

GENERAL CONSTRUCTION NOTES

- CONSTRUCTION OF THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS AND DETAILS FOR WATER MAINS AND SANITARY SEWERS OF THE HARFORD COUNTY DEPARTMENT OF PUBLIC WORKS AND WITH THE CONTRACT PLANS AND SPECIFICATIONS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MARYLAND OCCUPATIONAL SAFETY LAWS. SEE HARFORD COUNTY STANDARD SPECIFICATIONS. ALL MATERIALS USED ON THIS PROJECT SHALL BE LISTED IN THE APPROVED MATERIALS LIST AS IDENTIFIED IN THE RULES AND REGULATIONS OF THE DIVISION OF WATER AND SEWER.
- ALL WORK WITHIN THE HARFORD COUNTY ROAD RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS AND THE HARFORD COUNTY ROAD CODE REQUIREMENTS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION. ALL LOCATION MARKINGS FOR WATER AND SEWER LINES WILL BE PROVIDED THROUGH A REQUEST TO THE MISS UTILITY ONE CALL SYSTEM BY THE HARFORD COUNTY DIVISION OF WATER AND SEWER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REFERENCE AND MAINTAIN THE LOCATION MARKINGS DURING THE CONSTRUCTION OF THE PROJECT. IN THE EVENT THAT A UTILITY LOCATION NEEDS TO BE RE-ESTABLISHED BY HARFORD COUNTY, THE COST TO PROVIDE THIS SHALL BE BORNE BY THE CONTRACTOR.
- EXISTING UTILITIES ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR AND THE COMPLETENESS OR ACCURACY OF THE SAME IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES BEFORE TRENCH EXCAVATION BEGINS. HE SHALL PROTECT SERVICE CONNECTIONS AND MAINTAIN THEIR UNINTERRUPTED SERVICE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY. THE COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR.
- COORDINATES SHOWN ON THIS CONTRACT REFER TO THE MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83 (CORS96) AND ARE BASED ON HARFORD COUNTY MONUMENT "FAIRWAY", N673,034.07, E1,510,438.42. ELEVATIONS SHOWN HEREON ARE REFERRED TO NAVD 88 WITH LOCAL REFERENCE TO HARFORD COUNTY MONUMENT "FAIRWAY", ELEVATION 315.62.
- ALL STAKING, RESTAKING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED AND LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTOR'S OR OWNERS EXPENSE, INCLUDING HOUSE SERVICES.
- ALL PIPE ELEVATIONS ARE TO INVERT OF PIPE, UNLESS OTHERWISE SPECIFIED.
- TRAFFIC CONTROL SHALL BE AS SHOWN ON THESE PLANS AND/OR AS SPECIFIED BY THE HARFORD COUNTY UTILITY PERMIT. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- EXISTING MAILBOXES TO BE DISTURBED BY CONSTRUCTION SHALL BE MOVED TO A TEMPORARY LOCATION UNTIL CONSTRUCTION IN THE AREA IS COMPLETED, AT WHICH TIME THEY SHALL BE RELOCATED BACK TO THEIR PERMANENT LOCATION. TEMPORARY AND FINAL LOCATIONS SHALL MEET THE APPROVAL OF THE PROPERTY OWNER AND POSTMASTER.
- ALL FILL WITHIN HA. CO. IMPROVED EASEMENTS SHALL MEET HA. CO. SPECIFICATIONS FOR ROADWAY AND UTILITY TRENCH FILL.
- ALL AREAS DISTURBED FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTS PRIOR TO START OF CONSTRUCTION. ROADSIDE DRAINAGE DITCHES, CULVERTS, AND UNDERDRAINS WHICH ARE DAMAGED OR DESTROYED BY CONSTRUCTION, SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTS PRIOR TO THE START OF CONSTRUCTION. THE COST OF ANY RESTORATION SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL VIDEOTAPE THE PROJECT AREA AS DETAILED IN THE SPECIFICATIONS FOR THE PURPOSE OF DOCUMENTING PRE-CONSTRUCTION CONDITIONS. A DVD MUST BE SUBMITTED AT THE PRE-CONSTRUCTION MEETING.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO ORDERING MATERIALS.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM THE WORK IN SUCH A MANNER AS TO PREVENT THE WASHING OF ANY TOPSOIL, SILT OR DEBRIS ONTO ADJACENT PROPERTY.
- DAMAGE TO ANY EXISTING ENTRANCES, CURB AND GUTTER, SIDEWALK, OR PAVEMENT WITHIN COUNTY RIGHT-OF-WAY NOT PROPOSED TO BE DISTURBED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE REPAIRED TO THE SATISFACTION OF THE COUNTY AND ADJOINING OWNERS THAT MAY BE AFFECTED.
- A GRADING PERMIT IS TO BE OBTAINED FROM HARFORD COUNTY PRIOR TO THE START OF ANY GRADING ACTIVITIES.
- DESIGN FLOW OF THE INTERCEPTOR SEWER IS 23.2 MGD. ALL SEGMENTS OF SEWER CONSTRUCTED UNDER THIS CONTRACT SHALL HAVE A CAPACITY EQUAL TO OR GREATER THAN THE DESIGN FLOW.
- THE INSPECTOR SHALL VERIFY THAT THE MANHOLES, TO WHICH CONNECTIONS ARE PROPOSED, MEET COUNTY STANDARDS UPON COMPLETION OF CONSTRUCTION ACTIVITIES, IF NOT THE MANHOLES SHALL BE REBURIED ACCORDINGLY.
- SEWERAGE FLOW IN THE EXISTING SEWERS SHALL BE MAINTAINED AT ALL TIMES DURING WORK. PUMPING OF SEWAGE MAY BE REQUIRED. DISCHARGE OF SEWAGE ON LAND OR IN WATERWAYS IS STRICTLY PROHIBITED.
- ABANDONMENT OF THE EXISTING SEWER AND MANHOLES SHALL INCLUDE PROPER DISPOSAL OF SEWAGE IN THE PIPE PRIOR TO PLUGGING OF THE SEWER OR BACKFILLING OF THE MANHOLES.
- NO IN-STREAM WORK SHALL BE PERFORMED IN BYNUM RUN BETWEEN THE DATES OF MARCH 1 THROUGH JUNE 15.
- THE CONTRACTOR SHALL USE PUMP AROUNDS FOR ALL CONNECTIONS POINTS TO EXISTING SEWERS. PUMP AROUND PLANS AND PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE WAS MAINTENANCE DEPT. SHALL BE CONTACTED PRIOR TO PUMP OPERATIONS.

24. BENCH MARK: FAIRWAY SINGER MALL  
 N 673,034.07 N 861,345.10 N 877,491.95  
 E 1,510,438.42 E 1,504,303.87 E 1,494,171.07  
 ELEV. 315.62 ELEV. 216.53 ELEV. 363.62  
 DATUM: HORIZONTAL: NAD 83 (CORS96)  
 VERTICAL: NAVD 88

HARFORD COUNTY LEGEND

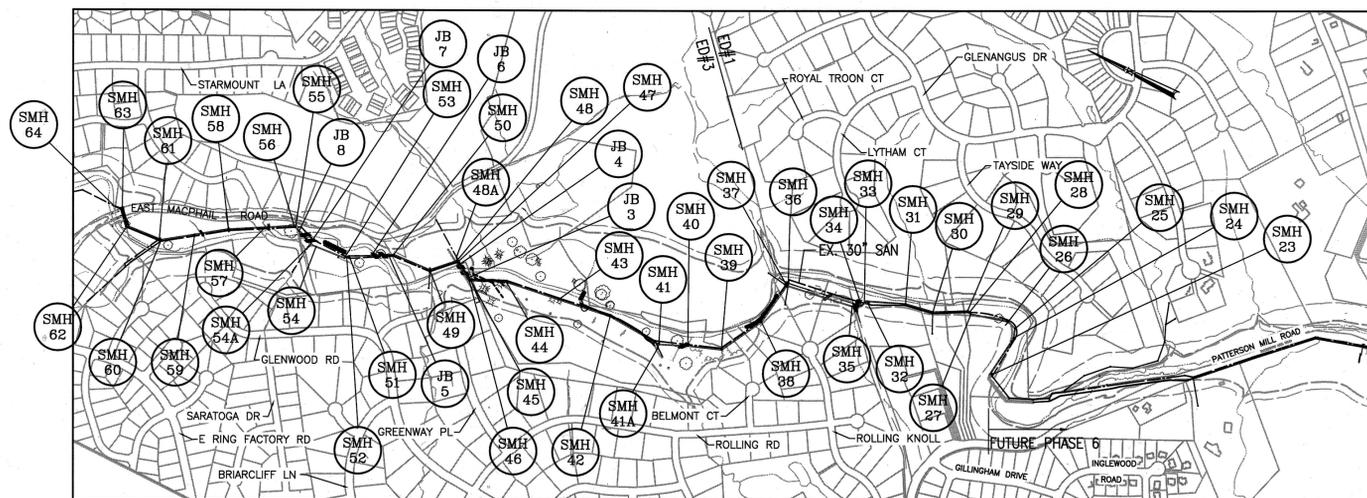
- EXISTING CONTOUR
- FUTURE CONTOUR
- PROPOSED CONTOUR
- EXISTING STREAM
- EXISTING WOODS LINE
- EXISTING WETLAND
- EXISTING 25' WETLAND BUFFER
- EXISTING 75' WETLAND BUFFER
- LIMIT OF FOREST RETENTION
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT-OF-WAY LINE
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER W/SHADING
- FUTURE SANITARY SEWER
- EXISTING WATER LINE
- LIMIT OF NONTIDAL WETLANDS
- TEST PIT
- BENCH MARK
- SOIL BORING LOCATION

SEDIMENT CONTROL NOTES

- ALL SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN FOR THE SITE PRIOR TO ACCORDANCE WITH "STANDARDS AND SPECIFICATIONS" FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS. NO MAJOR OPERATIONS WILL BE CARRIED ON PRIOR TO THE COMPLETION OF THESE CONTROL MEASURES WITHOUT WRITTEN AUTHORIZATION FROM THE HARFORD COUNTY SOIL CONSERVATION DISTRICT.
- LIMING, FERTILIZING, SEEDING, MULCHING, SODDING, ETC. WHERE SPECIFIED ARE AN ESSENTIAL PART OF SEDIMENT CONTROL AND MUST BE COMPLETED ALONG WITH THE OTHER MEASURES.
- ALL DISTURBED AREAS SHALL BE LIMED, SEEDED, AND MULCHED.
- WHEN SHOWN ON THE SEDIMENT CONTROL PLAN AND AS DEEMED NECESSARY BY THE INSPECTOR, DIKES, DIVERSIONS, LEVEL RIDGES, ETC. WILL BE INSTALLED AT THE APPROPRIATE LOCATIONS SO AS TO PROVIDE ADEQUATE SEDIMENT CONTROL.
- FOR SEDIMENT CONTROL MEASURES, SEE THESE PLANS.

# BYNUM RUN INTERCEPTOR SEWER PHASE 7

## SEWER CONTRACT NO. 6703



LOCATION MAP  
SCALE: 1" = 600'



# HARFORD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
TIMOTHY F. WHITTIE, P.E.  
DIRECTOR

"I HEREBY CERTIFY THAT THE "AS-BUILT" DRAWINGS CORRECTLY SHOW THE HORIZONTAL AND VERTICAL LOCATION OF THE WATER AND SEWER STRUCTURES AND APPURTENANCES. CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND AS-BUILT SURVEYS WHICH ARE CONDUCTED AFTER THE WATER AND SEWER UTILITIES ARE CONSTRUCTED. THE ONSITE INSPECTIONS AND AS-BUILT SURVEYS ARE THOSE VISUAL OBSERVATIONS AND SURVEYS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER, NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES."

SURVEY DATE: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ P.E. NUMBER: \_\_\_\_\_ DATE: \_\_\_\_\_

SEAL: \_\_\_\_\_

"I HEREBY CERTIFY THAT ANY AND ALL AS-BUILT INFORMATION IS SHOWN IN RED AND THE ORIGINAL DESIGN, WHICH IS SHOWN IN BLACK, HAS NOT CHANGED FROM THE ORIGINALLY APPROVED SET OF CONTRACT DRAWINGS."

