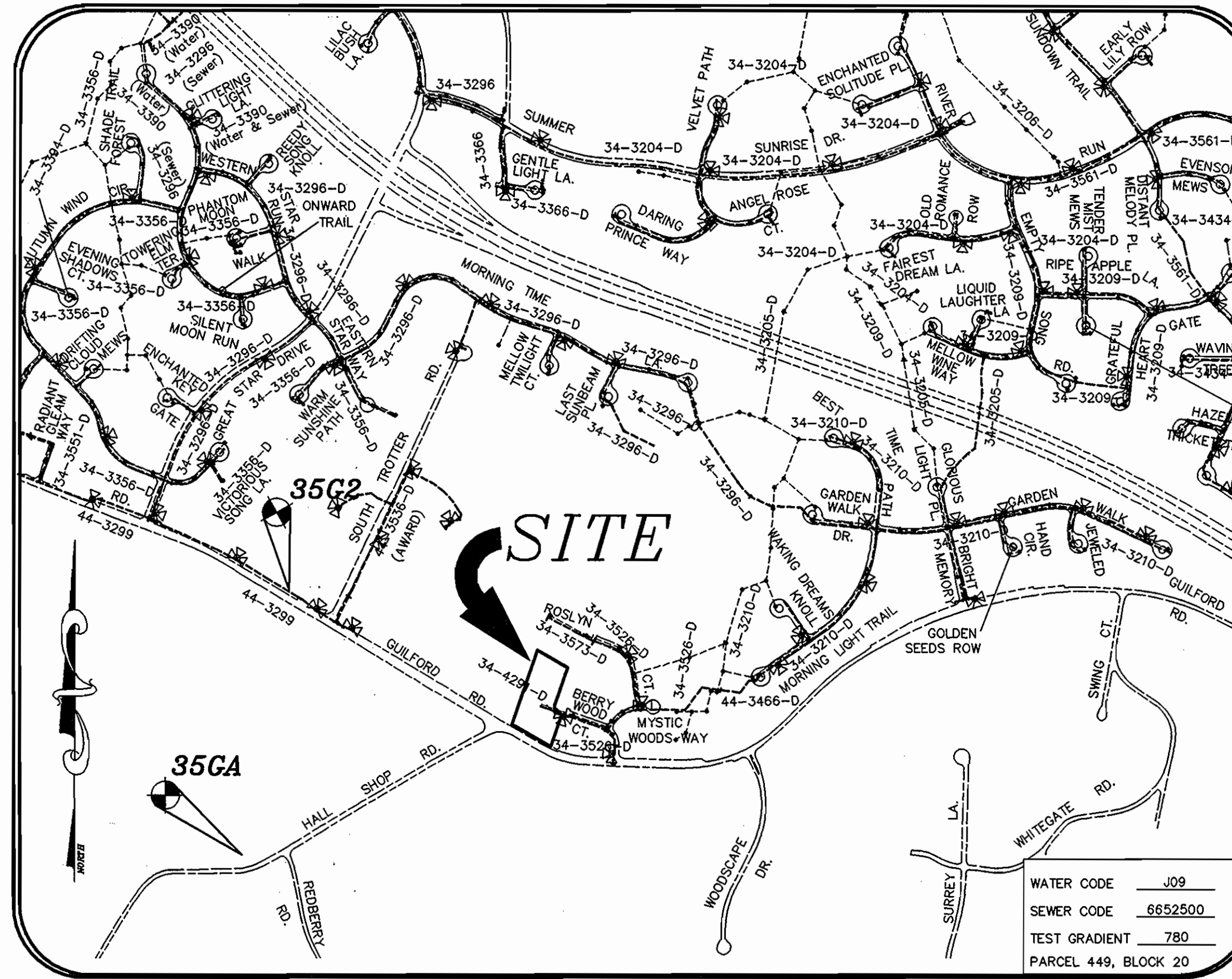


QUANTITY TABLE

ITEMS	QUANTITIES		TYPE	MANUFACTURER/SUPPLIER
	ESTIMATED	QUANTITIES		
STANDARD MH (HO. CO. STD.G-5.01)	1 EACH	1 EACH		ATLANTIC CONCRETE
8" SEWER MAIN	151 L.F.	151 L.F.	PVC	BELAIR RD SUPPLY
4" SEWER HOUSE CONNECTION	63 L.F.	63 L.F.	PVC	" " "
# 4" SEWER HOUSE CONNECTIONS	4 EACH	4 EA		MAYER BROS, INC.
4" WATER MAIN	143 L.F.	143 L.F.	DIP	BELAIR RD SUPPLY
1" WATER HOUSE CONNECTION	83 L.F.	83 L.F.	COPPER	BELAIR RD SUPPLY
# 1" WATER HOUSE CONNECTIONS	4 EACH	4 EA		BELAIR RD SUPPLY
4" CAP & BUTTRESS	1 EACH	1 EA	DIP	" " "
8" x 4" REDUCER	1 EACH	1 EA	DIP	" " "
4" VALVE	1 EACH	1 EA	DIP	" " "
NAME OF UTILITY CONTRACTOR: GRADELINE				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE 2/11/05				



