



CERTIFICATE OF AUTHENTICITY

THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMW ATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HAVE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.

BMP NUMBER: CC003

DATE VERIFIED: August 16, 2019

QUALITY ASSURANCE TECHNICIAN: Charles E. Lovett II

Charles E. Lovett II

LOCATION: WILLIAMSBURG, VIRGINIA

NOTES: Uploaded and Certified Maintenance Agreement, Construction Drawing, and additional Calculations



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BMP NUMBER: CC-003

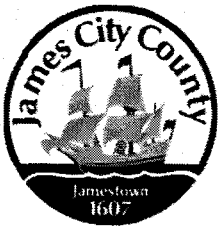
DATE VERIFIED: March 22, 2012

QUALITY ASSURANCE TECHNICIAN:

Leah Hardenbergh

Leah Hardenbergh

LOCATION: WILLIAMSBURG, VIRGINIA



Stormwater Division

MEMORANDUM

DATE: March 10, 2010
TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services
FROM: Jo Anna Ripley, Stormwater
PO: 270712
RE: Files Approved for Scanning

General File ID or BMP ID: CC003

PIN: 3910100131

Subdivision, Tract, Business or Owner

Name (if known):

Chambrel

Property Description:

Senior Care/Retirement Facility

Site Address:

3800 Treyburn Drive

(For internal use only)

Box 10

Drawer: 6

Agreements: (in file as of scan date)

N

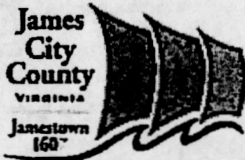
Book or Doc#:

Page:

Comments

1. Maintenance Agreement

130027204



COUNTY OF JAMES CITY, VIRGINIA

**DECLARATION OF COVENANTS
INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM**

Engineering and Resource
Protection Division
101-E Mounts Bay Road
Williamsburg, VA 23185
757-253-6670
jamescitycountyva.gov

Please type or print legibly in black ink. Covenantor(s) should submit this form to the JCC Engineering and Resource Protection Division, 101-E Mounts Bay Road, Williamsburg, VA 23185.

THIS DECLARATION OF COVENANTS, made this 18th day of NOVEMBER, 2013,
between CMCP - WILLIAMSBURG, LLC, and all successors in interest,
("COVENANTOR(S)"), owner(s) of the following property:

Parcel Identification Number(s): 3910100131

Legal Description(s): PT MILL NECK 51.70 acres 3800 Treyburn Dr.

Project or Subdivision Name: CHAMBER MEMORY CARE FACILITY

Document/Instrument No(s): 020011293

or Deed Book _____, Page No. _____

and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

I (We), the COVENANTOR(S), with full authority to execute deeds, mortgages, other covenants, and all rights, titles and interests in the property described above, do hereby covenant with the COUNTY as follows:

1. The COVENANTOR(S) shall provide maintenance for the drainage system including any runoff control facilities, conveyance systems and associated easements, hereinafter referred to as the "SYSTEM," located on and serving the above-described property to ensure that the SYSTEM is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations. The SYSTEM shall not include any elements located within any Virginia Department of Transportation rights-of-way.

2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the SYSTEM to ensure that the SYSTEM is properly maintained.

3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the SYSTEM for the COUNTY, its agent and its contractor.

4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the SYSTEM for the purpose of inspecting, monitoring, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

Prepared by (Name, Address & Phone):

CMCP - Williamsburg LLC
day krcpt
111 Westwood Pl Ste 400
Brentwood TN 37207
615-564-8312

Return to:

JCC Attorney's Office
101-D Mount's Bay Road
Williamsburg, VA 23185
(757) 253-6612

6. The COVENANTOR(S) shall indemnify and save the COUNTY harmless from any and all claims for damages to persons or property arising from the installation, construction, maintenance, repair, operation or use of the SYSTEM.

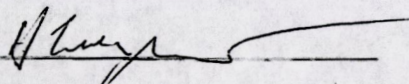
7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S) responsibilities for the SYSTEM. The COVENANTOR(S) shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

8. The covenants contained herein shall run with the land and shall bind the COVENANTOR(S) and the COVENANTOR(S)' heirs, executors, administrators, successors and assignees, and shall bind all present and subsequent owners of property served by the SYSTEM.

