

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

APPROVED: *John L. Blanton* 5/8/92  
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN # 92-52. REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND GETS TECHNICAL REQUIREMENTS.

*John L. Blanton* 5/8/92  
HOWARD SOIL CONSERVATION SERVICE DATE

**BENCHMARKS**

DM#1 ELEV. 407.02  
PK. NAIL SET IN GUTTER PAN OF GUCEL DRIVE AT STA. 30+5.23 KNOWN AS TRAVERSE STA. 101

DM#2 ELEV. 446.19  
TOP OPERATING BOLT ON FIRE HYDRANT LOCATED AT THE NORTHEAST INTERSECTION OF DIVERSIFIED LANE & GUCEL DRIVE - KNOWN AS TRAVERSE STA. 107

**DEVELOPER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT AN APPROVED PERIODIC OF-SITE INSPECTION PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC OF-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY.

*Paul W. Keidel* 12/06/91  
SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

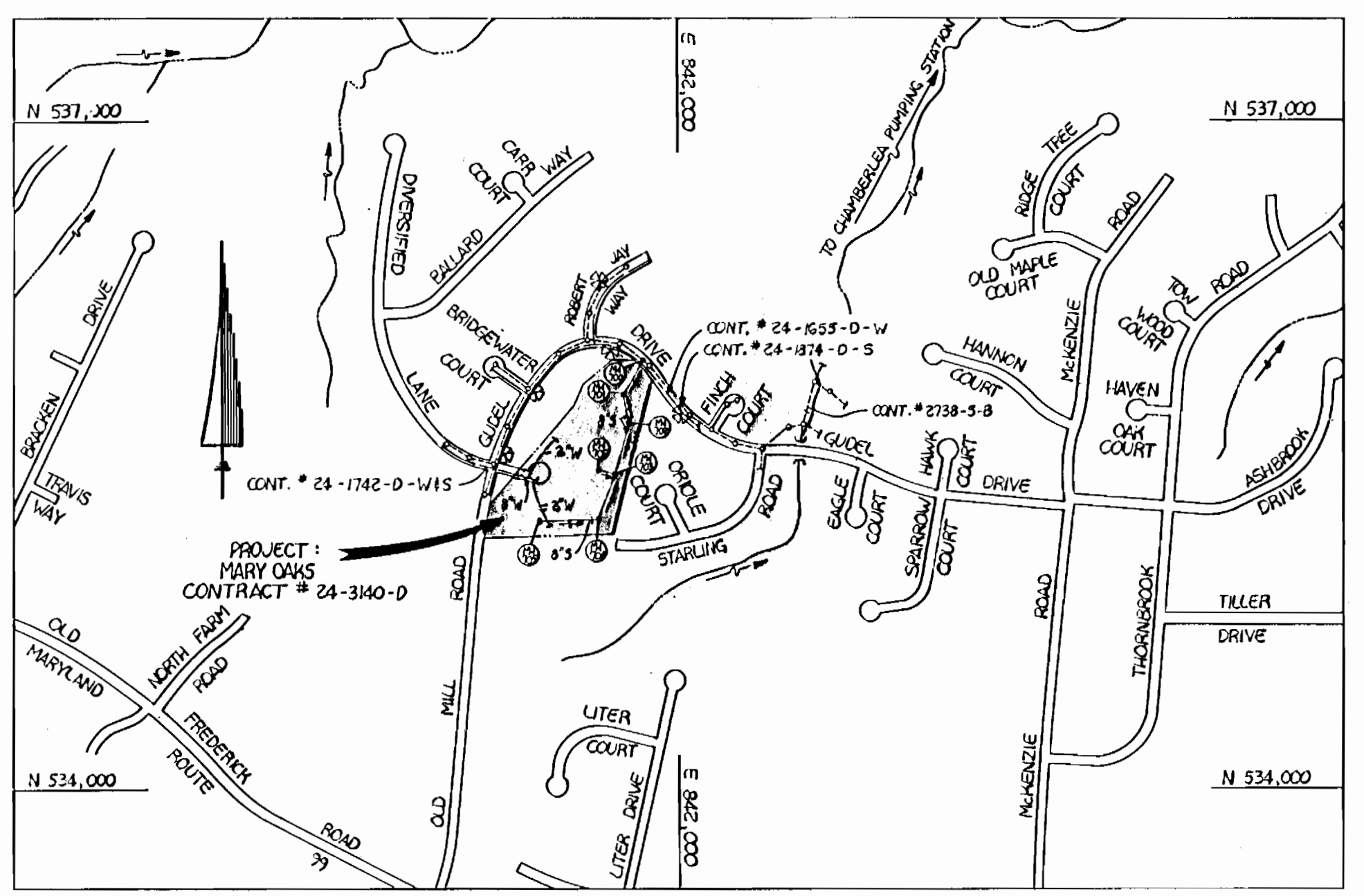
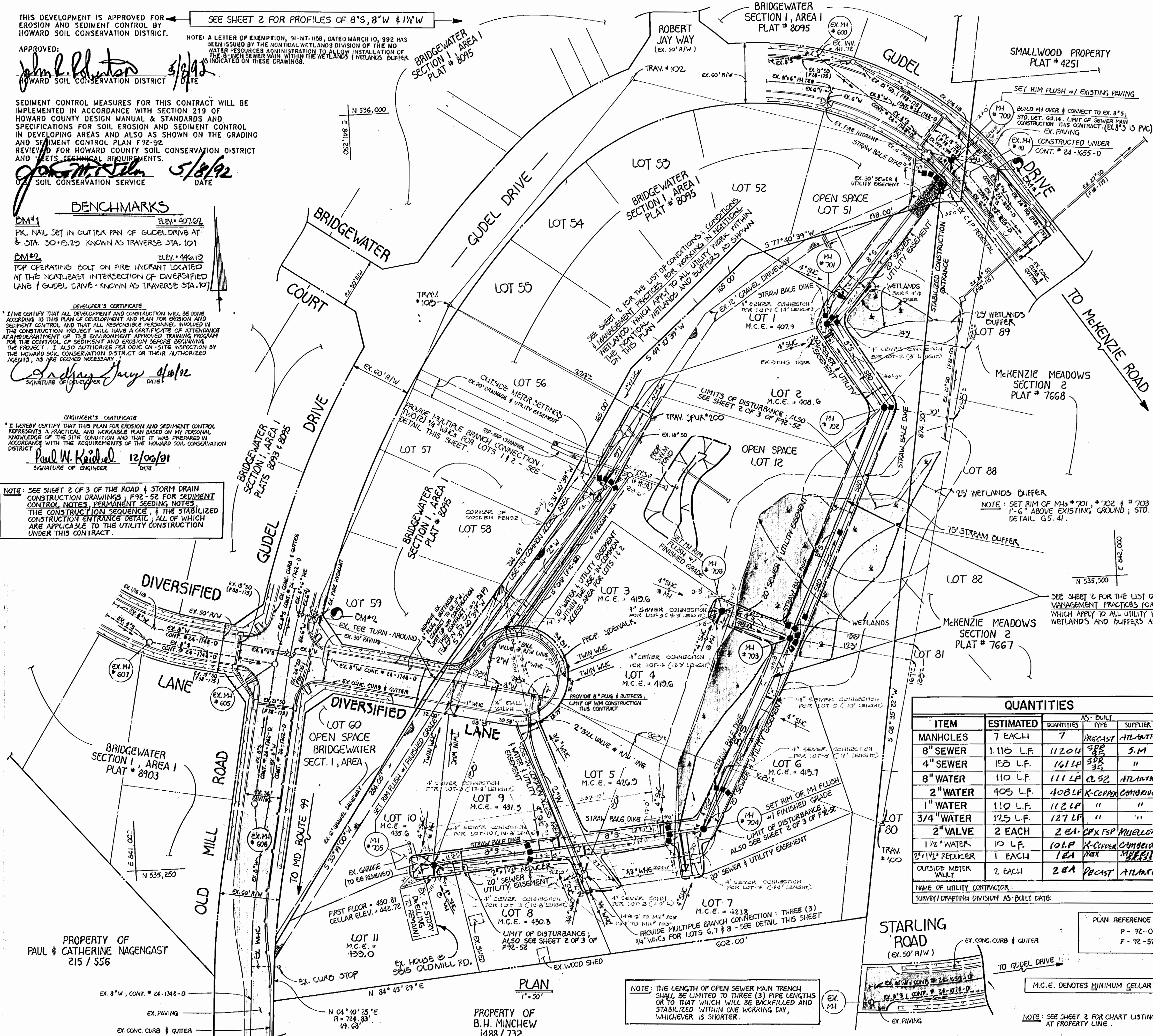
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Paul W. Keidel* 12/06/91  
SIGNATURE OF ENGINEER DATE

