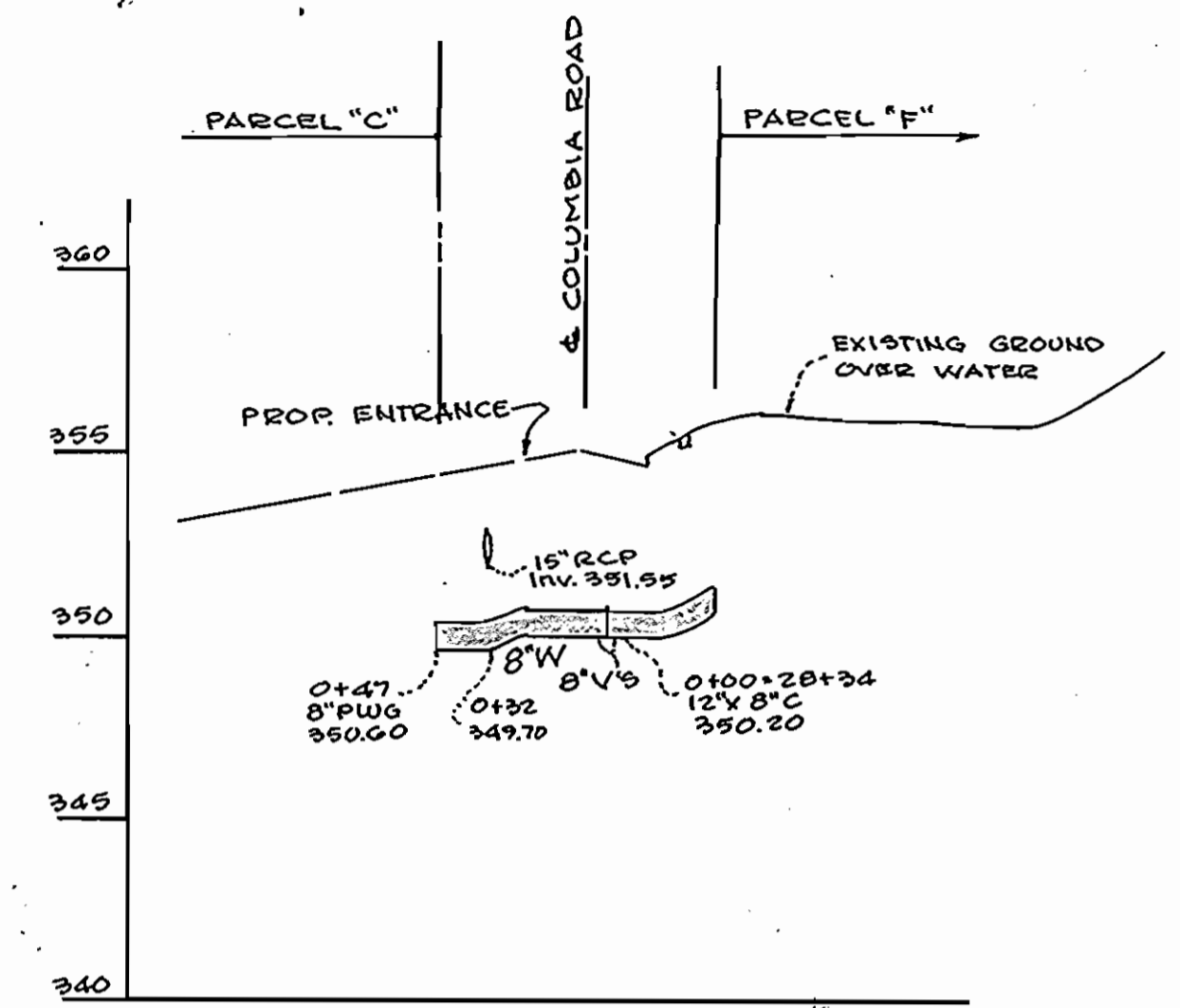
DES: JAD	NWC	5	ADDED 8" WVC @ STA 48+87; RELOCATED 8" SWS @ 5-86
DRN: JJC	JJC	4	REVISED WATER ACROSS D.C. 108
CHK: RMM	BLP	3	REVISED 12" W OHD TO 4" HD STAFF & PIPE SIZE
DATE: 7-25	BY	NO.	REVISION

PLAN AND PROFILE FOR WATER AND SEWER MAINS

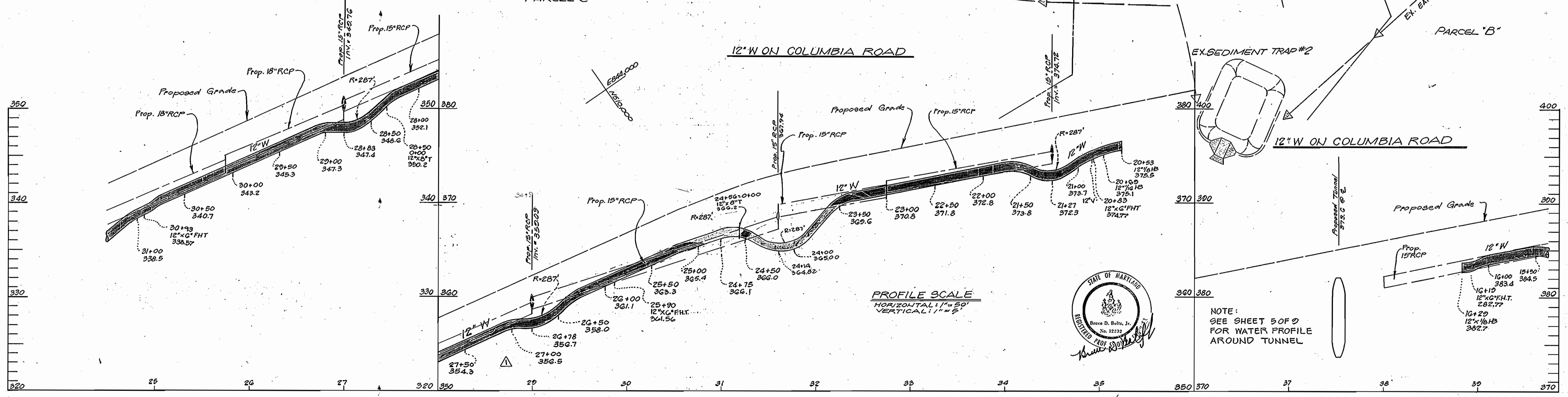
COLUMBIA  
VILLAGE OF DORSEY'S SEARCH  
SECTION 3 AREA I PHASE I  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 24-1361-D

SCALE AS SHOWN  
SHEET 2 OF 12

8'W ACROSS @ STA. 27+50  
(EAST & WEST)



PLAN VIEW  
SCALE: 1"=50'

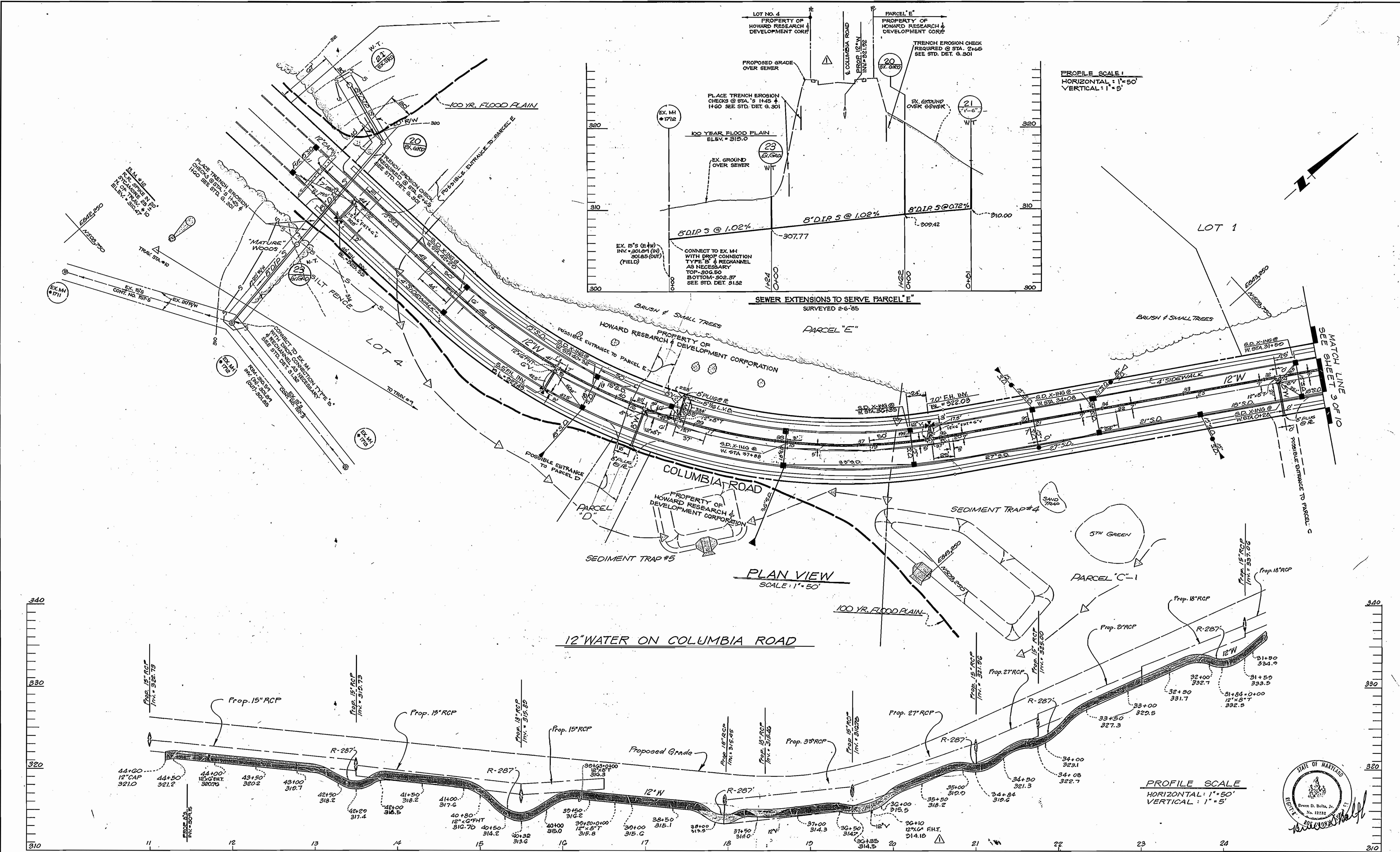


PROFILE SCALE  
HORIZONTAL: 1"=50'  
VERTICAL: 1"=5'

NOTE:  
SEE SHEET 5 OF 9  
FOR WATER PROFILE  
AROUND TUNNEL



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <i>Robert W. Wood</i> 11-12-80 Chief, Bureau of Engineering: <i>Mark H. ...</i> Chief, Bureau of Utilities: <i>Robert W. Wood</i> 11-12-80 Chief, Land Development Division: <i>Mark H. ...</i>		ENGINEERS ARCHITECTS PLANNERS SURVEYORS GREENHORNE AND O'MARA, INC. #2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850 (301) 948-0300		DES: TAD ORN: S.G. CHK: RHM DATE: 7-88		J.C. 2 BLP 1 NO. 2 REVISION DATE: 2-13-88 12-10-88		PLAN AND PROFILE FOR WATER AND SEWER MAINS 600' SCALE MAR NO. 20 BLOCK NO.		COLUMBIA VILLAGE OF DORSEY'S SEARCH SECTION 3 AREA I PHASE I 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 246131-D SCALE AS SHOWN SHEET 2 OF 10	
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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert Ward*  
DIRECTOR OF PUBLIC WORKS  
DATE: 11-12-85  
CHIEF, BUREAU OF UTILITIES

*Michael H. ...*  
CHIEF, LAND DEVELOPMENT DIVISION  
DATE: 11-12-85

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
GREENHORNE AND O'MARA, INC.  
#2 RESEARCH PLACE  
ROCKVILLE, MARYLAND 20850  
(301) 948-0900

DES: TAD					
DRN: E.O. ...					
CHK: RMY	JC	2	Revised Water @ Sta 39+00	2-14-84	
DATE: 7-85	BLP	1	REVISED FHT ELEV. @ STA. 36+10 & 12"W ON PROFILE	12-10-85	
	BY	NO.	REVISION	DATE	