VICINITY MAP
SCALE 1"=600'

TYPE OF BUILDING	SFD
No. OF UNITS	4
No. OF WATER HOUSE CONNECTION	4
No. OF SEWER HOUSE CONNECTIONS	4
DRAINAGE AREA	PATUXENT
TREATMENT PLANT	LITTLE PATUXENT WRP

PLAN REFERENCE NUMBERS:
GP-0601
F-05-145

**EROSION AND SEDIMENT CONTROL
FOR THIS CONTRACT IS PROVIDED
UNDER - GP-0601**

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.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON FEBRUARY 2003 BY WINGS AERIAL MAPPING SUPPLEMENTED BY TOPOGRAPHIC SURVEY PERFORMED BY MILDENBERG BOENDER & ASSOCIATES IN AUGUST 2004.
- 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. 35G2 AND NO. 35GA. ALL VERTICAL CONTROLS ARE BASED ON NAVD '29. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 35G2 & 35GA.
- 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, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWNED 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&T1-800-252-1133
BGE(CONSTRUCTION SERVICES).....410-850-4620
BGE(EMERGENCY).....410-685-1400
BUREAU OF UTILITIES.....410-313-4900
COLONIAL PIPELINE CO.....410-795-1390
MISS UTILITY.....1-800-257-7777
STATE HIGHWAY ADMINISTRATION.....410-531-5533
VERIZON.....1-800-743-0033/410-224-9210
- 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(a) OF THE HOWARD COUNTY CODE.

- WATER**
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF 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 STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

- 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 WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT 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." INDICATES THAT THE CELLAR CANNOT BE SERVED.

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN AND PROFILES

DEVELOPER

WILLIAMSURG GROUP LLC
5485 HARPERS FARM ROAD, SUITE 200
COLUMBIA, MD 21044
(410) 997-8800

**CONTRACT NO.: 34-4291-D
TOWERS PROPERTY
LOTS 7-10 & OPEN SPACE LOT 11
WATER AND SEWER MAIN EXTENSIONS
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.

[Signature] 7/11/05
DEVELOPER'S SIGNATURE DATE
WILLIAMSURG GROUP
DEVELOPER'S NAME

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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 7/1/05
ENGINEER'S SIGNATURE DATE
JOHN B. MILDENBERG
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 7/27/05
USDA NATURAL RESOURCE CONSERVATION SERVICE DATE

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

[Signature] 7/27/05
HOWARD SCD DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 8-11-05
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature] 8/6/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG,
BOENDER & ASSOC., INC.**
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax



engineering HSP					
illustration JJO					
approval					
project 04-072	KCI	1	AS-BUILT DATA SHOWN		
date JULY 2005	BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 35 BLOCK NO. 20

