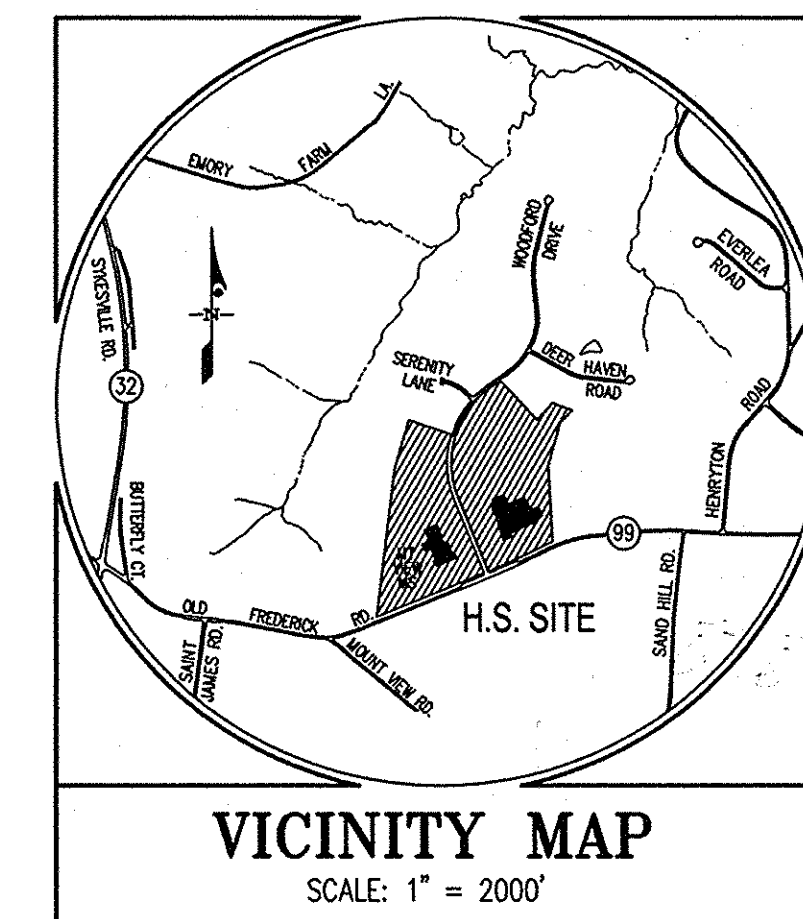


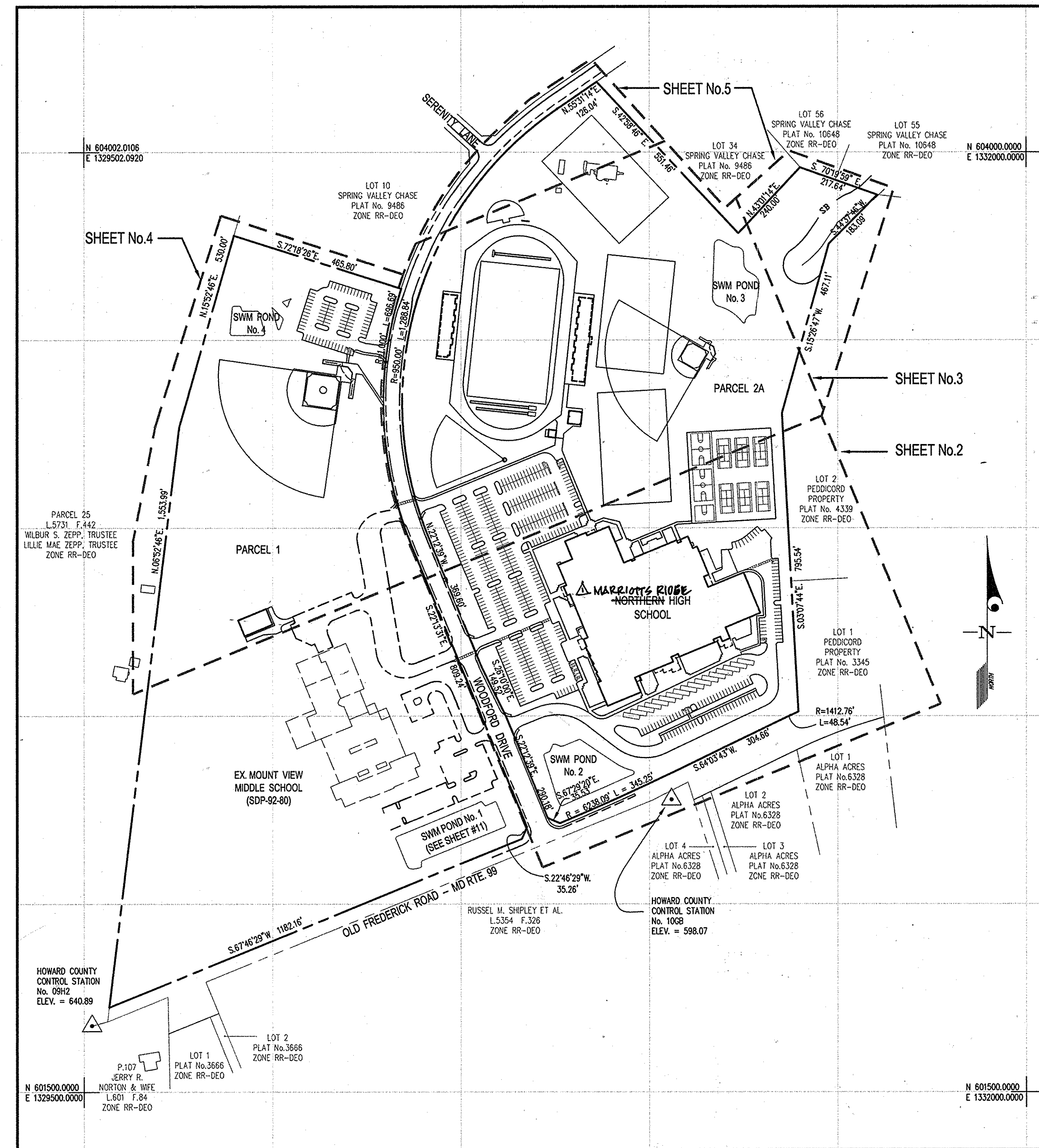
MARRIOTT'S RIDGE NORTHERN HIGH SCHOOL

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND



GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION WORK.
4. PROJECT BACKGROUND:
 LOCATION: TAX MAP 10, AT CORNER OF MD. RTE. 99 & WOODFORD DRIVE
 ZONING: RR-DEO
 ELECTION DISTRICT: 3RD ELECTION DISTRICT
 SECTION/AREA: N/A
 SITE AREA: 36.92 AC (GROSS FOR PARCEL-2A PER PLAT #16134/7 FOR TOTAL PROJECT SITE AREA SEE SITE DATA ON THIS SHEET)
 APPROVED NAME AND DPZ REF. FILE NOS.:
 SDP-92-80 (MOUNT VIEW MS. ON PARCEL #1), F-90-24, F-92-110 (PLAT #10405-10407), PLAT #16117/B, RESUBDIVISION PLATS #16134/7 (WHICH CREATED PARCEL 2A FROM PARCEL 2A FROM PLAT 10406 AND LOT 35 SHOWN ON PLAT 9488), F-03-200 AND F-03-201, COUNCIL RESOLUTION #12-2003 WHICH WAS ADOPTED ON 3-03-03 TO GRANT A VARIANCE FROM THE 50 FOOT USE SETBACK FROM WOODFORD DRIVE TO 45 FEET FOR PROPOSED PARKING SPACES AND A VARIANCE FROM THE 34' HEIGHT REQUIREMENT TO 45'-4" FOR THE PROPOSED SCHOOL STRUCTURE.
5. EXISTING TOPOGRAPHY AND FEATURES WERE SURVEYED BY FISHER, COLLINS & CARTER, INC. (DECEMBER, 2001)
6. STORMWATER MANAGEMENT IS PROVIDED BY FOUR NEW PRIVATE RETENTION PONDS. THE FOUR SWM PONDS ARE TO BE PRIVATELY OWNED & MAINTAINED (BY HOPSS).
7. COORDINATES ARE BASED ON NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATION NUMBERS 09H2 AND 1920.
8. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
9. ANY DAMAGE TO COUNTY & STATE OWNED RIGHT-OF-WAY TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
10. THE HIGH SCHOOL SHALL BE SERVED BY PUBLIC WATER (CONTRACT #44-3478 & 44-4066-D) AND A SEPTIC SYSTEM. THE HIGH SCHOOL BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM AND INSIDE METER.
11. ALL EXISTING WATER WELLS ON HOPSS PROPERTY SHALL BE ABANDONED BY A WELL DRILLER IN ACCORDANCE WITH THE HEALTH DEPARTMENT SPECIFICATIONS PRIOR TO ANY SITE GRADING WORK UNDER THIS SDP.
12. ALL OBSERVATION WELLS SHALL REMAIN AS NOTED ON SHEETS 2-5.
13. ALL ON-SITE STORM DRAINS PROPOSED UNDER THIS SDP ARE PRIVATE.
14. THE EXISTING UTILITIES SHOWN HEREIN WERE DERIVED FROM AVAILABLE PUBLIC RECORDS. THE CONTRACTOR MUST DIG TEST PITS, BY HAND, AT ALL UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY EXACT LOCATION.
15. ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A. STANDARDS. MAXIMUM SIDEWALK CROSS SLOPE SHALL BE (2%) TWO PERCENT. PROVIDE A (5'x5') FIVE FOOT BY FIVE FOOT LEVEL (2% MAX.) LANDING AREA AT THE TOP AND BOTTOM OF ALL RAMPS AND BUILDING ENTRANCES AND EXITS.
16. ALL DRIVEWAYS AND PARKING TO BE OWNED AND MAINTAINED BY HOWARD COUNTY PUBLIC SCHOOL SYSTEM.
17. TRENCH BEDDING FOR STORM DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH: HOWARD COUNTY STANDARD C2.01. CLASS "C" BEDDING, UNLESS OTHERWISE NOTED.
18. EXCEPT FOR SIDEWALKS, ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. SIDEWALKS ARE DIMENSIONED TO BACK OF CURB UNLESS NOTED OTHERWISE. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS UNLESS OTHERWISE NOTED.
19. GUTTER PAN OF CONCRETE CURBS SHALL BE PITCHED TO CONFORM TO THE ADJACENT DRAINAGE PATTERNS OF THE ADJOINING PAVING FOR VEHICULAR USE.
20. ALL CURB FILLETS ARE 5' RADIUS UNLESS NOTED OTHERWISE. SPOT ELEVATIONS ALONG CURB LINE ARE AT THE FLOW LINE, UNLESS NOTED OTHERWISE.
21. THERE ARE NO KNOWN GRAVE SITES OR CEMETERIES ON THIS SITE.
22. OTHER TOPICS RELATED TO THIS SITE:
 - 85TH PERCENTILE SPEED REPORT PREPARED BY THE TRAFFIC GROUP DATED 3/22/02 AND 11/22/02
 - SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION BY PENNIMAN & BROWN, INC., DATED 11/05/02, 10/23/02, 11/28/02 AND 3/04/03
 - TRAFFIC IMPACT ANALYSIS PREPARED BY THE TRAFFIC GROUP DATED 7/10/02 AND WAS APPROVED WITH THIS SDP.
23. FOR DETAILS OF BUILDING PROFILE, PARKING, PAVING SECTIONS, HANDICAP RAMPS, AND CURB/GUTTER SEE SHEET #6.
24. PER PREVIOUS SUBDIVISION PLANS FOR THIS SITE, THERE ARE NO 100-YR FLOOD PLAIN. A PRELIMINARY FIELD EVALUATION WAS CONDUCTED ON 10/22/02 BY EXPLORATION RESEARCH INC. INDICATES THAT THERE IS NO WETLANDS; HOWEVER, THERE IS THE BEGINNING OF AN INTERMITTENT STREAM ONLY ON PARCEL 2A. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE STREAM OR ITS REQUIRED 50' BUFFER.
25. THE FOREST CONSERVATION EASEMENTS (FCE) ON THIS PLAN HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FCE; HOWEVER, THE INITIAL GRADING TO DEVELOP THE SCHOOL SITES (PER THIS SDP) AND FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. THE FOREST CONSERVATION OBLIGATION FOR THE DEVELOPMENT OF THE HIGH SCHOOL UNDER THIS SDP IS FULFILLED BY RECORDING A LEAST 8.44 ACRES OF FCE AREA WHICH COMPRISES OF 0.54 AC. OF RETENTION AND 6.10 AC. OF SUPPLEMENTAL PLANTING (AFFORESTATION/REFORESTATION). THE FCE ARE RECORDED ON PLATS #16117/B & #16134/7.
26. ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING RESIDENTIAL PROPERTIES AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS. SITE LIGHTING SHALL BE POLE MOUNTED CUTOFF LUMINAIRE (BY LITHONIA) WITH 12" ARM, 1000 WATTS METAL HALIDE LAMPS, 480 VOLT, FUSED. POLE SHALL BE SQUARE, STRAIGHT, STEEL 30 FEET HIGH ABOVE CONCRETE BASE. POLE WALL THICKNESS SHALL BE 0.188" MINIMUM. COLOR OF FIXTURE AND POLE SHALL BE SAME DARK BRONZE. SEE SHEET 5 FOR THE LITHONIA SPECIFICATIONS. FOR ADDITIONAL INFORMATION, SEE PROJECT SPECIFICATIONS AND ELECTRICAL DRAWING SHEET E-1 TO BE SUBMITTED WITH BUILDING PERMIT SUBMISSION PACKAGE. THERE WILL BE NO STADIUM OR TENNIS COURT LIGHTING PROPOSED WITH THIS SDP.
27. THIS SDP IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.



SITE ANALYSIS & DATA

1. GENERAL SITE DATA
 A. PRESENT ZONING: RR-DEO
 B. EXISTING & PROPOSED USE OF SITE: INSTITUTIONAL (PUBLIC SCHOOLS)
 C. PUBLIC WATER & PRIVATE SEPTIC SYSTEM TO BE UTILIZED
2. AREA TABULATION
 A. TOTAL PROJECT/SITE AREA: 45.0 ± AC. (35.8 ± AC. FOR PARCEL #2A; 9.2 ± AC. FROM A PORTION OF PARCEL #1)
 B. NET AREA OF SITE: 45.0 ±
 C. AREA OF THIS PLAN SUBMISSION: 45.0 ±
 D. AREA OF DISTURBANCE BY THIS SDP: 43.7 ± ACRES
 E. BUILDING COVERAGE OF SITE: 136,752 S.F. (FOR THE H.S. BLDG., 3.14 AC. OR 8.7% OF PARCEL #2A)
 F. AREA OF PAVED (IMPERVIOUS) SURFACES (PARKING LOT, PLAY COURTS, SIDEWALK, ETC.)
 FOR THE H.S. SITE (PARCEL 2A) = 12.4 ± AC.
 FOR THE NEW PARKING LOT ON PARCEL No.1 = 0.7 ± AC.
 G. TOTAL IMPERVIOUS AREA FOR STORMWATER MANAGEMENT: SAME AS "F"
3. OPEN SPACE DATA
 A. OPEN SPACE REQUIRED ON SITE: N/A
 B. OPEN SPACE PROPOSED/PROVIDED: N/A
4. PARKING SPACE DATA
 A. NUMBER OF PARKING SPACES REQUIRED BY ZONING REGULATIONS: N/A
 B. TOTAL NUMBER OF SCHOOL BUS PARKING SPACES PROVIDED FOR THE HIGH SCHOOL AS REQUIRED BY HOPSS:
 17 SPACES (12'x44')
 C. TOTAL NUMBER OF PASSENGER VEHICLE PARKING SPACES FOR NORTHERN HIGH SCHOOL AS REQUIRED BY HOPSS (FOR APPROX. 1400 STUDENTS IN GRADES 9-12 AND 150 FACULTY/STAFF MEMBERS):

LOCATION OF PARKING FACILITY	PARCEL-1	PARCEL-2A	TOTAL PKG. SPACES
HANDICAPPED PARKING SPACES	2	11	13
STANDARD 9'x18' PARKING SPACES	78	502	580
TOTAL PARKING SPACES	80	513	593

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- 2 SITE DEVELOPMENT PLAN
- 3 SITE DEVELOPMENT PLAN
- 4 SITE DEVELOPMENT PLAN
- 5 SITE DEVELOPMENT PLAN
- 6 SITE DETAILS
- 7 SITE DETAILS
- 8 SITE DETAILS
- 9 PAVING DELINEATION PLAN
- 10 DRAINAGE AREA MAP (FOR SD)
- 11 STORMWATER MANAGEMENT DETAILS (POND #1)
- 12 STORMWATER MANAGEMENT DETAILS (POND #2)
- 13 STORMWATER MANAGEMENT DETAILS (POND #2)
- 14 STORMWATER MANAGEMENT DETAILS (POND #3 REV-FACILITY)
- 15 STORMWATER MANAGEMENT DETAILS (POND #3)
- 16 STORMWATER MANAGEMENT DETAILS (POND #4)
- 17 STORMWATER MANAGEMENT DETAILS (POND #4)
- 18 STORMWATER MANAGEMENT DETAILS (TEMPORARY CONDUIT)
- 19 STORMWATER MANAGEMENT NOTES, DETAILS & BORING LOGS
- 20 STORMWATER MANAGEMENT NOTES, DETAILS & BORING LOGS
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- 22 EXISTING CONDITION 1-YR ANALYSIS DRAINAGE AREA MAP (FOR SWM)
- 23 PRE-DEVELOPMENT DRAINAGE AREA MAP 2.10 YR. ANALYSIS (FOR SWM)
- 24 POST-DEVELOPMENT DRAINAGE AREA MAP (FOR SWM)
- 25 STORM DRAIN/UTILITY PROFILES & SCHEDULES
- 26 STORM DRAIN/UTILITY PROFILES & SCHEDULES
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- 50 EXISTING PLAN/DEMOLITION PLAN
- 51 SPACE OUT PLAN
- 52 SITE PLANS AND EROSION & SEDIMENT CONTROL PLAN
- 53-56 SITE DETAILS 1, II, III & IV
- 57 PIPE PROFILES
- 58 EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

THIS SDP IS NOT YET APPROVED FOR BUILDING CONSTRUCTION UNTIL THE PRIVATE SEPTIC FOR THE SCHOOL IS APPROVED BY THE HEALTH DEPARTMENT

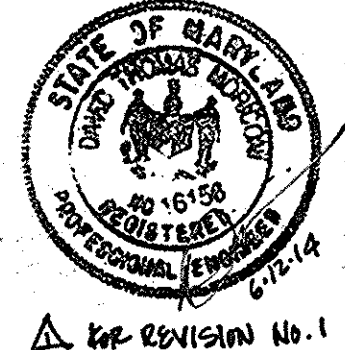
FOR THE PUBLIC PORTION OF THE ON-SITE WATER LINE SEE CONTRACT #44-4066-D.
 FOR THE PRIVATE SEPTIC SYSTEM, SEE THE DRAWINGS BY WHITMAN, REHARDT & ASSOCIATES.

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
Danny Boynton 1-15-04
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Frank S. Deagle 9/2/03
 Director Date

Cindy Hamant 9/2/03
 Chief, Division of Land Development Date

[Signature] 8-29-03
 Chief, Development Engineering Division Date



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. 16156, Expiration Date: 8-28-2014

SITE OVERVIEW

SCALE: 1" = 200'



FOR THE APPROVAL OF BUILDING CONSTRUCTION, THIS SDP WAS RE-SUBMITTED FOR SIGNATURE APPROVAL BY THE HEALTH DEPT. AS OF THE SIGNATURE DATE OF THE COUNTY HEALTH OFFICER.

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20866 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186			PREPARED FOR: OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 ROUTE 108 ELICOTT CITY, MD 21043 ATTN: CATHEEN YOUNG TEL: 410-313-6704			ARCHITECT: TCA ARCHITECTS LLC 2861 RIVA ROAD, SUITE 120 ANNAPOLIS, MD 21401 ATTN: WAVE BOON TEL: 301-261-8700			COVER SHEET NORTHERN HIGH SCHOOL HOWARD COUNTY PUBLIC SCHOOL SYSTEM PLAT Nos. 16117/B (PARCEL 1) and 16134/7 (PARCEL 2A)			SCALE: AS SHOWN ZONING: RR-DEO G. L. W. FILE No. 00-177		
DATE: 8-12-14 REVISION: 1-23-24 INSERT NEW SHEETS, UPDATED SCHOOL NAME, UPDATED NOTES UPDATED INFORMATION REGARDING THE APPROVAL OF THE SDP FOR BUILDING CONSTRUCTION			DATE: 28/JUL/03 TAX MAP - GRID: 10 19 SHEET: 1 of 48			WEST FRIENDSHIP ELECTION DISTRICT No. 3			HOWARD COUNTY, MARYLAND					

- NOTES:**
- SEE SHEET #5 FOR SDP LEGEND.
 - ALL EXISTING WATER WELLS ON HOPS PROPERTY SHALL BE ABANDONED BY A WELL DRILLER IN ACCORDANCE WITH THE HEALTH DEPARTMENT SPECIFICATIONS PRIOR TO ANY SITE GRADING WORK UNDER THIS SDP.
 - ALL OBSERVATION WELLS SHALL REMAIN. THOSE AFFECTED BY GRADING SHALL BE ADJUSTED SO THAT THE TOP OF THE WELL IS 2' (TWO FEET) ABOVE THE NEW FINISHED GRADE. ALL OBSERVATION WELLS SHALL BE PROTECTED SO THAT THEY ARE NOT DAMAGED BY CONSTRUCTION ACTIVITIES.
 - UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT PITS/PCS AND CORNERS.
 - SEE SHEET #9 FOR PAVING DELINEATION.
 - FOR INFORMATION ON THE PUBLIC PORTION OF THE WATER LINE SEE DPW CONTRACT NO. 44-3478 AND NO. 44-4066-D.
 - SEE ARCHITECTURAL DRAWINGS FOR INFORMATION ON SCREENING WALLS, MECH. EQUIPMENT PAD, FLAGPOLE LOCATION, ALL PLAY COURT/SPORT FACILITIES, MASONRY BENCHES, FENCING, SIDEWALK DIMENSION & SCORING PATTERN NOT SHOWN ON THESE SDP DRAWINGS.
 - SEE SHEET #8 FOR DETAILS OF ACCESSIBLE ROUTES TO THE HIGH SCHOOL BUILDING.
 - SEE SHEET #7 FOR DETAILS OF THE PEDESTRIAN CROSSING AREAS AND LANE STRIPING ON WOODFORD DRIVE.
 - FIVE STREETLIGHTS SHALL BE INSTALLED (BY BGC) ALONG WOODFORD DRIVE AT THE FOLLOWING LOCATIONS (OR AS DIRECTED BY DPW TRAFFIC DIVISION):
STATION 0+59.40 RIGHT
STATION 3+91.35 RIGHT
STATION 6+09.27 RIGHT
STATION 10+10.27 RIGHT
STATION 14+33.23 LEFT
 - THE FIVE STREETLIGHTS SHALL BE 250 WATT HPS VAPOR PENDANT (SAG) MOUNTED ON A 30" BRONZE FISHER CLASS POLE USING A 12" ARM ORIENTED PERPENDICULAR TO THE CENTERLINE OF WOODFORD DRIVE.
 - TWO SCHOOL ZONE FLASHERS SHALL BE INSTALLED ALONG WOODFORD DRIVE UNDER THE OVERSIGHT OF HOWARD COUNTY DPW TRAFFIC DIVISION.

THIS SDP IS NOT YET APPROVED FOR BUILDING CONSTRUCTION UNTIL THE PRIVATE SEPTIC FOR THE SCHOOL IS APPROVED BY THE HEALTH DEPARTMENT

SEE NOTE C BOTTOM FT. CORNER OF THIS SHEET.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS 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 SHALL EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conley Young 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CKG 7/30/03
ENGINEER'S SIGNATURE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John Selig 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Debra Neugebauer 8/14/03
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

Doug Bronte 1/15/04
County Health Officer (SAB) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

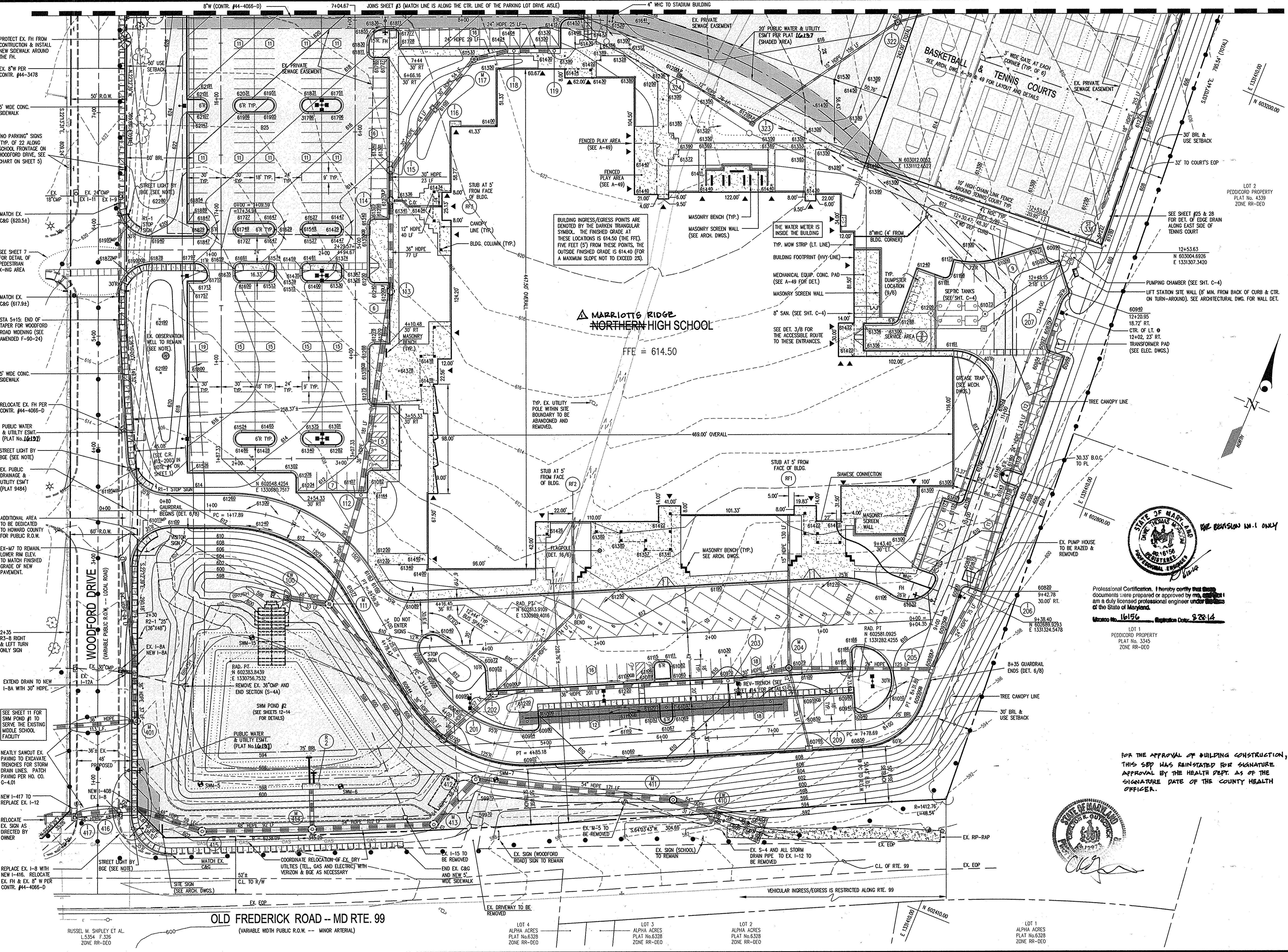
Harsh D. Ugras 9/6/03
Director Date

Cindy Hammett 7/6/03
Chief, Division of Land Development Date

Chief Development Engineering Division

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

00177/SDP-03-33/SDP-2-4.dwg	DES.	DRN.	CHK.
6.12.14	UPDATED SIGNATURE, CHANGED SHEET TOTAL		
1-29-04	UPDATED INFORMATION REGARDING THE APPROVAL OF THIS SDP FOR BUILDING CONSTRUCTION		
DATE	REVISION	BY	APPR.



Professional Certification. I hereby certify that these documents were prepared or approved by me, *CKG*, as a duly licensed professional engineer under the laws of the State of Maryland.
License No. 16156 Registration Date: 9-28-14

Professional Certification. I hereby certify that these documents were prepared or approved by me, *CKG*, as a duly licensed professional engineer under the laws of the State of Maryland.
License No. 16156 Registration Date: 9-28-14

FOR THE APPROVAL OF BUILDING CONSTRUCTION, THIS SDP HAS BEEN REINSTATED FOR SIGNATURE APPROVAL BY THE HEALTH DEPT. AS OF THE SIGNATURE DATE OF THE COUNTY HEALTH OFFICER.

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
ARCHITECT: TCA ARCHITECTS LLC
PREPARED FOR: HOWARD COUNTY PUBLIC SCHOOL SYSTEM

REVISED SITE DEVELOPMENT PLAN
MARRIOTT'S RIDGE NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 66117/2 (PARCEL 1) and 16126/7 (PARCEL 2A)

SCALE: 1" = 40'
ZONING: RR-DEO
DATE: 28/JUL/03
TAX MAP - GRID: 10 19
SHEET: 2 of 48

G. L. W. FILE No.	00-177
SHEET	2 of 48

- NOTES:**
- SEE SHEET #5 FOR SDP LEGEND.
 - ALL EXISTING WATER WELLS ON HCP'S PROPERTY SHALL BE ABANDONED BY A WELL DRILLER IN ACCORDANCE WITH THE HEALTH DEPARTMENT SPECIFICATIONS PRIOR TO ANY SITE GRADING WORK UNDER THIS SDP.
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 - UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG CONCRETE CURB & GUTTER ARE TO BE THE FLOW LINE (BOTTOM OF CURB) AT PITS/PVC'S AND CORNERS.
 - SEE SHEET #9 FOR PAVING DELINEATION.
 - FOR INFORMATION ON THE PUBLIC PORTION OF THE WATER LINE SEE DPW CONTRACT No.44-3478 AND No.44-4068-D.
 - SEE ARCHITECTURAL DRAWINGS FOR DETAILS ON ALL PLAYFIELDS/SPORT FACILITIES, BLEACHERS, FENCING, SIDEWALK DIMENSION AND SCORING PATTERN NOT SHOWN ON THESE SDP DRAWINGS.
 - SEE SHEET #8 FOR DETAIL OF THE ACCESSIBLE ROUTE TO THE STADIUM AREA.
 - SEE SHEET #7 FOR DETAILS OF THE PEDESTRIAN CROSSING AREAS AND LANE STRIPING ON WOODFORD DRIVE.
 - ALL EX. STRUCTURES AND UTILITIES ON PARCEL 2A SHALL BE DEMOLISHED AND THE REMAINING DEBRIS SHALL BE DUMPED AT A LEGAL DISPOSAL SITE.
 - FIVE STREETLIGHTS SHALL BE INSTALLED (BY BGC) ALONG WOODFORD DRIVE AT THE FOLLOWING LOCATIONS (OR AS DIRECTED BY DPW TRAFFIC DIVISION):
STATION 0+59, 40' RIGHT
STATION 3+81, 36' RIGHT
STATION 6+09, 27' RIGHT
STATION 10+10, 27' RIGHT
STATION 14+33, 23' LEFT
THE FIVE STREETLIGHTS SHALL BE 250 WATTS HPS VAPOR PENDANT (SAG) MOUNTED ON A 30' BRONZE FIBER GLASS POLE USING A 12' ARM ORIENTED PERPENDICULAR TO THE CENTERLINE OF WOODFORD DRIVE.
 - TWO SCHOOL ZONE FLASHERS SHALL BE INSTALLED ALONG WOODFORD DRIVE UNDER THE OVERSIGHT OF HOWARD COUNTY DPW TRAFFIC DIVISION.



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. 61566 Expiration Date: 8-25-14

PART OF FOREST CONSERVATION EASEMENT AREA No.2
 2.21± AC TOTAL
 (PLAT No. 66137)

PART OF FOREST CONSERVATION EASEMENT AREA No.2
 2.21± AC TOTAL
 (PLAT No. 66137)

PART OF FOREST CONSERVATION EASEMENT AREA No.1
 2.31± AC TOTAL

PART OF FOREST CONSERVATION EASEMENT AREA No.3
 0.60± AC TOTAL

PART OF FOREST CONSERVATION EASEMENT AREA No.1
 2.31± AC TOTAL
 (PLAT No. 66137)

THIS SDP IS NOT YET APPROVED FOR BUILDING CONSTRUCTION UNTIL THE PRIVATE SEPTIC FOR THE SCHOOL IS APPROVED BY THE HEALTH DEPARTMENT

FOR THE APPROVAL OF BUILDING CONSTRUCTION, THIS SDP WAS REINSTATED FOR SIGNATURE APPROVAL BY THE HEALTH DEPT. AS OF THE SIGNATURE DATE OF THE COUNTY HEALTH OFFICER.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Caitleen Conboy 7/31/03
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CLC 7/30/03
 ENGINEER'S SIGNATURE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John A. Kelly 8/14/02
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John A. Kelly 8/14/02
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

James J. Smith 1-15-04
 County Health Officer (SAS) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

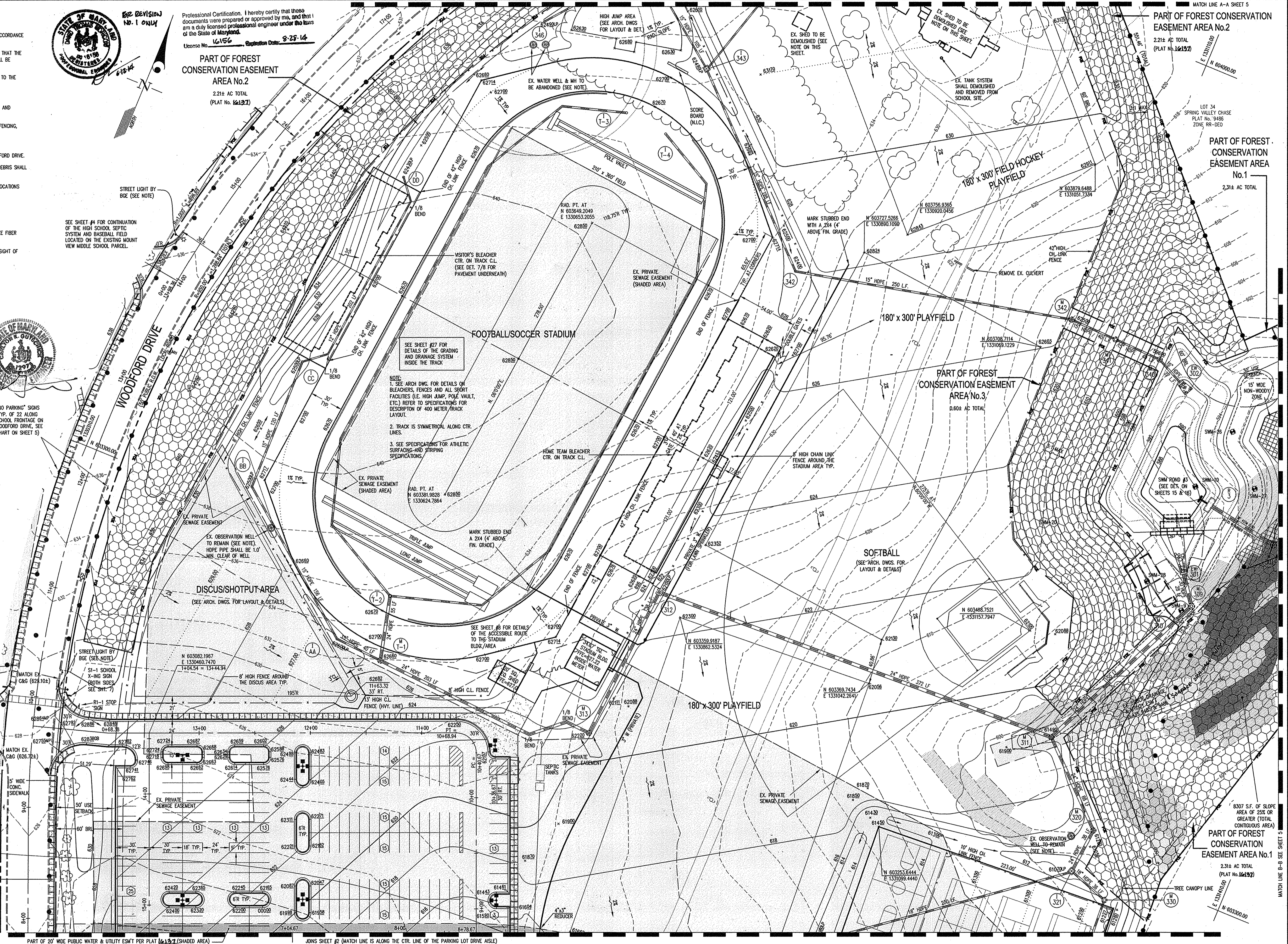
Mark A. Lauer 8/4/03
 Director Date

David Hamrick 7/26/03
 Chief, Division of Land Development Date

[Signature] 8/2/03
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

00177\SDP-03-33\SDP-2-4.dwg	DES.	DRN.	CHK.
DATE	REVISION	BY	APPR.
6-12-16	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	
1-02-04	UPDATED INFORMATION REGARDING THE APPROVAL OF THIS SDP FOR BUILDING CONSTRUCTION.	GLW/ST	



PREPARED FOR:
 OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: HOVE BOON
 TEL: 410-313-6704

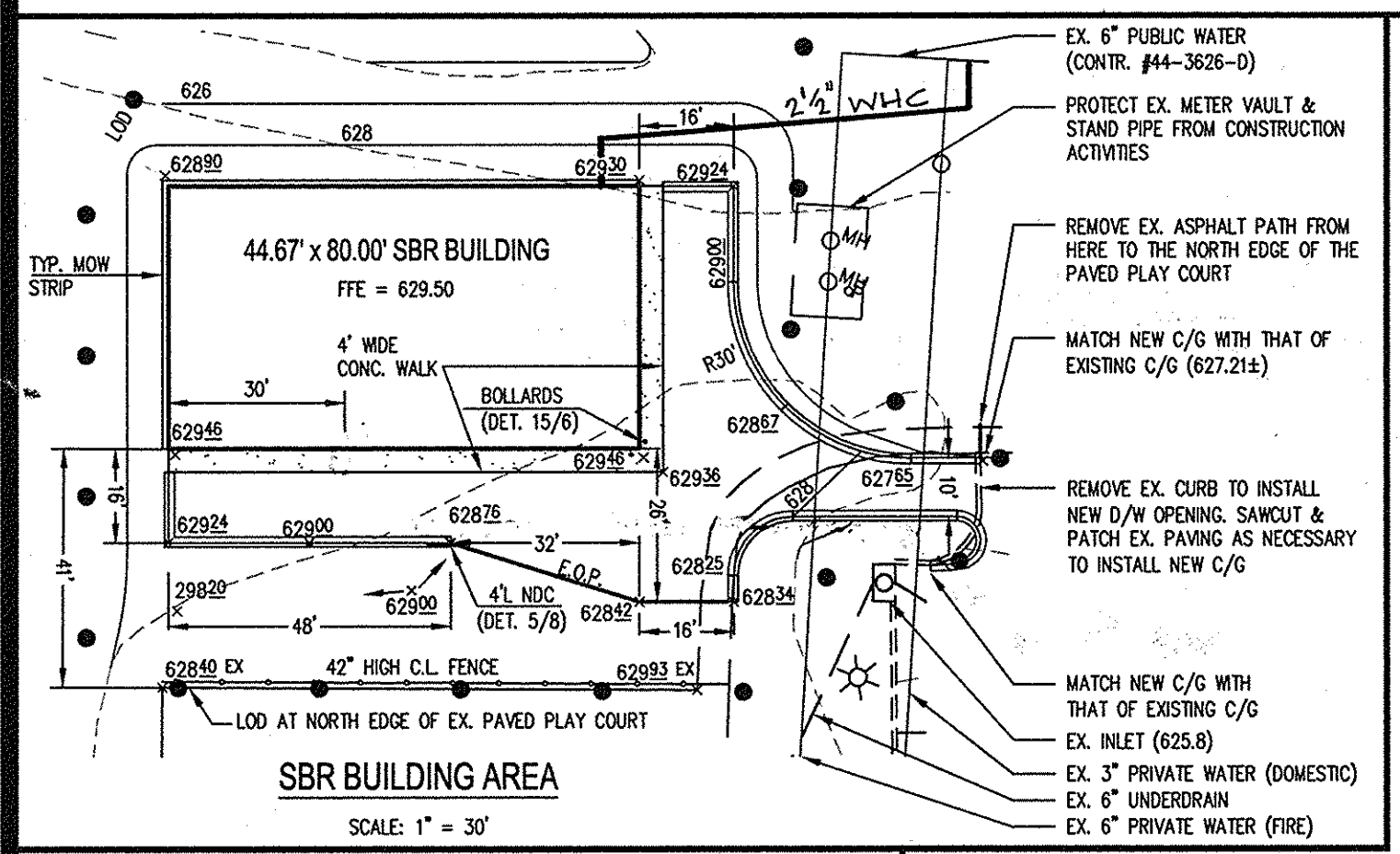
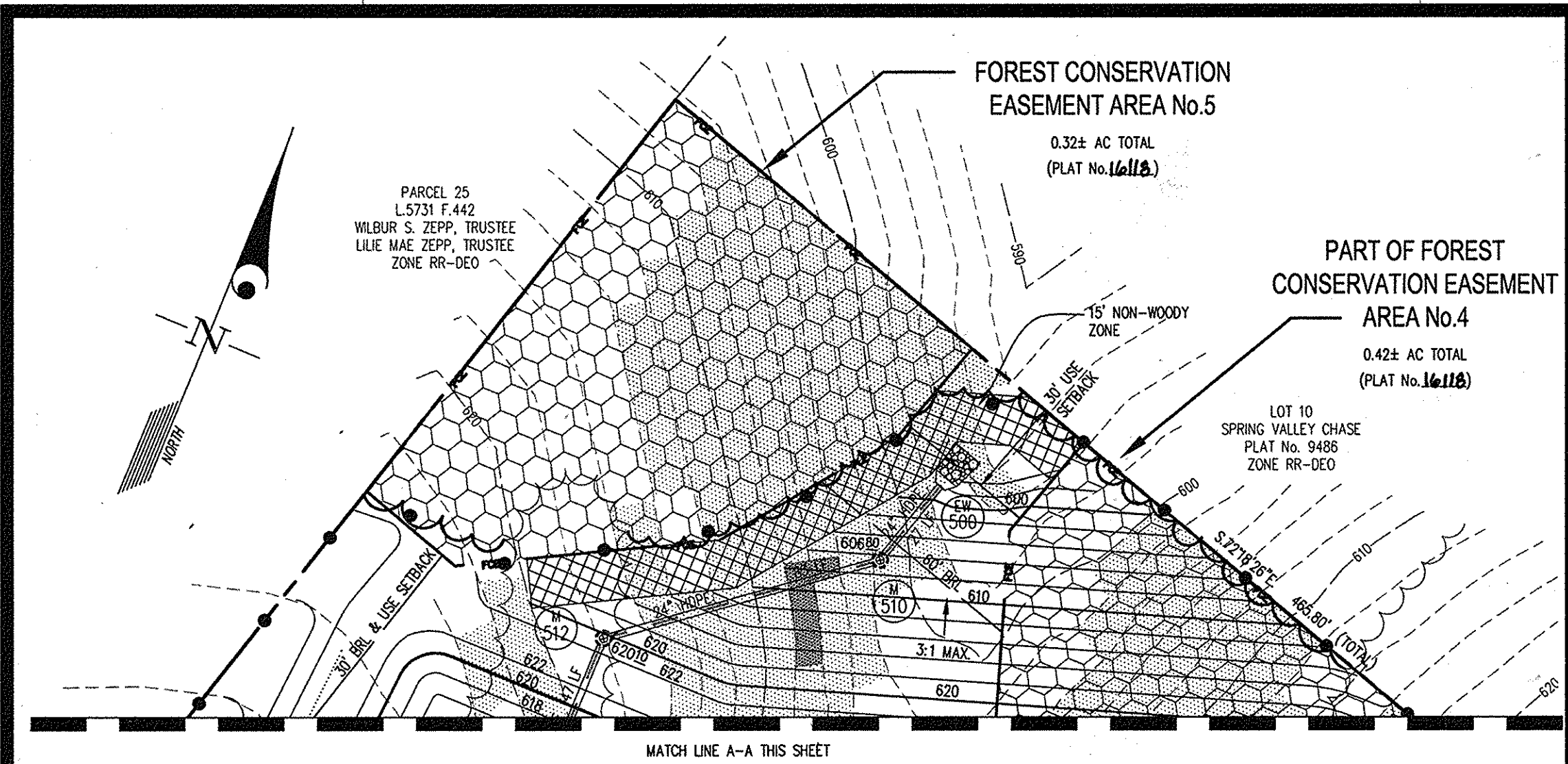
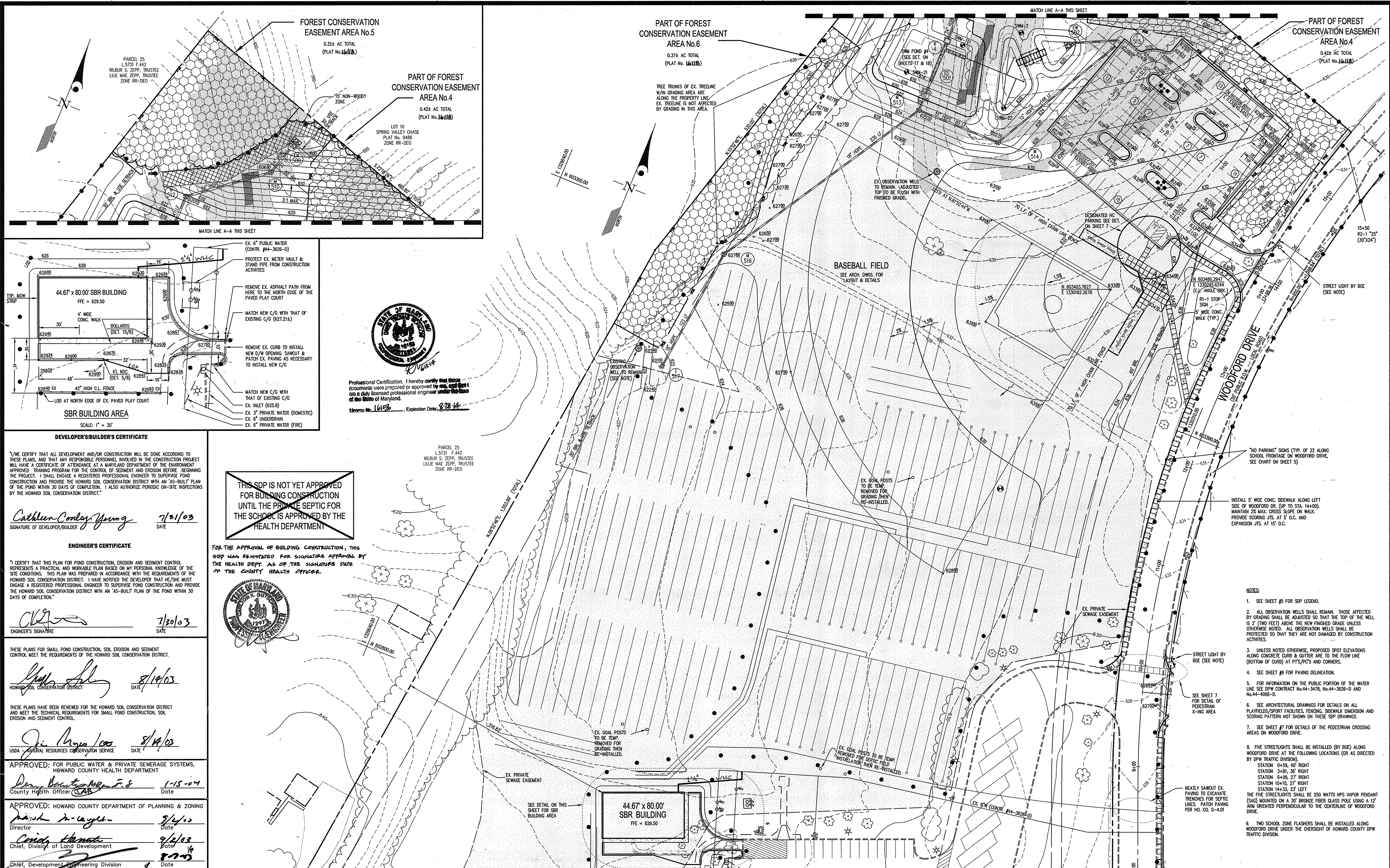
ARCHITECT:
 TCA ARCHITECTS LLC
 2661 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: HOVE BOON
 TEL: 301-261-8700

REVISOR SITE DEVELOPMENT PLAN
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16117/2 (PARCEL 1) and 16136/7 (PARCEL 2A)

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	3 of 48

WEST FRIENDSHIP ELECTION DISTRICT No. 3

HOWARD COUNTY, MARYLAND



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. 16176, Expiration Date: 8-28-14

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Young, 7/31/03
 SIGNATURE OF DEVELOPER/BUILDER DATE

THIS SDP IS NOT YET APPROVED FOR BUILDING CONSTRUCTION UNTIL THE PRIVATE SEPTIC FOR THE SCHOOL IS APPROVED BY THE HEALTH DEPARTMENT

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

7/30/03
 ENGINEER'S SIGNATURE DATE

FOR THE APPROVAL OF BUILDING CONSTRUCTION, THIS SDP WAS REINOTATED FOR SIGNATURE APPROVAL BY THE HEALTH DEPT. AS OF THE SIGNATURE DATE OF THE COUNTY HEALTH OFFICER.

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

8/14/03
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

8/14/03
 USDA NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

1-15-04
 County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

9/4/03
 Director DATE

9/2/03
 Chief, Division of Land Development DATE

8-27-03
 Chief, Development Engineering Division DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APPR.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DM	
8-30-05	added 2001 IAWWC to SBR building	GLW	
1-09-04	UPDATED INFORMATION REGARDING THE APPROVAL OF THIS SDP FOR BUILDING CONSTRUCTION.	GLW	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: MAE ZEPP
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MAE ZEPP
 TEL: 301-261-8700

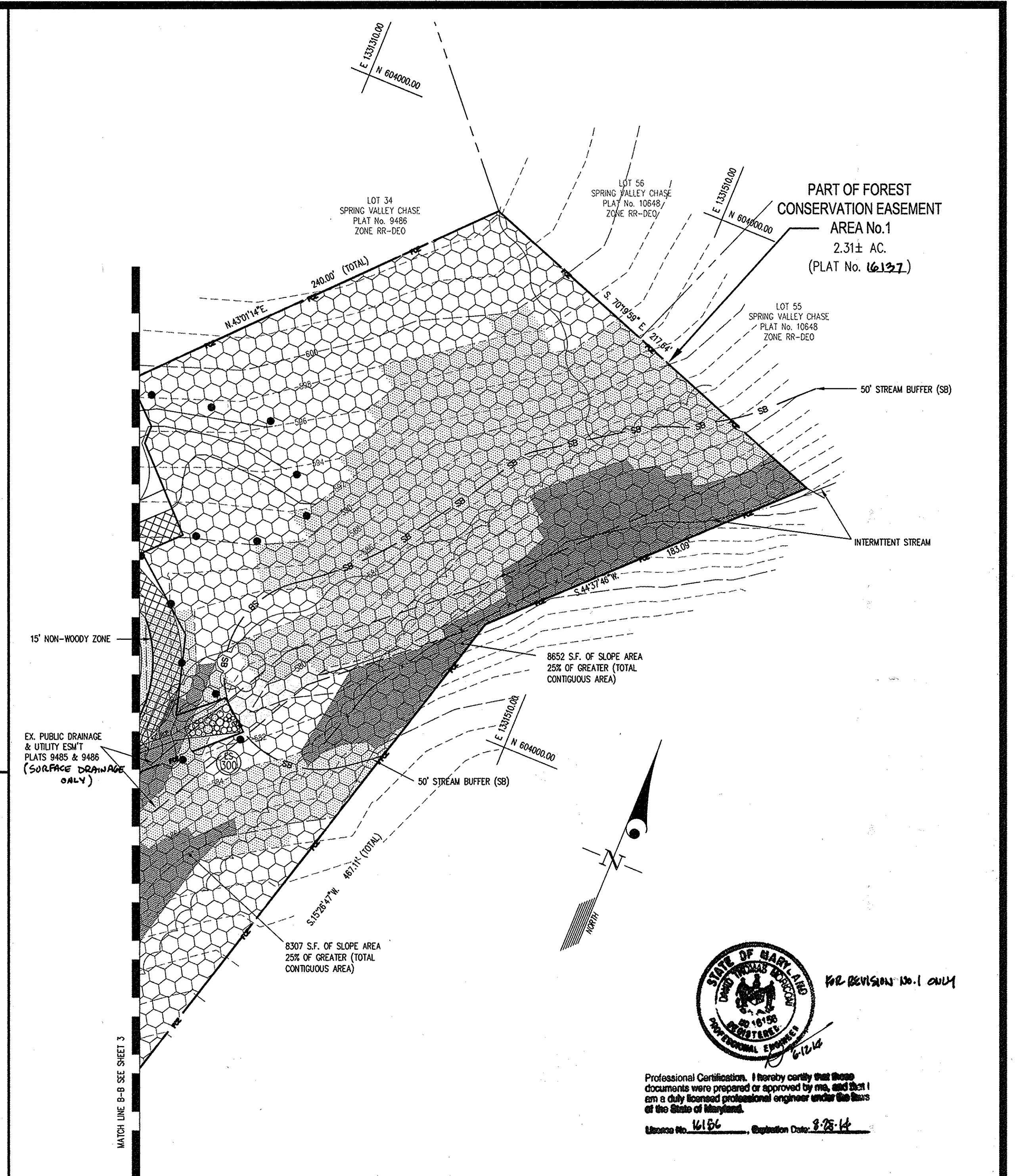
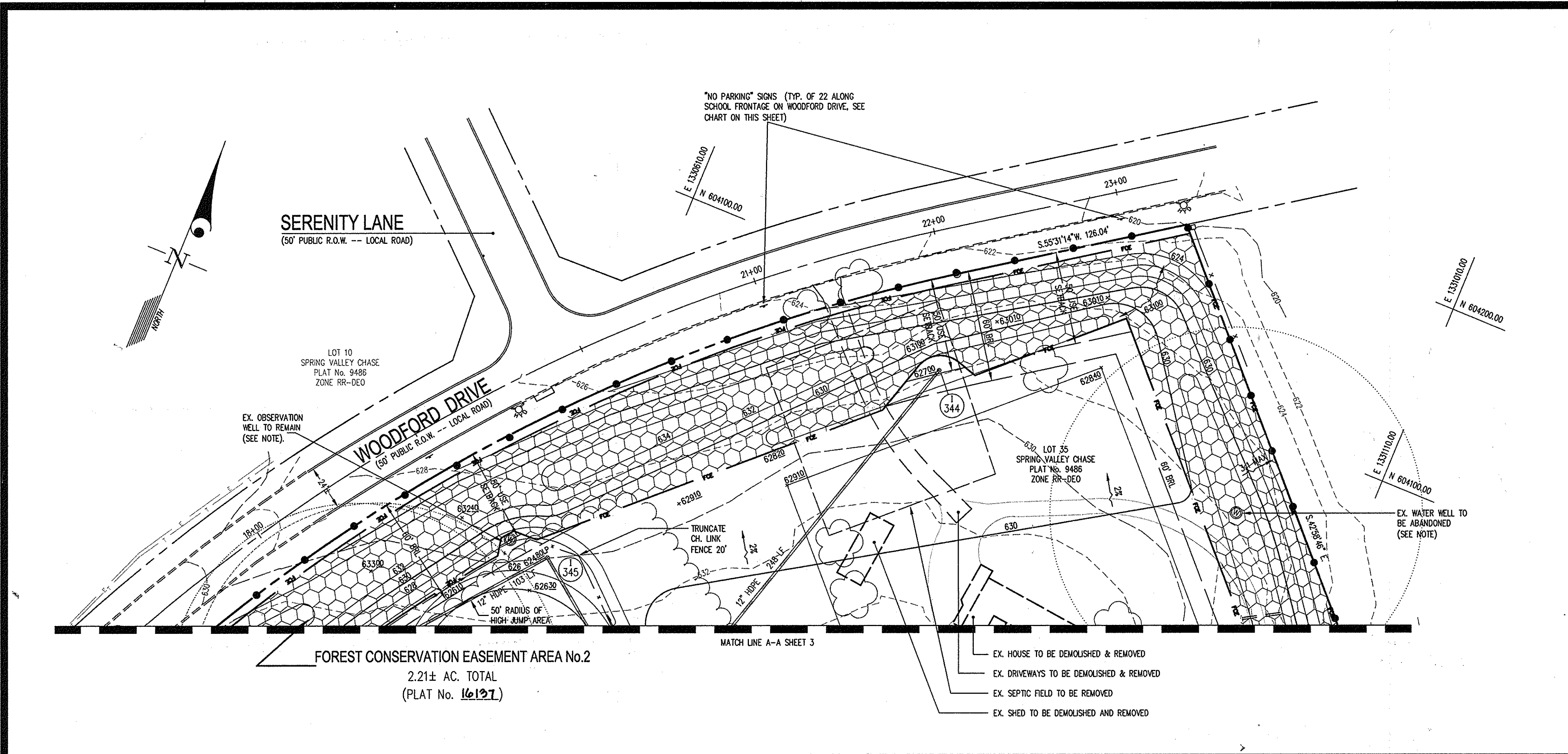
REVISION SITE DEVELOPMENT PLAN

NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16117A (PARCEL 1) and 16126A (PARCEL 2A)

WEST FRIENDSHIP ELECTION DISTRICT No. 3

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	4 of 48

- NOTES:**
- SEE SHEET #5 FOR SDP LEGEND.
 - ALL OBSERVATION WELLS SHALL REMAIN. THOSE AFFECTED BY GRADING SHALL BE ADJUSTED SO THAT THE TOP OF THE WELL IS 2' (TWO FEET) ABOVE THE NEW FINISHED GRADE UNLESS OTHERWISE NOTED. ALL OBSERVATION WELLS SHALL BE PROTECTED SO THAT THEY ARE NOT DAMAGED BY CONSTRUCTION ACTIVITIES.
 - UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT PTS/PCS AND CORNERS.
 - SEE SHEET #9 FOR PAVING DELINEATION.
 - FOR INFORMATION ON THE PUBLIC PORTION OF THE WATER LINE SEE DPW CONTRACT No. 44-3478, No. 44-3626-D AND No. 44-4095-D.
 - SEE ARCHITECTURAL DRAWINGS FOR DETAILS ON ALL PLAYFIELDS/SPORT FACILITIES, FENCING, SIDEWALK DIMENSION AND SCORING PATTERN NOT SHOWN ON THESE SDP DRAWINGS.
 - SEE SHEET #7 FOR DETAILS OF THE PEDESTRIAN CROSSING AREAS ON WOODFORD DRIVE.
 - FIVE STREETLIGHTS SHALL BE INSTALLED (BY BGE) ALONG WOODFORD DRIVE AT THE FOLLOWING LOCATIONS (OR AS DIRECTED BY DPW TRAFFIC DIVISION):
 STATION 04+59, 40' RIGHT
 STATION 34+81, 35' RIGHT
 STATION 64+09, 27' RIGHT
 STATION 104+10, 27' RIGHT
 STATION 144+33, 25' LEFT
 THE FIVE STREETLIGHTS SHALL BE 250 WATTS HPS VAPOR PENDANT (SAG) MOUNTED ON A 30' BRONZE FIBER GLASS POLE USING A 12" ARM ORIENTED PERPENDICULAR TO THE CENTERLINE OF WOODFORD DRIVE.
 - TWO SCHOOL ZONE FLASHERS SHALL BE INSTALLED ALONG WOODFORD DRIVE UNDER THE OVERSIGHT OF HOWARD COUNTY DPW TRAFFIC DIVISION.



DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Young
SIGNATURE OF DEVELOPER/BUILDER
7/26/03
DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CKJ
ENGINEER'S SIGNATURE
7/30/03
DATE

FEATURES

HOUSING — Rugged, .063" thick, aluminum rectilinear housing. Continuously seam welded for weather-tight seal and integrity. Standard finish is dark bronze (DBB) polyester powder. Other powder architectural colors available.

DOOR FRAME — Naturally anodized, extruded, aluminum door frame with mitered corners is retained with (two) .188" diameter hinge pins and secured with (one) quarter-turn, quick release fastener. Weatherproof seal between housing and door frame is accomplished with an integrally designed, extruded silicone gasket that snaps into door frame.

LENSES — .125" thick, impact-resistant, tempered glass with thermally-applied, silk screened power door shield.

MOUNTING — Extruded, 12" aluminum arm for pole or wall mounting. Shipped in fixture carton. Optional mountings available.

OPTICS — Reflectors are anodized, hydroformed and segmented for consistent quality, performance and lamp life. Three cutoff distributions available: Type III (Asymmetric), Type IV (Forward Throw), Type V (Square Symmetrical).

ELECTRICAL SYSTEM — Constant-voltage autotransformer is 100% copper wound and factory tested. Removable power door and positive locking disconnect plug.

SOCKET — Porcelain, horizontally-oriented, mogul-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 1500W-850V, 4KV pulse rated.

LISTING — UL listed for wet locations. Listed and labeled to comply with Canadian Standards (see Options).

Arm-Mounted Rectilinear Cutoff Lighting KSF3

Specifications

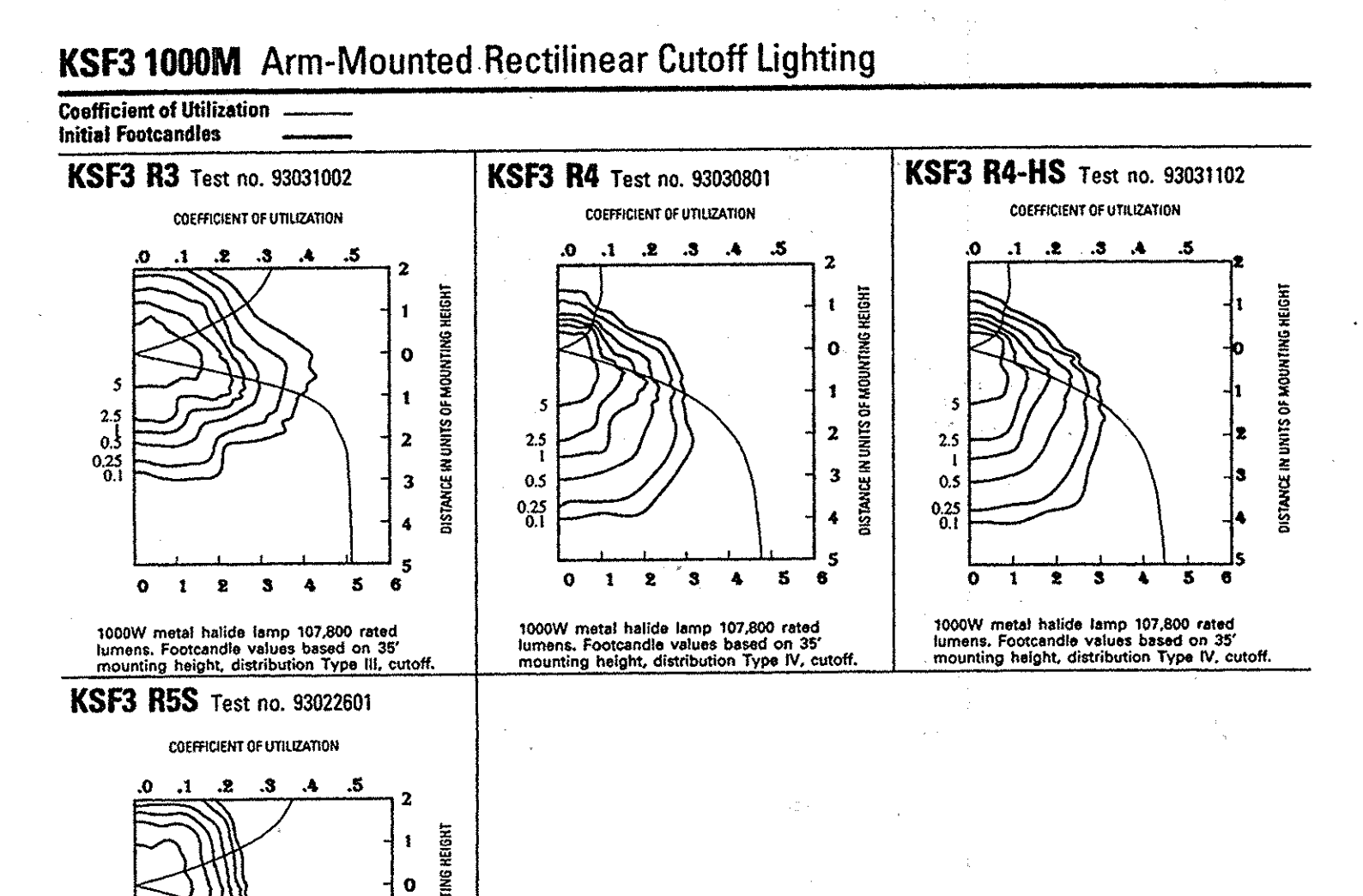
EPA 3.0 FL (28W) (includes arm)
Length: 30 x 5/16 (17.6)
Width: 24 x 5/16 (61.8)
Depth: 10-1/2 (26.7)
Weight: 60 lbs (28.3kg)
Arm: 12 (30.5)

All dimensions are inches (centimeters) unless otherwise specified.

Mounting Option: SPW, RPA, DA12P, W6x, DA12WB, WW6x

Dulling Tolerances: 5, 6, 7

Example: KSF3 1000M R3 120 SP12 SF DDB



THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
8/14/03
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA NATURAL RESOURCES CONSERVATION SERVICE
8/14/03
DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

Dennis Donato
County Health Officer
1-15-04
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director
8/2/03
Date

Chief, Land Development
8/2/03
Date

Chief, Development Engineering Division
8/2/03
Date

ORDERING INFORMATION

Choose the additional catalog recommendations that best suits your needs and write it on the appropriate line. Order accessories as separate catalog number.

Series	Voltage	Mounting*	Options
KSF3 1000M	120	SP12 Square pole (12" arm)	Shipped Installed In Fixture
	208	RP12 Round pole (12" arm)	LS Single fuse (120, 277, 347V, 4/0 TB)
	240	WW12 Wood pole or wall (12" arm)	DF Double fuse (208, 240, 480V, 0/0 TB)
R3 IES Type III Asymmetric	277	WB12 Wall bracket (12" arm)	PER NEMA twist-lock receptacle only (no photocell)
R4 IES Type IV Forward Throw	347		QRS Quartz resistive system (250W max; lamp not included, 120V only)
R5S IES Type V Square	480		EC Emergency circuit
	78		CR Corrosion-resistant finish
			LS Lamp support
			CSA Listed and labeled to comply with Canadian Standards
			Shipped separately
			PE1 NEMA twist-lock PE (120, 208, 240V)
			PE3 NEMA twist-lock PE (480V)
			PE4 NEMA twist-lock PE (277V)
			SC Shorting cap for PER option
			KSF3HS House side shield (R3 and R4)
			Accessories: Tenon Mounting Slipfitter
			Order as separate catalog number.
			Number of fixtures
			Tenon O.D. One Two@150° Three@120° Three@90° Four@90°
			2-3/8" 120-190 120-280 120-380 120-390 120-390 120-490
			2-1/2" 125-190 125-280 125-380 125-390 125-390 125-490
			2" 125-190 125-280 125-380 125-390 125-390 125-490

LOCATION OF NO PARKING SIGNS ALONG WOODFORD ROAD

QUANT.	ARROW DIRECTION ON SIGN	LOCATION
2	LT. & RT.	STATION 4+00: ONE EACH ON THE RIGHT & LEFT, 1' BEHIND THE SIDEWALK.
2		STATION 5+00: SAME
2		STATION 6+50: RIGHT SIDE AT 1 FOOT BEHIND SIDEWALK; LEFT SIDE, 3' BEHIND CURB
2		STATION 7+75: RIGHT SIDE AT 1 FOOT BEHIND SIDEWALK; LEFT SIDE, 3' BEHIND CURB
2		STATION 9+00: RIGHT SIDE AT 1 FOOT BEHIND SIDEWALK; LEFT SIDE, 3' BEHIND CURB
2		STATION 10+25: LEFT SIDE AT 1 FOOT BEHIND SIDEWALK; RIGHT SIDE, 3' BEHIND CURB
2		STATION 12+00: LEFT SIDE AT 1 FOOT BEHIND SIDEWALK; RIGHT SIDE, 3' BEHIND CURB
2		STATION 13+50: LEFT SIDE AT 1 FOOT BEHIND SIDEWALK; RIGHT SIDE, 3' BEHIND CURB
2		STATION 15+00: ONE EACH ON THE RIGHT & LEFT, 3' BEHIND THE CURB ON BOTH SIDES.
2		STATION 17+00: RIGHT SIDE AT 3' BEHIND THE CURB
1		STATION 19+00: RIGHT SIDE AT 3' BEHIND THE CURB
1		STATION 21+00: RIGHT SIDE AT 3' BEHIND THE CURB
1	RT. ONLY	STATION 23+00: RIGHT SIDE AT 3' BEHIND THE CURB
22	TOTAL	

SITE DEVELOPMENT PLAN LEGEND

- EXISTING CONTOUR
- EXISTING SLOPE 25% & GREATER
- EXISTING SLOPE 15% - 25%
- PROPOSED CONTOUR
- EXISTING SPOT ELEV.
- PROPOSED SPOT ELEV. (LP-LOW PT.)
- EXISTING TREE LINE (LIGHT LINE)
- PROPOSED TREE LINE (HLY. LINE)
- LIMIT OF GRADING DISTURBANCE
- EDGE OF PAVING
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- CURB RILET (P.C. PT)
- HOSE DOWN CURB (IND. DET. 5/8)
- 24" HDPE
- PROPOSED STORM DRAIN LINE
- WATER LINE (PRIVATE = HEAVY LINE)
- WATER LINE (PUBLIC = LIGHT LINE)
- FIRE HYDRANT
- EXISTING UTILITY/LIGHT POLE
- PROPOSED SITE LIGHTING (DET. THIS SHEET)
- PROPOSED STREET LIGHT (BY BOE)
- NUMBER OF PARKING SPACES
- SOIL BORING FOR SWM POND
- FENCE LINE
- PROPOSED SIDEWALK (SEE DET. 7/6)
- PROPOSED FOREST CONSERVATION ESMT. (FC)
- STREAM
- STREAM BUFFER

NOTES:

- ALL EXISTING WATER WELLS ON HCPS PROPERTY SHALL BE ABANDONED BY A WELL DRILLER IN ACCORDANCE WITH THE HEALTH DEPARTMENT SPECIFICATIONS PRIOR TO ANY SITE GRADING WORK UNDER THIS SDP.
- ALL OBSERVATION WELLS SHALL REMAIN. THOSE AFFECTED BY GRADING SHALL BE ADJUSTED SO THAT THE TOP OF THE WELL IS 2' (TWO FEET) ABOVE THE NEW FINISHED GRADE. ALL OBSERVATION WELLS SHALL BE PROTECTED SO THAT THEY ARE NOT DAMAGED BY CONSTRUCTION ACTIVITIES.
- FOR INFORMATION ON THE PUBLIC PORTION OF THE WATER LINE SEE DPW CONTRACT No. 44-3478 AND No. 44-4066-0.
- SEE ARCHITECTURAL DRAWINGS FOR DETAILS ON ALL PLAYFIELDS/SPORT FACILITIES AND FENCING.
- ALL EXISTING STRUCTURES AND UTILITIES ON LOT 35 SHALL BE DEMOLISHED AND THE REMAINING DEBRIS SHALL BE DUMPED AT A LEGAL DISPOSAL SITE.

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
BURTONVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

00177/SDP-03-33/SDP-2-4.dwg
DES. DRN. CHK.

DATE	REVISION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET DATA	DTM	APP'R.

LITHONIA LIGHTING
ARCHITECTURAL OUTDOOR LIGHTING

605-KSF3
©1992 Lithonia Lighting, Rev. 9/99
605KSF3.PLS

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELLICOTT CITY, MD 21043
ATTN: CATHELYN YOUNG
TEL: 410-313-6704

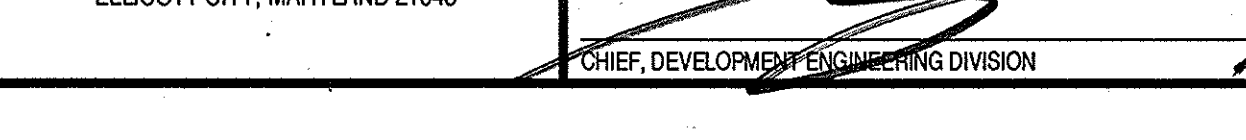
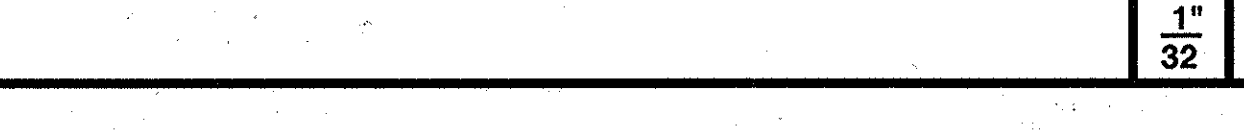
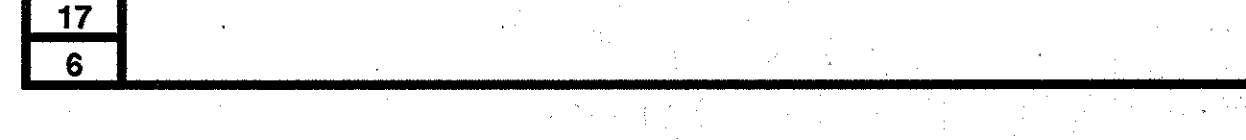
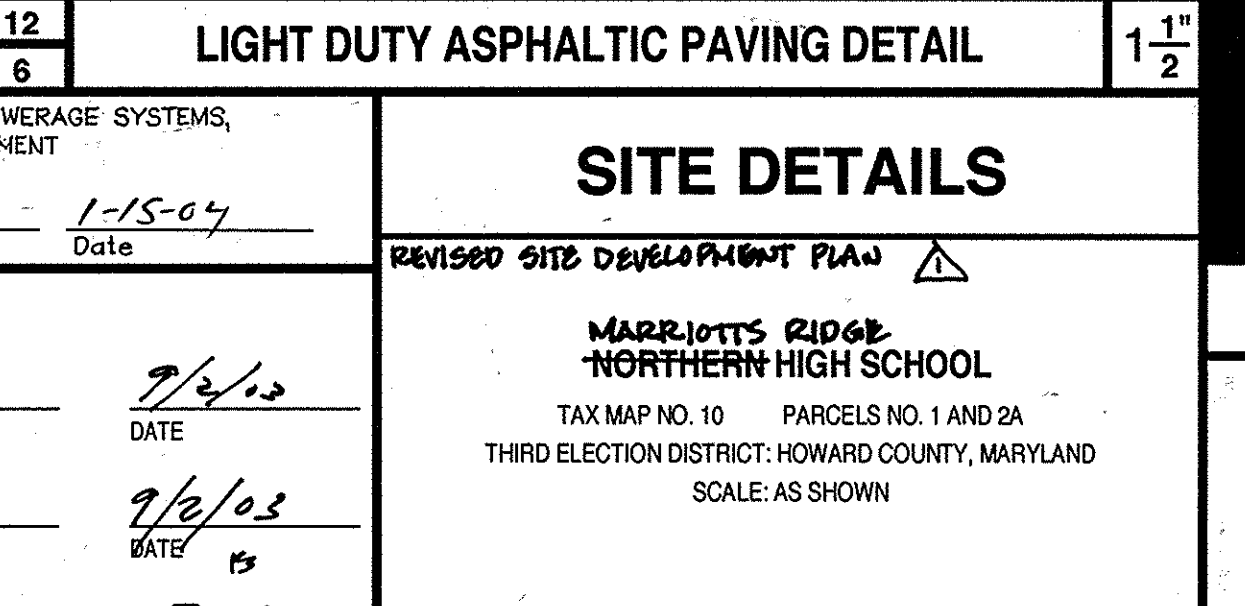
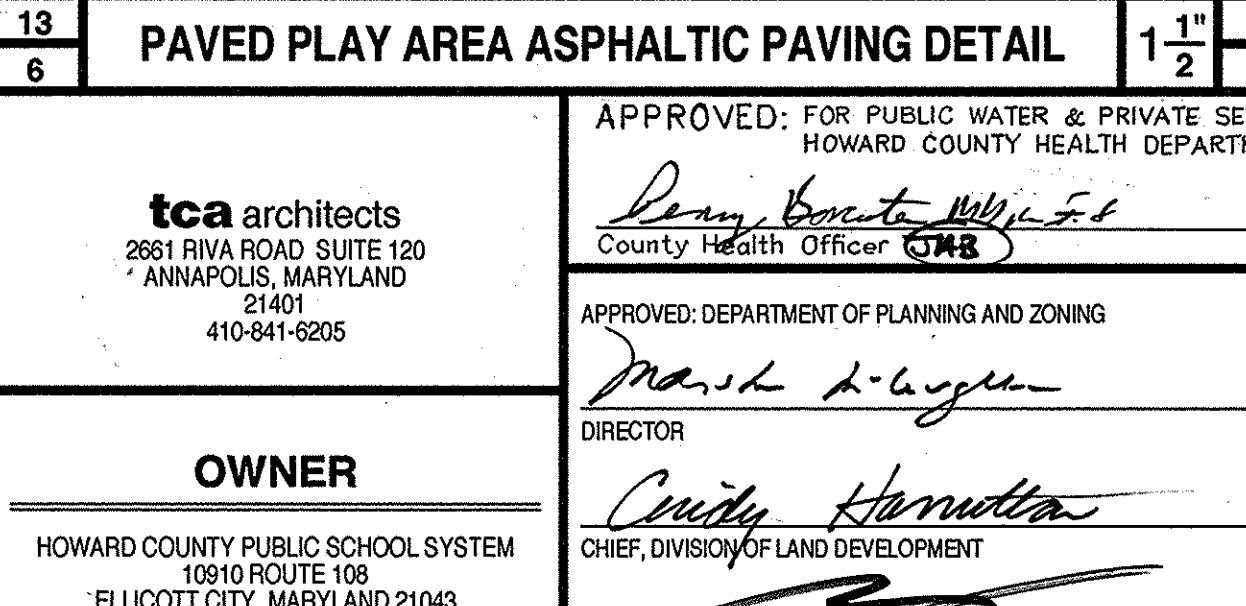
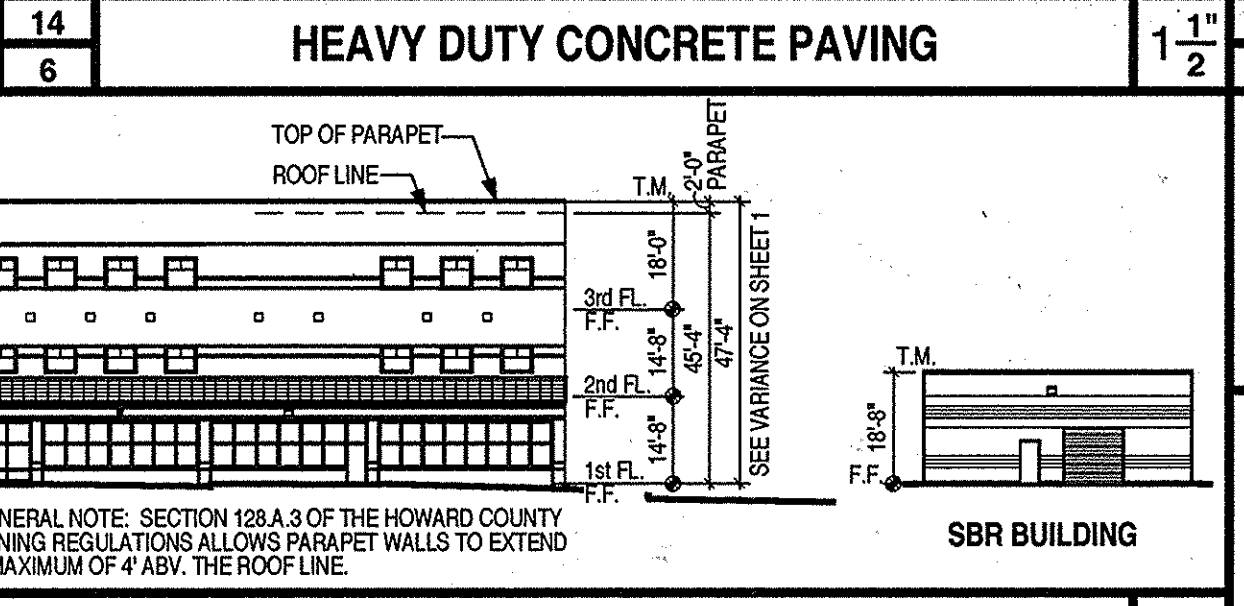
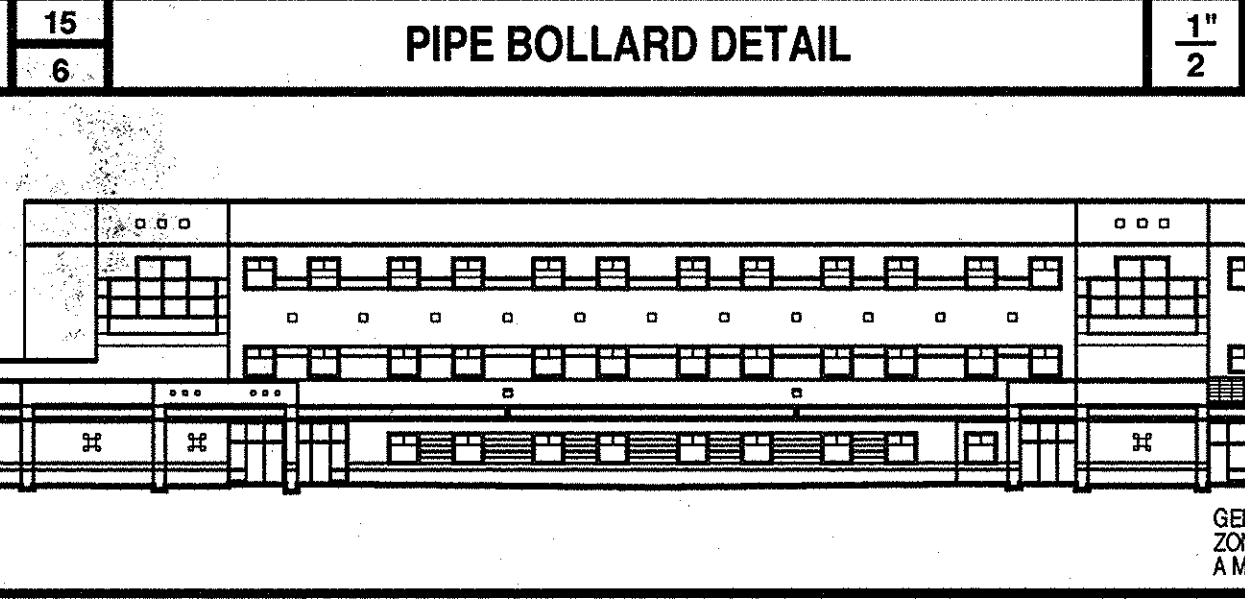
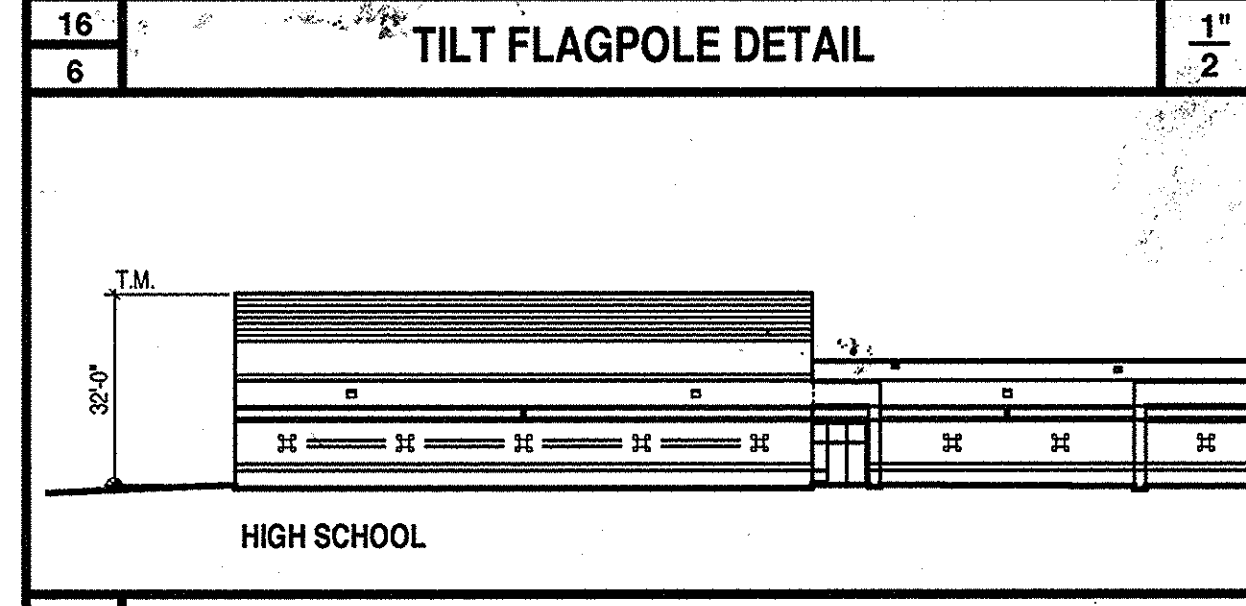
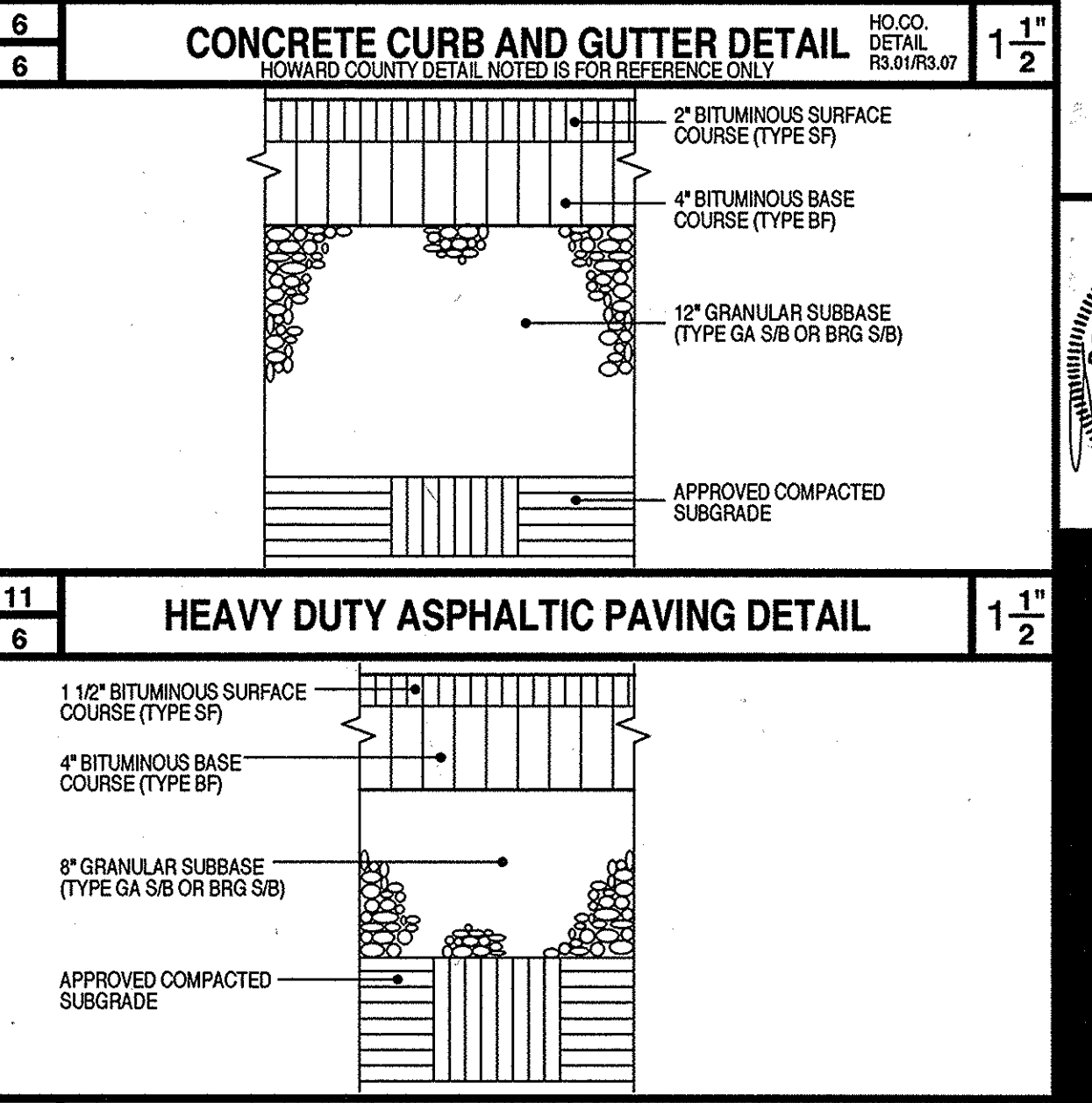
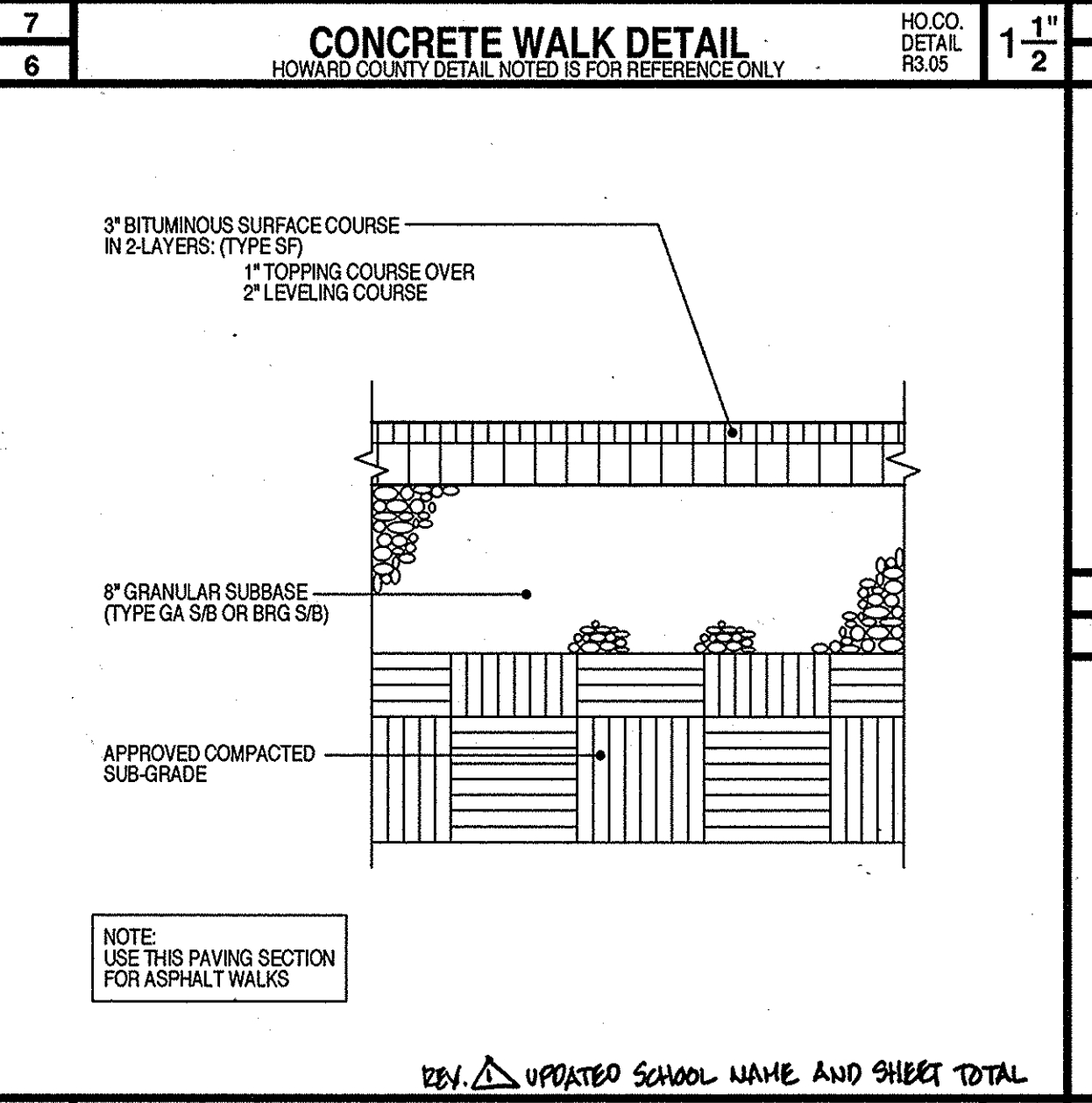
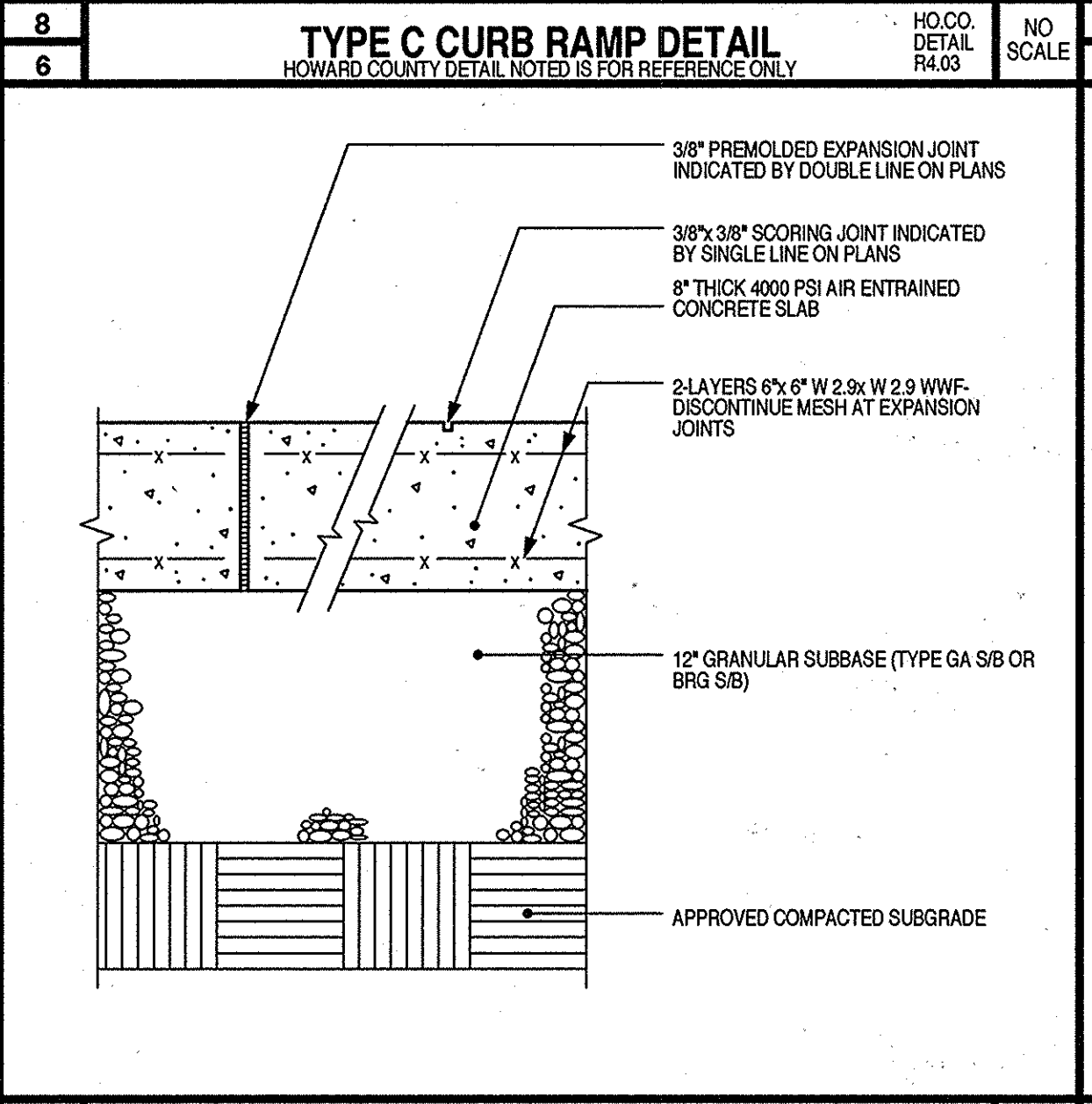
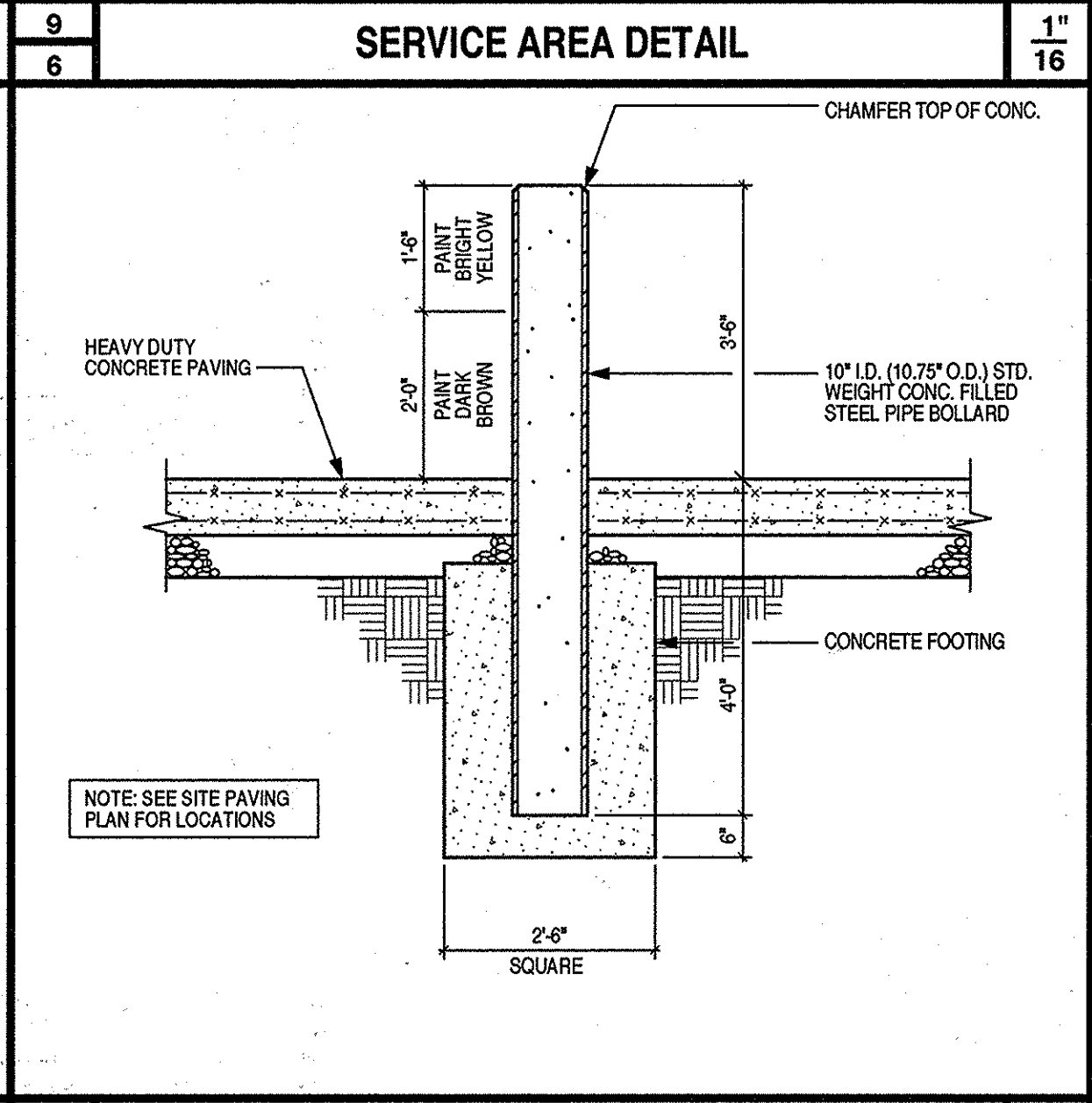
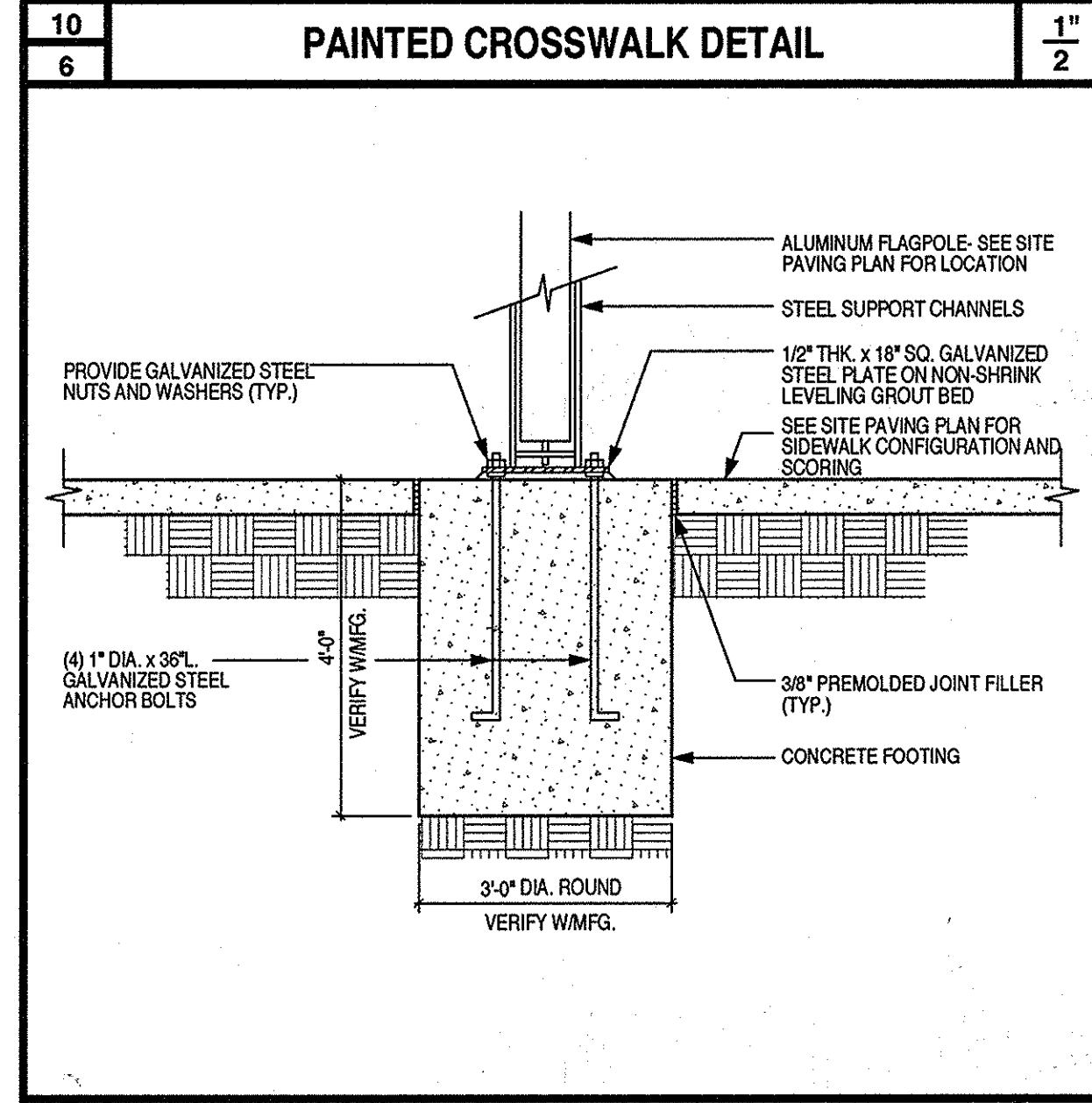
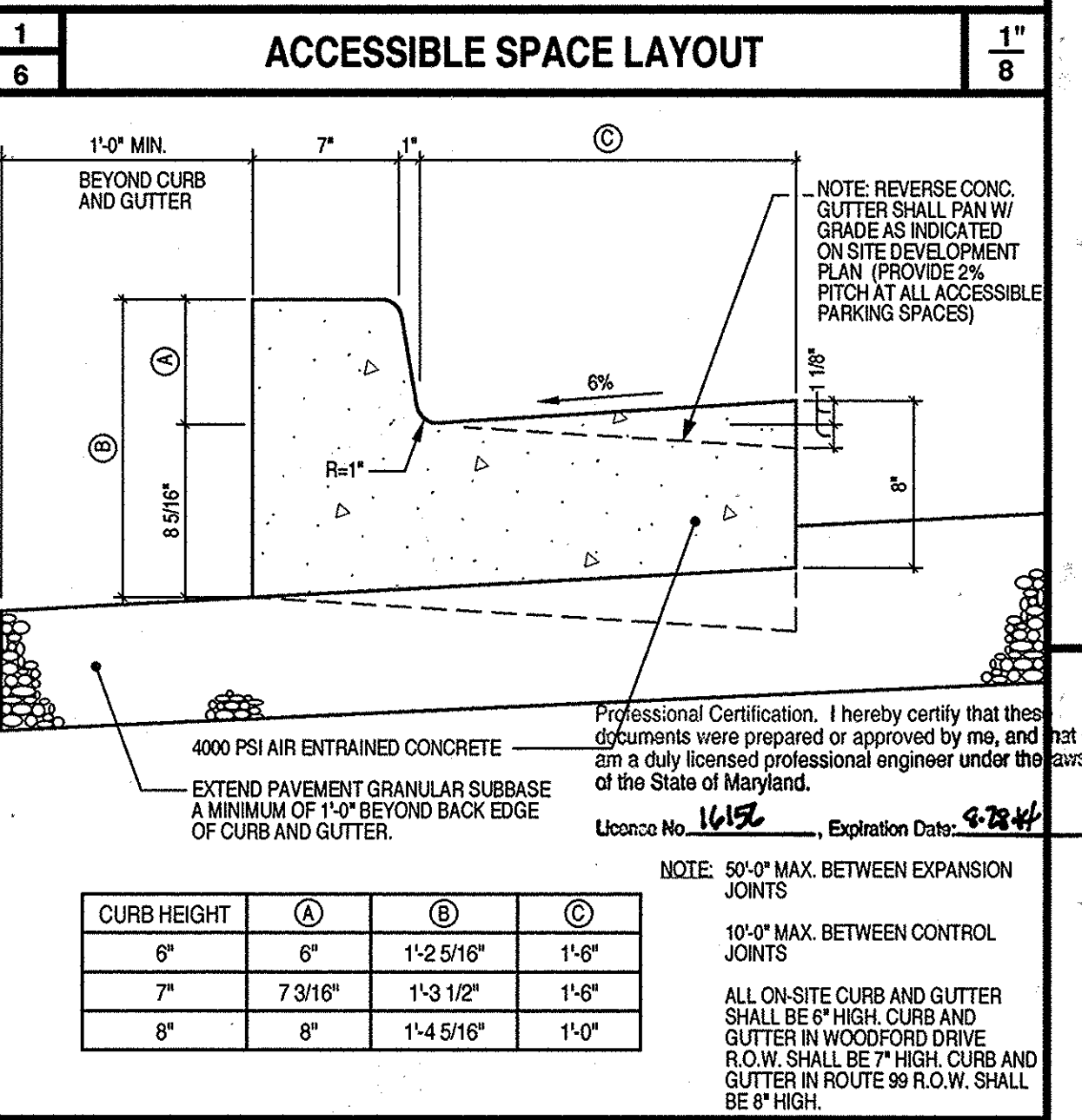
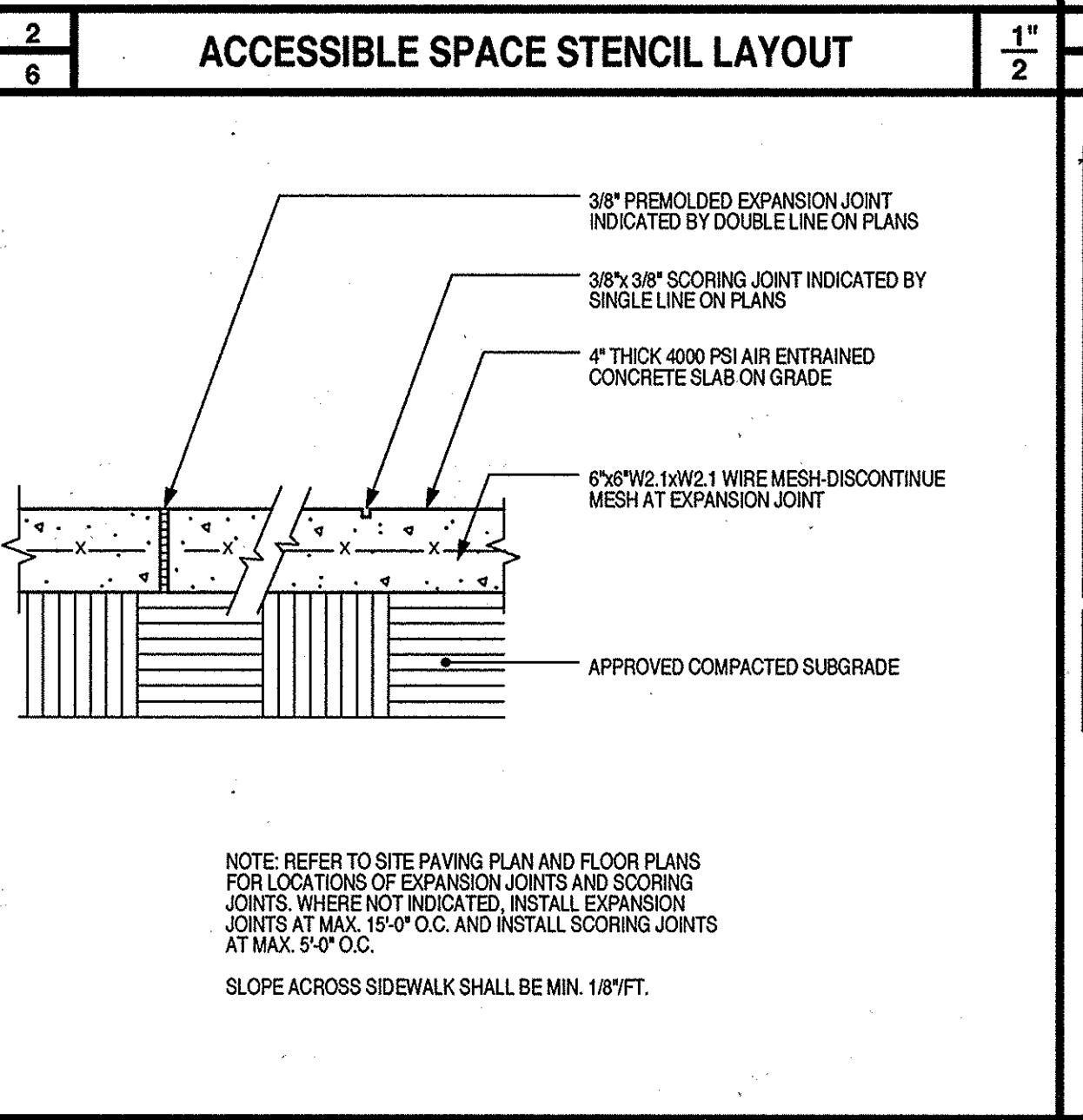
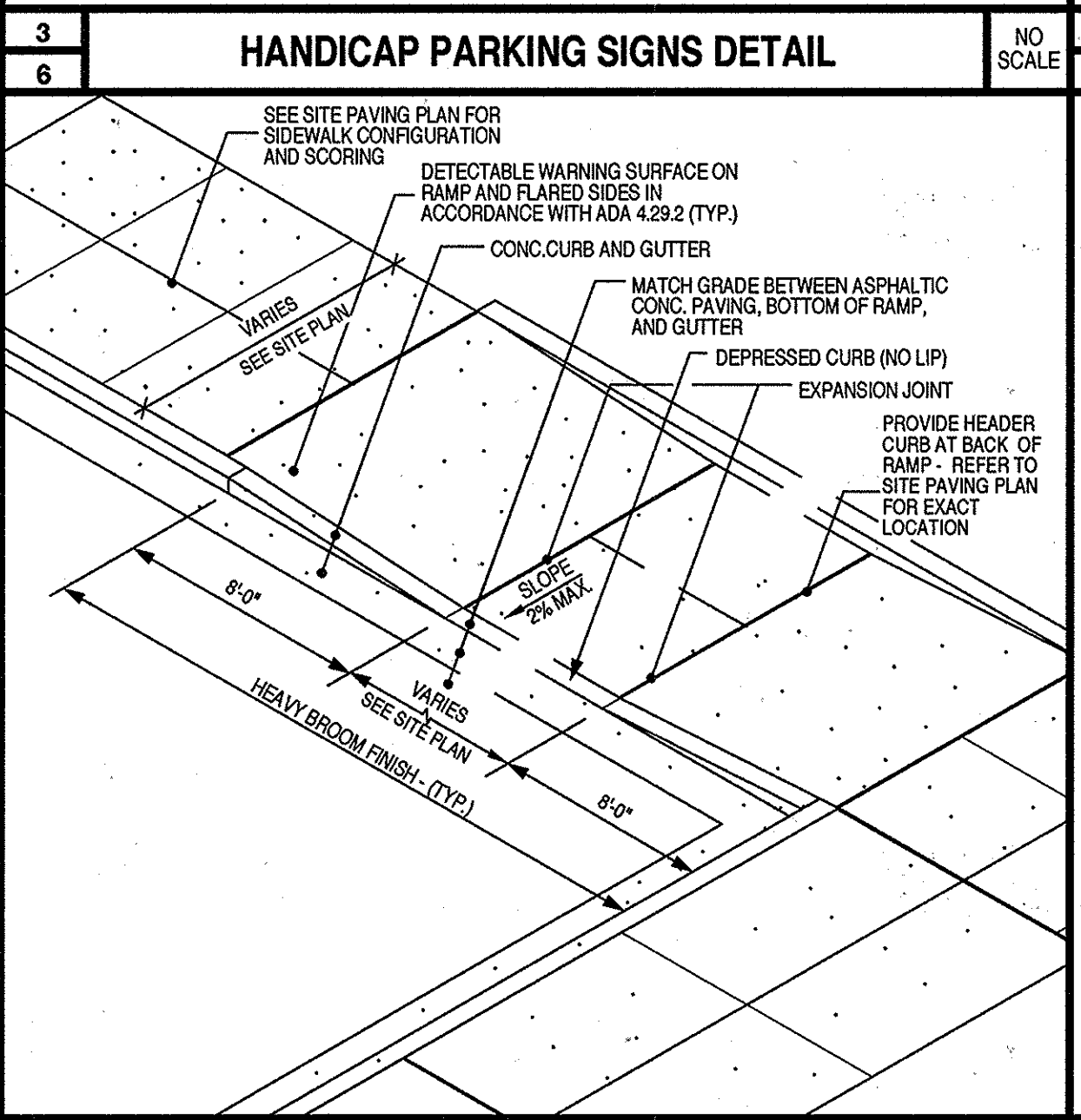
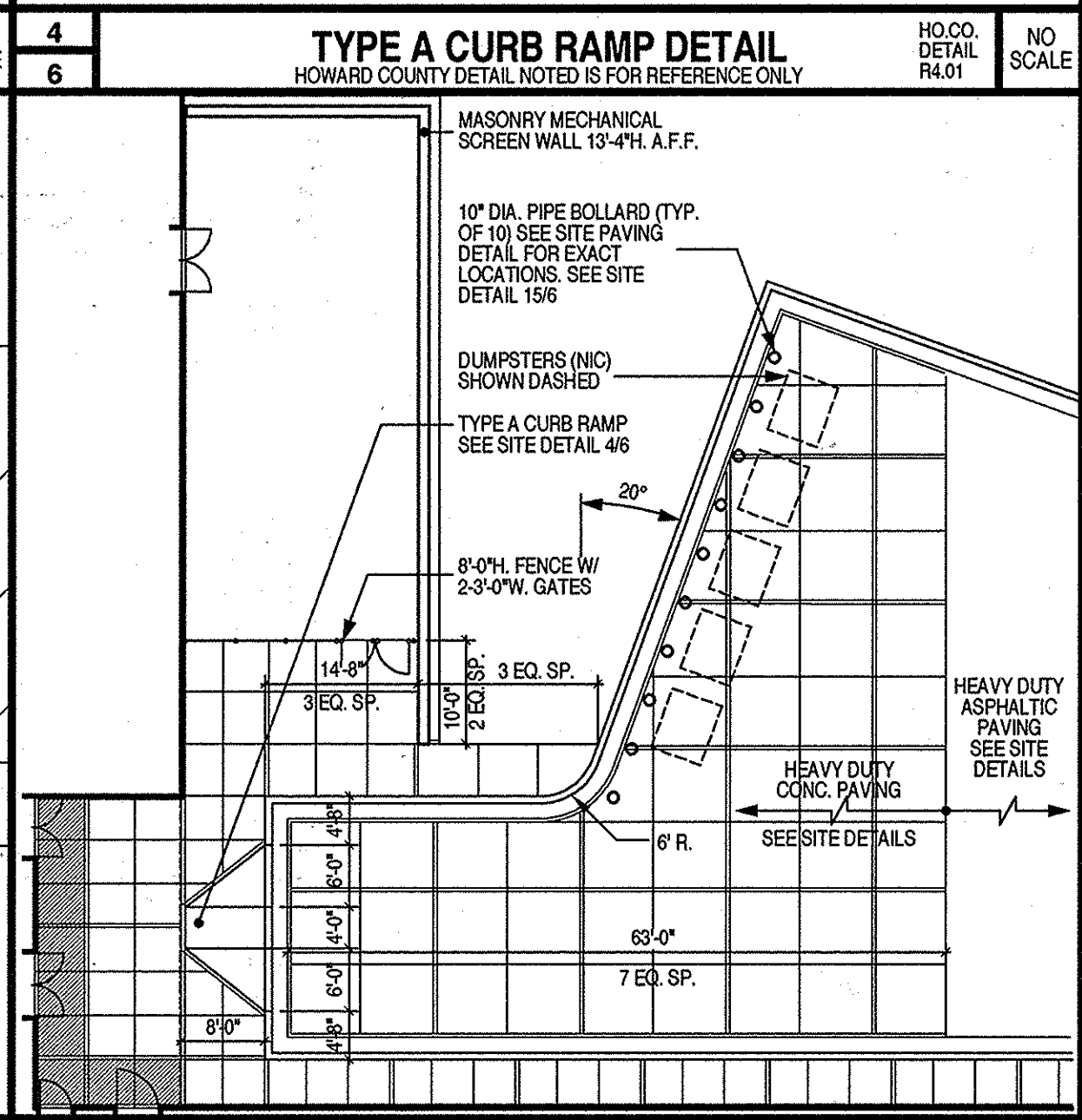
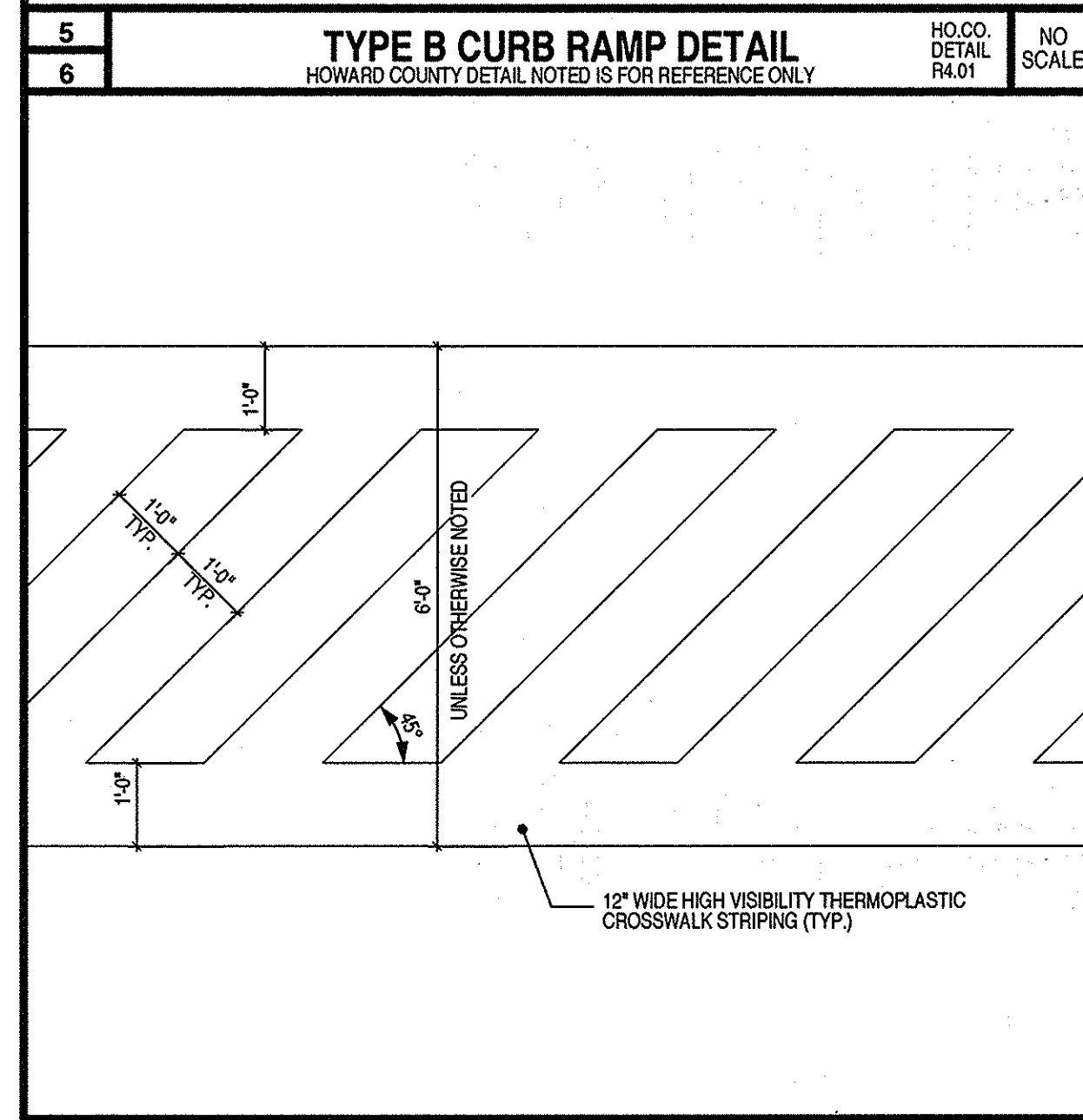
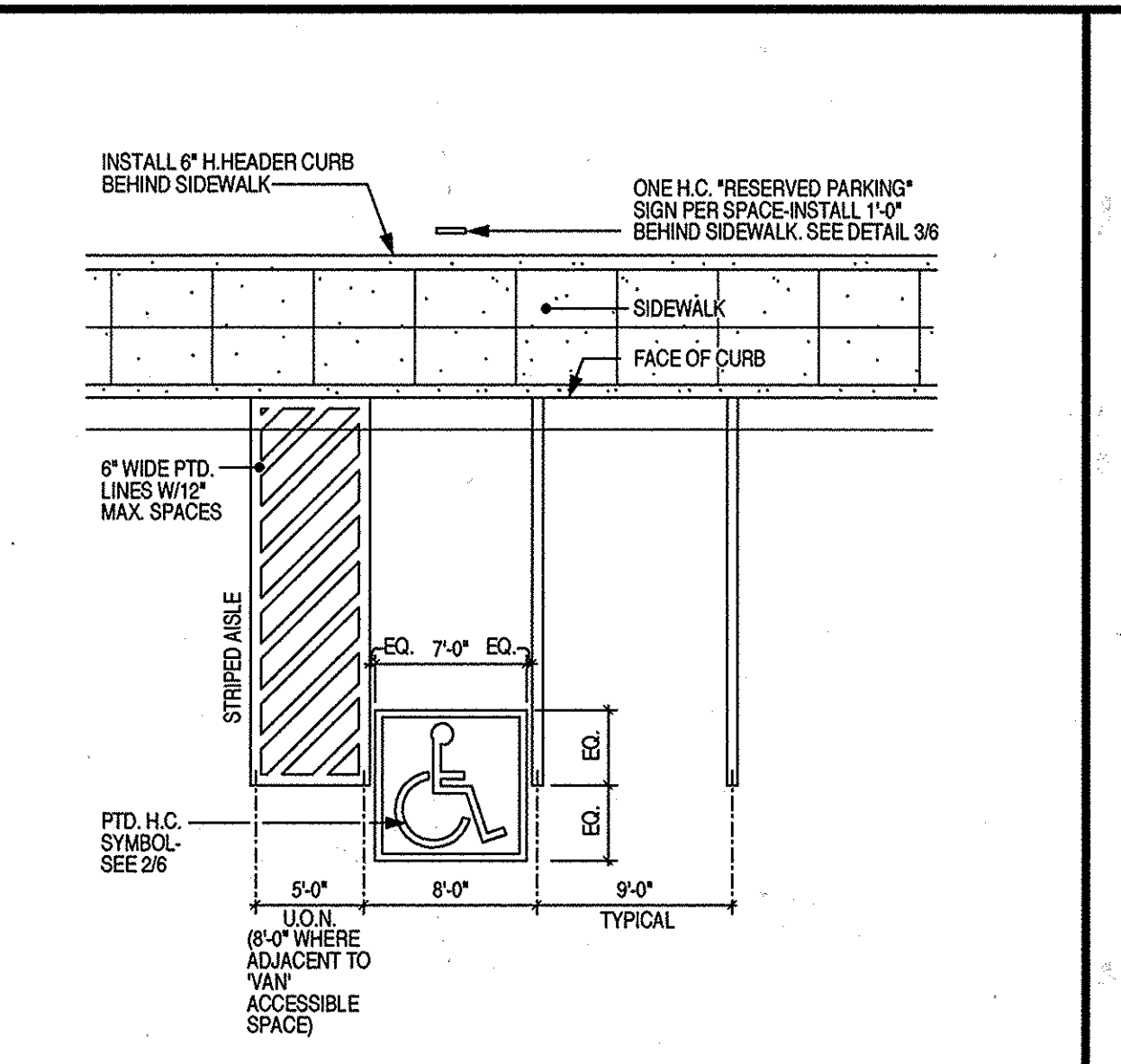
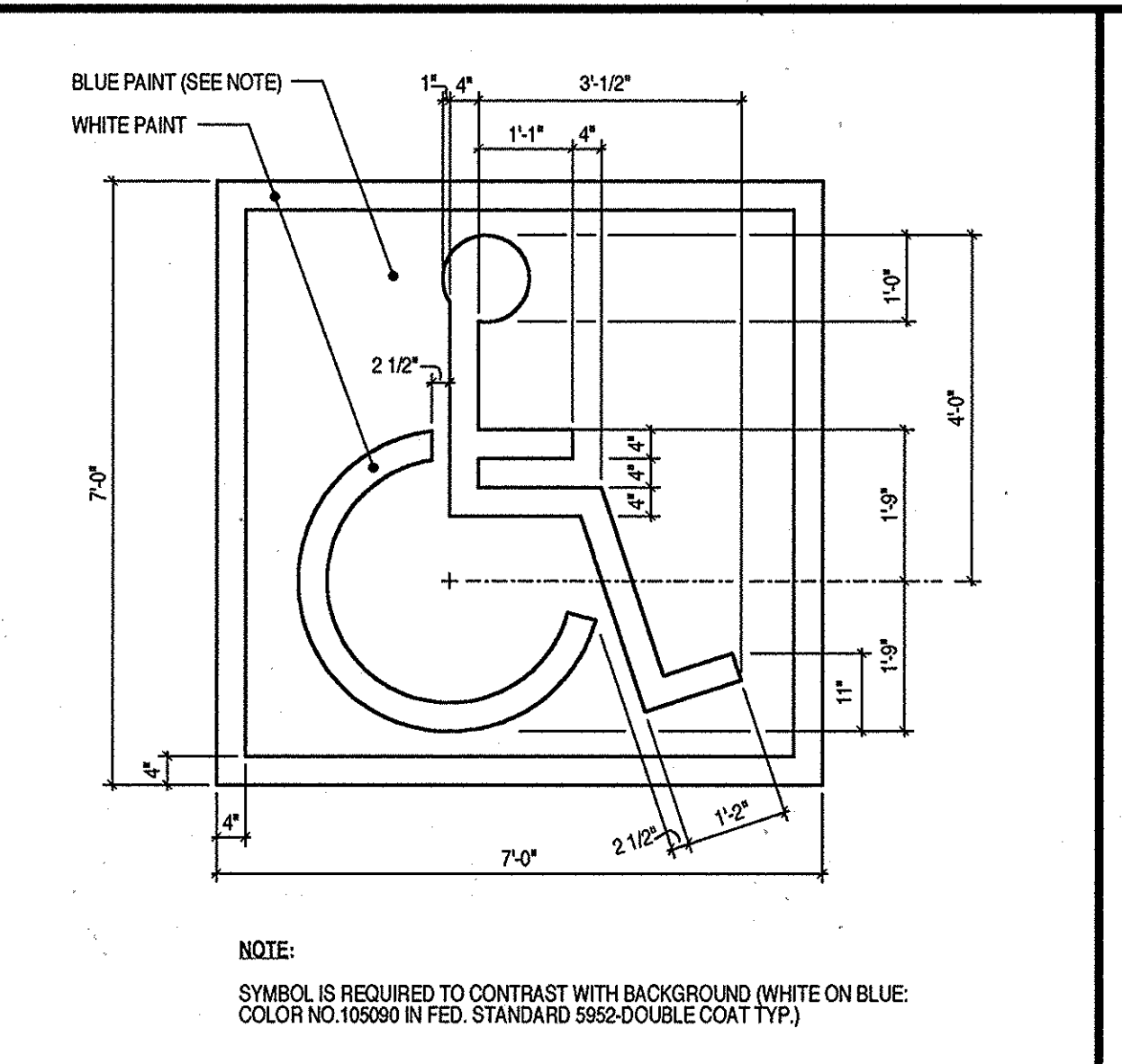
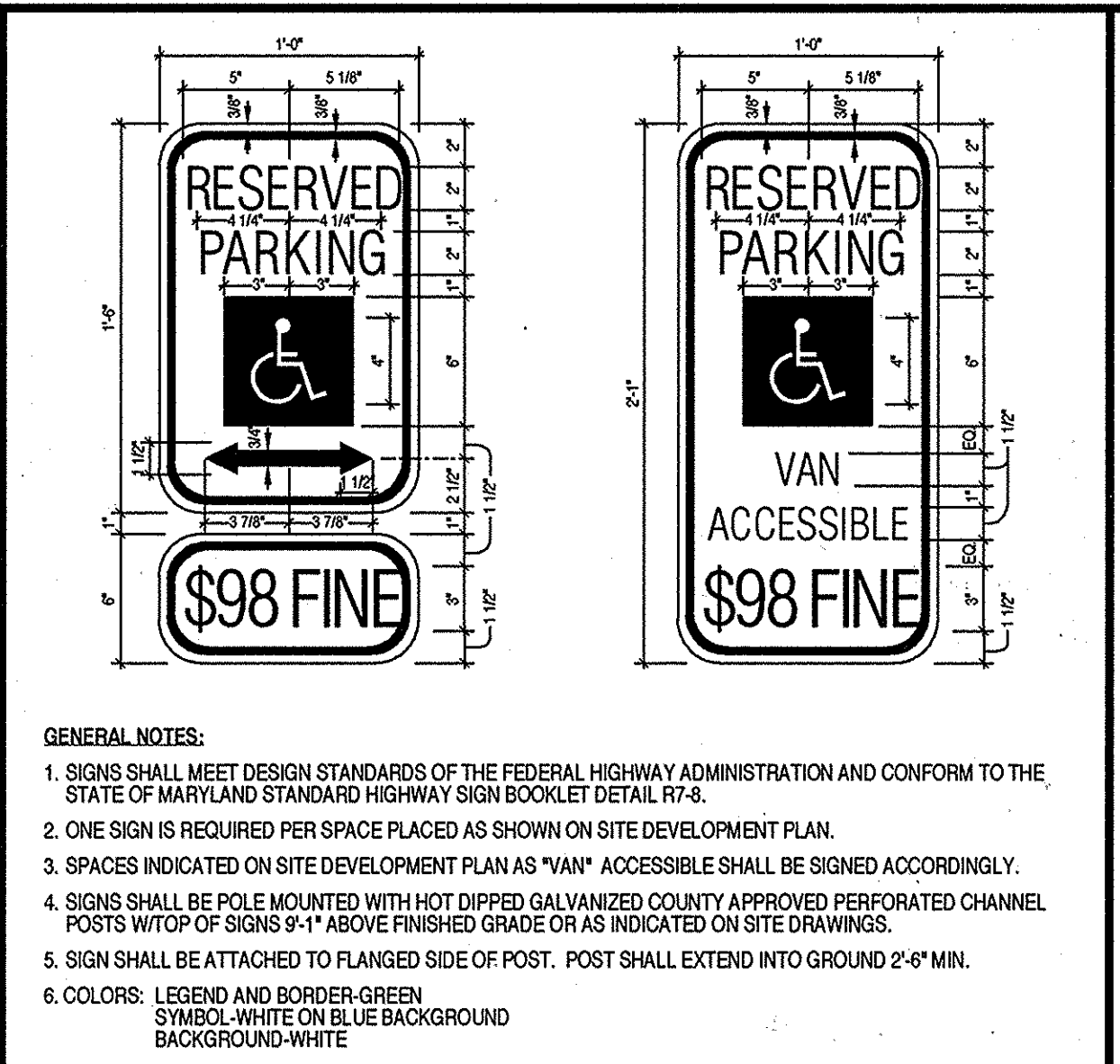
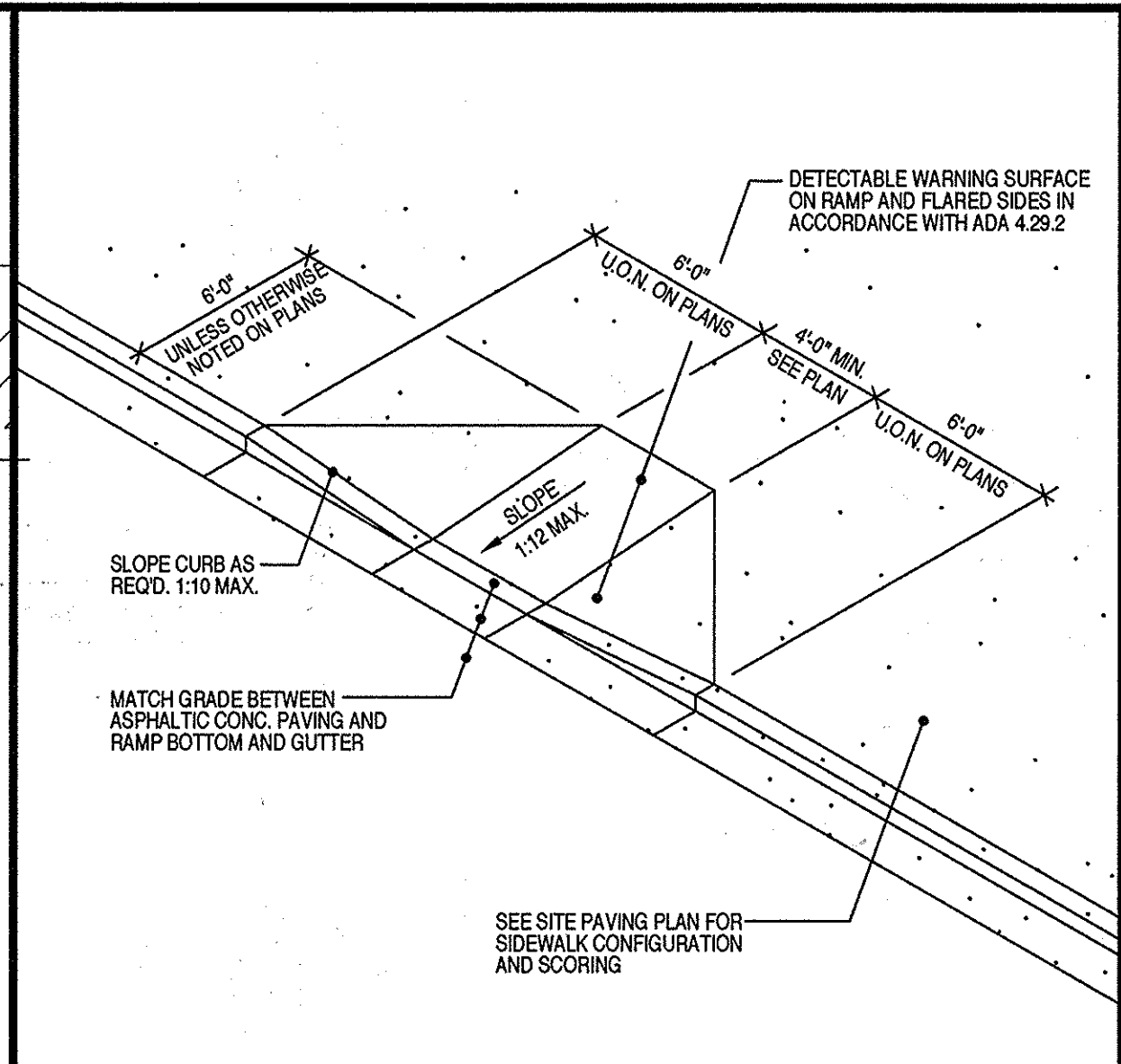
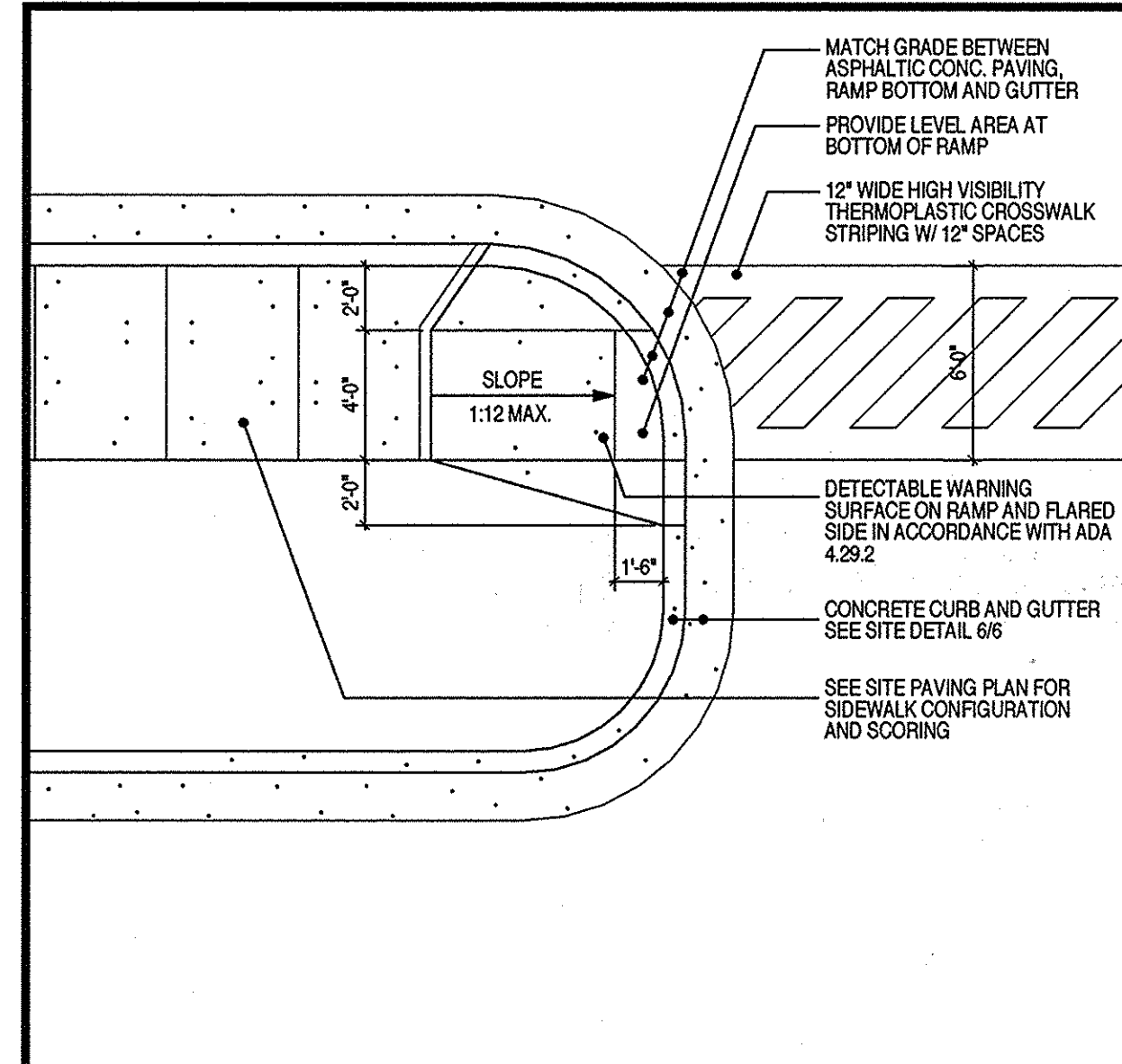
PREPARED FOR: ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