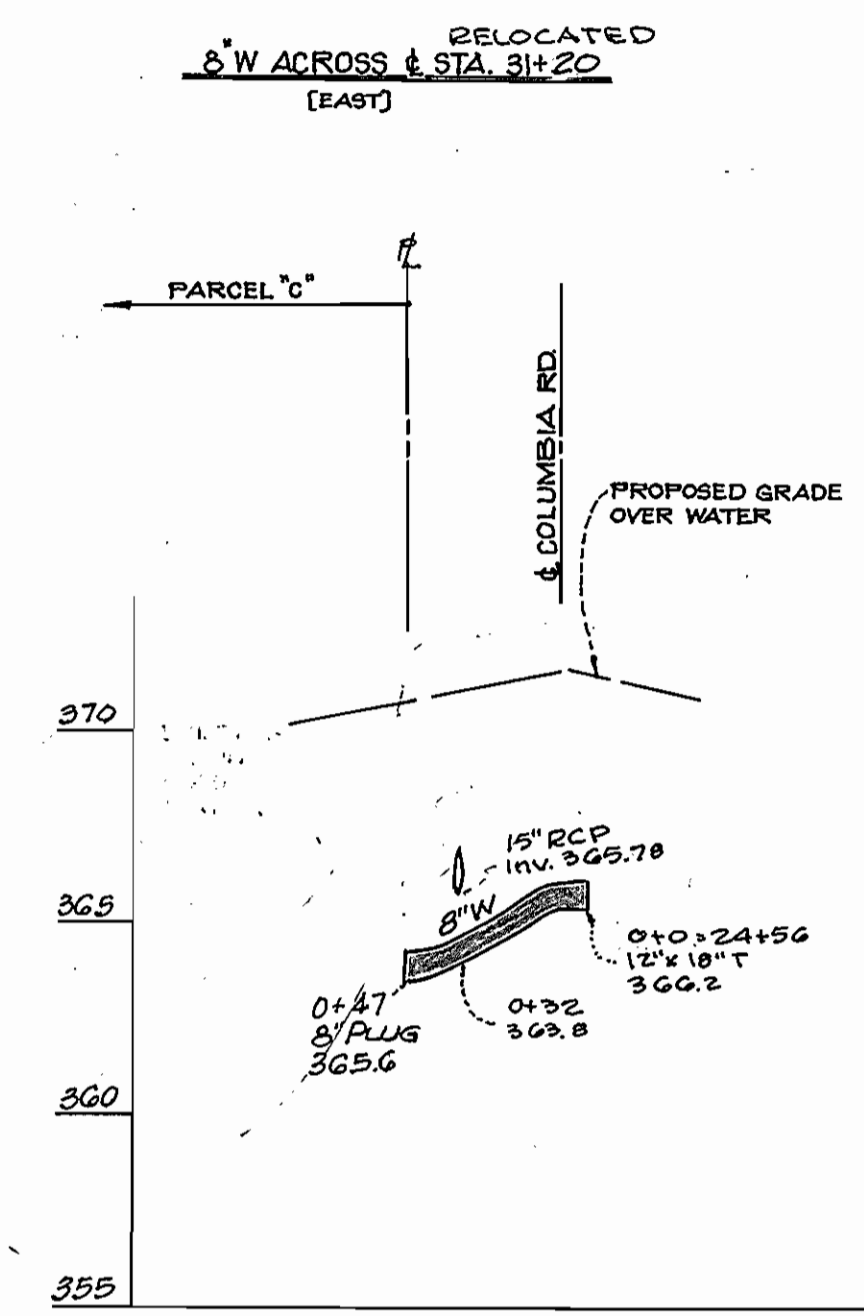
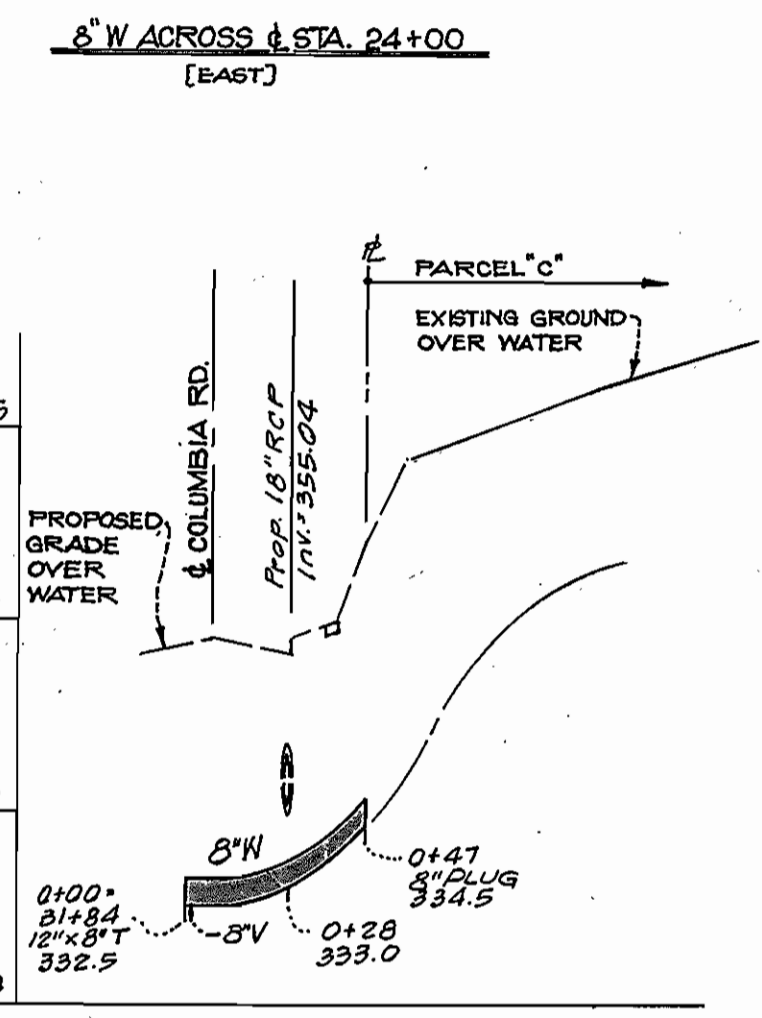
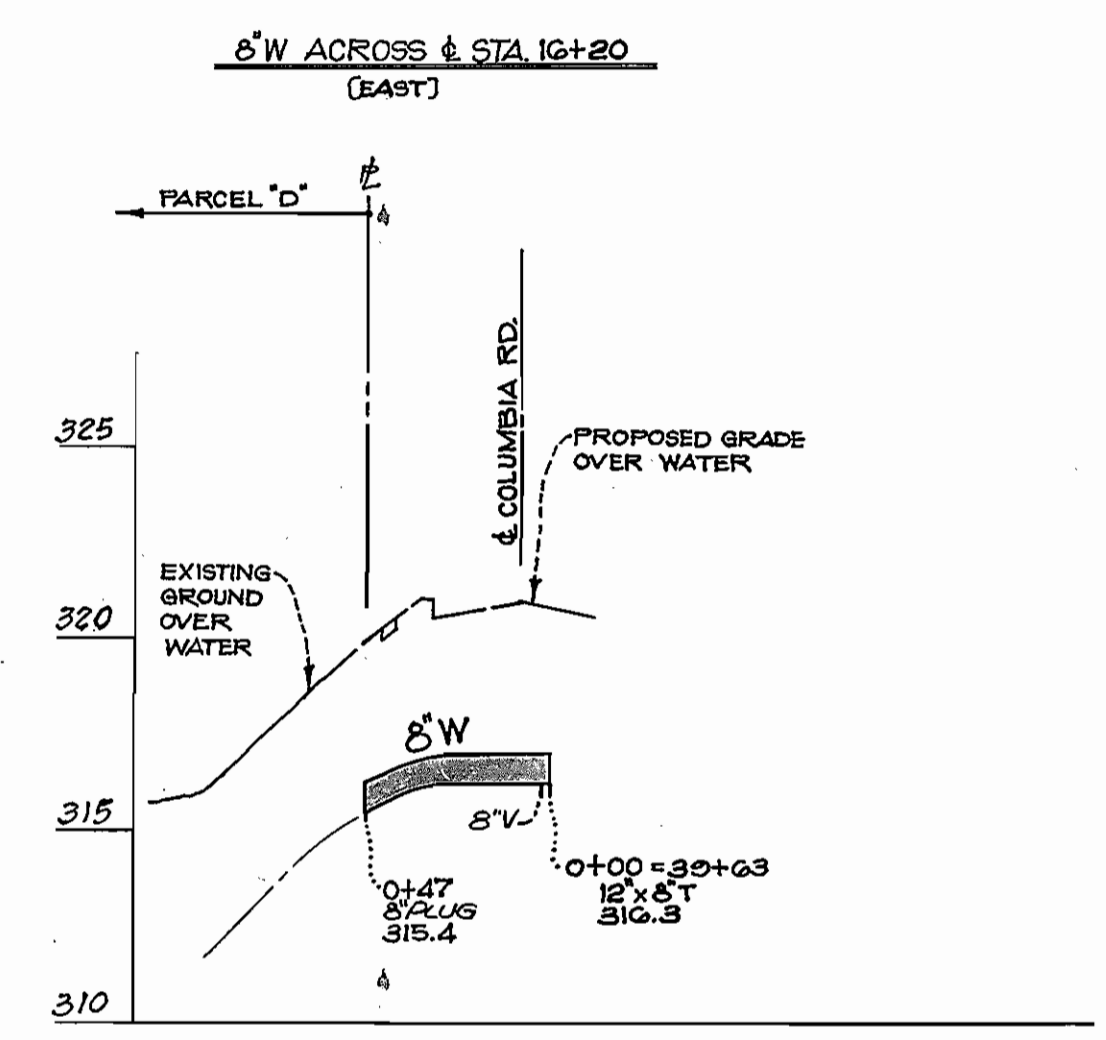
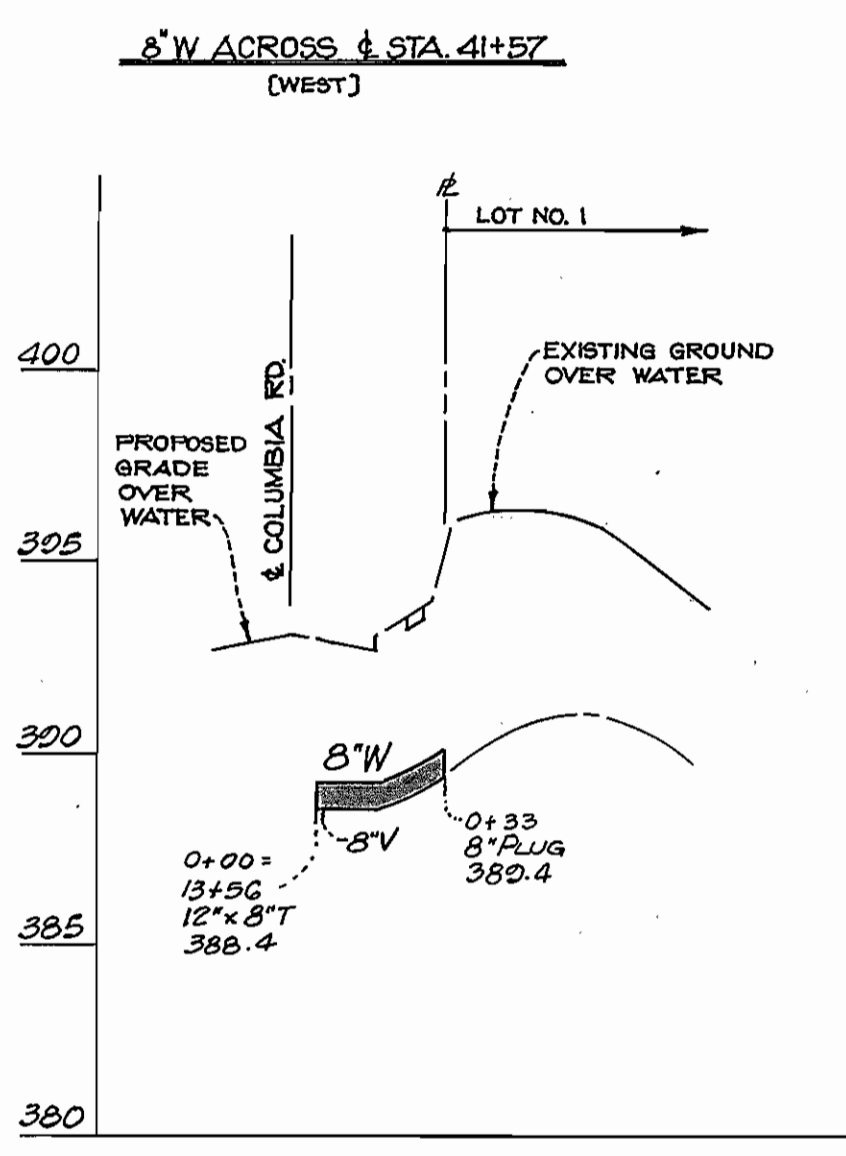
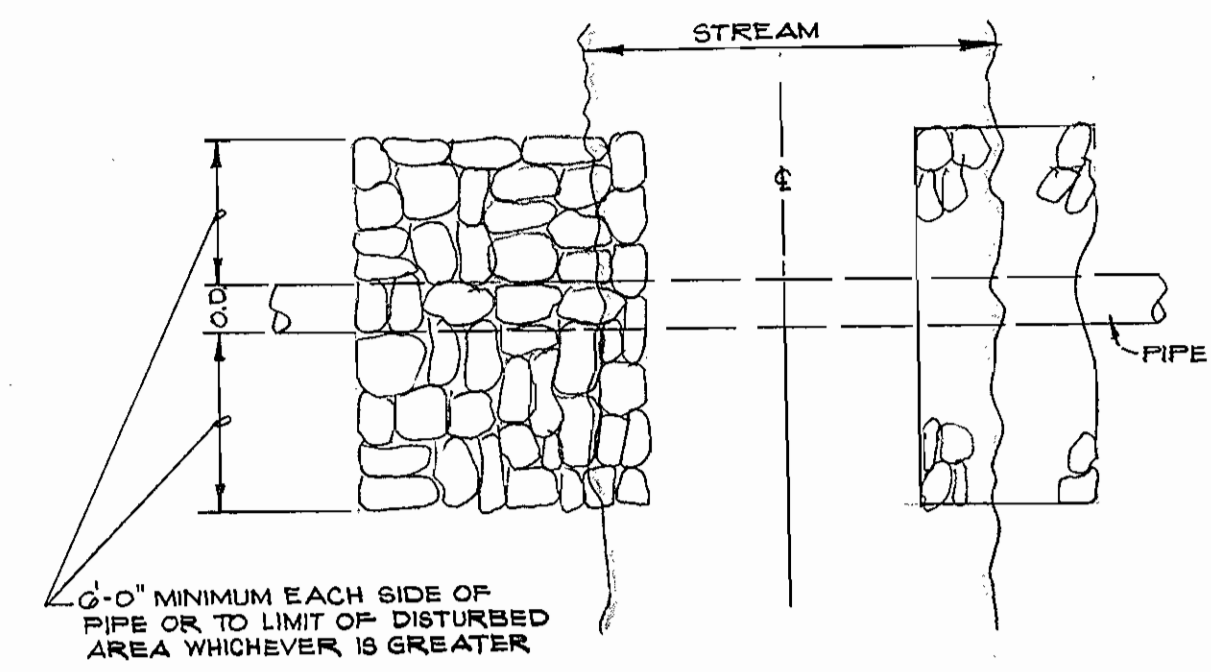
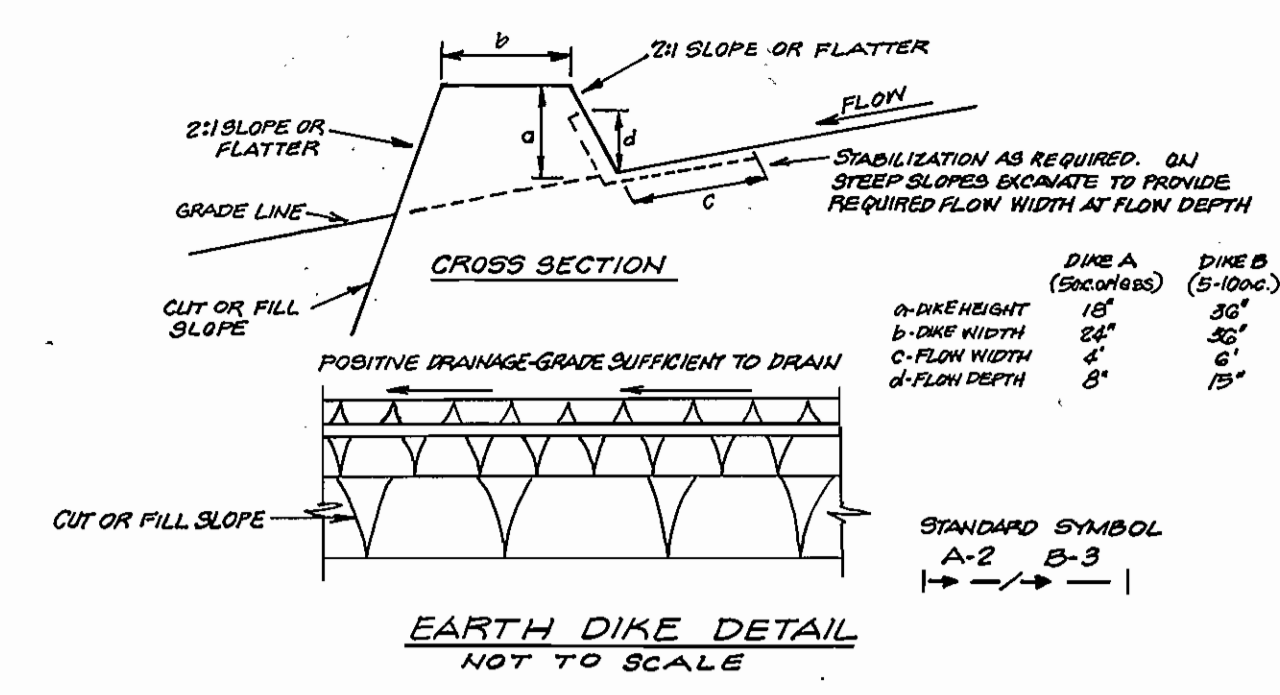
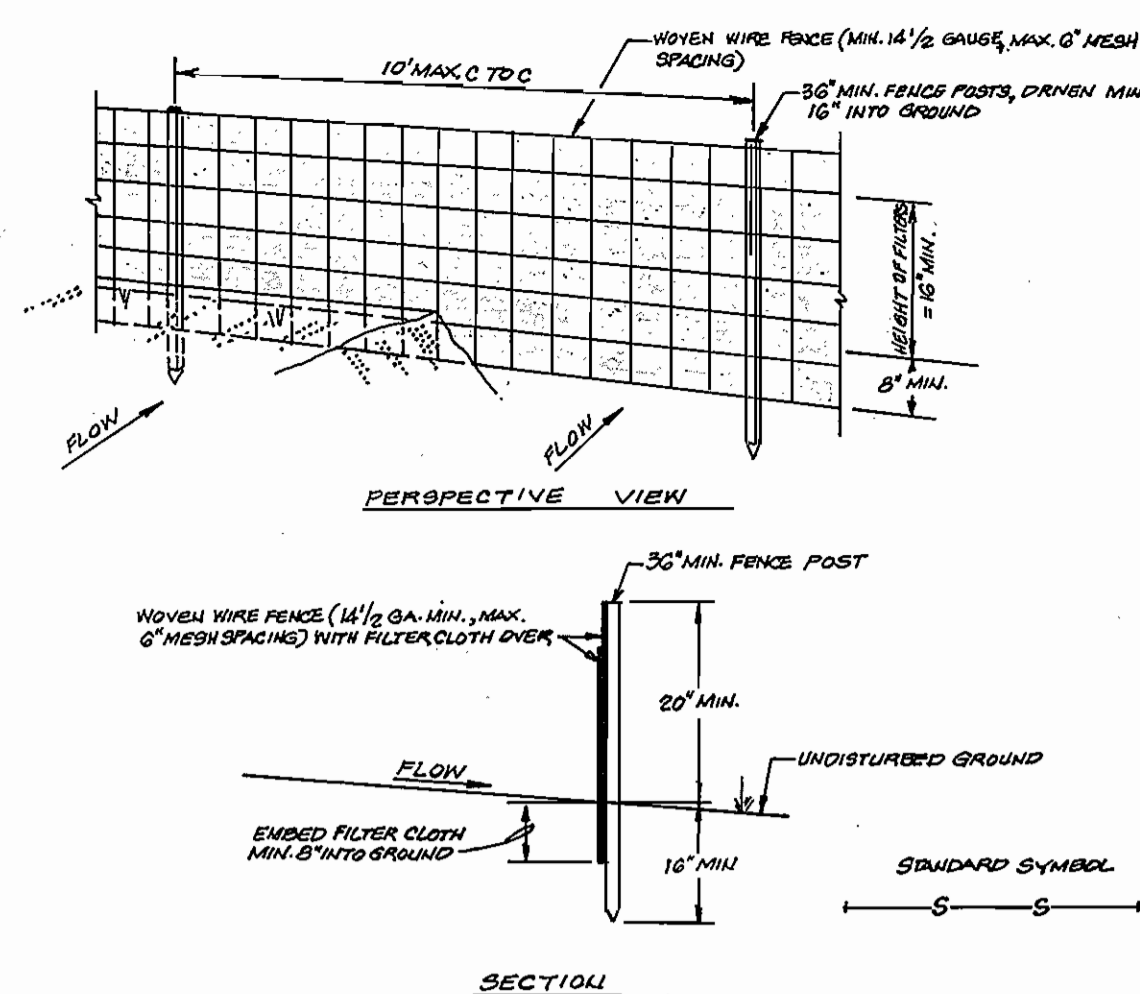
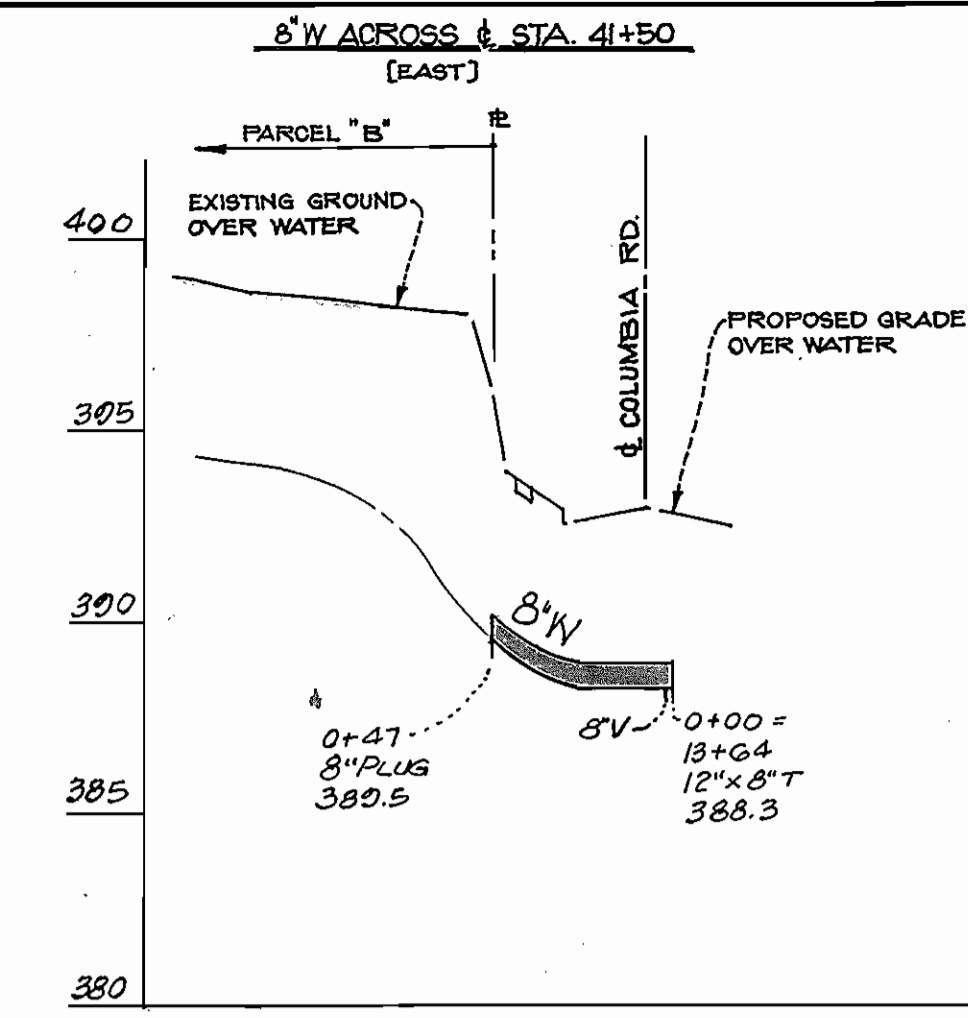
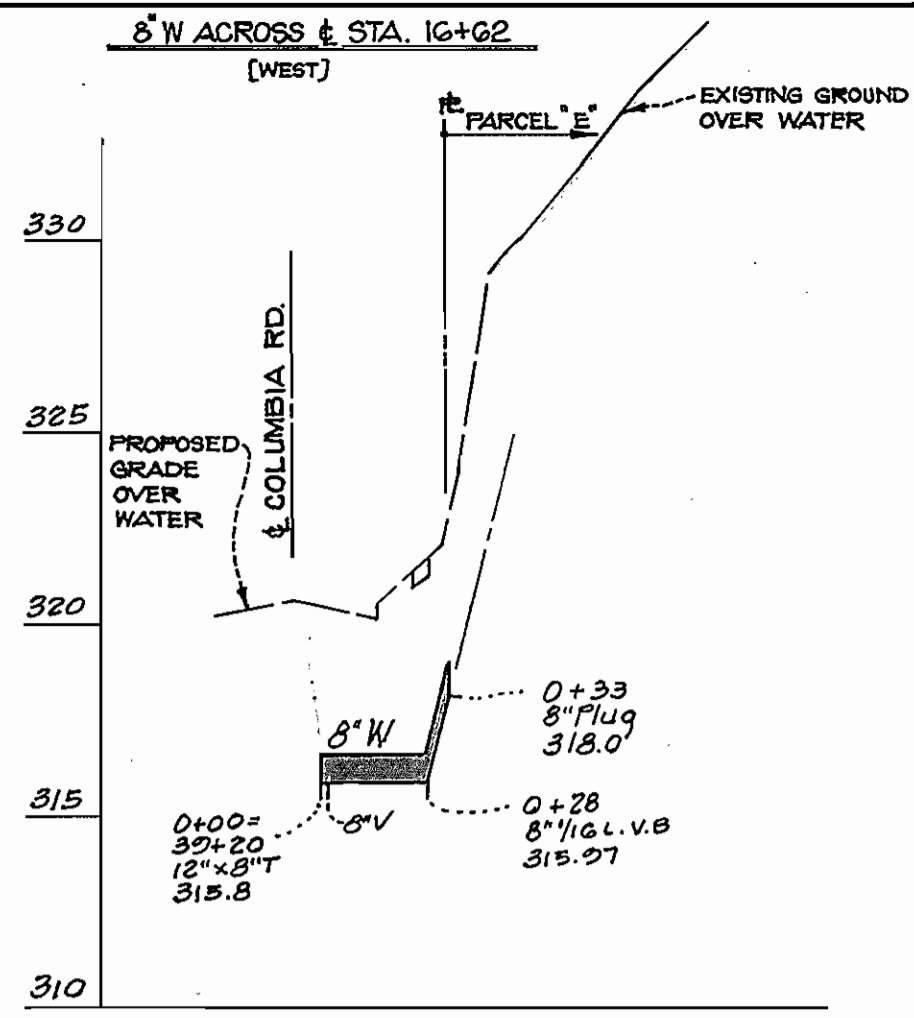
PLAN AND PROFILE FOR WATER AND SEWER MAINS

