DRILL HOLES

DRILL HOLES

DRILL HOLES

BY: $USERNAME$

Maryland Transportation Authority

FORT MCHENRY TUNNEL

UPGRADE AND REPLACE EXISTING SIGNING WITH BRIDGE MODIFICATIONS NORTH OF FORT MCHENRY TUNNEL

BALTIMORE COUNTY/BALTIMORE CITY

CONTRACT NO.: FT-710-000-002R

PB AMERICAS, INC. / WBCM

100 South Charles Street
Tower I, 10th Floor
Baltimore, MD 21201-2727
410-727-5050

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. 22127 EXPIRATION DATE: 10-09-2008

STATE OF MARYLAND — DONALD STEVEN NOVOCIN — NO. 22127 — PROFESSIONAL ENGINEER

E-1.00; E-2.01 – E-2.26; E-3.00 – E-3.03

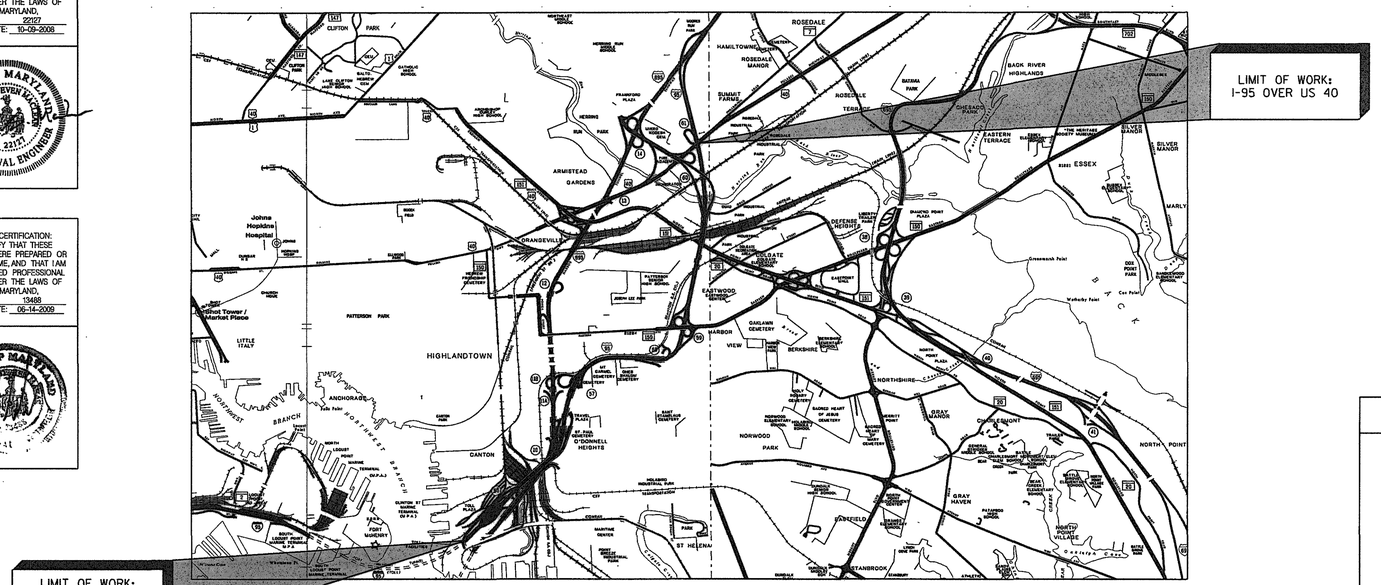
WR&A

Whitman, Requardt and Associates, LLP
Engineers and Planners
801South Caroline Street
Baltimore, Maryland 21231
410-235-3450

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. 13488 EXPIRATION DATE: 06-14-2009

STATE OF MARYLAND — THOMAS ... — PROFESSIONAL ENGINEER

ALL OTHER DRAWINGS NOT LISTED ABOVE



LOCATION MAP
SCALE: 1"=3000'

STANDARDS AND SPECIFICATIONS

THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MARYLAND STATE HIGHWAY ADMINISTRATION'S "STANDARDS FOR HIGHWAY AND INCIDENTAL CONSTRUCTION", THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION'S "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, JANUARY 2008" AND ALL REVISIONS THEREOF, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES(MUTCD) AND AS SPECIFIED IN THE CONTRACT DOCUMENTS.

COMPLETENESS OF DOCUMENTS

THE MARYLAND TRANSPORTATION AUTHORITY SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM THE MARYLAND TRANSPORTATION AUTHORITY'S CASHIER'S OFFICE. FAILURE TO ATTACH ADDENDA MAY CAUSE THE BID TO BE IRREGULAR.

ADA COMPLIANCE

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES IN COMPLIANCE WITH THE STATE AND FEDERAL LEGISLATION

RIGHT OF WAY

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL FEE RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS.

UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS. NOTIFICATION TO "MISS UTILITY", 1.800.257.7777, SHALL BE GIVEN 48 HOURS (TWO FULL WORKING DAYS) IN ADVANCE OF WORKING IN THE AREA OF THE SPECIFIC AFFECTED UTILITY. THE NOTIFICATION TO "MISS UTILITY" IS REQUIRED WHENEVER ANY EXCAVATING OR SIMILAR WORK IS TO BE PERFORMED.

ENVIRONMENTAL INFORMATION

MDE # 09 -SF- 0485 ⚠

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION. THE CONTRACTOR SHALL APPLY ALL EROSION AND SEDIMENT CONTROL MEASURES TO ALL ERODIBLE MATERIALS EXPOSED BY ANY ACTIVITY ON THE PROJECT. THESE MEASURES SHALL BE COORDINATED WITH OTHER ON-GOING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF SECTION 308 OF THE SPECIFICATIONS.

OWNERS/DEVELOPERS CERTIFICATION:

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

5-6-09 — DATE
OWNER / DEVELOPER SIGNATURE

165 — CARD NO.
DOUGLAS NOVOCIN, ENVIRONMENTAL MANAGER — PRINTED NAME AND TITLE

MARYLAND TRANSPORTATION AUTHORITY

RECOMMENDED FOR APPROVAL
Douglas M. Hutchison, for — 5.5.09
DIRECTOR, ENGINEERING DIVISION — DATE

APPROVED
Geoffrey V. Kolberg — 05/05/09
CHIEF ENGINEER, OFFICE OF ENGINEERING AND CONSTRUCTION — DATE

APPROVED
Ronald L. Freeland — 5/6/09
EXECUTIVE SECRETARY — DATE

⚠ ADDENDUM NO. 1 7/6/09
FT-710-000-002R

DRILL HOLES

DRILL HOLES

DRILL HOLES

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

THE WATER MANAGEMENT ADMINISTRATION REQUIRES THAT THESE NOTES, IN THEIR ENTIRETY, BE INCLUDED ON THE EROSION AND SEDIMENT CONTROL PLAN. IT IS RECOGNIZED THAT EVERY NOTE MAY NOT APPLY TO ALL PROJECTS. THE REQUIREMENT OF ANY INDIVIDUAL NOTE NOT APPLICABLE TO THE SUBJECT PROJECT IS NOT BINDING UPON THE APPLICANT OR THE APPLICANT'S CONTRACTOR.

1. THE CONTRACTOR SHALL NOTIFY THE ADMINISTRATION (WMA) AT (410) 537-3510 SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE ADMINISTRATION, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF WMA.

2. THE CONTRACTOR MUST NOTIFY WMA IN WRITING AND BY TELEPHONE AT THE FOLLOWING POINTS:
   A. THE REQUIRED PRE-CONSTRUCTION MEETING.
   B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
   C. DURING THE INSTALLATION OF SEDIMENT BASINS (TO BE CONVERTED INTO PERMANENT STORMWATER MANAGEMENT STRUCTURES) AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION OF EACH STEP IS MANDATORY.
   D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
   E. PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES.
   F. PRIOR TO FINAL ACCEPTANCE.

3. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED AND APPROVED BY THE AGENCY INSPECTOR OR WMA INSPECTOR PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE WMA INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM WMA INSPECTOR AND AGENCY INSPECTOR. THE CONTRACTOR MUST OBTAIN PRIOR AGENCY AND WMA APPROVAL FOR CHANGES TO THE SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION.

4. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.

5. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM WMA INSPECTOR AND AGENCY INSPECTOR.

6. ALL SEDIMENT BASINS, TRAP EMBANKMENTS AND SLOPES, PERIMETER DIKES, SWALES AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD OR SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES. AS SOON AS POSSIBLE BUT NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. (REQUIREMENT FOR STABILIZATION MAY BE REDUCED TO THREE (3) DAYS FOR SENSITIVE AREAS.)

7. THE CONTRACTOR SHALL APPLY SOD OR SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS AND STOCKPILES WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED IN THE AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. (REQUIREMENT MAY BE REDUCED TO SEVEN (7) DAYS FOR SENSITIVE AREAS.)

8. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE AND HAVE ESTABLISHED PERMANENT STABILIZATION FOR ALL CONTRIBUTORY DISTURBED AREAS USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHERE THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE, BUT NOT LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED AND ANCHORED STRAW MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.

9. THE SITE'S APPROVAL LETTER, APPROVED EROSION AND SEDIMENT CONTROL PLANS, DAILY LOG BOOKS, AND TESTS REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF WMA AND THE AGENCY RESPONSIBLE FOR PROJECT.