9. This COVENANT shall be recorded in the County Land Records.

IN WITNESS WHEREOF, the COVENANTOR(S) has executed this DECLARATION OF COVENANTS as of the date first above written.

COVENANTOR(S)


Signature
H. TODD KAESTNER
~~Executive Vice President~~
Print Name and Title

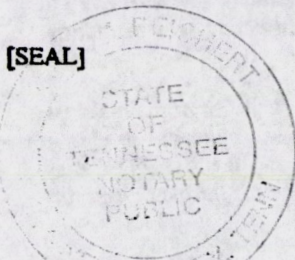
ACKNOWLEDGMENT

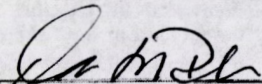
COMMONWEALTH OF VIRGINIA TN
CITY/COUNTY OF Williamson, to wit:

I hereby certify that on this 19th day of November, 20 13, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared H. Todd Kaestner and did acknowledge the foregoing instrument to be his/her Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 19th day of November, 20 13.

[SEAL]

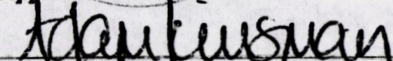



Notary Public

Notary Registration Number: _____

My Commission expires: 3/23/16

Approved as to form:


County Attorney

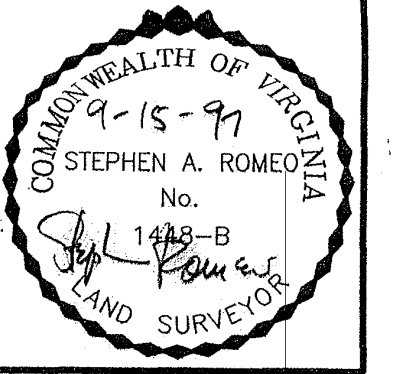
*Recorded: 12/11/2013 @ 11:25 AM
Instrument # 130027204*

2.

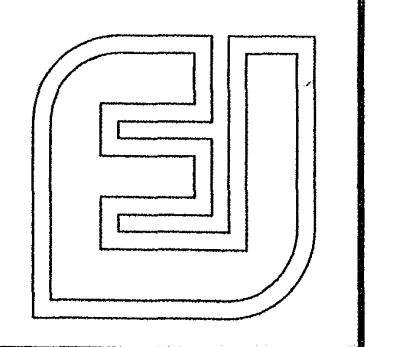
Deeds/Easements/Ag
reements/Property
Records

3. Construction Certificate

4. Record Drawing (as-built plan)



Langley and McDonald, P.C.
Engineers • Surveyors • Planners
Landscape Architects • Environmental Consultants
VIRGINIA BEACH
WILLIAMSBURG