600' SCALE MAP NO. 30 BLOCK NO. 2

COLUMBIA VILLAGE OF DORSEY'S SEARCH SECTION 3 AREA I PHASE I 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 241961-D

SCALE AS SHOWN SHEET 4 OF 10

AS-BUILT MAY 1986 1210-X



**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

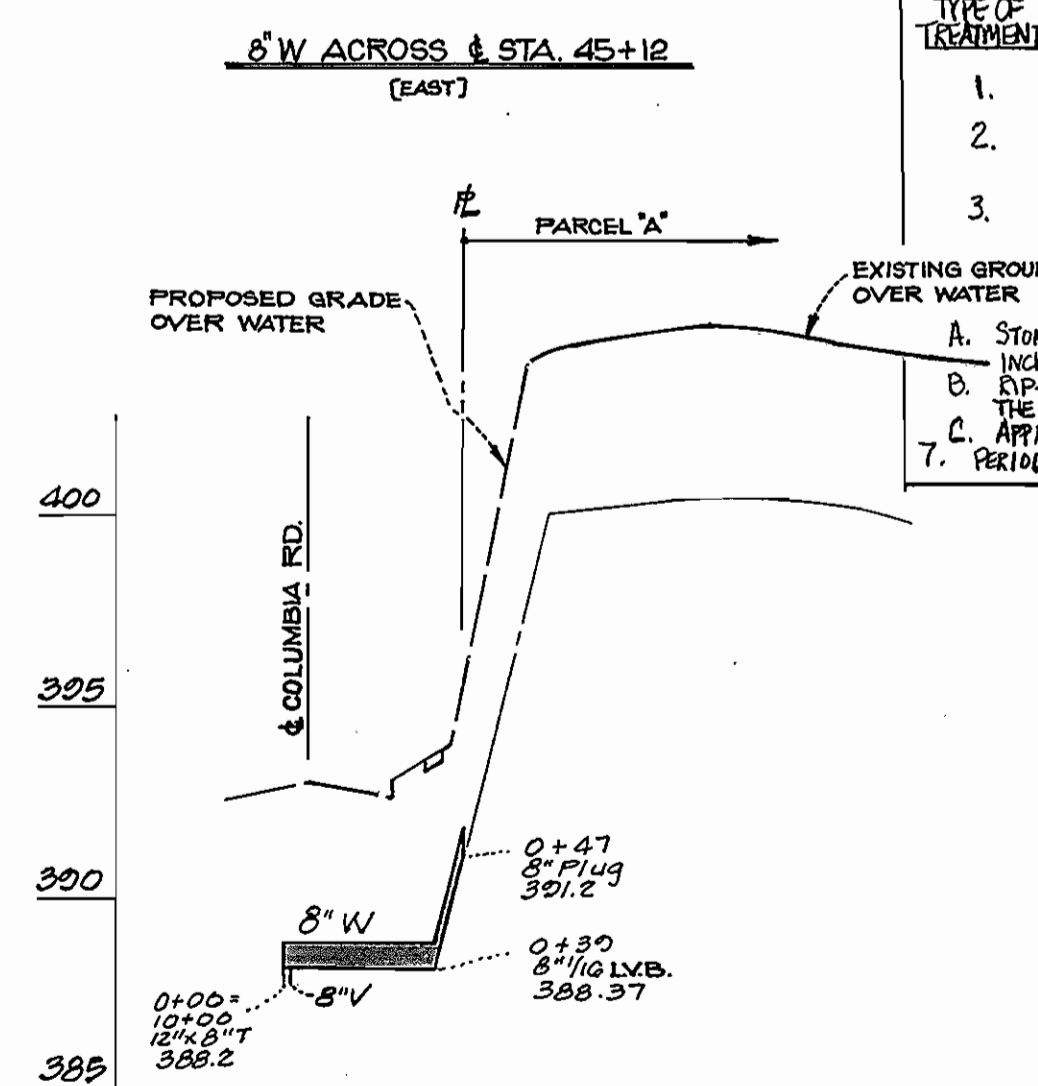
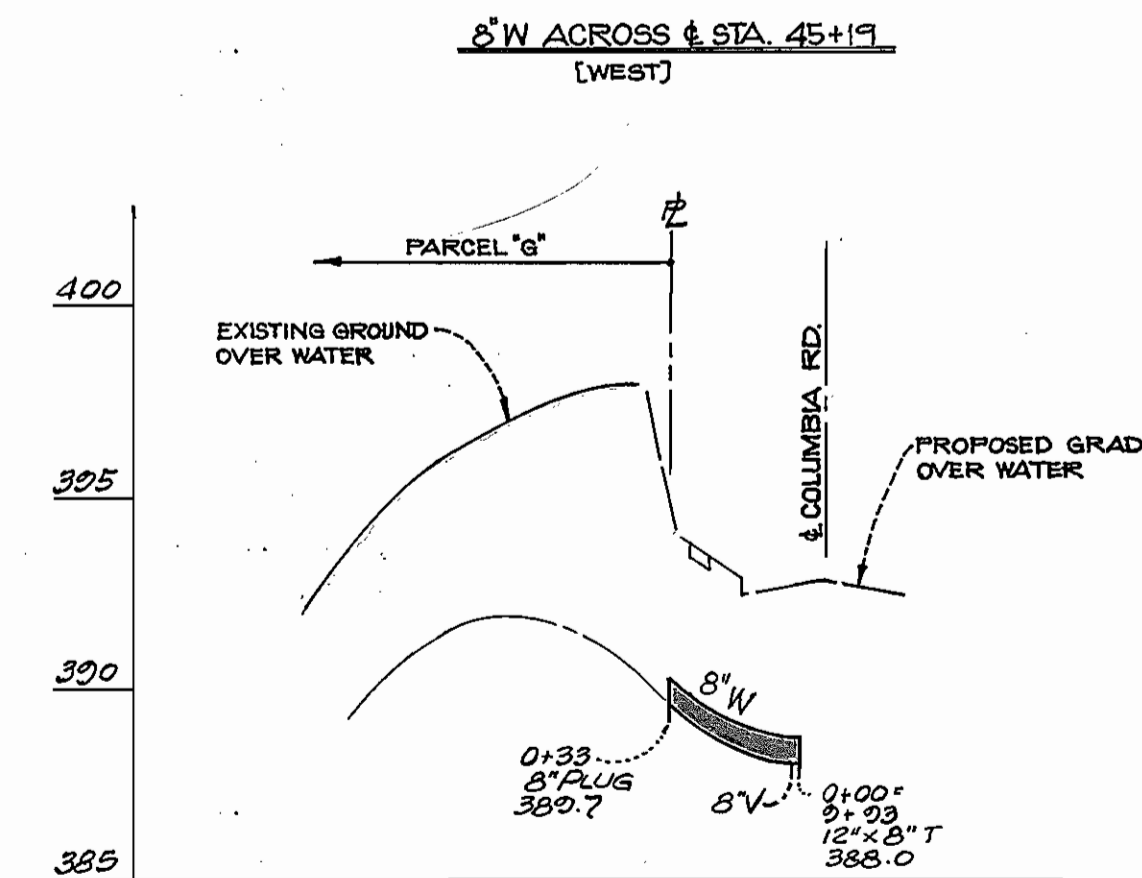
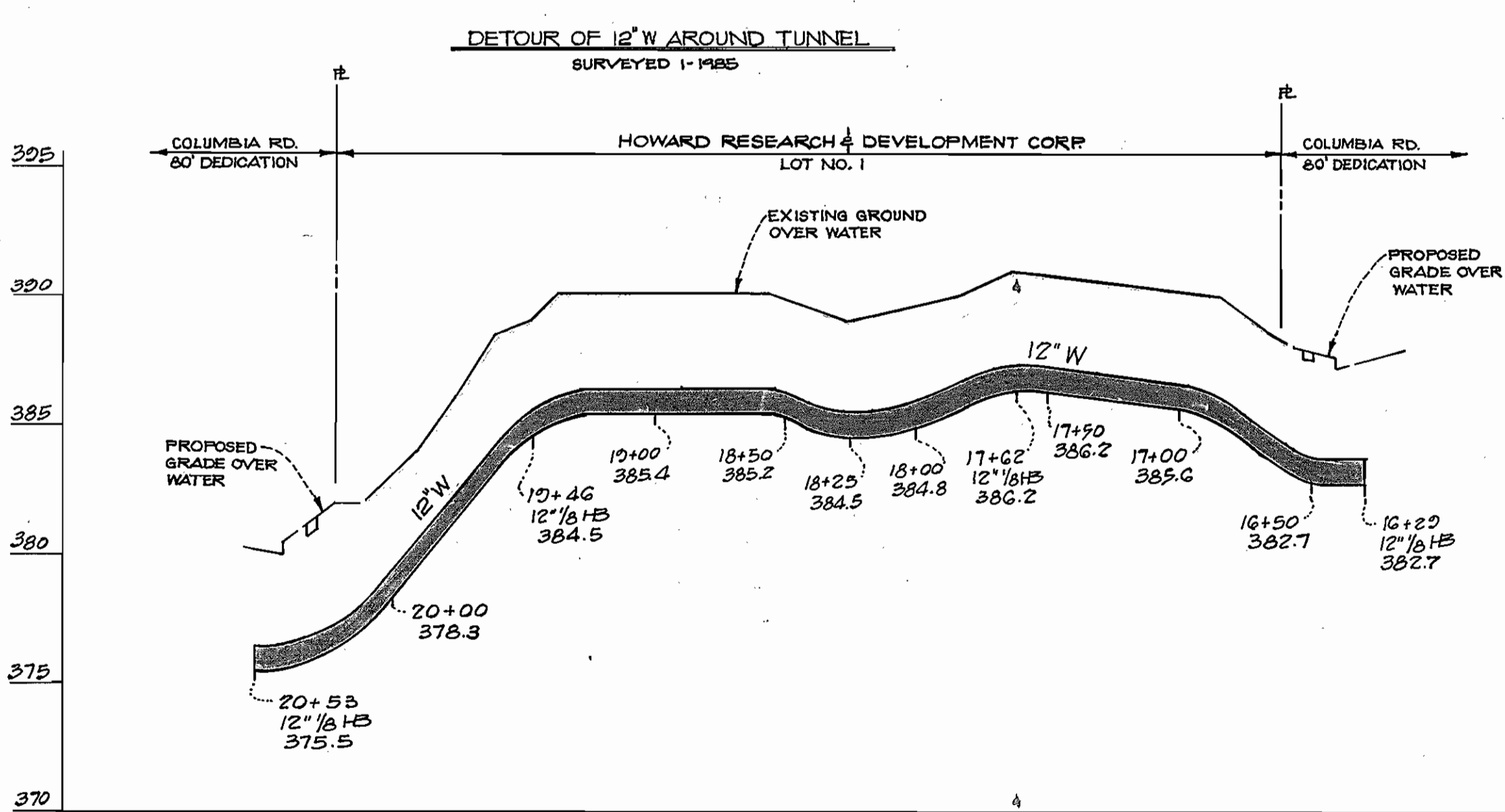
POSTS: STEEL E-OTHER T OR U TYPE OR 2" HARDWOOD  
 FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING  
 FILTER CLOTH: FILTER X, MICAL, LOCK, STABIL-LINER, TIGON OR APPROVED EQUAL.  
 PREFABRICATED UNIT, GEOTEX, ENVIROFENCE, OR APPROVED EQUAL.