**NOTE:** SEE SHEET 2 OF 3 OF THE ROAD & STORM DRAIN CONSTRUCTION DRAWINGS, #92-52 FOR SEDIMENT CONTROL NOTES, PERMANENT SEEDING NOTES, THE CONSTRUCTION SEQUENCE, & THE STABILIZED CONSTRUCTION ENTRANCE DETAIL, ALL OF WHICH ARE APPLICABLE TO THE UTILITY CONSTRUCTION UNDER THIS CONTRACT.

SEE SHEET 2 FOR PROFILES OF 8" S, 8" W & 1 1/2" W

NOTE: A LETTER OF EXEMPTION, 91-NI-158, DATED MARCH 10, 1992 HAS BEEN ISSUED BY THE NONTIDAL WETLANDS DIVISION OF THE MD WATER RESOURCES ADMINISTRATION TO ALLOW INSTALLATION OF THE 8" WATER SEWER MAIN WITHIN THE WETLANDS BUFFER INDICATED ON THESE DRAWINGS.



TYPE OF BUILDING: RESIDENTIAL  
NUMBER OF LOTS: 12 (1 BUILDABLE)  
NO. OF WATER HOUSE CONNECTIONS: 10  
NO. OF SEWER HOUSE CONNECTIONS: 11  
DRAINAGE AREA: LITTLE EXISTENT

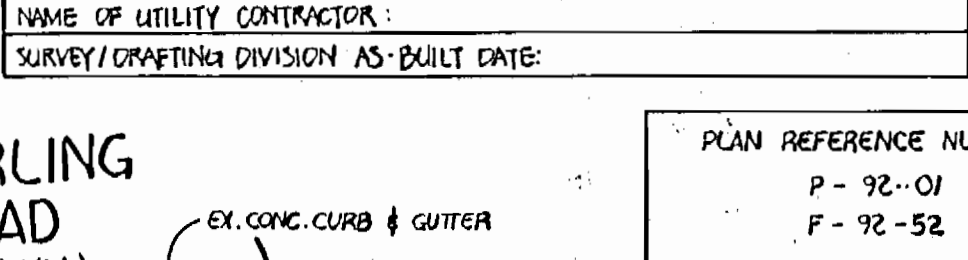
TREATMENT PLANT: PATAPSCO (CITY OF BALTIMORE) VIA THE ROUTE 108 PUMPING STATION

SCALE: 1"=600'

