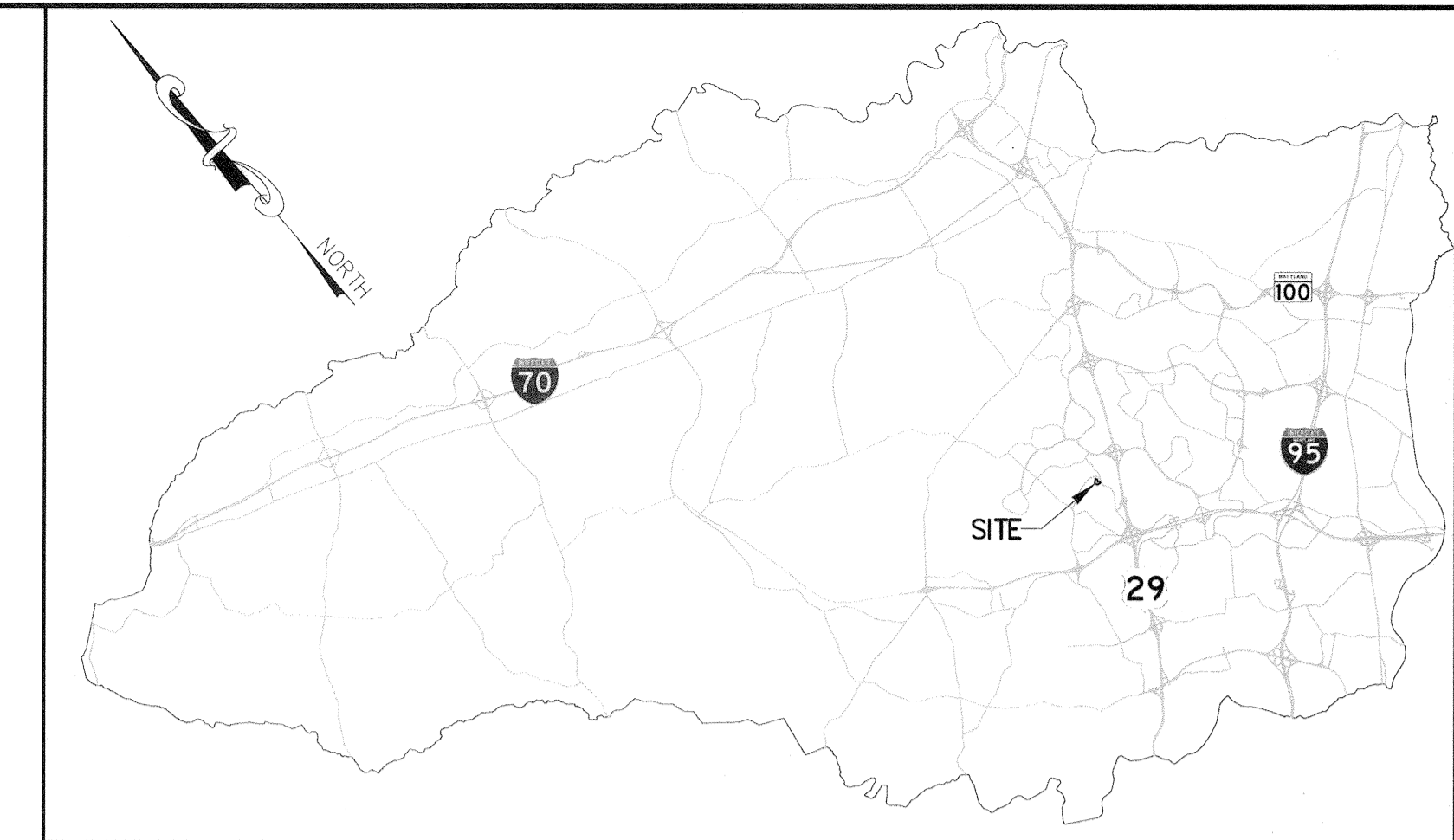


# WOODLEIGH DRIVE SEWER EXTENSION

## HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

### CAPITAL PROJECT NO. S6699 CONTRACT NO. 20-5093

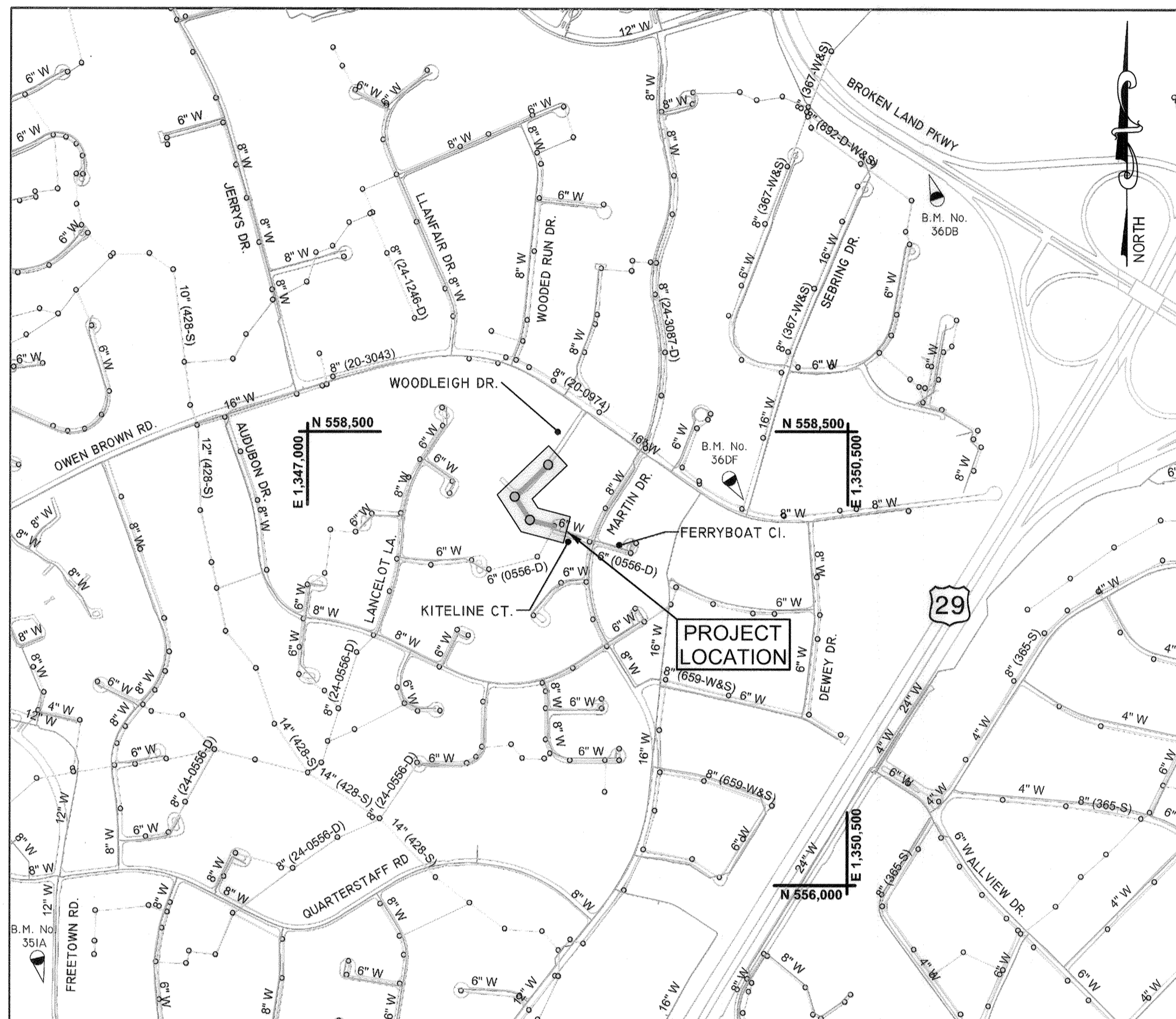


LOCATION MAP  
NOT TO SCALE

**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 IN DECEMBER 2018 BY RUMMEL, KLEPPER & KAHL, LLP (RK&K).
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:  
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83 (ADJUSTED 2011) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATION NO. 351A, NO. 36DB AND NO. 36DF. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88.
- 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 OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING OR DESCRIBED IN THE CONTRACT DOCUMENTS, 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.
- ALL EXISTING UTILITIES SHALL BE TEST PITTED/LOCATED AS NECESSARY AND IN ADVANCE OF THE PROPOSED CONSTRUCTION, IN ORDER TO PROPERLY MAKE ALL REQUIRED UTILITY CROSSINGS AND/OR CONNECTIONS. ANY DISCREPANCIES OR UTILITY CONFLICTS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. 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 ARE INCLUDED IN THE DRAWINGS OR SPECIFICATIONS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG, SHALL BE LOCATED BY THE CONTRACTOR TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  

AT&T.....	1-800-252-1133
BGE (CONSTRUCTION SERVICES).....	410-637-8713
BGE (EMERGENCY).....	800-685-0123
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 CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE (5) 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.



TYPE OF BUILDINGS: RESIDENTIAL  
 NUMBER OF PARCELS: N/A  
 WATER HOUSE CONNECTIONS: N/A  
 SEWER HOUSE CONNECTIONS: 3  
 DRAINAGE AREA: LITTLE PATUXENT

VICINITY MAP  
SCALE: 1" = 600'

HOWARD COUNTY GEODETIC SURVEY CONTROL POINTS:

STATION#	EAST	NORTH	ELEVATION
351A	1,346,039.778	555,450.556	412.302
36DB	1,350,945.671	559,940.816	344.648
36DF	1,239,924.206	558,122.368	392.348

PURPOSE STATEMENT: IN RESPONSE TO PROPERTY OWNER REQUEST, CONTRACT NO. 20-5093 WILL EXTEND PUBLIC SEWER TO WOODLEIGH DRIVE, WHICH IS INCORPORATED IN THE METROPOLITAN DISTRICT AND ELIGIBLE FOR PUBLIC WATER AND SEWER SERVICE.

**QUANTITIES**

NAME OF UTILITY CONTRACTOR : **UTILITIES UNLIMITED, INC.**  
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE : **NOV. 2020**

ITEM	ESTIMATED QUANTITY	AS-BUILT		
		QUANTITY	TYPE	MANUFACTURER/SUPPLIER
8" PVC SEWER	421 LF	426 LF	PVC SDR35	NATIONAL
48" MANHOLE	3 EA	3 EA	PRECAST	CONTRACTORS PRECAST CORP.
8" x 4" WYE BRANCH	3 EA	3 EA	CONC. BLOCK	PRISM PRECAST
4" SHC	113 LF	107 LF, 19 LF	PVC SDR 26	NATIONAL
CLEANOUT	3 EA	3 EA	C.I. CL 30	FOX FOUNDRY

**SURVEY CONTROL**

POINT NO.	COORDINATES		ELEVATION (NAVD 88)	DESCRIPTION
	NORTH	EAST		
KPL1	557,983.6064	1,348,727.7434	381.89'	REBAR & CAP
RKK1	557,851.8129	1,349,271.7672	386.89'	MAG NAIL
RKK2	557,946.4430	1,348,871.6943	383.32'	MAG NAIL
RKK3	558,174.5241	1,348,673.3685	386.31'	MAG NAIL
RKK4	558,316.8276	1,348,845.6933	395.19'	MAG NAIL
RKK5	558,672.4386	1,349,069.3842	399.23'	MAG NAIL

**SEWER NOTES:**

- ALL SEWER MAINS SHALL BE DIP OR PVC UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

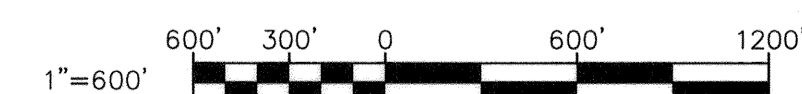
**SEWER HOUSE CONNECTION (SHC) NOTES:**

- SHC SHALL BE PVC MATCHING MATERIAL OF THE SEWER MAIN. SHC SHALL BE PER STANDARD DETAIL G-5.12.
- SHC SHALL BE BUILT TO THE PROPERTY LINE. CLEANOUTS SHALL BE PROVIDED ON ALL SHC AT THE PROPERTY LINE ON THE HOMEOWNER'S SIDE PER STANDARD DETAIL S-2.22.
- CONTRACTOR SHALL PROVIDE A PLUG AT THE PROPERTY LINE CLEANOUT FOR THE PRIVATE BUILDING SEWER.
- MINIMUM COVER OVER ALL SHC WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE 4- FEET.