REVISION SITE DEVELOPMENT PLAN

NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117/2 (PARCEL 1) and 16137/2 (PARCEL 2A)

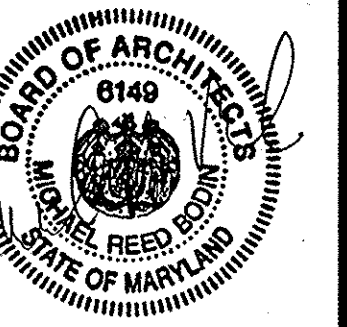
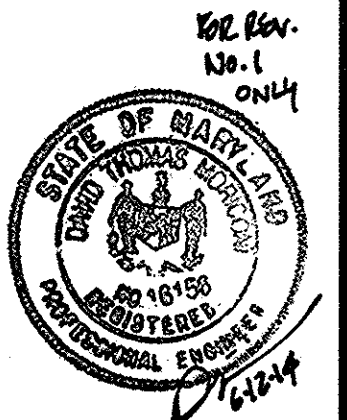
SCALE: 1" = 40'
DATE: 28/JUL/03
ZONING: RR-DEO
TAX MAP - GRID: 10 19
G. L. W. FILE No.: 00-177
SHEET: 5 of 48 58

WEST FRIENDSHIP ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND



MARLETT'S RIDGE
NORTHERN HIGH SCHOOL
Howard County, Maryland
Howard County Public School System

CD REVIEW
21 FEBRUARY 03
SDP PERMIT
28 JULY 03



BOARD OF ARCHITECTS
STATE OF MARYLAND

tca architects
Annapolis, Maryland

BID & CONSTRUCTION
1 JULY 03

6 of 48
58

project no. 2004
SDP-03-33

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Denny Banta 1-15-04
County Health Officer (CMA) Date

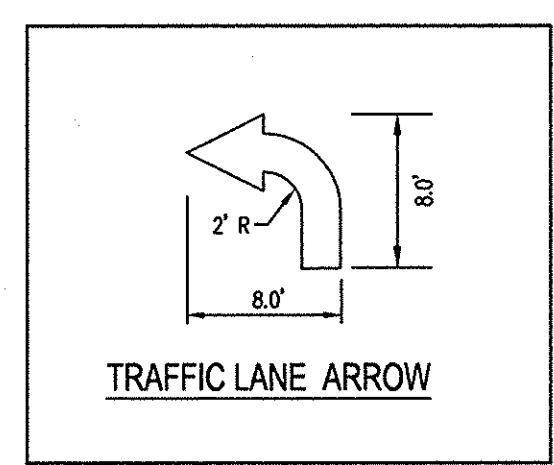
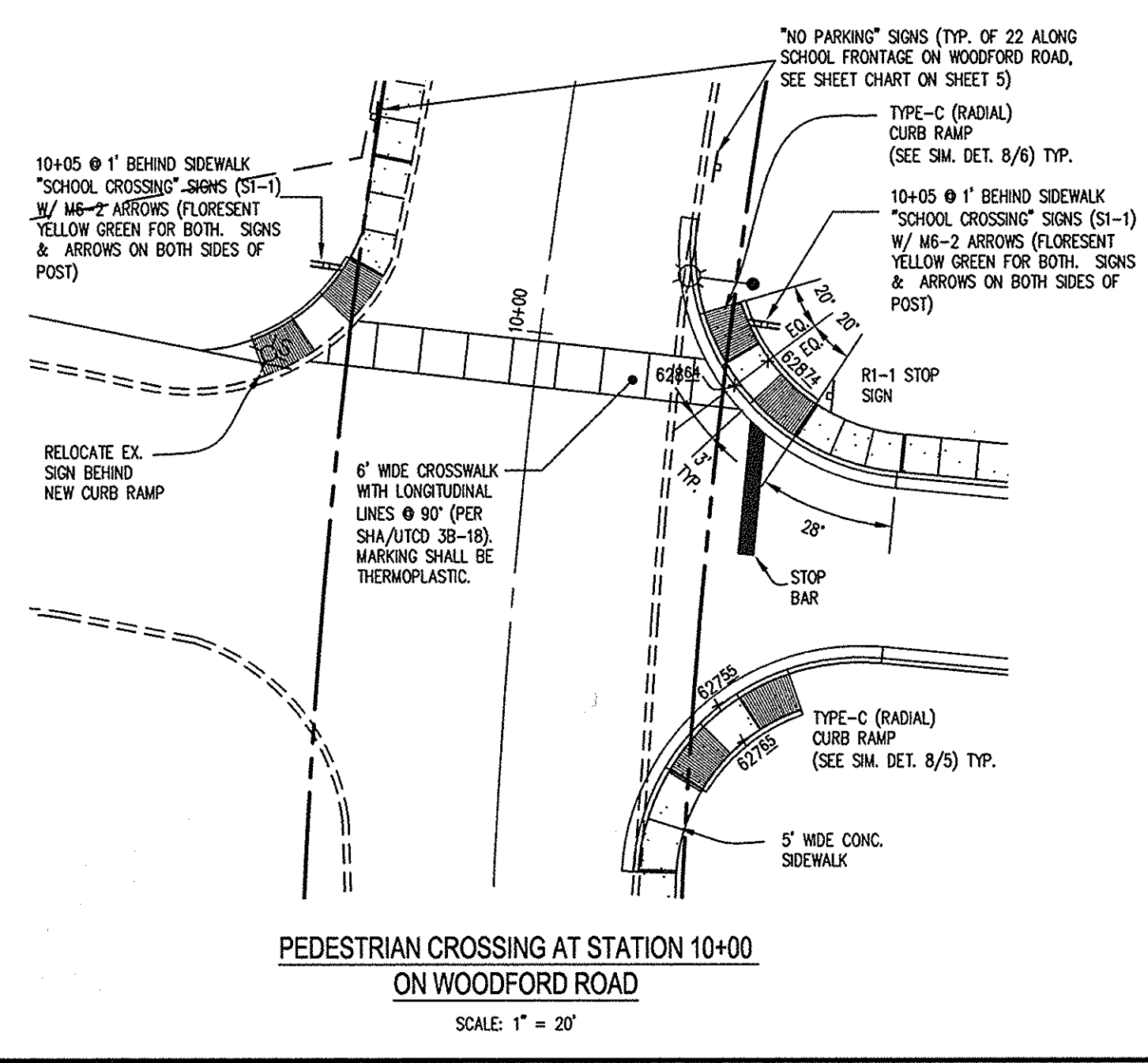
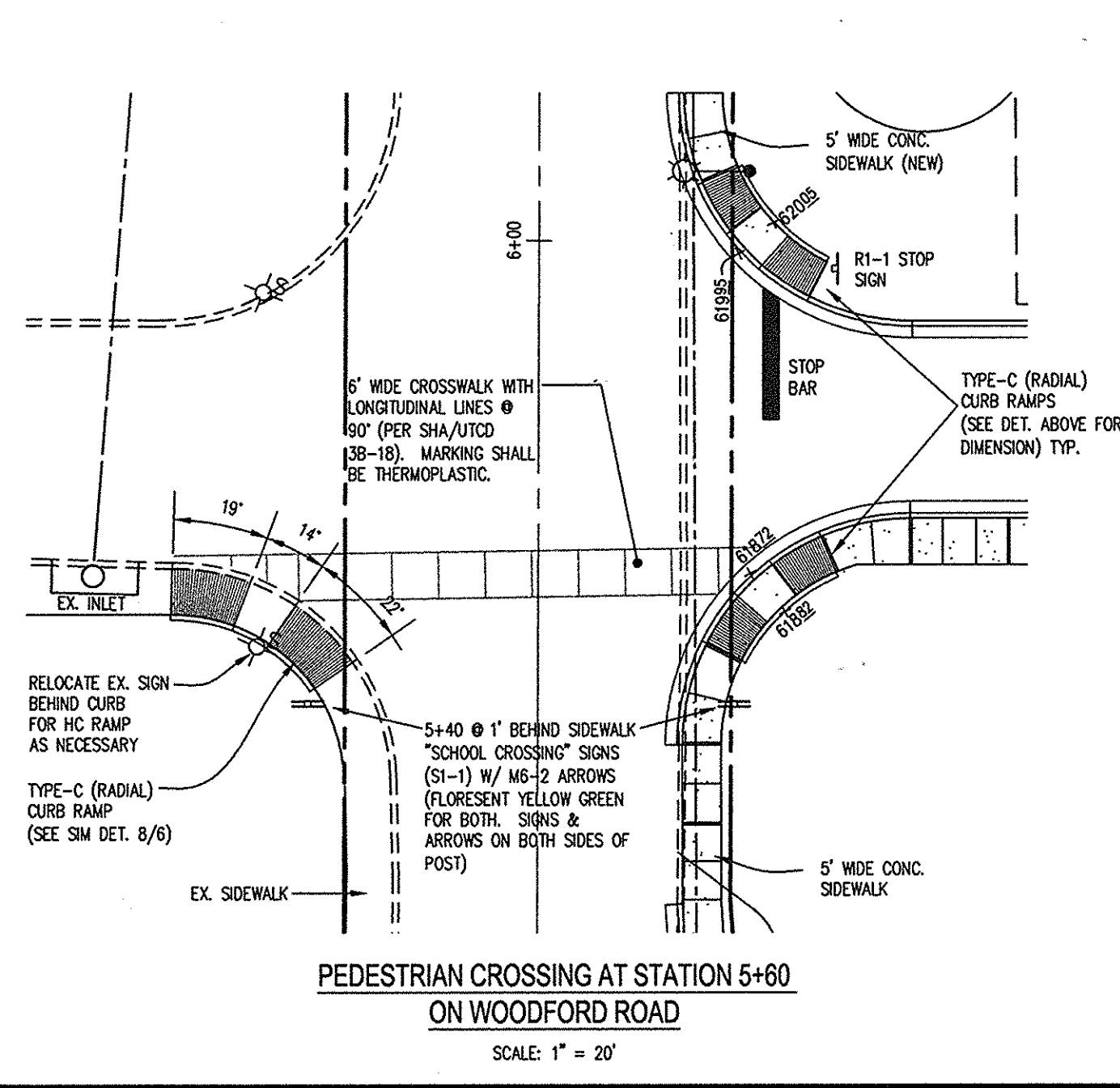
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mark A. Anglen 7/2/03
DIRECTOR DATE

OWNER
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 103
ELLICOTT CITY, MARYLAND 21043

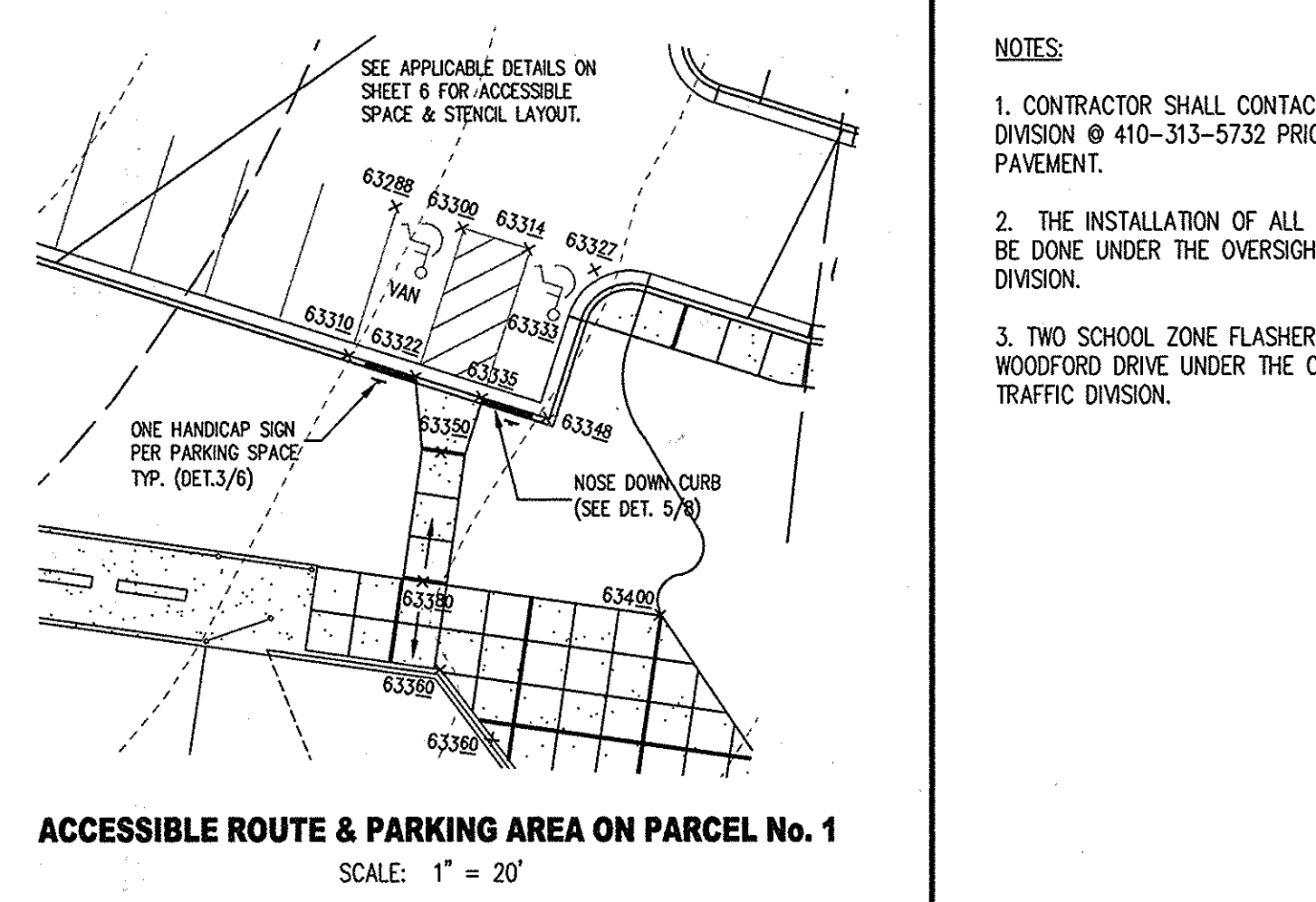
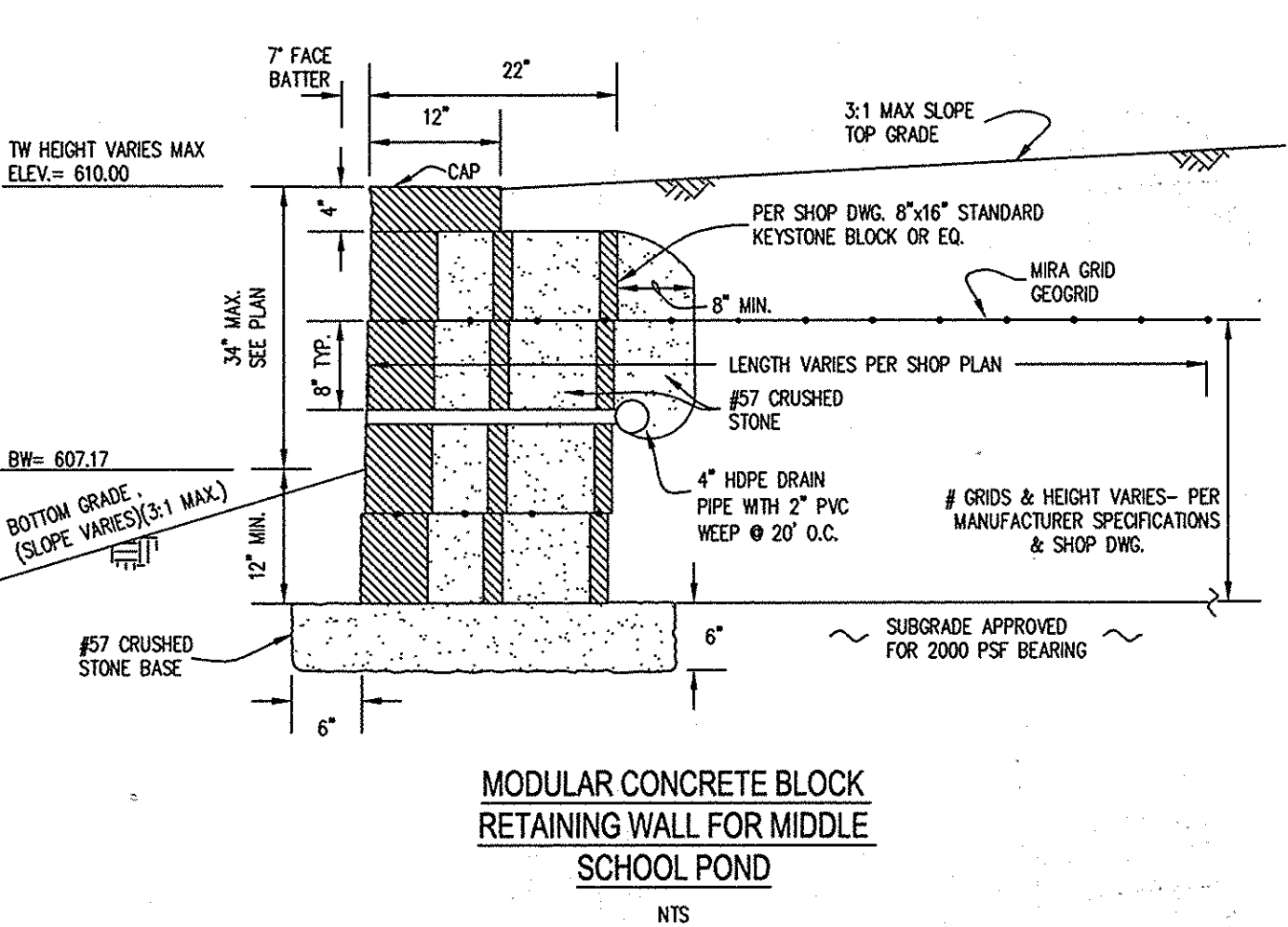
Cathy Hamilton 7/2/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 1-7-03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

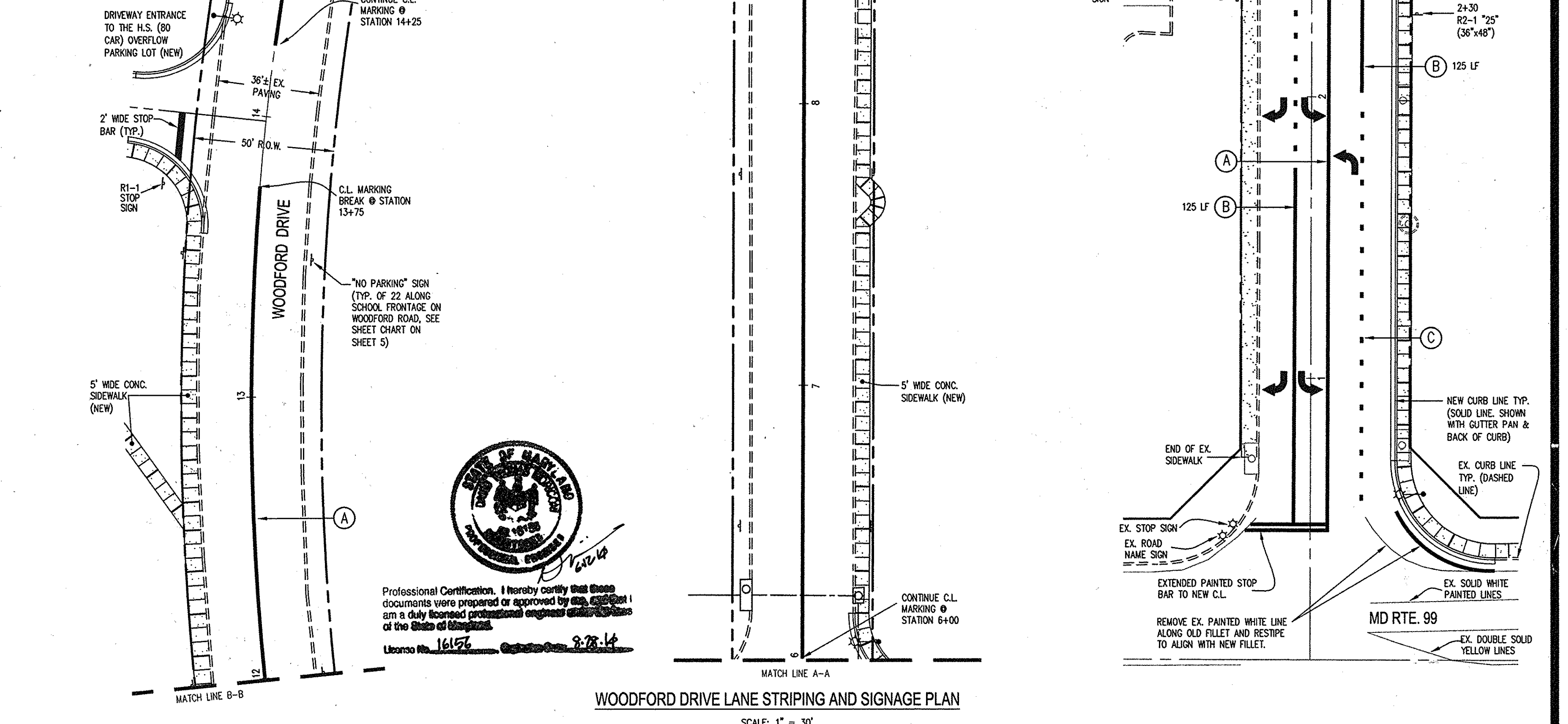
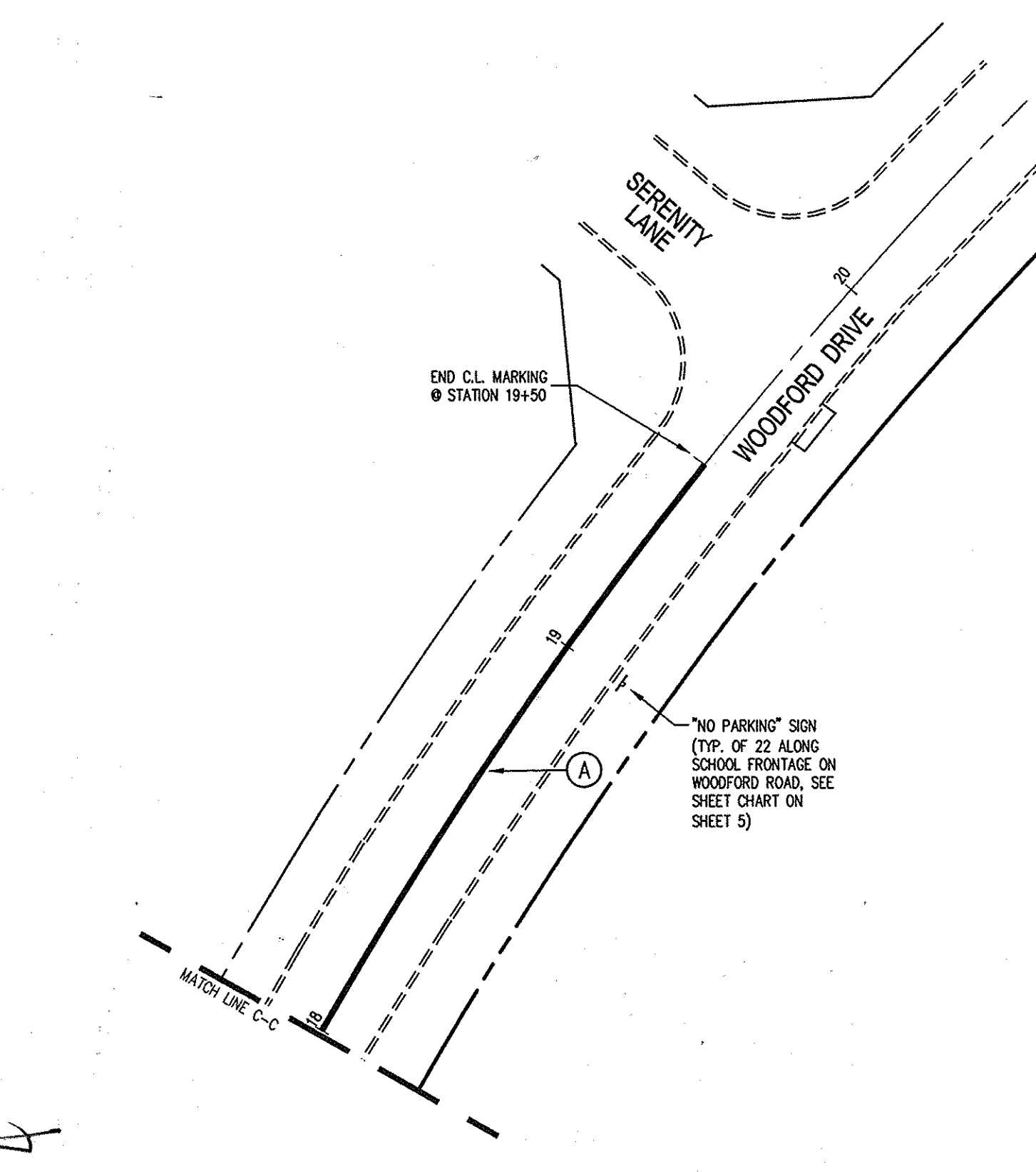
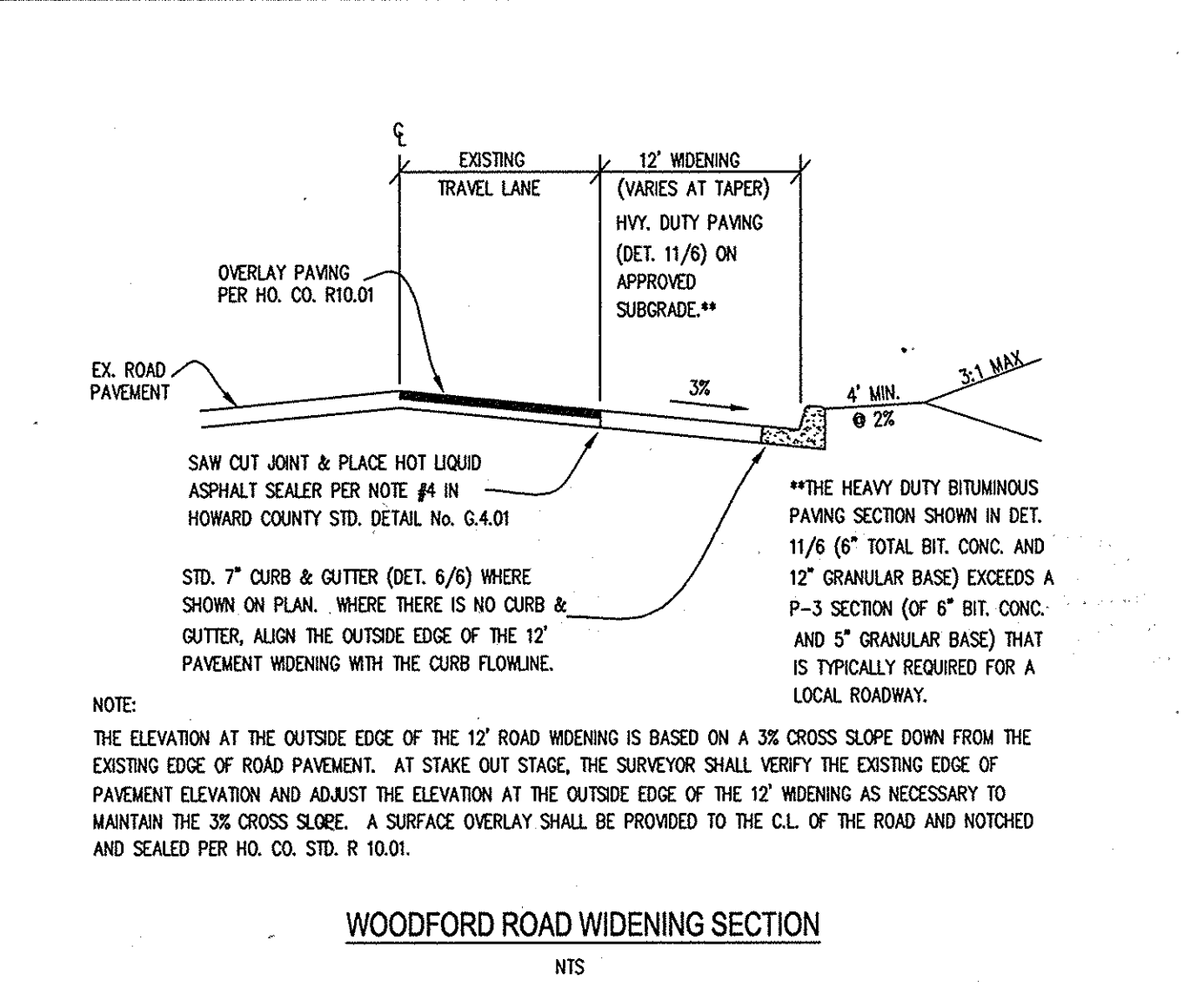
SITE DETAILS
REVISED SITE DEVELOPMENT PLAN
MARLETT'S RIDGE
NORTHERN HIGH SCHOOL
TAX MAP NO. 10 PARCELS NO. 1 AND 2A
THIRD ELECTION DISTRICT: HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN



- PAVEMENT MARKING LEGEND**
- (A) 5' WIDE DOUBLE SOLID YELLOW MARKING FOR CENTER LINE
 - (B) 5' WIDE SOLID WHITE MARKING FOR LANE LINE
 - (C) 5' WIDE DOTTED WHITE MARKING (2' SEGMENT WITH 6' GAP)
- NOTE: ALL PAVEMENT MARKINGS WITHIN WOODFORD DRIVE SHALL BE THERMOPLASTIC.



- NOTES:**
- CONTRACTOR SHALL CONTACT HOWARD COUNTY DPW TRAFFIC DIVISION @ 410-313-5732 PRIOR TO MARKING THE WOODFORD PAVEMENT.
 - THE INSTALLATION OF ALL SIGNS ALONG WOODFORD DRIVE SHALL BE DONE UNDER THE OVERSIGHT OF HOWARD COUNTY DPW TRAFFIC DIVISION.
 - TWO SCHOOL ZONE FLASHERS SHALL BE INSTALLED ALONG WOODFORD DRIVE UNDER THE OVERSIGHT OF HOWARD COUNTY DPW TRAFFIC DIVISION.

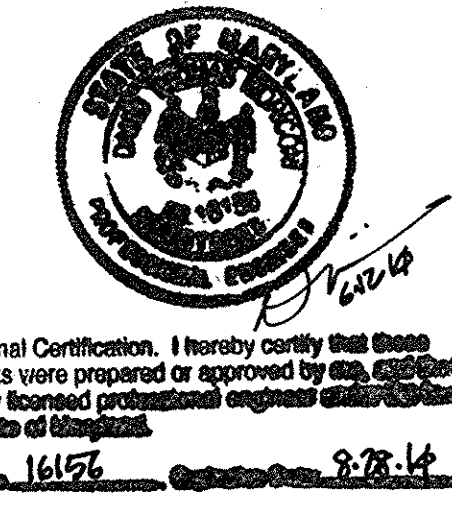


APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
Dennis Smith 1-15-07
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Marsh Delaney 9/2/03
 Director Date

Cindy Hamilton 9/2/03
 Chief, Division of Land Development Date

[Signature] 9/2/03
 Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TITLE	DTM	

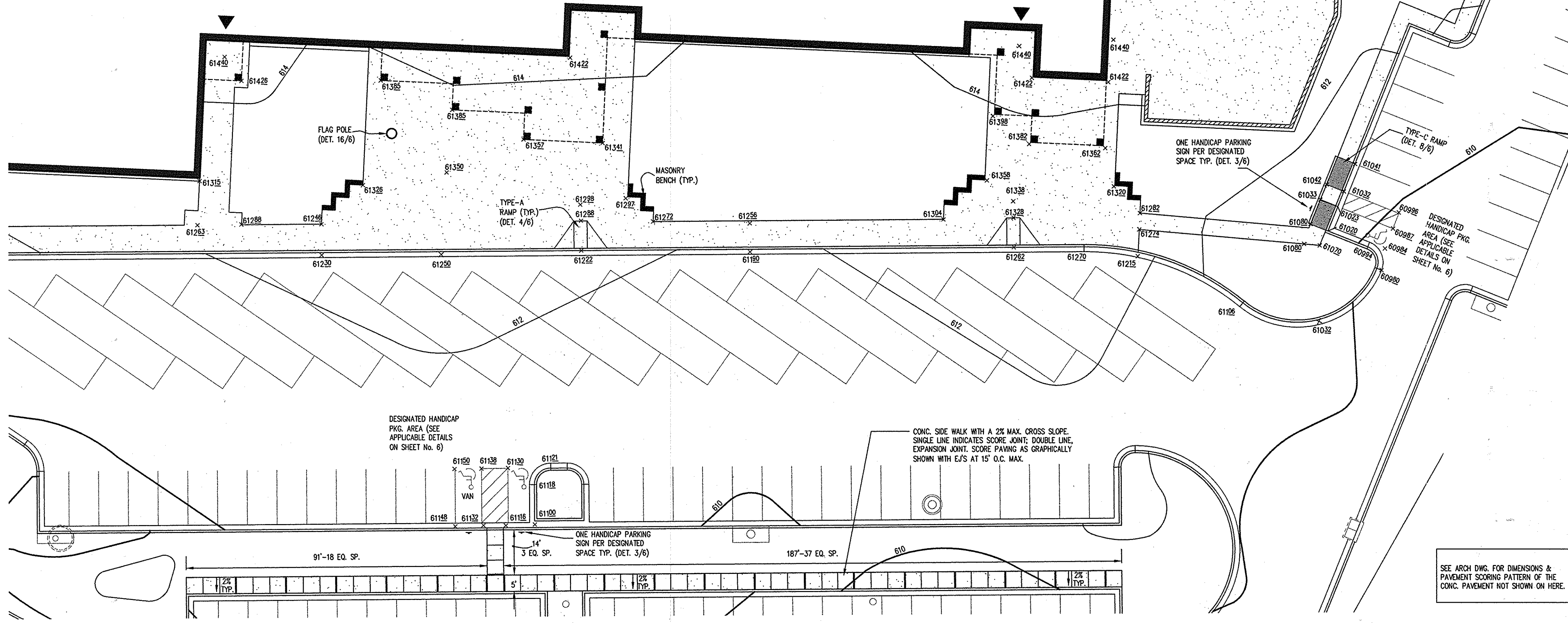
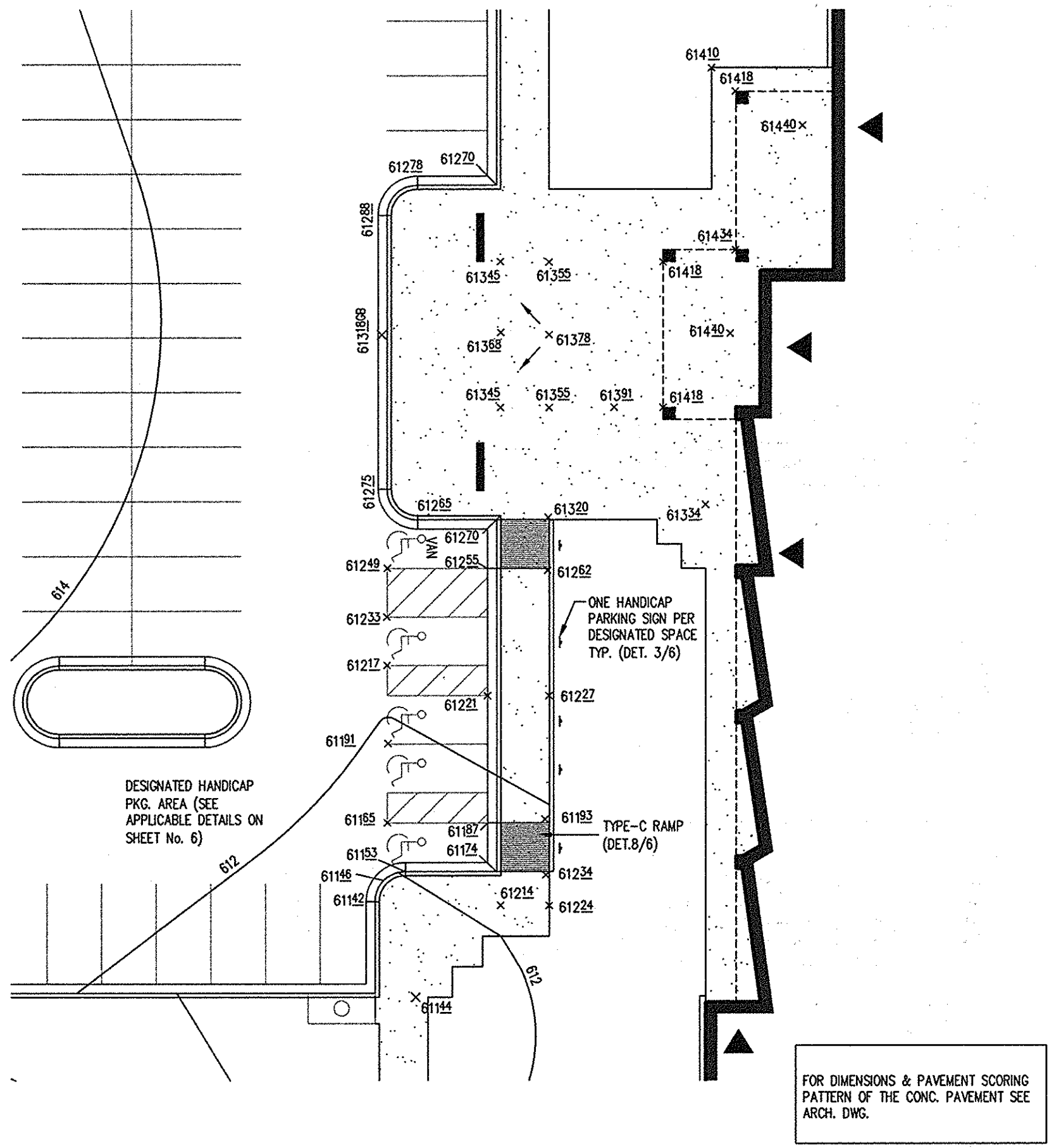
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELLICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2681 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

DESIGNED SITE DEVELOPMENT PLAN
 WEST FRIENDSHIP ELECTION DISTRICT No. 3

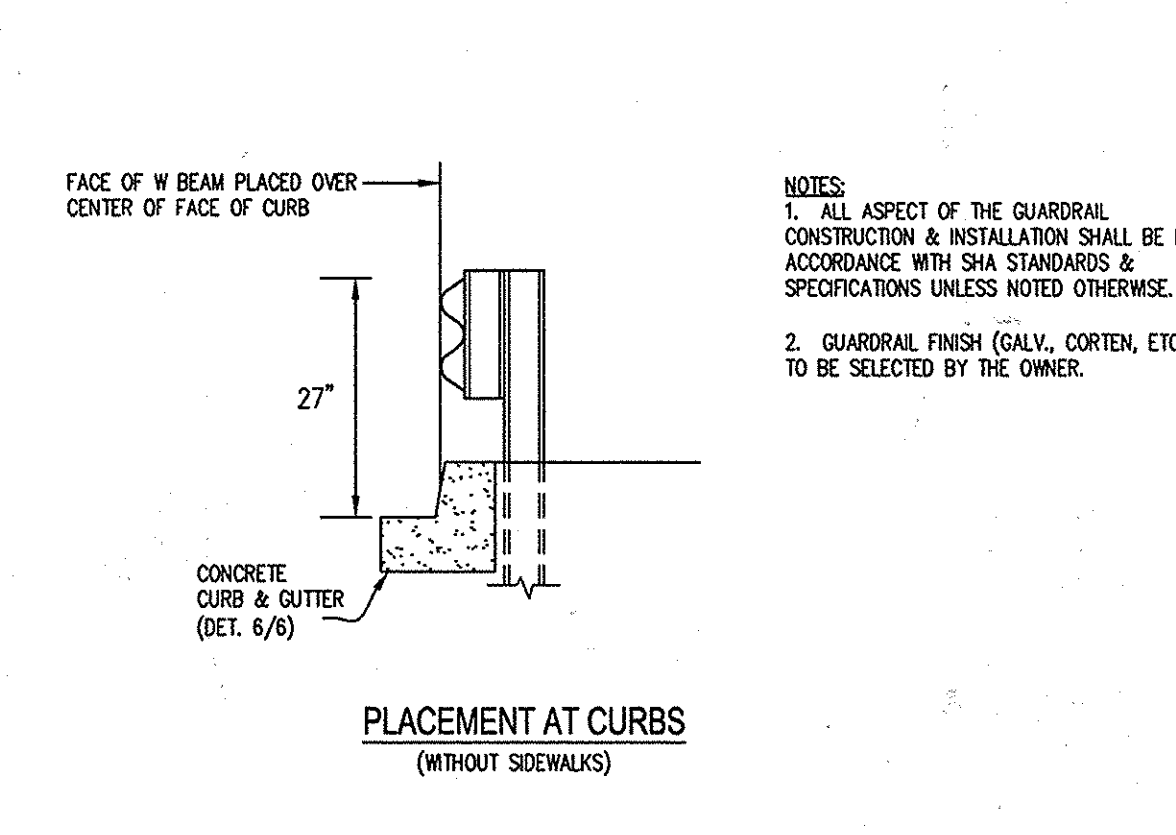
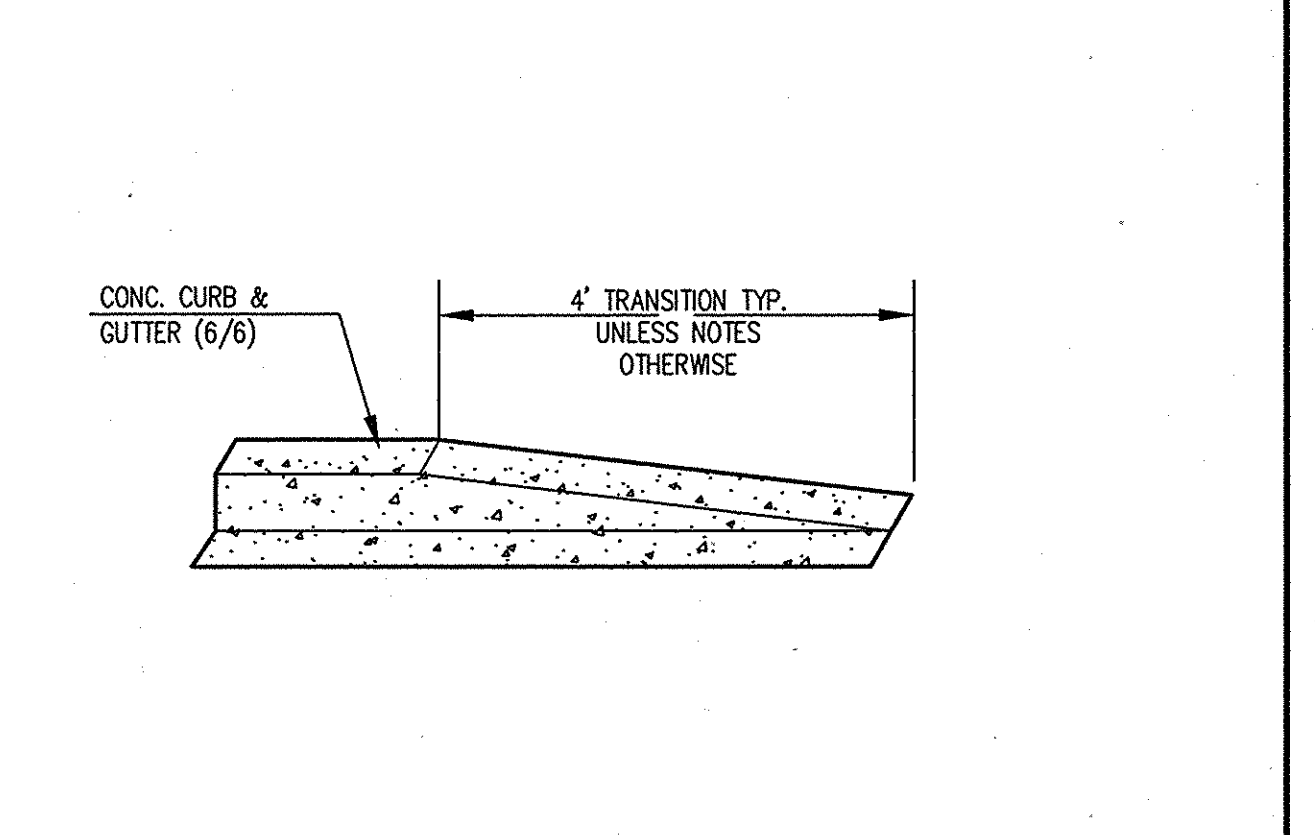
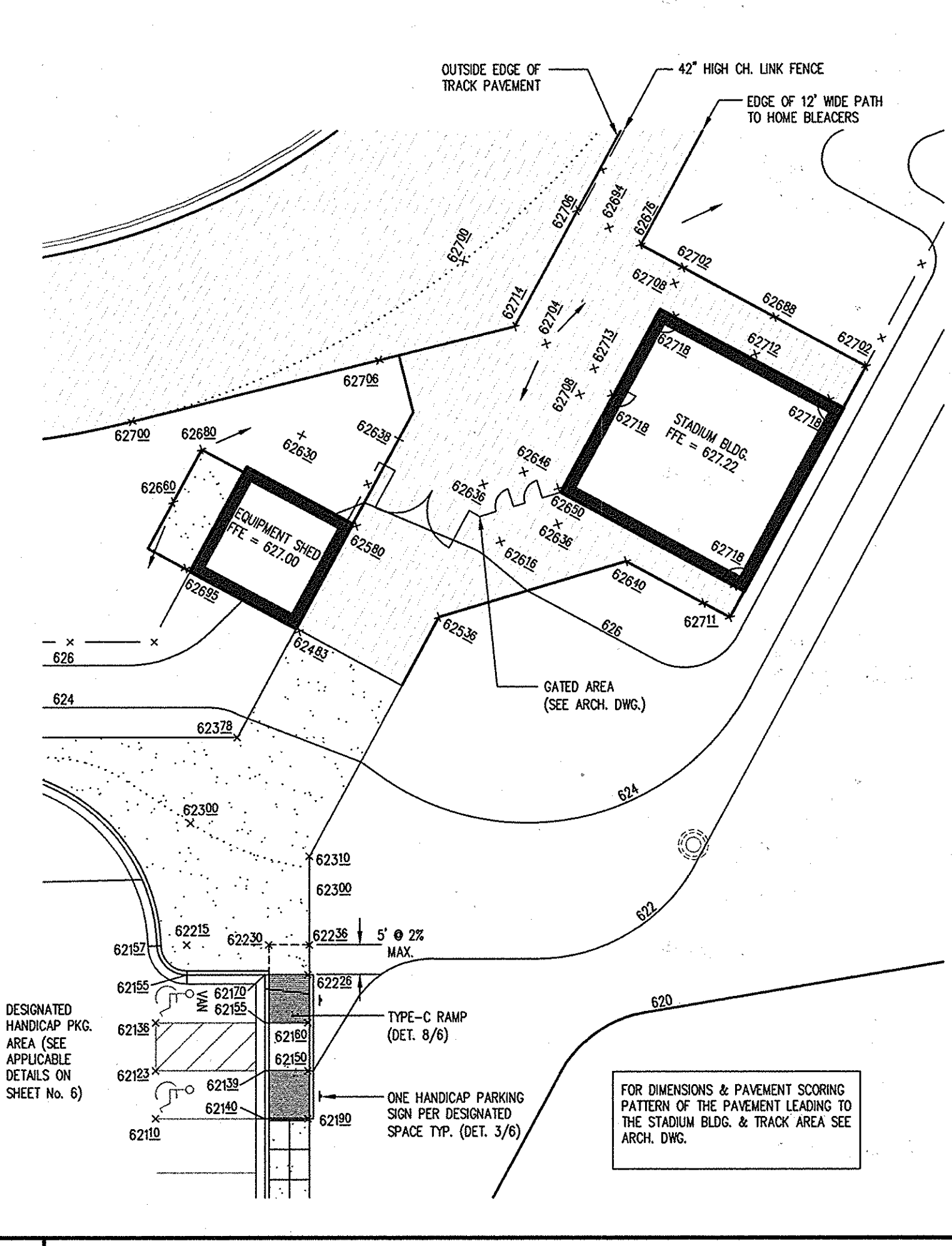
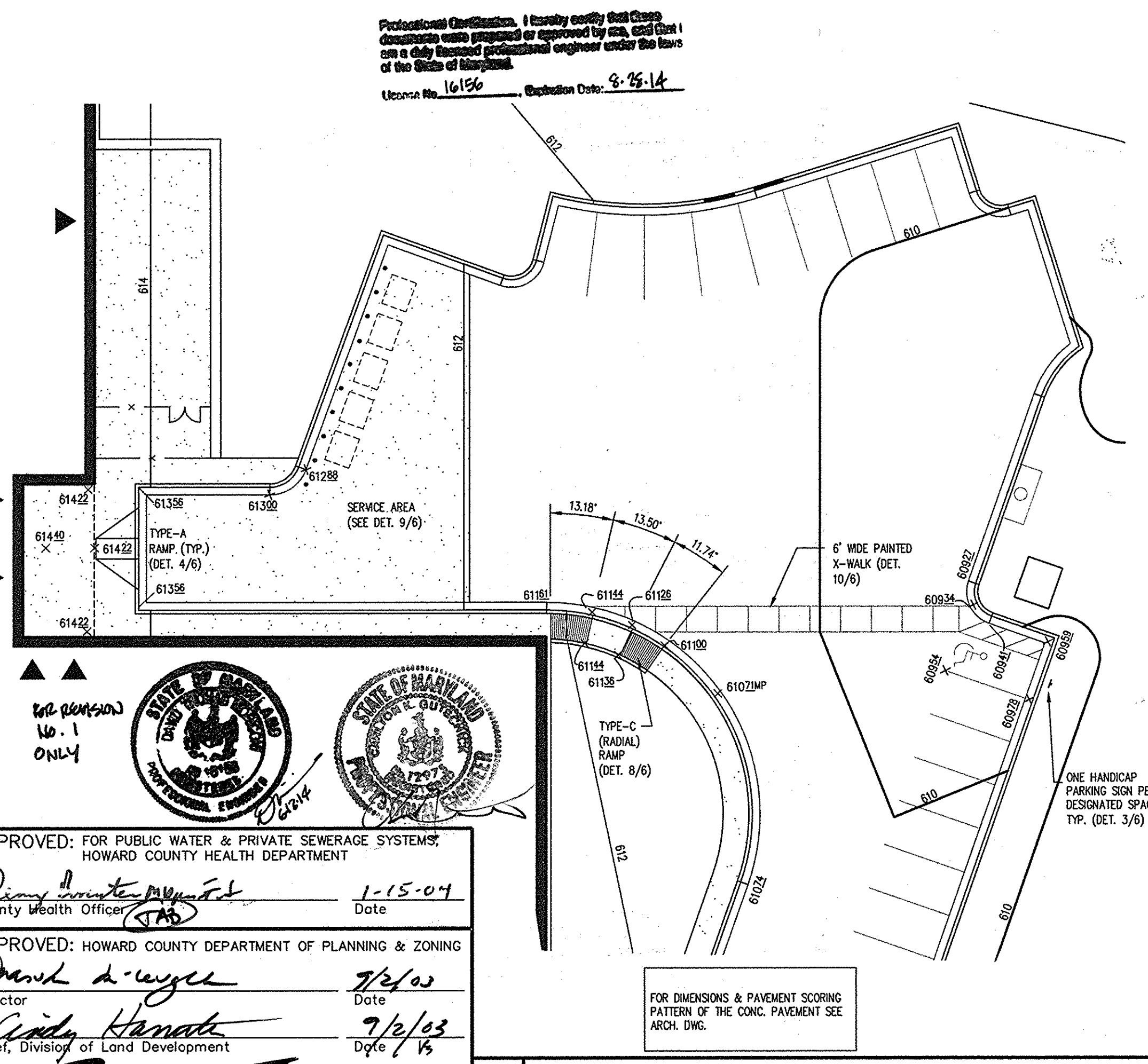
SITE DETAILS
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16117/8 (PARCEL 1) and 16136/7 (PARCEL 2A)

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	7 of 18 58



1 ACCESSIBLE ROUTE ON THE WEST SIDE OF THE BUILDING SCALE: 1" = 20'

2 ACCESSIBLE ROUTE ON THE SOUTH SIDE OF THE BUILDING SCALE: 1" = 20'

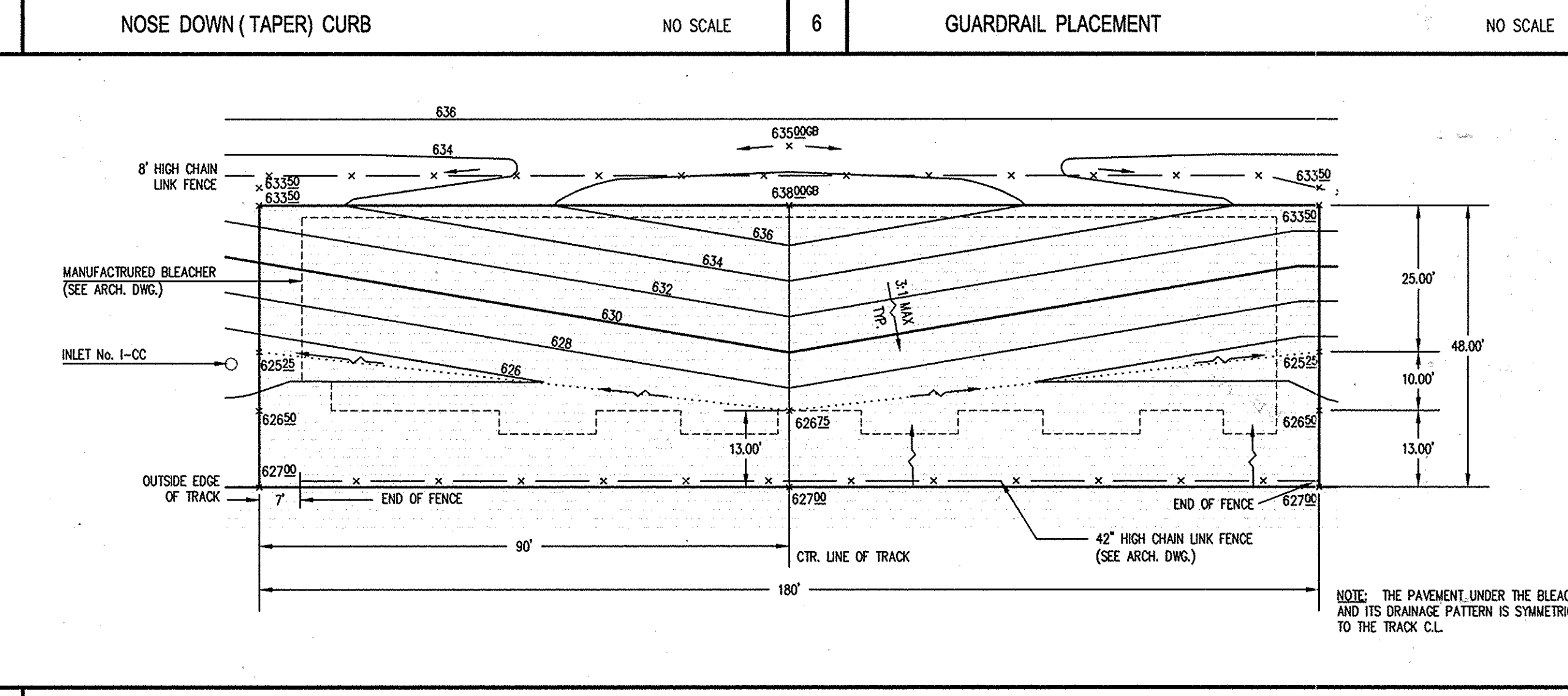


5 NOSE DOWN (TAPER) CURB NO SCALE

6 GUARDRAIL PLACEMENT NO SCALE

3 ACCESSIBLE ROUTE TO THE BUILDING SERVICE AREA SCALE: 1" = 20'

4 ACCESSIBLE ROUTE TO THE STADIUM AREA SCALE: 1" = 20'



7 PAVEMENT UNDER THE VISITOR'S BLEACHERS SCALE: 1" = 20'

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
Diana M. ... 1-15-04
 County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
... 7/2/03
 Director

... 7/2/03
 Chief, Division of Land Development

... 7-2-03
 Chief, Development Engineering Division

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VAI: 301-989-2524 FAX: 301-421-4188

DATE	1-15-04	REVISION	1	UPDATED SCHOOL NAME & SHEET TOTAL
DES.		DRN.		MP
CHK.				

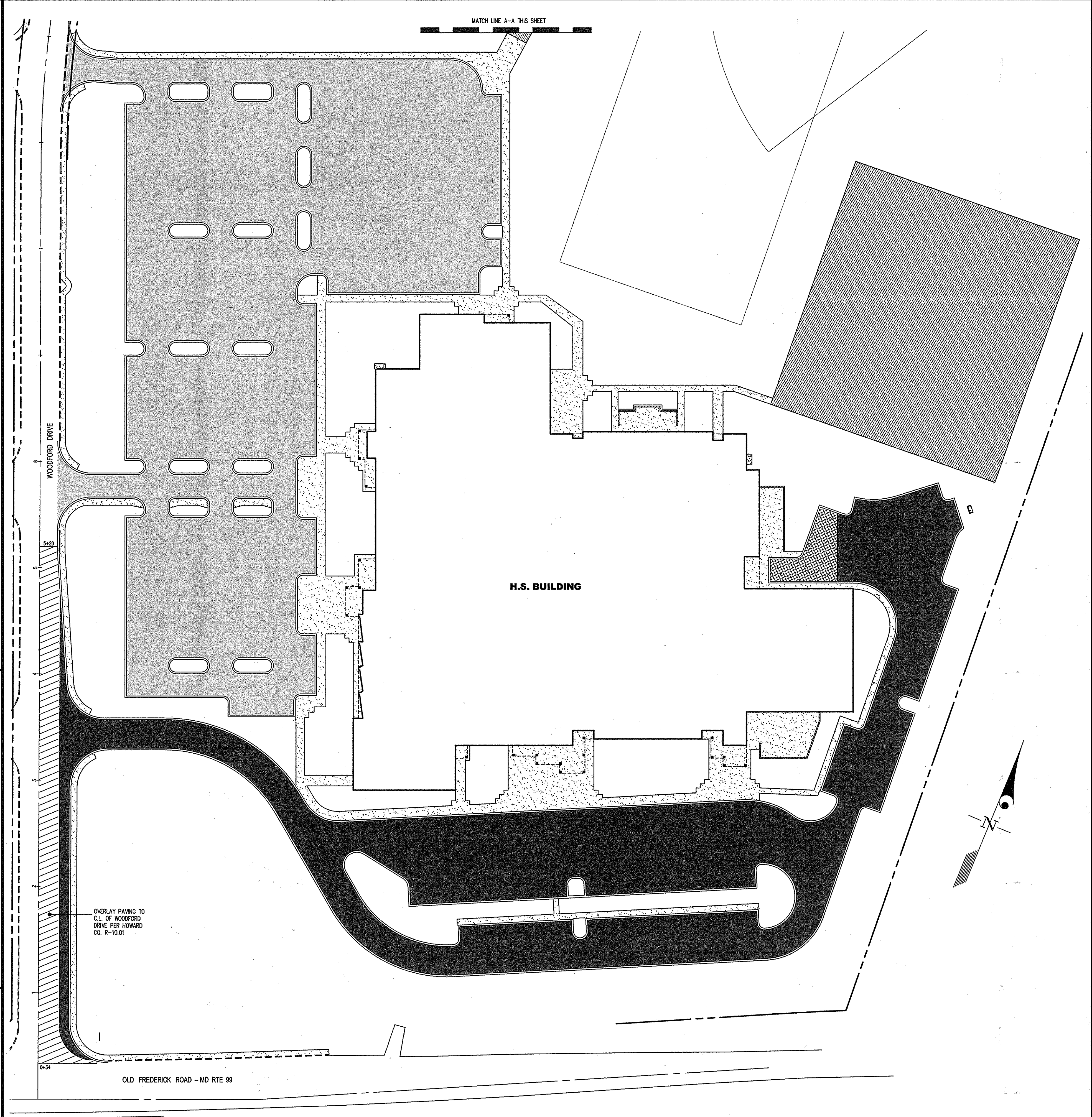
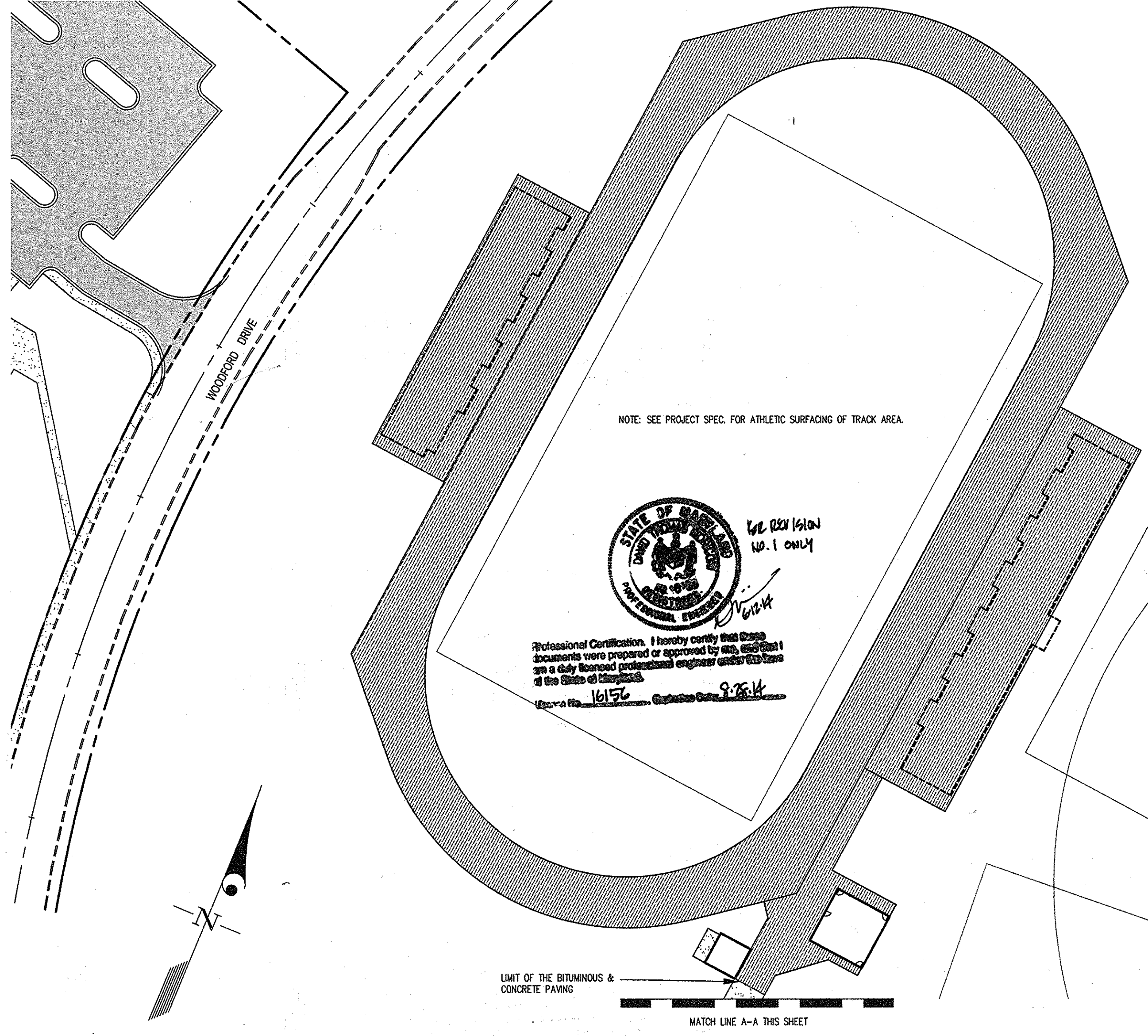
PREPARED FOR:
 OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT:
 TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

SITE DETAILS
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16-17/2 (PARCEL 1) and 16-18/7 (PARCEL 2A)
 WEST FRIENDSHIP ELECTION DISTRICT No. 3
 HOWARD COUNTY, MARYLAND

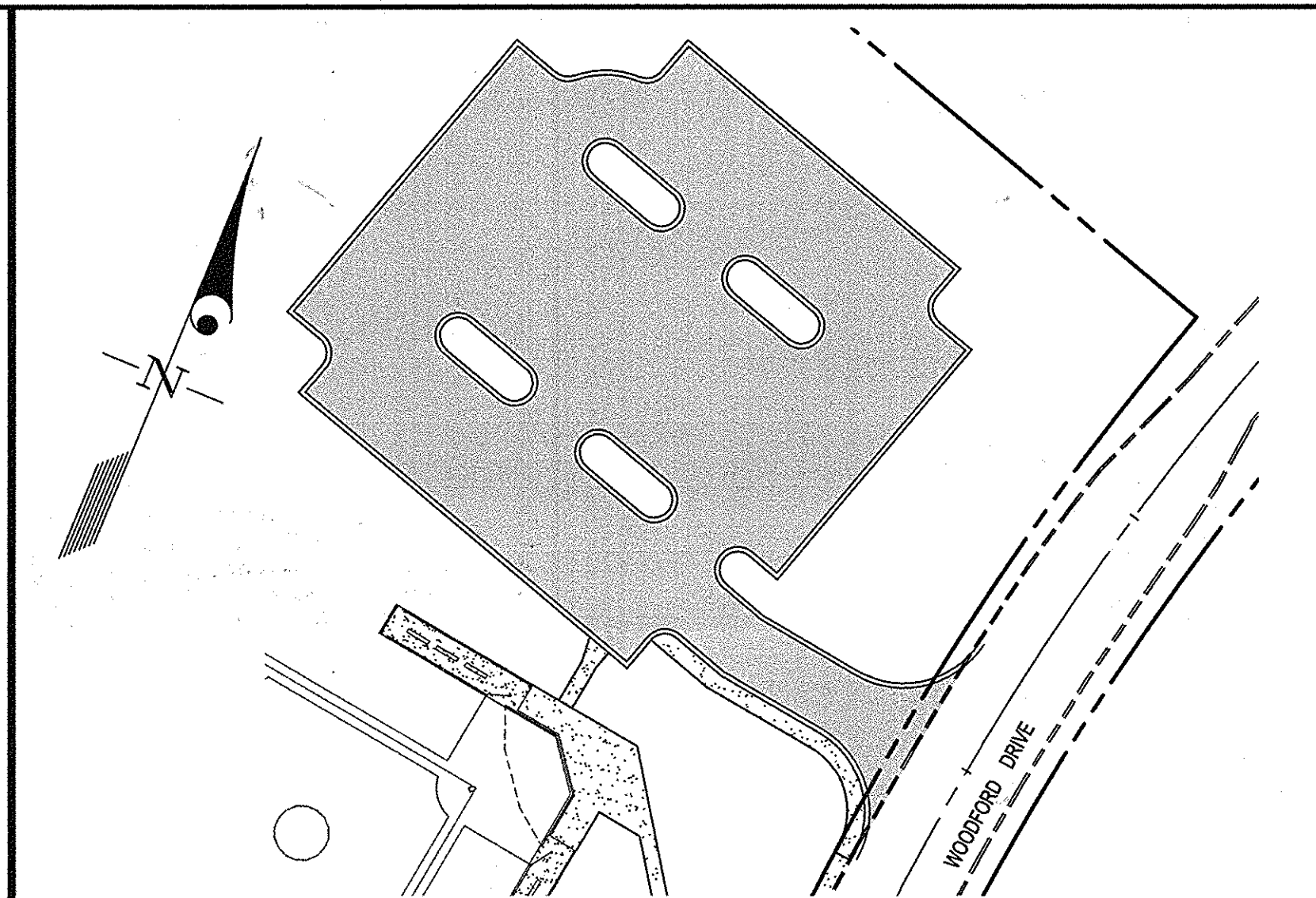
SCALE	AS SHOWN	ZONING	RR-DEO	G. L. W. FILE No.	00-177
DATE	28/JUL/03	TAX MAP - GRID	10 19	SHEET	8 of 48

SEE DETAIL BELOW FOR CONTINUATION OF THIS PARKING LOT



LEGEND

	LIGHT DUTY BITUMINOUS PAVING (DET. 12/6)
	HEAVY DUTY BITUMINOUS PAVING (DET. 11/6)
	CONCRETE WALK PAVING (DET. 7/6)
	SERVICE AREA CONCRETE PAVING (DET. 14/6)
	PLAY COURT PAVING (DET. 15/6)
	OVERLAY PAVING PER HOWARD CO. R-10.01



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

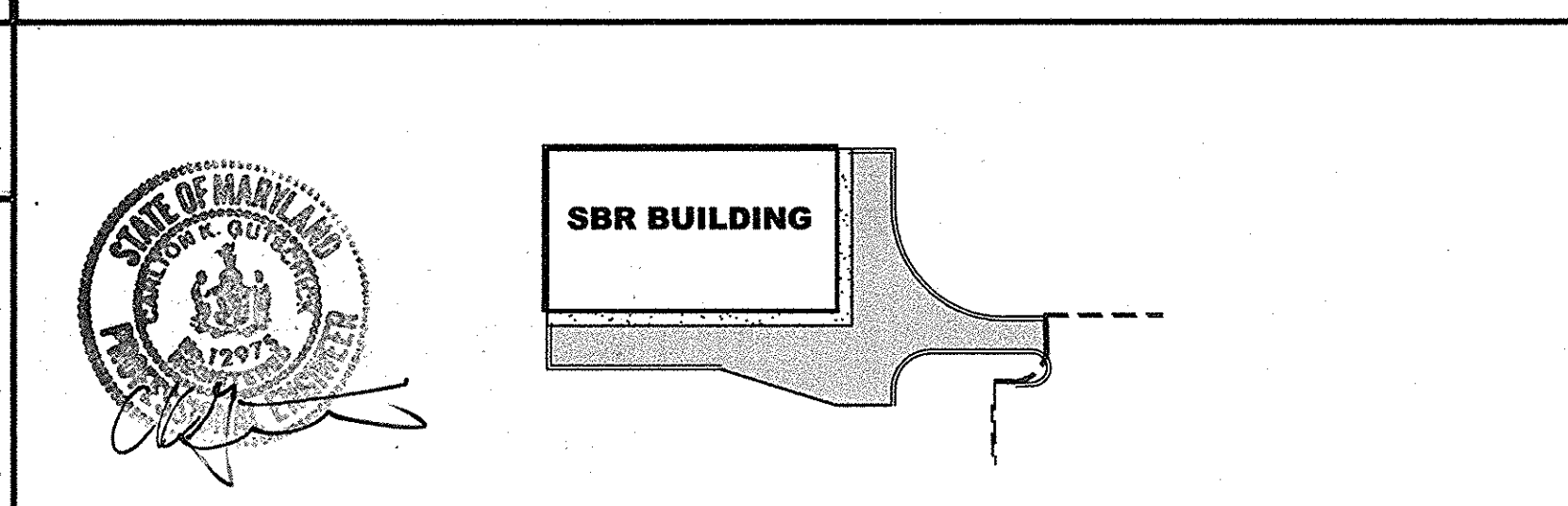
Dennis Donato 1-15-09
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David K. Layton 8/2/08
Director Date

Cheryl Hancock 9/2/13
Chief, Division of Land Development Date

[Signature] 8-27-09
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

00177\SDP-03-33\PAV.dwg

DATE	6-12-14	REVISION	UPDATED SHEET TITLE & SCHOOL NAME
DES.		CHK.	
DRN.		APP'R.	

PREPARED FOR:

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

PAVING DELINEATION PLAN

MARKETPPS RIDGE
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 1611718 (PARCEL 1) and 1613617 (PARCEL 2A)

WEST FRIENDSHIP ELECTION DISTRICT No. 3

HOWARD COUNTY, MARYLAND

SCALE	1" = 50'	ZONING	RR-DEO	G. L. W. FILE No.	00-177
DATE	28/JUL/03	TAX MAP - GRID	10 19'	SHEET	9 of 16

DRAINAGE AREAS - NORTHERN HIGH SCHOOL					
AREA (BY INLET No.)	D.A. (ACRES)	GRASS (ACRES)	IMPERVIOUS (ACRES)	% IMPERVIOUS	C-FACTOR
112	0.69	0.25	0.44	64	0.62
113	0.77	0.20	0.57	74	0.69
114	0.73	0.18	0.55	75	0.69
115	0.56	0.09	0.45	80	0.72
116	0.22	0.20	0.02	9	0.25
118	0.78	0.14	0.64	82	0.74
119	1.51	0.61	0.90	60	0.59
201	0.46	0.12	0.34	74	0.69
202	0.51	0.15	0.36	71	0.66
203	0.73	0.21	0.52	71	0.67
205	0.16	0.03	0.13	81	0.73
206	0.37	0.12	0.25	68	0.64
207	1.43	0.49	0.94	66	0.63
209	0.29	0.11	0.18	62	0.61
312	0.49	0.16	0.33	67	0.63
321	1.92	1.92	0.00	0	0.19
322	1.28	1.28	0.00	0	0.19
323	1.35	1.35	0.00	0.00	0.19
324	0.69	0.69	0.00	0.00	0.19
342	0.22	0.22	0.00	0	0.16
343	0.19	0.19	0.00	0	0.16
345	0.26	0.26	0.00	0	0.16
346	0.21	0.21	0.00	0	0.16
344	1.27	1.27	0.00	0	0.19
315	1.11	0.41	0.70	63	0.61
517	3.01	3.01	0.00	0.00	0.19
ST331	1.24	0.00	1.24	100	0.86
AA	0.28	0.28	0.00	0	0.16
BB	0.25	0.25	0.00	0	0.16
CC	0.34	0.24	0.10	29	0.37
DD	0.35	0.21	0.14	40	0.44
13-12	1.78	1.27	0.51	29	0.36
14-12	1.78	1.27	0.51	29	0.36
RF1	1.39	0.00	1.39	100	0.86
RF2	0.94	0.00	0.94	100	0.86
RF3	0.80	0.00	0.80	100	0.86


SOILS CHART		
SYMBOL	NAME	TYPE
Chc	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChB2	ELGOK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
ChC3	ELGOK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
G1A	GLENELG LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1C3	GLENELG LOAM, 15 TO 15 PERCENT, SEVERELY ERODED	B
M1C2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
M1C3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

DRAINAGE AREAS - TO POND #2 REV FACILITY				
AREA (BY INLET No.)	D.A. (ACRES)	GRASS (ACRES)	IMPERVIOUS (ACRES)	
203	0.73	0.21	0.52	
205	0.16	0.03	0.13	
206	0.37	0.12	0.25	
207	1.43	0.49	0.94	
209	0.29	0.11	0.18	
RF1	1.39	0.00	1.39	
TOTAL	4.37	0.96	3.41	

DRAINAGE AREAS - TO POND #3 REV FACILITY				
AREA (BY INLET No.)	D.A. (ACRES)	GRASS (ACRES)	IMPERVIOUS (ACRES)	
AA	0.28	0.28	0.00	
BB	0.25	0.25	0.00	
CC	0.34	0.24	0.10	
DD	0.35	0.21	0.14	
13-12	1.78	1.27	0.51	
14-12	1.78	1.27	0.51	
312	0.49	0.16	0.33	
321	1.92	1.92	0.00	
322	1.28	1.28	0.00	
323	1.35	1.35	0.00	
324	0.69	0.69	0.00	
ST331	1.24	0.00	1.24	
TOTAL	11.74	8.91	2.83	

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.

Urban No. 16146 Registration Date: 9-28-16



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Dennis D. Mumpert 1-15-04
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark D. Ayle 9/2/02
Director Date

Linda Hamilton 9/2/02
Chief, Division of Land Development Date

[Signature] 9-23-03
Chief, Development Engineering Division Date



LEGEND	
	DRAINAGE AREA DESIGNATION (HEXAGONAL)
	STORM DRAIN STRUCTURE DESIGNATION (CIRCULAR)
	DRAINAGE DIVIDE
	DRAINAGE AREA TO POND #2 REV FACILITY
	DRAINAGE AREA TO POND #3 REV FACILITY

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
6-12-12	ISSUED SCHOOL NAME & SHEET TOTAL	DTM	APP'R.

PREPARED FOR:

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHLEEN YOUNG
TEL: 410-313-6704

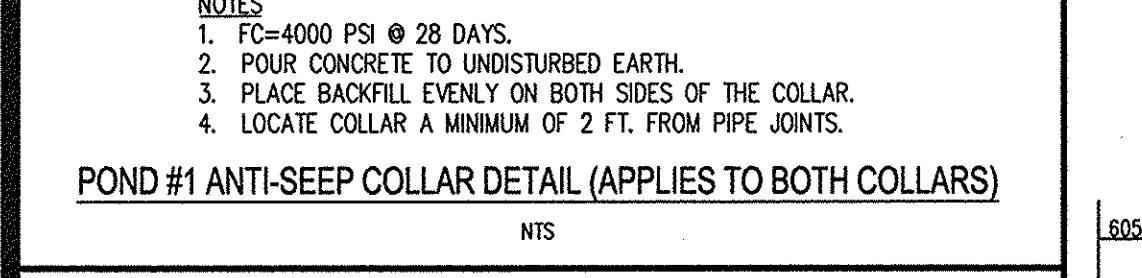
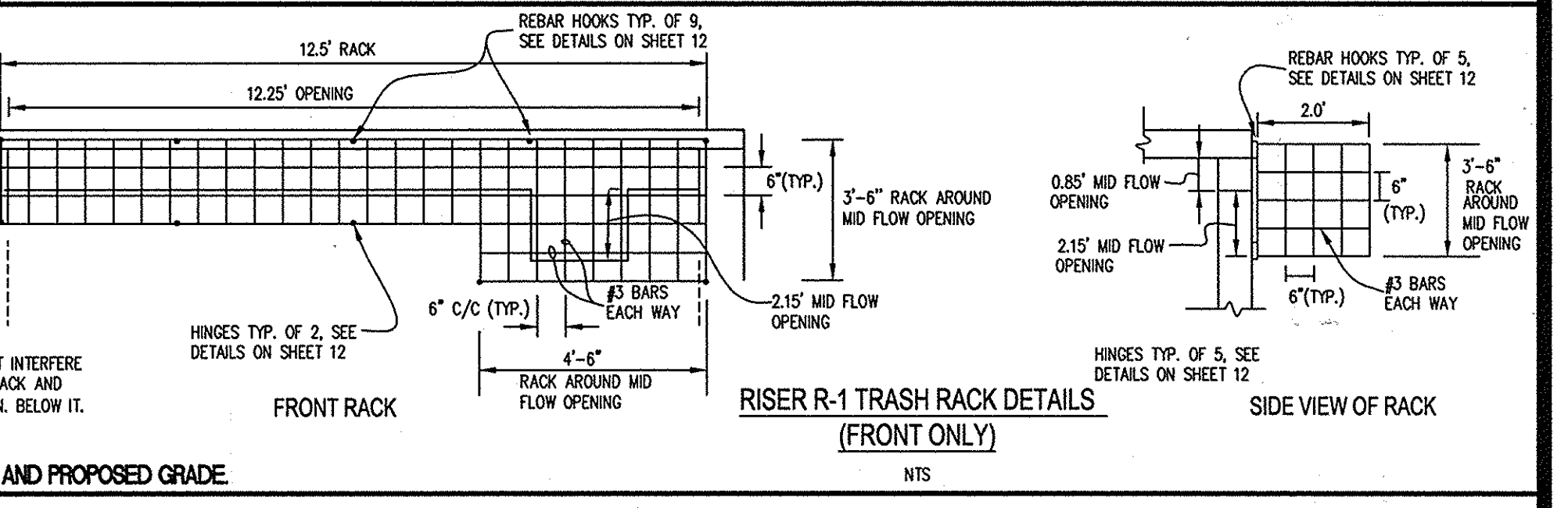
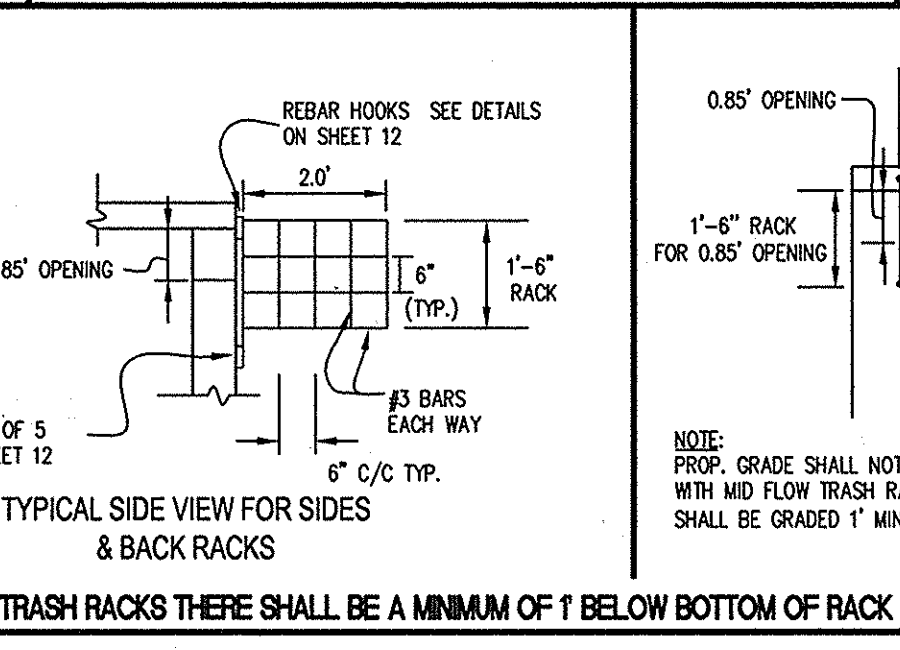
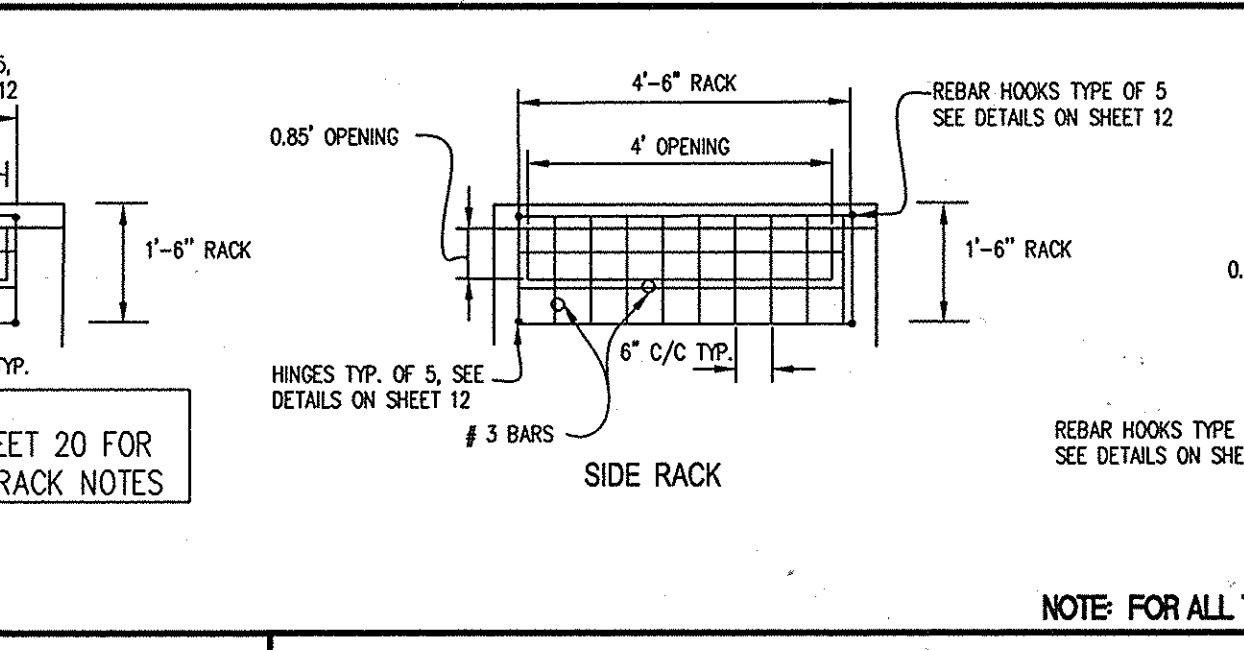
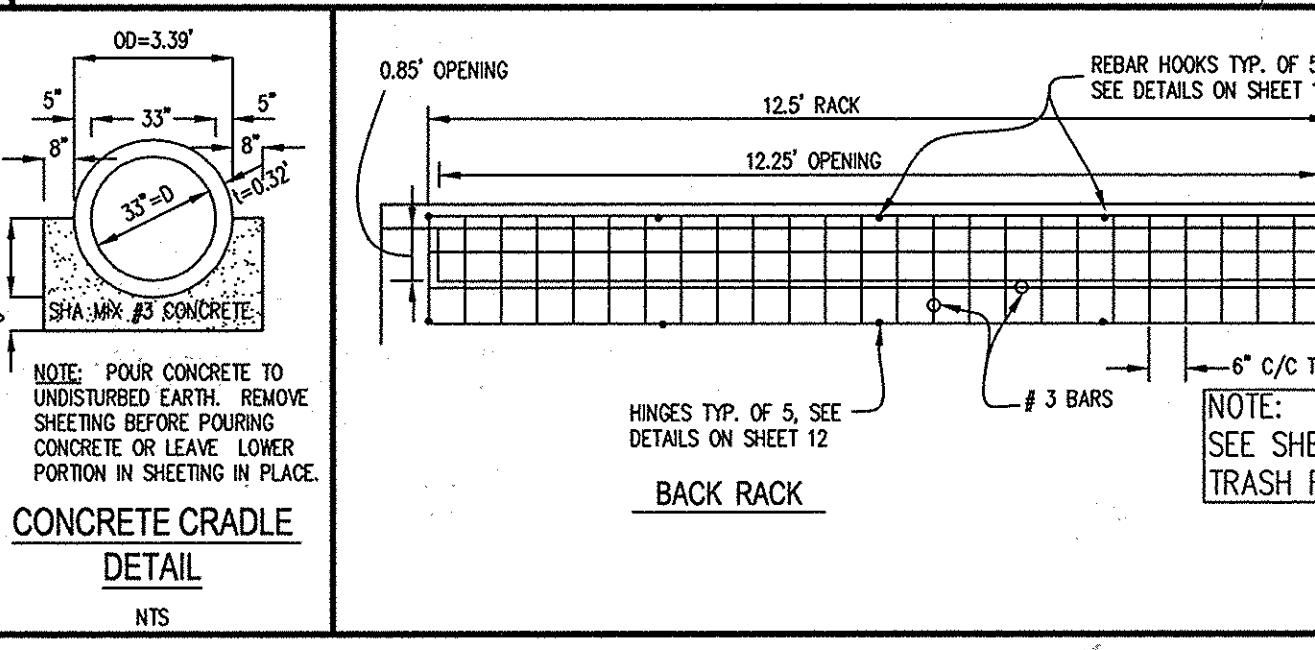
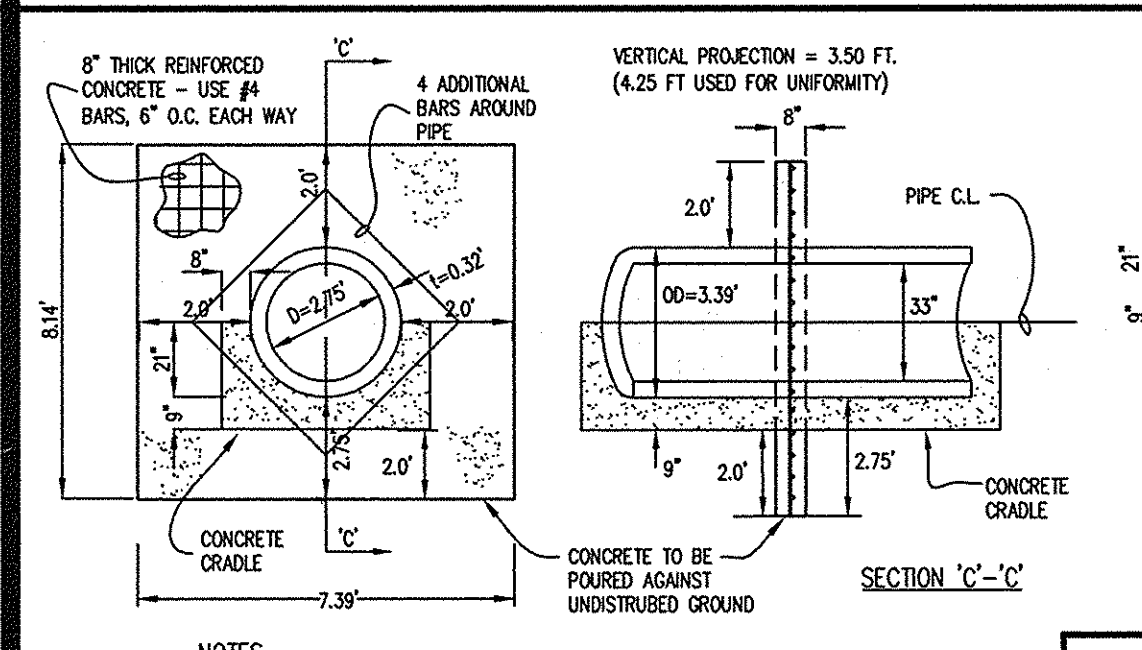
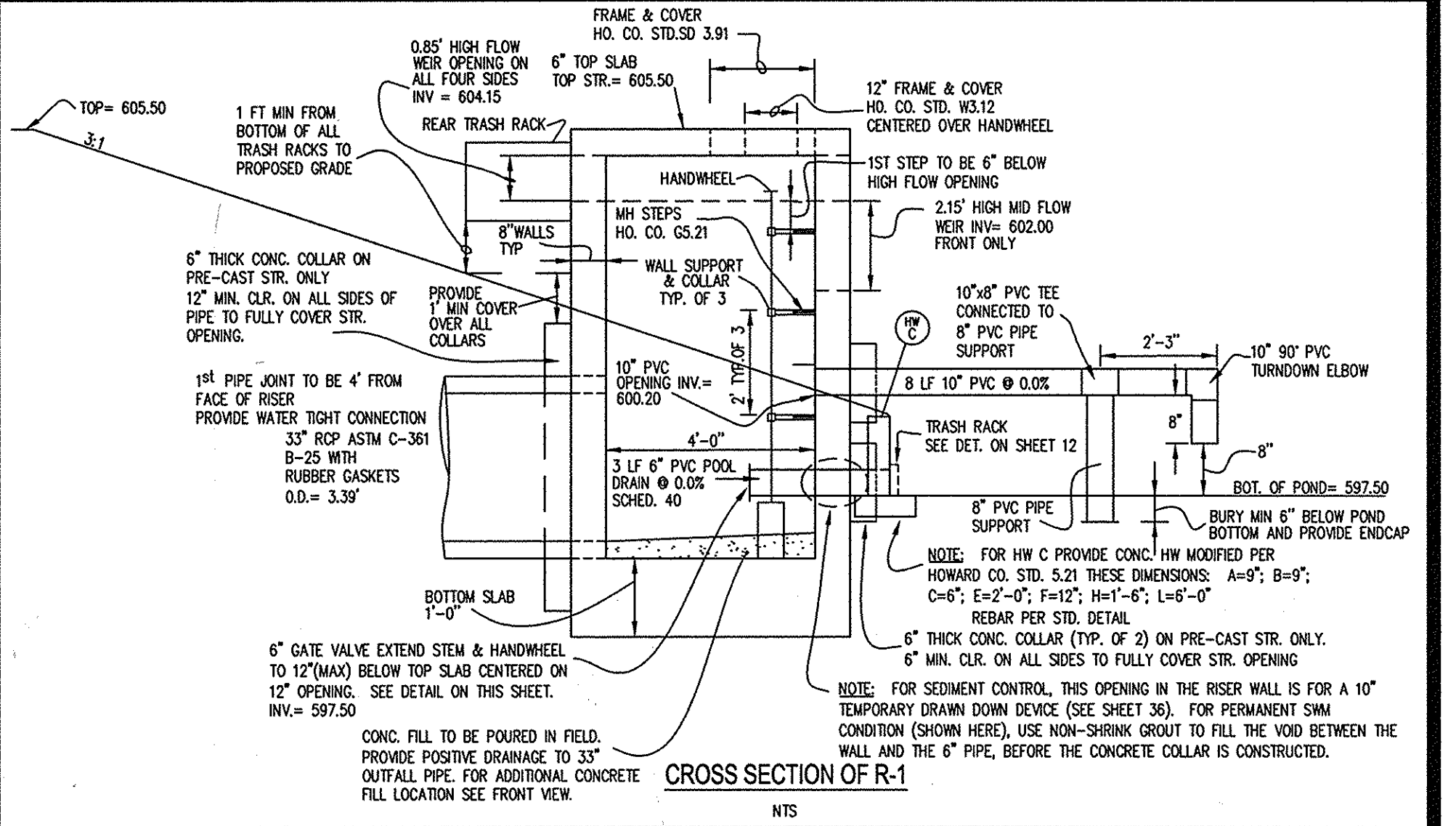
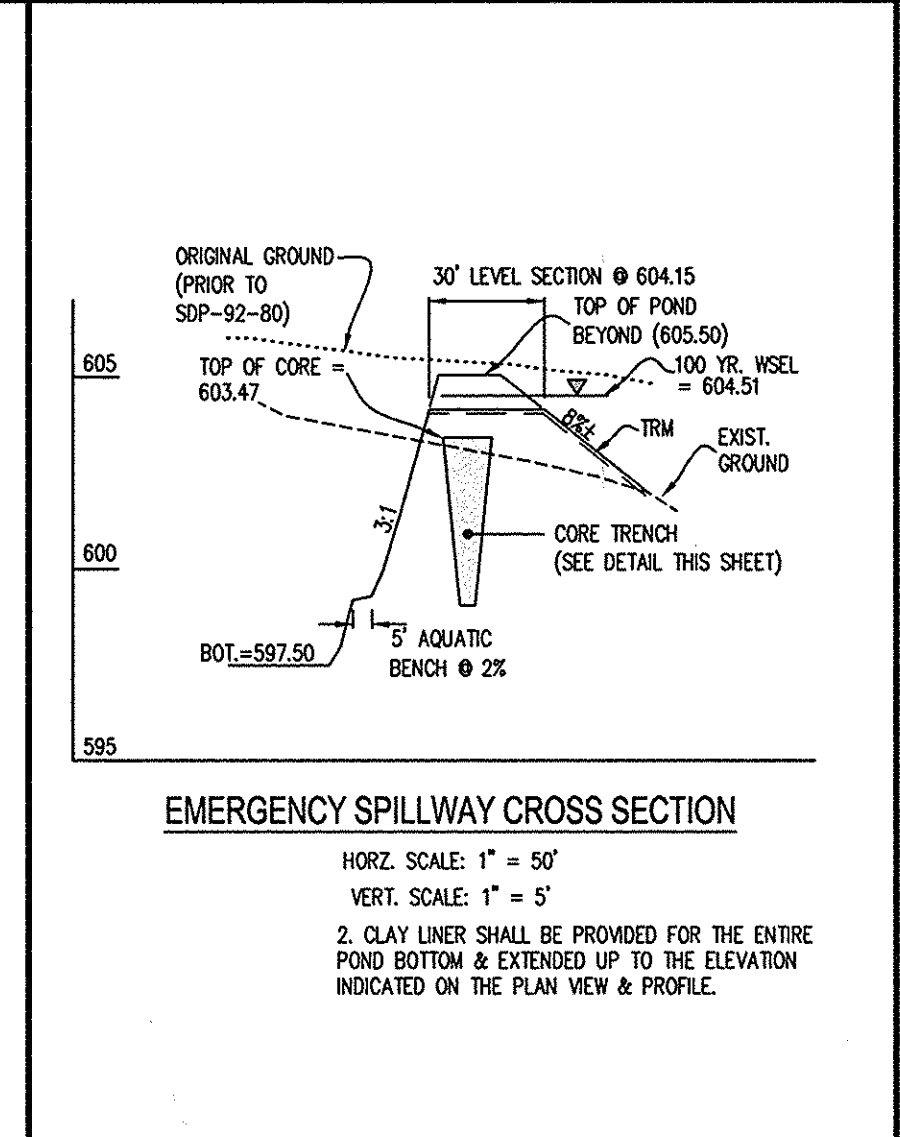
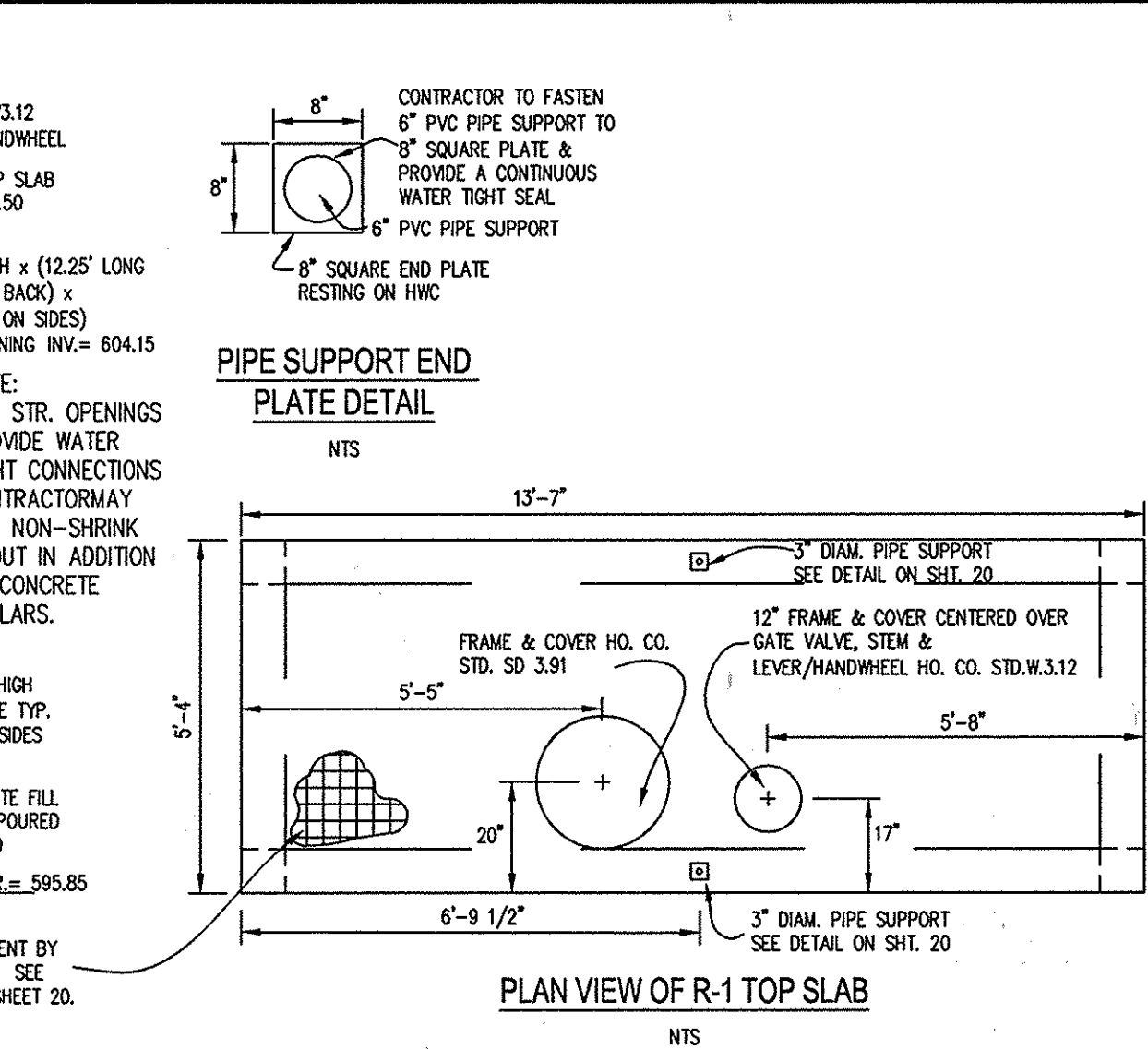
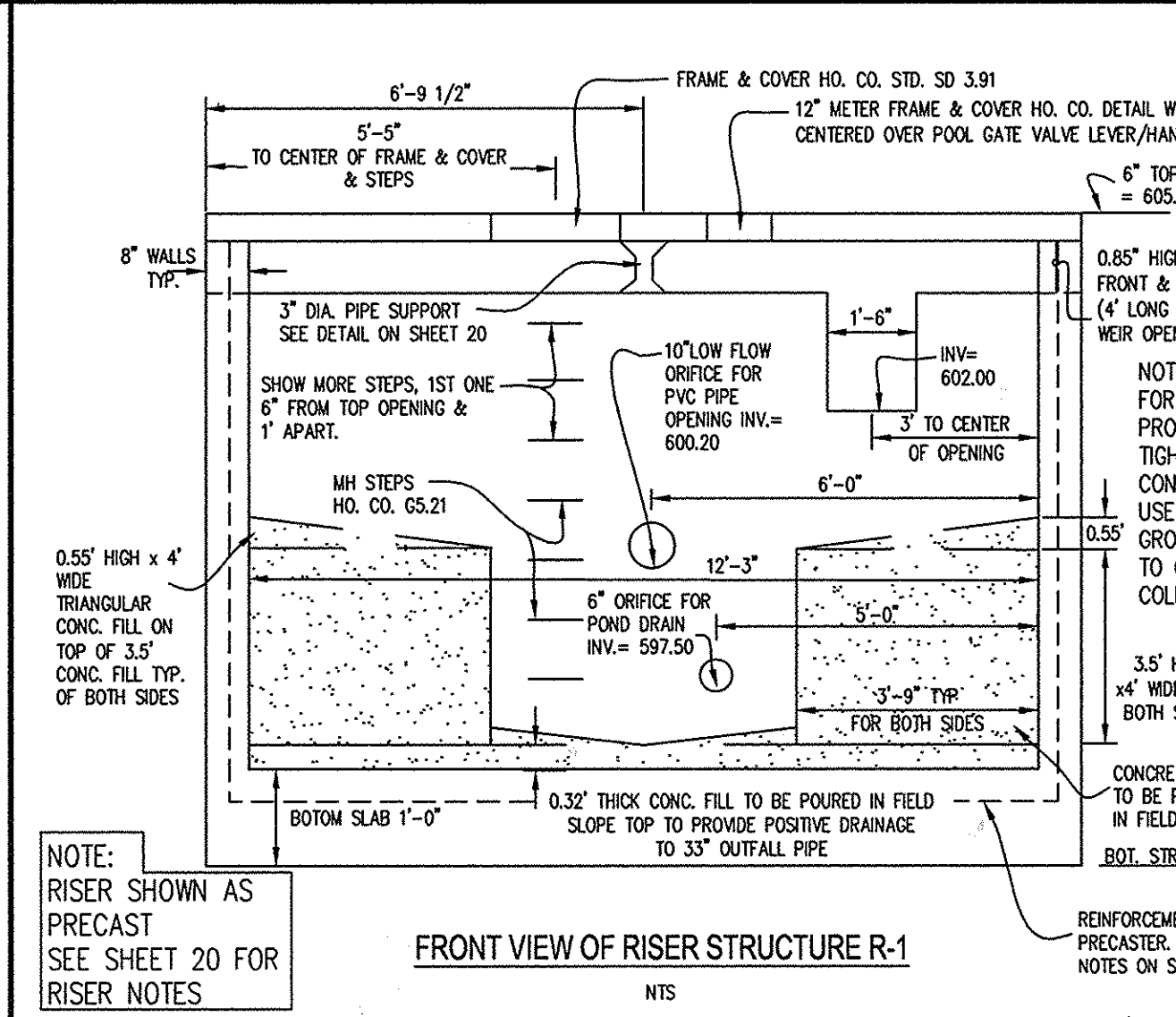
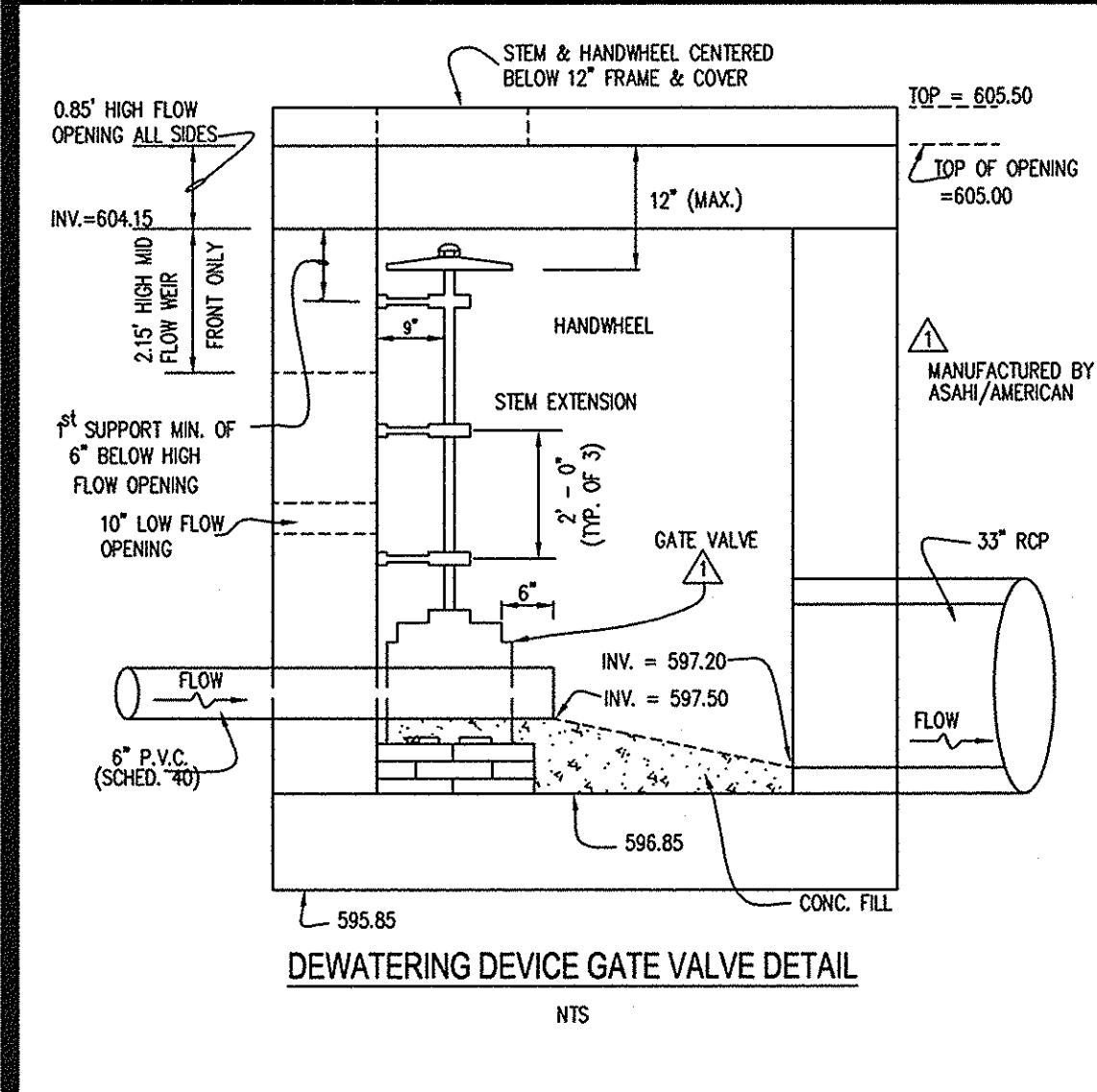
ARCHITECT: TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: NICK BOYD
TEL: 301-261-8700

REVISION: SITE DEVELOPMENT PLAN

WEST FRIENDSHIP ELECTION DISTRICT No. 3

DRAINAGE AREA MAP (for SD)
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117 (PARCEL 1) and 16126 (PARCEL 2A)

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	RR-DEO	00-177
DATE	TAX MAP - GRD	SHEET
28/JUL/03	10 19	10 of 48



NOTES

- FC=4000 PSI @ 28 DAYS.
- POUR CONCRETE TO UNDISTURBED EARTH.
- PLACE BACKFILL EVENLY ON BOTH SIDES OF THE COLLAR.
- LOCATE COLLAR A MINIMUM OF 2 FT. FROM PIPE JOINTS.

POND #1 ANTI-SEEP COLLAR DETAIL (APPLIES TO BOTH COLLARS)

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/14/03
HOWARD SOIL CONSERVATION DISTRICT

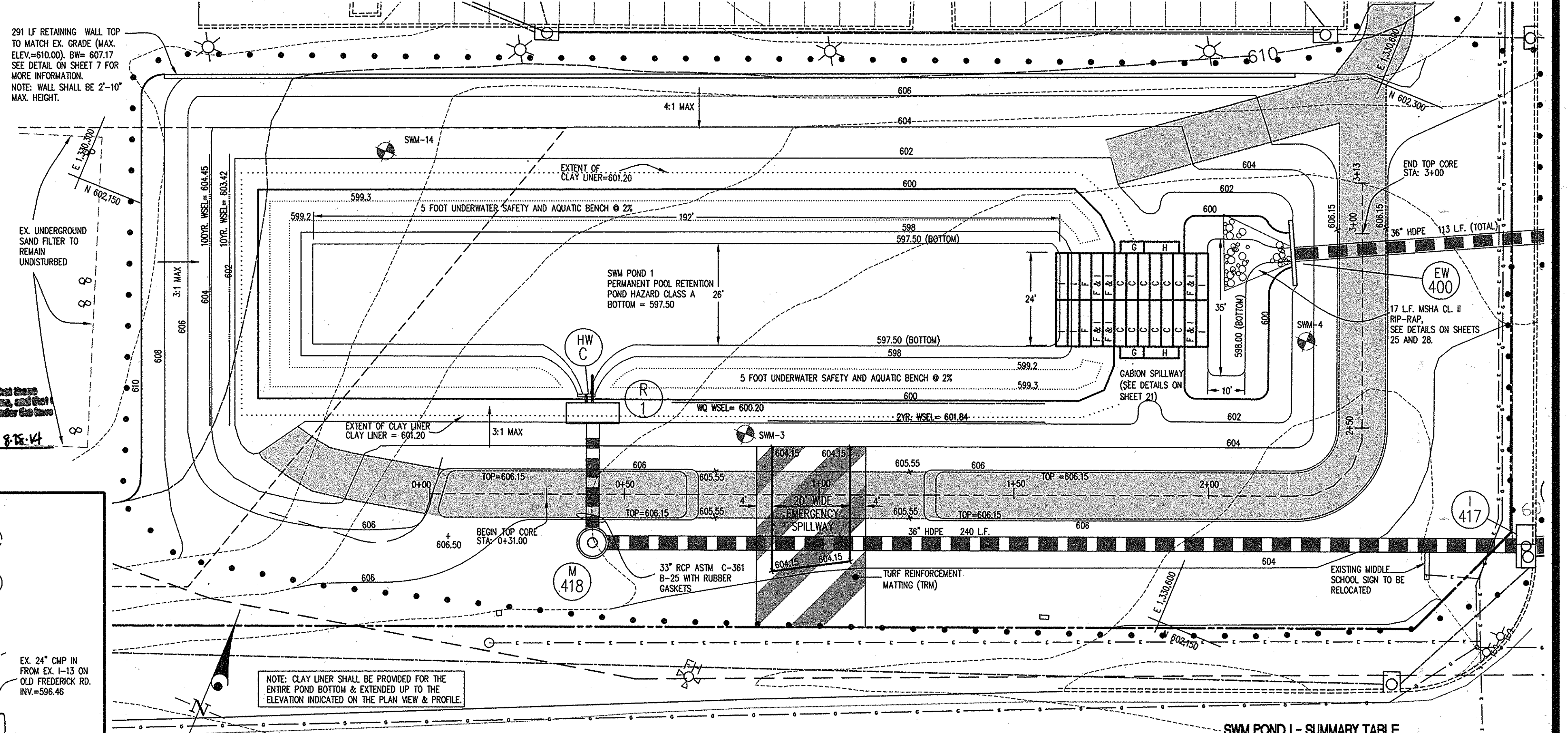
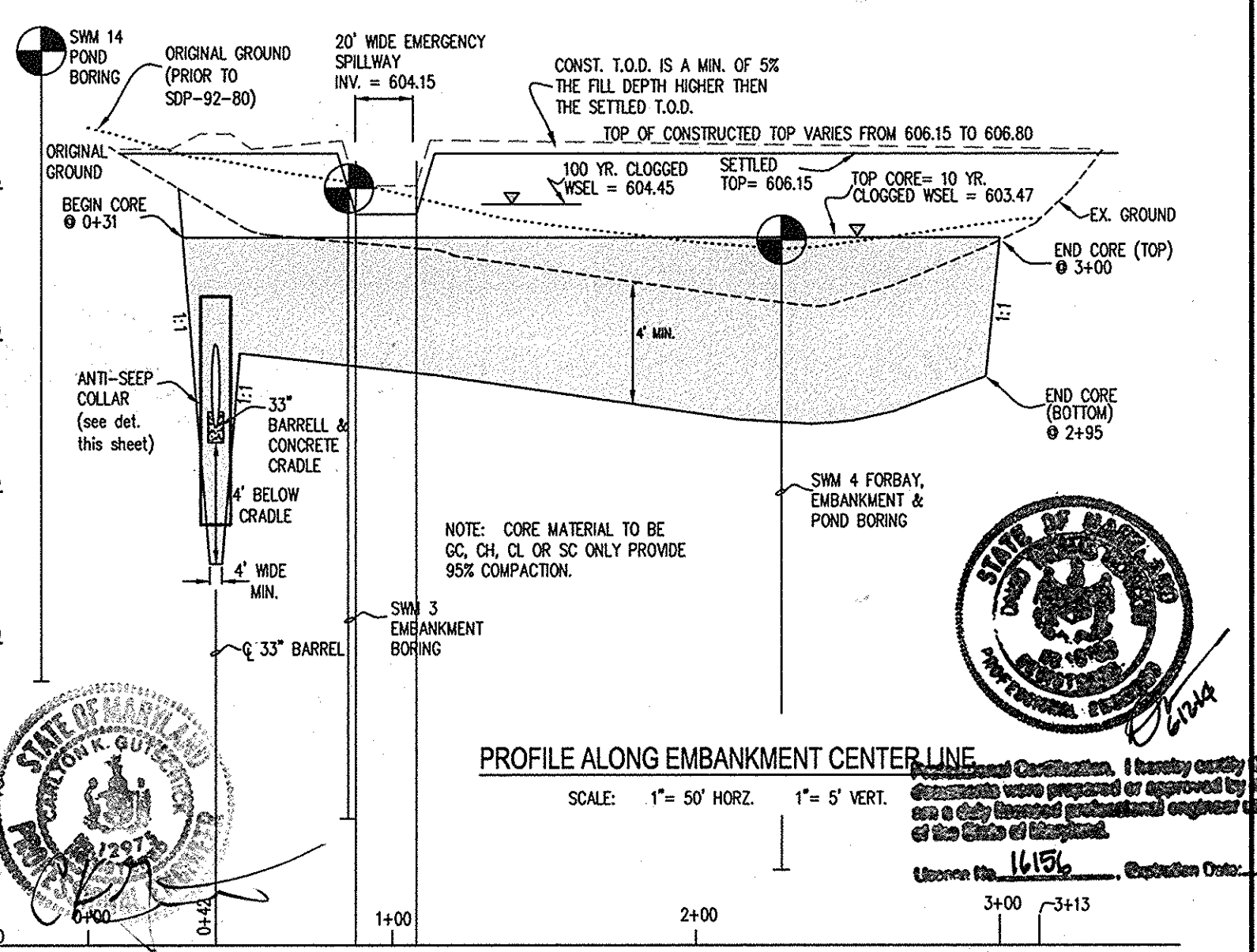
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 8/14/03
USDA NATURAL RESOURCES CONSERVATION SERVICE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 7/30/03
ENGINEER'S SIGNATURE DATE



DEVELOPER/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

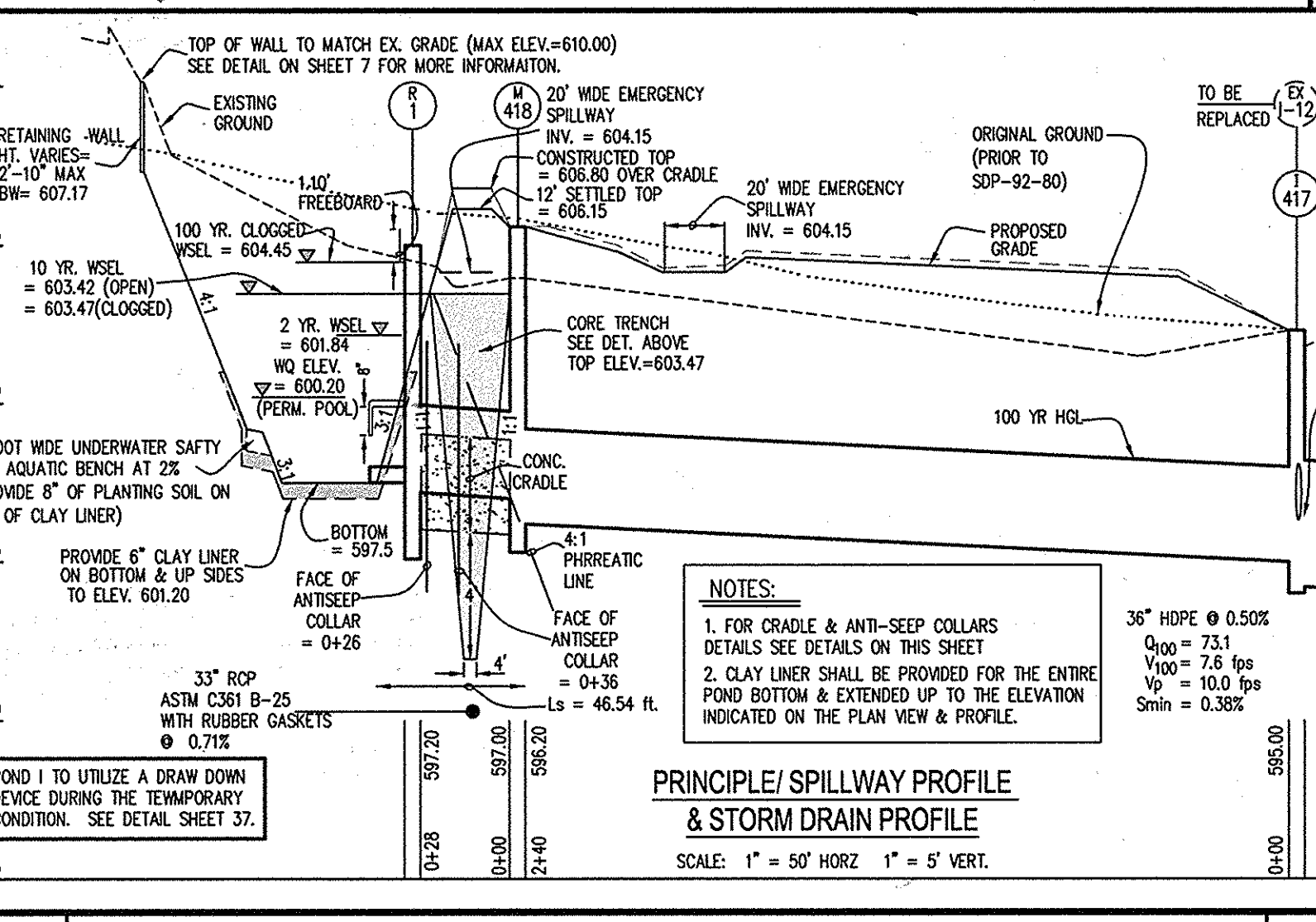
[Signature] 1-15-04
County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 7/2/03
Director DATE

[Signature] 7/2/03
Chief, Division of Land Development DATE

Chief, Development Engineering Division



No.	Type	Width (inside)		Top Elevation		Invert Elevation		St'd Detail	Location & Remarks
		Upper	Lower	Upper	Lower	Upper	Lower		
M 418	84" MANHOLE	84"	605.50	605.50	597.00	597.00	596.20	HD 384.07	
I 417	A-10 INLET	5'-0"	RFC @ TC = 602.53	MATCH EX. CURB	(EX. 24" CIP) = 598.46	593.87	593.87	HD CO. STD. 4.41	38" INV. IN = 595.00 ALIGN CORNER OF INLET WITH EX. CURB PT/PC (REPLACES EX. 1-12 ON WOODFORD)

TYPE: WATER QUALITY - 2 & 10 YR MGT.	
D.A. TO FACILITY: 16.32 acres	100-YR WSEL: 604.45 ft.
W.Q.V. REQUIRED: 0.5032 acre-ft.	100-YR CLOGGED WSEL: 604.45 ft.
W.Q.V. PROVIDED: 0.5126 acre-ft.	TOP OF DAM: 606.15 ft.
W.Q.V. WSEL: 600.20 ft.	FREEBOARD DURING 100-YR CLOGGED EVENT: 1.70 ft.
EX. 2-YR DISCHARGE: 3.61 cfs	EMERGENCY SPILLWAY CREST: 604.15 ft.
PROP. 2-YR DISCHARGE: 3.09 cfs	EMERGENCY SPILLWAY WIDTH: 20 ft.
PROP. 2-YR WSEL: 601.84 ft.	BOTTOM OF POND: 597.50 ft. (lowest)
EX. 10-YR DISCHARGE: 18.78 cfs	
PROP. 10-YR DISCHARGE: 12.49 cfs	
PROP. 10-YR WSEL: 603.42 ft.	
10-YR CLOGGED WSEL: 603.42 ft.	

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/V: 301-989-2524 FAX: 301-421-4186

00177/SDP-03-33/SMM1.dwg DES. bln. DRN. klp. CHK. bsf

REVISION

DATE	DESCRIPTION	BY	APP'R.
12/14/03	UPDATED SCHOOL NAME & SHEET TOTAL		
24/MAY/03	SHEET ISSUED AS AN ADDENDUM		

PREPARED FOR:

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: WAVE ROOM
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: WAVE ROOM
TEL: 301-261-8700

DESIGNED: WEST FRIENDSHIP ELECTION DISTRICT No. 3

STORMWATER MANAGEMENT DETAILS (POND No.1)

NORTHERN HIGH SCHOOL

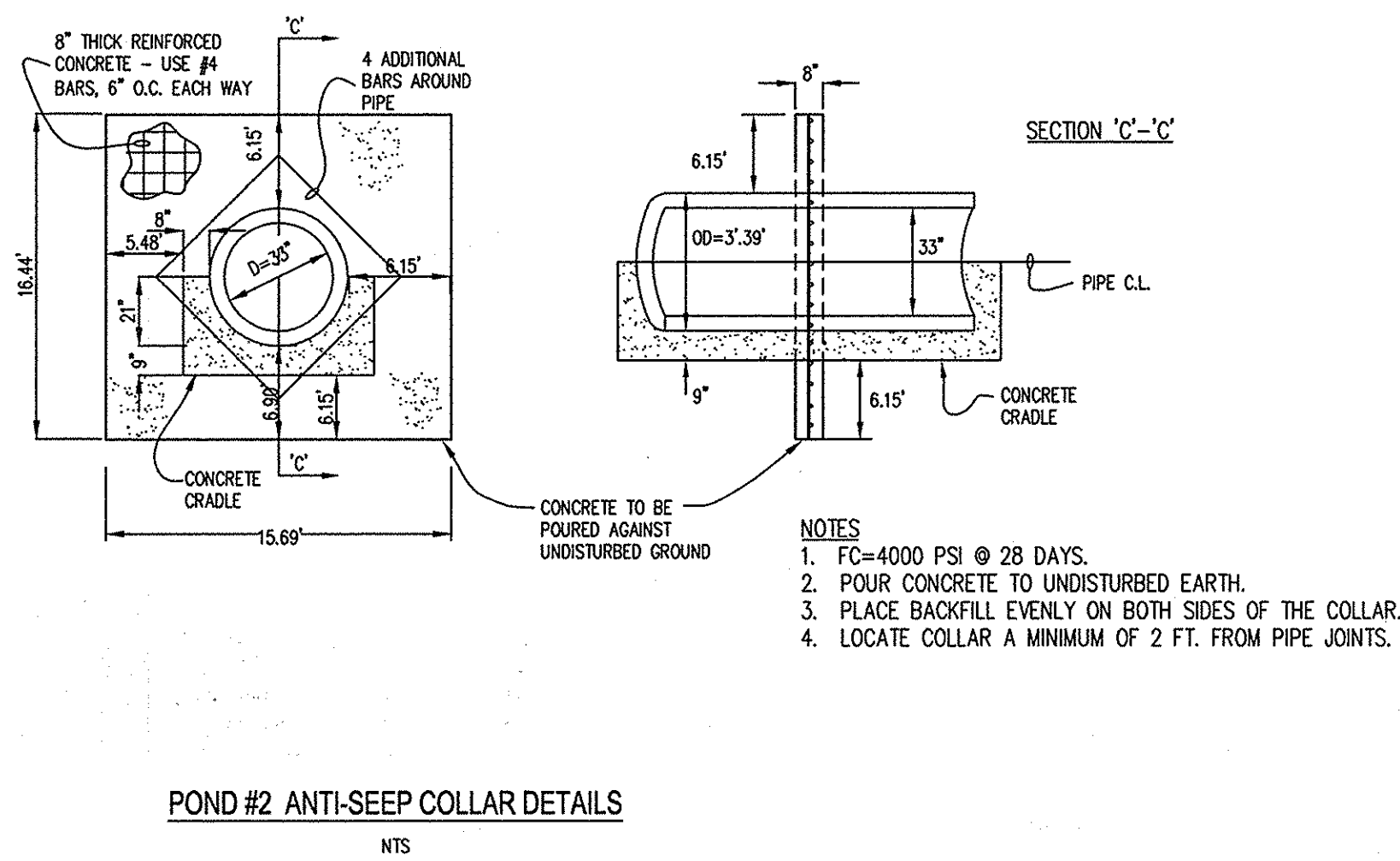
HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PLAT Nos. 16111 & 16126 (PARCEL 1) and 16126 (PARCEL 2A)

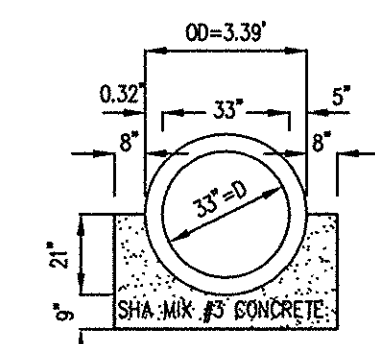
SCALE: AS SHOWN ZONING: RR-DEO G. L. W. FILE No. 00-177

DATE: 28/JUL/03 TAX MAP - GRID: 10 19 SHEET: 11 of 18

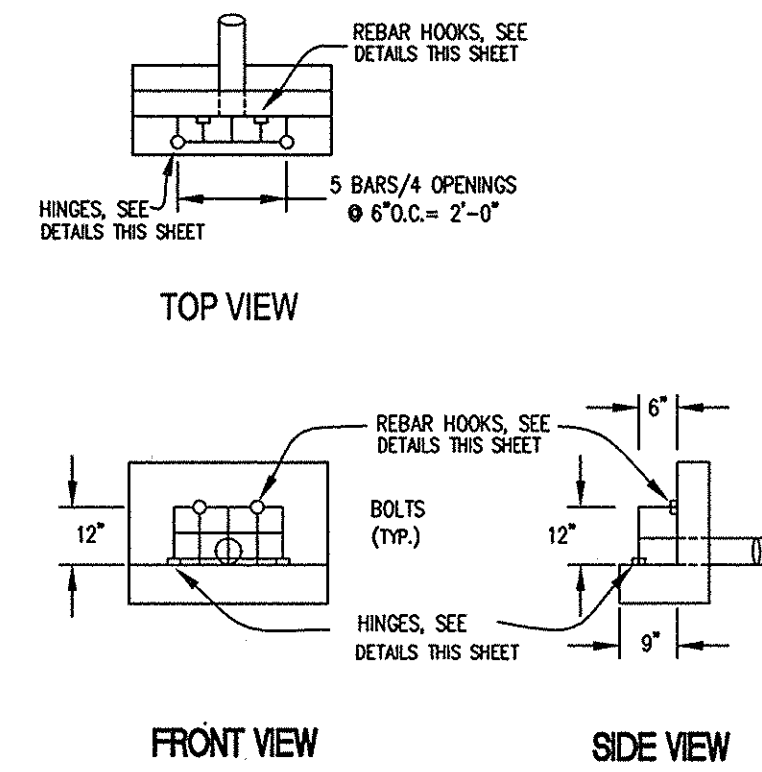
SDP-03-33



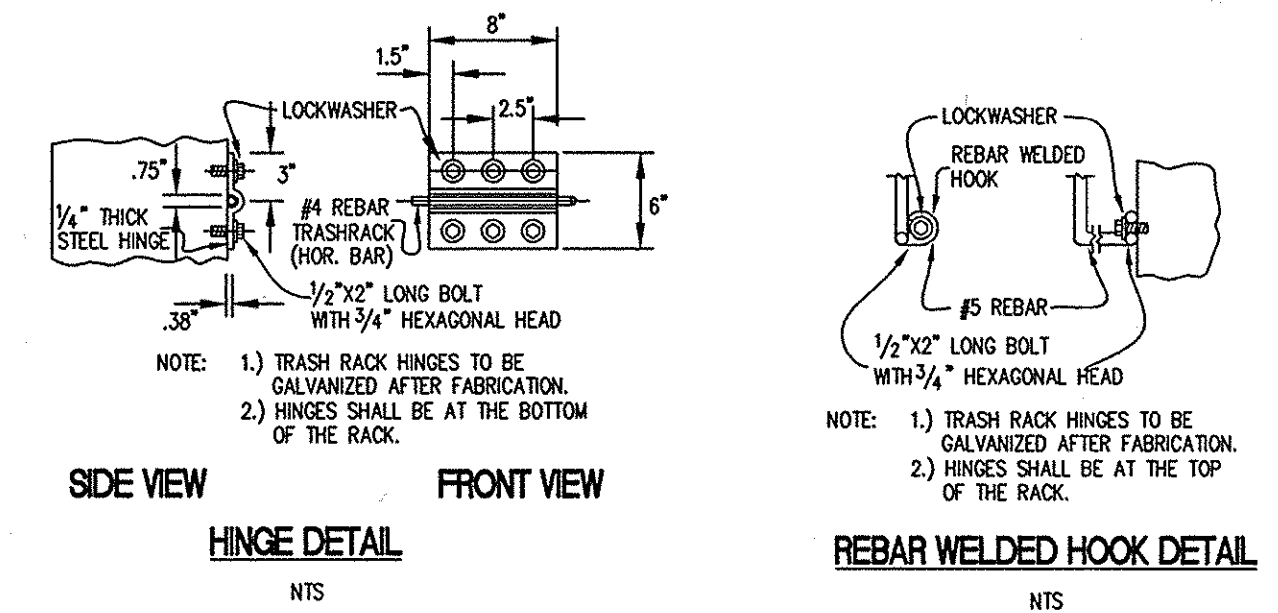
POND #2 CONCRETE CRADLE DETAIL FOR 33" PIPE
NTS



NOTE: POUR CONCRETE TO UNDISTURBED EARTH. REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION IN SHEETING IN PLACE.



NOTE: SEE SHEET 20 FOR TRASH RACK NOTES



Professional Certification. I hereby certify that the documents were prepared or prepared under my direct supervision and that I am a duly Licensed Professional Engineer of the State of Maryland.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

Cathleen Conly Young 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

CKJ 7/31/03
ENGINEER'S SIGNATURE DATE

THESE PLANS FOR POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John S. Kelly 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 8/14/03
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

Diana Brantner 1-15-04
County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Paula R. Ugly 9/2/03
Director DATE

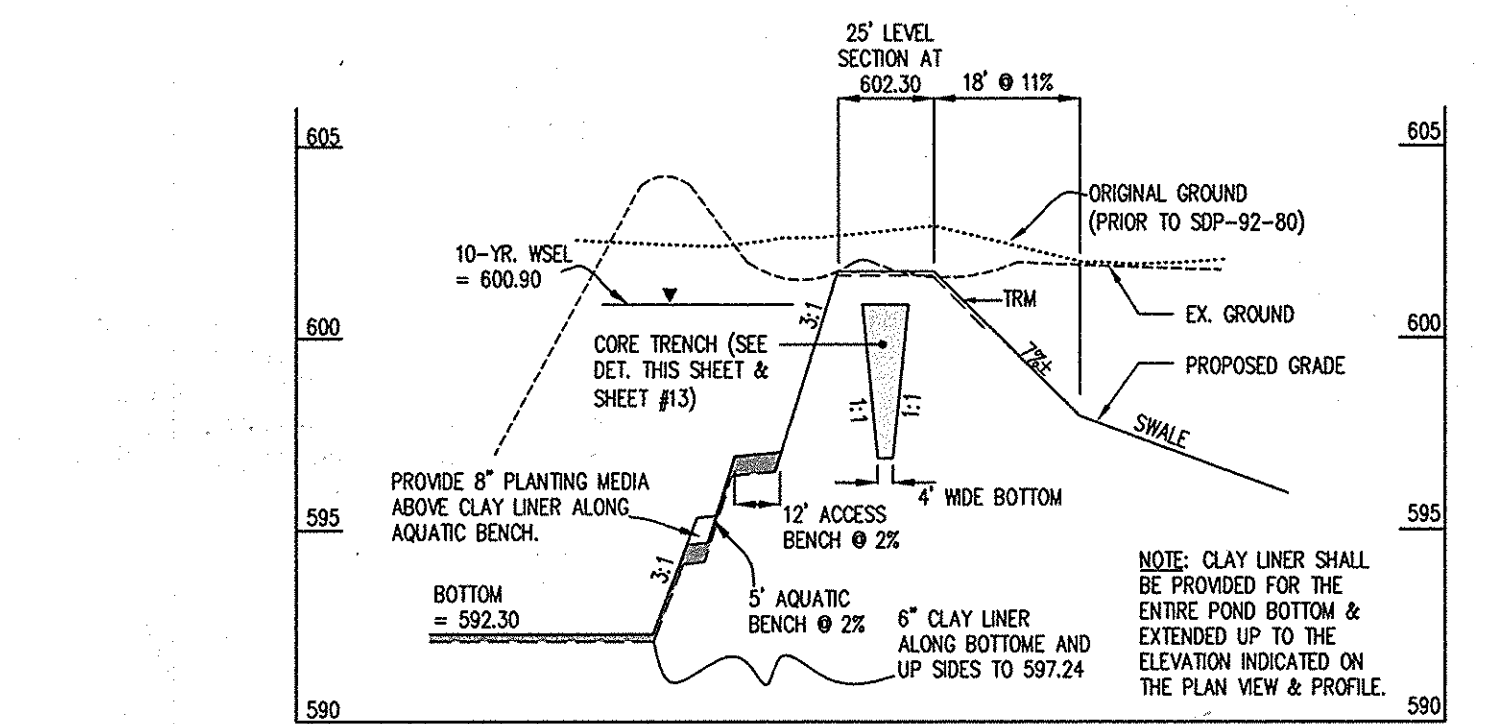
Cindy Hamilla 9/2/03
Chief, Division of Land Development DATE

9-2-03
Chief, Development Engineering Division DATE

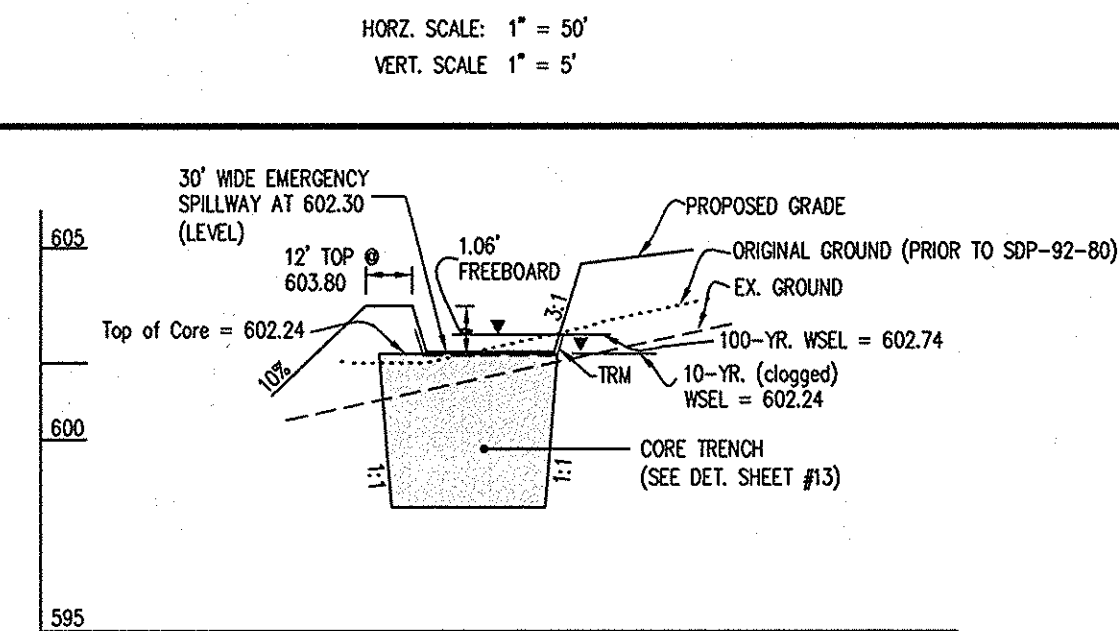
GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

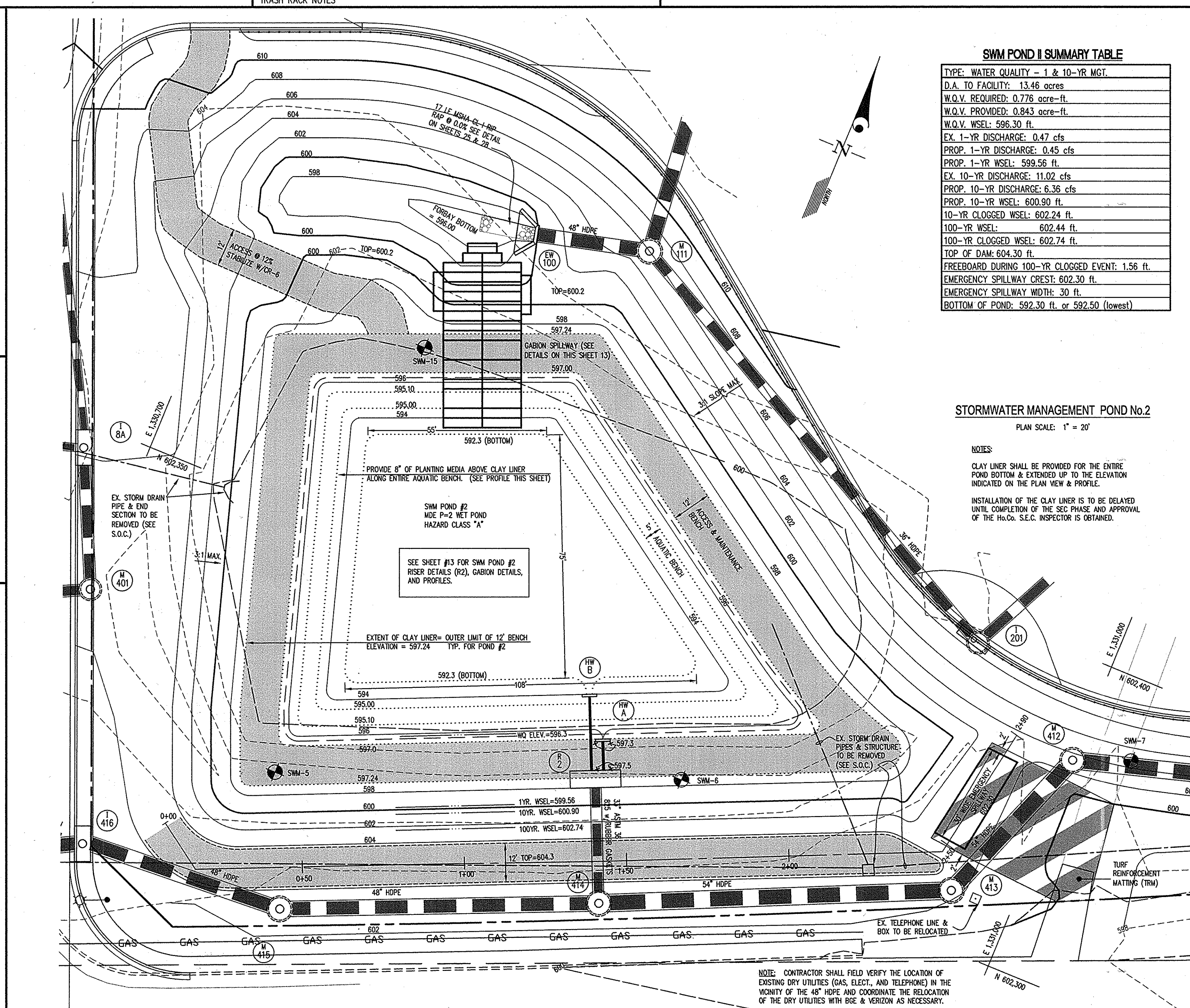
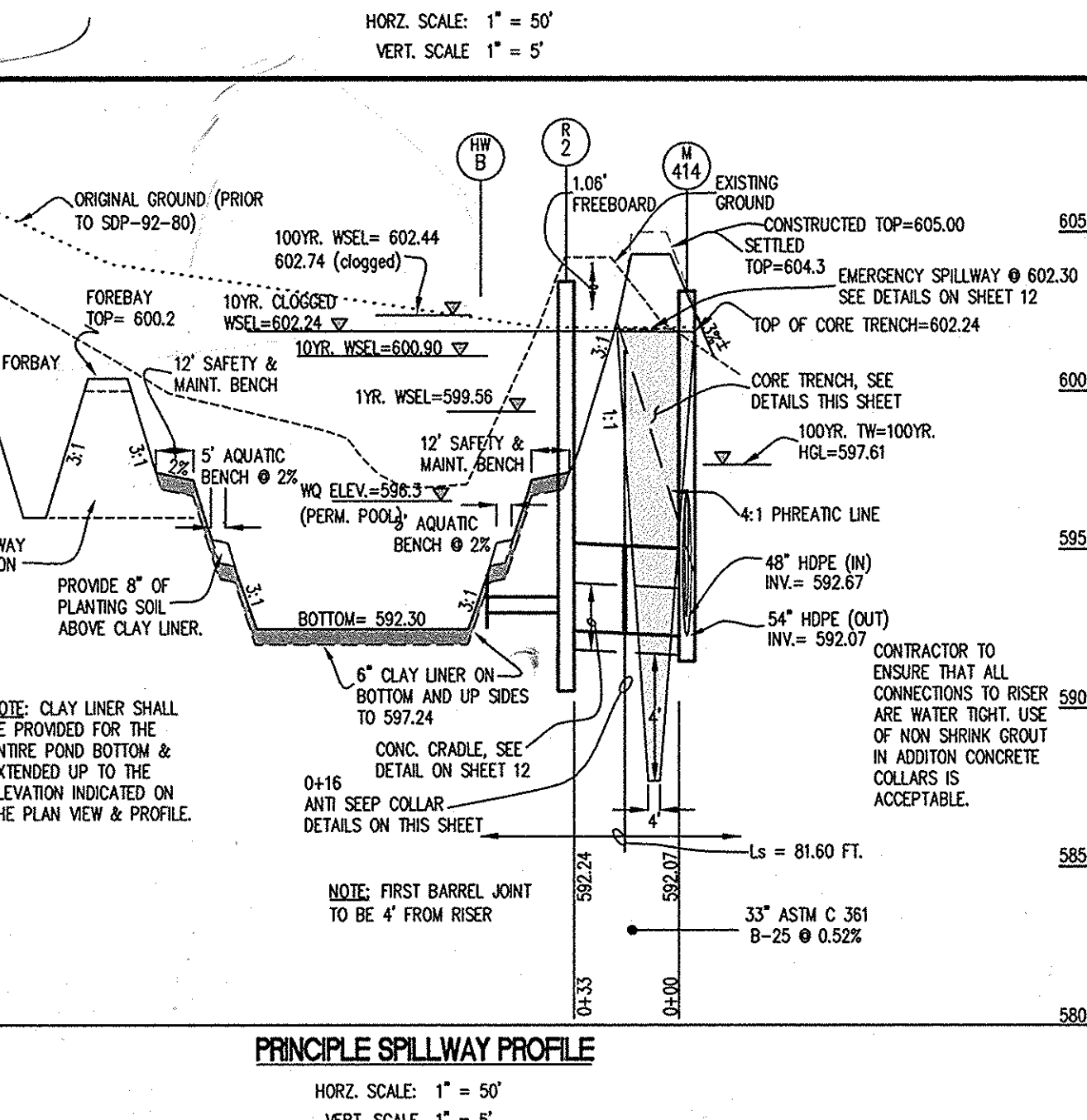
001077SDP-03-33/SIM2.dwg DES. brl. DSN. klp CHK.