10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WATER DOWN SLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF A CUT OR FILL SLOPE UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE METHODS MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.

11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING, RIP-RAP, OR BY OTHER APPROVED STABILIZATION MEASURES.

12. TEMPORARY SEDIMENT CONTROL DEVICES MAY BE REMOVED, WITH PERMISSION OF WMA INSPECTOR AND AGENCY INSPECTORS, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.

13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NON-MAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.

14. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS TO PREVENT WATER FROM PONDING FOR MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL EVENT. DRAINAGE COURSES AND SWALE FLOW AREAS MAY TAKE AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL EVENT TO DRAIN. AREAS DESIGNED TO HAVE STANDING WATER SHALL NOT BE REQUIRED TO MEET THIS REQUIREMENT.

15. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A FOUNDATION THAT EXISTS OR IS UNDER CONSTRUCTION. NO STRUCTURE MAY BE CONSTRUCTED WITHIN 20 FEET OF AN ACTIVE SEDIMENT TRAP OR BASIN.

16. THE WMA INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY.

17. ALL TRAP DEPTH DIMENSIONS ARE RELATIVE TO THE OUTLET ELEVATION. ALL TRAPS MUST HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.

18. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING AND GROUND COVERS.

19. SEDIMENT SHALL BE REMOVED AND THE TRAP OR BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE QUARTER OF THE TOTAL DEPTH OF THE TRAP OR BASIN. TOTAL DEPTH SHALL BE MEASURED FROM THE TRAP OR BASIN BOTTOM TO THE CREST OF THE OUTLET.

20. SEDIMENT REMOVED FROM TRAPS (AND BASINS) SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE MUST BE DIRECTED TO A SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.

21. ALL WATER REMOVED FROM EXCAVATED AREAS (E.G. UTILITY TRENCHES) SHALL BE PASSED THROUGH AN APPROVED DEWATERING PRACTICE OR PUMPED TO A SEDIMENT TRAP OR BASIN PRIOR TO DISCHARGE FROM THE SITE)I.E. VIA FUNCTIONAL STORM DRAIN SYSTEM OR TO STABLE GROUND SURFACE).

22. SEDIMENT CONTROL FOR UTILITY CONSTRUCTION FOR AREAS OUTSIDE OF DESIGNED CONTROLS OR AS DIRECTED BY THE ENGINEER OR WMA INSPECTOR:
   A. CALL "MISS UTILITY" AT 1-800-257-7777 72 HOURS PRIOR TO THE START OF WORK.
   B. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
   C. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED, AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAT CAN BE COMPLETED THE SAME DAY, UNLESS:
   D. TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED FOR MORE THAN ONE DAY.

23. WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR, SEDIMENT BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH THE LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES OR TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE MUST BE MADE OF WELDED WIRE AND AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHED IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.

24. OFF-SITE SPOIL OR BORROW AREAS ON STATE OR FEDERAL PROPERTY MUST HAVE PRIOR APPROVAL BY WMA AND OTHER APPLICABLE STATE, FEDERAL AND LOCAL AGENCIES; OTHERWISE APPROVAL MUST BE GRANTED BY THE LOCAL AUTHORITIES. ALL WASTE AND BORROW AREAS OFF-SITE MUST BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED.

25. SITES WHERE INFILTRATION DEVICES ARE USED FOR THE CONTROL OF STORMWATER, EXTREME CARE MUST BE TAKEN TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE STRUCTURE DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES PLACED IN INFILTRATION AREAS MUST HAVE BOTTOM ELEVATIONS AT LEAST TWO (2) FEET HIGHER THAN THE FINISH GRADE BOTTOM ELEVATION OF THE INFILTRATION PRACTICE. WHEN CONVERTING A SEDIMENT TRAP TO AN INFILTRATION DEVICE, ALL ACCUMULATED SEDIMENT MUST BE REMOVED AND DISPOSED OF PRIOR TO FINAL GRADING OF INFILTRATION DEVICE.

26. WHEN A STORM DRAIN SYSTEM OUTFALL IS DIRECTED TO A SEDIMENT TRAP OR SEDIMENT BASIN AND THE SYSTEM IS TO BE USED FOR TEMPORARILY CONVEYING SEDIMENT LADEN WATER, ALL STORM DRAIN INLETS IN NON-SUMP AREAS SHALL HAVE TEMPORARY ASPHALT BERMS CONSTRUCTED AT THE TIME OF BASE PAVING TO DIRECT GUTTER FLOW INTO THE INLETS TO AVOID SURCHARGING AND OVERFLOW OF INLETS IN SUMP AREAS.