**INDEX OF DRAWINGS**

SHEET NO.	DRAWING NO.	DESCRIPTION
1	G-01	TITLE SHEET, GENERAL NOTES AND INDEX OF SHEETS
2	G-02	ABBREVIATIONS, LEGEND AND HSCD STANDARD NOTES
3	C-01	SEWER PLAN & PROFILE
4	ES-01	EROSION AND SEDIMENT CONTROL PLAN
5	ES-02	EROSION AND SEDIMENT CONTROL DETAILS
6	ES-03	EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS

**AS-BUILT**  
BY: Z. KNIGHT, 11-24-2020



G-01

**OWNER/DEVELOPER CERTIFICATION:**  
 I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

*Zachary C. Knight*  
 Owner's/Developer's Signature  
 1-31-2020  
 Date

HSCD: EP-20-004  
**HOWARD SOIL CONSERVATION DISTRICT CERTIFICATION:**  
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT (HSCD).

*Kathleen Dominec*  
 Howard Soil Conservation District  
 3/2/20  
 Date

**ENGINEER'S CERTIFICATION:**  
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John C. Moore*  
 Engineer's Signature - Registration Number  
 01/29/2020  
 Date

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John J. De...*  
 Director of Public Works  
 1-31-2020  
 Date

*...*  
 Chief, Bureau of Engineering  
 1/31/2020  
 Date

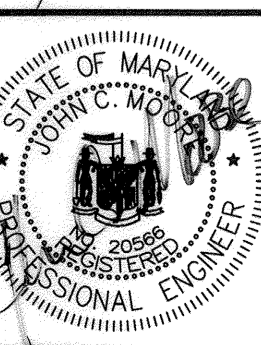
*...*  
 Chief, Bureau of Utilities  
 2-29-2020  
 Date

*...*  
 Chief, Utility Design Division  
 1/31/2020  
 Date

**RK&K**  
 P: 410.728.2900  
 700 East Pratt Street, Suite 500 | Baltimore, MD 21202  
 Engineers | Construction Managers | Planners | Scientists  
 www.rk&k.com  
 Responsive People | Creative Solutions

**PROFESSIONAL CERTIFICATION:**  
 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. 20566, EXPIRATION DATE: 09/06/2020.

*John C. Moore*  
 DATE: 01/29/2020



DES:	REG	BY	NO.	REVISION	DATE
DRN:	SCP				
CHK:	NKS				
DATE:					01/29/2020

JANUARY 23, 2020

TITLE SHEET, GENERAL NOTES,  
AND INDEX OF DRAWINGS

600' SCALE MAP NO. 35      BLOCK NO. 18      ELECTION DISTRICT NO. 4

PROJECT NO. S6699  
 CONTRACT NO. 20-5093


**WOODLEIGH DRIVE SEWER EXTENSION**

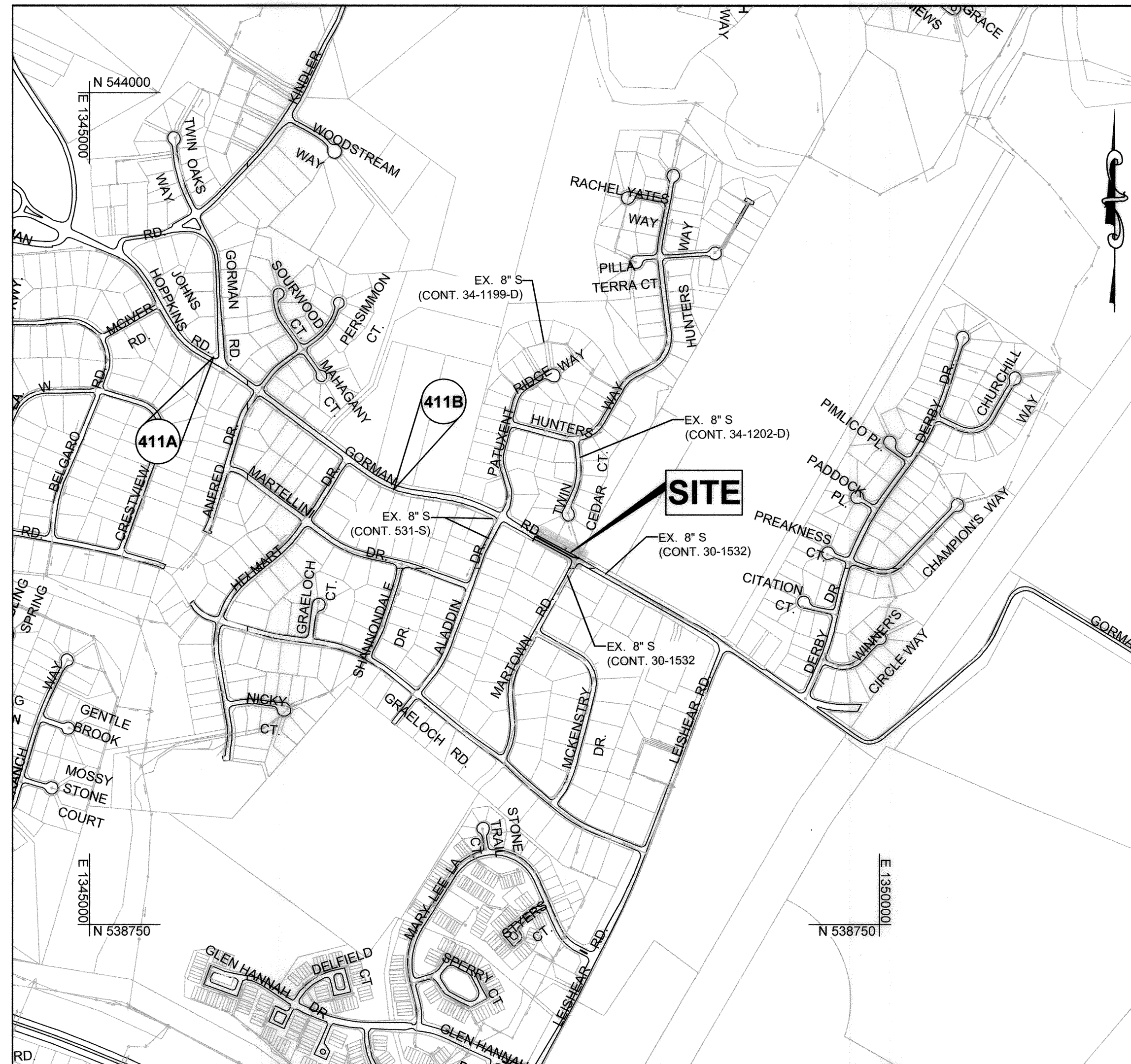
HOWARD COUNTY, MARYLAND

SCALE  
 AS SHOWN  
 SHEET NO.  
 1 OF 6

# 10489 GORMAN ROAD SEWER EXTENSION CAPITAL PROJECT NO. S6699 CONTRACT NO. 30-5103 HOWARD COUNTY, MARYLAND

### GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES 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 02/14/2019 BY KCI TECHNOLOGIES, INC.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:  
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/11 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 411A AND 411B. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 411A AND 411B.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". 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 REQUIRED. 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 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.
- ALL EXISTING UTILITIES SHALL BE TEST PITTED / LOCATED AS NECESSARY AND IN ADVANCE OF THE PROPOSED CONSTRUCTION, IN ORDER TO PROPERLY MAKE ALL REQUIRED UTILITY CROSSINGS AND / OR CONNECTIONS. ANY DISCREPANCIES OR UTILITY CONFLICTS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. 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 OR IN THE SPECIFICATIONS. LOCATIONS OF OTHER EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN NOTED SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- 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  
BG&E (CONSTRUCTION SERVICES).....410-637-8713  
BG&E (EMERGENCY).....410-685-0123  
BUREAU OF UTILITIES (DPW).....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.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG 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 ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS 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.
- THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINES. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY LINES, GRADES AND ELEVATIONS, AND CUT SHEETS SHALL BE PREPARED BASED ON THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS.
- SPOIL FROM TRENCHING OPERATIONS SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
- THE CONTRACTOR SHALL USE THE AREA DESIGNATED ON THE PLANS AS THE STAGING / STORAGE AREA. THE WORK SHALL BE CONDUCTED UNDER STRICT ADHERENCE TO SECTION 308 - EROSION AND SEDIMENT CONTROL OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV. PRECONSTRUCTION CONTOURS SHALL BE RESTORED ONCE THE UTILITY HAS BEEN INSTALLED.



**VICINITY MAP**

SCALE: 1" = 600'




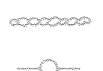













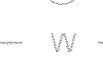









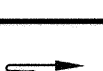
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SEWER PLAN AND PROFILE
3	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
4	EROSION AND SEDIMENT CONTROL NOTES

### QUANTITIES




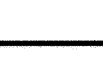
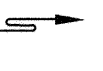
ITEM	UNIT	ESTIMATE	AS-BUILT	MANUFACTURER
8" PVC SDR35 SEWER	L.F.	312	304	DIAMOND PIPE
4' DIA PRECAST MANHOLE	EA.	1	2	CONTRACTORS PRECAST
4" PVC SHC	L.F.	50	36	DIAMOND PRECAST
10" PVC SDR-35 INSIDE DROP	L.F.	5	5	NORTH AMERICAN

NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED	
CHECKBOX	FEBRUARY 2020
AS-BUILT DATE	SURVEY AND DRAFTING DIVISION

### LEGEND

EXISTING	
	DECIDUOUS TREE
	CONIFEROUS TREE
	BUSH
	HEDGE
	UTILITY POLE
	GUY
	LIGHT POST
	MAIL BOX
	TELECOM PEDESTAL
	WATER WELL
	WATER METER / CURB STOP
	SEWER CLEAN-OUT
	SIGN
	TRAVERSE POINT
	FIRE HYDRANT
	WATER VALVE
	SEWER MANHOLE
	STORM DRAIN MANHOLE
	WATER MAIN
	SEWER MAIN
	STORM DRAIN
	OVERHEAD WIRE
	UNDERGROUND ELECTRIC
	CABLE TV
	FENCE
	PROPERTY BOUNDARY
	MAJOR CONTOUR
	MINOR CONTOUR

PROPOSED	
	SEWER MANHOLE
	SHC WITH CLEAN-OUT
	SOIL BORING
	SEWER MAIN
	FLOW ARROW

### PURPOSE STATEMENT:

IN RESPONSE TO PROPERTY OWNER REQUEST, CONTRACT NO. 30-5103 WILL PROVIDE AN 8" SEWER MAIN INCLUDING A 4" SEWER HOUSE CONNECTION TO SERVE 10489 GORMAN ROAD.

### NOTE:

THE WORK SITE SHALL BE CONTROLLED IN ACCORDANCE WITH THE HOWARD SOIL CONSERVATION DISTRICT STANDARD EROSION AND SEDIMENT CONTROL PLAN FOR MINOR EARTH DISTURBANCE, AND ADHERE TO THE LIMITATIONS, CONDITIONS AND REQUIREMENTS THEREIN. A COPY OF THE STANDARD PLAN SHALL BE ON-SITE FOR REFERENCE DURING WORKING HOURS.

### SANITARY SEWER MAIN NOTES

- ALL SEWER MAINS SHALL BE 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 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.