SIGNATURE: \_\_\_\_\_ P.E. NUMBER: \_\_\_\_\_ DATE: \_\_\_\_\_

SEAL: \_\_\_\_\_

SHEET INDEX

No.	DESCRIPTION	18	19	20	21	22	23
1	COVER SHEET						
2	KEY SHEET						
3	PLAN & PROFILE						
4	PLAN & PROFILE						
5	PLAN & PROFILE						
6	PLAN & PROFILE						
7	PLAN & PROFILE						
8	PLAN & PROFILE						
9	NOTES AND DETAILS						
10	DETAILS FOR JUNCTION BOXES						
11	EROSION & SEDIMENT CONTROL PLAN DETAILS						
12	EROSION & SEDIMENT CONTROL PLAN LIMIT OF DISTURBANCE						
13	EROSION & SEDIMENT CONTROL PLAN						
14	EROSION & SEDIMENT CONTROL PLAN						
15	EROSION & SEDIMENT CONTROL PLAN						
16	IMBRICATED RIP-RAP DETAILS						
17	TRAFFIC CONTROL PLAN						

LIST OF MATERIALS

ITEM	QUANTITY	UNITS	AS-BUILT QUANTITY	MANUFACTURER
<b>SEWER</b>				
42" SANITARY SEWER	6,704	LF		
36" SANITARY SEWER	429	LF		
24" SANITARY SEWER	15	LF		
12" SANITARY SEWER	31	LF		
8" SANITARY SEWER	65	LF		
6" SANITARY SEWER	106	LF		
30" D.I.P. SANITARY SEWER	23	LF		
30" R.J. DIP INVERTED SIPHON	663	LF		
30" D.I.P. R.J. 1/32 BENDS	24	EACH		
48" I.D. PRECAST MANHOLE	24	VF		
72" I.D. PRECAST MANHOLE	418	VF		
96" I.D. PRECAST MANHOLE	88	VF		
24" LOCKING WATERTIGHT FRAME AND COVER (PLATE S-17)	45	EACH		
CONCRETE JUNCTION BOX	6	EACH		
60" STEEL SLEEVE	75	LF		
<b>WATER</b>				
20" D.I.P. R.J. WATERMAIN	80	LF		
20" D.I.P. R.J. 1/8 BENDS	7	EACH		

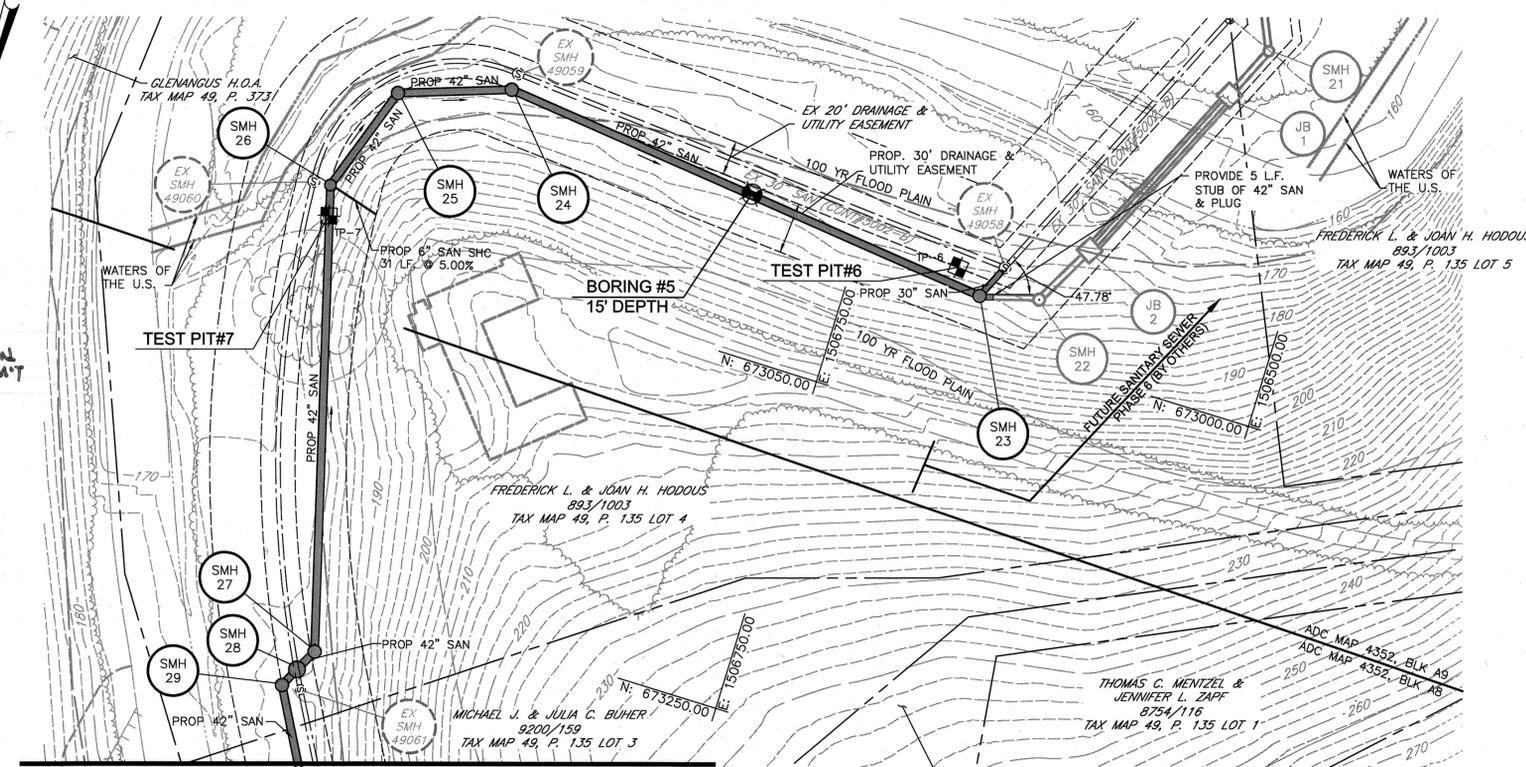
SURVEY DATE: 11/15/2011

OWNER/DEVELOPER HARFORD COUNTY DPW DIV. OF WATER & SEWER 145 N. HICKORY AVE. BEL AIR, MD 21014 ATTN: DARRYL IVINS 410-638-3300		 BRUCE T. BEASMAN 3/20/14	
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. 18162 EXPIRATION DATE: 02/21/2015 SIGNATURE: BRUCE T. BEASMAN DATE: 3/20/14		APPROVED: _____ REV. No. _____ DATE: _____ REVISION: _____ BY: _____ PLANNING: <i>W.D. 3-31-14</i> MAINTENANCE CHIEF: <i>RJR 3-25-14</i> PROPERTY MANAGEMENT: <i>W.D. 1-9-15</i> SEDIMENT CONTROL: <i>W.D. 03/24/14</i> ENGINEERING OPERATIONS CHIEF: <i>W.D. 03/24/14</i> CONST. MGMT.: <i>W.D. 3-28-14</i> TRAFFIC CONTROL: <i>W.D. 03/24/14</i>	
AS-BUILT PER INSPECTOR TRANS. BY: _____ DATE: _____ RESIDENT INSPECTOR: _____		TAX MAP 49 & 56 ADC MAP No. 4351 & 4352 ADC GRID of 23 SHEET No. 1 of 23 JOB No. 2101064.00.00	

M:\PROJECTS\2101064.00\BYNUM RUN INTERCEPTOR SEWER PHASES 6 & 7\ENGINEERS\CAD\FINAL ALIGNMENT PLANS\SHEETS\SW-1-TITLE-SHEET.DWG, TITLE SHEET, 3/20/2014 1:47 PM.rvt



**NOTE:**  
CONTRACTOR SHALL LOCATE EX. SEWER SERVICE TO P.135 LOT 4 & CONNECT TO NEW SEWER AS SHOWN. A NEW CLEANOUT SHALL BE INSTALLED AT THE CSMT LINE IN ACCORDANCE WITH CO STD SEWER DTLS.



MATCHLINE @ SMH 29  
(SEE SHEET 4 FOR CONTINUATION)  
PLAN  
SCALE: 1" = 50'

SANITARY SEWER STRUCTURE SCHEDULE				
EX SMH 49058 TO SMH 29		AS BUILT		
NO.	NORTHING	EASTING	NORTHING	EASTING
23	N:672973.67	E:1506673.26		
24	N:672940.38	E:1506970.61		
25	N:672962.13	E:1507033.82		
26	N:673025.06	E:1507055.73		
27	N:673287.96	E:1506984.14		
28	N:673300.96	E:1506990.89		
29	N:673312.34	E:1506996.56		

NOTE: ALL MANHOLES SHALL RECEIVE WATER TIGHT FRAME AND COVER (HA.CO. PLATE S-17). TOPS OF ALL MANHOLES SHALL BE 3'-0" ABOVE FINISHED GRADE.

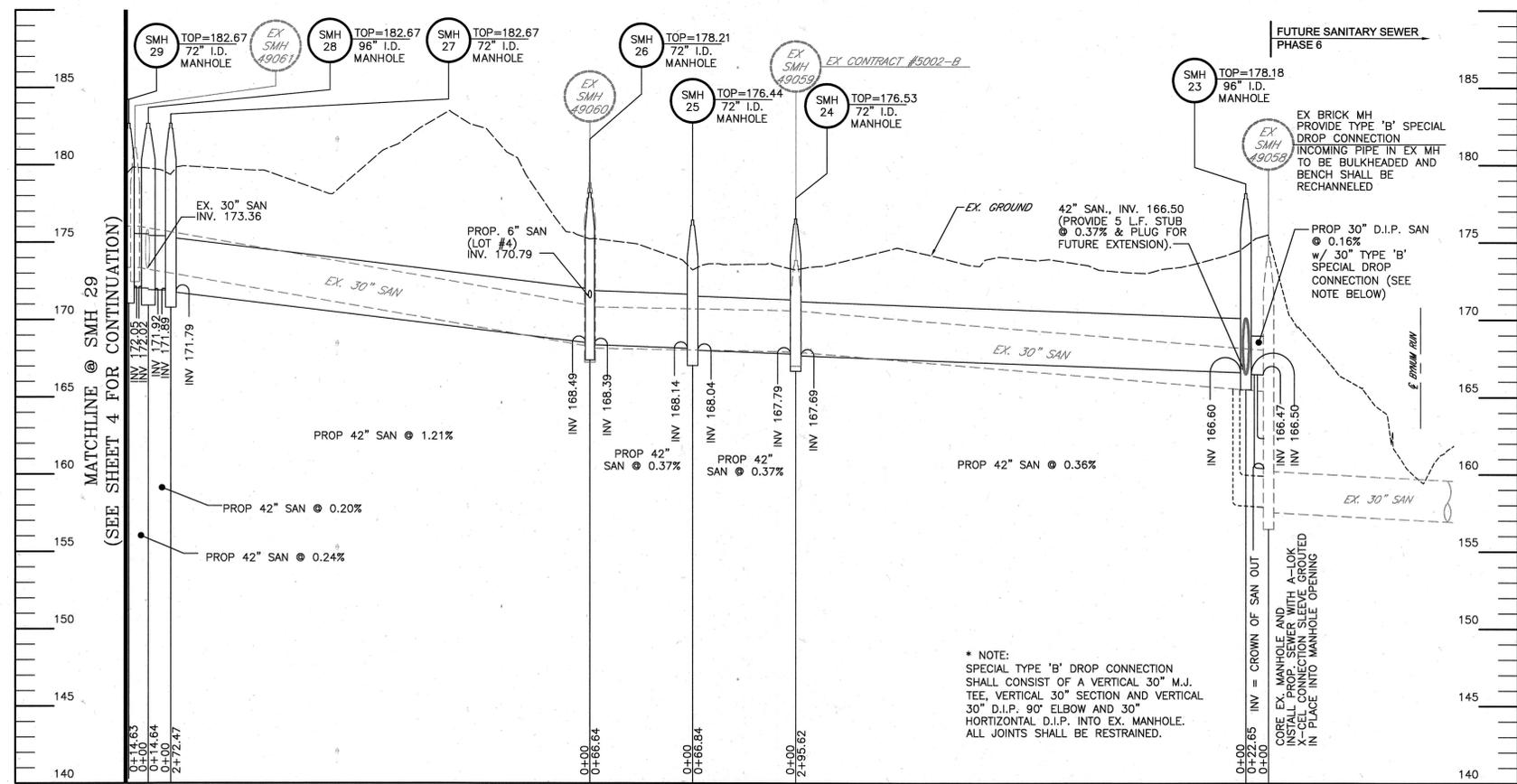
EXCEPT WHERE SHOWN, COMPACTION SHALL MEET OR EXCEED SPECIFICATION 02250-3.0 D.1 IN ALL PIPE RUNS THIS SHEET.

