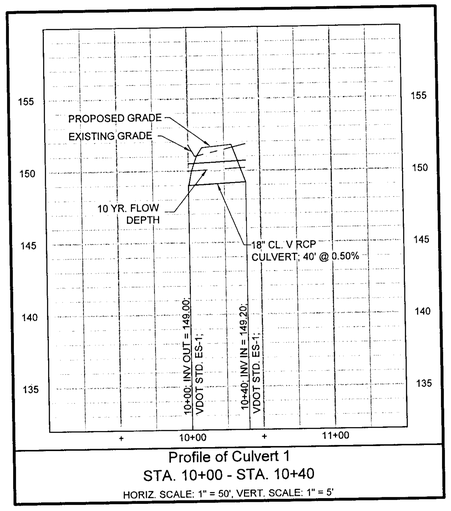
GENERAL NOTES

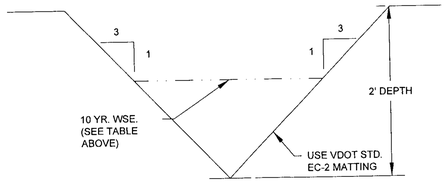
1. THIS SITE PLAN IS FOR THE CONSTRUCTION OF A 500,000 GALLON WATER STORAGE TANK WITH 4,450 LF OF WATER SUPPLY MAIN AND ASSOCIATED ACCESS ROADWAY.
2. THE BOUNDARY INFORMATION SHOWN HEREON, IS TAKEN FROM A PLAT PREPARED BY BURY+PARTNERS, INC., DATED 9/23/04. THE BEARINGS HAVE BEEN ROTATED TO MATCH THE VA NAD83 NORTH ZONE STATE GRID. THE ERROR CLOSURE FOR THIS BOUNDARY IS LESS THAN 1:10,000.
3. THE EXISTING CONDITIONS SHOWN HEREON, ARE TAKEN FROM A FIELD SURVEY, PREPARED BY BURY+PARTNERS, INC., DATED 8/14/06.
4. THE PROPERTY SHOWN HEREON IS PIN 420((01))-00-004-0 (PRINCE GEORGE COUNTY) ZONED R-1, AND PIN 36-3 (DINWIDDIE COUNTY) ZONED A-2. IT HAS A TOTAL AREA OF 1.56 AC.
5. THIS PROPERTY FALLS OUTSIDE THE MAPPED FLOODPLAIN LIMITS AS SHOWN ON PANEL 0170A COMMUNITY NO. 510187.
6. THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ANY PERMITS, BONDS, OR INSPECTIONS, IF REQUIRED BY ANY GOVERNMENT AGENCY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE COUNTY AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED.
8. DETAILS AND MATERIALS, WHERE INDICATED, REFER TO VDOT AND OR PRINCE GEORGE COUNTY STANDARDS.
9. BURY+PARTNERS, INC. DOES NOT CERTIFY TO THE LOCATION OF OR THE EXISTENCE OF ANY UNDERGROUND UTILITIES. THE UNDERGROUND UTILITIES SHOWN ARE FROM AVAILABLE RECORDS. THIS DOES NOT CONSTITUTE A GUARANTEE OF THEIR ACTUAL LOCATION OR THAT THEY HAVE ALL BEEN SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES AT THE PROPOSED CROSSINGS, PRIOR TO BEGINNING ANY CONSTRUCTION. THESE TEST HOLES WILL BE MADE TO VERIFY ALL EXISTING CONDITIONS. IF CONDITIONS ARE FOUND IN THE FIELD WHICH ARE MATERIALLY DIFFERENT FROM THE PLANS, THE CONTRACTOR SHALL NOTIFY BURY+PARTNERS, INC. SO THE APPROPRIATE COURSE OF ACTION CAN BE DETERMINED.
10. CONTRACTOR SHALL NOTIFY OPERATIONS WHO MAINTAIN EXISTING UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-552-7001 PRIOR TO COMMENCEMENT OF ANY EXCAVATION.
11. PAVEMENT DESIGNS ARE BASED ON A CBR VALUE OF 6. ACTUAL PAVEMENT DESIGN WILL BE ADJUSTED BASED ON SOIL TESTS AT THE TIME OF CONSTRUCTION. ALL SUBGRADE TO BE COMPACTED TO A MINIMUM OF 95%, WITH THE FINAL 1' OF FILL BEING COMPACTED TO A MINIMUM 100% OF THEORETICAL DENSITY AT WITHIN 20% OF OPTIMUM MOISTURE CONTENT PER AASHTO-T99 METHOD A.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY DISCONNECTION OF EXISTING UTILITIES AS NECESSARY.
13. DURING CONSTRUCTION OPERATIONS, AN EXPERIENCED GEOTECHNICAL ENGINEER (HIRED BY THE OWNER) SHOULD BE UTILIZED TO IDENTIFY PLASTIC CLAY SOILS WHICH REQUIRE UNDERCUTTING AND/OR REPLACEMENT
14. CONTROLLED FILLS:
A.) CONTROLLED COMPACTION SHALL OCCUR IN ALL SUBGRADE AREAS FOR PAVEMENT, TRENCHES FOR UTILITIES, AND IN ANY OTHER AREA SO DESIGNATED ON THE DRAWINGS.
B.) CONTROLLED FILLS MUST BE COMPACTED TO A MINIMUM OF 95%, WITH THE FINAL 1' OF FILL BEING COMPACTED TO A MINIMUM 100% OF THEORETICAL DENSITY AS DETERMINED BY METHODS AS PER STANDARD PROCTOR AASHTO-T99 OR ASTM-D698. DENSITY MUST BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER (HIRED BY OWNER).
