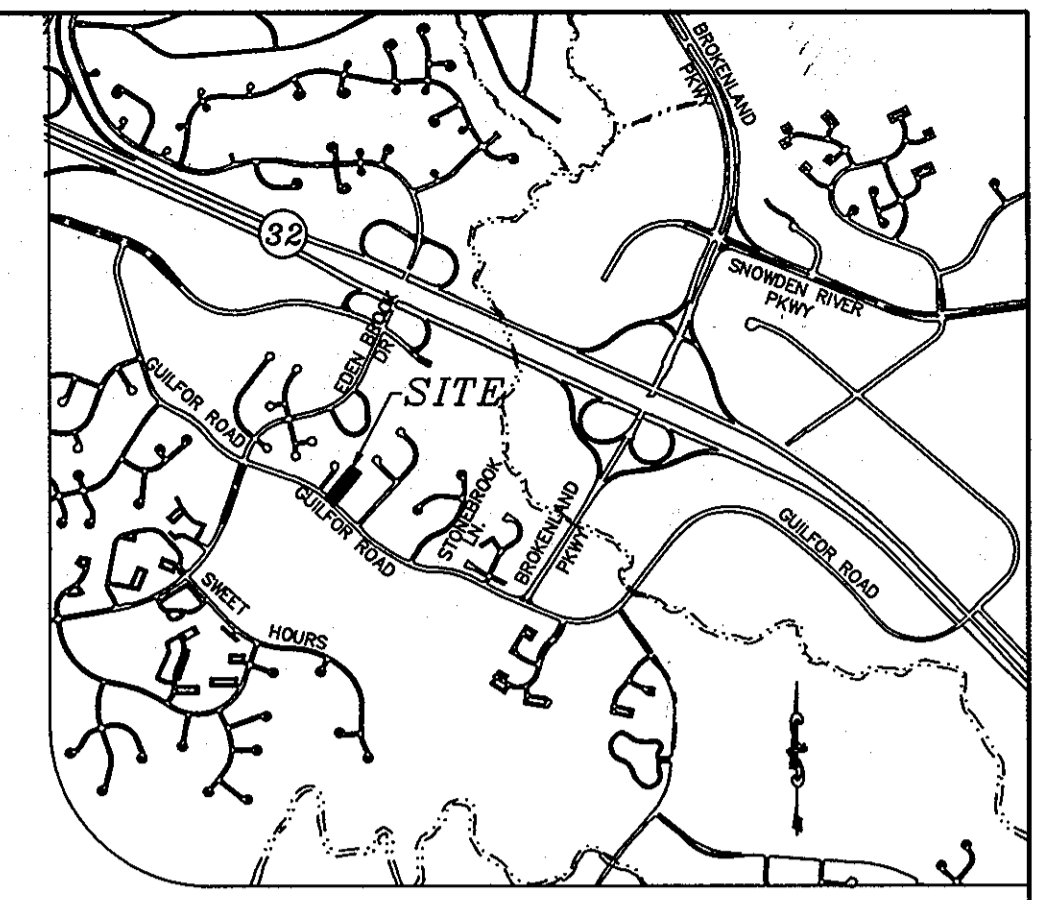


QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	5	5		CONTRACTORS PRECAST CORP.
8" SEWER MAIN	312 L.F.	312 L.F.		NORTH AMERICAN PIPE CO.
4" SEWER HOUSE CONNECTION	30 L.F.	30 L.F.		NORTH AMERICAN PIPE CO.
1 1/2" WATER HOUSE CONNECTION	31 L.F.	31 L.F.		MUELLER INDUSTRIES
# SEWER HOUSE CONNECTIONS	3	3		NORTH AMERICAN PIPE CO.
# MH SEWER CONNECTIONS	1	1		NORTH AMERICAN PIPE CO.
# WATER HOUSE CONNECTIONS	2	2		A.Y. Mc DONALD, INC.
NAME OF UTILITY CONTRACTOR: J.A. CONTRACTOR SERVICE INC.				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 6-8-2013				