TITLE SHEET

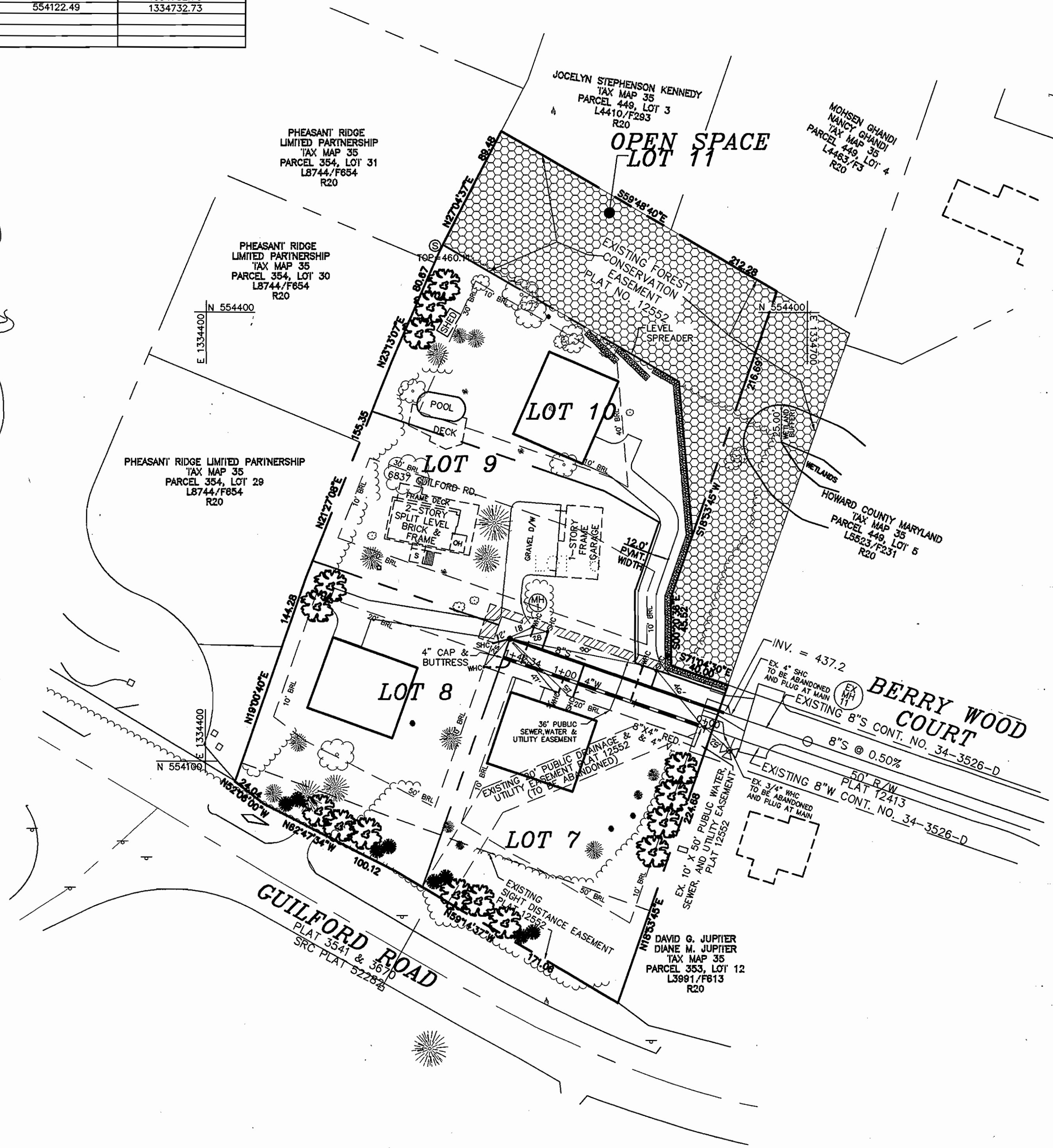
**TOWERS PROPERTY
LOTS 7-10 & OPEN SPACE LOT 11**
CONTRACT NO.: 34-4291-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale AS SHOWN
1 OF 2