C.) CONTROLLED FILLS SHALL BE COMPACTED IN EIGHT (8) INCH LIFTS (LOOSE THICKNESS) AND MOISTURE CONDITIONED TO WITHIN 20% OF THE OPTIMUM MOISTURE CONTENT, TO THE SPECIFIED DENSITY, BEGINNING FROM THE EXISTING GROUND SURFACE, UNLESS OTHERWISE APPROVED IN WRITING BY A QUALIFIED GEOTECHNICAL ENGINEER (HIRED BY OWNER).
D.) ALL VEGETATION AND TOPSOIL MUST BE REMOVED FROM THE SURFACE OF ANY AREA TO RECEIVE CONTROLLED FILL. FILL FOR AREAS OF LESS THAN FIVE (5) FEET IS TO BE DENUDED OF ALL VEGETATION AND SCARIFIED AND COMPACTED TO A DEPTH OF SIX (6) INCHES TO THE SAME DENSITY AS THE CONTROLLED FILL TO BE PLACED THEREON.
15. A VIDEO CAMERA INSPECTION IS REQUIRED FOR ALL STORM SEWERS AND CULVERTS WITHIN VDOT RIGHT-OF-WAY THAT ARE DEEMED INACCESSIBLE TO VDOT INSPECTIONS. THE VIDEO CAMERA INSPECTION SHALL BE MADE WITH A VDOT AND/OR COUNTY INSPECTOR PRESENT.
16. ALL ROAD DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT'S CURRENT SUBDIVISION STREET REQUIREMENTS, DRAINAGE MANUAL, AND ROAD AND BRIDGE STANDARDS, AND ANY DEVIATIONS OR MODIFICATIONS REQUIRE APPROVAL PRIOR TO CONSTRUCTION.
17. THE DEPARTMENT'S APPROVAL OF A CONSTRUCTION PLAN SHALL CONSTITUTE ITS COMMITMENT TO ACCEPT THE STREETS DEPICTED THEREON, WHEN ALL APPLICABLE PROVISIONS OF THESE REQUIREMENTS ARE SATISFIED AND THE STREETS HAVE BEEN CONSTRUCTED ACCORDING TO THE APPROVED CONSTRUCTION PLAN AND SUPPORTING SPECIFICATIONS. HOWEVER, DURING VDOT'S INSPECTION OF CONSTRUCTION, IF A SITUATION IS DISCOVERED THAT WAS NOT ADDRESSED ON THE APPROVED PLAN THAT COULD, IN THE OPINION OF THE RESIDENT ENGINEER, ADVERSELY AFFECT PUBLIC SAFETY, ACCEPTANCE OF THE STREET SHALL BE DEFERRED UNTIL THE SITUATION IS CORRECTED.
18. THE DEPARTMENT'S APPROVAL OF A CONSTRUCTION PLAN SHALL EXPIRE AFTER A PERIOD OF THREE YEARS IF CONSTRUCTION HAS NOT COMMENCED, IN WHICH CASE THE PLAN SHALL BE RESUBMITTED FOR SUBSEQUENT REVIEW AND APPROVAL.
19. THE DEVELOPER ACCEPTS RESPONSIBILITY TO PROVIDE ACCURATE DOCUMENTATION OF CONSTRUCTION INSPECTION OF STREETS INTENDED FOR ACCEPTANCE INTO THE SECONDARY SYSTEM OF STATE HIGHWAYS.
20. WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE COORDINATED WITH DINWIDDIE RESIDENCY REGARDING THE CONTRACTOR'S QUALIFICATION AND RESOURCES, SCHEDULING AND INSPECTIONS. IT SHOULD ALSO BE NOTED THAT TIME RESTRICTIONS MAY BE PLACED ON ACTIVITIES WITHIN THE RIGHT OF WAY.
21. THE DEVELOPER ACCEPTS RESPONSIBILITY TO PROVIDE AND INSTALL, AT THEIR EXPENSE, ADDITIONAL ITEMS DEEMED WARRANTED BY VDOT. ITEMS MAY INCLUDE BUT NOT BE LIMITED TO PAVEMENT MARKINGS, ERADICATION OF EXISTING PAVEMENT MARKINGS, SIGNAGE, GUARDRAIL, AND EROSION CONTROL MEASURES.
22. ALL OF THE WATER LINES HEREON SHALL BE CONSTRUCTED TO THE PRINCE GEORGE COUNTY UTILITIES DEPARTMENT STANDARDS.
23. IT IS THE CONTRACTOR'S RESPONSIBILITY TO GET AUTHORIZATION FROM VDOT PRIOR TO REMOVING ANY TREES THAT HAVE A TRUNK DIAMETER OF 4" OR GREATER.
24. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD LOCATE THE EXISTING WATERMAIN PRIOR TO COMMENCING TRENCH WORK.