**CONSTRUCTION SPECIFICATIONS**

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION EQUIPMENT.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STREAM MULCH IF NOT IN SEEDING SEASON; (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION			
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1.	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2.	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXPOSURE; 50# 2" STONE
3.	5.1-8.0%	SEED WITH JUTE OR SOG	LINED RIP-RAP 4-8"
4.	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.  
 B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 3 INCHES THICKNESS AND PRESSED INTO THE SOIL.  
 C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.  
 7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



PROFILE SCALE:  
 HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'

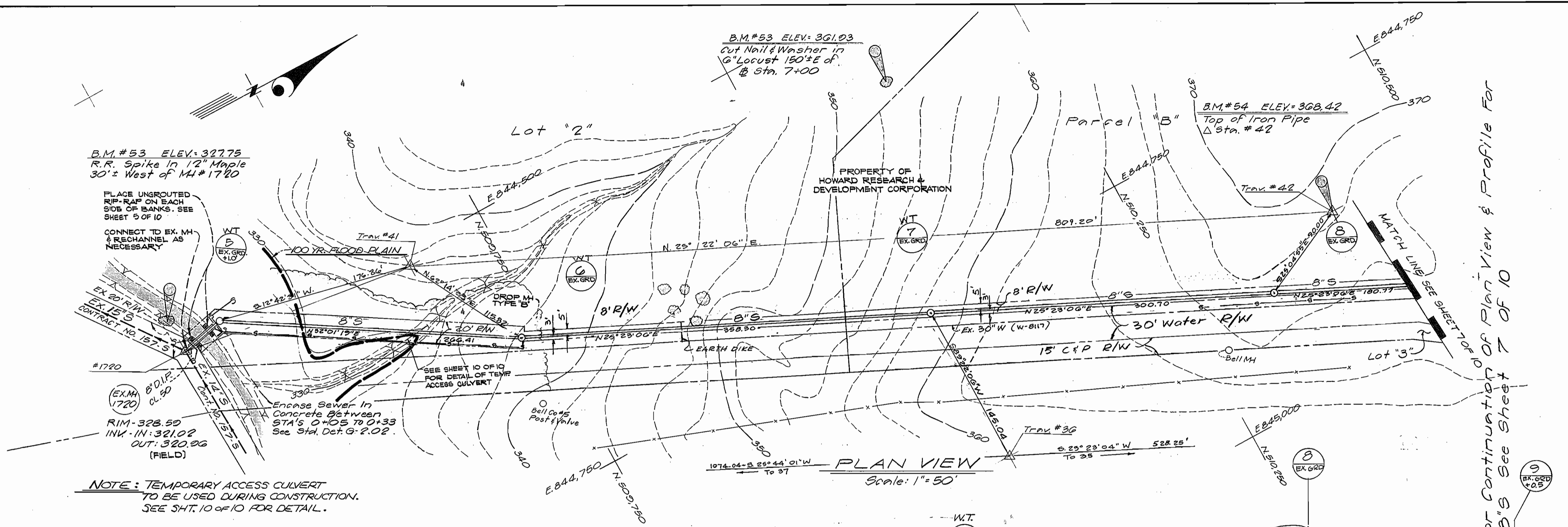
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works: Wayne Nunnery  
 Chief, Bureau of Engineers: [Signature]  
 Chief, Bureau of Utilities: [Signature]  
 Chief, Land Development Division: [Signature]

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
 GREENHORNE AND O'MARA, INC.  
 #2 RESEARCH PLACE  
 ROCKVILLE, MARYLAND 20850  
 (301)948-0900

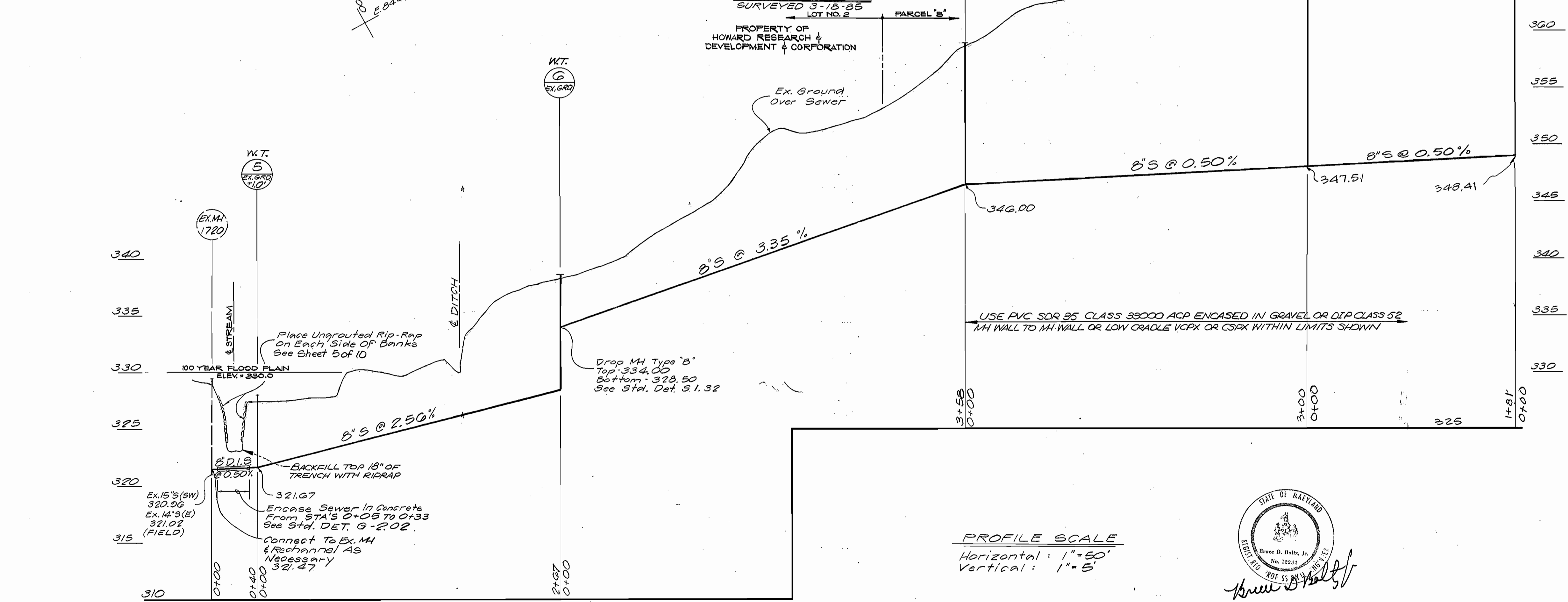
DES:	DRN:	CHK:	DATE:	BY:	NO.:	REVISION:	DATE:
TAD	EB	RHY	7-25				
				J.C.	3	Revised 8' W Q & Sta. 31+20	2-13-88
					2	SEDIMENT CONTROL UPDATED PER HCS-CD	11-4-88
					1	REVISED 12' W 0+00 TO 4+00 CROSSING FUTURE MD 108	11-4-88

PLAN AND PROFILE FOR WATER AND SEWER MAINS  
 600' SCALE MAP NO. 30 BLOCK NO.

COLUMBIA VILLAGE OF DORSEY'S SEARCH  
 SECTION 3 AREA I PHASE I  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CONTRACT NO. 24-1361-D  
 SCALE AS SHOWN  
 SHEET 5 OF 10  
 AS-BUILT, MAY 1986 1210-X



**EXTENSIONS TO SERVE LOTS 2 & 3, PARCELS A & B**  
SURVEYED 3-18-85 LOT NO. 2



For Continuation of Plan View & Profile For 8" S See Sheet 7 of 10

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

11-12-85

ROBERT W. WOOD, JR. / RMB 11/8/85

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
GREENHORNE AND O'MARA, INC.  
#2 RESEARCH PLACE  
ROCKVILLE, MARYLAND 20850

DES: Z10			
DRN: 23			
CHK: RHW			
DATE: 7-85	BY: J.C.	REVISION: Revised Plan & Profile	DATE: 2-14-86

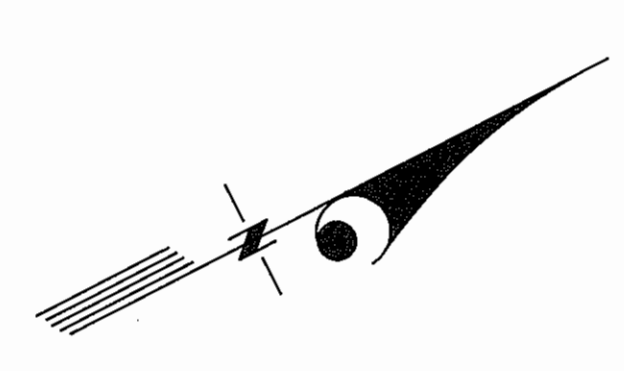
STATE OF MARYLAND  
BRETT D. BILTS, JR.  
PROF. SS. No. 12222

PLAN AND PROFILE FOR WATER AND SEWER MAINS

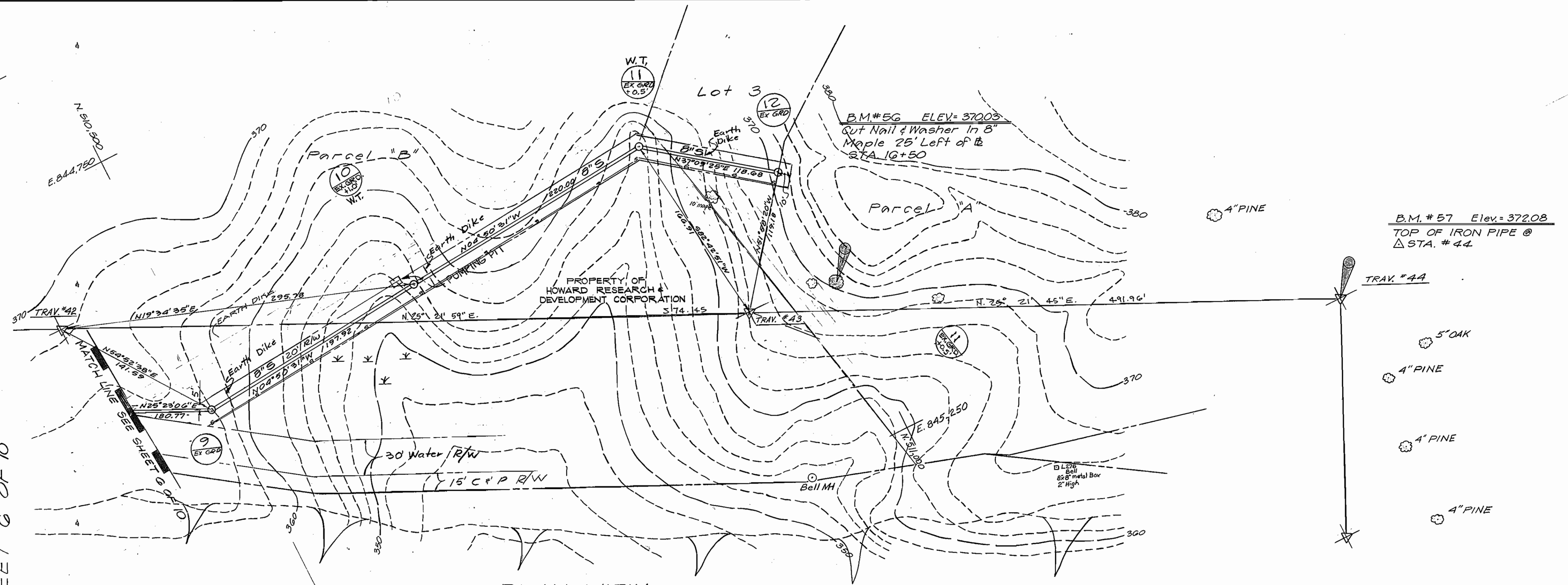
600' SCALE MAP NO. 30 BLOCK NO.