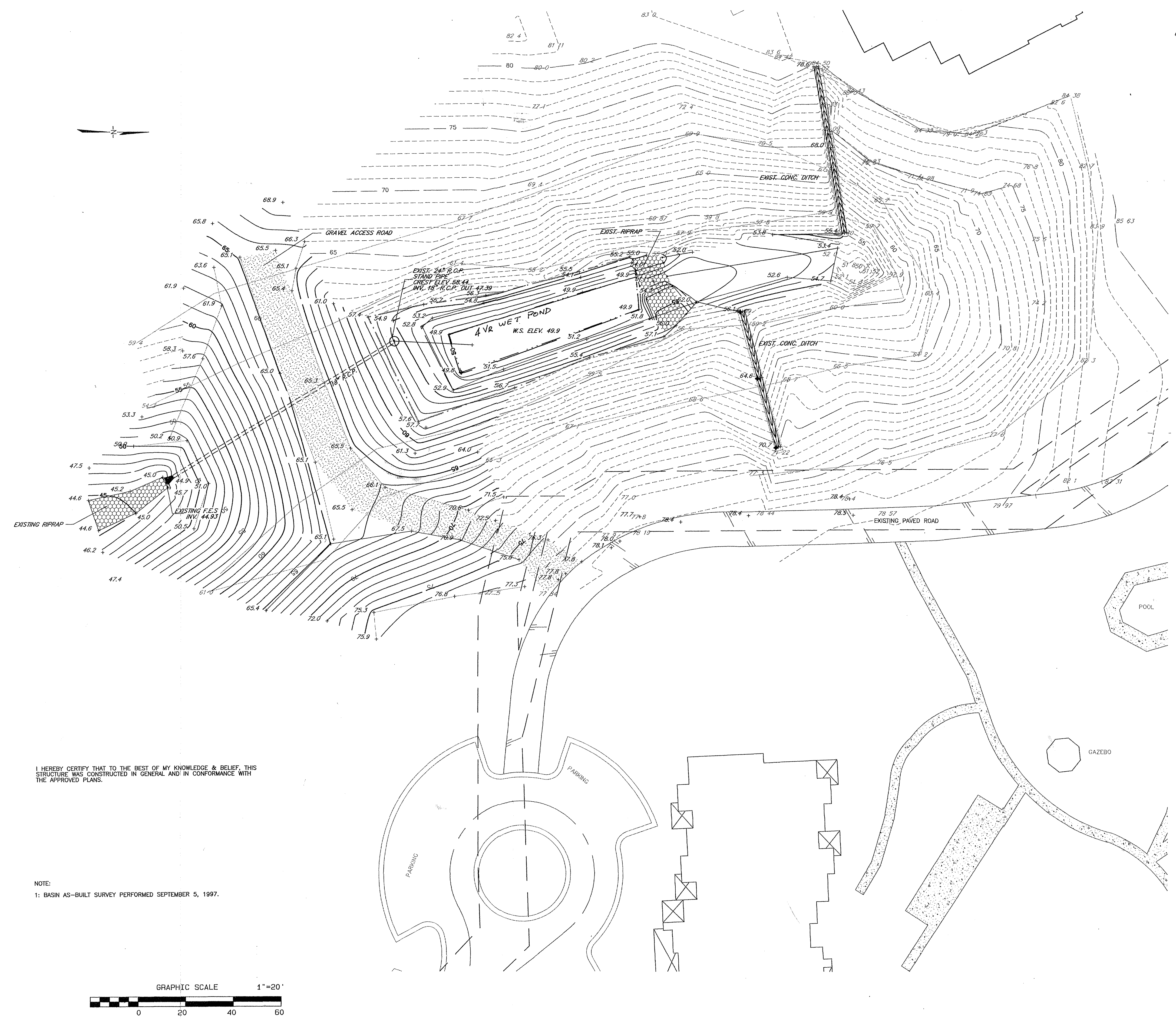


DES.	DWN.	A.J.R.
CHK.	S.A.R.	
DATE	9/12/97	

CHAMBREL BMP
RECORD DRAWING

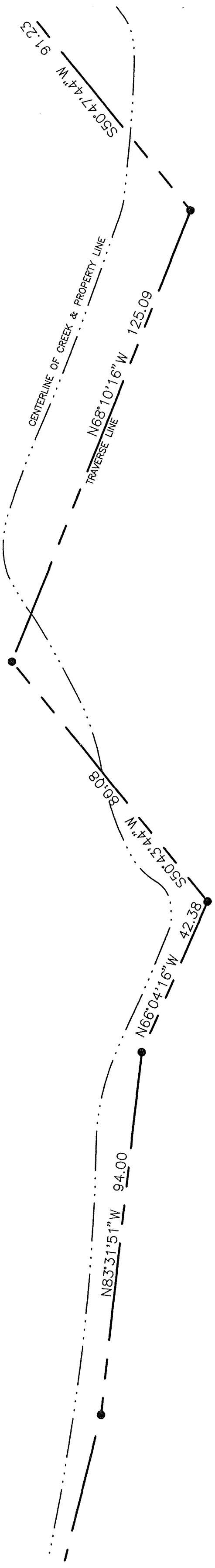
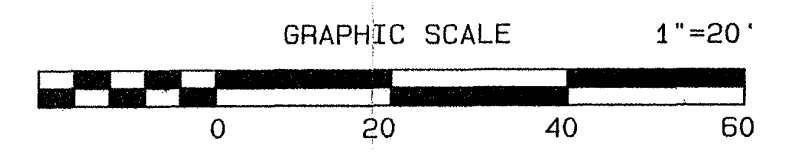
PROJ.NO.	96079
SCALE:	1" = 20'
SHEET OF	1 1
DWG. NO.	6718 W