27. SITE INFORMATION:

A.	TOTAL AREA OF FACILITY (BASE, CAMPUS, PARK, ETC.)	N/A ACRES
B.	TOTAL AREA OF PROJECT SITE	APPROX. 1 ACRE
C.	AREA DISTURBED	0.09 ACRES
D.	AREA TO BE ROOFED OR PAVED	N/A ACRES
E.	TOTAL CUT	1256 CU. YDS.
F.	TOTAL FILL	N/A CU. YDS.
G.	OFF-SITE WASTE/BORROW AREA LOCATION	1256 CU. YDS.

OWNER'S / DEVELOPER'S CERTIFICATION

"I / WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE 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 STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS."

7-9-09
DATE

OWNER'S / DEVELOPER'S SIGNATURE

165
CARD NO.

Doug Novocin, P.E., Environmental Manager
PRINTED NAME AND TITLE

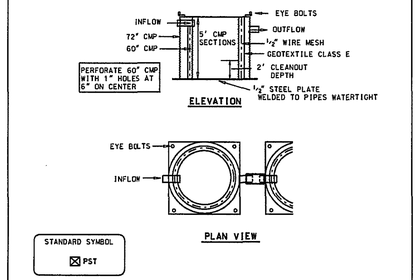
STANDARD STABILIZATION NOTE:

" FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS (14) AS TO ALL DISTURBED OR GRADED AREAS ON THE PROJECT SITE."

SEQUENCE OF CONSTRUCTION NOTES

1. THE CONTRACTOR MUST NOTIFY MDE IN WRITING AND/OR BY TELEPHONE (410) 537-3510 SEVEN (7) DAYS PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT. IF AREA CAN NOT BE STABILIZED, EROSION AND SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS NOTED ON THIS SHEET, IN NOTES 3 AND 4 BELOW, AND/OR AS DIRECTED BY THE ENGINEER/MDE WMA INSPECTOR.
3. FOR OPEN FOUNDATION EXCAVATIONS CONTRACTOR SHALL UTILIZE IMPERVIOUS SHEETING AND STONE OR SANDBAG ANCHORS TO COVER EXPOSED AREA. OPEN FOUNDATION EXCAVATION SHALL BE DEWATERED, AS NECESSARY, BY PSTS (SEE DETAIL THIS SHEET) AND SEDIMENT REMOVED AS DIRECTED BY ENGINEER. PSTS MUST DISCHARGE TO STABLE OUTFALLS.
4. ALL EXCAVATED MATERIAL SHALL BE REMOVED DAILY FROM THE CONSTRUCTION SITE AND BE DISPOSED AT A PREVIOUSLY APPROVED DISPOSAL SITE. IN THE EVENT THAT SAME DAY REMOVAL IS NOT FEASIBLE, UNDER DIRECTION OF ENGINEER, CONTRACTOR SHALL INSTALL SF (SEE DETAIL THIS SHEET) TO PREVENT SEDIMENT LADEN WATER FROM EXITING THE DISTURBED SITE. ONSITE STORAGE SHALL NOT EXCEED FIVE (5) WORKING DAYS.
5. ALL CONDUIT TRENCHING SHALL BE IN ACCORDANCE WITH NOTE 22, THIS SHEET. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT TEMPORARY STABILIZATION METHODS ARE EFFECTIVELY EMPLOYED THROUGHOUT THE DURATION OF THE PROJECT.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN STABILIZED ACCESS TO ALL DISTURBED AREAS OF THE PROJECT. AT THE DIRECTION OF THE ENGINEER, ACCESS TO AREAS OF CONSTRUCTION MAY BE FROM THE SHOULDER OF ROADWAY. THE ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER, THE CONTRACTOR AND THE MDE WMA INSPECTOR.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING DISTURBED AREAS. SEE SPECIAL PROVISIONS SECTION 308.
8. THE CONTRACTOR SHALL PROVIDE FINAL STABILIZATION OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, PER SHEET ESC-02.
9. CONTRACTOR SHALL PERFORM ANY NECESSARY CLEANOUT OF STORM DRAIN INLETS AND PIPES TO FLUSH ANY SEDIMENT BYPASS AS A LAST ORDER OF WORK. ALL SEDIMENT LADEN WATER SHALL BE REMOVED AND DISPOSED OFFSITE AT AN APPROVED LOCATION. COST OF CLEANOUT AND DISPOSAL OF CLEANOUT MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DETAIL 21 – PORTABLE SEDIMENT TANK

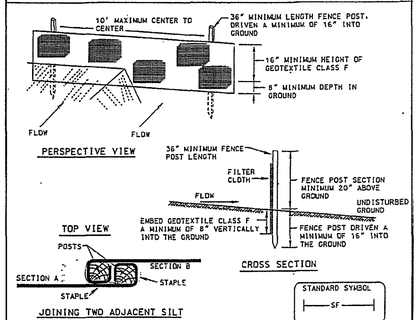


Construction Specifications

1. The following formula should be used in determining the storage volume of the sediment tank: 1 cubic foot of storage for each gallon per minute of pump discharge capacity.
2. An example of a typical sediment tank is shown above. Other container designs can be used if the storage volume is adequate and approval is obtained from the local approving agency.
3. Tanks may be connected in series.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 14 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 – SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 16 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DESIGN CERTIFICATION

" I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT REGULATIONS."