**ABANDONMENT NOTES:**  
1. ALL EXISTING MANHOLES ON 30" INTERCEPTOR WITHIN THE LIMITS OF THE WORK (UNLESS OTHERWISE NOTED) SHALL BE ABANDONED IN ACCORDANCE WITH DETAIL S-32.  
2. THE EXISTING SEWER PIPE SHOWN WITHIN THE LIMITS OF THE WORK (UNLESS OTHERWISE NOTED) SHALL BE ABANDONED AS PART OF THIS CONTRACT IN ACCORDANCE WITH DETAIL S-31.

**MANHOLE NOTES:**  
1. FOR ALL NEW CONSTRUCTION, SEWER BRICK SHALL BE PLACED ON EDGE FOR ALL SURFACES UNDER THE FLOW LINE.  
2. PUMP AROUND METHODS SHALL BE EMPLOYED FOR ALL SEWER BRICK INSTALLATION UNDER THE FLOW LINE IN EXISTING AND PROPOSED STRUCTURES. NEW BRICK WORK MUST CURE FOR AT LEAST 48 HOURS MIN PRIOR TO CONTACT WITH SEWAGE.  
3. WHERE EXISTING MANHOLES ARE TO BE REMOVED EXISTING SEWER SHALL BE EXTENDED IN THE SAME DIRECTION AND AT THE SAME SLOPE TO PROPOSED MANHOLE.

NOTE: ALL WORK WITHIN NONTIDAL WETLANDS, WETLAND BUFFERS, AND BYNUM RUN SHALL BE IN ACCORDANCE WITH THE "CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS AND BUFFERS" AND "THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, WATER RESOURCES ADMINISTRATION WETLANDS & WATERWAY CONSTRUCTION PERMIT.

**PROFILE NOTE:**  
THE CONTRACTOR SHALL ASSURE THAT THE MINIMUM SLOPE OF EACH RUN OF 42" SEWER IS GREATER THAN OR EQUAL TO 0.14%. THE SLOPE SHALL BE COMPUTED BY USING THE ACTUAL DISTANCES BETWEEN MANHOLES AND ELEVATION DIFFERENCES OF THE MANHOLE INVERTS. THE CONTRACTOR SHALL HAVE EACH MANHOLE AND ALL RUNS OF SEWER SURVEYED BY A REGISTERED LAND SURVEYOR OR A PROFESSIONAL ENGINEER OR HIS DULY AUTHORIZED AGENT AND THE RESULTS SUBMITTED IN WRITING TO AND VERIFIED BY THE COUNTY INSPECTOR TO VERIFY THE SEWER SLOPES BEFORE CONSTRUCTING SUBSEQUENT MANHOLE RUNS. SEWER MAINS NOT MEETING THE MINIMUM SLOPE MUST BE RECONSTRUCTED AT THIS SLOPE BEFORE EACH SUBSEQUENT MANHOLE RUN OF SEWER IS CONSTRUCTED. AS EACH MANHOLE RUN IS SURVEYED, BOTH MANHOLES SHALL BE SURVEYED REGARDLESS OF WHETHER OR NOT THEY WERE PREVIOUSLY SURVEYED. IF THE INVERT ELEVATION OF A PREVIOUSLY SURVEYED MANHOLE HAS CHANGED, THE SLOPE OF THE DOWNSTREAM MANHOLE RUN SHALL BE RE-COMPUTED WITH THE REVISED SURVEY DATA AND SUBMITTED FOR REVIEW AND APPROVAL.



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

\* NOTE: SPECIAL TYPE 'B' DROP CONNECTION SHALL CONSIST OF A VERTICAL 30" M.J. TEE, VERTICAL 30" SECTION AND VERTICAL 30" D.I.P. 90° ELBOW AND 30" HORIZONTAL D.I.P. INTO EX. MANHOLE. ALL JOINTS SHALL BE RESTRAINED.

SURVEY DATE: 11/15/2011

APPROVED	REV. No.	DATE	REVISION	BY
PLANNING				
MAINTENANCE CHIEF				
PROPERTY MANAGEMENT				
SEDIMENT CONTROL				

ENGINEERING: **WJD 3-31-14**  
OPERATIONS CHIEF: **BLR 03/26/14**  
MAINTENANCE CHIEF: **RLR 3-25-14**  
PROPERTY MANAGEMENT: **WJD 1-9-15**  
SEDIMENT CONTROL: **BLR 03/26/14**

CONST. MGMT.: **WJD 3-28-14**  
TRAFFIC CONTROL: **BLR 03/21/14**

AS-BUILT PER INSPECTOR  
TRANS. BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
RESIDENT INSPECTOR: \_\_\_\_\_

DESIGNED: LDD/BTB	SCALE: TAX MAP 49 & 56	SHEET: No. 3 of 23	JOB No. 2101064.00
DRAWN: LDD	HORIZ 1"=50'	ADC MAP No. 4351 & 4352	
CHECKED: BTB	VERT 1"=5'	ADC GRID	

M:\PROJECTS\2101064.00 HARFORD CO DPW - BYNUM RUN INTERCEPTOR SEWER PHASES 6 & 7\ENGINEERING\ADFINAL PLANS\SHEETS\SS6-SEWER-PLAN AND PROFILE.DWG, SHT 3, 3/20/2014, 1:46 PM, jmb

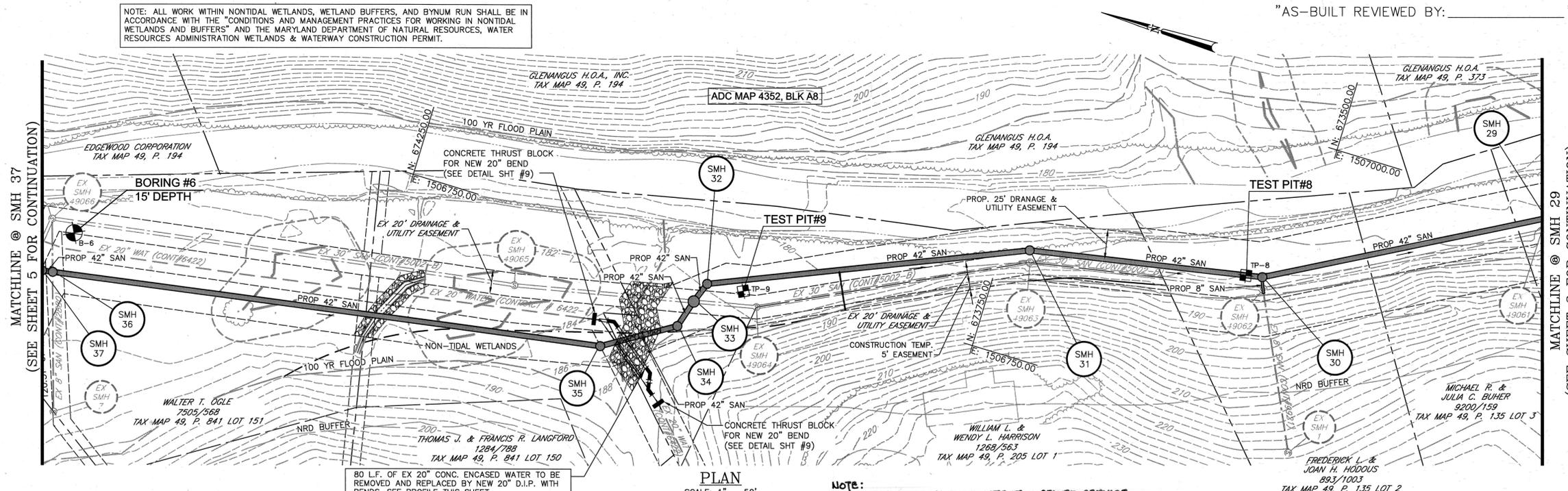
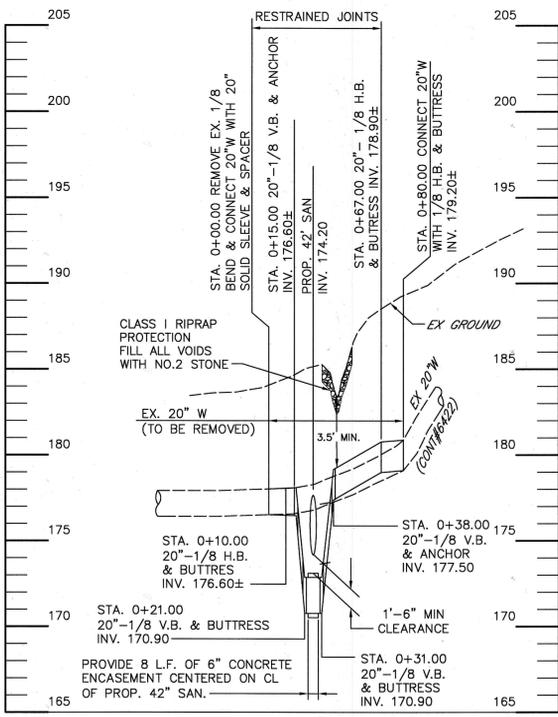
HARFORD COUNTY MARYLAND

DEPUTY DIRECTOR, DIVISION OF WATER AND SEWER  
1ST ELECTION DISTRICT  
DATE: 11/15/15

SANITARY SEWER PLAN & PROFILE  
BYNUM RUN INTERCEPTOR SEWER  
PHASE 7

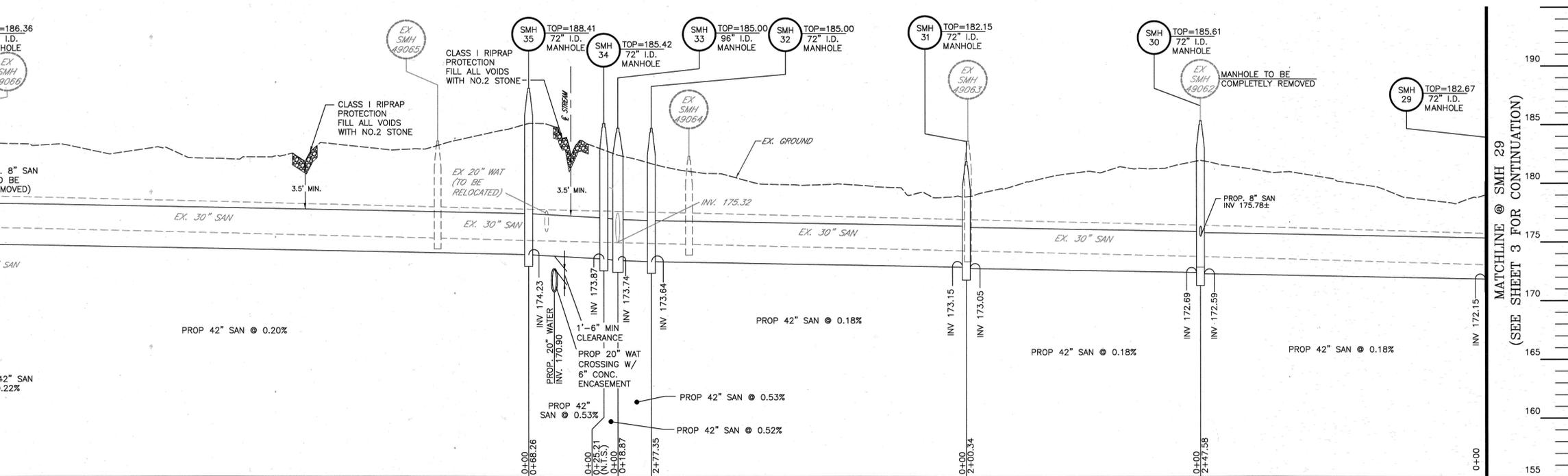
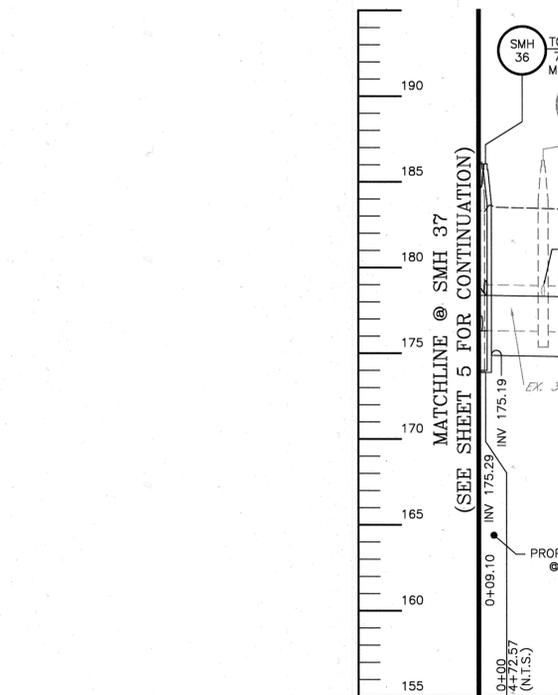
HARFORD COUNTY, MARYLAND  
SEWER CONTRACT NO. 6703

ENGINEER: **FREDERICK WARD ASSOCIATES**  
210 South Main Street, Suite 200, Annapolis, MD 21401  
410-293-7000 / 410-293-1240 fax  
www.fredward.com



NOTE: ALL WORK WITHIN NONTIDAL WETLANDS, WETLAND BUFFERS, AND BYNUM RUN SHALL BE IN ACCORDANCE WITH THE "CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS AND BUFFERS" AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, WATER RESOURCES ADMINISTRATION WETLANDS & WATERWAY CONSTRUCTION PERMIT.