EMERGENCY SPILLWAY CROSS SECTION



PRINCIPLE SPILLWAY PROFILE



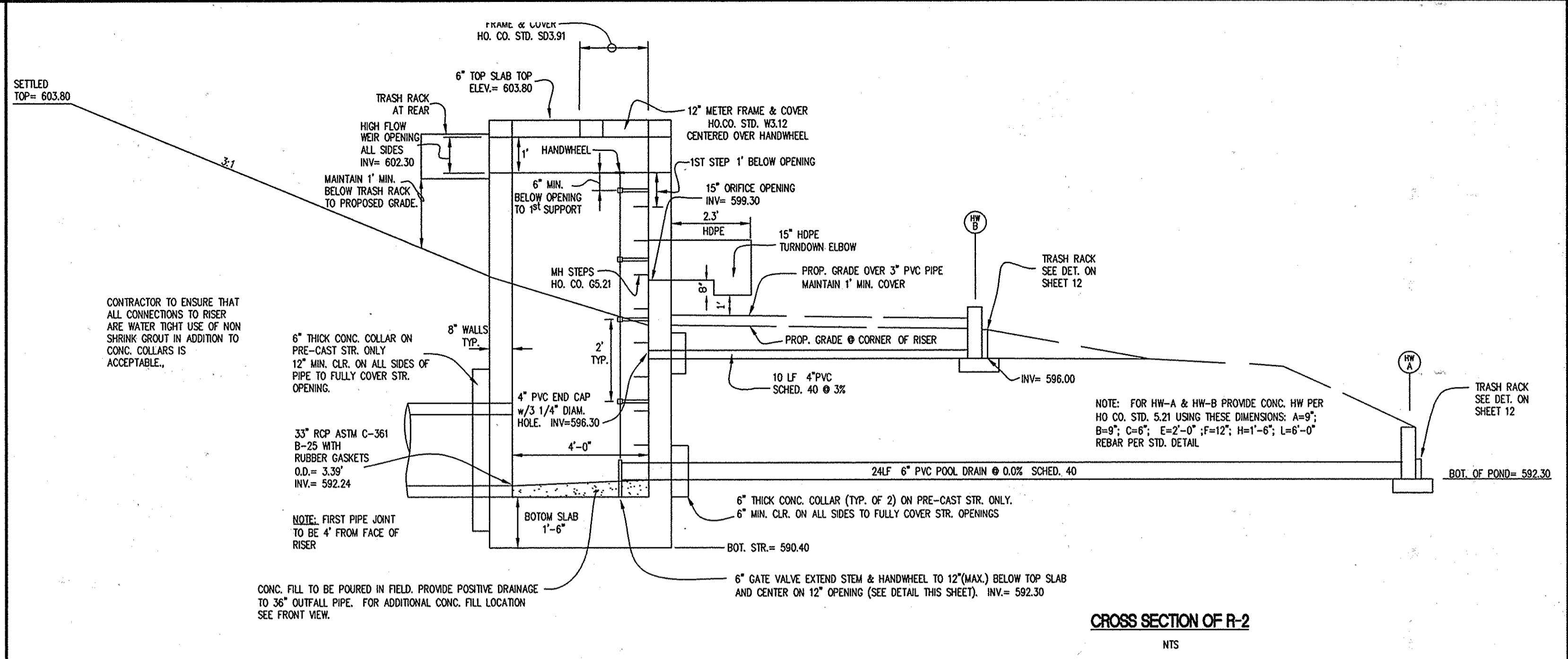
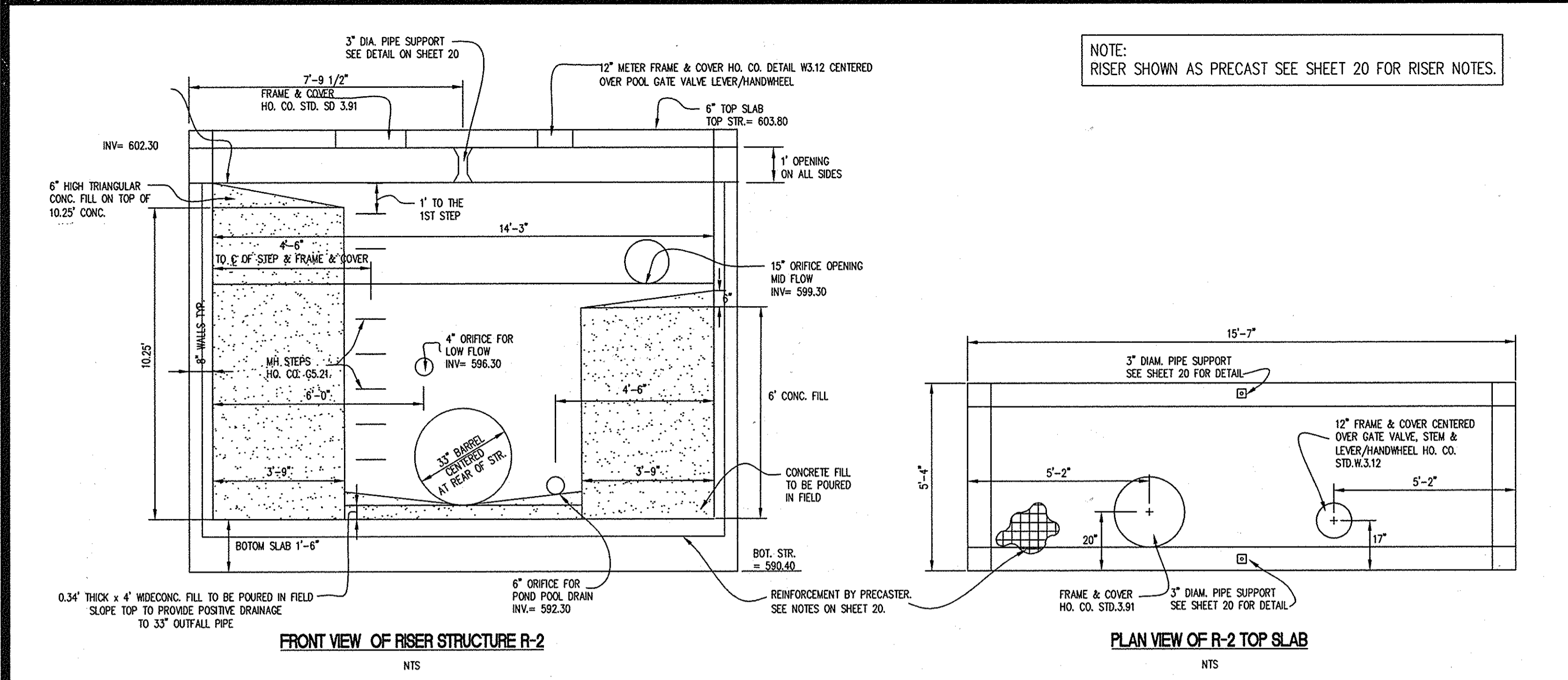
SWM POND II SUMMARY TABLE

TYPE: WATER QUALITY - 1 & 10-YR MGT.
D.A. TO FACILITY: 13.46 acres
W.Q.V. REQUIRED: 0.776 acre-ft.
W.Q.V. PROVIDED: 0.843 acre-ft.
W.Q.V. WSEL: 596.30 ft.
EX. 1-YR DISCHARGE: 0.47 cfs
PROP. 1-YR DISCHARGE: 0.45 cfs
PROP. 1-YR WSEL: 599.56 ft.
EX. 10-YR DISCHARGE: 11.02 cfs
PROP. 10-YR DISCHARGE: 6.36 cfs
PROP. 10-YR WSEL: 600.90 ft.
10-YR CLOGGED WSEL: 602.24 ft.
100-YR WSEL: 602.44 ft.
100-YR CLOGGED WSEL: 602.74 ft.
TOP OF DAM: 604.30 ft.
FREEBOARD DURING 100-YR CLOGGED EVENT: 1.56 ft.
EMERGENCY SPILLWAY CREST: 602.30 ft.
EMERGENCY SPILLWAY WIDTH: 30 ft.
BOTTOM OF POND: 592.30 ft. or 592.50 (lowest)

PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
ARCHITECT: TCA ARCHITECTS LLC
2681 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

STORMWATER MANAGEMENT DETAILS (POND #2)
WAKEFIELD ROAD
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117a (PARCEL 1) and 16130a7 (PARCEL 2A)
WEST FRIENDSHIP ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN	ZONING: RR-DEO	G. L. W. FILE No.: 00-177
DATE: 28/JUL/03	TAX MAP - GRID: 10 19	SHEET: 12 of 48



DEVELOPER'S/BUILDER'S CERTIFICATE

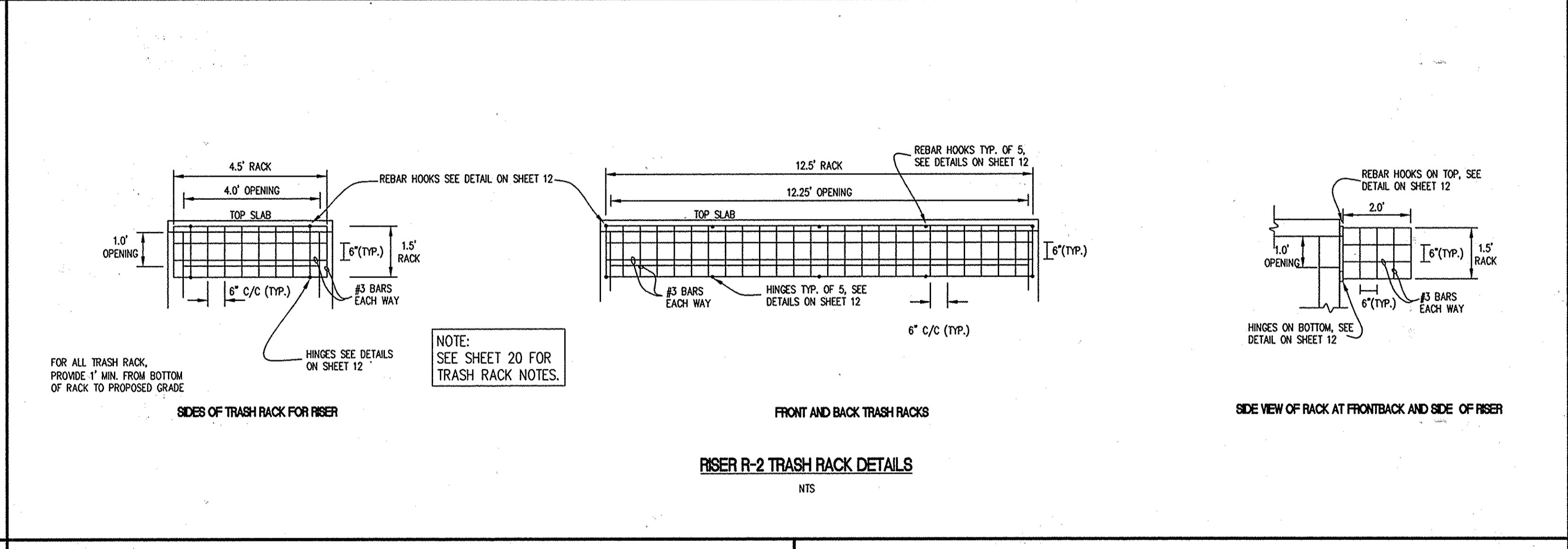
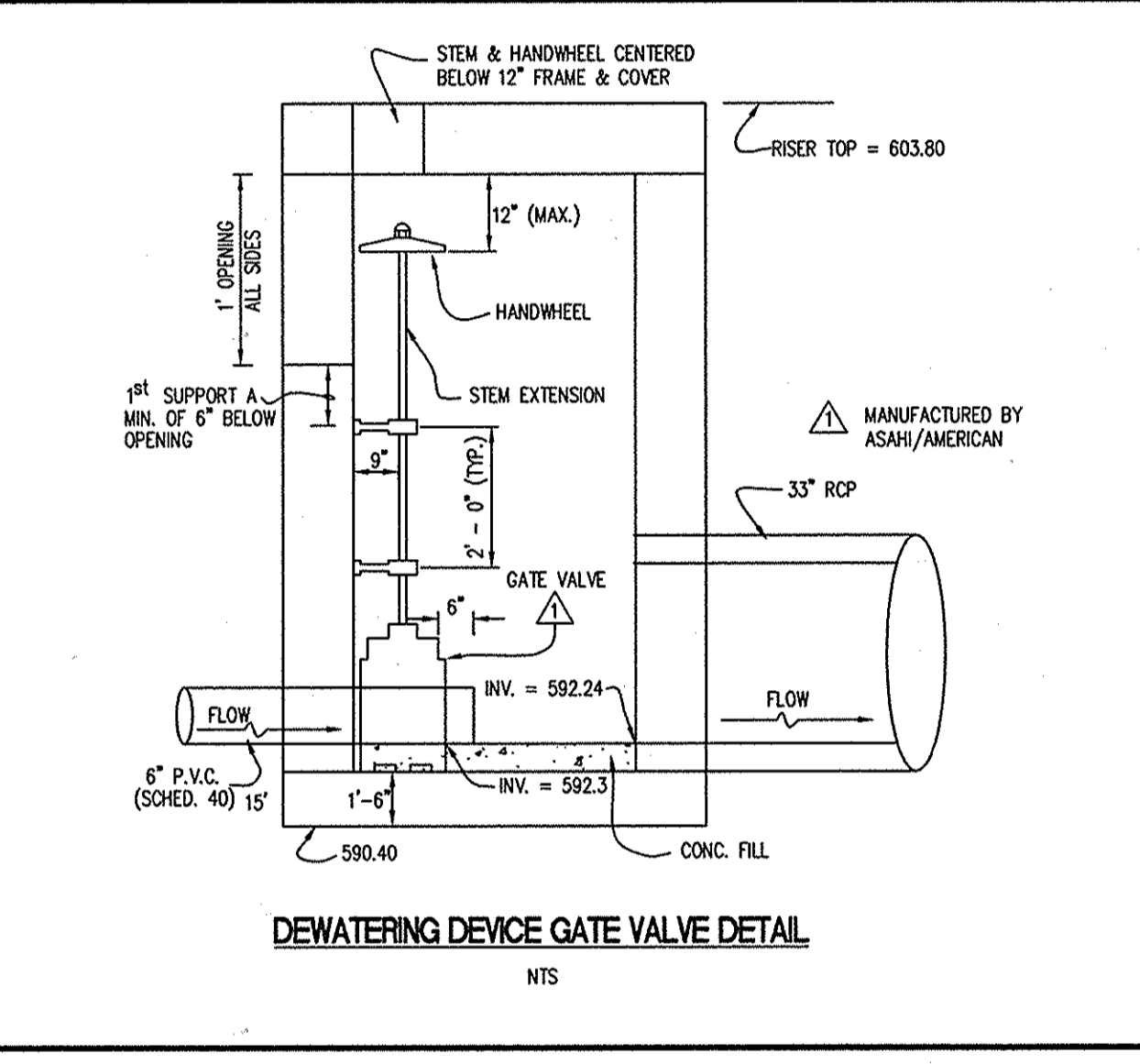
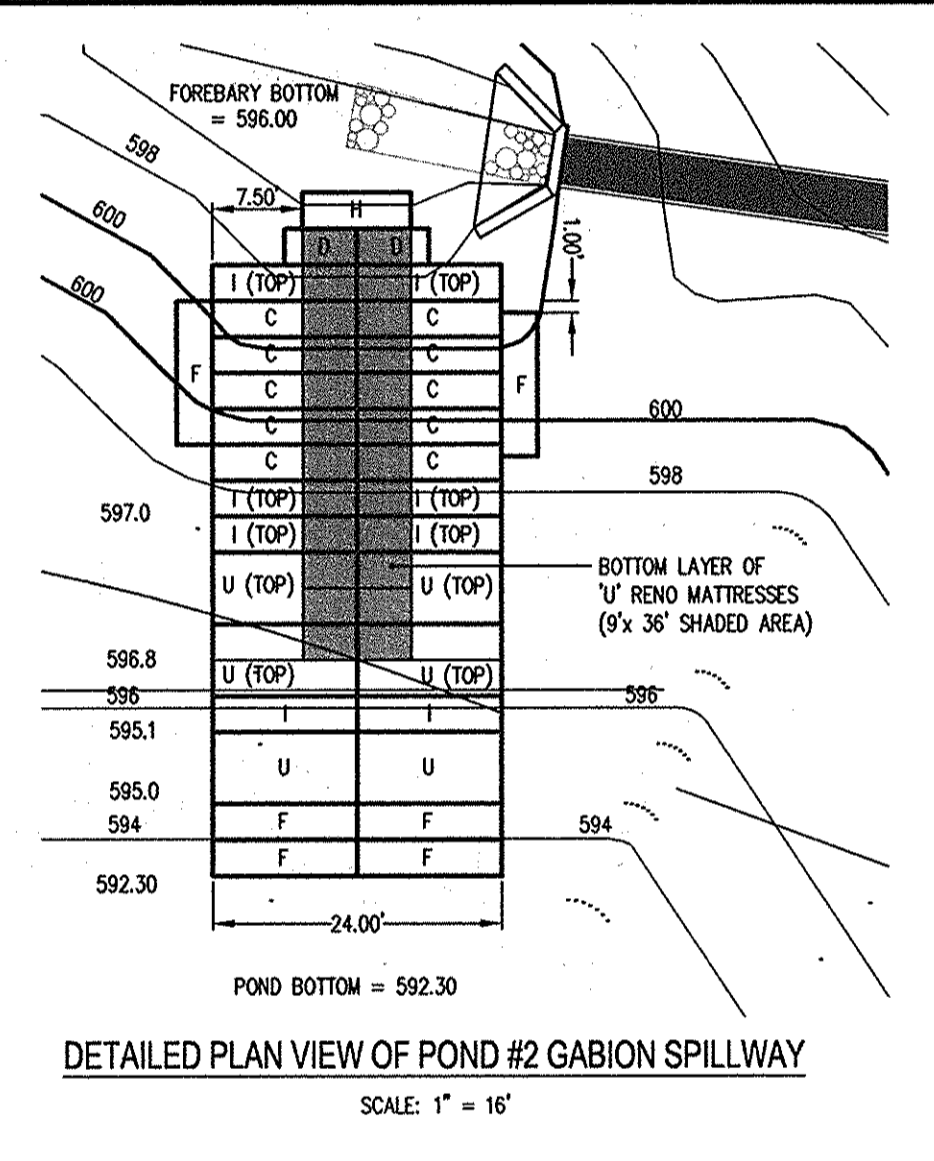
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conroy Young
SIGNATURE OF DEVELOPER/BUILDER
7/26/03
DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CLG
ENGINEER'S SIGNATURE
7/30/03
DATE



THESE PLANS FOR POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Shelly Saly
HOWARD SOIL CONSERVATION DISTRICT
8/14/03
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Jin Mayo/CS
USDA NATURAL RESOURCES CONSERVATION SERVICE
8/14/03
DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

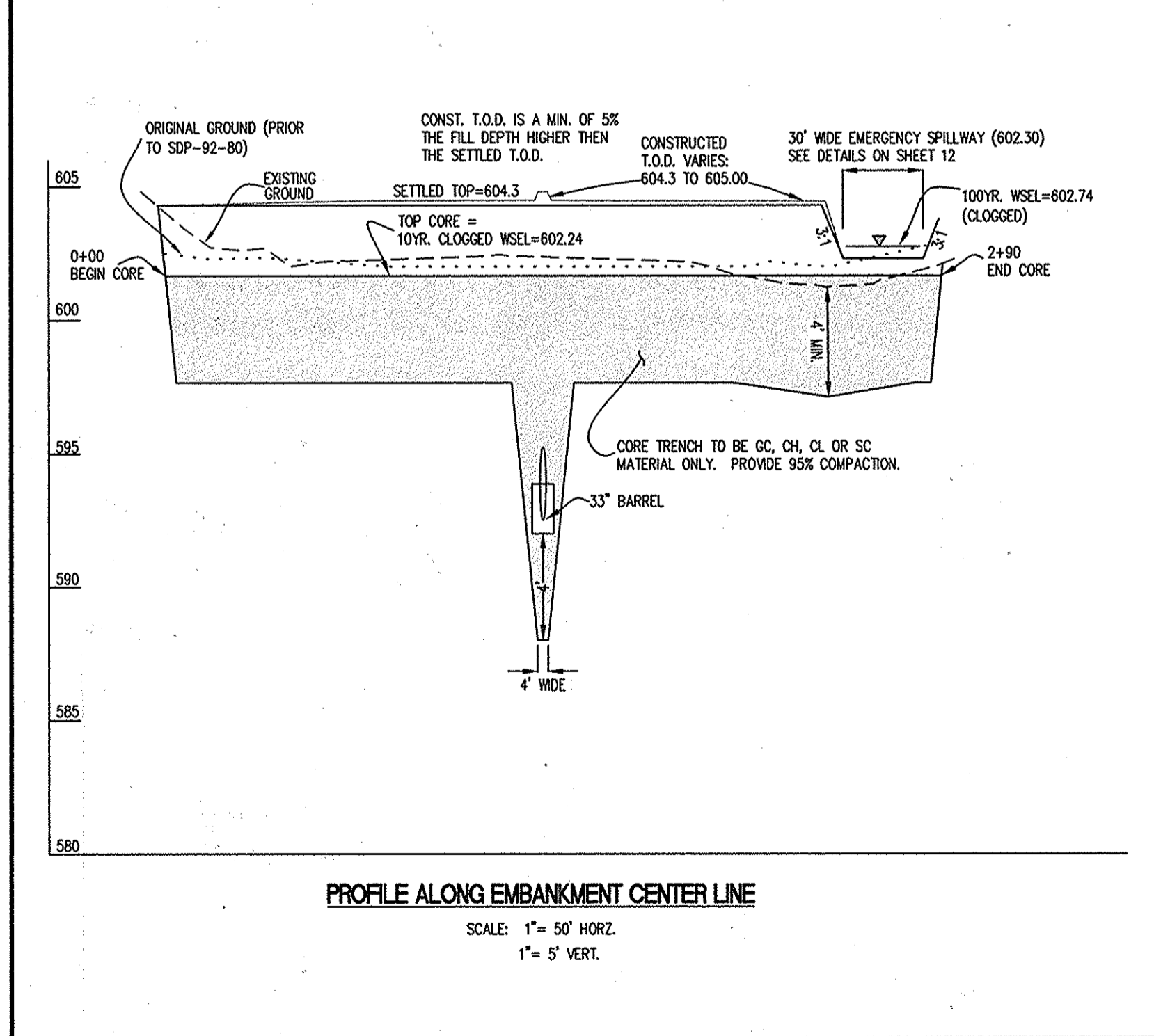
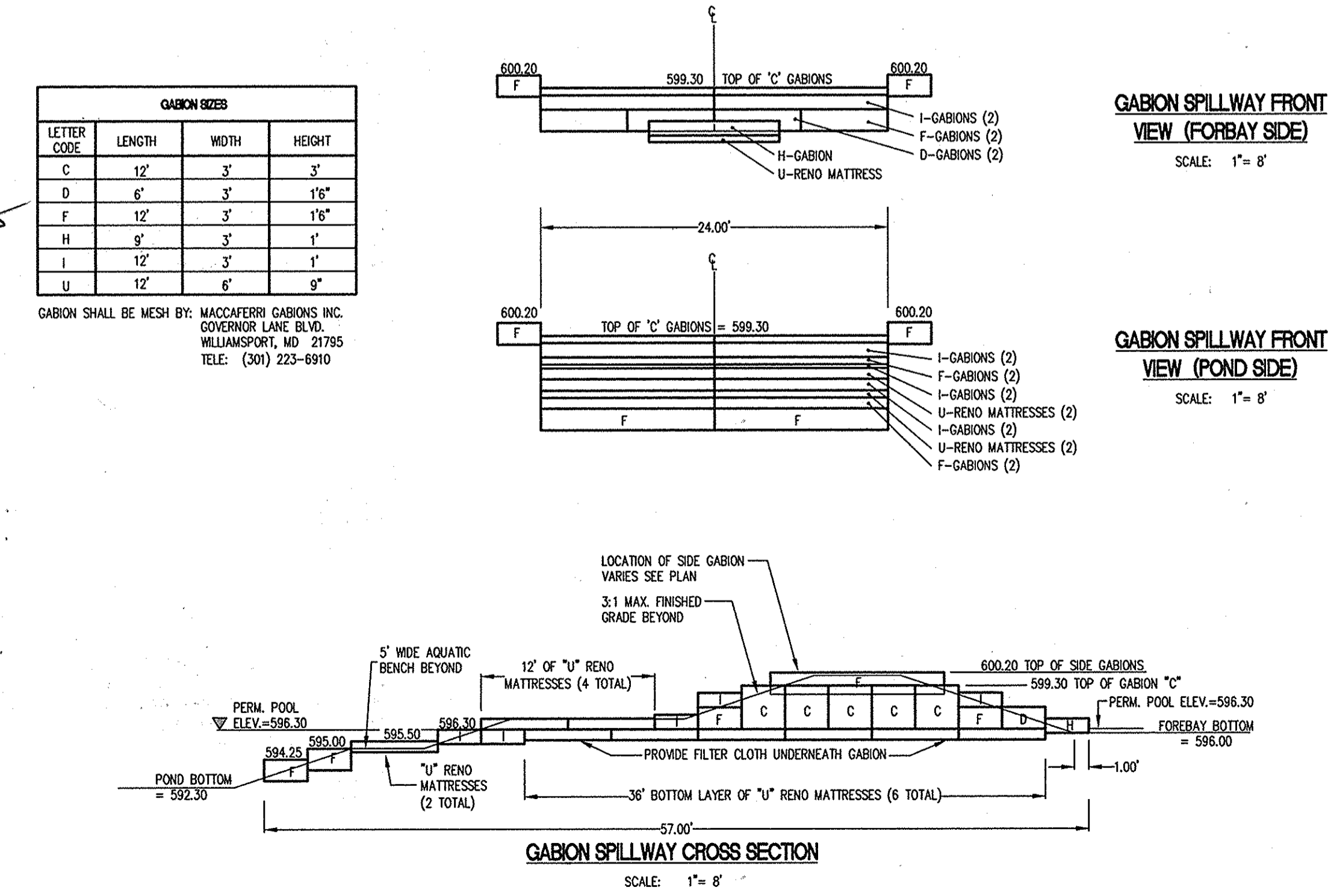
Dennis Brackley
County Health Officer
8-15-03
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Patrick D. Weyll
Director
9/2/03
Date

Condy Hamilton
Chief, Division of Land Development
9/2/03
Date

CLW
Chief, Development Engineering Division
9-2-03
Date



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. 16156 Expiration Date: 8-28-14

STATE OF MARYLAND
ENGINEERING

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
BURTONVILLE, MARYLAND 20886
TEL: 301-421-4024 FAX: 410-880-1820 DC/WA: 301-899-2524 FAX: 301-421-4186

00177SDP-03-33(S)M2.dwg
DES. bsn. DRN. klp. CHK. bsl

DATE	REVISION	BY	APPR.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DLW	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108 ELICOTT CITY, MD 21043 ATTN: CATHLEEN YOUNG TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120 ANNAPOLIS, MD 21401 ATTN: MIKE BOON TEL: 301-261-8700

STORMWATER MANAGEMENT DETAILS (POND #2)

DESIGNED SITE DEVELOPMENT PLAN

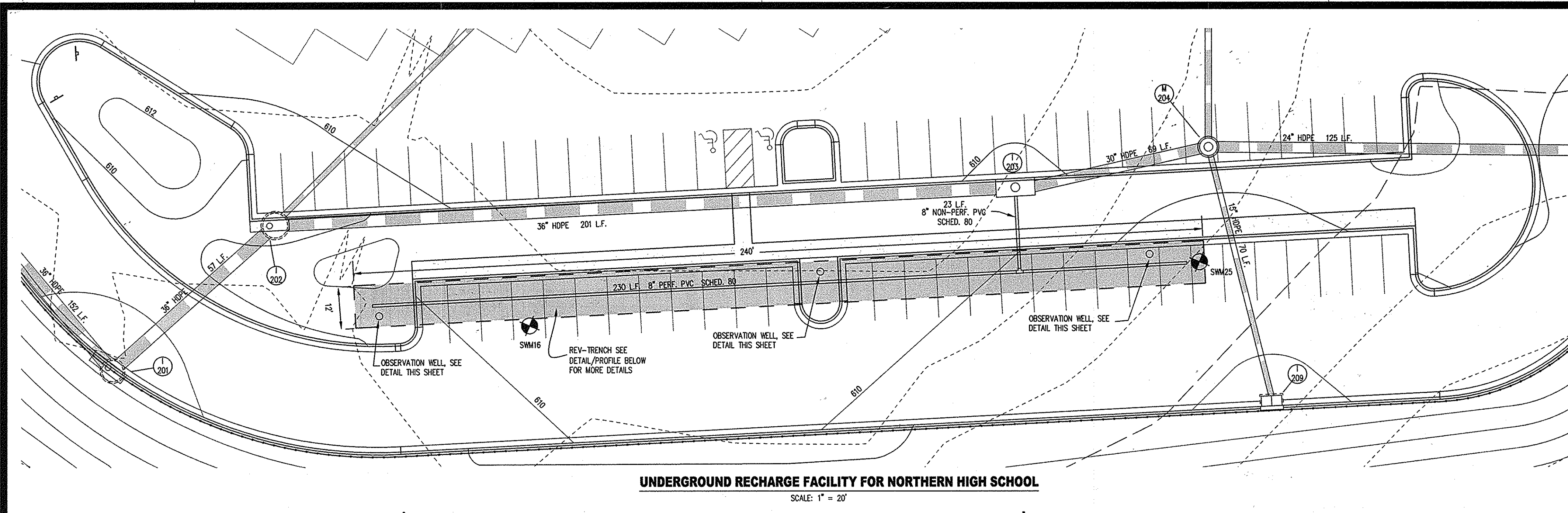
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16-111 & (PARCEL 1) and 16-136 (PARCEL 2A)

WEST FRIENDSHIP ELECTION DISTRICT No. 3

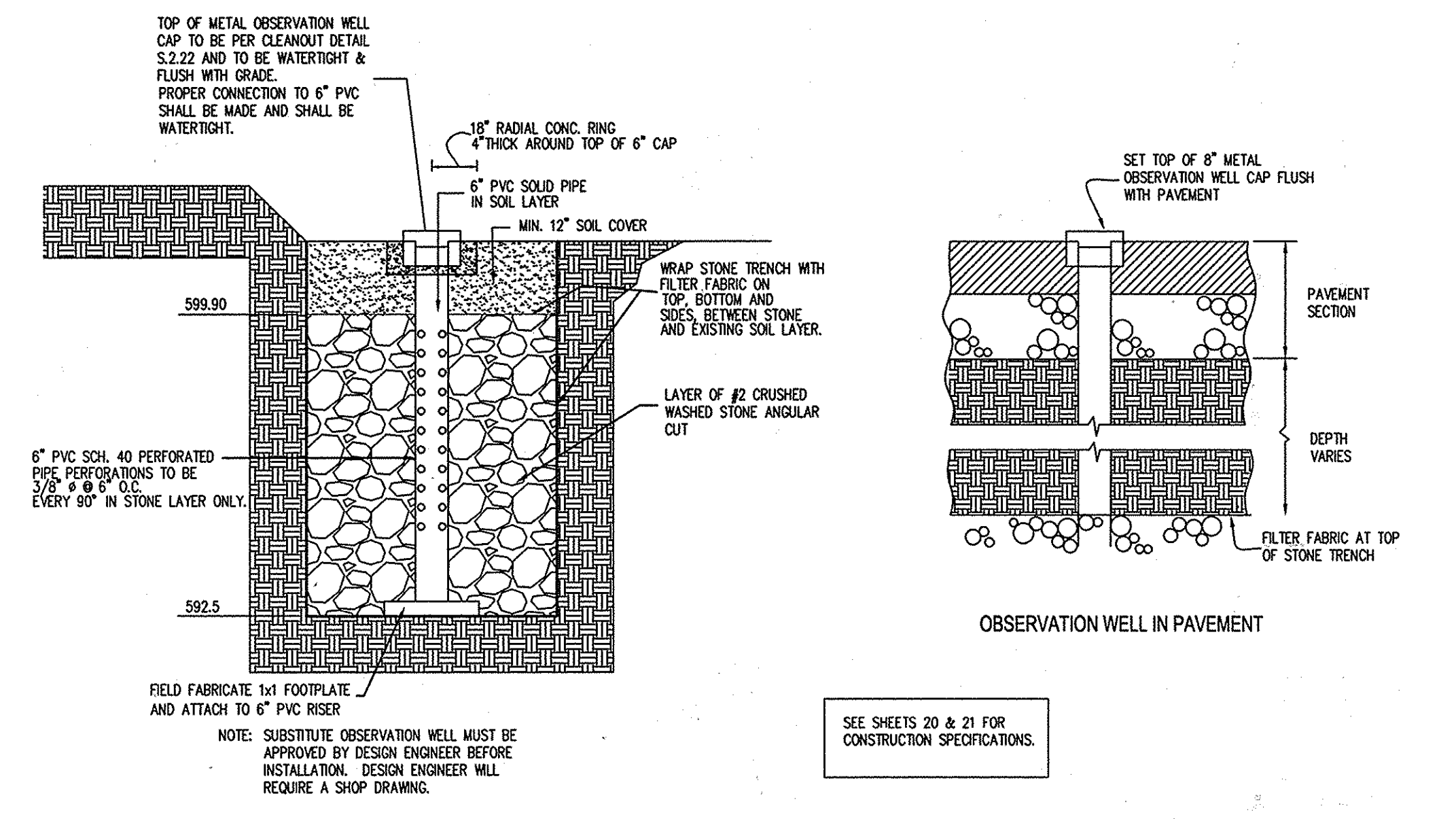
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	13 of 48

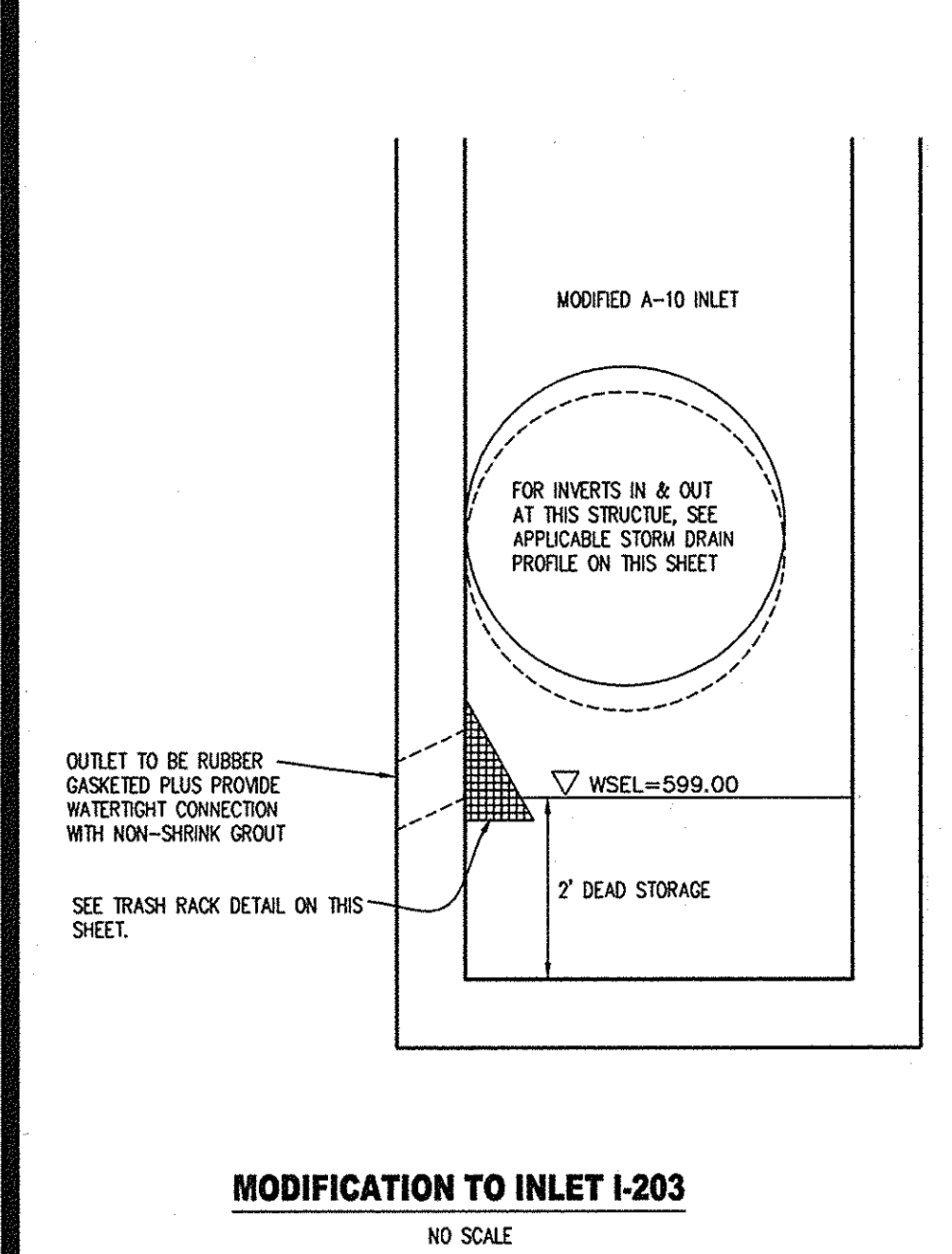
SDP-03-33



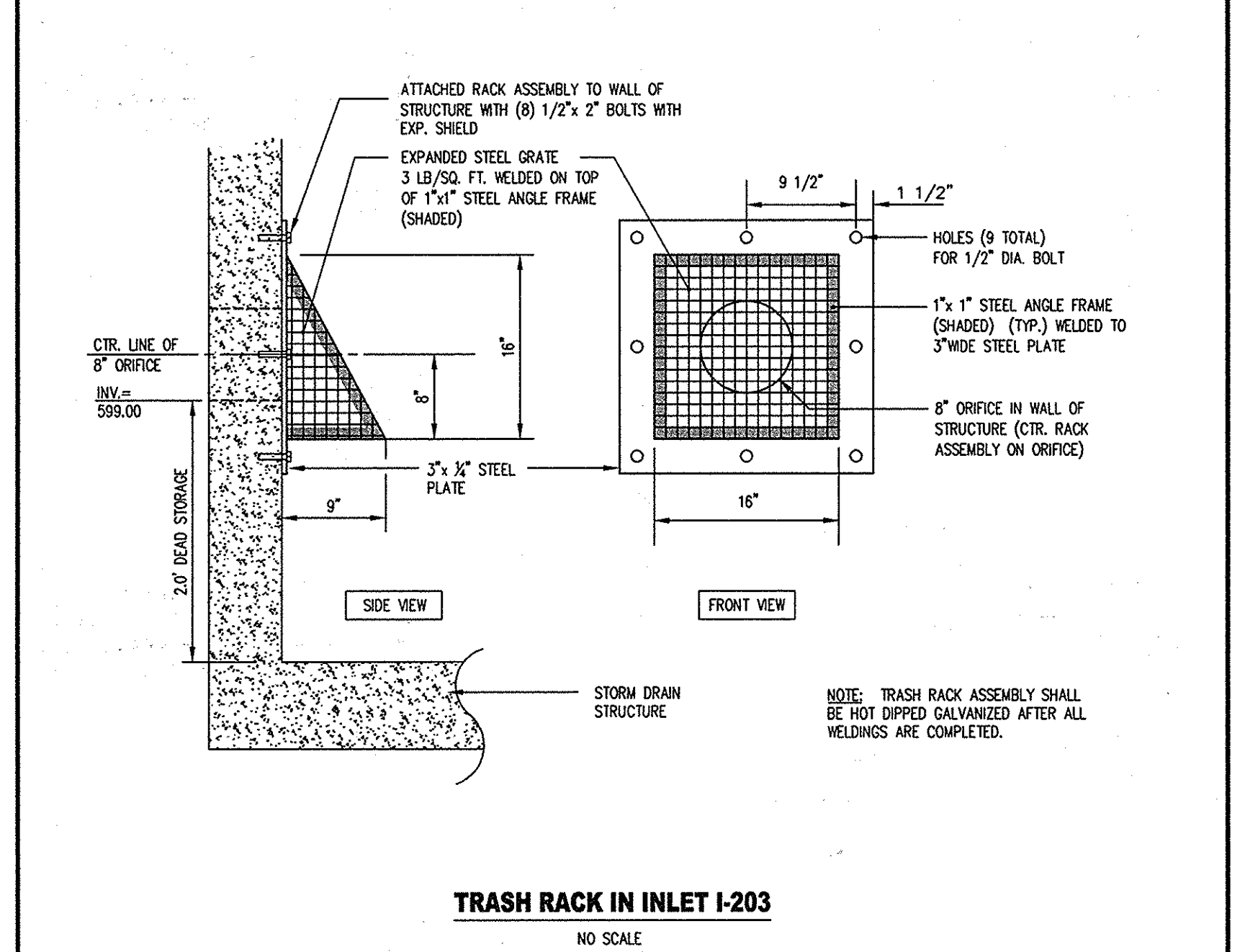
UNDERGROUND RECHARGE FACILITY FOR NORTHERN HIGH SCHOOL
SCALE: 1" = 20'



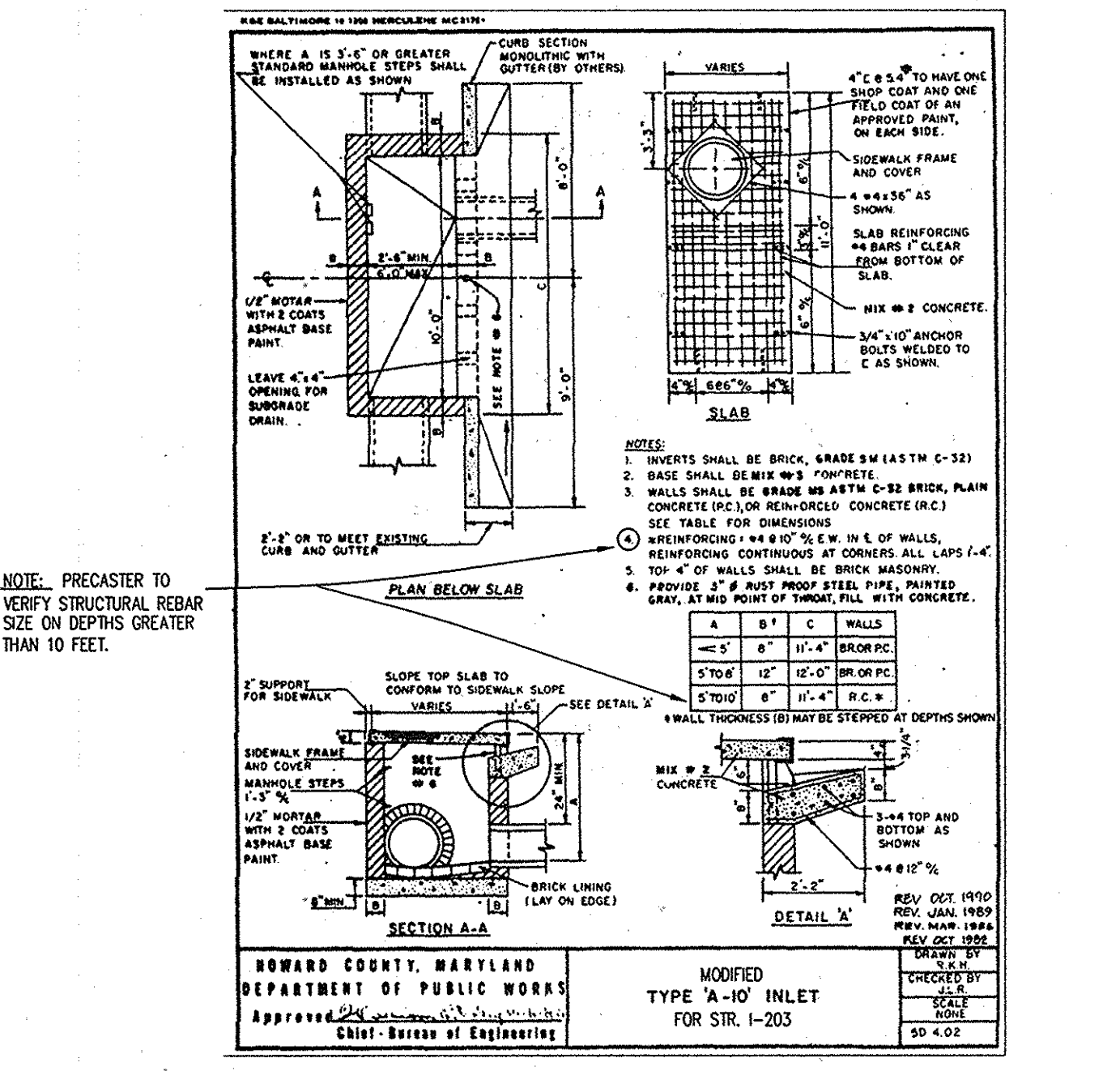
REV-TRENCH OBSERVATION WELL DETAILS
NO SCALE



MODIFICATION TO INLET I-203
NO SCALE



TRASH RACK IN INLET I-203
NO SCALE



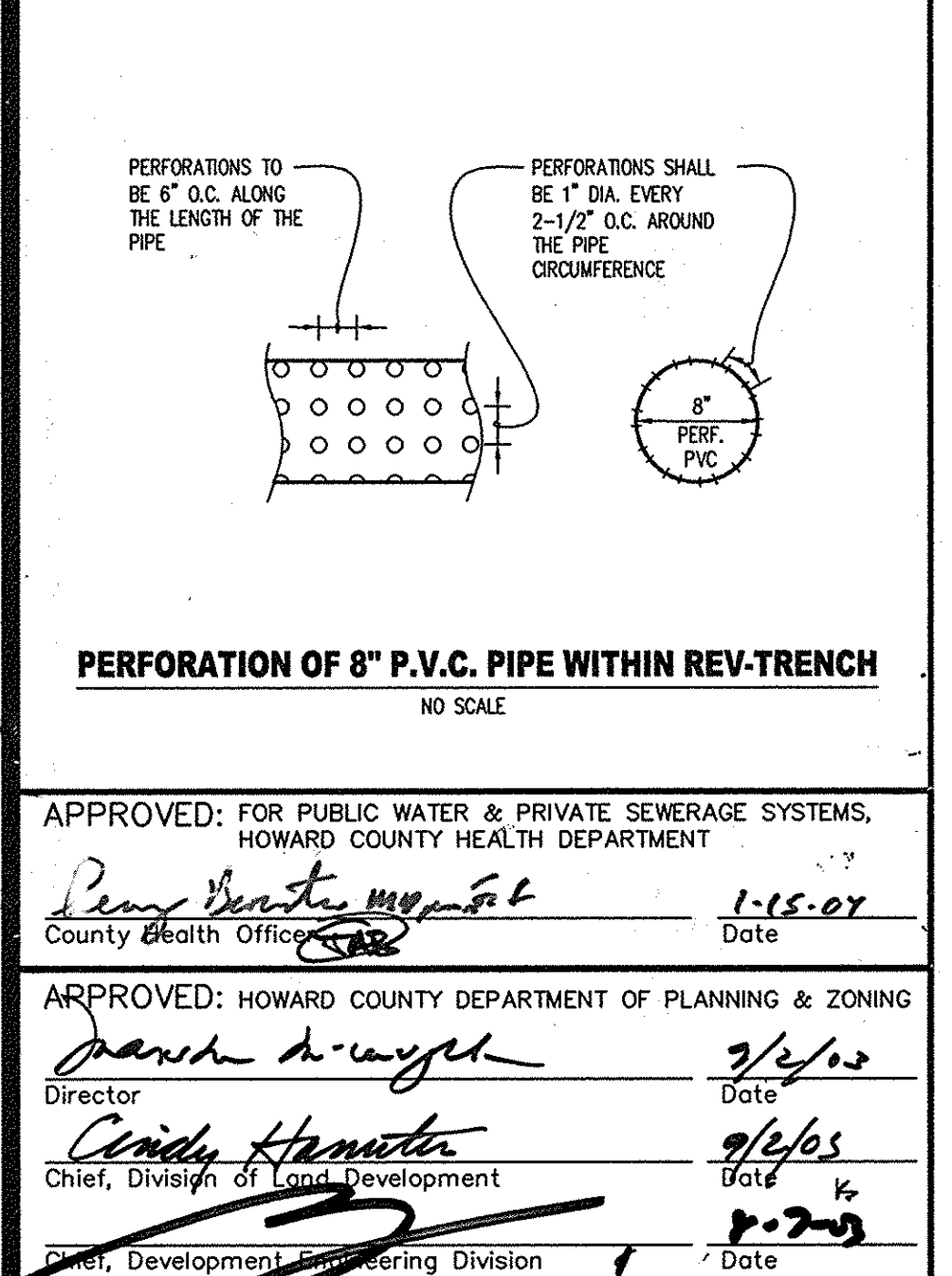
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LOG OF BORING No. SWM-16

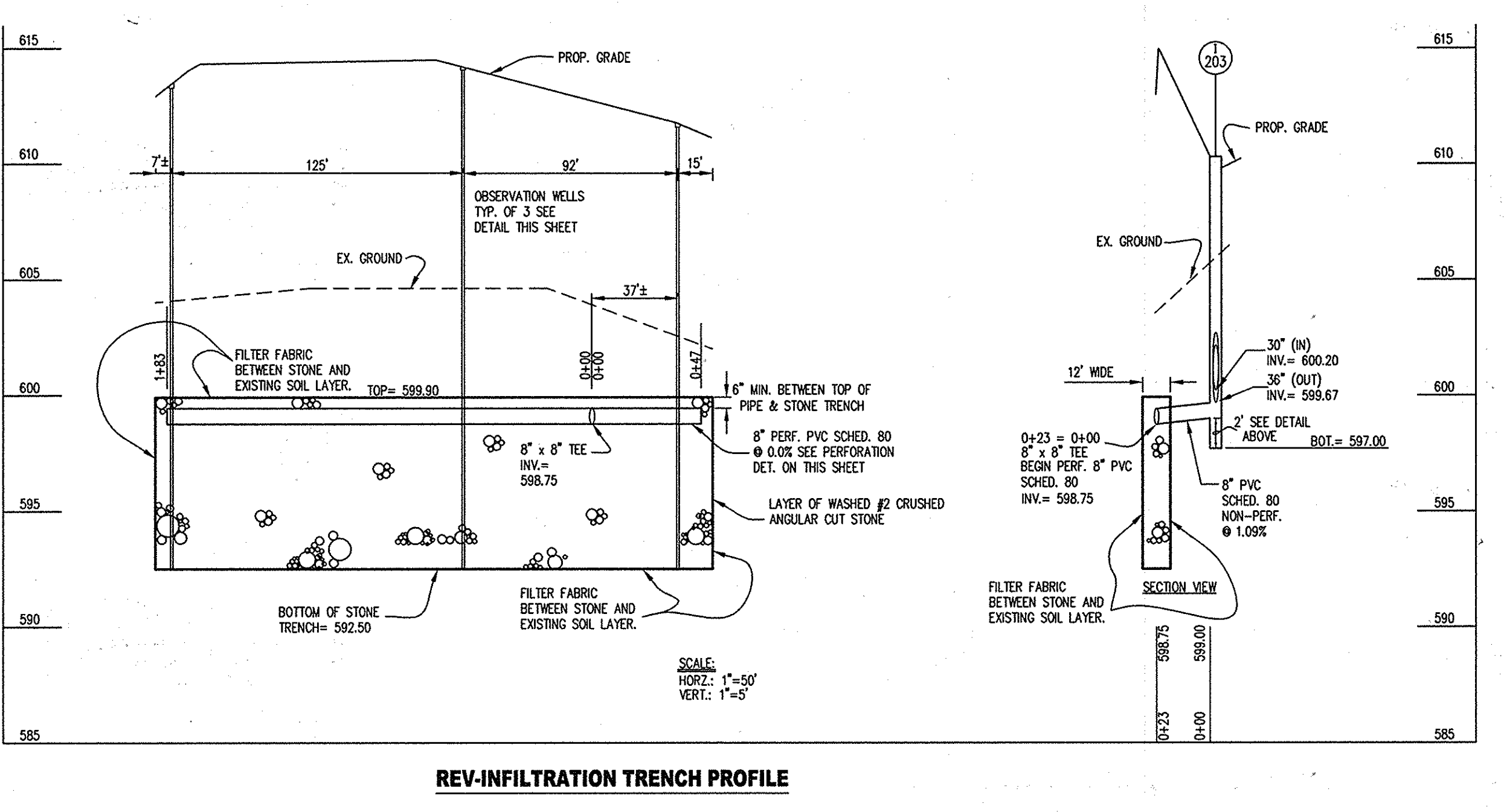
DEPTH TO - WATER - INITIAL	DEPTH TO - WATER - INITIAL	DEPTH TO - WATER - INITIAL	TEST RESULTS	
			Permeability	Water Content
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2	2	2	10	20
3	3	3	10	20
4	4	4	10	20
5	5	5	10	20
6	6	6	10	20
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LOG OF BORING No. SWM-25

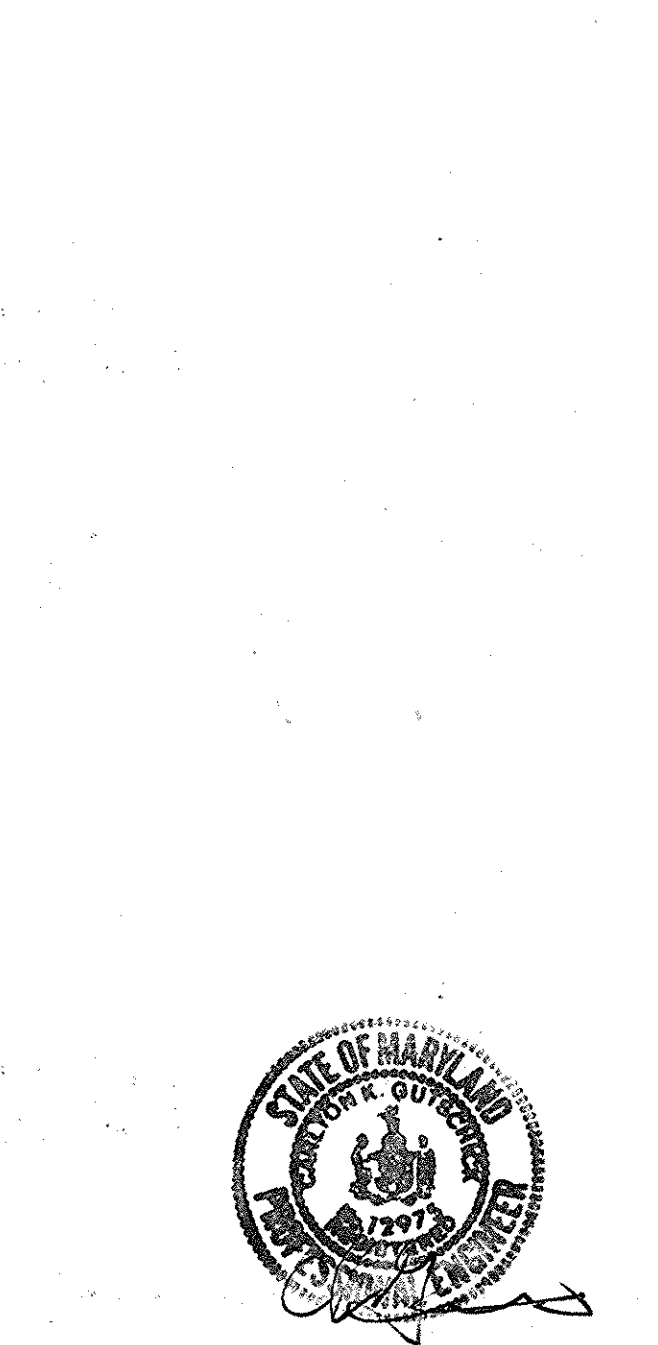
DEPTH TO - WATER - INITIAL	DEPTH TO - WATER - INITIAL	DEPTH TO - WATER - INITIAL	TEST RESULTS	
			Permeability	Water Content
0	0	0	10	20
1	1	1	10	20
2	2	2	10	20
3	3	3	10	20
4	4	4	10	20
5	5	5	10	20
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26	26	26	10	20
27	27	27	10	20
28	28	28	10	20
29	29	29	10	20
30	30	30	10	20



PERFORATION OF 8\"/>



REV-INFILTRATION TRENCH PROFILE
SCALE: HORIZ. 1" = 50' VERT. 1" = 5'



STORMWATER MANAGEMENT DETAILS (POND #2 REV-FACILITY)

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. 16136, Expiration Date: 8-28-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
6-12-14	UPDATE SCHOOL NAME & SHEET TOTAL	DES	

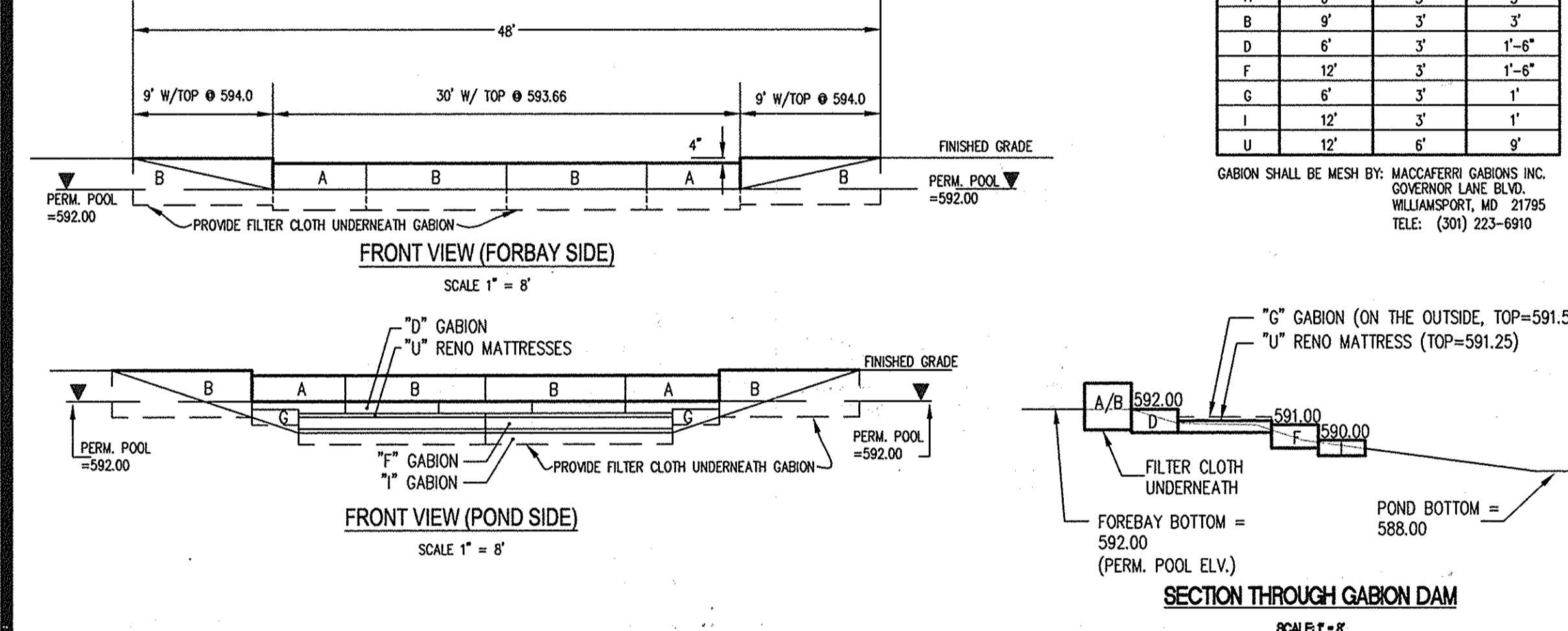
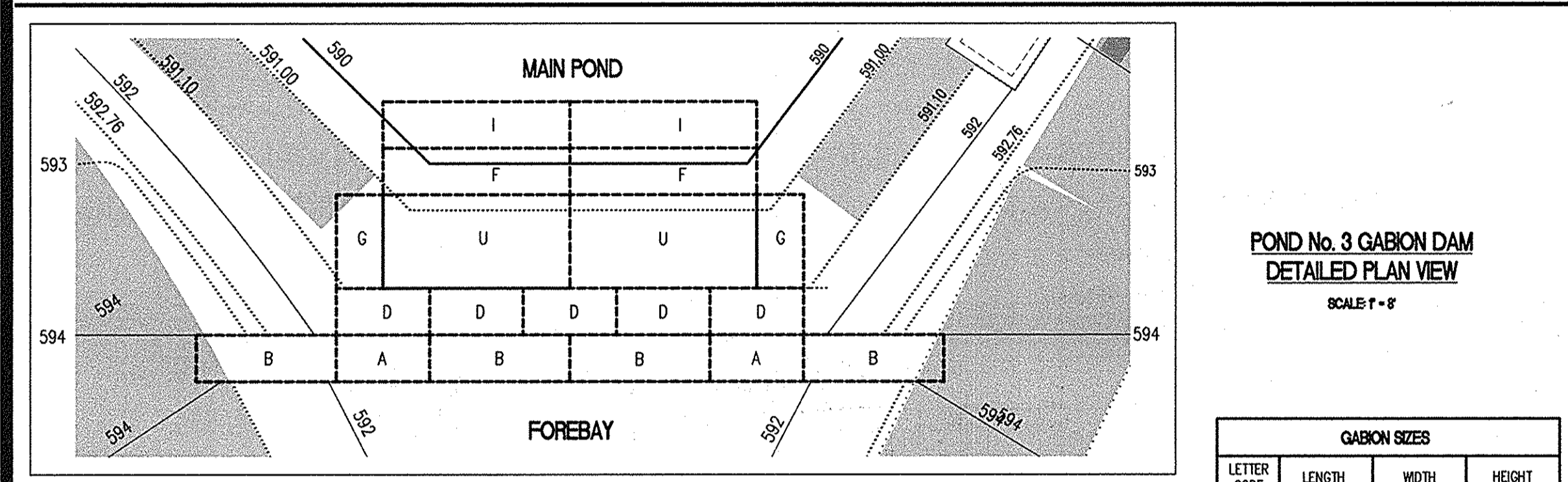
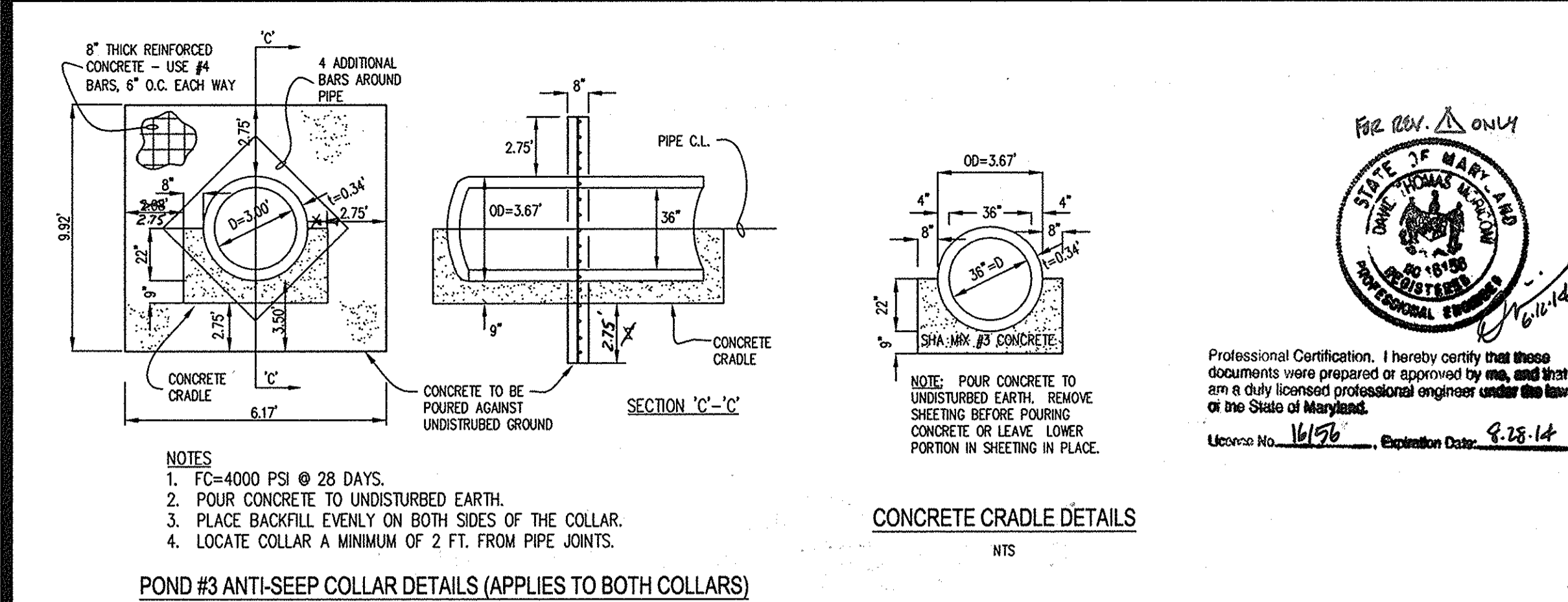
PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT:
TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

REVISOR: [Signature]

STORMWATER MANAGEMENT DETAILS (POND #2 REV-FACILITY)
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117/2 (PARCEL 1) and 16126/2 (PARCEL 2A)

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	14 of 48 58



ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Cathleen Conley Young 7/30/03
DATE

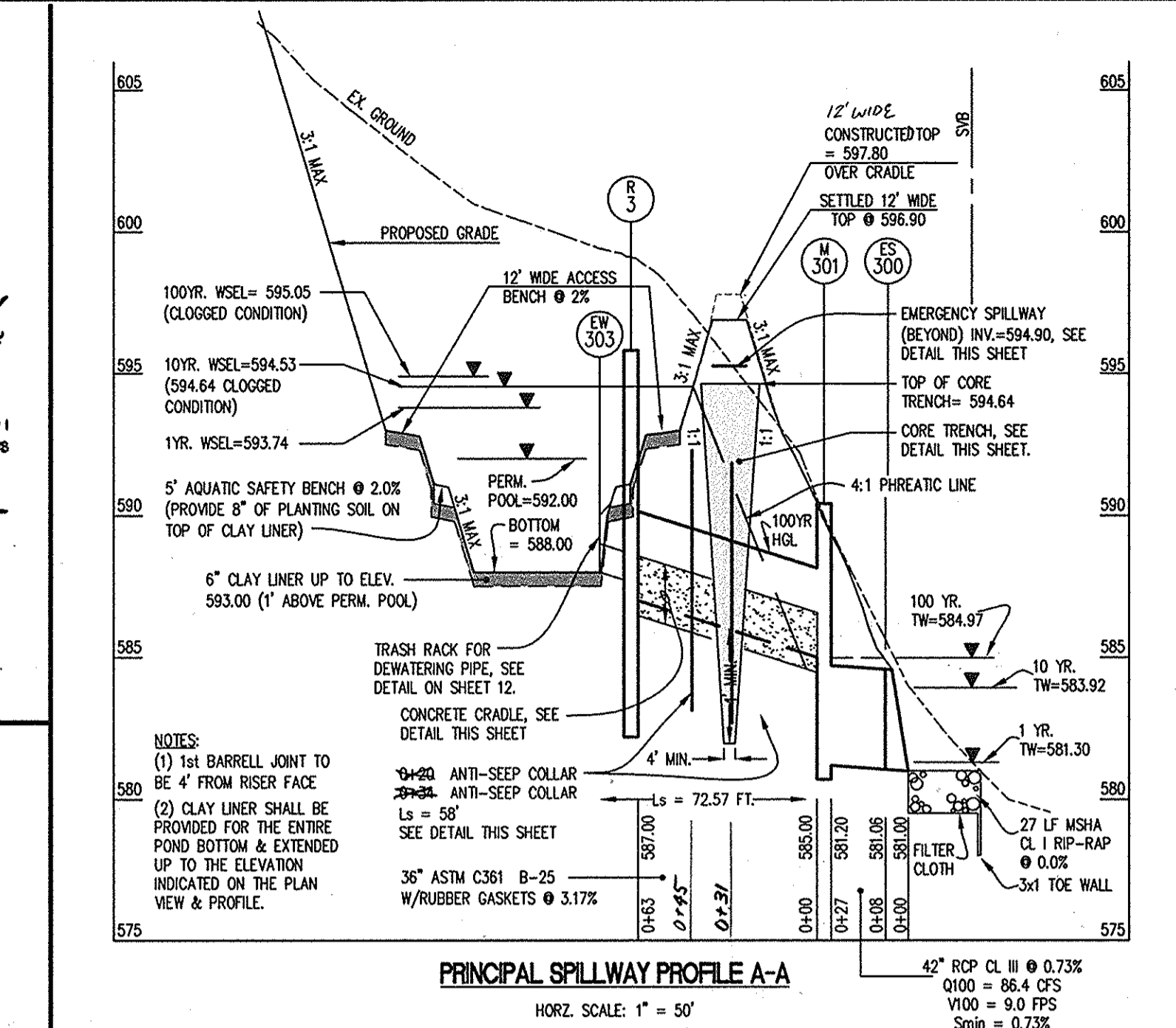
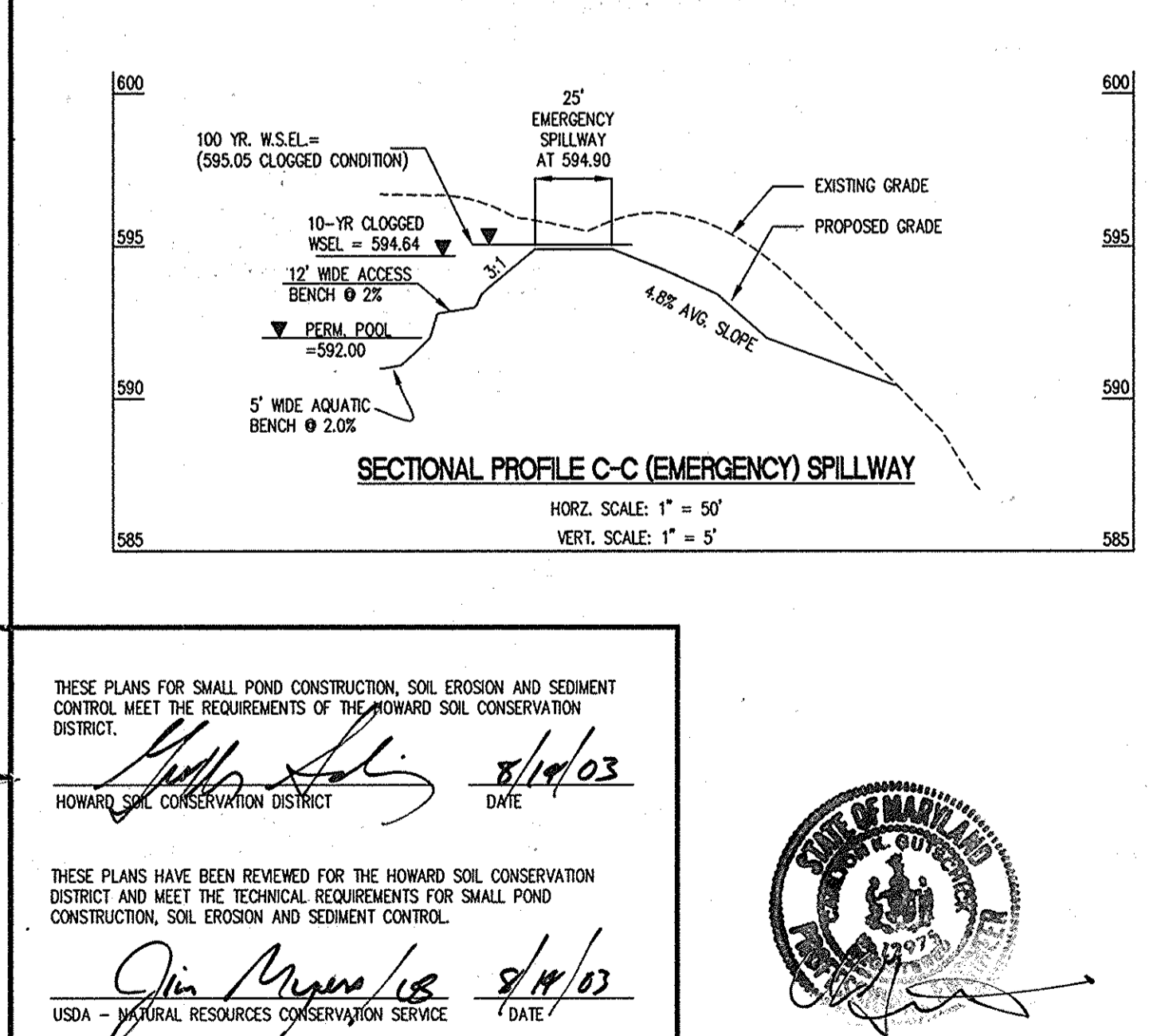
DEVELOPER/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Denny Dunbar 1-15-04
DATE

Frank A. Lyons 7/1/03
DATE

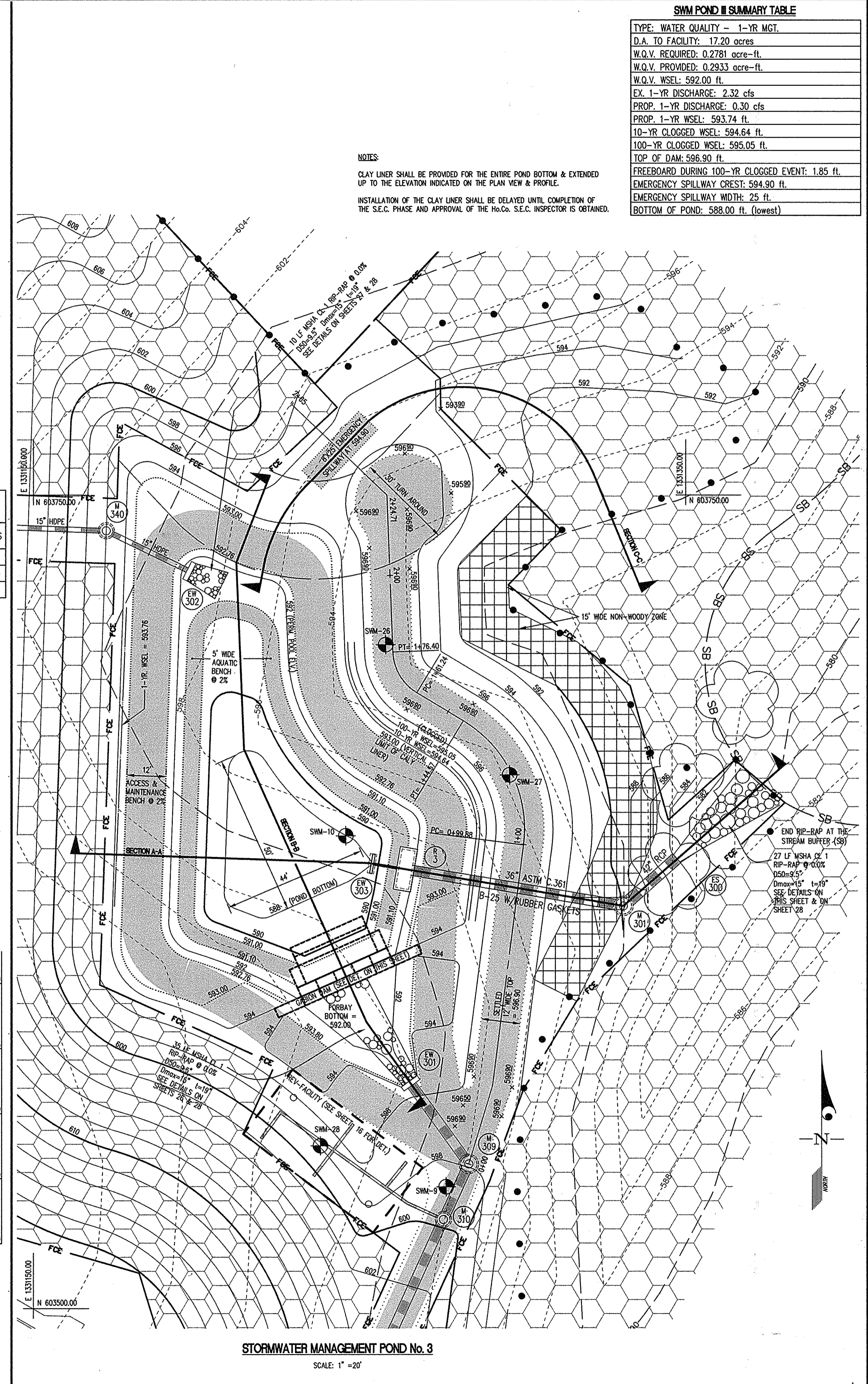
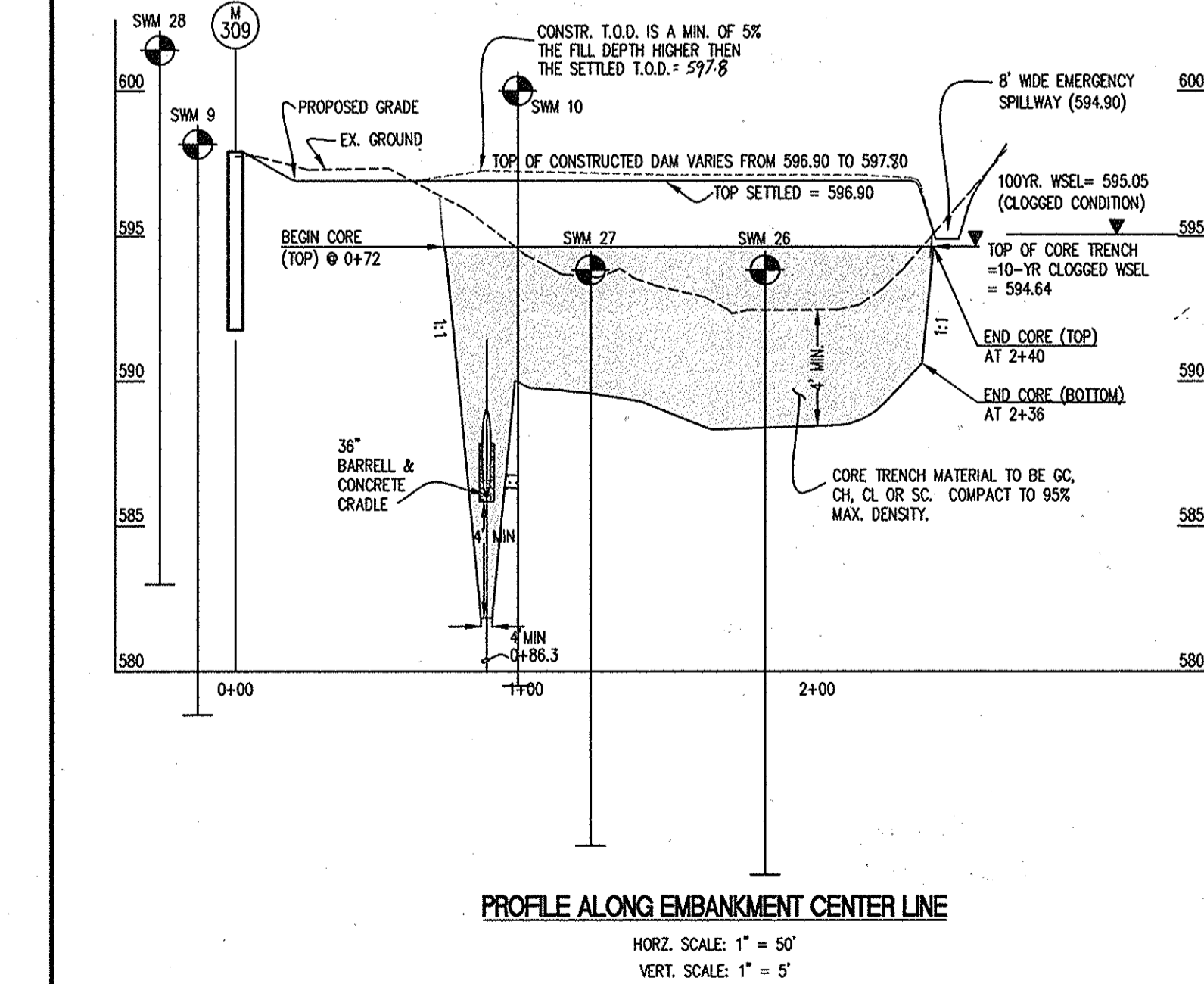
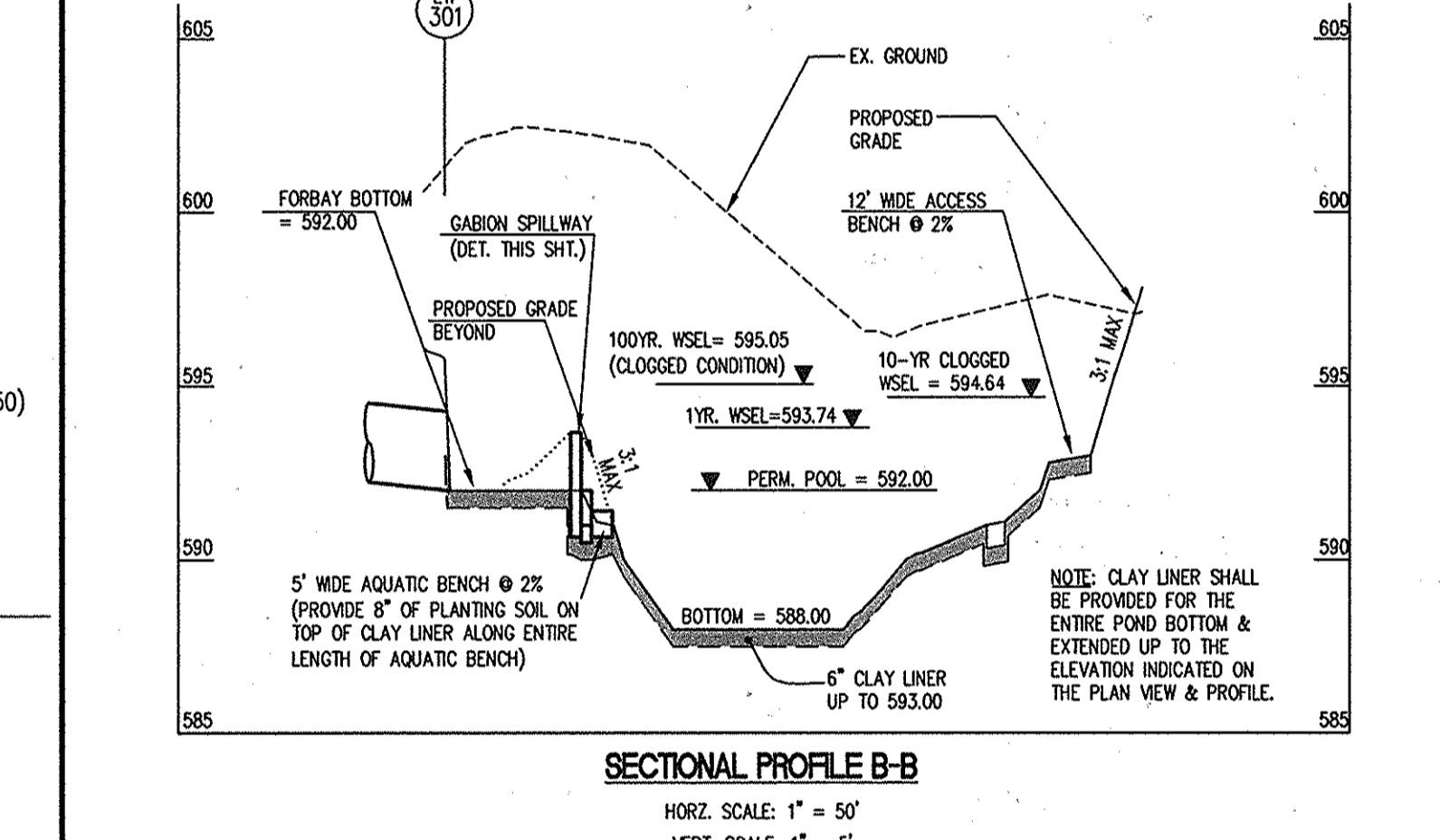
Cathy Hamilton 7/2/03
DATE

Jim Myers 8/14/03
DATE



STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (DIAM.)	TOP ELEVATION		INVERT ELEVATION		STD. DETAIL	LOCATIONS & REMARKS
			UPPER	LOWER	UPPER	LOWER		
ES 300	END SECTION 42" PIPE	42"		584.50		581.00	HO. CO. SD 5.51	
M 301	72" MANHOLE	6'-0"		590.10		585.00	MD 384.05	
EN303	6" ENDWALL	D=6"		589.50		588.00	MODIFIED HOLO. SD 5.21 A=9 B=6 C=6 E=1 F=9 H=18 L=6 O=7 REBAR PER STD. DETAIL	



SWM POND #3 SUMMARY TABLE

TYPE: WATER QUALITY - 1-YR MGT.
D.A. TO FACILITY: 17.20 acres
W.Q.V. REQUIRED: 0.2781 acre-ft.
W.Q.V. PROVIDED: 0.2933 acre-ft.
W.Q.V. WSEL: 592.00 ft.
EX. 1-YR DISCHARGE: 2.32 cfs
PROP. 1-YR DISCHARGE: 0.30 cfs
PROP. 1-YR WSEL: 593.74 ft.
10-YR CLOGGED WSEL: 594.64 ft.
100-YR CLOGGED WSEL: 595.05 ft.
TOP OF DAM: 596.90 ft.
FREEBOARD DURING 100-YR CLOGGED EVENT: 1.85 ft.
EMERGENCY SPILLWAY CREST: 594.90 ft.
EMERGENCY SPILLWAY WIDTH: 25 ft.
BOTTOM OF POND: 588.00 ft. (lowest)

NOTES:
CLAY LINER SHALL BE PROVIDED FOR THE ENTIRE POND BOTTOM & EXTENDED UP TO THE ELEVATION INDICATED ON THE PLAN VIEW & PROFILE.
INSTALLATION OF THE CLAY LINER SHALL BE DELAYED UNTIL COMPLETION OF THE S.E.C. PHASE AND APPROVAL OF THE H.S.C. S.E.C. INSPECTOR IS OBTAINED.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION
6-10-14	UPDATED SCHOOL NAME & SHEET TOTAL

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: MICHELE BOYD
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOYD
TEL: 301-261-8700

DESIGNED SITE DEVELOPMENT PLAN

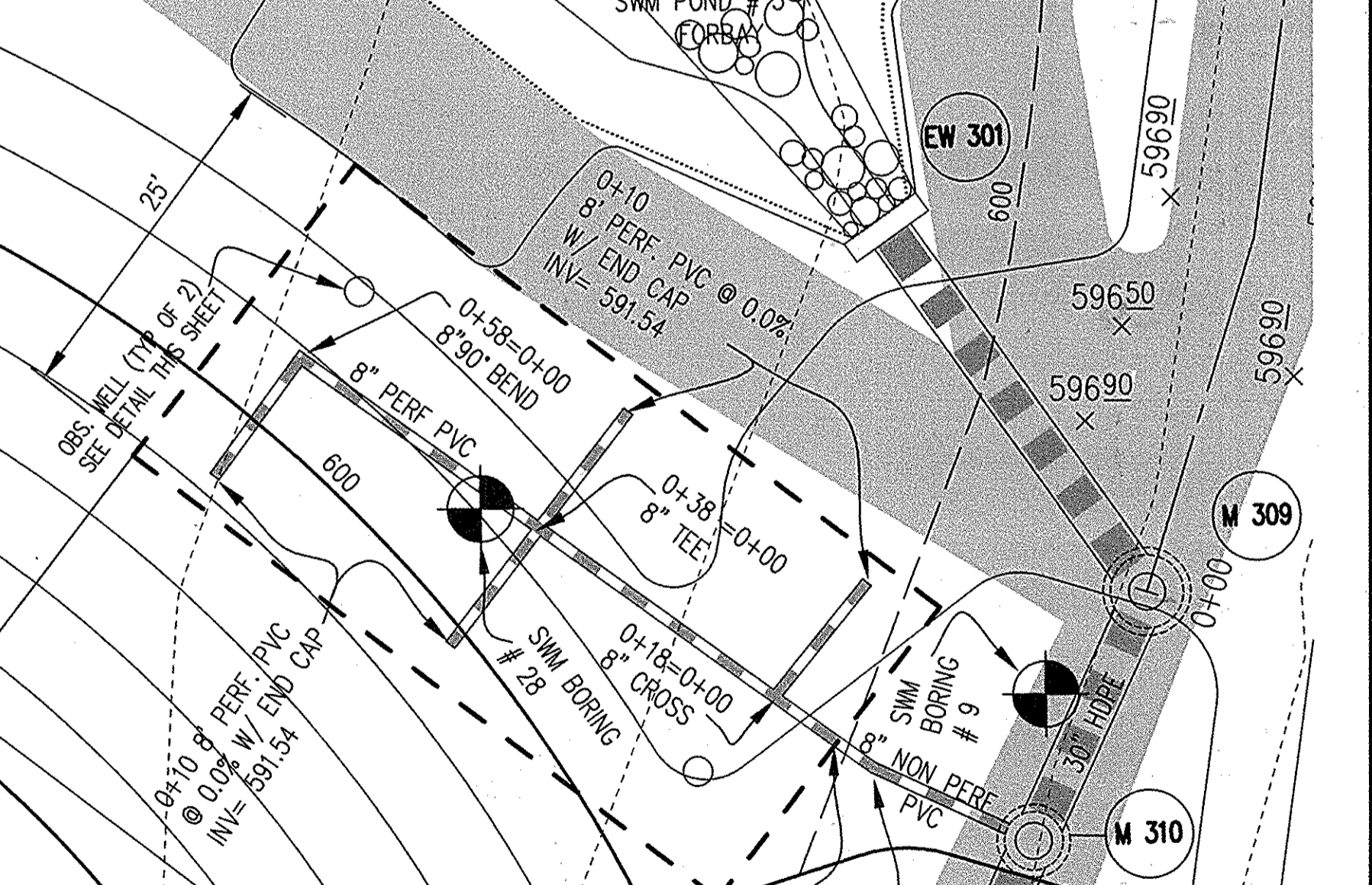
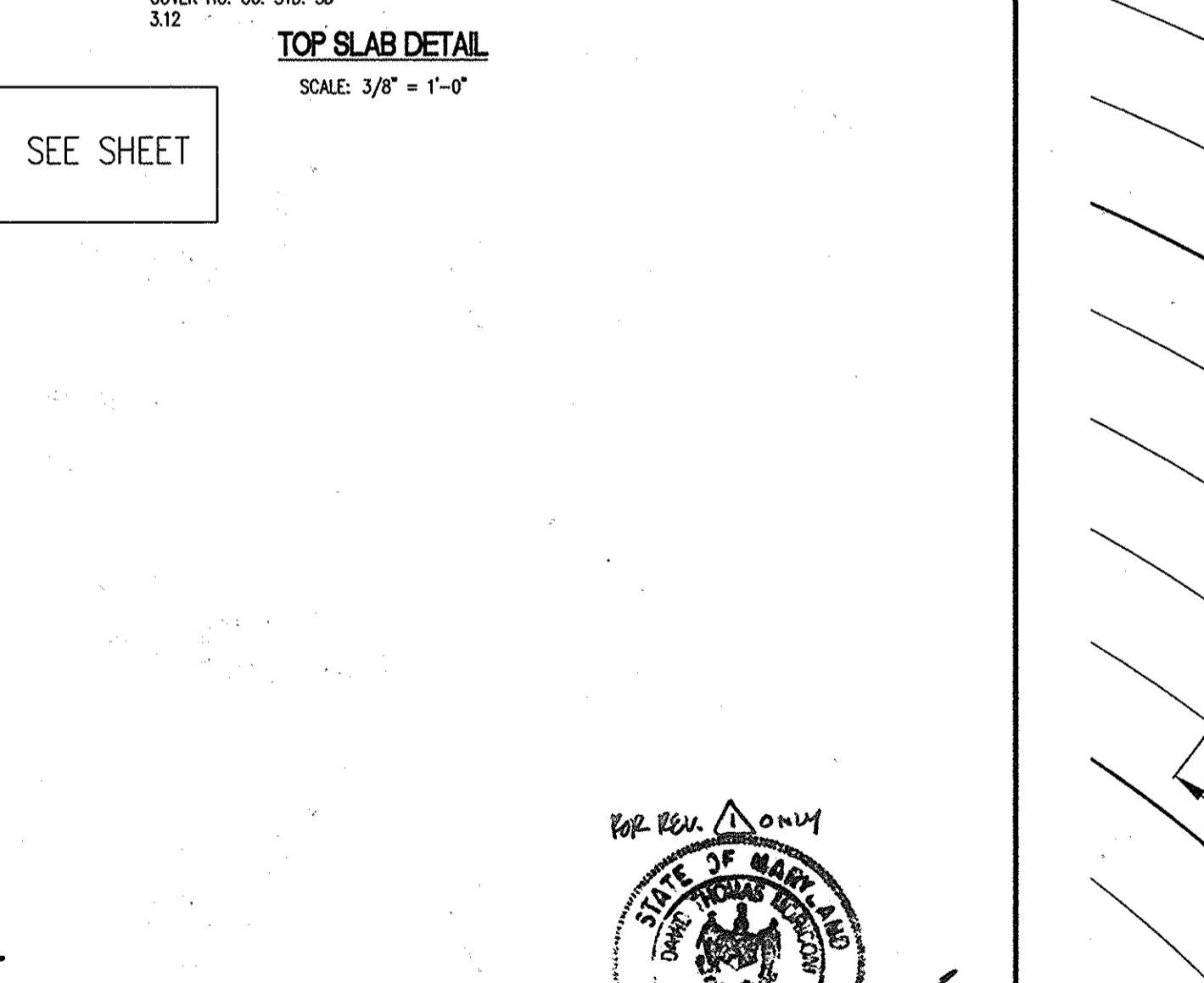
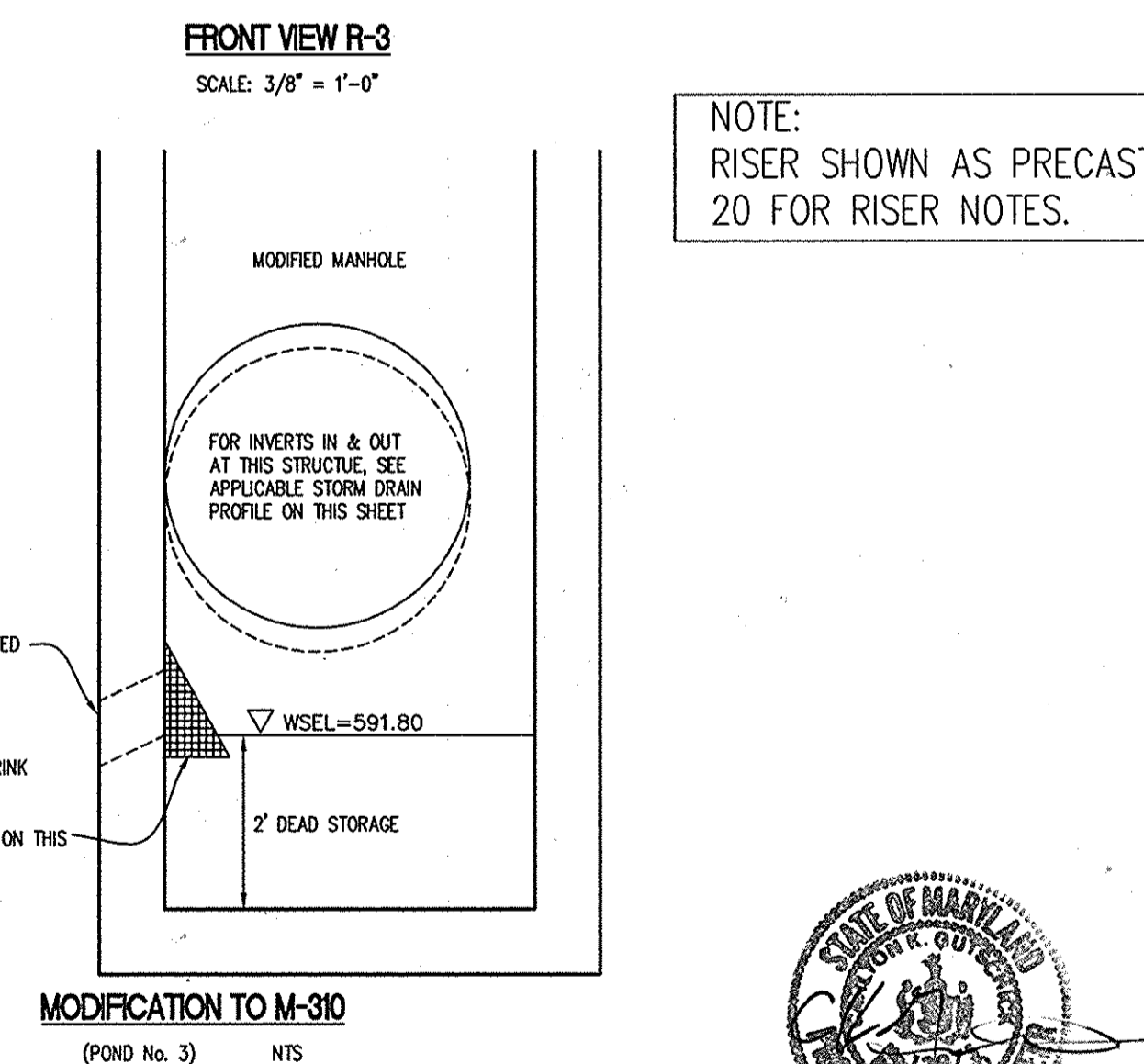
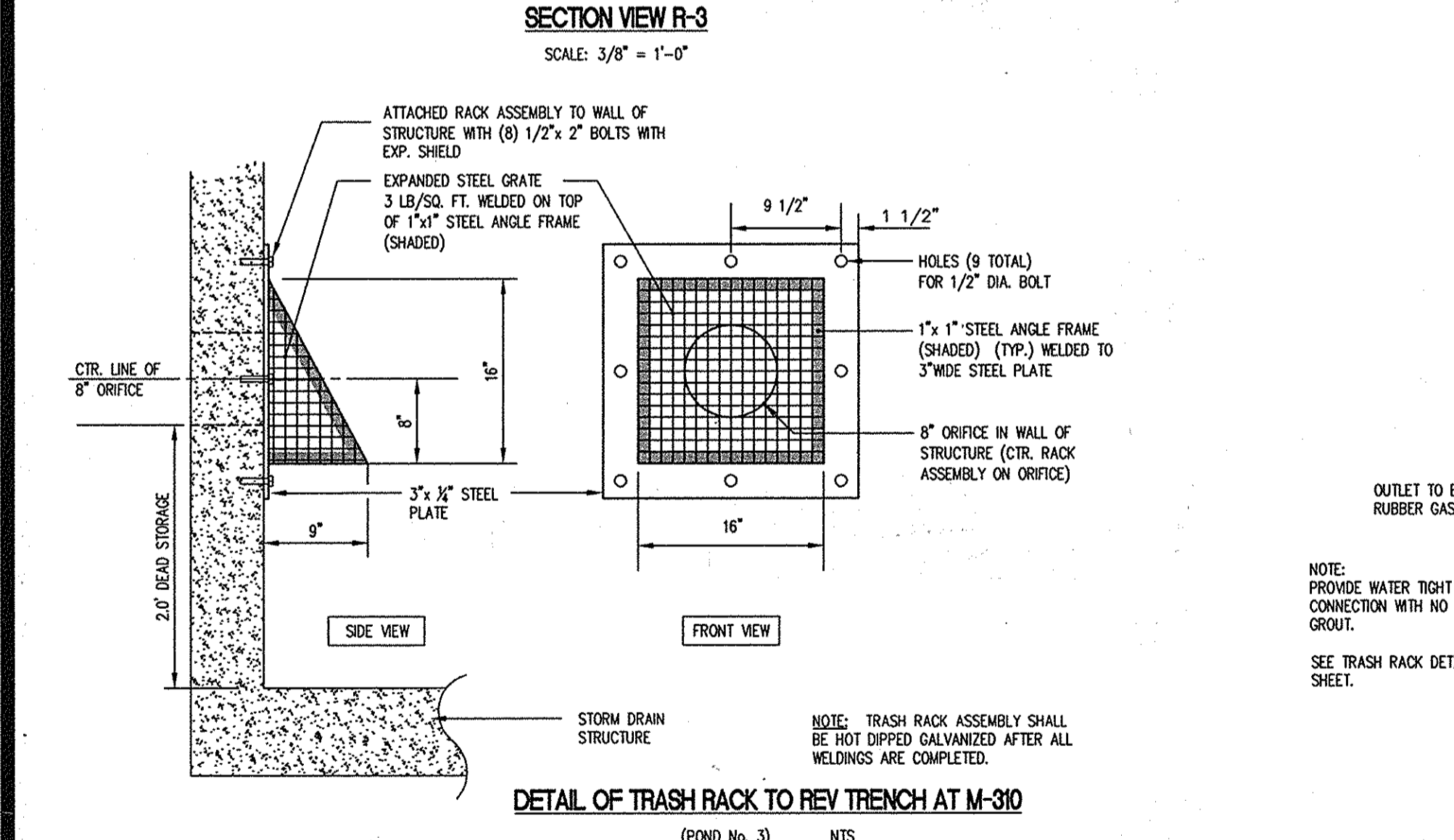
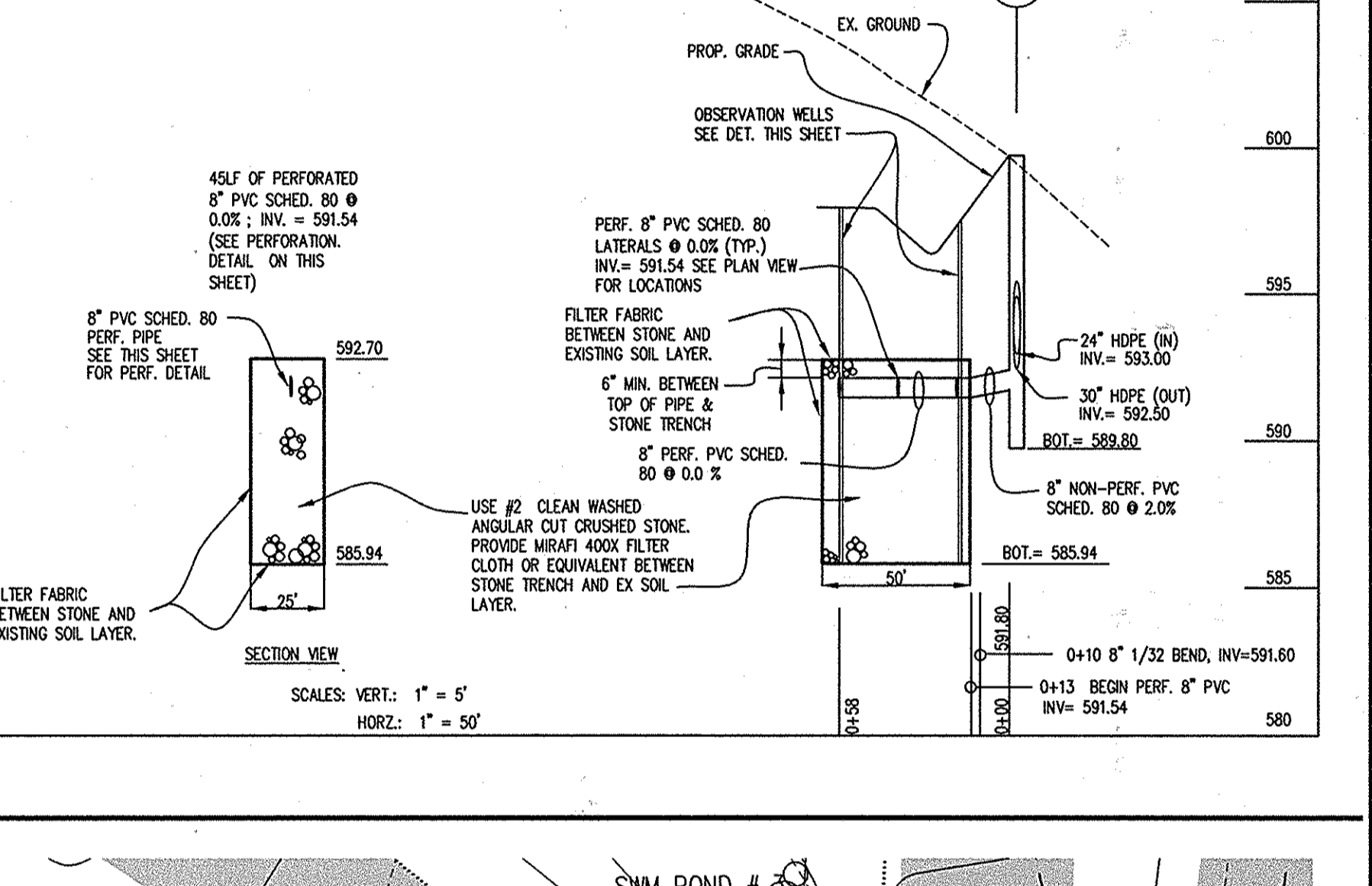
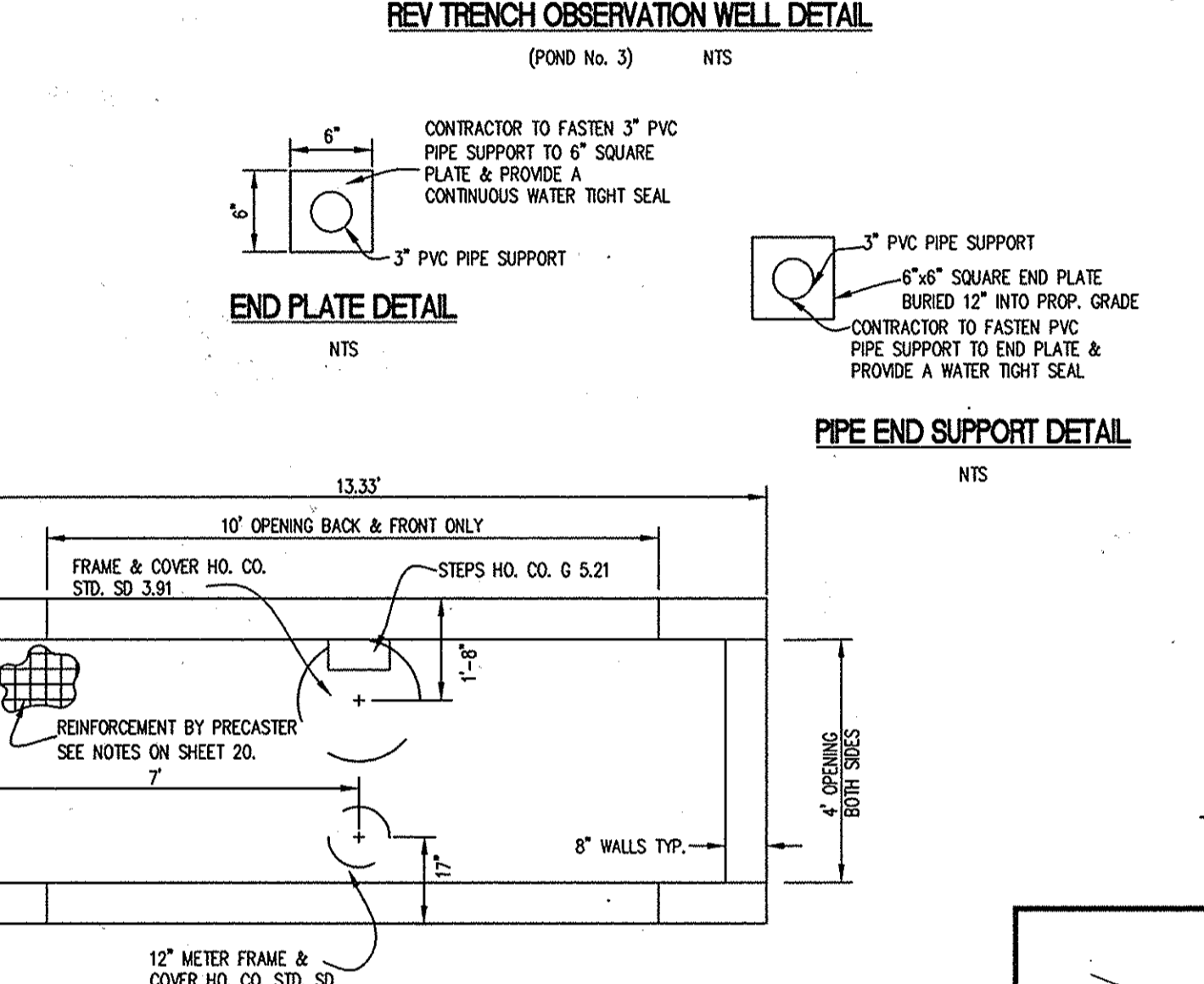
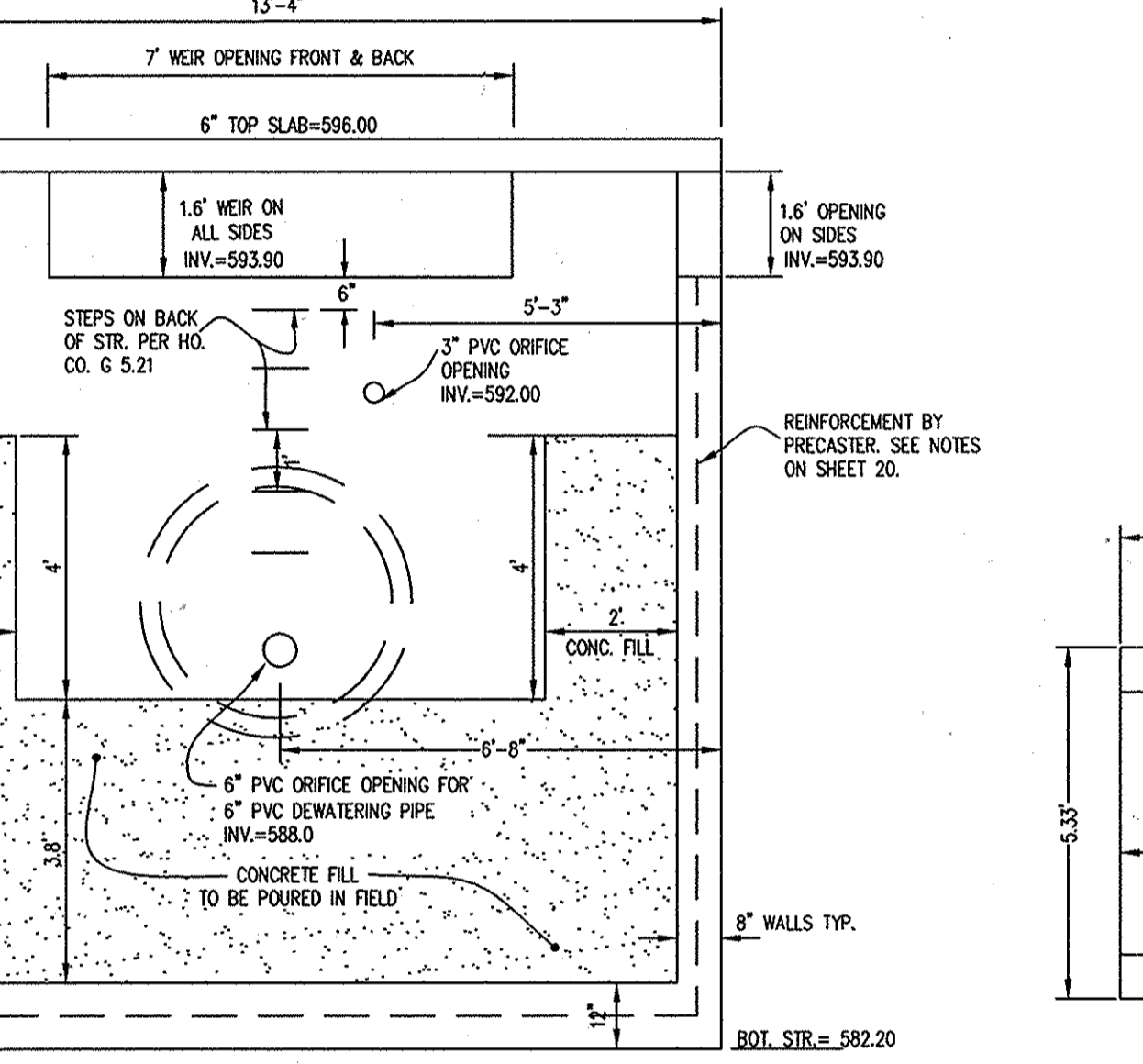
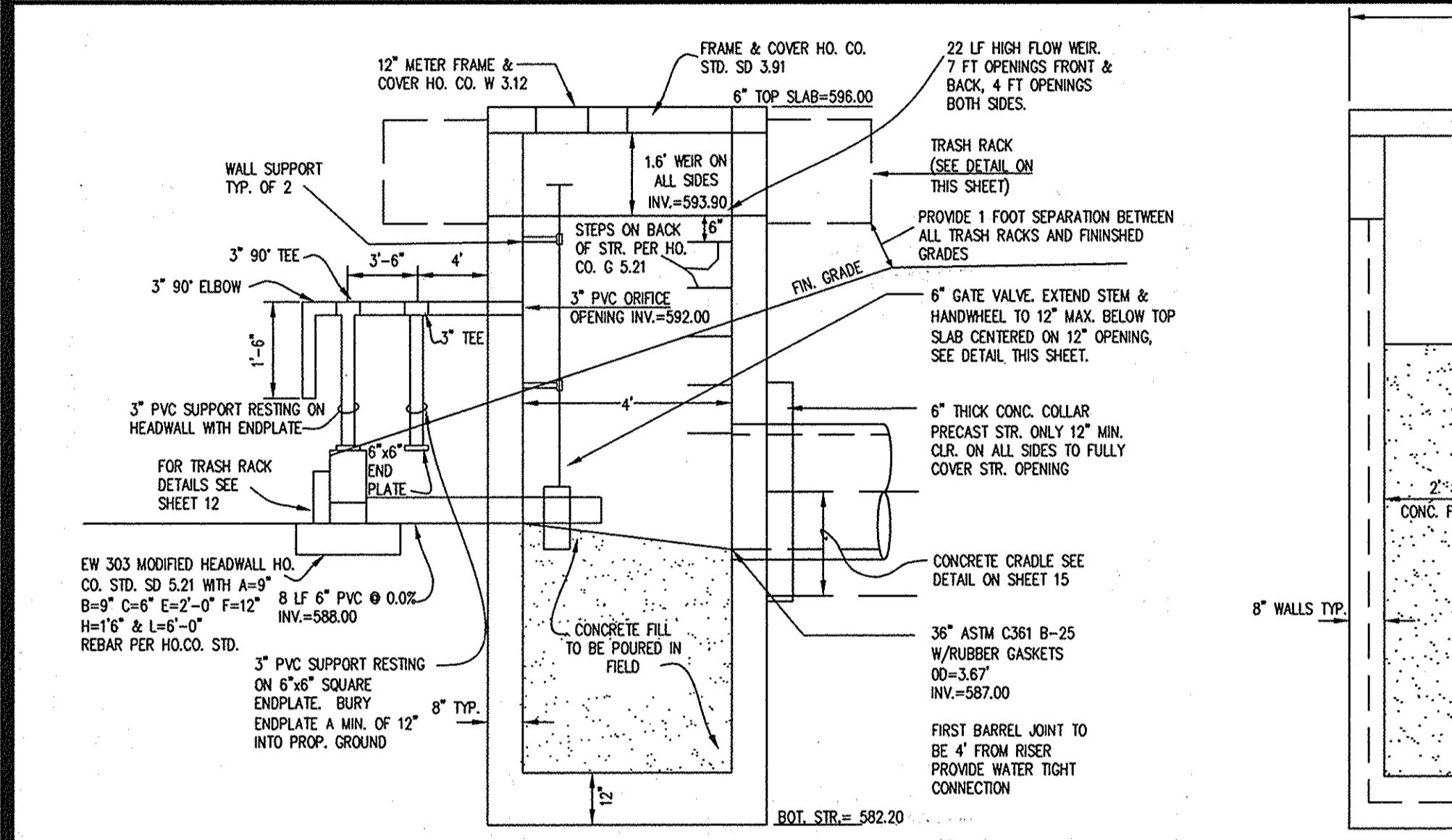
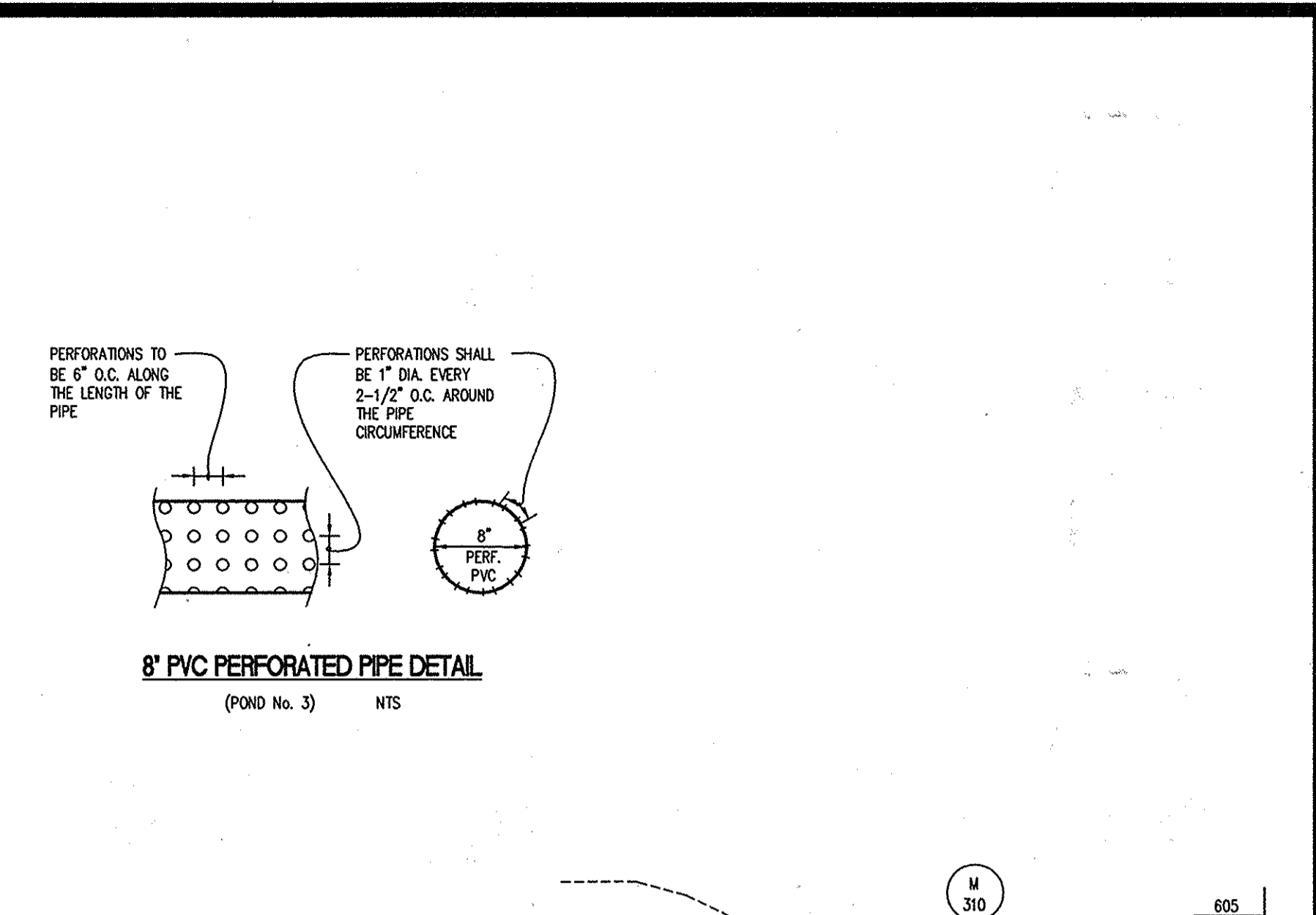
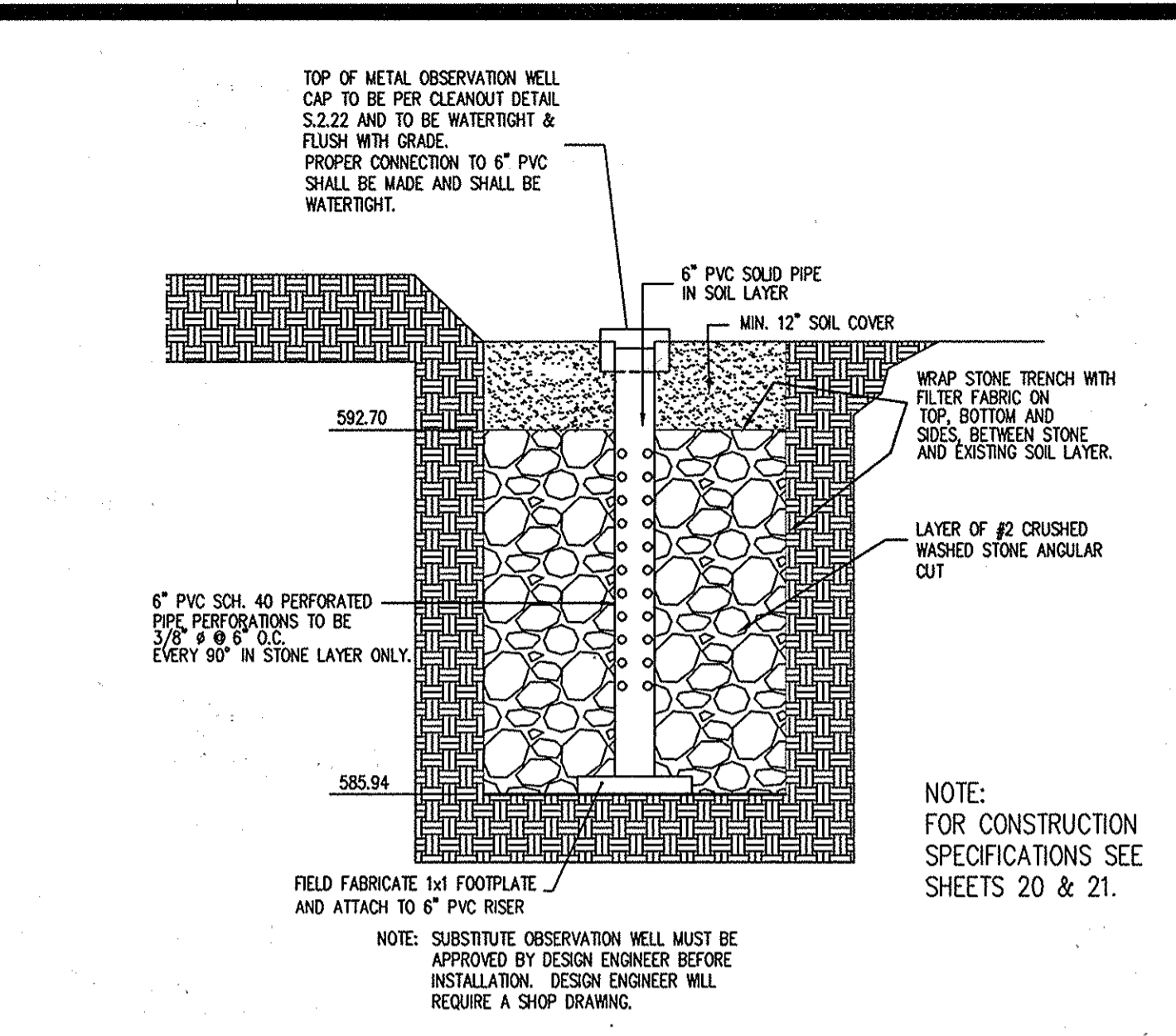
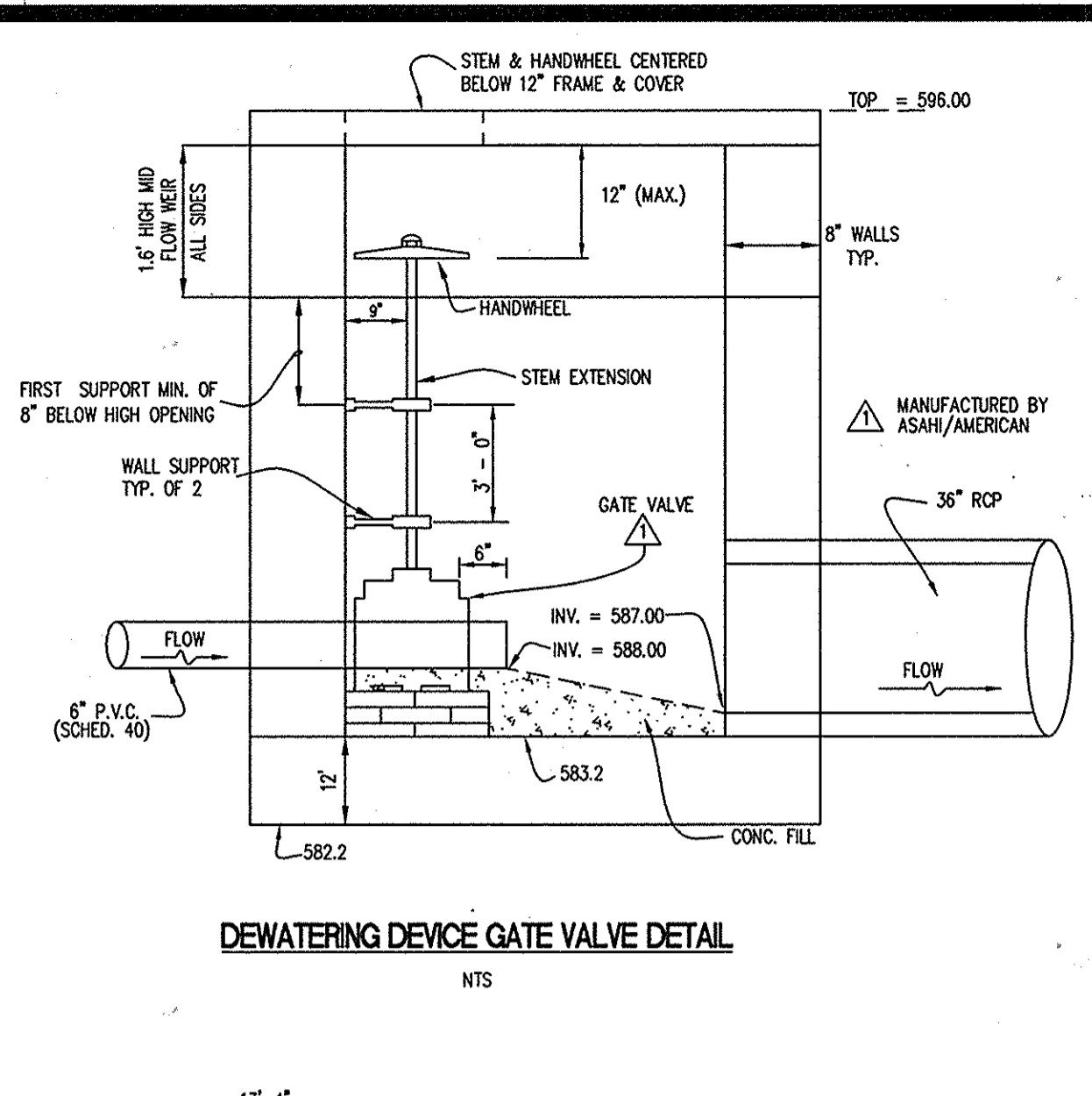
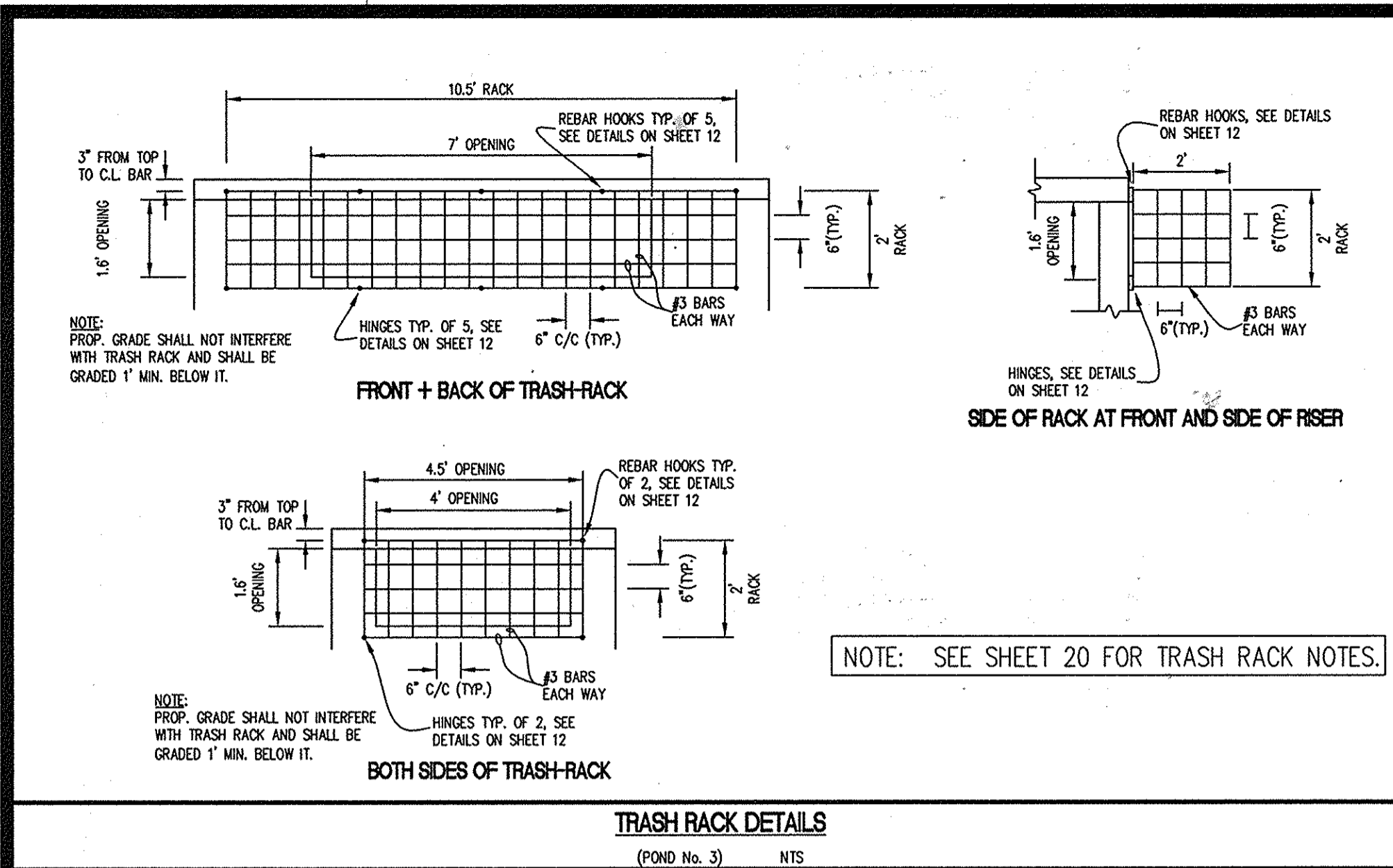
WEST FRIENDSHIP ELECTION DISTRICT No. 3

STORMWATER MANAGEMENT DETAILS (POND #3)

NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 161178 (PARCEL 1) and 161367 (PARCEL 2A)

SCALE: AS NOTED
ZONING: RR-DEO
DATE: 28/JUL/03
TAX MAP - GRID: 10 19
SHEET: 15 of 40

G. L. W. FILE No. 00-177
SHEET 15 of 40



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: *[Signature]* 1-15-04 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* 9/14/03 Date
 Chief, Division of Land Development: *[Signature]* 9/14/03 Date
 Chief, Development Engineering Division: *[Signature]* 9-2-03 Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conley Young 7/8/03 DATE
 SIGNATURE OF DEVELOPER/BUILDER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 7/30/03 DATE
 ENGINEER'S SIGNATURE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT
[Signature] 8/19/03 DATE
 HOWARD SOIL CONSERVATION DISTRICT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 USDA - NATURAL RESOURCES CONSERVATION SERVICE
[Signature] 8/19/03 DATE
 USDA - NATURAL RESOURCES CONSERVATION SERVICE

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. 16156 Expiration Date: 8-28-14
 State of Maryland Professional Engineer

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.
6.12.14	UPDATED SCHOOL NAME & SHEET TOTAL		

STORMWATER MANAGEMENT DETAILS (POND #3 REV-FACILITY)

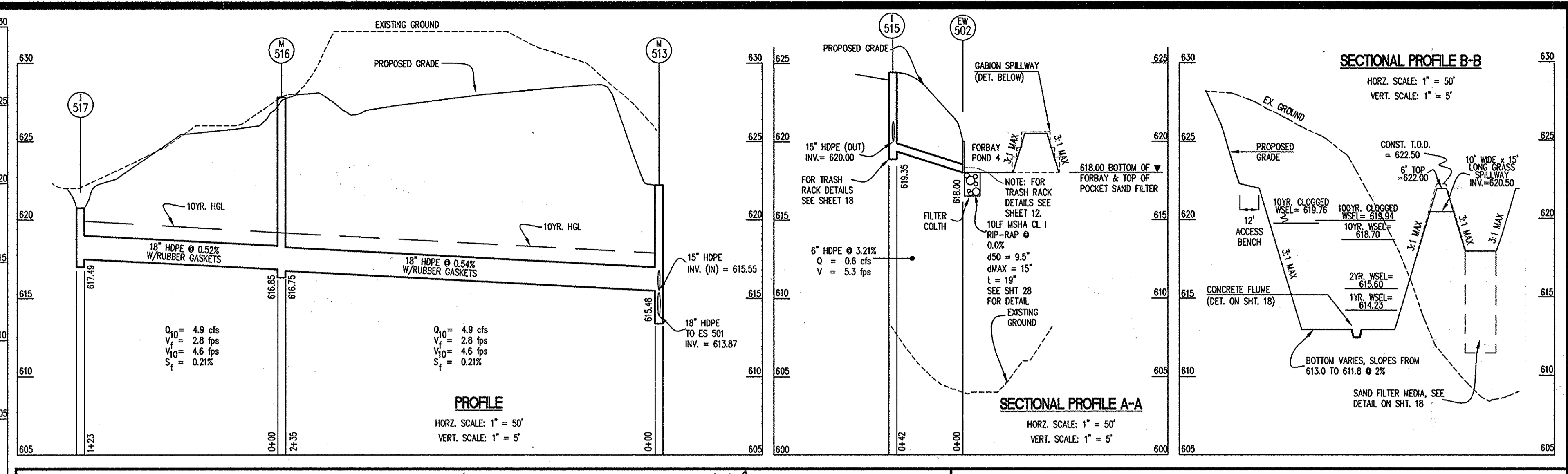
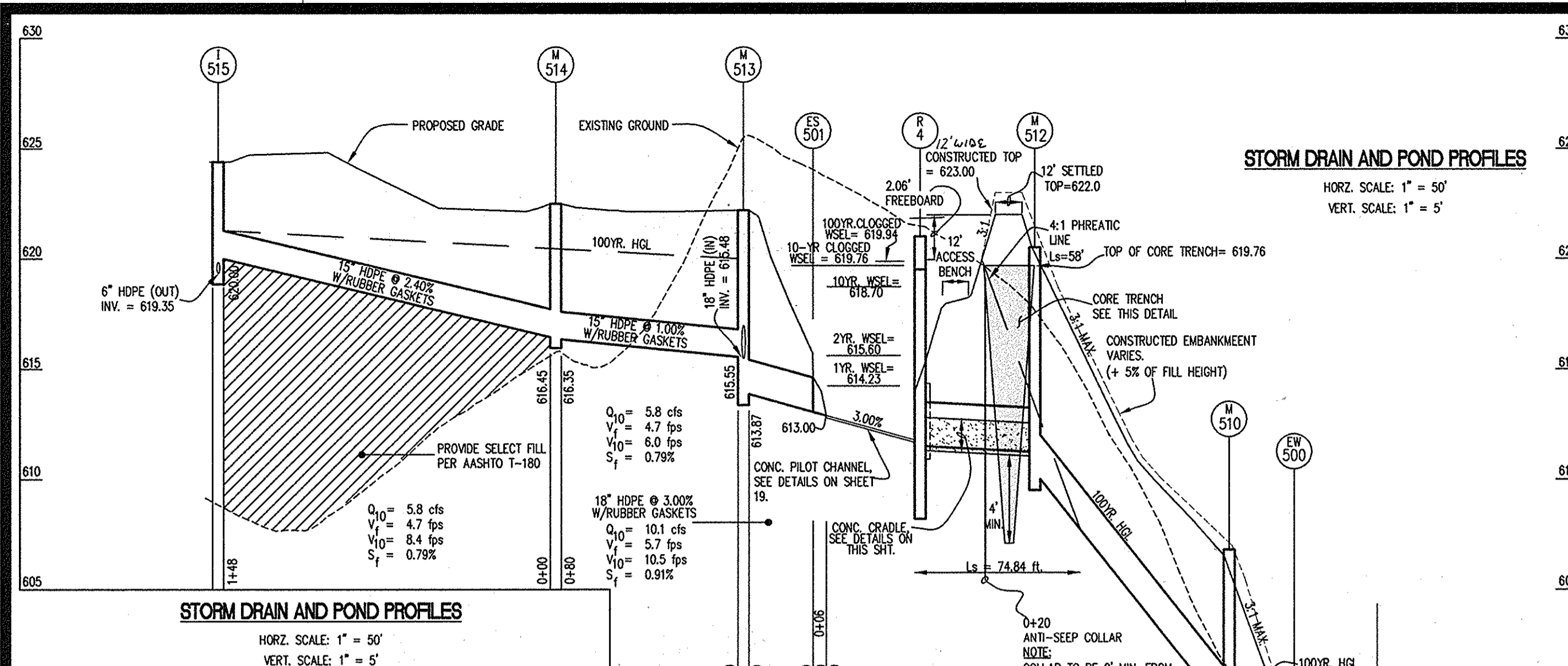
REVISOR: *[Signature]* DATE: 8/19/03