TYPE OF BUILDING: RESIDENTIAL  
 NUMBER OF PARCELS: 1  
 NUMBER OF SEWER HOUSE CONNECTIONS: 1  
 PRESSURE ZONE: N/A  
 TEST GRADIENT: N/A  
 TEST PRESSURE: N/A  
 DRAINAGE AREA: MIDDLE PATUXENT  
 TREATMENT PLANT: LPWRP

CONTROL NOTE:  
 THE HORIZONTAL AND VERTICAL DATUM SHOWN HEREON ARE BASED ON GPS OBSERVATIONS FROM HOWARD COUNTY GEODETIC SURVEY CONTROL POINTS.  
 NAD 1983 / 2011 (HORIZONTAL)  
 NAVD 1988 (VERTICAL)  
 411A N 542333.82 E 1345783.95 ELEV. 400.24  
 411B N 541494.29 E 1346924.86 ELEV. 402.05

### OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO THE BEGINNING OF THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

*Zachary C. Knight* 7-6-2019  
 OWNERS/DEVELOPERS SIGNATURE DATE

### DESIGN CERTIFICATION

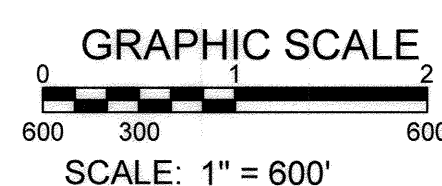
"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

*Guhua Wang* 07/11/2019  
 DESIGNERS SIGNATURE DATE

GUIHUA WANG  
 PRINTED NAME  
 MD REGISTRATION NO. 31363  
 (P.E./L.S. OR R.L.A. (CIRCLE ONE))

## AS-BUILT REPLACEMENT SHEET

PROFESSIONAL CERTIFICATION. 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. 31363, Expiration Date 01/16/2020.



KCI TECHNOLOGIES PROJECT NO. 131802366.14

Mar 05, 2020 - 2:38pm User: kavin.jackson M:\2019\131802366.14\Drawings\AS-Built\CAD Files\01\_1 Title Sheet\_ASBuilt.dwg

<b>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</b>	
DIRECTOR OF PUBLIC WORKS <i>[Signature]</i> 7/16/19 DATE	CHIEF, BUREAU OF ENGINEERING <i>[Signature]</i> 7/16/19 DATE
CHIEF, BUREAU OF UTILITIES <i>[Signature]</i> 7-17-19 DATE	CHIEF, UTILITY DESIGN DIVISION <i>[Signature]</i> 7/16/19 DATE

**KCI TECHNOLOGIES**  
 ENGINEERS  
 PLANNERS  
 SCIENTISTS  
 CONSTRUCTION MANAGERS  
 936 Ridgebrook Road  
 Sparks, MD 21152  
 Phone: (410) 316-7800  
 Fax: (410) 316-7817  
 www.kci.com

STATE OF MARYLAND  
**GUHUA WANG**  
 PROFESSIONAL ENGINEER  
 License No. 31363  
 03/05/2020

DES: KFJ			
DRN: KFJ			
CHK: JR			
DATE: MARCH 2020	BY: KFJ	AS-BUILT, RECORD DRAWING	3/5/20
	NO.	REVISION	DATE

TITLE SHEET	
600' SCALE MAP NO. 46	BLOCK NO. 6

<b>10489 GORMAN ROAD SEWER EXTENSION</b> CAPITAL PROJECT No. S6699 CONTRACT No. 30-5103 ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 4
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RKK21\SYS - \Baltimore\2017\17240\_HoCoConCall\Howard County\Task 5 - Woodleigh Drive Sewer Ext (S6699)\CAD\Plan\02-p01-n01\_WOODLEIGH DR.dwg Jan 23, 2020 - 3:32pm ENV:CTB Plot Scale 1=1 Plot By: rgreen Tab:G-02

**ABBREVIATIONS**

⊙	AT
ADA	AMERICANS WITH DISABILITIES ACT
APPROX.	APPROXIMATE
BGE	BALTIMORE GAS & ELECTRIC
BLDG.	BUILDING
B.M.	BENCHMARK
CE	CELLAR ELEVATION
CLR.	CLEAR
CNS	CELLAR NOT SERVED
C.O.	CLEANOUT
CONC.	CONCRETE
CONST.	CONSTRUCTION
CRZ	CRITICAL ROOT ZONE
D.	STORM DRAIN
DIA.	DIAMETER
DIP	DUCTILE IRON PIPE
DWG.	DRAWING
E	ELECTRIC, EAST
ELEV.	ELEVATION
EX.	EXISTING
FFE	FIRST FLOOR ELEVATION
F.O.	FIBEROPTIC
FF	FIRST FLOOR
FLG.	FLANGE
FM	FORCE MAIN
G.	GAS
G.P.M.	GALLONS PER MINUTE
HC	HOWARD COUNTY
HB	HORIZONTAL BEND
HOR.	HORIZONTAL
INV.	INVERT
ICBN	INTER-COUNTY BROADBAND NETWORK
JT.	JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
MDSHA	MARYLAND STATE HIGHWAY ADMINISTRATION
MJ.	MECHANICAL JOINT
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MPH	MILES PER HOUR
OH	OVERHEAD UTILITIES
PC	POINT OF CURVATURE
PCC	POINT OF CONTINUOUS CURVE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PE	PLAIN END
PI	POINT OF INTERSECTION
POL	POINT ON LINE
PROP.	PROPOSED
PRC	POINT OF REVERSE CURVE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
S.	SANITARY SEWER, SOUTH
SHC	SEWER HOUSE CONNECTION
S.S.	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
UG	UNDERGROUND UTILITIES
VB	VERTICAL BEND
VERT.	VERTICAL
W.	WATER (POTABLE), WEST
WHC	WATER HOUSE CONNECTION

**LEGEND**

<b>EXISTING</b>	
8" S (0556-0)	
Sanitary Sewer	
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
Sanitary Septic Well	
Water	
Water Fire Hydrant	
Water Valve	
Curb Stop	
Storm Drain	
Storm Drain Inlet	
Overhead Electric	
Underground Electric	
Utility Pole	
Light Pole	
Hand Box	
Underground Cable	
Underground Telephone	
Telephone Junction Box	
Gas	
Gas Valve	
Property Line (GIS)	
Property Line (Surveyed)	
Major Contours (Survey, 1-FT)	
Minor Contours (Survey, 1-FT)	
Tree Line or Woods	
Critical Root Zone	
Specimen Tree	
Non-Specimen Tree	
Survey Traverse Control	
Geodetic Survey Control	
	<b>PROPOSED</b>
8" S	
4" SHC	
Sanitary Sewer	
Sanitary Sewer Service Pipe	
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
Boring	
Limits of Disturbance	
Silt Fence	
Curb Inlet Protection	
5-Foot Construction Strip	

**HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES**

- A PRECONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOURS NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
  - PRIOR TO THE START OF EACH DISTURBANCE
  - UPON COMPLETION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING
  - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
  - PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
 OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH > 15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

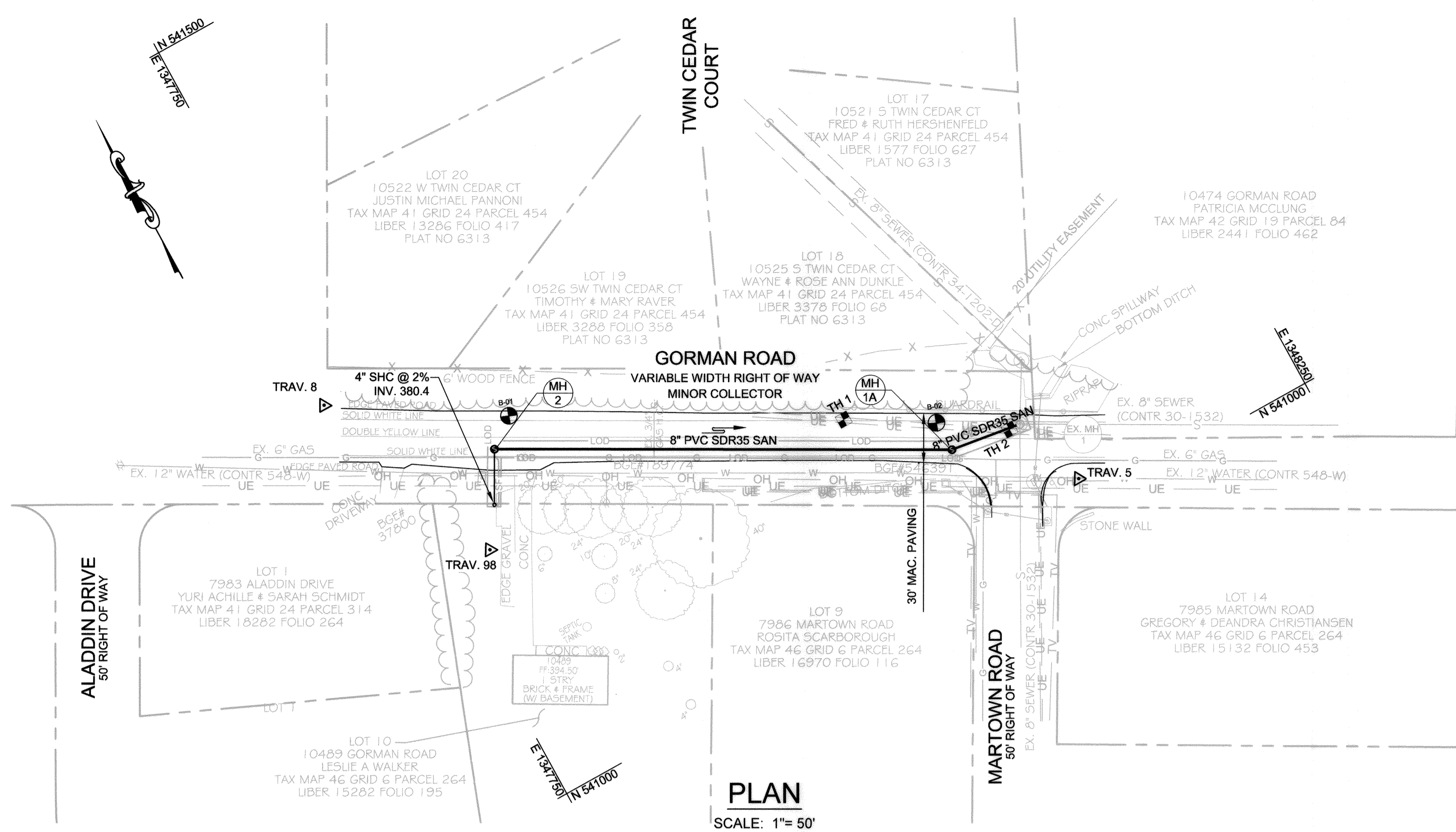
TOTAL AREA OF SITE:	0.14 ACRES	(LINEAR PUBLIC UTILITY PROJECT)
AREA DISTURBED:	0.14 ACRES	
AREA TO BE ROOFED OR PAVED:	0.12 ACRES	
AREA TO BE VEGETATIVELY STABILIZED:	0.02 ACRES	
TOTAL CUT:	1,978 CU. YDS.	
TOTAL FILL:	1,978 CU. YDS.	
SITE WITH AN ACTIVE GRADING PERMIT:	TO BE DETERMINED BY CONTRACTOR FOR EXCESS CUT/FILL	
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
  - INSPECTION DATE
  - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
  - NAME AND TITLE OF INSPECTOR
  - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
  - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
  - EVIDENCE OF SEDIMENT DISCHARGES
  - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
  - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
  - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
  - PHOTOGRAPHS
  - MONITORING/SAMPLING
  - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
  - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORM ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.
- ANY MAJOR CHANGES OR REVISIONS ON THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER LIST OF HSCD-APPROVED FIELD CHANGES.
- DISTURBANCE SHALL NOT OCCUR OUTSIDE THE LOD. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
- ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
- STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
  - USE I AND II: MARCH 1 - JUNE 15
  - USE III AND III: OCTOBER 1 - APRIL 30
  - USE IV: MARCH 1 - MAY 31
- A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