- 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 DAMAGED 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 ARE INVERT ELEVATIONS.
  - CLEAR ALL UTILITIES BY A MINIMUM OF 3'
  - 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 (1989 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
  - 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 MADE 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:
    - C. & P. TELEPHONE COMPANY - 1-800-257-7777
    - STATE HIGHWAY ADMINISTRATION - 531-9333
    - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4820
    - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 859-9004
    - BALTIMORE GAS & ELECTRIC CO. - TROUBLE SHOOTING - 298-9001
    - MISS UTILITY - 1-800-559-0100
    - COLONIAL PIPELINE CO. - 795-1390
    - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900

**QUANTITIES**

ITEM	ESTIMATED QUANTITIES	AS-BUILT QUANTITIES	TYPE	SUPPLIER
MANHOLES	7 EACH	7	PRECAST	ATLANTIC
8" SEWER	1,110 L.F.	1,120 L.F.	SPB	S.M.
4" SEWER	150 L.F.	161 L.F.	SPB	"
8" WATER	110 L.F.	111 L.F.	C52	ATLANTIC
2" WATER	405 L.F.	408 L.F.	R-CORP	COMBUSTION
1" WATER	112 L.F.	112 L.F.	"	"
3/4" WATER	125 L.F.	127 L.F.	"	"
2" VALVE	2 EACH	2 EA.	CPX FSP	MUELLER
1 1/2" WATER	10 L.F.	10 L.F.	R-CORP	COMBUSTION
2 1/2" REDUCER	1 EACH	1 EA.	PER	MUELLER
OUTSIDE METER VAULT	2 EACH	2 EA.	PRECAST	ATLANTIC



NAME OF UTILITY CONTRACTOR: SURVEY/DRAFTING DIVISION AS-BUILT DATE:

PLAN REFERENCE NUMBERS:  
P - 92-01  
F - 92-52

M.C.E. DENOTES MINIMUM CELLAR ELEVATION

NOTE: SEE SHEET 2 FOR CHART LISTING THE SHC INVERTS AT PROPERTY LINE.

CONTRACT NO. 24-3140-D  
MARY OAKS  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert B. Bowers* 5-3-92  
DIRECTOR OF PUBLIC WORKS DATE

*John L. Blanton* 5/8/92  
CHIEF, BUREAU OF ENGINEERING DATE

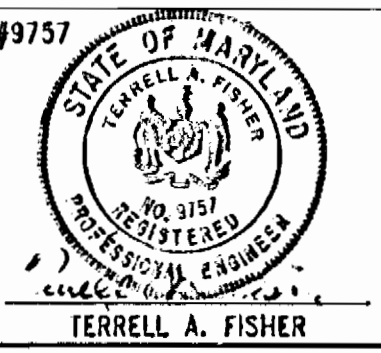
*John L. Blanton* 5/8/92  
CHIEF, BUREAU OF UTILITIES DATE