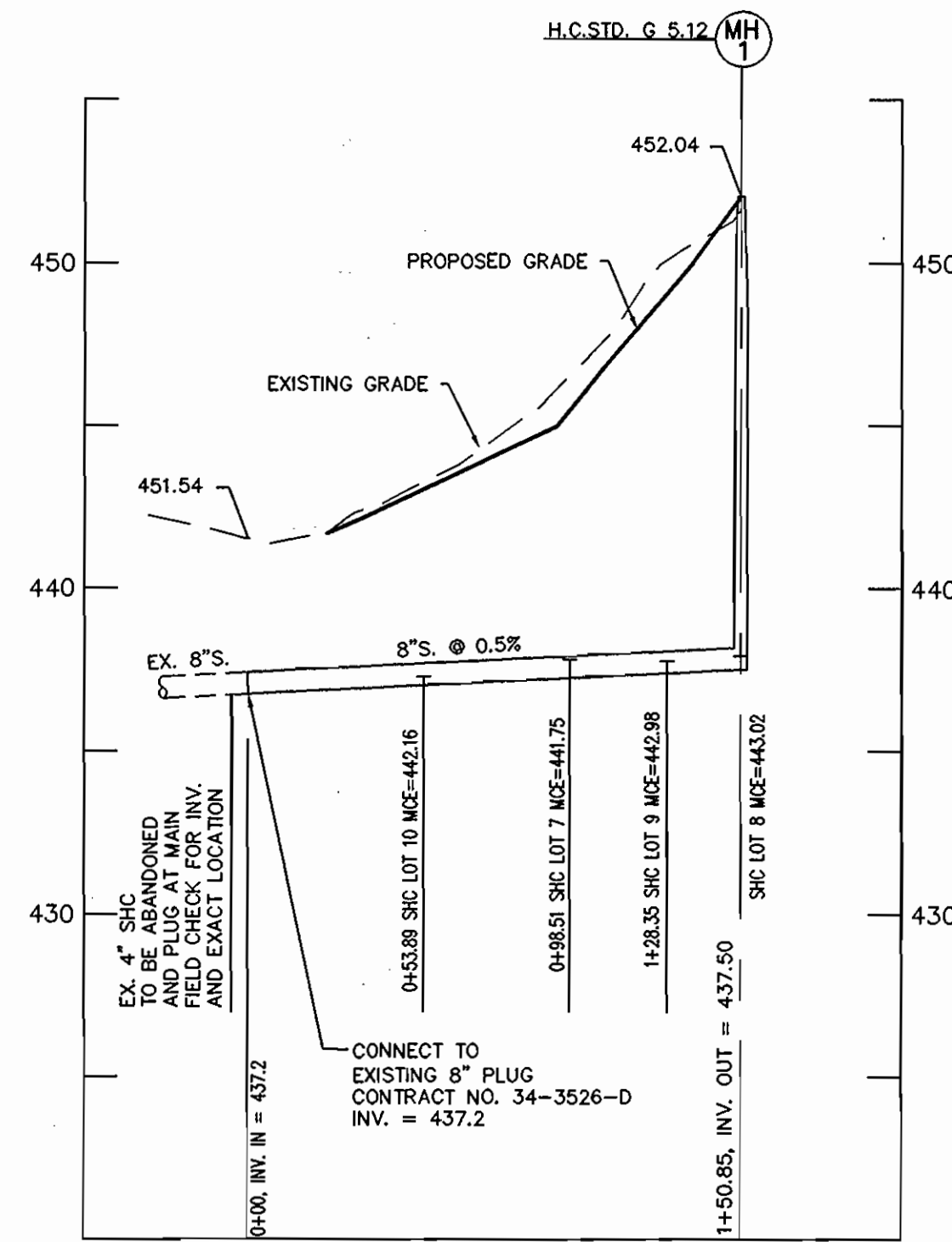
SEWER MANHOLE LOCATION CHART		
MANHOLE NO.	NORTHING	EASTING
MH 1	554181.80	1334602.58

SEWER HOUSE CONNECTION TABLE			
UNIT #	% SLOPE	INV. @ EASE.	MIN. CELLAR ELEV.
7	2	437.81	441.75
8	2	437.91	443.02
9	2	437.76	442.98
10	1	437.28	442.16

