

GENERAL NOTES

PART I

- APPROXIMATE LOCATION 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 AERIAL SURVEYS WERE PERFORMED IN APRIL, 2005 BY POTOMAC AERIAL VIM SERVICES.
- 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 31EA AND 31EB.
ALL VERTICAL CONTROLS ARE BASED ON (NAVD '88). VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 31EA (N. 568,641.129, E. 1,374,816.027)
3/4" REBAR 0.8' BELOW SURFACE
GEODETIC SURVEY CONTROL 31EB (N. 568,730.996, E. 1,376,273.570)
3/4" REBAR 0.6' BELOW SURFACE
- 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 DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- 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 (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 (S) AT THE LOCATION 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 OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:
AT&T 1-800-252-1133
BGE (CONSTRUCTION SERVICES) 410-637-8713
BGE (EMERGENCY) 410-685-0123
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
- 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 THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY 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.

PART II - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" 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 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 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS TO BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS.

PART III - 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 CELLAR CANNOT BE SERVED.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH FINAL PLAN F-10-102

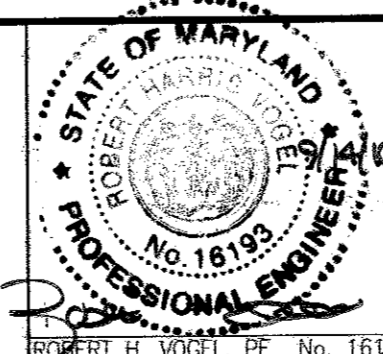
THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. [Signature]
HOWARD SOIL CONSERVATION DISTRICT
DATE: 11/2/10

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
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. 16193
EXPIRATION DATE: 09-27-2010
DRN: JMR/JD/KG DES: JAR
CHK: RHV
DATE: SEPTEMBER 2010

FINAL WATER & SEWER PLAN
COVER SHEET

LOCUST CHAPEL - SECTION I
LOTS 1-64, OPEN SPACE 65-69
A SUBDIVISION OF PARCEL 115
CONTRACT 14-4617-D

SCALE AS SHOWN

SHEET 1 OF 6

Shirley C. [Signature]
CHIEF, BUREAU OF UTILITIES

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

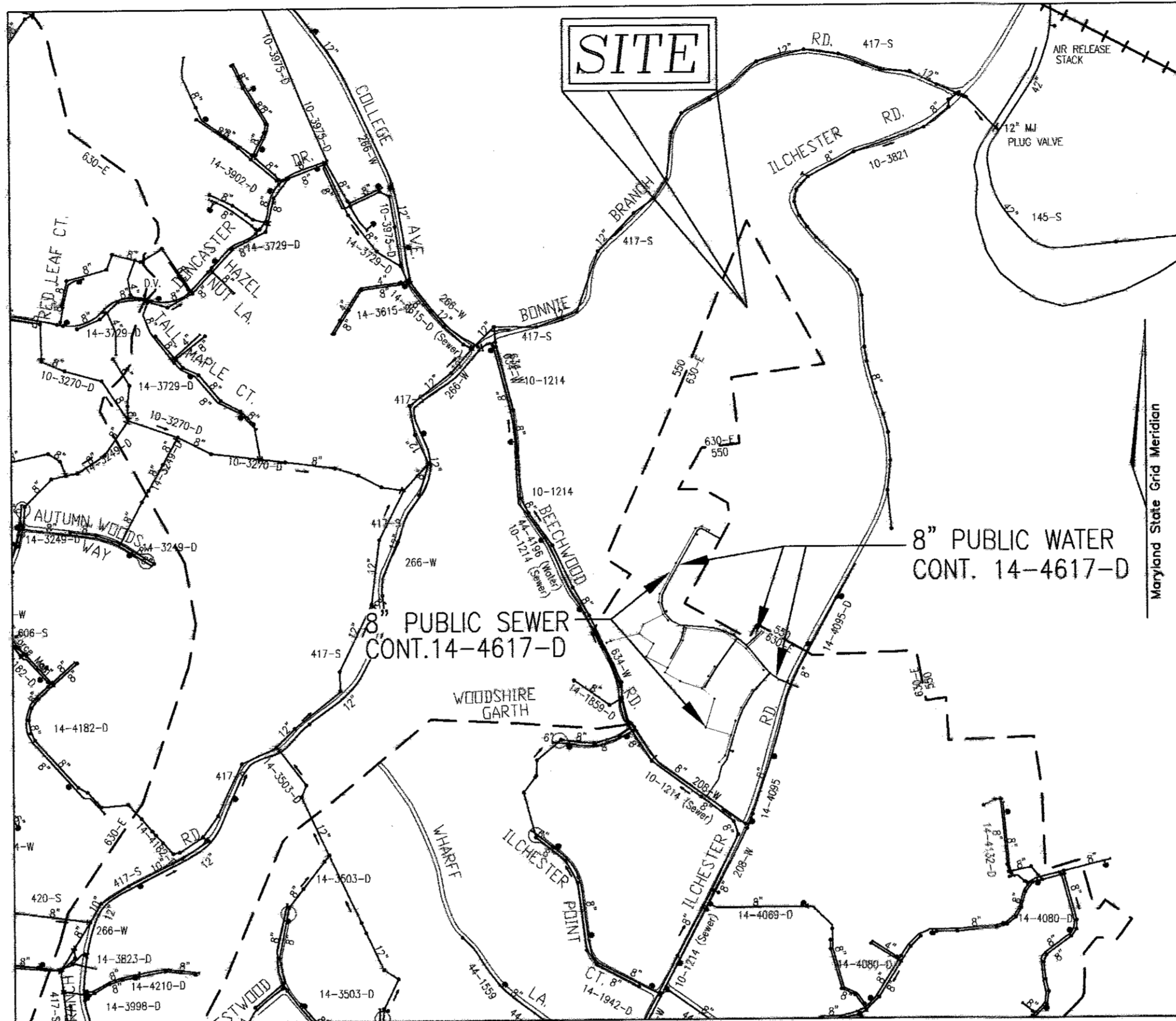
FINAL WATER & SEWER PLAN

LOCUST CHAPEL - SECTION I

LOTS 1-64, OPEN SPACE 65-69

A RESUBDIVISION OF PARCELS 115

CONTRACT 14-4617-D



WATER CODE:	630E
TEST GRADIENT:	700

LOCATION MAP

SCALE: 1"=600'