*John L. Blanton* 5/8/92  
CHIEF, LAND DEVELOPMENT DIVISION DATE

**FISHER, COLLINS & CARTER, INC.**

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21043  
(301) 481-2855

TERRELL A. FISHER



DES: MJM

DRWN: SPH

CHK: PWK

DATE: 5/7/92

BY NO. \_\_\_\_\_

REVISION \_\_\_\_\_

**WATER AND SEWER MAINS PLAN**

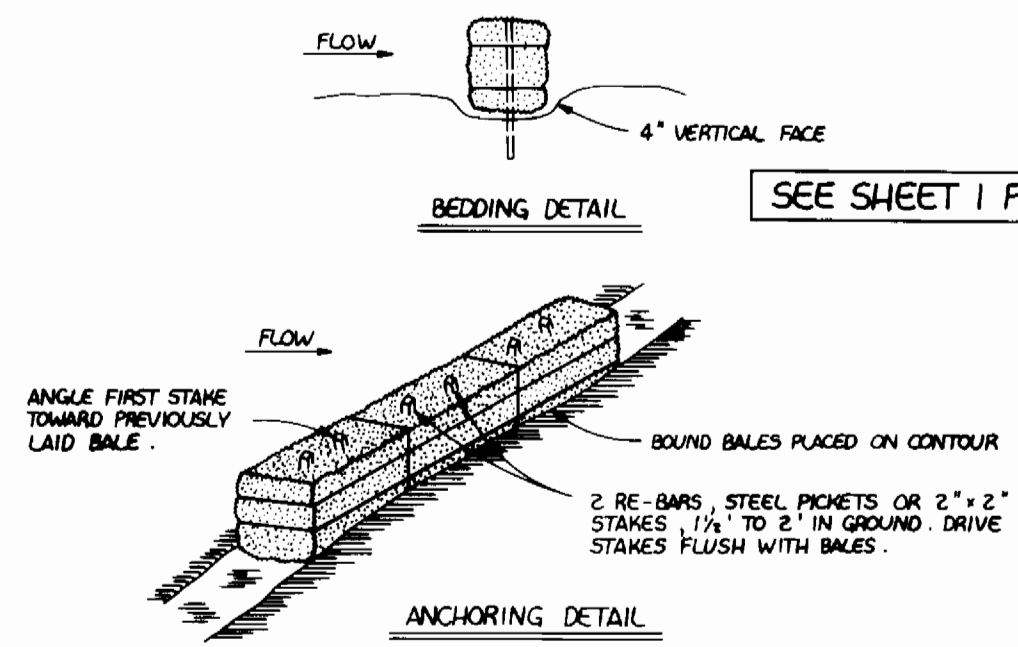
600' SCALE MAP NO. 17 BLOCK NO. 8

**MARY OAKS AS-BUILT**

CONTRACT NO. 24-3140-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2



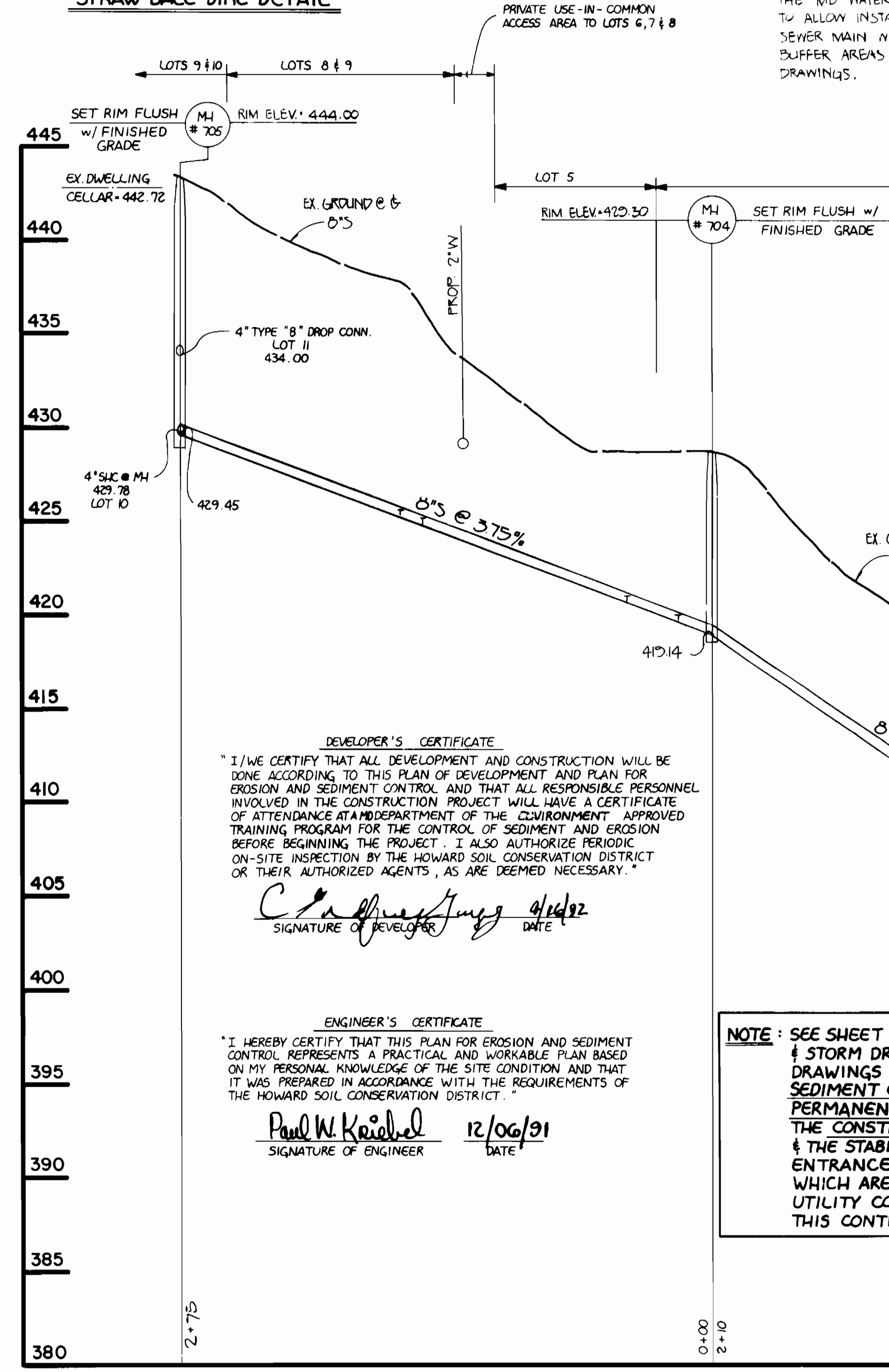
SEE SHEET 1 FOR LOCATIONS OF SBDs

**STRAW BALE DIKE**

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING 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 RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE 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 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.

**NOTE:** A LETTER OF EXEMPTION, #91-NT-1158, DATED MARCH 10, 1992, HAS BEEN ISSUED BY THE NONTIDAL WETLANDS DIVISION OF THE MD WATER RESOURCES ADMINISTRATION TO ALLOW INSTALLATION OF THE 8-INCH SEWER MAIN WITHIN THE WETLANDS & WETLANDS BUFFER AREAS AS INDICATED ON THESE DRAWINGS.