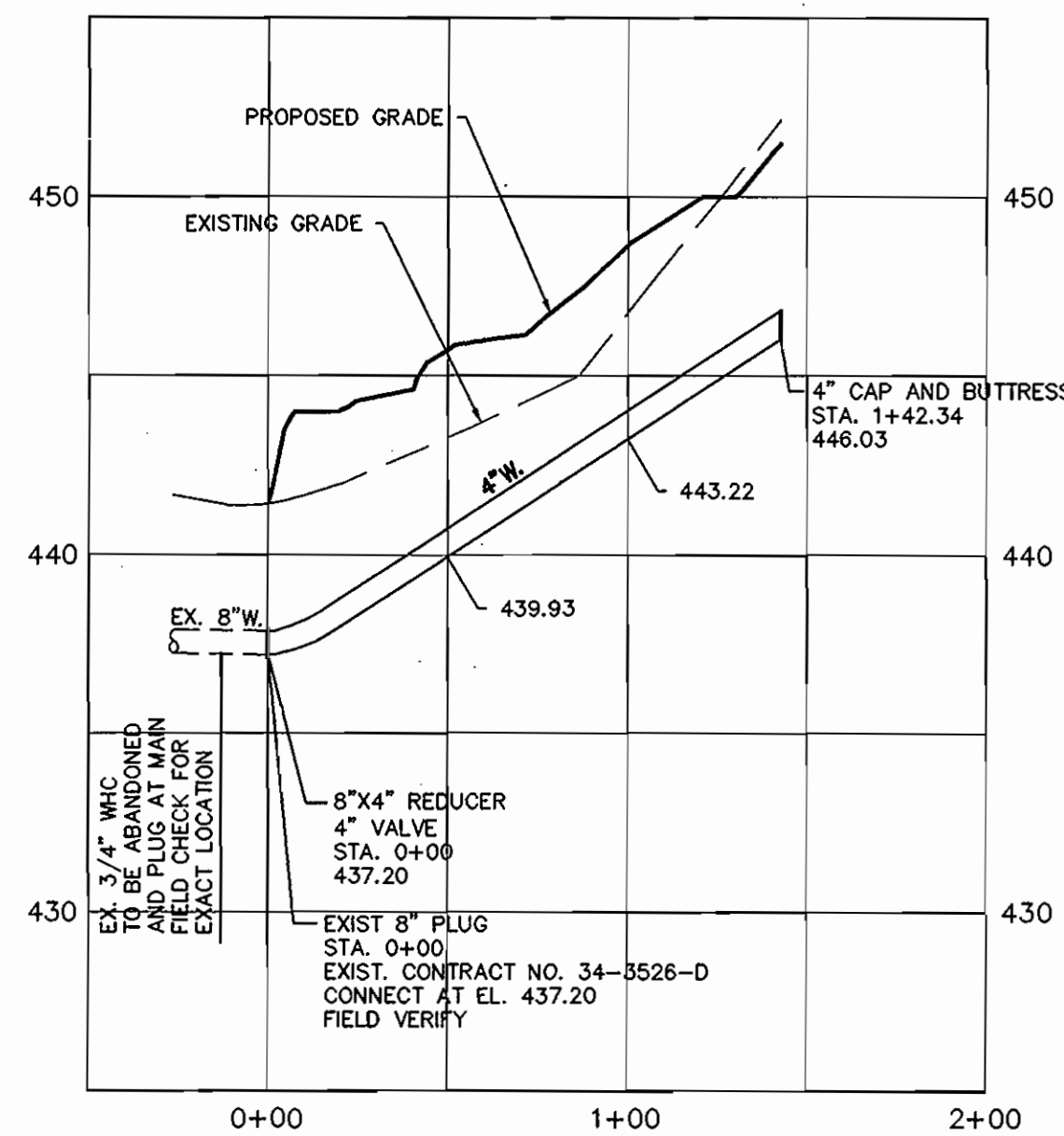
WATER MAIN TABULATION CHART		
APPURTENANCE	NORTHING	EASTING
4" CAP & BUTTRESS	554172.35	1334599.30
8" X 4" REDUCER	554122.49	1334732.73
4" VALVE	554122.49	1334732.73



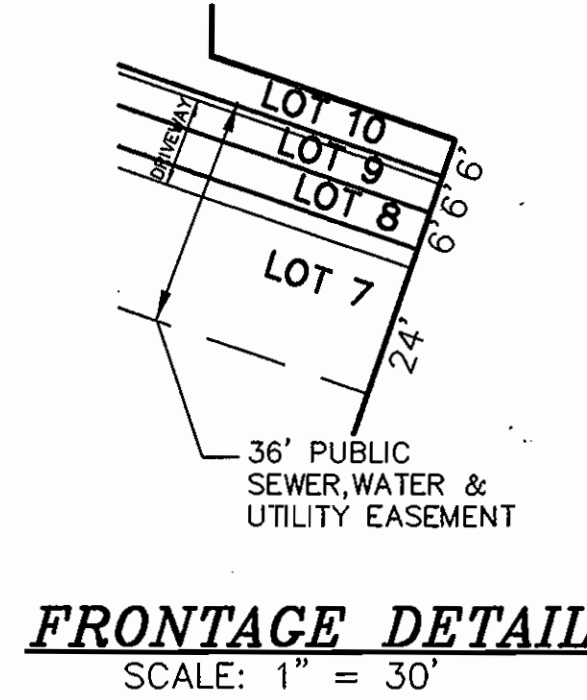
WATER AND SEWER PLAN
SCALE: 1"=50'



SEWER MAIN PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



WATER MAIN PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



DEVELOPER
WILLIAMSBURG GROUP LLC
5485 HARPERS FARM ROAD, SUITE 200
COLUMBIA, MD 21044
(410) 997-8800

TOWERS PROPERTY
LOTS 7-10 & OPEN SPACE LOT 11
CONTRACT NO.: 34-4291-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale
AS SHOWN
2 OF 2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. J. Berman
CHIEF, BUREAU OF UTILITIES
8-11-05
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
M. J. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5972 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21043
(410) 997-0298 Baltimore (301) 621-5521 Wash. (410) 997-0298 Fax



engineering	EISP				
illustration	JJO				
approval					
project	04-072	KCI	I	ASBUILT DATA SHOWN	3/20/05
date	JUNE 2005	BY	NO.	REVISION	DATE

WATER AND SEWER PLAN AND PROFILES
600' SCALE MAP NO. 35 BLOCK NO. 20

04-072.DWG, W&S 04072-COVER.DWG