Type of Building :	SINGLE FAMILY DETACHED
No. of Lots/Parcels :	63
No. of single Water House Connections :	62
No. of twin Water House Connections :	1
No. of Sewer House Connections :	59
No. of twin Sewer House Connections :	2
Drainage Area :	PATAPSCO RIVER
Treatment Plant :	PATAPSCO RIVER

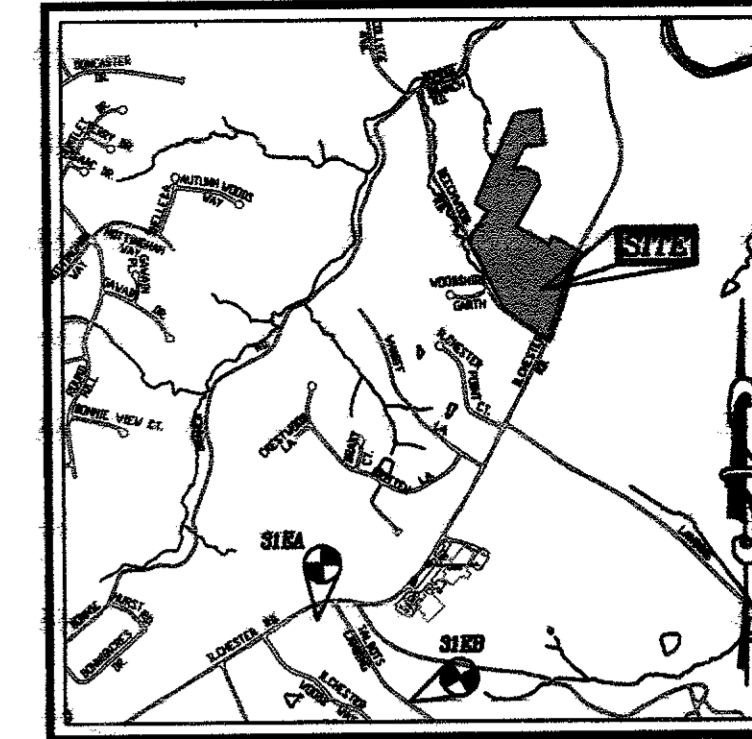
PROPERTIES WITH WELL AND SEPTIC

ADDRESS	EXISTING SEPTIC	EXISTING WELL
4738 ILCHESTER ROAD (PARCEL 122)	OFFSITE	TO BE ABANDONED*
4640 ILCHESTER ROAD (LOT 64)	TO REMAIN	TO REMAIN

* TO BE ABANDONED WHEN PUBLIC WATER AND SEWER IS AVAILABLE BY THIS CONTRACT

BENCHMARKS

BENCHMARK NO. 1: COUNTY CONTROL #31EA
3/4" REBAR 0.8' BELOW SURFACE
N. 568,641.129, E. 1,374,816.027
BENCHMARK NO. 2: COUNTY CONTROL #31EB
3/4" REBAR 0.6' BELOW SURFACE
N. 568,730.996, E. 1,376,273.570



VICINITY MAP

SCALE = 1"=2000'
ADC MAP COORDINATES: 4936 G 1&2

LEGEND

- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED TEE
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- PROPOSED SEWER
- EXISTING SEWER
- SEWER MANHOLE
- WATER HOUSE CONNECTION
- SEWER HOUSE CONNECTION
- PROPOSED SIGN
- PROPOSED LIGHT

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 6
LAYOUT PLAN	2 OF 6
LAYOUT PLAN	3 OF 6
WATER AND SEWER PROFILES	4 OF 6
SEWER PROFILE	5 OF 6
WATER AND SEWER PROFILES	6 OF 6

NAME OF UTILITY CONTRACTOR :		AS-BUILT		MANUFACTURER/SUPPLIER
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	
WATER				
8" WATER DIP	2,320 LF	2415 LF		U.S. PIPE
6" WATER DIP	589 LF	605 LF		U.S. PIPE
1 1/2" WMC COPPER	1,379 LF	1895 LF		HOWELL METAL
8" X 6" TAPPING SLEEVE	2 EA	2 EA		FORD METER BOX
8" X 6" TEE	2 EA	2 EA		SIGMA
8" X 6" TEE	7 EA	7 EA		SIGMA
8" VALVE	8 EA	8 EA		KENNEDY
6" VALVE	7 EA	7 EA		KENNEDY
6" FIRE HYDRANT	5 EA	5 EA		KENNEDY
8" - 1/8" BEND	2 EA	2 EA		SIGMA
8" - 1/16" BEND	5 EA	5 EA		SIGMA
8" - 1/32" BEND	6 EA	6 EA		SIGMA
8" - 1/32" VERTICAL BEND	2 EA	2 EA		SIGMA
6" CAP AND BUTTRESS	2 EA	2 EA		SIGMA
8" CAP AND BUTTRESS	2 EA	2 EA		SIGMA
SEWER				
8" SEWER PVC	3,229 LF	3300 LF		PLASTIC TRENDS
8" SEWER DIP	253 LF	240 LF		U.S. PIPE
MANHOLES	37 EA	37 EA		FREDERICK PRECAST
4" SMC PVC	1,233 LF	1233 LF		PLASTIC TRENDS

DEVELOPER

4640 ILCHESTER ROAD, LLC
WELSH PROPERTY, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE, SUITE 102
ELLCOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