COLUMBIA, VILLAGE OF DORSEY'S SEARCH  
SECTION 3 AREA I PHASE I  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 241361-D

SCALE AS SHOWN  
SHEET 6 OF 10

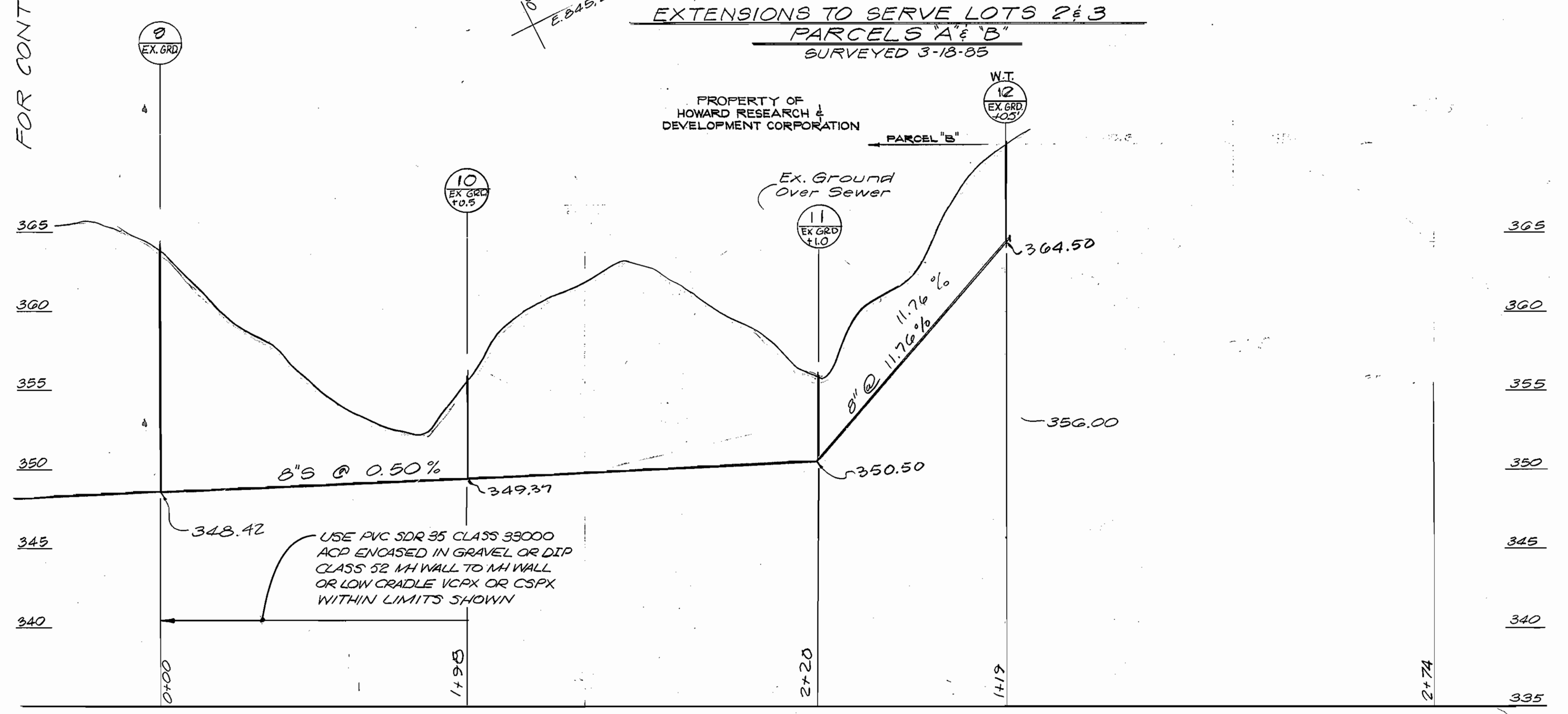


FOR CONTINUATION OF PLAN & PROFILE  
SEE SHEET 6 OF 10



**PLAN VIEW**  
Scale: 1"=50'

**EXTENSIONS TO SERVE LOTS 2 & 3  
PARCELS A & B**  
SURVEYED 3-13-85



**PROFILE SCALE**  
Horizontal: 1"=50'  
Vertical: 1"=5'



**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

*Robert W. Wood*  
DIRECTOR OF PUBLIC WORKS  
DATE: 11-17-85

*Robert W. Wood*  
CHIEF, BUREAU OF UTILITIES  
DATE: 11/8/85

*[Signature]*  
CHIEF, LAND DEVELOPMENT DIVISION  
DATE: 11/8/85

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
**GREENHORNE AND O'MARA, INC.**  
#2 RESEARCH PLACE  
ROCKVILLE, MARYLAND 20850

(301)948-0000

DES: <b>TMD</b>				
DRN: <b>AS</b>				
CHK: <b>RMY</b>				
DATE: <b>7-85</b>	BY: <b>JC</b>	NO. <b>1</b>	REVISION: <b>Revised Plan &amp; Profile</b>	DATE: <b>2-14-86</b>

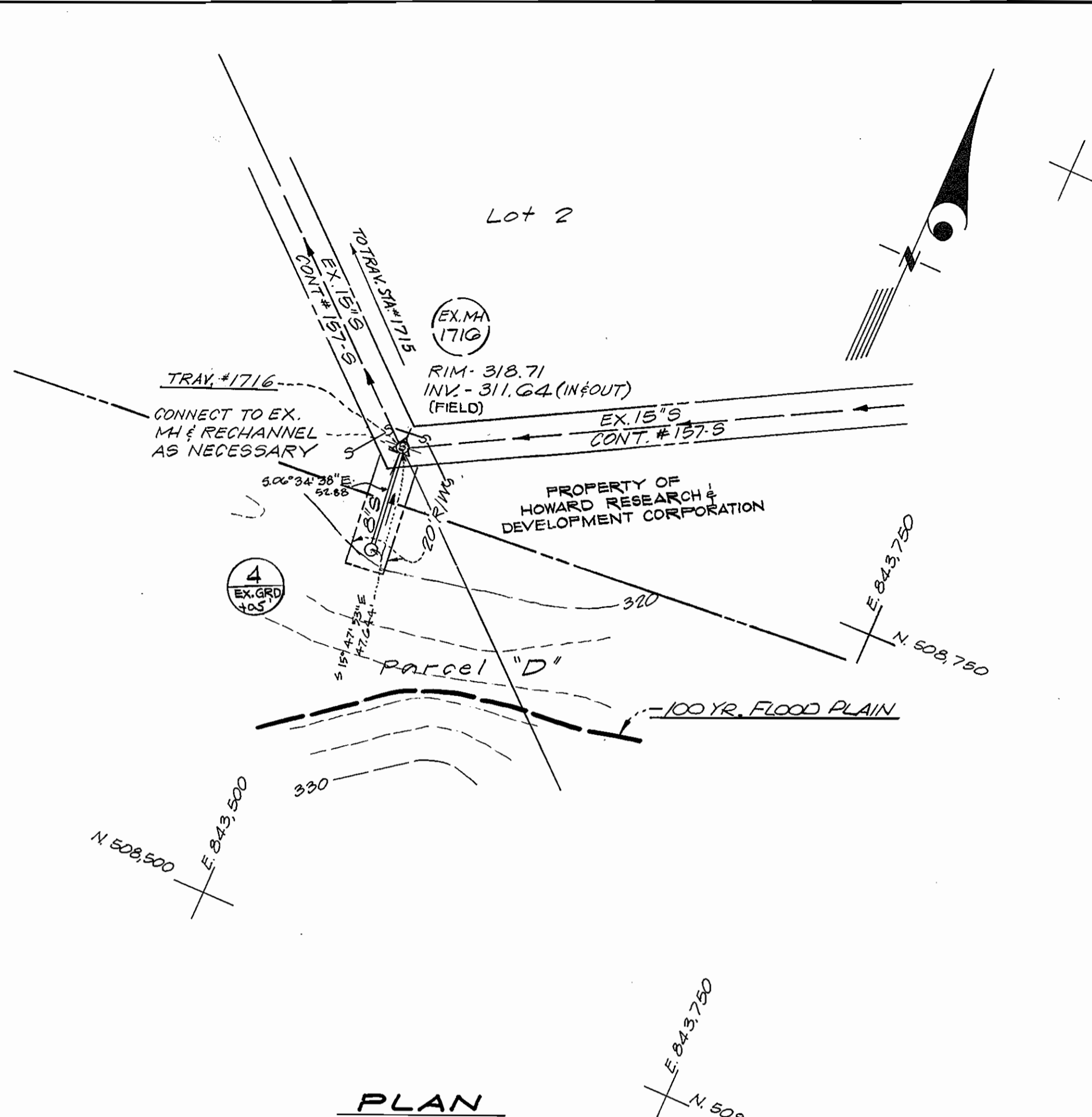
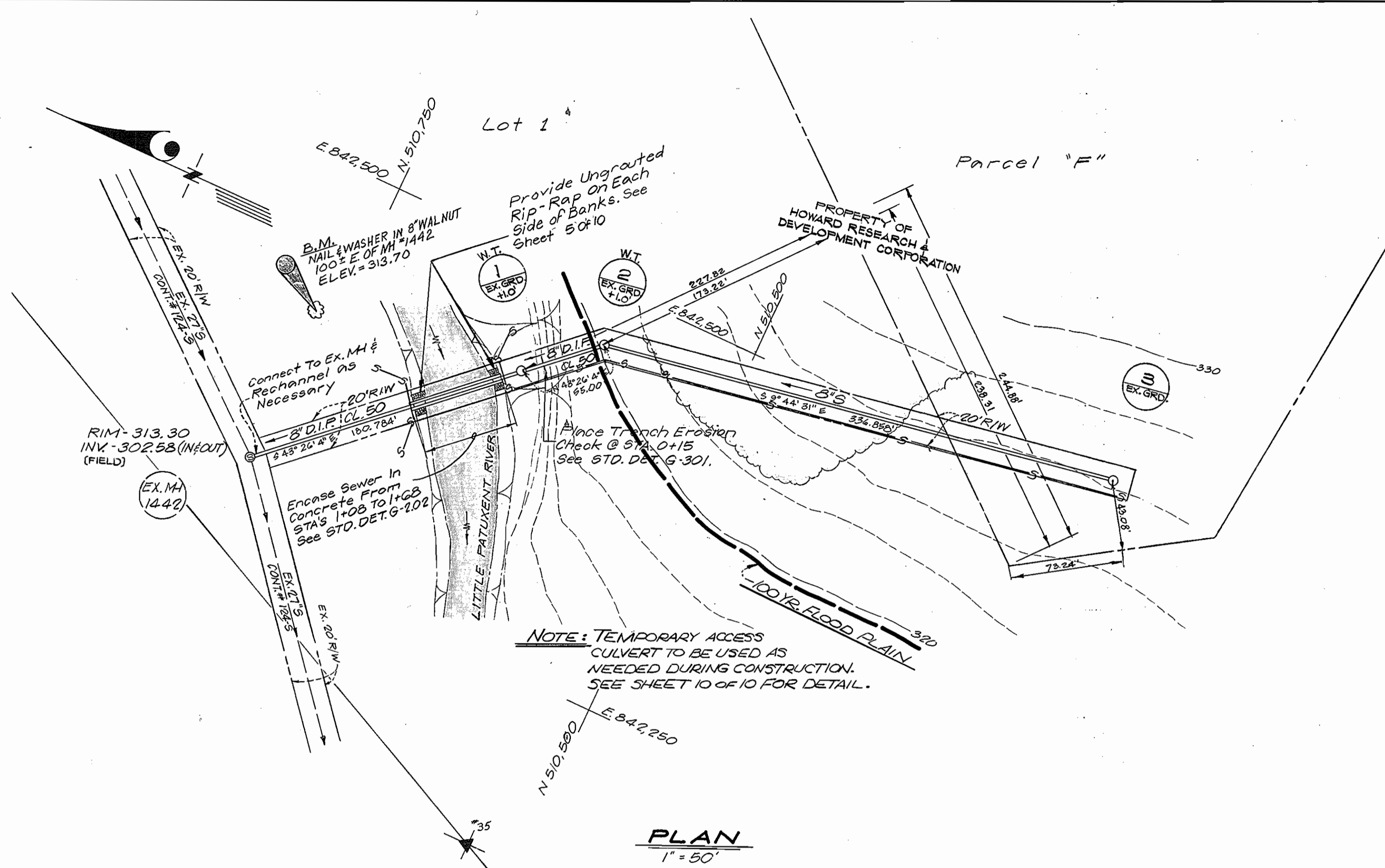
**PLAN AND PROFILE FOR WATER  
AND SEWER MAINS**

600' SCALE MAP NO. **22** BLOCK NO. \_\_\_\_\_

**COLUMBIA**  
**VILLAGE OF DORSEY'S SEARCH**  
SECTION 3 AREA I PHASE I  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 241361-D