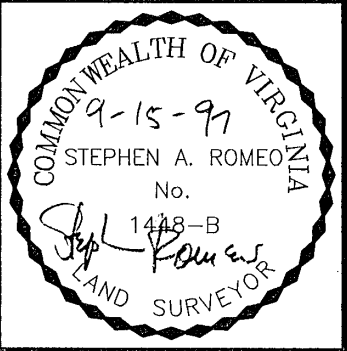
CC 003; SP-127-15



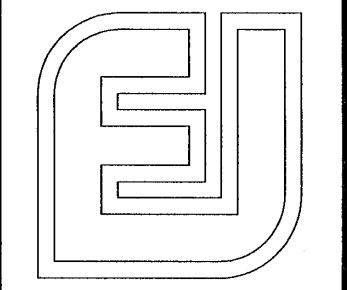
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS
STRUCTURE WAS CONSTRUCTED IN GENERAL AND IN CONFORMANCE WITH
THE APPROVED PLANS.

NOTE:
1: BASIN AS-BUILT SURVEY PERFORMED SEPTEMBER 5, 1997.





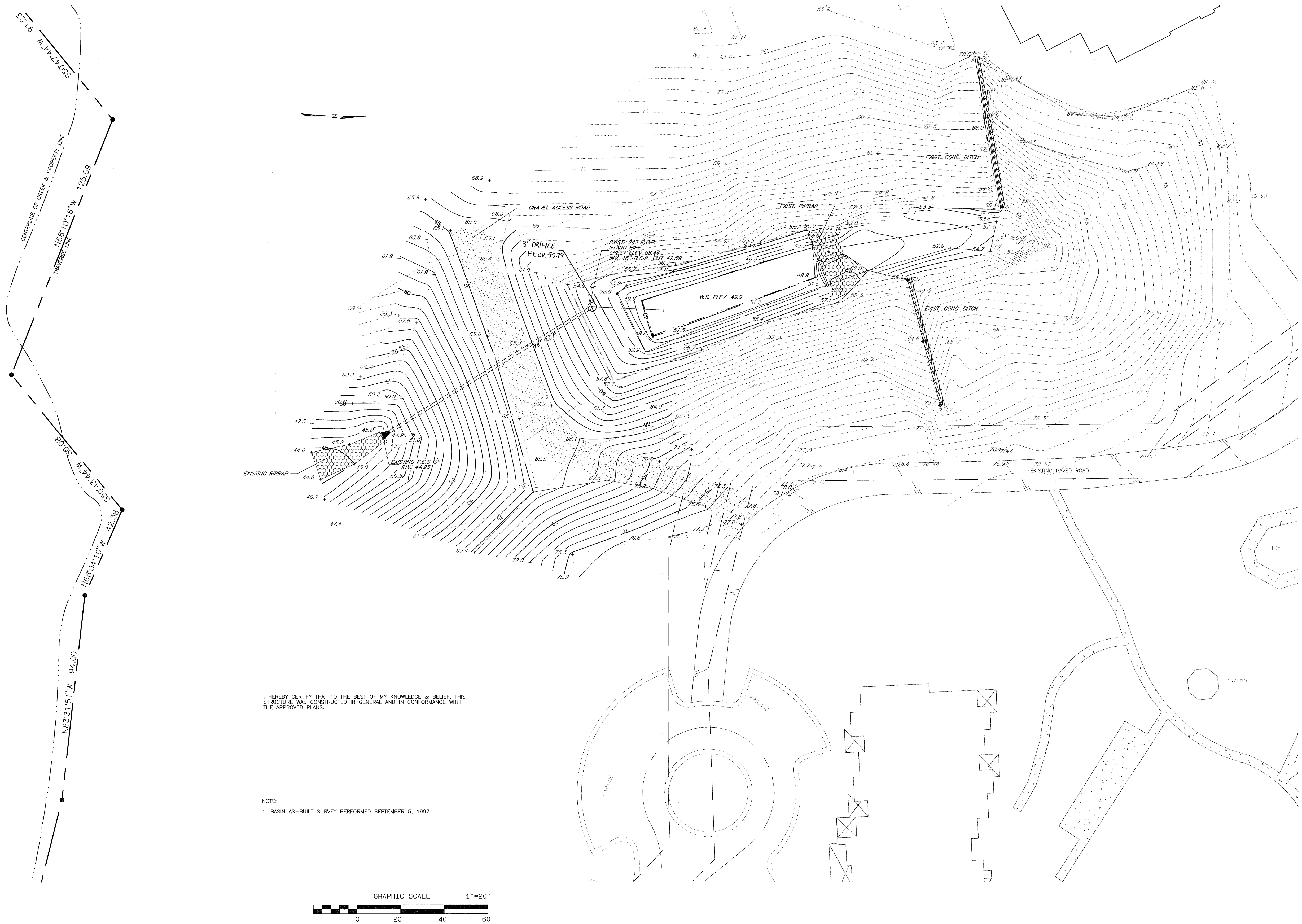
Langley and McDonald, P.C.
Engineers • Surveyors • Planners
Landscape Architects • Environmental Consultants
VIRGINIA BEACH
WILLIAMSBURG