NOTE: CONTRACTOR SHALL LOCATE EX. SEWER SERVICE TO P.205 LOT 1 & CONNECT TO NEW SEWER AS SHOWN. A NEW CLEANOUT SHALL BE INSTALLED AT THE BSM-T LINE IN ACCORDANCE W/HA CO STD SEWER SPLS.



SANITARY SEWER STRUCTURE SCHEDULE					
SMH 29 TO SMH 37		AS BUILT			
NO.	NORTHING	EASTING	NO.	NORTHING	EASTING
29	N:673312.34	E:1506996.56	29		
30	N:673529.50	E:1506877.66	30		
31	N:673726.61	E:1506841.83	31		
32	N:673982.20	E:1506734.15	32		
33	N:673988.88	E:1506716.50	33		
34	N:673996.20	E:1506692.38	34		
35	N:674054.47	E:1506656.82	35		
36	N:674520.85	E:1506580.62	36		
37	N:674529.83	E:1506579.15	37		

NOTE: ALL MANHOLES SHALL RECEIVE WATER TIGHT FRAME AND COVER (HA.CO. PLATE S-17). TOPS OF ALL MANHOLES SHALL BE 3'-0" ABOVE FINISHED GRADE.

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SURVEY DATE: 11/15/2011

APPROVED	REV. No.	DATE	REVISION	BY

PLANNING	ENGINEERING	AS-BUILT
DWD 3-31-14	BLR 03/24/14	PER INSPECTOR
MAINTENANCE CHIEF	OPERATIONS CHIEF	TRANS. BY:
RLR 3-25-14		DATE:
PROPERTY MANAGEMENT	CONST. MGMT.	RESIDENT INSPECTOR:
WJD 1-9-15	BLR 3-28-14	
SEDIMENT CONTROL	TRAFFIC CONTROL	
BLR 03/24/14	BLR 03/27/14	

HARFORD COUNTY MARYLAND

DEPUTY DIRECTOR, DIVISION OF WATER AND SEWER  
1ST ELECTION DISTRICT

SANITARY SEWER PLAN & PROFILE  
BYNUM RUN INTERCEPTOR SEWER  
PHASE 7

HARFORD COUNTY, MARYLAND  
SEWER CONTRACT NO. 6703

ENGINEER  
FREDERICK WARD ASSOCIATES

DESIGNED: LDD/BTB  
DRAWN: LDD/MPB  
CHECKED: BTB  
SCALE: HORIZ 1"=50' VERT 1"=5'  
TAX MAP 49 & 56  
ADC MAP No. 4351 & 4352  
ADC GRID K6, K7, K8, A8 & A9  
SHEET No. 4 of 23  
JOB No. 2101064.00

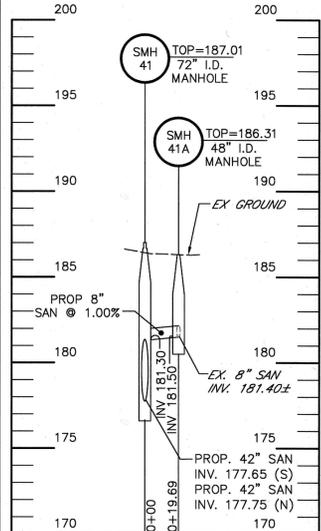
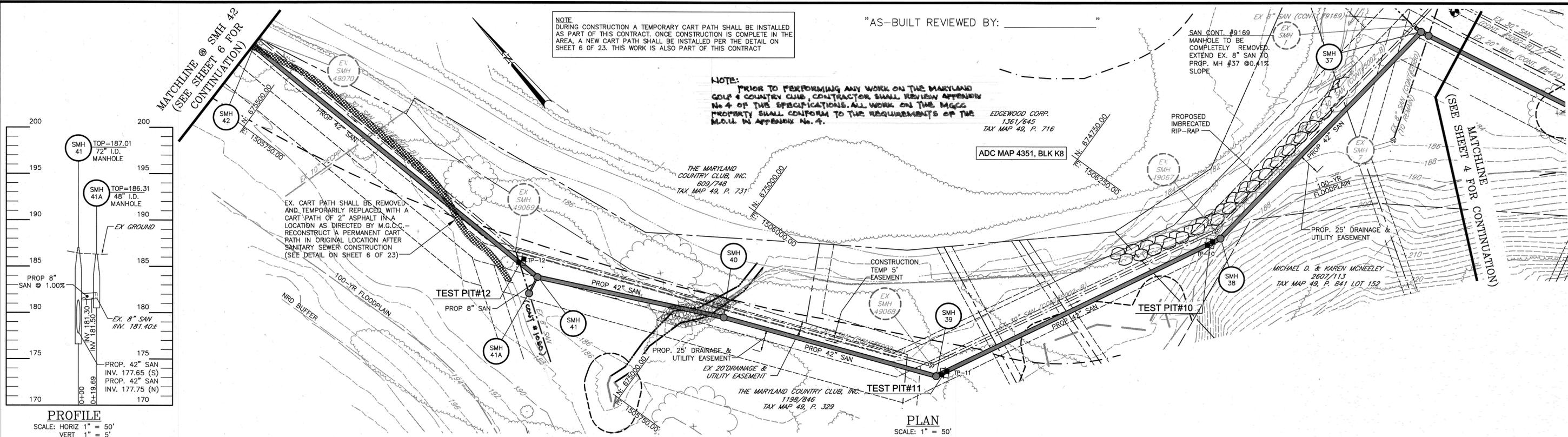
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NOTE:  
DURING CONSTRUCTION A TEMPORARY CART PATH SHALL BE INSTALLED AS PART OF THIS CONTRACT. ONCE CONSTRUCTION IS COMPLETE IN THE AREA, A NEW CART PATH SHALL BE INSTALLED PER THE DETAIL ON SHEET 6 OF 23. THIS WORK IS ALSO PART OF THIS CONTRACT

"AS-BUILT REVIEWED BY: \_\_\_\_\_"

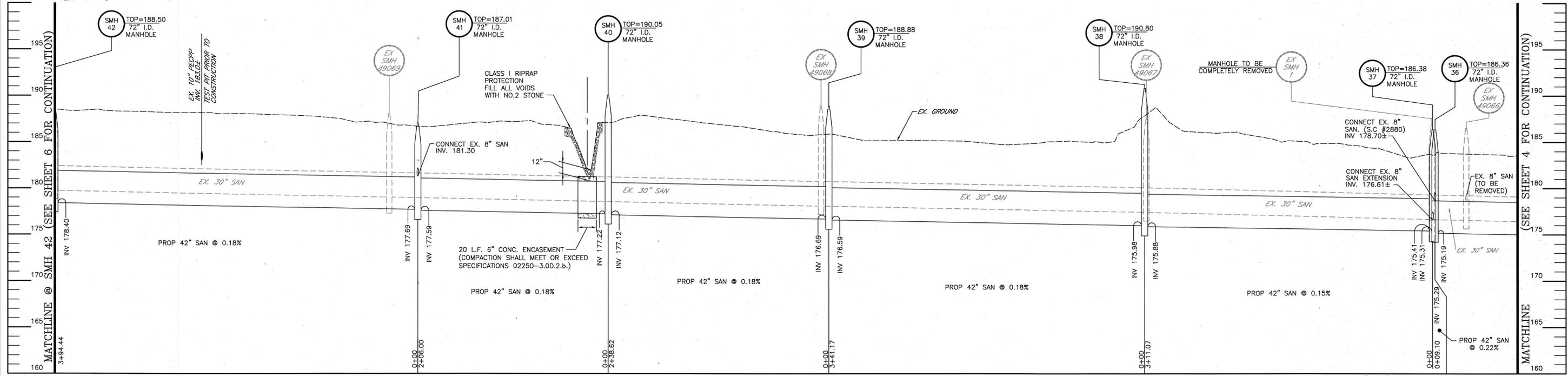
NOTE:  
PRIOR TO PERFORMING ANY WORK ON THE MARYLAND GOLF & COUNTRY CLUB, CONTRACTOR SHALL REVIEW APPENDIX No 4 OF THE SPECIFICATIONS. ALL WORK ON THE MGCCL PROPERTY SHALL CONFORM TO THE REQUIREMENTS OF THE M.G.C.C. IN APPENDIX No. 4.

SAN. CONT. #9169  
MANHOLE TO BE COMPLETELY REMOVED. EXTEND EX. 8" SAN TO PROP. MH #37 @ 0.1% SLOPE.



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

PLAN  
SCALE: 1" = 50'



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

ABANDONMENT NOTES:  
1. ALL EXISTING MANHOLES ON 30" INTERCEPTOR WITHIN THE LIMITS OF THE WORK (UNLESS OTHERWISE NOTED) SHALL BE ABANDONED IN ACCORDANCE WITH DETAIL S-32.  
2. THE EXISTING SEWER PIPE SHOWN WITHIN THE LIMITS OF THE WORK (UNLESS OTHERWISE NOTED) SHALL BE ABANDONED AS PART OF THIS CONTRACT IN ACCORDANCE WITH DETAIL S-31.

MANHOLE NOTES:  
1. FOR ALL NEW CONSTRUCTION, SEWER BRICK SHALL BE PLACED ON EDGE FOR ALL SURFACES UNDER THE FLOW LINE.  
2. PUMP AROUND METHODS SHALL BE EMPLOYED FOR ALL SEWER BRICK INSTALLATION UNDER THE FLOW LINE IN EXISTING AND PROPOSED STRUCTURES. NEW BRICK WORK MUST CURE FOR AT LEAST 48 HOURS MIN PRIOR TO CONTACT WITH SEWAGE.  
3. WHERE EXISTING MANHOLES ARE TO BE REMOVED EXISTING SEWER SHALL BE EXTENDED IN THE SAME DIRECTION AND AT THE SAME SLOPE TO PROPOSED MANHOLE.

NOTE: ALL WORK WITHIN NONTIDAL WETLANDS, WETLAND BUFFERS, AND BYNUM RUN SHALL BE IN ACCORDANCE WITH THE "CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS AND BUFFERS" AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, WATER RESOURCES ADMINISTRATION WETLANDS & WATERWAY CONSTRUCTION PERMIT.