SCALE AS SHOWN

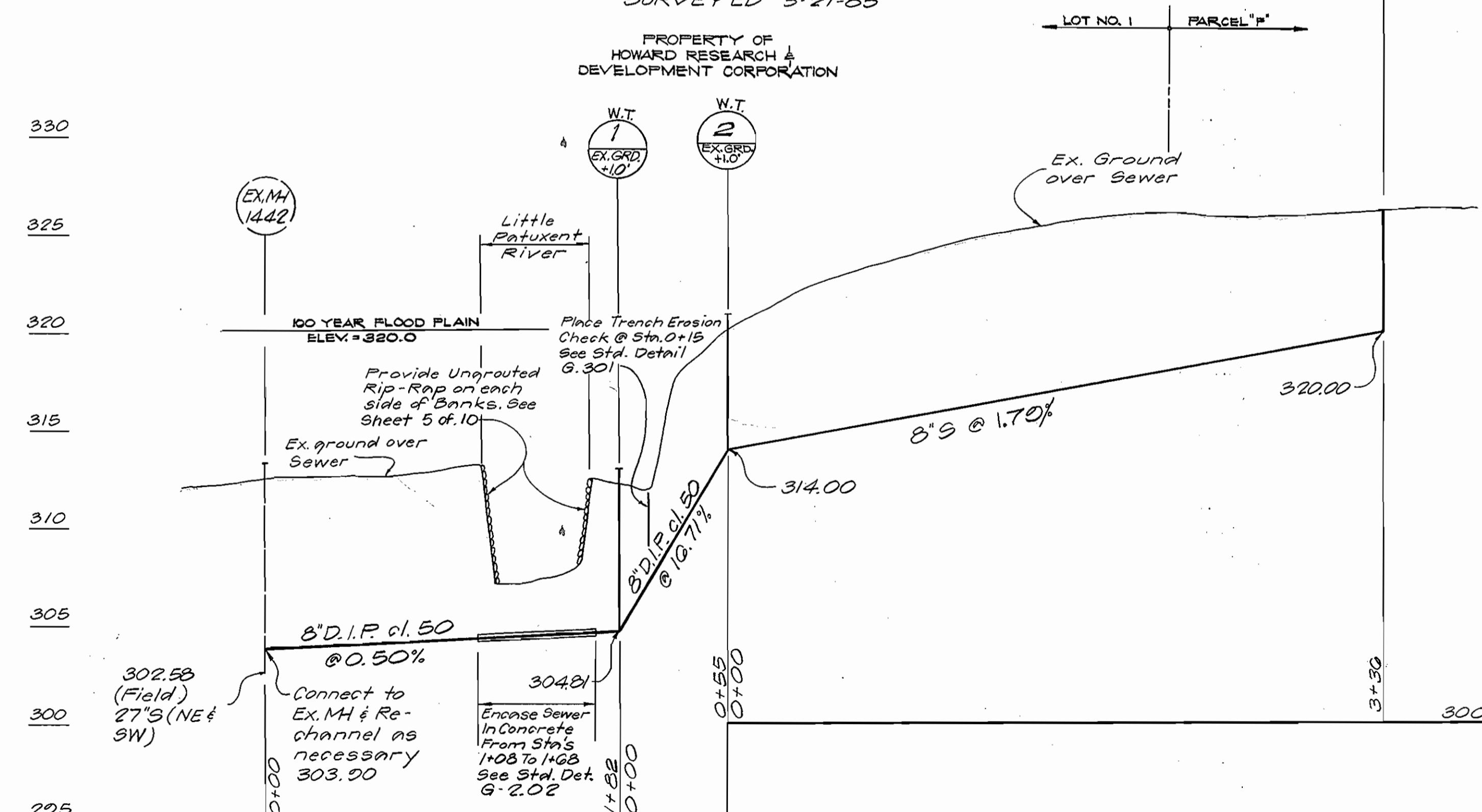
SHEET **7** OF **10**



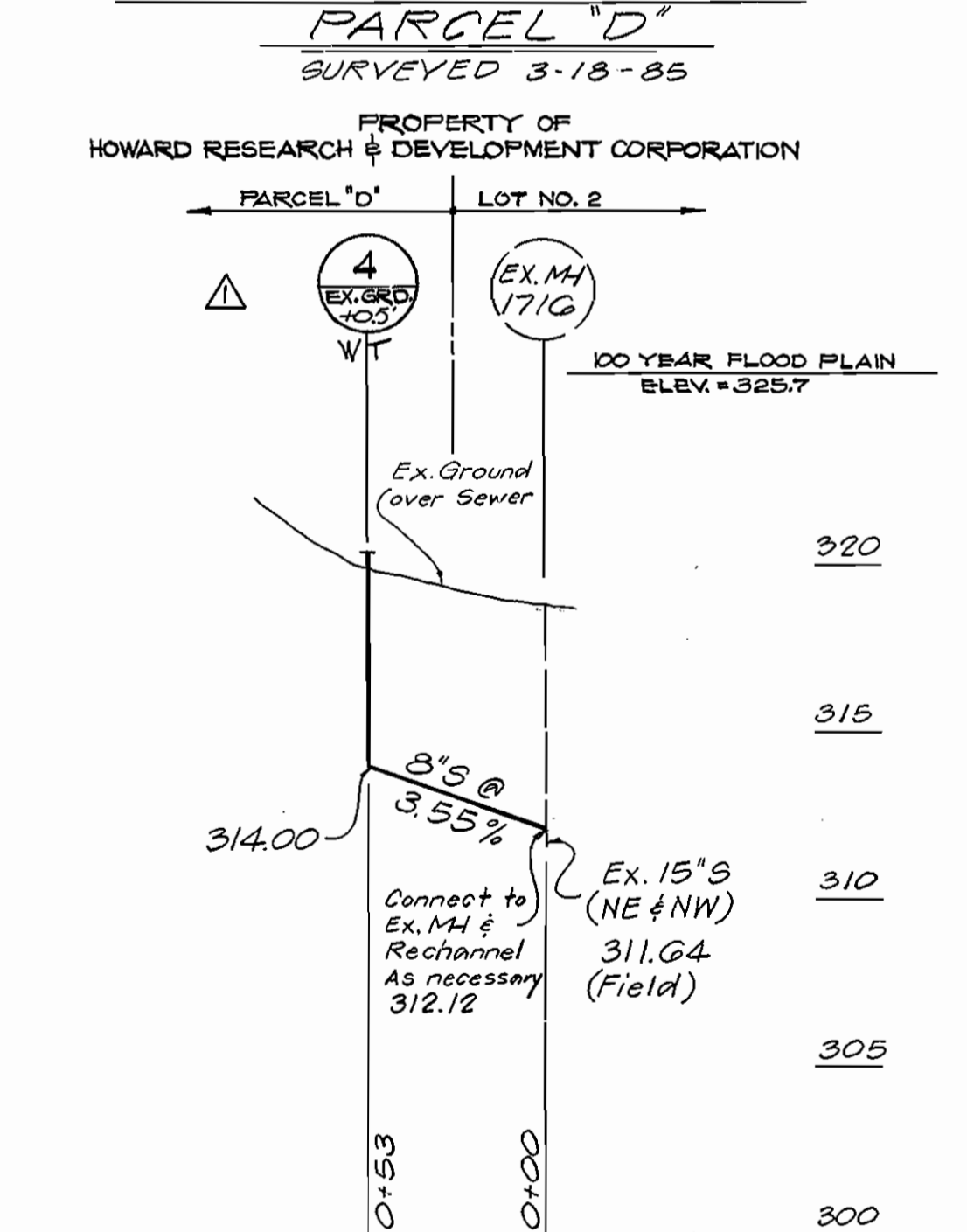
**PLAN**  
1" = 50'

**PLAN**  
1" = 50'

**EXTENSIONS TO SERVE LOT 1 & PARCEL "F"**  
SURVEYED 5-21-85



**EXTENSION TO SERVE PARCEL "D"**  
SURVEYED 3-18-85



**PROFILE SCALES**  
Horizontal: 1" = 50'  
Vertical: 1" = 5'



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
11-12-85  
Robert W. Wood, Jr. for RMB/10/85  
CHIEF, BUREAU OF UTILITIES

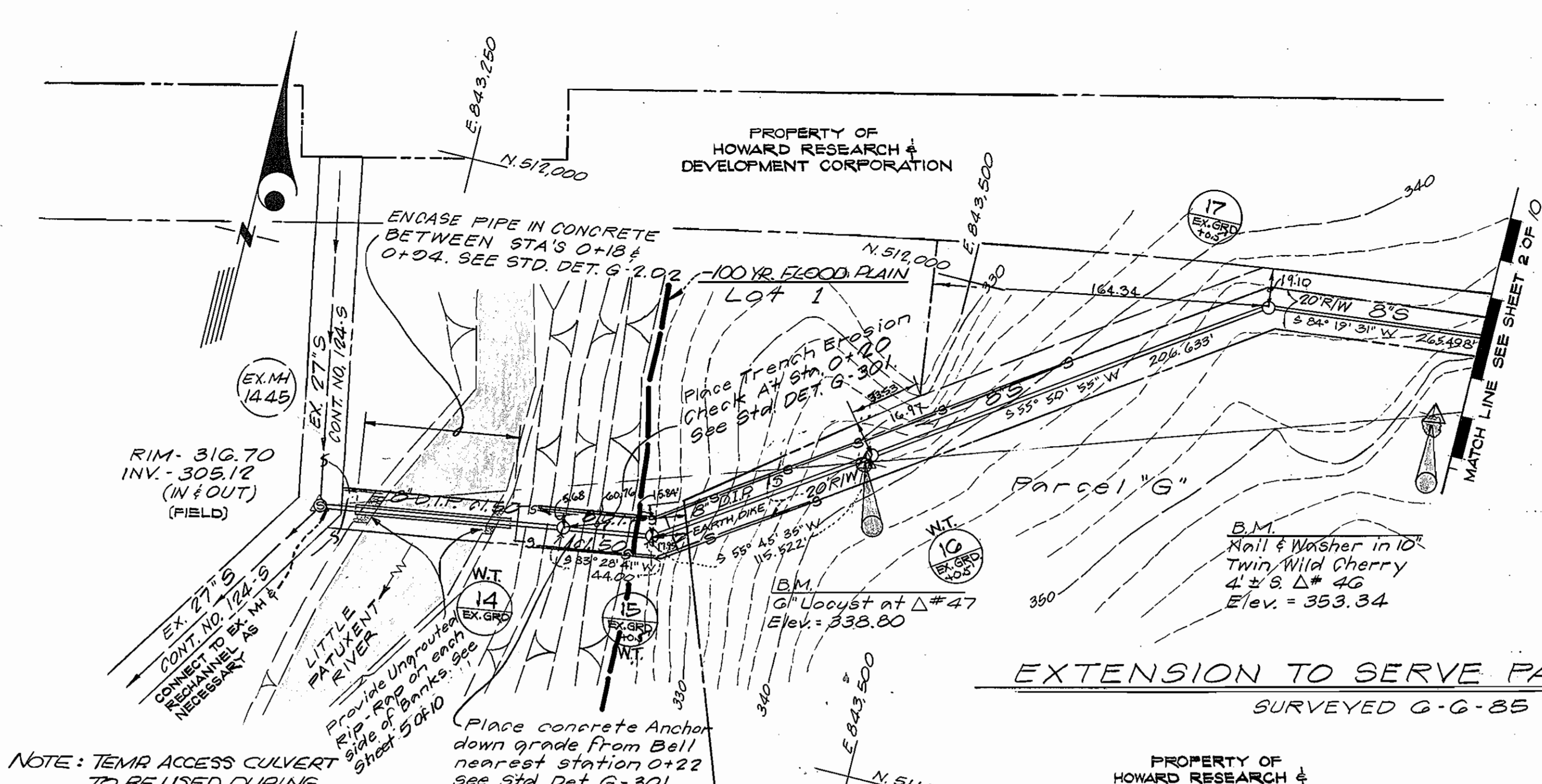
ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
GREENHORNE AND O'MARA, INC.  
#2 RESEARCH PLACE  
ROCKVILLE, MARYLAND 20850  
(301) 948-0800

DES:	TAD			
DRN:	E.S.			
CHK:	RHW			
DATE:	7-25			
BY:				
NO.:				
REVISION:	ADDED WT TO MH #4 ON SEWER PROFILE		12-10-85	

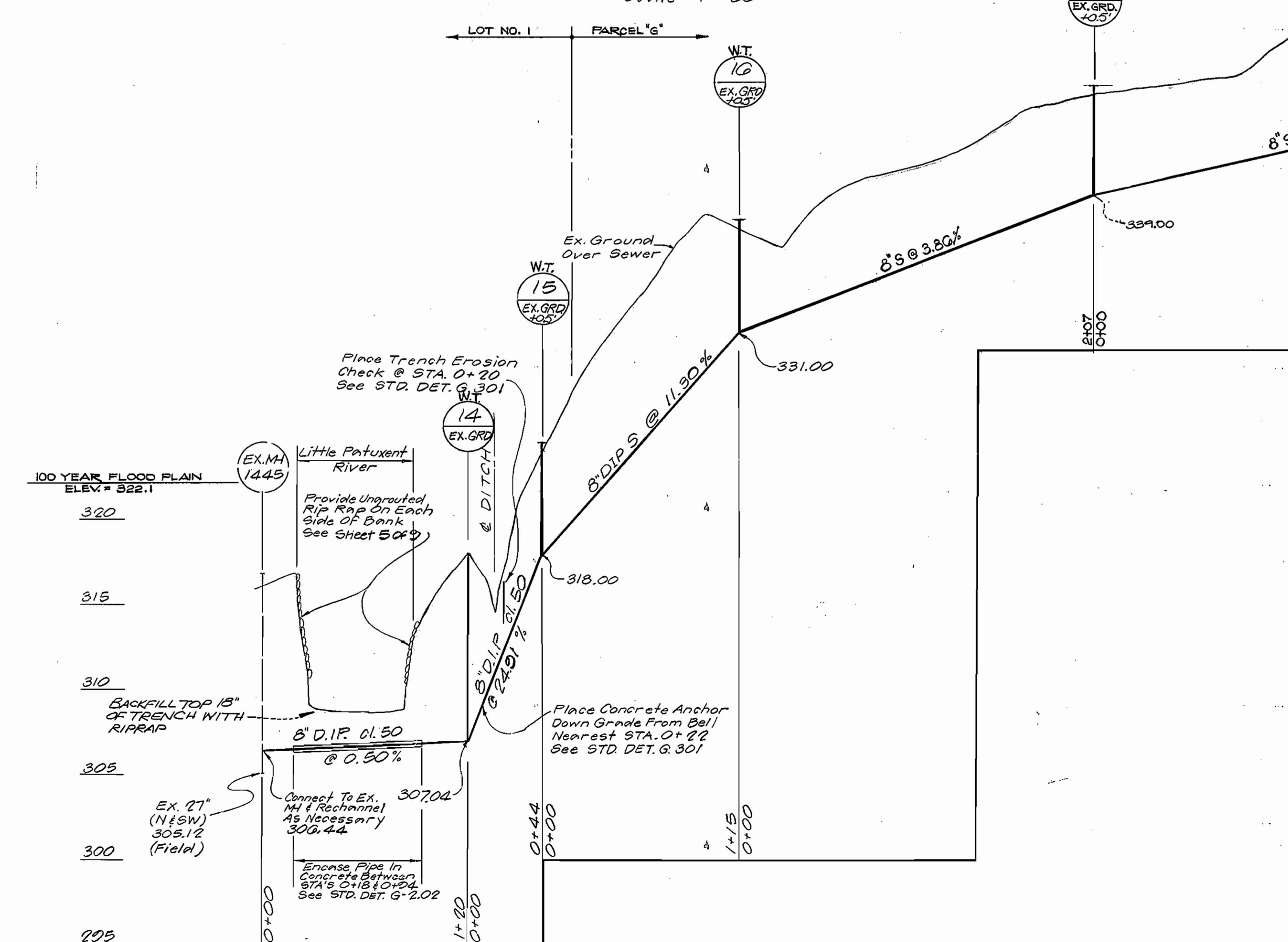
PLAN AND PROFILE FOR WATER AND SEWER MAINS

COLUMBIA VILLAGE OF DORSEY'S SEARCH  
SECTION 3 AREA 1 PHASE I  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 24-1501-D  
SCALE AS SHOWN  
SHEET 8 OF 10  
AS-BUILT MAY 1986 1210-X