VICINITY MAP
SCALE: 1"=2000'
ADC MAP: 5053 C-3

GENERAL NOTES

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY SURVEY ASSOCIATE #1 DATED AUGUST 2007.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 291E AND NO. 291F. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 42R1 AND 42R2.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. 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 OR DAMAGES INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). 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 LOCATIONS OF THE TEST PITS. 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

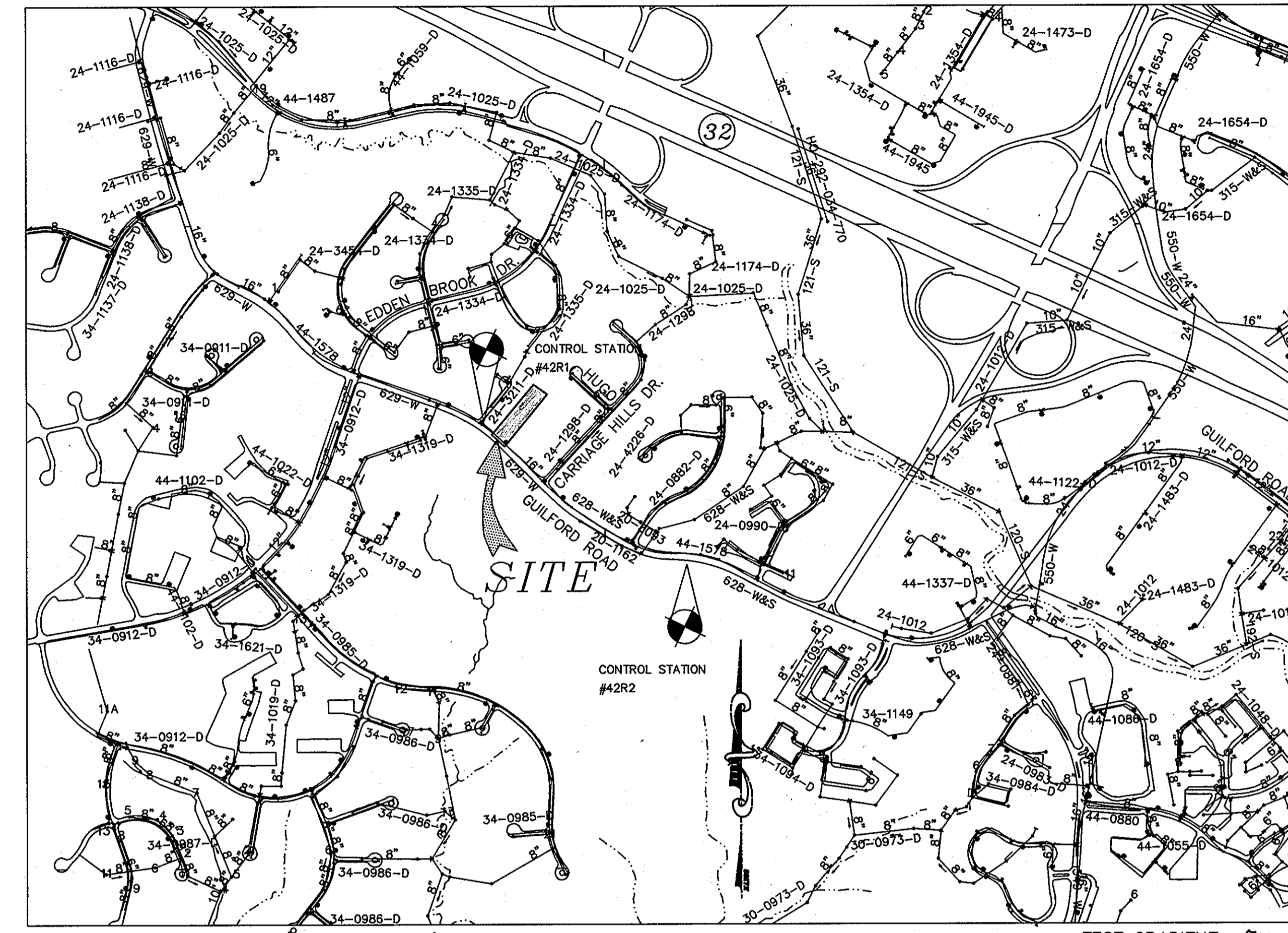
AT&T	1-800-252-1133
BGE(EMERGENCY SERVICES)	410-850-4620
BGE(EMERGENCY)	410-685-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033/410-224-9210
MISS UTILITY	1-800-257-7777
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.