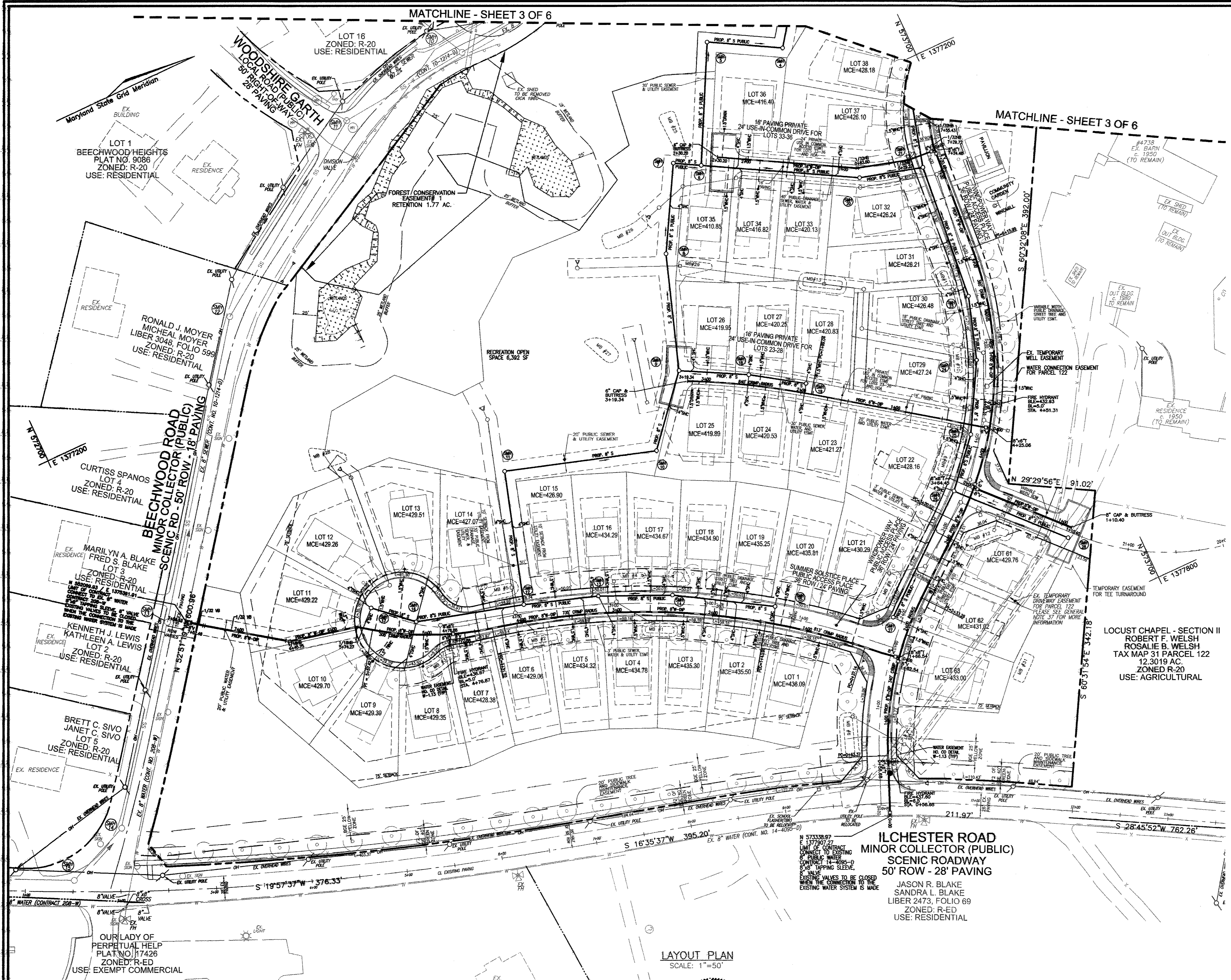
TAX MAP 31 GRID 4
1ST ELECTION DISTRICT

PARCEL 115
HOWARD COUNTY, MARYLAND

MATCHLINE - SHEET 3 OF 6

WATER FITTING LOCATIONS

WINDPOWER WAY		SUMMER SOLTICE WAY	
0+00	8" TAPPING SLEEVE	0+00	8" TEE
0+04	8" VALVE	0+04	8" VALVE
0+56.66	8" TEE (FH)	0+37.14	BEGIN 813 CRIMP RADIUS
0+63.37	BEGIN 340 CRIMP RADIUS	1+43.66	END 813 CRIMP RADIUS
1+62.54	8" VALVE	4+31.52	END 726 CRIMP RADIUS
1+66.54	8" TEE	4+72.36	8" VALVE
2+33.26	END 340 CRIMP RADIUS	4+76.87	8" TEE (FH)
3+20.52	BEGIN 307 CRIMP RADIUS	5+57.42	END 307 CRIMP RADIUS
3+40.45	8" TEE	5+74.26	1/16" HORIZONTAL BEND 8"
3+64.45	8" VALVE	6+45.74	1/16" HORIZONTAL BEND 8"
4+26.06	8" TEE (FH)	7+08	1/32" VERTICAL BEND 8"
4+51.31	8" TEE (FH)	7+42	1/32" VERTICAL BEND 8"
4+15.84	END 380 CRIMP RADIUS	7+42.44	8" VALVE
7+20.48	8" VALVE	7+56.35	8" TAPPING SLEEVE
7+24.48	8" TEE		
7+29.72	1/32" HORIZONTAL BEND 8"	USE IN COMMON LOTS 23-28	
7+56.43	1/32" HORIZONTAL BEND 8"	STA	APPERTENANCE
7+61.37	1/32" HORIZONTAL BEND 8"	0+00	8" TEE
8+20.20	1/16" HORIZONTAL BEND 8"	0+04	8" VALVE
8+52.53	8" TEE (FH)	3+19.34	8" CAP AND BUTTRESS
8+72.34	1/16" HORIZONTAL BEND 8"		
9+11.29	1/32" HORIZONTAL BEND 8"	USE IN COMMON LOTS 33-36	
9+20.52	1/16" HORIZONTAL BEND 8"	STA	APPERTENANCE
10+18.97	8" TEE (FH)	0+00	8" TEE
13+40.02	1/8" HORIZONTAL BEND 8"	0+04	8" VALVE
13+64.04	1/8" HORIZONTAL BEND 8"	0+29.22	1/32" HORIZONTAL BEND 8"
14+53.79	8" CAP AND BUTTRESS	0+63.00	1/32" HORIZONTAL BEND 8"
WINDPOWER WAY (EXTENDED)		2+30.20	8" CAP AND BUTTRESS
0+00	8" TEE		
0+04	8" VALVE		
1+10.40	8" CAP AND BUTTRESS		



LAYOUT PLAN SCALE: 1"=50'

JASON R. BLAKE
 SANDRA L. BLAKE
 LIBER 2473, FOLIO 69
 ZONED: R-ED
 USE: RESIDENTIAL

DEVELOPER
 4640 ILCHESTER ROAD, LLC
 WELSH PROPERTY, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DRIVE, SUITE 102
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LOCUST CHAPEL - SECTION I
 LOTS 1-64, OPEN SPACE 65-69
 A SUBDIVISION OF PARCEL 115
 CONTRACT 14-4617-D

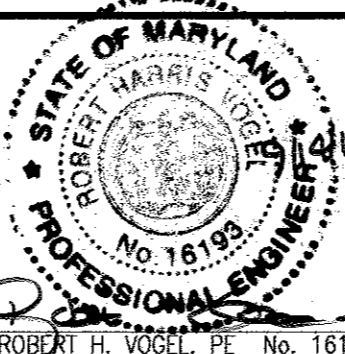
TAX MAP 31 GRID 4 PARCEL 115
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 6

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
 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. 15191 EXPIRATION DATE: 09-27-2010