PROFILE NOTE:  
THE CONTRACTOR SHALL ASSURE THAT THE MINIMUM SLOPE OF EACH RUN OF 42" SEWER IS GREATER THAN OR EQUAL TO 0.14%. THE SLOPE SHALL BE COMPUTED BY USING THE ACTUAL DISTANCES BETWEEN MANHOLES AND ELEVATION DIFFERENCES OF THE MANHOLE INVERTS. THE CONTRACTOR SHALL HAVE EACH MANHOLE AND ALL RUNS OF SEWER SURVEYED BY A REGISTERED LAND SURVEYOR OR A PROFESSIONAL ENGINEER OR HIS DULY AUTHORIZED AGENT AND THE RESULTS SUBMITTED IN WRITING TO AND VERIFIED BY THE COUNTY INSPECTOR TO VERIFY THE SEWER SLOPES BEFORE CONSTRUCTING SUBSEQUENT MANHOLE RUNS. SEWER MAINS NOT MEETING THE MINIMUM SLOPE MUST BE RECONSTRUCTED AT THIS SLOPE BEFORE EACH SUBSEQUENT MANHOLE RUN OF SEWER IS CONSTRUCTED. AS EACH MANHOLE RUN IS SURVEYED, BOTH MANHOLES SHALL BE SURVEYED REGARDLESS OF WHETHER OR NOT THEY WERE PREVIOUSLY SURVEYED. IF THE INVERT ELEVATION OF A PREVIOUSLY SURVEYED MANHOLE HAS CHANGED, THE SLOPE OF THE DOWNSTREAM MANHOLE RUN SHALL BE RE-COMPUTED WITH THE REVISED SURVEY DATA AND SUBMITTED FOR REVIEW AND APPROVAL.

EXCEPT WHERE SHOWN, COMPACTION SHALL MEET OR EXCEED SPECIFICATION 02250-3.0 D.1 IN ALL PIPE RUNS THIS SHEET.

SANITARY SEWER STRUCTURE SCHEDULE			
SMH 36 TO SMH 42		AS BUILT	
NO.	NORTHING	EASTING	
37	N:674529.83	E:1506579.15	
38	N:674574.57	E:1506271.32	
39	N:674735.96	E:1505970.74	
40	N:674959.53	E:1505887.34	
41	N:675147.99	E:1505804.18	
41A	N:675145.02	E:1505784.71	
42	N:675541.95	E:1505826.38	

NOTE: ALL MANHOLES SHALL RECEIVE WATER TIGHT FRAME AND COVER (H.A.CO. PLATE S-17). TOPS OF ALL MANHOLES SHALL BE 3'-0" ABOVE FINISHED GRADE, EXCEPT SMH#42, WHICH SHALL BE FLUSH WITH GRADE.

SURVEY DATE: 11/15/2011

APPROVED	REV. No.	DATE	REVISION	BY
PLANNING				
ENGINEERING				
MAINTENANCE CHIEF				
OPERATIONS CHIEF				
PROPERTY MANAGEMENT				
CONST. MGMT.				
SEDIMENT CONTROL				
TRAFFIC CONTROL				



HARFORD COUNTY MARYLAND

DEPUTY DIRECTOR, DIVISION OF WATER AND SEWER  
*J. Carl*

3RD ELECTION DISTRICT

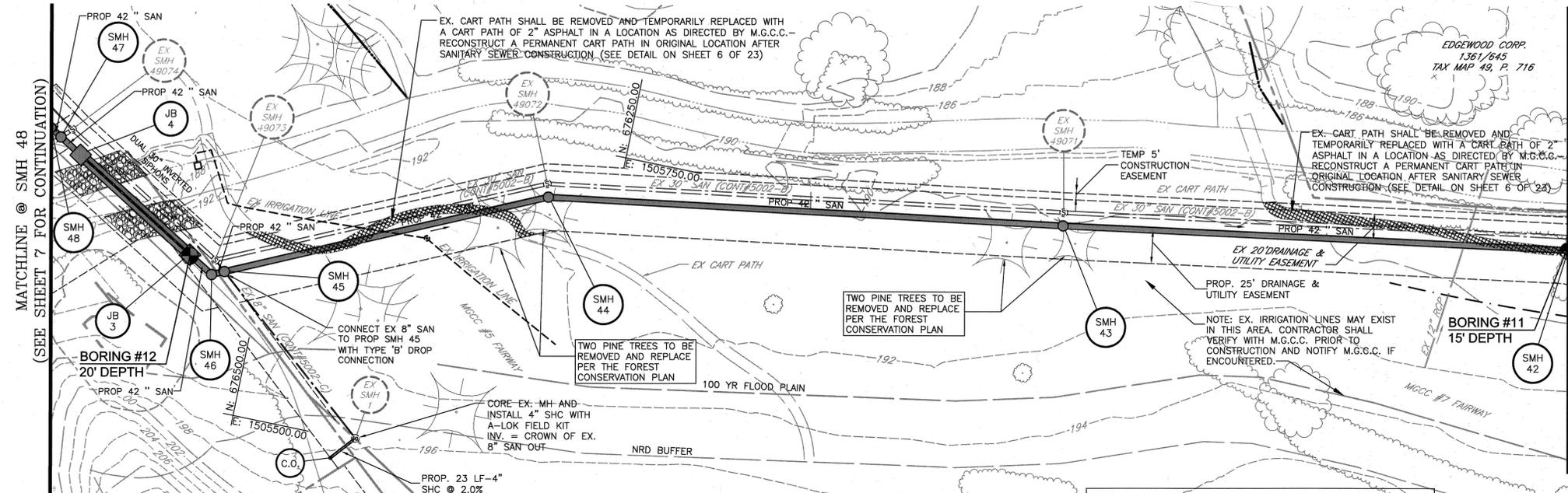
SANITARY SEWER PLAN AND PROFILE  
BYNUM RUN INTERCEPTOR SEWER  
PHASE 7

HARFORD COUNTY, MARYLAND  
SEWER CONTRACT NO. 6703

ENGINEER  
FREDERICK WARD ASSOCIATES, INC.  
www.fredward.com

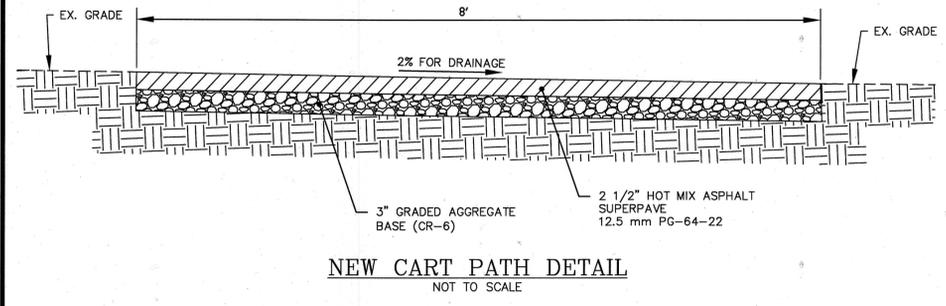
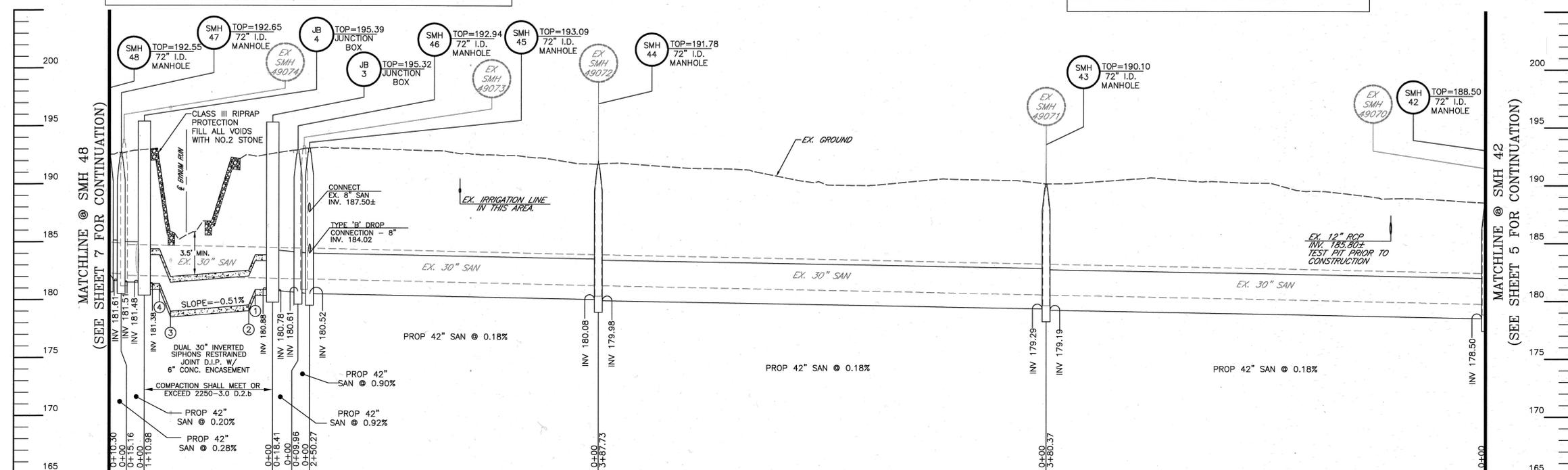
DESIGNED:	DRAWN:	CHECKED:	SCALE:	TAX MAP:	SHEET:	JOB No.
LDD/BBT	LDD/MPB	BTB	HORIZ 1"=50' VERT 1"=5'	49 & 56 ADC MAP No. 4351 & 4352 ADD GRID K6, K7, K8, A8 & A9	5 of 23	2101064.00

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SANITARY SEWER STRUCTURE SCHEDULE					
SMH 42 TO SMH 48			AS BUILT		
NO.	NORTHING	EASTING	NO.	NORTHING	EASTING
42	N:675541.95	E:1505826.38	42		
43	N:675917.65	E:1505766.96	43		
44	N:676301.06	E:1505709.22	44		
45	N:676528.30	E:1505604.35	45		
46	N:676537.34	E:1505600.18	46		
47	N:676669.03	E:1505678.03	47		
48	N:676677.89	E:1505683.27	48		
JB 3	N:676556.28	E:1505611.37	JB 3		
JB 4	N:676651.81	E:1505667.85	JB 4		

NOTE: ALL MANHOLES SHALL RECEIVE WATER TIGHT FRAME AND COVER (H.A.CO. PLATE S-17). TOPS OF ALL MANHOLES SHALL BE 3'-0" ABOVE FINISHED GRADE, EXCEPT SMH#42 TO SMH#47.