LEGEND

- EXISTING SEWER MAIN AND MANHOLE
- EXISTING WATER MAIN AND VALVE
- EXISTING FIRE HYDRANT
- PROPOSED SEWER MAIN
- PROPOSED SEWER HOUSE CONNECTION
- PROPOSED SEWER MANHOLE
- EXISTING WATER HOUSE CONNECTION
- EXISTING SEWER HOUSE CONNECTION

WATER / SEWER MAIN TABULATION CHART

APPURTENANCE	NORTHING	EASTING
MH 1	N 548,071.851	E 1,351,759.974
MH 2	N 548,034.892	E 1,351,590.059
MH 3	N 547,997.848	E 1,351,559.427
MH 4	N 547,946.574	E 1,351,630.347
MH 4A	N 548,257.888	E 1,351,603.750



LOCATION MAP
SCALE: 1" = 600'

TYPE OF BUILDING	RESIDENTIAL
No. OF UNITS	3
No. OF WATER HOUSE CONNECTION	2
No. OF SEWER HOUSE CONNECTIONS	3
DRAINAGE AREA	LITTLE PATUXENT
TREATMENT PLANT	LITTLE PATUXENT

CONTRACT NO.: 24-4524-D
MAHANES PROPERTY
LOTS 1 THRU 3
SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

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.

Joan A. Mahanes 8/24/10
DEVELOPER'S SIGNATURE DATE
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 17942, EXPIRATION DATE: 9/3/12

R. Jacob Hikmat 8/24/10
ENGINEER'S SIGNATURE DATE
ENGINEER'S NAME

PLAN REFERENCE NUMBERS:
F-08-069

- SEWER**
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - FORCE MAINS SHALL BE D.I.P. ONLY.
 - MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER, STANDARD DIEEL OS 52, WHERE WATER-TIGHT MANHOLE FRAMES AND COVERS 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." INDICATE THAT THE CELLAR CANNOT BE SERVED.
- WATER**
- ALL SINGLE WATER HOUSE CONNECTIONS ARE TO BE 1 1/2" WITH 1" OUTSIDE METER SETTINGS.

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	SEWER PLAN AND PROFILE
3	GRADING PLAN

OWNER
JOAN A. MAHANES
8691 GUILFORD ROAD
COLUMBIA, MD 21046
410-381-3053

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

John R. Robinson 9/10/10
WARD SCD

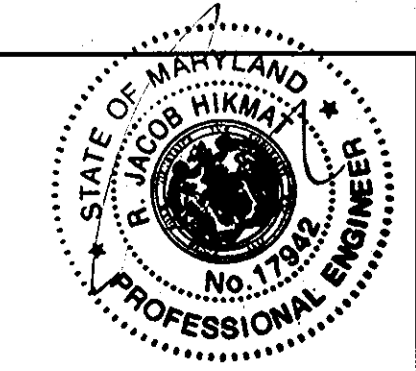
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Simon C. Combs 9/10/10
CHIEF, BUREAU OF UTILITIES DATE DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

William J. ... 10/1/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION, M.C. DATE

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
6800 Deerpath Road, Suite 150, Elkridge, Maryland 21075
(410) 997-0286 Cell. (410) 997-0288 Fax.