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-281-8700

NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 161712 (PARCEL 1) and 161611 (PARCEL 2A)

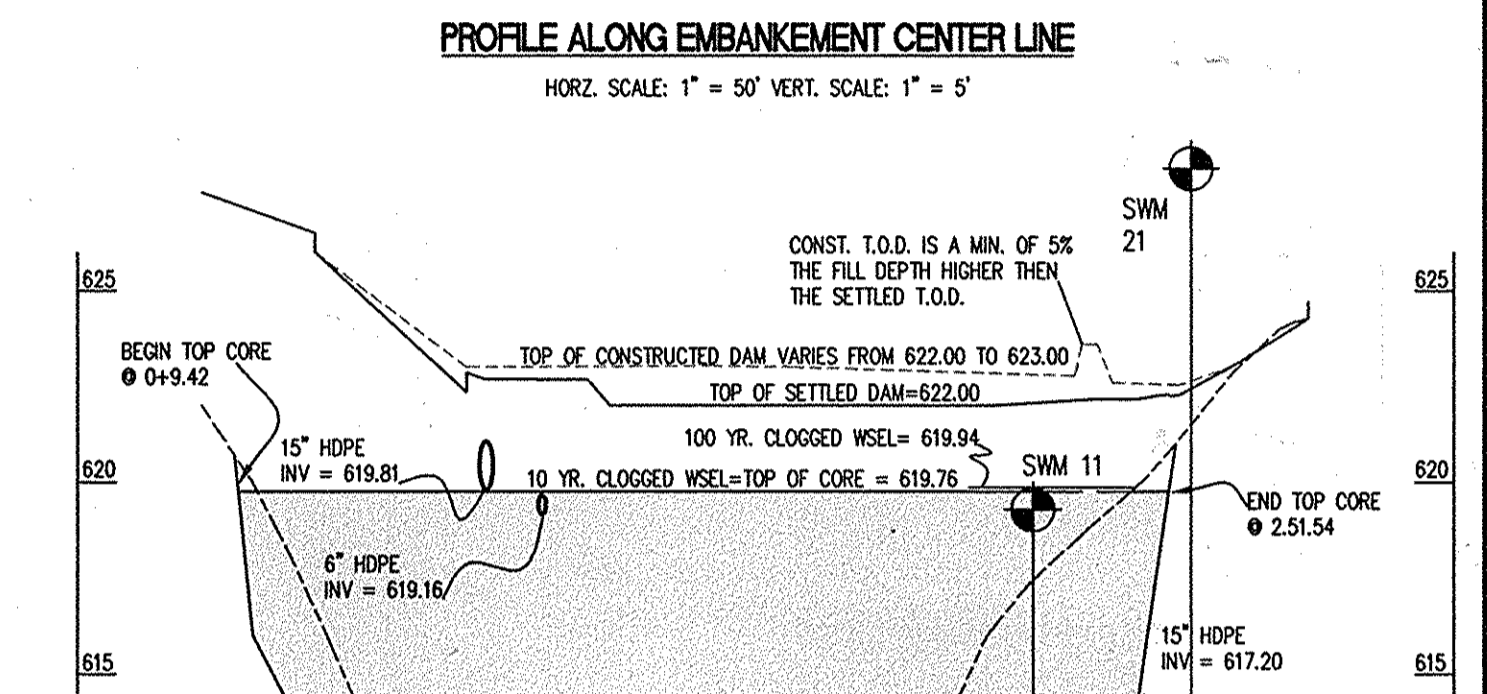
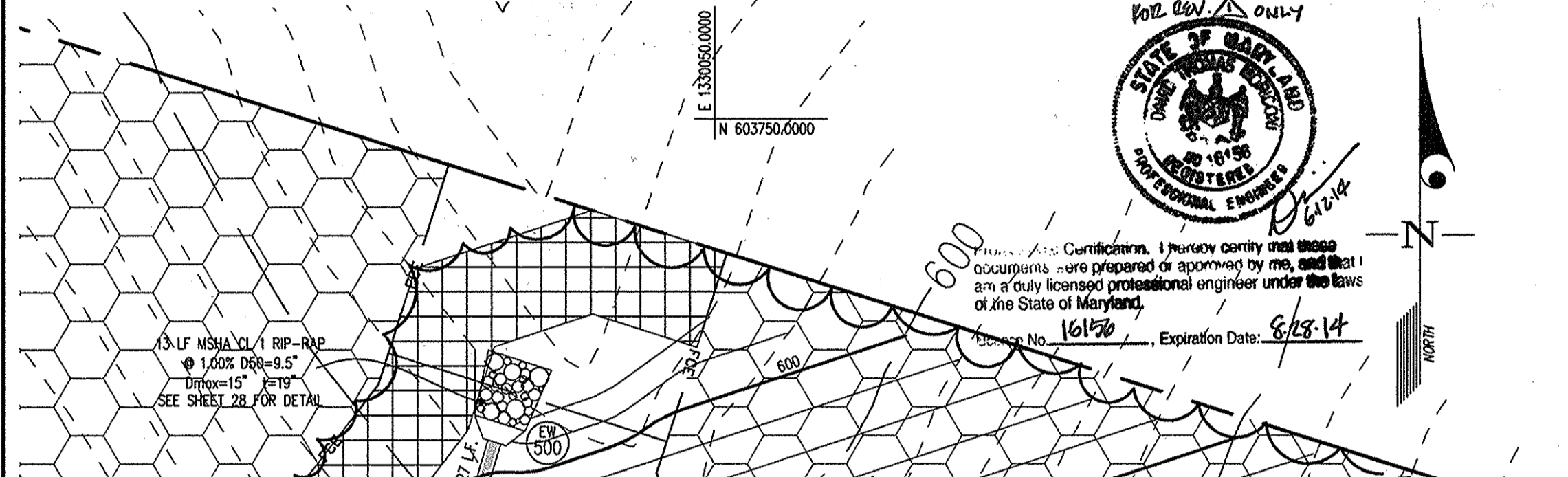
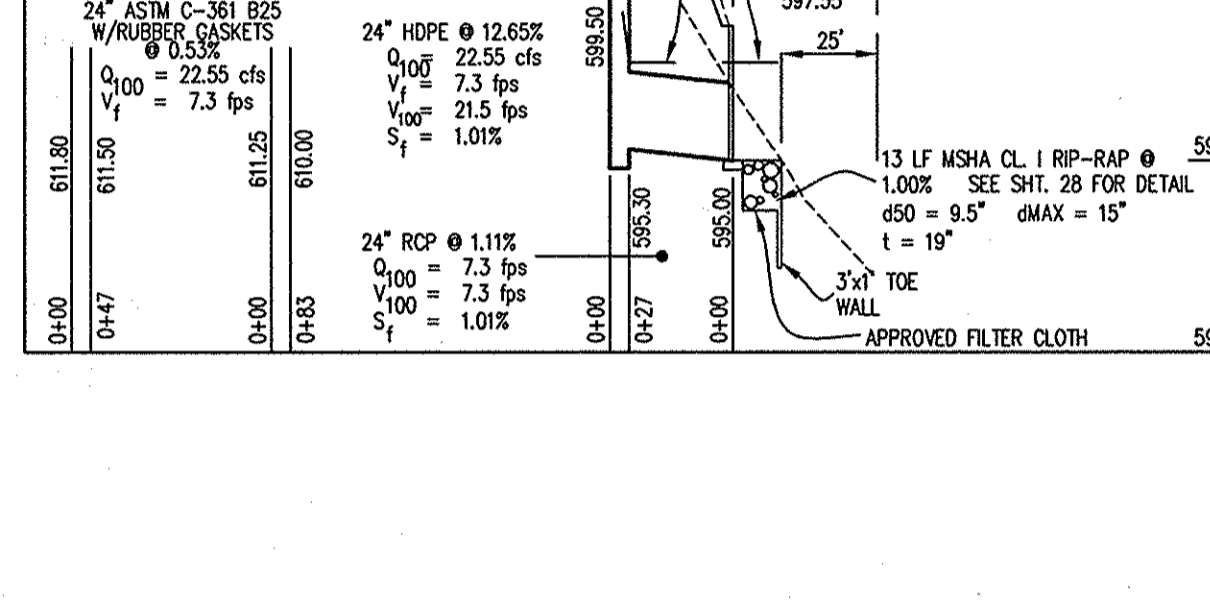
SCALE	ZONING	G. L. W. FILE No.
AS NOTED	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	16 of 49

WEST FRIENDSHIP ELECTION DISTRICT No. 3
 HOWARD COUNTY, MARYLAND
 SDP-03-33



STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	LOCATIONS & REMARKS
			UPPER	LOWER	UPPER	LOWER		
I 515	A 10	3'-0"	624.40	620.00	619.35	618.70	HO CO SD 4.41	SEE SHEET 18 FOR TRASH RACK DETAIL
I 517	S INLET	2'-7"	621.10	617.49	617.49	617.49	HO CO SD 4.22 & 4.93	USE GRATE PER HO. CO. SD 4.93
M 516	MANHOLE	4'-0"	627.80	616.85	616.75	616.75	HO CO G 5.12	
M 514	MANHOLE	4'-0"	622.70	616.45	616.35	616.35	HO CO G 5.12	
M 513	MANHOLE	4'-0"	622.20	615.55	615.87	615.87	HO CO G 5.12	18" pipe inv in from M516-615.48
M 512	MANHOLE	4'-0"	620.10	611.25	610.00	610.00	HO CO G 5.12	
M 510	MANHOLE	4'-0"	608.50	599.50	595.30	595.30	HO CO G 5.12	
ES 501	18" DAM D/R SECTION	D = 15"	614.33	613.00	613.00	613.00	HO CO SD 5.51	
EW 500	24" PIPE A HEADWALL	D = 24"	598.5	595.00	595.00	595.00	HO CO SD 5.11	
EW 502	6" EXWALL	D = 6"	619.50	618.00	618.00	618.00	Modified Ho Co SD 5.21 A=9", B=6", C=6", E=1'-9", F=9", H=18", L=6'-0"	Rebor on per sht. detail
EW 503	6" EXWALL	D = 6"	614.50	613.00	613.00	613.00	Modified Ho Co SD 5.21 A=9", B=6", C=6", E=1'-9", F=9", H=18", L=6'-0"	Rebor on per sht. detail



DEVELOPER/BUILDER'S CERTIFICATE

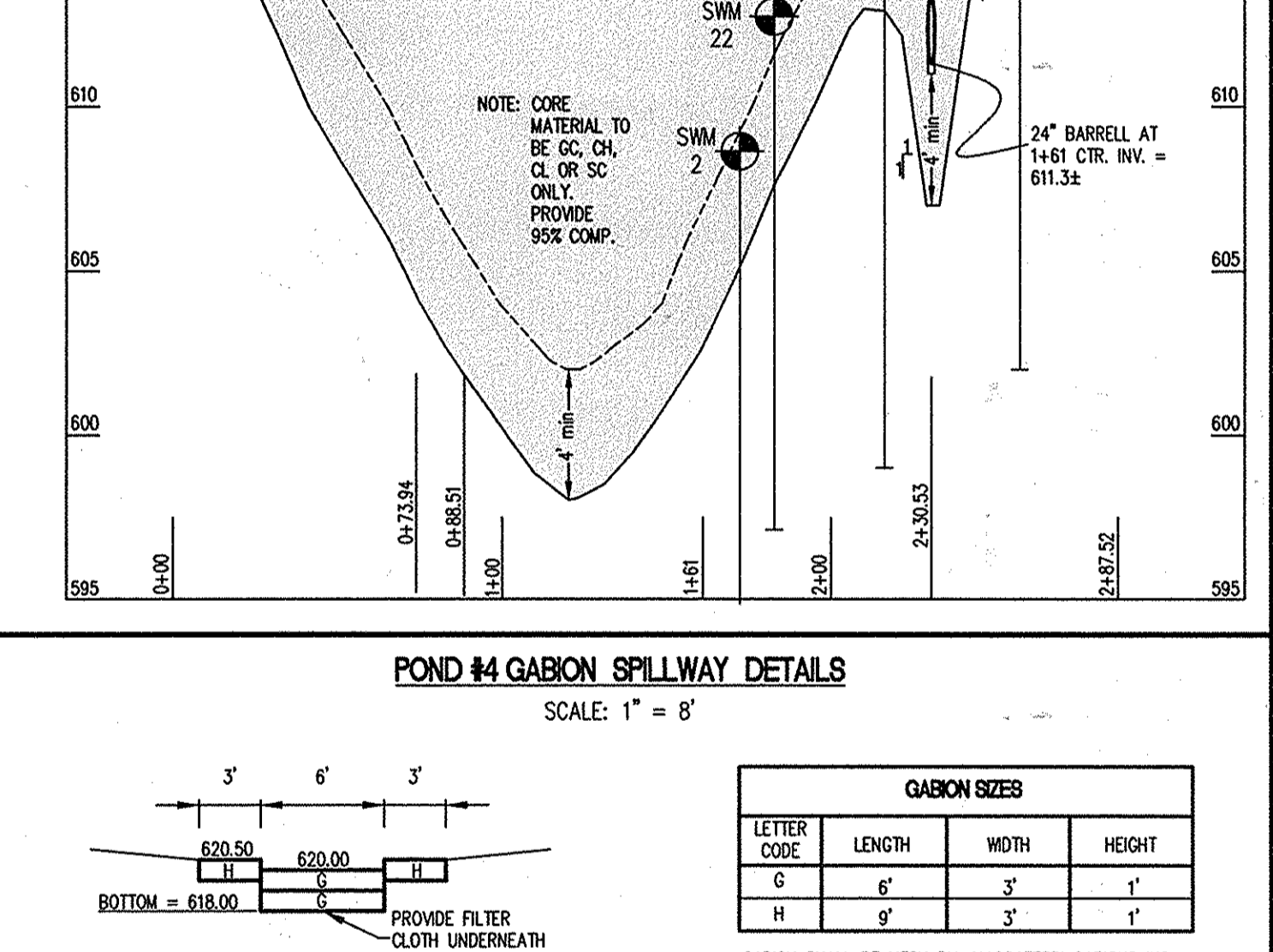
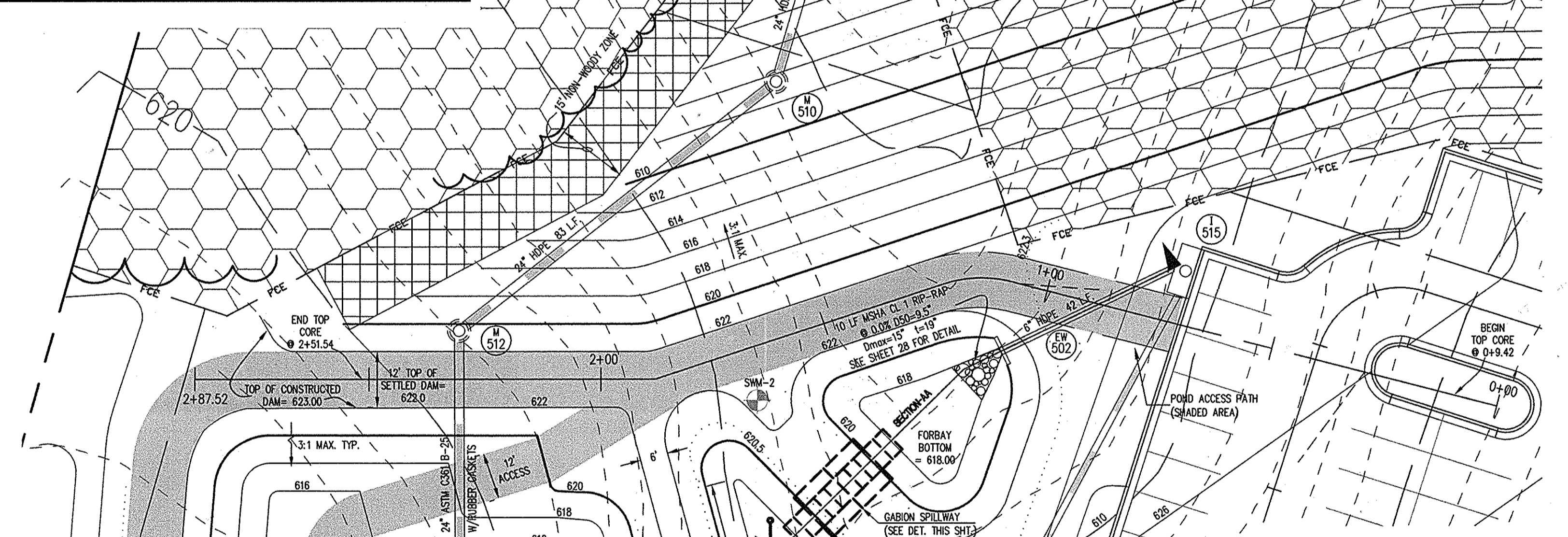
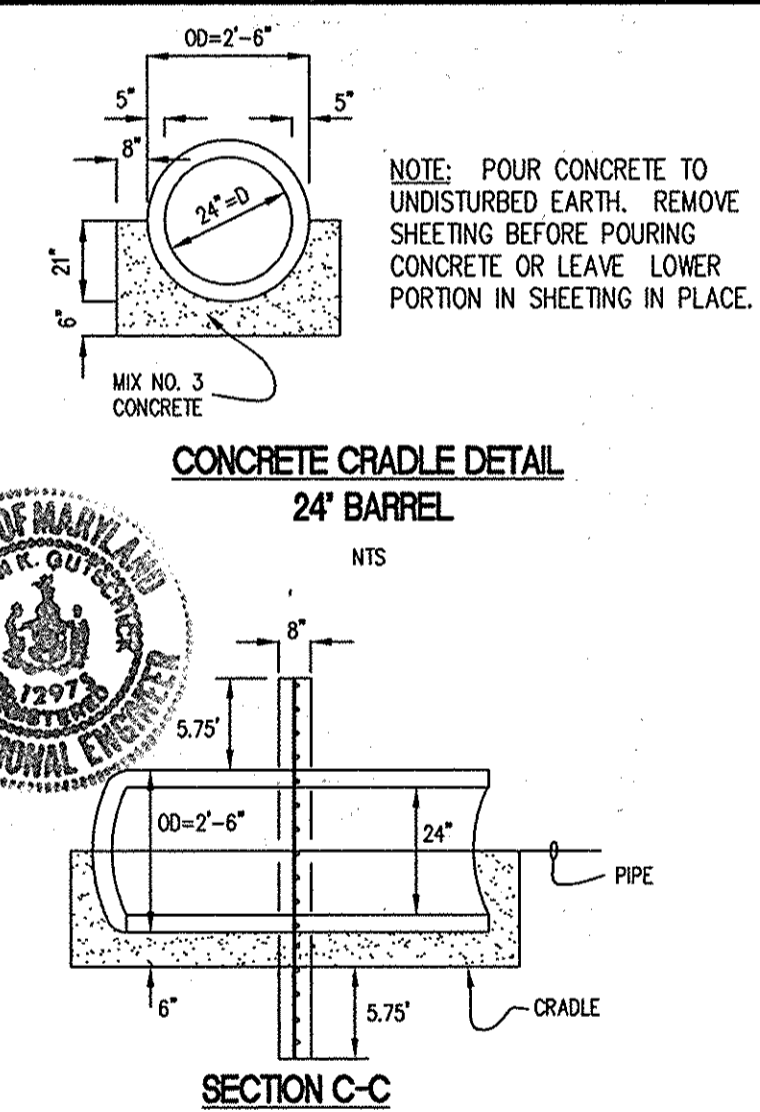
I, the undersigned, hereby certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a certificate of attendance at a Maryland Department of the Environment approved training program for the control of sediment and erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conley Young 7/31/03
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CKY 7/30/03
 ENGINEER'S SIGNATURE DATE



THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Shirley S. [Signature] 8/14/03
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers/ce 8/14/03
 USDA NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

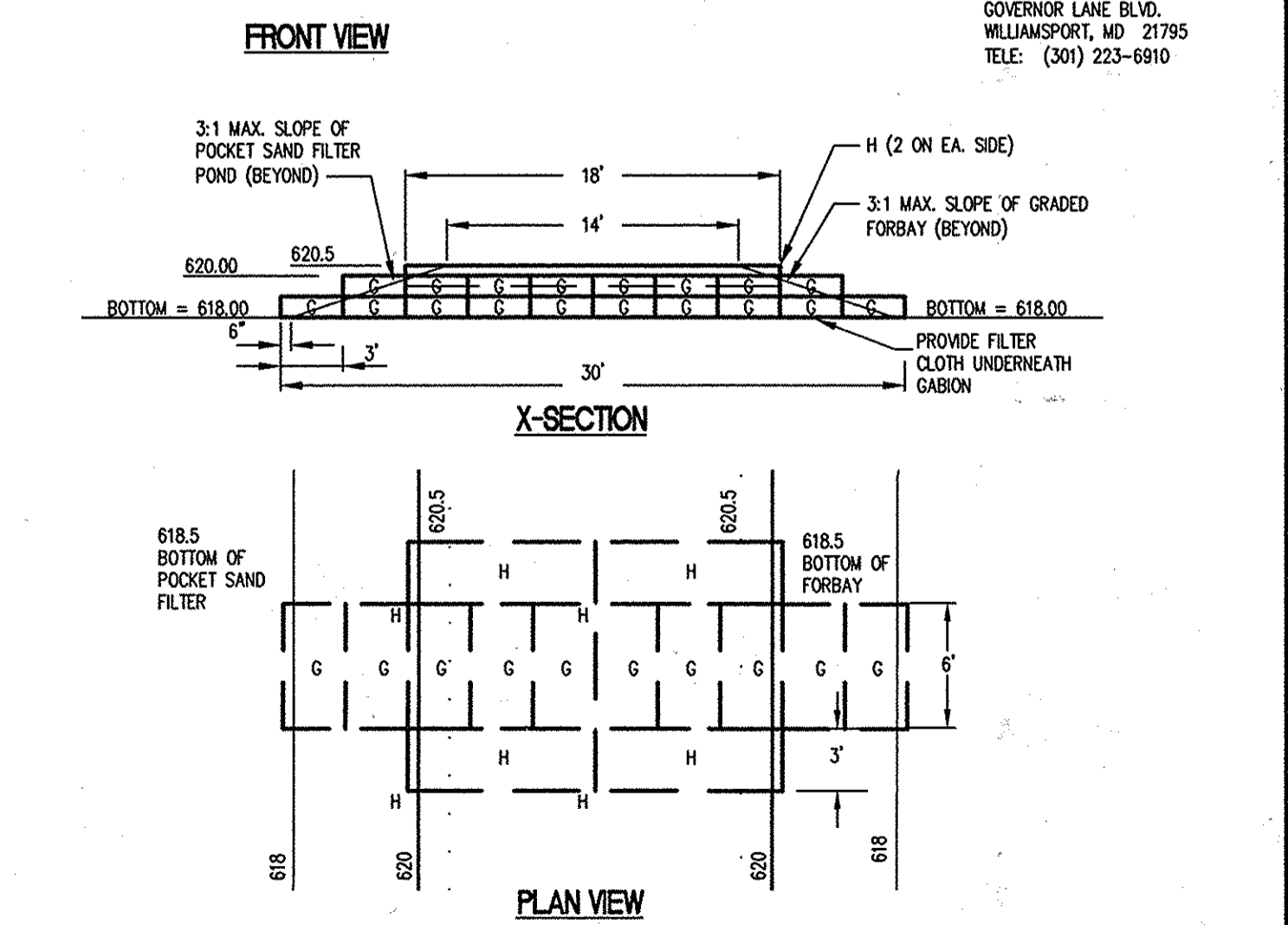
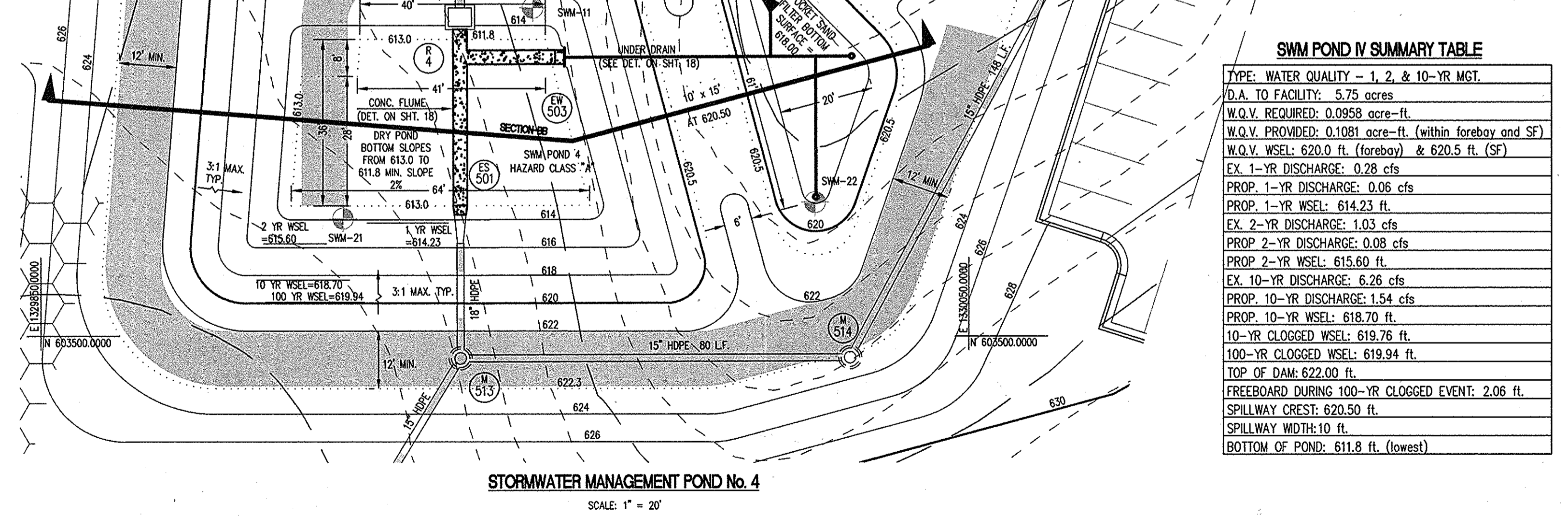
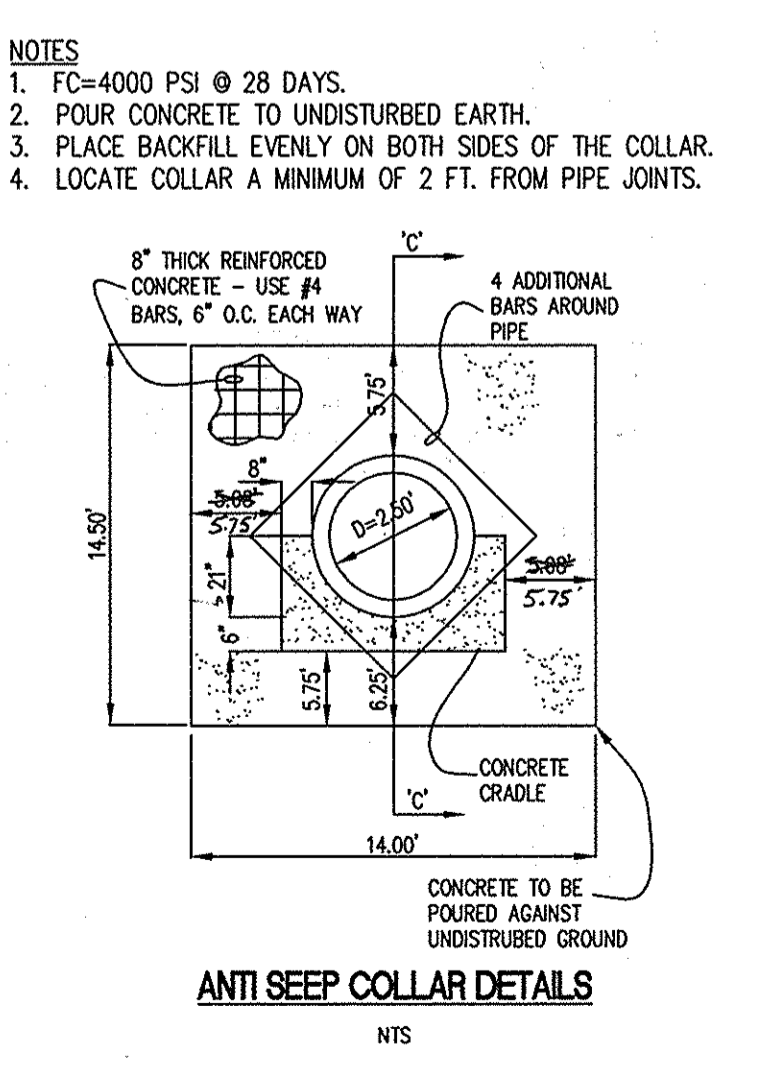
Doug Brantley, M.D., F.S. 1-15-04
 County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark A. Lynch 7/4/03
 Director DATE

Cindy Hamilton 7/6/03
 Chief, Division of Land Development DATE

[Signature] 8-7-03
 Chief, Development Engineering Division DATE



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

00177\SDP-03-33\SWM4.dwg DES. DRN. CHK.

DATE	DESCRIPTION	BY	APP'R.
6-20-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

REVISION

PREPARED FOR:

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: JANE BOON
 TEL: 301-261-8700

REVISED SITE DEVELOPMENT PLAN

WEST-FRIENDSHIP ELECTION DISTRICT No. 3

STORMWATER MANAGEMENT DETAILS (POND #4)

MAR 21 2003 8:10 AM
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 161118 (PARCEL 1) and 161367 (PARCEL 2A)

SCALE: AS NOTED
 ZONING: RR-DEO
 G. L. W. FILE No.: 00-177

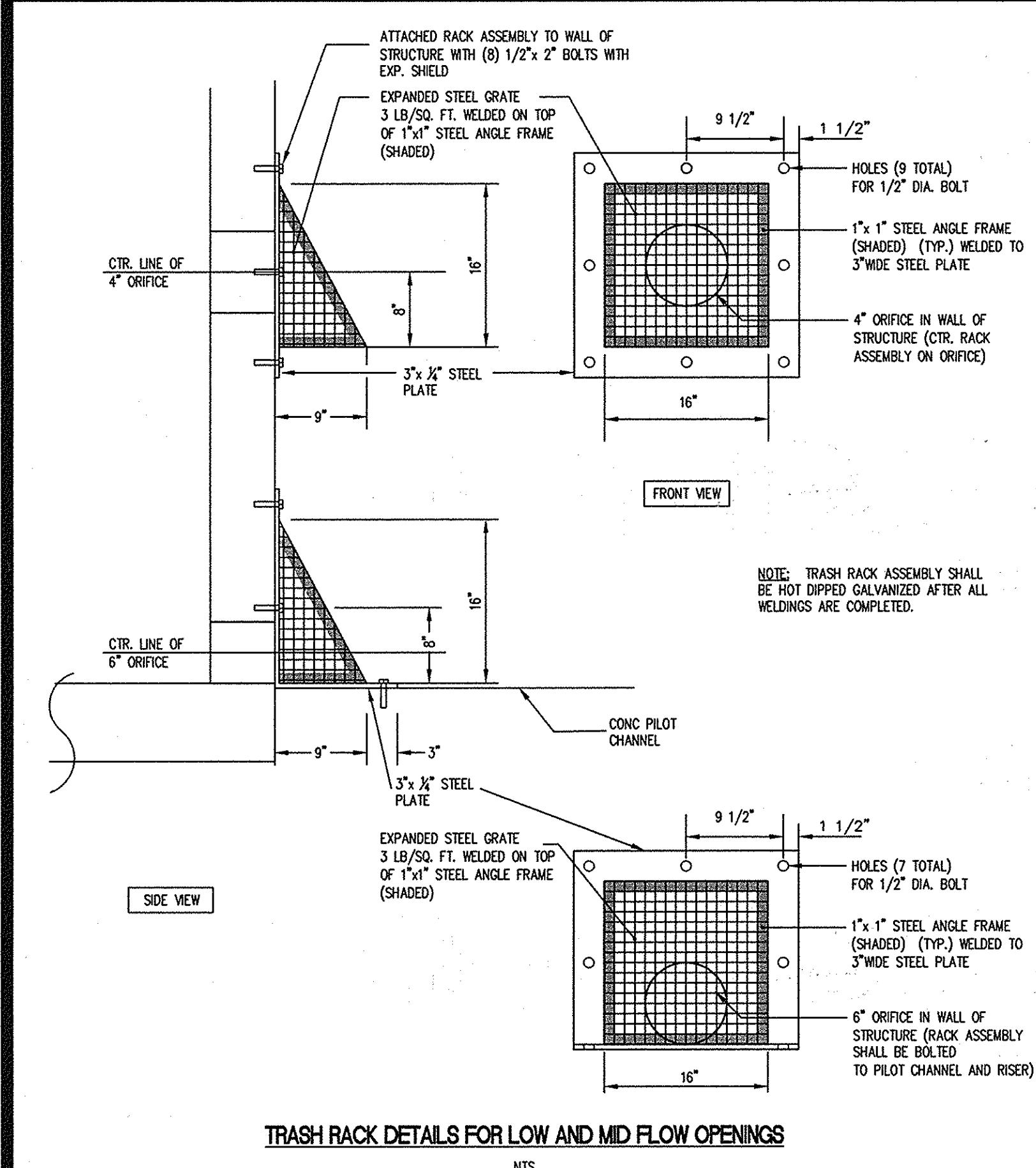
DATE: 28/JUL/03
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 SHEET: 17 of 40

HOWARD COUNTY, MARYLAND

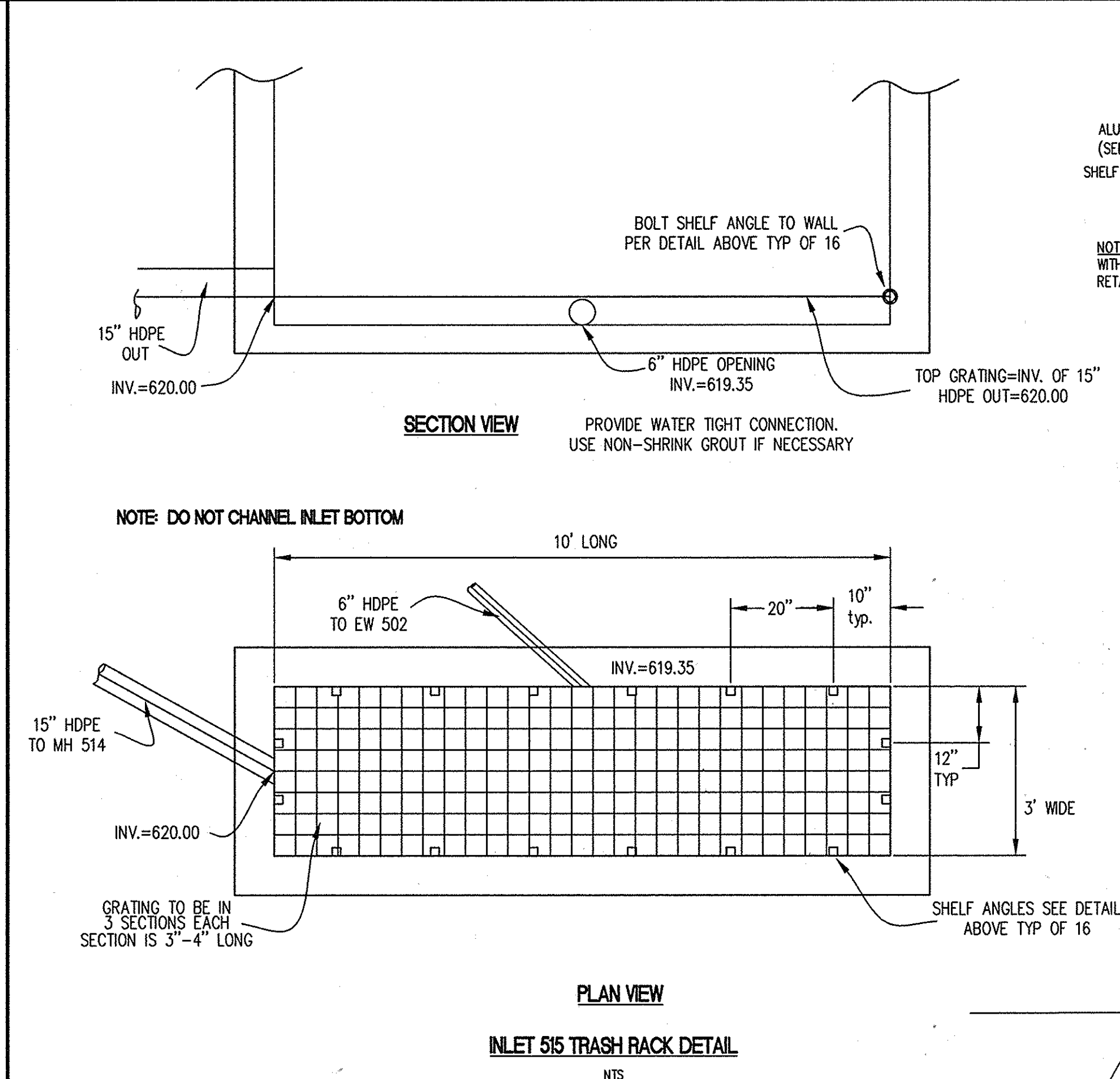
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 G. L. W. FILE No.: 00-177

DATE: 28/JUL/03
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 SHEET: 17 of 40

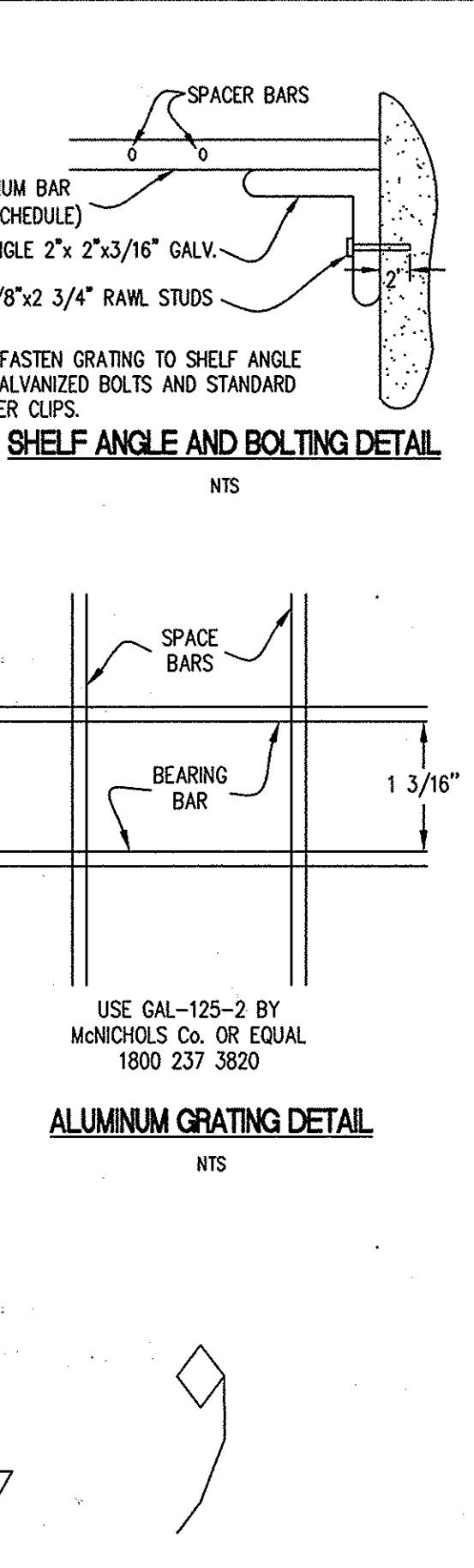
HOWARD COUNTY, MARYLAND



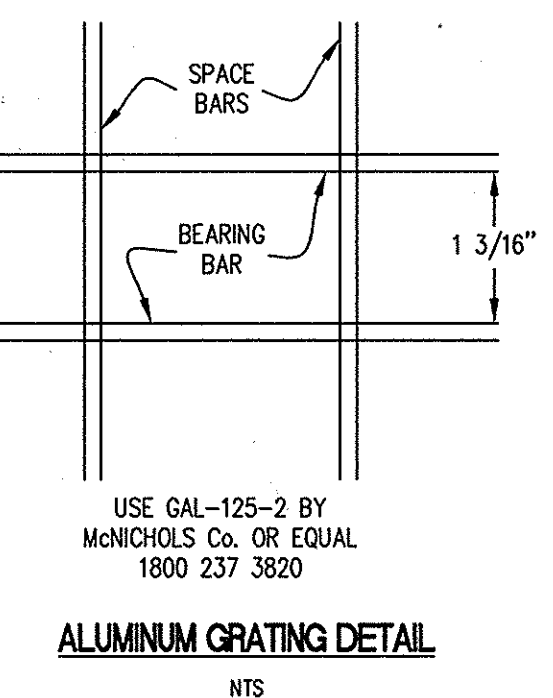
TRASH RACK DETAILS FOR LOW AND MID FLOW OPENINGS



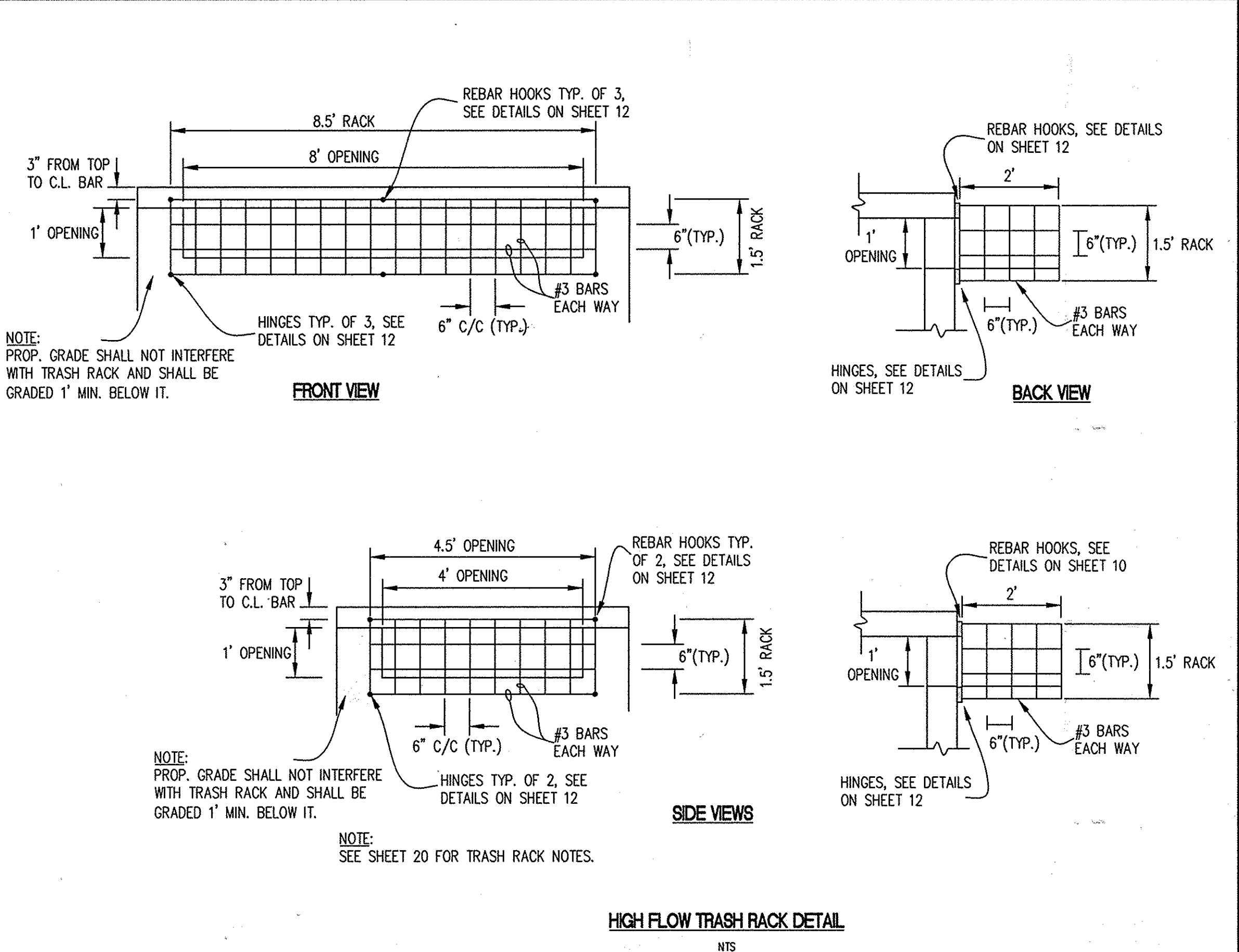
INLET 515 TRASH RACK DETAIL



SHelf ANGLE AND BOLTING DETAIL



ALUMINUM GRATING DETAIL



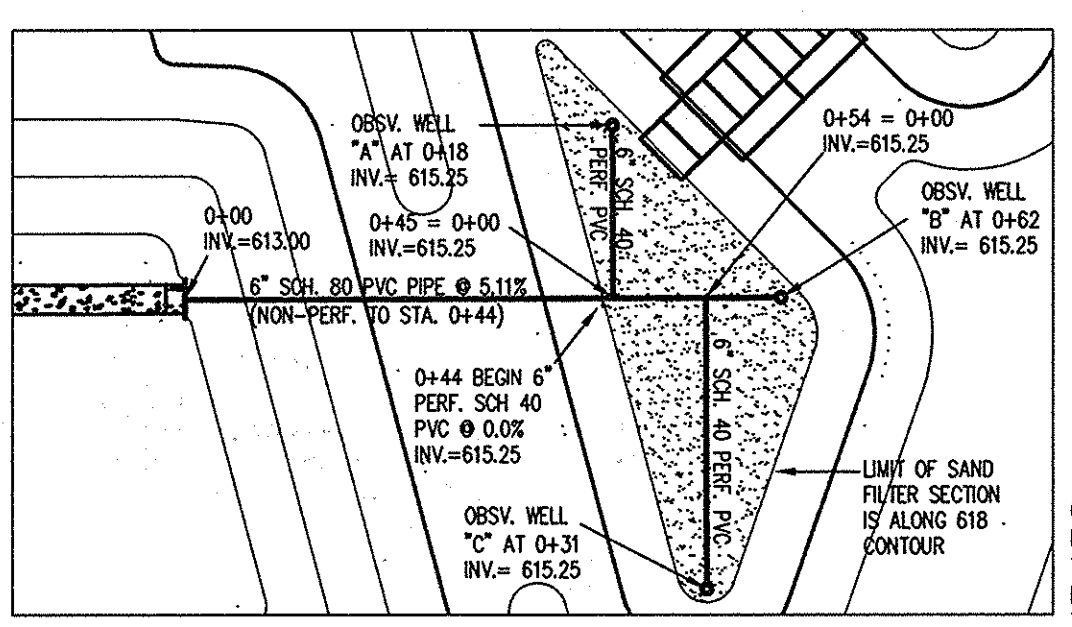
HIGH FLOW TRASH RACK DETAIL

DEVELOPERS/BUILDERS CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conley Young 7/31/03
 SIGNATURE OF DEVELOPER/BUILDER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

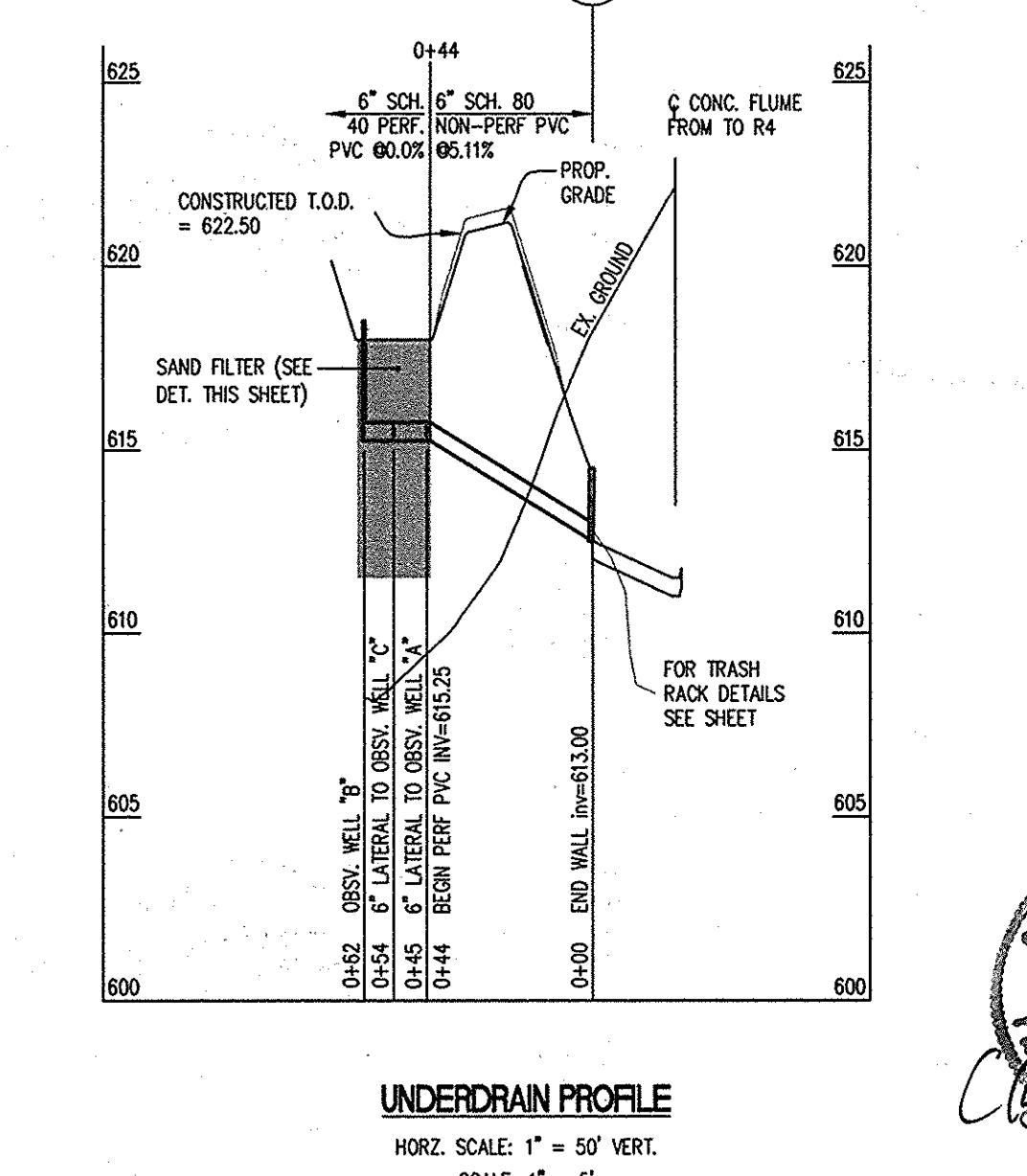
[Signature] 7/30/03
 ENGINEER'S SIGNATURE



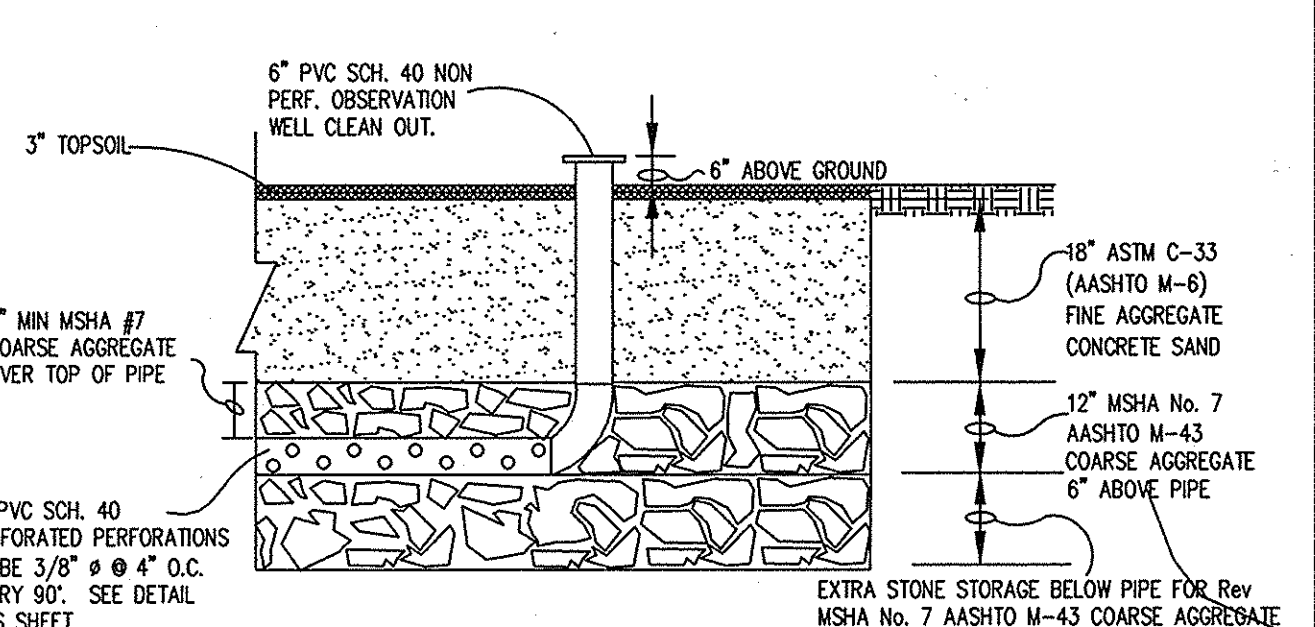
UNDERDRAIN LAYOUT

UNDERDRAIN SYSTEM PIPE SCHEDULE

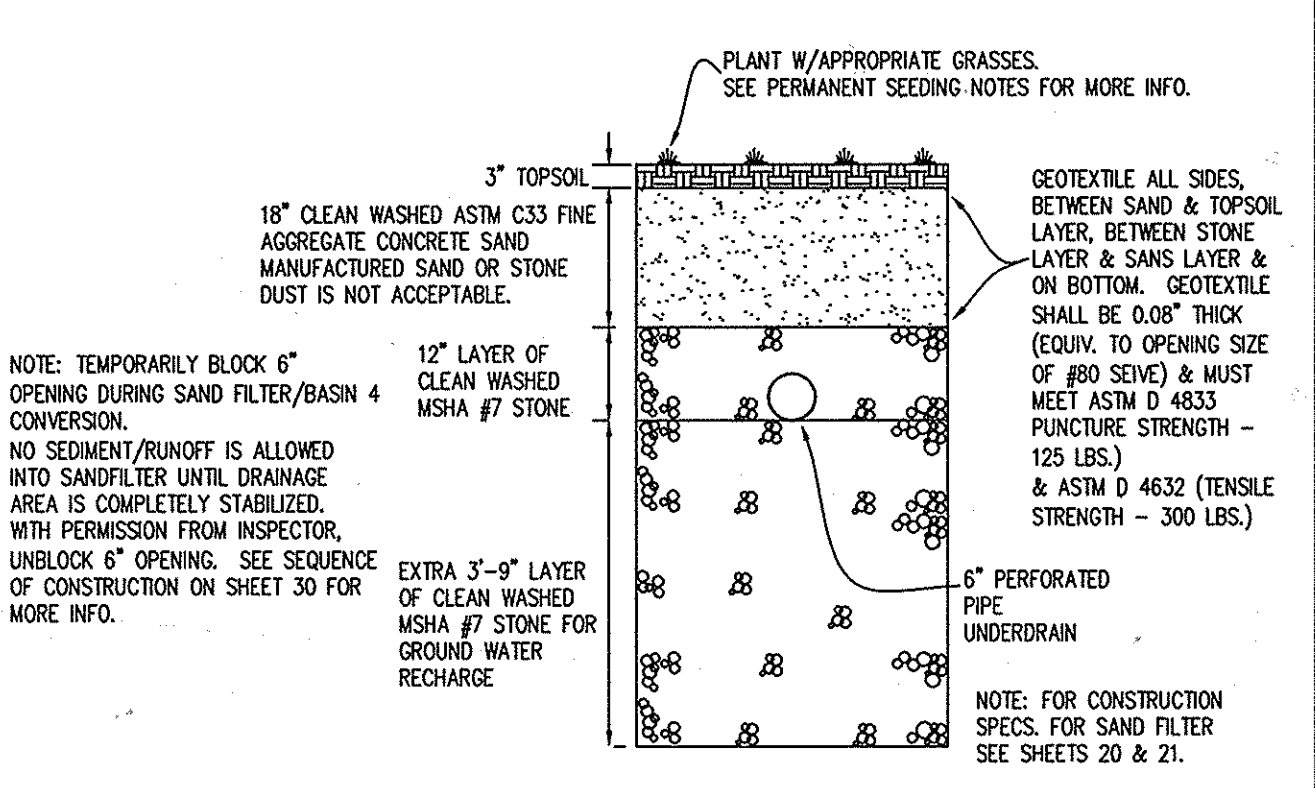
44 LF OF SCH. 80 NON-PERFORATED 6\"/>
67 LF OF SCH. 40 PERFORATED 6\"/>



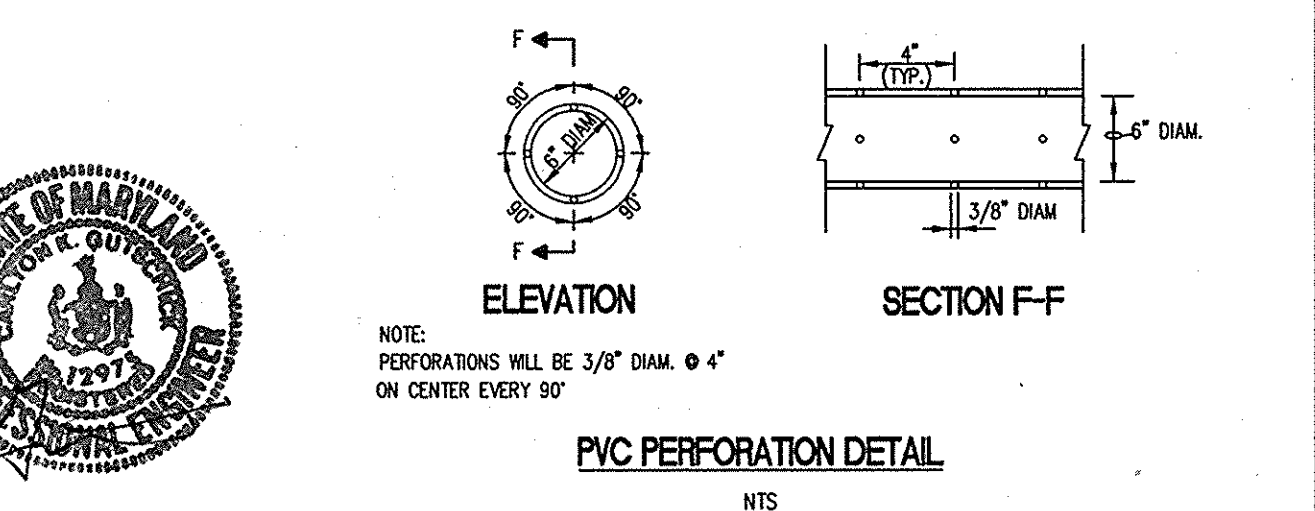
UNDERDRAIN PROFILE



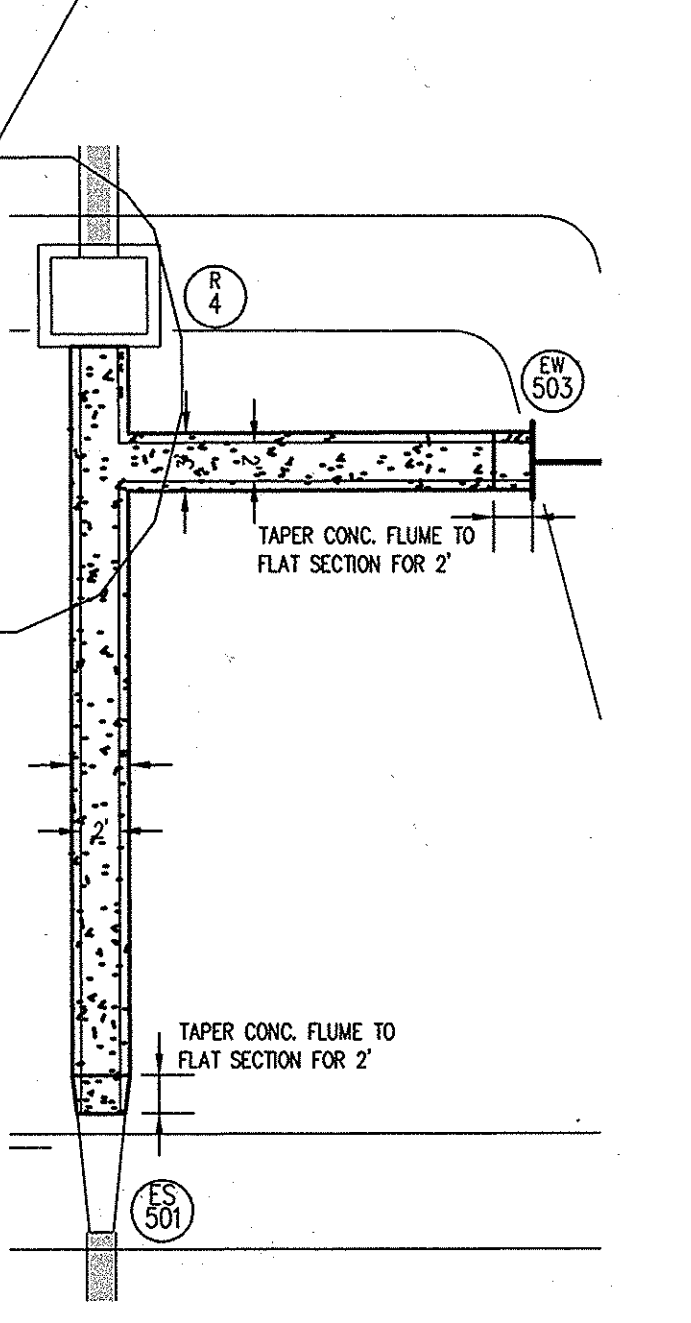
OBSERVATION WELL/CLEANOUT DETAIL



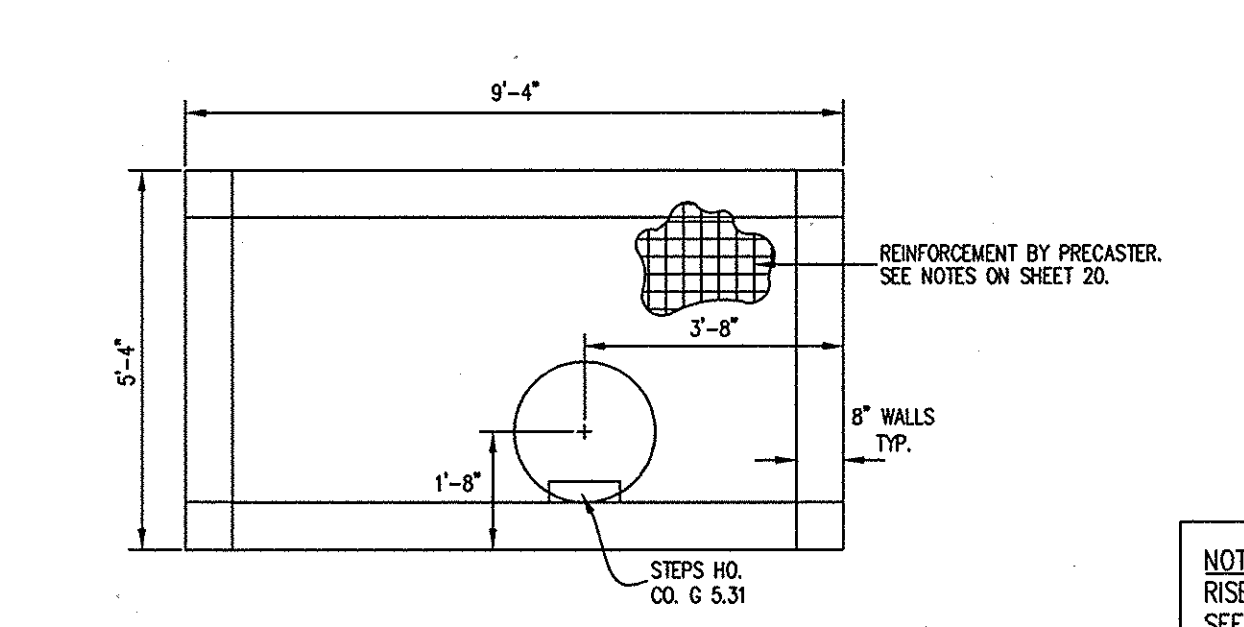
POCKET SAND FILTER SECTION



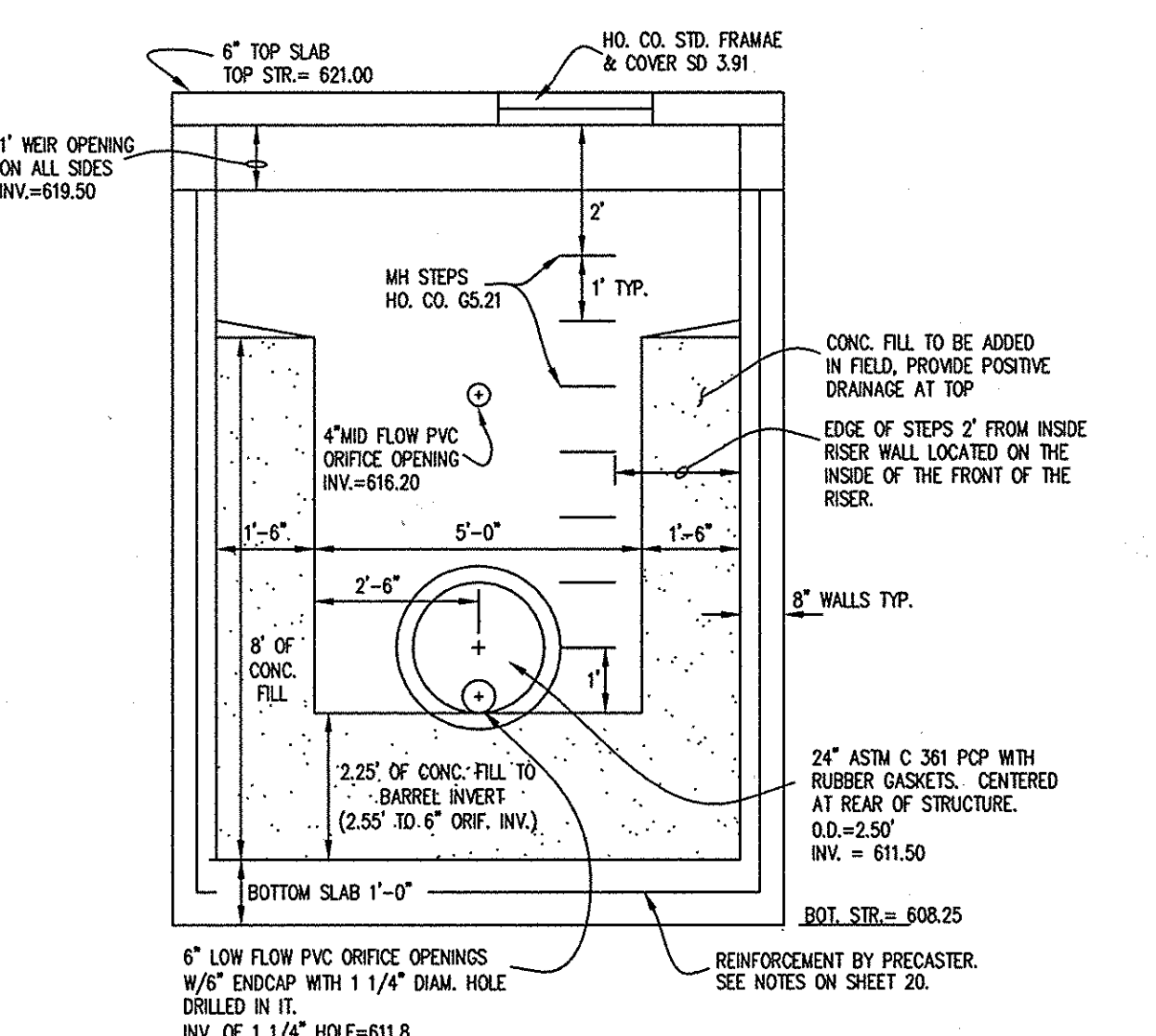
PVC PERFORATION DETAIL



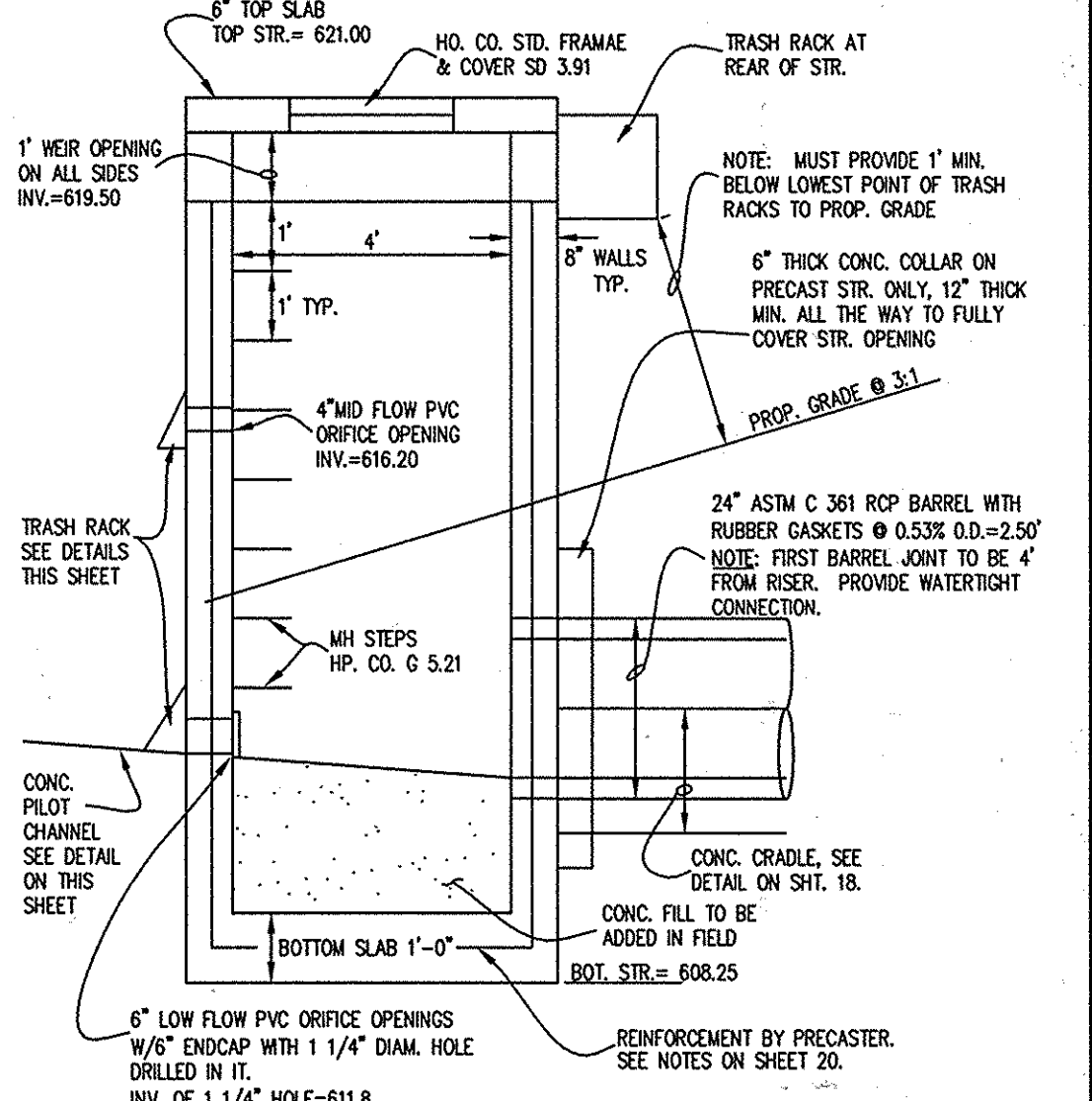
CONCRETE FLUME DETAIL



TOP SLAB R-4



FRONT VIEW OF R-4



CROSS SECTION OF R-4

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/14/03
 HOWARD SOIL CONSERVATION DISTRICT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 8/14/03
 USA - NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 1.15.07
 County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 9/4/03
 Director

[Signature] 9/6/03
 Chief, Division of Land Development

[Signature] 8-27-03
 Chief, Development Engineering Division

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4188

00177\SDP-03-33\SWM4.dwg

DATE	REVISION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DM	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELLICOTT CITY, MD 21043
 ATTN: CATHLEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

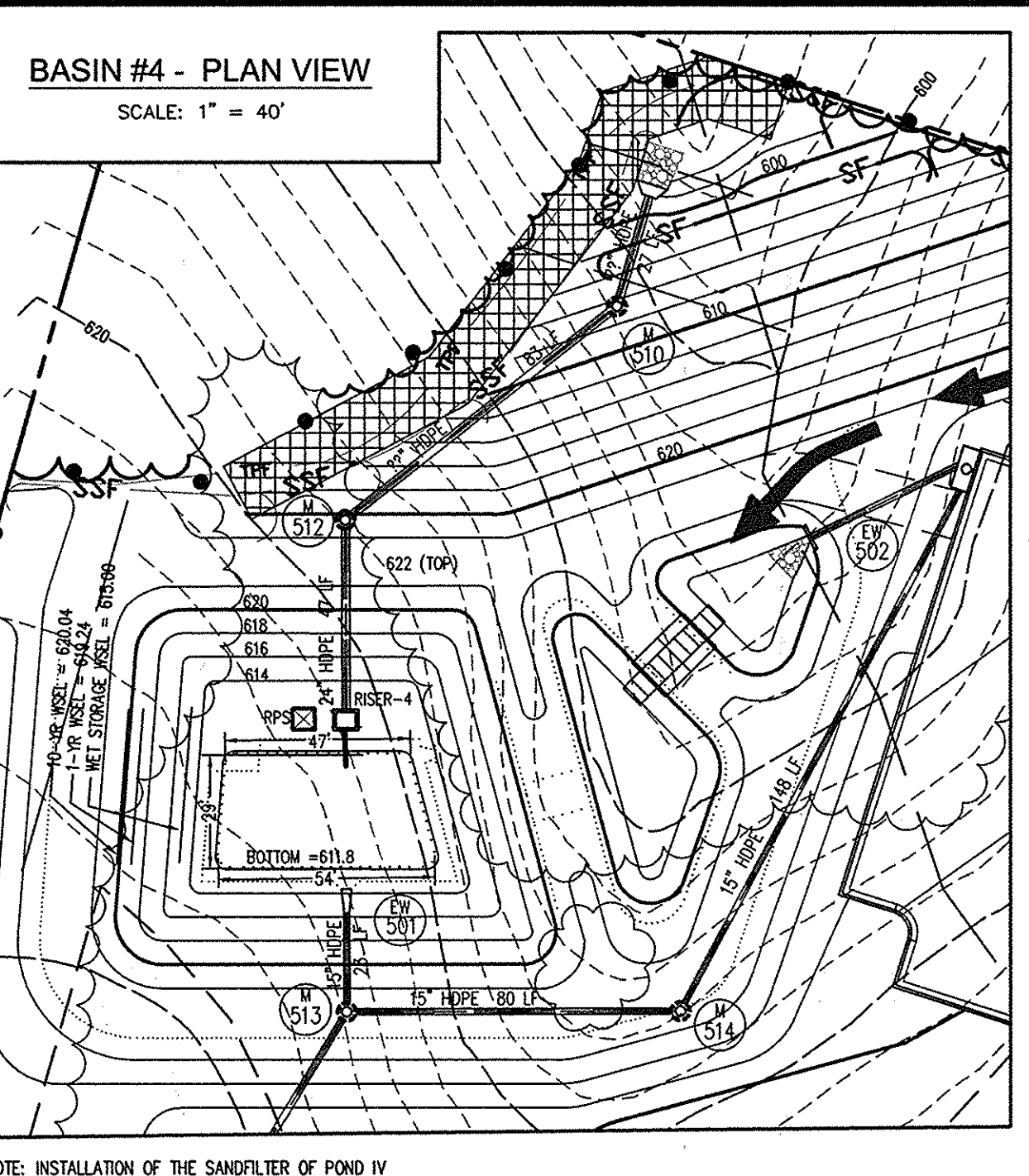
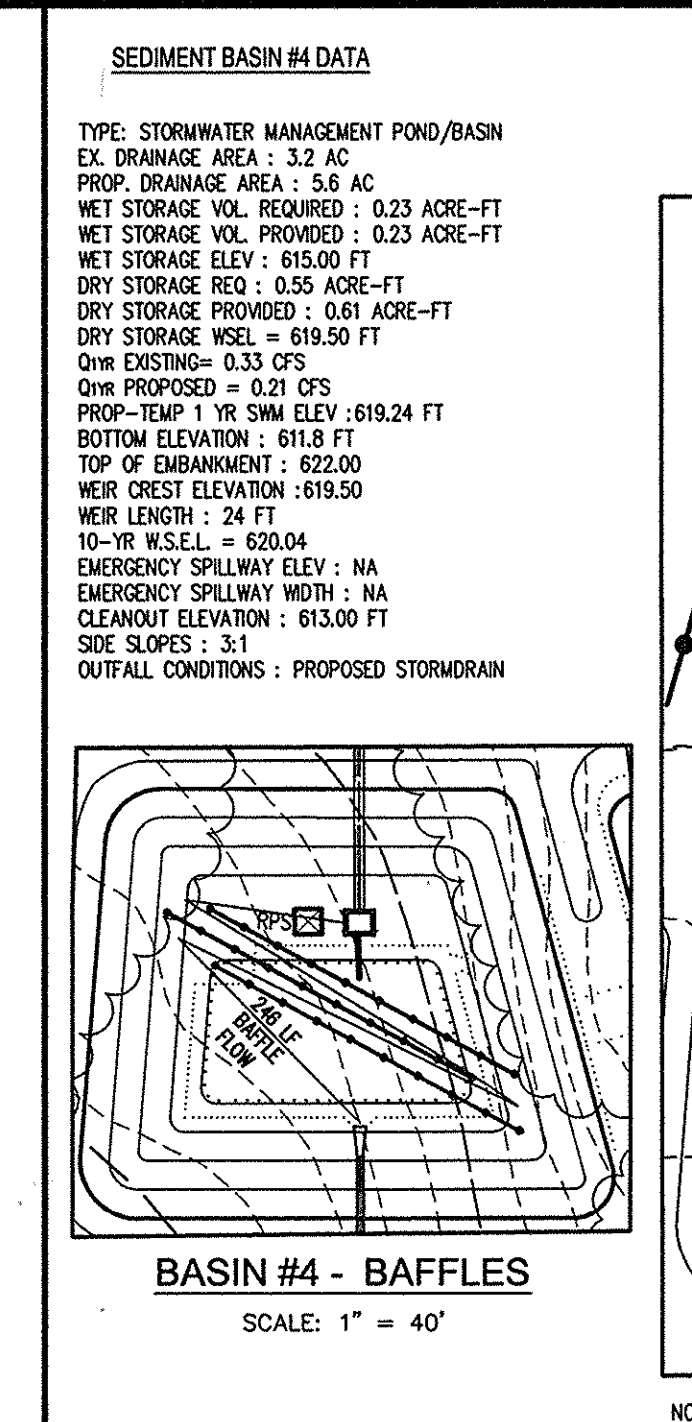
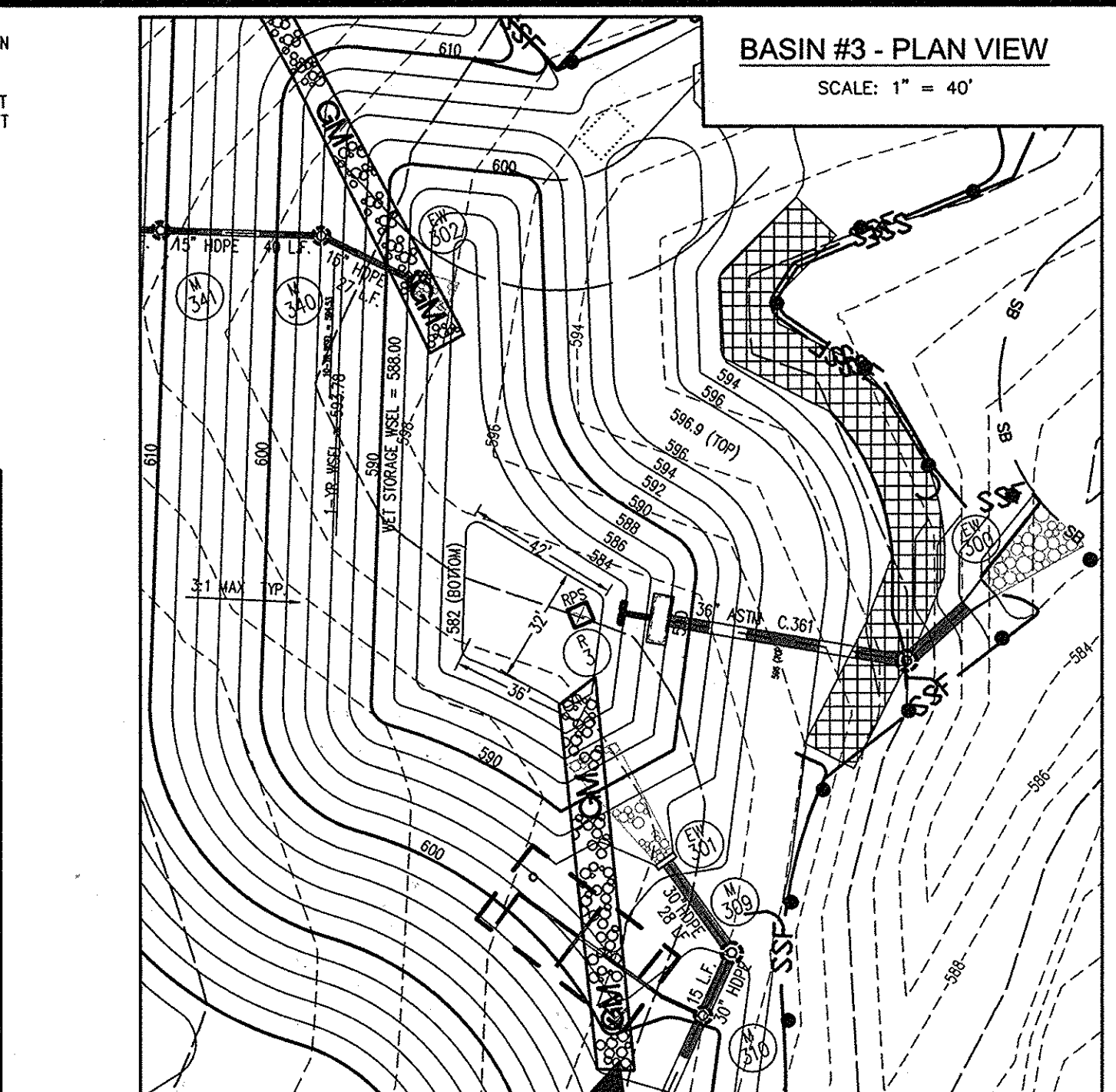
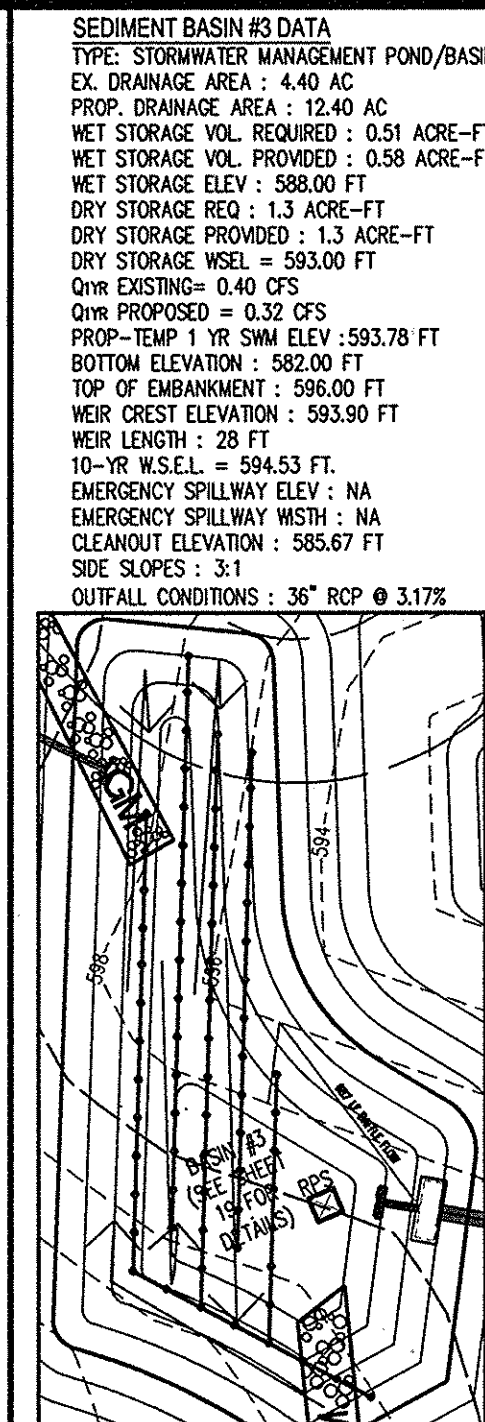
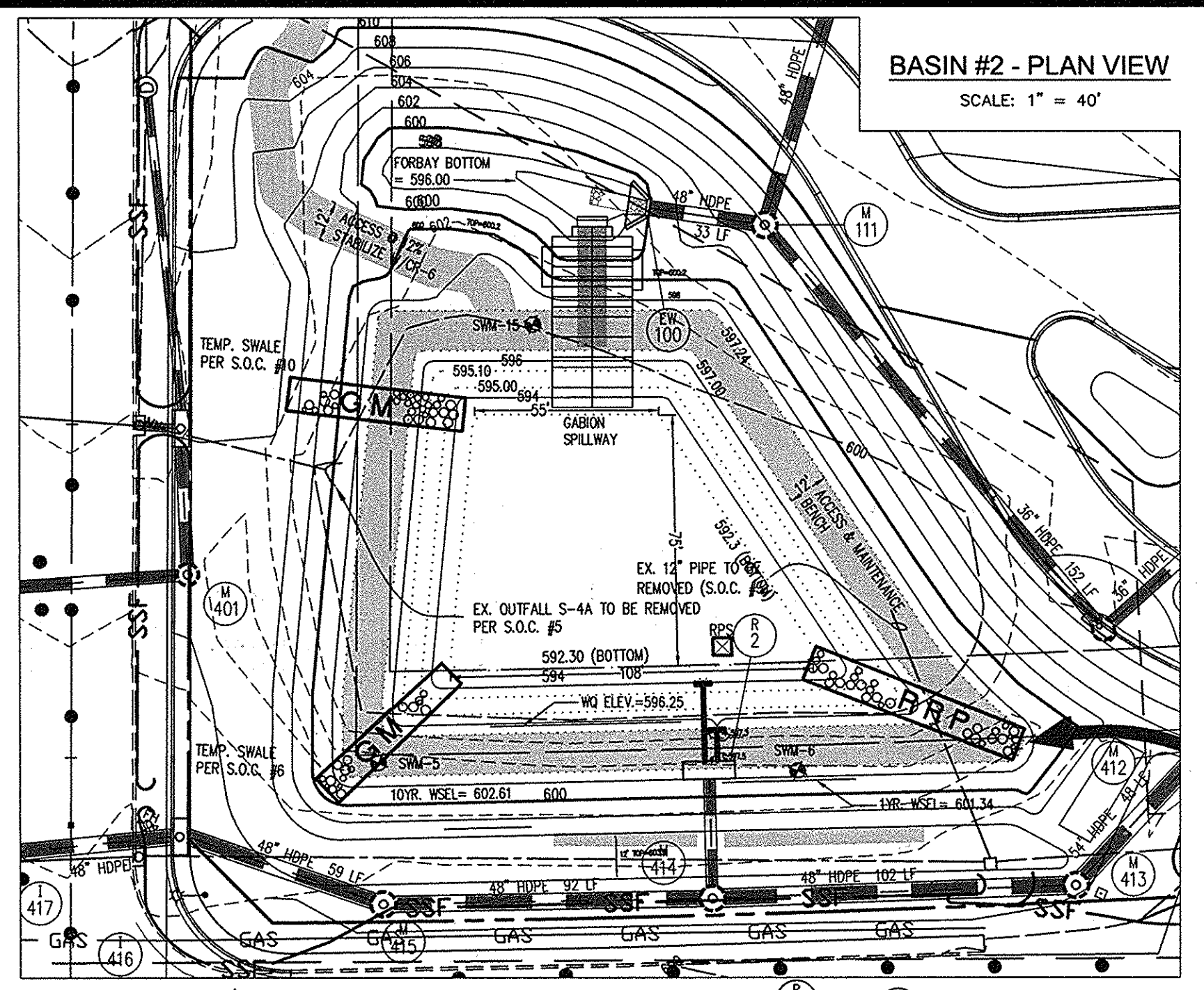
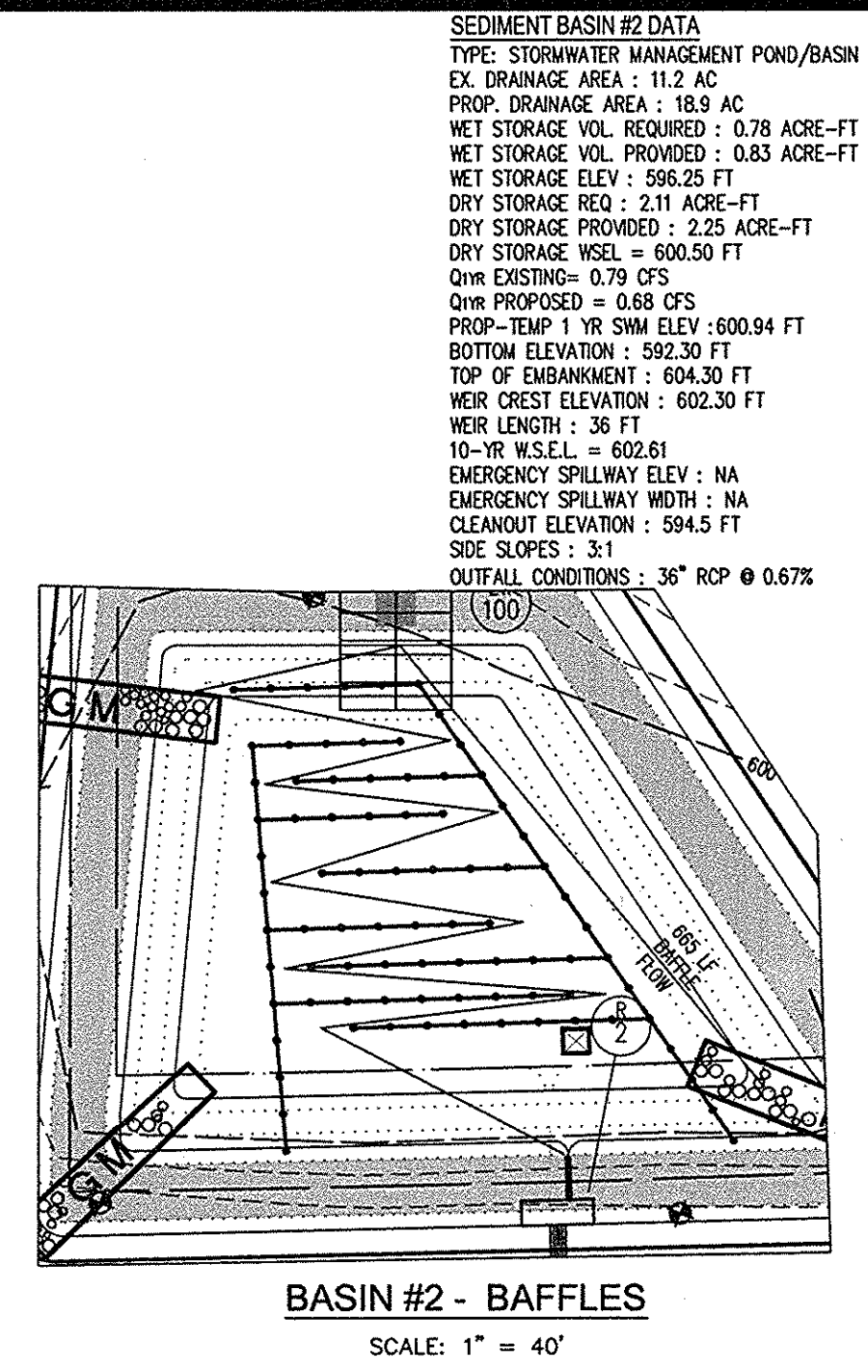
STORMWATER MANAGEMENT DETAILS (POND #4)

NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 161112 (PARCEL 1) and 161362 (PARCEL 2A)

SCALE: AS NOTED
 ZONING: RR-DEO
 DATE: 28/JUL/03
 TAX MAP - GRID: 10 19
 SHEET: 18 of 48

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS NOTED	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	18 of 48



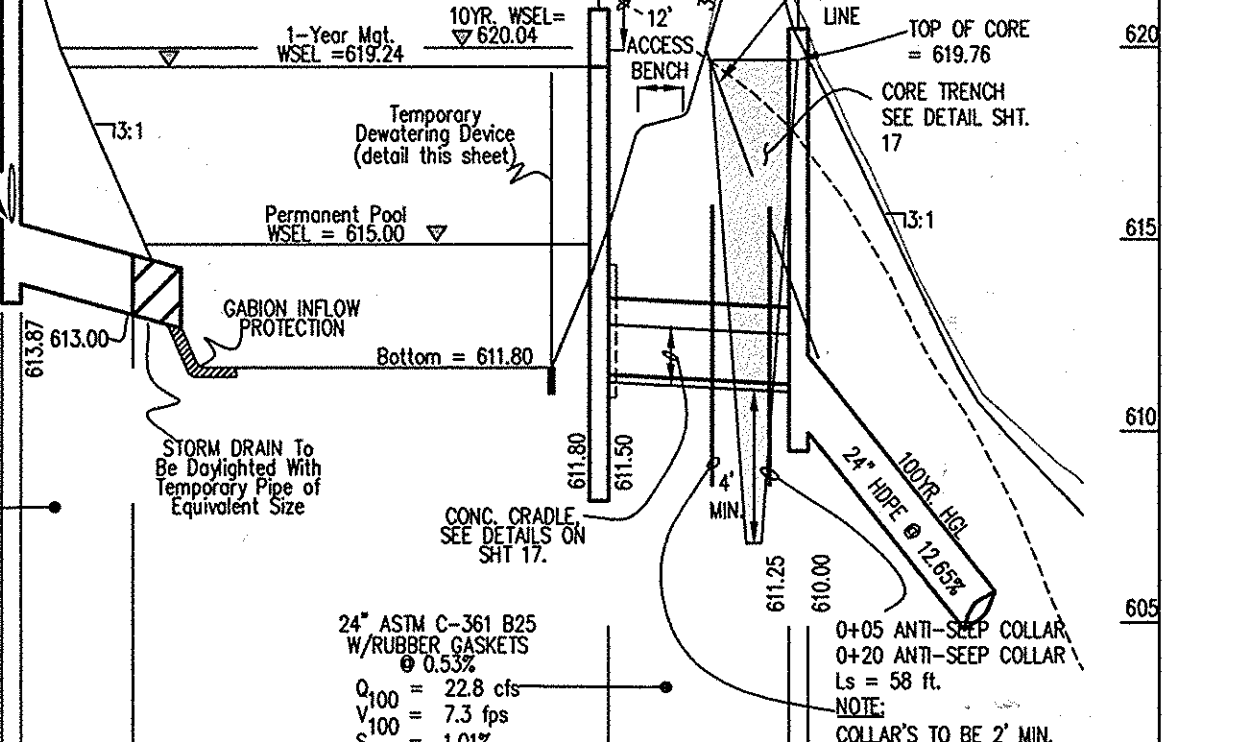
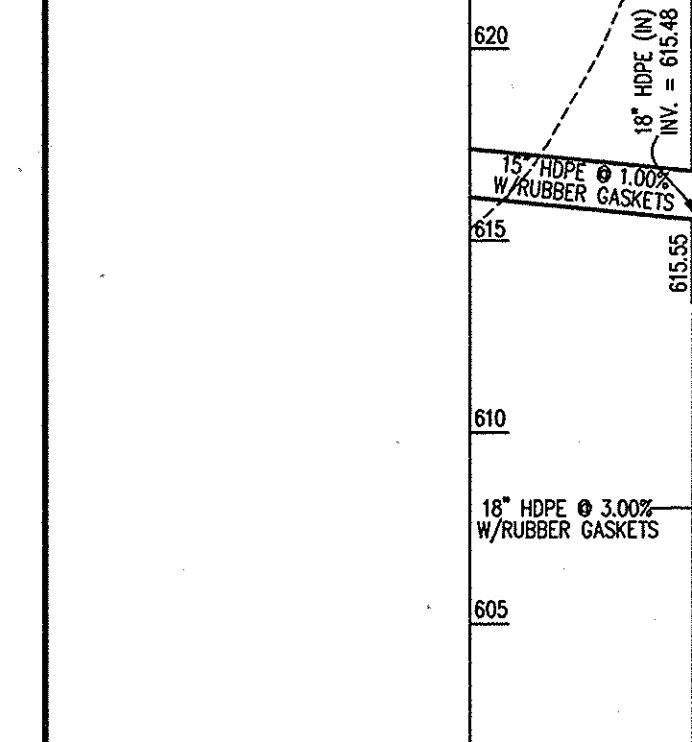
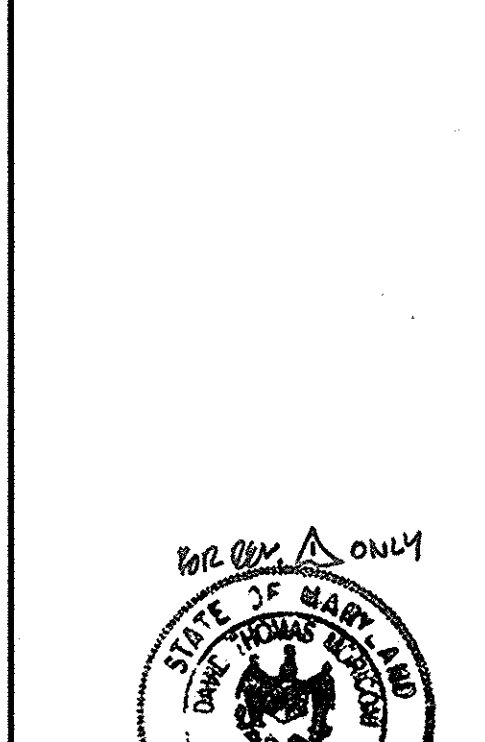
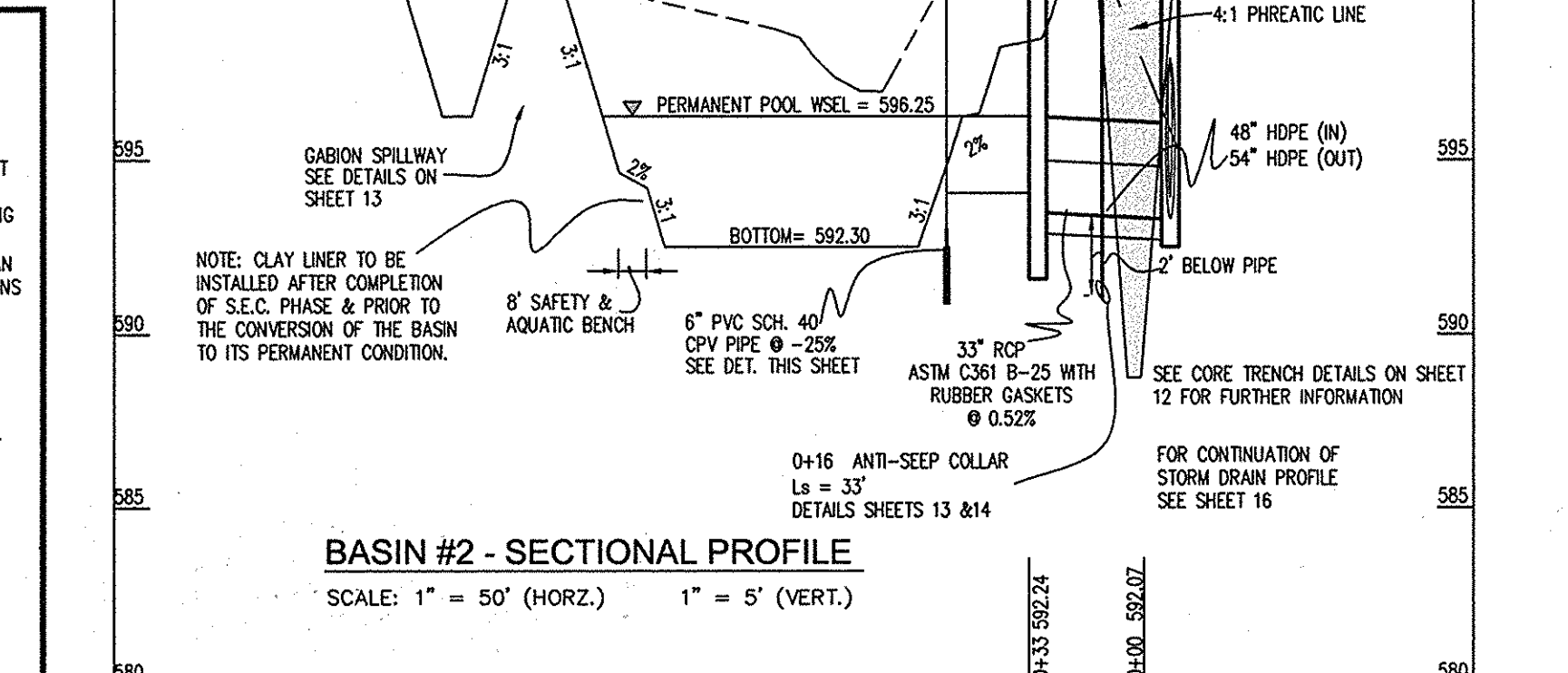
SEDIMENT BASIN #2 DATA
 TYPE: STORMWATER MANAGEMENT POND/BASIN
 EX. DRAINAGE AREA: 11.2 AC
 PROP. DRAINAGE AREA: 18.9 AC
 WET STORAGE VOL. REQUIRED: 0.78 ACRE-FT
 WET STORAGE VOL. PROVIDED: 0.83 ACRE-FT
 WET STORAGE ELEV.: 596.25 FT
 DRY STORAGE REQ.: 2.11 ACRE-FT
 DRY STORAGE PROVIDED: 2.25 ACRE-FT
 DRY STORAGE WSEL = 600.50 FT
 Q₁₀ EXISTING = 0.79 CFS
 Q₁₀ PROPOSED = 0.88 CFS
 PROP. TEMP. 1 YR SWM ELEV.: 600.94 FT
 BOTTOM ELEVATION: 592.30 FT
 TOP OF EMBANKMENT: 604.30 FT
 WEIR CREST ELEVATION: 602.30 FT
 WEIR LENGTH: 36 FT
 10-YR W.S.E.L. = 602.61
 EMERGENCY SPILLWAY ELEV.: NA
 EMERGENCY SPILLWAY WIDTH: NA
 CLEANOUT ELEVATION: 594.5 FT
 SIDE SLOPES: 3:1
 OUTFALL CONDITIONS: 36" RCP @ 0.67%

SEDIMENT BASIN #3 DATA
 TYPE: STORMWATER MANAGEMENT POND/BASIN
 EX. DRAINAGE AREA: 4.40 AC
 PROP. DRAINAGE AREA: 12.40 AC
 WET STORAGE VOL. REQUIRED: 0.51 ACRE-FT
 WET STORAGE VOL. PROVIDED: 0.58 ACRE-FT
 WET STORAGE ELEV.: 588.00 FT
 DRY STORAGE REQ.: 1.3 ACRE-FT
 DRY STORAGE PROVIDED: 1.3 ACRE-FT
 DRY STORAGE WSEL = 593.03 FT
 Q₁₀ EXISTING = 0.40 CFS
 Q₁₀ PROPOSED = 0.32 CFS
 PROP. TEMP. 1 YR SWM ELEV.: 593.78 FT
 BOTTOM ELEVATION: 582.00 FT
 TOP OF EMBANKMENT: 596.00 FT
 WEIR CREST ELEVATION: 593.50 FT
 WEIR LENGTH: 28 FT
 10-YR W.S.E.L. = 594.53 FT
 EMERGENCY SPILLWAY ELEV.: NA
 EMERGENCY SPILLWAY WIDTH: NA
 CLEANOUT ELEVATION: 585.67 FT
 SIDE SLOPES: 3:1
 OUTFALL CONDITIONS: 36" RCP @ 3.17%

SEDIMENT BASIN #4 DATA
 TYPE: STORMWATER MANAGEMENT POND/BASIN
 EX. DRAINAGE AREA: 3.2 AC
 PROP. DRAINAGE AREA: 5.6 AC
 WET STORAGE VOL. REQUIRED: 0.23 ACRE-FT
 WET STORAGE VOL. PROVIDED: 0.23 ACRE-FT
 WET STORAGE ELEV.: 615.00 FT
 DRY STORAGE REQ.: 0.55 ACRE-FT
 DRY STORAGE PROVIDED: 0.61 ACRE-FT
 DRY STORAGE WSEL = 619.50 FT
 WEIR LENGTH: 24 FT
 Q₁₀ EXISTING = 0.33 CFS
 Q₁₀ PROPOSED = 0.21 CFS
 PROP. TEMP. 1 YR SWM ELEV.: 619.24 FT
 BOTTOM ELEVATION: 611.8 FT
 TOP OF EMBANKMENT: 622.00 FT
 WEIR CREST ELEVATION: 619.50 FT
 WEIR LENGTH: 24 FT
 10-YR W.S.E.L. = 620.04
 EMERGENCY SPILLWAY ELEV.: NA
 EMERGENCY SPILLWAY WIDTH: NA
 CLEANOUT ELEVATION: 613.00 FT
 SIDE SLOPES: 3:1
 OUTFALL CONDITIONS: PROPOSED STORMDRAIN

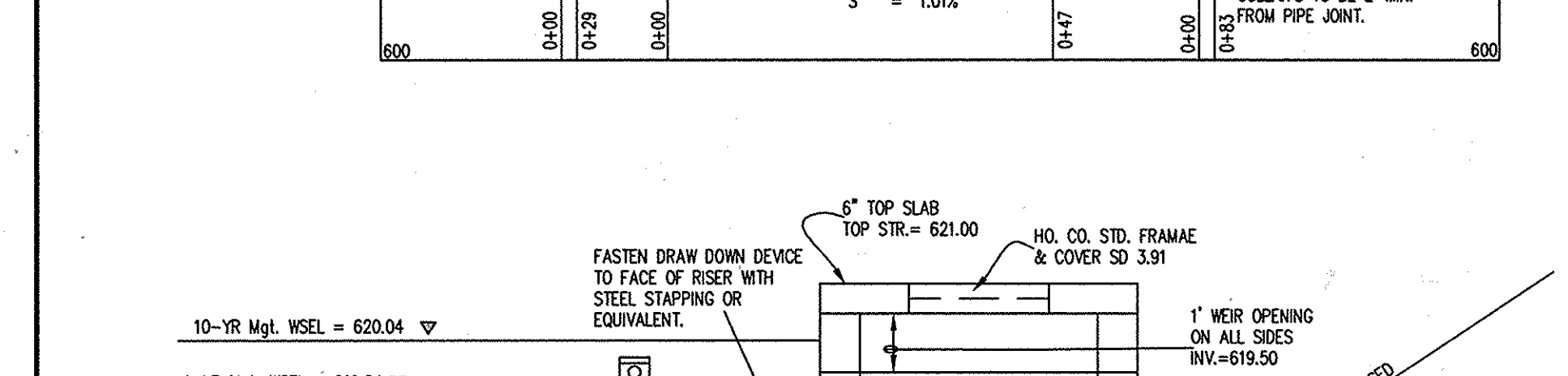
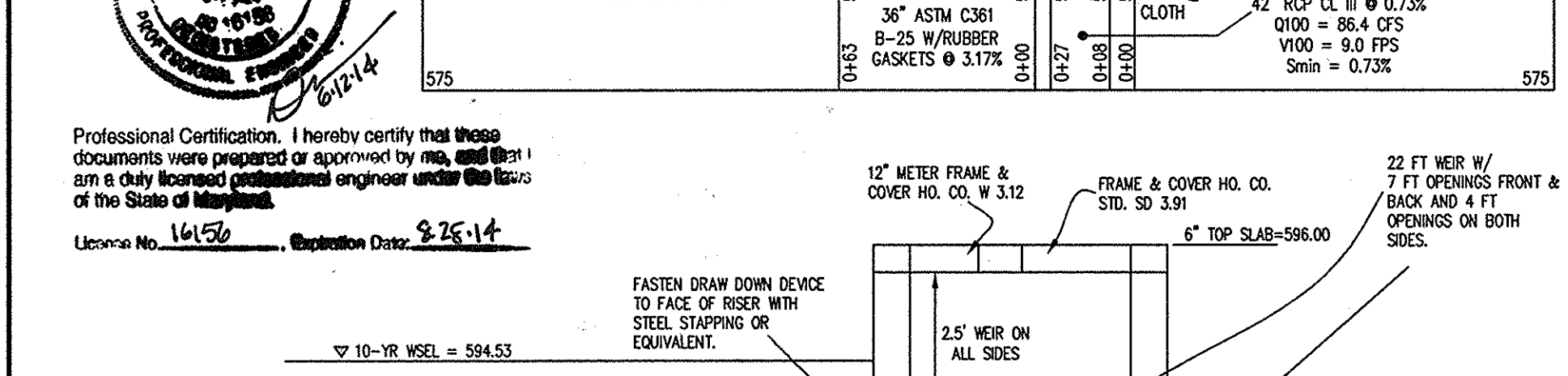
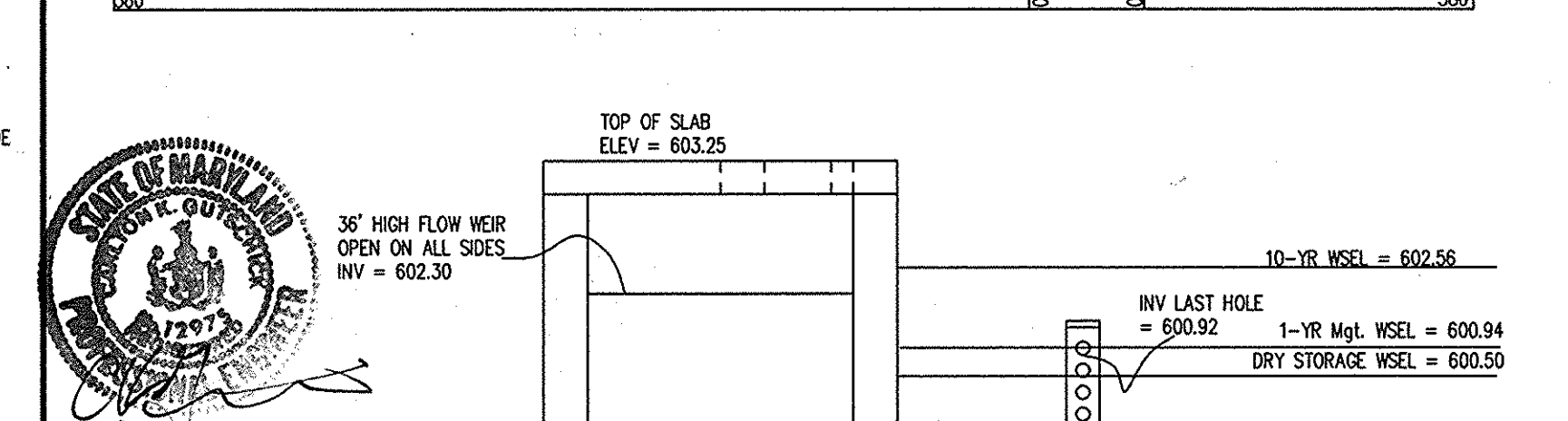
DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Young 7/21/03
 SIGNATURE OF DEVELOPER/BUILDER DATE



ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CLW 7/30/03
 ENGINEER'S SIGNATURE DATE



THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Shawn Adams 8/14/03
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

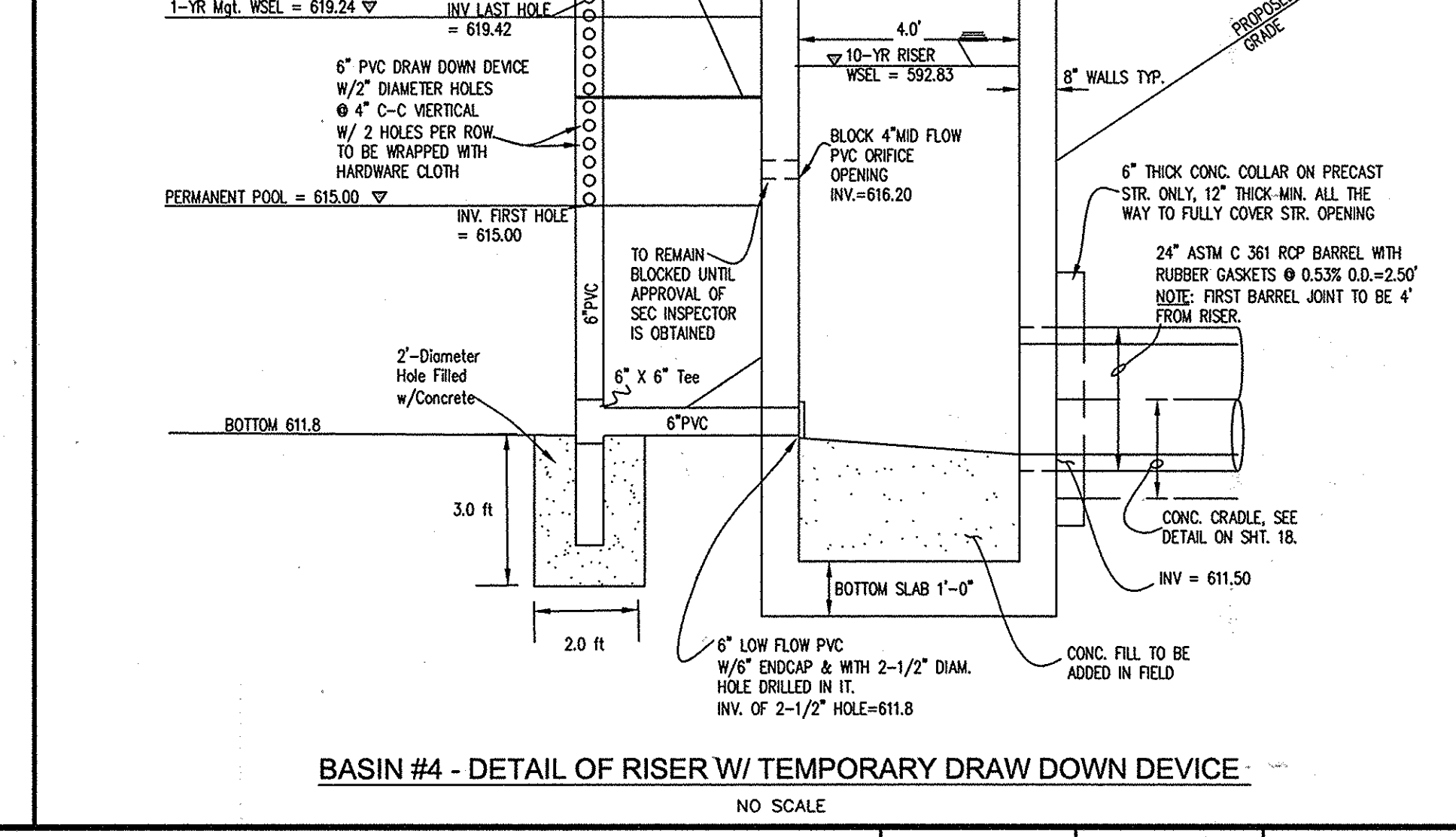
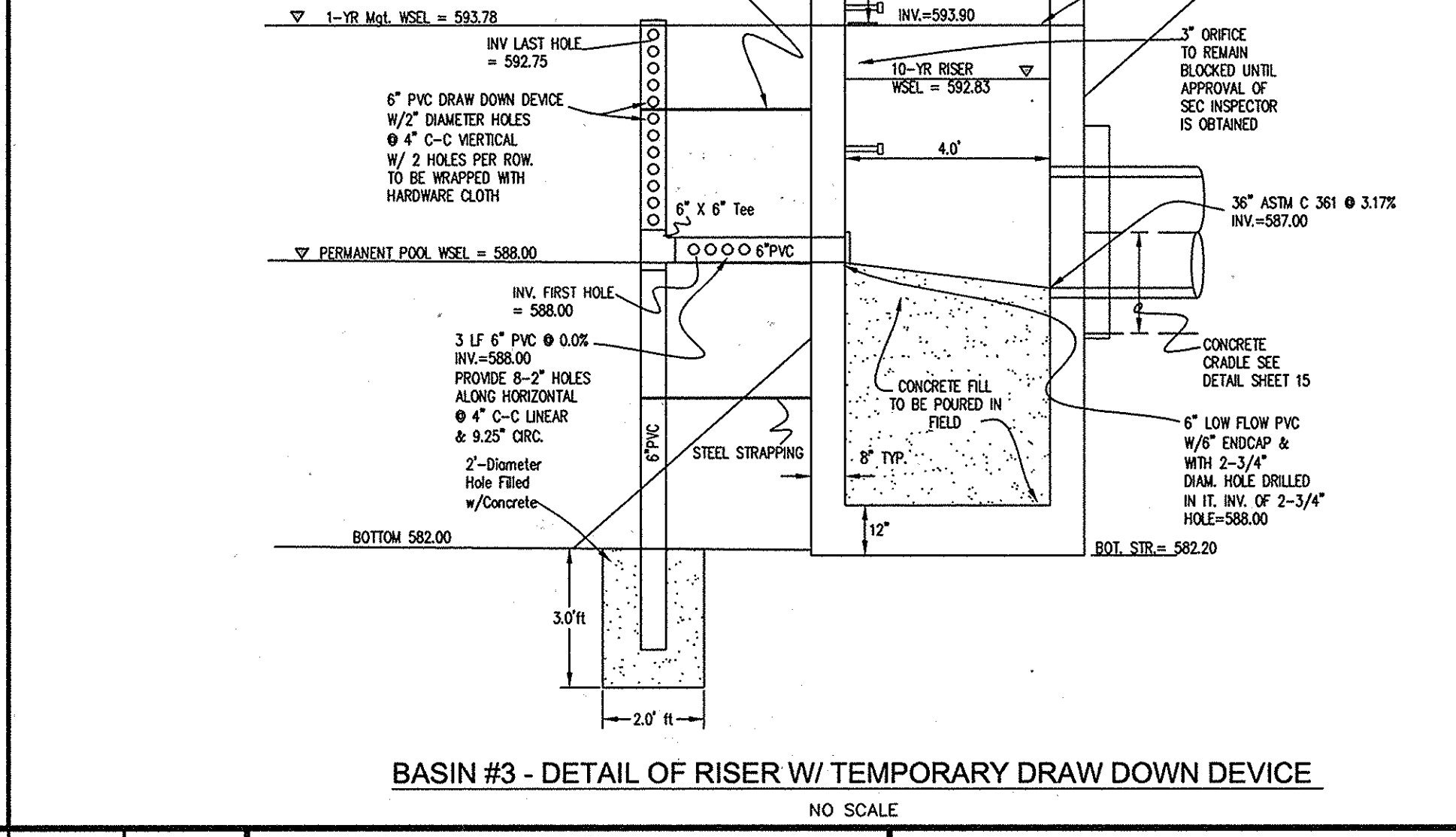
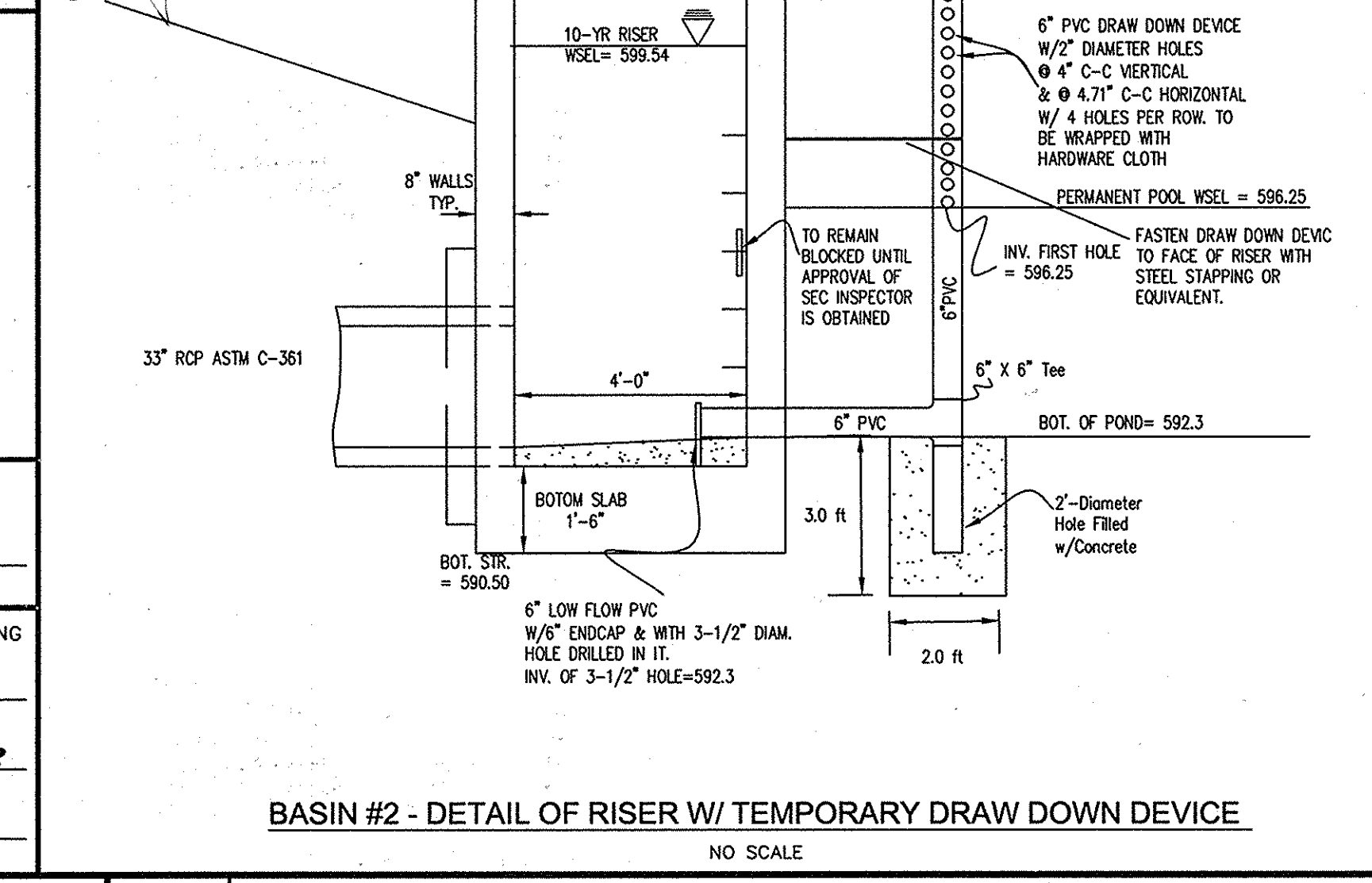
Jim Mervin 8/16/03
 USDA NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
Dennis Donohue 7-15-04
 County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Frank K. Ogden 9/2/03
 Director DATE

Linda Hamilton 9/2/03
 Chief, Division of Land Development DATE

Chief, Development Engineering Division



CLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4188

DATE	REVISION
11-14	UPDATED SCHOOL NAME & SHEET TOTAL

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2661 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: NAVE BOON
 TEL: 301-261-8700

PREPARED FOR: STORMWATER MANAGEMENT DETAILS (TEMPORARY CONDITION)

REVISED SITE DEVELOPMENT PLAN

WEST FRIENDSHIP ELECTION DISTRICT No. 3

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRD	SHEET
28/JUL/03	10 19	19 of 48-58

SWM CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORK SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBSTRUCTIBLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE EDGE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBSTRUCTIBLE MATERIALS. A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBSTRUCTIBLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGN MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER. MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8-INCH THICK (FOR COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION. TREAD SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRE OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE. YET NOT SO WET THAT WATER CAN BE SQUEEZED OUT, WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 90% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD 1-99 (STANDARD PROCTOR).

CUT OFF TRENCH - THE CUT OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10-YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100-200 PSI, 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PI OF 4.0 AND A MINIMUM RESISTIVITY OF 200 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" OF FLOWABLE FILL PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER, AND ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS. AVERAGE SLUMP OF THE FILL SHALL BE 7" TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC) TO PREVENT FLOATING OF THE PIPE. WHEN USING FLOWABLE FILL, ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADJOINING SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL UNDER THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE

ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

1. MATERIALS - (POLYMER COATED STEEL PIPE) - STEEL PIPES WITH POLYMER COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (0.1 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-205 AS A 14-246 WITH WATERPROOF COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATERPROOF COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE, WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATERPROOF COUPLING BANDS OR FLANGES. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED STEEL MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC. MUST BE COMPOSED OF THE SAME MATERIAL AND COATINGS AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 2 MILS IN THICKNESS.

3. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATERTIGHT. GASKETS ARE NOT CONSIDERED TO BE WATERTIGHT. ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORUGATIONS TO ACCOMMODATE THE BANDWIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR 3/8 INCH CLOSED CELL NEOPRENE GASKET, PREPUNCHED TO THE FLANGE BOLT CIRCLE, SANDWICHED BETWEEN ADJACENT FLANGES; A 12-INCH WIDE STANDARD LAP TYPE BAND WITH 12-INCH WIDE BY 3/8-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET, AND A 12-INCH WIDE HUGGER TYPE BAND WITH 0-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2 INCH GREATER THAN THE CORRUGATION DEPTH. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) ROOFS AND LUGS, 2 ON EACH CONNECTING PIPE END. A 24-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WITH 12 INCHES ON THE END OF EACH PIPE. FLANGED JOINTS WITH 3/8 INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE FLANGE IS ALSO ACCEPTABLE. HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CHALKING OR A NEOPRENE BEAD.

4. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE

ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EXCEED ASTM C-361.

2. BEDDING - REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE

THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

1. MATERIALS - PVC PIPE SHALL BE PVC-1122 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4"-10" INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 TYPE S, AND 12" THROUGH 24" INCH SHALL MEET THE REQUIREMENTS OF AASHTO M294 TYPE S.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.

DRAINAGE DIAPHRAGMS - WHEN A DRAINAGE DIAPHRAGM IS USED, A REGISTERED PROFESSIONAL ENGINEER WILL SUPERVISE THE DESIGN AND CONSTRUCTION INSPECTION.

NOTE

FOR CONSTRUCTION SPECS REFER TO SWM POND FOR THE MIDDLE & HIGH SCHOOL POND/BASIN ONLY. REFER TO PROJECT SPECIFICATIONS FOR GRADING AND CONCRETE SPECIFICATIONS FOR THE REST OF THE SITE. ANY TREES, BRUSH, STUMPS AND GRUBBED MATERIAL CLEARED FOR THE SWM POND SHALL BE REMOVED FROM THIS SITE TO A LEGAL DUMP SITE.