DRN: JMR/JD/KG DES: JAR
 CHK: RHV
 DATE: SEPTEMBER 2010

BY	NO.	REVISION	DATE	600' SCALE MAP NO.	31	BLOCK NO.	4

FINAL WATER & SEWER PLAN LAYOUT PLAN

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MICHAEL PAUL SEE
 PATRICIA ANN PFAF
 L 1615 F 423
 TM 31 P 117
 ZONED: R-20
 USE: RESIDENTIAL

MONROE C. MALIN
 JANE H. MALIN
 MALIN LIVING TRUST
 L 5742 F 255
 TM 31 P 119 P3
 ZONED: R-ED
 USE: RESIDENTIAL

LOT 1
 HECKMAN SUBDIVISION
 PLAT NO. 5958
 ZONED: R-20
 USE: RESIDENTIAL

MONROE C. MALIN
 JANE H. MALIN
 MALIN LIVING TRUST
 L 5742 F 252
 TM 31 P 119 P1
 ZONED: R-ED
 USE: RESIDENTIAL

OPEN SPACE
 LOT 66
 TO BE DEDICATED TO
 HOWARD COUNTY
 MARYLAND &
 MAINTAINED BY DEPT.
 RECREATION & PARKS
 694,728 SF
 15.95 AC.

OPEN SPACE
 LOT 17
 BEECHWOOD HEIGHTS
 PLAT NO. 9085
 ZONED: R-20
 USE: RESIDENTIAL

OPEN SPACE
 LOT 68
 TO BE DEDICATED TO
 HOWARD COUNTY
 MARYLAND &
 MAINTAINED BY DEPT.
 RECREATION & PARKS
 694,728 SF
 15.95 AC.

FOREST CONSERVATION
 EASEMENT # 2
 RETENTION 11.49 AC.

FOREST CONSERVATION
 EASEMENT # 2
 RETENTION 11.49 AC.

FOREST CONSERVATION
 EASEMENT # 2
 RETENTION 11.49 AC.

LOT 15
 ED: R-20
 RESIDENTIAL

MATCHLINE - SHEET 2 OF 6

MATCHLINE - SHEET 2 OF 6

LAYOUT PLAN
 SCALE: 1"=50'

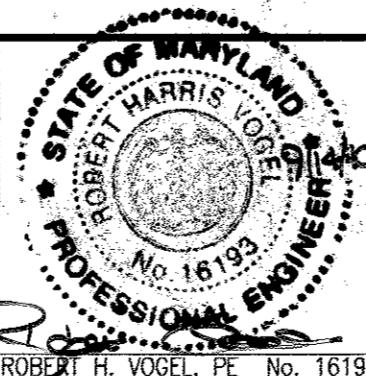
DEVELOPER

4640 ILCHESTER ROAD, LLC
 WELSH PROPERTY, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DRIVE, SUITE 102
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**FINAL WATER & SEWER PLAN
 LAYOUT PLAN**

**LOCUST CHAPEL - SECTION I
 LOTS 1-64, OPEN SPACE 65-69
 A SUBDIVISION OF PARCEL 115
 CONTRACT 14-4617-D**

SCALE
 AS
 SHOWN

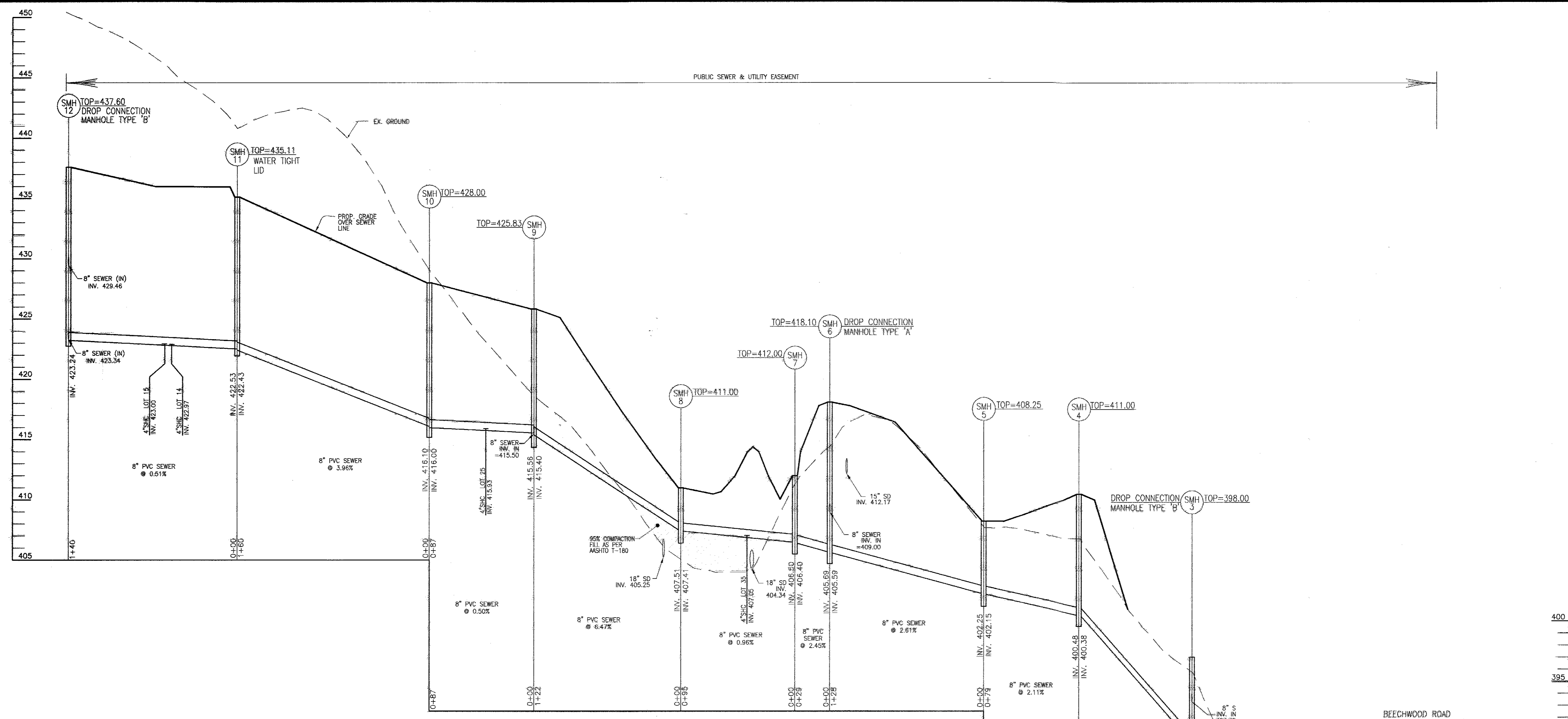
SHEET
3 OF 6

CHIEF, BUREAU OF UTILITIES DATE 10/18/10

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 11/5/10

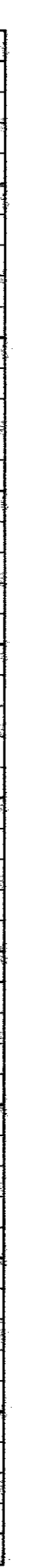
BY NO. REVISION DATE 600' SCALE MAP NO. 31 BLOCK NO. 4 TAX MAP 31 GRID 4 1ST ELECTION DISTRICT PARCEL 115 HOWARD COUNTY, MARYLAND