engineering	MMT				
illustration	MMT				
approval	RJH				
project	KCI	2	AS-BUILT	S-22-D	
date	09-017	MBA	1	REVISED QUANTITIES TABLE & TABULATION CHART	10/5/12
date	AUG. 2010	BY	NO.	REVISION	DATE

TITLE SHEET

600' SCALE MAP NO. 42 BLOCK NO. 8

MAHANES PROPERTY
LOTS 1 THRU 3
CONTRACT NO.: 24-4524-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY

scale AS SHOWN
1 OF 3

H:\09-017.DWG\09-017-FINAL-PLAN.DWG

LEGEND

- 8" S EXISTING SEWER MAIN AND MANHOLE
- 8" W EXISTING WATER MAIN AND VALVE
- EXH EXISTING FIRE HYDRANT
- SHC PROPOSED SEWER MAIN
- SHC PROPOSED SEWER HOUSE CONNECTION
- EX-WHC EXISTING WATER HOUSE CONNECTION
- EX-SHC EXISTING SEWER HOUSE CONNECTION

SEWER HOUSE CONNECTION TABLE

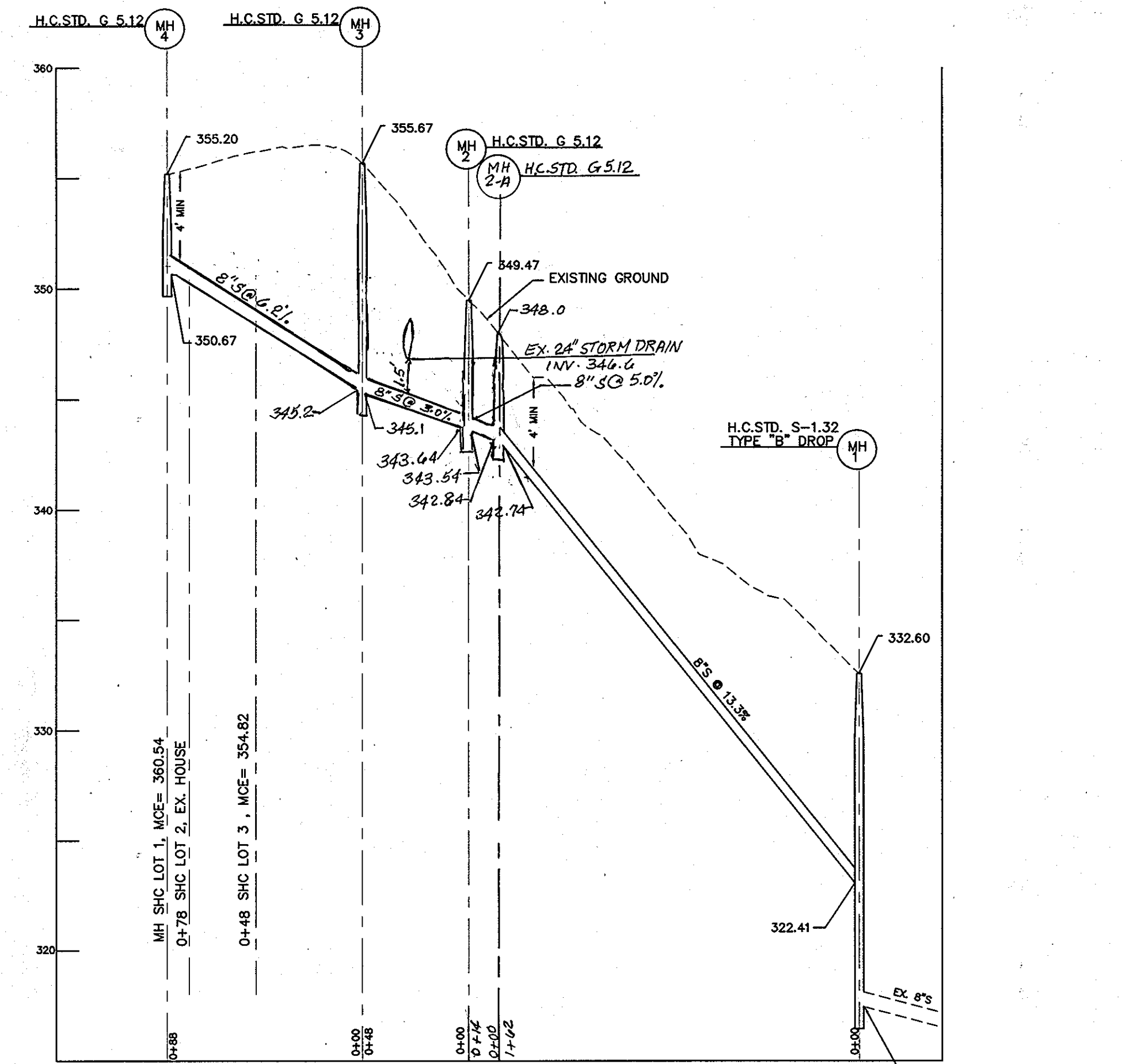
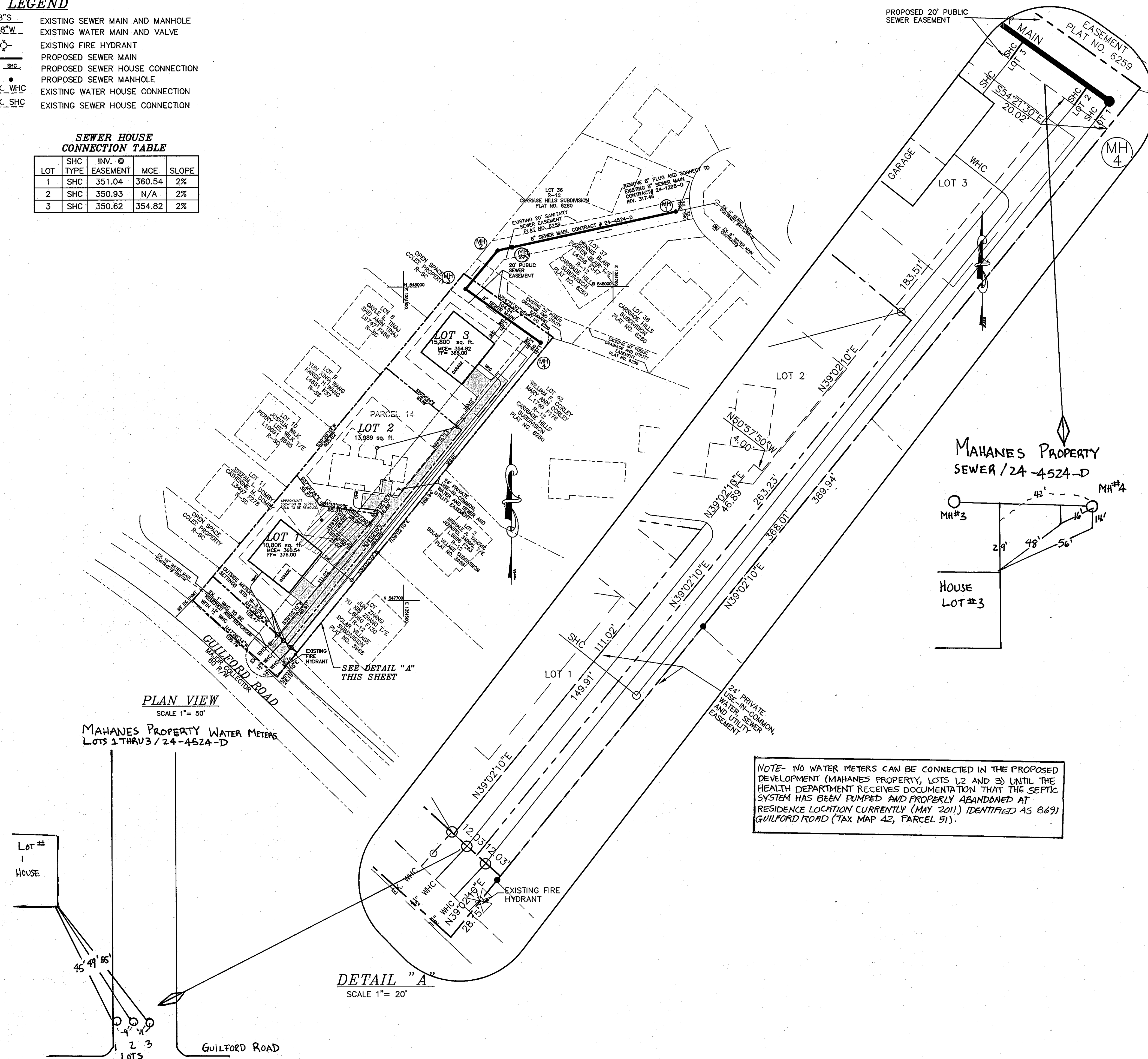
LOT	SHC TYPE	INV. @ EASEMENT	MCE	SLOPE
1	SHC	351.04	360.54	2%
2	SHC	350.93	N/A	2%
3	SHC	350.62	354.82	2%