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER PONDS

ROUTINE MAINTENANCE

- 1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
2. TOP AND SIDE SLOPE OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOVED AS NEEDED.
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. VISIBLE SIGN OF EROSION IN THE POND AS WELL AS THE RIP-RAP OR GABION OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

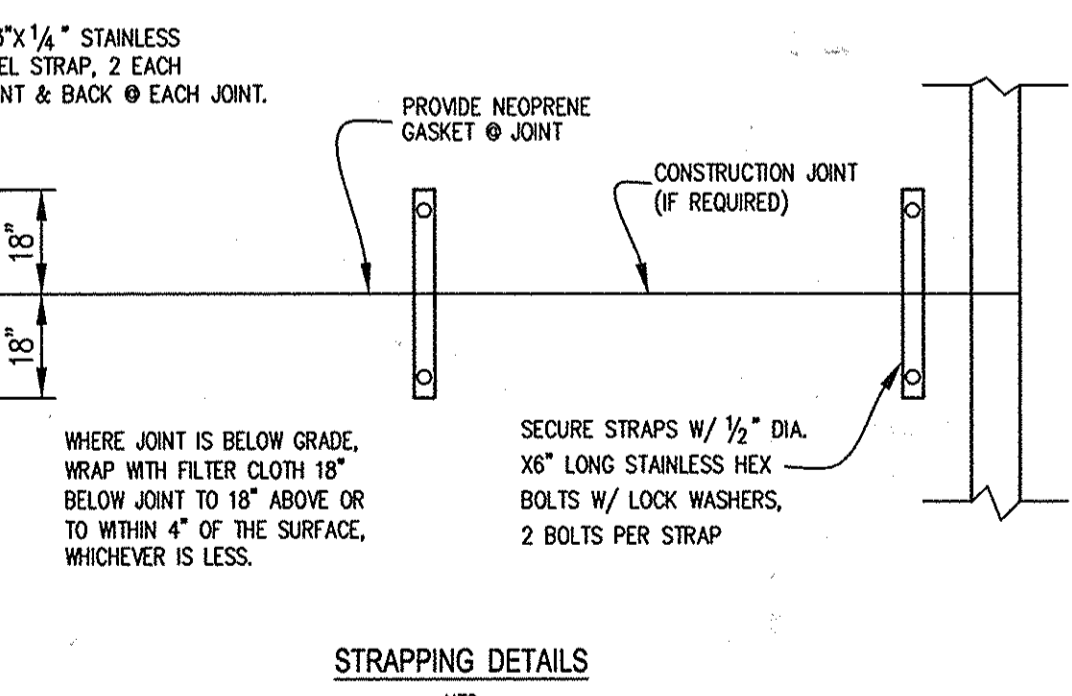
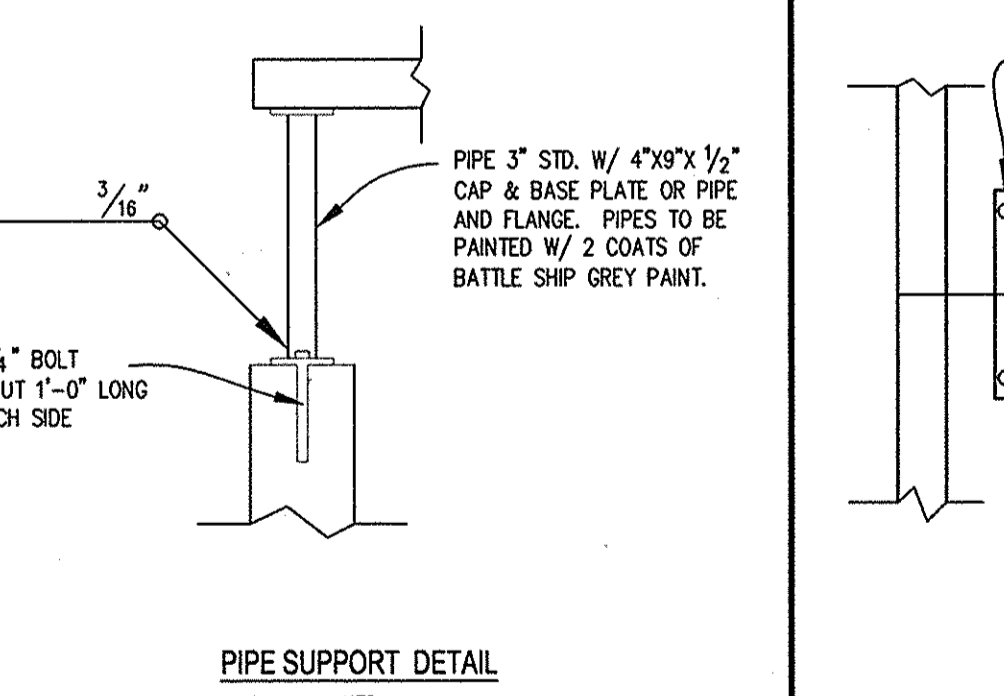
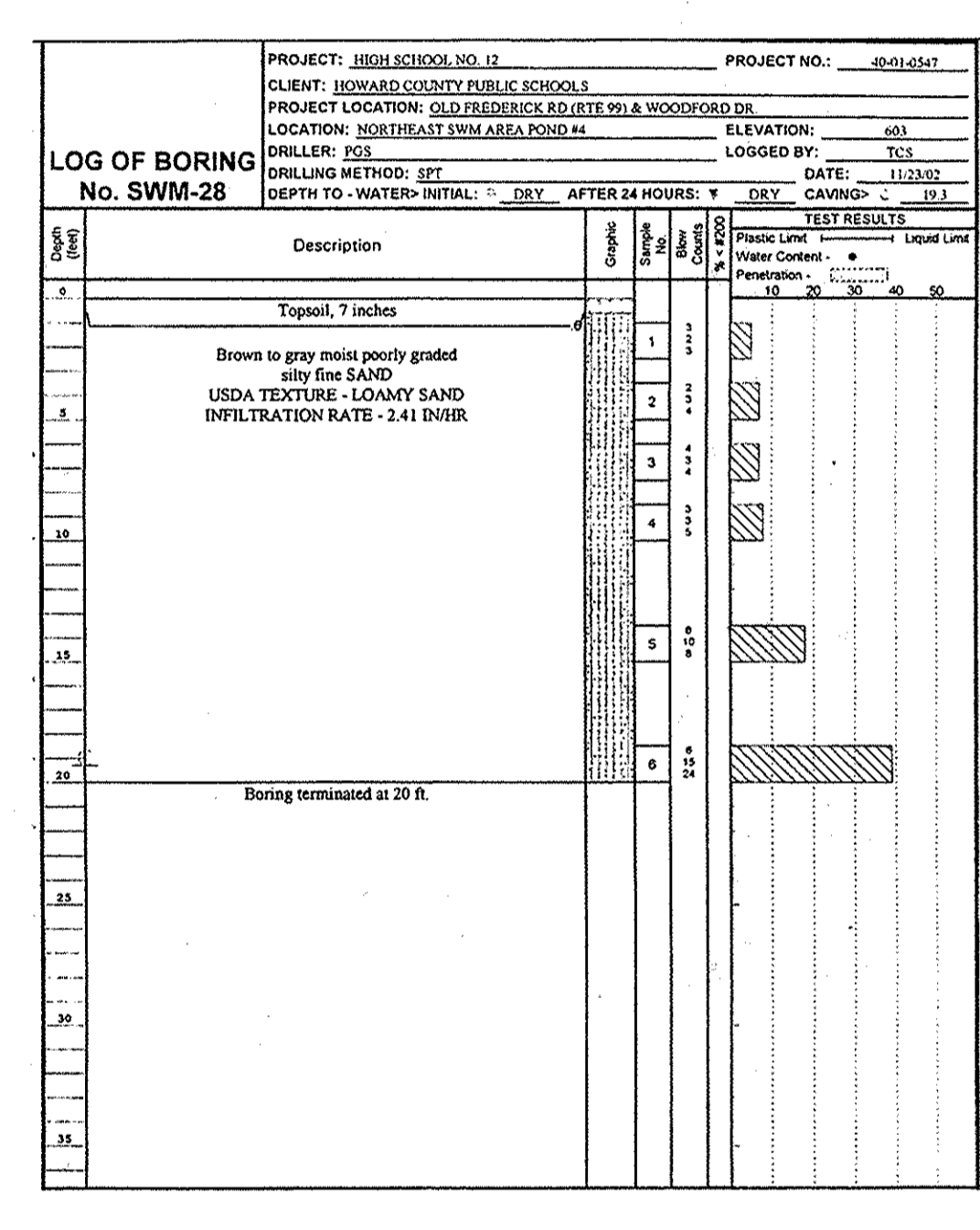
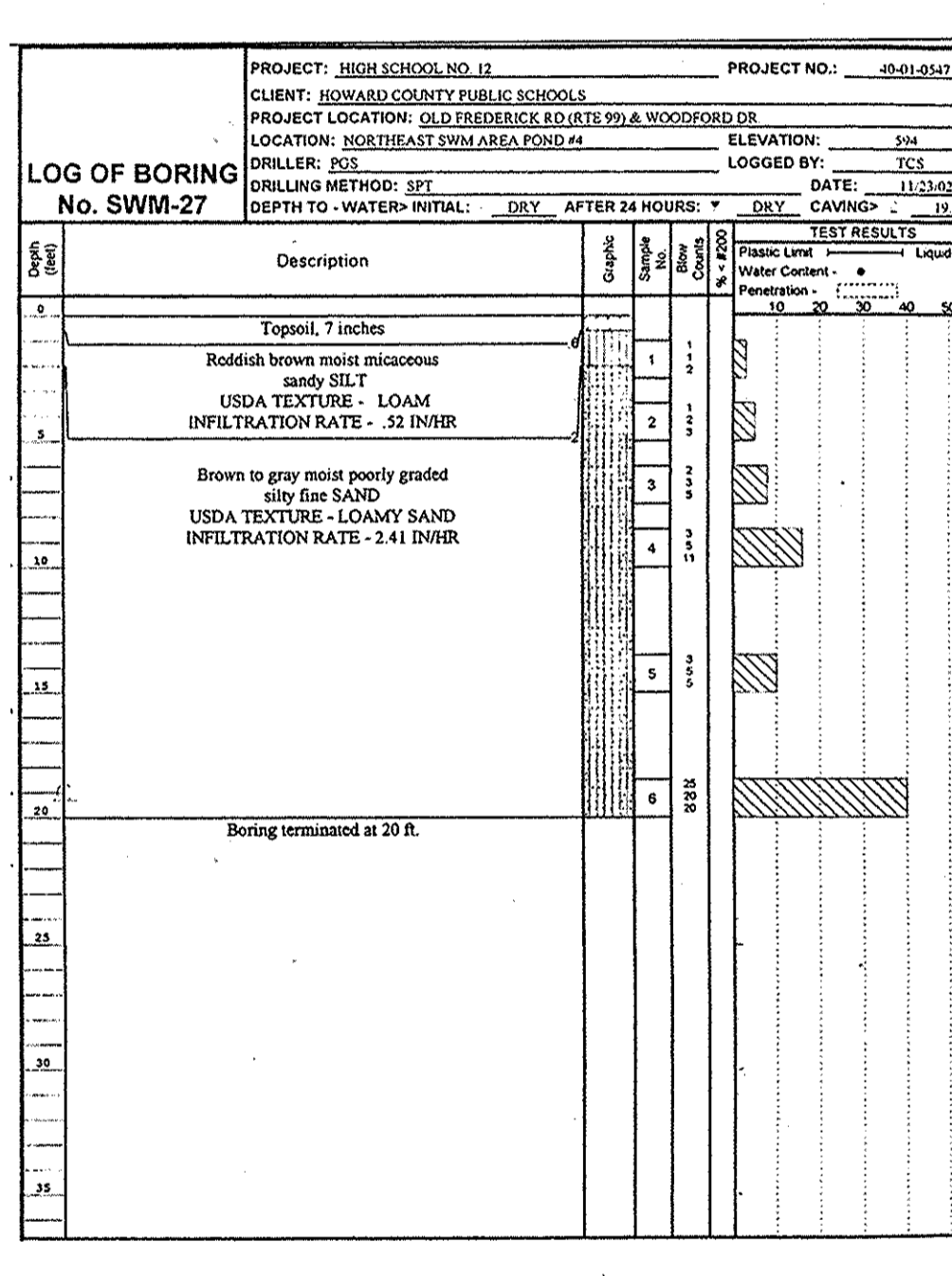
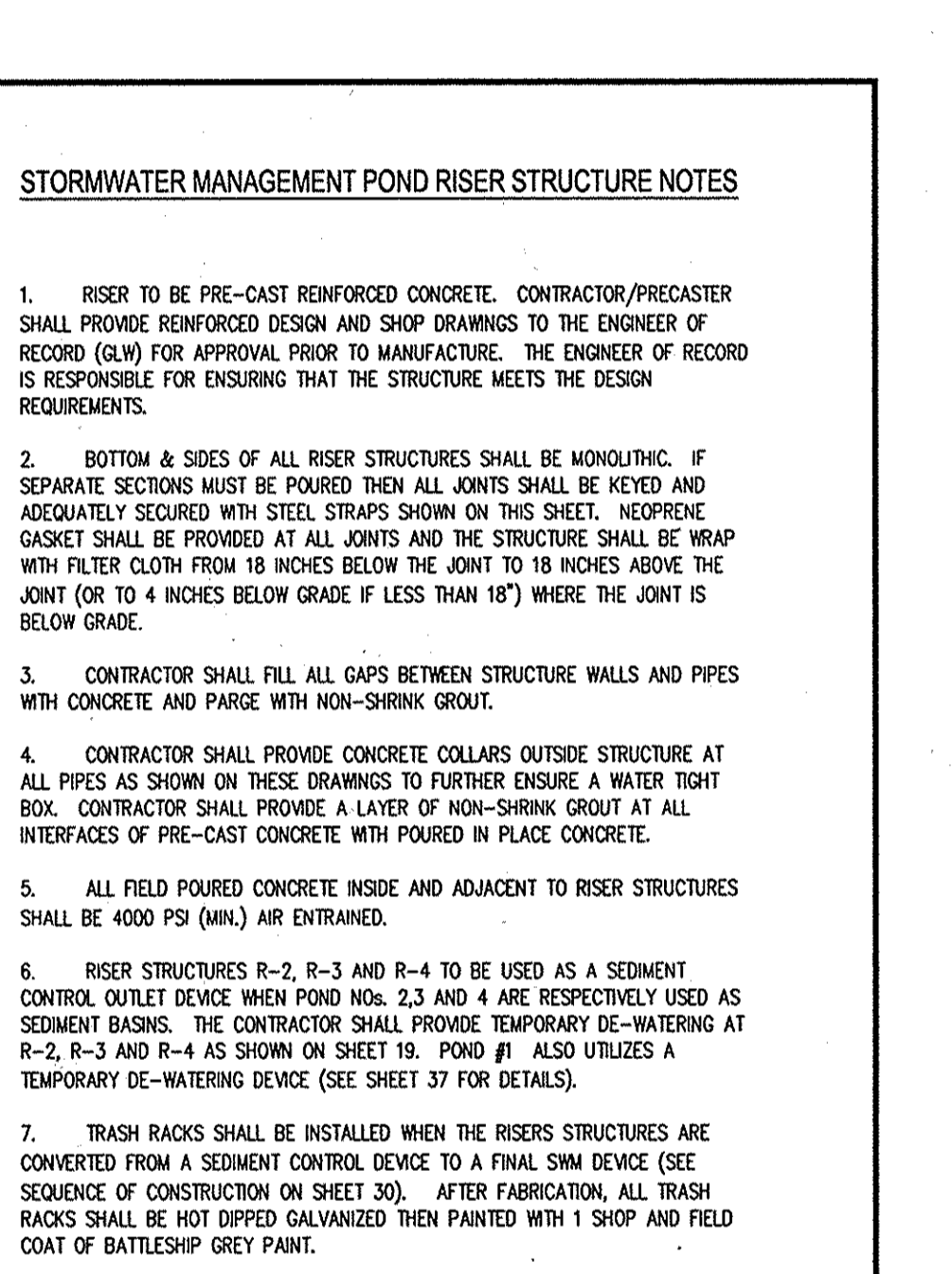
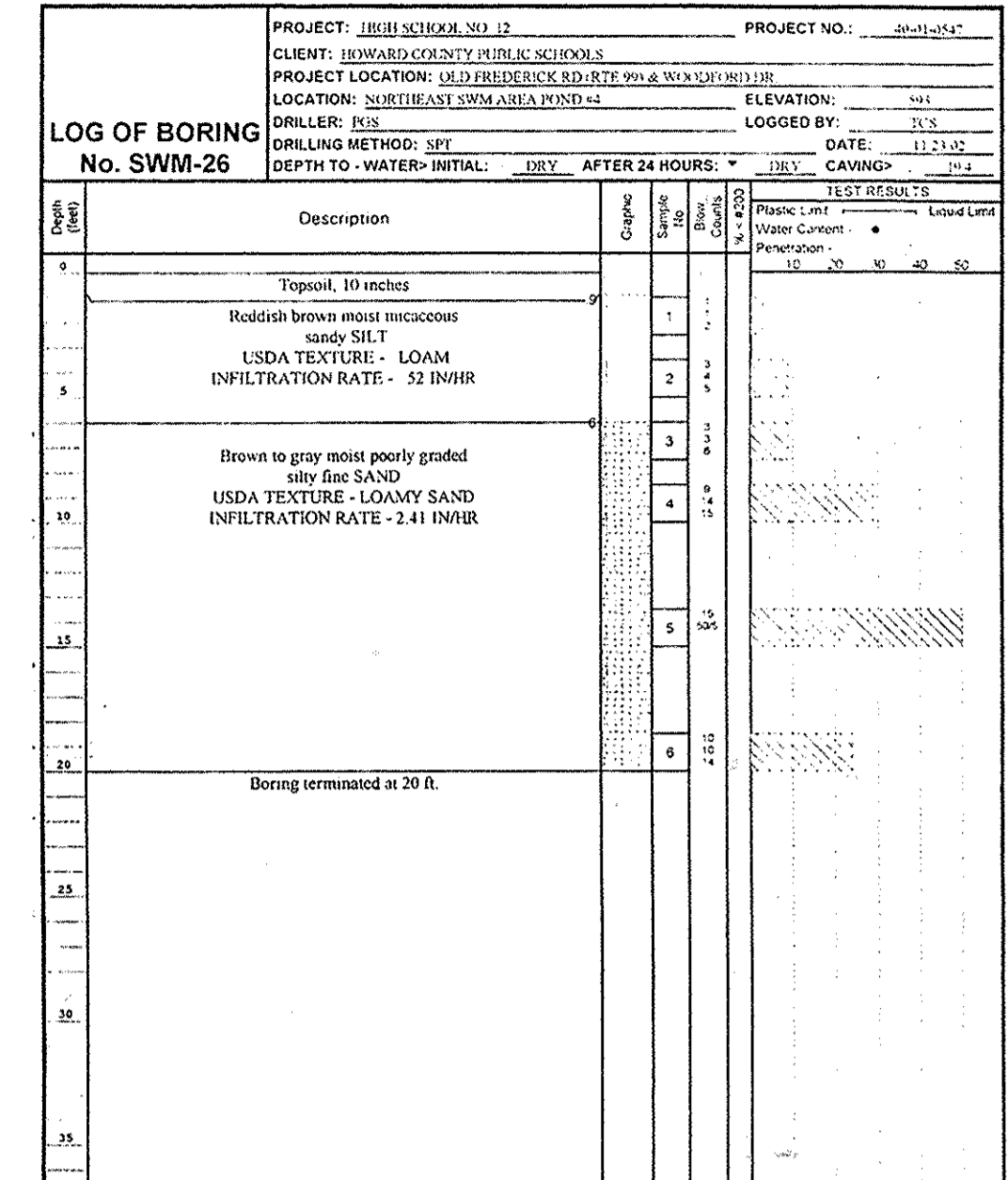
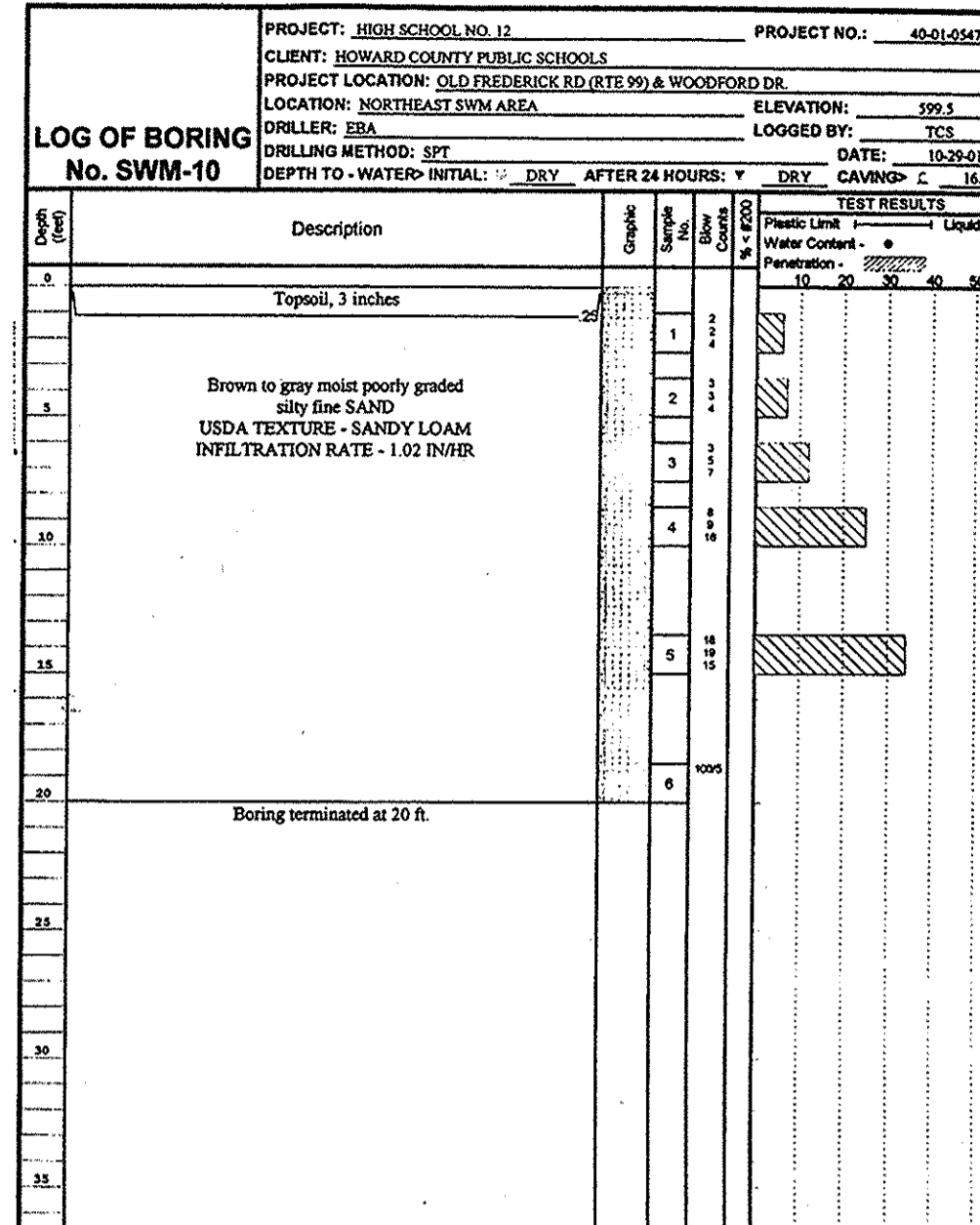
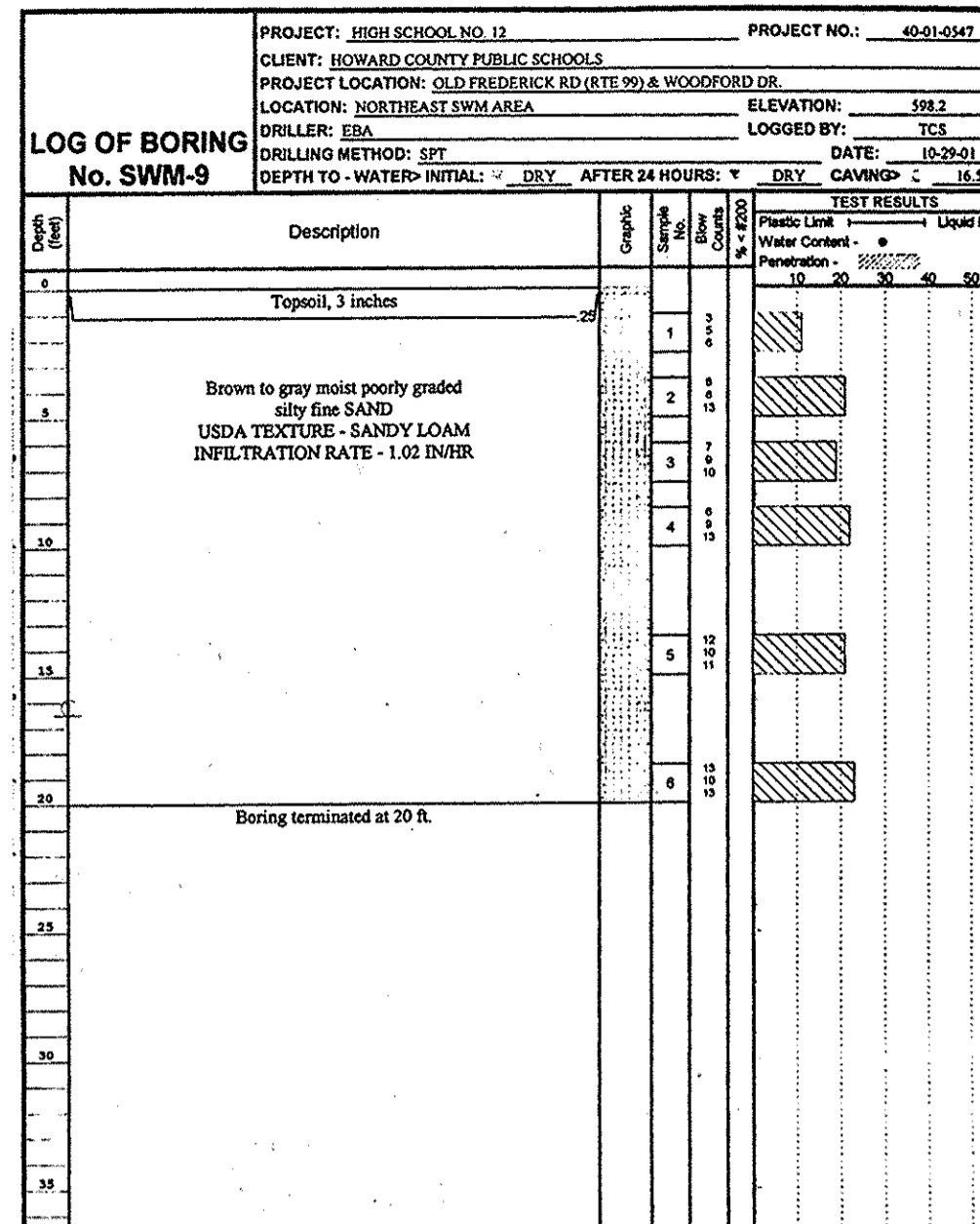
NON-ROUTINE MAINTENANCE

- 1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
2. SEDIMENT SHALL BE REMOVED FROM THE POND AND FORBAY NO LATER THAN WHEN THE CAPACITY OF THE POND OR FOREBAY IS HALF FULL OF SEDIMENT, OR, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

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. 16156, Expiration Date: 9/28/14.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES

- 1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT. Date: 1-15-09.
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING. Date: 2/2/03.

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. Date: 8/14/03.

DEVELOPER/BUILDER CERTIFICATE. I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY 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.

ENGINEER'S CERTIFICATE. I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS. 3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK, BURTONSVILLE, MARYLAND 20866.

DATE: 6-12-14. UPDATED SCHOOL NAME & SHEET TOTAL. REVISION: D14 BY APPR.

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM. ARCHITECT: TCA ARCHITECTS LLC, 2861 RIVA ROAD, SUITE 120, ANNAPOLIS, MD 21403.

STORMWATER MANAGEMENT NOTES, DETAILS & BORING LOGS. PREPARED FOR: NORTHERN HIGH SCHOOL, HOWARD COUNTY PUBLIC SCHOOL SYSTEM. PLAT No. 16111 & 16126 (PARCEL 1) AND 16126 (PARCEL 2A).

SCALE: AS SHOWN. ZONING: RR-DEO. G. L. W. FILE No. 00-177. DATE: 28/JUL/03. TAX MAP - GRID: 10 19. SHEET: 20 of 48.

NOTE: IN ADDITION TO THE HOWARD COUNTY STANDARD SPECIFICATIONS, AND THOSE ON THIS SHEET, THE CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITY SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION REPORT BY PENNING & BROWNE, INC., DATED NOVEMBER 05, 2001.



EXCERPT FROM "SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION" DATED MARCH 4, 2003 BY PENNIMAN & BROWNE, INC. (P&B).

IV. Construction Considerations

A. Site Preparations
 Prior to the placement of fill in any SWM embankment or slope areas, all vegetation, organic matter and/or excessively organic material, and any existing surficial soils which are excessively soft, wet or frozen should be removed and wasted. Organic materials may be stockpiled and used exclusively as the final fill layer in landscaping and recreational field areas. Otherwise, any excess organic material should be wasted. The adequate support newly placed structural fill by deeply discing or scarifying, aerating, and recompacting of the striping operations should be monitored by an P & B soils technicians or Geotechnical Engineer to verify the depths of striping.

After striping has been completed, the exposed subgrade in areas to be filled should be examined by P&B soil technicians or Geotechnical Engineer. The technician should require the exposed materials be profiled utilizing a heavily-loaded dump truck or other pneumatic-tired vehicle of similar size and weight to detect any excessively soft or yielding soils conditions. Relatively soft surficial materials may be improved for the adequate support newly placed structural fill by deeply discing or scarifying, aerating, and recompacting of the project specifications; alternately, excessively soft soils may be undercut and replaced with controlled fill.

Depending upon weather conditions, and due to the presence of moisture-sensitive materials, surficial undercutting of wet, excessively soft, or yielding materials may be required. If the on-site soils exhibit high moisture contents during construction, traffic of heavy equipment, including heavy compaction equipment, will create pumping and a general deterioration of these materials. A further significant increase in moisture content and/or deterioration of these moisture-sensitive soils during construction will likely require their removal and replacement with suitable (less moisture-sensitive) material. If possible, the grading operations should be conducted during dry and warm weather (preferably late spring through early fall). This should minimize potential subgrade problems, although they may not be eliminated. If such problems arise, the P&B Geotechnical Engineer should be consulted for an evaluation of the site conditions.

The bottom of the cut pond areas should be examined by a P & B Geotechnical Engineer to ensure that the exposed materials are suitable for the intended use. Any pockets or seams of exposed clayey materials should be removed and replaced with sandy loam materials.

B. Embankment Fill Placement

The boring and laboratory data indicate that the on-site soils are generally suitable for use as controlled, compacted fill; however, the presence of moisture-sensitive fine grain materials (i.e. Micaceous Silty Sands, Clayey Silts and Sandy Silts) will require special attention to moisture contents. Consequently, the on-site soils may require discing, aeration and/or manipulation to achieve efficient compaction. Any regions exhibiting poor drainage characteristics, and low lying areas, must be expected to display moisture contents excessively high for fill placement without drying.

It should be noted that the moisture descriptions shown on the boring logs are visual only, and such descriptions (visual, very moist) are related to wet-dry conditions and do not reflect moisture relative to optimum moisture contents. The use of the on-site soils for controlled, compacted fill will depend on the time of year that construction is accomplished and whether the construction schedule and space permit manipulation and/or aeration of the soils to ensure adequate compaction. As previously discussed above, due to the moisture-sensitivity of the on-site materials, it would be prudent to accomplish the earthwork operations during the warmer and drier seasons, i.e. late spring through early fall.

Controlled fill should be placed in relatively level lifts, eight to ten inches in loose thickness, and compacted to 95 percent of the Standard Proctor maximum dry density as established by ASTM D-698 specifications.

C. Slope Recommendations

The subsuits encountered by the borings generally appear acceptable to support new sloped embankment fill depending upon location and depth. Accordingly a slope flatter than 2H:1V gradient, constructed of properly classified and compacted engineered fills will typically be stable. An in-depth slope stability analysis is not typically performed in this situation unless the void ground water, unsuitable materials or excessive loadings have been identified. Slopes designed steeper than 2H:1V should have slope stability analysis performed. A review of the SWM grading plans indicated a maximum slope of 3H:1V.

Where fills are placed on hillsides or slopes, the slopes of the original ground upon which the fill is to be placed shall be plowed or scarified deeply, and where the slope of the existing ground is steeper than 3 horizontal to 1 vertical, the bank shall be stepped or benched in order to prevent the formation of any slip surfaces and to facilitate the placement of fill in horizontal layers. Additionally, a keyway shall be installed at the base of the slope prior to any benched fill installation.

It is recommended that any fill required to achieve required slope subgrade be constructed as controlled embankment placed in accordance with the previously provided requirements, for fill placement. The compaction should be a minimum 95% of the ASTM D698 maximum dry density performed under the direction of a Geotechnical Engineer.

D. Embankment Settlement

Based upon the subsurface conditions encountered and the magnitude of the proposed fill loadings, and with the implementation of the recommendations provided in this report, it is estimated that total settlement of the embankments will not exceed one half inch. Differential settlement on the order of one-half of the total amount is possible. The majority of the actual settlements would be expected to occur during and within one year of the construction of the embankment.

E. Embankment Seepage

The ponds that are designed as retention ponds will require an impervious core constructed of materials classified as CL, CH, SC or GL compacted to 95% of the standard proctor at or above optimum moisture content. Limited amounts of CL material may be available in the upper 5 to 6 feet excavated from the ponds.

B.2 INfiltration TRENCH GENERAL NOTES AND SPECIFICATIONS

AN INFILTRATION TRENCH MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION TRENCH HAS REACHED FINAL STABILIZATION.

1. HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE PROPOSED LOCATION OF THE INFILTRATION TRENCH TO MINIMIZE COMPACTION OF THE SOIL.
2. EXCAVATE THE INFILTRATION TRENCH TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE TRENCH SIDES TO ENHANCE TRENCH WALL STABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH SHALL BE ROUGHENED WHERE SHARDED AND SEALED BY HEAVY EQUIPMENT.
3. A CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, W-84) SHALL INTERFACE BETWEEN THE TRENCH SIDE WALLS AND BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NON-WOVEN FILTER FABRICS THAT MEET THE CLASS "C" CRITERIA FOLLOWS. ANY ALTERNATIVE FILTER FABRIC MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.

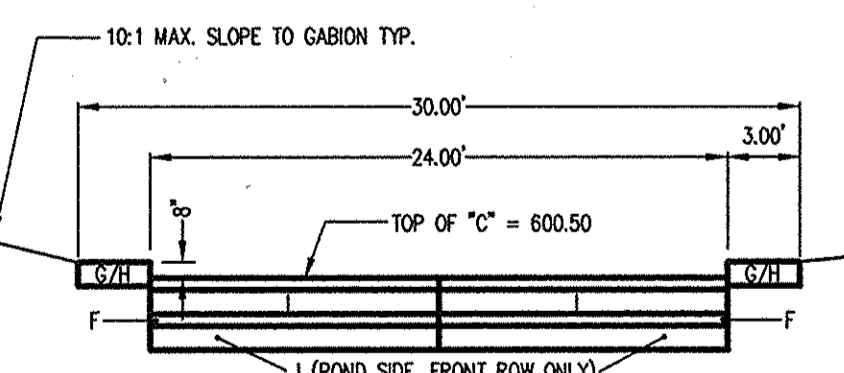
4. IF A 6 INCH SAND FILTER LAYER IS PLACED ON THE BOTTOM OF THE INFILTRATION TRENCH, THE SAND FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET AASHTO-M-43, SIZE NO. 9 OR NO. 10. ANY ALTERNATIVE SAND GRADATION MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.
5. THE STONE AGGREGATE SHOULD BE PLACED IN A MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES. THE GRAVEL (ROUNDED "SHANK RUM" GRAVEL IS PREFERRED) FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET ONE OF THE FOLLOWING AASHTO-M-43, SIZE NO. 2 OR NO. 3.
6. FOLLOWING THE STONE AGGREGATE PLACEMENT, THE FILTER FABRIC SHALL BE FOLDED OVER THE STONE AGGREGATE TO FORM A 6-INCH MINIMUM LONGITUDINAL LAP. THE DESIRED FILL SOIL OR STONE AGGREGATE SHALL BE PLACED OVER THE LAP AT SUFFICIENT INTERVALS TO MAINTAIN THE LAP DURING SUBSEQUENT BACKFILLING.
7. CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERMIXING WITH THE STONE AGGREGATE. ALL CONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED STONE AGGREGATE.

8. VOIDS MAY OCCUR BETWEEN THE FABRIC AND THE EXCAVATION SIDES SHALL BE AVOIDED. REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOIDS. THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES.
9. VERTICALLY EXCAVATED WALLS MAY BE DIFFICULT TO MAINTAIN IN AREAS WHERE SOIL MOISTURE IS HIGH OR WHERE SOFT COHESIVE OR CONELESSONAL SOILS ARE DOMINANT. THESE CONDITIONS MAY REQUIRE LAYING BACK OF THE SIDE SLOPES TO MAINTAIN STABILITY.
10. PVC DISTRIBUTION PIPES SHALL BE SCHEDULE 40 AND MEET ASTM-D-1785. ALL FITTINGS SHALL MEET ASTM-D-2728. PERFORATIONS SHALL BE 3/8 INCH IN DIAMETER. A PERFORATED PIPE SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. THE END OF THE PVC PIPE SHALL BE CAPPED. NOTE: PVC PIPE WITH A WALL THICKNESS CLASSIFICATION OF SDR-35 MEETING ASTM-D-3034 IS AN ACCEPTABLE SUBSTITUTE FOR THE SCHEDULE 40 PIPE.
11. THE OBSERVATION WELL IS TO CONSIST OF 6-INCH DIAMETER PERFORATED PVC SCHEDULE 40 PIPE (M278 OR F708, TYPE PS 28) WITH A CAP SET 6 INCHES ABOVE GROUND LEVEL AND IS TO BE LOCATED NEAR THE LONGITUDINAL CENTER OF THE INFILTRATION TRENCH. THE PIPE SHALL HAVE A PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING THE CAP. THE SCREW TOP LID SHALL BE A CLEANOUT WITH A LOCKING MECHANISM OR SPECIAL BOLT TO DISCOURAGE VANDALISM. THE DEPTH TO THE INVERT SHALL BE MARKED ON THE CAP AND BE PLACED VERTICALLY WITHIN THE GRAVEL PORTION OF THE INFILTRATION TRENCH AND A CAP PROVIDED AT THE BOTTOM OF THE PIPE. THE BOTTOM OF THE CAP SHALL REST ON THE INFILTRATION TRENCH BOTTOM.

12. CORRUGATED METAL DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, AND SHALL BE ALUMINIZED IN ACCORDANCE WITH AASHTO-M-274. ALUMINIZED PIPE CONTACT WITH CONCRETE SHALL BE COATED WITH AN INERT COMPOUND CAPABLE OF PREVENTING THE DELETERIOUS EFFECT OF THE ALUMINUM ON THE CONCRETE. PERFORATED DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, CLASS 2 AND SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. AN ALUMINIZED METAL PIPE SHALL BE WELDED TO THE END OF THE PIPE.
13. IF A DISTRIBUTION STRUCTURE WITH A WET WELL IS USED, A 4-INCH DRAIN PIPE SHALL BE PROVIDED AT OPPOSITE ENDS OF THE INFILTRATION TRENCH DISTRIBUTION STRUCTURE. TWO (2) CUBIC FEET OF POROUS BACKFILL MEETING AASHTO-M-43, SIZE NO. 57 SHALL BE PROVIDED AT EACH DRAIN.
14. IF A DISTRIBUTION STRUCTURE IS USED, THE MANHOLE COVER SHALL BE BOLTED TO THE FRAME.

GABION SIZES			
LETTER CODE	LENGTH	WIDTH	HEIGHT
C	12'	3'	3'
F	12'	3'	18"
G	6'	3'	1'
H	9'	3'	1'
I	12'	3'	3'

GABION SHALL BE MESH BY: MACCAFERRI GABIONS INC. GOVERNOR LANE BLVD. WILLIAMSPORT, MD 21795 TELE: (301) 223-6910



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer (Signature) Date: 1-15-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director (Signature) Date: 9/4/03
 Chief, Division of Land Development (Signature) Date: 9/26/03

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 DEVELOPERS/BUILDERS CERTIFICATE (Signature) Date: 8/19/03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 NATURAL RESOURCES CONSERVATION SERVICE (Signature) Date: 8/19/03

WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S CERTIFICATE (Signature) Date: 7/31/03

WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER'S CERTIFICATE (Signature) Date: 7/20/03

GEW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE: 6-10-14
 REVISION: UPDATED SCHOOL NAME & SHEET TOTAL

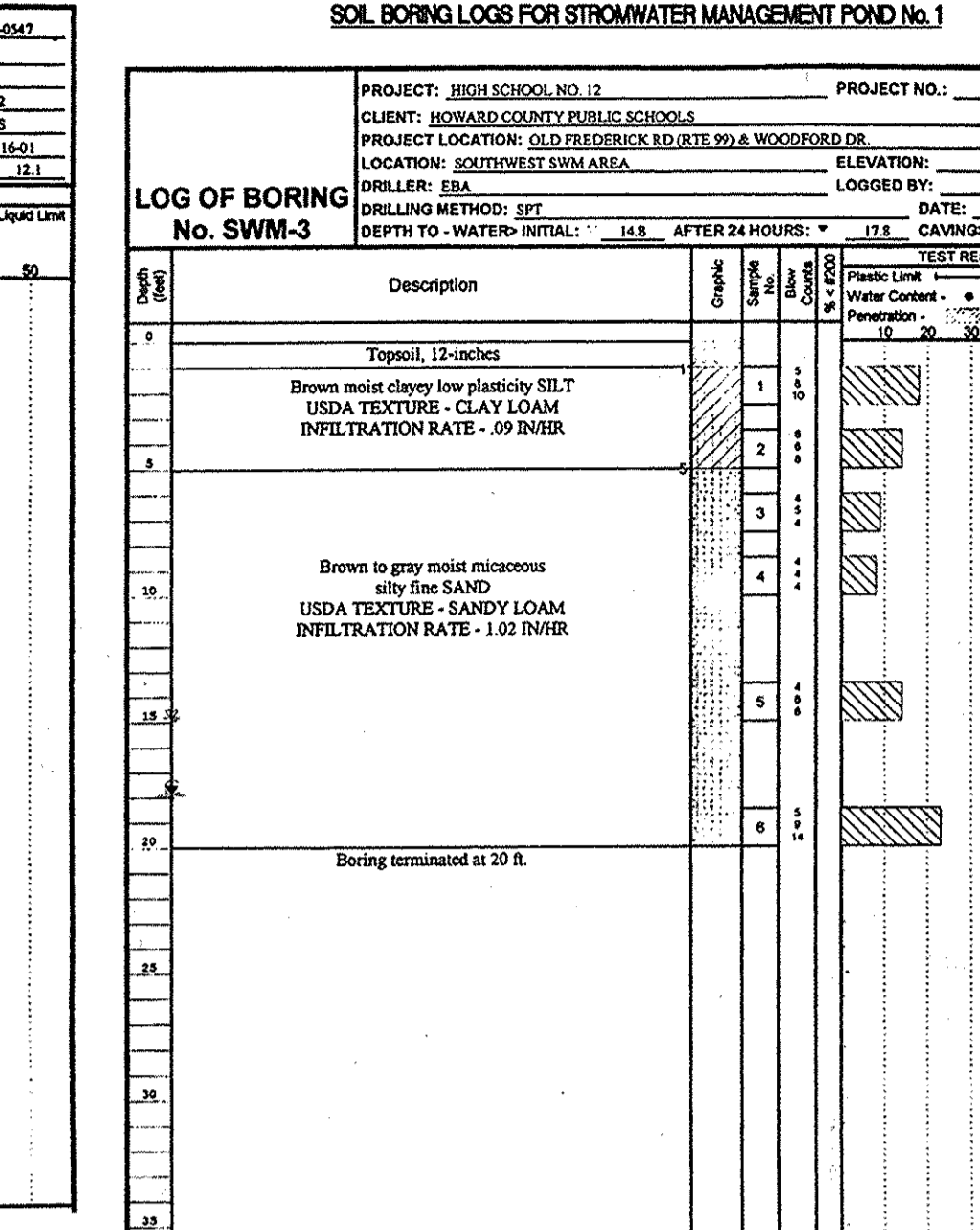
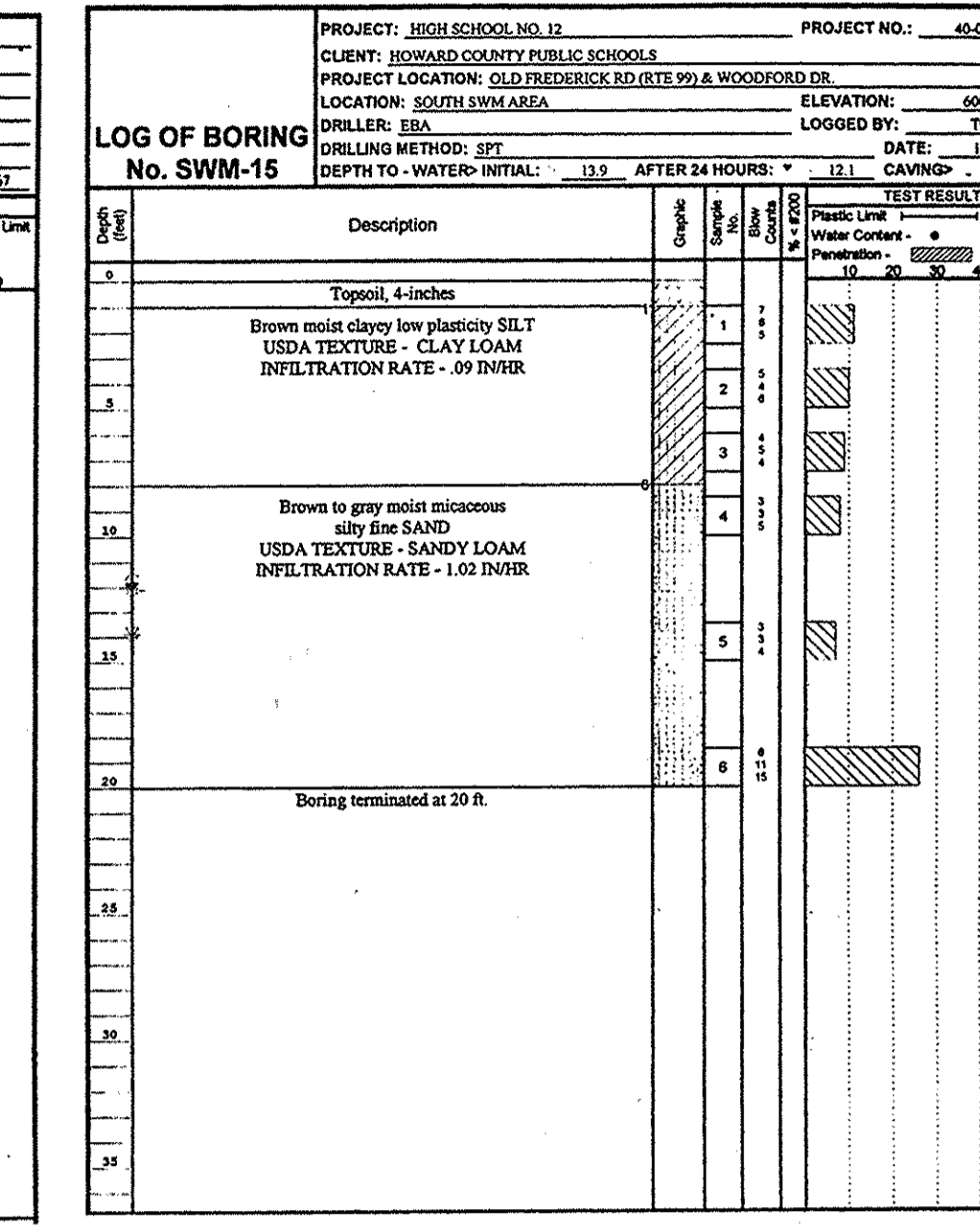
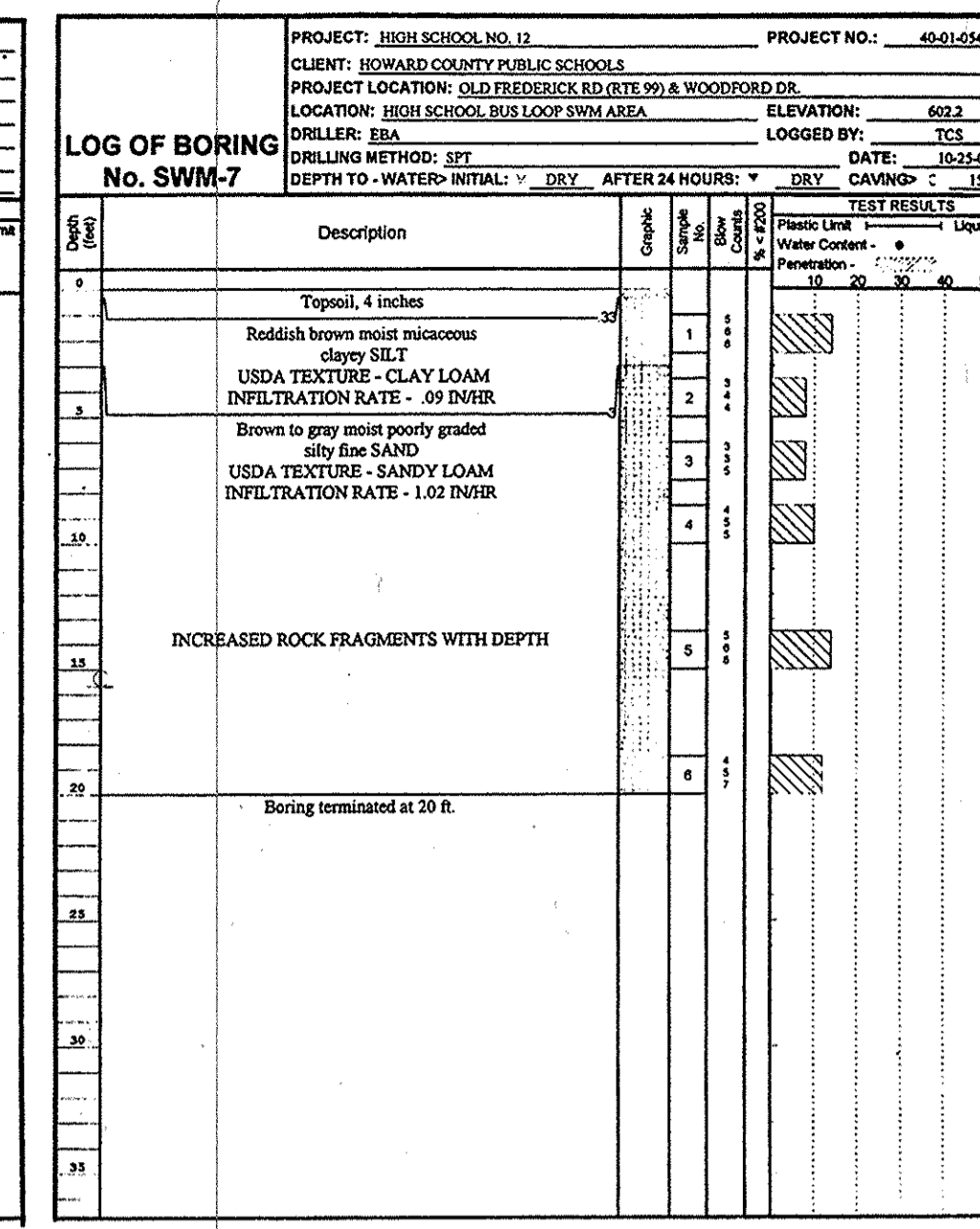
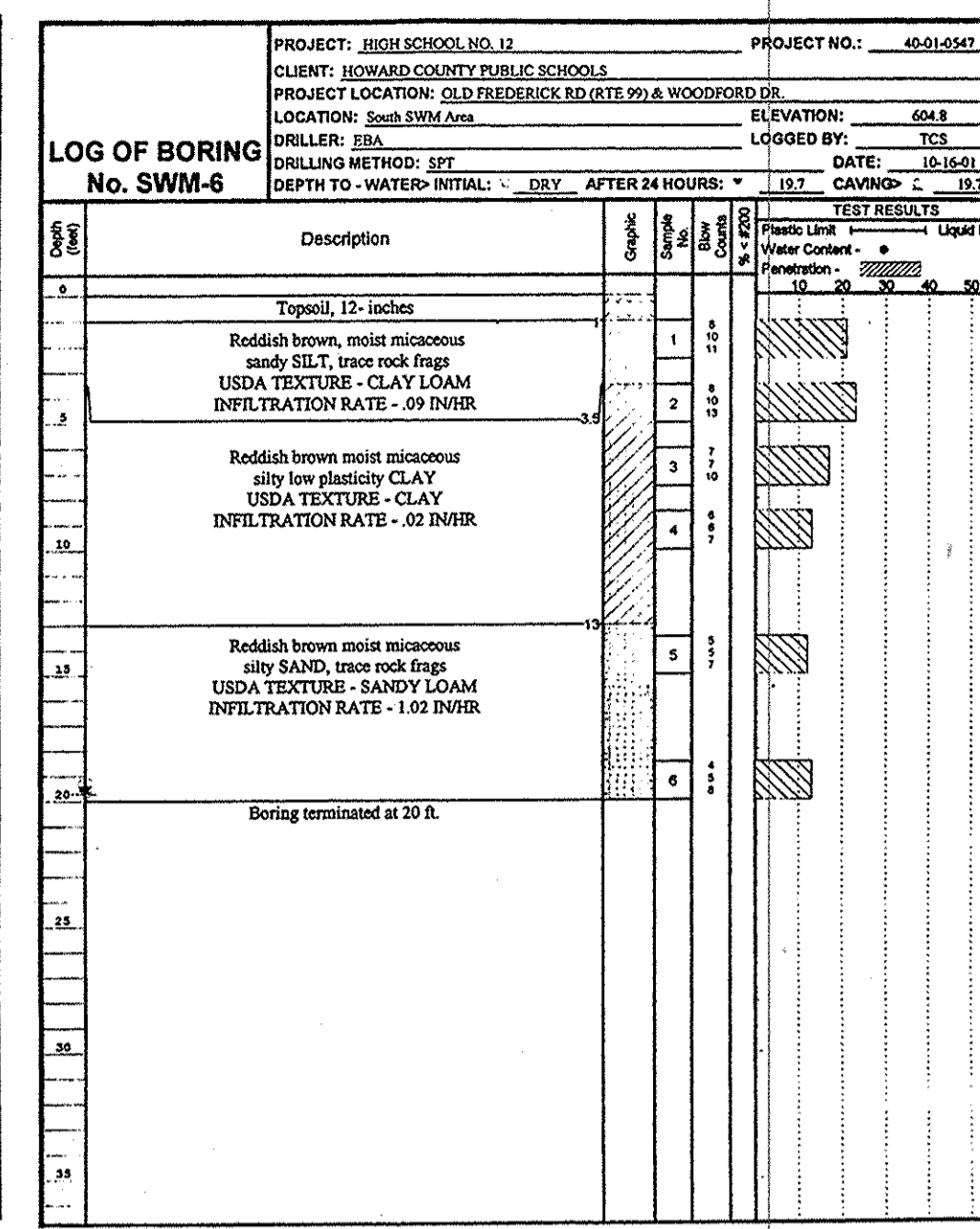
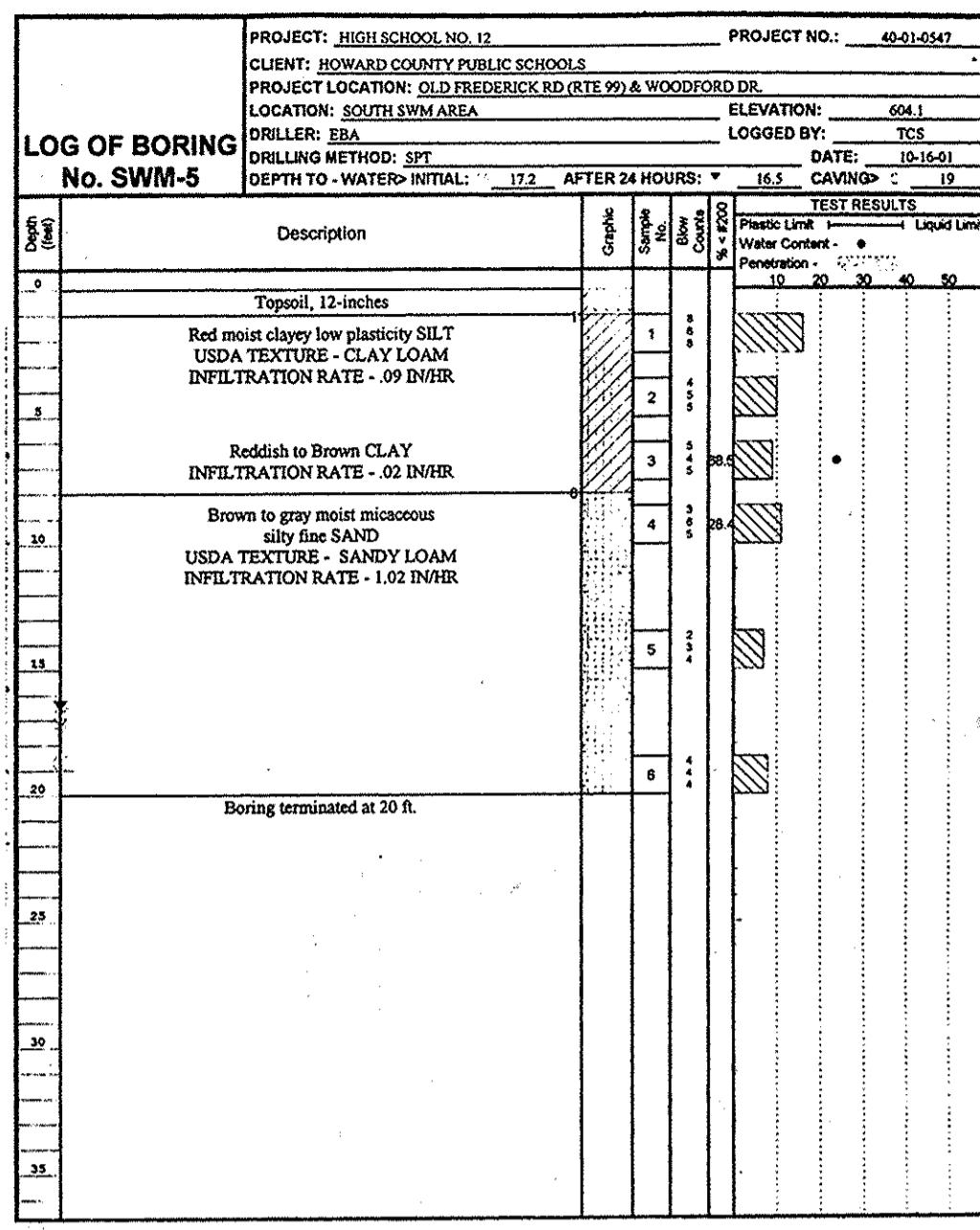
PREPARED FOR: ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHELYN YOUNG
 TEL: 410-313-6704

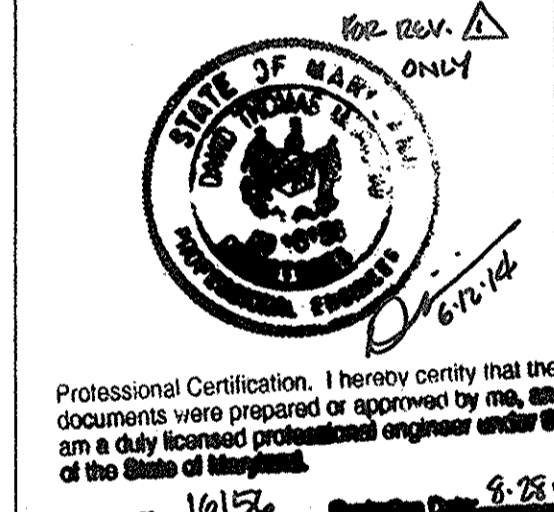
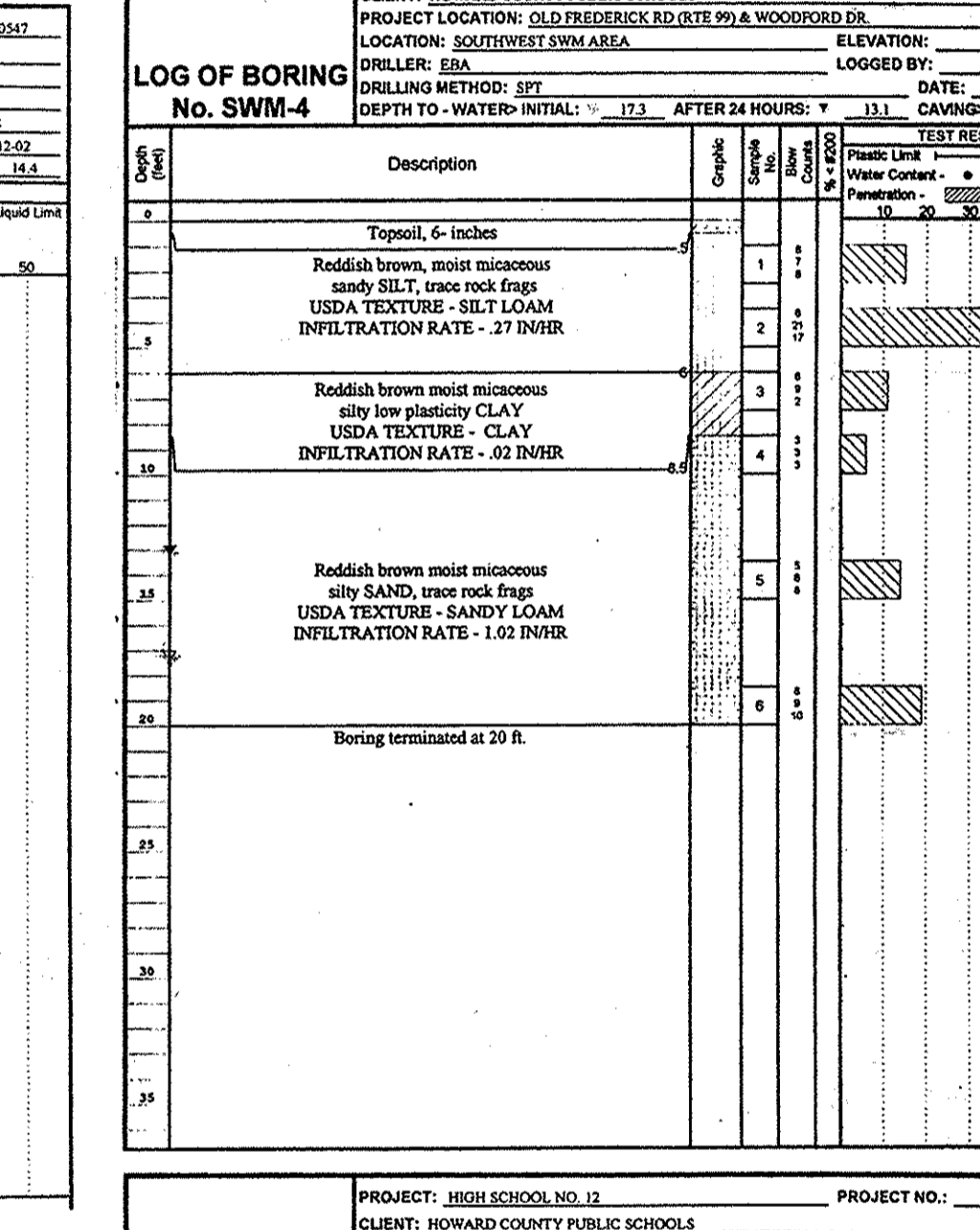
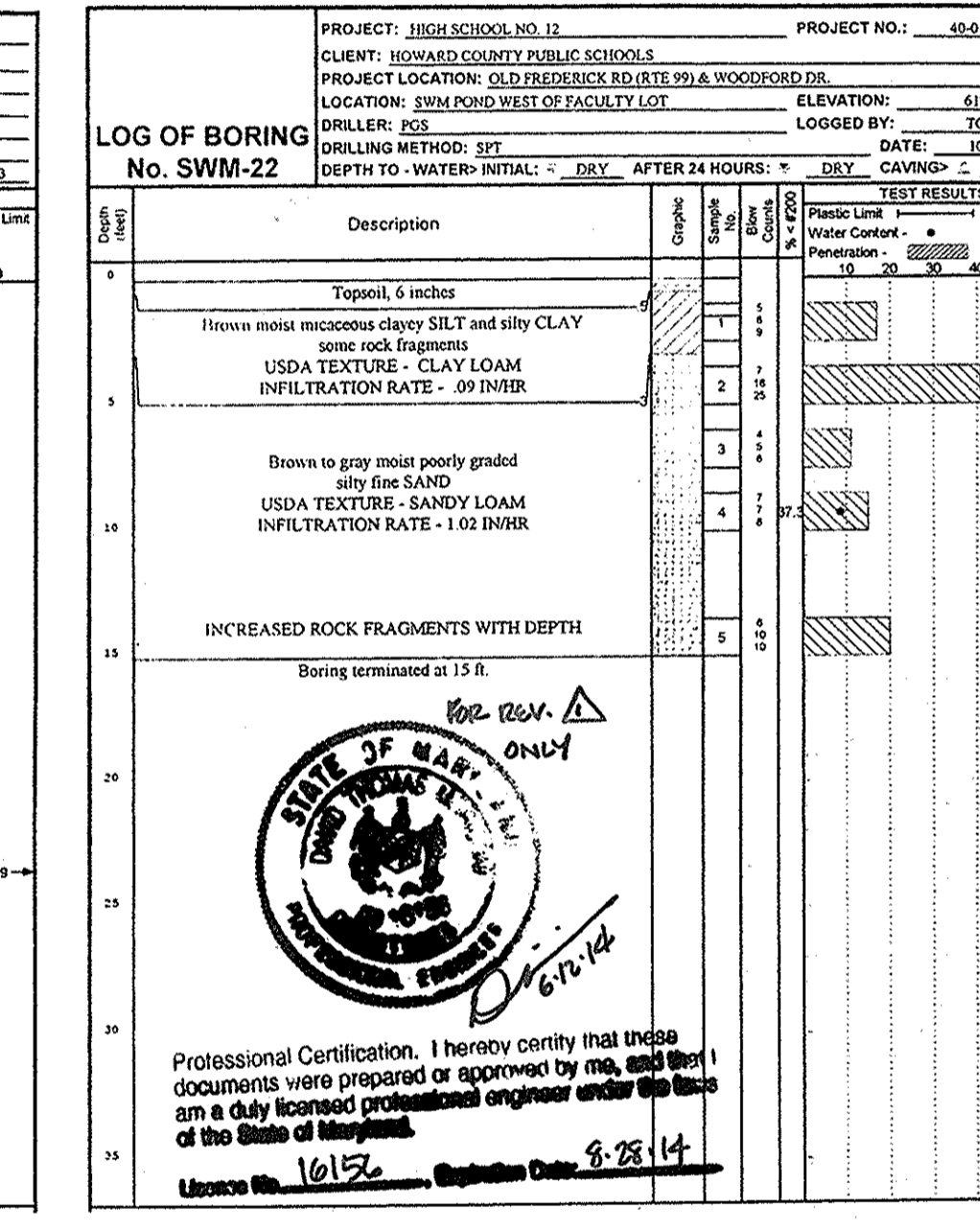
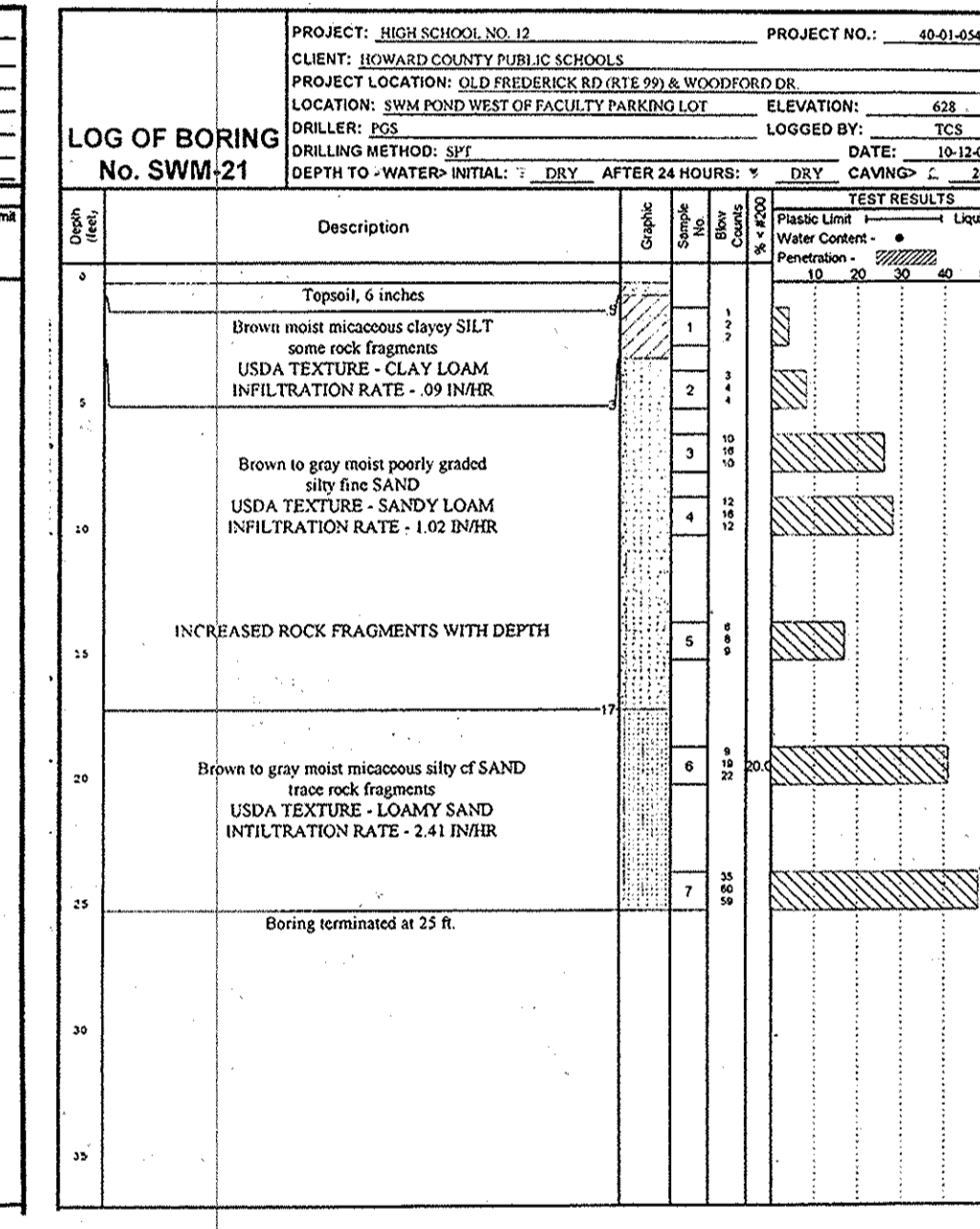
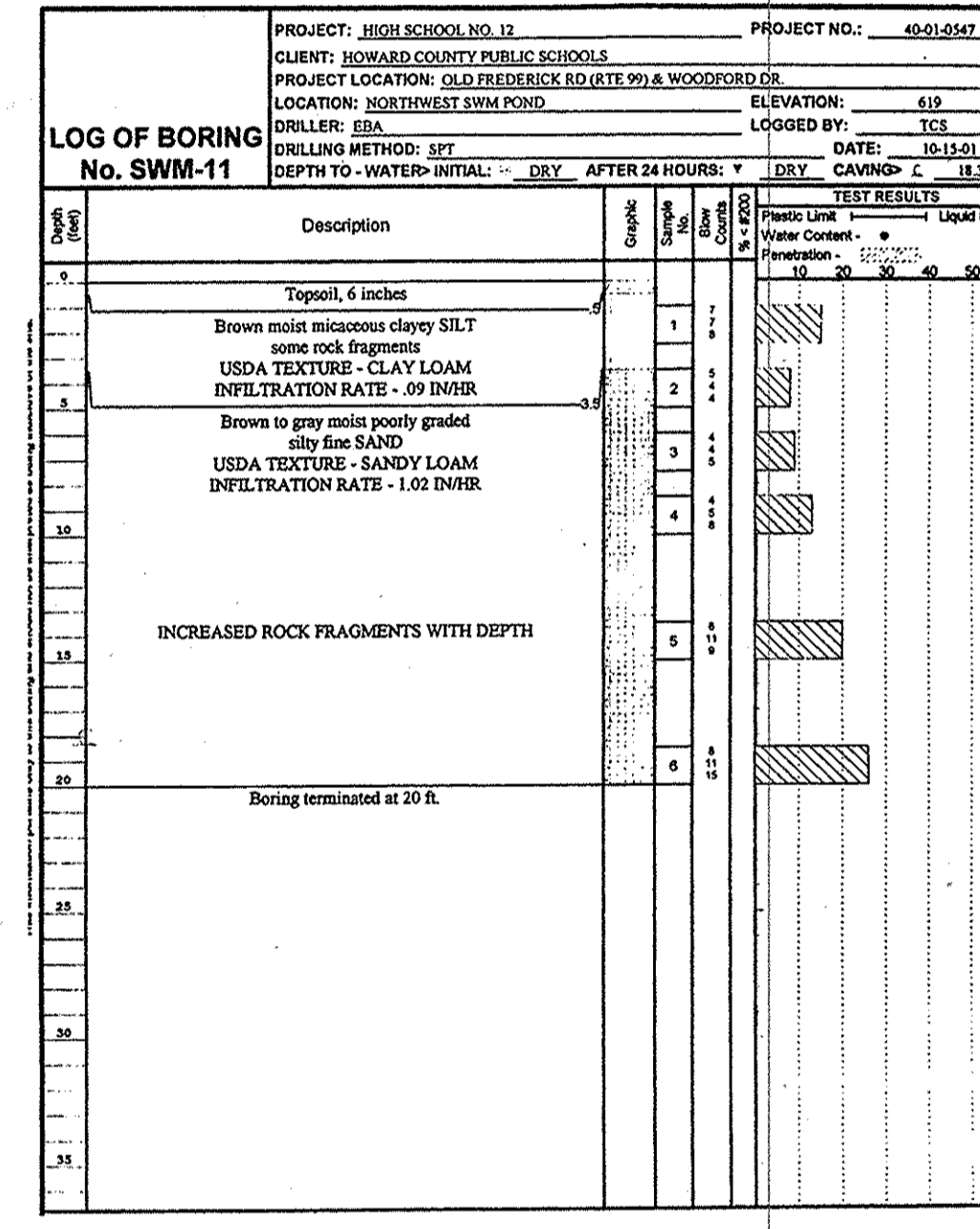
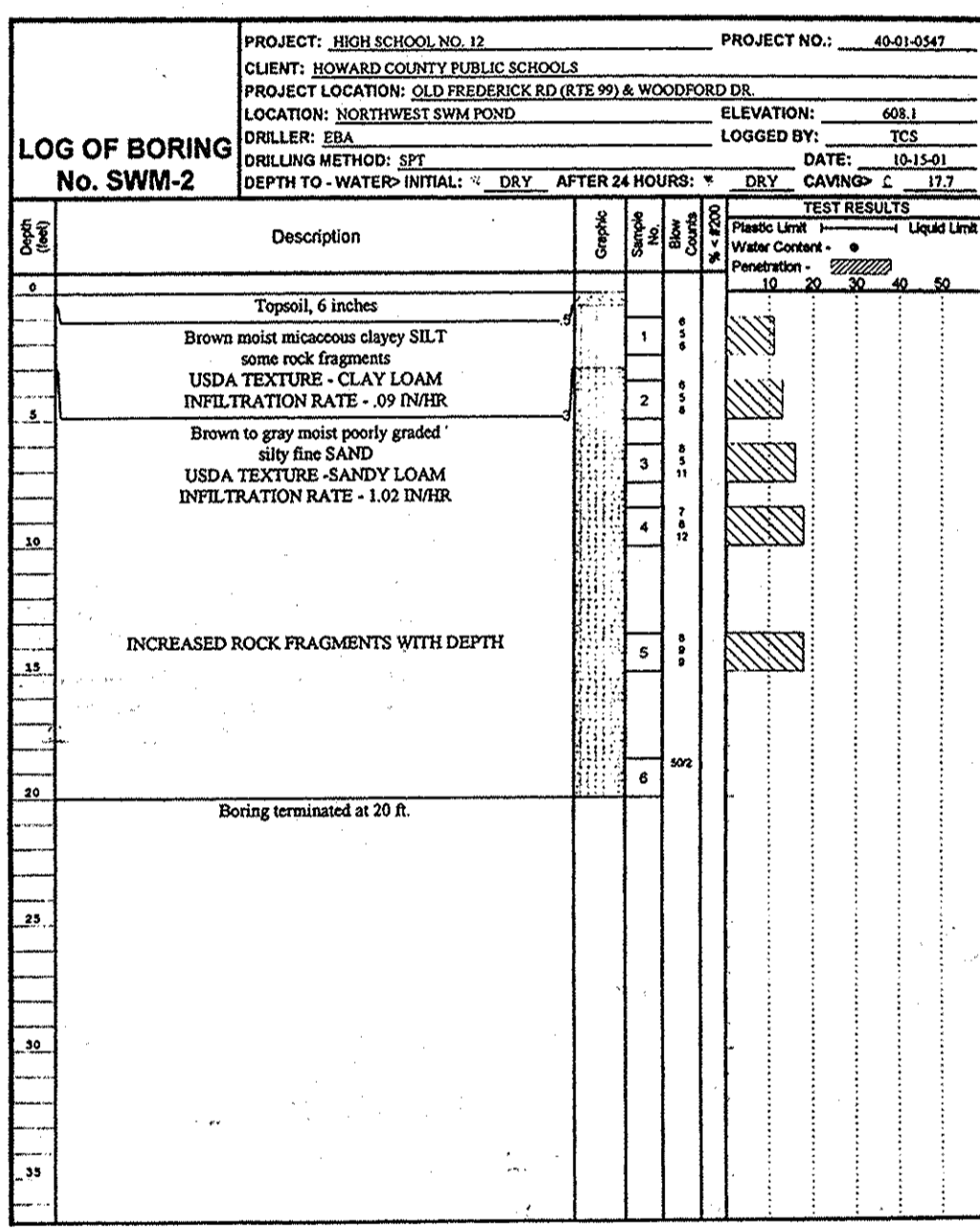
STORMWATER MANAGEMENT NOTES, DETAILS & BORING LOGS
 NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 161118 (PARCEL 1) and 161261 (PARCEL 2A)

SCALE: AS SHOWN
 ZONING: RR-DEO
 DATE: 28/JUL/03
 TAX MAP - GRID: 10 19
 SHEET: 21 of 48
 G. L. W. FILE No.: 00-177
 SHEET: 21 of 48

SOIL BORING LOGS FOR STORMWATER MANAGEMENT POND No. 2

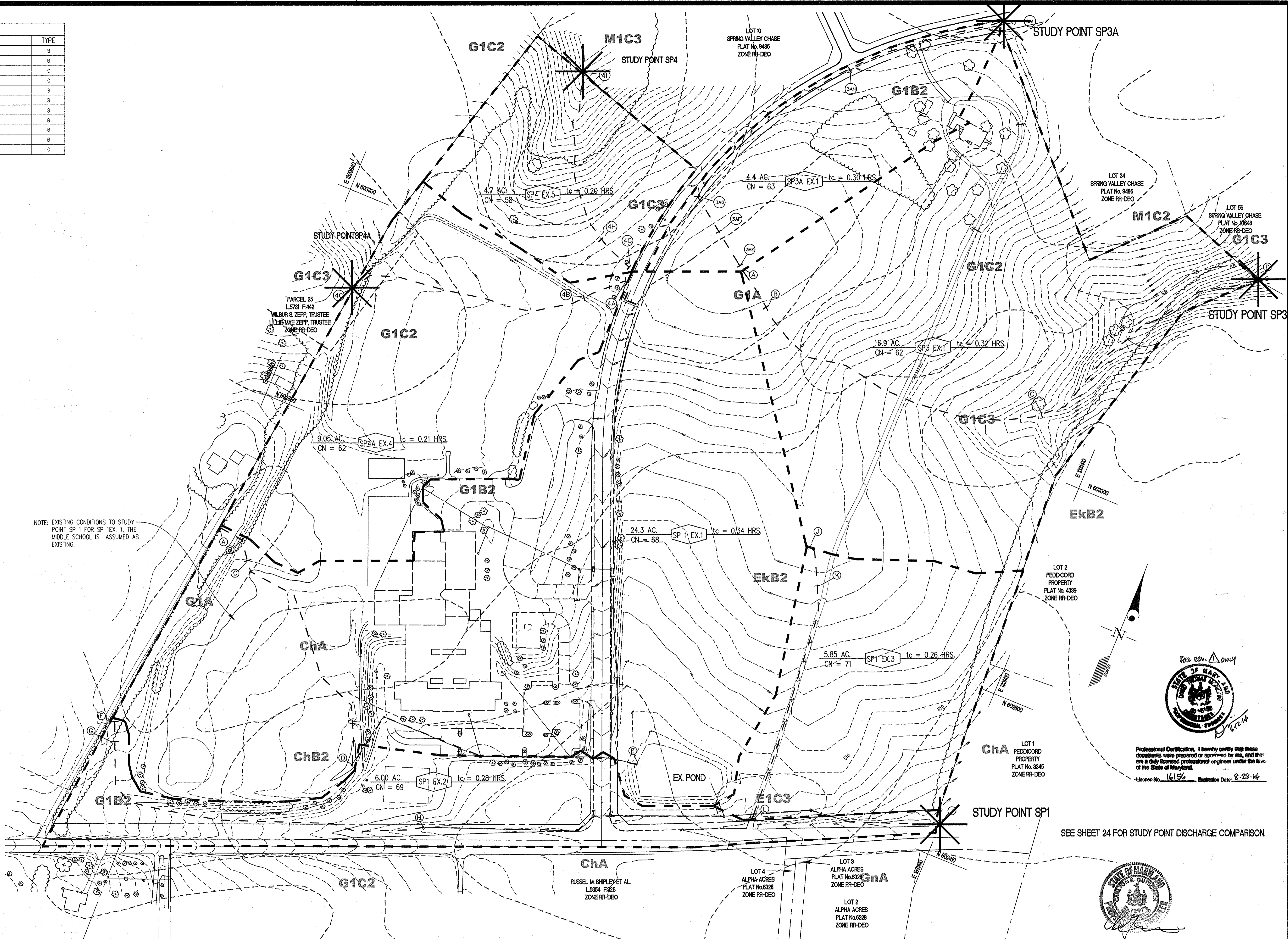


SOIL BORING LOGS FOR STORMWATER MANAGEMENT POND No. 4



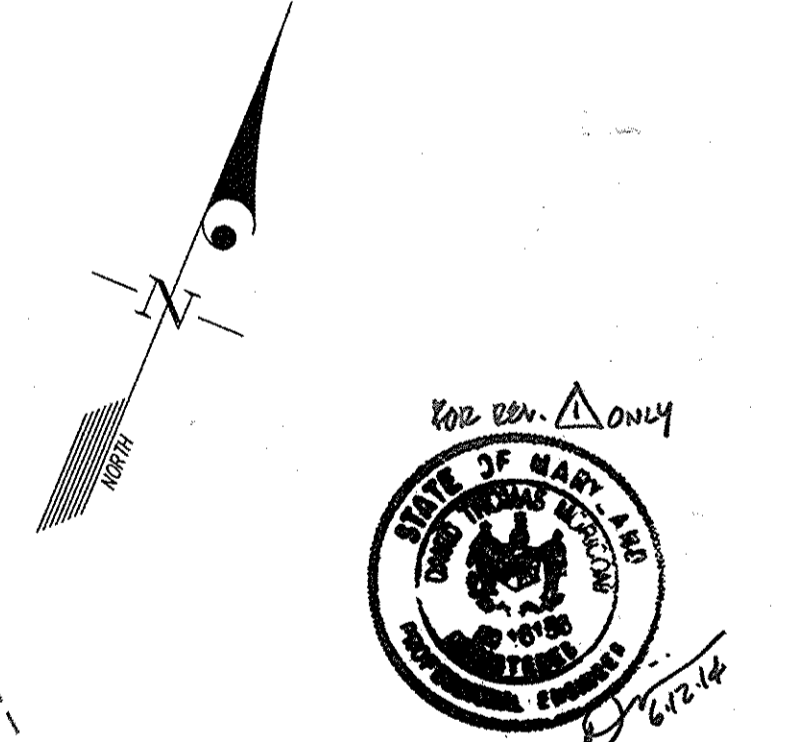
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

SOILS CHART		
SYMBOL	NAME	TYPE
ChA	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EkB2	ELIOLAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
E1C3	ELIOLAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
G1A	GLENELG LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1C3	GLENELG LOAM, 15 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
M1C2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
M1C3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnA	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C



NOTE: EXISTING CONDITIONS TO STUDY POINT SP 1 FOR SP EX. 1, THE MIDDLE SCHOOL IS ASSUMED AS EXISTING.

- LEGEND**
- (A) (B) TC PATH
 - DRAINAGE DIVIDE
 - (113) DRAINAGE AREA
 - G1B2 SOILS
 - ChB2
 - EX. TREE CANOPY LINE



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. 16156, Registration Date: 8-28-14

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
Denny Boyce 1-15-07
 County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Mark A. Eagle 9/2/07
 Director

Chris Klumpp 7/6/07
 Chief, Division of Land Development

[Signature] 8-27-03
 Chief, Development Engineering Division

SEE SHEET 24 FOR STUDY POINT DISCHARGE COMPARISON.

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.
6-12-12	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	APP'R.

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2661 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

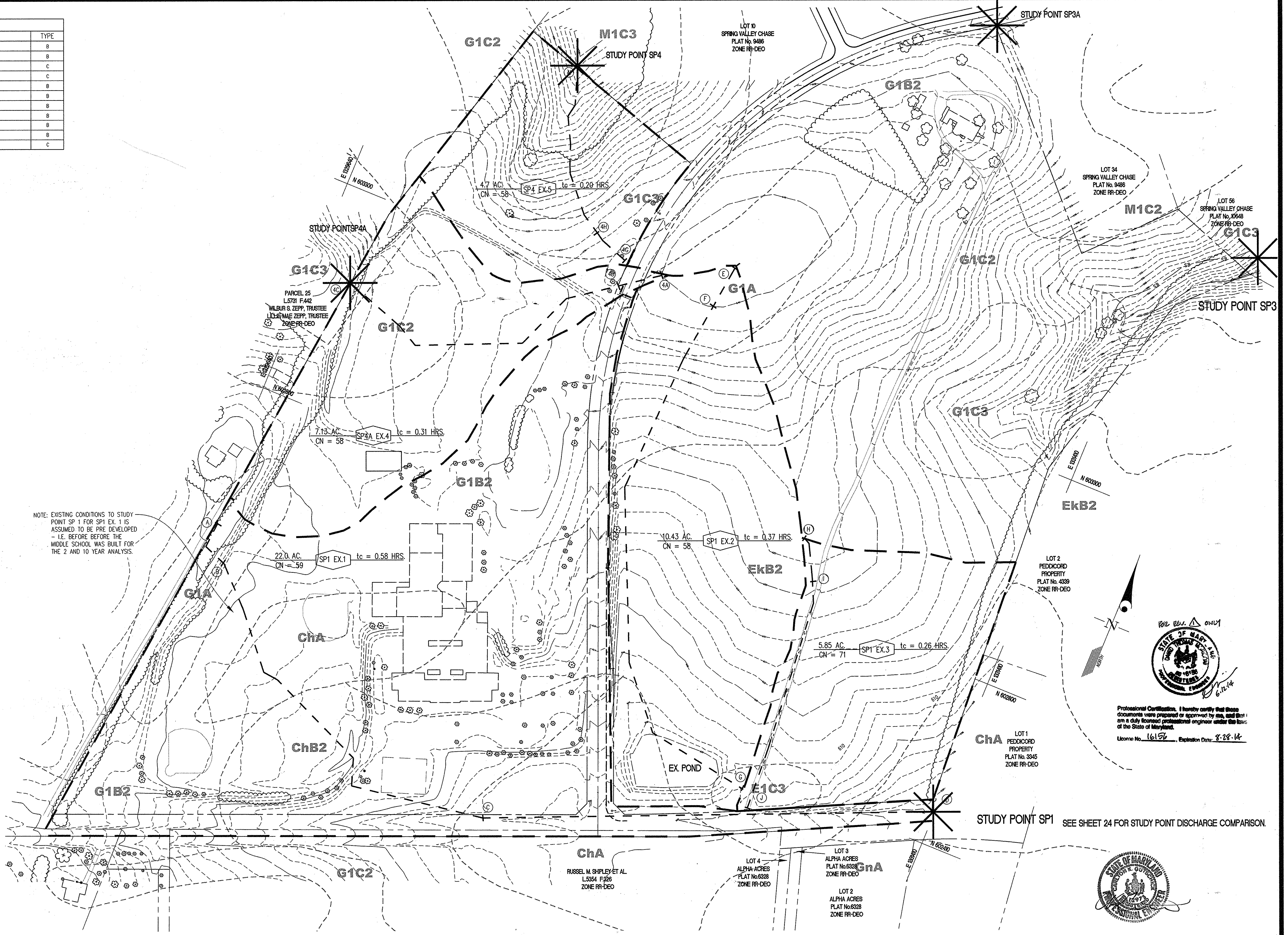
EXISTING CONDITION 1-YR ANALYSIS DRAINAGE AREA MAP (FOR SWM)
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 161112 (PARCEL 1) and 161567 (PARCEL 2A)
 WEST FRIENDSHIP ELECTION DISTRICT No. 3
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	22 of 48

SOILS CHART		
SYMBOL	NAME	TYPE
ChA	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ExB2	ELDOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
ExC3	ELDOAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
G1A	GLENELG LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1C3	GLENELG LOAM, 15 TO 15 PERCENT, SEVERELY ERODED	B
M1C2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
M1C3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnA	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C

NOTE: EXISTING CONDITIONS TO STUDY POINT SP 1 FOR SP1 EX. 1 IS ASSUMED TO BE PRE DEVELOPED - I.E. BEFORE THE MIDDLE SCHOOL WAS BUILT FOR THE 2 AND 10 YEAR ANALYSIS.

- LEGEND**
- TC PATH
 - DRAINAGE DIVIDE
 - DRAINAGE AREA
 - SOILS
 - EX. TREE CANOPY LINE



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
Diana Dorey 1-15-04
 County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Frank A. Cagle 9/2/03
 Director

Andy Hamrick 9/2/03
 Chief, Division of Land Development

[Signature] 8-27-03
 Chief, Development Engineering Division

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. 16156, Expiration Date: 8-28-14
 6/2/14

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	DESCRIPTION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2661 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

PRE-DEVELOPMENT DRAINAGE AREA MAP 2, 10 YR. ANALYSIS (FOR SWM)
 REVISOR: [Signature]
 DEVELOPER: [Signature]
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16117 & 16121 (PARCEL 1) and 16121 (PARCEL 2A)
 WEST FRIENDSHIP ELECTION DISTRICT No. 3
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	23 of 48

SOILS CHART		
SYMBOL	NAME	TYPE
ChA	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EkB2	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
EC3	ELIOAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
G1A	GLENELG LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1C3	GLENELG LOAM, 15 TO 15 PERCENT, SEVERELY ERODED	B
M1C2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
M1C3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnA	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C

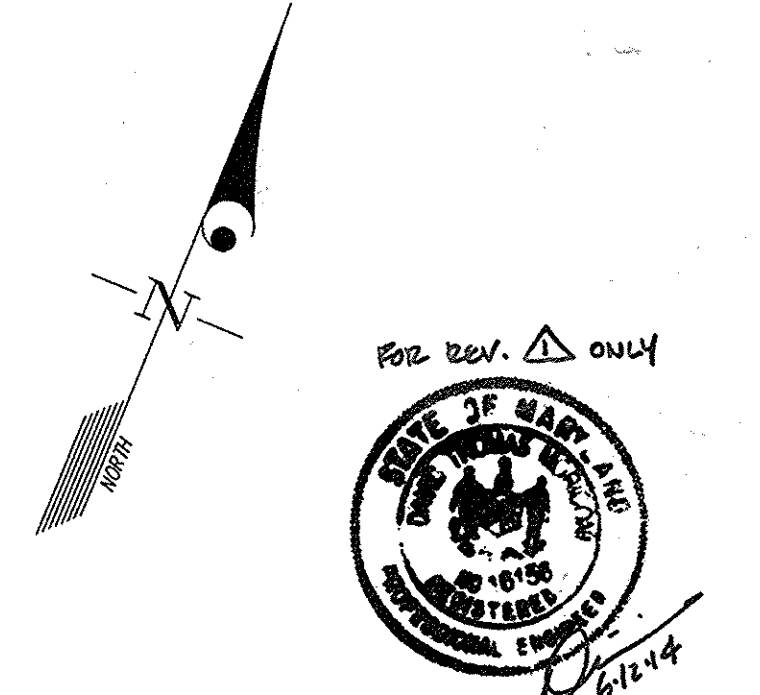
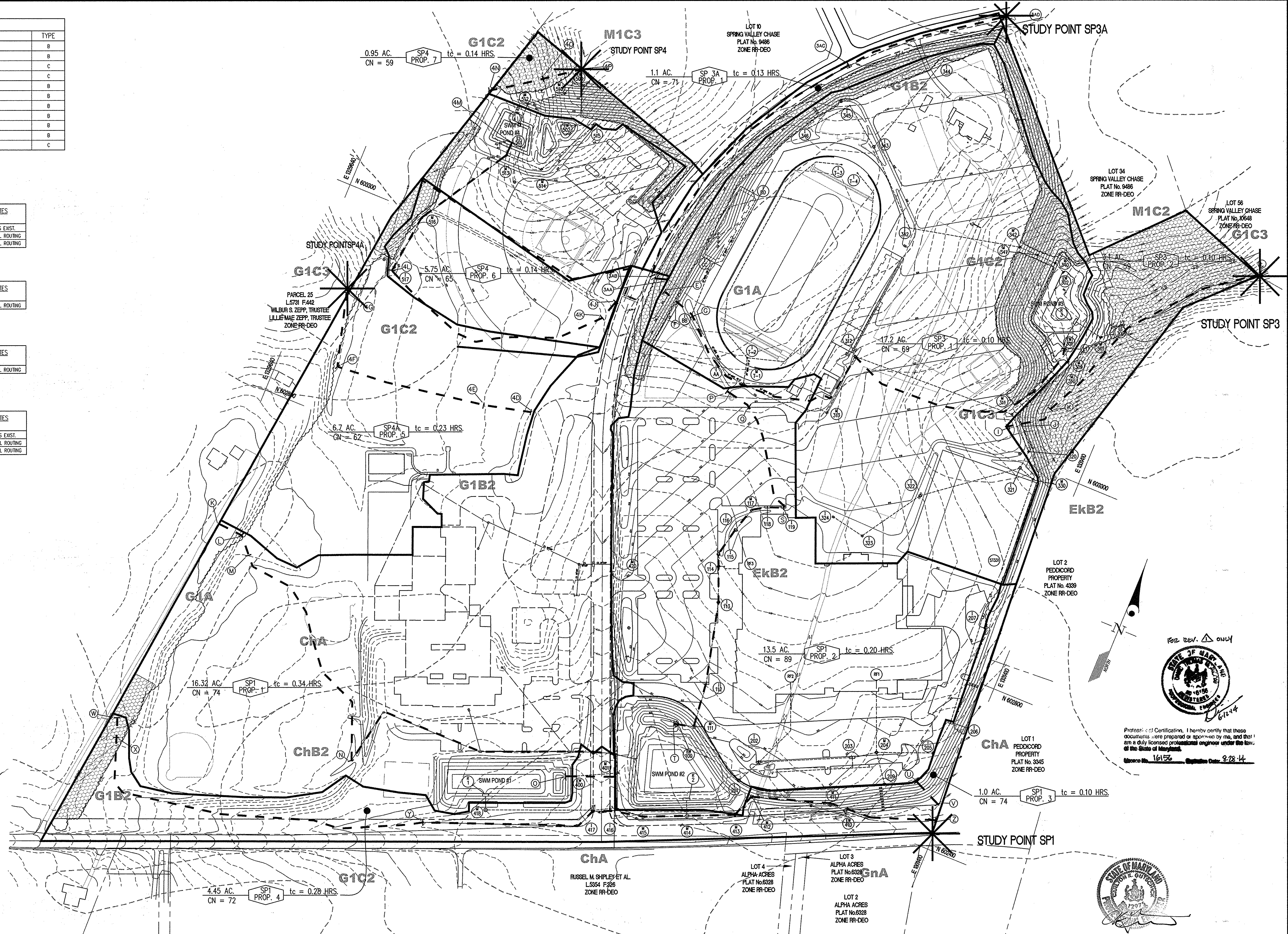
STUDY POINT 1 (SP1)			
EVENT (YR)	EXISTING PEAK DISCHARGE (CFS)	POST-DEV. PEAK DISCHARGE (CFS)	NOTES
1	6.00	4.41	M.S. AS EXIST.
2	9.13	7.44	NORMAL ROUTING
10	39.35	26.08	NORMAL ROUTING

STUDY POINT 3 (SP3)			
EVENT (YR)	EXISTING PEAK DISCHARGE (CFS)	POST-DEV. PEAK DISCHARGE (CFS)	NOTES
1	2.32	0.47	NORMAL ROUTING

STUDY POINT 3A (SP3A)			
EVENT (YR)	EXISTING PEAK DISCHARGE (CFS)	POST-DEV. PEAK DISCHARGE (CFS)	NOTES
1	0.73	0.76	NORMAL ROUTING

COMBINED STUDY POINT 4 and 4A (SP4 and 4A)			
EVENT (YR)	EXISTING PEAK DISCHARGE (CFS)	POST-DEV. PEAK DISCHARGE (CFS)	NOTES
1	1.70	1.17	M.S. AS EXIST.
2	2.89	2.55	NORMAL ROUTING
10	13.26	13.13	NORMAL ROUTING

- LEGEND**
- TC PATH
 - DRAINAGE DIVIDE
 - DRAINAGE AREA
 - SOILS
 - POST DEVELOPMENT TREE LINE
 - FOREST CONSERVATION AREA



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Diana Bonetto 1/15/07
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark A. Cagle 9/4/03
Director

Conrad H. Smith 1/2/13
Chief, Division of Land Development

[Signature] 8/28/14
Chief, Development Engineering Division

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	DESCRIPTION	BY	APP'R.
6-22-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: WAVE BROWN
TEL: 301-261-8700

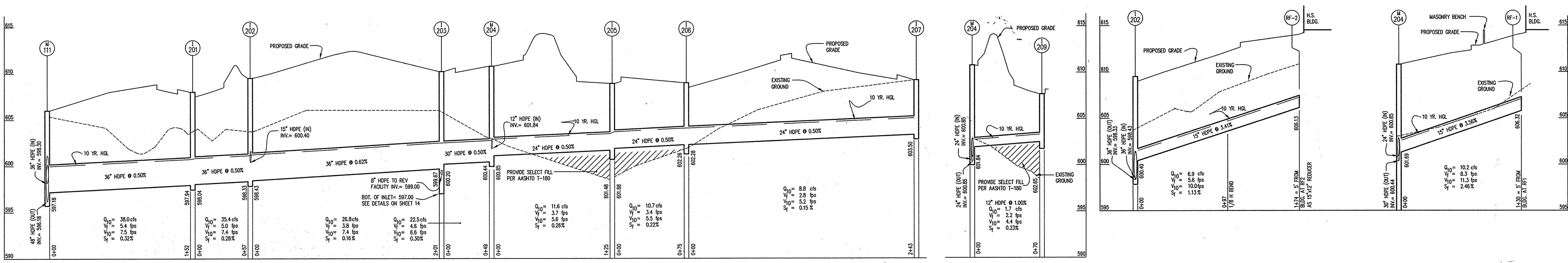
PREPARED FOR: **NORTHERN HIGH SCHOOL**
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117 & 16136 (PARCEL 1) and 16136 (PARCEL 2A)

POST-DEVELOPMENT DRAINAGE AREA MAP (FOR SWM)

WEST FRIENDSHIP ELECTION DISTRICT No. 3

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	24 of 48



STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	LOCATIONS & REMARKS
			UPPER	LOWER	UPPER	LOWER		
EW 100	48" TYPE A ENDWALL	L = 13'-0"	401.50	---	---	598.00	HO. CO. SD-5.11	AT END OF PIPE IN H.S. POND FOREBAY
M 111	MANHOLE	7'-0"	606.00	---	---	599.30	MD-384.07	CTR. OF MH @ STA: 2+59.49; 32.85' RT. (BUS LOOP ENTR. DRIVE)
I 112	A-10 INLET	2'-6"	611.57	611.32	599.40	599.30	HO. CO. SD-4.41	ALIGN CORNER OF INLET W/ THAT OF PKG. LOT
I 113	COS-10 INLET	6'-0" DIA.	612.50	---	600.46	600.31	SHA MD-374.63	ALIGN CORNER OF INLET W/ THAT OF PKG. LOT
I 114	COS-10 INLET	6'-0" DIA.	613.20	---	604.00	601.85	SHA MD-374.63	CTR. LINE OF INLET @ STA: 5+36.68 (MAIN PKG. LOT)
I 115	COS-10 INLET	6'-0" DIA.	614.31	613.90	602.93	602.73	SHA MD-374.62	CTR. LINE OF INLET @ STA: 5+67.68 (MAIN PKG. LOT)
I 116	DOUBLE S-INLET	2'-7.5"	611.00	---	603.57	603.47	HO. CO. SD-4.23	CTR. OF DRN. @ N 602910.4415 E 1330737.3670
M 117	MANHOLE	5'-0"	615.33	---	604.48	603.88	HO. CO. G-	CTR. OF MH @ STA: 8+10.92; 40' RT. (MAIN PKG. LOT)
I 118	A-10 INLET	4'-0"	614.74	614.54	604.83	604.73	HO. CO. SD-4.41	CTR. LINE OF INLET @ STA: 8+46.50 (MAIN PKG. LOT)
I 119	A-10 INLET	4'-0"	614.00	613.80	605.08	604.98	HO. CO. SD-4.41	ALIGN CORNER OF INLET W/ THAT OF PKG. LOT
I 201	COS-10 INLET	6'-0" DIA.	608.00	---	598.04	597.84	SHA MD-374.63	CTR. LINE OF INLET @ STA: 4+08.30 (BUS LOOP ENTR. DRIVE)
I 202	COS-10 INLET	7'-0" DIA.	609.50	---	600.40	598.33	SHA MD-374.63	ALIGN CORNER OF INLET W/ THAT OF PKG. LOT
I 203	A-10 INLET	4'-0"	610.20	---	600.20	599.67	HO. CO. SD-4.41	CTR. LINE OF INLET @ STA: 1+85.63 (DRIVE THRU BUS PKG.)
M 204	MANHOLE	5'-0"	610.79	---	601.84	600.44	HO. CO. G-5.12	CTR. OF MH @ STA: 1+30.63; 36' LT. (DRIVE THRU BUS PKG.)
I 205	DBL. S-COMB. INLET	3'-5"	609.40	---	601.88	601.48	HO. CO. SD-4.34	CTR. LINE OF INLET @ STA: 8+61.87 (BUS LOOP ENTR. DRIVE)
I 206	A-10 INLET	2'-6"	609.23	608.70	602.28	602.26	HO. CO. SD-4.41	ALIGN CORNER OF INLET W/ THAT OF PKG. LOT
I 207	A-10 INLET	3'-0"	609.25	---	603.50	603.41	HO. CO. SD-4.41	CTR. LINE OF INLET @ STA: 11+89.99 (SERVICE AREA)
I 209	DBL. S-COMB. INLET	3'-5"	608.16	---	602.85	602.55	HO. CO. SD-4.34	CTR. LINE OF INLET @ STA: 7+31.22 (BUS LOOP ENTR. DRIVE)
M 415	MANHOLE	7'-0"	603.40	---	593.23	593.13	MD-384.07	SEE PLAN
M 413	MANHOLE	7'-0"	602.50	---	591.56	591.46	MD-384.07	SEE PLAN
EW 410	54" TYPE A ENDWALL	L = 14'-6"	598.00	---	---	590.00	HO. CO. G-5.11	END OF PIPE ALONG MD RT. 99 (EX. RIP--RAP)
M 411	MANHOLE	7'-0"	601.00	---	590.26	590.16	MD-384.07	CTR. OF MH @ N 602418.6325 E 1331170.0074
M 414	MANHOLE	7'-0"	603.40	---	592.67	592.07	MD-384.07	CTR. OF MH @ N 602272.2520 E 1330881.6462
I 416	A-10 INLET	2'-6"	602.45	602.45	593.63	593.53	HO. CO. SD-4.41	ALIGN CORNER OF INLET WITH NEW CURB P/P/C (REPLACES EX. I-8 ON WOODFORD)
I 417	A-10 INLET	2'-6"	602.45	---	---	---	---	SEE SHEET 11 FOR MORE INFORMATION
EW 400	36" TYPE C ENDWALL	L = 16'-8"	602.00	---	---	598.00	HO. CO. SD-5.21	AT END OF PIPE IN M.S. POND FOREBAY
M 401	MANHOLE	7'-0"	604.85	---	598.74	598.64	HO. CO. G-5.12	CTR. OF MH @ STA: 0+40.23; 34.67' RT. (EX. CTR. LINE OF WOODFORD RD.)
I 8A	A-10 INLET	4'-0"	600.00	---	599.00	599.00	HO. CO. SD-4.41	CTR. FACE OF INLET @ STA: 1+98.80; 30' RT. (REPLACES THE EX. I-8A ON WOODFORD)
M 412	MANHOLE	7'-0"	603.50	---	591.22	591.12	MD-384.07	SEE PLAN

PIPE SCHEDULE

SIZE	TYPE	QUANTITY (L.F.)	REMARKS
12"	HDPE	110	SEE NOTE BELOW
15"	HDPE	304	SEE NOTE BELOW
24"	HDPE	591	SEE NOTE BELOW
30"	HDPE	179	SEE NOTE BELOW
36"	HDPE	803	SEE NOTE BELOW
48"	HDPE	199	SEE NOTE BELOW
54"	HDPE	352	SEE NOTE BELOW

- PRE-CAST ALTERNATES TO FIELD CONSTRUCTED STANDARD DETAILS REFERENCED ABOVE ARE ACCEPTABLE.
- IF A STRUCTURE IS NOT PER STD. THEN THE SHOP DRAWINGS FOR THE STRUCTURE MUST BE APPROVED BY THE DESIGN ENGINEER.
- PROVIDE RETICULAR GRATES FOR ALL S-TYPE INLETS PER HO. CO. SD 4.93.
- PROVIDE 2.5" INLET DEPRESSION AT ALL S-INLETS WITHIN PAVED AREAS.
- MANHOLE TOP ELEVATIONS ARE SURFACE ELEVATIONS AT THE CENTER OF THE BASE UNIT.
- A-INLET TOP ELEVATIONS ARE TOP OF SLAB AT THE FACE OF THE CURB AT THE INSIDE FACE OF THE SIDE WALLS.
- S-INLET TOP ELEVATIONS ARE GRATE ELEVATIONS.
- ALL GRATES FOR LANDSCAPE TYPE DRAINS SHALL BE CAST IRON H20 RATED AND LOCKING.

NOTE:
ALL HDPE 12" THRU 42" SHALL BE AASHTO M 294-90 TYPE "S" (SMOOTH LINED).
ALL HDPE 3" THRU 10" SHALL BE AASHTO M 292-90 TYPE "S" (SMOOTH LINED).

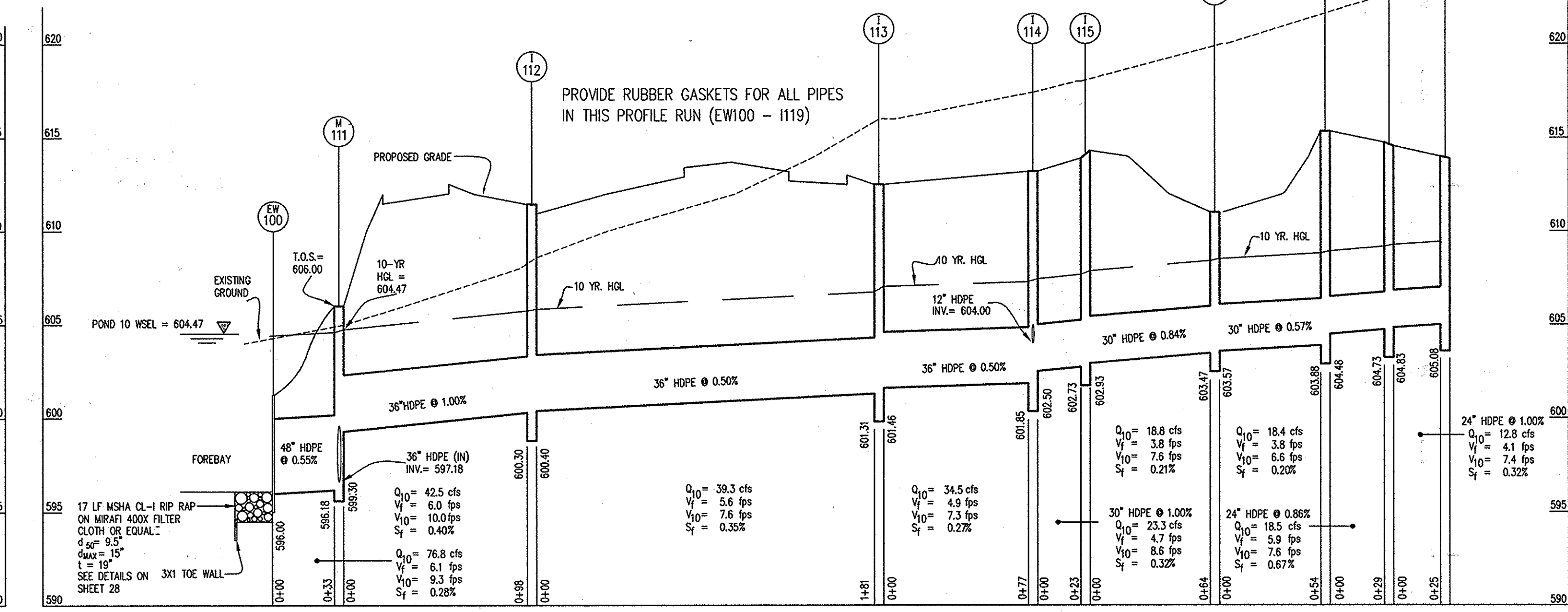
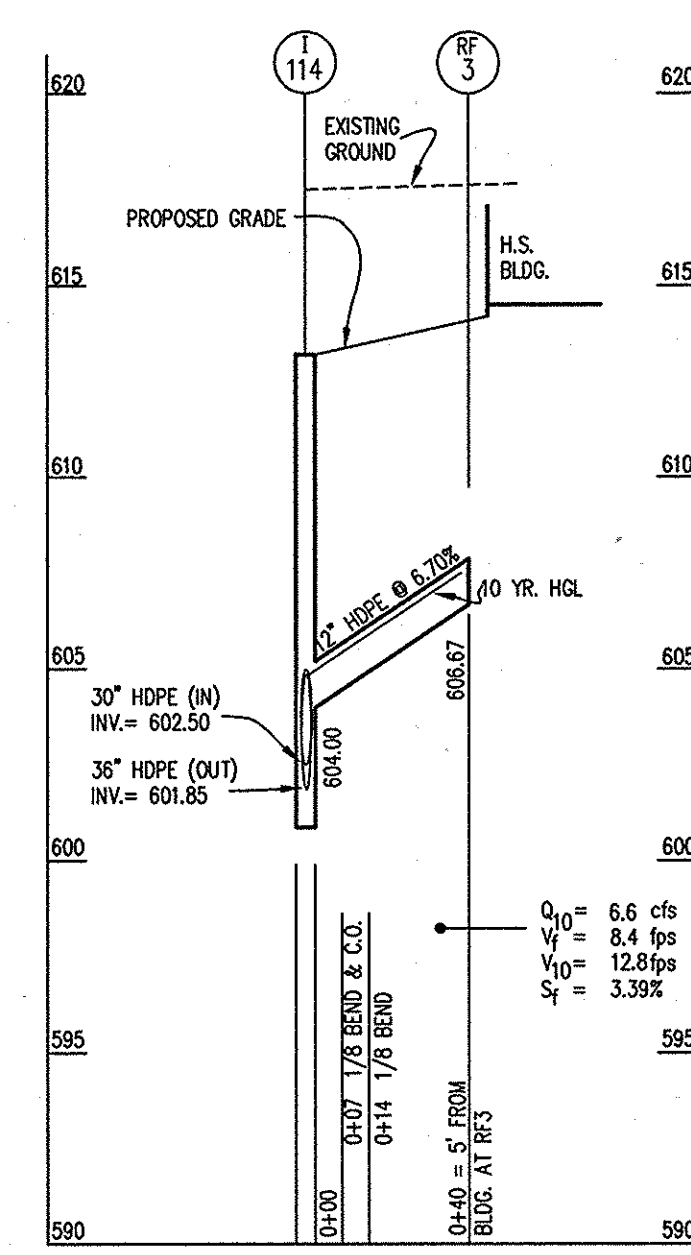
APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Debra D. ... 1-15-07
County Health Officer (CAB) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Mark ... 9/1/03
Director Date
David ... 9/6/03
Chief, Division of Land Development Date
Chief, Development Engineering Division

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND, 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

NO.	DATE	DESCRIPTION	BY	APP.
1	6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DM	APP.

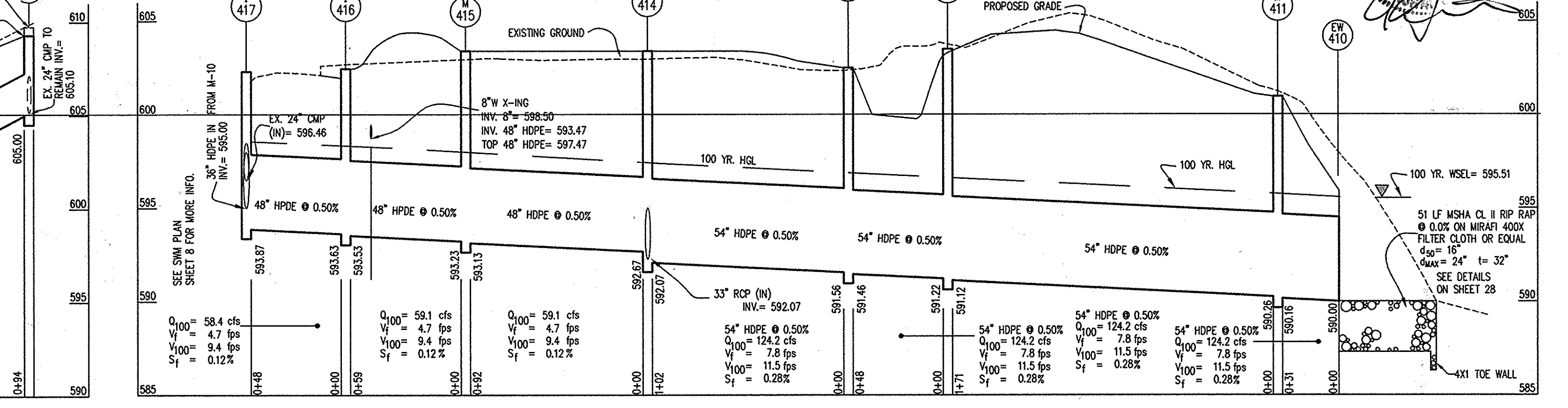
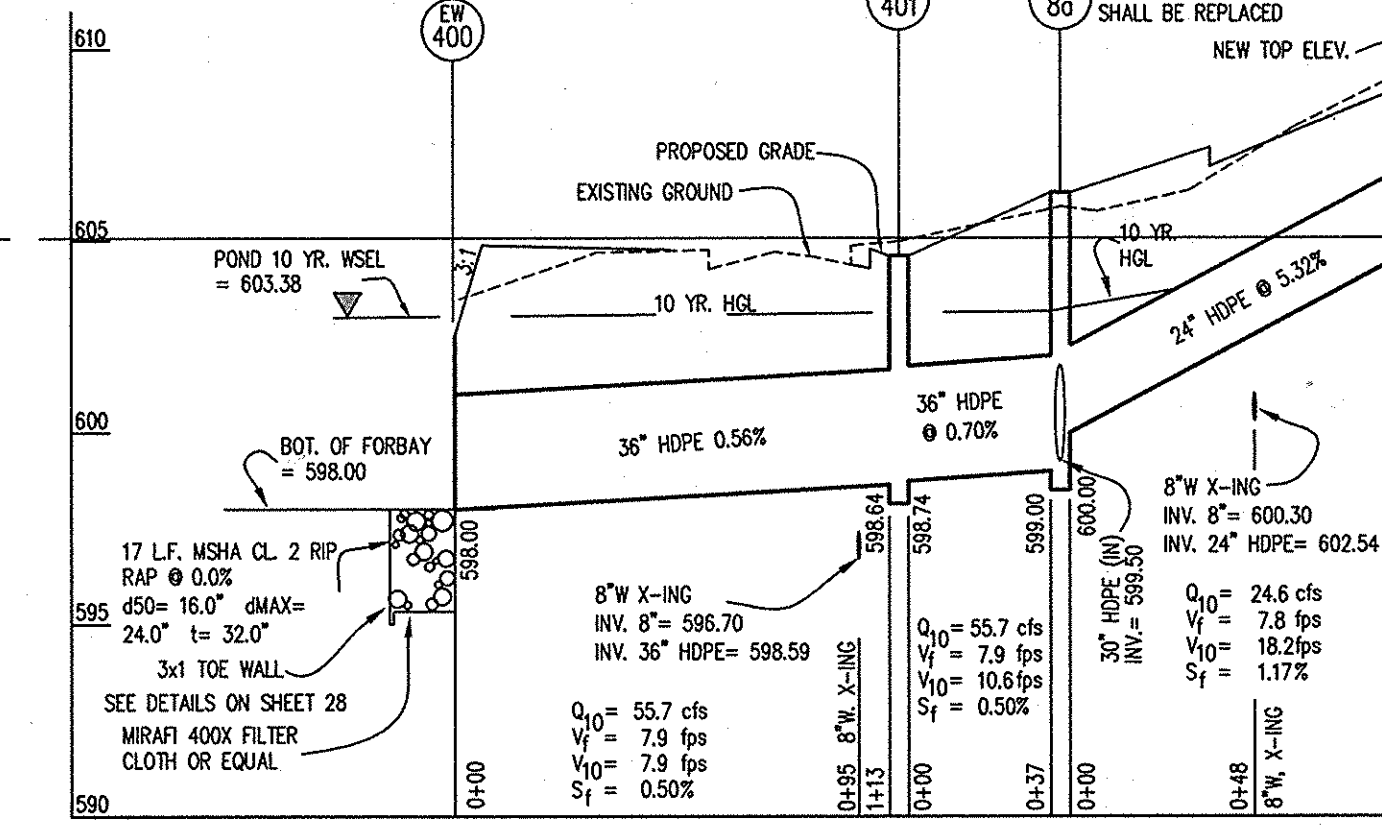
FOR ALL PROFILES ON THIS SHEET
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



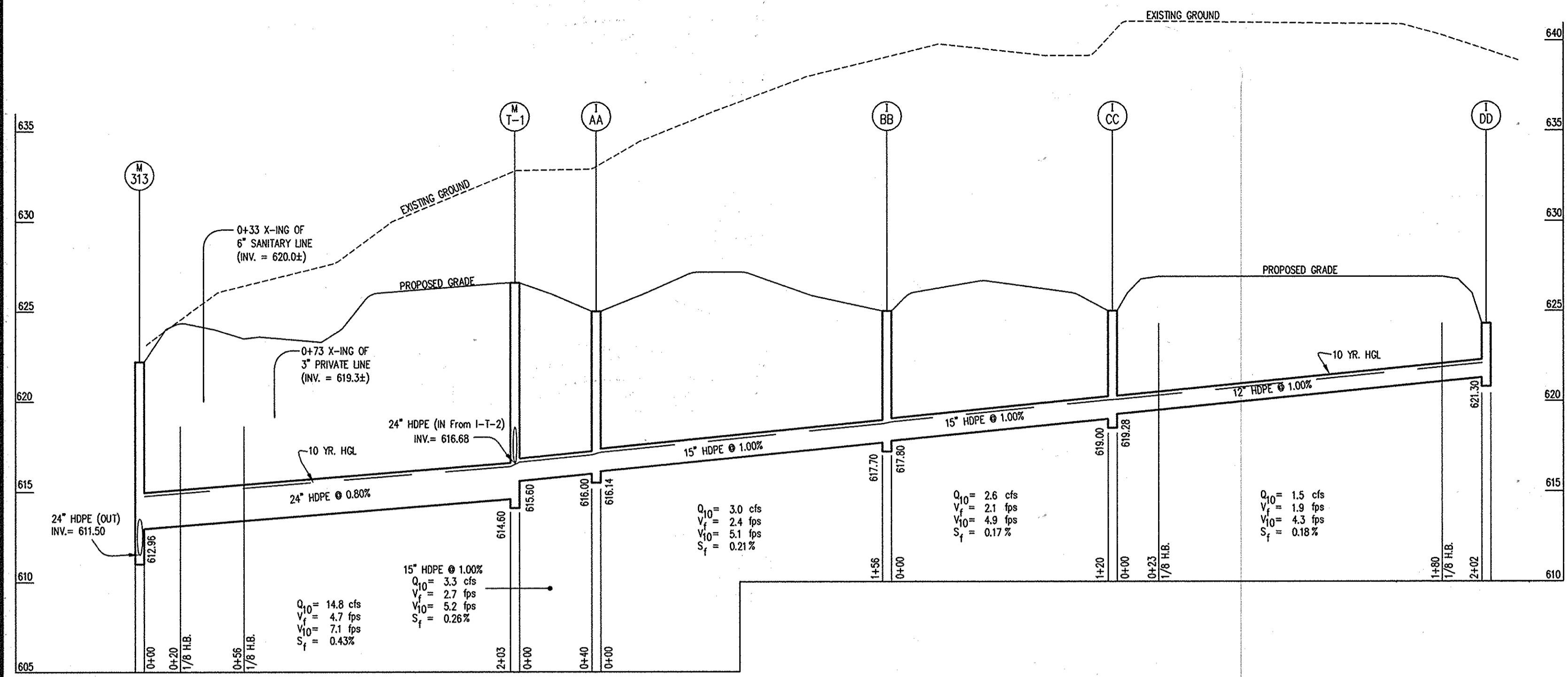
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 16152, Expiration Date: 8-28-14



PROVIDE RUBBER GASKETS FOR PIPES (EW100 - M401), (M401-18a).



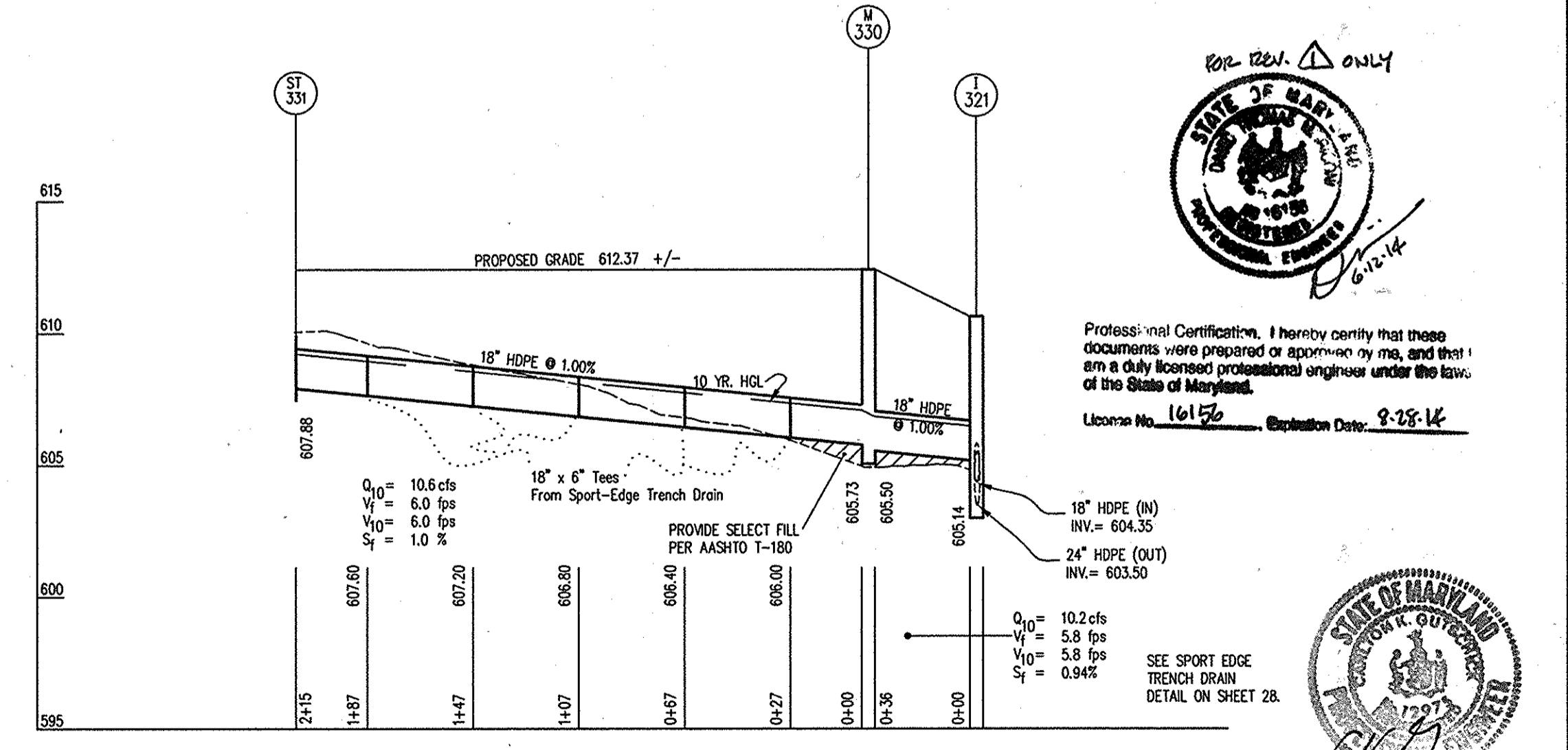
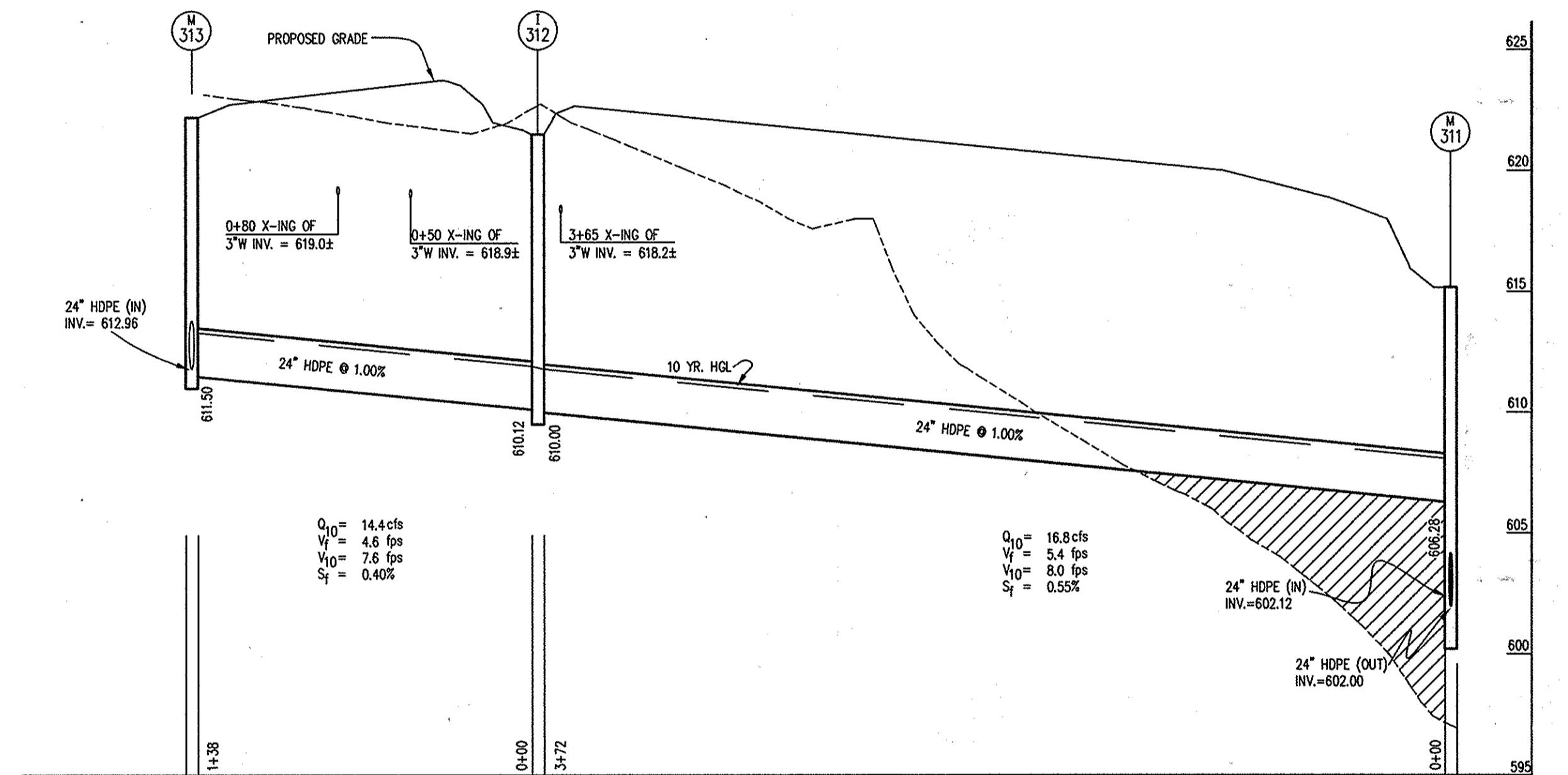
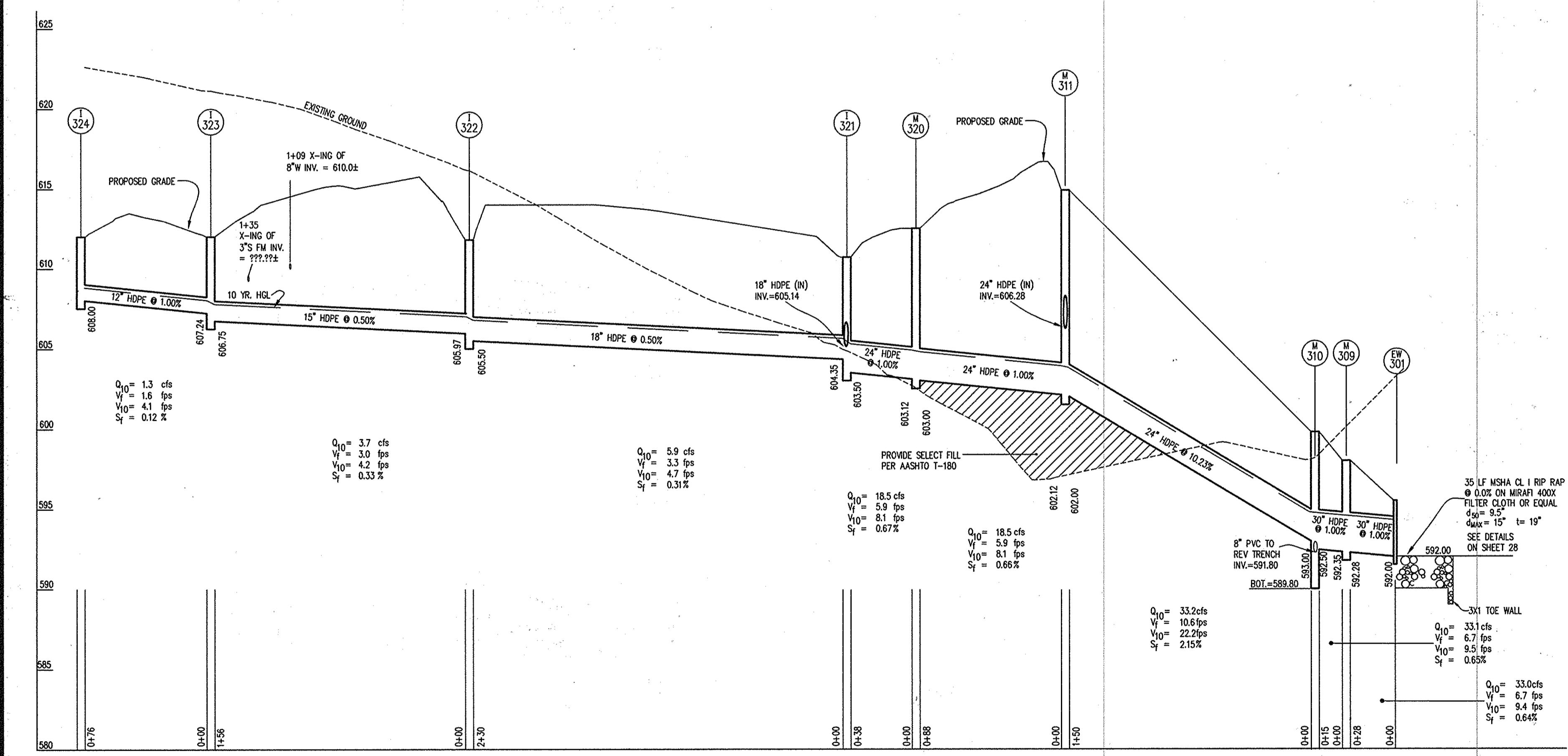
PREPARED FOR:		SCALE		ZONING		G. L. W. FILE NO.	
OWNER HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 ROUTE 108 ELICOTT CITY, MD 21043 ATTN: CATHEEN YOUNG TEL: 410-313-6704	ARCHITECT TCA ARCHITECTS LLC 2661 RIVA ROAD, SUITE 120 ANNAPOLIS, MD 21401 ATTN: MIKE BOON TEL: 301-261-8700	AS NOTED	RR-DEO	10	19	00-177	SHEET 1
REVISOR SITE DEVELOPMENT PLAN		DATE	TAX MAP - GRID	SHEET		25 of 48	
WEST FRIENDSHIP ELECTION DISTRICT No. 3		28/JUL/03		SDP-03-33			



SIZE	TYPE	QUANTITY (L.F.)	REMARKS
12"	HDPE	278	SEE NOTE BELOW
15"	HDPE	472	SEE NOTE BELOW
18"	HDPE	480	SEE NOTE BELOW
24"	HDPE	989	SEE NOTE BELOW
30"	HDPE	43	SEE NOTE BELOW

NOTE:
 ALL HDPE 12" THRU 42" SHALL BE AASHTO M 294-90 TYPE "S" (SMOOTH LINED).
 ALL HDPE 3" THRU 10" SHALL BE AASHTO M 292-90 TYPE "S" (SMOOTH LINED).

STRUCTURE SCHEDULE								
NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	LOCATIONS & REMARKS
			UPPER	LOWER	UPPER	LOWER		
I AA	24" DRAIN BASIN	24" GRATE	625.00	----	616.14	616.00	NYLOPLAST INC. BURFORD, GEORGIA (OR EQV.)	SEE PLAN
I BB	24" DRAIN BASIN	24" GRATE	625.00	----	617.80	617.70	NYLOPLAST INC. BURFORD, GEORGIA (OR EQV.)	
I CC	24" DRAIN BASIN	24" GRATE	625.00	----	619.28	619.00	NYLOPLAST INC. BURFORD, GEORGIA (OR EQV.)	
I DD	24" IN-LINE DRAIN	24" GRATE	624.30	----	TERMINAL	621.30	NYLOPLAST INC. BURFORD, GEORGIA (OR EQV.)	
M T-1	PRECAST MANHOLE	4'-0"	626.60	----	616.68	614.60	HO. CO. G-5.12	
M 313	PRECAST MANHOLE	4'-0"	622.20	----	612.96	611.50	HO. CO. G-5.12	
I 312	PRECAST S INLET	2'-7"	621.50	----	610.12	610.00	HO. CO. SD-4.22	
M 311	PRECAST MANHOLE	5'-0"	614.90	----	606.28	602.00	HO. CO. G-5.13	
M 310	PRECAST MANHOLE	5'-0"	599.80	----	593.00	592.50*	MODIFIED HO. CO. G-5.13	*SEE SHEET 16 FOR MODIFICATIONS TO BOTTOM
M 309	PRECAST MANHOLE	5'-0"	598.00	----	592.35	592.28	HO. CO. G-5.13	SEE PLAN
I 324	PRECAST S INLET	2'-7"	612.00	----	TERMINAL	608.00	HO. CO. SD-4.22	
I 323	PRECAST S INLET	2'-7"	612.00	----	607.24	606.75	HO. CO. SD-4.22	
I 322	PRECAST S INLET	2'-7"	611.80	----	605.97	605.50	HO. CO. SD-4.22	
I 321	PRECAST S INLET	2'-7"	610.70	----	605.14	603.50	HO. CO. SD-4.22	
M 320	PRECAST MANHOLE	4'-0"	612.50	----	603.12	603.00	HO. CO. G-5.12	
M 330	PRECAST MANHOLE	4'-0"	612.27	----	605.73	605.50	HO. CO. G-5.12	
EW 301	PRECAST END SECTION	NA	595.00	592.00	TERMINAL	592.00	SEE MFG.	



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. 16156 Expiration Date: 9-28-14



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 Date: 1-15-04
 County Health Officer: [Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Date: 9/4/03
 Director: [Signature]

Date: 7/2/03
 Chief, Division of Land Development: [Signature]

Date: 8-2-03
 Chief, Development Engineering Division: [Signature]

- NOTES:
1. PRE-CAST ALTERNATES TO FIELD CONSTRUCTED STANDARD DETAILS REFERENCED ABOVE ARE ACCEPTABLE.
 2. PROVIDE RECTANGULAR GRATES FOR ALL S-TYPE INLETS PER HO. CO. SD 4.93.
 3. PROVIDE 2" S-INLET DEPRESSION AT ALL S-INLETS WITHIN PAVED AREAS.
 4. MANHOLE TOP ELEVATIONS ARE SURFACE ELEVATIONS AT THE CENTER OF THE BASE UNIT.
 5. A-INLET TOP ELEVATIONS ARE TOP OF SLAB AT THE FACE OF THE CURB AT THE INSIDE FACE OF THE SIDE WALLS.
 6. S-INLET TOP ELEVATIONS ARE GRATE ELEVATIONS.
 7. ALL GRATES FOR LANDSCAPE TYPE DRAINS SHALL BE CAST IRON AND LOCKING.

FOR ALL PROFILES ON THIS SHEET
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20866 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188 00177/SDP-03-33/PROFILES-SD.DWG	DES. BY: [Signature] DRN. [Signature] CHK. [Signature]	DATE: 6-12-14 UPDATED SCHOOL NAME & SHEET TOTAL	REVISION: [Table]	PREPARED FOR: OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 ROUTE 108 ELLICOTT CITY, MD 21043 ATTN: CATHEEN YOUNG TEL: 410-313-8704	ARCHITECT: TCA ARCHITECTS LLC 2661 RIVA ROAD, SUITE 120 ANNAPOLIS, MD 21401 ATTN: MIKE BOON TEL: 301-261-8700	REVISIONED SITE DEVELOPMENT PLAN WEST FRIENDSHIP ELECTION DISTRICT No. 3	STORM DRAIN/UTILITY PROFILES & SCHEDULES MARILYN'S RIDGE NORTHERN HIGH SCHOOL HOWARD COUNTY PUBLIC SCHOOL SYSTEM PLAT Nos. 16111B (PARCEL 1) and 16134G1 (PARCEL 2A)	SCALE: AS NOTED	ZONING: RR-DEO	G. L. W. FILE No.: 00-177
								DATE: 28/JUL/03	TAX MAP - GRID: 10 19	SHEET: 26 of 48

STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	LOCATIONS & REMARKS
			UPPER	LOWER	UPPER	LOWER		
I 346	18" DRAIN BASIN	18" GRATE	624.90	-----	TERMINAL	620.90	HYDROPLAST INC. BUREFORD, GEORGIA (OR EDV.)	SEE PLAN
I 345	18" DRAIN BASIN	18" GRATE	624.80	-----	620.38	619.98	HYDROPLAST INC. BUREFORD, GEORGIA (OR EDV.)	
I 343	24" DRAIN BASIN	24" GRATE	624.90	-----	620.90	619.25	HYDROPLAST INC. BUREFORD, GEORGIA (OR EDV.)	
I 342	24" DRAIN BASIN	24" GRATE	624.00	-----	618.28	618.00	HYDROPLAST INC. BUREFORD, GEORGIA (OR EDV.)	
M 342	MANHOLE	4'-0"	625.00	-----	616.75	611.75	HO. CO. G-5.12	
M 341	MANHOLE	4'-0"	610.75	-----	606.27	601.27	HO. CO. G-5.12	
EW 300	MANHOLE	4'-0"	594.50	-----	592.00	592.00	HO. CO. G-5.12	
I 344	24" DRAIN BASIN	24" GRATE	627.00	-----	TERMINAL	623.38	HYDROPLAST INC. BUREFORD, GEORGIA (OR EDV.)	
M 340	MANHOLE	4'-0"	596.00	-----	592.50	592.20	HO. CO. G-5.12	

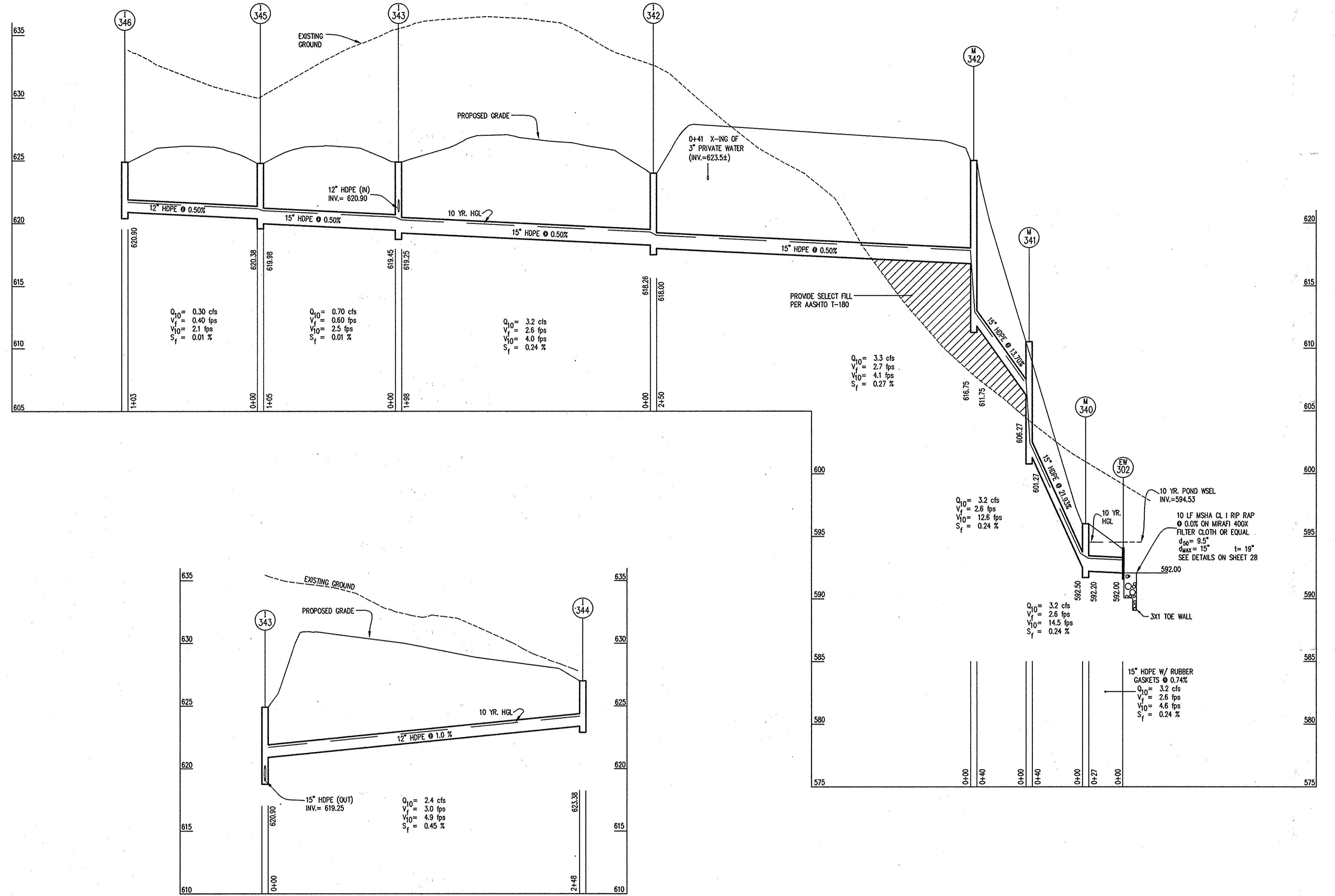
NOTES: 1) PRECAST ALTERNATIVES ARE ACCEPTABLE.
2) IF STR. IS NOT PER STD. THEN SHOP DWGS. MUST BE APPROVED BY DESIGN ENGINEER.

PIPE SCHEDULE

SIZE	TYPE	QUANTITY (L.F.)	REMARKS
12"	HDPE	351	SEE NOTE BELOW
15"	HDPE	660	SEE NOTE BELOW

NOTE:
ALL HDPE 12" THRU 42" SHALL BE AASHTO M 294-90 TYPE "S" (SMOOTH LINED).
ALL HDPE 3" THRU 10" SHALL BE AASHTO M 292-90 TYPE "S" (SMOOTH LINED).

FOR ALL PROFILES ON THIS SHEET
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: *[Signature]* Date: 1-15-07
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* Date: 9/1/06
 Chief, Division of Land Development: *[Signature]* Date: 9/2/03
 Chief, Development Engineering Division: *[Signature]* Date: 8-2-06

- NOTES:
- PRE-CAST ALTERNATIVES TO FIELD CONSTRUCTED STANDARD DETAILS REFERENCED ABOVE ARE ACCEPTABLE.
 - PROVIDE RECTANGULAR GRATES FOR ALL S-TYPE INLETS PER HO. CO. SD 4.93.
 - PROVIDE 2.5" INLET DEPRESSION AT ALL S-INLETS WITHIN PAVED AREAS.
 - MANHOLE TOP ELEVATIONS ARE SURFACE ELEVATIONS AT THE CENTER OF THE BASE UNIT.
 - A-INLET TOP ELEVATIONS ARE TOP OF SLAB AT THE FACE OF THE CURB AT THE INSIDE FACE OF THE SIDE WALLS.
 - S-INLET TOP ELEVATIONS ARE GRATE ELEVATIONS.
 - ALL GRATES FOR LANDSCAPE TYPE DRAINS SHALL BE CAST IRON H20 RATED AND LOCKING.



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. 161976 Expiration Date: 8-28-14



GLEW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-288-2524 FAX: 301-421-4186

NO.	DATE	DESCRIPTION	BY	APP'R.
1	6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2661 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MARK BOON
 TEL: 301-261-8700

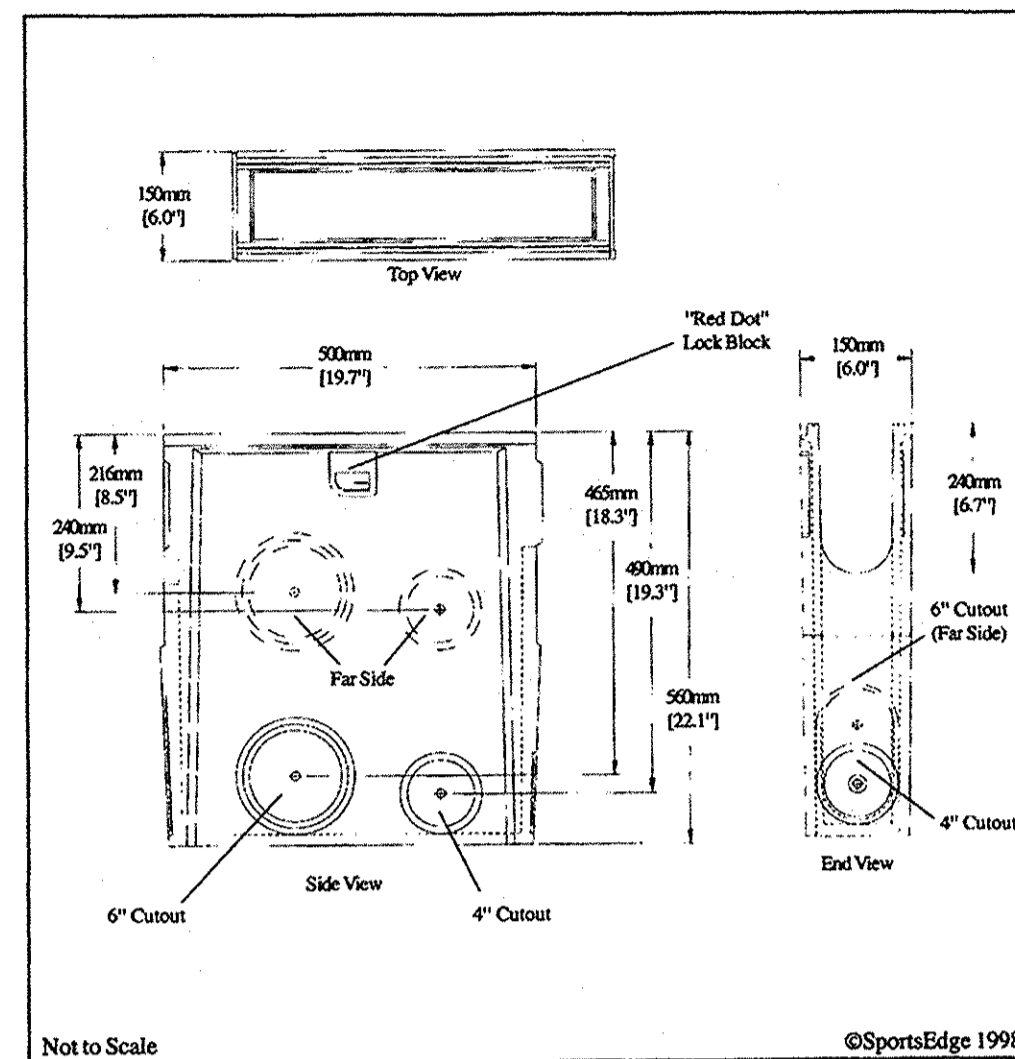
REVISOR: *[Signature]*
 WEST FRIENDSHIP ELECTION DISTRICT No. 3

STORM DRAIN/UTILITY PROFILES & SCHEDULES
 MARZETT'S RIDGE
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16111a (PARCEL 1) and 16136a (PARCEL 2A)

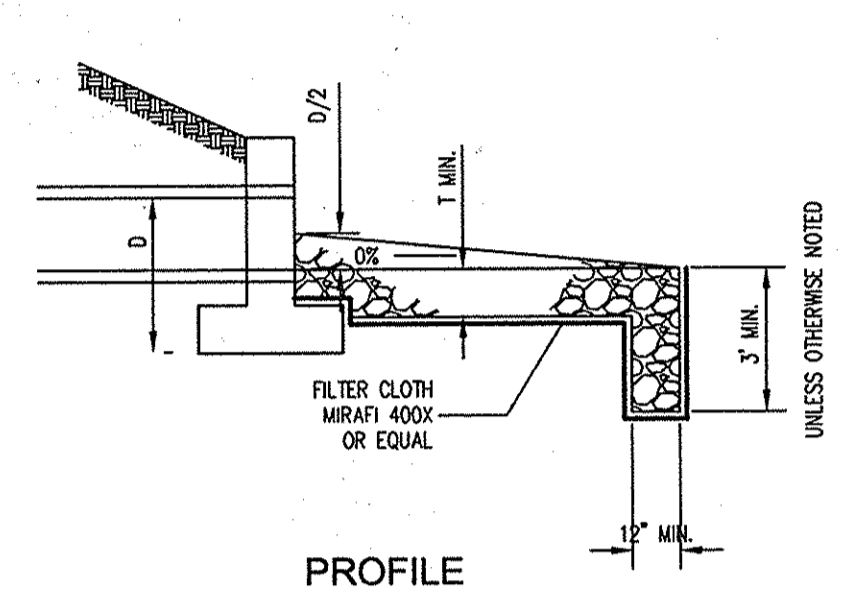
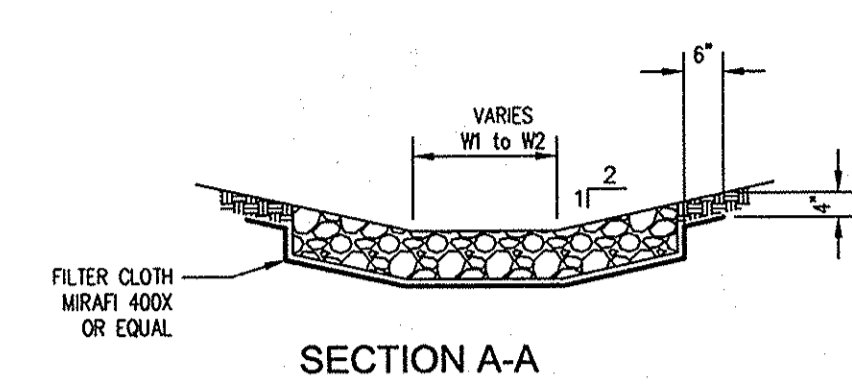
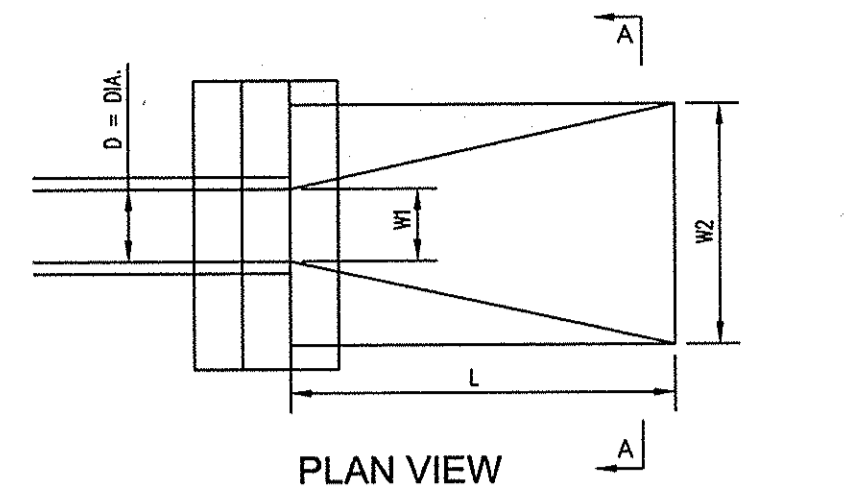
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS NOTED	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	27 of 48

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OUTLET PROTECTION DETAILS & SCHEDULE
 N.T.S.