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8" PUBLIC SEWER PROFILE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE								
LOCATION 1	LOCATION 2	DIMENSION	LOCATION 1	LOCATION 2	DIMENSION	LOCATION 1	LOCATION 2	DIMENSION
LOT 37 SHC	SMH 29	17.1'	LOT 60 SHC	LOT 59 SHC	167.8'	LOT 20 SHC	LOT 19 SHC	52.5'
LOT 39 SHC	LOT 40 SHC	60.8'	LOT 58 SHC	SMH 27	15.3'	LOT 19 SHC	SMH 15	34.0'
LOT 40 SHC	SMH 29	51.7'	LOT 58 SHC	LOT 60 SHC	36.8'	LOT 18 SHC	SMH 14	27.5'
LOT 41 SHC	SMH 30	29.8'	LOT 57 SHC	SMH 20	50.2'	LOT 18 SHC	LOT 17 SHC	55.0'
LOT 41 SHC	SMH 31	42.2'	LOT 53 SHC	LOT 53 SHC	60.4'	LOT 17 SHC	SMH 14	12.2'
LOT 42 SHC	SMH 31	33.2'	LOT 54 SHC	LOT 54 SHC	40.3'	LOT 16 SHC	SMH 13	10.6'
LOT 42 SHC	LOT 43 SHC	22.3'	LOT 54 SHC	SMH 10	58.10'	LOT 16 SHC	LOT 4 SHC	43.7'
LOT 43 SHC	SMH 31	26.9'	LOT 55 SHC	SMH 7	47.0'	LOT 15 SHC	LOT 14 SHC	22.7'
LOT 44 SHC	LOT 45 SHC	27.9'	LOT 55 SHC	LOT 54 SHC	62.1'	LOT 15 SHC	SMH 11	50.7'
LOT 44 SHC	SMH 32	45.7'	LOT 54 SHC	LOT 19 SHC	56.9'	LOT 14 SHC	SMH 11	24.7'
LOT 45 SHC	SMH 33	36.4'	LOT 54 SHC	SMH 6	42.8'	LOT 13 SHC	SMH 6	41.9'
LOT 46 SHC	LOT 47 SHC	63.2'	LOT 53 SHC	LOT 52 SHC	57.6'	LOT 13 SHC	SMH 10	60.3'
LOT 47 SHC	SMH 33	70.3'	LOT 52 SHC	SMH 21	48.9'	LOT 12 SHC	SMH 10	25.5'
LOT 47 SHC	LOT 48 SHC	59.0'	LOT 51 SHC	LOT 51 SHC	34.7'	LOT 11 SHC	LOT 11 SHC	70.1'
LOT 48 SHC	SMH 34	73.9'	LOT 51 SHC	SMH 23	61.6'	LOT 10 SHC	SMH 10	40.4'
LOT 49 SHC	SMH 35	73.9'	LOT 50 SHC	LOT 21 SHC	52.7'	LOT 9 SHC	LOT 8 SHC	8.4'
LOT 49 SHC	SMH 35	73.9'	LOT 50 SHC	SMH 22	75.7'	LOT 9 SHC	LOT 10 SHC	46.2'
LOT 49 SHC	LOT 50 SHC	28.4'	LOT 50 SHC	SMH 24	39.1'	LOT 8 SHC	SMH 17	58.5'
LOT 50 SHC	SMH 36	12.3'	LOT 50 SHC	SMH 24	48.6'	LOT 7 SHC	SMH 17	70.2'
LOT 50 SHC	LOT 51 SHC	52.8'	LOT 50 SHC	SMH 22	81.3'	LOT 7 SHC	SMH 12	41.5'
LOT 51 SHC	SMH 37	20.0'	LOT 50 SHC	SMH 11	8.2'	LOT 6 SHC	SMH 12	28.4'
LOT 51 SHC	LOT 52 SHC	16.6'	LOT 50 SHC	LOT 25 SHC	62.7'	LOT 5 SHC	SMH 13	38.0'
LOT 52 SHC	SMH 37	12.3'	LOT 49 SHC	SMH 18	7.9'	LOT 5 SHC	LOT 4 SHC	28.5'
LOT 52 SHC	LOT 53 SHC	42.8'	LOT 48 SHC	SMH 9	14.8'	LOT 4 SHC	SMH 13	33.2'
LOT 53 SHC	LOT 54 SHC	65.7'	LOT 48 SHC	LOT 26 SHC	58.6'	LOT 3 SHC	SMH 14	42.9'
LOT 54 SHC	LOT 55 SHC	12.2'	LOT 47 SHC	SMH 5	92.1'	LOT 3 SHC	LOT 2 SHC	31.8'
LOT 55 SHC	SMH 38	67.1'	LOT 46 SHC	SMH 10	46.6'	LOT 2 SHC	LOT 1 SHC	41.4'
LOT 56 SHC	SMH 38	61.1'	LOT 45 SHC	SMH 18	21.1'	LOT 1 SHC	SMH 15	29.9'
LOT 56 SHC	LOT 57 SHC	65.5'	LOT 44 SHC	LOT 25 SHC	29.2'	LOT 1 SHC	LOT 61 SHC	22.1'
LOT 57 SHC	SMH 39	68.2'	LOT 43 SHC	SMH 19	26.2'	LOT 1 SHC	LOT 62 SHC	45.5'
LOT 57 SHC	LOT 58 SHC	57.7'	LOT 42 SHC	LOT 28 SHC	29.8'	LOT 1 SHC	LOT 61 SHC	9.8'
LOT 58 SHC	LOT 59 SHC	44.1'	LOT 41 SHC	SMH 26	12.0'	LOT 1 SHC	LOT 62 SHC	27.5'
LOT 59 SHC	SMH 37	47.6'	LOT 40 SHC	LOT 21 SHC	59.6'	LOT 1 SHC	LOT 63 SHC	9.6'
LOT 60 SHC	SMH 37	26.7'	LOT 39 SHC	SMH 45	8.2'			