**STRAW BALE DIKE DETAIL**



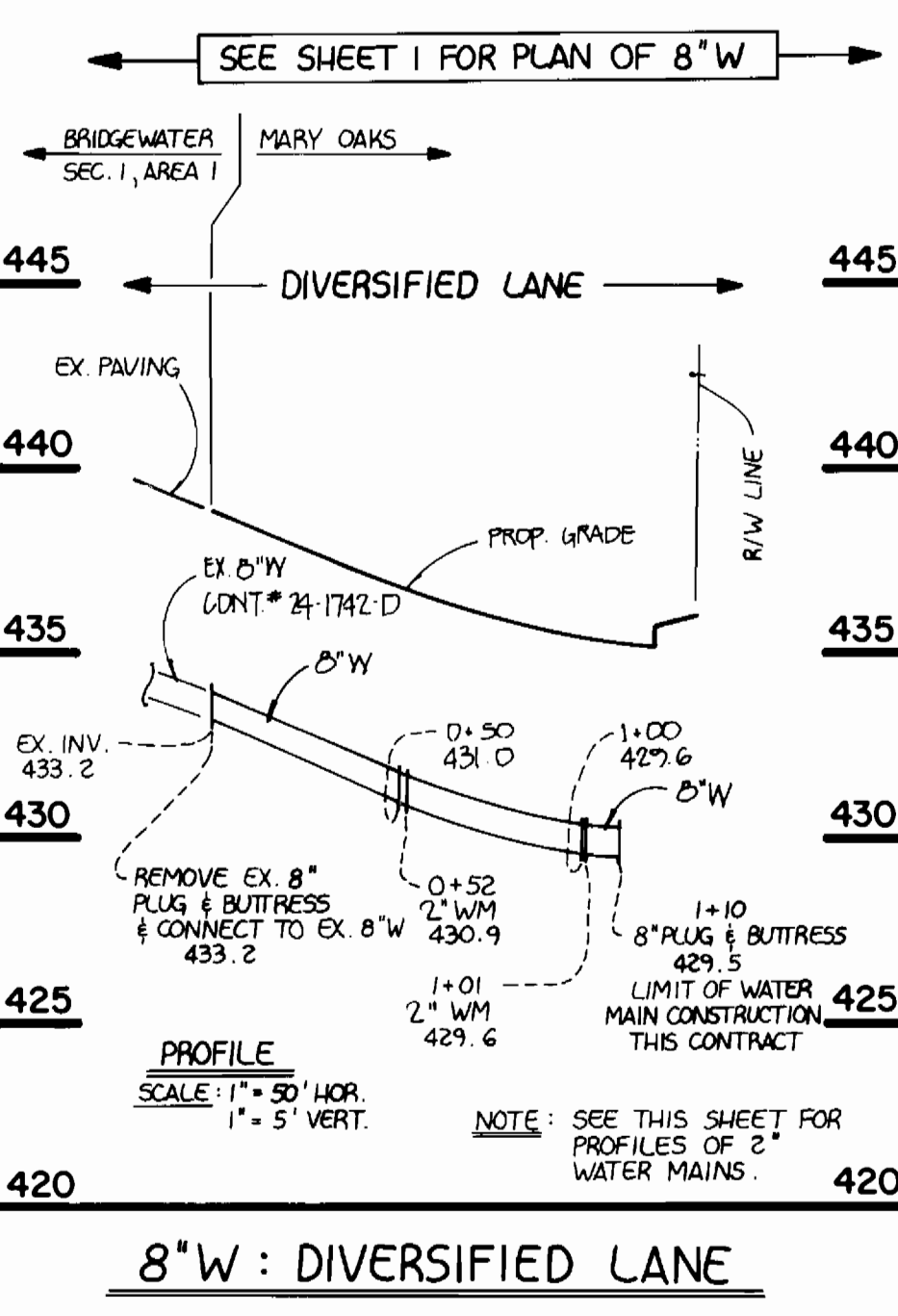
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 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*Signature* DATE 12/06/91

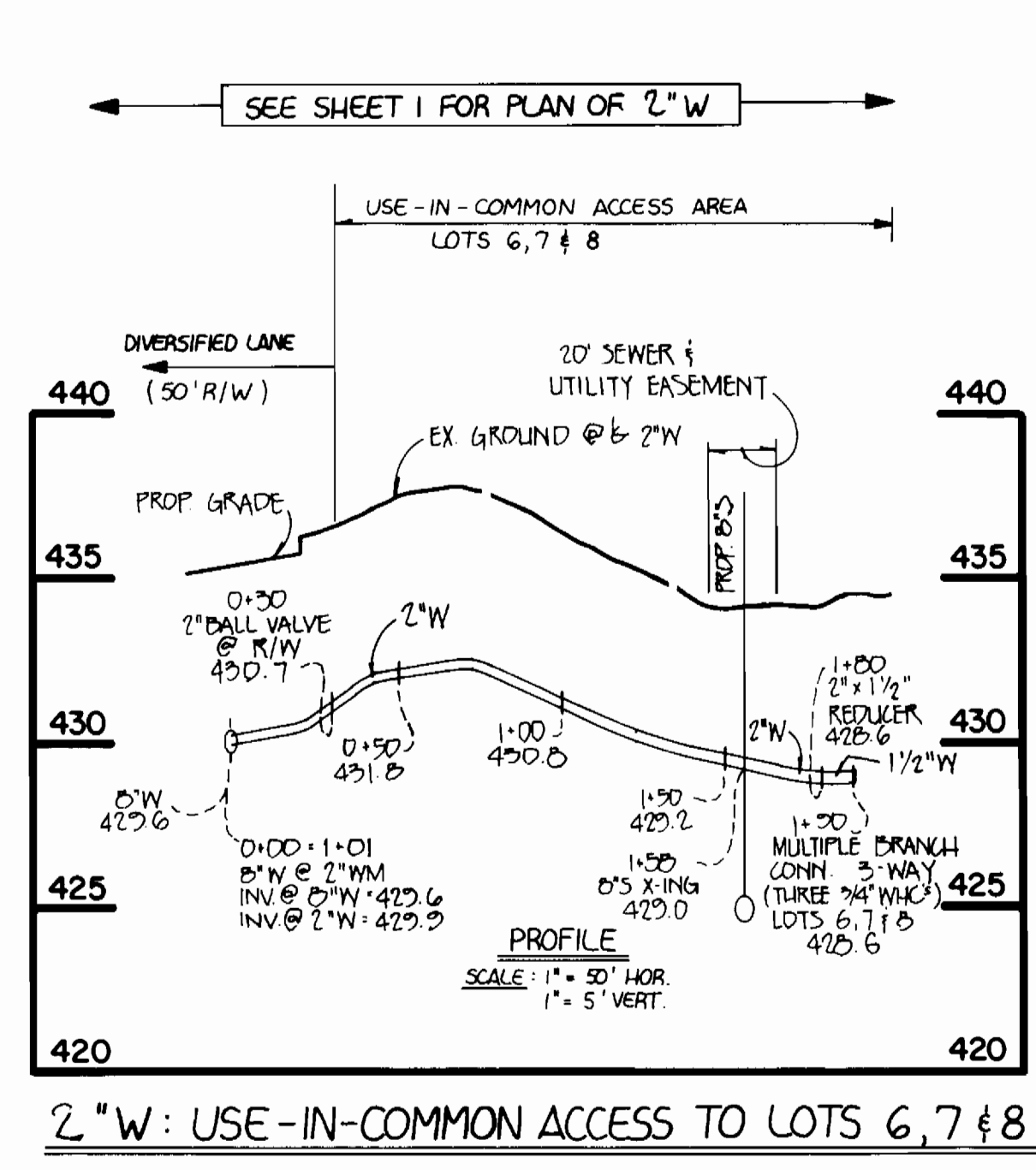
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*Signature* DATE 12/06/91