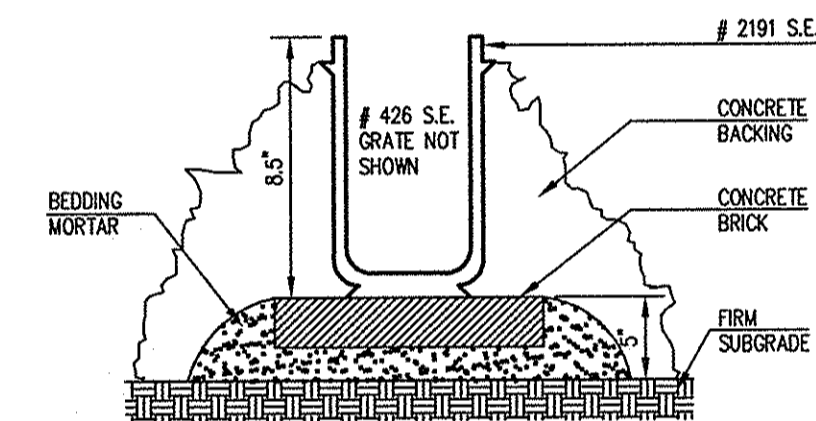
ROCK OUTLET PROTECTION CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER, RIPRAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. GEOTEXTILE SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE SHALL BE A MINIMUM OF ONE FOOT.
4. STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIPRAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
5. THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.

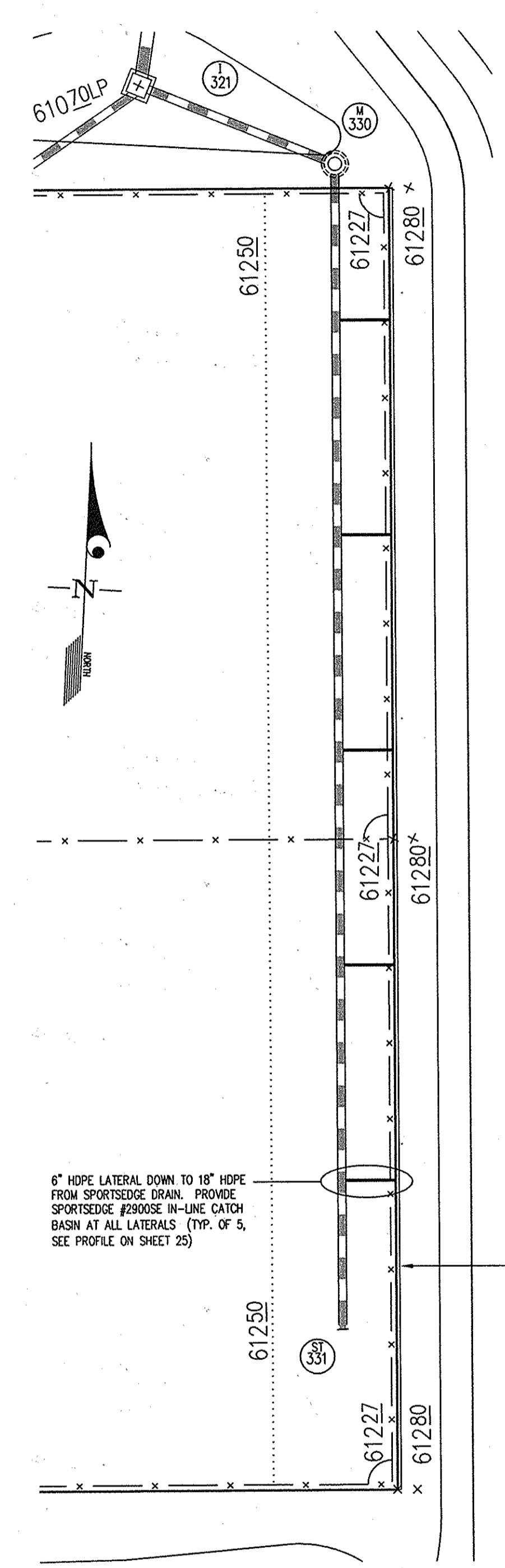
RIP-RAP SCHEDULE

STRUCTURE	L	W1	W2	t	D ₅₀	D _{MAX}	SHA
EW 100	17'	4'	11'	19"	9.5"	15"	CLASS 1
EW 405	51'	4'-8"	25'	32"	16"	24"	CLASS 2
EW 400	17'	3'-0"	20'	32"	16"	24"	CLASS 2
ES 300	27'	6'-6"	18'	19"	9.5"	15"	CLASS 1
EW 500	13'	2'-0"	8'	19"	9.5"	15"	CLASS 1
EW 302	10'	1'-3"	9'	19"	9.5"	15"	CLASS 1
EW 301	35'	2'-6"	17'	19"	9.5"	15"	CLASS 1
EW 502*	10'	1'-0"	5'	19"	9.5"	15"	CLASS 1

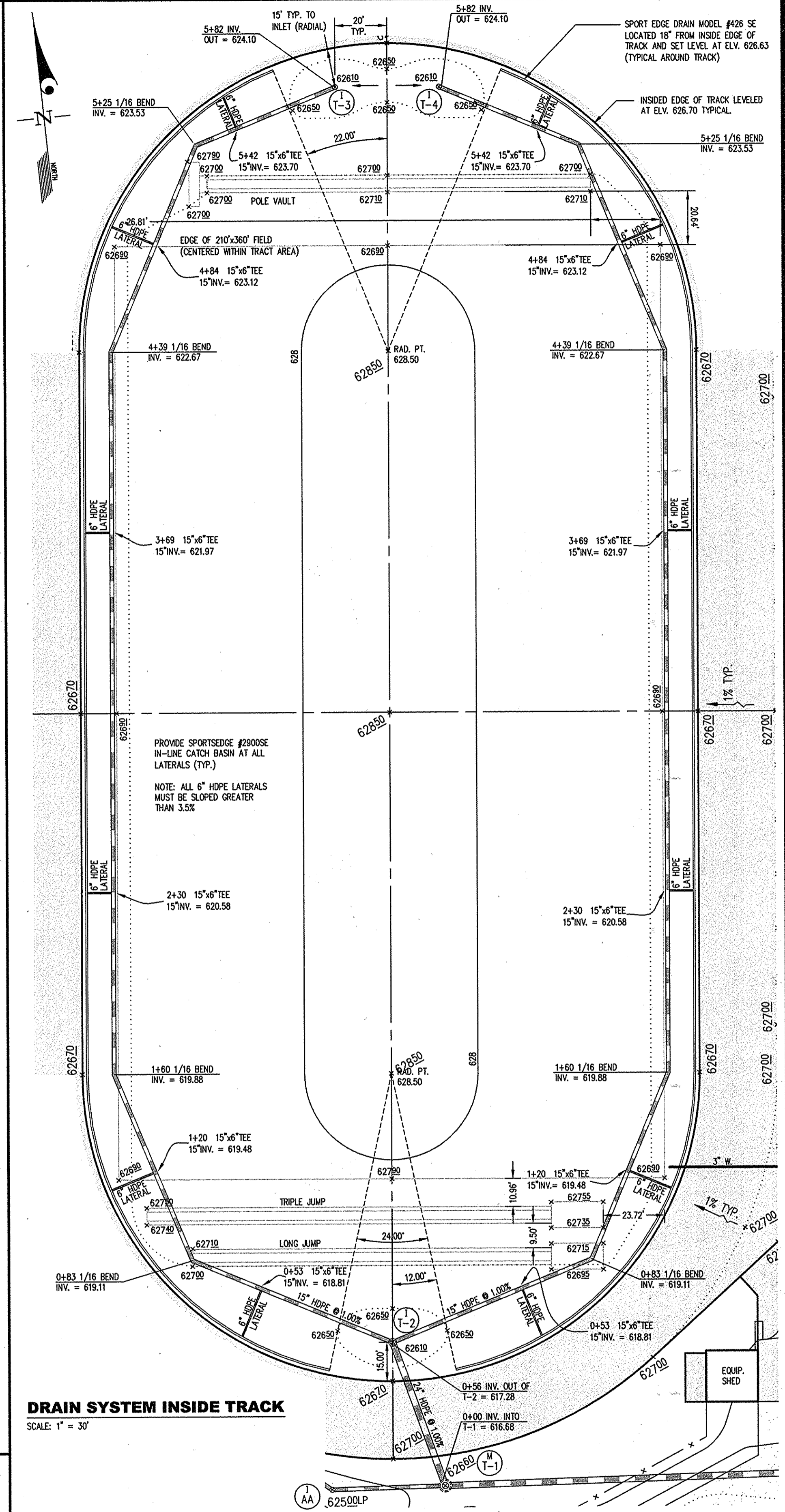
* NO TIE WALL



SPORTSEDRAIN DETAIL
 N.T.S.



TENNIS COURT EDGE DRAIN DETAIL
 SCALE: 1" = 20"



DRAIN SYSTEM INSIDE TRACK
 SCALE: 1" = 30"

NO.	TYPE	WIDTH (INSIDE)	GRATE	INVERT ELEVATION	REMARKS
I T-2	24" DRAIN BASIN	24"	GRATE	626.10 (EAST) 617.28 (WEST)	NYOPLAST INC., BURFORD GEORGIA (OR EQV.)
I T-3	18" INLINE DRAIN	18"	GRATE	624.10	NYOPLAST INC., BURFORD GEORGIA (OR EQV.)
I T-4	18" INLINE DRAIN	18"	GRATE	624.10	NYOPLAST INC., BURFORD GEORGIA (OR EQV.)

NOTE: THE TRACK DRAINAGE SYSTEM TO INLET I-T2 IS SYMMETRICAL ALONG THE LONG CENTRAL AXIS OF THE TRACK.

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: [Signature] 1-15-04 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] 7/4/03 Date
 Chief, Division of Land Development: [Signature] 7/2/03 Date
 Chief, Development Engineering Division: [Signature] 8-7-03 Date

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
 [Signature] 8/14/03 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA NATURAL RESOURCES CONSERVATION SERVICE
 [Signature] 8/14/03 DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

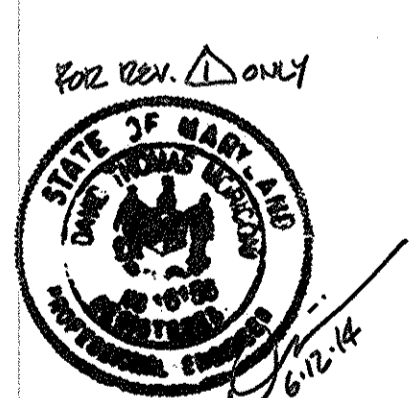
"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

Cathleen Conley Young 7/31/03 DATE
 SIGNATURE OF DEVELOPER/BUILDER

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

[Signature] 7/30/03 DATE
 ENGINEER'S SIGNATURE



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. 16152 Expiration Date 8-25-14

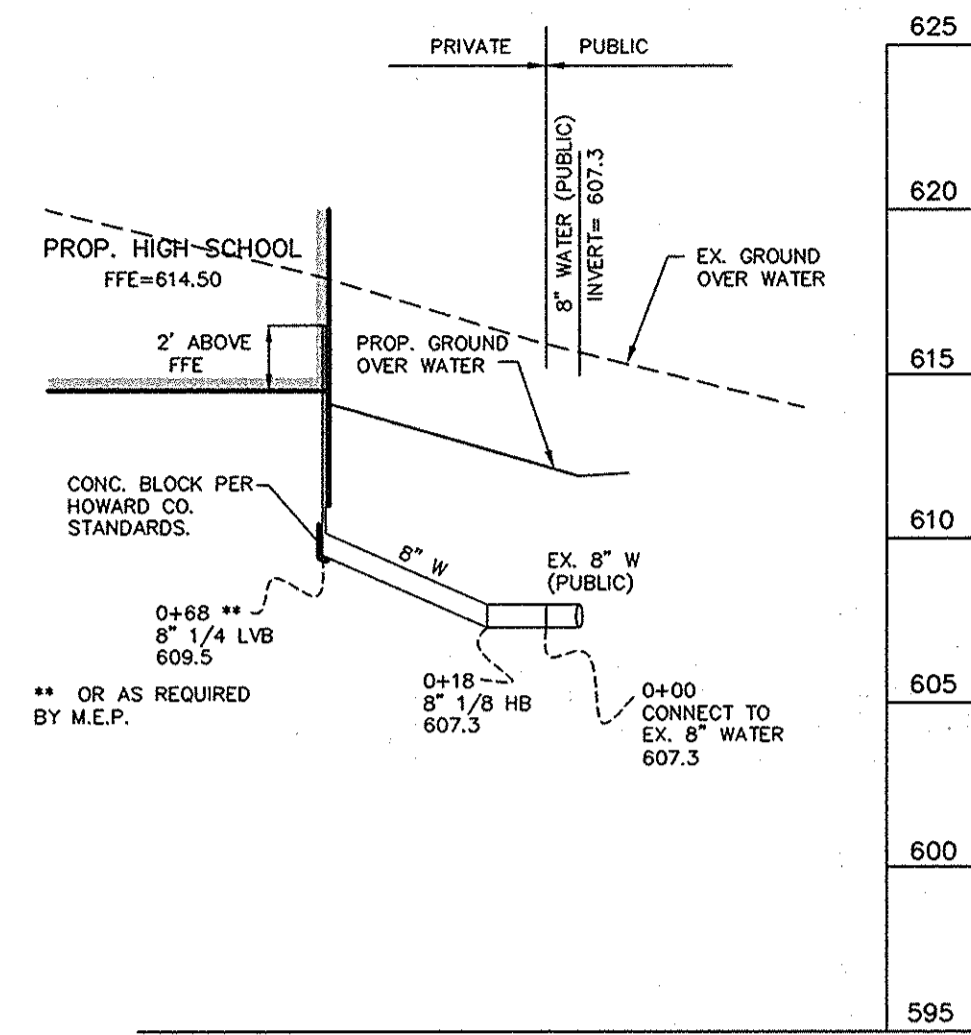
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108 ELLICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG TEL: 410-513-6704

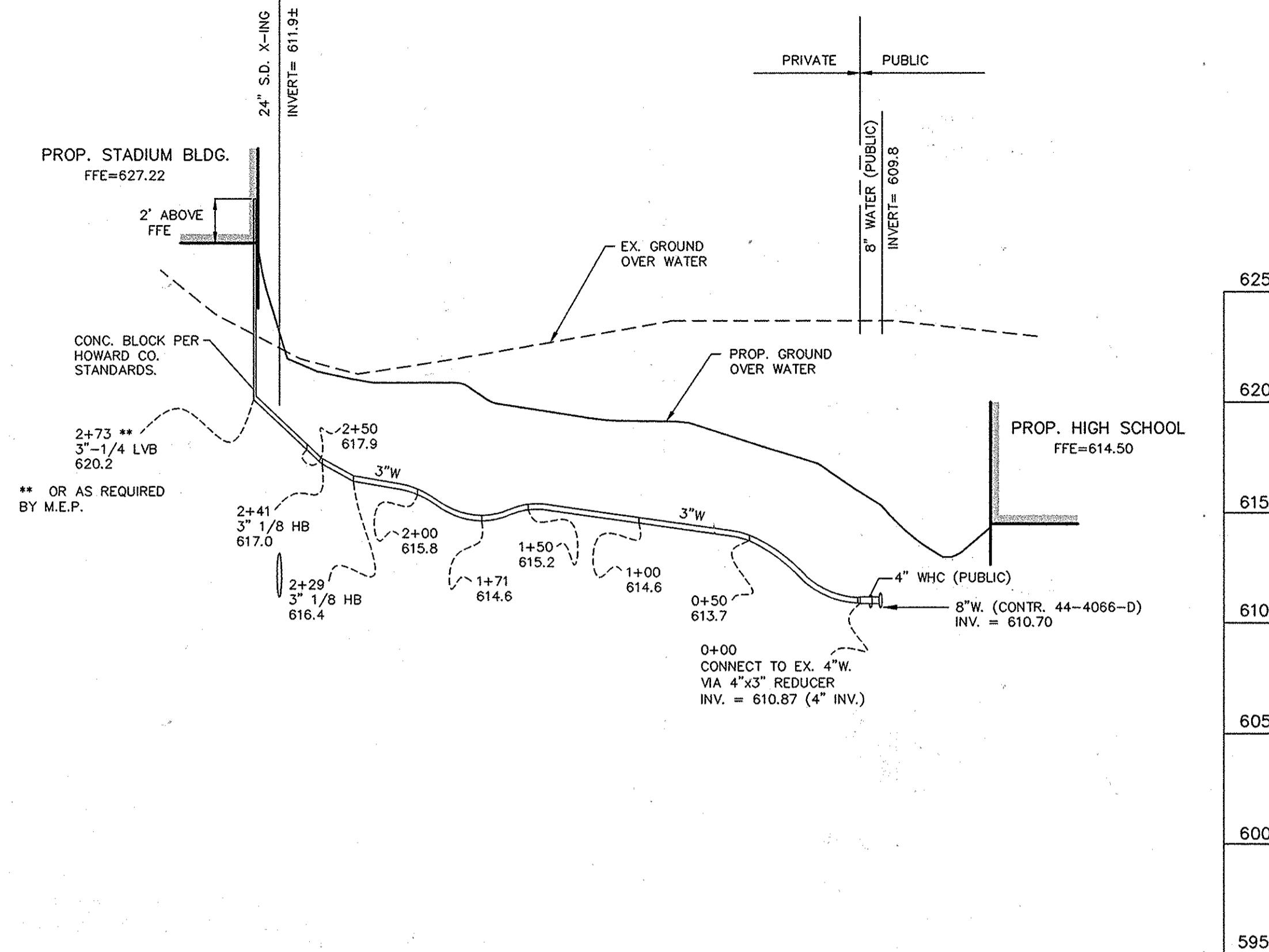
ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON TEL: 301-261-8700

STORM DRAIN PROFILES, DETAILS & SCHEDULES
 MARLBOROUGH ROAD
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16117E (PARCEL 1) and 161367 (PARCEL 2A)
 WEST FRIENDSHIP ELECTION DISTRICT No. 3

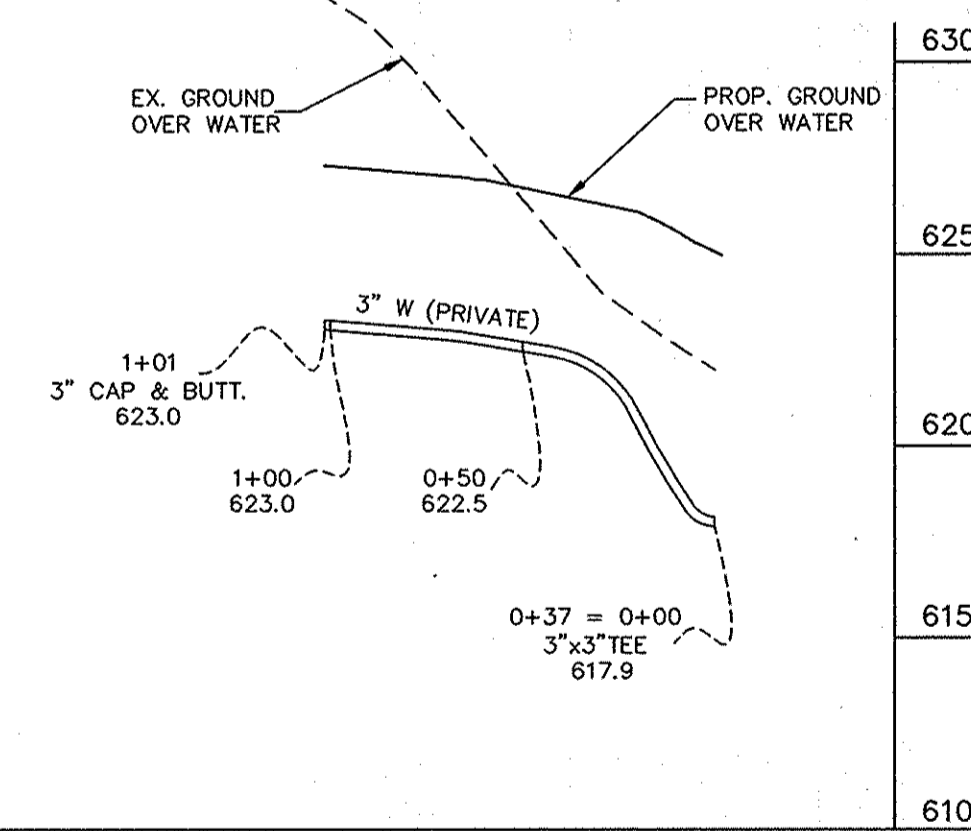
SCALE	ZONING	G. L. W. FILE No.
AS NOTED	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	28 of 48



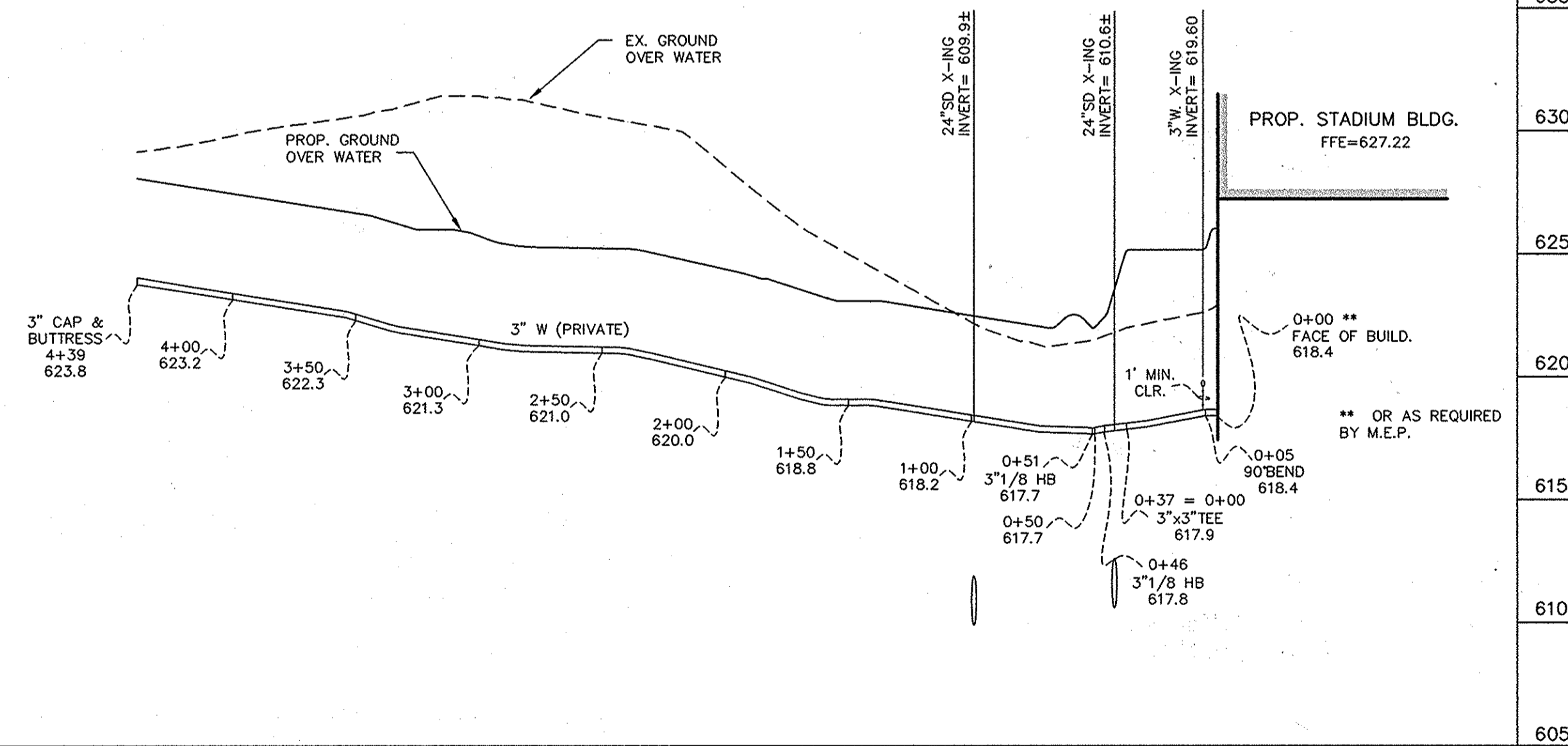
8" WMC TO THE HIGH SCHOOL BUILDING
 PROFILE SCALE: 1" = 50' (HORZ); 1" = 5' (VERT.)



3" WATER SERVICE TO THE STADIUM BUILDING
 PROFILE SCALE: 1" = 50' (HORZ); 1" = 5' (VERT.)



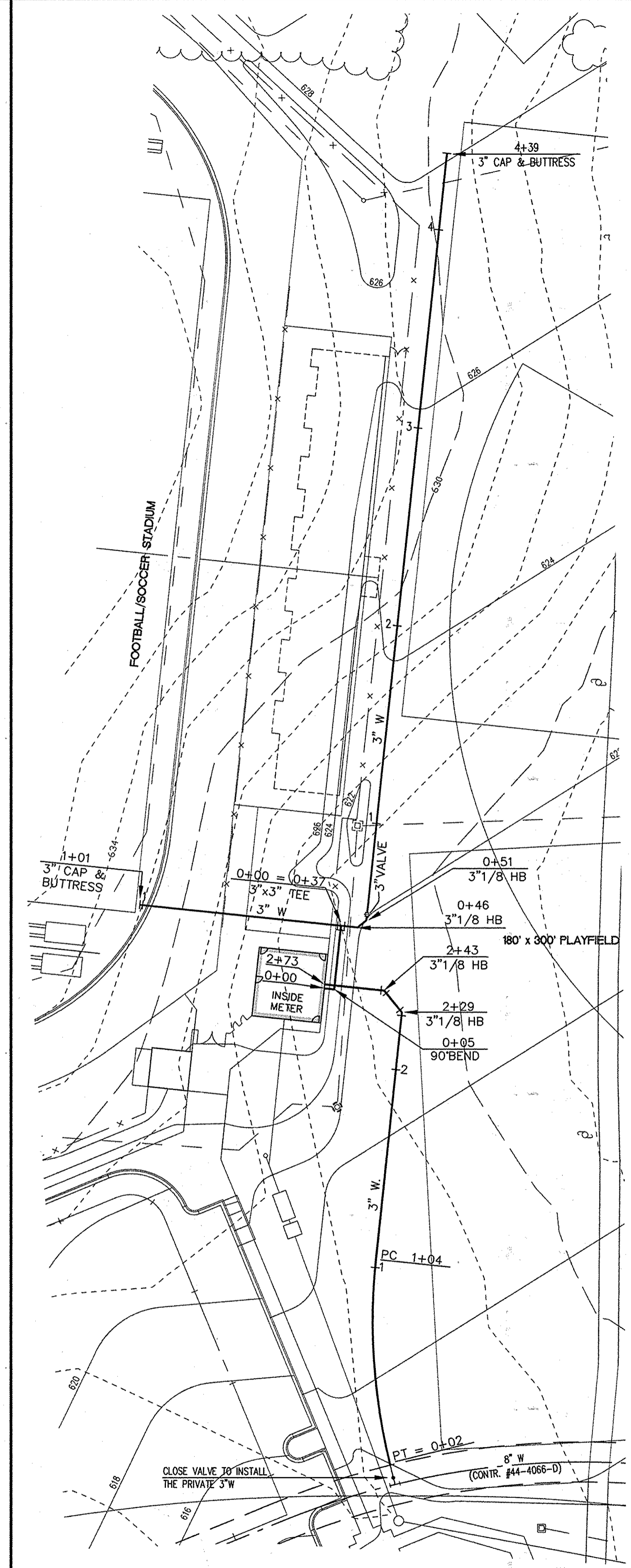
3" WATER FOR A LAWN SPRINKLER SYSTEM (TRACK AREA)
 PROFILE SCALE: 1" = 50' (HORZ); 1" = 5' (VERT.)



3" WATER FOR A LAWN SPRINKLER SYSTEM (FIELD HOCKEY AREA)
 PROFILE SCALE: 1" = 50' (HORZ); 1" = 5' (VERT.)

FOR REV. ONLY
 STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 License No. 16112 Expiration Date: 8-28-14

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 License No. 16112 Expiration Date: 8-28-14



LAYOUT OF PRIVATE WATER SERVICE TO THE STADIUM BUILDING AND ATHLETIC FIELDS
 SCALE: 1" = 40'

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer (Signature) 1-15-07 Date
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director (Signature) 9/2/07 Date
 Chief, Division of Land Development (Signature) 1/2/13 Date
 Chief, Development Engineering Division (Signature) 8-2-03 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	DESCRIPTION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

PREPARED FOR:
 OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELICOTT CITY, MD 21043
 ATTN: KATHLEEN YOUNG
 TEL: 410-313-6704

ARCHITECT:
 TCA ARCHITECTS LLC
 2661 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOON
 TEL: 301-261-8700

REVISOR: [Signature]
 PRIVATE WATER LINE/UTILITY PROFILES & SCHEDULES
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16111a (PARCEL 1) and 16112a (PARCEL 2A)
 WEST FRIENDSHIP ELECTION DISTRICT No. 3
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	29 of 48

SEQUENCE OF CONSTRUCTION

1. APPLY FOR ALL APPLICABLE PERMITS (GRADING, BUILDING, ETC.) AND SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. THE GRADING PERMIT IS ISSUED BY THE SEDIMENT CONTROL INSPECTOR (SCI) TO THE OWNER AT THE PRE-CONSTRUCTION MEETING.

2. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES (SCE), TREE PROTECTION FENCE (TFP), FOREST CONSERVATION SIGNS PERIMETER SILT FENCE (SF) AND SUPER SILT FENCE (SSF). REMOVE ONLY A SECTION OF EXISTING CURB & GUTTER THAT IS NECESSARY TO INSTALL THE SCE. (1-2 DAYS)

PARCEL #2 AND LOT 35 (HIGH SCHOOL) CONSTRUCTION

3. DRAIN THE EXISTING SWM POND SO THAT IT CAN BE ENLARGED TO SWM POND/BASIN #2. REMOVE THE EXISTING 12" OUTFALL PIPE TO EX. I-15 AND BLOCK THE OPENING FOR THE 12" PIPE INSIDE EX. I-15. (LESS THAN 1 DAY)

4. EXCAVATE AND CONSTRUCT SWM POND/BASIN #2. COVER THE GABION SPILLWAY WITH FILTER CLOTH WHEN THE POND IS USED AS A BASIN FOR SEDIMENT CONTROL. (2-3 DAYS)

5. REMOVE THE EXISTING END SECTION S-4A AND PORTION OF THE 36" CMP IN ORDER TO INSTALL A TEMPORARY 12" FLEXIBLE PIPE AND SET THE INVERT OF THE FLEXIBLE PIPE AT THE BOTTOM OF THE BASIN. TEMPORARILY ANCHOR IT IN PLACE (1 DAY).

6. SIMULTANEOUS WITH S.O.C. #4 AND #5

(A) REMOVE THE EXISTING STORM DRAIN FROM EX. I-8 TO I-12 IN ORDER TO INSTALL THE NEW STORM DRAIN FROM NEW I-416 TO I-417. TEMPORARILY DIVERT DRAINAGE FROM I-416 TO THE BOTTOM OF BASIN #2 WITH A TEMP. FLEXIBLE PIPE

7. EXCAVATE AND CONSTRUCT THE NEW SWM POND #1. COMPLETE CONSTRUCTING THE STORM DRAIN FROM I-417 TO M-410 AND CONNECT THE POND #1 RISER STRUCTURE TO M-410 (3-4 DAYS).

8. CONSTRUCT THE STORM DRAIN FROM EX. I-400 IN POND #1 TO M-401 THEN STABILIZED POND #1 WITH PERMANENT VEGETATIONS. DIRECT TRAFFIC ON WOODFORD DRIVE AS NECESSARY (1-2 DAYS).

9. THE FOLLOWING SHALL BE COMPLETED WITHIN 4 DAYS AND SHALL BE DONE DURING A 5-DAY CLEAR WEATHER FORECAST BY NWS.

(A) INSTALL THE NEW STORM DRAIN FROM M-401 TO THE NEW I-8A AND EX. MH-7 THEN COMPLETE THE 30" PIPE CONNECTION BETWEEN EX. I-12A AND THE NEW I-8A (REMOVE THE EX. I-8A AND ITS ASSOCIATED PIPE INTO BASIN #2 IN ORDER TO INSTALL THE NEW STORM DRAIN).

(B) REMOVE 20 LF OF EX. C&G IMMEDIATELY NORTH OF THE OLD I-8A AND CUT A TEMPORARY DIVERSION SWALE WITH POSITIVE SLOPE FROM THE CURB OPENING TO THE INFLOW PROTECTION LEADING TO THE BOTTOM OF BASIN #2. LOCATE THE TEMPORARY SWALE TO THE NORTH OF NEW I-8A AND PROVIDE INLET PROTECTION AT THE NEW I-8A. PROVIDE A TEMPORARY MOUNTABLE ASPHALT BERM (5' LONG) IN WOODFORD DRIVE TO DIVERT DRAINAGE THROUGH THE CURB OPENING AND TO THE TEMPORARY SWALE.

(C) REMOVE THE TEMPORARY PIPE FROM THE BACK OF I-416 SO THAT THE STORM DRAIN CONNECTION BETWEEN NEW M-415 TO I-416 CAN BE COMPLETED. CHECK TO ENSURE THAT I-416 IS STILL BLOCKED AND THE DIVERSION SWALE THAT WAS INSTALLED IN S.O.C. #6 IS STILL OPERATIONAL.

10. STARTING AT BASIN #2, INSTALL THE EARTH DIKE UP THE VICINITY OF M-411 THEN CUT THE TEMPORARY SWALE UP TO THE AREA NORTH OF I-206. CONTINUE INSTALLING THE EARTH DIKE UP TO THE TENNIS COURT BUT DO NOT REMOVE THE TEMPORARY SWALE UNTIL THERE IS POSITIVE FLOW TO BASIN #2 ALONG THE ENTIRE LENGTH OF THE EARTH DIKE (SEE DETAIL ON SHEET 37 FOR THE CONSTRUCTION OF THE EARTH DIKE ALONG AN EMBANKMENT SITUATION). (1-2 DAYS)

11. CONSTRUCT BASIN #3 AND THE ASSOCIATED EARTH DIKES, INFLOW PROTECTIONS AND RISER #3 TO EW-300 (1-WEEK). DELAY THE FOLLOWING ITEMS UNTIL BASIN #3 IS CONVERTED TO A SWM POND:

(A) THE GABION DAM.

(B) EW-302 AND A PORTION OF THE 15" HDPE LEADING TO EW-302. INSTALL A TEMPORARY FLEXIBLE PIPE TO THE 15" HDPE FROM M-340 AND DISCHARGE THE FLEXIBLE PIPE ONTO THE GABION INFLOW PROTECTION.

12. CHECK ALL PERIMETER SEDIMENT CONTROL MEASURES (ED, SF, SSF, etc.) AND OBTAIN PERMISSION FROM THE S.C.I. TO PROCEED WITH GRADING THE H.S. SITE. PROVIDE DUST CONTROL MEASURE AS NECESSARY.

13. GRADE SITE AND COORDINATE THIS OPERATION WITH THE BUILDING FOUNDATION CONSTRUCTION AND SITE UTILITY INSTALLATION. HOWEVER, DELAY THE CONVEYANCE OF ANY STORM DRAIN FROM I-203 AND M-310 TO THEIR CORRESPONDING REV-TRENCH SYSTEM. TEMPORARILY BLOCK THE PVC PIPE TO THE REV-TRENCH AT THE OFFICE INSIDE INLET I-203 AND M-310.

14. BRING THE H.S. SITE TO APPROPRIATE SUBGRADE AND BEARING CAPACITY WHILE PROCEEDING WITH THE BUILDING CONSTRUCTION. (1-2 MONTHS FOR GRADING, BUILDING CONSTRUCTION, APPROX. 24 MONTHS).

15. INSTALL CONCRETE CURB AND GUTTER, INCLUDING THE NEW C&G ON WOODFORD DRIVE FOR THE ROAD WIDENING. HOWEVER, DELAY INSTALLING A PORTION OF CURB IMMEDIATELY NORTH OF NEW INLETS I-8A AND I-416 SO THAT ANY STORM RUN-OFF TO THESE INLETS ARE DIVERTED VIA MOUNTABLE ASPHALT BERMS AND DIVERSION SWALES (INSTALLED IN S.O.C. # 6 VIA 9 ABOVE) TO THE BASIN #2. (1-2 WEEKS). EXTEND THE ASPHALT BERMS TO THE NEW CURBS AS NECESSARY.

16. REMOVE THE EXISTING C&G ON WOODFORD DRIVE THAT IS AFFECTED BY THE WIDENING AND THE NEW DRIVEWAY ENTRANCES TO THE HIGH SCHOOL.

17. CHECK THE SUBGRADE OF THE AREAS TO BE PAVED AND INSTALL THE PAYMENT (OBTAIN PERMISSION FROM THE INSPECTOR TO REMOVE THE S&E AND MOUNTABLE ASPHALT BERM IN ORDER TO PAVE). FOR WOODFORD DRIVE, INSTALL THE FULL BITUMINOUS PAYMENT SECTION, FOR THE DRIVEWAYS AND PARKING LOT, INSTALL ONLY THE BASE PAVING. INSTALL THE MISSING C&G SECTIONS BY I-416 AND BY THE NEW I-8A. INSTALL SSF IMMEDIATELY BEHIND THESE NEW SECTIONS OF C&G. OBTAIN PERMISSION FROM THE S.C.I. TO REMOVE THE INLET PROTECTION AT I-416, THE NEW I-8A AND THE NEW I-9 ONCE THE AREAS DRAINING TO THESE INLETS ARE STABILIZED. (2-3 WEEKS)

18. SIMULTANEOUS WITH S.O.C. #15-17, STABILIZE WITH PERMANENT VEGETATION (LANDSCAPE/FORESTRATION PLANTINGS AND PERMANENT SEEDING) ALL "GREEN" AREAS THAT ARE BROUGHT TO FINISHED GRADE WITH TOPSOIL. (2-3 WEEKS)

19. ONCE THE H.S. SITE IS ENTIRELY STABILIZED, FLUSH THE STORM DRAIN SYSTEM OF ANY ACCUMULATED SEDIMENT THEN OBTAIN PERMISSION FROM THE SCI TO CONVERT BASIN #2 & #3 SWM PONDS AND COMPLETE ANY ITEMS THAT WERE PREVIOUSLY DELAYED UNTIL THE CONVERSION STAGE. REMOVE ANY REMAINING PERIMETER SEDIMENT CONTROL DEVICES AS APPROVED BY THE SCI.

20. REMOVE ANY REMAINING SEDIMENT FROM THE BOTTOM OF INLET I-203 AND M-310 THEN UNBLOCK THE OFFICE INSIDE I-203 AND M-310 (INSTALL THE TRASH RACK IN THESE STRUCTURES IF THEY'RE MISSING).

21. INSTALL FINISHED PAVING COURSE & STRIPING.

22. COMPLETE THE BUILDING INTERIOR AND OBTAIN A "USE & OCCUPANCY" PERMIT.

BASEBALL FIELD, OVERFLOW PARKING LOT AND SBR BUILDING CONSTRUCTION ON PARCEL-1

THE FOLLOWING CAN BE DONE CONCURRENT WITH THE H.S. SITE WORK:

23. CHECK ALL PERIMETER SEDIMENT CONTROL MEASURES AND TFP THEN CONSTRUCT BASIN #4, ITS ASSOCIATED EARTH DIKES AND OUTLET DRAIN SYSTEM (RISER #4 TO EW-500); HOWEVER, DELAY THE INSTALLATION OF THE SAND FILTER SYSTEM AND CONCRETE FLUME UNTIL THE BASIN IS CONVERTED TO A SWM POND. COVER THE GABION SPILLWAY WITH FILTER CLOTH OR DELAY THE GABION INSTALLATION UNTIL THE CONVERSION STAGE. INSTALL THE STORM DRAIN SYSTEM FROM EW-501 TO I-517.

24. OBTAIN PERMISSION FROM THE SCI TO GRADE THIS AREA AND TO INSTALL THE SEPTIC TRENCHES, THE REMAINDER OF THE STORM DRAIN NETWORK AND THE SBR BUILDING. PROVIDE DUST CONTROL MEASURES AS NECESSARY.

25. INSTALL CURB & GUTTER THEN THE BASE PAVING COURSE & SIDEWALKS.

26. BRING THE BALL FIELD TO FINAL GRADE AND STABILIZE WITH THE APPROPRIATE AREAS OF THE FIELD WITH PERMANENT SEEDING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

27. STABILIZE ANY REMAINING "GREEN AREA" WITH PERMANENT VEGETATION (LANDSCAPE/FORESTRATION PLANTINGS & PERMANENT SEEDING). USE MATTING WITH PERMANENT SEEDING ON THE EMBANKMENTS.

28. ONCE THE AREA DRAINING TO POND #1 IS ENTIRELY STABILIZED, FLUSH THE STORM DRAIN SYSTEM OF ANY ACCUMULATED SEDIMENTS THEN OBTAIN PERMISSION FROM THE SCI TO CONVERT BASIN #4 TO A SWM POND (AND INSTALL THE ITEMS DELAYED IN S.O.C. #23).

29. INSTALL FINISHED PAVING COURSE & STRIPING.

30. OBTAIN PERMISSION FROM THE SCI TO REMOVE ANY REMAINING SEDIMENT CONTROL MEASURES.

DEVELOPER'S/BUILDER'S CERTIFICATE

I, THE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conley Young 7/31/03 DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

7/30/03 DATE



THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

5/14/03 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

8/14/03 DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

GLW GUTSCHICK LITTLE & WEBER, P.A.

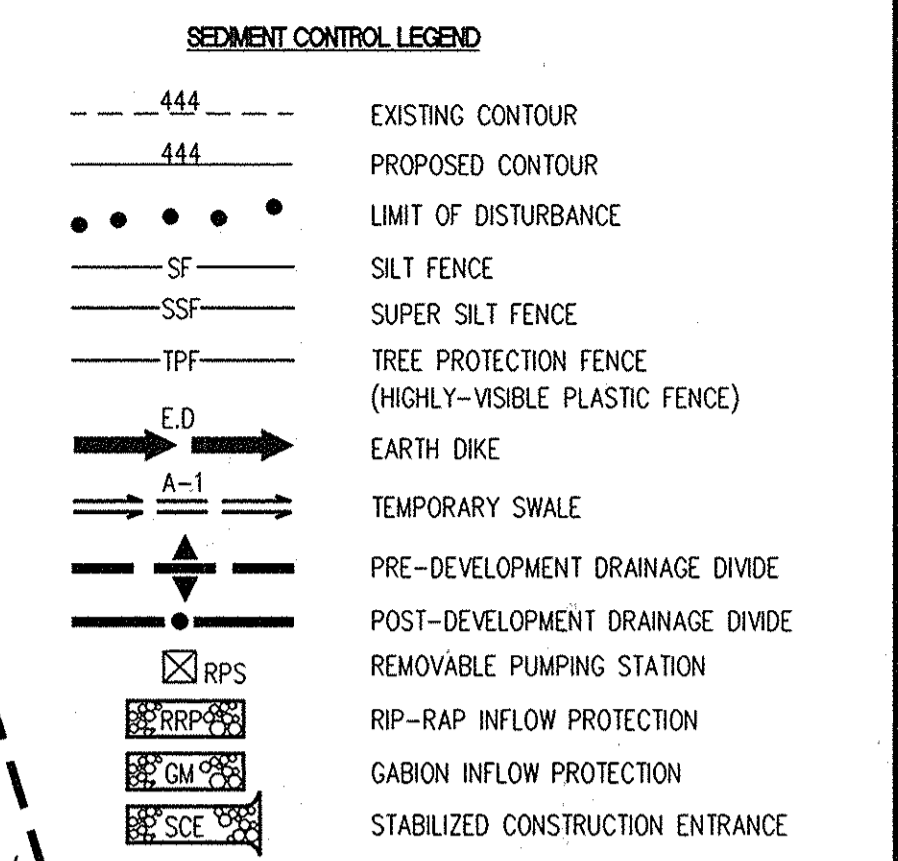
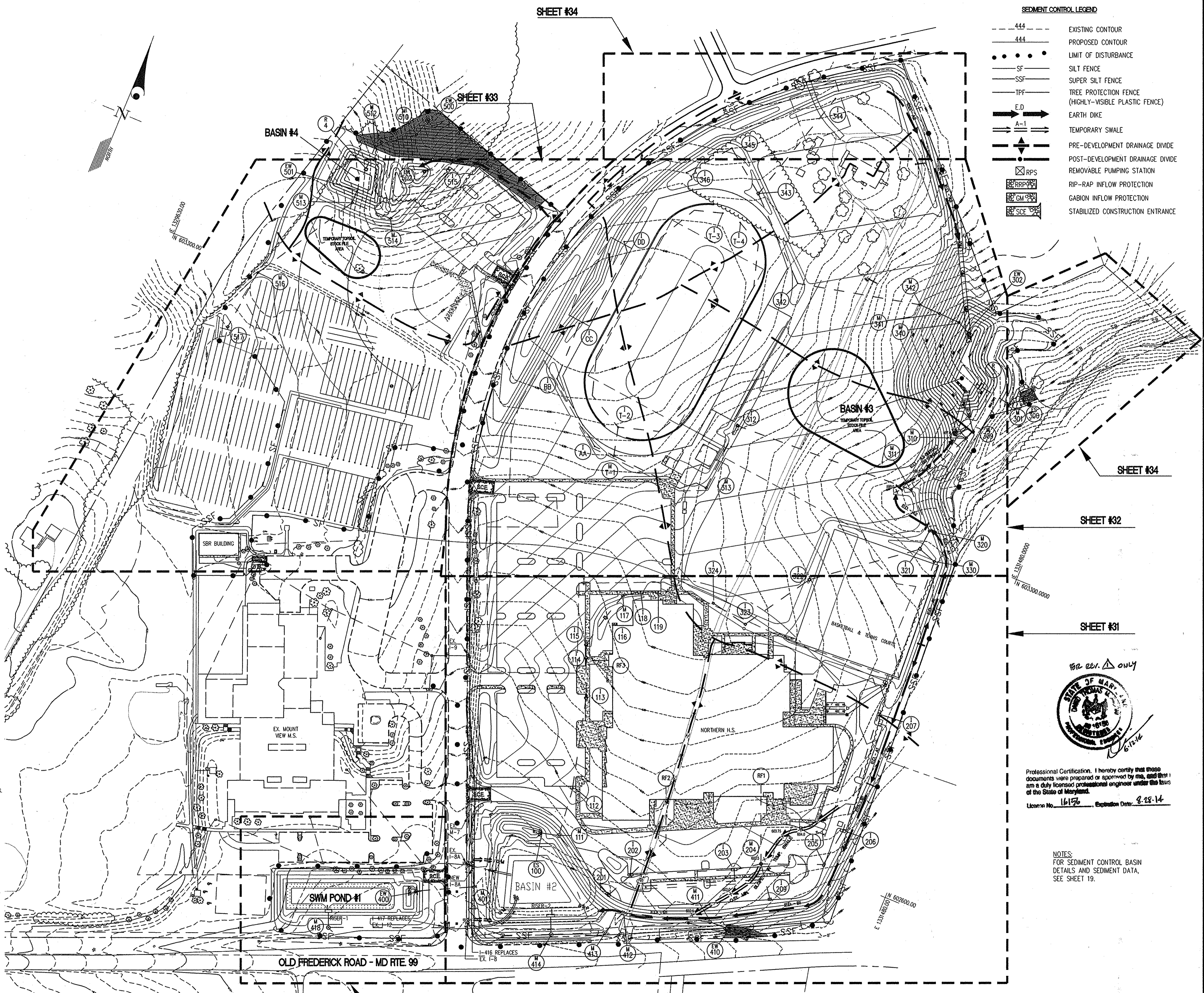
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

00177\SDP-03-33\SCS-OV.dwg

UPDARED SCHOOL NAME & SHEET TOTAL

DATE

DES. DRN. CHK.



THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY!!

SEDIMENT CONTROL OVERVIEW

NORTHERN HIGH SCHOOL

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

SCALE 1" = 100'

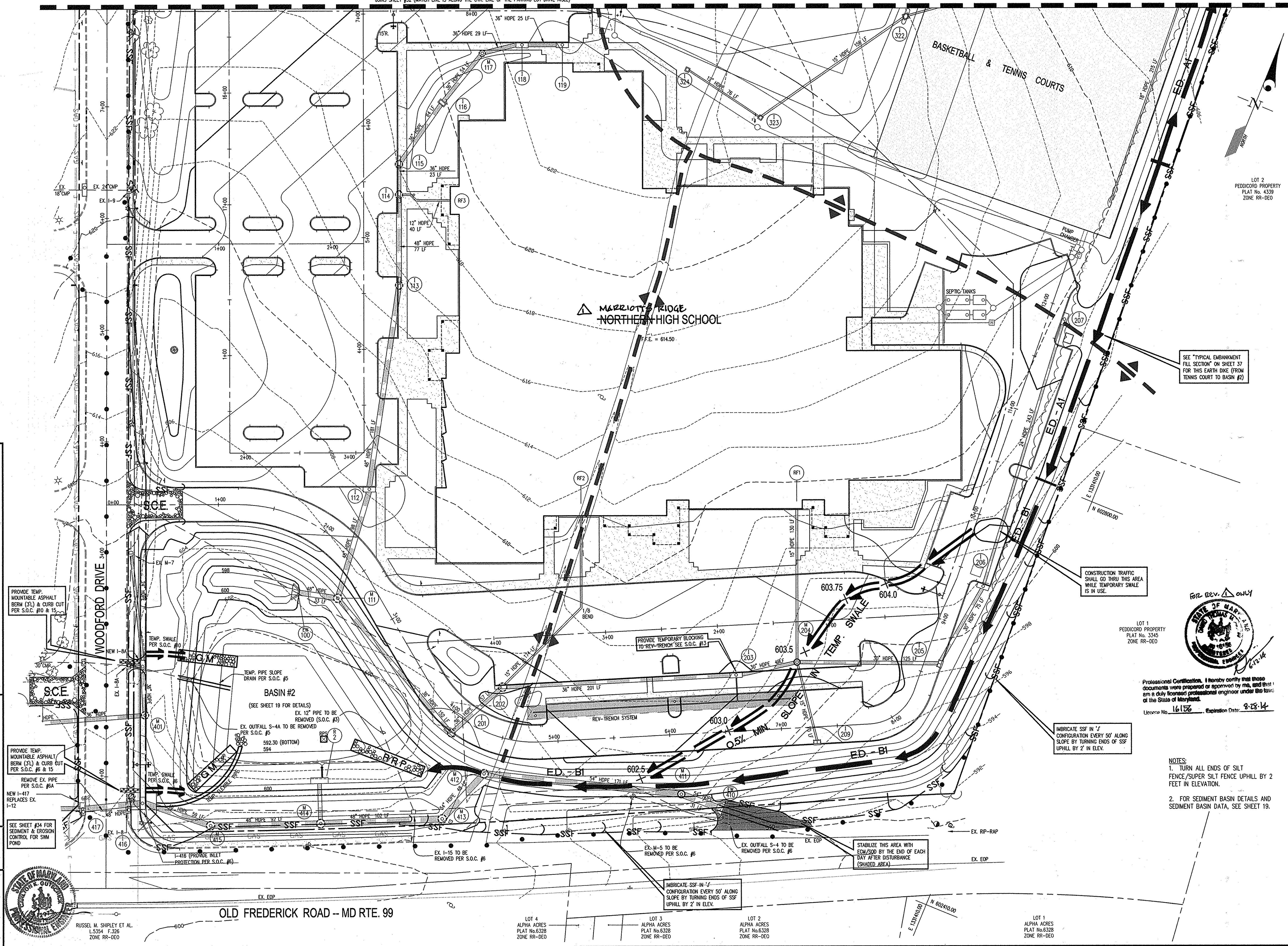
DATE 28/JUL/03

ZONING RR-DEO

G. L. W. FILE NO. 00-177

SEDIMENT CONTROL LEGEND

- 444 --- EXISTING CONTOUR
- 444 --- PROPOSED CONTOUR
- LIMIT OF DISTURBANCE
- - - - - SILT FENCE
- - - - - SUPER SILT FENCE
- - - - - TREE PROTECTION FENCE (HIGHLY-VISIBLE PLASTIC FENCE)
- E.D → EARTH DIKE
- A-1 → TEMPORARY SWALE
- → PRE-DEVELOPMENT DRAINAGE DIVIDE
- → POST-DEVELOPMENT DRAINAGE DIVIDE
- ⊠ RPS REMOVABLE PUMPING STATION
- ⊠ RRP RIP-RAP INFLOW PROTECTION
- ⊠ GM GABION INFLOW PROTECTION
- ⊠ SCE STABILIZED CONSTRUCTION ENTRANCE
- AREA STABILIZED WITH ECM/SOD BY THE END OF EACH DAY



THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY!!

DEVELOPER'S/BUILDER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD.

Cathleen Young 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Cliff 7/30/03
ENGINEER'S SIGNATURE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Jim 8/14/03
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

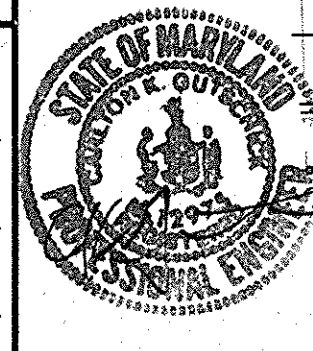
Denny 1-15-04
County Health Officer (SAB) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Frank 9/2/03
Director Date

Cindy 9/2/03
Chief, Division of Land Development Date

Panel 1-7-03
Panel, Development Engineering Division Date



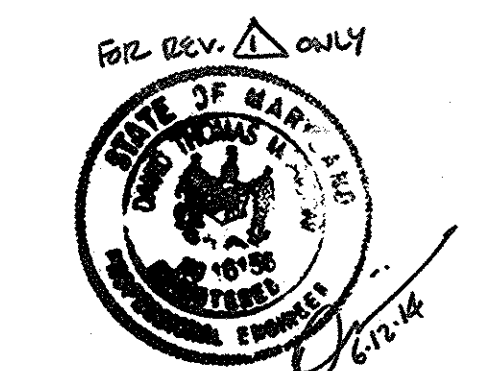
SEE "TYPICAL EMBANKMENT FILL SECTION" ON SHEET 37 FOR THIS EARTH DIKE (FROM TENNIS COURT TO BASIN #2)

CONSTRUCTION TRAFFIC SHALL GO THRU THIS AREA WHILE TEMPORARY SWALE IS IN USE.

FURNISH 12" WIDE S-SF IN 1/2" CONFIGURATION EVERY 50' ALONG SLOPE BY TURNING ENDS OF S-SF UP HILL BY 2' IN ELEV.

STABILIZE THIS AREA WITH ECM/SOD BY THE END OF EACH DAY AFTER DISTURBANCE (SHADED AREA)

FURNISH 12" WIDE S-SF IN 1/2" CONFIGURATION EVERY 50' ALONG SLOPE BY TURNING ENDS OF S-SF UP HILL BY 2' IN ELEV.



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. 16156, Expiration Date: 9-28-14

NOTES:
1. TURN ALL ENDS OF SILT FENCE/SUPER SILT FENCE UP HILL BY 2 FEET IN ELEVATION.

2. FOR SEDIMENT BASIN DETAILS AND SEDIMENT BASIN DATA, SEE SHEET 19.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND, 20886
TEL: 301-421-4024, BAL: 410-880-1820, DC/VA: 301-989-2524, FAX: 301-421-4188

DATE	11-14-14	REVISION	UPDATED SCHOOL NAME & SHEET TOTAL
DES.		DRN.	
CHK.		APP'R.	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108, ELLICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-9704

ARCHITECT: TCA ARCHITECTS LLC
2664 ROVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

SEDIMENT & EROSION CONTROL PLAN
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 161112 (PARCEL 1) and 161212 (PARCEL 2A)

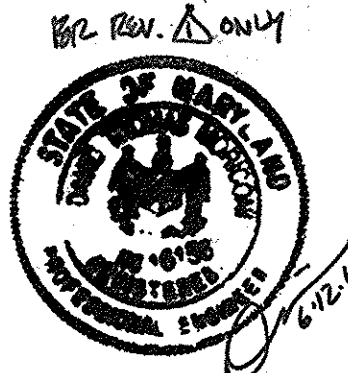
SCALE: 1" = 40'
ZONING: RR-DEO
DATE: 28/JUL/03
TAX MAP - GRID: 10 19
SHEET: 31 of 48

G. L. W. FILE No.	00-177
SHEET	31 of 48

SEDIMENT CONTROL LEGEND

- 444--- EXISTING CONTOUR
- 444--- PROPOSED CONTOUR
- LIMIT OF DISTURBANCE
- SF— SILT FENCE
- SSF— SUPER SILT FENCE
- TPF— TREE PROTECTION FENCE (HIGHLY-VISIBLE PLASTIC FENCE)
- E.D.→ EARTH DIKE
- A-1 TEMPORARY SWALE
- ▲ PRE-DEVELOPMENT DRAINAGE DIVIDE
- ▲ POST-DEVELOPMENT DRAINAGE DIVIDE
- ⊠ RPS REMOVABLE PUMPING STATION
- ⊠ RRIP RIP-RAP INFLOW PROTECTION
- ⊠ CM GABION INFLOW PROTECTION
- ⊠ SCE STABILIZED CONSTRUCTION ENTRANCE

NOTES:
 1. TURN ALL ENDS OF SILT FENCE/SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
 2. FOR SEDIMENT BASIN DETAILS AND SEDIMENT BASIN DATA, SEE SHEET 19.



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. 16152, Expiration Date: 9-28-14



SEE SHEET #33 FOR CONTINUATION OF THE BASEBALL FIELD GRADING WORK ON THE MIDDLE SCHOOL SITE.

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY!!

DEVELOPERS/BUILDERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD."

Cathleen Young 7/31/03
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 7/30/03
 ENGINEER'S SIGNATURE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/14/03
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 8/14/03
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

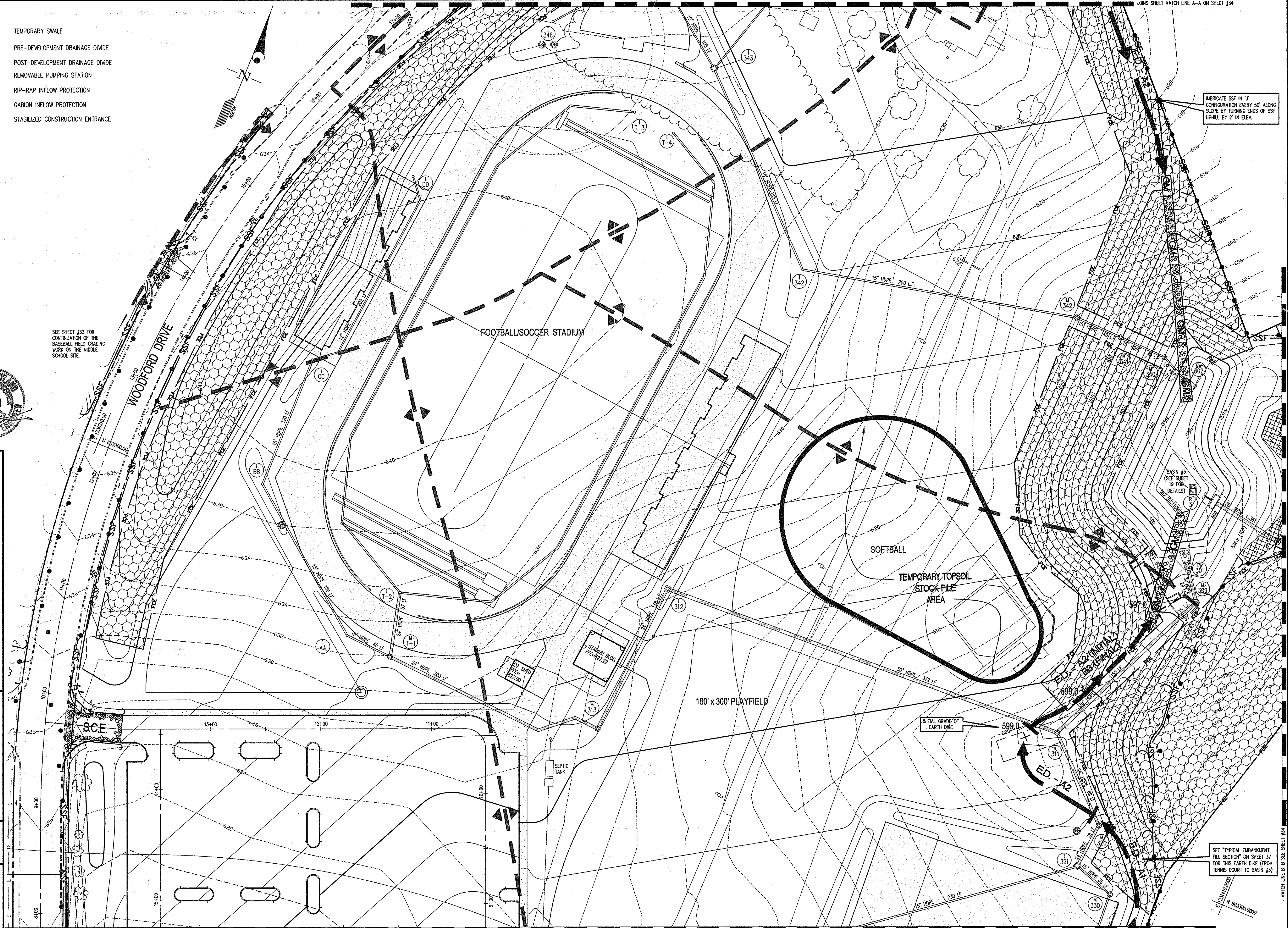
[Signature] 1-15-09
 County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 9/4/03
 Director DATE

[Signature] 9/2/03
 Chief, Division of Land Development DATE

[Signature] 8-2-03
 Chief, Development Engineering Division DATE



IMBRICATE SSF IN 'J' CONFIGURATION EVERY 50' ALONG SLOPE BY TURNING ENDS OF SSF UPHILL BY 2' IN ELEV.

SEE "TYPICAL EMBANKMENT FILL SECTION" ON SHEET 37 FOR THIS EARTH DIKE (FROM TENNIS COURT TO BASIN #3)

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

00177\SDP-03-33\SNE.dwg DES. DRN. CHK. DATE: 6-10-14 UPON SCHOOL NAME & SHEET TOTAL BY: DVA APPR.

PREPARED FOR:

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 ROUTE 108
 ELLICOTT CITY, MD 21043
 ATTN: CATHEEN YOUNG
 TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: MIKE BOYD
 TEL: 301-261-8700

REVISED SITE DEVELOPMENT PLAN

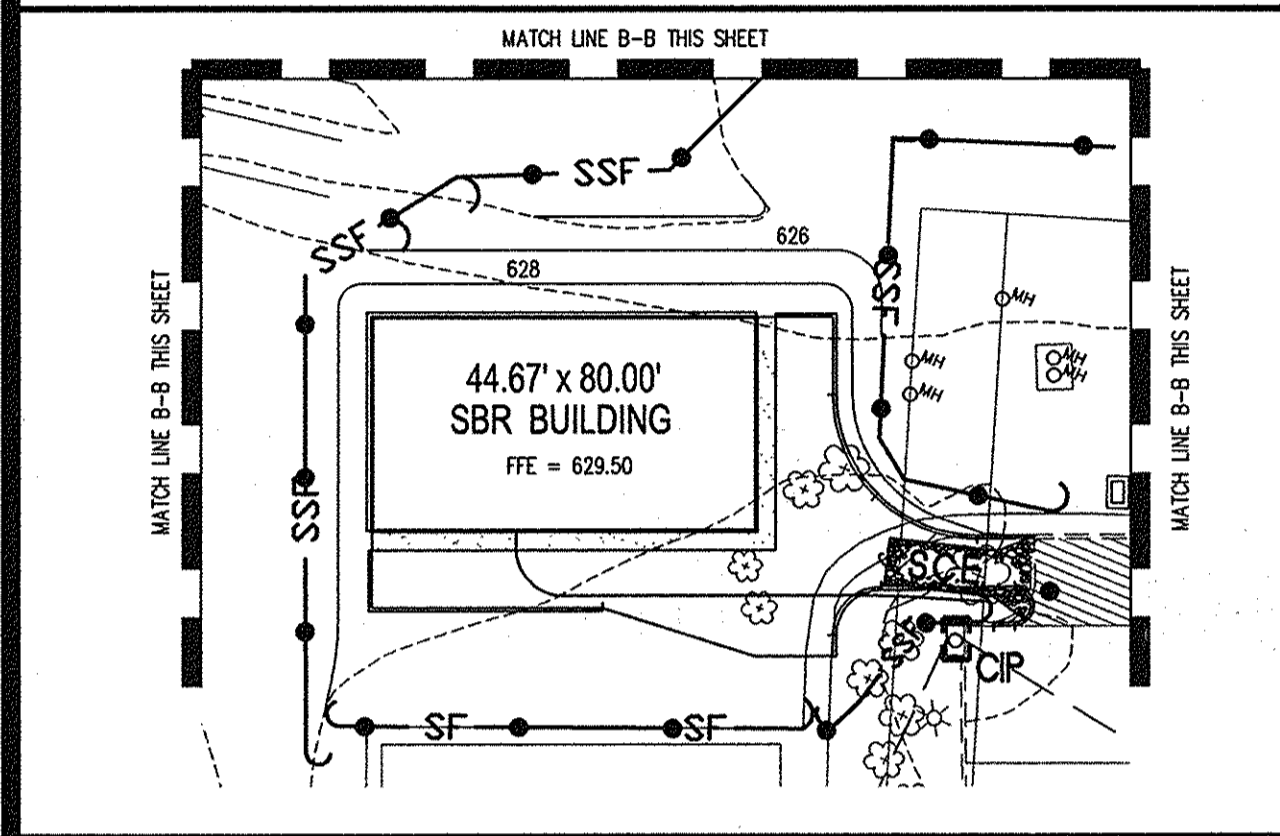
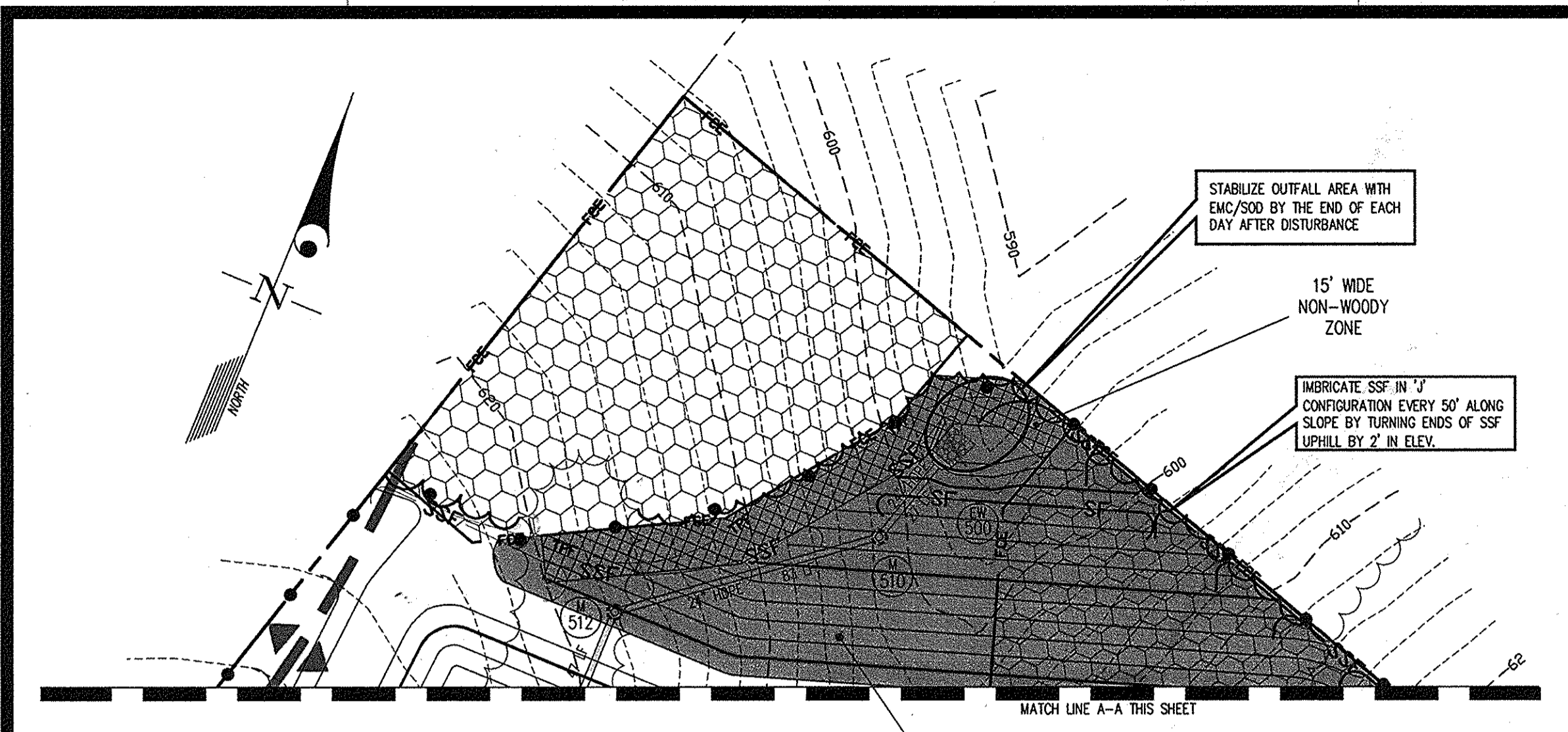
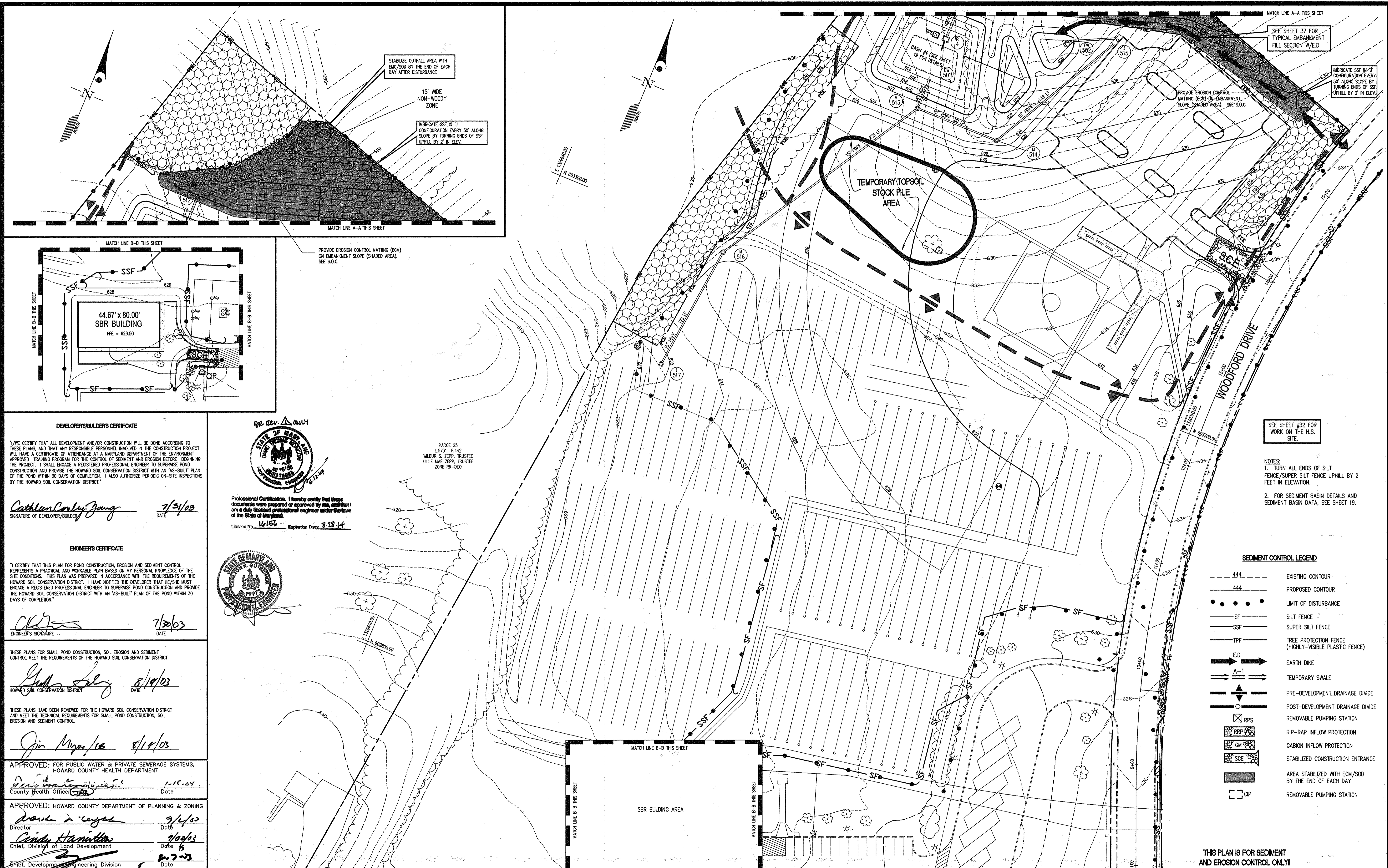
WEST FRIENDSHIP ELECTION DISTRICT No. 3

SEDIMENT & EROSION CONTROL PLAN

MARKETTES 21042
NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16111/2 (PARCEL 1) and 16126/2 (PARCEL 2A)

SCALE: 1" = 40'
 ZONING: RR-DEO
 DATE: 28/JUL/03
 TAX MAP - GRID: 10 19
 HOWARD COUNTY, MARYLAND

G. L. W. FILE No. 00-177
 SHEET 32 of 48
 SDP-03-33



DEVELOPERS/BUILDERS CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Cathleen Conley Young 7/3/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEERS CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 7/30/03
ENGINEER'S SIGNATURE DATE

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. 16156 Expiration Date: 8-28-14

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 8/14/03
DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer *[Signature]* 1-15-04 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director *[Signature]* 9/2/03 Date
Chief, Division of Land Development *[Signature]* 9/2/03 Date
Chief, Development Engineering Division *[Signature]* 8-27-03 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	6-12-14	REVISION	UPDATED SCHOOL NAME & SHEET TOTAL
DES.		CHK.	
DRN.		APP'R.	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

SEDIMENT & EROSION CONTROL PLAN
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 161112 (PARCEL 1) and 161362 (PARCEL 2A)

SCALE: 1" = 40'
DATE: 28/JUL/03
ZONING: RR-DEO
TAX MAP - GRID: 10 19
G. L. W. FILE No.: 00-177
SHEET: 33 of 40

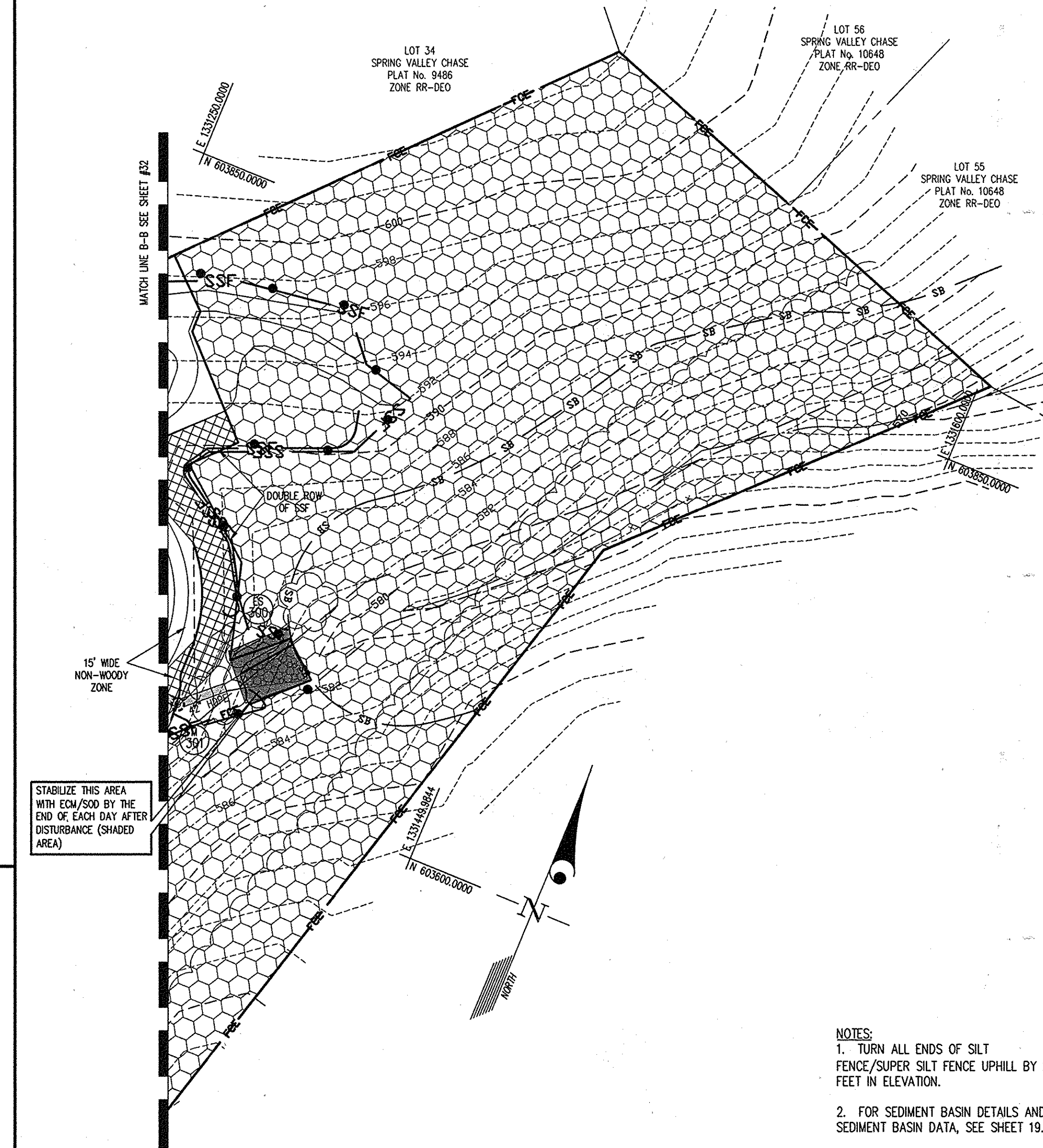
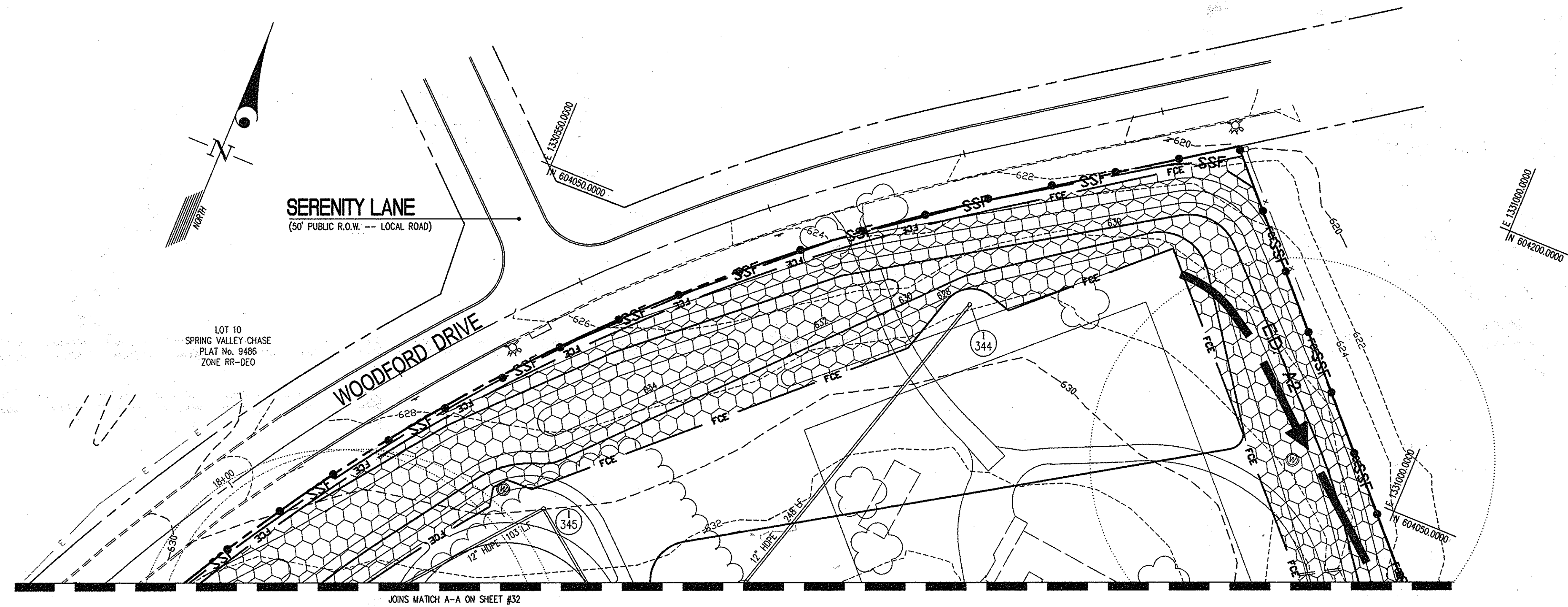
NOTES:

- TURN ALL ENDS OF SILT FENCE/SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
- FOR SEDIMENT BASIN DETAILS AND SEDIMENT BASIN DATA, SEE SHEET 19.

SEDIMENT CONTROL LEGEND

--- 444 ---	EXISTING CONTOUR
--- 444 ---	PROPOSED CONTOUR
---	LIMIT OF DISTURBANCE
●●●●●	SILT FENCE
●●●●●	SUPER SILT FENCE
--- ---	TREE PROTECTION FENCE (HIGHLY-VISIBLE PLASTIC FENCE)
→ E.D. →	EARTH DIKE
→ A-1 →	TEMPORARY SWALE
--- ---	PRE-DEVELOPMENT DRAINAGE DIVIDE
--- ---	POST-DEVELOPMENT DRAINAGE DIVIDE
⊠ RPS	REMOVABLE PUMPING STATION
⊠ RRP	RIP-RAP INFLOW PROTECTION
⊠ GM	GABION INFLOW PROTECTION
⊠ SCE	STABILIZED CONSTRUCTION ENTRANCE
■	AREA STABILIZED WITH ECM/SOD BY THE END OF EACH DAY
⊠ CIP	REMOVABLE PUMPING STATION

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY!



THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY!!

DEVELOPERS/BUILDERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD."

Cathleen Conly Young 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 7/30/03
ENGINEER'S SIGNATURE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 8/19/03
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

[Signature] 8-15-03
County Health Officer DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

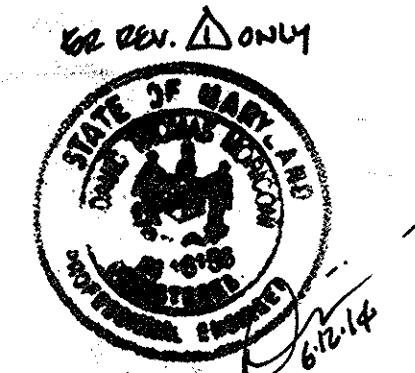
[Signature] 9/2/03
Director DATE

[Signature] 9/2/03
Chief, Division of Land Development DATE

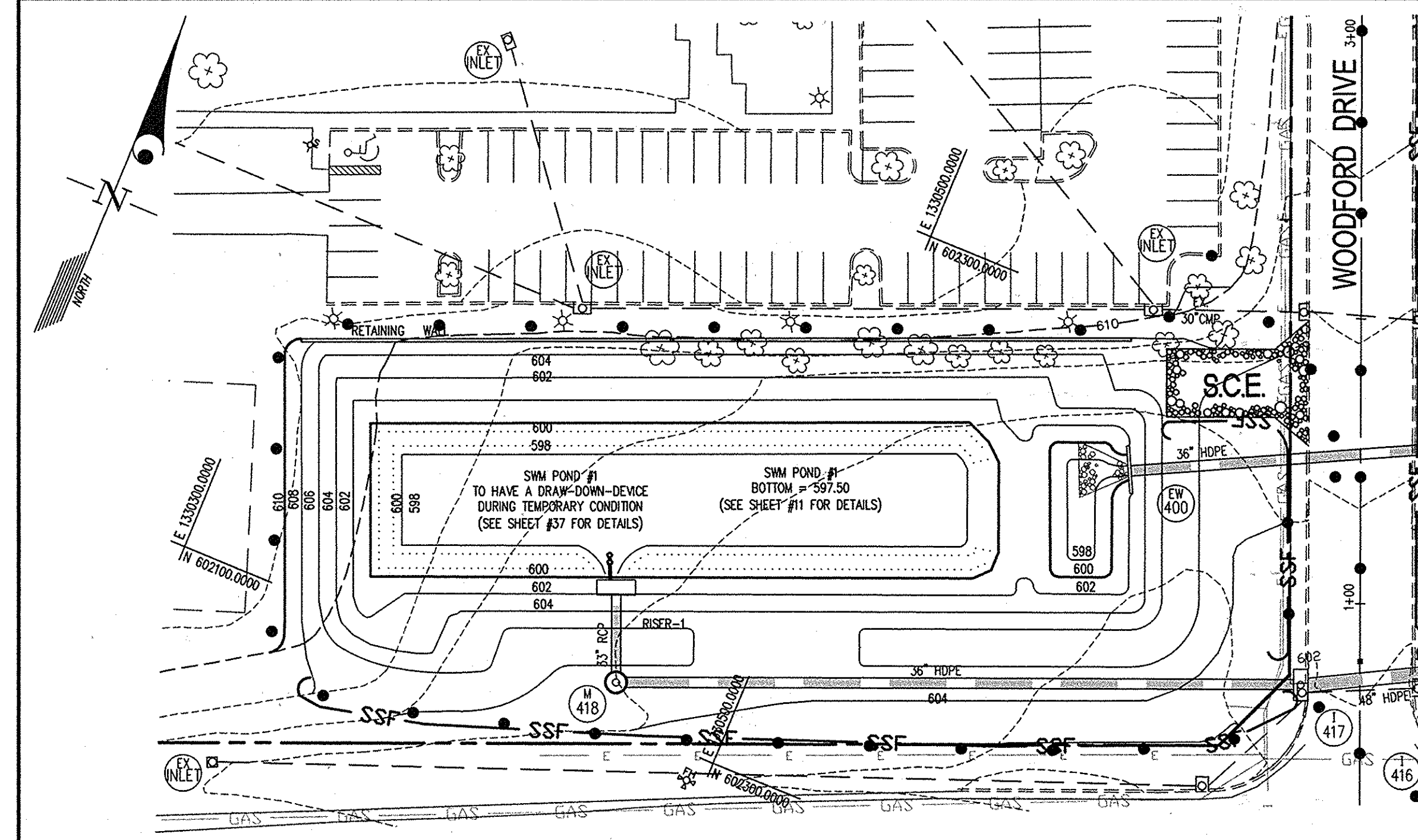
[Signature] 9-2-03
Chief, Development Engineering Division DATE

SEDIMENT CONTROL LEGEND

- 444 --- EXISTING CONTOUR
- 444 --- PROPOSED CONTOUR
- LIMIT OF DISTURBANCE
- SF- SILT FENCE
- SSF- SUPER SILT FENCE
- TPF- TREE PROTECTION FENCE (HIGHLY-VISIBLE PLASTIC FENCE)
- E-D → EARTH DIKE
- A-I → TEMPORARY SWALE
- ▲ PRE-DEVELOPMENT DRAINAGE DIVIDE
- POST-DEVELOPMENT DRAINAGE DIVIDE
- ⊠ RPS REMOVABLE PUMPING STATION
- RRP RIP-RAP INFLOW PROTECTION
- GM GABION INFLOW PROTECTION
- SCE STABILIZED CONSTRUCTION ENTRANCE
- AREA STABILIZED WITH ECM/SOD BY THE END OF EACH DAY



NOTES:
1. TURN ALL ENDS OF SILT FENCE/SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
2. FOR SEDIMENT BASIN DETAILS AND SEDIMENT BASIN DATA, SEE SHEET 19.



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
ARCHITECT: TCA ARCHITECTS LLC
PREPARED FOR: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELLCOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

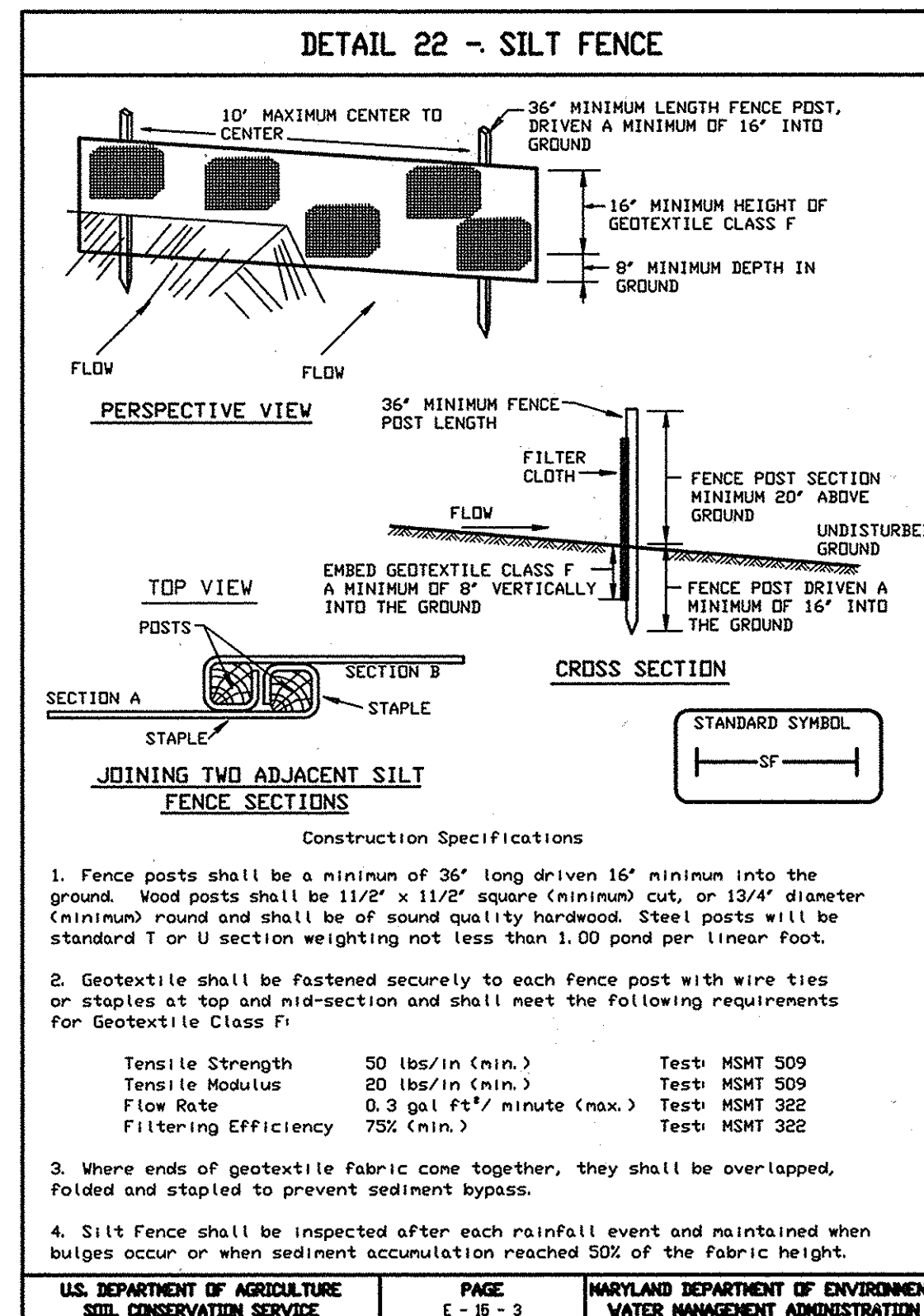
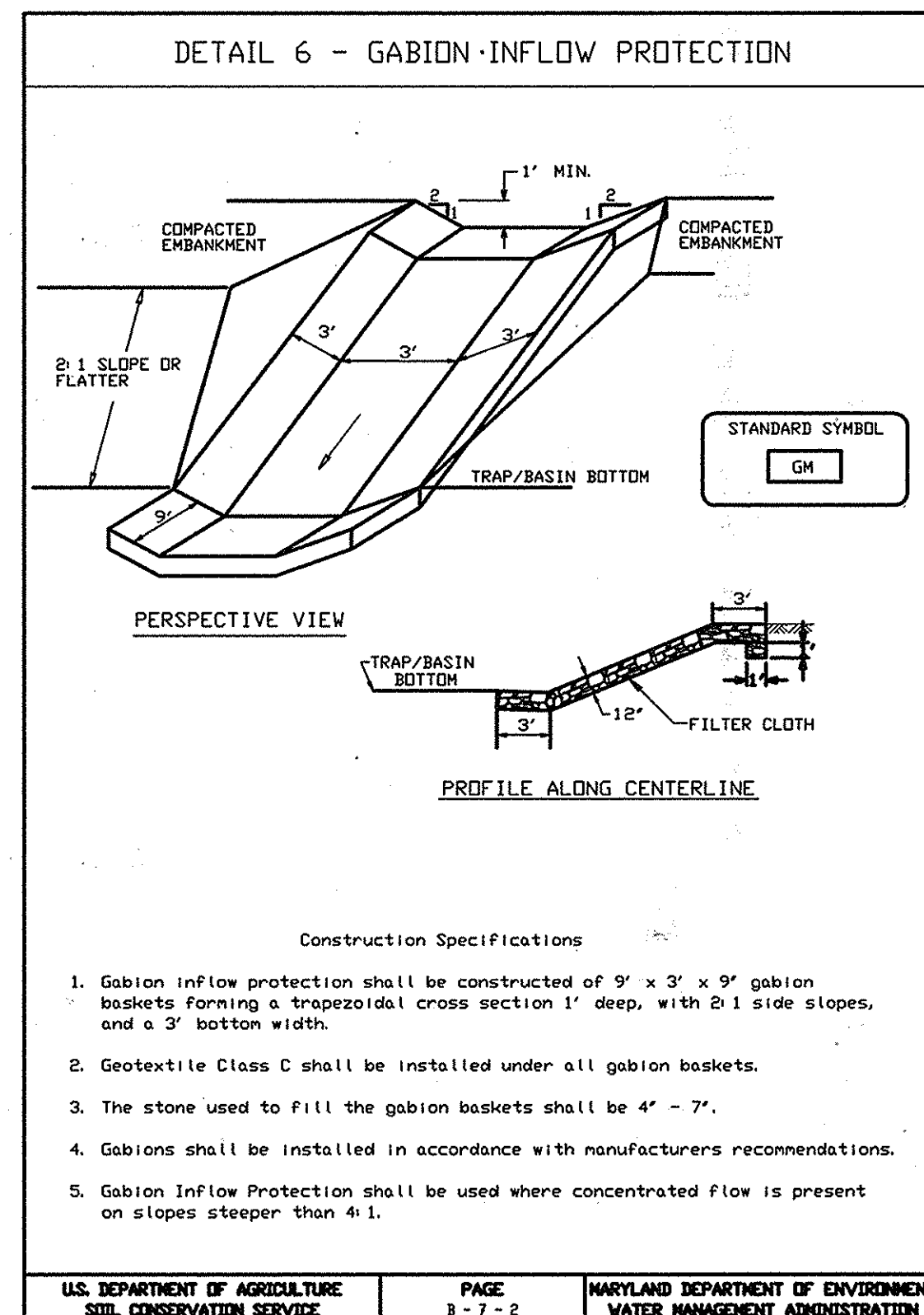
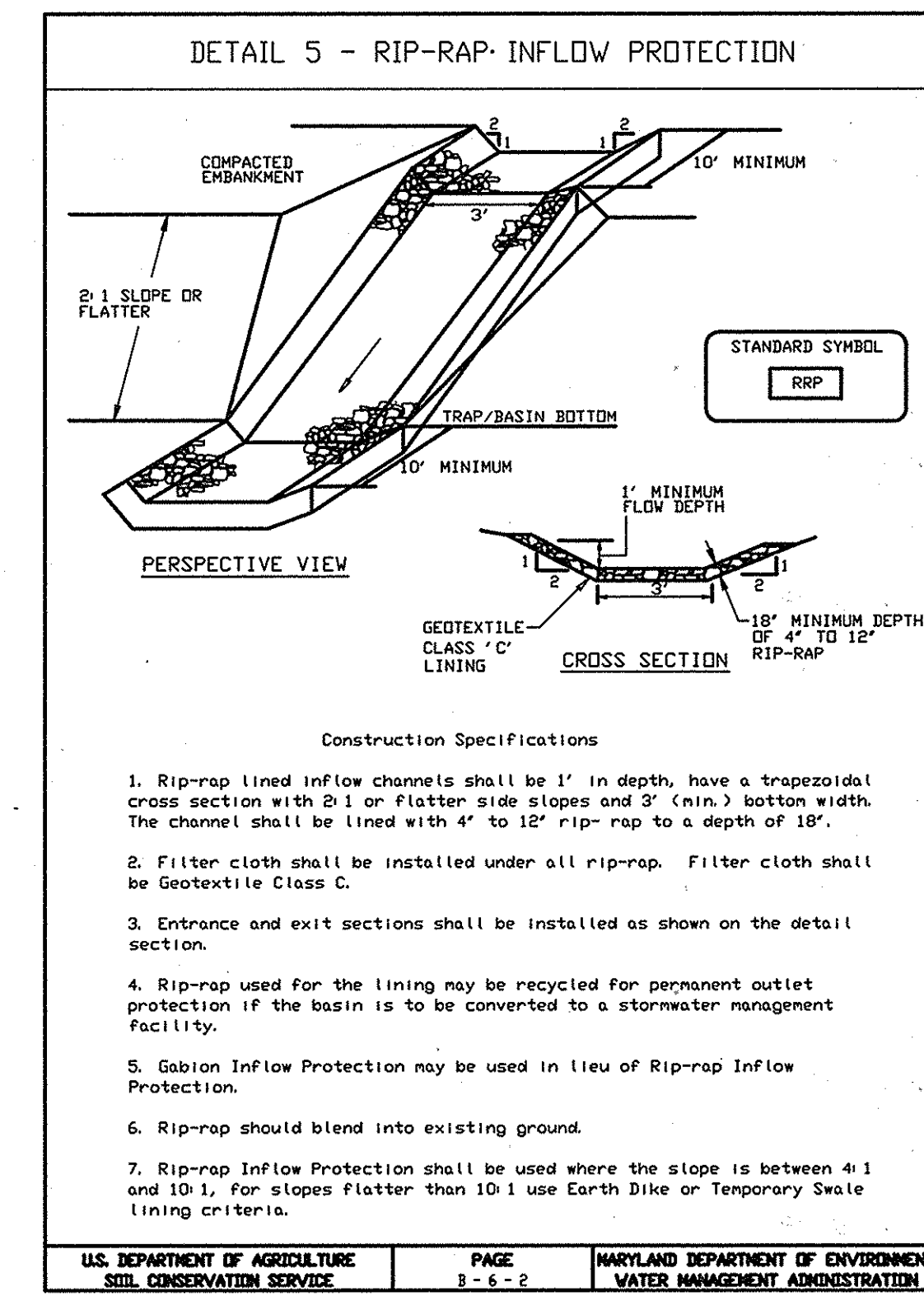
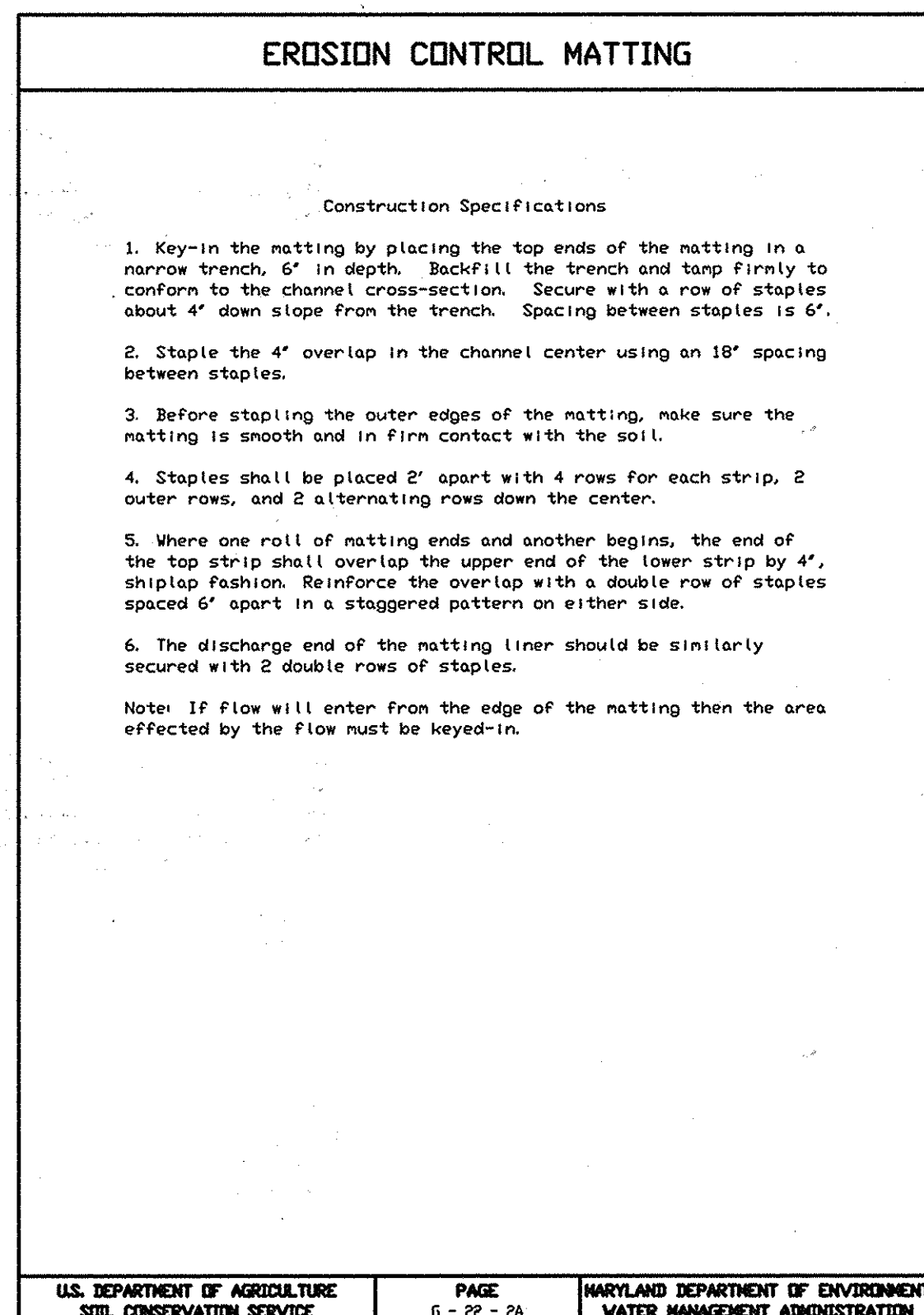
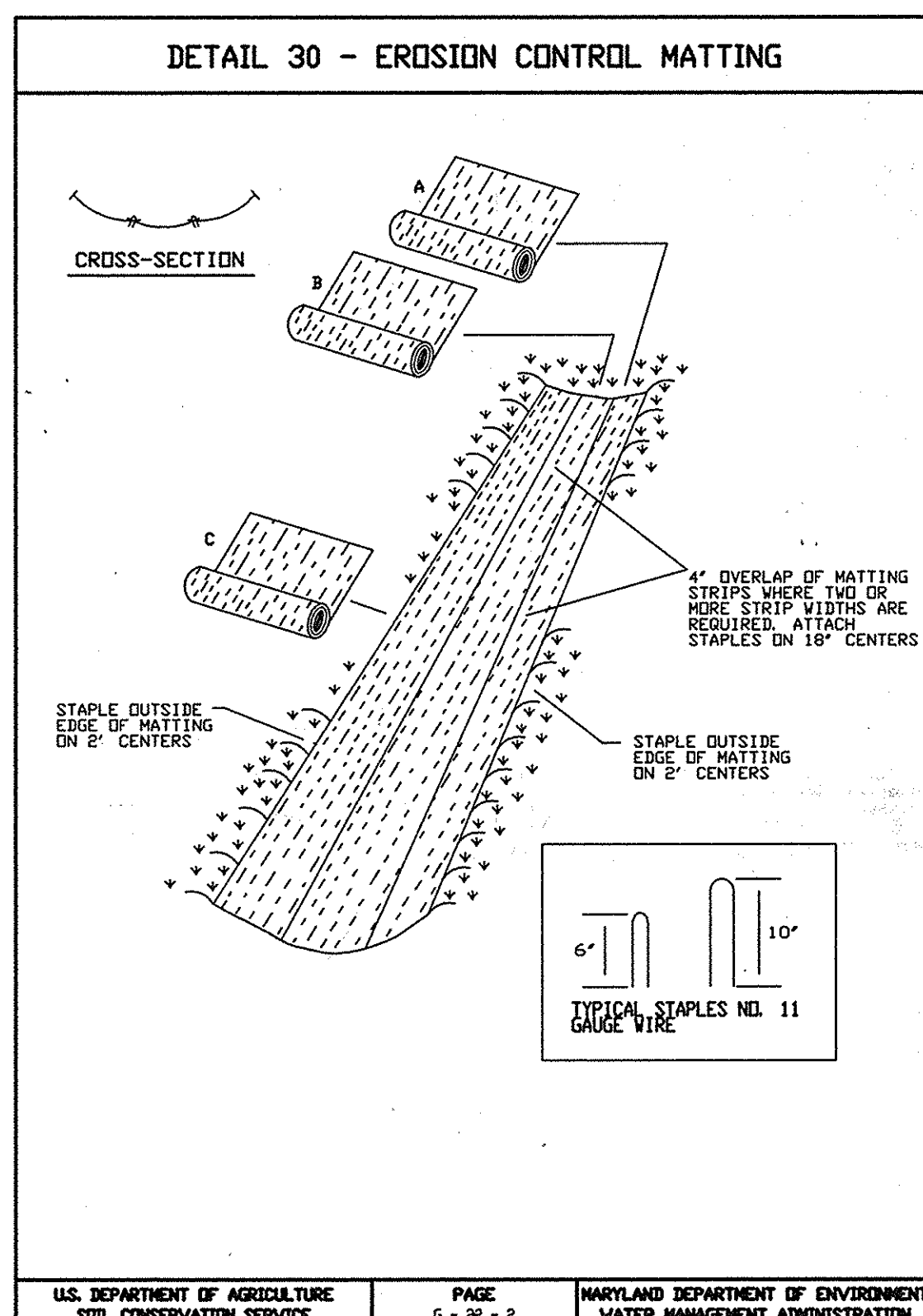
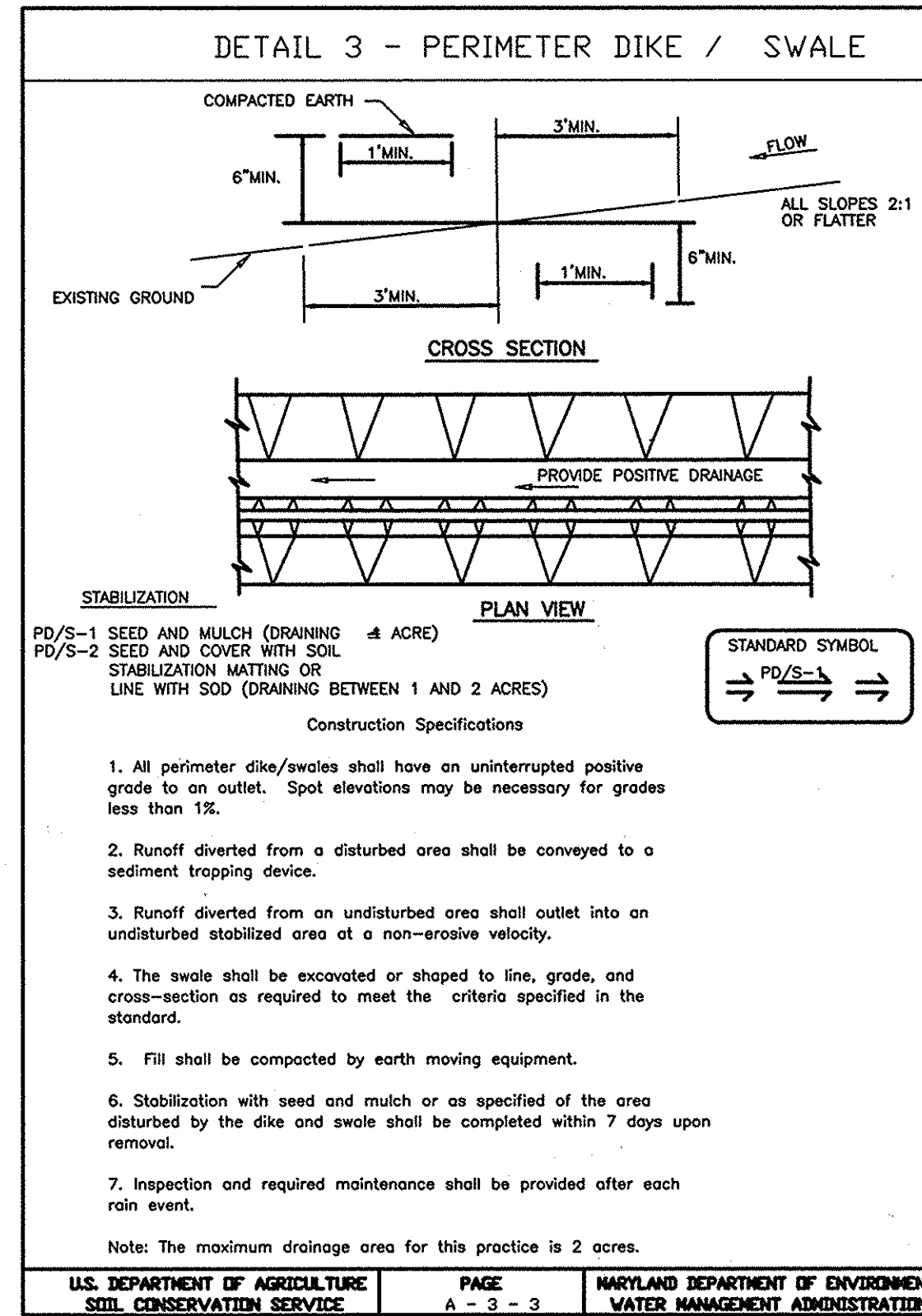
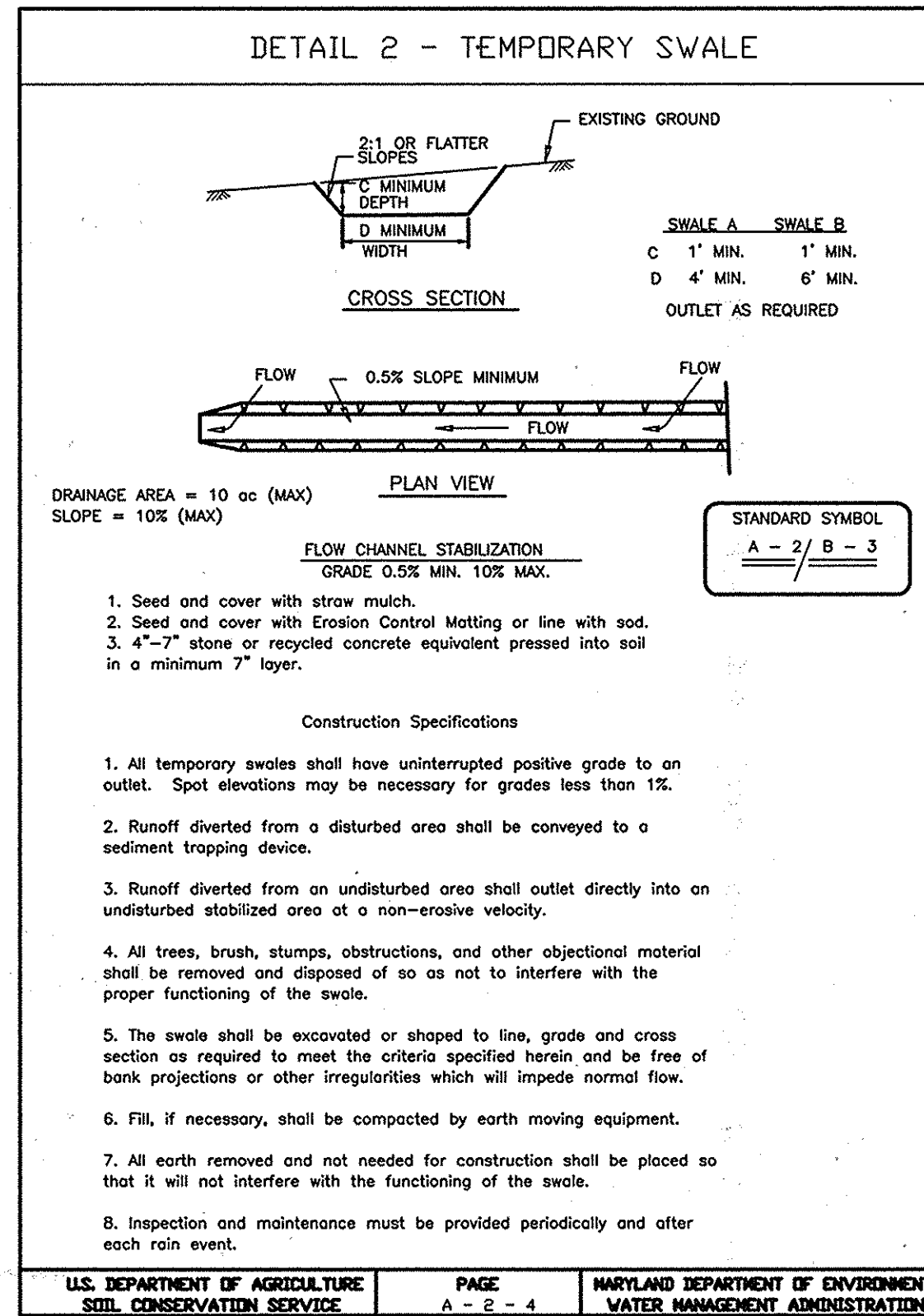
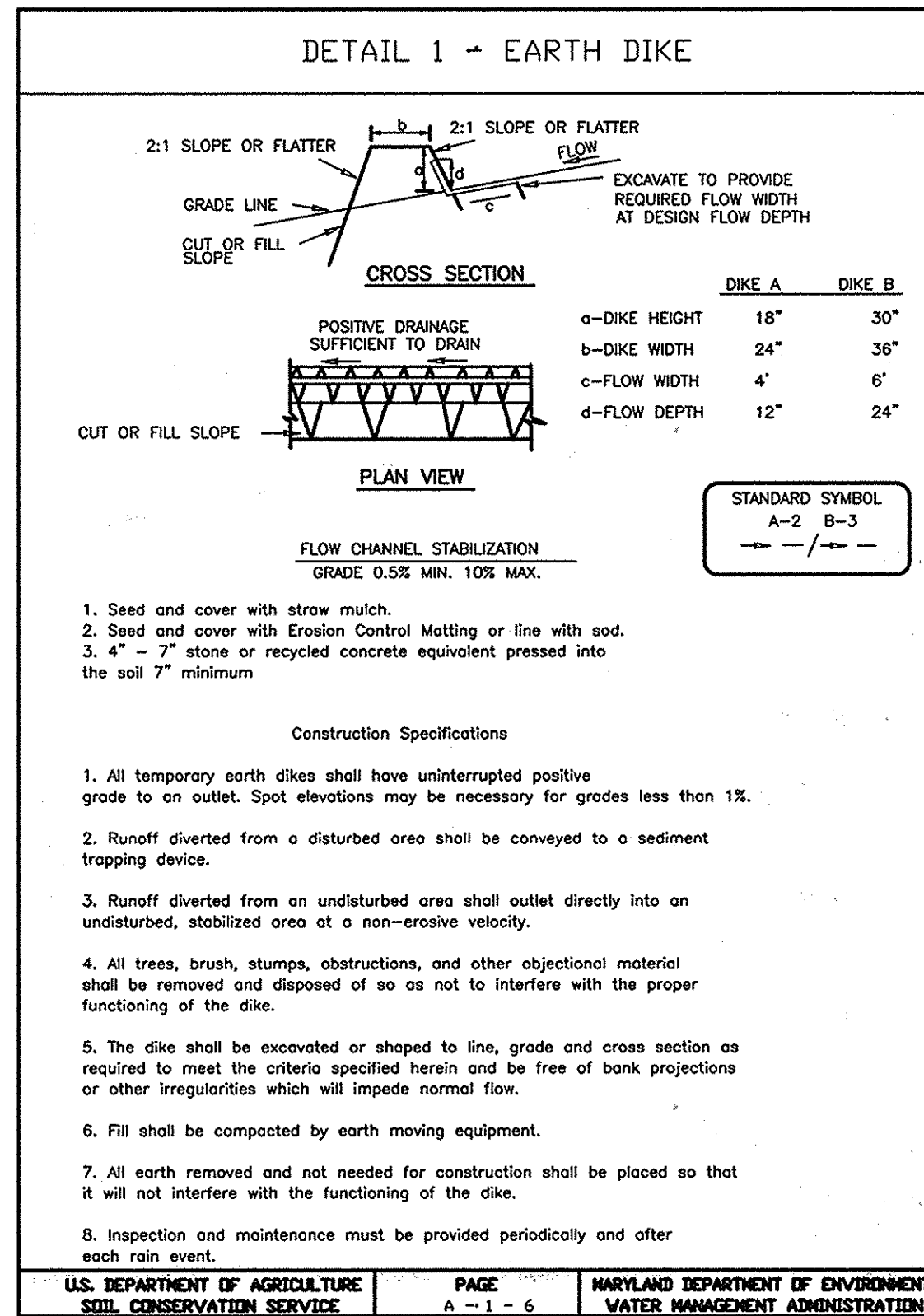
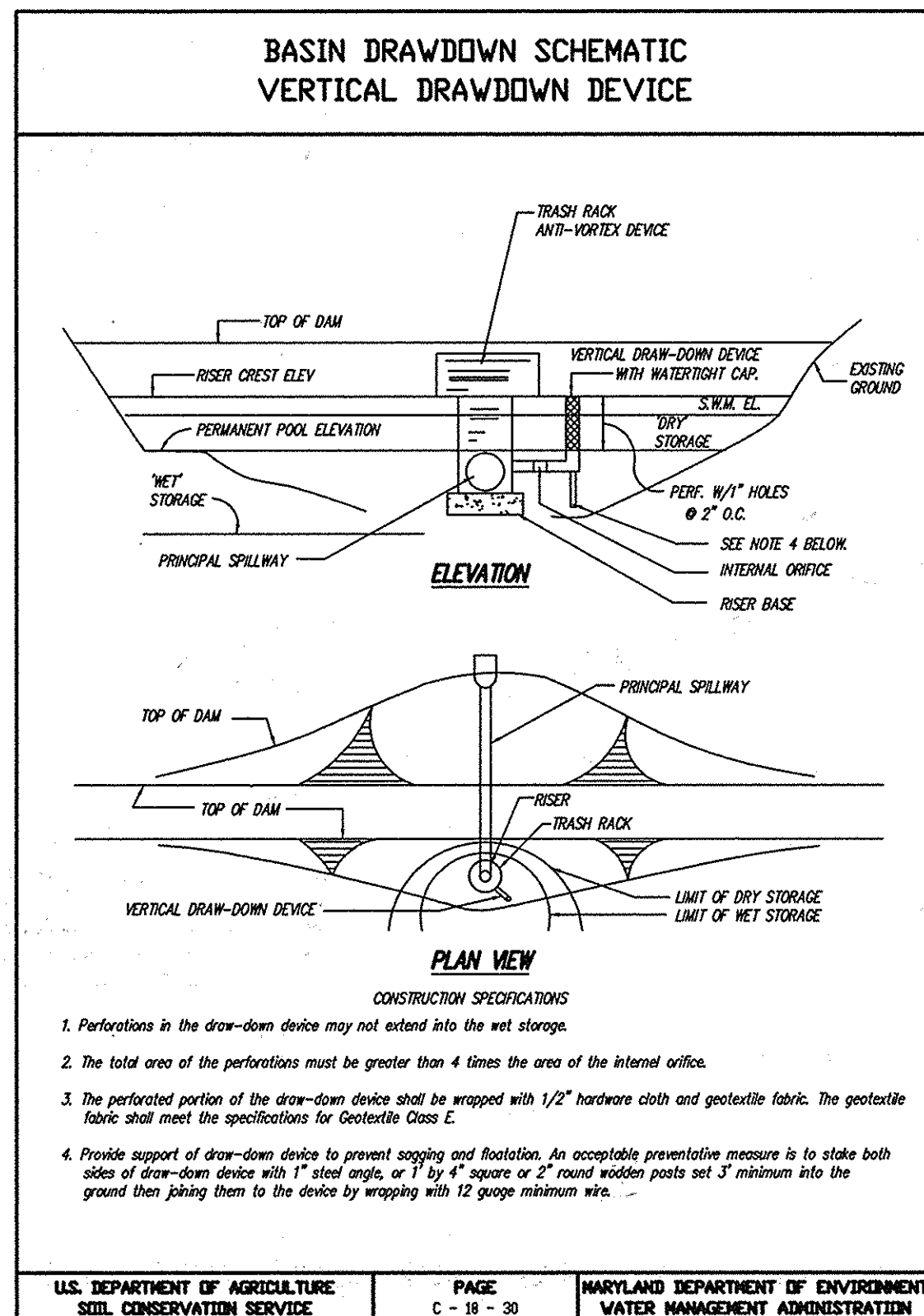
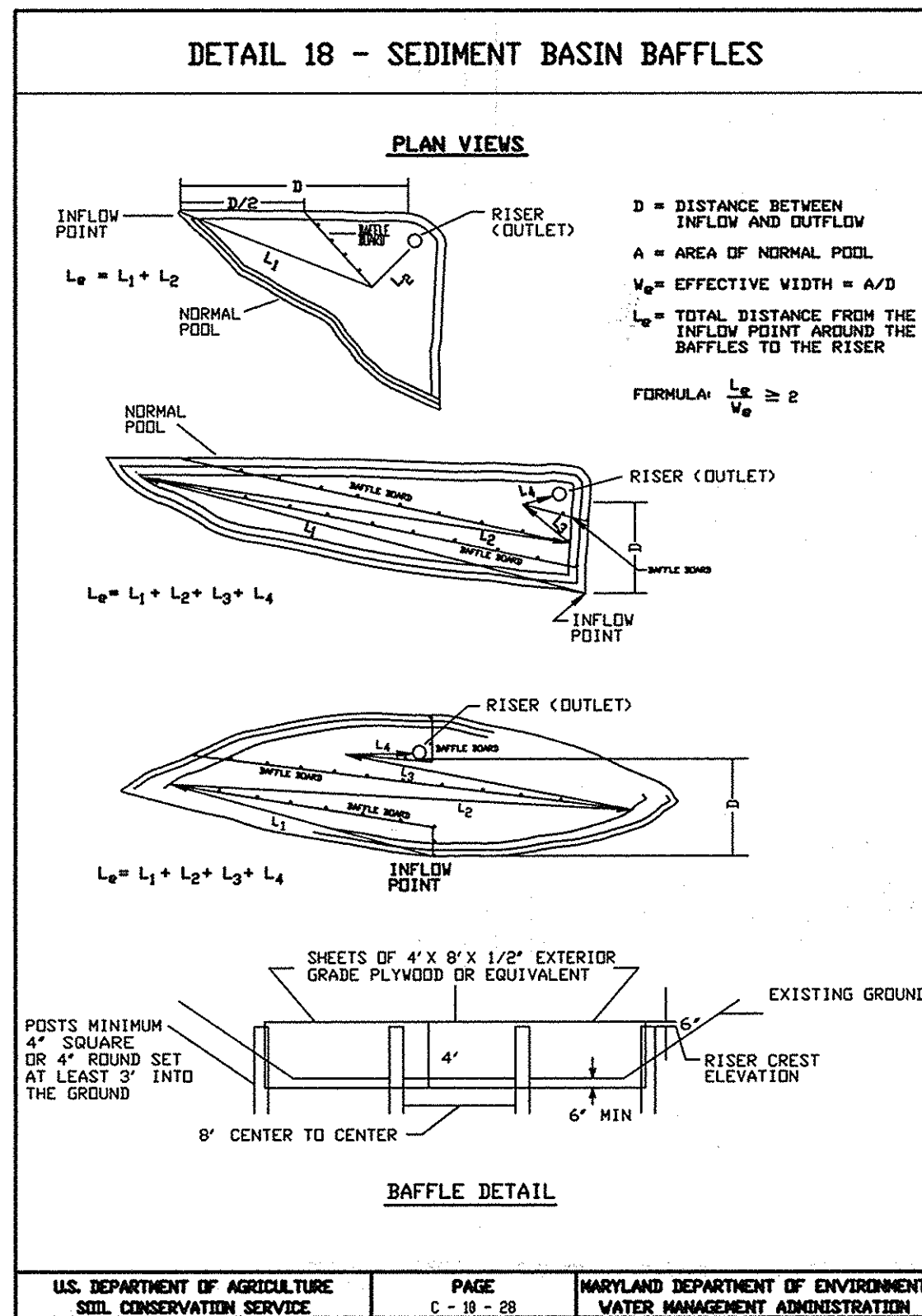
DESIGNED SITE DEVELOPMENT PLAN
WEST FRIENDSHIP ELECTION DISTRICT No. 3

SEDIMENT & EROSION CONTROL PLAN
HARRIETTES BLVD
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16111a (PARCEL 1) and 16112a (PARCEL 2A)
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	34 of 40

00177\SDP-03-33\SNE.dwg DES. DRN. CHK.

DATE	REVISION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	



APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: *[Signature]* Date: 1-15-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* Date: 9/2/03
 Chief, Division of Land Development: *[Signature]* Date: 8-27-03

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT: *[Signature]* Date: 8/14/03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 USDA NATURAL RESOURCES CONSERVATION SERVICE: *[Signature]* Date: 8/14/03

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD.
 SIGNATURE OF DEVELOPER/BUILDER: *[Signature]* Date: 7/30/03

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 ENGINEER'S SIGNATURE: *[Signature]* Date: 7/30/03

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. 6136, Expiration Date: 9-25-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4188

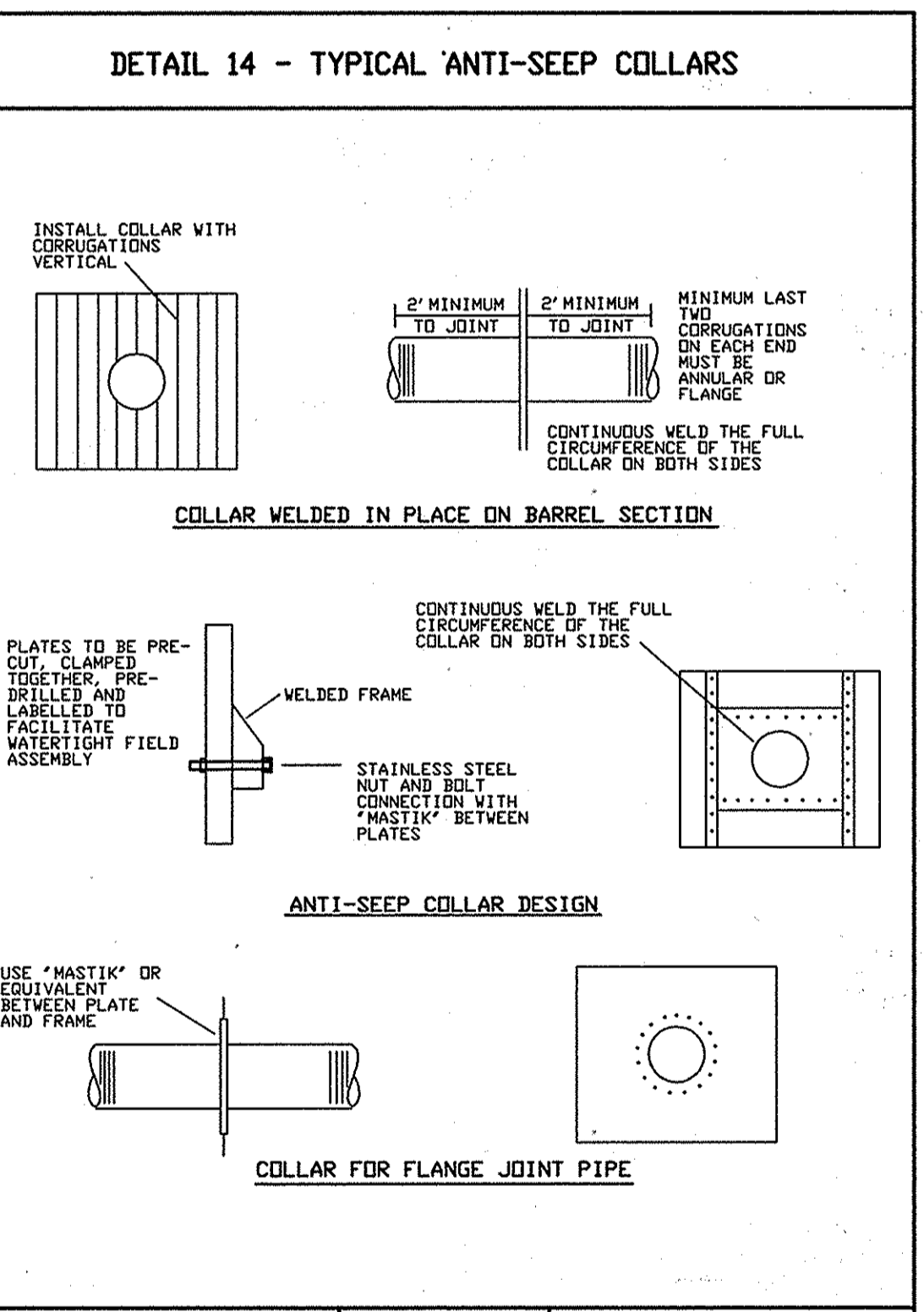
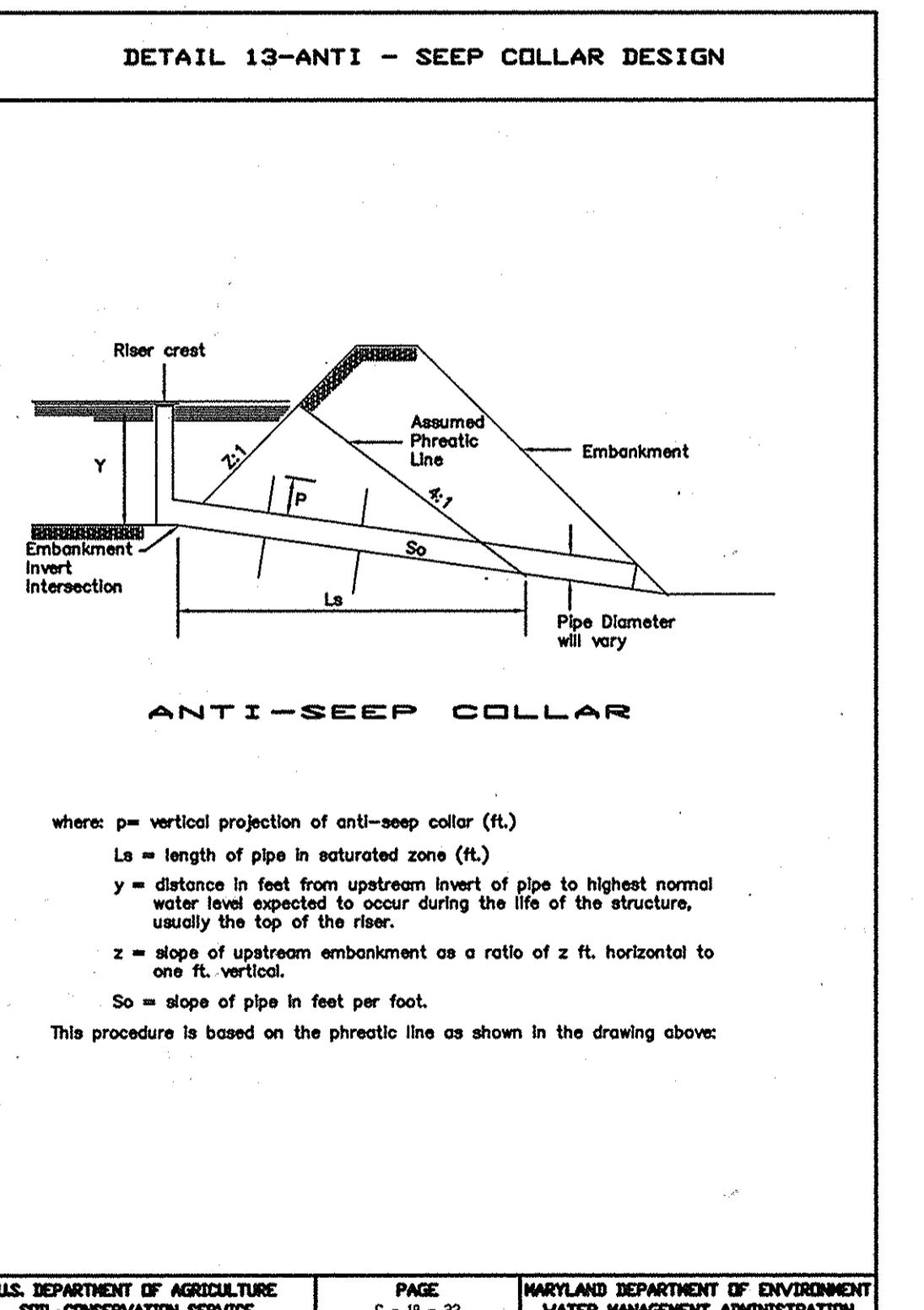
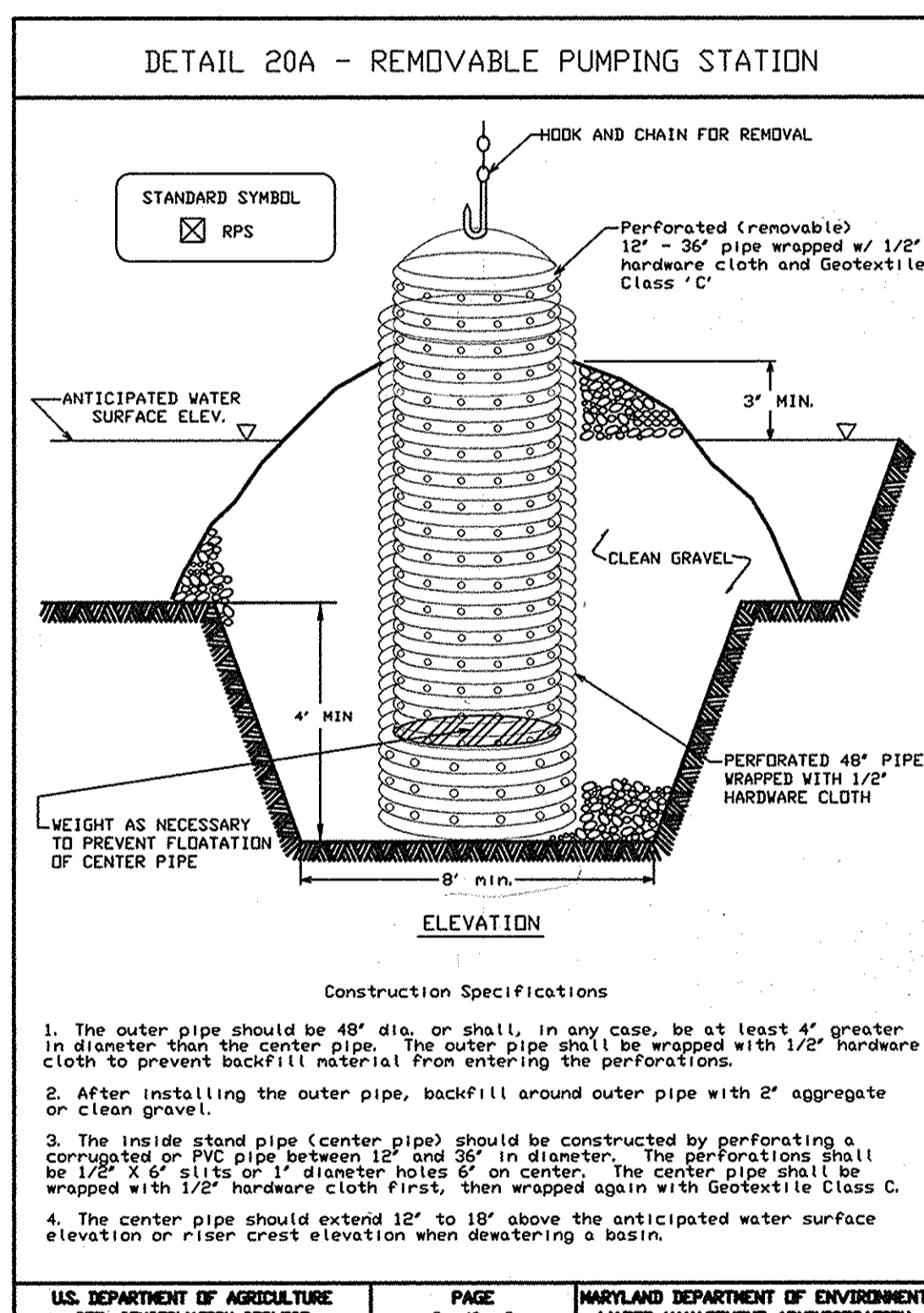
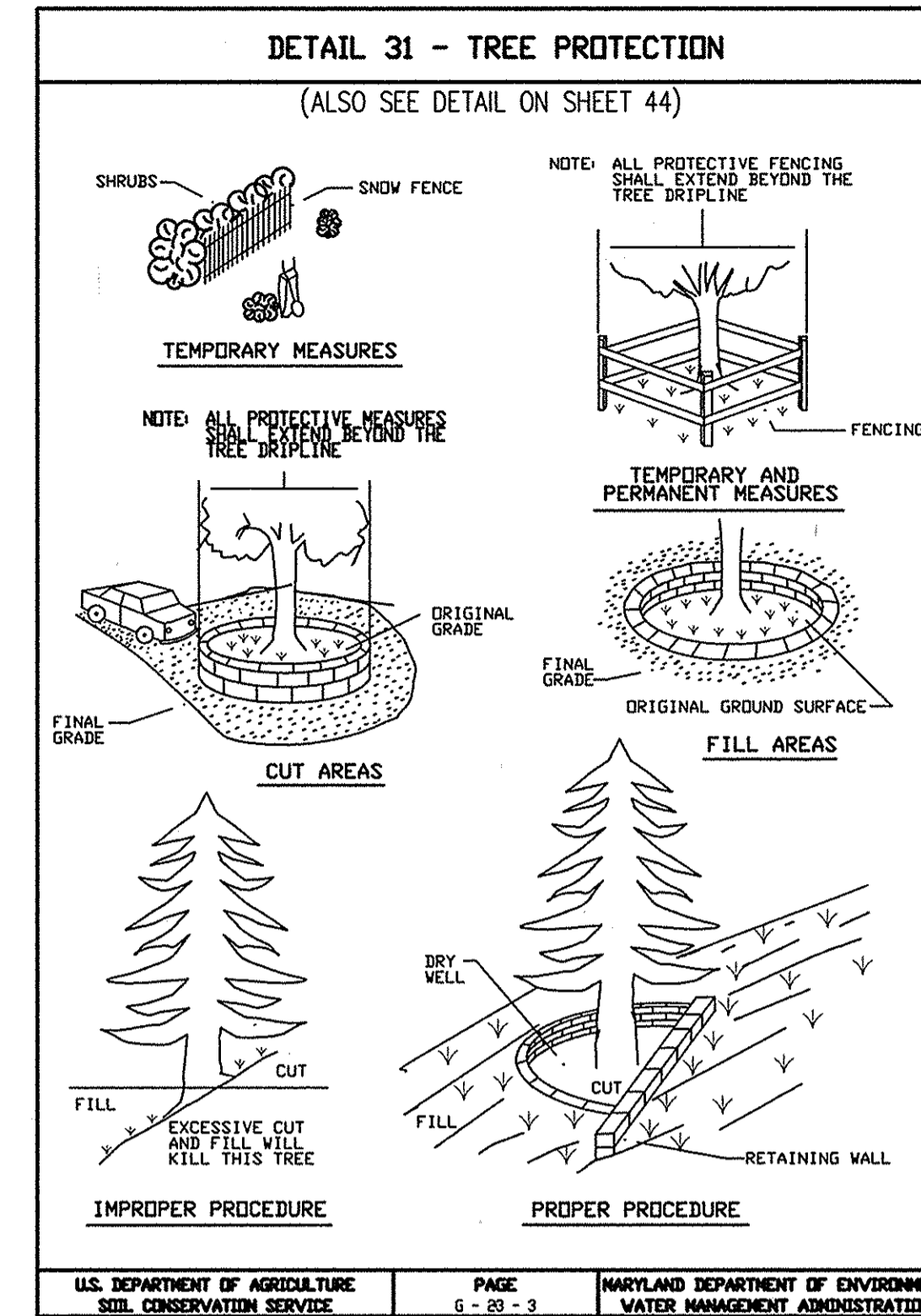
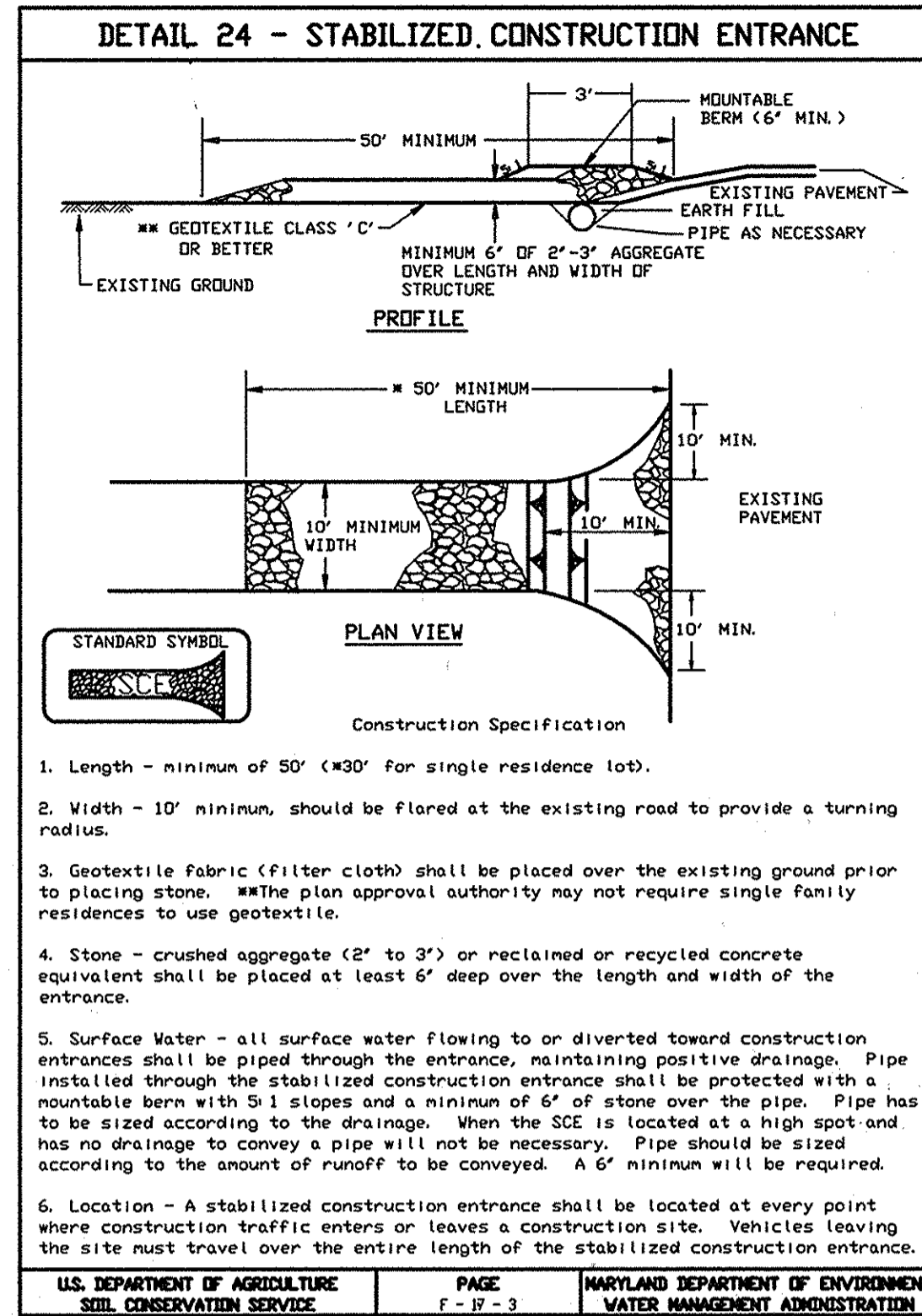
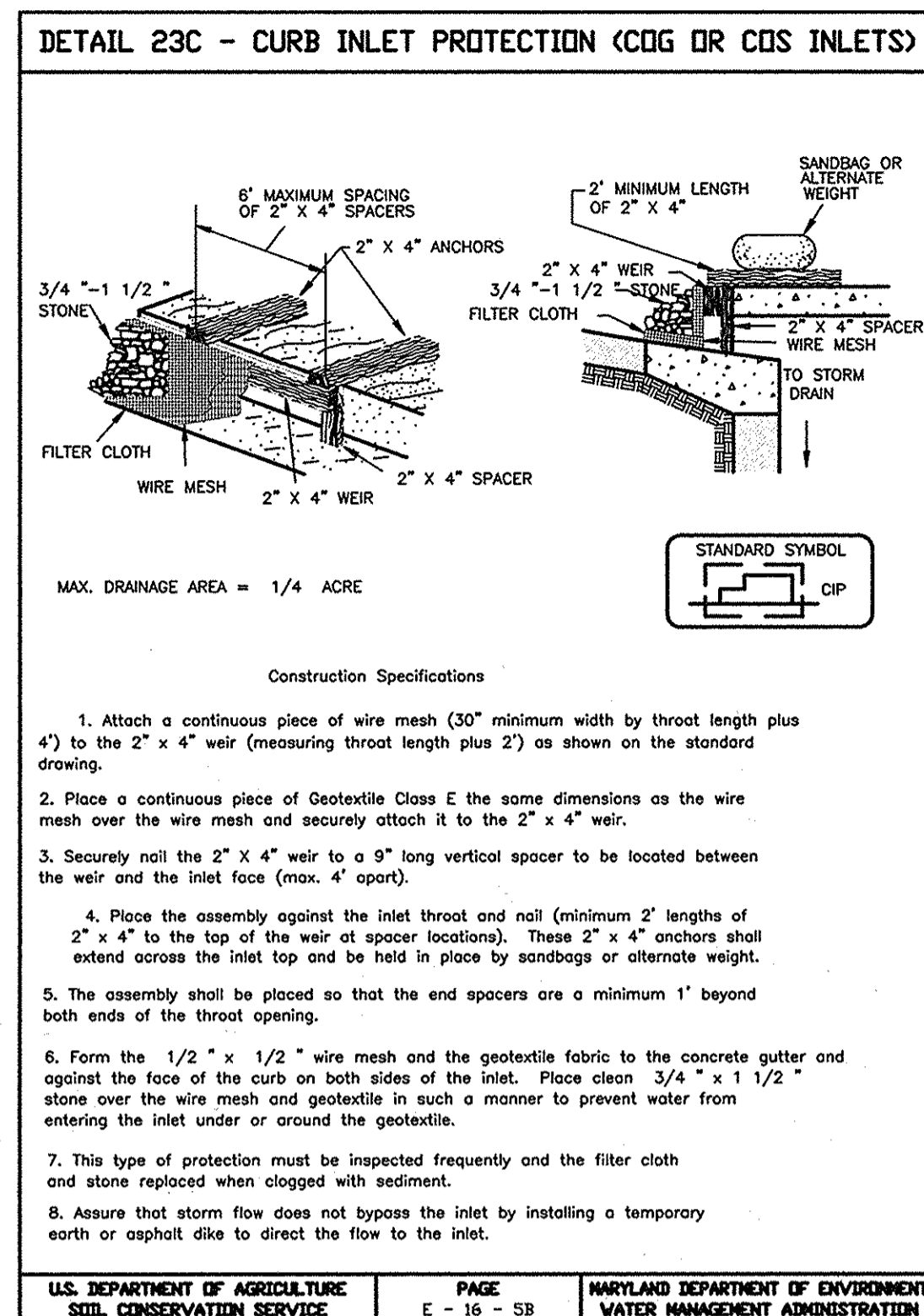
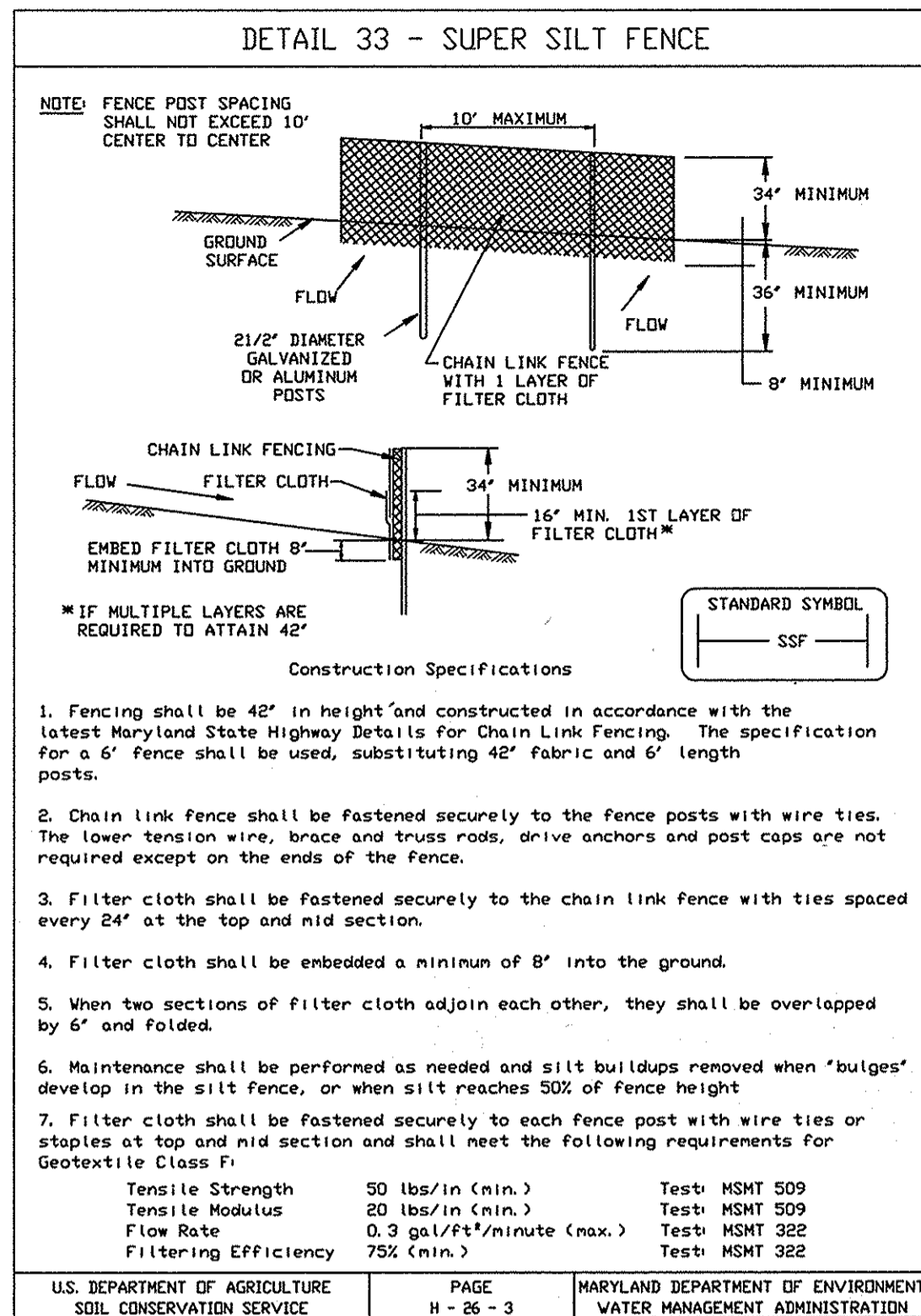
6-13-14 DATE
 UPDATED SCHOOL NAME & SHEET TOTAL

PREPARED FOR:
 OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 ARCHITECT: TCA ARCHITECTS LLC
 2861 RIVA ROAD, SUITE 120
 ANNAPOLIS, MD 21401
 ATTN: HOVE BOON
 TEL: 301-261-8700

SEDIMENT CONTROL DETAILS
 NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 16117/2 (PARCEL 1) and 16116/2 (PARCEL 2A)
 WEST FRIENDSHIP ELECTION DISTRICT No. 3
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN
 ZONING: RR-DEO
 DATE: 28/JUL/03
 TAX MAP - GRID: 10 19
 SHEET: 35 of 49

G. L. W. FILE No. 00-177
 SHEET 35 of 49
 SDP-03-33



Dust Control

Definition: Controlling dust blowing and movement on construction sites and roads.