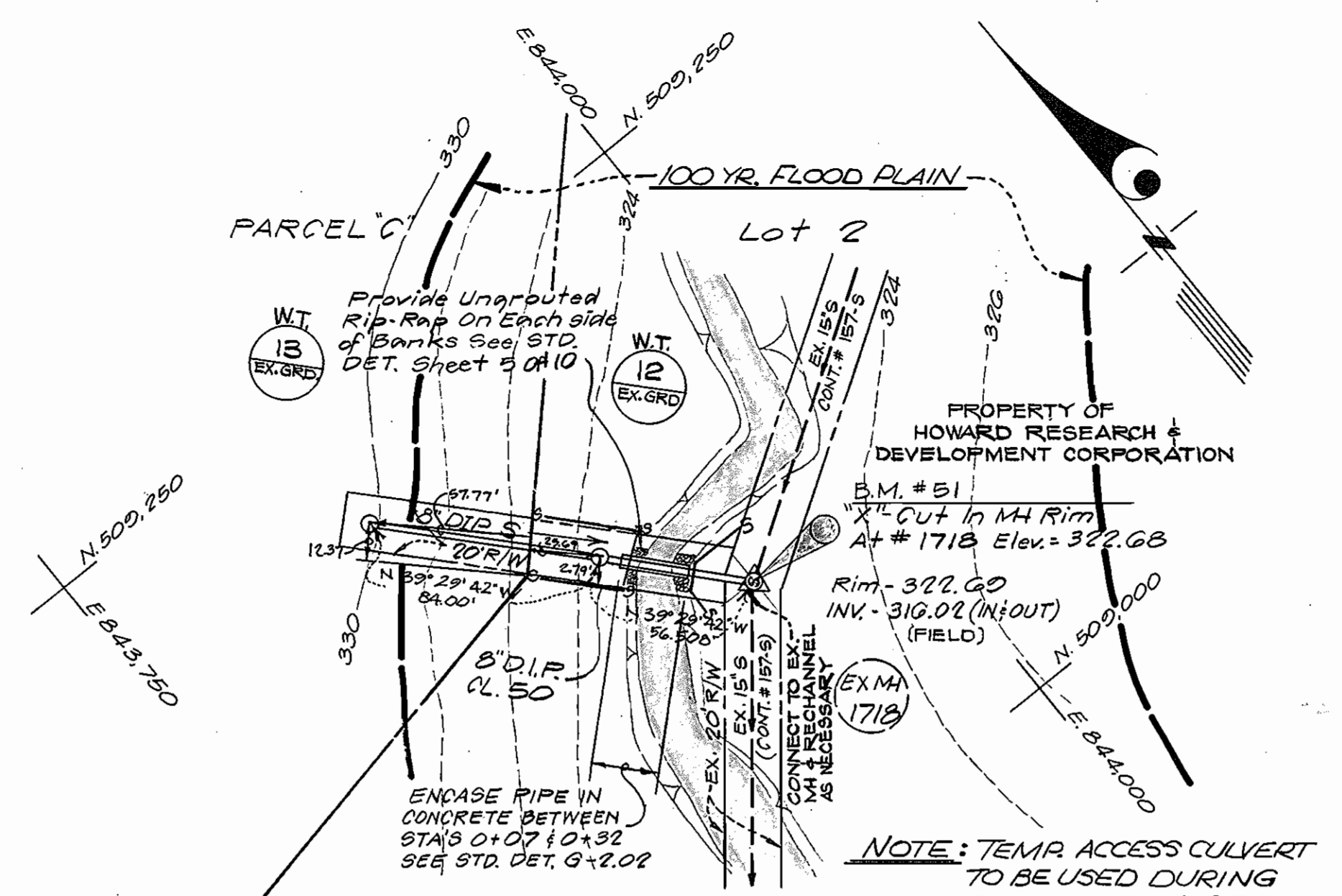




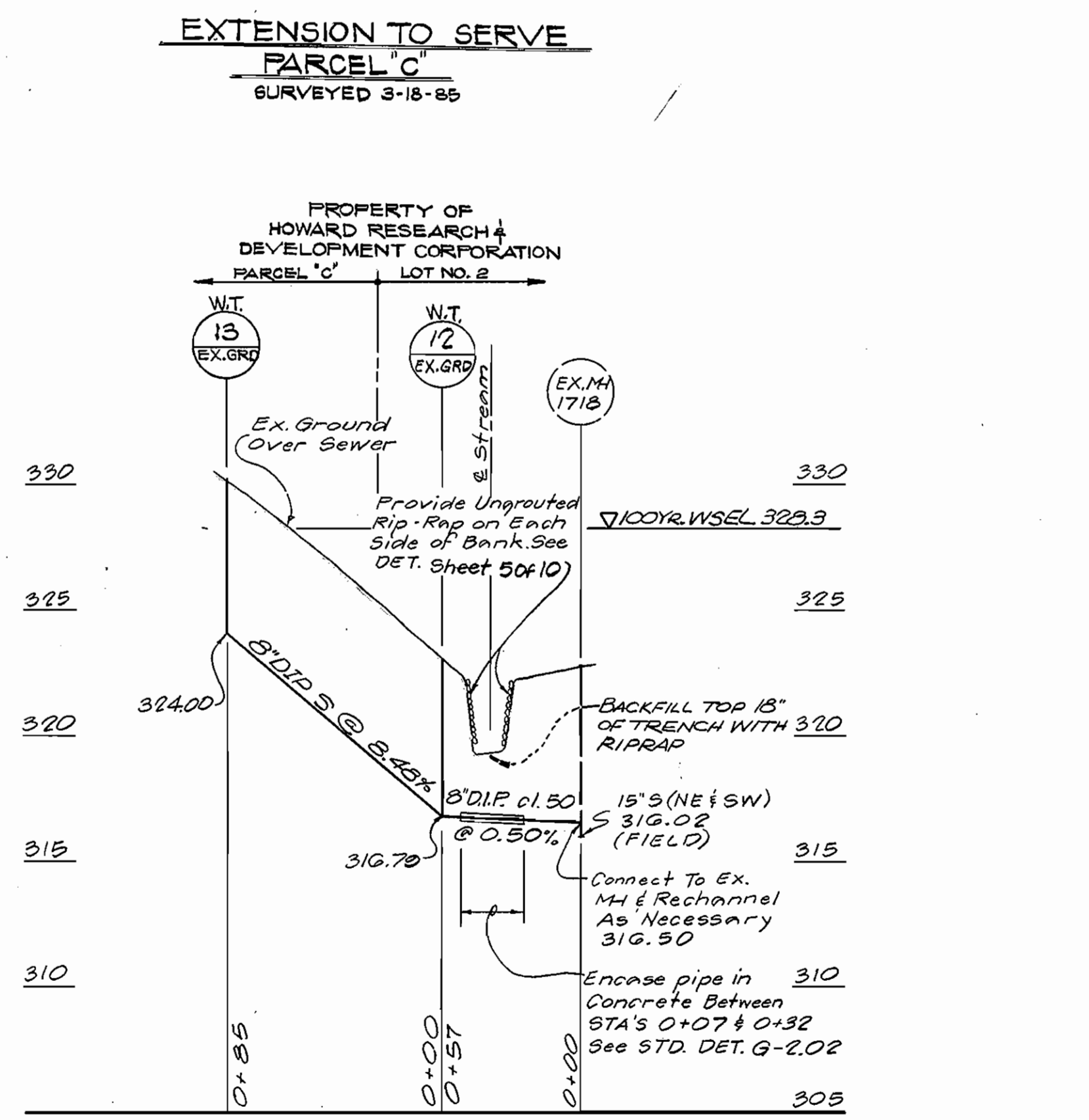
PLAN VIEW  
Scale: 1" = 50'



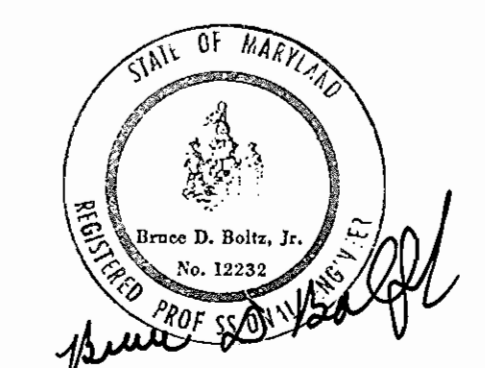
PROFILE SCALES  
Horizontal: 1" = 50'  
Vertical: 1" = 5'



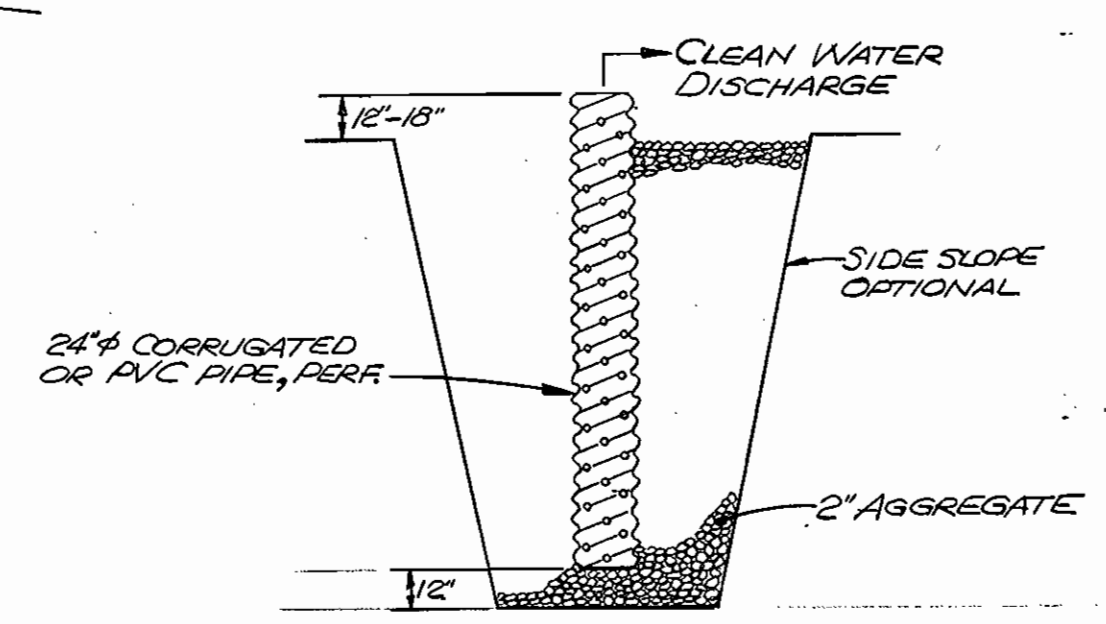
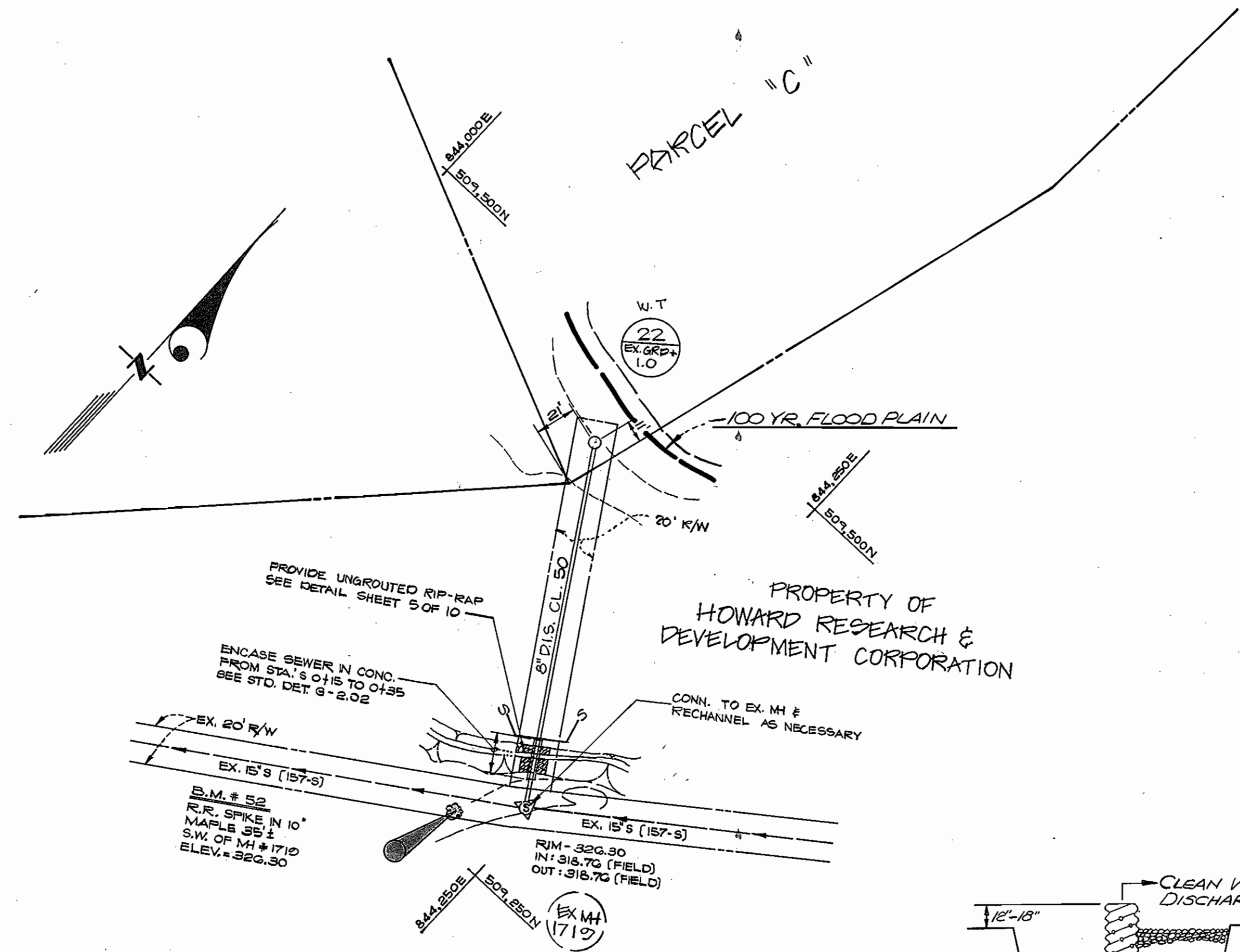
PLAN VIEW  
Scale: 1" = 50'