June 4, 2009
DATE

Diane B. Rubin
DESIGNER'S SIGNATURE

MD. REGISTRATION NO. 33960
(P.E.) R.L.S. OR R.L.A. (CIRCLE)

Diane Rubin, P.E., WR&A
PRINTED NAME

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE APPROVED LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33960, EXPIRATION DATE: JANUARY 14, 2011.

DEVELOPER INFORMATION:

Name: MARYLAND TRANSPORTATION AUTHORITY
Address: 320 AUTHORITY DRIVE
BALTIMORE, MARYLAND 21222-2200
Telephone: 410-537-7840

WR&A
Whitman, Requardt and Associates, LLP
Engineers and Planners
801 S. Caroline Street
Baltimore, Maryland 21231
(410) 235-3450

Maryland Transportation Authority
Engineering Division

ADDENDUMS & REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	Owner/Developer's Signature DN		7/9/09

m:\3150903\CentralRegion\MA582\FMT_North\ES-N001_FT710.dgn 1:36:22 PM

UPGRADE AND REPLACE EXISTING SIGNING WITH BRIDGE MODIFICATIONS NORTH OF FORT MCHENRY TUNNEL
FORT MCHENRY TUNNEL (BALTIMORE COUNTY/BALTIMORE CITY)
EROSION & SEDIMENT CONTROL NOTES (SHEET 1 OF 2)

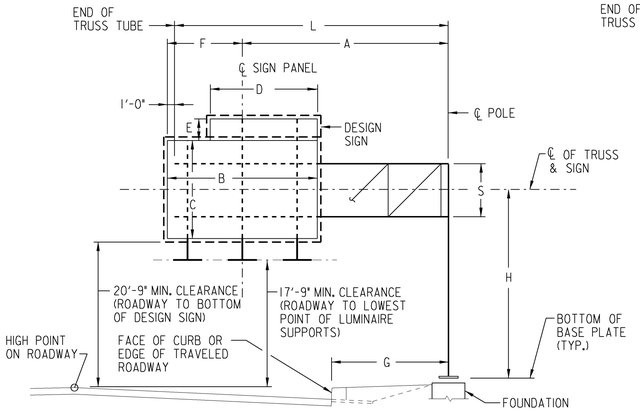
DESIGNED BY D. RUBIN	DRAWN BY D. RUBIN	CHECKED BY M.LEARY	
CONST. REVIEW BY	DATE 1:36:22 PM	SCALE NONE	