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	GUILFORD RD.		
2	GUILFORD RD.		
3	GUILFORD RD.		

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	GUILFORD RD.		
2	GUILFORD RD.		
3	GUILFORD RD.		



OWNER
JOAN A. MAHANES
8691 GUILFORD ROAD
COLUMBIA, MD 21046
410-381-3053

H:\09-017.DWG\09-017-FINAL-PLAN.DWG

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Stake C. Lewis
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
David Williams
CHIEF, DEVELOPMENT ENGINEERING DIVISION

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
6800 Deepwater Road, Suite 150, Elkridge, Maryland 21075
(410) 997-0286 Ball. (410) 997-0288 Fax.



engineering	MMT				
illustration	MMT				
approval					
project	KCT	2	AS-BUILT	Shztl	
	MBA	2	ADDED SEWER MH 2A TO PLAN AND PROFILE	10/15/2012	
	MBA	1	ADDED NOTE TO PLAN AS PER H.C.H.D. REQUEST	12/12/2011	
date	AUG. 2010	BY	NO.	REVISION	DATE

SEWER PLAN AND PROFILE
600' SCALE MAP NO. 42 BLOCK NO. 8

MAHANES PROPERTY
LOTS 1 THRU 3
CONTRACT NO.: 24-4524-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY

scale
AS SHOWN
2 OF 3

HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED. SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING...

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING...

STANDARD SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION... 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN...

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION: PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATION GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION...

CONSTRUCTION AND MATERIAL SPECIFICATIONS: TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS... TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