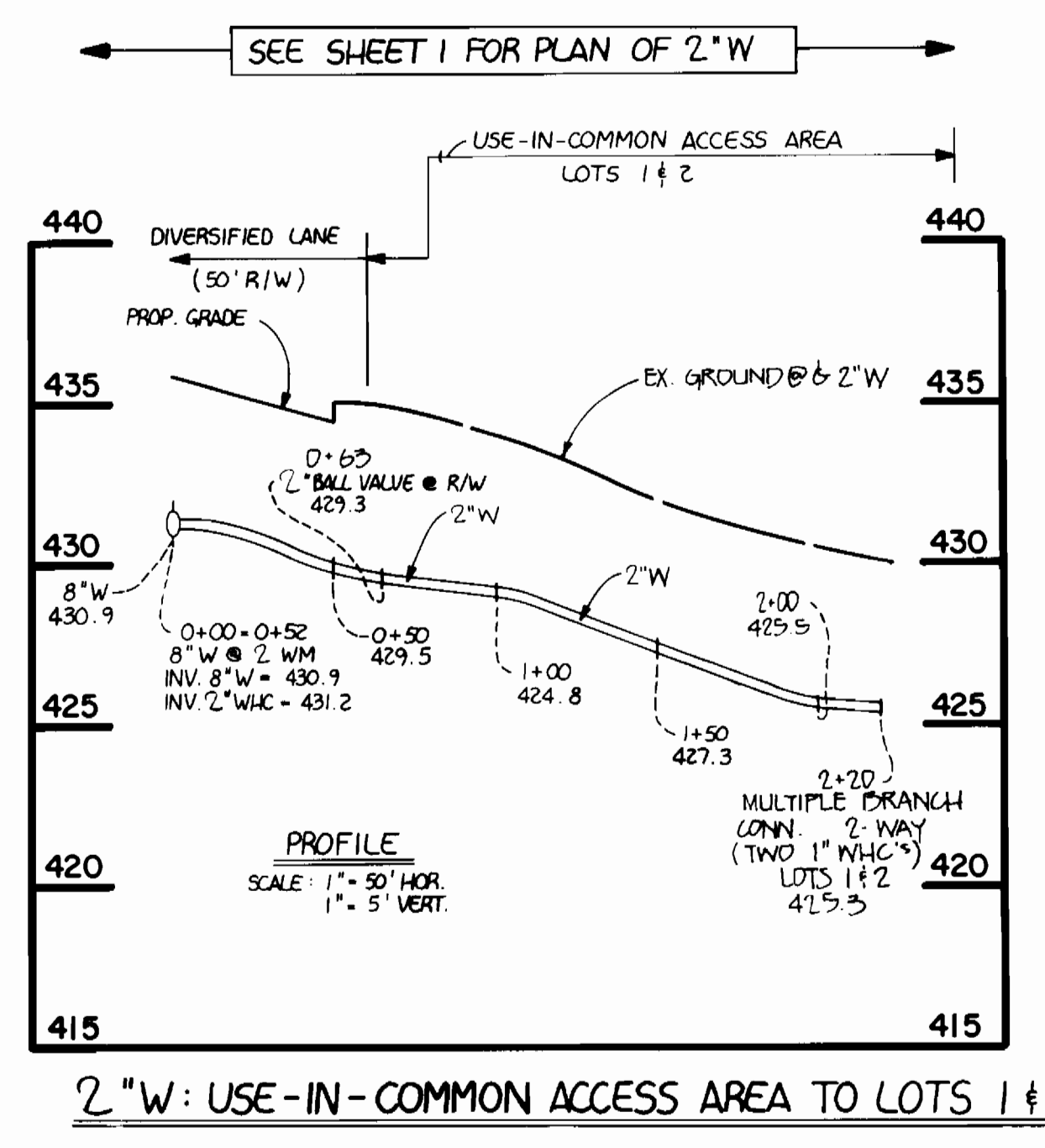
**NOTE:** SEE SHEET 2 OF 3 OF THE ROAD & STORM DRAIN CONSTRUCTION DRAWINGS; F92-52 FOR SEDIMENT CONTROL NOTES, PERMANENT SEEDING NOTES, THE CONSTRUCTION SEQUENCE, & THE STABILIZED CONSTRUCTION ENTRANCE DETAIL; ALL OF WHICH ARE APPLICABLE TO THE UTILITY CONSTRUCTION UNDER THIS CONTRACT.