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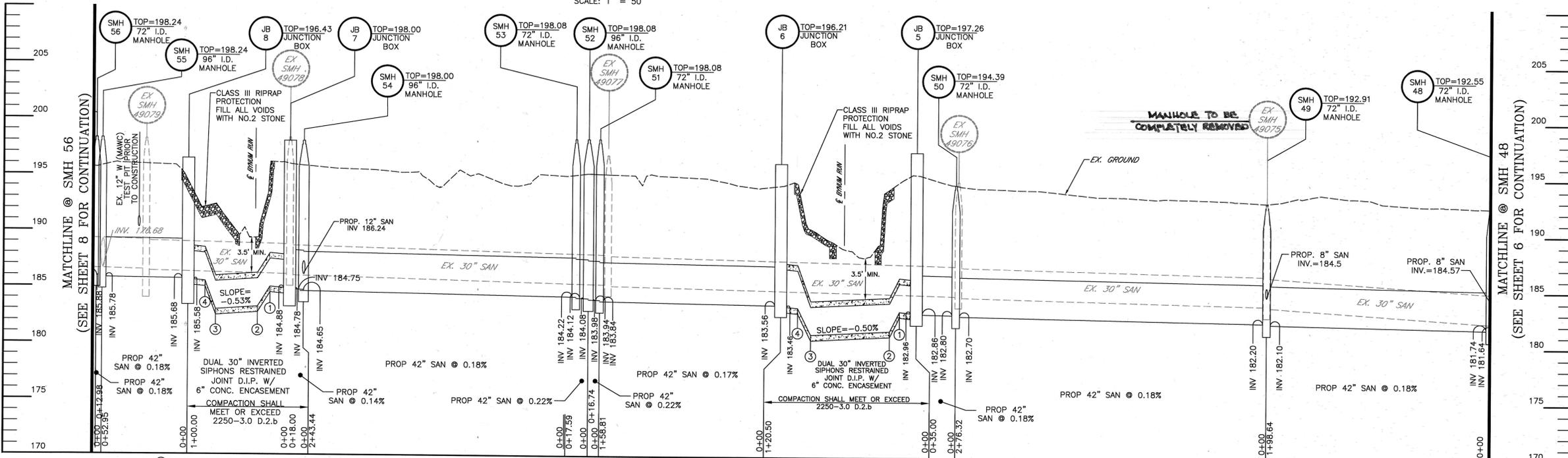
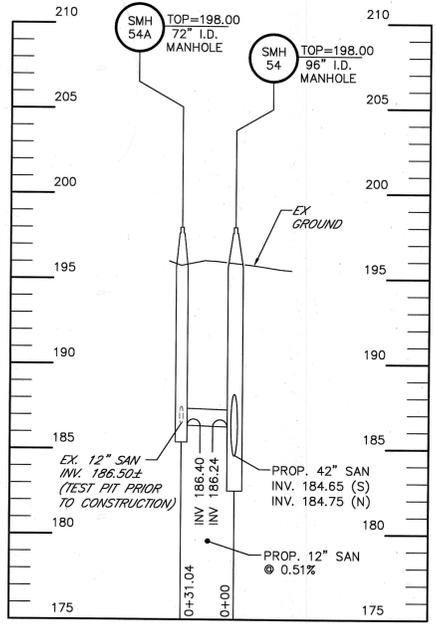
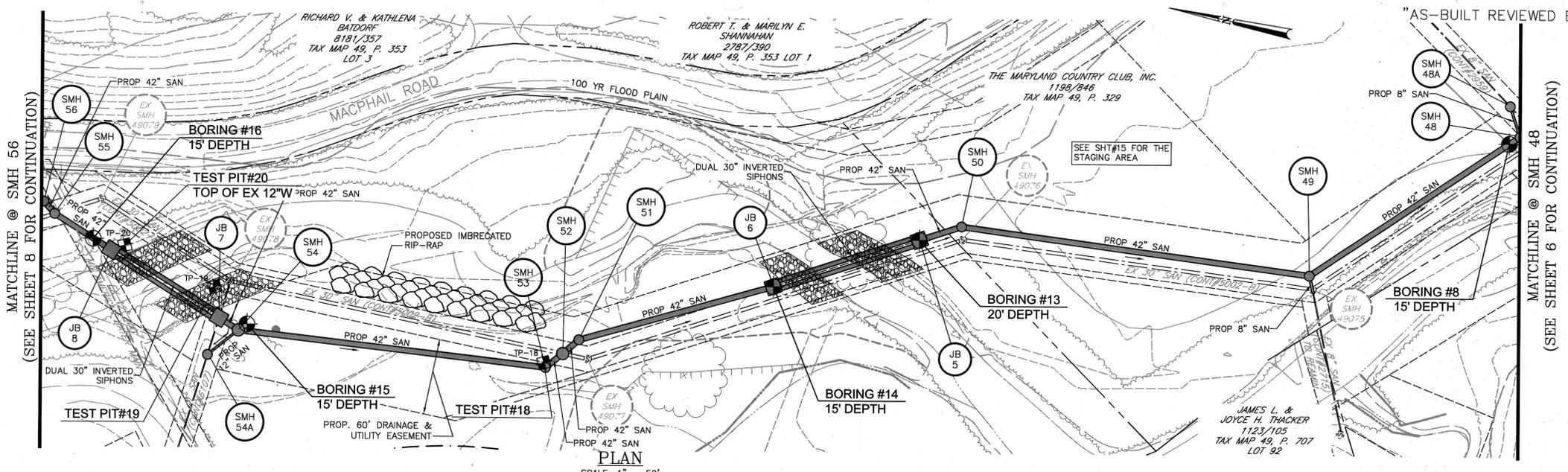
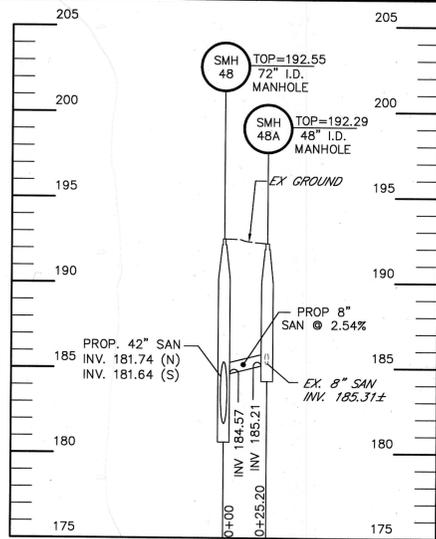
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SURVEY DATE: 11/15/2011

APPROVED	REV. No.	DATE	REVISION	BY
PLANNING				
MAINTENANCE CHIEF				
PROPERTY MANAGEMENT				
RESIDENT INSPECTOR				





SANITARY SEWER STRUCTURE SCHEDULE					
SMH 48 TO SMH 56		AS BUILT			
NO.	NORTHING	EASTING	NO.	NORTHING	EASTING
48	N:676677.89	E:1505683.27	48		
48A	N:676690.32	E:1505705.19	48A		
49	N:676816.79	E:1505541.26	49		
50	N:677092.41	E:1505521.67	50		
51	N:677368.40	E:1505371.41	51		
52	N:677378.54	E:1505358.10	52		
53	N:677389.62	E:1505344.45	53		
54	N:677603.14	E:1505328.53	54		
54A	N:677651.72	E:1505298.18	54A		
55	N:677792.33	E:1505381.59	55		
56	N:677802.76	E:1505389.33	56		
JB 5	N:677122.80	E:1505504.30	JB 5		
JB 6	N:677227.40	E:1505444.50	JB 6		
JB 7	N:677648.91	E:1505328.46	JB 7		
JB 8	N:677742.77	E:1505362.96	JB 8		

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APPROVED	REV. No.	DATE	REVISION	BY
PLANNING				
MAINTENANCE CHIEF				
OPERATIONS CHIEF				
PROPERTY MANAGEMENT				
CONSTRUCTION CONTROL				
TRAFFIC CONTROL				
AS-BUILT PER INSPECTOR				
TRANS. BY:				
DATE:				
RESIDENT INSPECTOR:				

DESIGNED: LDD/BTB  
DRAWN: LDD/MPB  
CHECKED: BTB

SCALE: HORIZ 1"=50' VERT 1"=5'

TAX MAP 49 & 56  
ADC MAP No. 4351 & 4352  
ADC GRID

SHEET 7 of 23  
JOB No. 2101064.00

HARFORD COUNTY MARYLAND

DEPUTY DIRECTOR, DIVISION OF WATER AND SEWER  
3RD ELECTION DISTRICT

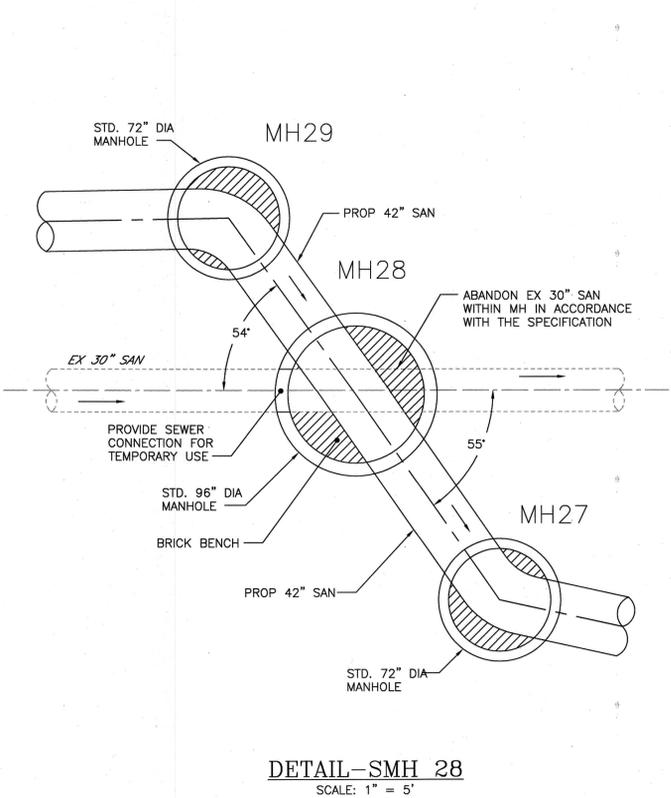
SANITARY SEWER PLAN AND PROFILE  
BYNUM RUN INTERCEPTOR SEWER  
PHASE 7

HARFORD COUNTY, MARYLAND  
SEWER CONTRACT NO. 6703

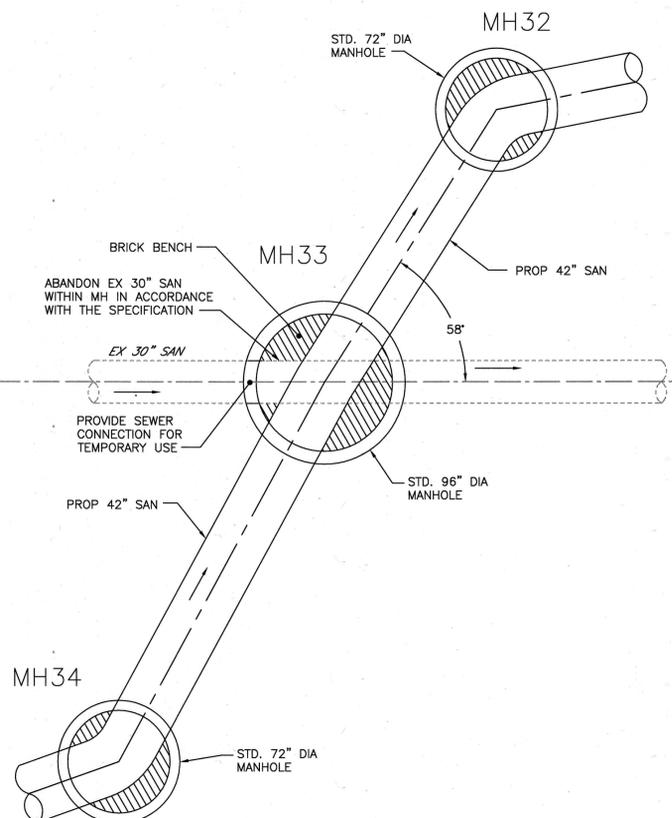


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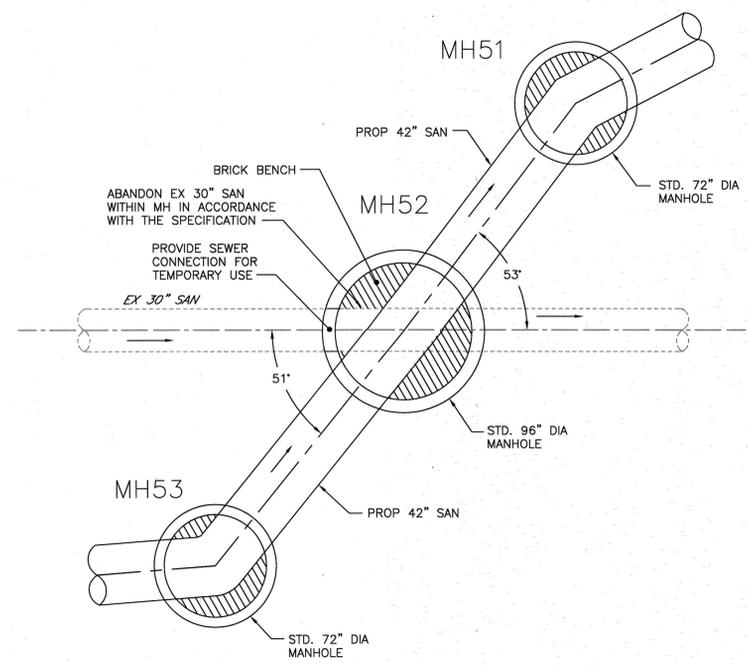




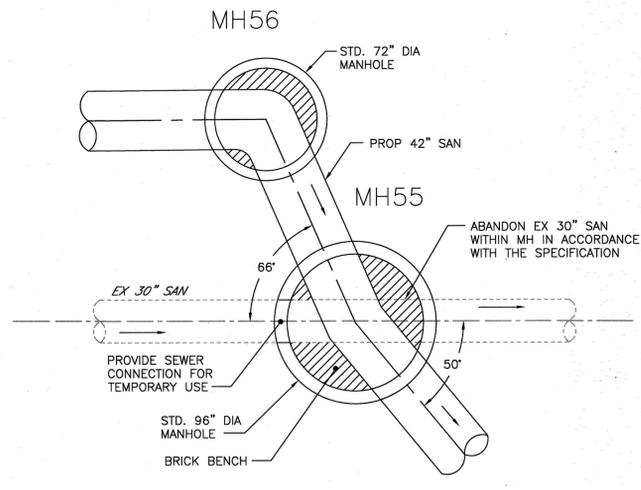
**DETAIL-SMH 28**  
SCALE: 1" = 5'