CONTRACT NO. FT-710-000-002R
DRAWING NO. ESC-01
SHEET NO. 4 OF 212

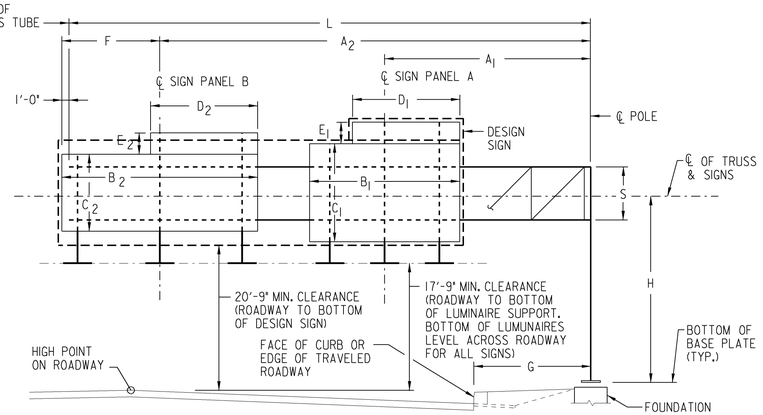
DRILL HOLES

DRILL HOLES

DRILL HOLES



ELEVATION OF CANTILEVER SIGN SUPPORT – SINGLE PANEL
DIRECTION OF TRAFFIC



ELEVATION OF CANTILEVER SIGN SUPPORT – DOUBLE PANEL
DIRECTION OF TRAFFIC

CANTILEVER SIGN SUPPORT – SINGLE PANEL

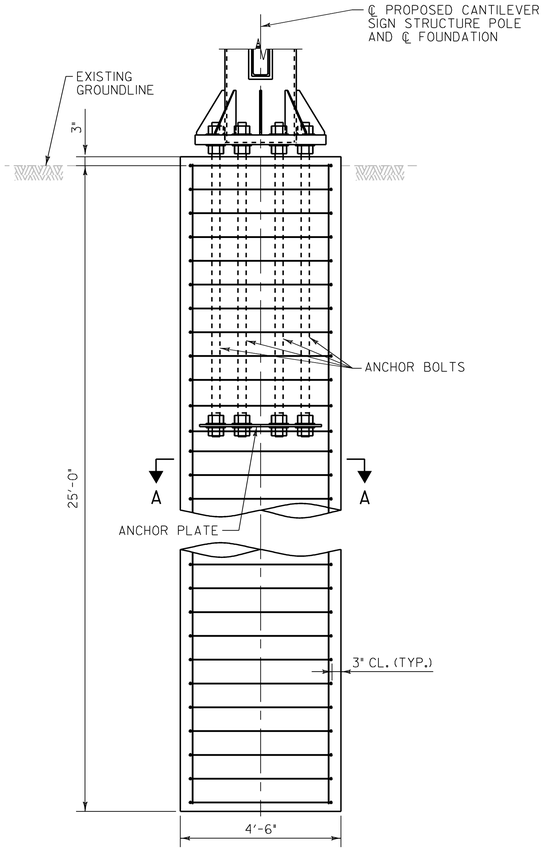
SIGN STRUCTURE NO.	STRUCTURE MARK	STRUCTURE DIMENSIONS			SIGN PANEL							DESIGN SIGN SIZE W x H	FOUNDATION			LOCATION/REMARKS
		H	S	L	A	B	C	D	E	F	G••		MARK	TYPE	C.Y. CONC.	
C-29	C-35-32-C	31'-4"	4'-0"	29'-0"	19'-0"	22'-0"	13'-0"	-	-	11'-0"	6'-8"	22' (W) x 16' (H) •	•••	•••	14.9	KEITH AVE WB, 25' W OF EX CANT STR 24225
C-34	C-30-28-B	27'-5"	4'-0"	28'-0"	19'-6"	19'-0"	9'-0"	-	-	9'-6"	10'-8"	18' (W) x 12' (H) •	CF-3	A	10.6	O'DONNELL ST WB, 20' E OF EX CANT STR 24240
C-35	C-30-28-B	27'-3"	4'-0"	30'-0"	22'-6"	17'-0"	8'-0"	-	-	8'-6"	8'-0"	18' (W) x-12' (H) •	CF-3	A	10.6	O'DONNEL ST RAMP FROM I-95 SB, 25' W OF I-95 OVERPASS
C-36	C-45-30-E	28'-1"	4'-0"	45'-0"	34'-0"	24'-0"	12'-0"	-	-	12'-0"	5'-2"	28' (W) x 16' (H) •	CF-23	A	15.9	I-95 SB, 110' S OF GORE FOR I-95 SB AND O'DONNELL ST RAMP
C-37	C-40-30-E	28'-5"	4'-0"	38'-0"	29'-0"	20'-0"	10'-0"	12'-0"	3'-0"	10'-0"	8'-0"	26' (W) x 16' (H) •	CF-20	A	14.4	I-95 NB, 250' S OF EX OH STR 24048
C-38	SEE NOTE A	SEE NOTE A	4'-0"	39'-0"	32'-0"	16'-0"	12'-0"	12'-0"	3'-0"	8'-0"	8'-0"	26' (W) x 16' (H) •	CF-17	A	13.8	I-95 NB, 20' N OF EX CANT STR 24049 SEE NOTE A
C-42	C-35-30-E	30'-0"	4'-0"	31'-0"	21'-0"	22'-0"	13'-0"	-	-	11'-0"	8'-0"	26' (W) x 16' (H) •	CF-20	A	14.4	KEITH AVE EB, 30' E OF EX LIGHT POLE 2549
C-43	C-45-26-F	26'-5"	4'-0"	44'-0"	32'-6"	25'-0"	11'-0"	-	-	12'-6"	13'-8"	28' (W) x 12' (H) •	CF-21	A	15.3	EASTERN AVE WB, 20' W OF EX CANT STR 24057
C-45	C-25-30-B	27'-11"	4'-0"	24'-0"	19'-0"	12'-0"	12'-0"	-	-	6'-0"	10'-5"	16' (W) x 12' (H) •	CF-1	A	7.4	EASTERN AVE EB, 25' W OF EX CANT STR 24055
C-46	C-25-28-B	27'-3"	4'-0"	22'-0"	17'-0"	12'-0"	12'-0"	-	-	6'-0"	9'-0"	16' (W) x 12' (H) •	CF-1	A	7.4	EASTERN AVE EB, 16' E OF EX CANT STR 24056
C-60	C-45-30-E	30'-0"	4'-0"	45'-0"	31'-6"	29'-0"	12'-0"	-	-	14'-6"	14'-0"	28' (W) x 16' (H)	CF-23	A	15.9	I-95 NB RAMP TO EASTERN AVE. 60' S OF EXISTING STRUCTURE NO. 24231
C-61	C-40-30-E	29'-1"	4'-0"	39'-0"	28'-0"	24'-0"	12'-0"	-	-	12'-0"	8'-0"	26' (W) x 16' (H)	CF-20	A	14.4	I-95 SB RAMP TO EASTERN AVE. 25' S OF EXISTING STRUCTURE NO. 24238