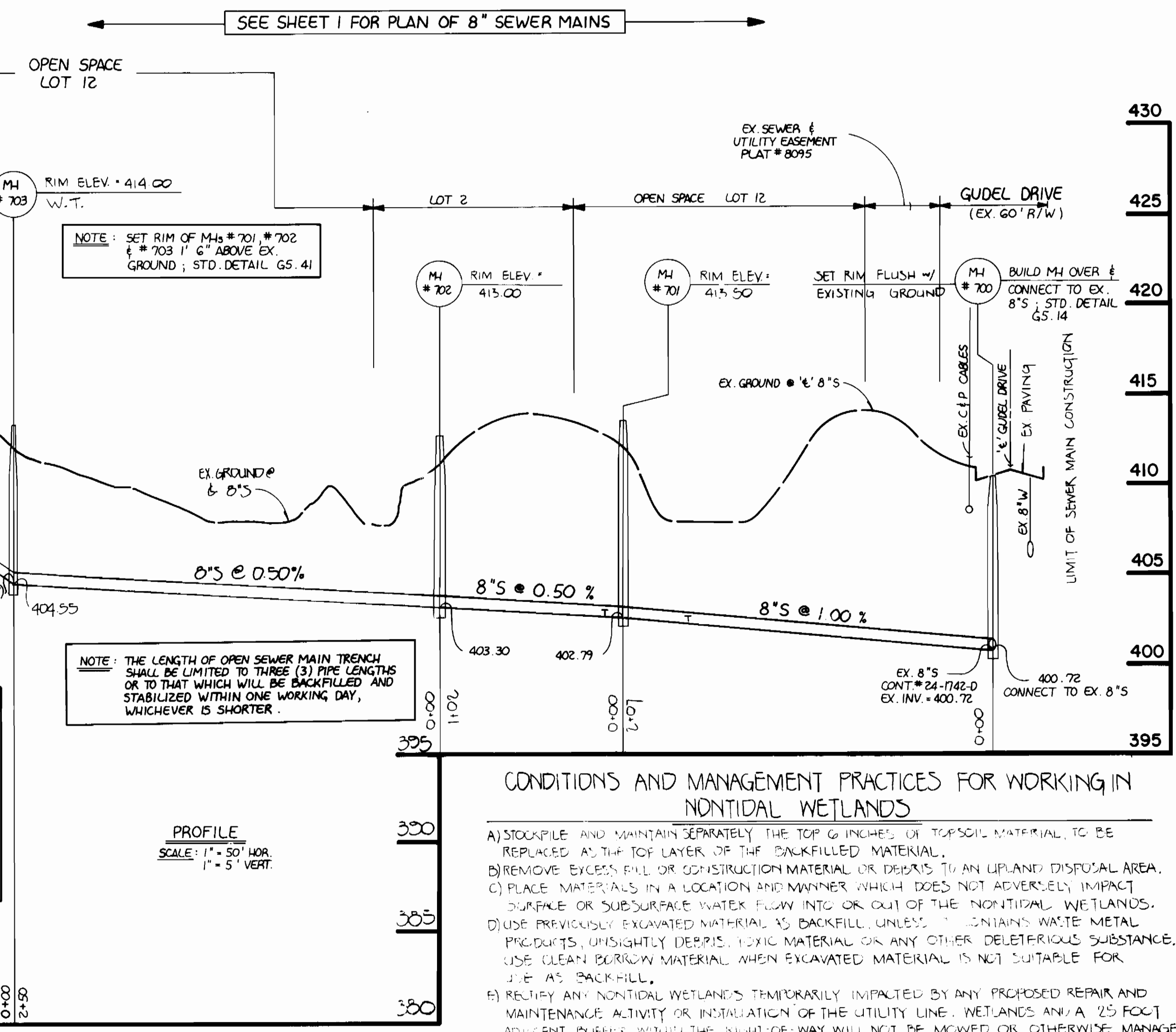
**8" W: DIVERSIFIED LANE**



**2" W: USE-IN-COMMON ACCESS TO LOTS 6, 7 & 8**



**2" W: USE-IN-COMMON ACCESS AREA TO LOTS 1 & 2**



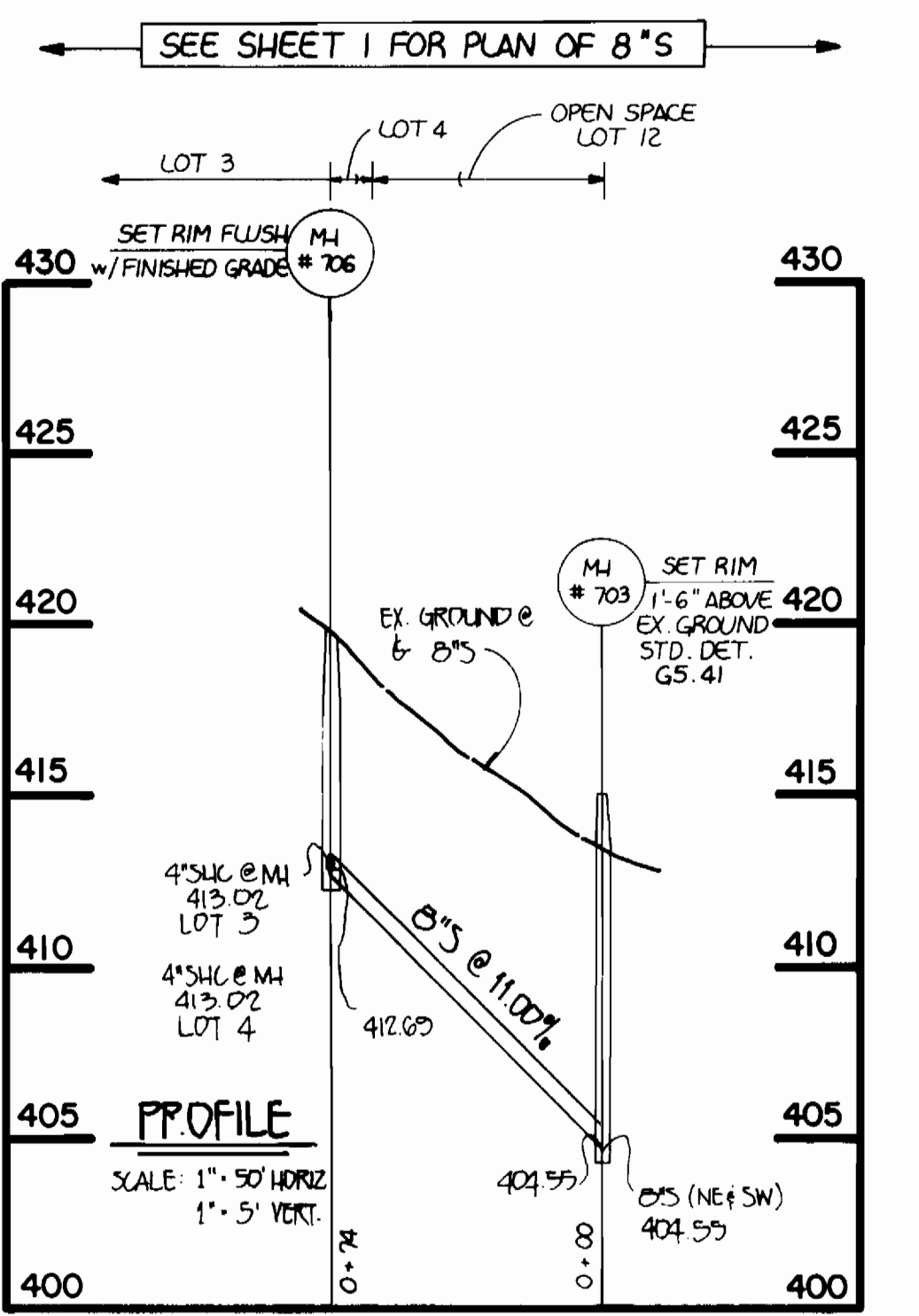
**NOTE:** SET RIM OF MH #701, #702 & #703 1' 6" ABOVE EX. GROUND; STD. DETAIL GS. 41

**NOTE:** THE LENGTH OF OPEN SEWER MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR TO THAT WHICH WILL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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

**CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS**

- STOCKPILE AND MAINTAIN SEPARATELY THE TOP 6 INCHES OF TOPSOIL MATERIAL TO BE REPLACED AS THE TOP LAYER OF THE BACKFILLED MATERIAL.
- REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA.
- PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLANDS.
- USE PREVIOUSLY EXCAVATED MATERIAL AS BACKFILL, UNLESS IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. USE CLEAN BORROW MATERIAL WHEN EXCAVATED MATERIAL IS NOT SUITABLE FOR 2:1 AS BACKFILL.
- REIFY ANY NONTIDAL WETLANDS TEMPORARILY IMPACTED BY ANY PROPOSED REPAIR AND MAINTENANCE ACTIVITY OR INSTALLATION OF THE UTILITY LINE. WETLANDS AND A 25 FOOT ADJACENT BUFFER WITHIN THE RIGHT-OF-WAY WILL NOT BE MOWED OR OTHERWISE MANAGED TO PRECLUDE THE RE-ESTABLISHMENT OF THE FOREST VEGETATION. STABILIZATION TO TEMPORARILY IMPACTED AREAS SHALL BE ANNUAL RYE OR MILLET AND MULCH. ALL TEMPORARY FILLS SHALL BE REMOVED IN THEIR ENTIRETY ON OR BEFORE COMPLETION OF CONSTRUCTION.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NONTIDAL WETLANDS THE SAME AS ORIGINAL GRADES AND ELEVATIONS.