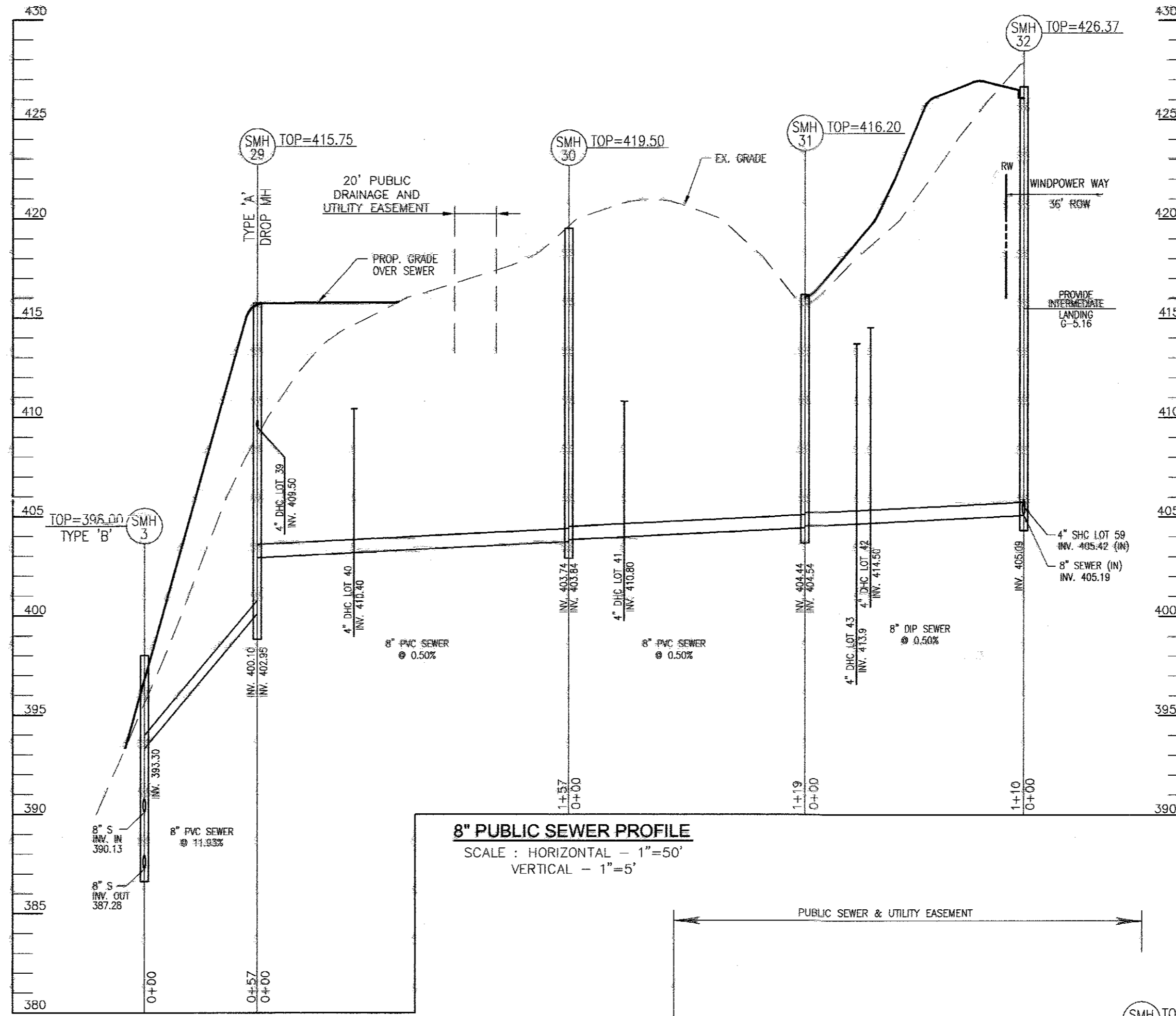


DEVELOPER
 4640 ILCHESTER ROAD, LLC
 WELSH PROPERTY, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

K:\Projects\04-151\CDM\DWG\WV\FINAL\040506-PROFILES.dwg, 9/15/2010 10:50:06 PM

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND 	 ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961		PROFESSIONAL CERTIFICATE 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. 16193 EXPIRATION DATE: 09-27-2010 DRN: JMR/JD/KG DES: JAR CHK: RIV DATE: SEPTEMBER 2010	FINAL WATER & SEWER PLAN WATER & SEWER PROFILES AS-BUILTS 8-16 600' SCALE MAP NO. 31 BLOCK NO. 4	LOCUST CHAPEL - SECTION I LOTS 1-64, OPEN SPACE 65-69 A SUBDIVISION OF PARCEL 115 CONTRACT 14-4617-D TAX MAP 31 GRID 4 1ST ELECTION DISTRICT PARCEL 115 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 5 OF 6
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SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	INVERT
SMH 1	DROP CONNECTION MH TYPE B HO. CO. STD. DETAIL S-1.32	N 573575.43 E 1376865.37	368.00	357.40	353.78	351.30
SMH 2	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573594.31 E 1376905.13	371.00	364.00	363.90	
SMH 3	DROP CONNECTION MH TYPE B HO. CO. STD. DETAIL S-1.32	N 573632.06 E 1377058.92	398.00	383.33	380.33	387.28
SMH 4	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573576.67 E 1377134.79	411.00	400.48	400.38	
SMH 5	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573507.65 E 1377095.81	408.25	402.25	402.15	
SMH 6	DROP CONNECTION MH TYPE A HO. CO. STD. DETAIL S-1.32	N 573447.93 E 1377209.56	416.10	405.69	408.00	405.59
SMH 7	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573422.45 E 1377195.14	412.00	406.50	406.40	
SMH 8	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573375.78 E 1377277.64	411.00	407.51	407.41	
SMH 9	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573336.76 E 1377393.59	425.83	415.88	415.80	415.40
SMH 10	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573280.28 E 1377459.28	428.00	416.10	416.00	
SMH 11	STD. PRECAST MH HO. CO. STD. DET. G5.12 (WATER TIGHT LID)	N 573127.63 E 1377411.73	435.11	422.53	422.43	
SMH 12	DROP CONNECTION MH TYPE B HO. CO. STD. DETAIL S-1.32	CL STA. 3+89.85 SUMMER SOLTICE WAY, 9.00' LT	437.60	429.46	433.34	423.24
SMH 13	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 3+12.43 SUMMER SOLTICE WAY, 9.00' LT	439.15	429.95	429.85	
SMH 14	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 2+36.07 SUMMER SOLTICE WAY, 9.00' LT	440.88	430.44	430.34	
SMH 15	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 1+29.23 SUMMER SOLTICE WAY, 9.00' LT	442.43	-	431.22	
SMH 16	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 5+05.81 SUMMER SOLTICE WAY, 9.00' LT	435.28	424.02	423.92	
SMH 17	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 572941.08 E 1377481.88	433.31	-	424.37	
SMH 18	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573401.04 E 1377428.33	426.85	415.96	415.86	
SMH 19	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573451.34 E 1377462.01	427.85	-	416.40	
SMH 20	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573592.49 E 1377291.34	431.04	421.13	421.03	
SMH 21	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 6+95.04 WINDPOWER WAY, 9.00' LT	434.95	421.58	421.48	
SMH 22	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 4+58.60 WINDPOWER WAY, 9.00' LT	433.67	423.92	423.59	
SMH 23	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 5+51.77 WINDPOWER WAY, 9.10' LT	432.72	422.39	422.29	
SMH 24	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 4+82.78 WINDPOWER WAY, 9.34' LT	432.01	422.83	422.73	
SMH 25	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 4+02.81 WINDPOWER WAY, 9.00' LT	432.82	423.32	423.22	
SMH 26	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 3+39.38 WINDPOWER WAY, 9.00' LT	434.63	423.73	423.63	