AS-BUILT

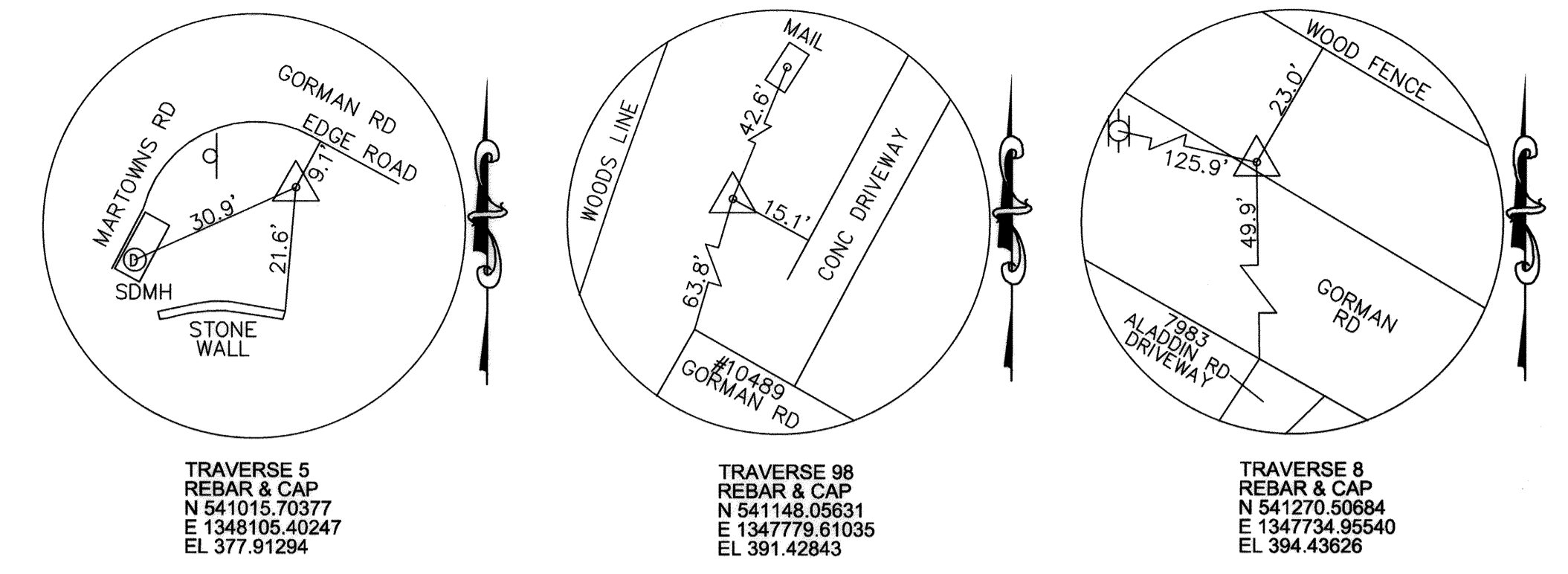
BY: ZK NIGHT, 11-24-2020

G-02

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>[Signature]</i> 1/31/2020 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>[Signature]</i> 1/31/2020 CHIEF, BUREAU OF UTILITIES DATE</p>	<p><b>RKK</b></p> <p>P: 410.728.2900 700 East Pratt Street, Suite 500   Baltimore, MD 21202</p> <p>Engineers   Construction Managers   Planners   Scientists www.rkk.com Responsive People   Creative Solutions</p>	<p>PROFESSIONAL CERTIFICATION: 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. 20566, EXPIRATION DATE: 09/06/2020.</p> <p><i>[Signature]</i> DATE: 01/29/2020</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>DES:</th><td>REG</td><th>BY:</th><td>NO.</td><th>NO.</th><td></td><th>REVISION</th><td></td><th>DATE</th><td></td></tr> <tr><td>DRN:</td><td>SCP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>CHK:</td><td>NKS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DATE:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	DES:	REG	BY:	NO.	NO.		REVISION		DATE		DRN:	SCP									CHK:	NKS									DATE:										<p>JANUARY 23, 2020</p> <p>ABBREVIATIONS, LEGEND AND HSCD STANDARD NOTES</p> <p>600' SCALE MAP NO. 35</p>	<p>PROJECT NO. S6699 CONTRACT NO. 20-5093</p> <p>WOODLEIGH DRIVE SEWER EXTENSION</p> <p>ELECTION DISTRICT NO. 4</p> <p>HOWARD COUNTY, MARYLAND</p>	<p>SCALE</p> <p>AS SHOWN</p> <p>SHEET NO.</p> <p>2 OF 6</p>
DES:	REG	BY:	NO.	NO.		REVISION		DATE																																						
DRN:	SCP																																													
CHK:	NKS																																													
DATE:																																														



**PLAN**  
SCALE: 1"= 50'



**STRUCTURE STAKE-OUT SCHEDULE**

DESCRIPTION	NORTHING	EASTING
2	541198.83	1347810.90
1A	541087.06	1348048.02
EX. MH 1	541080.77	1348090.64

**SOIL BORING SCHEDULE**

DESCRIPTION	NORTHING	EASTING	ELEVATION
B-01	541211.86	1347827.91	390.70
B-02	541085.38	1348047.57	380.36

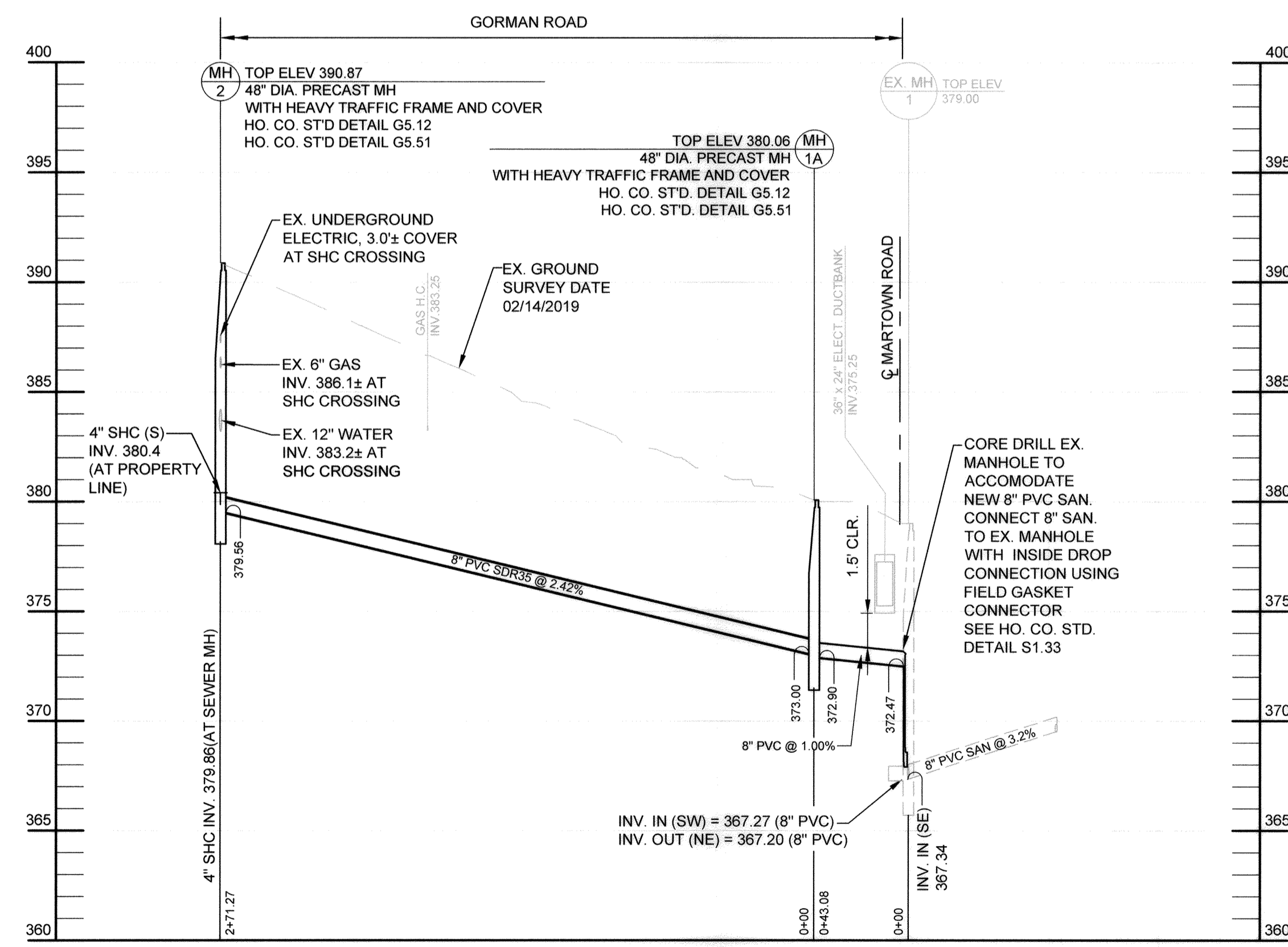
**SEWER HOUSE CONNECTION SCHEDULE**

SERVICE ADDRESS	BUILDING TYPE	SHC TYPE	PROP. SHC SIZE	SHC SLOPE	MINIMUM CELLAR ELEV. (FT.)	APPROX. LENGTH OF PROP. SHC (LF.)
10489 GORMAN ROAD	RESIDENTIAL	SHC	4"	2%	385.50	50'

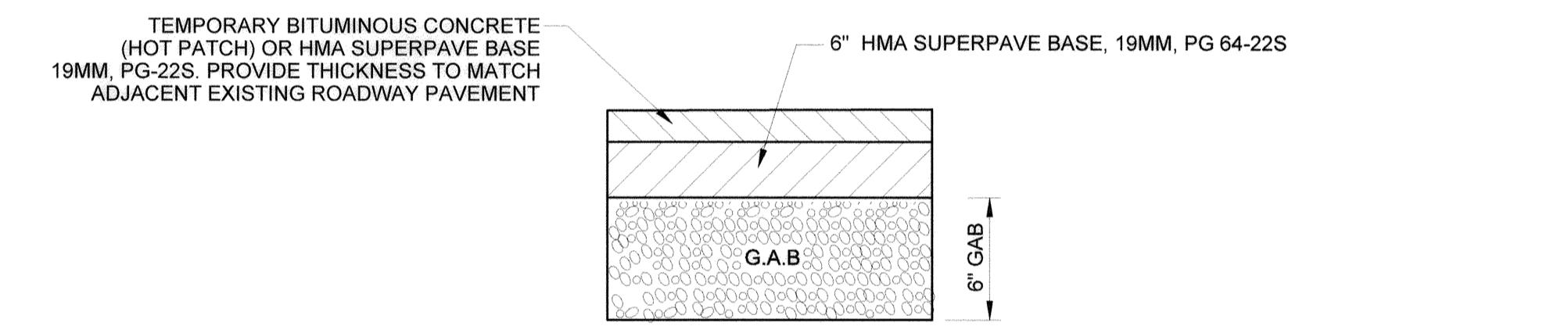
STANDARD DETAILS:  
S-2.11 SEWER HOUSE CONNECTION  
S-2.22 SEWER HOUSE CONNECTION CLEANOUT IN VEGETATED AREA

**GORMAN ROAD SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE**

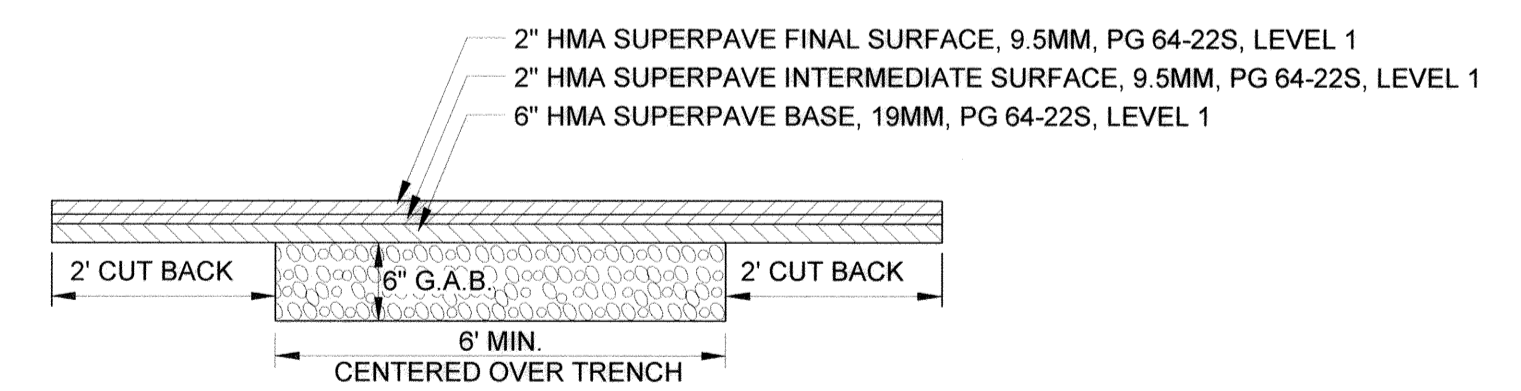
ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
10489 GORMAN ROAD	MH 1A TO EX. MH 1	CO TO BGE POLE #37800 = 44'