Culvert ID		1
Runoff Analysis		
Drainage Area	(Ac.)	3.20
Rational Coefficient		0.46
Time Of Concentration	(Min.)	27
10 Year Intensity	(In./Hr.)	3.91
10 Year Runoff	(Cu. Ft./Sec.)	5.76
Culvert Geometry		
# Of Barrels		1
Barrel Diameter	(Ft.)	1.50
Material		RCP
Barrel Length	(Ft.)	40
Invert In	(Elev.)	149.20
Invert Out	(Elev.)	149.00
Slope	(Ft/Ft.)	0.005
Inlet Control		
Flow /Barrel	(Cu. Ft./Sec.)	5.76
Submerged/Unsubmerged?		Unsubmerged
Entrance Condition		Groove End
Headwater	(Ft.)	0.10
Headwater	(Elev.)	149.30
Outlet Control		
Manning's Coefficient		0.013
Velocity	(Ft./Sec.)	3.26
Entrance Loss Coefficient		0.70
Entrance Loss	(Ft.)	0.12
Friction Loss	(Ft.)	0.12
Outlet Loss	(Ft.)	0.16
Tailwater	(Ft.)	0.93
Headwater	(Ft.)	1.33
Headwater	(Elev.)	150.33
Controlling Headwater		
Inlet/Outlet Control?		Outlet Control
Controlling Headwater	(Elev.)	150.33
Road Edge Elevation		152.00
Freeboard	(Ft.)	1.67

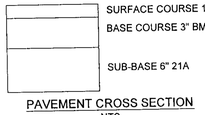
Channel ID		North	South
Runoff Analysis			
Drainage Area	(Ac.)	3.20	0.42
Rational Coefficient		0.46	0.65
Time Of Concentration	(Min.)	27	5
2 Year Intensity	(In./Hr.)	2.82	5.60
10 Year Intensity	(In./Hr.)	3.91	7.16
2 Year Runoff	(Cu. Ft./Sec.)	4.15	1.52
10 Year Runoff	(Cu. Ft./Sec.)	5.76	1.95
Channel Geometry			
Design Depth	(Ft.)	2.00	2.00
Bottom Width	(Ft.)	0.00	0.00
Side Slope Left	X H:1 V	3	3
Side Slope Right	X H:1 V	3	3
Channel Slope	(Ft./Ft.)	0.060	0.060
Lining Material		Vegetative	Vegetative
Channel Lining - Vegetative			
Flow Retardance Classification		C	C
Manning's coefficient		0.090	0.148
Hydraulic Radius	(Ft.)	0.410	0.293
10 Year Flow depth	(Ft.)	0.85	0.60
2 Year Flow Depth	(Ft.)	0.70	0.51
2 Year Flow Velocity	(Ft./Sec.)	1.98	0.99