SMH 27	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 1+93.30 WINDPOWER WAY, 9.92' LT	439.73	-	427.80	
SMH 28	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573631.69 E 1377722.87	437.80	-	426.80	
SMH 29	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573684.01 E 1377082.17	415.75	402.95	400.10	
SMH 30	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573833.33 E 1377033.00	419.50	403.84	403.74	
SMH 31	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 573937.04 E 1377091.67	416.20	404.54	404.44	
SMH 32	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 9+85.75 WINDPOWER WAY, 9.00' LT	426.37	405.19	405.09	
SMH 33	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 11+28.72 WINDPOWER WAY, 9.00' LT	420.68	406.01	405.91	
SMH 34	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 13+26.84 WINDPOWER WAY, 9.00' LT	418.85	407.10	407.00	
SMH 35	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 13+45.13 WINDPOWER WAY, 9.00' LT	418.85	407.31	407.21	
SMH 36	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 13+69.35 WINDPOWER WAY, 8.52' LT	419.44	408.86	408.76	
SMH 37	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 14+10.51 WINDPOWER WAY, 3.84' LT	420.93	-	410.62	



SEWER HOUSE CONNECTION SCHEDULE

LOT #	EL @ MAIN	TYPE	DIST TO RW	EL @ RW	DIST RW - HSE	EL @ HOUSE	MCE
1	431.55	SHC	27	432.08	75	432.59	436.60
2	431.10	SHC	25	431.80	70	433.00	436.60
3	430.88	SHC	27	431.40	70	432.80	436.30
4	430.18	SHC	30	430.78	75	432.28	434.78
5	429.84	SHC	27	430.48	67	431.82	434.32
6	424.82	SHC	27	425.18	70	425.88	428.08
7	423.78	SHC	30	424.38	75	425.88	428.38
8	424.25	SHC	50	425.25	80	426.85	428.35
9	424.25	SHC	52	425.29	80	426.80	428.30
10	424.70	SHC	35	425.40	60	426.70	428.70
11	424.70	SHC	18	425.02	85	426.72	428.22
12	424.70	SHC	18	425.06	85	426.78	428.28
13	424.25	SHC	48	425.21	90	427.01	428.81
14	422.87	SHC	28	423.37	80	424.57	427.97
15	423.00	SHC	10	423.20	80	424.40	428.80
16	429.89	SHC	10	430.19	80	431.70	434.20
17	430.47	SHC	10	430.87	75	432.17	434.67
18	430.80	SHC	10	431.00	70	432.40	434.90
19	431.15	SHC	10	431.35	70	432.75	435.25
20	431.55	SHC	8	431.71	80	433.31	436.81
21	425.83	SHC	8	425.79	100	427.79	430.29
22	424.06	SHC	10	424.26	70	425.66	428.16
23	416.73	SHC	22	417.17	80	418.77	421.27
24	416.19	SHC	22	416.83	70	418.03	420.53
25	415.83	SHC	10	416.13	63	417.39	419.89
26	415.75	SHC	10	415.95	75	417.45	419.95
27	416.19	SHC	8	416.35	70	417.75	420.25
28	416.73	SHC	10	416.83	70	418.33	420.83
29	423.10	SHC	7	423.24	75	424.74	427.24
30	422.42	SHC	8	422.56	70	423.86	426.36
31	422.15	SHC	8	422.31	70	423.71	426.21
32	421.88	SHC	8	422.14	80	423.74	426.24
33	416.13	SHC	20	416.53	55	417.83	420.13
34	412.72	SHC	20	419.12	60	414.30	416.80
35	407.05	SHC	10	407.25	85	408.35	410.85
36	412.00	DHC	10	410.80	70	412.00	414.80
37	412.00	DHC	10	411.00	85	412.70	415.20
38	423.82	SHC	13	424.18	75	425.89	428.18
39	409.50	DHC	10	409.70	84	411.39	413.89
40	410.40	DHC	10	410.80	70	412.00	414.80
41	410.80	DHC	10	411.00	85	412.70	415.20
42	414.50	DHC	10	414.70	55	415.80	417.70
43	413.80	DHC	10	414.10	55	415.20	417.20
44	412.00	DHC	10	412.20	75	413.70	416.20
45	411.00	DHC	10	411.20	75	412.70	415.20
46	406.46	SHC	10	406.69	75	408.19	410.69
47	406.75	SHC	10	406.95	75	408.45	410.95
48	407.00	DHC	10	407.20	75	408.70	411.20
49	407.54	DHC	10	407.74	120	410.14	412.64
50	408.38	SHC	12	408.52	85	410.22	412.72
51	410.43	SHC	15	410.73	80	412.33	414.83
52	410.85	SHC	18	411.27	80	412.87	415.37
53	406.83	SHC	28	407.45	85	408.15	410.65
54	406.70	SHC	28	407.22	80	408.82	411.32
55	406.81	SHC	28	407.13	80	408.73	411.23
56	406.24	SHC	28	406.78	80	408.38	410.88
57	412.00	DHC	28	412.92	75	414.02	416.82
58	414.00	DHC	28	414.92	75	416.02	418.82
59	418.00	DHC	28	418.82	87	420.28	422.78
60	423.82	SHC	27	424.48	75	425.88	428.38
61	425.22	SHC	27	425.76	75	427.26	429.76
62	426.48	SHC	27	427.02	75	428.52	431.02
63	428.04	SHC	28	428.80	95	430.90	433.90