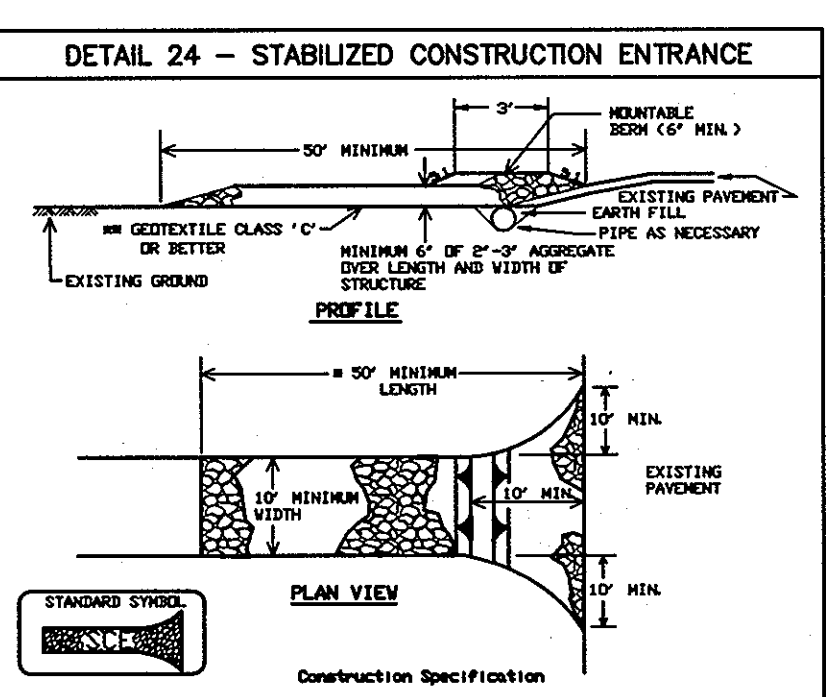
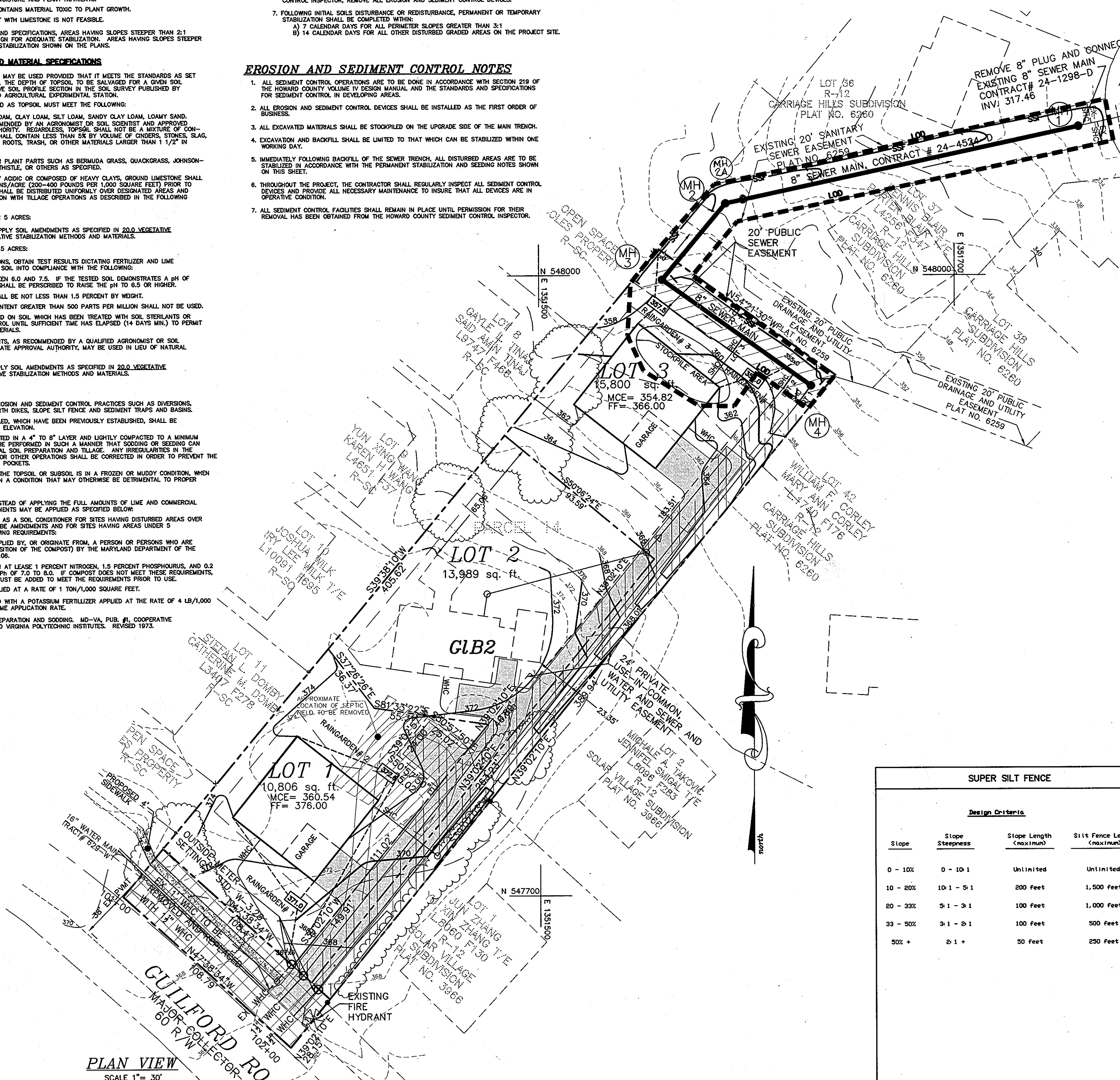
- I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY... II. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES...