• +12'(W) x 3'(H) EXIT PANEL
•• 'G' DIMENSION FROM EDGE OF TRAVEL LANE/FACE OF CURB/FLOW LINE OF CONCRETE BARRIER TO CENTERLINE OF POLE
••• SEE 'C-29 FOUNDATION - ELEVATION' THIS DRAWING FOR DETAILS

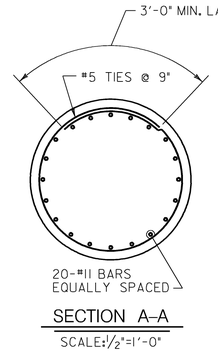
CANTILEVER SIGN SUPPORT – DOUBLE PANEL

SIGN STRUCTURE NO.	STRUCTURE MARK	STRUCTURE DIMENSIONS			SIGN PANEL												DESIGN SIGN SIZE W x H	FOUNDATION			LOCATION
					PANEL A					PANEL B								MARK	TYPE	C.Y. CONC.	
		H	S	L	A_1	B_1	C_1	D_1	E_1	A_2	B_2	C_2	D_2	E_2	F	G••					
C-49	C-45-30-E	28'-5"	4'-0"	45'-0"	22'-0"	14'-0"	7'-0"	12'-0"	3'-0"	38'-6"	15'-0"	9'-0"	12'-0"	3'-0"	7'-6"	5'-0"	28' (W) x 16' (H) •	CF-23	A	15.9	I-95 NB, 30 N OF EX CANT STR 24051
C-55	C-45-30-E	29'-2"	4'-0"	41'-0"	23'-0"	12'-0"	10'-0"	-	-	36'-6"	11'-0"	13'-0"	-	-	5'-6"	13'-0"	28' (W) x 16' (H) •	CF-23	A	15.9	US 40 EB, 10 FT E OF EX GND MOUNTED FOUNDATIONS
C-56	C-45-30-E	28'-5"	4'-0"	42'-0"	24'-0"	12'-0"	10'-0"	-	-	37'-6"	11'-0"	13'-0"	-	-	5'-6"	14'-6"	28' (W) x 16' (H) •	CF-23	A	15.9	US 40 WB, 90' W OF EX CANT STR

• +12'(W) x 3'(H) EXIT PANEL
•• 'G' DIMENSION FROM EDGE OF TRAVEL LANE/FACE OF CURB/FLOW LINE OF CONCRETE BARRIER TO CENTERLINE OF POLE



C-29 FOUNDATION – ELEVATION
SCALE: 1/2"=1'-0"



SECTION A–A
SCALE: 1/2"=1'-0"

GENERAL NOTES:

1. REFER TO CONTRACT PROPOSAL AND MD. STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS FOR MATERIAL, CONSTRUCTION SPECIFICATIONS AND DETAILS.
2. REFER TO ROADWAY LIGHTING PLANS FOR LIGHTING CHARTS.
3. ANY ALTERNATE DESIGN SHALL BE STRUCTURALLY EQUIVALENT AND SUBJECT TO APPROVAL BY THE ENGINEER.
4. ALL ALTERNATE DESIGNS MUST BE SIMILAR TO THE DESIGN SHOWN ON THE PLANS.
5. ALTERNATE DESIGNS MAY BE REJECTED BY THE ENGINEER FOR ANY REASON, INCLUDING REASONS NOT RELATED TO STRUCTURAL EQUIVALENCY.
6. ACTUAL STRUCTURE HEIGHT 'H' SHALL NOT BE LESS THAN 20'-9" + 1/2 x DESIGN SIGN HEIGHT ± ELEVATION DIFFERENCE BETWEEN HIGH POINT OF ROADWAY AND TOP OF FOUNDATION.
7. ALL SIGN STRUCTURE SUPPORTS SHALL BE LOCATED BEHIND PHYSICAL TRAFFIC BARRIERS.
8. ALL ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF FI554, GRADE 55 SI.
9. STEEL TEMPLATES SHALL BE USED TO SET ANCHOR BOLTS PLUMB WHEN POURING THE FOUNDATION.
10. ALL ANCHOR BOLTS SHALL BE PLUMB AFTER FOUNDATION INSTALLATION.
11. ALL CONNECTION BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A325 (BOLTS OVER 1 1/2" DIA. ASTM A449), WASHERS F436 AND NUTS AI94 GRADE 2 OR 2H. THE BOLTS SHALL HAVE A FLAT WASHER UNDER THE ELEMENT TO BE TURNED.
12. USE LOCK NUTS AND FLAT WASHERS FOR ALL 'U' BOLTS (A307 OR EQUIVALENT).
13. BASE PLATE SHALL BE IN FULL CONTACT WITH ALL FLAT WASHERS.
14. GROUT SHALL NOT BE PLACED BETWEEN THE BASE PLATE AND CONCRETE TOP.
15. FOR ALL STRUCTURAL DETAILS, SEE STANDARDS NO. MD-803.04 THRU. MD-803.08-23.