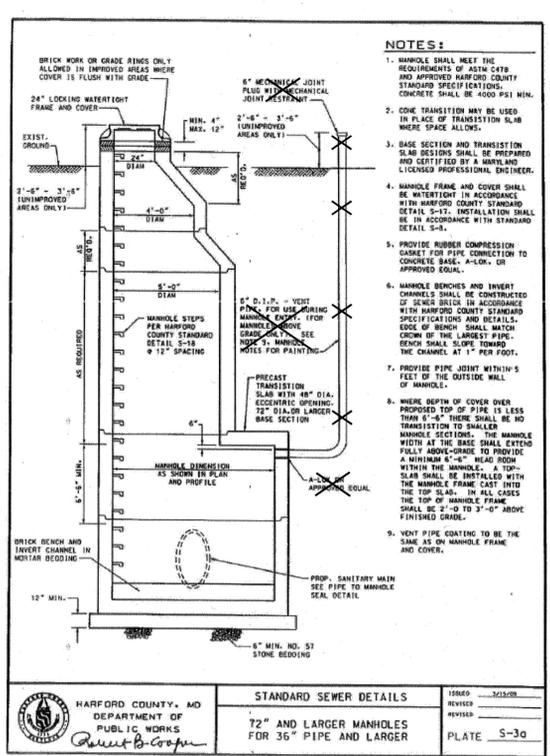
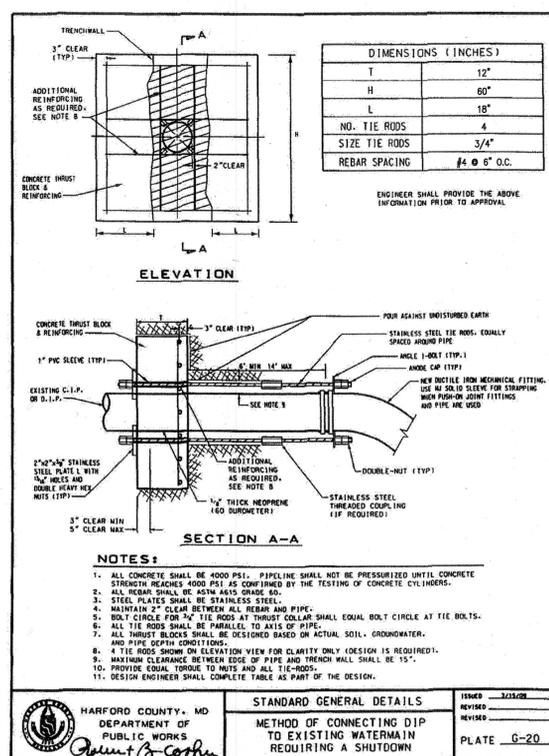
**DETAIL-SMH 33**  
SCALE: 1" = 5'



**DETAIL-SMH 52**  
SCALE: 1" = 5'



**DETAIL-SMH 55**  
SCALE: 1" = 5'



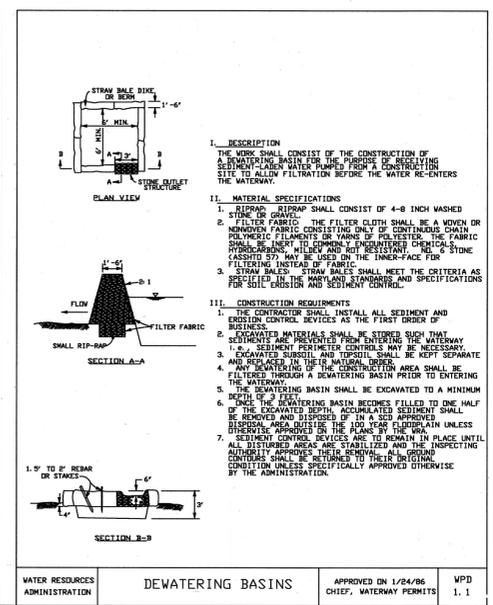
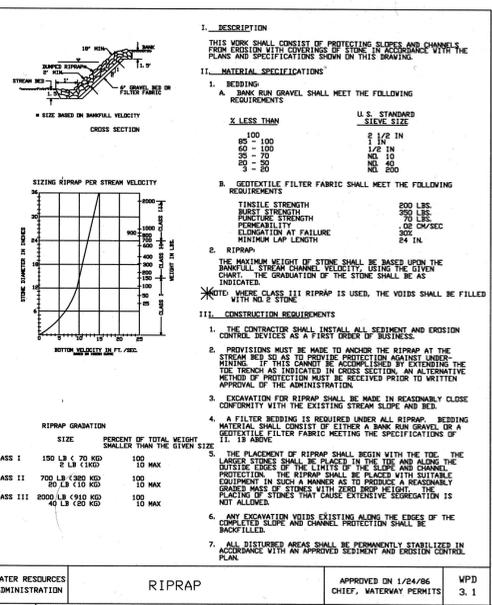
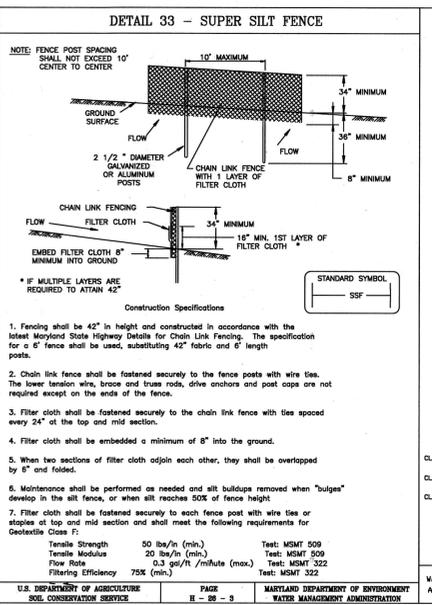
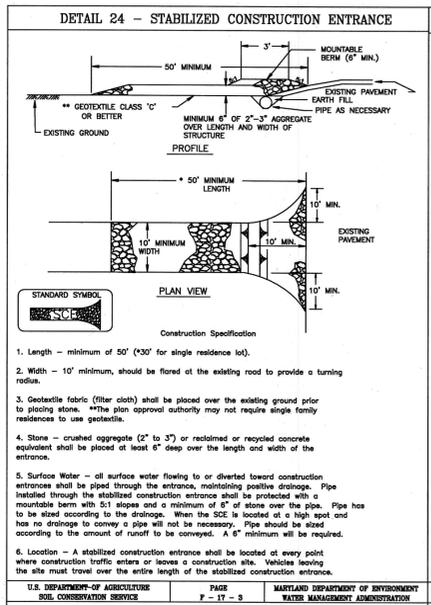
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APPROVED	REV. No.	DATE	REVISION	BY
PLANNING				
MAINTENANCE CHIEF				
PROPERTY MANAGEMENT				
SEDIMENT CONTROL				
ENGINEERING				
CONST. MGMT.				
TRAFFIC CONTROL				
DESIGNED: LDD/BTB				
DRAWN: LDD				
CHECKED: BTB				
TAX MAP 49 & 56				
ADC MAP No. 4351 & 4352				
ADC GRID				
K6, K7, K8, A8 & A9				
AS-BUILT PER INSPECTOR				
TRANS. BY:				
DATE:				
RESIDENT INSPECTOR:				
SHEET 9				
OF 23				
JOB No. 2101064.00				

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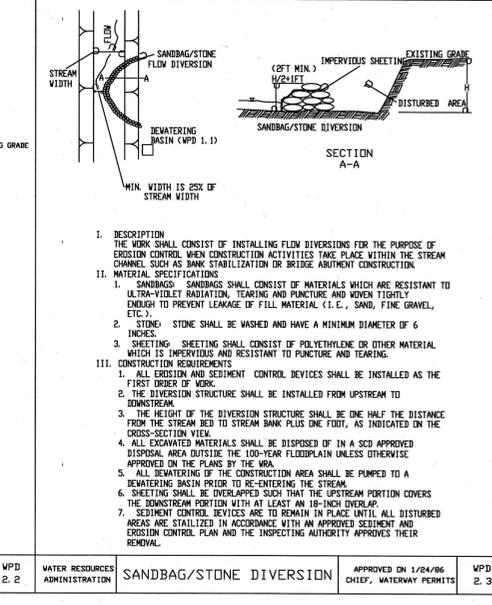
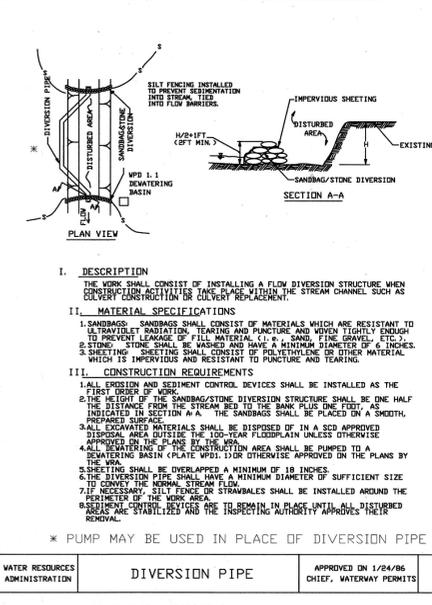
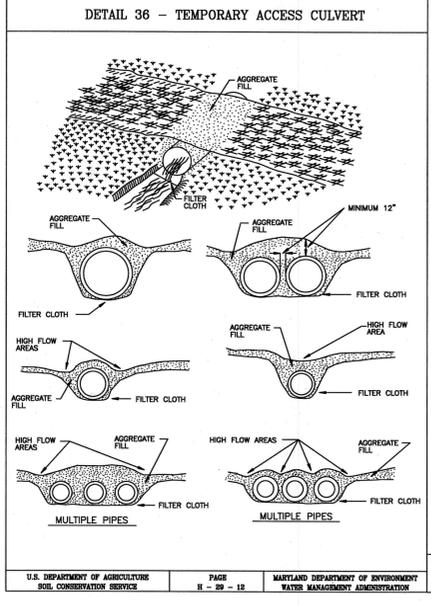