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN THE REQUIRED GRADING PERMIT. 2. INSTALL SUPER SILT FENCES AS INDICATED. (2 DAYS) 3. EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY...

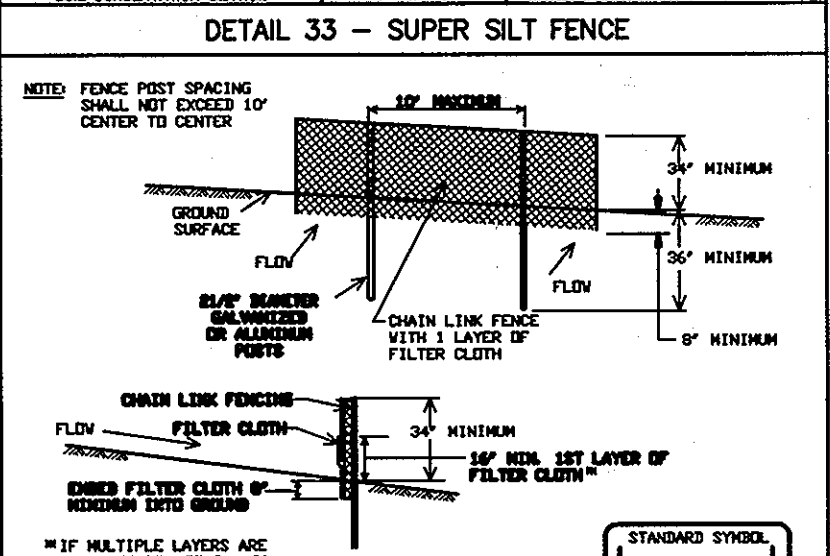
EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS... 2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS...



- 1. Length - minimum of 50' (40' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius. 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone...

Table with columns: Design Criteria, Slope, Slope Steepness, Slope Length (Maximum), Silt Fence Length (Maximum). Rows include 0-10%, 10-20%, 20-33%, 33-50%, 50%+.



- 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing... 2. Chain link fence shall be fastened securely to the fence posts with wire ties...

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...

OWNER: JOAN A. MAHANES, 8651 GUILFORD ROAD, COLUMBIA, MD 21046, 410-381-3053

ENGINEER'S SIGNATURE: R. JACOB HIKMAT, DATE: 8/26/10

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT. DATE: 9/12/10

THIS PLAN IS FOR GRADING PURPOSES ONLY. SCALE 1" = 30'

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MARYLAND. CHIEF, BUREAU OF UTILITIES. DATE: 9/10/10

DEPARTMENT OF PLANNING & ZONING, HOWARD COUNTY, MARYLAND. CHIEF, DEVELOPMENT ENGINEERING DIVISION. DATE: 10/11/10

MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors. 6800 Derrypath Road, Suite 150, Beltsville, Maryland 20705



Project information table including MMT, illustration, approval, project name (ADDED SEWER MAIN 24 TO PLAN), date (AUG. 2010), and revision details.

GRADING PLAN, SEDIMENT CONTROL DETAILS AND NOTES. 600' SCALE MAP NO. 42, BLOCK NO. 8

MAHANES PROPERTY, LOTS 1 THRU 3, CONTRACT NO.: 24-4524-D, SIXTH ELECTION DISTRICT, HOWARD COUNTY. 3 OF 3. scale AS SHOWN