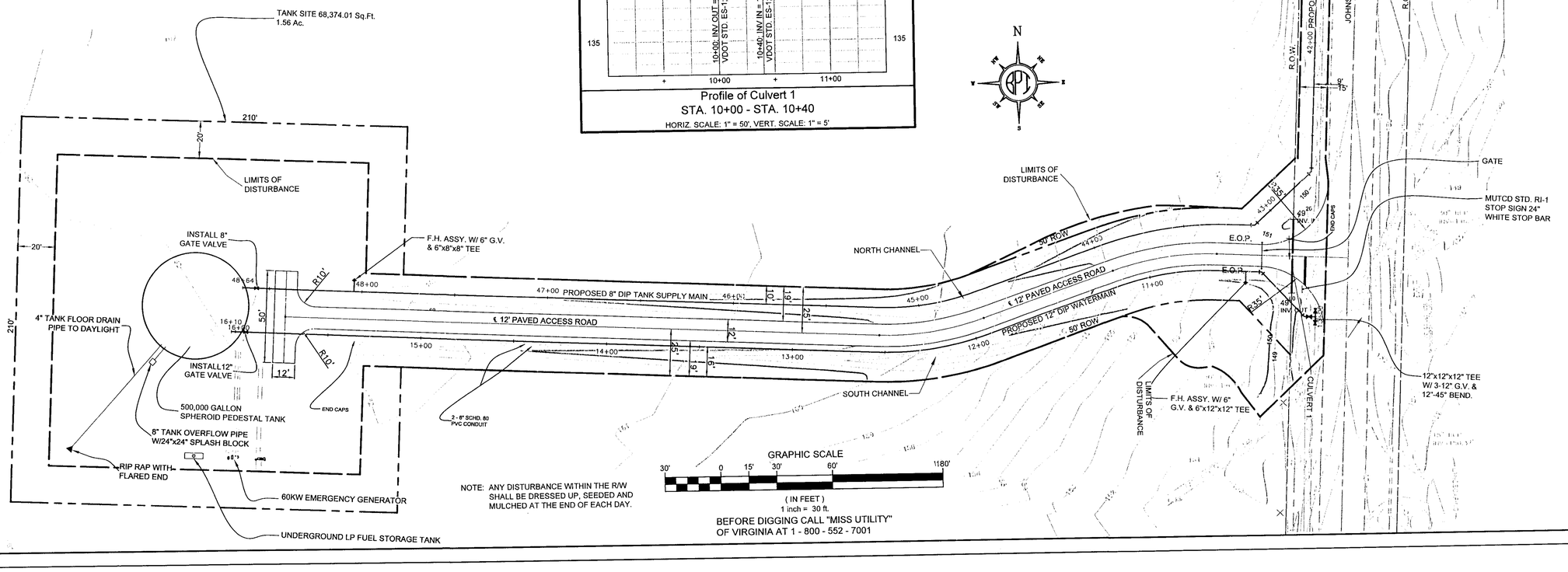
Profile of Culvert 1
STA. 10+00 - STA. 10+40
HORIZ. SCALE: 1" = 50', VERT. SCALE: 1" = 5'



CHANNEL CROSS SECTION
NTS



PAVEMENT CROSS SECTION
NTS



NOTE: ANY DISTURBANCE WITHIN THE R/W SHALL BE DRESSED UP, SEEDED AND MULCHED AT THE END OF EACH DAY.

BEFORE DIGGING CALL "MISS UTILITY" OF VIRGINIA AT 1 - 800 - 552 - 7001

NO.	DATE	REVISION	APPROVAL
1	02/13/07	RESPOND TO VDOT/RCM COMMENTS	KMB
2	03/23/07	REVISED PER RCOM COMMENT LTR DTD 03/08/07	KMB

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COMMONWEALTH OF VIRGINIA
KENNETH M. BAYBUTT
No. 028257
3/23/07
PROFESSIONAL ENGINEER

SITE PLAN

RICHARD BLAND COLLEGE CONSTRUCTION OF ELEVATED WATER STORAGE TANK

VIRGINIA

PRINCE GEORGE & DINWIDDIE COUNTY

PLOTTING SCALE: 1" = 30'
DATE PLOTTED: 12/22/2006
FILE: C1.dwg
DRAWN BY: GTS
DESIGNED BY: DJM
REVIEWED BY: KMB
PROJECT NO.: 210640004

SHEET C1 OF

I:\21064 - Richard Bland College\RBC Tanks\Sheets\Water\Storage Tank Drawings\C1.dwg