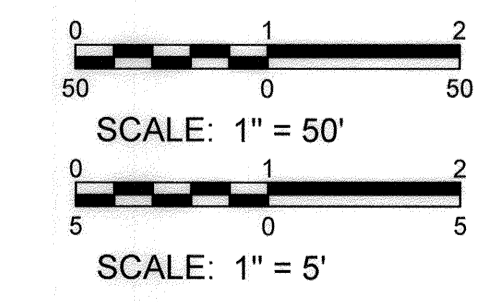
**PROFILE**  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



**DETAIL 1 - TEMPORARY UTILITY TRENCH PAVING RESTORATION**  
NOT TO SCALE  
FOR TRENCH DETAIL REFER TO HOWARD COUNTY STANDARD DETAIL G-2.12



**DETAIL 2 - PERMANENT UTILITY TRENCH PAVING RESTORATION**  
NOT TO SCALE  
REFER TO HOWARD COUNTY STANDARD DETAIL G-4.01 FOR ADDITIONAL NOTES  
FOR TRENCH DETAIL REFER TO HOWARD COUNTY STANDARD DETAIL G-2.12



PROFESSIONAL CERTIFICATION. 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. 31363, Expiration Date 01/16/2020.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 7/10/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 7-17-19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 7/16/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 7/16/19  
CHIEF, UTILITY DESIGN DIVISION DATE

ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

**KCI TECHNOLOGIES**

936 Ridgeway Road  
Sparks, MD 21152  
Phone: (410) 316-7800  
Fax: (410) 316-7817  
www.kci.com

STATE OF MARYLAND  
GUYA WALKER  
PROFESSIONAL ENGINEER  
03/05/2020

DES: Kfj  
DRN: Kfj  
CHK: JR

DATE: MARCH 2020

BY: NO.

REVISION

DATE: 3/5/20

600' SCALE MAP NO. 46

BLOCK NO. 6

**SEWER PLAN AND PROFILE**

**10489 GORMAN ROAD SEWER EXTENSION**

CAPITAL PROJECT No. S6699  
CONTRACT No. 30-5103

ELECTION DISTRICT NO. 6

HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 4

**SEWER PLAN NOTES:**

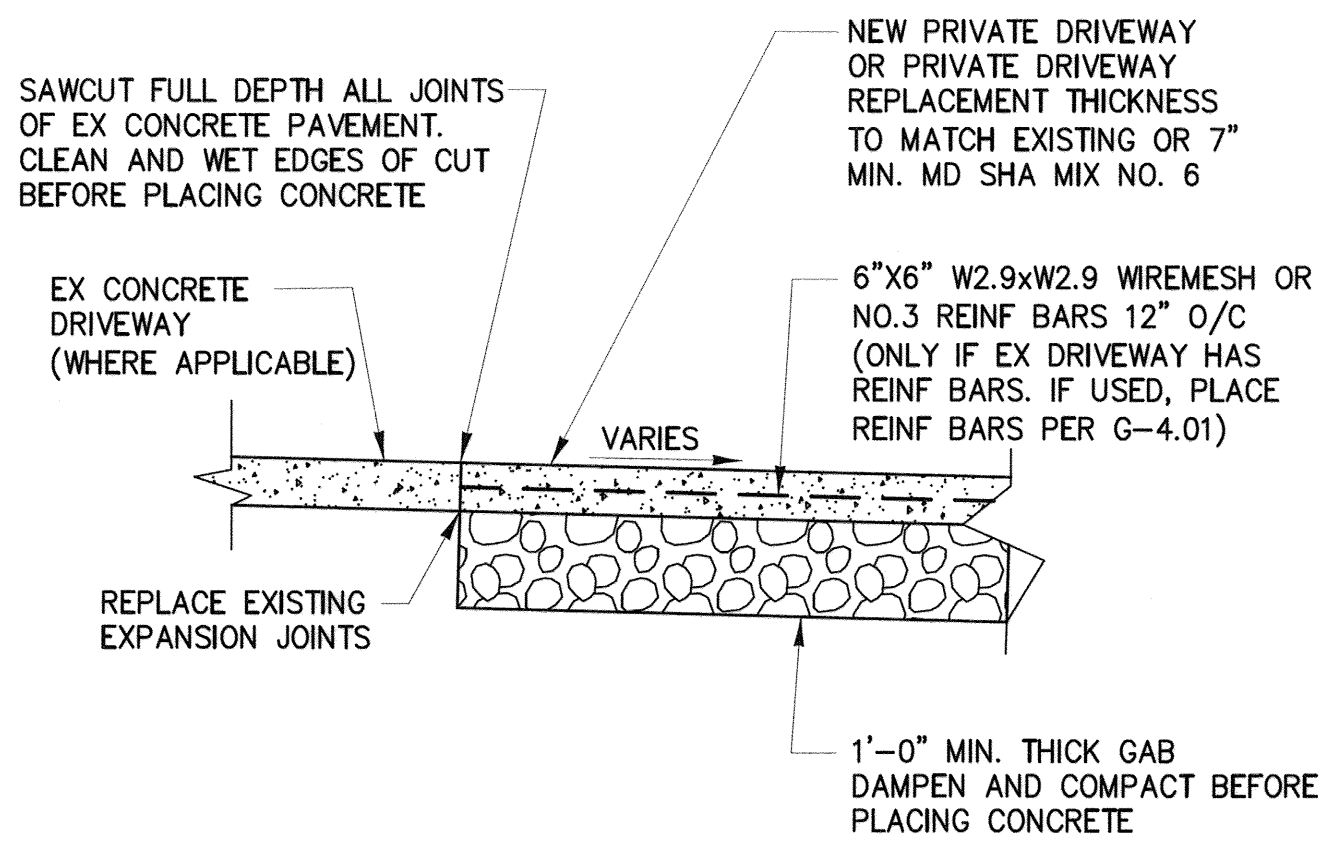
1. THE CONTRACTOR SHALL RESTORE UNPAVED AREAS DISTURBED WITHIN PUBLIC ROW AND EASEMENT WIDTHS WITH 3" MINIMUM OF WOOD CHIP MULCH.
2. THE CONTRACTOR SHALL REPAVE THE FULL WIDTH OF THE COMMON CONCRETE DRIVEWAY AND PRESERVE THE EXISTING DRAINAGE PATTERN. INDIVIDUAL DRIVEWAYS SHALL BE REPAVED TO THE NEAREST PAVEMENT JOINT. NEW DRIVEWAY AND DRIVEWAY RESTORATION SHALL BE PER THE DRIVEWAY PAVEMENT DETAIL ON THIS SHEET.
3. THE CONTRACTOR SHALL ABANDON A PORTION OF EXISTING #6323 SHC BY INSERTING A MECHANICAL PLUG A MINIMUM OF 12" INTO THE ABANDONED SHC. ALL SPACE AROUND THE PIPELINE BEHIND THE PLUG SHALL BE FILLED /SURROUNDED BY NON-SHRINK GROUT OR 2,500 PSI CONCRETE.
4. THE CONTRACTOR SHALL ABANDON EXISTING CLEANOUT BY FILLING CLEANOUT WITH NON-SHRINK GROUT OR 2,500 PSI CONCRETE AND DEMOLISHING CLEANOUT COVER AND PIPE TO A MINIMUM OF 3' BELOW FINISHED GRADE.
5. PRIOR TO ANY EXCAVATION WITHIN THE CRITICAL ROOT ZONE OF THE SPECIMEN TREES, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY SUFFICIENTLY IN ADVANCE (PREFERABLY AT THE PRE-CONSTRUCTION MEETING) AND OBTAIN APPROVAL OF THE PROPOSED MEANS AND METHODS TO MINIMIZE IMPACT TO THE SPECIMEN TREES. TREE PRUNING SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON ES-01.
6. THE CONTRACTOR SHALL NOT USE ROOT PRUNING AT SPECIMEN TREE T-5; ONLY AIR SPADING, HAND EXCAVATION AND/OR OTHER METHODS APPROVED BY THE COUNTY SHALL BE USED.

PROPOSED NEW DRIVEWAY EXTENSION PAVED PER DETAIL THIS SHEET. CONTRACTOR SHALL STAKEOUT CORNERS FOR RESIDENT APPROVAL PRIOR TO PAVING.

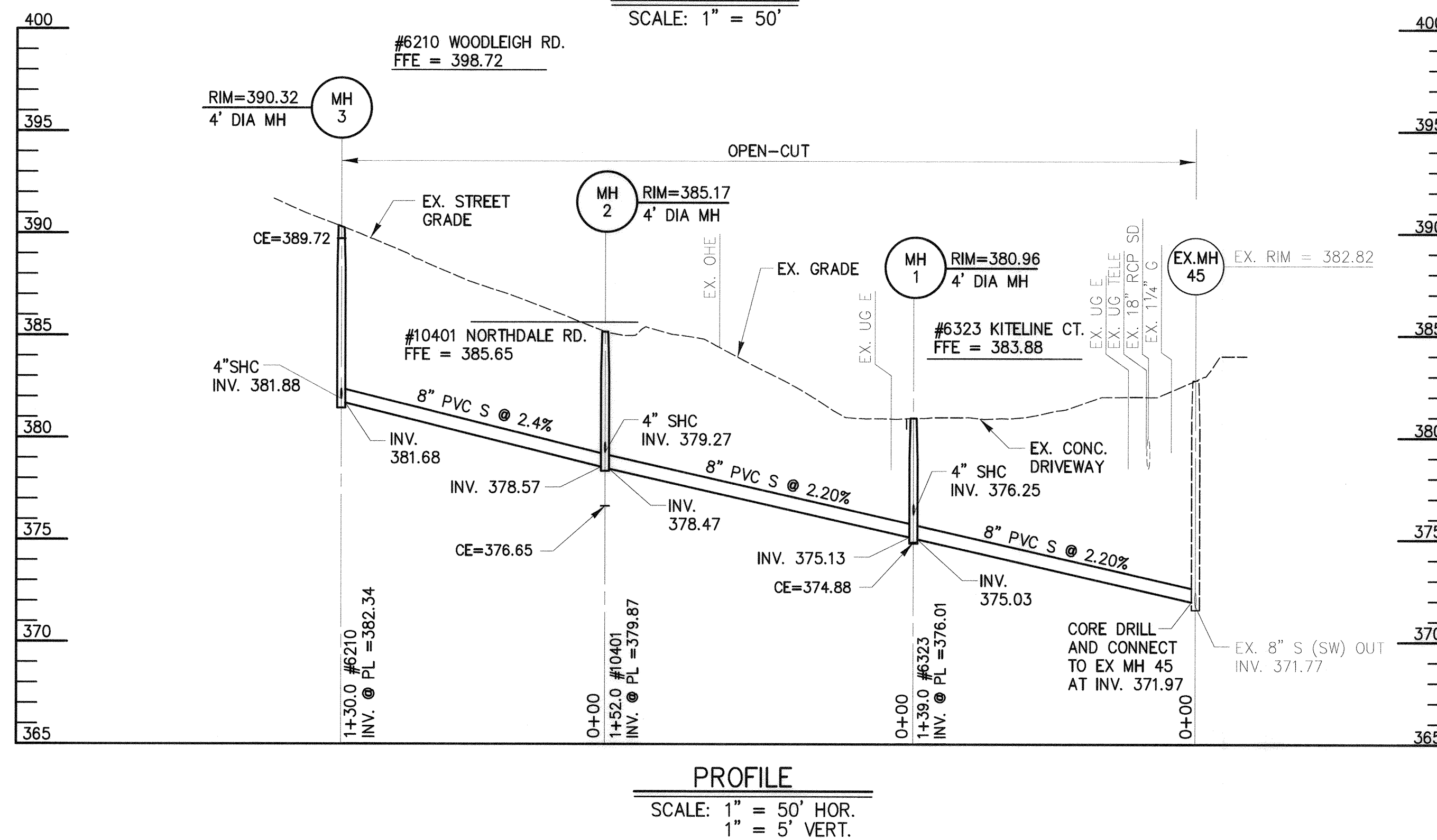
PROVIDE CAP ON ABANDONED SHC AND CLEANOUT TO BE ABANDONED ACCORDING TO NEW SHC ALIGNMENT

SEE NOTE 3 AND 4 EX. SHC AND CLEANOUT TO BE ABANDONED

16' PRIVATE SHARED ACCESS DRIVEWAY SEE NOTE 2.