Purpose: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies: This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications:

Temporary Methods

- Mulches - See standards for vegetative stabilization with mulches only; mulch should be crimped or tacked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12" apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
- Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
- Barriers - Solid board fences, silt fences, snow fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angle to prevailing currents at intervals at least ten times their height are effective in controlling soil blowing.
- Calcium Chloride - Apply at rates that will keep surface moist. May need treatment.

Permanent Methods

- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsoiling - Covering with less erosive soil material. See standards for top soil.
- Stone - Cover surface with crushed stone or gravel.

References

- Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
- Agriculture Information Bulletin 354. How to Control Wind Erosion. USDA-ARS.

TURF REINFORCEMENT MATING (TRM)

A. TRM SHALL BE PEC-MAT AS SUPPLIED BY AMERICAN EXCELSIOR COMPANY, ARLINGTON, TX (800-777-7645).

B. TRM SHALL BE MADE OF TWO-DIMENSIONAL STRUCTURE OF PVC HAVING A MINIMUM CONTENT OF 25 PERCENT CARBON BLACK. THE CONTINUOUS FILAMENTS SHALL BE MELT-BONDED AT INTERSECTIONS TO FORM STABLE MAT. THE MAT SHALL BE FLEXIBLE, PERMEABLE AND RESISTANT TO ULTRAVIOLET RADIATION AND CHEMICALS NORMALLY ENCOUNTERED IN NATURAL SOIL ENVIRONMENT. MAT COLOR SHALL BE GREEN.

C. TRM SHALL HAVE THE FOLLOWING MATERIAL CHARACTERISTICS:

PROPERTY	VALUE	TEST METHOD
WEIGHT, OZ/ST	28	ASTM D-3776
THICKNESS, IN	0.1	MEASURED
SPECIFIC GRAVITY	1.17	MEASURED
TENSILE STRENGTH - WIDTH, LB/FT	144	ASTM D-4595-86
TENSILE STRENGTH - LENGTH, LB/FT	84	ASTM D-4595-86
ELONGATION - WIDTH, %	75	D-4595-86
ELONGATION - LENGTH, %	75	D-4595-86
POSSIBLY, %	72	CW 92215-86
ULTRAVIOLET STABILITY - QUV @ 2000 HR, % PROPERTY RETAINED	85	ASTM G-53-84
ULTRAVIOLET STABILITY - WEATHERMETER @ 1500 HR, % PROPERTY RETAINED	85	ASTM G-23-81
PH RANGE	7-12	MEASURED

D. DEPENDING ON JOB SITE CONDITIONS, ANCHOR SHALL BE:

- STEEL WIRE STAPLES, U-SHAPED, 11 GAUGE AND SHALL BE 1 INCH WIDE BY 6 INCHES LONG (MIN).

E. EXECUTION

A. CONTRACTOR SHALL COORDINATE WITH THE TRM SUPPLIER FOR A QUALIFIED REPRESENTATIVE OF THE TRM SUPPLIER TO BE PRESENT AT THE JOB SITE ON THE START OF INSTALLATION TO PROVIDE TECHNICAL ASSISTANCE AS NEEDED. CONTRACTOR SHALL REMAIN SOLELY RESPONSIBLE FOR THE QUALITY OF INSTALLATION.

F. SITE PREPARATION

A. BEFORE PLACING TRM, THE SUBGRADE SHALL BE INSPECTED BY CONTRACTOR TO INSURE THAT IT HAS BEEN PROPERLY COMPACTED; HAS BEEN GRADED SMOOTH; HAS NO DEPRESSIONS, VOID, SOFT OR UNCOMPACTED AREAS; IS FREE FROM OBSTRUCTIONS, SUCH AS TREE ROOTS, PROJECTING STONES OR OTHER FOREIGN MATTER; AND HAS BEEN SEDED. CONTRACTOR SHALL NOT PROCEED UNTIL ALL UNSATISFACTORY CONDITIONS HAVE BEEN REMOVED. BY BEGINNING CONSTRUCTION, CONTRACTOR SIGNIFIES HIS APPROVAL OF PRECEDING WORK.

B. CONTRACTOR SHALL FINE GRADE THE SUBGRADE BY HAND DRESSING WHERE NECESSARY TO REMOVE LOCAL DEVIATIONS.

C. NO VEHICULAR TRAFFIC SHALL BE PERMITTED DIRECTLY ON THE TRM.

G. CHANNEL INSTALLATION

A. TRM SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. THE EXTENT OF TRM SHALL BE AS SHOWN ON DRAWINGS. TRM SHALL EXTEND ABOVE THE ANTICIPATED MAXIMUM FLOW LINE, AS DIRECTED.

B. TRM SHALL BE INSTALLED PARALLEL TO THE FLOW OF WATER. THE FIRST ROLL SHALL BE CENTERED LONGITUDINALLY IN MID-CHANNEL AND ANCHORED, AS IDENTIFIED IN THE DRAWING ANCHOR PATTERN AND DETAILS. SUBSEQUENT ROLLS SHALL FOLLOW FROM CHANNEL CENTER OUTWARD AND BE OVERLAPPED A MINIMUM OF 6 INCHES TO ALLOW INSTALLATION OF A COMMON ROW OF ANCHORS.

C. SUCCESSIVE LENGTHS OF TRM SHALL BE OVERLAPPED ("SHINGLED") 24 INCHES FOR A COMMON ROW OF STAPLES WITH TWO ANCHORS AT 1-1/2 FEET ON CENTER.

D. A TRENCH (6 IN. WIDE BY 12 IN. DEEP) SHALL BE LOCATED AT THE UPSTREAM TERMINATION. TRM SHALL BE ANCHORED TO THE BOTTOM OF THE TRENCH AT 2 FEET ON CENTER. BACKFILL AND COMPACT THE TRENCH. TRM SHALL THEN BE FOLDED BACK OVER TRENCH AND ANCHORED AT 2 FEET ON CENTER.

E. CONSTRUCT INTERMEDIATE CHECK SLOTS (6 IN. WIDE BY 12 IN. DEEP) EVERY 15 TO 25 FEET PERPENDICULAR TO THE DIRECTION OF FLOW. DOUBLE LAYER MATTING SINGLY OVER THE BOTTOM AND UPSTREAM WALL OF THE SLOT. ANCHOR AT 2 FEET ON CENTER. BACKFILL AND COMPACT TRENCH.

F. ANCHOR THE DOWNSTREAM TERMINATION AND FLANKS BY BURYING THE MAT IN A TRENCH (6 IN. WIDE BY 6 IN. TO 12 IN. DEEP). INSTALL ANCHORS AT 2 FEET ON CENTER. BACKFILL AND COMPACT TRENCH.

H. SLOPE INSTALLATION

A. TRM SHALL BE INSTALLED USING SIMILAR TECHNIQUES AS THOSE DESCRIBED FOR CHANNEL APPLICATIONS.

I. QUALITY ASSURANCE

A. TRM SHALL NOT BE DEFECTIVE OR DAMAGED. ANY SUCH PROBLEMS SHALL BE CORRECTED BY CONTRACTOR AT NO COST TO OWNER AND TO THE SATISFACTION OF ENGINEER.

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

[Signature] 1-15-04
County Health Officer (TAB) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 9/4/03
Director Date

[Signature] 9/6/03
Chief, Division of Land Development Date

[Signature] 8-28-04
Chief, Engineering Division Date

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 8/14/03
USDA NATURAL RESOURCES CONSERVATION SERVICE DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NSCD.

[Signature] 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 7/30/03
ENGINEER'S SIGNATURE DATE

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. 16156. Expiration Date: 8-28-14

[Signature] 8/21/04

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DATE: 6-12-14
REVISION: UPDATED SCHOOL NAME & SHEET TOTAL

PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHELYN YOUNG
TEL: 410-313-6704

ARCHITECT:
TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MOSE BOON
TEL: 301-261-8700

SEDIMENT CONTROL DETAILS

MAZEPITS RIDGE
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT No. 161112 (PARCEL 1) AND 161212 (PARCEL 2A)

SCALE: AS SHOWN
ZONING: RR-DEO
G. L. W. FILE No.: 00-177

DATE: 28/JUL/03
TAX MAP - GRID: 10 19
SHEET: 36 of 48

WEST FRIENDSHIP ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES
I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPE WHERE:
A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLY OF MOISTURE AND PLANT NUTRIENTS.
C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE RESPECTIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CHIPPERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
B. TOPSOIL MUST BE FREE OF PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

C. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE IF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
A. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS (OR SEE SEEDING NOTES).

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
A. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

- PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
- ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
- TOPSOIL HAVING SOLUBLE SALT GREATER THAN 500 PARTS PER MILL SHALL NOT BE USED.
- NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHOTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

B. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS (OR SEE SEEDING NOTES).

V. TOPSOIL APPLICATION

A. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

B. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4"-8" HIGHER IN ELEVATION.

C. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER.

D. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

V. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

A. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

- COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
- COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
- COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.

B. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT A RATE OF 4LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENED).

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQUARE FEET) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREA-FORM FERTILIZER (8 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (14 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) USE SOD, OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTATED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENED).

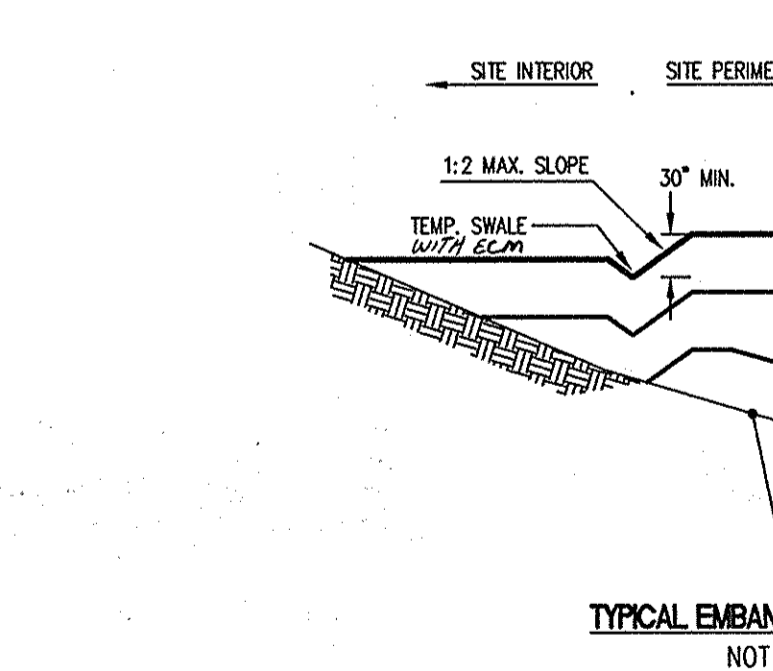
SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTATED, WEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

NOTE: THESE SEEDING NOTES ARE THE MINIMUM REQUIRED FOR SEDIMENT CONTROL. REFER TO PROJECT SPECIFICATIONS FOR SEEDING REQUIREMENTS OF OTHER AREAS OF THE SITE.



SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 313-1855

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DIKES AND PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDINGS AND MULCHING (SEC. C). TEMPORARY STABILIZATION, WITH MULCH ALONE, CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

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.

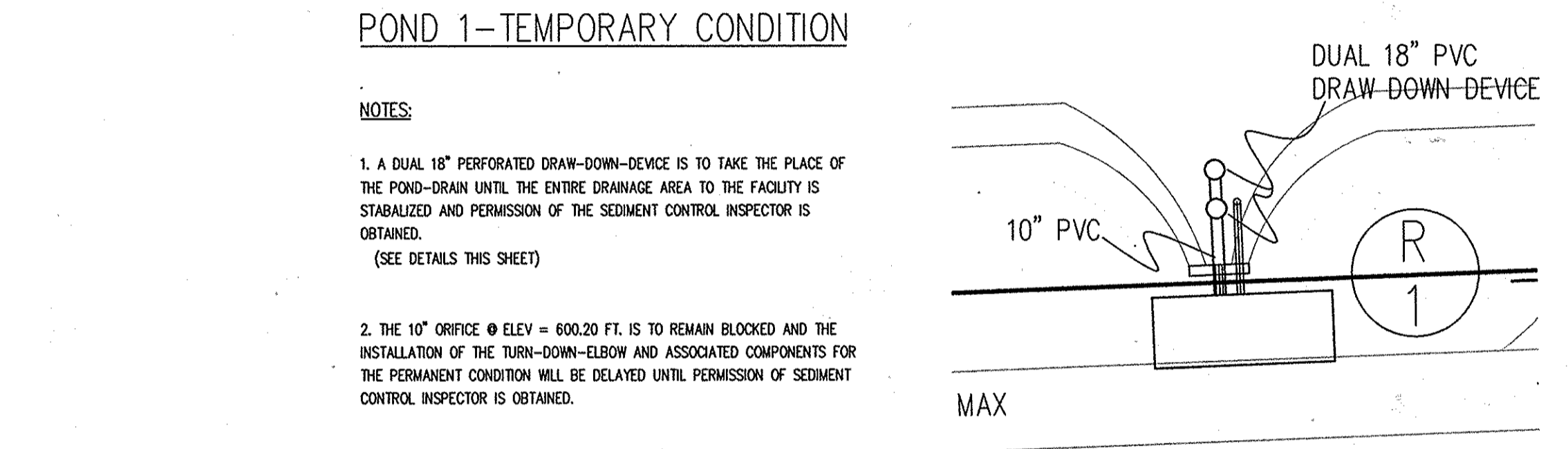
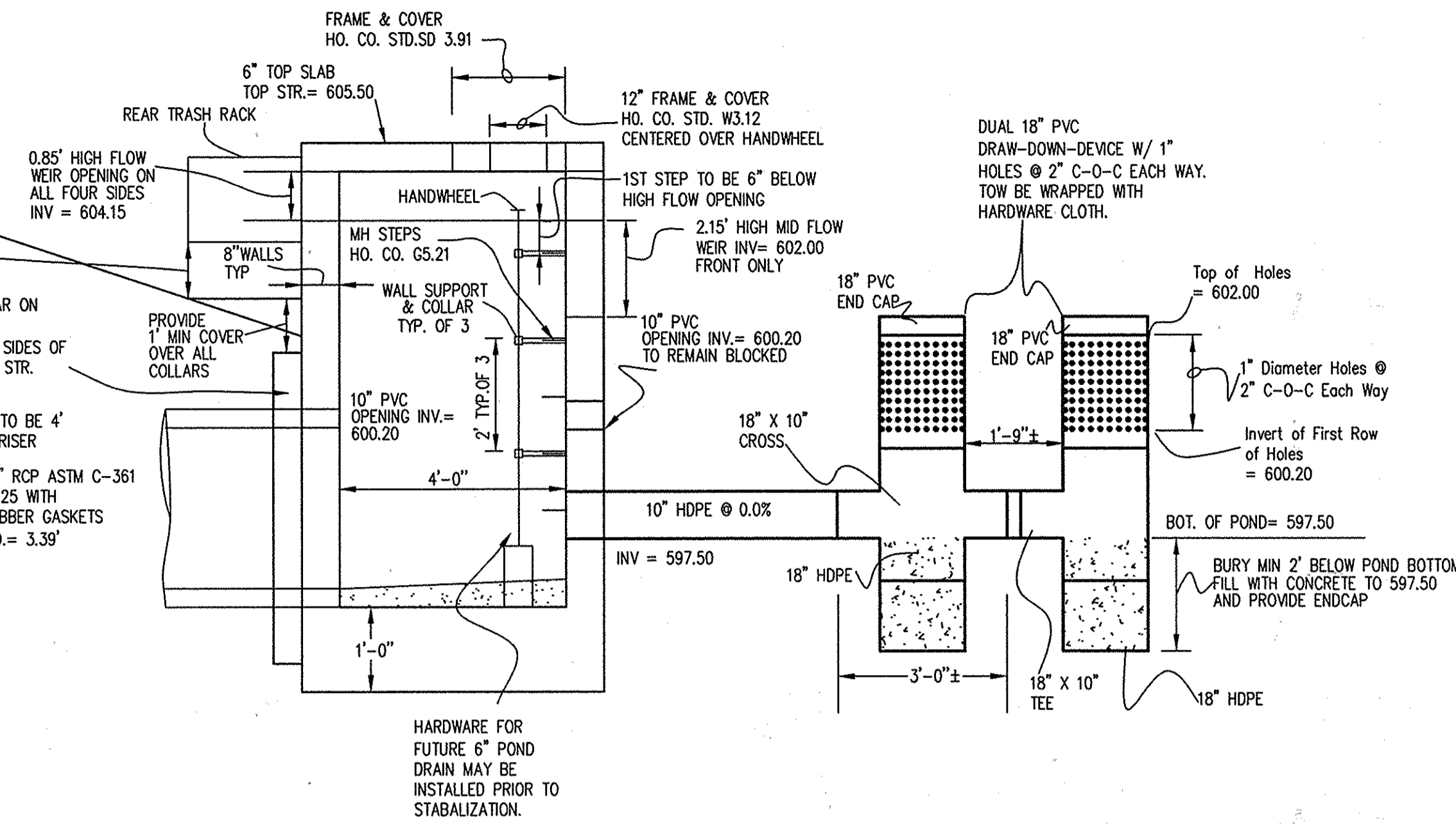
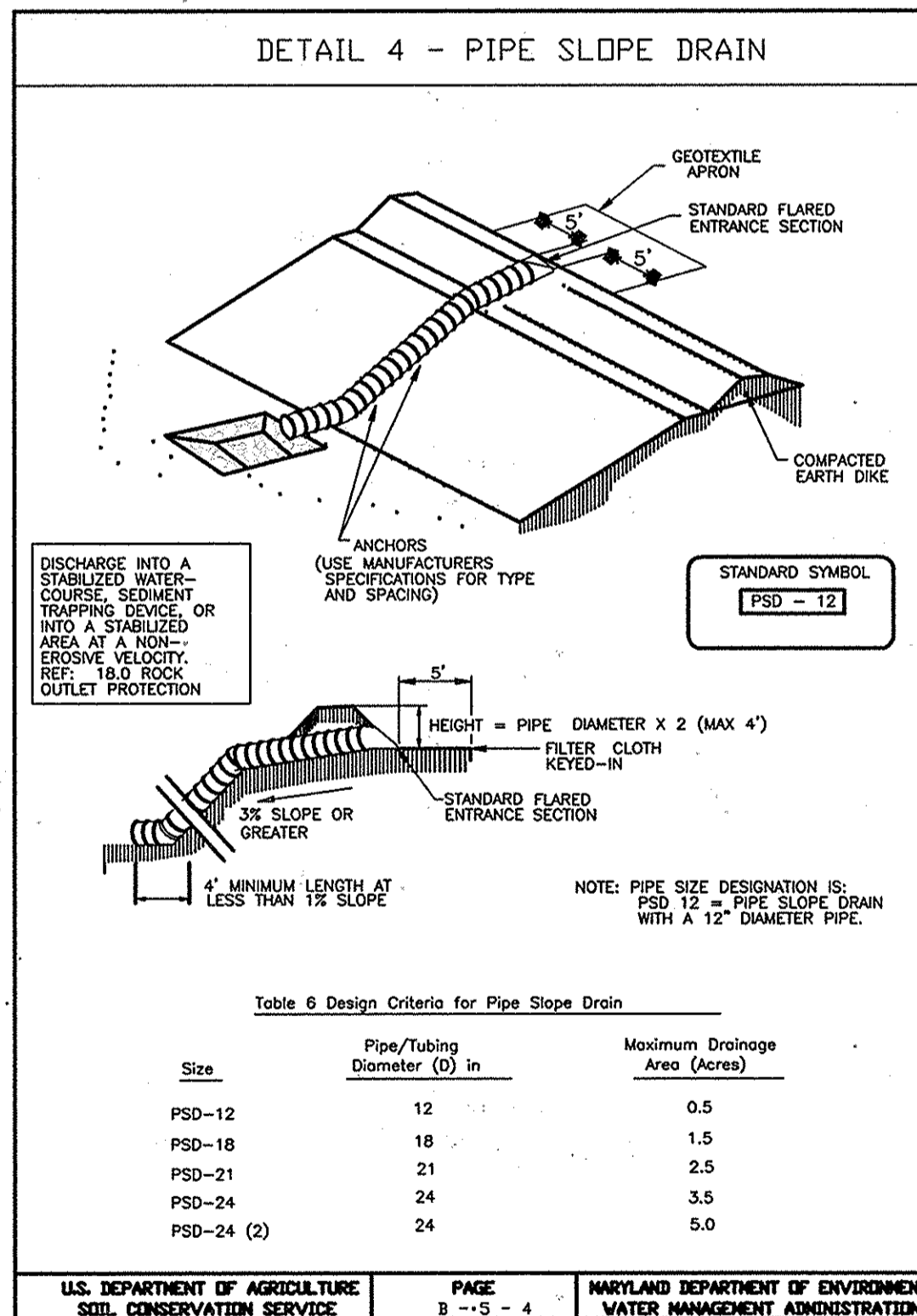
7. SITE ANALYSIS:
TOTAL AREA OF SITE : 45.0± ACRES
AREA DISTURBED : 43.7± ACRES
AREA TO BE ROOFED OR PAVED : 13.1± ACRES
AREA TO BE VEGETATIVELY STABILIZED : 30.6± ACRES
TOTAL CUT : 200,000± CU. YDS.
TOTAL FILL : 200,000± CU. YDS.
OFF-SITE WASTE/BORROW AREA LOCATION: NONE

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 3 PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN 1 WORKING DAY, WHICHEVER IS SHORTER.



PIPE SLOPE DRAIN

Construction Specifications - Pipe Slope Drain

- The Pipe Slope Drain (PSD) shall have a slope of 3 percent or steeper.
- The top of the earth dike over the inlet pipe shall be at least 2 times the pipe diameter measured at the invert of the pipe.
- Flexible tubing is preferred. However, corrugated metal pipe or equivalent PVC pipe can be used. All connections shall be watertight.
- A flared end section shall be attached to the inlet end of pipe with a watertight connection. Filter cloth shall be placed under the inlet of the pipe slope drain and shall extend out 5' from the inlet. The filter cloth shall be "keyed in" on all sides.
- The Pipe Slope Drain shall be securely anchored to the slope by staking at the grommets provided. Spacing for anchors shall be as provided by manufacturer's specification. In no case shall less than two (2) anchors be provided, equally spaced along the length of pipe. These details should be provided by pipe suppliers.
- The soil around and under the pipe and end section shall be hand tamped in 4 inch lifts to the top of the earth dike.
- All pipe connections shall be watertight.
- Whenever possible where a PSD drains an unstabilized area, it shall outlet into a sediment trap or basin. If this is not possible then the slope drain will discharge into a stable conveyance that leads to a sediment trap or basin. When discharging into a trap or basin the PSD shall discharge at the same elevation as the wet pool elevation. The discharge from the PSD must be as far away from the sediment control outlet as possible.
- When the drainage area is stabilized, the PSD shall discharge onto a stabilized area at a non-erosive velocity.
- Inspection and any required maintenance shall be performed periodically and after each rain event.
- The inlet must be kept open at all times.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B - 5 - 4A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 11/15/07
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 9/14/07
Director Date
[Signature] 11/26/07
Chief, Division of Land Development Date
[Signature] 8/27/07
Chief, Development Engineering Division Date

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 8/14/03
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
[Signature] 8/14/03
USDA NATIONAL RESOURCES CONSERVATION SERVICE DATE

DEVELOPERS/BUILDERS CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD.
[Signature] 7/31/03
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEERS CERTIFICATE
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 7/30/03
ENGINEER'S SIGNATURE DATE

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.
[Signature] 8/28/14
Licenses No. 16156 Registration Date: 8/28/14

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B - 5 - 4A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.
6-12-14	UPDATED SUBD NAME & SHEET TOTAL	DM	

PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108, ELICOTT CITY, MD 21043
ATTN: CATHELYN YOUNG
TEL: 410-313-6704

ARCHITECT:
TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNEAPOLIS, MD 21401
ATTN: HOE SOON
TEL: 301-261-8700

REVISOR'S SITE DEVELOPMENT PLAN

SEDIMENT CONTROL NOTES & DETAILS
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT No. 161118 (PARCEL 1) and 161127 (PARCEL 2A)

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	37 of 48

PERIMETER LANDSCAPE BUFFER ANALYSIS

NEW HIGH SCHOOL SITE

PERIMETER-1
PARKING/DRIVEWAY IS LOCATED ADJACENT TO MD ROUTE 99 FOR APPROX. 420 LF. A TYPE-E BUFFER IS REQUIRED.

PERIMETER-2
APPROX. 570 LF OF A NEW STORMWATER POND ABUTS MD ROUTE 99 AND THE EAST SIDE OF WOODFORD ROAD. THE TOTAL POND PERIMETER IS APPROX. 990 LF. A TYPE-B BUFFER IS REQUIRED AROUND THE POND.

PERIMETER-3
PARKING IS LOCATED ALONG WOODFORD ROAD FOR APPROX. 576 LF (600' - 24' FOR D/W OPENING). A BERM AT LEAST 3' HIGH IS PROVIDED BETWEEN EACH PARKING BAY AND WOODFORD ROAD. A TYPE-E BUFFER (WITH CREDIT FOR THE BERMS) IS REQUIRED.

PERIMETER-4
ATHLETIC FIELDS AND A STADIUM FACILITY ARE LOCATED ALONG WOODFORD ROAD FOR APPROX. 1316 LF. A BERM IS PROVIDED BETWEEN THE SPORT FACILITY AND WOODFORD ROAD. THE TOP OF THE BERM IS 5'-15" ABOVE TRACK AND APPROX. 3' HIGHER THAN WOODFORD ROAD. A MAJOR PORTION OF THE BERM IS TO BE ESTABLISHED AS FOREST TO MEET THE FOREST CONSERVATION OBLIGATION FOR THE DEVELOPMENT OF THIS SITE. A TYPE-B BUFFER IS REQUIRED.

PERIMETER-5
A TYPE-C BUFFER IS REQUIRED FOR THIS 940' STRETCH OF GENERAL INSTITUTIONAL USE THAT ABUTS RESIDENTIAL USE. FOREST CONSERVATION WILL ALSO BE ESTABLISHED FOR THIS AREA.

PERIMETER-6
EXISTING TREES AND FOREST IS RETAINED ALONG THIS PORTION FOR 720 LF OF CREDIT TOWARD A TYPE-C BUFFER. FOREST CONSERVATION WILL ALSO BE ESTABLISHED FOR THIS AREA.

PERIMETER-7
A TYPE-C BUFFER IS REQUIRED FOR THIS 307' STRETCH OF GENERAL INSTITUTIONAL USE THAT ABUTS RESIDENTIAL USE.

PERIMETER-8
A TYPE-D BUFFER IS REQUIRED FOR THIS 80' STRETCH OF LOADING AREA THAT ABUTS RESIDENTIAL USE.

PERIMETER-9
A TYPE-C BUFFER IS REQUIRED FOR THIS 409' STRETCH OF GENERAL INSTITUTIONAL USE THAT ABUTS RESIDENTIAL USE.

FOR NEW DEVELOPMENT ON THE M.S. SITE

PERIMETER-1
APPROX. 470 LF OF A NEW STORMWATER POND ABUTS MD ROUTE 99 AND THE WEST SIDE OF WOODFORD ROAD. THE TOTAL POND PERIMETER IS APPROX. 945 LF. A TYPE-B BUFFER IS REQUIRED AROUND THE POND.

PERIMETER-2
A TYPE-B BUFFER IS REQUIRED FOR THIS 420' STRETCH OF GENERAL INSTITUTIONAL USE THAT ABUTS WOODFORD ROAD.

PERIMETER-3
180 LF OF TYPE-E BUFFER IS REQUIRED FOR THE PARKING LOT WHICH IS LOCATED ADJACENT TO A PUBLIC ROAD. A BERM IS PROVIDED TO PROVIDE SCREENING IN LIEU OF SHRUBS.

PERIMETER-4
A TYPE-C BUFFER IS REQUIRED FOR THIS 896' STRETCH OF GENERAL INSTITUTIONAL USE THAT ABUTS RESIDENTIAL USE. 295 LF OF THIS PERIMETER IS ALONG A PORTION OF AN EXISTING WOODLAND THAT IS BEING RETAINED.

PLAN LEGEND
(FOR SHEETS 38-43)

- 600 EXISTING CONTOUR
- 600 EXISTING SLOPE 25% & GREATER
- 600 PROPOSED CONTOUR
- EXISTING TREE LINE (LIGHT LINE)
- PROPOSED TREE LINE (Hvy. LINE)
- LIMIT OF GRADING DISTURBANCE
- EDGE OF PAVING
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- CURB FACE
- GUTTER PAN
- 24" HDPE
- NOSE DOWN CURB (M.C. DET. 5/8)
- PROPOSED STORM DRAIN LINE
- WATER LINE (PRIVATE = HEAVY LINE)
- WATER LINE (PUBLIC = LIGHT LINE)
- FIRE HYDRANT
- EXISTING UTILITY/LIGHT POLE
- PROPOSED SITE LIGHTING
- NUMBER OF PARKING SPACES
- FENCE LINE
- PROPOSED SIDEWALK
- PROPOSED FOREST CONSERVATION ESMT. (FCE)
- FOREST CONSERVATION SIGN
- CENTERLINE STREAM
- STREAM BUFFER
- SB
- FOREST RETENTION AREA
- FOREST TO BE CLEARED

FOREST CONSERVATION EASEMENT AREA #7
0.41 AC. TOTAL
(0.00 AC. RETENTION AND 0.41 AC. OF PLANTING)
(PLAT No. 16118)

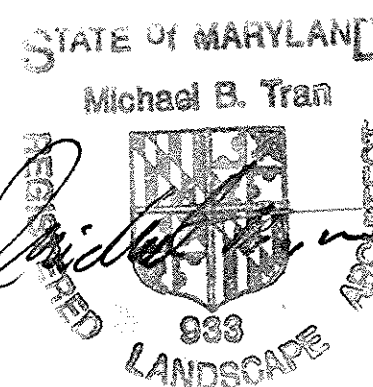
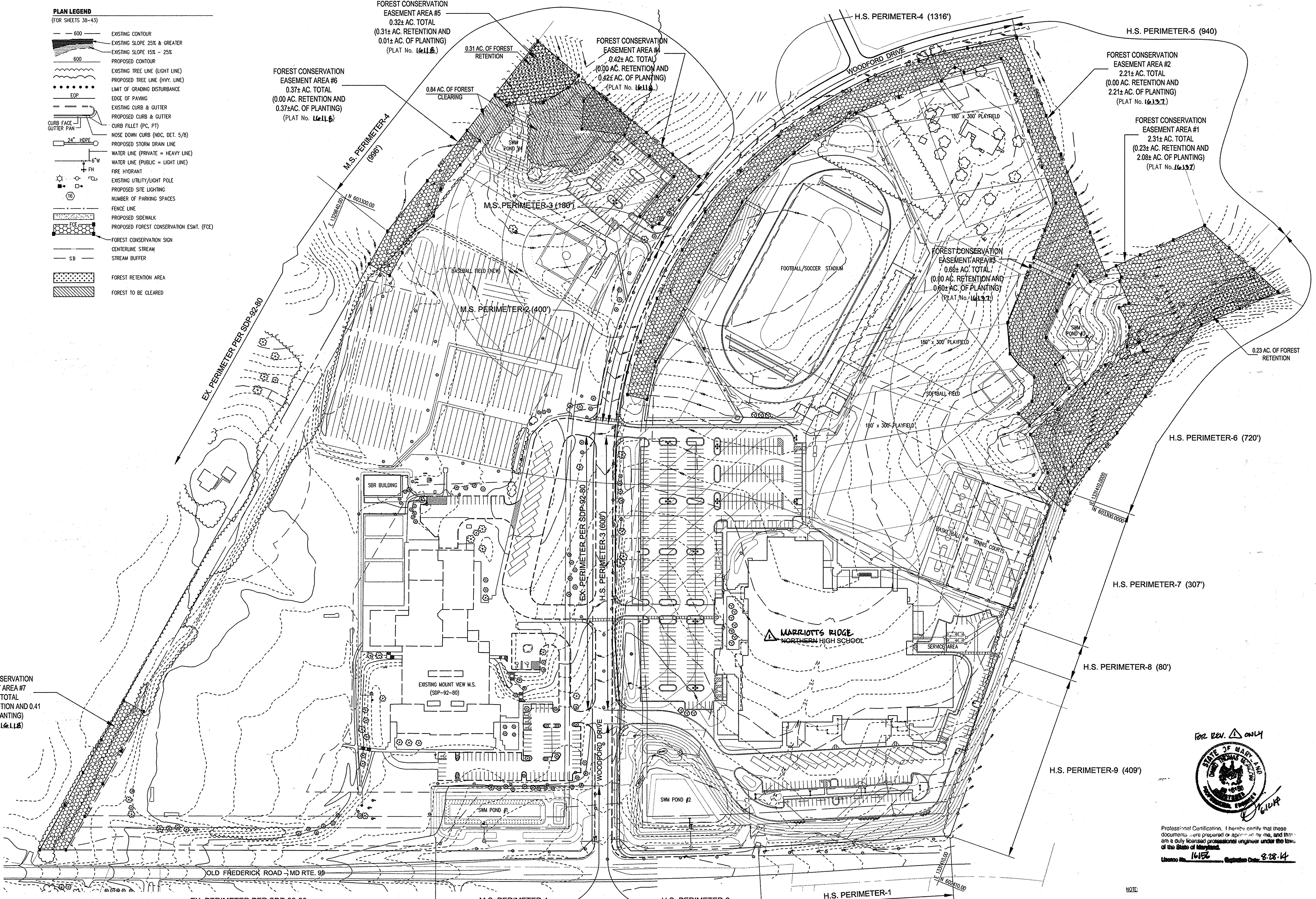
FOREST CONSERVATION EASEMENT AREA #5
0.32 AC. TOTAL
(0.31 AC. RETENTION AND 0.01 AC. OF PLANTING)
(PLAT No. 16115)

FOREST CONSERVATION EASEMENT AREA #6
0.37 AC. TOTAL
(0.00 AC. RETENTION AND 0.37 AC. OF PLANTING)
(PLAT No. 16116)

FOREST CONSERVATION EASEMENT AREA #4
0.42 AC. TOTAL
(0.00 AC. RETENTION AND 0.42 AC. OF PLANTING)
(PLAT No. 16114)

FOREST CONSERVATION EASEMENT AREA #2
2.21 AC. TOTAL
(0.00 AC. RETENTION AND 2.21 AC. OF PLANTING)
(PLAT No. 16137)

FOREST CONSERVATION EASEMENT AREA #1
2.31 AC. TOTAL
(0.23 AC. RETENTION AND 2.08 AC. OF PLANTING)
(PLAT No. 16137)



THIS PLAN IS FOR PLANTING PURPOSES ONLY!!

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Dennis P. ... 1-15-04
County Health Officer (SAR) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

... & ... 9/2/03
Director Date

Cinda ... 9/16/03
Chief, Division of Land Development Date

... 1-9-04
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

00177\SDP-03-33\LS-OV.dwg DES. DRN. CHK. DATE 6-12-14 UPDATED SCHOOL NAME & SHEET TOTAL BY DTM APPR.

PREPARED FOR:

OWNER
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHLEEN YOUNG
TEL: 410-313-6704

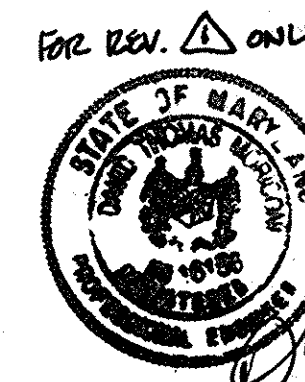
ARCHITECT
TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: WAVE SCOTT
TEL: 301-261-8700

LANDSCAPE EDGE ANALYSIS & FOREST CONSERVATION OVERVIEW

REVISED SITE DEVELOPMENT PLAN
MARRIOTT'S RIDGE NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16114, 16115, 16116, 16137 (PARCEL 1) and 16137 (PARCEL 2A)

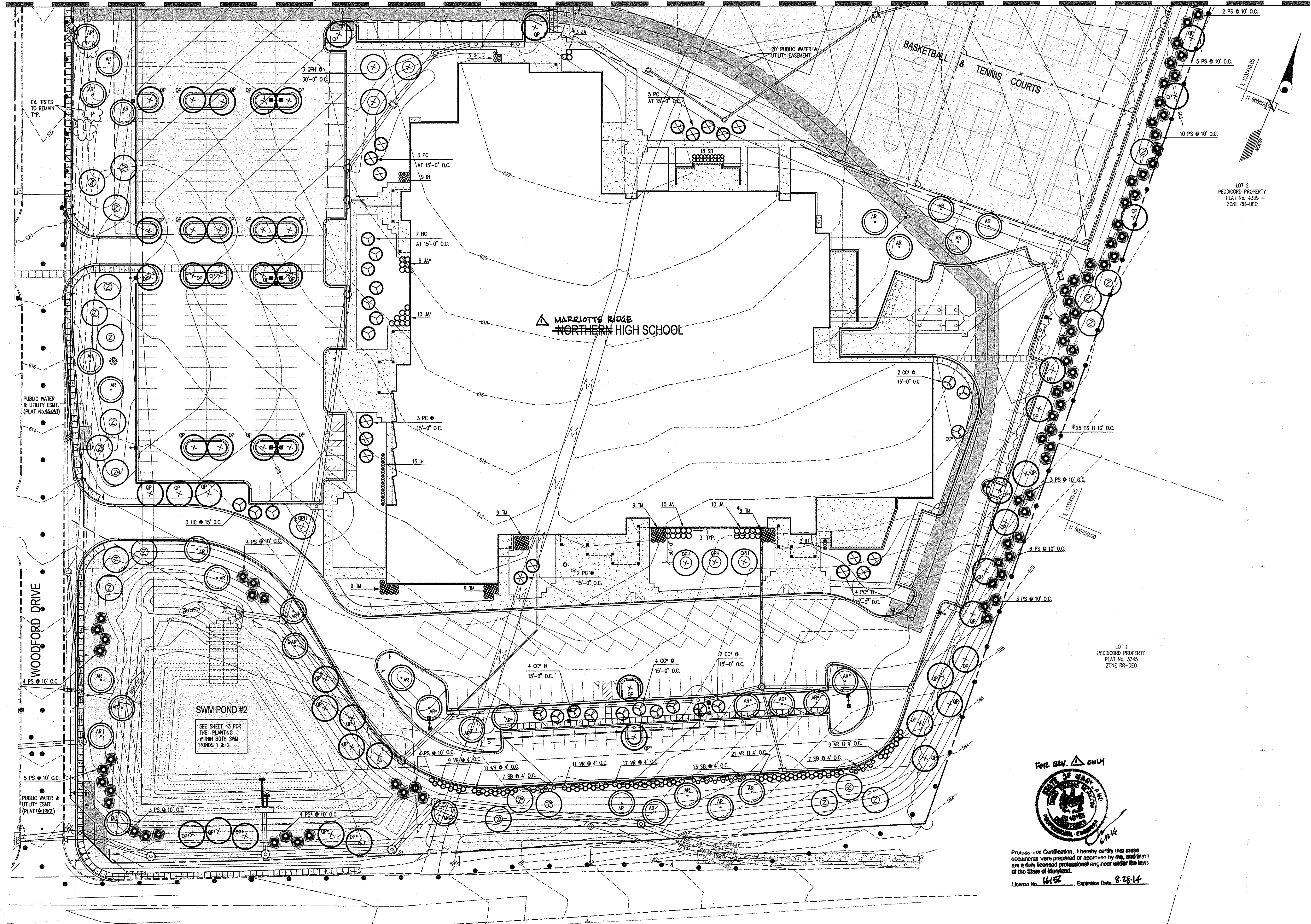
WEST FRIENDSHIP ELECTION DISTRICT No. 3 HOWARD COUNTY, MARYLAND

NOTE:
SEE SHEET 44 FOR THE FOLLOWING HOWARD COUNTY LANDSCAPE MANUAL SCHEDULES:
SCH-A (PERIMETER LANDSCAPE EDGE)
SCH-B (PARKING LOT INTERNAL LANDSCAPING)
SCH-D (STORMWATER MANAGEMENT AREA LANDSCAPING)



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. 16137 Registration Date: 8-28-14

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	38 of 40



LOT 2
PEDDICORD PROPERTY
PLAT No. 4339
ZONE RR-DEO

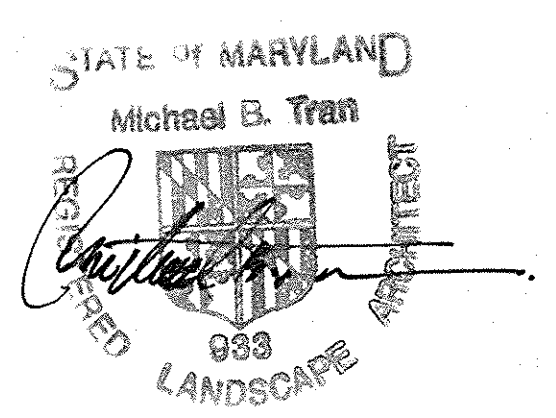
LOT 1
PEDDICORD PROPERTY
PLAT No. 3345
ZONE RR-DEO

LOT 4
ALPHA ACRES
PLAT No. 6328
ZONE RR-DEO

LOT 3
ALPHA ACRES
PLAT No. 6328
ZONE RR-DEO

LOT 2
ALPHA ACRES
PLAT No. 6328
ZONE RR-DEO

LOT 1
ALPHA ACRES
PLAT No. 6328
ZONE RR-DEO



- NOTES:
- SEE SHEET #44 FOR PLANTING NOTES AND SCHEDULES.
 - SEE SHEET #43 FOR PLANTING WITHIN THE SWM PONDS.
 - ALL EX. TREES WITHIN THE LIMIT OF DISTURBANCE FOR GRADING SHALL BE REMOVED (INCLUDING THE STUMPS).
 - PLANTING WITHIN THE PUBLIC WATER EASEMENT IS PROHIBITED.
 - PLANTS WITH * INDICATE LOCATIONS WHERE CONTRACTOR MUST HAND DIG FOR NEW TREES AND SHRUBS AFTER VERIFYING LOCATIONS OF UTILITIES.

THIS PLAN IS FOR PLANTING PURPOSES ONLY!!

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Dennis D. ... 1-15-04
County Health Officer (AR) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David Hamilton 7/6/04
Director Date

... 8-7-03
Chief, Division of Land Development Date

Chief, Development Planning Division



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. 6764, Expiration Date: 8-28-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
5909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	DESCRIPTION	BY	APP'R.
6-16-14	UPDATED SCHOOL NAME & SHEET TOTAL	DM	

PREPARED FOR:

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELLICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT:
TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

REVISOR: **PLANTING PLAN**

DEVELOPMENT PLAN

MARIOTTES RIDGE NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117Z (PARCEL 1) and 16126Z (PARCEL 2A)

WEST FRIENDSHIP ELECTION DISTRICT No. 3

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	39 of 48-58

PART OF FOREST
CONSERVATION EASEMENT
AREA No.2
2.21±AC. TOTAL
(0.00±AC. RETENTION AND
2.21± AC. OF PLANTING)
(PLAT No. 16137)

180' x 300' PLAYFIELD

FOOTBALL/SOCCER STADIUM

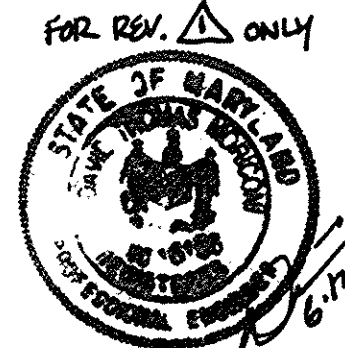
FOREST CONSERVATION
EASEMENT AREA No.3
0.60±AC. TOTAL
(0.00±AC. RETENTION AND
0.60± AC. OF PLANTING)
(PLAT No. 16127)

180' x 300' PLAYFIELD

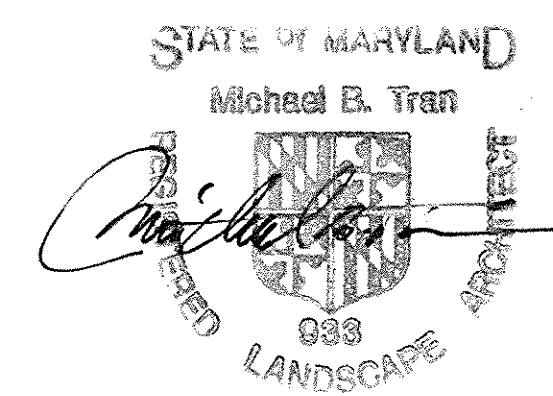
SOFTBALL

PART OF FOREST
CONSERVATION EASEMENT
AREA No.1
2.31±AC. TOTAL
(0.23±AC. RETENTION AND
2.08± AC. OF PLANTING)
(PLAT No. 16127)

180' x 300' PLAYFIELD



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. 16156 Expiration Date: 8-25-14



SEE SHEET #41 FOR CONTINUATION OF THE HIGH SCHOOL BASEBALL FIELD LOCATED ON THE EXISTING MOUNT VIEW MIDDLE SCHOOL PARCEL.

- NOTES:
- SEE SHEET #44 & 45 FOR PLANTING NOTES AND SCHEDULES.
 - ALL EX. TREES WITHIN THE LIMIT OF DISTURBANCE FOR GRADING SHALL BE REMOVED (INCLUDING THE STUMPS).
 - PLANTING WITHIN THE PUBLIC WATER EASEMENT IS PROHIBITED.
 - PLANTS WITH * INDICATES LOCATIONS WHERE CONTRACTOR MUST HAND DIG NEW TREES AND SHRUBS AFTER VERIFYING LOCATIONS OF UTILITIES.

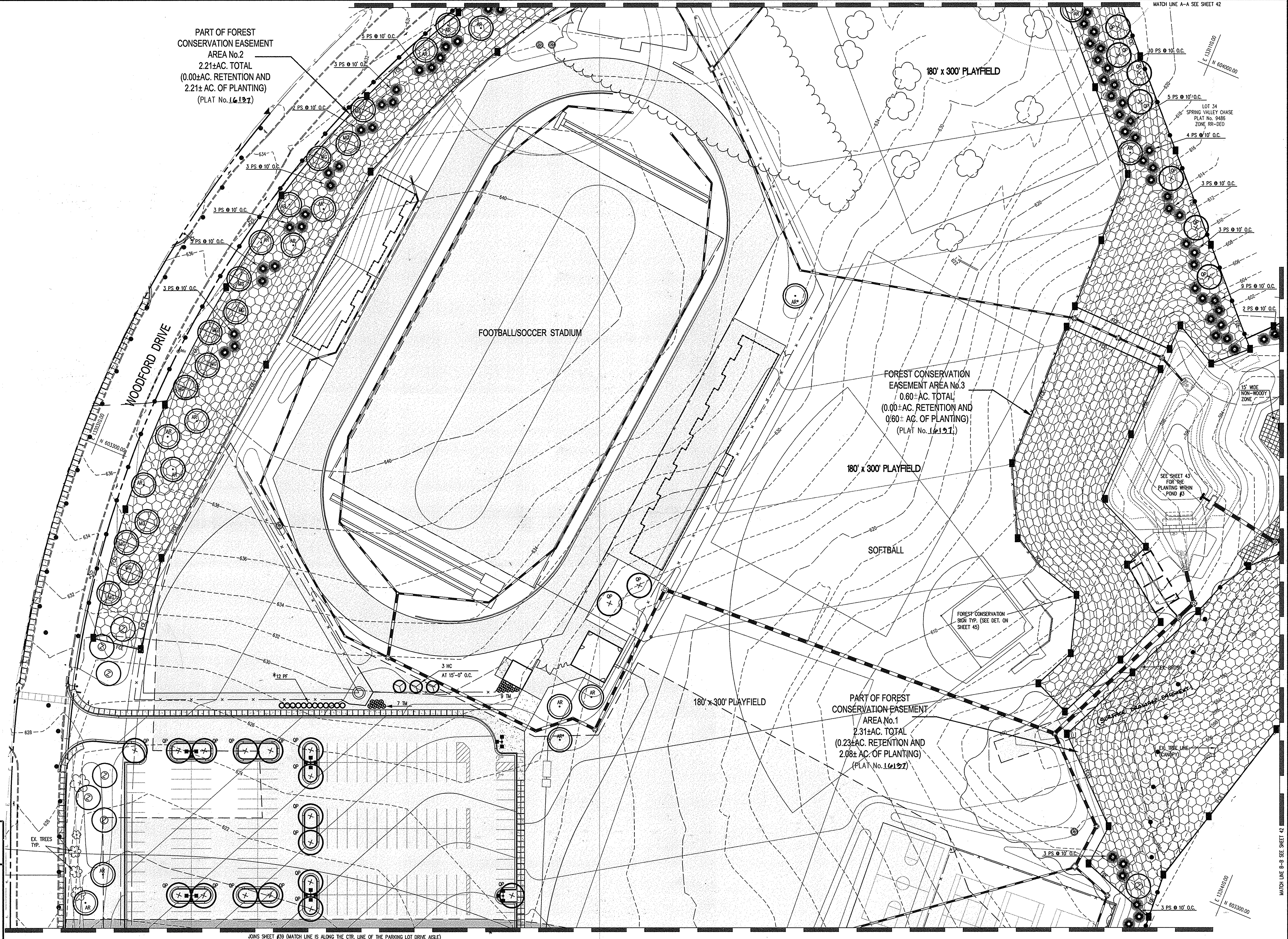
THIS PLAN IS FOR PLANTING PURPOSES ONLY !!

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Debra Romo M.D. 1-15-04
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
David L. Coughlin 9/2/03
Director
Andy Harshbarger 9/2/03
Chief, Division of Land Development
Date: 8-25-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3509 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DES.	DRN.	CHK.
DATE: 6-12-14	REVISION: UPDATED SCHOOL NAME & SHEET TOTAL	BY: [Signature]
DATE:	REVISION:	BY:



REVISOR'S EDGE NORTHERN HIGH SCHOOL HOWARD COUNTY PUBLIC SCHOOL SYSTEM PLAT Nos. 16117 & 16126 (PARCEL 1) and 16126 (PARCEL 2A)	SCALE 1" = 40' DATE 28/JUL/03	ZONING RR-DEO TAX MAP - GRID 10 19	G. L. W. FILE No. 00-177 SHEET 40 of 40
	HOWARD COUNTY, MARYLAND		

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 ARCHITECT: TCA ARCHITECTS LLC
 PREPARED FOR: WEST FRIENDSHIP ELECTION DISTRICT No. 3

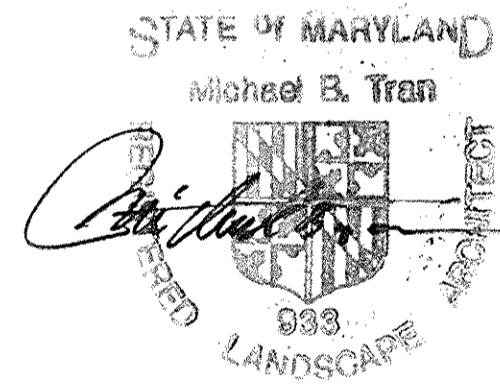
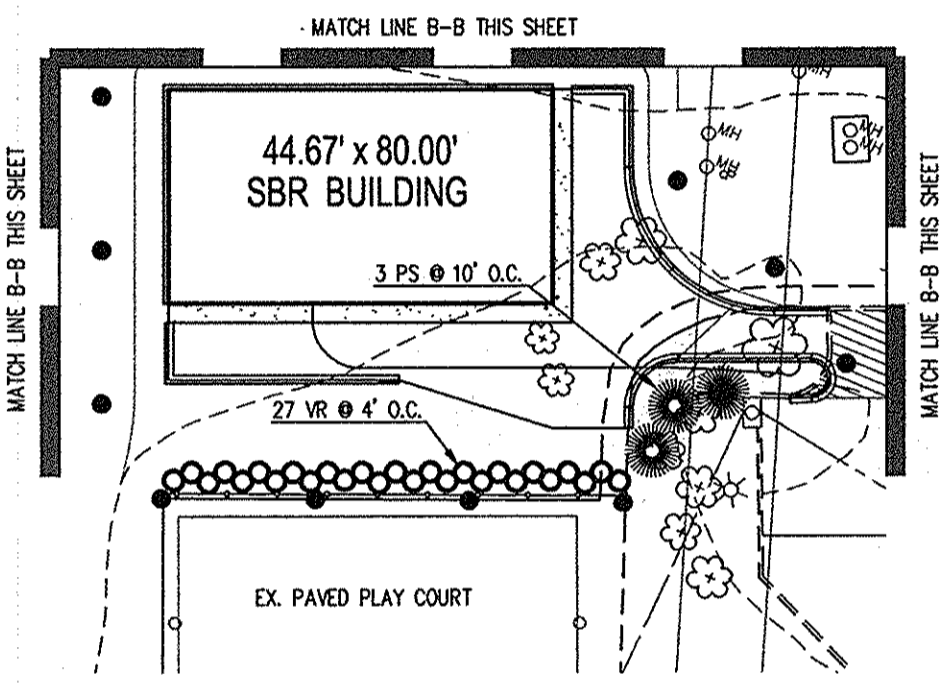
FOREST CONSERVATION EASEMENT AREA No.5
0.32± AC. TOTAL
(0.31± AC. RETENTION AND 0.01± AC. OF PLANTING)
(PLAT No. 1611B)

PART OF FOREST CONSERVATION EASEMENT AREA No.4
0.42± AC. TOTAL
(0.00± AC. RETENTION AND 0.42± AC. OF PLANTING)
(PLAT No. 1611B)

FOREST CONSERVATION EASEMENT AREA No.6
0.37± AC. TOTAL
(0.00± AC. RETENTION AND 0.37± AC. OF PLANTING)
(PLAT No. 1611B)

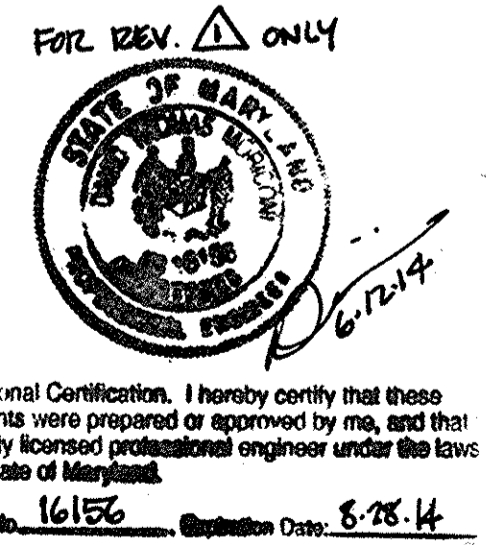
PART OF FOREST CONSERVATION EASEMENT AREA No.4
0.42± AC. TOTAL
(0.00± AC. RETENTION AND 0.42± AC. OF PLANTING)
(PLAT No. 1611B)

PARCEL 25
L5731 F.442
WILBUR S. ZEPP, TRUSTEE
LILLIE MAZ ZEPP, TRUSTEE
ZONE RR-DEO



- NOTES:
- SEE SHEETS #44 & 45 FOR PLANTING NOTES AND SCHEDULES.
 - UNLESS OTHERWISE NOTED, ALL EX. TREES WITHIN THE LIMIT OF DISTURBANCE FOR GRADING SHALL BE REMOVED (INCLUDING THE STUMPS).

THIS PLAN IS FOR PLANTING PURPOSES ONLY !!
APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Deanna K. M... M.D. 1-15-04
County Health Officer (JAB) Date
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
David L. Cagle 9/4/03
Director Date
Cindy Harsh 7/24/03
Chief, Division of Land Development Date
[Signature] 10-2-03
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	DESCRIPTION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	APP'R.

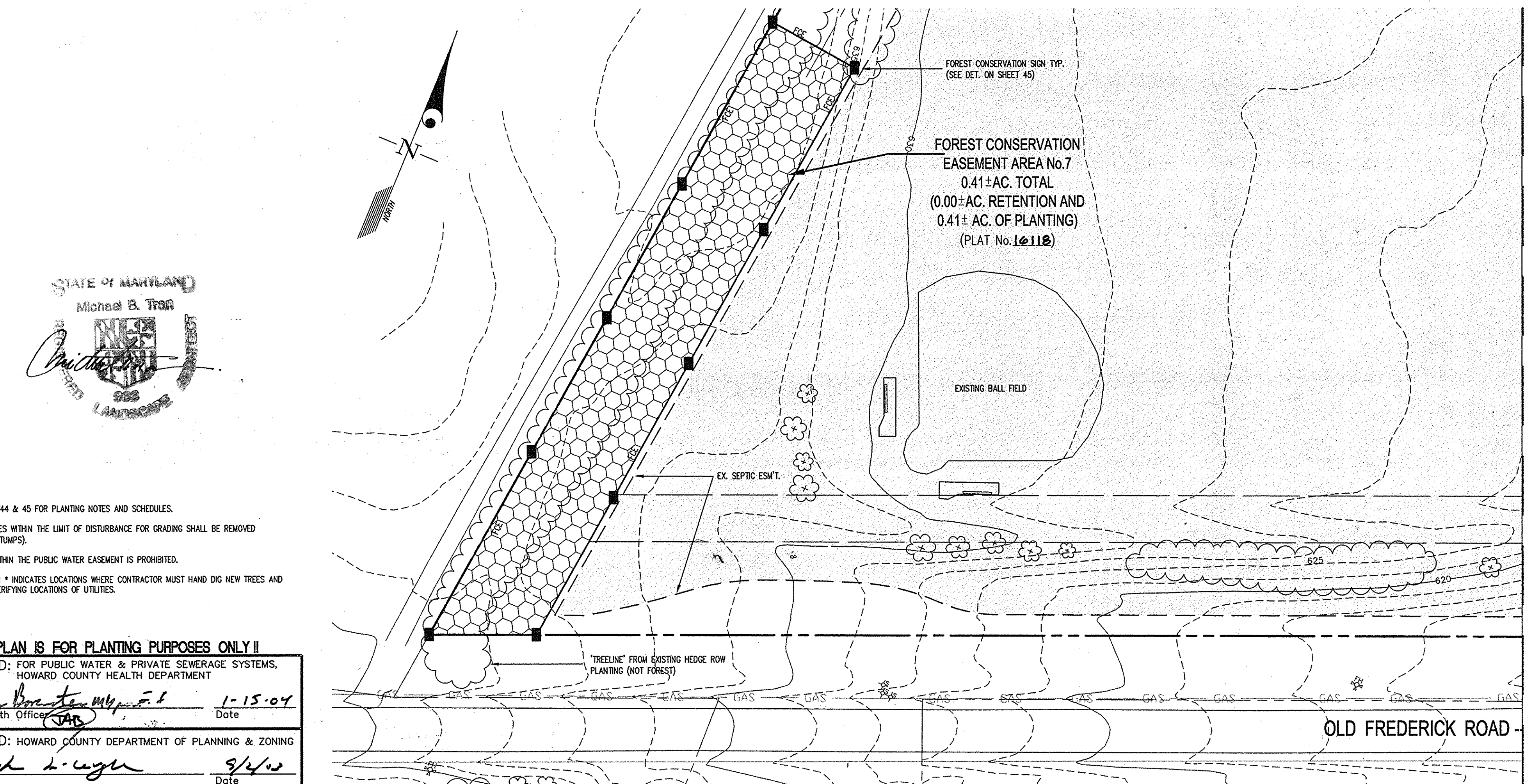
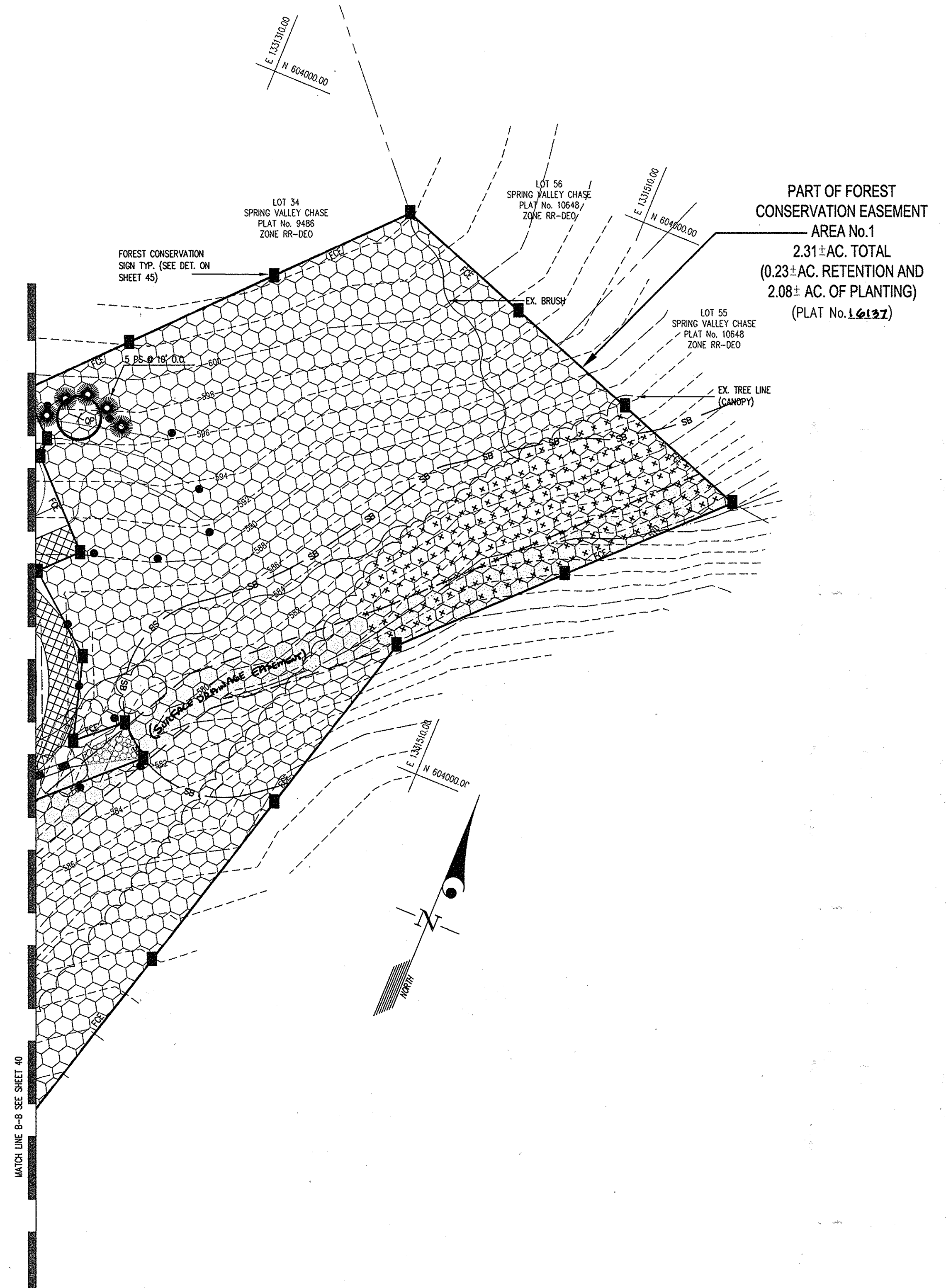
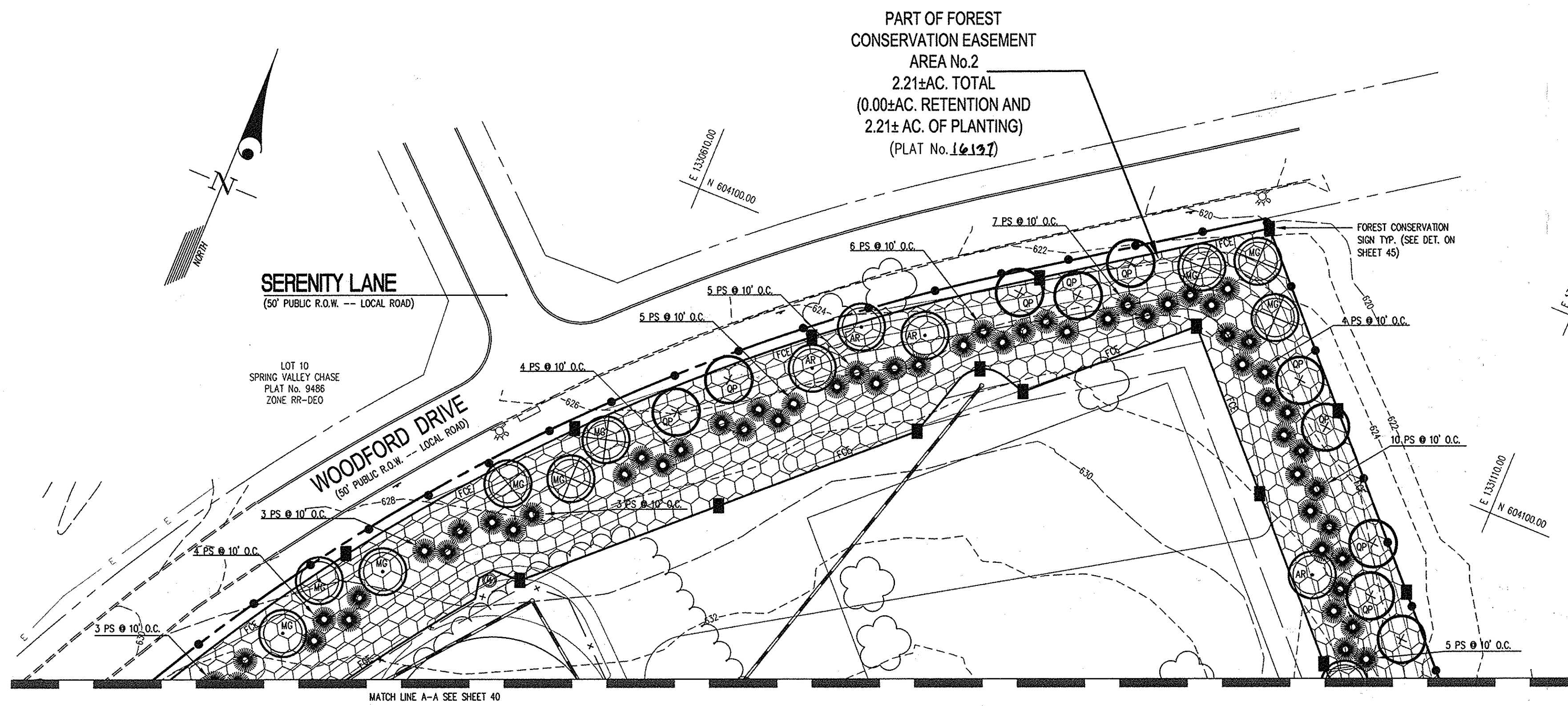
PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT:
TCA ARCHITECTS LLC
2651 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

REVISED SITE DEVELOPMENT PLAN
WEST FRIENDSHIP ELECTION DISTRICT No. 3

PLANTING PLAN
MARCOTTS RIDGE
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 1611B (PARCEL 1) and 1612A (PARCEL 2A)
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	41 of 48



- NOTES:
1. SEE SHEET #44 & 45 FOR PLANTING NOTES AND SCHEDULES.
 2. ALL EX. TREES WITHIN THE LIMIT OF DISTURBANCE FOR GRADING SHALL BE REMOVED (INCLUDING THE STUMPS).
 3. PLANTING WITHIN THE PUBLIC WATER EASEMENT IS PROHIBITED.
 4. PLANTS WITH * INDICATES LOCATIONS WHERE CONTRACTOR MUST HAND DIG NEW TREES AND SHRUBS AFTER VERIFYING LOCATIONS OF UTILITIES.

THIS PLAN IS FOR PLANTING PURPOSES ONLY!!

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Paul Bonetto 1-15-04
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Frank L. Unger 9/4/03
Director Date

Cindy Hamstra 7/8/04
Chief, Division of Land Development Date

[Signature] 8-2-03
Chief, Development Engineering Division Date

FOR DEV. ONLY

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. 16117B Expiration Date: 8-25-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
5909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	DESCRIPTION	BY	APPR.
6-16-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELLCOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

REVISED SITE DEVELOPMENT PLAN

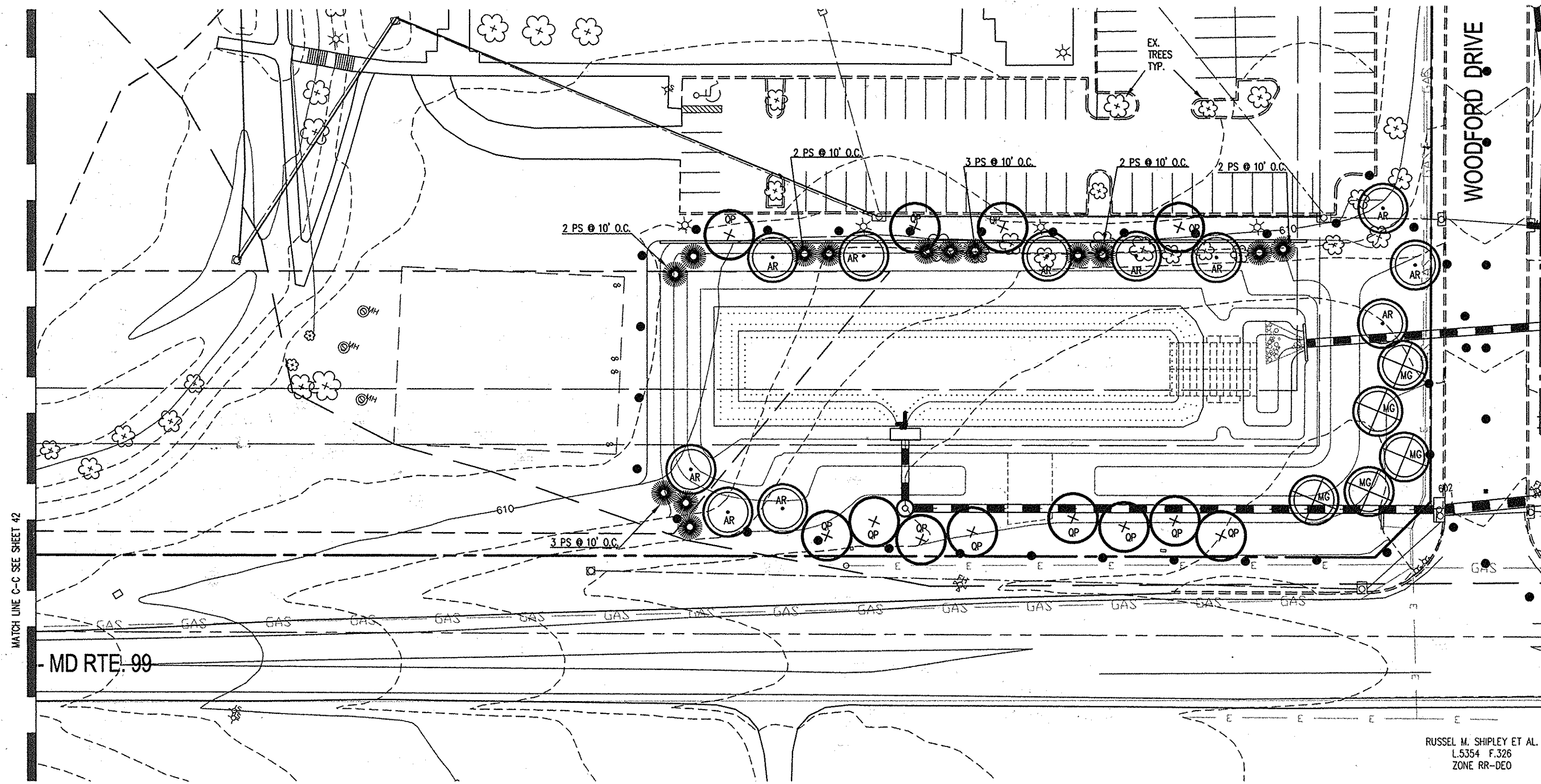
WEST FRIENDSHIP ELECTION DISTRICT No. 3

PLANTING PLAN

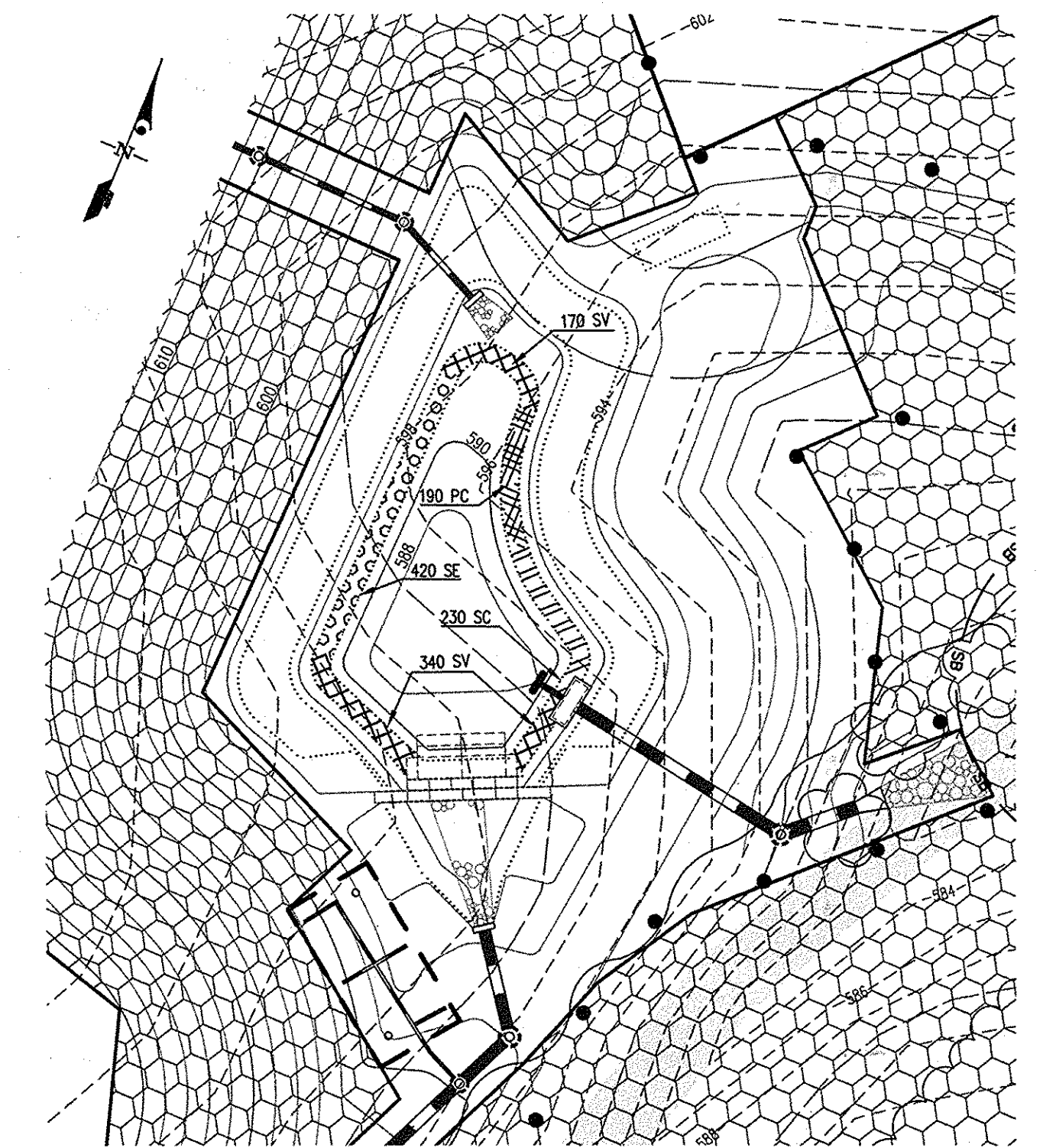
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117B (PARCEL 1) and 16136J7 (PARCEL 2A)

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	42 of 48



POND #1 PERIMETER PLANTING PLAN
SCALE: 1" = 40'



SWM POND #3 AQUATIC BENCH PLANTING PLAN
SCALE: 1" = 40'

SWM POND PLANTING NOTES

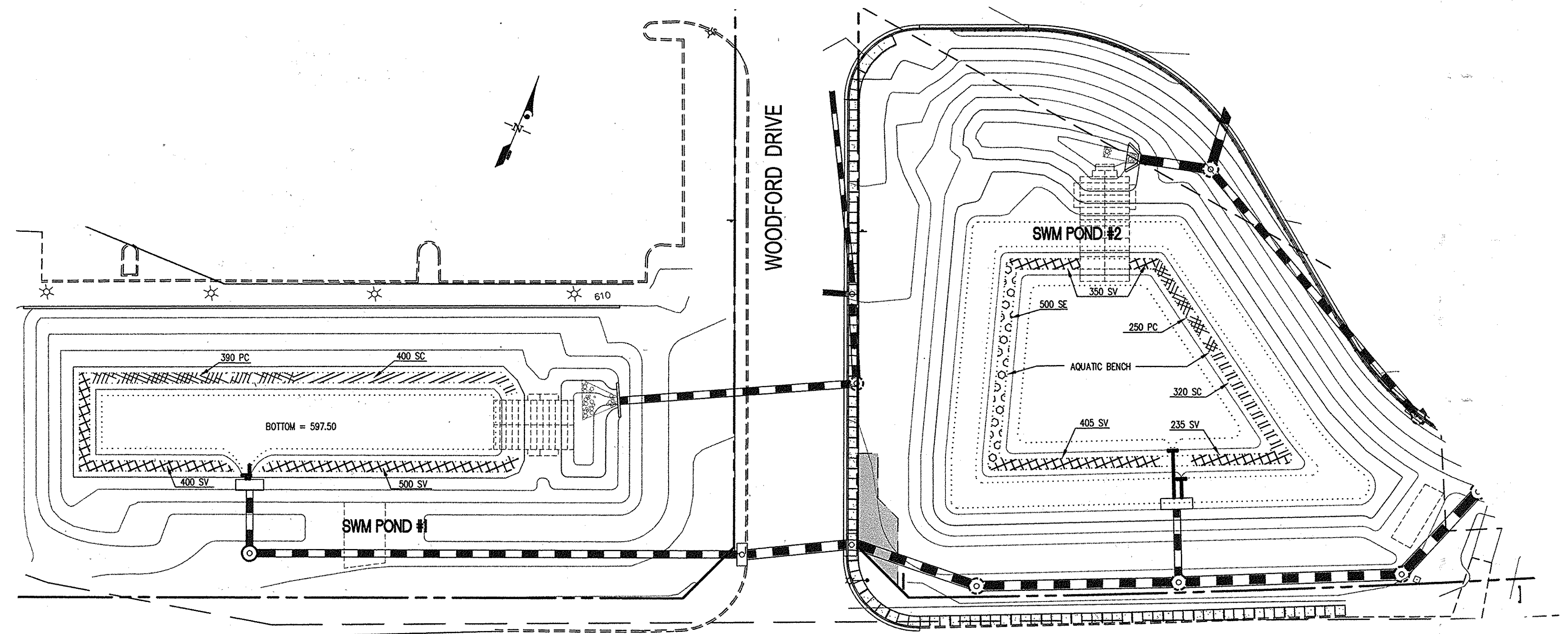
- UPON CONVERSION OF SEDIMENT CONTROL POND TO STORMWATER MANAGEMENT POND, THE CONTRACTOR SHALL REMOVE ANY STONES, DEBRIS, OR CONSTRUCTION MATERIAL LARGER THAN TWO INCHES (2") IN ANY DIMENSION. THE PONDS SHALL BE FLOODED AND LEFT UNDISTURBED FOR A PERIOD OF 10 DAYS PRIOR TO PLANTING.
- ONE OUNCE OF 18-6-25 SLOW RELEASE FERTILIZER SHALL BE INCORPORATED INTO THE SOIL FOR EACH PLANT AT THE TIME OF PLANTING.
- SOIL SHALL BE SATURATED WITH WATER DURING AND AFTER PLANTING OR THE PLANTING AREA MAY BE COMPLETELY FLOODED AT THIS TIME (WET PLANTING). PLANTING SOIL SHALL BE FIRMLY PRESSED AROUND EACH TO PREVENT FLOTATION.
- THE SOURCE OF ALL AQUATIC AND EMERGENT PLANTS SHALL BE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT PRIOR TO ORDERING. THESE PLANTS SHALL BE GROWN IN POTS (CONTAINER SPECIFIED) OR NURSERY GROWING BEDS (BARE ROOT SPECIFIED) FOR A MINIMUM OF 12 MONTHS PRIOR TO INSTALLATION AND SHALL HAVE BEEN WET CULTIVATED DURING THE ENTIRE PERIOD.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION. PLANTS WHICH HAVE GREATER THAN 33% DEBACK OR HAVE NOT GROWN SO AS TO EMERGE FROM THE WATER SURFACE SHALL BE REPLACED AT THE NEXT PLANTING SEASON.
- REMOVE LITTER AND DEBRIS AS REQUIRED DURING THE FIRST GROWING SEASON AND AT THE BEGINNING OF THE SECOND GROWING SEASON.

NOTES:

- SEE SHEET #44 FOR PLANTING NOTES AND SCHEDULES.
- ALL EX. TREES WITHIN THE LIMIT OF DISTURBANCE FOR GRADING SHALL BE REMOVED (INCLUDING THE STUMPS).

SWM POND PLANT LIST

KEY	QTY	NAME (COMMON/BOTANICAL)	REMARKS
PC	830	PICKEREL WEED/ PONDEROSA CORDATA	BARE ROOT @ 18" O.C.±
SC	950	LIZARDS TAIL/ SAURURUS CERVAUS	BARE ROOT @ 18" O.C.±
SE	920	GIANT BUR-REED/ SPARGANILUM EURYCARPUM	BARE ROOT @ 18" O.C.±
SV	3002	SOFT STEM BULLRUSH/ SORBUS VALIDUS	BARE ROOT @ 18" O.C.±



SWM POND #1 & #2 PLANTING PLAN
SCALE: 1" = 40'



THIS PLAN IS FOR PLANTING PURPOSES ONLY !!

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Gregory B. ... 1-15-07
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David ... 9/4/03
Director Date

Cindy ... 9/2/03
Chief, Division of Land Development Date

[Signature] 8-27-04
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

PREPARED FOR:

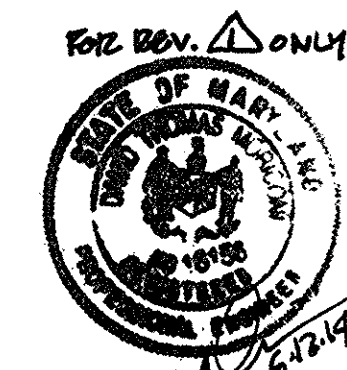
OWNER
HOWARD COUNTY PUBLIC
SCHOOL SYSTEM
10910 ROUTE 108
ELLSWORTH CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-315-8704

ARCHITECT
TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MARK BOON
TEL: 301-261-8700

REVISED SITE
DEVELOPMENT PLAN

PLANTING PLAN
MARKETON RIDGE
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16111/2 (PARCEL 1) and 16136/2 (PARCEL 2A)

WEST FRIENDSHIP ELECTION DISTRICT No. 3



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. 16152 Expiration Date: 8-28-14

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	43 of 48-58

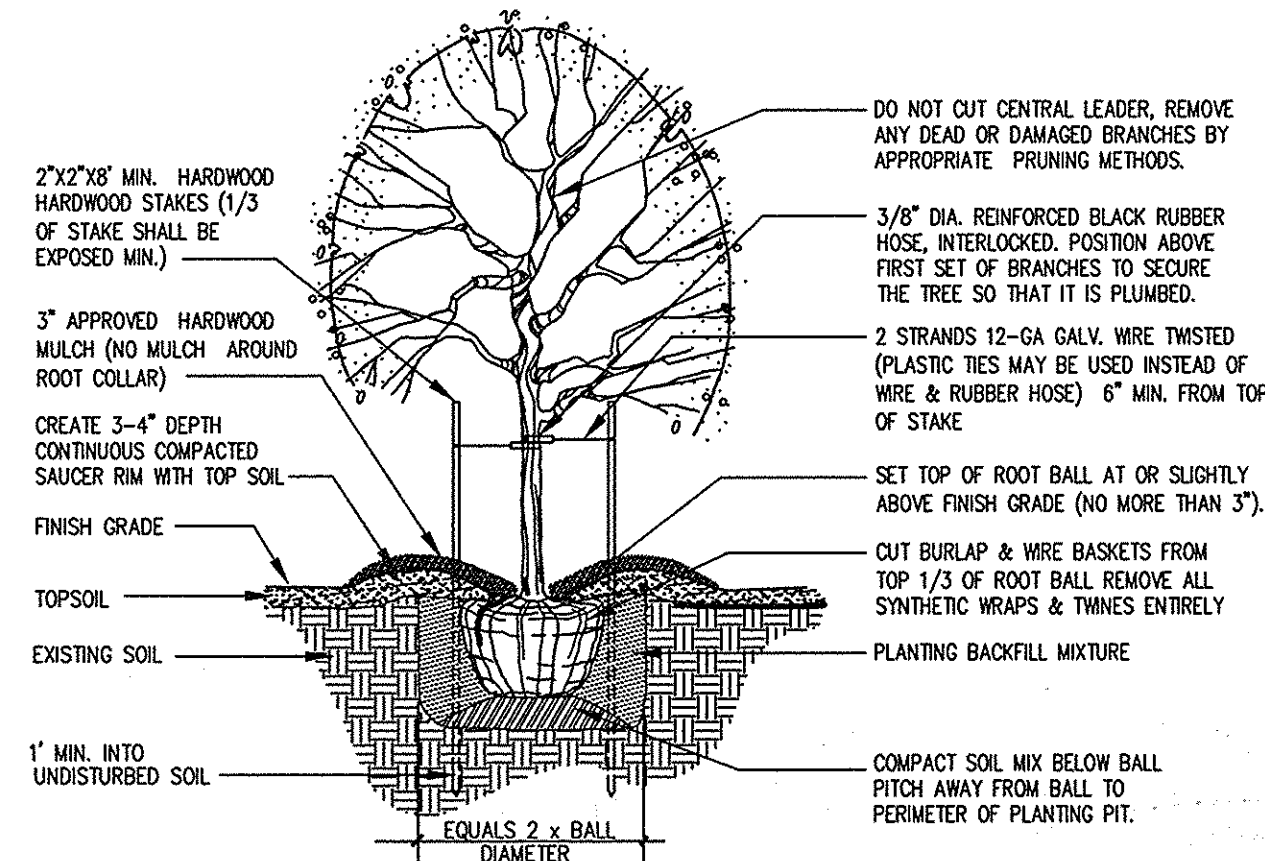
00177\SDP-03-33\LS.dwg DES. DRN. CHK.

6-10-14 UPDATED SCHOOL NAME & SHEET TOTAL

DATE REVISION

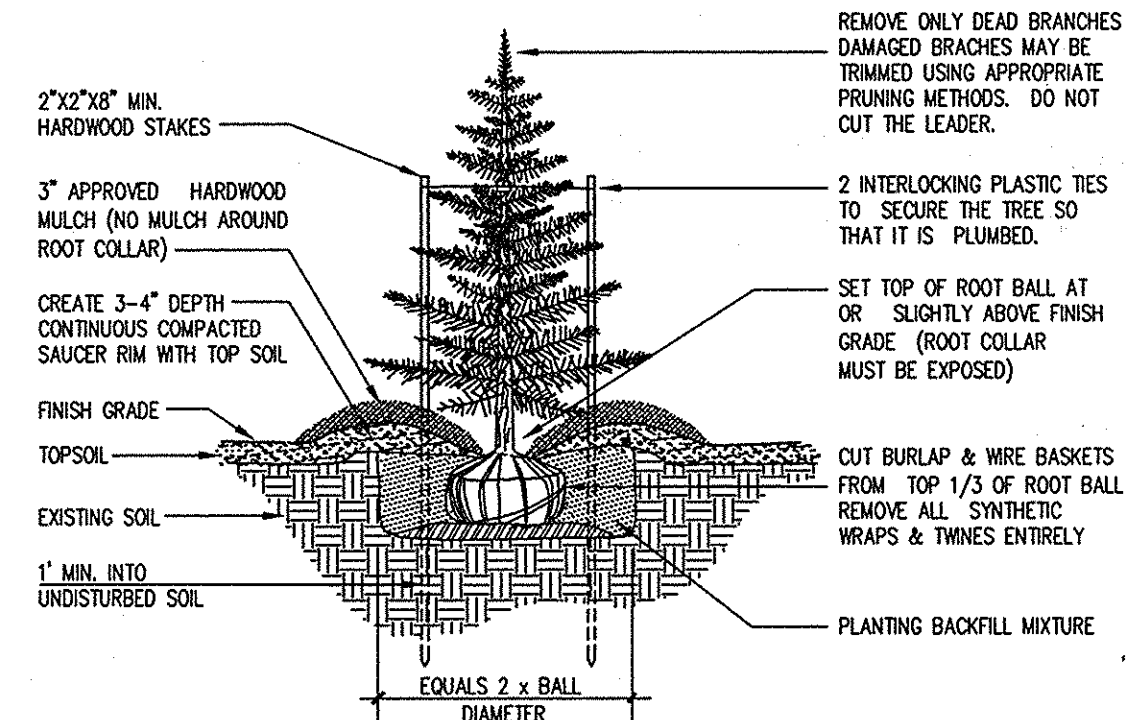
BY APPR.

HOWARD COUNTY, MARYLAND



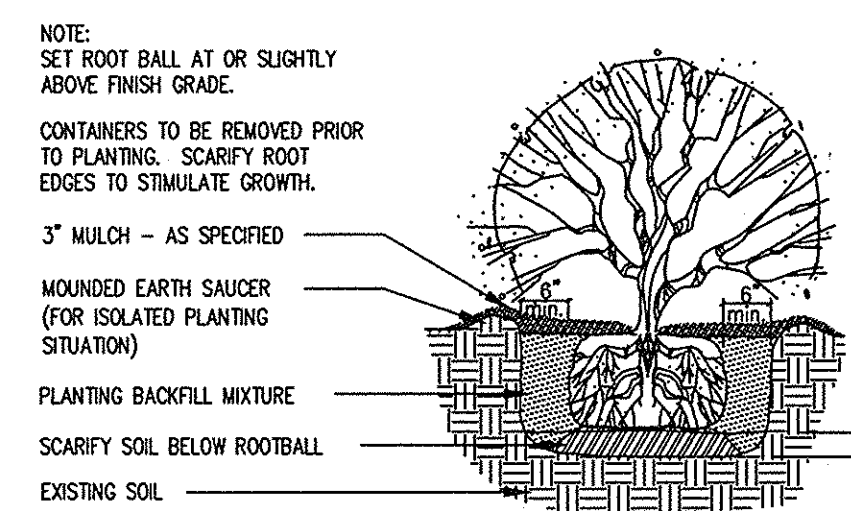
NOTE: ALL SUPPORTING DEVICES (STAKES, WIRES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.

DECIDUOUS TREE PLANTING DETAIL FOR PLANTING MATERIAL UP TO 3 1/2" CALIPER NTS



NOTE: ALL SUPPORTING DEVICES (STAKES, TIES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.

EVERGREEN TREE PLANTING DETAIL NTS



SHRUB PLANTING DETAIL NTS

SCHEDULE-A: PERIMETER LANDSCAPE EDGE (HIGH SCHOOL SITE)

PERIMETER No.	1	2	3	4	5	6	7	8	9
LOCATED ADJACENT TO	ROADWAYS	ROADWAYS	ROADWAYS	ROADWAYS	RESIDENTIAL PROPERTY	RESIDENTIAL PROPERTY	RESIDENTIAL PROPERTY	RESIDENTIAL PROPERTY	RESIDENTIAL PROPERTY
LANDSCAPE BUFFER TYPE	E	B	E	B	C	C	C	D	C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	420'	570'	576' (600' - 24' FOR D/W)	1316'	940'	720'	307'	80'	409'
CREDIT FOR EXISTING VEGETATION	N/A	YES, AS PER SCHEDULE-D	N/A	N/A	N/A	YES, 100% FOR RETENTION OF EX. WOODLAND	N/A	N/A	N/A
CREDIT FOR WALL, FENCE OR BERM	3' BERMED	N/A	3' BERMED	3' BERMED	N/A	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	11 SHADE TREES N/A 105	SEE SCHEDULE-D	15 SHADE TREES N/A N/A, BERM CREDIT	26 SHADE TREES 33 N/A	24 SHADE TREES 47 N/A	N/A CREDIT FOR RETENTION OF EX. WOODLAND	8 SHADE TREES 16 N/A	2 SHADE TREES 8 N/A	10 SHADE TREES 20 N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (@ 2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	11 SHADE TREES NA 105	SEE SCHEDULE-D	20 SHADE TREES	34 SHADE TREES 33 EVGRN. TREES	18 SHADE TREES 60 EVGRN. TREES (13 SUBSTITUTED FOR 6 SHADE TREES)	N/A CREDIT FOR RETENTION OF EX. WOODLAND	5 SHADE TREES 29 EVGRN. TREES (13 SUBSTITUTED FOR 3 SHADE TREES)	3 SHADE TREES 11 EVGRN. TREES	12 SHADE TREES 20 EVGRN. TREES

SCHEDULE-A: PERIMETER LANDSCAPE EDGE (FOR NEW DEVELOPMENT ON M.S. SITE)

PERIMETER No.	1	2	3	4
LOCATED ADJACENT TO	ROADWAYS	ROADWAYS	RESIDENTIAL PROPERTY	RESIDENTIAL PROPERTY
LANDSCAPE BUFFER TYPE	B	B	E	C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	470'	400'	156' (180'-24' D/W)	996'
CREDIT FOR EXISTING VEGETATION	YES, AS PER SCHEDULE-D	YES, 2 EXISTING SHADE TREES	N/A	YES, SOME 295' ALONG AN EX. WOODLAND
CREDIT FOR WALL, FENCE OR BERM	N/A	N/A	YES, 3' HIGH BERM	N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	SEE SCHEDULE-D	8 SHADE TREES 10 N/A	4 SHADE TREES N/A BERM CREDIT	FOR 701 LF 18 SHADE TREES 35 N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (@ 2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	SEE SCHEDULE-D	6 NEW SHADE TREES 10 N/A N/A	4 SHADE TREES N/A N/A N/A	13 SHADE TREES 45 EVGRN. (10 SUBSTITUTED FOR 5 SHADE TREES)

BUFFER TYPE	SHADE TREES/LF	EVG. TREES/LF	SHRUBS/LF
B	1:50	1:40	0
C	1:40	1:20	0
D	1:60	1:10	0
E	1:40	0	1:4

SCHEDULE-B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	593 CAR SPACES + 17 BUS SPACES
NUMBER OF TREES REQUIRED (AT 1 SHADE TREE PER 20 SPACES)	30 SHADE TREES (OR EQV. SUBSTITUTIONS)
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	OVER 30 SHADE TREES

LANDSCAPING NOTES

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE & CHAPTER VI OF THE HOWARD COUNTY LANDSCAPE MANUAL.
- CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES, ON SHEET No.1 SHALL APPLY.
- FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK EVEN WHERE PLANT LOCATIONS ARE DIMENSIONED. CONTACT CONSTRUCTION MANAGER OR OWNER IF ANY RELOCATIONS ARE REQUIRED.
- ALL PLANT MATERIAL SHALL BE FULL, HEAVY, WELL FORMED, SYMMETRICAL, AND CONFORM TO THE A.A.N. SPECIFICATIONS. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THIS PLAN.
- NO SUBSTITUTION SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER OR HIS REPRESENTATIVE.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED, OR MULCHED SHALL BE SEEDDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS FOR SEEDING.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL DRAINAGE CONDITIONS THAT MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS.
- ALL EXPOSED EARTH WITHIN LIMITS OF PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER THE PLANTING DETAILS.
- DO NOT PLANT WITHIN THE PUBLIC WATER AND UTILITY EASEMENT.
- REFER TO OTHER SITE DRAWINGS FOR ADDITIONAL SEEDING REQUIREMENTS.

SCHEDULE-D: STORMWATER MANAGEMENT AREA LANDSCAPING

	POND #1	POND #2
LINEAR FEET OF TYPE 'B' BUFFER PERIMETER	945	990
NUMBER OF SHADE TREES REQUIRED	19	20
NUMBER OF EVERGREEN TREES REQUIRED	24	25
CREDIT FOR EXISTING VEGETATIONS	NONE	NONE
CREDIT FOR OTHER LANDSCAPING	N/A	N/A
NUMBER OF SHADE TREES PROVIDED	28*	21*
NUMBER OF EVERGREEN TREES PROVIDED	14	24
NUMBER OF OTHER TREES PROVIDED (AS SUB.)	(15 ARE BROADLEAF EVERGREENS & 4 DECIDUOUS SHD. TREES ARE SUBSTITUTED FOR THE REMAINING 5 PINES)	(12 ARE BROADLEAF EVERGREENS)

NOTE: SWM LANDSCAPING FOR POND Nos. 3 & 4 IS FULFILLED BY SCHEDULE-A. TYPE 'C' BUFFER PLANTING WHICH IS MORE STRINGENT THAN THE 'B' BUFFER.

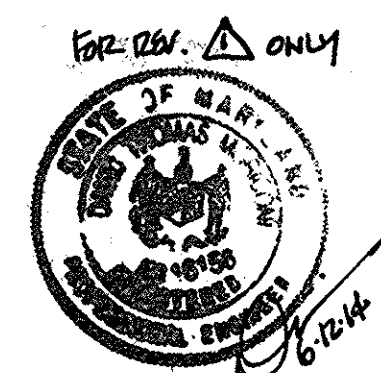
PLANT LIST

KEY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE & CONDITION	REMARKS	QUANTITY
AR	⊙	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY MAPLE	3'-3 1/2" CAL. B&B	30' O.C. U.O.N.	81
MG	⊕	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	3'-3 1/2" CAL. B&B	MIN. 25' O.C.	31
QPH	⊕	QUERCUS PALUSTRIS	PIN OAK	3'-3 1/2" CAL. B&B	MIN. 25' O.C.	7
QP	⊕	QUERCUS PHELLOS	WILLOW OAK	3 1/2"-4" CAL. B&B, 14'-16" HT.	MIN. 25' O.C.	117
Z	⊕	ZELKOVIA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN JAPANESE ZELKOVA	3'-3 1/2" CAL. B&B	MIN. 25' O.C.	29
CC	⊕	CERES CANADENSIS	EASTERN REDBUD	1 1/2"-2" CAL. B&B, 8'-10" HT.	MATCHED IN GROUPS	13
HC	⊕	HALESIA CAROLINA	CAROLINA SILVERBELL	1 1/2"-2" CAL. B&B, 8'-10" HT.	MATCHED IN GROUPS	13
PC	⊕	PRUNUS Cerasifera 'THUNDERCLOUD'	PURPLELEAF FLOWERING PLUM	1 1/2"-2" CAL. B&B, 8'-10" HT.	MATCHED IN GROUPS	17
PS	⊕	PINUS STROBUS	EASTERN WHITE PINE	8'-10" MIN. HT., B&B, CENTRAL LEADER SHALL BE INTACT.	AS INDICATED ON PLAN	254
PF	⊕	PHOTINIA FRASERI	FRASER'S RED TIPPED PHOTINIA	30" - 36" CONT.	AT 5'-0" O.C. & 5'-0" ANY STRUCTURES	13
SB	⊕	SPIRAEA BUMALDA 'GOLD FLAME'	GOLD FLAME SPIRAEA	30" - 36" B&B	AT 3'-0" O.C. & 3'-0" FROM ANY STRUCTURES	45
IH	⊕	ILEX ORENATA 'HETZLI'	HETZ JAPANESE HOLLY	24" - 30" CONT.	AT 3'-0" O.C. & 36" FROM ANY STRUCTURES	34
JA	⊕	JUNIPERUS ANDORRA	ANDORRA JUNIPER	18"-24" CONT.	AT 4'-8" O.C. & 36" FROM ANY STRUCTURES	44
TM	⊕	TAXUS MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	30"-36" B&B	AT 4'-0" O.C. & 36" FROM ANY STRUCTURES	57
VR	⊕	VIBURNUM x 'ESKIMO'	ESKIMO VIBURNUM	30"-36" B&B	AT 4'-0" O.C. & 2' MIN. FROM QUADRANT	105

U.O.N. = UNLESS OTHERWISE NOTED.

* INDICATES LOCATIONS WHERE CONTRACTOR MUST HAND DIG FOR NEW TREES AND SHRUBS AFTER VERIFYING LOCATIONS OF UTILITIES.

NOTE: THIS PLANT LIST COVERS ONLY THE INDIVIDUAL "LANDSCAPE" PLANTS SHOWN ON THE SHEETS TITLED "PLANTING PLAN" ONLY. ALSO SEE THE "FOREST CONSERVATION PLANT LIST" ON SHEET #45 FOR FORESTATION PLANTING.



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. 16156, Expiration Date: 9-28-14

NO DEVELOPER LANDSCAPE SURETY IS REQUIRED FOR THIS PLAN BECAUSE IT IS A HOWARD COUNTY PUBLIC SCHOOL SYSTEM PROJECT.

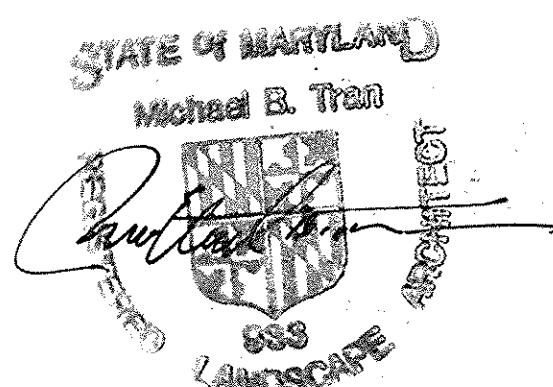
DEVELOPER/SUBSIDERS CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Cathleen Conley Jones 7/31/03
NAME DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
Dennis Bonnet, MD, Health Officer, Date: 1-15-04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Dawn H. Weyer, Director, Date: 9/4/03
Cindy Hamble, Chief, Division of Land Development, Date: 9/2/03
Chief, Development Engineering Division, Date: 8/27/03



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

6-12-14 UPDATED SCHOOL NAME & SHEET TOTAL
DATE REVISION

PREPARED FOR: OWNER HOWARD COUNTY PUBLIC SCHOOL SYSTEM
ARCHITECT: TCA ARCHITECTS LLC, 2861 RIVA ROAD, SUITE 120, ANNAPOLIS, MD 21403, ATTN: WAVE BROWN, TEL: 301-261-8700

REVISOR: DIM BY APPR.

REVISOR: DIM BY APPR.

PLANTING NOTES, SCHEDULES AND DETAILS
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117 & 16127 (PARCEL 1) AND 16127 (PARCEL 2A)

SCALE: AS SHOWN
ZONING: RR-DEO
G. L. W. FILE No.: 00-177
DATE: 28/JUL/03
TAX MAP - GRID: 10 19
SHEET: 44 of 4058

GENERAL NOTES

- THIS REFORESTATION PLAN IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY CODE.
- IMPLEMENTATION OF THIS PLAN MUST BE PERFORMED BY A CONTRACTOR THAT IS KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION TECHNIQUES AND PRACTICES.
- THE OWNER IS RESPONSIBLE FOR A 2-YEAR (MIN.) POST-CONSTRUCTION MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE SURVIVAL AND GROWTH OF THE CONSERVATION AREA. TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY. IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING (IF APPLICABLE) WILL NOT MEET SURVIVAL RATE STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS.
- AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, CERTIFICATION BY A QUALIFIED CONSULTANT WILL BE REQUIRED BEFORE TO THE OWNER CAN BE RELEASED FROM HIS/HER FOREST CONSERVATION OBLIGATION TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF ANY EXISTING UTILITIES, THE REPAIR OF ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE FOREST CONSERVATION EASEMENTS (FCE) ON THESE PLANS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FCE; HOWEVER, THE INITIAL GRADING TO DEVELOP THE SCHOOL SITES (PER THIS SDP) AND FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. THE FOREST CONSERVATION OBLIGATION FOR THE DEVELOPMENT OF THE HIGH SCHOOL UNDER THIS SDP IS FULFILLED BY RECORDING AT LEAST 6.64± ACRES OF FCE AREA WHICH COMPRISES OF 0.54± AC. OF RETENTION AND 6.10± AC. OF SUPPLEMENTAL PLANTING (AFFORESTATION/REFORESTATION). THE FCE IS RECORDED ON PLATS 16117/8 & 16126/7.

CONSTRUCTION PERIOD PROTECTION PROGRAM

- THE LIMIT OF FOREST RETENTION SHALL BE STAKED AND FLAGGED.
- A PRE-CONSTRUCTION MEETING AT THE SITE SHOULD BE HELD TO CONFIRM THE LIMITS OF CLEARING SPECIFIED. THE MEETING SHOULD INCLUDE THE OWNER OR THE OWNER'S REPRESENTATIVE, THE ON-SITE FOREMAN IN CHARGE OF LAND DISTURBANCE, THE ENVIRONMENTAL CONSULTANT AND THE APPROPRIATE HOWARD COUNTY INSPECTORS.
- FOREST PROTECTION DEVICES AND SIGNS (SEE DETAILS) SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING. THE PROTECTION DEVICES AND SIGNS SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD. NONE OF THE DEVICES SHALL BE ANCHORED OR ATTACHED IN ANY WAY TO THE TREES TO BE SAVED.
- EQUIPMENT, VEHICLES AND BUILDING MATERIALS SHALL NOT BE WITHIN THE PROTECTED AREA. ACTIVITIES STRICTLY TO IMPLEMENT ANY REFORESTATION PLANTING AND MAINTENANCE (I.E. WATERING, FERTILIZING, THINNING, PRUNING, REMOVAL OF DEAD AND DISEASED TREES WHERE NECESSARY, ETC.) OF THE CONSERVATION AREA ARE PERMITTED. CLEARING FOR THE PURPOSE OF SODDING OR PLANTING GRASS IS NOT PERMITTED WITHIN THE FOREST CONSERVATION AREA ONCE IT'S ESTABLISHED.
- AT THE END OF THE CONSTRUCTION PERIOD, THE DESIGNATED QUALIFIED PROFESSIONAL SHALL CONVEY TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL FOREST RETENTION AREAS HAVE BEEN PRESERVED, ALL REFORESTATION AND/OR AFFORESTATION PLANTINGS (IF APPLICABLE) HAVE BEEN INSTALLED AS REQUIRED BY THE FOREST CONSERVATION PLAN, AND THAT ALL PROTECTION MEASURES REQUIRED FOR THE POST-CONSTRUCTION PERIOD HAVE BEEN INSTALLED. UPON REVIEW OF THE FINAL CERTIFICATION DOCUMENT FOR COMPLETENESS AND ACCURACY, THE PROGRAM COORDINATOR WILL NOTIFY THE OWNER OF RELEASE FROM THE CONSTRUCTION PERIOD OBLIGATIONS. THE 2-YEAR (MIN.) POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD THEN COMMENCES.

FOREST CONSERVATION PROGRAM SEQUENCE

- OBTAIN ALL NECESSARY PERMITS.
- STAKEOUT LIMITS OF DISTURBANCE.
- FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE SCHOOL SITE GRADING AND CONSTRUCTION.
- INSTALL FOREST CONSERVATION SIGNS AND FOREST PROTECTION DEVICES (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES. SEE THE "SEDIMENT CONTROL PLAN").
- COMMENCE SITE CONSTRUCTION.
- INSTALL FOREST PLANTING AND THE REMAINDER OF THE CONSERVATION SIGNS ALONG THE EDGE OF THE CONSERVATION EASEMENT. MOVE CONSERVATION SIGNS INSTALLED IN #4 (ABOVE) TO THE EDGE OF THE CONSERVATION EASEMENT.
- INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
- POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
- FINAL INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATION.

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

Demetrius... 1-15-04
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David... 9/2/03
Director

Cindy... 9/2/03
Chief, Division of Land Development

... 8-27-03
Chief, Development Engineering Division

STATE OF MARYLAND
Michael B. Tran
933
LANDSCAPE ARCHITECT

NO FOREST CONSERVATION SURETY IS REQUIRED FOR THIS PLAN BECAUSE IT IS A HOWARD COUNTY PUBLIC SCHOOL SYSTEM PROJECT.

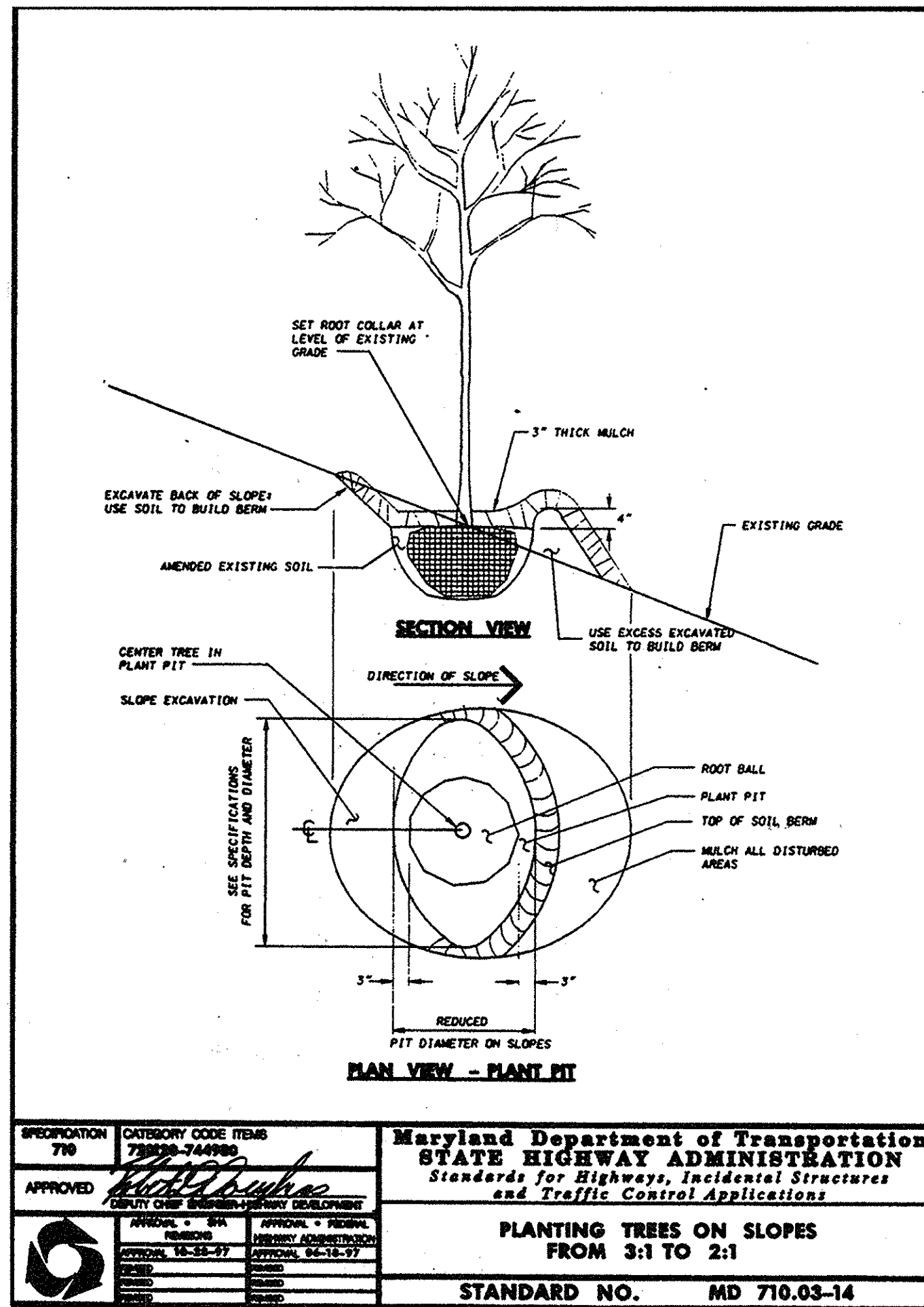
TREE PLANTING AND MAINTENANCE CALENDAR

TASKS	MONTHS											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
TRANSPLANT OF 2" DBH OR GREATER	[RECOMMENDED]											
PLANTING SEEDINGS, WHIPS	[RECOMMENDED]											
MINIMUM MONITORING	*				*					*		
FERTILIZER + (IF NEEDED)	[RECOMMENDED]											
WATER ++	[RECOMMENDED]											
PRUNING	[RECOMMENDED]											

- KEY**
- * ACTIVITIES DURING THESE MONTHS ARE DEPENDANT UPON GROUND CONDITIONS
 - [RECOMMENDED] GREATLY RECOMMENDED
 - [RECOMMENDED] RECOMMENDED WITH ADDITIONAL CARE
 - [RECOMMENDED] RECOMMENDED
 - + DEPENDANT UPON SITE CONDITIONS
 - ++ DEPENDANT UPON SITE CONDITIONS; WEEKLY WATERING IS GREATLY RECOMMENDED FROM MAY THROUGH OCTOBER UNLESS WEEKLY RAINFALL EQUALS 1"

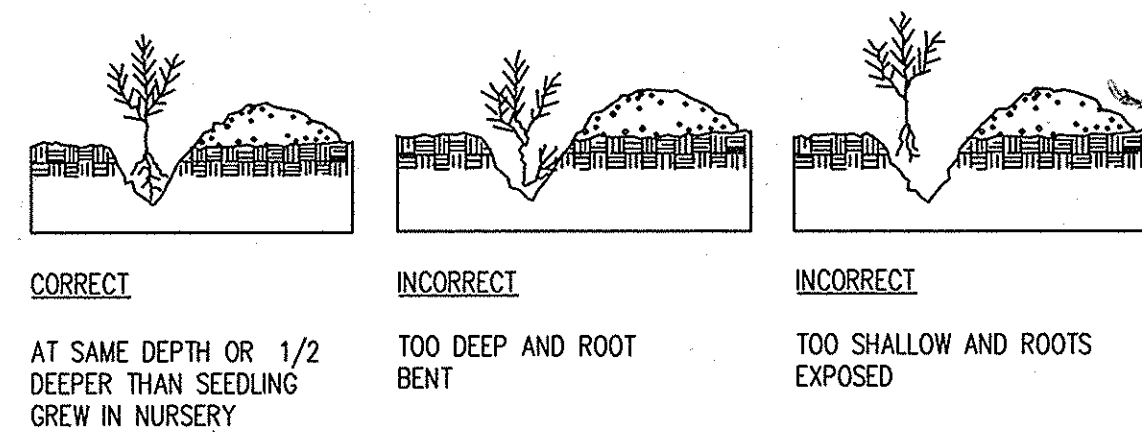
NOTE: THE PLANTING AND CARE OF TREES IS MOST SUCCESSFUL WHEN COORDINATED WITH THE LOCAL CLIMATIC CONDITIONS. THIS CALENDAR SUMMARIZES SOME OF THE RECOMMENDED TIME FRAMES FOR BASIC REFORESTATION AND STRESS REDUCTION ACTIVITIES.

SOURCE: ADAPTED FROM THE MARYLAND STATE FOREST CONSERVATION MANUAL

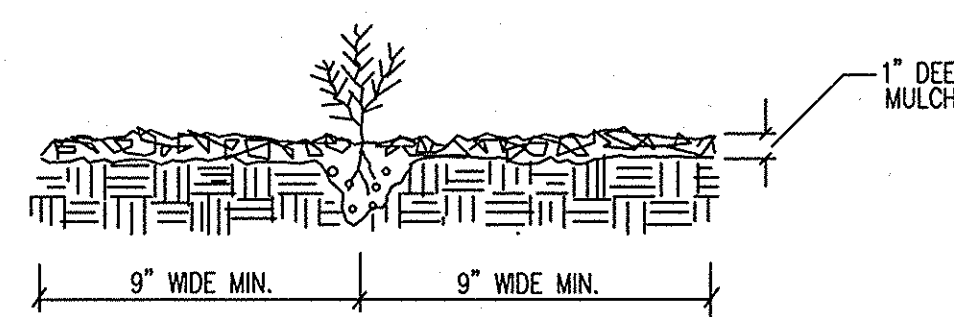


HANDLING AND PLANTING OF SEEDLING(4)

CORRECT AND INCORRECT PLANTING DEPTH



SEEDLING AND WHIP PLANTING SPECIFICATION

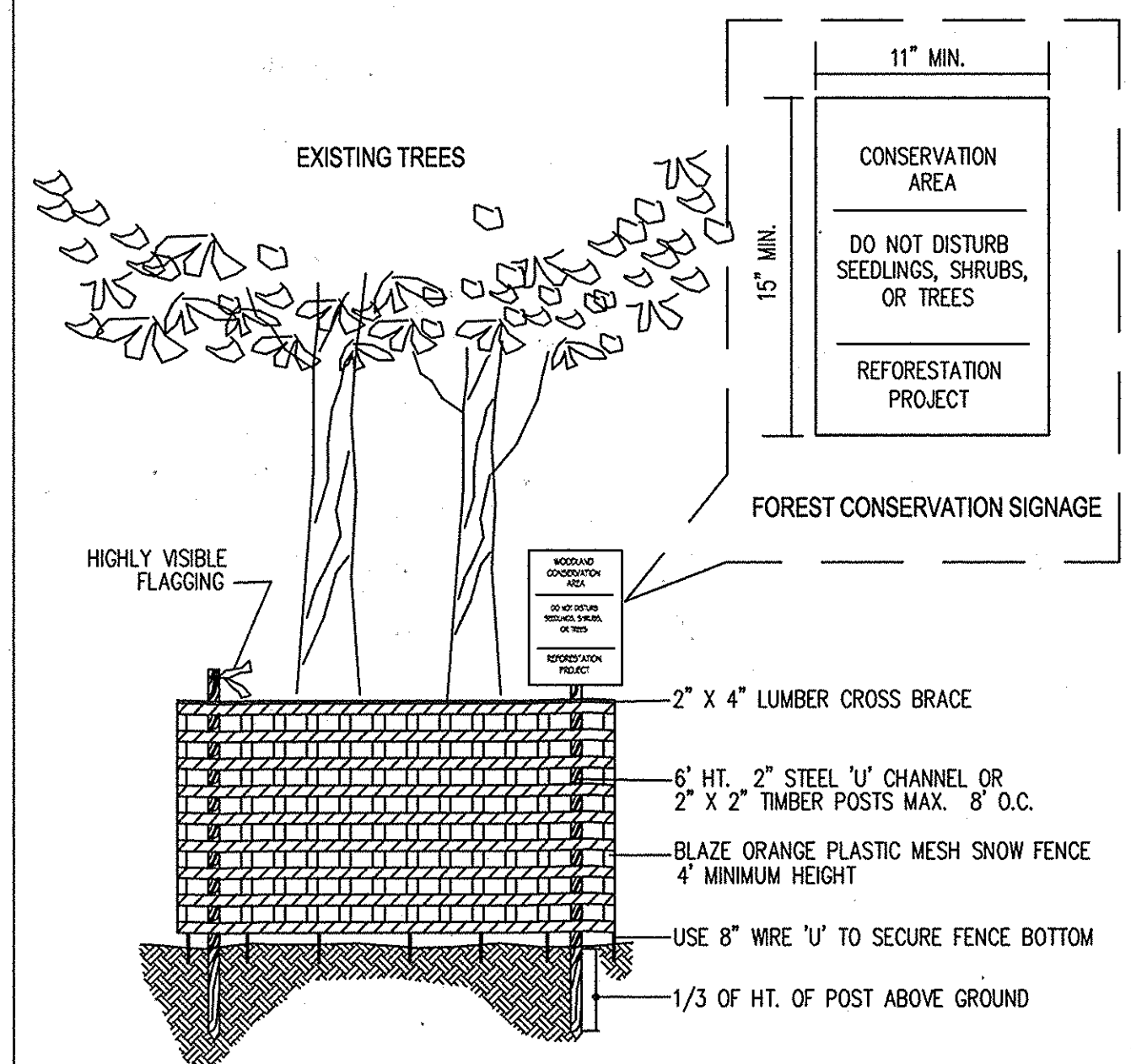


NOTE: MULCHING NEWLY PLANTED SEEDLING HELPS THE SOIL RETAIN MOISTURE AND IT PROTECTS THE SEEDLING FROM COMPACTION AND STEM INJURIES.

SOURCE: ADAPTED FROM THE MARYLAND STATE FOREST CONSERVATION MANUAL

TREE PROTECTION FENCE

NOT TO SCALE



TREE PROTECTION FENCING

- FOREST PROTECTION DEVICE ONLY.
- AVOID ROOT DAMAGE
- DEVICE MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.

SOURCE: PRINCE GEORGE'S COUNTY, MARYLAND: WOODLAND CONSERVATION MANUAL ADAPTED FROM THE MARYLAND STATE FOREST CONSERVATION MANUAL

FOREST CONSERVATION WORKSHEET

1. SITE DATA

GROSS SITE AREA*	38.66± AC
AREA WITHIN 100-YEAR FLOOD PLAIN	N/A
NET TRACT AREA	38.66±
LAND USE CATEGORY	INSTITUTIONAL

2. INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	38.66± AC
B. REFORESTATION THRESHOLD (20% x A)	7.73
C. AFFORESTATION THRESHOLD (15% x A)	5.79
D. EXISTING FOREST ON NET TRACT AREA	1.38
E. FOREST AREAS TO BE CLEARED	0.84
F. FOREST AREAS TO BE RETAINED	0.54

3. AFFORESTATION CALCULATIONS

A. NET TRACT AREA	38.66± AC
B. AFFORESTATION THRESHOLD (15% x A)	5.80
C. EXISTING FOREST ON NET TRACT AREA	1.38
D. FOREST AREAS ON NET TRACT AREA TO BE CLEARED	0.84
E. FOREST AREAS TO BE RETAINED	0.54

4. REQUIRED FOREST CONSERVATION

A. AFFORESTATION UP TO THRESHOLD (3B-3C)	4.42 AC
B. REFORESTATION FOR CLEARING BELOW THRESHOLD (3D x 2)	1.68
C. TOTAL CONSERVATION PLANTING AREA REQUIRED (4A + 4B)	6.10
D. TOTAL FOREST CONSERVATION EASEMENT AREA REQUIRED (3E + 4C)	6.64

5. PROPOSED METHODS OF FULFILLING FOREST CONSERVATION OBLIGATIONS

RETENTION OF EXISTING FOREST ON NET TRACT	0.54 AC
FOREST PLANTING (ON THE H.S. & M.S. PARCELS.)	6.10 AC
TOTAL AREA OF FOREST CONSERVATION EASEMENT	6.64± AC

* THE GROSS AREA COMPRISES OF:
35.82± AC FOR PARCEL 2-A
2.84± AC FOR THE NEW DEVELOPMENT AREA ON PORTION OF PARCEL-1 THAT IS OUTSIDE THE LIMIT OF DISTURBANCE SHOWN ON SDP-92-80 AND F-90-24.

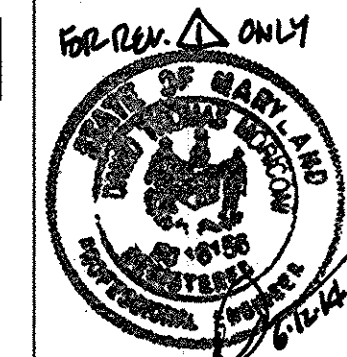
CONSERVATION EASEMENT AREA NUMBER	1	2	3	4	5	6	7
FOREST RETENTION AREA (IN AC.)	0.23	0.00	0.00	0.00	0.31	0.00	0.00
FORESTATION PLANTING AREA (IN AC.)	2.08	2.21	0.60	0.42	0.01	0.37	0.41
TOTAL AREA IN CONSERVATION EASEMENT (IN AC.)	2.31	2.21	0.60	0.42	0.32	0.37	0.41

FOREST CONSERVATION LOCATION NO.	1	2	3	4	5	6	7
AREA TO BE PLANTED (IN AC.)	2.08	2.21	0.60	0.42	0.01	0.37	0.41
BASE QUANTITY OF 2" CAL. TREES REQUIRED (AT 100 TREES/AC.)	208	221	60	42	1	37	41
CREDIT FOR EXISTING AND PROPOSED LANDSCAPE TREES	11	150	0	29	0	23	0
REQUIRED QUANTITY OF 2" CAL. TREES TO BE PLANTED*	197	71	60	13	1	14	41

* FOR PLANTING WITH SMALLER TREES, THE REQUIRED QUANTITY TO BE PLANTED SHALL BE INCREASED BY A FACTOR OF:
A. 2x FOR PLANTING WITH 1" CAL. TREES
B. 7x FOR PLANTING WITH SEEDLINGS

FOREST CONSERVATION PLANT LIST

PLANT NAME (BOTANICAL/COMMON)	CONSERVATION AREA						
	FCE-1	FCE-2	FCE-3	FCE-4	FCE-5	FCE-6	FCE-7
ACER RUBRUM/RED MAPLE	49	18	12	N/A	N/A	4	14
PENNSYLVANICA/GREEN ASH	49	18	12	5	1	4	14
LIRIODENDRON TULIPFERA/TULIP TREE	50	17	12	4	N/A	4	N/A
QUERCUS PALUSTRIS/PIN OAK	N/A	N/A	12	N/A	N/A	N/A	N/A
QUERCUS RUBRUM/RED OAK	49	18	12	4	N/A	2	13
TOTAL	197	71	60	13	1	14	41



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.

16176 Exp. 8-25-14

- THE TREE PROTECTION FENCING SHOWN ON THESE PLANS IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY, BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FOREST CONSERVATION EASEMENTS AFTER THE REMOVAL OF THE TREE PROTECTION FENCING.
- FOREST CONSERVATION SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSERVATION EASEMENT AT 50' TO 100' APART AND AT ALL CORNERS WHERE THE EASEMENT CHANGES DIRECTION.
- ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

00177\SDP-03-33\LS-NOTES.dwg DES. DRN. CHK. DATE 6-12-14 UPDATED SCHOOL NAME & SHEET TOTAL

REVISION BY APPR.

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-8704

ARCHITECT: TCA ARCHITECTS LLC
2861 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

FOREST CONSERVATION NOTES, SCHEDULES AND DETAILS

REVISED SITE DEVELOPMENT PLAN

WEST FRIENDSHIP ELECTION DISTRICT No. 3

MARGARETTS RIDGE
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16117/8 (PARCEL 1) and 16126/7 (PARCEL 2A)

SCALE: AS SHOWN
ZONING: RR-DEO
G. L. W. FILE No.: 00-177

DATE: 28/JUL/03
TAX MAP - GRID: 10 19
SHEET: 45 of 48

SOILS CHART		
Symbol	Name	Type
Ch	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EB2	ELDOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
E1C3	ELDOAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
G1A	GLENELG LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1C3	GLENELG LOAM, 15 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
M1C2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
M1C3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

PLAN LEGEND

- 600 — EXISTING CONTOUR
- 25% — EXISTING SLOPE 25% & GREATER
- 15% — EXISTING SLOPE 15% - 25%
- ChB2 SOIL DELINEATION
- SOIL SYMBOL
- Existing Tree
- Existing Brush Line
- F1 EXISTING TREE LINE (CANOPY)
- FOP FOREST AREA (CROSS HATCHED)
- EDGE OF PAVING
- EXISTING CURB & GUTTER
- EXISTING FIRE HYDRANT
- EXISTING UTILITY/LIGHT POLE
- EXISTING STORM DRAIN
- PREVIOUS LIMIT OF DISTURBANCE (UNDER F-90-24 & SDP-92-80)
- STREAM
- STREAM BUFFER

FOREST STAND DESCRIPTION

F1: THIS FORESTED AREA IS APPROXIMATELY 0.23± ACRES. IT CONSIST OF MOSTLY TULIP POPLAR IN GOOD CONDITION (12"-16" AVE. DBH) WITH MULBERRY, POISON IVY, MULTIFLORA ROSE AND OTHER BRAMBLES ALONG THE WEST PERIMETER. THIS FOREST CONTINUES ON THE NEIGHBORING PROPERTY TO THE EAST.

F2: THIS FORESTED AREA IS APPROXIMATELY 1.15± ACRES. IT'S A YOUNG, MIXED HARDWOOD FOREST (OF MOSTLY TULIP POPLAR, RED MAPLE, ASH AND CHERRY) IN GOOD CONDITION WITH AN AVERAGE DBH OF 4"-6". POISON IVY, MULTIFLORA ROSE AND OTHER BRAMBLES ARE ALONG THE EXPOSED SOUTHERN AND EASTERN PERIMETER. THIS YOUNG FOREST BORDERS A MORE MATURED NEIGHBORING FOREST (OF TULIP POPLAR, ASH, RED MAPLE, MIXED OAKS) TO THE WEST.