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE											
LOCATION 1	LOCATION 2	DIMENSION	LOCATION 1	LOCATION 2	DIMENSION	LOCATION 1	LOCATION 2	DIMENSION	LOCATION 1	LOCATION 2	DIMENSION
LOT 60 W/H	SMH 22	21.4'	LOT 28 W/H	LOT 45 W/H	11.5'	LOT 28 W/H	SMH 19	12.4'	LOT 13 W/H	LOT 13 S/H	26.2'
LOT 60 W/H	PHD B/SZ S3	32.6'	LOT 44 W/H	LOT 44 S/H	23.3'	LOT 28 W/H	LOT 28 S/H	7.8'	LOT 13 W/H	SMH 17	51.6'
LOT 59 W/H	LOT 41 W/H	48.3'	LOT 44 W/H	LOT 58 S/H	45.6'	LOT 27 W/H	LOT 28 S/H	7.6'	LOT 12 W/H	SMH 12	28.2'
LOT 59 W/H	LOT 58 W/H	81.4'	LOT 43 W/H	SMH 21	21.2'	LOT 27 W/H	SMH 18	15.9'	LOT 12 W/H	LOT 12 S/H	13.8'
LOT 59 W/H	LOT 58 S/H	61.0'	LOT 43 W/H	LOT 59 S/H	61.4'	LOT 26 W/H	LOT 26 S/H	15.0'	LOT 11 W/H	SMH 17	31.1'
LOT 57 W/H	LOT 44 S/H	37.4'	LOT 42 W/H	SMH 32	31.4'	LOT 26 W/H	SMH 9	32.3'	LOT 11 W/H	LOT 10 S/H	27.2'
LOT 57 W/H	LOT 57 S/H	166.6'	LOT 42 W/H	LOT 43 W/H	48.3'	LOT 25 W/H	SMH 7	30.6'	LOT 10 W/H	LOT 9 W/H	8.0'
LOT 56 W/H	LOT 56 S/H	21.1'	LOT 41 W/H	LOT 42 W/H	42.7'	LOT 25 W/H	LOT 25 S/H	30.9'	LOT 9 W/H	LOT 9 S/H	23.3'
LOT 56 W/H	SMH 33	35.3'	LOT 40 W/H	LOT 43 W/H	52.5'	LOT 24 W/H	LOT 24 S/H	18.8'	LOT 8 W/H	LOT 8 S/H	20.3'
LOT 55 W/H	LOT 56 W/H	51.5'	LOT 40 W/H	PHD B/SZ S3	48.5'	LOT 24 W/H	SMH 18	28.9'	LOT 8 W/H	SMH 16	48.3'
LOT 55 W/H	LOT 55 S/H	19.8'	LOT 39 W/H	PHD B/SZ S3	44.0'	LOT 24 W/H	SMH 18	44.4'	LOT 7 W/H	PHD 4+76 B7	17.8'
LOT 54 W/H	LOT 54 S/H	20.3'	LOT 38 W/H	LOT 58 W/H	37.3'	PHD 4+76 S1	SMH 24	31.6'	LOT 7 W/H	PHD 4+76 B7	35.1'
LOT 54 W/H	LOT 54 S/H	33.3'	LOT 38 W/H	LOT 38 W/H	26.8'	LOT 23 W/H	LOT 23 S/H	25.8'	LOT 7 W/H	LOT 7 S/H	15.3'
LOT 53 W/H	PHD B/SZ S3	14.4'	LOT 37 W/H	SMH 21	41.6'	LOT 23 W/H	SMH 19	32.2'	LOT 6 W/H	LOT 6 S/H	13.4'
LOT 53 W/H	PHD B/SZ S3	34.0'	LOT 37 W/H	LOT 37 S/H	36.0'	LOT 22 W/H	SMH 26	17.0'	LOT 6 W/H	LOT 7 S/H	40.9'
LOT 53 W/H	LOT 53 S/H	19.2'	LOT 36 W/H	LOT 36 S/H	13.5'	LOT 22 W/H	SMH 26	30.6'	LOT 5 W/H	LOT 5 S/H	14.6'
LOT 52 W/H	SMH 37	32.7'	LOT 36 W/H	LOT 34 S/H	40.6'	LOT 21 W/H	SMH 13	35.7'	LOT 5 W/H	SMH 13	42.3'
LOT 52 W/H	LOT 52 S/H	31.6'	LOT 35 W/H	LOT 34 S/H	18.3'	LOT 21 W/H	LOT 1 W/H	52.4'	LOT 4 W/H	LOT 4 S/H	28.2'
LOT 51 W/H	LOT 51 S/H	17.2'	LOT 35 W/H	SMH 6	47.4'	LOT 20 W/H	LOT 20 S/H	8.8'	LOT 4 W/H	LOT 3 W/H	52.7'
LOT 51 W/H	SMH 36	23.8'	LOT 34 W/H	LOT 34 S/H	19.7'	LOT 20 W/H	SMH 15	15.4'	LOT 3 W/H	LOT 2 W/H	21.4'
LOT 50 W/H	LOT 50 S/H	10.0'	LOT 34 W/H	LOT 33 S/H	37.5'	LOT 19 W/H	LOT 19 S/H	19.5'	LOT 2 W/H	LOT 2 S/H	27.3'
LOT 50 W/H	SMH 36	74.5'	LOT 32 W/H	LOT 32 S/H	10.4'	LOT 19 W/H	LOT 18 W/H	15.0'	LOT 2 W/H	LOT 1 S/H	14.1'
LOT 49 W/H	SMH 35	13.6'	LOT 32 W/H	LOT 31 S/H	54.1'	LOT 18 W/H	LOT 18 W/H	19.2'	LOT 1 W/H	LOT 1 S/H	48.5'
LOT 49 W/H	LOT 50 S/H	15.1'	LOT 32 W/H	LOT 32 S/H	10.5'	LOT 18 W/H	LOT 17 S/H	15.6'	LOT 1 W/H	SMH 15	61.4'
LOT 48 W/H	LOT 48 S/H	19.4'	LOT 31 W/H	SMH 21	46.7'	LOT 17 W/H	LOT 12 W/H	24.9'	LOT 1 W/H	LOT 6 S/H	8.6'