**CONCRETE DRIVEWAY PAVEMENT DETAIL**  
SCALE: NTS



PROPERTY ADDRESS	FIRST FLOOR ELEVATION	ASSUMED CELLAR ELEVATION	PROP. SHC INVERT AT PROPERTY LINE	SERVICE TYPE	BUILDING TYPE	SHC SIZE	SHC SLOPE	APPROXIMATE SHC LENGTH
6210 WOODLEIGH DRIVE	398.72	389.72	382.34	CELLAR	RESIDENTIAL	4"	2%	22'
10401 NORTHDAL ROAD	385.65	376.65	379.87	FIRST FLOOR ONLY (CNS)	RESIDENTIAL	4"	2%	30'
6323 KITELINE COURT	383.88	374.88	375.38	FIRST FLOOR ONLY (CNS)	RESIDENTIAL	4"	2%	61'

PROPERTY ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
6210 WOODLEIGH DRIVE	MH 1 TO MH 2 TO MH 3	
10401 NORTHDAL ROAD		
6323 KITELINE COURT		

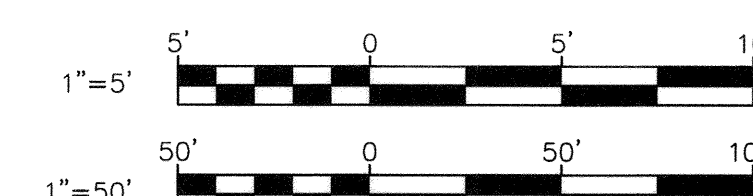
ID	COORDINATES		AS-BUILT		
	NORTH	EAST	NORTH	EAST	RIM ELEV
EX. MH 45	N 557,976.63	E 1,348,871.22			
MH 1	N 558,012.23	E 1,348,736.86			
MH 2	N 558,139.59	E 1,348,653.89			
MH 3	N 558,229.31	E 1,348,748.56			

Tree ID	Common Name	Scientific Name	DBH (Inches)
T-0	Northern red oak	<i>Quercus rubra</i>	28.1
T-1	Tulip poplar	<i>Liriodendron tulipifera</i>	43.2
T-2	Northern red oak	<i>Quercus rubra</i>	25.9
T-3	Tulip poplar	<i>Liriodendron tulipifera</i>	26.9
T-4	Tulip poplar	<i>Liriodendron tulipifera</i>	30.2
T-5	Pin oak	<i>Quercus palustris</i>	30.3
T-6	White Pine	<i>Pinus strobus</i>	33.6

BORING NUMBER	COORDINATES		GROUND ELEVATION
	NORTH	EAST	
B-1	N 557,978	E 1,348,864	383.00
B-2-1	N 557,998	E 1,348,738	381.00
B-2-2	N 558,012	E 1,348,719	381.00
B-3	N 558,139	E 1,348,653	385.00
B-4	N 558,260	E 1,348,780	392.00

ID/ ADDRESS	LOCATION DIMENSION 1	DIA. 1 LENGTH	LOCATION DIMENSION 2	DIA. 2 LENGTH
MH1	LEFT CORNER # 6323 (S.E.)	36 FT.	RIGHT CORNER #6323 (N.W.)	77 FT.
MH2	LEFT CORNER # 10401 (S.E.)	96 FT.	STREET SIGN "NORTHDAL RD." (NORTH)	37 FT.
MH3	LEFT CORNER # 6210 (S.W.)	99 FT.	LEFT CORNER #6210'S PORCH (S.W.)	116 FT.
6210 WOODLEIGH DRIVE c/o	LEFT CORNER #6210 (S.W.)	77 FT.	LEFT CORNER #6210'S PORCH (S.W.)	100 FT.
10401 NORTHDAL ROAD c/o	LEFT CORNER # 10401 (S.E.)	78 FT.	RIGHT CORNER #10401 (NORTH)	85 FT.
6323 KITELINE COURT c/o	LEFT CORNER #6323 (S.E.)	25 FT.	RIGHT CORNER #6323 (N.W.)	57 FT.

**AS-BUILT**  
BY: Z. KNIGHT, 11-24-2020



C-01

RPK21\Sys - \Baker05\2017\2017\17240\_Woodleigh Drive Sewer Ext (S6699)\CAD\Plan\03-p01-woodleigh DR.dwg Jun 28, 2020 - 5:48pm  
 ENV.CTB Plot Scale 1=1 Plot By: rgreen Tab: C-01

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* Date: 1-28-2020

Chief, Bureau of Engineering: *[Signature]* Date: 1-31-2020

Chief, Bureau of Utilities: *[Signature]* Date: 1-31-2020

Chief, Utility Design Division: *[Signature]* Date: 1-31-2020

**RK&K**

P: 410.728.2900  
700 East Pratt Street, Suite 500 | Baltimore, MD 21202

Engineers | Construction Managers | Planners | Scientists  
www.rk.com  
Responsive People | Creative Solutions

PROFESSIONAL CERTIFICATION:  
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. 20566  
EXPIRATION DATE: 09/06/2020

DES: REG  
BY: NO.  
REVISION  
DATE: 01/29/2020

DES	REG	BY	NO.	REVISION	DATE
DRN	SCP				
CHK	NKS				

JANUARY 23, 2020

SEWER PLAN AND PROFILE

600' SCALE MAP NO. 35 BLOCK NO. 18 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND

PROJECT NO. S6699  
CONTRACT NO. 20-5093

WOODLEIGH DRIVE SEWER EXTENSION

SCALE AS SHOWN  
SHEET NO. 3 OF 6

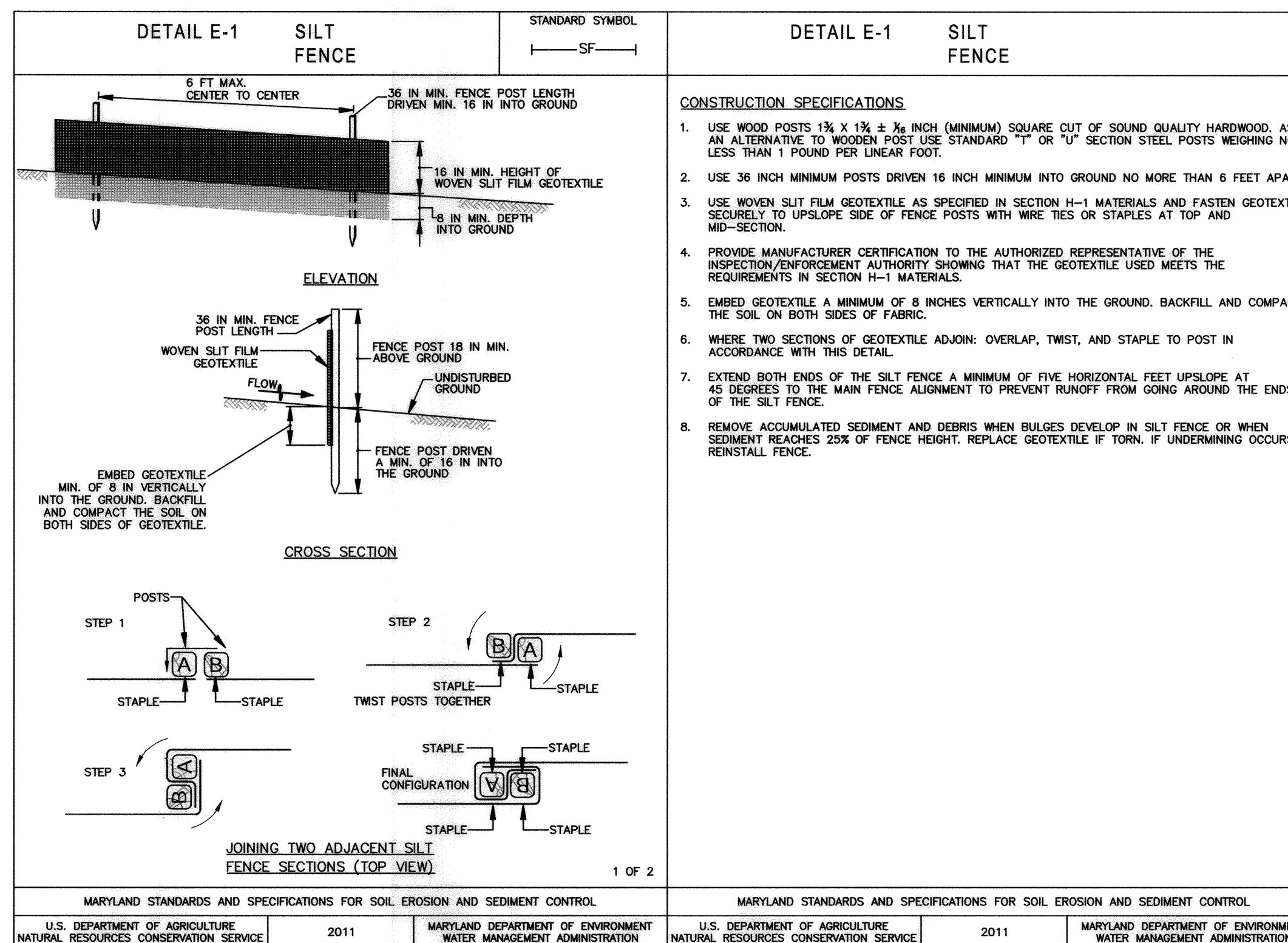
**HOWARD SOIL CONSERVATION DISTRICT (HSCD)  
STANDARD SEDIMENT CONTROL NOTES**

- A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
  - Prior to the start of earth disturbance,
  - Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,
  - Prior to the start of another phase of construction or opening of another grading unit,
  - Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).
- All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
- Site Analysis:
 

Total Area of Site:	0.05	Acres
Area Disturbed:	0.032	Acres
Area to be roofed or paved:	0.031	Acres
Area to be vegetatively stabilized:	0.001	Acres
Total Cut:	267	Cu. Yds.
Total Fill:	267	Cu. Yds.
Offsite waste/borrow area location:	CONTRACTOR COORDINATE	
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
  - Inspection type (routine, pre-storm event, during rain event)
  - Name and title of inspector
  - Weather information (current conditions as well as time and amount of last recorded precipitation)
  - Brief description of project's status (e.g., percent complete) and/or current activities
  - Evidence of sediment discharges
  - Identification of plan deficiencies
  - Identification of sediment controls that require maintenance
  - Identification of missing or improperly installed sediment controls
  - Compliance status regarding the sequence of construction and stabilization requirements
  - Photographs
  - Monitoring/sampling
  - Maintenance and/or corrective action performed
  - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
- Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.
  - Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.
  - Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.
  - Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
  - Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
  - All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.
  - Stream channels must not be disturbed during the following restricted time periods (inclusive):
    - Use I and IP March 1 - June 15
    - Use III and IIIIP October 1 - April 30
    - Use IV March 1 - May 31
  - A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.