NOTE A:

THE SIGN STRUCTURE TO BE USED FOR C-38 HAS BEEN FABRICATED AND WILL BE SUPPLIED BY THE AUTHORITY. THE SIGN STRUCTURE DESIGNATION IS C-40-28-F AND WAS FABRICATED WITH SOME MODIFICATIONS TO THE STANDARD DETAILS DUE TO MATERIAL AVAILABILITY. A COPY OF THE APPROVED SHOP DRAWING WILL BE FURNISHED UPON THE CONTRACTOR'S REQUEST.

THE CONTRACTOR SHALL FIELD MEASURE THE POLE HEIGHT, BASE PLATE DIAMETER, BASE PLATE THICKNESS, AND BOLT CIRCLE DIAMETER OF THE FABRICATED SIGN STRUCTURE AND ADJUST THE ELEVATION OF THE TOP OF CONCRETE FOUNDATION ACCORDINGLY SO AS TO MAINTAIN THE MINIMUM VERTICAL CLEARANCE TO THE HIGH POINT OF THE ROADWAY. THE TOP OF CONCRETE FOUNDATION SHALL EXTEND 3 INCHES MIN. ABOVE THE EXISTING GROUNDLINE.

THE CONTRACTOR SHALL FABRICATE THE NECESSARY SIGN AND LUMINAIRE SUPPORTS FOR MOUNTING TO SIGN STRUCTURE C-38. REFER TO DWG. NO. SN-2.11 FOR THE NUMBER OF SUPPORTS REQUIRED.

THE CONTRACTOR SHALL FURNISH THE NECESSARY HIGH STRENGTH BOLTS, NUTS AND WASHERS FOR ALL CONNECTIONS ASSOCIATED WITH SIGN STRUCTURE C-38 AS REQUIRED BY THE STANDARD DETAILS.

THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER TWO (2) WEEKS PRIOR TO THE DATE THAT IS DESIRED TO PICK-UP THE EXISTING SIGN STRUCTURE TO BE USED FOR C-38.

⚠ THE PAYMENT FOR CANTILEVER SIGN STRUCTURE C-38 WILL BE FULL COMPENSATION FOR ALL STAKEOUTS, FURNISH AND INSTALL SIGN SUPPORTS AND LUMINAIRE SUPPORTS, PICK-UP AND HAULING OF THE FABRICATED SIGN STRUCTURE, INSTALLATION OF THE SIGN STRUCTURE, FURNISH AND INSTALL HIGH STRENGTH BOLTS, NUTS AND WASHERS, AND FOR ALL MATERIAL, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE SIGN STRUCTURE WILL BE LOCATED AT THE FORT MCHENRY TUNNEL MAINTENANCE COMPLEX AT 4000 LELAND AVENUE, BALTIMORE, MD 21224.

REFER TO STANDARD NO. MD 803.05-07 FOR ANCHOR BOLT AND ANCHOR PLATE INFORMATION FOR THE POLE SIZE OF THE FABRICATED SIGN STRUCTURE. THE ANCHOR BOLTS AND ANCHOR PLATE FOR THE FOUNDATION OF SIGN STRUCTURE C-38 WILL BE PAID FOR UNDER THE CONCRETE FOR SIGN FOUNDATION ITEM.

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Maryland Transportation Authority
Engineering Division

ADDENDUMS & REVISIONS			
NO.	DESCRIPTION	BY	DATE
⚠	SHEET REVISED	NML	7/10/09

m:\3150903\CentralRegion\MA582\FMT_North\sn9_FT710.dgn 7/10/2009

UPGRADE AND REPLACE EXISTING SIGNING WITH BRIDGE MODIFICATIONS NORTH OF FORT MCHENRY TUNNEL
FORT MCHENRY TUNNEL (BALTIMORE COUNTY/BALTIMORE CITY)
CANTILEVER SIGN STRUCTURE

DESIGNED BY J. MOCNY | DRAWN BY J. RASMUSSEN | CHECKED BY N.LEARY
CONST. REVIEW BY | DATE 7/10/2009 | SCALE NONE

CONTRACT NO. FT-710-000-002R
DRAWING NO. SN-9
SHEET NO. 61 OF 212