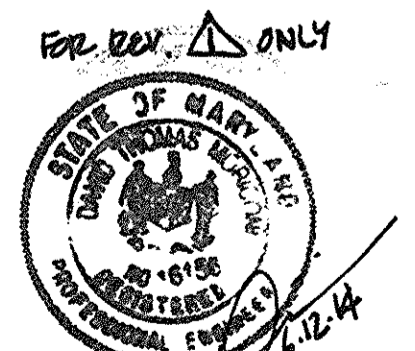


APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Debra D. ... 1-15-07
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
David ... 9/14/03
Director

Cindy ... 1/2/03
Chief, Division of Land Development

... 8-27-03
Chief Development Engineering Division



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.
No. 16156 Expiration Date 8-28-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
5909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

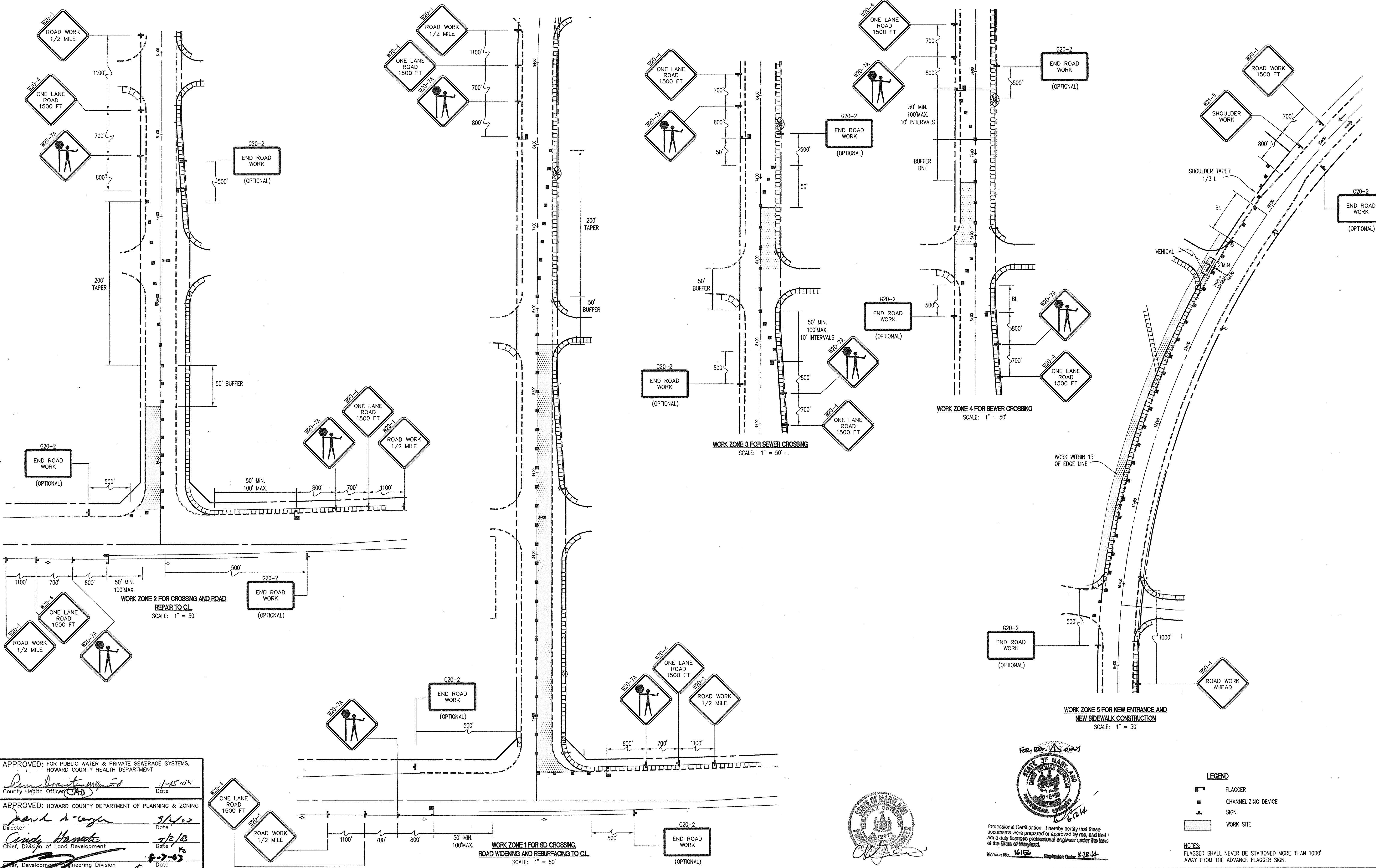
DATE	DESCRIPTION	BY	APP'R.
6-12-14	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	APP'R.

PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELICOTT CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT: TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: WAVE BOON
TEL: 301-261-8700

EXISTING CONDITION & FOREST STAND DELINEATION
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 16111/2 (PARCEL 1) and 16124/2 (PARCEL 2A)
WEST FRIENDSHIP ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	46 of 48

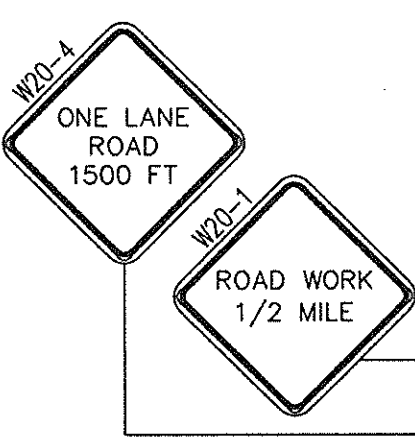


APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 1-15-03
County Health Officer (AD) Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 5/14/03
Director Date

[Signature] 7/2/03
Chief, Division of Land Development Date

[Signature] 8-2-03
Chief, Development Engineering Division Date



LEGEND

- FLAGGER
- CHANNELIZING DEVICE
- SIGN
- WORK SITE

NOTES:
FLAGGER SHALL NEVER BE STATIONED MORE THAN 1000'
AWAY FROM THE ADVANCE FLAGGER SIGN.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
5909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	DESCRIPTION	BY	APPR.
6-17-04	UPDATED SCHOOL NAME & SHEET TOTAL	DTM	

PREPARED FOR:
OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 408
ELLSWORTH CITY, MD 21043
ATTN: CATHEEN YOUNG
TEL: 410-313-6704

ARCHITECT:
TCA ARCHITECTS LLC
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MD 21401
ATTN: MIKE BOON
TEL: 301-261-8700

WORK ZONE TRAFFIC CONTROL
MARKETTS RIDGE
NORTHERN HIGH SCHOOL
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
PLAT Nos. 1611112 (PARCEL 1) and 1612612 (PARCEL 2A)

REVISOR: [Signature]
WEST FRIENDSHIP ELECTION DISTRICT No. 3

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	00-177
DATE	TAX MAP - GRID	SHEET
28/JUL/03	10 19	47 of 48

HOWARD COUNTY, MARYLAND

GENERAL NOTES FOR TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS (TTCTA)

1.0 INTRODUCTION

1.1 The General Notes (GN) supplement the TTCTA setups, and have been assembled to provide additional directions on the installation and application of traffic control devices shown on these standards. The GN's also provide additional guidelines and other useful information that will facilitate the installation of appropriate temporary traffic controls. Users of these standards shall also comply with the provisions of the Manual on Uniform Traffic Control Devices (MUTCD), the Standard Specifications For Construction And Materials, and General Provisions For Construction Contracts.

1.2 The TTCTA show the minimum requirements necessary to plan for the safety of workers, motorists, pedestrians and other traffic throughout the temporary traffic control zone for various types of activity along roadways. Typically, more traffic control devices are required for long-term stationary work activities than for short-term stationary work activities. Additional temporary traffic control devices may be necessary because of other traffic factors such as the roadway's accident history, expected traffic backups, high truck traffic, roadway geometrics or characteristics, and other conditions that may adversely affect the smooth flow of traffic. The users of these TTCTA should review the temporary traffic control setup once in place to insure that traffic is traveling smoothly throughout the traffic control zone, meeting driver expectations, and no other adjustments to the temporary traffic control devices are necessary. This review is to be repeated on a frequent basis as noted elsewhere.

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-01

4.0 SIGNS:

4.1 Signs should be spaced at the distances shown on the typical application diagrams.

4.2 See the "Sign And Buffer Spacing Charts/ Standard Temporary Traffic Control Operations" for the appropriate spacing of the advance warning signs for lower speed highway facilities.

4.3 The advance warning area may need to be lengthened with additional signs in order to provide sufficient warning to upstream motorists, especially if traffic is expected to backup past any of the warning signs near the work site.

4.4 When bus and/or truck volumes are high, as determined by the Engineer, an initial advance warning sign may be placed on the left side of a multi-lane undivided roadway.

4.5 Fluorescent Orange High Performance Wide Angle Retroreflective Sign Sheeting material shall be used on all warning signs erected in construction zones along freeways, and major expressways with an Average Daily Traffic of 50,000 vehicles or more. These signs shall also be used on the highway ramps leading to these roadways.

4.6 POE/WA Retroreflective Sign sheeting material may be used for maintenance work along freeways and major expressways at the discretion of the Engineer.

4.7 Approved temporary roll up signs may be used for maintenance work along all roadways.

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
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APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-07

6.0 ARROW PANELS

6.1 Arrow panels that are installed along the shoulder or median of roadways with prevailing speeds greater than 40 mph shall be provided with a minimum shoulder closure taper of 1/3 the taper length. (See 7.0 Channelizing Devices). For all other roadways a 100 foot minimum shoulder closure taper shall be used.

7.0 CHANNELIZING DEVICES

7.1 Taper Formulas:
 $L = WS$ for speeds greater than (>) 40 mph
 $L = WS^2/60$ for speeds equal to or less than (≤) 40 mph
 Where: L = minimum length of taper (ft)
 S = numerical value of prevailing travel speed or speed limit (MPH), whichever is higher, prior to work starting;
 W = width of offset (ft)

7.2 Maximum spacing between channelizing devices:
 a. Taper Channelization - shall be equal in feet to the posted speed limit.
 b. Tangent Channelization - shall be equal in feet to twice the posted speed limit.

7.3 Channelizing devices, especially at horizontal or vertical curves, are to be extended to a point where they are visible to approaching traffic. A full taper length (on two-lane, two-way roadways) shall always be provided in advance of curves.

7.4 Drums should always be used to form the taper on roadways having a posted or prevailing travel speed (whichever is higher) equal to or greater than 40 MPH.

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
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APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-09

9.0 FLAGGING

9.1 Where two or more flaggers are to be used and are unable to see each other, two-way radio communications shall be used.

9.2 If the entire work area is visible from one station, a single flagger may be used, subject to other safety considerations.

10.0 VEHICLES

10.1 Work vehicles should not occupy or be stopped in a lane beyond a horizontal curve or a vertical curve (hill). Instead, vehicles stopping are to be pulled as far off the road as possible or be otherwise parked in a manner as to inhibit the movement of traffic as little as possible. If stopping is necessary and no protection vehicle is available, place channelizing devices in conformance with the placement of channelizing devices at curves as specified in 7.0, Channelizing Devices.

10.2 Work vehicles, if required, should not occupy any part of the buffer area; instead vehicle(s) may occupy part of the work area.

10.3 Vehicle safety lights (amber in color) shall be approved by the Office of Traffic & Safety.

10.4 A protection vehicle with a rear truck-mounted attenuator (TMA) shall be required for all work operations on freeways, where no formal lane closure exists. A formal lane closure condition includes a full complement of advance warning devices, a lane closure taper of channelizing devices and channelizing devices to define the work area as required. A protection vehicle shall also be required for highway marking and may be required under other traffic and work conditions in conformance with SHA policy or as directed by the Engineer. The protection vehicle may be considered the initial advance warning for some mobile work operations. This vehicle should be used in advance of horizontal and/or vertical curves to provide

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-11

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION SIGN AND BUFFER SPACING CHARTS

STANDARD TEMPORARY TRAFFIC CONTROL OPERATIONS

MINIMUM DISTANCE FROM TAPER TO FIRST SIGN (MINIMUM)	MINIMUM COMBINED TAPER TO BE SPACED AT A MINIMUM ADVANCED WARNING	MINIMUM DISTANCE FROM TAPER TO LAST SIGN (MINIMUM)	MINIMUM DISTANCE FROM TAPER TO LAST SIGN (MINIMUM)
0 - 25	600'	600'	600'
26 - 35	900'	900'	900'
36 - 45	1200'	1200'	1200'
46 - 65	1500'	1500'	1500'

* SPEED (MPH)
 0 - 25
 26 - 35
 36 - 45
 46 - 65

* TYPICAL BUFFER LENGTH (FEET)
 25
 35
 45
 65

* TYPICAL BUFFER LENGTH (FEET) WITH SPEED/MESSAGE LIGHTS AND ADVANCEMENT TO BUFFER OF AREA ON STOPPING AND WARNING FOR TRUCKS
 50
 70
 100
 150

* SPEED LIMIT OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER.
 * BUFFER AREA (SEE NOTE 10.4)
 * WORK AREA (SEE NOTE 10.4)
 * TERMINATION AREA (SEE NOTE 10.4)
 * ADVANCE WARNING AREA (SEE NOTE 10.4)
 * BUFFER AREA (SEE NOTE 10.4)
 * WORK AREA (SEE NOTE 10.4)
 * TERMINATION AREA (SEE NOTE 10.4)
 * ADVANCE WARNING AREA (SEE NOTE 10.4)

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-13

1.3 The TTCTA address a wide variety of different applications, however, every situation could not be shown. Therefore, charts have been provided which show standard devices to be used for the proposed work zone activity, and the placement of these devices for certain roadway conditions and work durations. The user is expected to combine the information of these charts into a workable traffic control plan.

1.4 In applying these standards and guidelines, questions for applications and interpretations should be referred to the State Highway Administration's Assistant District Engineer-Traffic, County Traffic Engineer, City Traffic Engineer, Public Works Department and so forth, who are the experts in traffic engineering; and who has jurisdiction on the appropriate roadways for applying such controls, establishing the appropriate speed criteria for the appropriate speed condition and other operational and/or elements.

1.5 The General Notes address the following topics:

- Definitions
- Abbreviations
- Signs
- Portable Variable Message Signs
- Arrow Panels
- Channelizing Devices
- Pavement Markings
- Flagging
- Vehicles
- Work Restrictions
- Traffic Control Plans
- Sign and Buffer Spacing Charts/ Standard Temporary Traffic Control (TTC) Operations
- Project Limits Signs
- Identification Hat and Shovel Signs
- Placement of Regulatory Speed Signs
- TTC Device Selection Charts (for various roadway types)
- Warning, Regulatory And Special Signs/Sign Designations
- Sign/Sign Support Placement
- Vehicle conspicuity
- Protection Vehicle/Paint Train Vehicle Signing

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-02

4.8 On 60 mph and 65 mph highways, special temporary traffic control regulatory speed signing shall be required for work activities of one hour duration or longer, unless otherwise directed by the Engineer. These signs are to be placed as directed in the General Notes.

4.9 Sign designations and messages for the most common signs used in work zones are shown within these General Notes. See Specification 104.08.03 for information on other temporary traffic signs.

4.10 Hat and Shovel signs shall be used for projects lasting greater than two months in duration, unless otherwise specified by the Engineer.

4.11 In urban areas along streets where the prevailing speed is 35 mph or less, and along secondary roads where the Average Daily Traffic (ADT) is less than 1000 vehicles, the minimum sign size of 36" x 36" may be used.

4.12 For utility operations, advance warning signs may utilize the word "AHEAD" in lieu of distances up to and including 1500 feet. At greater distances, such as 1/2 mile or 1 mile, however, the correct distance value is to be used on such warning signs. Also the UTILITY WORK AHEAD sign may be used in lieu of ROAD WORK OR SHOULDER WORK signs only.

4.13 Warning signs mounted on wood posts, and those mounted on approved portable supports shall be mounted in conformance with Standard No. MD 104.00.26.

5.0 PORTABLE VARIABLE MESSAGE SIGNS

5.1 The sequential arrow mode display is prohibited on portable variable message signs.

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-08

7.5 Storing channelizing devices along any roadway is prohibited without approval of the Engineer.

7.6 Type 3 object markers (VP-1) are required for barrier flare/tangent points.

7.7 The appropriate channelizing devices (including approved barrier) to separate opposing traffic shall be as shown on the plans or as directed by the Engineer.

8.0 PAVEMENT MARKINGS

8.1 Pavement markings no longer applicable shall be completely removed or obliterated. Temporary markings shall be used as necessary. Operations less than 12 hours or undertaken during the daytime may require that the permanent markings be temporarily covered with black tape as specified below.

8.2 Pavement marking lines adjacent to any lane transition or lane closure taper shall be removed (or covered with SHA approved black pavement marking tape) as depicted on TTCTA for over 12 hours or nighttime use, unless otherwise directed by the Engineer. Pavement marking lines shall be re-installed (or uncovered) prior to re-opening the closed lane(s).

8.3 Temporary markings on intermediate pavement surfaces shall be paint placed to full dimensions per the Contract Documents, (i.e. continuous double yellow center lines; single dashed yellow center line--10' segments, 30' gaps to denote passing when allowed; lane lines--10' segments, 30' gaps).

8.4 On straight sections of roadway with full dimension center and/or lane lines, but without edge lines, channelizing drums may be used to delineate the edge of the roadway and may be spaced up to 500' apart where no undue hazards exist and when directed by the Engineer. On curve sections, this spacing shall be reduced to a value equal to the posted speed limit, unless otherwise directed by the Engineer.

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-10

the advance warning for a work operation hidden by curves. Consideration should also be given to placing an additional temporary advance warning sign(s) or truck mounted variable message sign no less than 500' and no more than 1500' (or no more than 1/2 mile for expressway conditions) in advance of the protection vehicle, when one or more of the traffic factors listed under General Notes 1.2 exist.

11.0 WORK RESTRICTIONS

11.1 Work within a lane, or within 15 feet of the nearest edge line is prohibited during the peak hours 6 a.m. - 9 a.m. and 3 p.m. - 7 p.m., Monday - Friday. Also, such work is not permitted on Saturdays, Sundays, National or State holidays or days preceding and following said holidays. These work restrictions apply unless otherwise specified in the Contract Document or permitted by the Engineer.

12.0 TRAFFIC CONTROL PLANS:

12.1 Alternate traffic control plans may be presented to the SHA District Office for approval in conformance with Specification 104.01.

12.2 For emergency repair operations, a minimum number of traffic control devices (TCD's) may be used. This generally will consist of one sign per direction. Flashing lights on the vehicle, a minimum number of channelizing devices, and flags or high level warning devices. Additional TCD's such as, arrow panel(s), more signing, etc., will be placed as soon as possible to present an array of devices which are consistent with the standard TTCTA.

12.3 All signs, channelizing devices, and other traffic control devices shall be in conformance with the latest edition of the MUTCD.

SPECIFICATION 104	CATEGORY CODE ITEMS SECTION 100	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED:	DESIGN: OFFICE OF STATE AND SAFETY	GENERAL NOTES
APPROVAL & SIGNATURE:	APPROVAL & SIGNATURE:	STANDARD NO. MD 10400-12

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: *[Signature]* Date: 1-15-04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* Date: 9/2/03

Chief, Division of Land Development: *[Signature]* Date: 7/2/03

Chief, Development Engineering Division: *[Signature]* Date: 6-27-03

[Professional Engineer Seal]
 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. 16152 Expiration Date: 8-28-14

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-889-2524

DATE: 6-12-14	REVISION: UPDATED SCHOOL NAME & SHEET TOTAL	BY: DTM	APPR:
---------------	---	---------	-------

WORK ZONE TRAFFIC CONTROL DETAILS

NORTHERN HIGH SCHOOL
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 PLAT Nos. 161112 (PARCEL 1) and 161212 (PARCEL 2A)

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 ARCHITECT: TCA ARCHITECTS LLC
 WEST FRIENDSHIP ELECTION DISTRICT No. 3

SCALE: NOT TO SCALE	ZONING: RR-DEO	G. L. W. FILE No.: 00-177
DATE: 28/JUL/03	TAX MAP - GRID: 10 19	SHEET: 48 of 48

MARRIOTTS RIDGE HIGH SCHOOL FIELD IMPROVEMENTS

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- 49 (1) TITLE SHEET
- 50 (2) EXISTING PLAN/DEMOLITION PLAN
- 51 (3) STAKE-OUT PLAN
- 52 (4) SITE PLAN AND EROSION & SEDIMENT CONTROL PLAN
- 53-56 (5-8) SITE DETAILS I, II, III & IV
- 57 (9) PIPE PROFILES
- 58 (10) EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

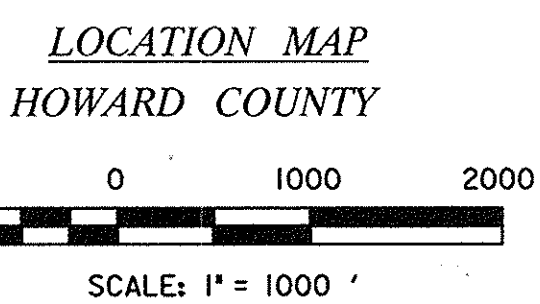
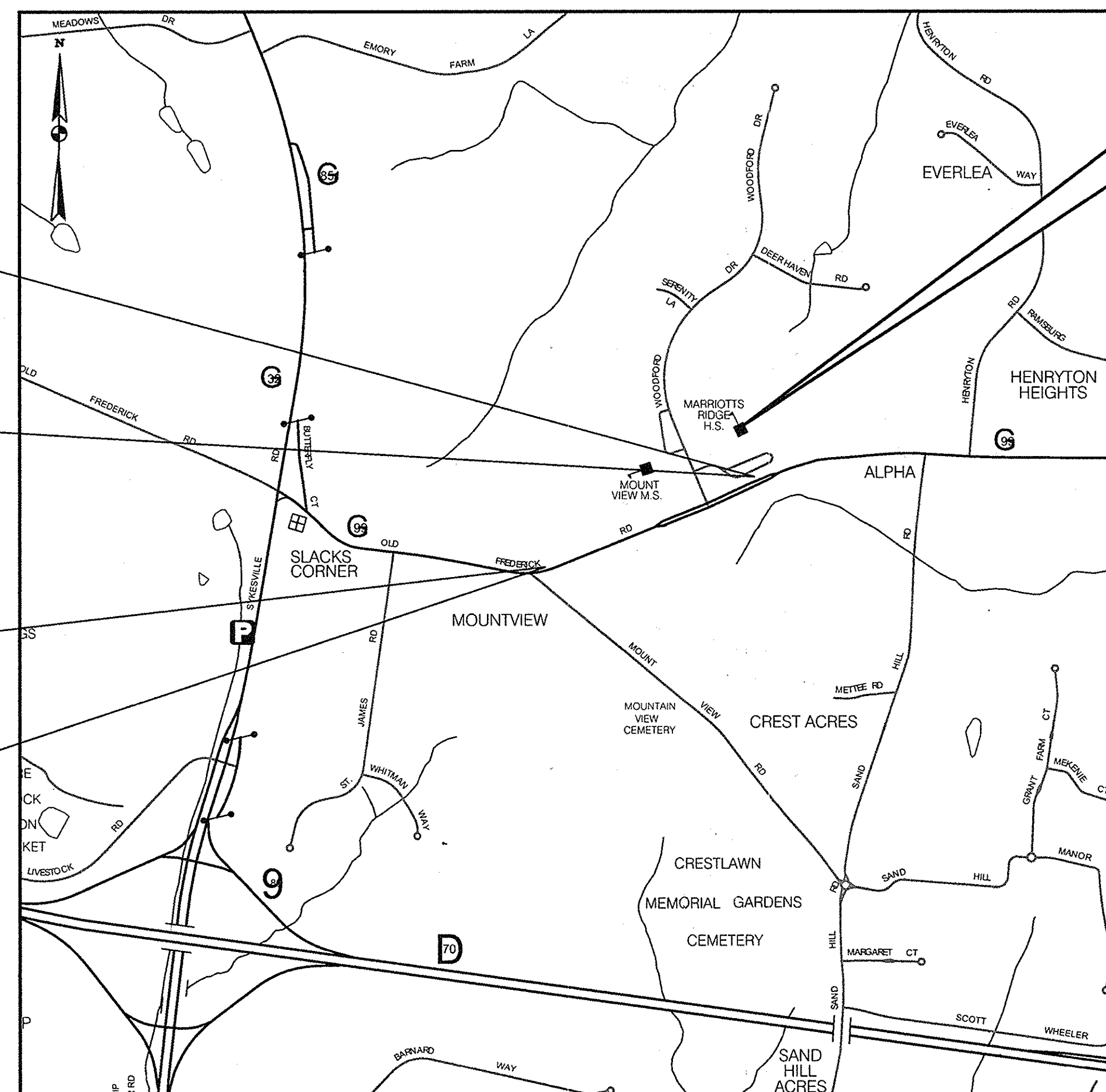
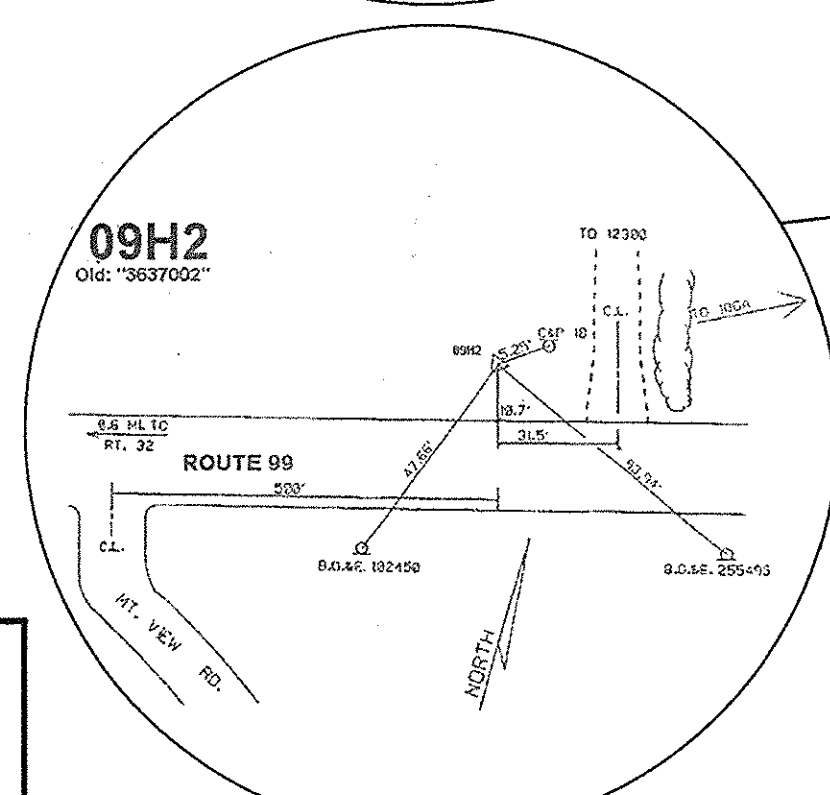
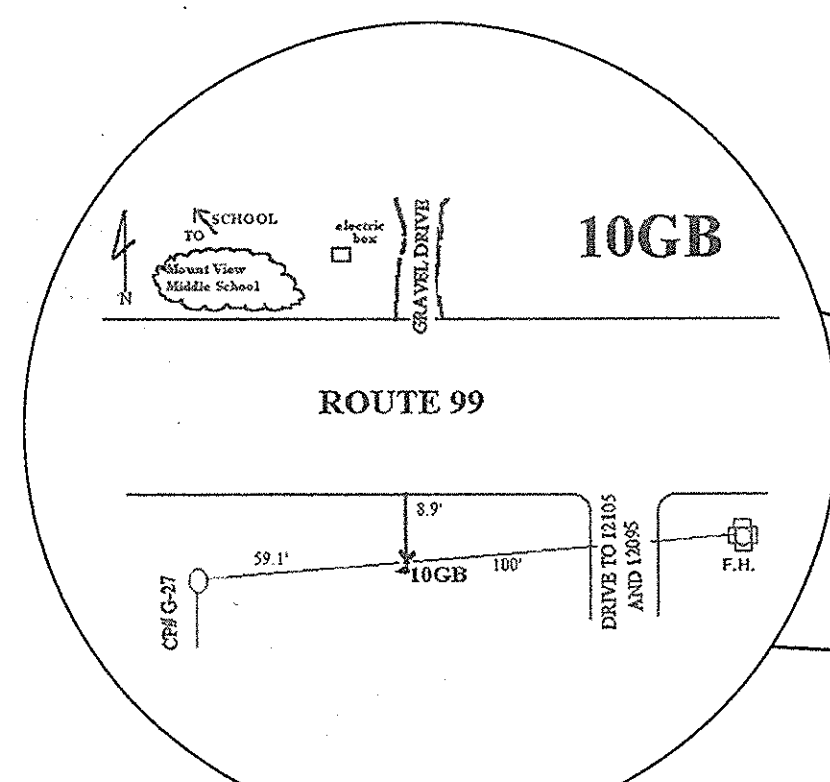
3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 HOWARD COUNTY PUBLIC SCHOOLS AT 410-313-6600 AND MISS UTILITY AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK.
 2. THE HORIZONTAL AND VERTICAL CONTROL FOR THESE PLANS ARE BASED ON THE MARYLAND STATE SYSTEM OF PLANE COORDINATES AS ESTABLISHED FROM THE FOLLOWING HOWARD COUNTY CONTROL POINTS:
09H2 & 10GB
THE SYSTEM OF COORDINATES USED IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:
HORIZONTAL: NAD83/2011
VERTICAL: NAVD88
 3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
 4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE NATURAL RESOURCES CONSERVATION SERVICE.
 5. TOPOGRAPHIC SURVEYS WERE PERFORMED BY URS CORPORATION IN JANUARY 2014.
 6. THE PROPERTY LINES AND EASEMENT LINES ARE APPROXIMATE.
 7. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
 8. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHOD, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
 9. APPROXIMATE UTILITIES ARE SHOWN FROM AVAILABLE RECORDS AND/OR FIELD RECONNAISSANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

UTILITY CONTACTS:

AT&T	1-800-252-1133
BGE (CONSTRUCTION SERVICES)	(410) 637-8713
BGE (EMERGENCY)	(410) 685-0123
HOCO 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



POINT NO.	NORTHING	EASTING	ELEVATION
09H2	601,676.6940	1,329,521.0450	640.22
10GB	602,275.9480	1,331,069.4110	406.55

DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature 5-30-14
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature 5-30-14
URS CORPORATION DAVID T. MORICANI DATE
4 NORTH PARK DRIVE
HUNT VALLEY, MD 21030

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

Signature 5/30/14
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PROFESSIONAL CERTIFICATION

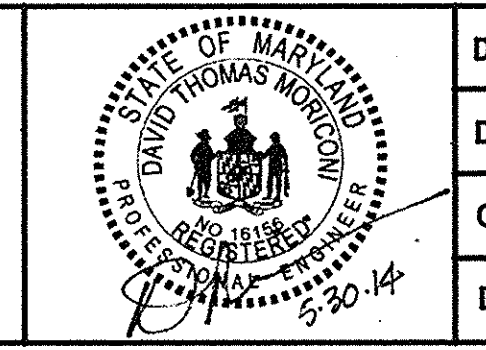
"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156 EXPIRATION DATE: 8/28/2014"

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

Signature 5/30/14
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE

Signature 6-3-14
ASSISTANT MANAGER, GROUNDS SERVICES,
HOWARD COUNTY PUBLIC SCHOOL SYSTEM DATE

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-7220



DES: RLL			
DRN: CDF			
CHK: DTM			
DATE: 04/14	BY: <i>Signature</i>	NO. 6-12-14	REVISION

TITLE SHEET

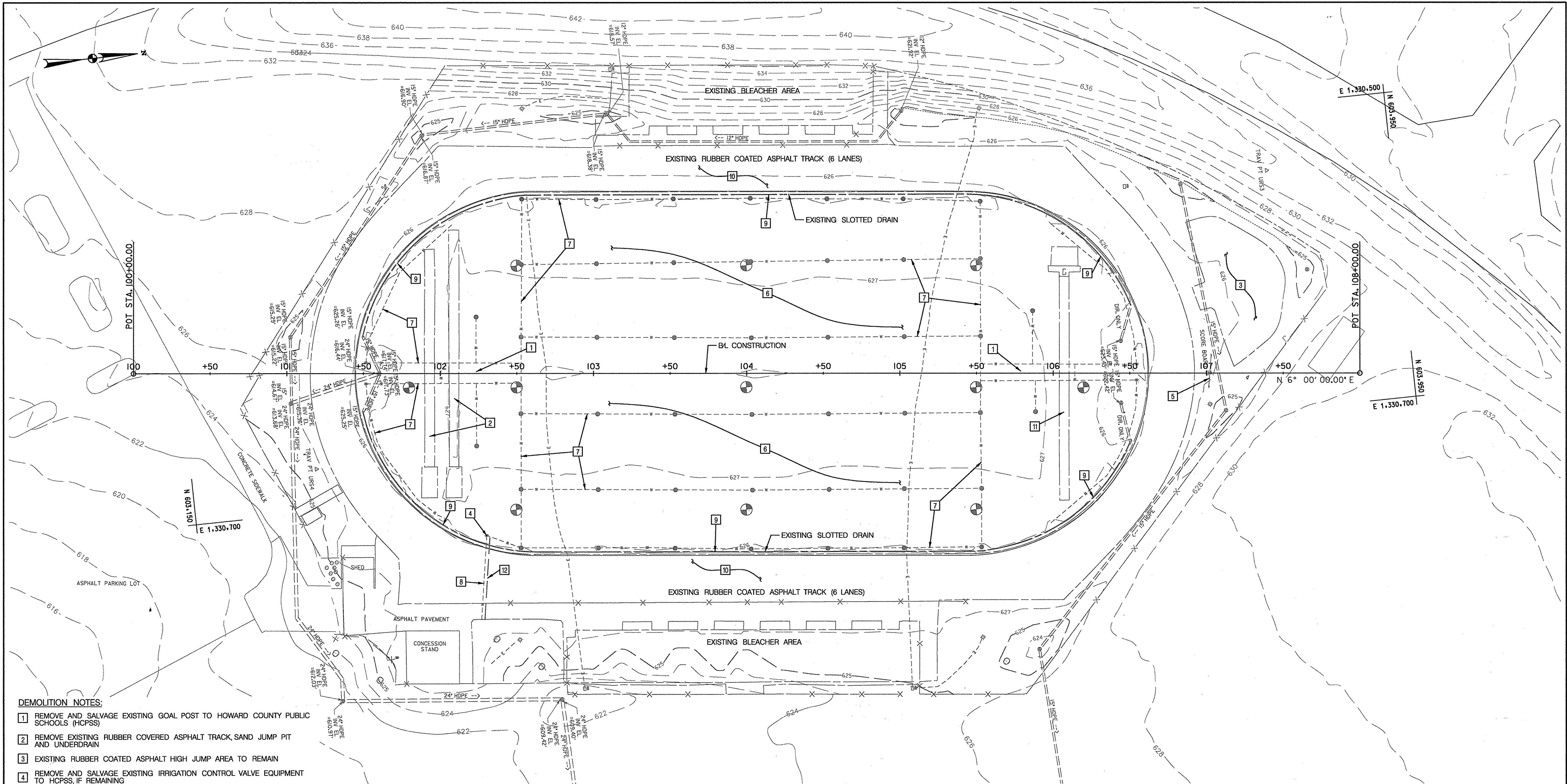
SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN
MARRIOTTS RIDGE HIGH SCHOOL
FIELD IMPROVEMENTS

3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 10
49 58



- DEMOLITION NOTES:**
- 1 REMOVE AND SALVAGE EXISTING GOAL POST TO HOWARD COUNTY PUBLIC SCHOOLS (HCPSS)
 - 2 REMOVE EXISTING RUBBER COVERED ASPHALT TRACK, SAND JUMP PIT AND UNDERDRAIN
 - 3 EXISTING RUBBER COATED ASPHALT HIGH JUMP AREA TO REMAIN
 - 4 REMOVE AND SALVAGE EXISTING IRRIGATION CONTROL VALVE EQUIPMENT TO HCPSS, IF REMAINING
 - 5 EXISTING SCOREBOARD TO REMAIN
 - 6 THERE WILL BE NO STOCKPILING OF EXISTING GRASS TURF ON SITE. THE CONTRACTOR SHALL REMOVE ALL TOPSOIL TO A SUITABLE LOCATION DETERMINED BY HOWARD COUNTY
 - 7 REMOVE EXISTING IRRIGATION LINES AND SPRINKLER HEADS, COORDINATE WITH 4
 - 8 EXISTING PVC MAIN WATER LINE TO REMAIN. THE LIMITS OF WHERE THE WATER LINE WILL REMAIN SHALL BE COORDINATED WITH HCPSS
 - 9 REMOVE EXISTING DRAINAGE STRUCTURE, BULKHEAD AND ABANDON PIPE USING FLOWABLE FILL
 - 10 EXISTING RUBBER COVERED ASPHALT TRACK TO REMAIN
 - 11 REMOVE EXISTING RUBBER COATED ASPHALT TRACK, POLE VAULT PIT AND UNDERDRAIN
 - 12 3" PVC CONDUIT FOR HYDRAULIC CONTROL TUBING AND VALVE CONTROL WIRES

GENERAL NOTE:
REFER TO SHEET 4 FOR ANY DRAINAGE DEMOLITION REQUIREMENTS.

PROFESSIONAL CERTIFICATION
"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DILIGENT LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156 EXPIRATION DATE: 8/28/2014."

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER _____ DATE _____
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 DIRECTOR _____ DATE _____
 CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____
 CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

LEGEND

- SOIL BORING TARGET
- SPRINKLER HEAD
- EXISTING CONTOUR
- X-X-X EXISTING CHAIN LINK FENCE
- - - - - EXISTING UNDERGROUND ELECTRIC
- ==== EXISTING RCP
- - - - - EXISTING IRRIGATION LINE

30' 0 30' 60'
SCALE: 1"=30'

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

John R. Spill 5/30/14 *Deanna Connor* 6-3-14
 DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM DATE

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-7220

STATE OF MARYLAND
DAVID THOMAS WOODWARD
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/28/2014

DES: RLL					
DRN: CDF					
CHK: DTM					
DATE: 04/14	DTM	NEW SHEET	6/12/14		
BY NO.		REVISION	DATE		

EXISTING PLAN / DEMOLITION PLAN

SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN
MARIOTTS RIDGE HIGH SCHOOL
FIELD IMPROVEMENTS
3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

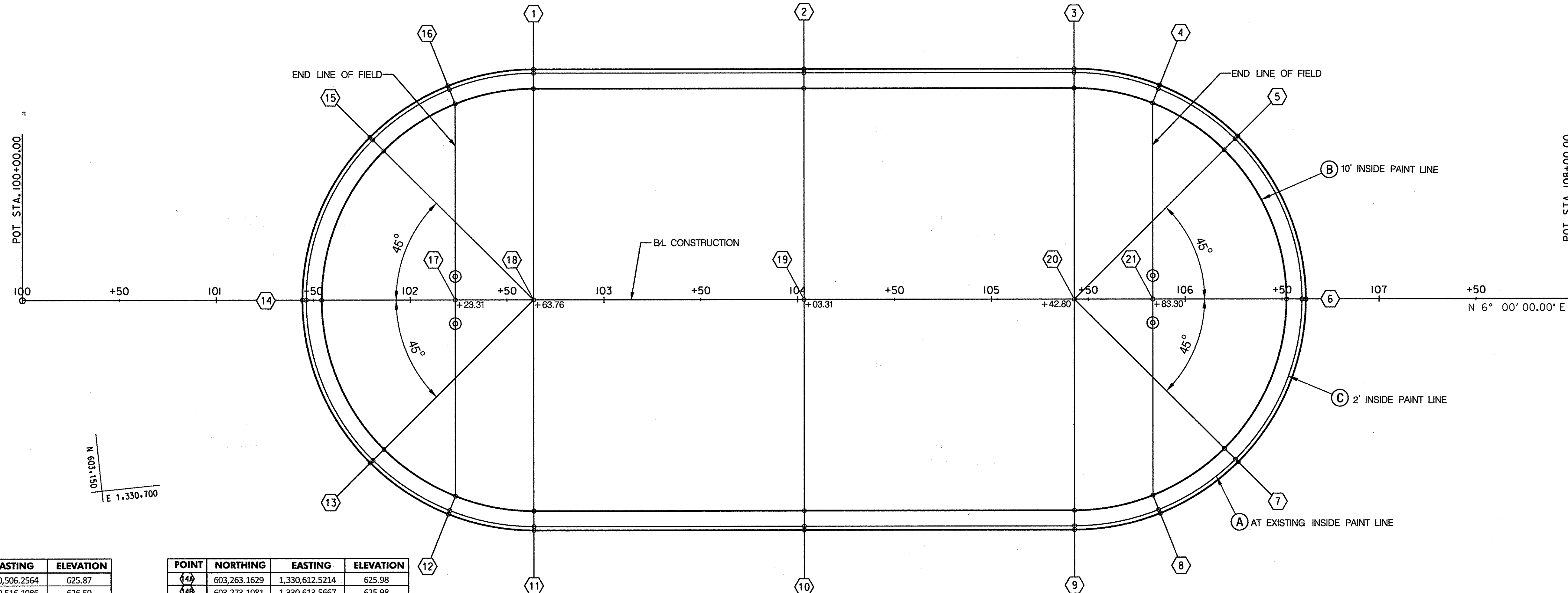
SCALE
1"=30'

SHEET
2 OF 10
50 58

I:\Projects\14\14033735 CAD\PlanSet\PHD-POOL\MARR.dgn Friday, May 30, 2014 AT 10:30 AM ronaldj.landrum



E 1.330.500
N 056° 00' 00" E



N 051° 00' 00" E
E 1.330.700

N 053° 50' 00" E
E 1.330.700

POINT	NORTHING	EASTING	ELEVATION
(1A)	603,394.3893	1,330,506.2564	625.87
(1B)	603,393.3158	1,330,516.1986	626.59
(1C)	603,394.1802	1,330,508.2454	625.83
(2A)	603,533.1473	1,330,520.8404	625.87
(2B)	603,532.1020	1,330,530.7856	626.59
(2C)	603,532.9382	1,330,522.8295	625.83
(3A)	603,671.9053	1,330,535.4245	625.92
(3B)	603,670.8318	1,330,545.3667	626.59
(3C)	603,671.6962	1,330,537.4135	625.88
(4A)	603,714.9552	1,330,548.4694	626.02
(4B)	603,710.3044	1,330,557.3220	626.63
(4C)	603,714.0250	1,330,550.2399	625.98
(5A)	603,752.2031	1,330,579.0139	625.93
(5B)	603,744.4455	1,330,585.3242	626.38
(5C)	603,750.6488	1,330,580.2725	625.89
(6A)	603,778.1704	1,330,666.6508	625.98
(6B)	603,768.2251	1,330,665.6056	625.98
(6C)	603,776.1813	1,330,666.4418	625.94
(7A)	603,734.5498	1,330,746.9739	625.99
(7B)	603,728.2566	1,330,739.2024	626.38
(7C)	603,733.2911	1,330,745.4196	625.95
(8A)	603,691.7653	1,330,769.1066	626.04
(8B)	603,689.0567	1,330,759.4804	626.63
(8C)	603,691.2236	1,330,767.1814	626.00
(9A)	603,646.9157	1,330,772.9129	626.06
(9B)	603,647.9488	1,330,763.0837	626.59
(9C)	603,647.1530	1,330,770.9268	626.02
(10A)	603,508.1859	1,330,758.3318	626.08
(10B)	603,509.2312	1,330,748.3866	626.59
(10C)	603,508.3950	1,330,756.3428	626.04
(11A)	603,369.3997	1,330,743.7448	626.07
(11B)	603,370.5014	1,330,733.8055	626.59
(11C)	603,369.6370	1,330,741.7587	626.03
(12A)	603,326.3780	1,330,730.7029	625.99
(12B)	603,331.0288	1,330,721.8502	626.63
(12C)	603,327.3082	1,330,728.9323	625.95
(13A)	603,289.1049	1,330,700.1272	626.01
(13B)	603,296.8764	1,330,693.8340	626.38
(13C)	603,290.6592	1,330,698.8686	625.97

POINT	NORTHING	EASTING	ELEVATION
(14A)	603,263.1629	1,330,612.5214	625.98
(14B)	603,273.1081	1,330,613.5667	625.98
(14C)	603,265.1519	1,330,612.7304	625.94
(15A)	603,306.7523	1,330,532.2236	625.91
(15B)	603,313.0455	1,330,539.9951	626.38
(15C)	603,308.0109	1,330,533.7779	625.87
(16A)	603,349.5679	1,330,510.0656	625.88
(16B)	603,352.2765	1,330,519.6918	626.63
(16C)	603,350.1096	1,330,511.9908	625.84
(17)	603,341.6527	1,330,620.7710	627.14
(18)	603,381.8804	1,330,624.9991	627.14
(19)	603,520.6666	1,330,639.5861	627.14
(20)	603,659.3964	1,330,654.1672	627.14
(21)	603,699.6805	1,330,658.4012	627.14

PROFESSIONAL CERTIFICATION
 "I HEREBY CERTIFY THAT 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. 16156 EXPIRATION DATE: 8/28/2014"

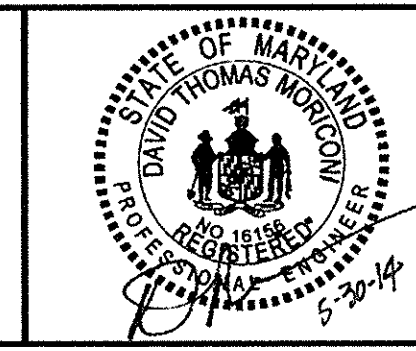
APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER _____ DATE _____
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 DIRECTOR _____ DATE _____
 CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____
 CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

NOTES:
 -FOR LONG/TRIPLE JUMP AND POLE VAULT STAKE OUT SEE SHEET 6

30' 0 30' 60'
 SCALE: 1"=30'

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 HOWARD COUNTY, MARYLAND
 DIRECTOR, HOWARD COUNTY RECREATION AND PARKS: *Adrian R. Boyd* 5/30/14
 ASSISTANT MANAGER, GROUNDS SERVICES: *James P. ...* 6-3-14
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM

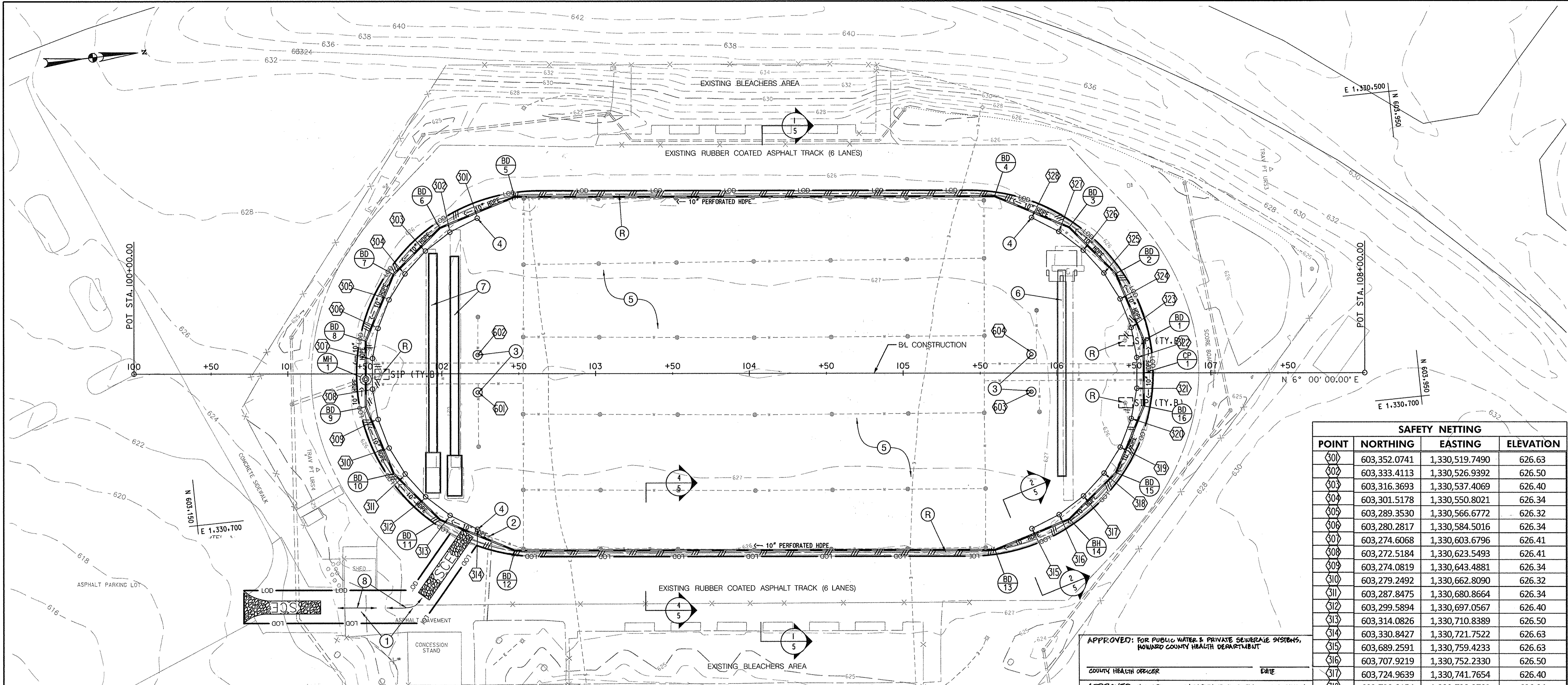
PREPARED BY
URS
 4 NORTH PARK DRIVE
 HUNT VALLEY, MARYLAND
 TEL: (410) 785-7220



DES: RLL			
DRN: CDF			
CHK: DTM			
DATE: 04/14			
BY: <i>DA</i>	NO. <i>NEW SHEET</i>	REVISION	DATE <i>6-12-14</i>

STAKE-OUT PLAN
 SCALE MAP NO. N/A BLOCK NO. _____

REVISED SITE DEVELOPMENT PLAN
MARRIOTT'S RIDGE HIGH SCHOOL
 FIELD IMPROVEMENTS
 3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
 SCALE 1" = 30'
 SHEET 51 OF 58



SAFETY NETTING			
POINT	NORTHING	EASTING	ELEVATION
300	603,352.0741	1,330,519.7490	626.63
302	603,333.4113	1,330,526.9392	626.50
303	603,316.3693	1,330,537.4069	626.40
304	603,301.5178	1,330,550.8021	626.34
305	603,289.3530	1,330,566.6772	626.32
306	603,280.2817	1,330,584.5016	626.34
307	603,274.6068	1,330,603.6796	626.41
308	603,272.5184	1,330,623.5493	626.41
309	603,274.0819	1,330,643.4881	626.34
310	603,279.2492	1,330,662.8090	626.32
311	603,287.8475	1,330,680.8664	626.34
312	603,299.5894	1,330,697.0567	626.40
313	603,314.0826	1,330,710.8389	626.50
314	603,330.8427	1,330,721.7522	626.63
315	603,689.2591	1,330,759.4233	626.63
316	603,707.9219	1,330,752.2330	626.50
317	603,724.9639	1,330,741.7654	626.40
318	603,739.8154	1,330,728.3702	626.34
319	603,751.9802	1,330,712.4950	626.32
320	603,761.0516	1,330,694.6706	626.34
321	603,766.7264	1,330,675.4926	626.41
322	603,768.8148	1,330,655.6230	626.41
323	603,767.2513	1,330,635.6842	626.34
324	603,762.0840	1,330,616.3632	626.32
325	603,753.4857	1,330,598.3058	626.34
326	603,741.7438	1,330,582.1155	626.40
327	603,727.2506	1,330,568.3334	626.50
328	603,710.4905	1,330,557.4200	626.63

GOAL POST			
POINT	NORTHING	EASTING	ELEVATION
601	603,340.3811	1,330,632.8714	627.08
602	603,342.9246	1,330,608.6713	627.08
603	603,698.4089	1,330,670.5016	627.08
604	603,700.9525	1,330,646.3015	627.08

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

- LEGEND**
- EXISTING CONTOUR
 - X-X-X EXISTING CHAIN LINK FENCE
 - EXISTING UNDERGROUND ELECTRIC
 - ==#=# ABANDON EXISTING PIPE & FILL WITH FLOWABLE FILL
 - #---# REMOVE EXISTING PIPE
 - SAFETY NETTING SLEEVES
 - SIP STANDARD INLET PROTECTION
 - SF— SILT FENCE
 - ⊗ REMOVE EXISTING STRUCTURE
 - ⊙ COMBINATION GOAL GROUND SLEEVE
 - MH MANHOLE
 - BD BEND
 - CP COUPLING

- NOTES:**
- PLACE STEEL PLATES OR OTHER ACCEPTABLE MEASURES OVER EXISTING TRACK PRIOR TO CONSTRUCTION TO PREVENT DAMAGE TO THE EXISTING TRACK. ANY DAMAGE TO EXISTING TRACK SHALL BE REPAIRED AT NO COST TO HOWARD COUNTY.
 - INSTALL WATER REEL CONNECTION BOX (SEE DETAIL SHEET). CONNECT TO EXISTING 3" WATER LINE. FINAL PLACEMENT AS DIRECTED BY THE COUNTY.
 - HOWARD COUNTY TO FURNISH SOCCER/FOOTBALL GOAL POSTS. CONTRACTOR SHALL INSTALL THE GOAL POST FOUNDATIONS WITH SLEEVES.
 - SAFETY NETTING SLEEVES. CONTRACTOR MUST COORDINATE WITH PLACEMENT OF UNDERDRAIN
 - FIELD TURF, SEE DETAIL 1/5
 - POLE VAULT (SEE DETAIL SHEET 6 FOR STAKEOUT).
 - LONG JUMP/TRIPLE EVENT (SEE DETAIL SHEET 6 FOR STAKEOUT).
 - THE CONTRACTOR SHALL REPAIR ANY DAMAGED ASPHALT OR CONCRETE AREAS AS A RESULT OF THE PROPOSED USE DURING CONSTRUCTION.

DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

A. K. Deane 5-30-14
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

David T. Moricani 5-30-14
SIGNATURE DATE

URS CORPORATION
4 NORTH PARK DRIVE
HUNT VALLEY, MD 21030

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

John R. Roberts 5/30/14
HOWARD SOIL CONSERVATION DISTRICT DATE

TYPE B HYDROLOGIC SOIL GROUP WITHIN LOD

Standard Stabilization Note

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

- Three (3) calendar days as to the surface of all perimeter 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 or graded areas on the project site not under active grading.

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT 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. 16156. EXPIRATION DATE: 3/28/2014."

David Thomas Worland 5-30-14
REGISTERED PROFESSIONAL ENGINEER

CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILE AREA AND IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL EROSION CONTROLS AS REQUIRED BY THE INSPECTOR WITHIN THE APPROVED LIMIT OF DISTURBANCE. OFFSITE STAGING, STOCKPILE, OR WASTE SITE THE CONTRACTOR UTILIZES MUST HAVE AN ACTIVE APPROVED GRADING PERMIT.

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

John R. Roberts 5/30/14
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE

Gregory Connor 6-3-14
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY, PUBLIC SCHOOL SYSTEM DATE

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 755-7220

DES: RLL
DRN: CDF
CHK: DTM
DATE: 04/14

DTM BY NO. REVISION DATE

NEW SHEET

SITE PLAN AND EROSION & SEDIMENT CONTROL PLAN

SCALE MAP NO. N/A BLOCK NO.

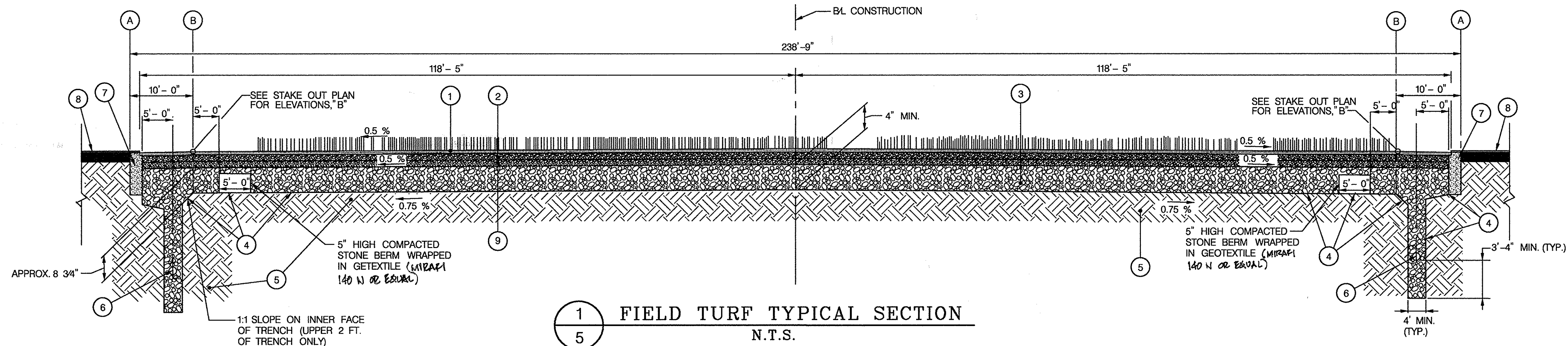
REVISED SITE DEVELOPMENT PLAN
MARIOTTS RIDGE HIGH SCHOOL
FIELD IMPROVEMENTS

3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1"=30'

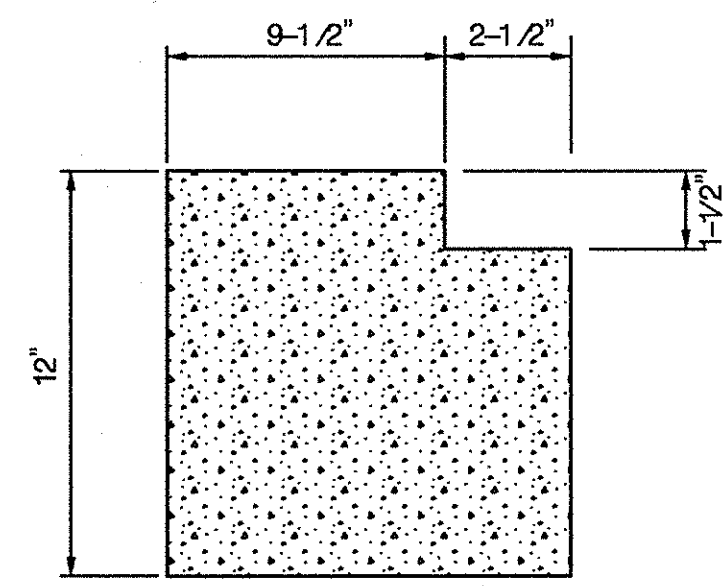
SHEET 4 OF 10
52 58

Thursday, May 29, 2014 AT 01:22 PM Joe.Yoon

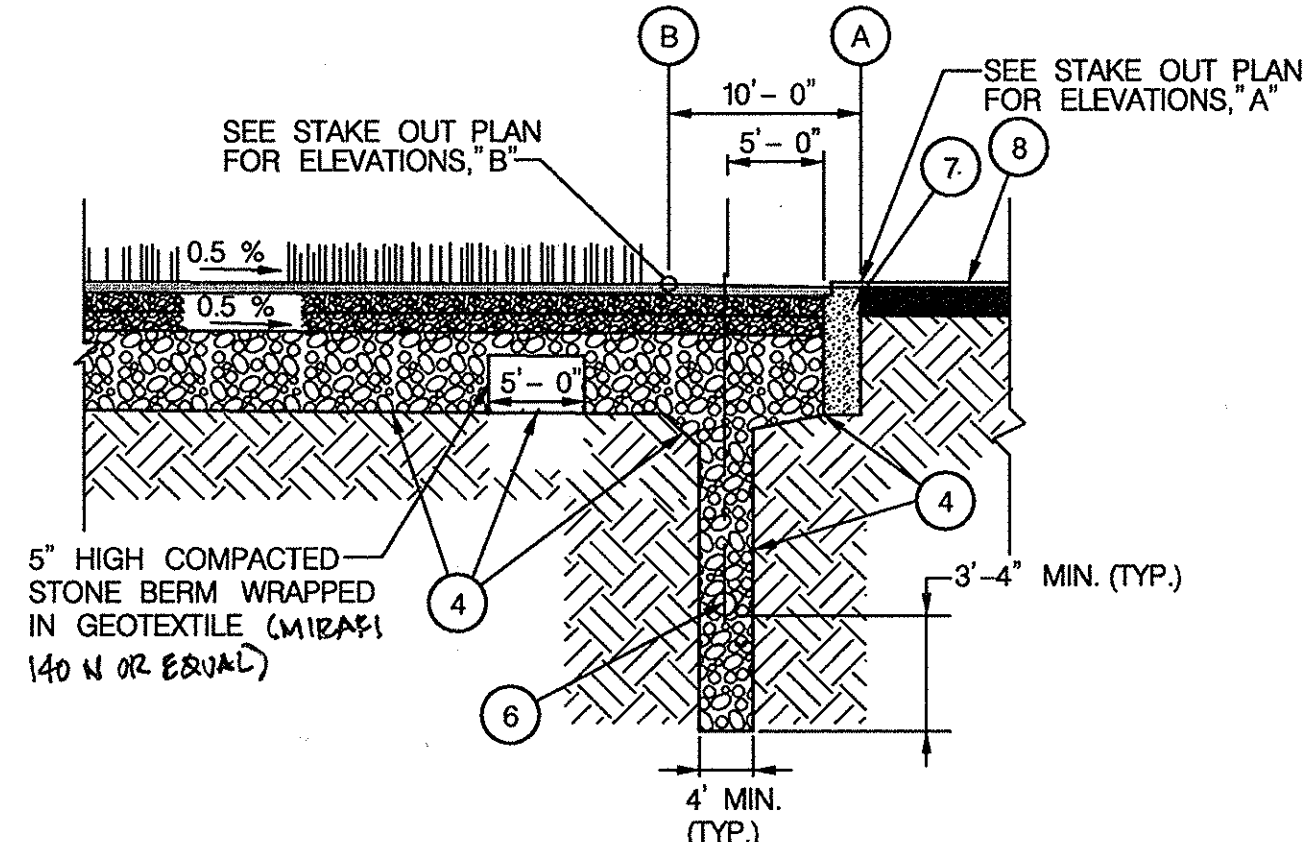


1 FIELD TURF TYPICAL SECTION
5 N.T.S.

- LEGEND**
- 1 2 - 12" PILE FIELD TURF WITH 1 - 3/4" OF INFILL.
 - 2 1" OF FINISHING STONE AS PER SPECIFICATIONS, COMPACTED TO 95% PROCTOR AND GRADED TO WITHIN 0 - 1/2" OF DESIGN GRADE AND WITHIN 0 - 1/4" IN 10 FEET (USE LASER GUIDED GRADER).
 - 3 VARIABLE DEPTH (MIN. 4" @ CENTER) #2 BASE STONE.
 - 4 GEOTEXTILE (MIRAFI 140N OR EQUAL) LINING THE TRENCH AND UNDER THE BASE.
 - 5 NATURAL SOIL COMPACTED TO 95% PROCTOR.
 - 6 10" DIAMETER PERFORATED HDPE COLLECTOR PIPE, SLOPE AT 0.5 %.
 - 7 CONCRETE CURB (SEE DETAILS THIS SHEET)
 - 8 EXISTING RUBBER COATED TRACK.
 - 9 1" OF #8 STONE.
 - 10 RUBBER COATING ON TRACK.
 - 11 FULL DEPTH SAWCUT AT CENTER OF PAINT LINE.
 - 12 CENTER OF WHITE PAINT LINE - MATCH EXISTING.

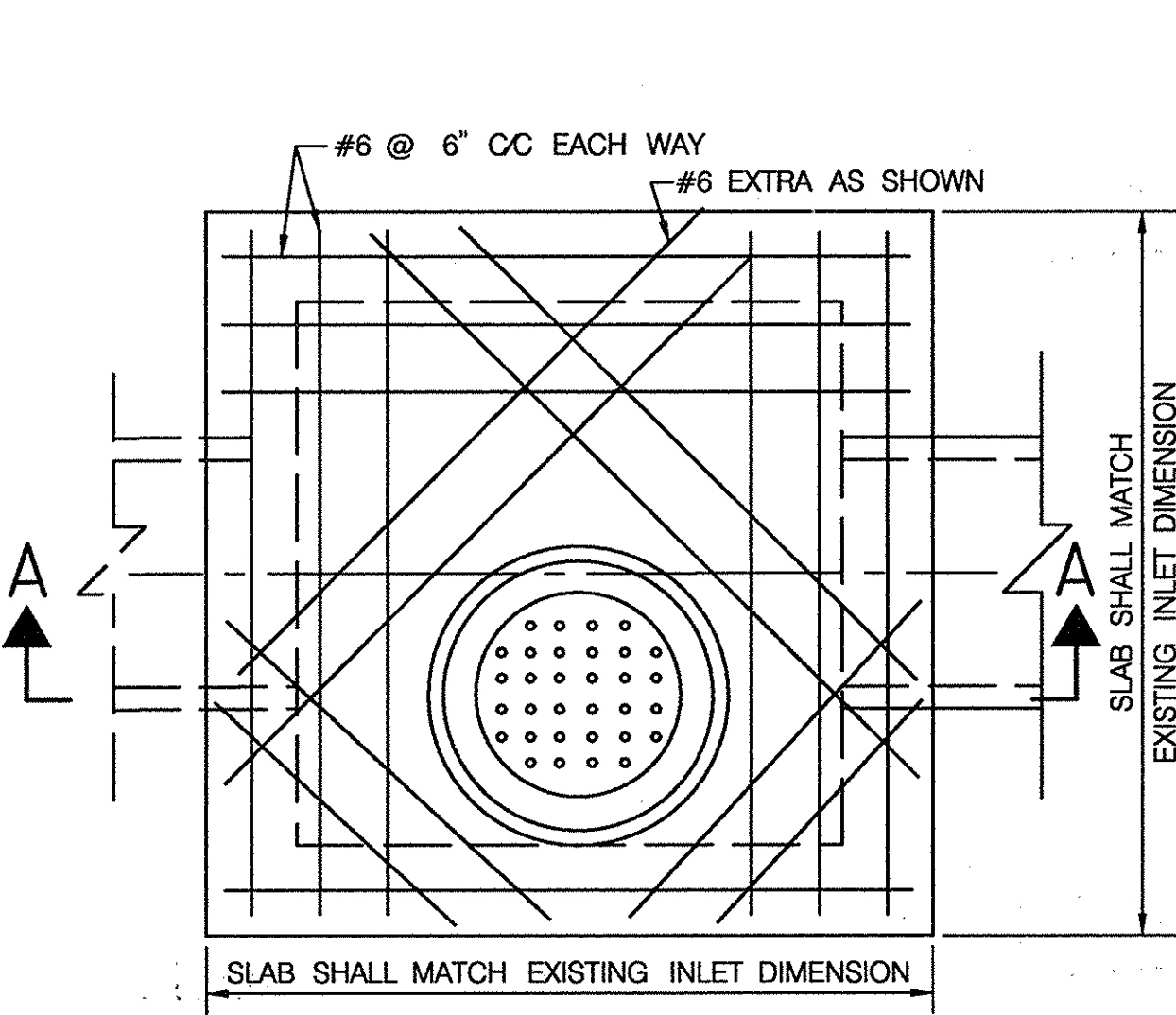


2 NAILER NOTCH
5 N.T.S.

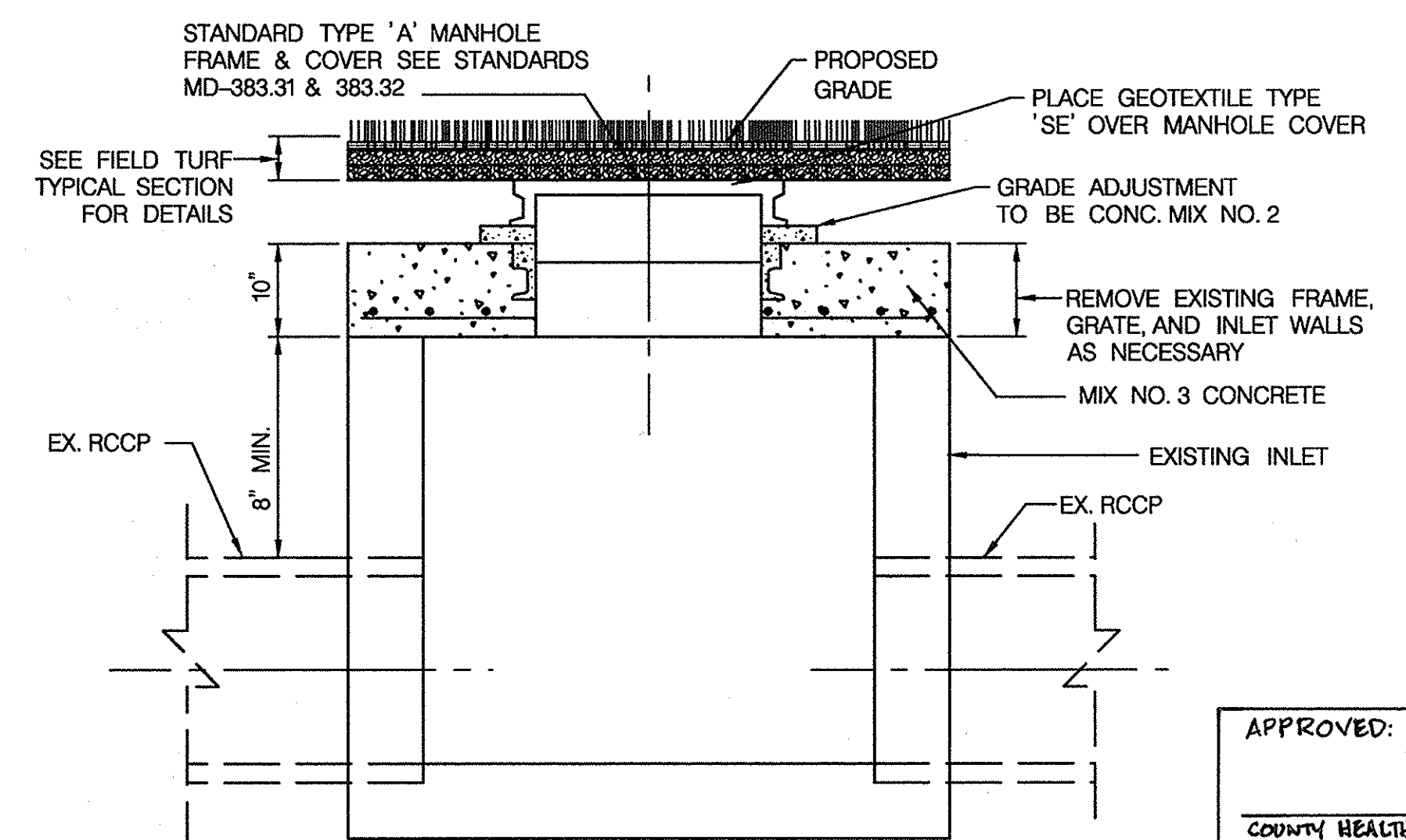


3 "D" SEMI-CIRCLE FIELD TURF TYPICAL SECTION
5 N.T.S.

- NOTES**
1. CUT AN OPENING IN THE EXISTING CONVERTED MANHOLE TO ACCOMMODATE THE NEW PIPE. BRICK AND GROUT (NON-SHRINK) EXISTING OPENINGS AND GROUT NEW PIPE.
 2. SET FRAME AND COVER TO MEET PROPOSED FINISHED GRADE.
 3. SEE MARYLAND STANDARD MD-383.31 & 383.32 FOR THE STANDARD TYPE 'A' MANHOLE FRAME AND COVER.
 4. MANHOLE FRAME AND COVER TO BE PLACED AS SHOWN.

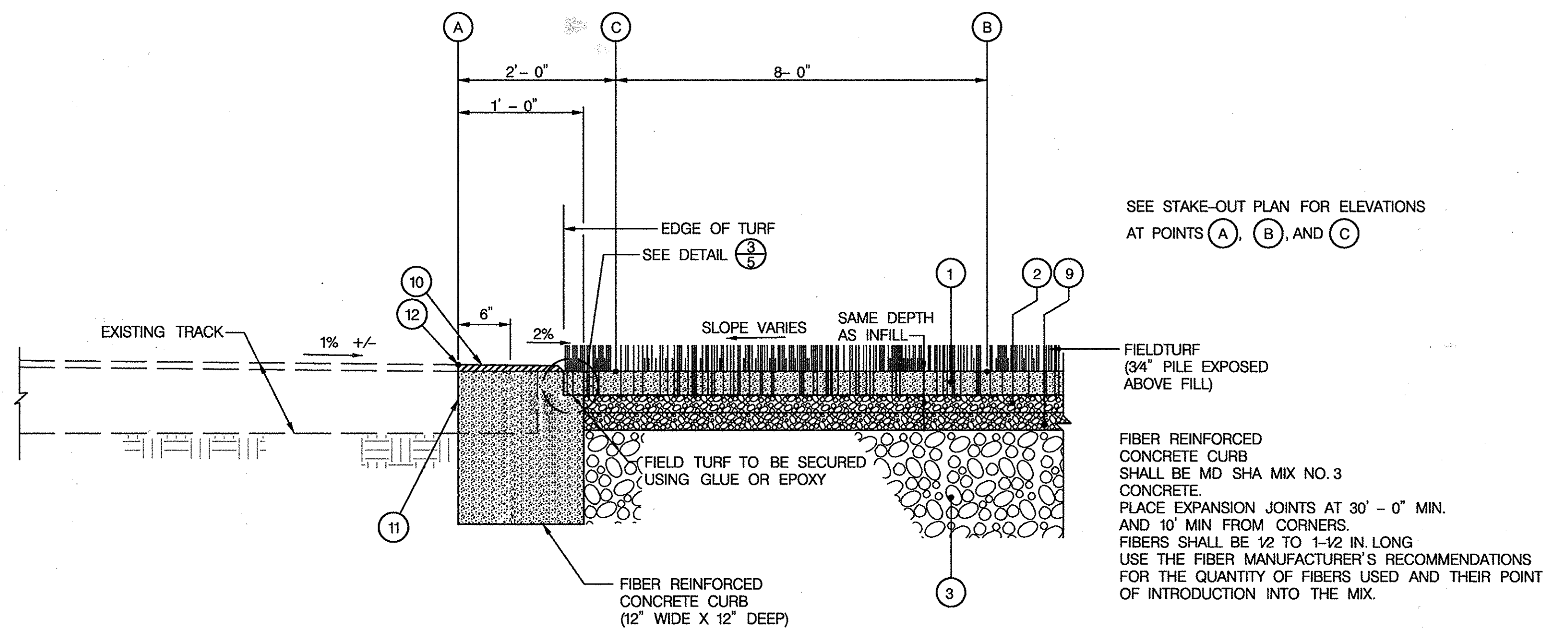


PLAN
NOTE:
MANHOLE FRAME AND COVER TO BE PLACED AS SHOWN.



SECTION A-A

GRATE INLET TO MANHOLE CONVERSION
NOT TO SCALE



4 CONCRETE CURB EDGE
5 N.T.S.

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT 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. 16156 EXPIRATION DATE: 8/28/2014."

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-2200

DATE: 04/14

DATE: 5/20/14

DATE: 6-3-14

DES: RLL

DRN: CDF

CHK: DTM

DATE: 04/14

DATE: 6-12-14

DATE: 04/14

DATE: 6-12-14

DATE: 6-12-14

DATE: 6-12-14

DATE: 6-12-14

DATE: 6-12-14

REVISOR: [Signature]

DATE: 6-12-14

DATE: 6-12-14

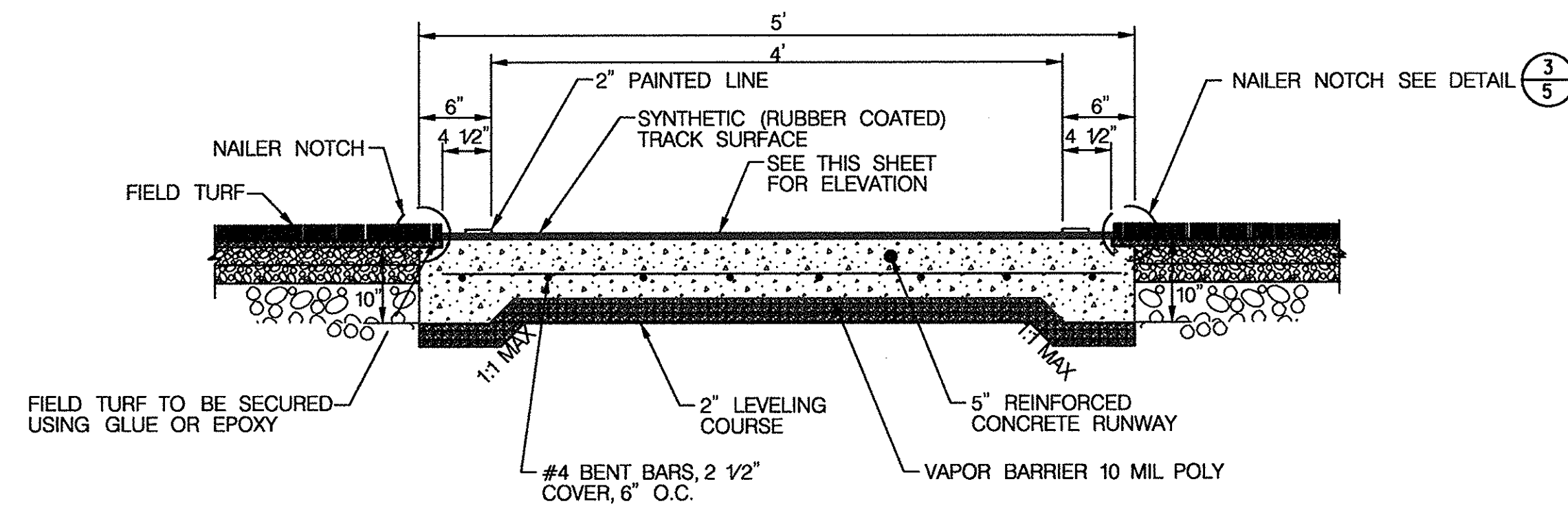
DATE: 6-12-14

SCALE AS SHOWN

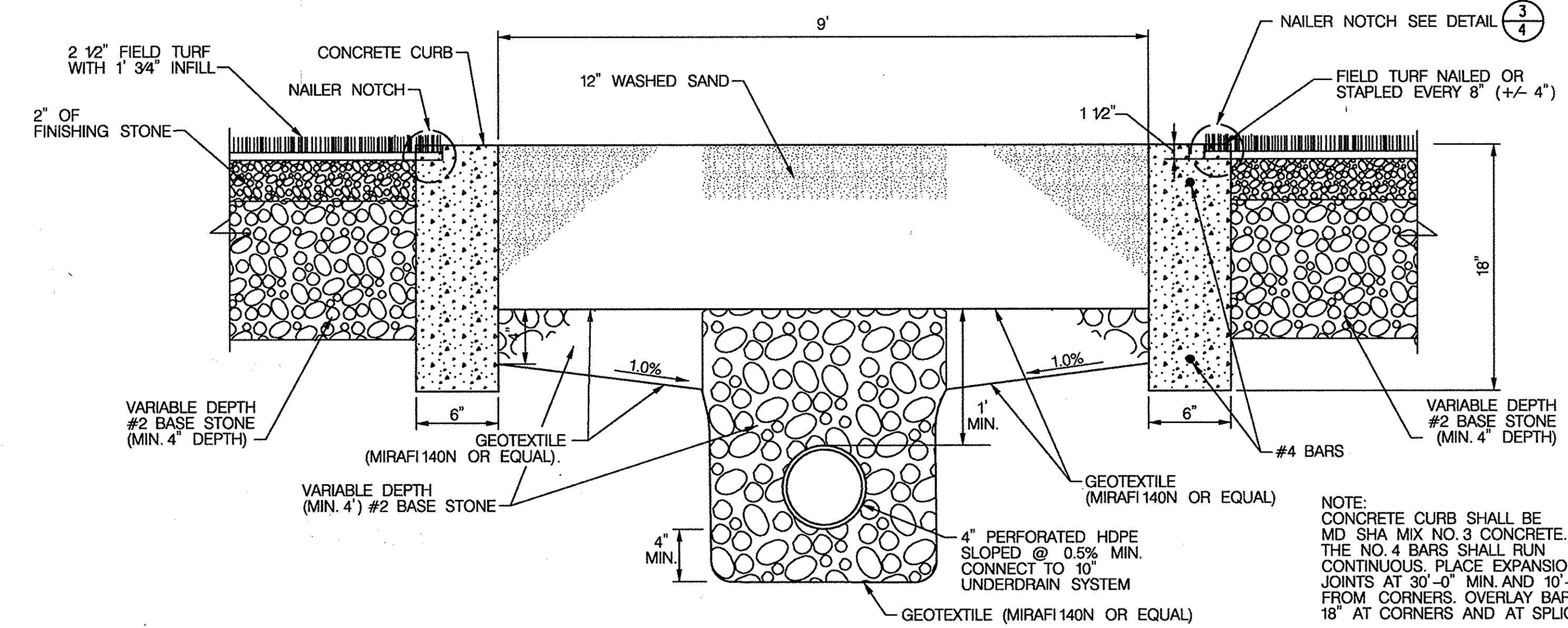
SHEET 5 OF 10

53 58

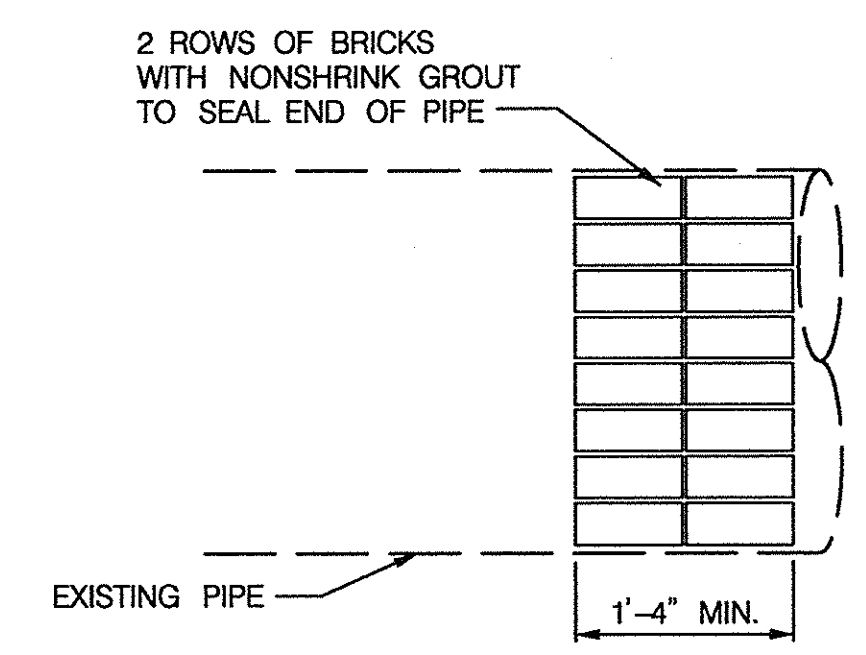
Friday, May 30, 2014 AT 10:31 AM ronald.londrum



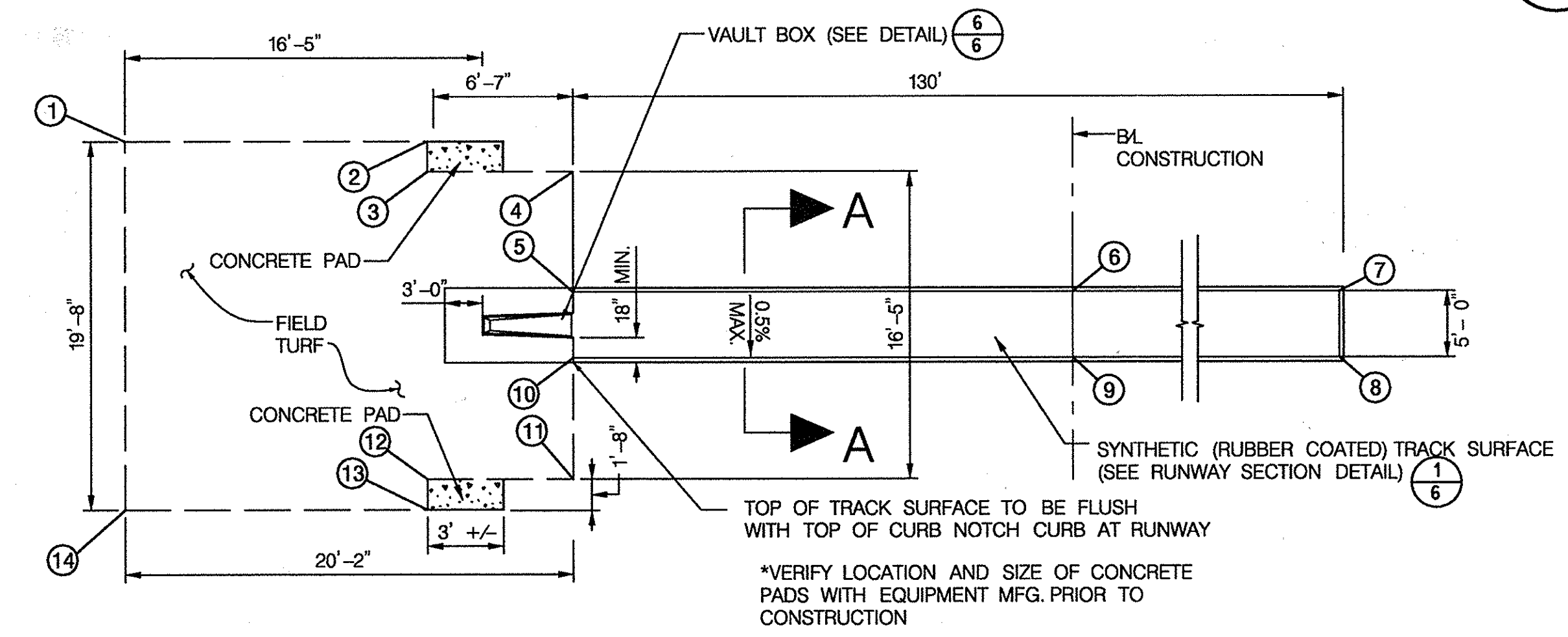
1 SECTION A-A THRU POLE VAULT RUNWAY
6 N.T.S.



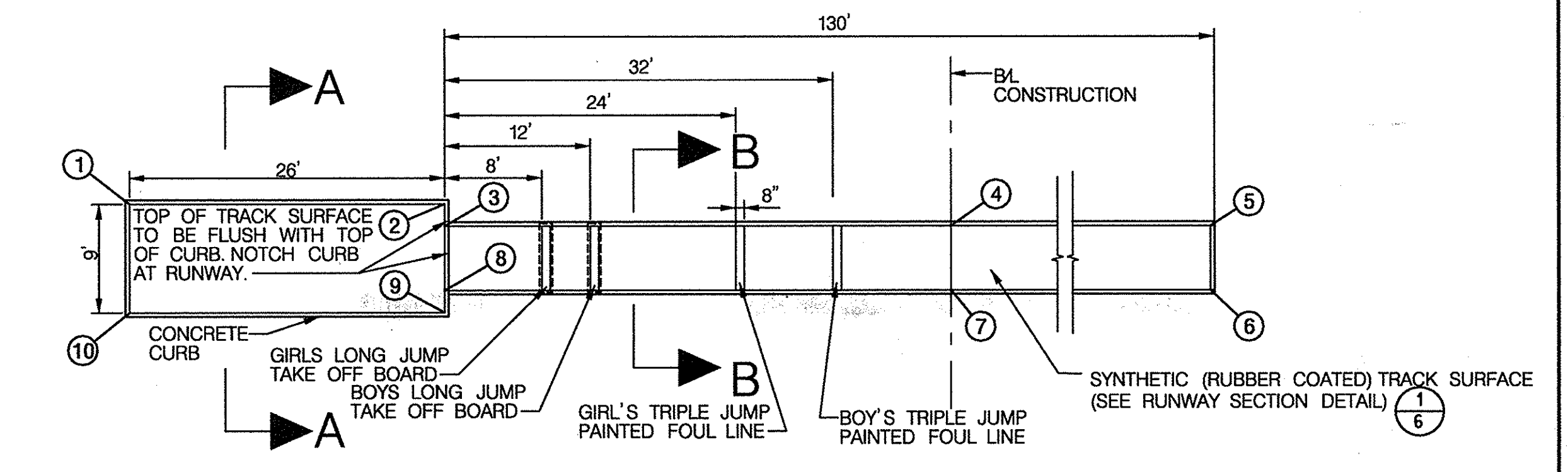
2 SECTION A-A JUMP PIT DETAIL
6 N.T.S.



3 PERMANENT BULKHEAD EXISTING PIPE
6 N.T.S.



4 POLE VAULT DETAIL
6 N.T.S.



5 LONG / TRIPLE JUMP DETAIL
6 N.T.S.

POLE VAULT			
POINT	NORTHING	EASTING	ELEVATION
1	603,737.5469	1,330,581.9405	626.44
2	603,736.2142	1,330,594.6206	626.51
3	603,734.5566	1,330,594.4464	626.52
4	603,733.8228	1,330,601.8269	626.56
5	603,728.1458	1,330,601.2302	626.62
6	603,721.8915	1,330,660.7357	626.92
7	603,714.8723	1,330,727.5185	626.58
8	603,709.8997	1,330,726.9959	626.63
9	603,716.9189	1,330,660.2131	626.97
10	603,723.1732	1,330,600.7075	626.67
11	603,717.4961	1,330,600.1109	626.72
12	603,718.2714	1,330,592.7348	626.69
13	603,716.6553	1,330,592.5649	626.70
14	603,717.9880	1,330,579.8848	626.64

LONG/TRIPLE JUMP "B"			
POINT	NORTHING	EASTING	ELEVATION
1	603,300.2266	1,330,694.4264	626.42
2	603,302.9444	1,330,668.5688	626.55
3	603,304.9334	1,330,668.7779	626.57
4	603,310.3252	1,330,617.4783	626.82
5	603,318.5221	1,330,539.4900	626.43
6	603,323.4947	1,330,540.0127	626.48
7	603,315.2978	1,330,618.0010	626.88
8	603,309.9060	1,330,669.3005	626.62
9	603,311.8951	1,330,669.5096	626.64
10	603,309.1773	1,330,695.3672	626.51

LONG/TRIPLE JUMP "B"			
POINT	NORTHING	EASTING	ELEVATION
1	603,313.9495	1,330,697.7972	626.55
2	603,316.6672	1,330,671.9396	626.68
3	603,318.6563	1,330,672.1487	626.70
4	603,324.2485	1,330,618.9417	626.97
5	603,332.2450	1,330,542.8608	626.58
6	603,337.2176	1,330,543.3835	626.63
7	603,329.2211	1,330,619.4644	627.02
8	603,323.6289	1,330,672.6713	626.75
9	603,325.6179	1,330,672.8804	626.77
10	603,322.9002	1,330,698.7379	626.64

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: _____ DATE: _____

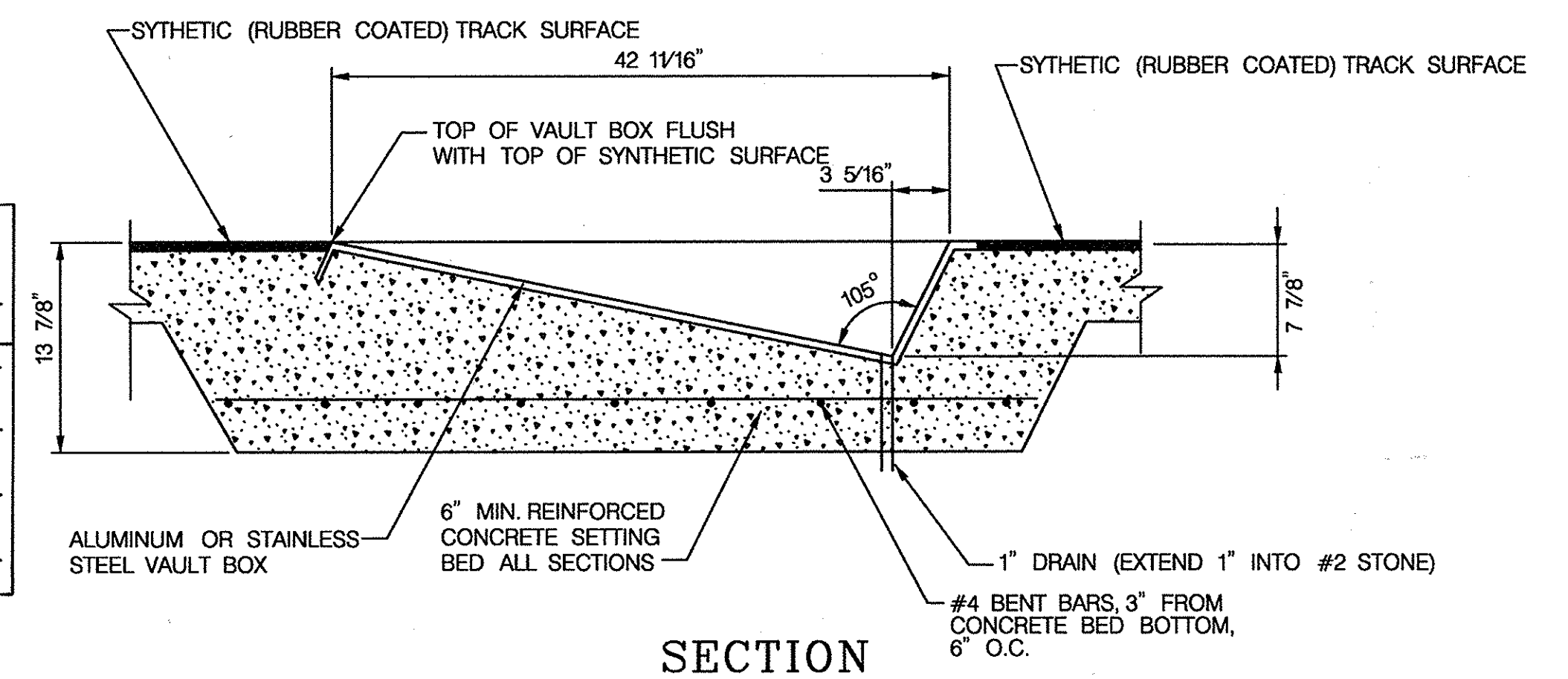
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR: _____ DATE: _____

CHIEF, DIVISION OF LAND DEVELOPMENT: _____ DATE: _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION: _____ DATE: _____

NOTES:
1. VERIFY LOCATION AND SIZE OF CONCRETE PADS WITH EQUIPMENT MFG. PRIOR TO CONSTRUCTION.
2. SEE 1/6 FOR BASE MATERIAL.
3. WORK POINTS ALONG POLE VAULT AND LONG/TRIPLE JUMP RUN WAYS ARE APPLIED TO INSIDE LINE.
BOYS LONG JUMP TAKE OFF BOARD AND GIRLS LONG JUMP TAKE OFF BOARD SHOULD BE A NON-METALIC MATERIAL.



6 SECTION THROUGH VAULT BOX
6 N.T.S.

PROFESSIONAL CERTIFICATION
"I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2014"

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-7220

5/26/14
DATE

6.3.14
DATE

ASSISTANT MANAGER, GROUNDS SERVICES
HOWARD COUNTY PUBLIC SCHOOL SYSTEM

DES: RLL
DRN: CDF
CHK: DTM
DATE: 04/14

STATE OF MARYLAND
DAVID THOMAS
COMMISSIONER
REGISTRATION DIVISION

SCALE MAP NO. N/A BLOCK NO.

REVISION

DATE

BY NO.

DATE

SCALE MAP NO. N/A BLOCK NO.

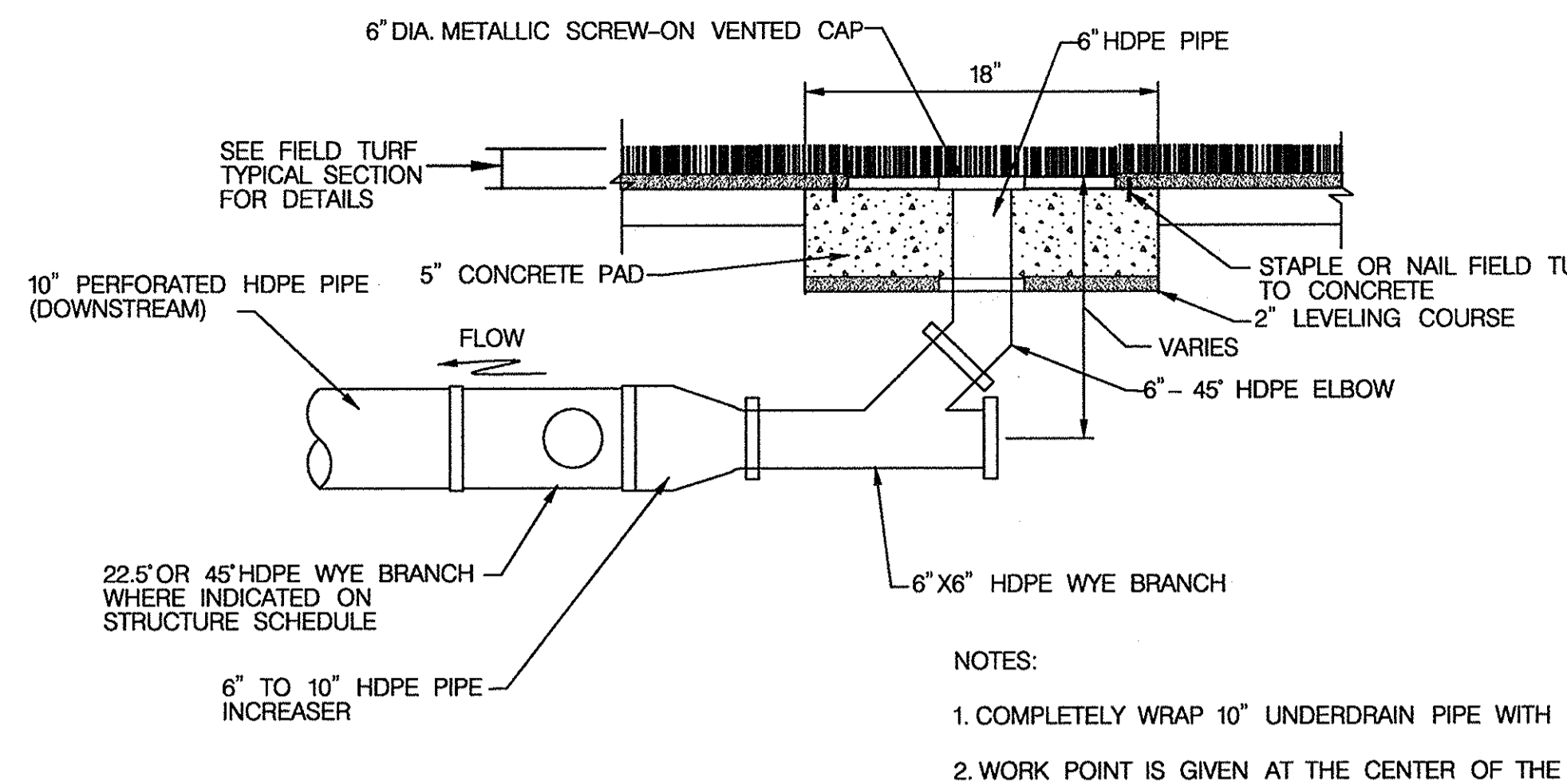
SITE DETAILS II

REVISED SITE DEVELOPMENT PLAN
MARRIOTT'S RIDGE HIGH SCHOOL
FIELD IMPROVEMENTS

3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 54 OF 58

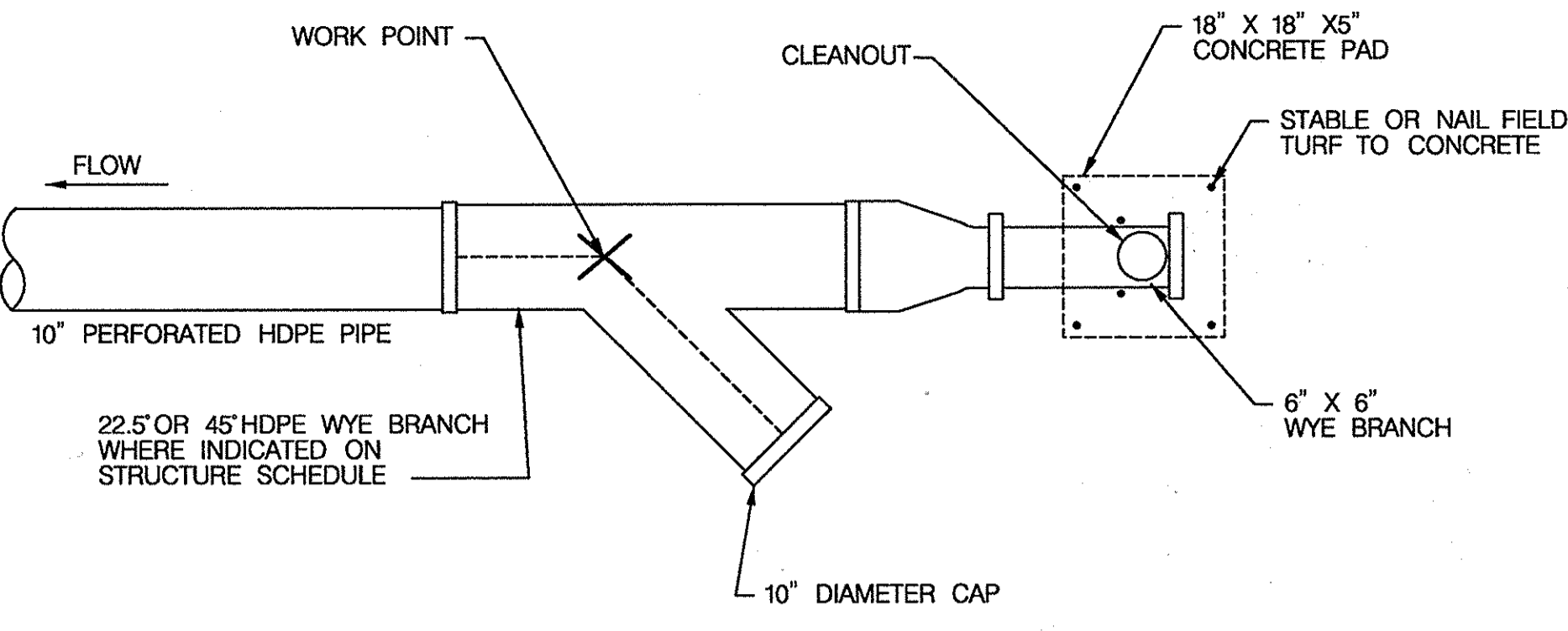


NOTES:
 1. COMPLETELY WRAP 10" UNDERDRAIN PIPE WITH FILTER FABRIC DURING INSTALLATION.
 2. WORK POINT IS GIVEN AT THE CENTER OF THE 22.5' OR 45' HDPE WYE BRANCH.

**CLEANOUT / WYE BRANCH DETAIL (C.O.)
 (ONE DIRECTION)**

1A
 7

N.T.S.



NOTES:
 1. COMPLETELY WRAP 10" UNDERDRAIN PIPE WITH FILTER FABRIC DURING INSTALLATION.
 2. WORK POINT IS GIVEN AT THE CENTER OF THE 22.5' OR 45' HDPE WYE BRANCH.

**CLEANOUT / WYE BRANCH DETAIL (C.O.)
 (BI DIRECTIONAL)**

1B
 7

N.T.S.

LOCATION POINT		STRUCTURE SCHEDULE				
NO.	NORTHING	EASTING	TYPE	Inv. In	Inv. Out	Top Elev.
CP-1	603,772.2032	1,330,666.0237	10" X 10" FLEX-SEAL RUBBER COUPLING	--	--	--
BD-1	603,774.4393	1,330,644.7493	22.5 DEG. BEND	--	--	--
BD-2	603,761.0150	1,330,599.4298	22.5 DEG. BEND	--	--	--
BD-3	603,734.0907	1,330,566.1810	22.5 DEG. BEND	--	--	--
BD-4	603,687.9596	1,330,541.1339	22.5 DEG. BEND	--	--	--
BD-5	603,377.4987	1,330,508.5031	22.5 DEG. BEND	--	--	--
BD-6	603,327.1681	1,330,523.4117	22.5 DEG. BEND	--	--	--
BD-7	603,293.9194	1,330,550.3361	22.5 DEG. BEND	--	--	--
BD-8	603,271.3660	1,330,591.8742	22.5 DEG. BEND	--	--	--
BD-9	603,266.8940	1,330,634.4229	22.5 DEG. BEND	--	--	--
BD-10	603,280.3182	1,330,679.7424	22.5 DEG. BEND	--	--	--
BD-11	603,307.2425	1,330,712.9912	22.5 DEG. BEND	--	--	--
BD-12	603,353.3736	1,330,738.0383	22.5 DEG. BEND	--	--	--
BD-13	603,663.8345	1,330,770.6691	22.5 DEG. BEND	--	--	--
BD-14	603,714.1651	1,330,755.7605	22.5 DEG. BEND	--	--	--
BD-15	603,747.4138	1,330,728.8362	22.5 DEG. BEND	--	--	--
BD-16	603,769.9672	1,330,687.2981	22.5 DEG. BEND	--	--	--
MH-1	603,268.7738	1,330,616.5375	STANDARD 4 FT. CIRCULAR MANHOLE (STD. MD-383.21)	619.00 / 619.00	616.27	625.72

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT

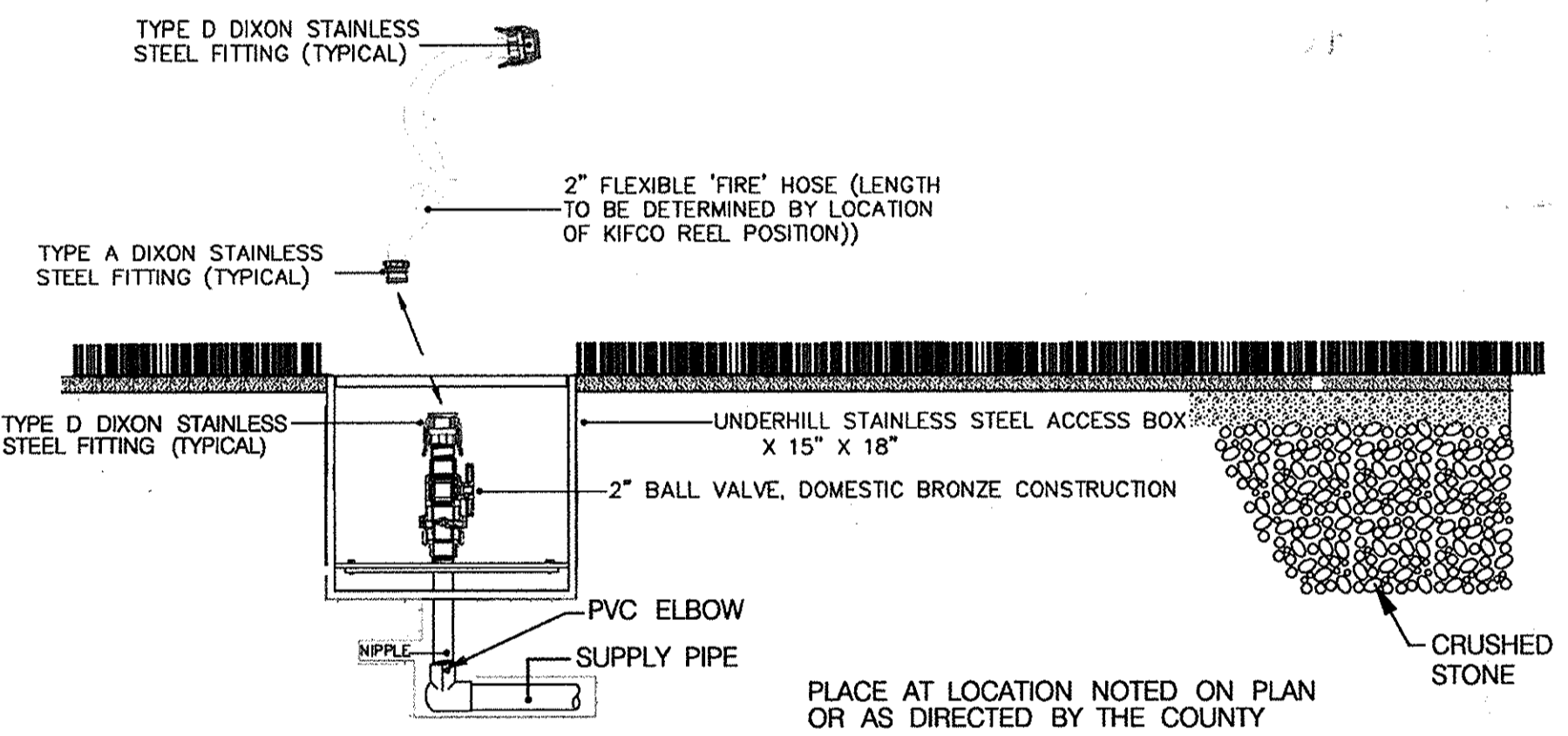
COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____



**2
 7** WATER REEL CONNECTION DETAIL
 N.T.S.

1. Lay each pole on the ground and assemble as shown. After the rope is fed through the pulley, knot tied in the rope at the 20' mark will keep the rope from pulling out when raising or lowering the net. Set the assembled poles into the ground sleeves with the pulleys facing the side you want the net. Lower the net hook to the ground and tie off the rope.
2. To minimize sag, the net is supported by a vinyl coated steel cable at the top. To install the cable, weave it in and out through every 5th net opening just below the top edge of the net. When finished, the loops at each end of the cable should be even with the ends of the net.
4. Lay out the net beside the net poles. At each pole, hook both the net binding and the cable. At each end be sure the hook is through the cable loop.
5. Raise the net to the top of the poles and tie off the ropes. Weave the ground net cable through the net in the same way as the top net support cable. This is the shorter cable and should be rather taught as it runs from pole to pole. Secure the bottom of the net and cable to the lower eyebolts with the 5/16" snap hooks.

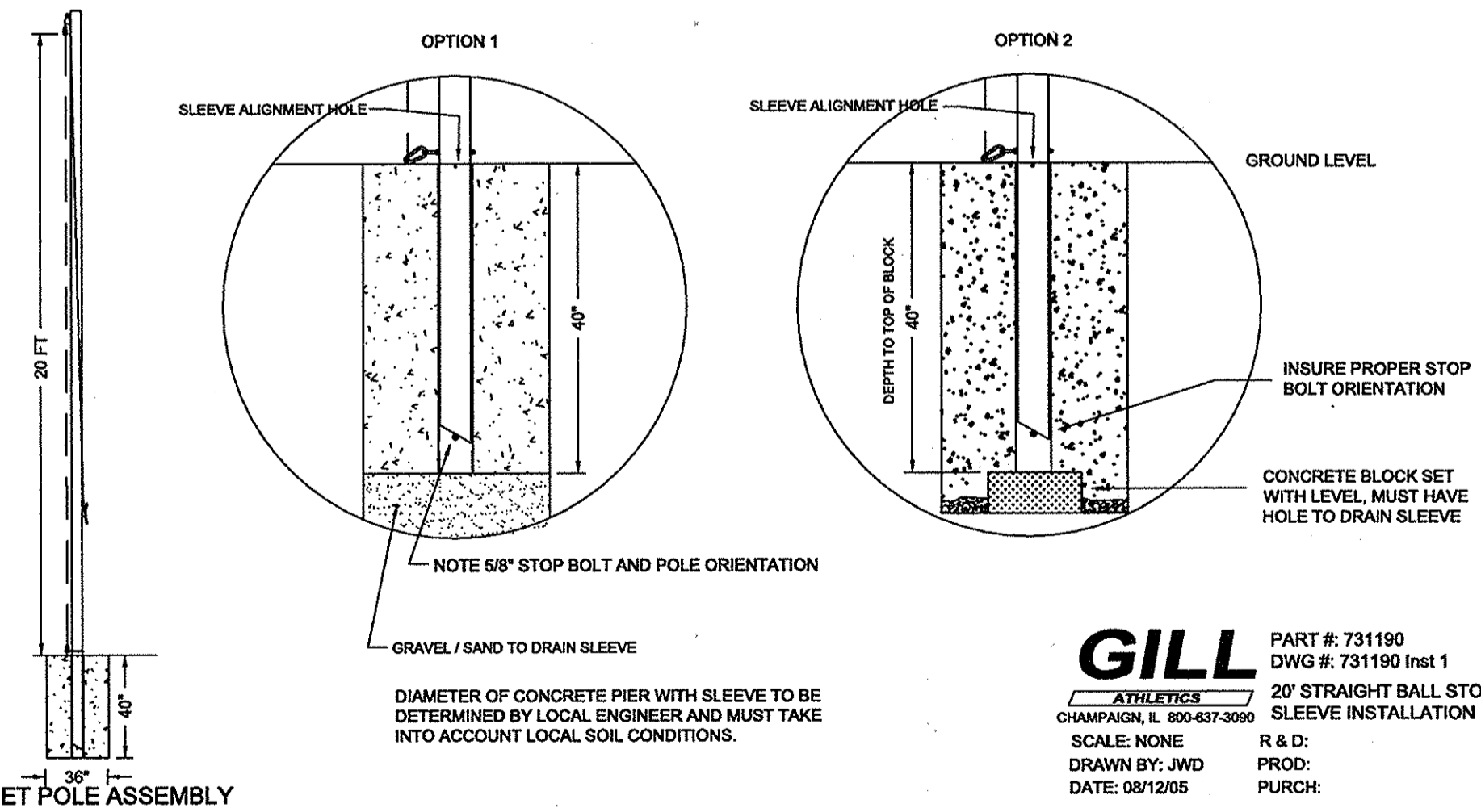
GILL PART #: 731190
 ATHLETICS DWG #: 731190 net 2
 CHAMPAGN, IL 60947-3050 NET POLE ASSEMBLY
 SCALE: NONE R & D:
 DRAWN BY: JWD PROCD:
 DATE: 08/12/05 PURCH:

PROFESSIONAL CERTIFICATION
 "I HEREBY CERTIFY THAT 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. 16156
 EXPIRATION DATE: 8/28/2014

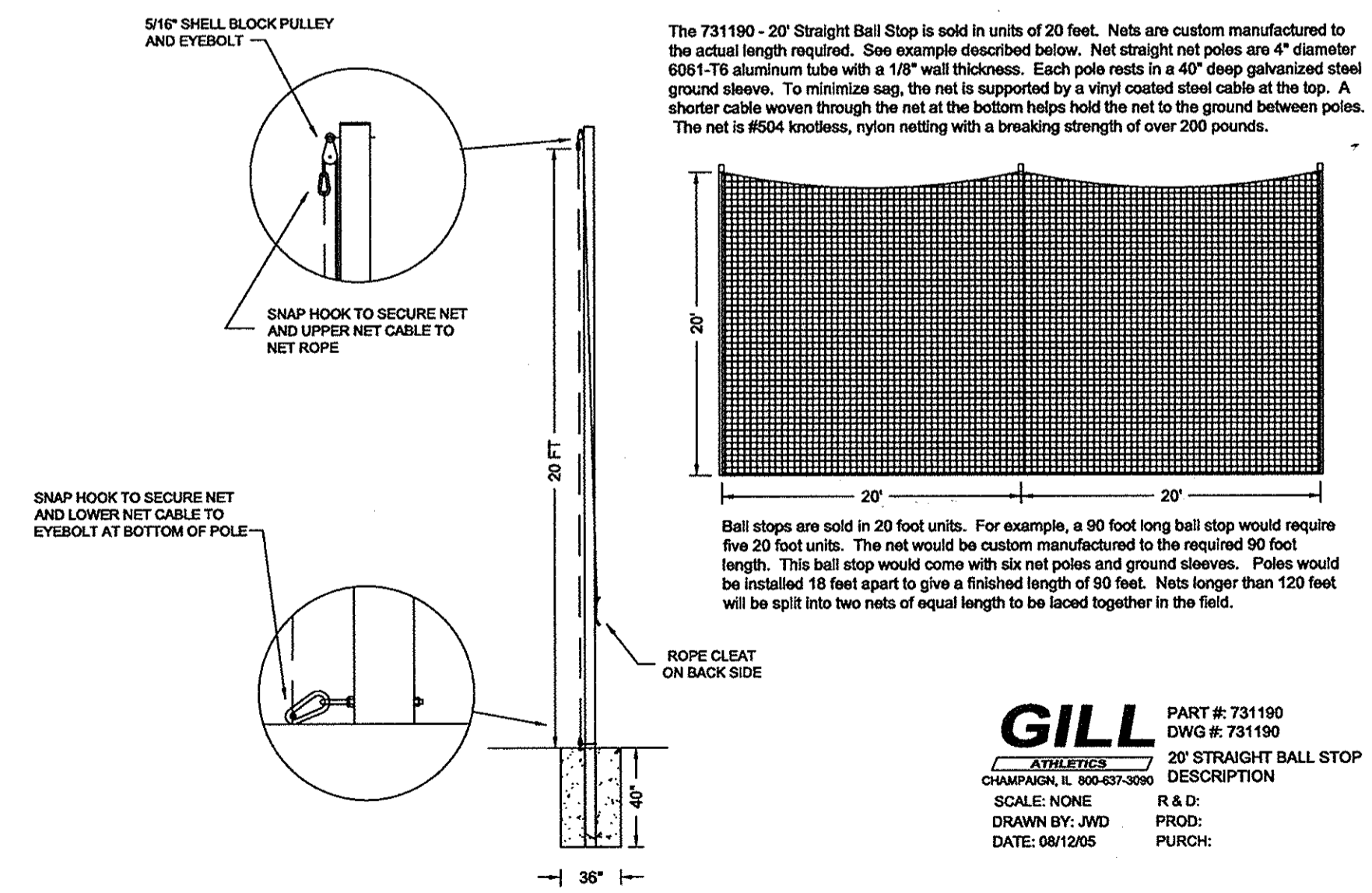
GROUND SLEEVE INSTALLATION

NOTE: The proper orientation of the 5/8" sleeve stop bolt determines the proper orientation of the net pole. Each sleeve has a 1/4" through hole at the top edge through which string could be tied as a visible reference to help insure proper alignment.

1. Dig holes for sleeves at staked locations. Size of holes are dependent on equipment used and must take into account soil conditions to support the poles.
2. Position and level gravel or a concrete block at the bottom of the hole so that the sleeve opening rests at the proper height at the surface.
3. Fix and support the sleeve in position with wire and/or sections of rebar to prevent sleeve movement during the concrete pour.
4. During the concrete pour, insure the alignment holes at the top opening of the sleeve remain properly aligned. These holes help orient the pole alignment pins at the bottom of the sleeves.



**3
 7** SAFETY NETTING DETAILS
 N.T.S.



GILL PART #: 731190
 ATHLETICS DWG #: 731190
 CHAMPAGN, IL 60947-3050
 SCALE: NONE R & D:
 DRAWN BY: JWD PROCD:
 DATE: 08/12/05 PURCH:

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 HOWARD COUNTY, MARYLAND

PREPARED BY
URS
 4 NORTH PARK DRIVE
 HUNT VALLEY, MARYLAND
 TEL: (410) 785-1220



DES: RLL					
DRN: CDF					
CHK: DTM					
DATE: 04/14	DRM	BY	NO.	REVISION	DATE
					6/12/14

SITE DETAIL III

REVISED SITE DEVELOPMENT PLAN
 MARRIOTT'S RIDGE HIGH SCHOOL
 FIELD IMPROVEMENTS

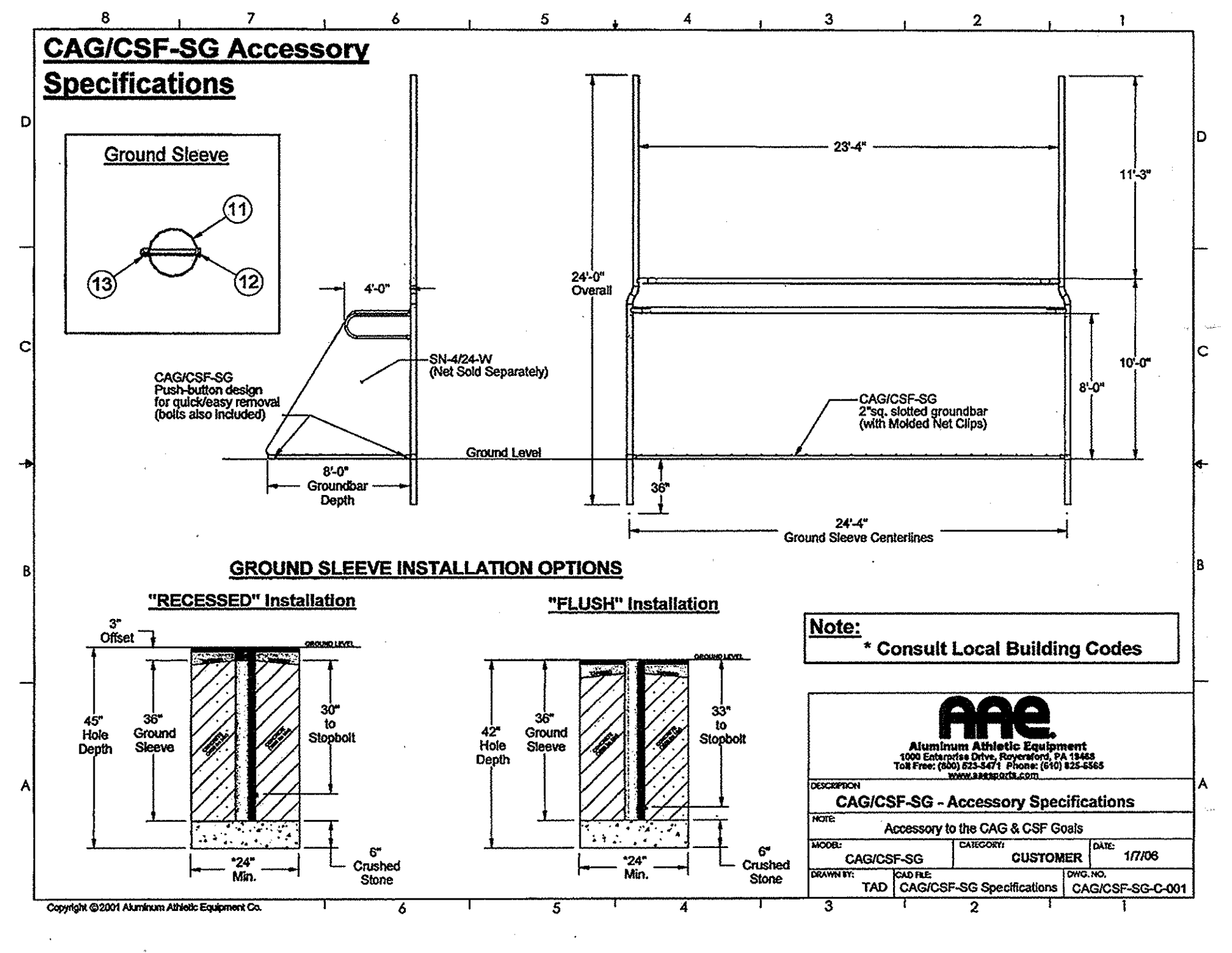
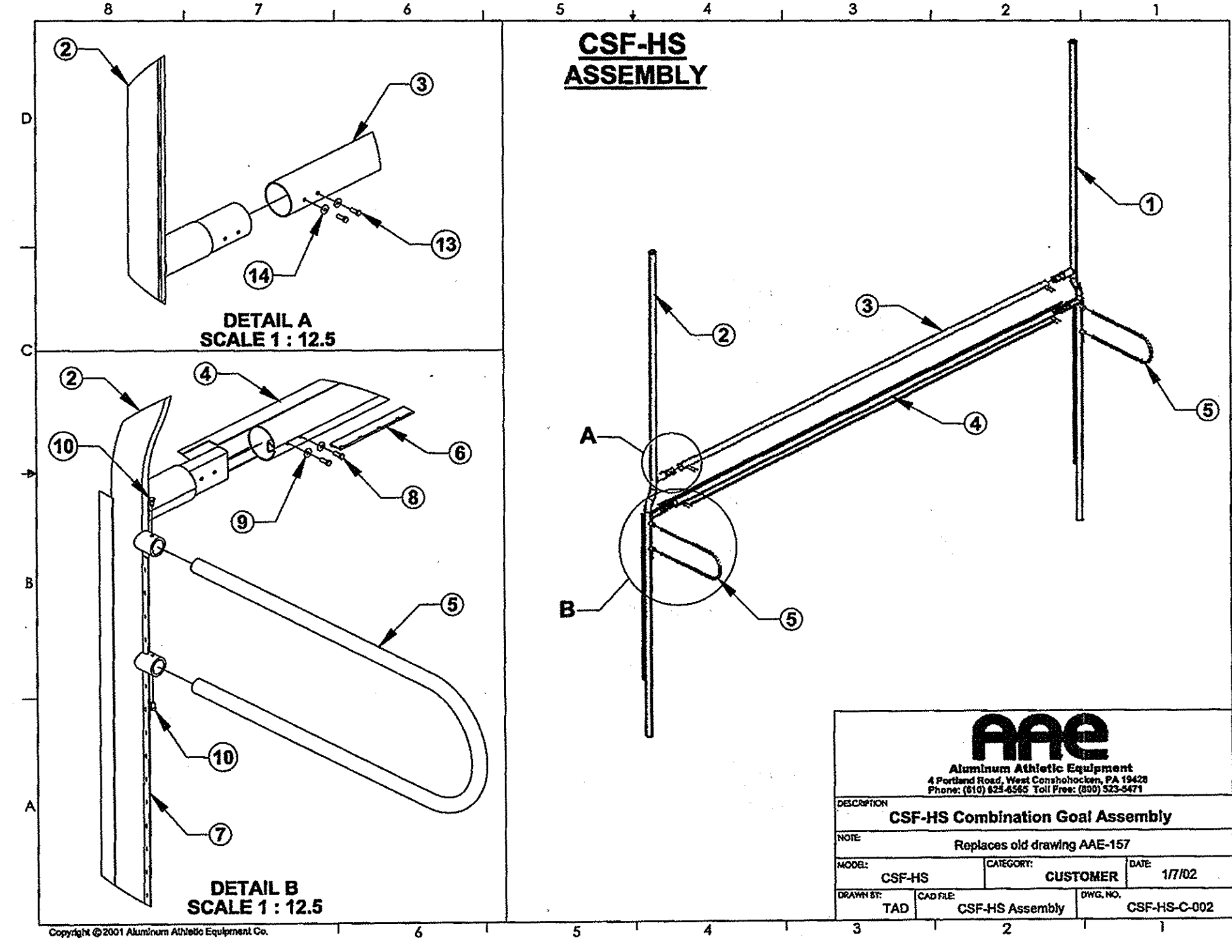
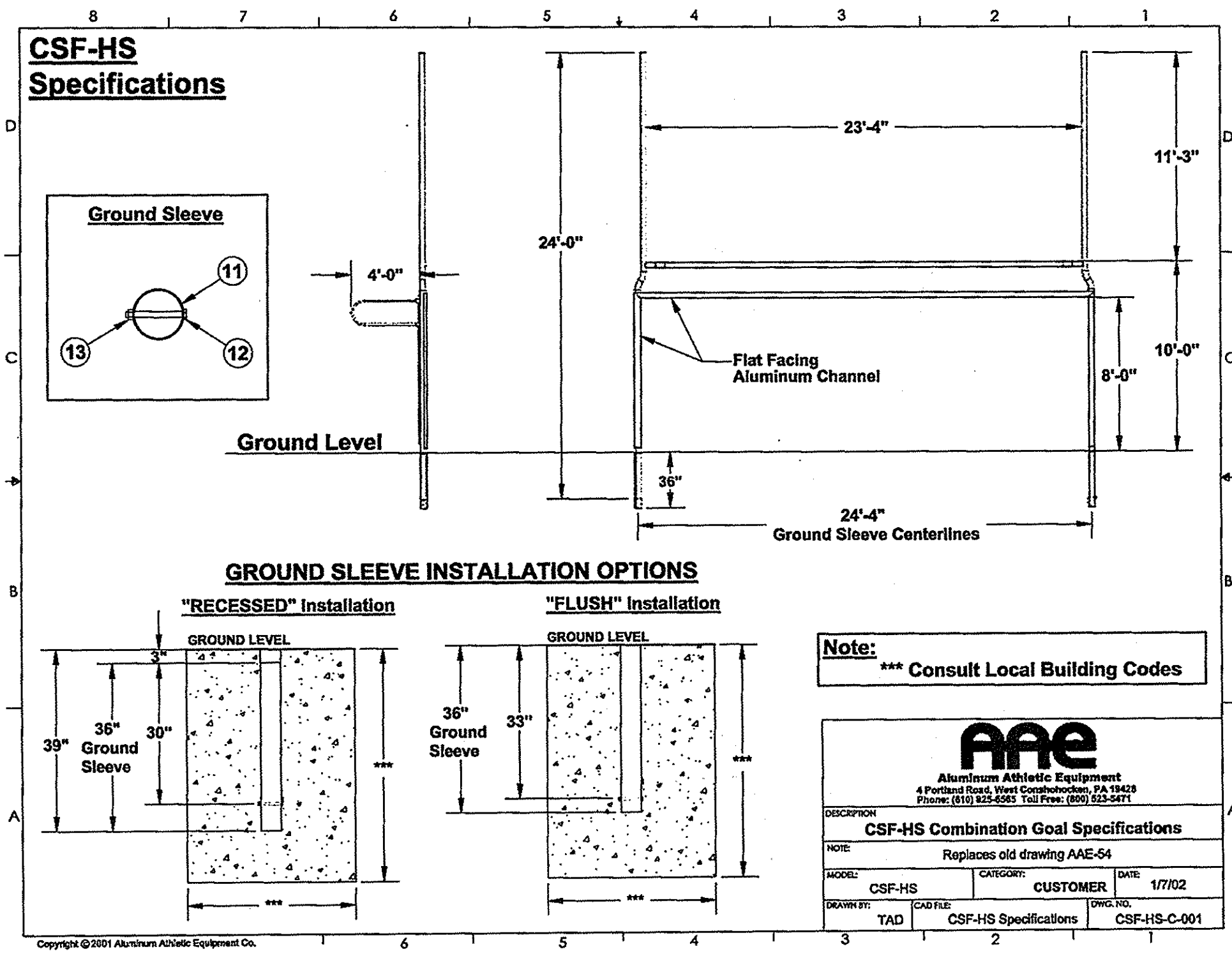
SCALE
 AS SHOWN

3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SHEET
 1 OF 10
 55 58

Director, HOWARD COUNTY
 RECREATION AND PARKS
 5/30/14 DATE

Assistant Manager, GROUNDS SERVICES,
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 6/3/14 DATE



1 COMBINATION GOAL SPECIFICATIONS
N.T.S.

2 GROUND BAR ATTACHMENT DETAILS
N.T.S.

**CAG-HS/CSF-HS
HIGH SCHOOL COMBINATION GOALS
PARTS LIST**

Part#	Item	Description	Qty.
1	Upright,LH	4.00 o.d. x .226 x 24' - aluminum extrusion.	2
*1A			
2	Upright,RH	4.00 o.d. x .226 x 24' - aluminum extrusion.	2
3	Crossbar (Football)	4.00" o.d. x .125 x 22'- 4" 6061T6 - aluminum tube.	2
4	Crossbar (Soccer)	4.00" o.d. x .125 x 23'-0" - aluminum extrusion.	2
5	ISA Stay	International Net Stay, 1.688" o.d. x .125 x 43", 17" arc, 6061T6 aluminum.	4
6	PVC	PVC Net attachment extrusion, 22'-2" lg.	2
7	PVC	PVC Net attachment extrusion, 7'-6" lg.	4
8	Bolt	3/8"-16 x 1" stainless steel hex bolt	16
9	Washer	3/8 washer, SS	16
10	Bolt	3/8"-16 x 5/8" stainless steel hex bolt	8
11	Ground Sleeve	4.35" o.d. x .100 x 30" 6061T6 aluminum tube.	4
12	Stopbolt	1/2"-13 x 5" steel hex bolt, plated	4
13	Stopbolt Nut	1/2"-13 steel hex nut, plated	4

K:\AAE Data\Product Instructions & Parts Lists\CAG-HS\CAG-HS & CSF-HS Parts List.doc
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APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR: _____ DATE _____

CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

CHIEF DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

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AND THAT I AM A DULY LICENSED
PROFESSIONAL ENGINEER UNDER THE
LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 16156
EXPIRATION DATE: 8/28/2014

HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-7220

ASSISTANT MANAGER - GROUNDS SERVICES
HOWARD COUNTY PUBLIC SCHOOL SYSTEM

5/15/14 DATE
6-3-14 DATE

DES: RLL
DRN: CDF
CHK: DTM
DATE: 04/14

BY NO. REVISION DATE

NEW SHEET 6-12-14

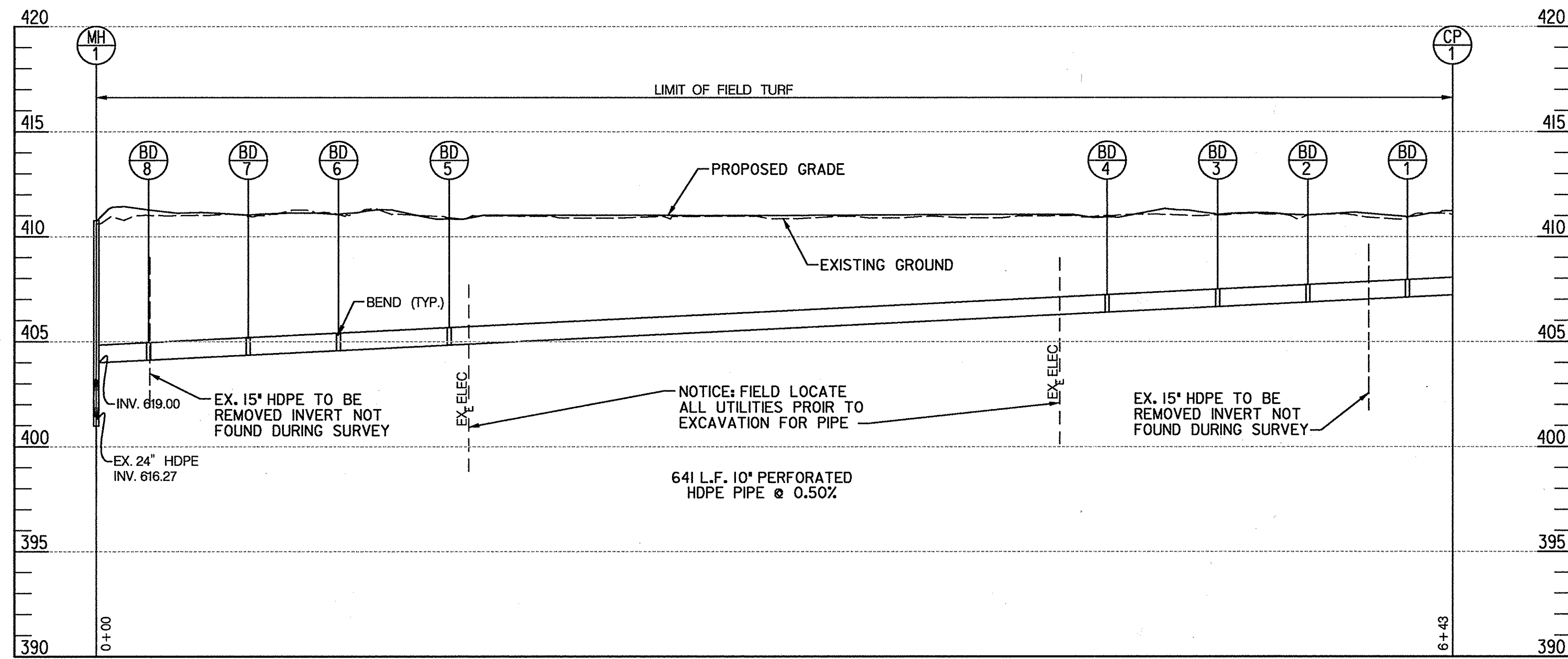
SITE DETAILS IV

SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN
MARRIOTTS RIDGE HIGH SCHOOL
FIELD IMPROVEMENTS

3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

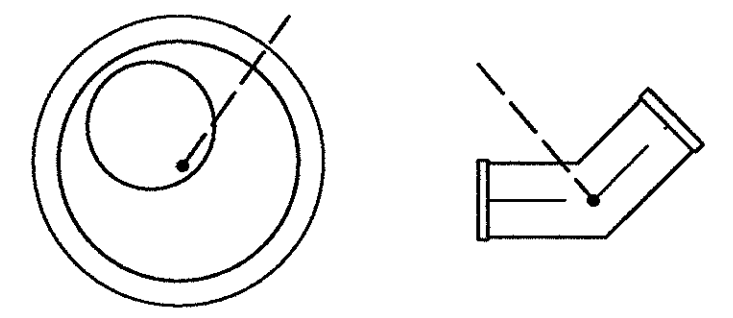
SCALE AS SHOWN
SHEET 8 OF 10
56 50



PIPE PROFILE (STA. 104+45, RT. TO STA. 104+45, LT.)

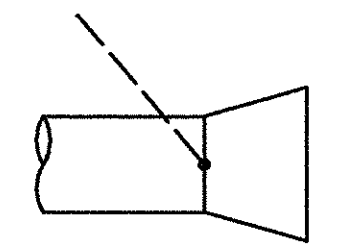
SCALE: HORZ. 1"=40'
VERT. 1"=4'

LOCATION POINT



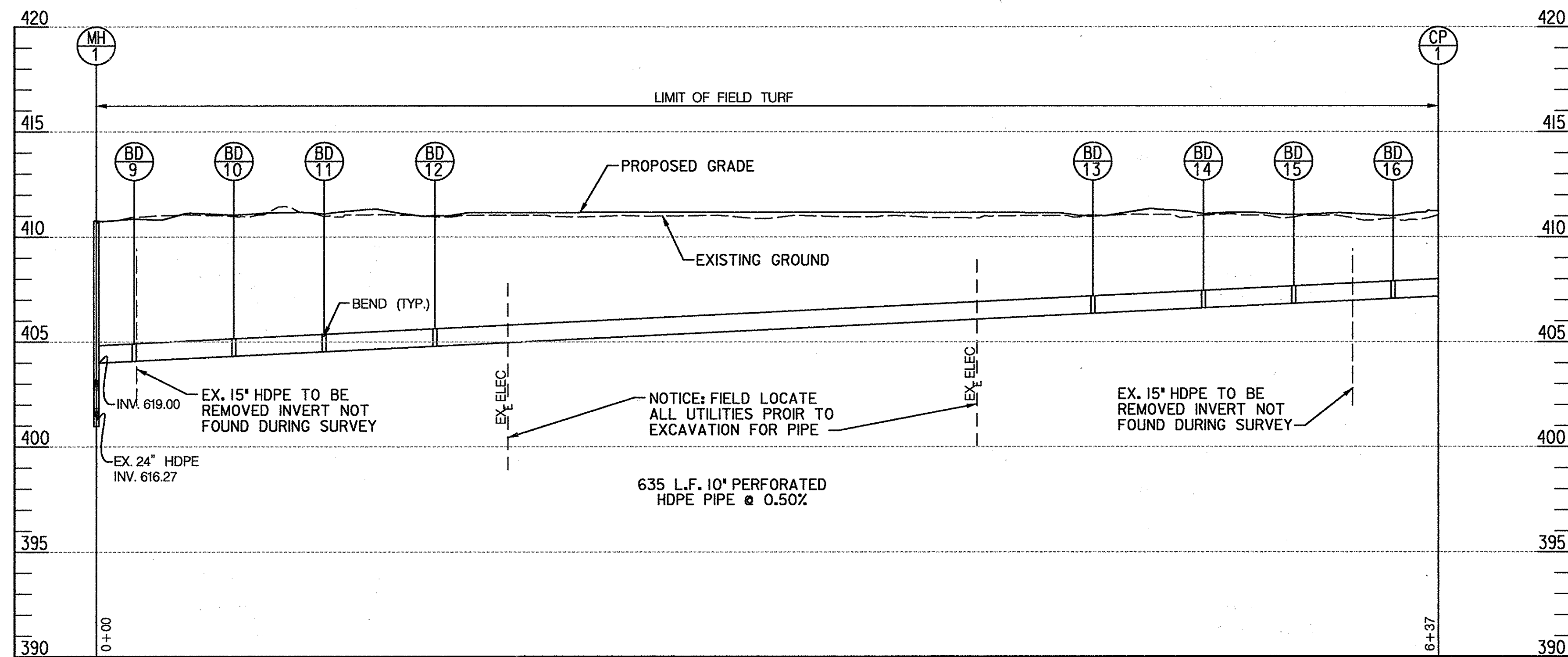
MANHOLE

BEND



END SECTION

NOTE:
SEE SHEET NO. 8 FOR STRUCTURE SCHEDULE.



PIPE PROFILE (STA. 104+45, RT. TO STA. 104+45, LT.)

SCALE: HORZ. 1"=40'
VERT. 1"=4'

APPROVED: FOR PUBLIC WATER & PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

PROFESSIONAL CERTIFICATION

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HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HOWARD COUNTY, MARYLAND

PREPARED BY
URS
4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-7220

DATE: 04/14

5/30/14
DATE

6-3-14
DATE

STATE OF MARYLAND
DAVID THOMAS WORKING
REGISTERED PROFESSIONAL ENGINEER
LICENSE NO. 16156
EXPIRATION DATE: 8/28/2014

DES:	RLI				
DRN:	CDF				
CHK:	DTM				
DATE:	04/14	BY:		NO.	
DATE:	6-18-14	REVISION:			

PIPE PROFILES

SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN
MARRIOTT'S RIDGE HIGH SCHOOL
FIELD IMPROVEMENTS

3RD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 9 OF 10
57 58