**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE. (2 DAYS)
- REQUEST PRE-CONSTRUCTION MEETING ON-SITE WITH REPRESENTATIVE OF HOWARD COUNTY DPW CONSTRUCTION INSPECTION DIVISION. (1 DAY)
- IF NECESSARY, THE CONTRACTOR SHALL INSTALL SEDIMENT CONTROL DEVICES AT THE DIRECTION OF THE HOWARD DPW CID INSPECTOR.(1 DAY)
- EXCAVATE TRENCH TO THE GRADE SPECIFIED ON THE PROFILE, INSTALL SEWER MAIN AND BACKFILL AND STABILIZE TRENCH AND RESURFACE WITH BITUMINOUS PAVING AS APPROPRIATE (30 DAYS). TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO 3 LENGTHS OF PIPE OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER. AT THE END OF EACH WORK DAY, ALL VEGETATED AREAS DISTURBED DURING THE COURSE OF CONSTRUCTION SHALL BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE TEMPORARY SEEDING SUMMARY SHOWN ON SHEET 4 OF 4 AND THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, SECTION B-4-4. AT THE END OF EACH WORKING DAY ALL DISTURBED PAVING AREAS WITHIN THE EXISTING ROAD SHALL BE REPLACED WITH PERMANENT SUBGRADE AND BASE ASPHALT, THEN TEMPORARILY PATCHED, SEE TEMPORARY PAVING DETAIL ON SHEET 2 OF 4.
- UPON COMPLETION OF PIPE INSTALLATION AND INSPECTOR'S APPROVAL, PERMANENTLY STABILIZE ALL DISTURBED VEGETATED AREAS IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION SHOWN ON SHEET 4 OF 4 AND THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, SECTION B-4-5. (1 DAY)
- CLEAN UP CONSTRUCTION SITE. (1 DAY)
- REMOVE SEDIMENT CONTROL DEVICES AFTER SEED/MULCH HAS COMPLETED VEGETATIVE ESTABLISHMENTS AND THE HOWARD COUNTY CID INSPECTOR APPROVES THE REMOVAL. (1 DAY)

PROFESSIONAL CERTIFICATION. 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. 31363, Expiration Date 01/16/2020.

**AS-BUILT**  
DATE 03-05-2020

KCI TECHNOLOGIES PROJECT No. - 131802366-14

July 11, 2019 - 10:30am User: Kevin Jackson  
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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE 7/12/19  
CHIEF, BUREAU OF UTILITIES DATE 2-12-19

CHIEF, BUREAU OF ENGINEERING DATE 7/16/2019  
CHIEF, UTILITY DESIGN DIVISION DATE 7/16/19

ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

**KCI TECHNOLOGIES**

936 Ridgeway Road  
Sparks, MD 21152  
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FAX: (410) 316-7817  
www.kci.com

STATE OF MARYLAND  
GUTHRIE WALKER  
PROFESSIONAL ENGINEER  
No. 31363  
07/11/2019

DES: Kfj					
DRN: Kfj					
CHK: JR					
DATE: JULY 2019	BY	NO.	REVISION	DATE	

**EROSION & SEDIMENT CONTROL NOTES AND DETAILS**

600' SCALE MAP NO. 48 BLOCK NO. 6

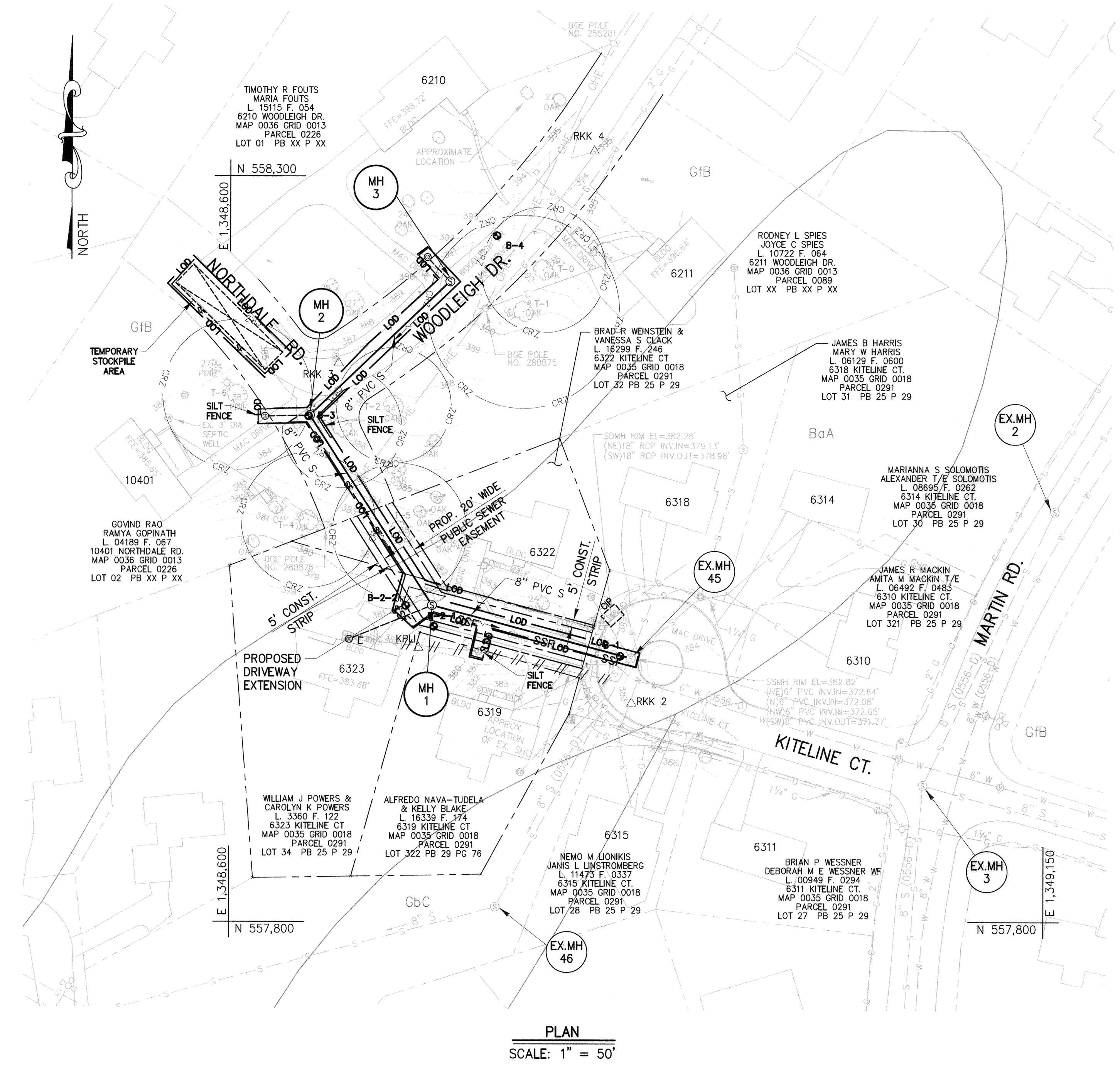
10489 GORMAN ROAD  
SEWER EXTENSION

CAPITAL PROJECT No. S6699  
CONTRACT No. 30-5103

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 3 OF 4

RKK21 (S) - \\baird05\2017\17240\_46\CoonCall\Howard County\Task 5 - Woodleigh Drive Sewer Ext (S6699)\CAD\Plan\04-46-ES-01-WOODLEIGH DR.dwg Jan 23, 2020 - 3:16pm ENV.CTB Plot Scale 1"=50' Plot By: rgreen Tab: ES-01



**PLAN**  
SCALE: 1" = 50'

**SUPPLEMENTAL EROSION AND SEDIMENT CONTROL NOTES**

- WORK MAY NOT COMMENCE UNTIL THE CONTRACTOR AND RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE COUNTY SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS.
- CONTRACTOR SHALL DIRECT ALL WATER PUMPED DURING TRENCH DEWATERING OPERATIONS TO AN APPROVED PORTABLE SEDIMENT TANK. CLEAN OUT TANK WHEN ONE-THIRD (1/3) FILLED WITH SILT. HAUL SEDIMENT TO A HOWARD COUNTY APPROVED SITE.
- NO EXCAVATED MATERIAL SHALL BE PLACED ON THE PRIVATE PROPERTIES ADJACENT TO THE TRENCH. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT THE DISTURBANCE OF EXISTING VEGETATED AREAS TO THE EXTENT POSSIBLE. ANY VEGETATED AREAS DISTURBED BY THE CONTRACTOR'S WORK OPERATIONS SHALL BE STABILIZED BY THE END OF THE WORK DAY AND RESTORED BY THE END OF THE PROJECT.
- STABILIZED CONSTRUCTION ENTRANCE (SCE) AND EQUIPMENT CLEANING AREA (ECA):  
  
THERE ARE NO SCEs INCLUDED IN THIS PROJECT. PROVIDE AN EQUIPMENT CLEANING AREA (ECA) DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER. REFER TO ECA DETAIL ON DRAWING ES-02 (SHEET 5 OF 6). REMOVE ACCUMULATED STONE AND SEDIMENT PRIOR TO DISMANTLING THE ECA.
- SEQUENCE OF CONSTRUCTION  
  
THE SEQUENCE OF CONSTRUCTION INCLUDED IN THESE PLANS IS APPROVED BY HOWARD COUNTY. THIS SEQUENCE OF CONSTRUCTION MAY BE MODIFIED BY THE CONTRACTOR. HOWEVER, THE CONTRACTOR MUST OBTAIN HOWARD COUNTY APPROVAL FOR ANY MODIFICATIONS PRIOR TO IMPLEMENTING A REVISED SEQUENCE OF CONSTRUCTION IN THE FIELD.  
  
NO DISTURBED AREAS SHALL BE LEFT UNSTABILIZED OVERNIGHT, UNLESS RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
- CONTRACTOR SHALL REMOVE SPOILS TO A SITE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PERMIT.

**SEQUENCE OF CONSTRUCTION**

- A PRECONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOURS NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
  - PRIOR TO THE START OF EACH DISTURBANCE
  - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING
  - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
  - PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
- INSTALL PERIMETER CONTROLS AS NECESSARY... ONE (1) DAY
- CONTACT CID PER 1.B ABOVE.
- PERFORM THE FOLLOWING SEQUENCE FOR EACH DAY OF UTILITY CONSTRUCTION OPERATIONS:
  - EXCAVATE AND INSTALL SANITARY SEWER AND APPURTENANCES. PLACE BACKFILL AND COMPACT. CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY.
  - PLACE SOIL ON UPHILL SIDE OF TRENCH.
  - PLACE TOPSOIL, FINE GRADE, SEED AND APPLY SOIL STABILIZATION MATTING AS REQUIRED TO DISTURBED AREA.
  - ALL ROADWAYS (PUBLIC & PRIVATE) ARE TO BE SWEEPED FREE OF DIRT AND DEBRIS.
  - ANY SEDIMENT LADEN WATER RESULTING FROM DEWATERING OPERATIONS SHALL BE DISCHARGED THROUGH A PORTABLE SEDIMENT TANK WHICH WILL NOT BE MEASURED FOR PAYMENT BUT SHALL BE CONSIDERED INCIDENTAL TO PROJECT CONSTRUCTION
- COMPLETE SEWER MAIN CONSTRUCTION... FIFTEEN (15) DAYS
- COMPLETE TIE-IN TO EXISTING SEWER MANHOLE... THREE (3) DAYS
- RESTORE PAVING AND SURROUNDING AREAS, CONTACT CID PER 1.C ABOVE... FIVE (5) DAYS
- ONCE THE PROJECT SITE IS STABILIZED AND CONTROLS CAN BE REMOVED, CONTACT CID PER 1.D ABOVE.
- REMOVE ANY REMAINING SEDIMENT CONTROLS AND STABILIZE AREAS DISTURBED BY REMOVAL OF SEDIMENT CONTROLS... ONE (1) DAY