- TO PROTECT IMPORTANT AQUATIC SPECIES IN STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:
  - CLASS I WATERS: IN-STREAM WORK MAY NOT BE CONDUCTED DURING MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.



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

**S.H.C. INVERT ELEVATIONS @ PROPERTY LINE**

STATION	LOT	ELEVATION
MH# 700 TO MH# 701		
1+70 RT.	1	402.79
MH# 701 TO MH# 702		
0+10 RT.	2	403.21
MH# 702 TO MH# 706		
0+70 RT.	3	413.22
0+75 RT.	4	415.22
MH# 703 TO MH# 704		
0+75 RT.	6	410.13
MH# 704 TO MH# 705		
0+18 LT.	7	420.00
0+43 RT.	5	421.12
1+55 LT.	8	425.32
1+65 RT.	9	425.10
0+75 RT.	10	430.00
0+75 RT. D.C.	11	434.20

CONTRACT NO. 24-3140-D  
 MARY OAKS  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

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

*Signature* DATE 5-2-92  
 DIRECTOR OF PUBLIC WORKS

*Signature* DATE 5-5-92  
 CHIEF, BUREAU OF UTILITIES

*Signature* DATE 5-12-92  
 CHIEF, BUREAU OF ENGINEERING

*Signature* DATE  
 CHIEF, LAND DEVELOPMENT DIVISION

**FISHER, COLLINS, AND CARTER, INC.** #9757

CONSULTING ENGINEERS AND LAND SURVEYORS  
 9171 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (301) 461-2855

*Signature*  
 TERRELL A. FISHER

DES: MJM			
DRN: SFH			
CHK: PWK			
DATE:	BY:	NO.:	REVISION:

**WATER AND SEWER MAINS PROFILES**

600' SCALE MAP NO. 17 BLOCK NO. 8

**MARY OAKS**

CONTRACT NO. 24-3140-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 2 OF 2