EXTENSION TO SERVE PARCEL C  
SURVEYED 3-18-85



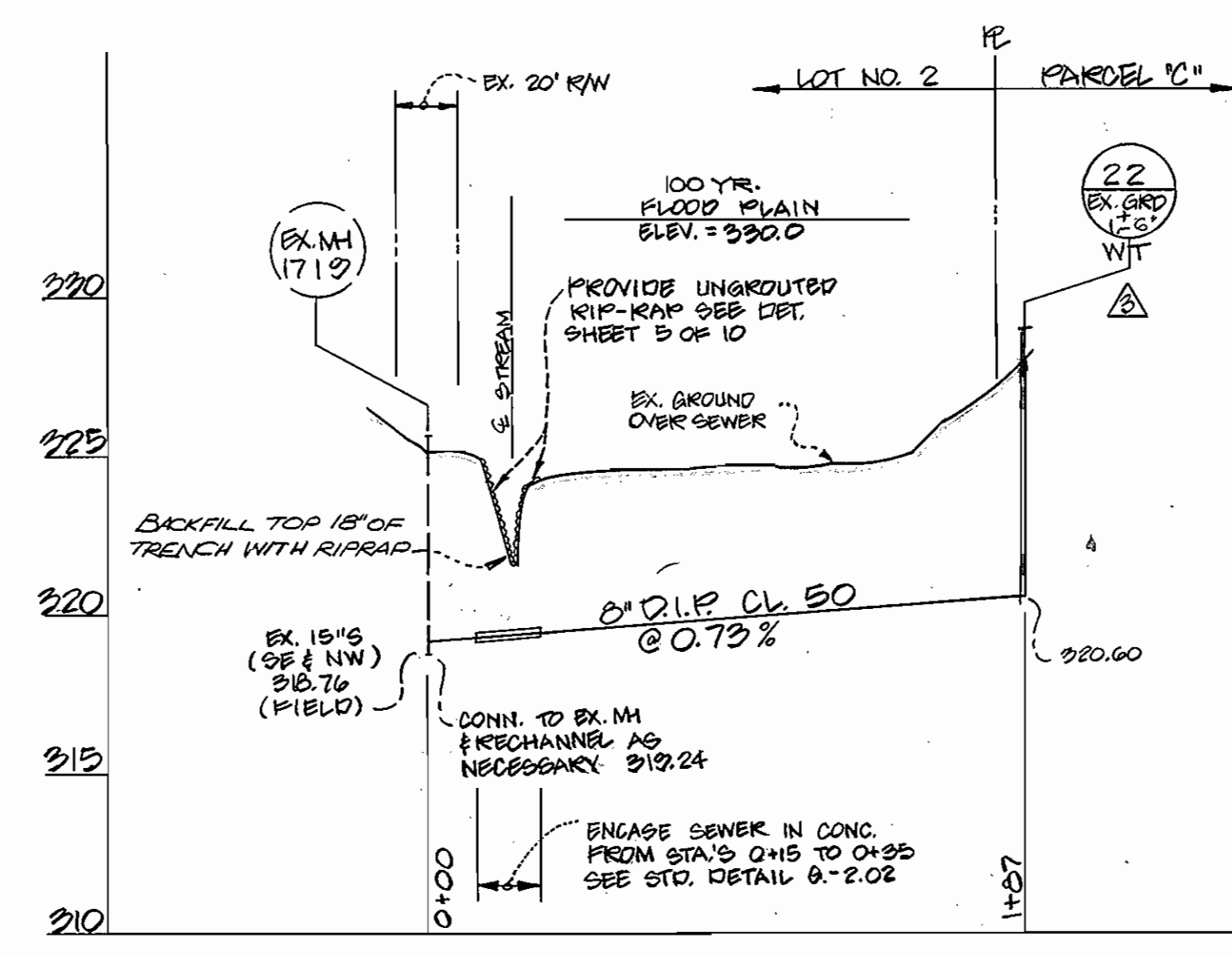
<b>DEPARTMENT OF PUBLIC WORKS</b> HOWARD COUNTY, MARYLAND DATE: 11-12-85 DIRECTOR OF PUBLIC WORKS: Robert Woodfork CHIEF, BUREAU OF UTILITIES: Robert Woodfork		<b>ENGINEERS ARCHITECTS PLANNERS SURVEYORS</b> GREENHORNE AND O'MARA, INC. #2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850 DATE: 7-28		DES: TAD DRN: E.G. CHK: RHM DATE: 7-28		REVISED SEWER PROFILE PER H.C. REVIEW DATE: 12-10-88		600' SCALE MAP NO. 38 BLOCK NO.		<b>COLUMBIA VILLAGE OF DORSEY'S SEARCH</b> SECTION 3 AREA I PHASE I 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-1361-D SCALE AS SHOWN SHEET 2 OF 10 AS-BUILT MAY 1986 1210-X	
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TEMP. DEWATERING BASIN  
SCALE: NONE

- CONSTRUCTION SPECIFICATIONS:**
1. PIT DIMENSIONS ARE OPTIONAL.
  2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 24" CORRUGATED OR PVC PIPE.
  3. A BASE OF 2" AGGREGATE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING IT SHOULD THEN BE BACKFILLED WITH 2" AGGREGATE.
  4. THE STANDPIPE SHOULD EXTEND 12" TO 18" ABOVE THE LIP OF THE PIT.
  5. THE STANDPIPE SHOULD BE WRAPPED WITH FILTER CLOTH BEFORE INSTALLATION. IF DESIRED, 1/4" TO 1/2" HARDWARE CLOTH MAY BE PLACED AROUND THE STANDPIPE, PRIOR TO ATTACHING THE FILTER CLOTH. THIS WILL INCREASE THE RATE OF WATER SEEPAGE INTO THE PIPE.
  6. IF STANDARD PUMPING PROCEDURES CAN HANDLE EXCESS WATER BACKUP, DEWATERING BASIN IS NOT NEEDED.

EXTENSION TO SERVE PARCEL "C"  
PROPERTY OF HOWARD RESEARCH & DEVELOPMENT CORP.



**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 the normal stream flow and shall have a minimum diameter of at least 24 inches.
3. All dewatering of the construction area shall be pumped to a dewatering basin (Plate WPD-6) or otherwise filtered prior to re-entering the stream.
4. The flow barrier shall be a minimum of 3 feet in depth and be constructed of materials which shall be sized to withstand normal stream flow velocities.
5. The temporary culvert crossing shall be constructed in accordance with Standard Detail (TAC-2), 1985 Maryland Standards and Specifications for Sediment and Erosion Control.
6. Sediment control devices shall remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal.
7. Restrictions - No Construction or removal of a temporary access culvert will be permitted between October 1 through April 30 for all Class III and Class IV Trout Waters or between March 15 through June 15 for non-trout waterways.
8. Culvert Strength - All culverts shall be strong enough to support their cross sectional area under maximum expected loads.
9. Culvert Length - The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.

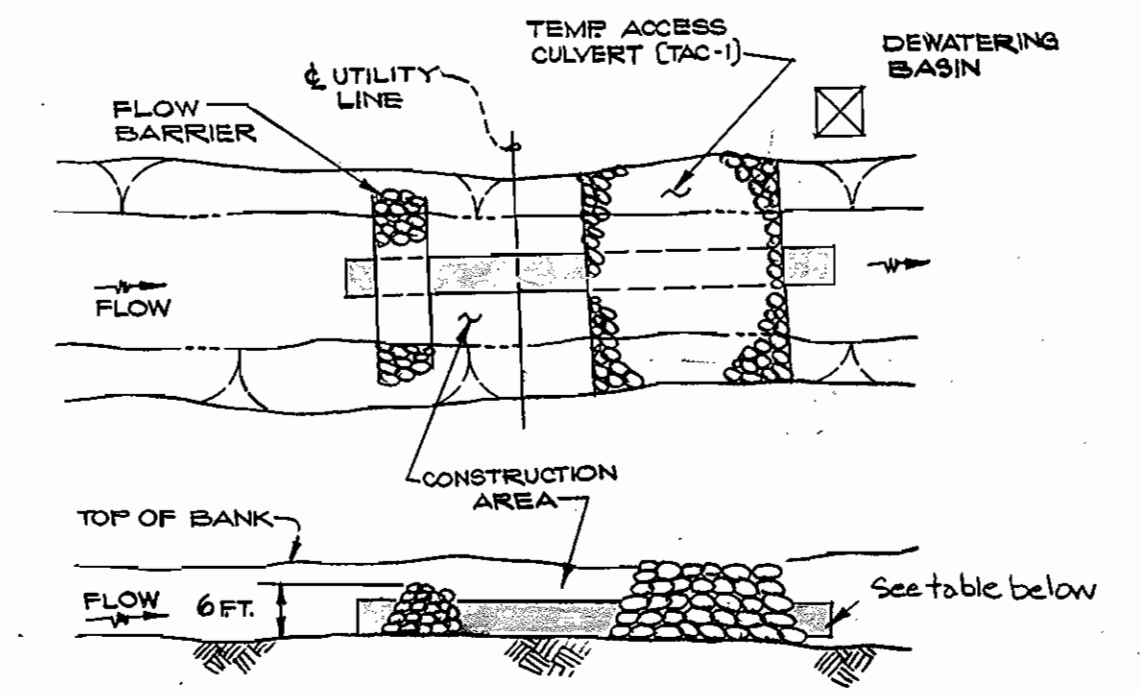
10. Culvert Placement - The invert elevation of the culvert shall be installed on the natural streambed grade to minimize interference with fish migration (free passage of fish).
11. Culvert Protection - The culvert(s) shall be covered with a minimum of one foot of aggregate. If multiple culverts are used they shall be separated by at least 12' of compacted aggregate fill. At a minimum, the bedding and fill material used in the construction of the temporary access culvert crossings shall conform with the aggregate requirements cited in Section I.H. 1.

**CULVERT MAINTENANCE REQUIREMENTS**

1. Inspection - Periodic inspection shall be performed to ensure that the culverts, streambed, and streambanks are not damaged, and that sediment is not entering the stream or blocking fish passage or migration.
2. Maintenance - Maintenance shall be performed, as needed in a timely manner to ensure that structures are in compliance with this standard and specification. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of and stabilized outside the waterway flood plain.

**CULVERT REMOVAL AND CLEAN-UP REQUIREMENTS**

1. Removal - When the crossing has served its purpose, all structures including culverts, bedding and filter cloth materials shall be removed within 14 calendar days. In all cases, the culvert materials shall be removed within one year of installation. No structure shall be removed during the spawning season (March 15 through June 15).
2. Final Clean-up - Final clean-up shall consist of removal of the temporary structure from the waterway, removal of all construction materials, restoration of original stream channel cross section, and protection of the stream banks from erosion. Removed material shall be stored outside of the waterway flood plain.
3. Method - Removal of the structure and clean up of the area shall be accomplished without construction equipment working in the waterway channel.

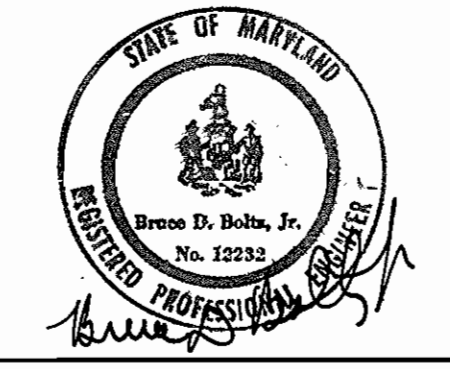
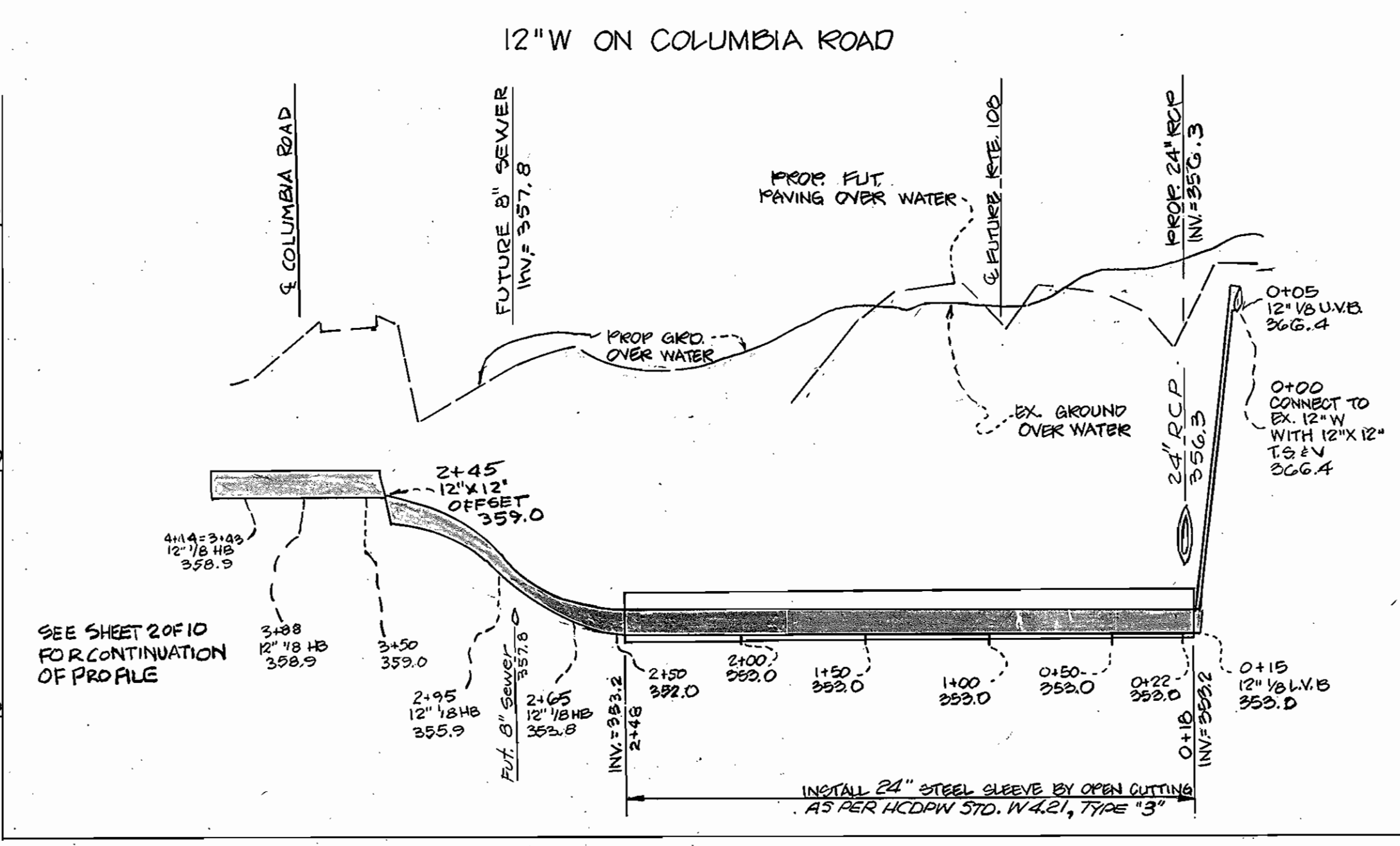


TEMP. ACCESS CULVERT  
(NO SCALE)

(FOR DETAILS NOT SHOWN, SEE WRA STD. DETAIL TAC-1)

**TEMP. DIVERSION PIPE SCHEDULE**

PIPE CROSSING	CORRUGATED METAL PIPE
EX. MH 1712 TO 20	1-60"
EX. MH 1718 TO 12	1-60"
EX. MH 1719 TO 22	1-60"
EX. MH 1720 TO 5	1-60"
EX. MH 1442 TO 1	3-60"
EX. MH 1445 TO 14	3-60"



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
11-12-85  
DIRECTOR OF PUBLIC WORKS  
CHIEF, BUREAU OF UTILITIES

ENGINEERS ARCHITECTS PLANNERS SURVEYORS  
GREENHORNE AND O'MARA, INC.  
#2 RESEARCH PLACE  
ROCKVILLE, MARYLAND 20850  
1301948-0900

DESIGN	DATE	REVISION	DATE
DES: ZAD			
DRN: ADJ	J.C. 4	REVISED 12" W/ PROFIL	2-18-84
	BLP 3	ADDED WT TO SEWER MH #12	2-18-85
CHK: RHM	2	SEDIMENT CONTROL UPDATED PER MCSCD	11-4-85
	1	REVISED 12" W/ 0100 TO 4100 CROSSING FUTURE MD. RTE 108	11-4-85
DATE: 7-85	BY NO.	REVISION	DATE

PLAN AND PROFILE FOR WATER AND SEWER MAINS  
600' SCALE MAP NO. 30 BLOCK NO.

COLUMBIA VILLAGE OF DORSEY'S SEARCH  
SECTION 3 AREA I PHASE I  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 24-1361-D

SCALE AS SHOWN  
SHEET 10 OF 10