**SOIL NOTES**

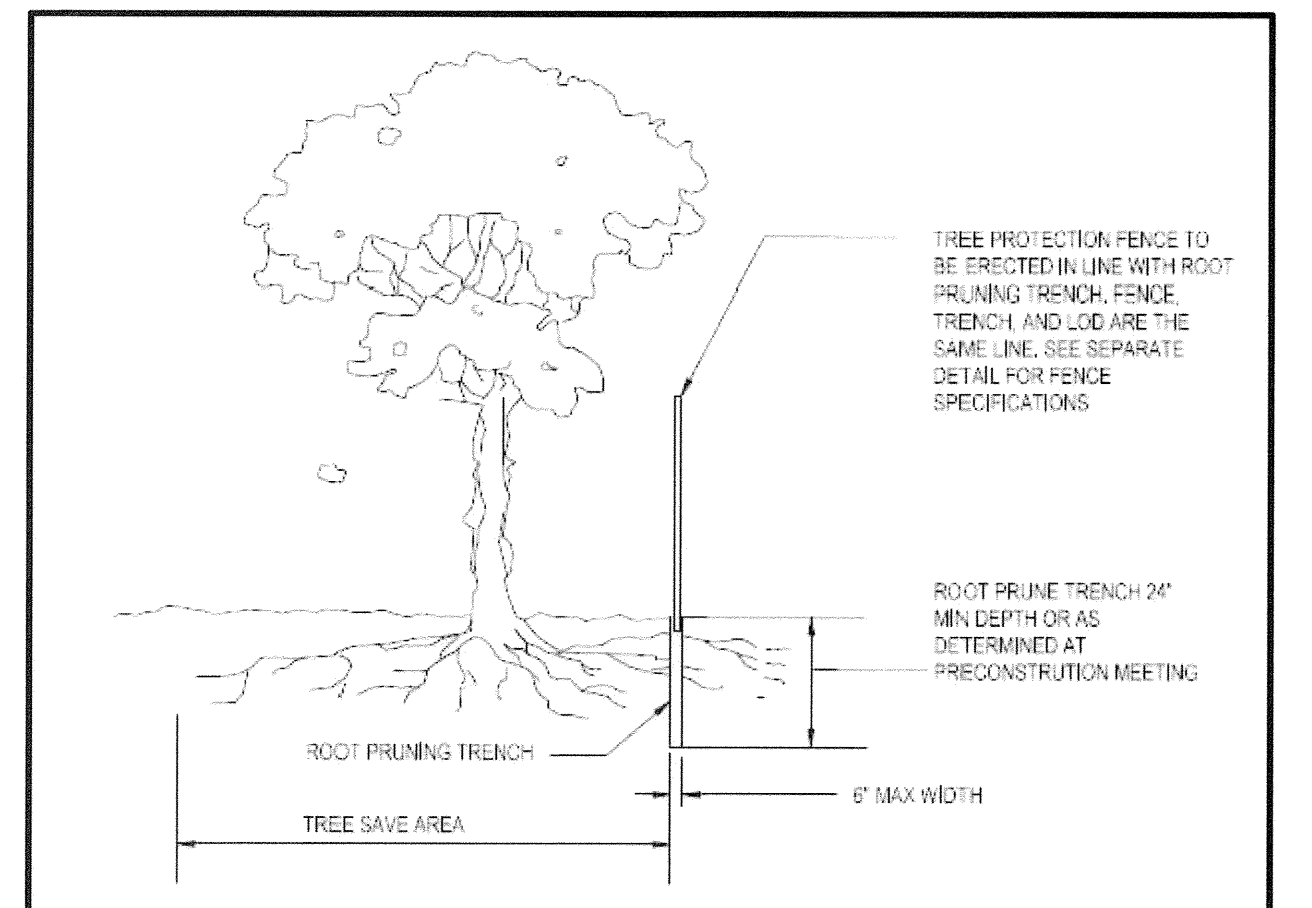
- SOIL DATA IS BASED ON THE WEB SOIL SURVEY WEBSITE BY THE USDA NATURAL RESOURCES CONSERVATION SERVICE:
  - GfB GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES Kw=0.28
  - BaA BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES Kw=0.37
  - GbC GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES Kw=0.28
- TOP SOIL SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST EDITION OF THE SHA STANDARD SPECIFICATIONS OF CONSTRUCTION AND MATERIALS. SECTION 920 - LANDSCAPING MATERIALS.

**UTILITY TRENCH SEDIMENT CONTROL PROCEDURES**

- EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
- IMMEDIATELY FOLLOWING PIPE INSTALLATION THE TRENCH SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY. SEE HSCD NOTE #9 ON DWG. G-02 (SHT 2 OF 6).
- TEMPORARY STEEL PLATES SHALL BE PLACED ON ANY DISTURBED AREA DAILY.

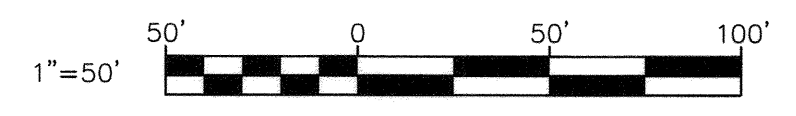
**PAVEMENT RESTORATION NOTE**

KITELINE COURT AND WOODLEIGH DRIVE ARE RESIDENTIAL ROADWAYS. REFER TO STANDARD DETAILS G-4.01 AND R-2.01, PAVING SECTION P-2 AND CBR 10 FOR RESTORATION OF THE ROADWAY AFTER THE SEWER EXTENSION IS COMPLETE.



- NOTES:**
- RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS AND PRECONSTRUCTION MEETING.
  - BOUNDARIES OF RETENTION AREAS MUST BE STAKED AT THE PRECONSTRUCTION MEETING AND FLAGGED PRIOR TO TRENCHING.
  - EXACT LOCATION OF TRENCH SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FOREST CONSERVATION (FC) INSPECTOR.
  - TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH EXCAVATED SOIL OR OTHER ORGANIC SOIL AS SPECIFIED PER PLAN OR BY THE FC INSPECTOR.
  - ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
  - ALL PRUNING MUST BE EXECUTED WITH LOD SHOWN ON PLANS OR AS AUTHORIZED IN WRITING BY THE FC INSPECTOR.
- \*ROOT PRUNING DETAIL  
\*ROOT PRUNING DOES NOT APPLY TO SPECIMEN TREE T-5

**AS-BUILT**  
BY: Z. KNIGHT, 11-24-2020



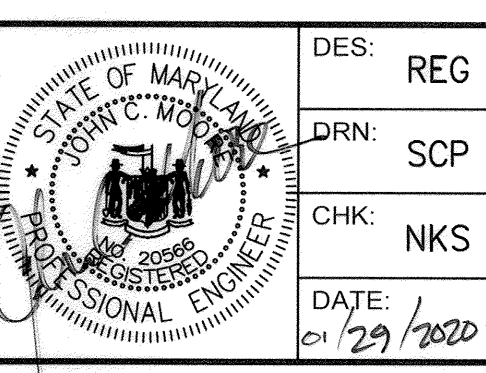
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *James J. ...* DATE: 2-29-2020  
 Chief, Bureau of Utilities: *...* DATE: *...*

Chief, Bureau of Engineering: *Thomas B. ...* DATE: 11/31/2020  
 Chief, Utility Design Division: *...* DATE: *...*

**RK K**  
P: 410.728.2900  
700 East Pratt Street, Suite 500 | Baltimore, MD 21202  
www.rkk.com  
Responsive People | Creative Solutions

PROFESSIONAL CERTIFICATION:  
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. 20566, EXPIRATION DATE: 09/06/2020.



DES:	REG:	BY:	NO.:	REVISION:	DATE:
DRN:	SCP:				
CHK:	NKS:				
DATE:					01/29/2020

JANUARY 23, 2020

EROSION AND SEDIMENT CONTROL PLAN

600' SCALE MAP NO. 35 BLOCK NO. 18

PROJECT NO. S6699  
CONTRACT NO. 20-5093

WOODLEIGH DRIVE SEWER EXTENSION

ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
SHEET NO. 4 OF 6

B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- A. Soil Preparation
1. Temporary Stabilization
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...

B-4-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

- A. Seeding
1. Specifications
a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory...

- c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring

- a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches...

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- 1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

Temporary Seeding Summary

Table with columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20), Lime Rate. Includes rows for ANNUAL RYEGRASS, BARLEY, OATS, FOXTAIL, and MILLET.

NOTES:

- 1/ Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.
2/ For sandy soils, plant seeds at twice the depth listed above.
3/ The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

B-4-5 STANDARDS AND SPECIFICATIONS

FOR

PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

- A. Seed Mixtures
1. General Use
a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found in Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

AS-BUILT
DATE 03-05-2020

- c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.

- d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures

- a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures

- Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

- d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Table with columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20) (N, P2O5, K2O), Lime Rate. Includes rows for TALL FESCUE, PERENNIAL RYEGRASS, WHITE CLOVER.

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications

- a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.

2. Sod Installation

- a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.

3. Sod Maintenance

- a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
c. Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

PROFESSIONAL CERTIFICATION. 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. 31383, Expiration Date 01/18/2020.

KCI TECHNOLOGIES PROJECT No. 131802366.14

July 11, 2019 - 10:36am User: Kevin Jackson... KCI TECHNOLOGIES

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS
CHIEF, BUREAU OF UTILITIES

ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
KCI TECHNOLOGIES
936 Ridgebrook Road
Sparks, MD 21152

STATE OF MARYLAND
PROFESSIONAL ENGINEER
07/11/2019

Table with columns: DES, DRN, CHK, DATE, BY, NO., REVISION, DATE

EROSION & SEDIMENT CONTROL NOTES
600' SCALE MAP NO. 46
BLOCK NO. 6

10489 GORMAN ROAD SEWER EXTENSION
CAPITAL PROJECT No. S6699
CONTRACT No. 30-5103
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN SHEET 4 OF 4



RKK21\SYS - \baser05\2017\17240\_HoCoonCall\Howard County\Task 5 - Woodleigh Drive Sewer Ext (S6699)\CAD\Plan\005-RES-002\_WOODLEIGH DR.dwg Jan 23, 2020 - 3:13pm  
 ENV/OTB Plot Scale 1=1 Plot By: rgreen Tab: ES-02

### DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = 1/4 ACRE

**CONSTRUCTION SPECIFICATIONS**

- USE NOMINAL 2 INCH x 4 INCH LUMBER
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
- ATTACH A CONTINUOUS PIECE OF 1/4 INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
- PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH), EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
- INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
- FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
- AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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### DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: TSSMS - 2.25 lb/ft<sup>2</sup> (\* INCLUDE SHEAR STRESS)

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
- UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYS AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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### DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: PSSMS - 2.25 lb/ft<sup>2</sup> (\* INCLUDE SHEAR STRESS)

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING DOWN SLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYS AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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### DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL: PST

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
- USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, 1/4 INCH HARDWARE CLOTH.
- OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
- ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
- USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE.
- INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
- PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
- A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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### DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

**CONSTRUCTION SPECIFICATIONS**

- USE WOOD POSTS 1 1/2 x 1 1/2 x 1/4 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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### DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

**CONSTRUCTION SPECIFICATIONS**

- USE WOOD POSTS 1 1/2 x 1 1/2 x 1/4 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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### DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL: SFOP

**CONSTRUCTION SPECIFICATIONS**

- USE NOMINAL 2 INCH x 4 INCH LUMBER.
- USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
- PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
- KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
- PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
- SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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### U-SHAPED EQUIPMENT CLEANING AREA

**NOTES:**

- SFOP TO MEET DETAIL E-2 AND CONSTRUCTION SPECIFICATIONS THEREOF.
- ECA TO BE PLACED AT LOWEST END OF LOD AND CLEANED DAILY.
- IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING.
- CID MAY WAIVE INSTALLATION OF ECA WHERE INSPECTOR ACCEPTS SAME-DAY STABILIZATION WITH SEED/SSM OR SOD.

**AS-BUILT**  
BY: Z. KNIGHT, 11-24-2020

1"=50' 0 50' 100'

ES-02

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* DATE: 1-29-2020  
 Chief, Bureau of Utilities: *[Signature]* DATE: 1-29-2020

Chief, Bureau of Engineering: *[Signature]* DATE: 1-31-2020  
 Chief, Utility Design Division: *[Signature]* DATE: 2-3-2020

**RK&K**  
 P: 410.728.2900  
 700 East Pratt Street, Suite 500 | Baltimore, MD 21202  
 Engineers | Construction Managers | Planners | Scientists  
 www.rkk.com  
 Responsive People | Creative Solutions

PROFESSIONAL CERTIFICATION:  
 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. 20566  
 EXPIRATION DATE: 09/06/2020

DES: REG  
 BY NO. \_\_\_\_\_  
 DRN: SCP  
 CHK: NKS  
 DATE: 01/29/2020

REVISION	DATE

JANUARY 23, 2020

EROSION AND SEDIMENT CONTROL DETAILS

600' SCALE MAP NO. 35

PROJECT NO. S6699  
 CONTRACT NO. 20-5093

WOODLEIGH DRIVE SEWER EXTENSION

ELECTION DISTRICT NO. 4

HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
 SHEET NO. 5 OF 6