### SEDIMENT CONTROL NOTES

- THE CONTRACTOR/OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. FURTHER, NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE UNTIL ALL REQUIRED PERMITS HAVE BEEN OBTAINED.
- THE LIMITS OF DISTURBANCE SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO GRADING OF THE SITE TO ENSURE COMPLIANCE WITH APPROVED PLANS. ALL FOREST RETENTION AREA WILL BE DELINEATED WITH BUZE ORANGE FENCE AS WELL AS AN SWM INFILTRATION PRACTICE PRIOR TO ANY CLEARING. WORK BEYOND LIMITS OF DISTURBANCE AND IN ANY AREA INSIDE THE FOREST RETENTION AND SWM INFILTRATION AREA IS CONSIDERED TO BE VIOLATION OF THIS PLAN.
- ALL SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. UPON COMPLETION OF INSTALLATION OF PERIMETER SEDIMENT CONTROL PRACTICES THE SITE MUST BE INSPECTED BY THE DEPARTMENT OF PUBLIC WORKS (DPW). NO ADDITIONAL CONSTRUCTION ACTIVITY WILL BE AUTHORIZED WITHOUT THE APPROVAL OF DPW.
- ALL POINTS OF INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD INTO PUBLIC WAYS. DURING CONSTRUCTION, EVERY MEANS WILL BE TAKEN TO CONTROL SOIL EROSION AND SILTATION. IF NECESSARY A WASH RACK MAY BE ESTABLISHED.
- EARTH DIKES, SEDIMENT TRAPS, ETC. WILL BE LOCATED AS SHOWN ON THESE DRAWINGS. FIELD CHANGES AND MINOR ADJUSTMENTS ARE PERMISSIBLE AS LONG AS THE INSTALLATION FUNCTIONS AND CONFORMS TO SPECIFICATIONS. THE SITE INSPECTOR PRIOR TO INSTALLATION MUST APPROVE ALL SUCH CHANGES. MAJOR CHANGES TO THE APPROVED PLAN WILL REQUIRE RE-APPROVAL BY THE HARFORD SOIL CONSERVATION DISTRICT.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS.
  - SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT SITE.
- DUST CONTROL MUST BE MANAGED AS PART OF ALL SEDIMENT CONTROL PLANS. FAILURE TO DO SO IS A VIOLATION OF THIS PLAN.
- SEDIMENT BASINS MUST BE BUILT TO DESIGN SPECIFICATIONS SHOWN ON THE PLAN. IF THE BASIN IS TO BE USED AS A FUTURE SWM FACILITY, THE BASIN WILL BE BUILT IN ACCORDANCE WITH THE LATEST MD-378 STANDARDS SPECIFICATIONS. SPECIFIED MATERIALS MUST BE USED. NO CHANGES OR MODIFICATIONS WILL BE MADE WITHOUT WRITTEN AUTHORIZATION OF THE HARFORD SOIL CONSERVATION DISTRICT.
- TEMPORARY FENCING SHALL BE PLACED AROUND ALL SEDIMENT BASINS, TRAPS, AND PONDS DURING CONSTRUCTION AND SITE GRADING.
- AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT OPERATIONAL. A WEEKLY LOG WILL BE KEPT IN ACCORDANCE WITH NO/NPDES REGULATIONS. A COPY OF THE APPROVED SEDIMENT CONTROL PLANS SHALL BE AVAILABLE AT THE SITE AT ALL TIMES.
- ENSURE POSITIVE DRAINAGE TO ALL ROAD INLETS DURING ALL PHASES OF ROAD CONSTRUCTION TO ENSURE POSITIVE FLOW TO TRAPS AND OR BASINS.
- CUT AND/OR FILL SHALL BE DONE IN CONFORMANCE WITH 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR LAND GRADING.
- SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY OTHER REDIRECTING FLOWS FROM TRaversing THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO SAFELY CONVEY WATER DOWN SLOPES WITHOUT CAUSING EROSION.
- OFF-SITE WASTE OR BORROW AREAS SHALL HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO THE IMPORT OR EXPORT OF MATERIAL TO/FROM THE PROJECT SITE.
- ALL MATERIAL ORIGINATING FROM THE DEVELOPMENT OF THE PROPERTY AND DEPOSITED ON THE PUBLIC RIGHT-OF-WAY SHALL BE IMMEDIATELY REMOVED.
- STORM DRAIN INLETS AND OUTLETS SHALL BE PROTECTED PER 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.
- TOPSOIL, LIMING, FERTILIZING, SEEDING, MULCHING, SOD, ETC. ARE ALL ESSENTIAL PARTS OF THE SEDIMENT CONTROL PLAN AND MUST BE COMPLETED ALONG WITH ALL OTHER PRACTICES.
- TRAPS TO BE REMOVED SHALL BE DEWATERED AS PER THE 2011 EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.
- PRIOR TO REMOVAL OF TRAPS OR CONVERSION OF SEDIMENT BASINS TO SWM FACILITIES, THE STORM DRAINS WILL BE FLUSHED.
- SEDIMENT CONTROL PRACTICES WILL BE MAINTAINED UNTIL ALL DISTURBED AREAS FOR WHICH THE PRACTICES WERE INSTALLED HAVE BEEN STABILIZED. SEDIMENT CONTROL PRACTICES MAY BE REMOVED ONLY WITH THE AUTHORIZATION OF THE DPW INSPECTOR. ALL DISTURBED AREAS RESULTING FROM REMOVAL OF SEDIMENT CONTROL DEVICES SHALL BE STABILIZED IMMEDIATELY. REMOVAL PRIOR TO INSPECTOR'S APPROVAL CONSTITUTES A VIOLATION.

### BEST MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS AND 100 YEAR FLOODPLAINS

- No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that loss under the originally authorized structure or fill.
- Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
- All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria Italica*), Barley (*Hordeum sp.*), Oats (*Avena sp.*), and/or Rye (*Secale cereale*). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division, Kentucky 31. Fescue shall not be utilized in wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream. Use 1 water: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.
- Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- Outlets shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.



### SEQUENCE OF CONSTRUCTION

- OBTAIN ALL REQUIRED PERMITS, APPROVALS, AND LICENSES FROM APPROPRIATE AGENCIES.
- NOTIFY HARFORD COUNTY BUREAU OF ENVIRONMENTAL ENFORCEMENT (410) 638-3127 AT LEAST 7 DAYS PRIOR TO BEGINNING WORK.
- IF APPLICABLE, ORANGE HIGH VISIBILITY FENCE SHALL BE MANUALLY INSTALLED ALONG THE LIMIT OF DISTURBANCE, WHERE THE LIMIT IS WITHIN 50 FEET OF A FOREST BUFFER/CONSERVATION EASEMENT. THIS SHALL BE COMPLETED BY AND INSPECTED AT THE PRE-CONSTRUCTION MEETING.
- CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES.
- INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES IN THE FOLLOWING ORDER: (2 WEEKS)
  - STABILIZED CONSTRUCTION ENTRANCE
  - SILT FENCE
  - SUPER SILT FENCE
- NOTIFY HARFORD COUNTY BUREAU OF ENVIRONMENTAL ENFORCEMENT, UPON COMPLETION OF SAID INSTALLATION.
- WITH THE APPROVAL OF HARFORD COUNTY BUREAU OF ENVIRONMENTAL ENFORCEMENT AND THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB REMAINDER OF SITE.
- INSTALL ALL SEWER PIPE, MANHOLES AND JUNCTION BOXES, BACKFILLING, TEMPORARY PAVEMENT PATCHING AND TEMPORARILY STABILIZING AS CONSTRUCTION PROGRESSES. (90 DAYS)
- ONCE CONSTRUCTION IS COMPLETE, FINE GRADE AND VEGETATIVELY STABILIZE. PLACE PERMANENT ASPHALT. PERMANENTLY STABILIZE REMAINDER OF SITE. (5 DAYS)
- ONCE SITE IS STABILIZED WITH ESTABLISHED VEGETATION AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE THE REMAINING SEDIMENT CONTROL MEASURES AND DEVICES. STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS.

### STANDARD NOTES FOR UTILITY INSTALLATION

- CALL "MISS UTILITY" BY DIALING 811, 48 HOURS PRIOR TO THE START OF WORK.
- ONLY ENOUGH TRENCH SHOULD BE EXCAVATED WHICH CAN BE BACKFILLED DAILY.
- EXCAVATED TRENCH MATERIALS SHOULD BE PLACED ON THE HIGH SIDE OF THE TRENCH.
- IMMEDIATELY FOLLOWING UTILITY INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE COMPLETED IN THE SAME DAY.
- FULL TRENCH COMPACTION IS REQUIRED.
- MULCHING TO HARFORD CO. SCD SPECIFICATIONS OF ALL DISTURBED AREAS AND DAILY ON BACKFILL WILL BE REQUIRED.
- ANY SEDIMENT CONTROL PRACTICES WHICH ARE DISTURBED DURING UTILITY CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE END OF EACH WORKING DAY.
- ANY DITCHES OR DRAINAGE WAYS DISTURBED DURING CONSTRUCTION WILL BE RESTORED TO ORIGINAL CONDITION.

**131051**

EROSION AND SEDIMENT CONTROL PLAN # 59792

RECOMMENDED FOR APPROVAL

HARFORD COUNTY, DPW

TECHNICAL CONCURRENCE

HARFORD SOIL CONSERVATION DISTRICT

APPROVED:

HARFORD SOIL CONSERVATION DISTRICT

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OWNER/DEVELOPER

HARFORD COUNTY DPW  
DIV. OF WATER & SEWER  
145 N. HICKORY AVE.  
BEL AIR, MD 21014  
ATTN: DARRYL IVINS  
410-638-3300

### TEMPORARY AND PERMANENT SEEDING NOTE

TEMPORARY AND PERMANENT SEEDING SHOULD BE DONE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS & SPECIFICATIONS FOR SOIL EROSION & SEDIMENT CONTROL (HARDNESS ZONE 6B)

#### PERMANENT SEEDING SUMMARY

NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	LIME RATE
1	TALL FESCUE (80%)	125	3/1 - 5/15 8/15 - 10/15	1"	90 LB/AC (15 LB/1000 SF)	175 LB/AC (14 LB/1000 SF)	175 LB/AC (14 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)
2	PERENNIAL RYEGRASS (100%)	15	3/1 - 5/15 8/15 - 10/15	1"				
3	KENTUCKY BLUEGRASS (100%)	10	3/1 - 5/15 8/15 - 10/15	1"				

#### TEMPORARY SEEDING SUMMARY

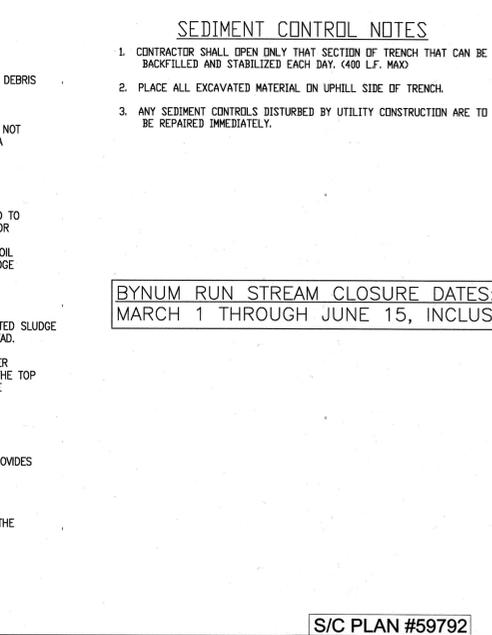
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	LIME RATE
1	BARLEY	122	3/1 - 4/30 8/15 - 10/15	1"				
2	OATS	86	3/1 - 4/30 8/15 - 11/15	1"	600 LB/AC (15 LB/1000 SF)			2 TONS/AC (100 LB/1000 SF)
3	RYE	140	3/1 - 4/30 8/15 - 11/15	1"				
4	TALL FESCUE	30	3/1 - 4/30 8/15 - 11/15	1"				

### SEDIMENT CONTROL NOTES

- CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY (400 LF, MAX)
- PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

### WETLANDS SEED MIX

SPECIES	MIN % PURITY	MIN % GERMINATION	% BY WEIGHT
NE 28 SWITCHGRASS	42.7	92	60
PDA TRIVIALS	18.6	97	10
REDTOP	18.3	87	10
JAPANESE MILLET	9.4	74	10
ANNUAL RYEGRASS	9.4	74	10



### ESTIMATE OF SEDIMENT CONTROLS

TYPE	BTY
STABILIZED CONSTRUCTION ENTRANCE	2 EACH
SUPER SILT FENCE	12,218 LF
DEWATERING BASIN	8 EACH
TEMPORARY ACCESS CULVERT/ CROSSING	7 EACH

#### SITE DATA

	SQUARE FT	ACRES
TOTAL AREA OF SITE	483,184	11.09
AREA DISTURBED	483,184	11.09
TOTAL TEMPORARY WETLAND IMPACT	161,250	3.70
TOTAL TEMPORARY WETLAND BUFFER IMPACT	80,675	1.85
AREA TO BECOME IMPERVIOUS	0	0
TOTAL VEGETATION AREA	483,184	11.09
TOTAL CUT	15,000 C.Y.	
TOTAL FILL	15,000 C.Y.	

NPDES ID PT N675.741 E1,505,815

### BYNUM RUN STREAM CLOSURE DATES: MARCH 1 THROUGH JUNE 15, INCLUSIVE

### DESIGN 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. 18162 EXPIRATION DATE: 2/21/15.

DATE: 11/22/13  
DESIGNER'S SIGNATURE: *[Signature]*  
BRUCE T. BEASMAN P.E.

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL CLEARING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE CDCL SOIL CONSERVATION DISTRICT OR THEIR REPRESENTATIVES AND THE STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.

I HEREBY CERTIFY THAT DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN OF EROSION AND SEDIMENT CONTROL.

*[Signature]* 11-25-13  
OWNER/DEVELOPER SIGNATURE DATE

*[Signature]*  
Darryl W. Ivins, Project Manager  
PRINTED NAME AND TITLE