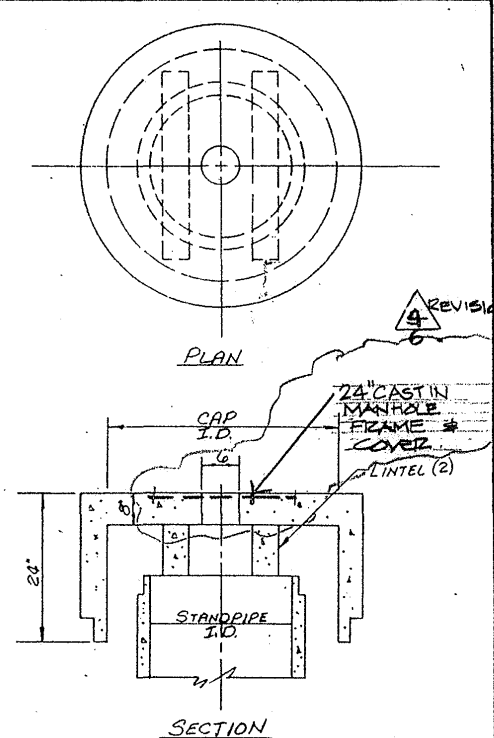
DES.	DWN.	A.J.R.
CHK.	S.A.R.	
DATE	9/12/97	

CHAMBREL BMP
RECORD DRAWING

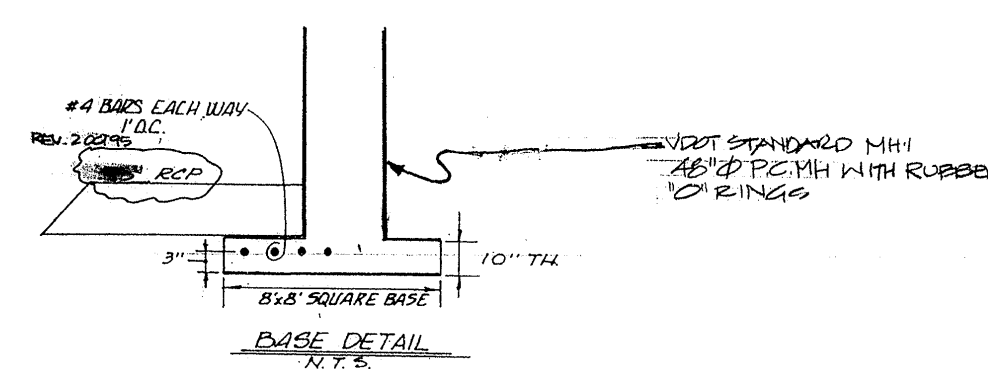
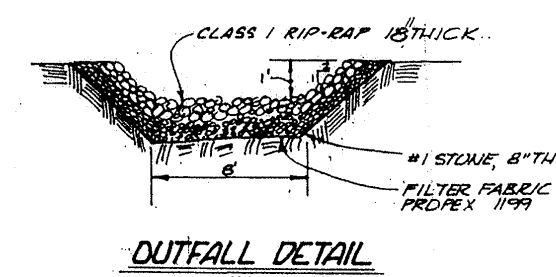
PROJ. NO.	96079
SCALE:	1" = 20'
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DWG. NO.	



STAND	CRP ID	CAP	W/ST	W/ST	W/ST
82"	82"	111.5"	2'-8"	7'-8"	7'-8"
82"	82"	2.915"	2'-8"		

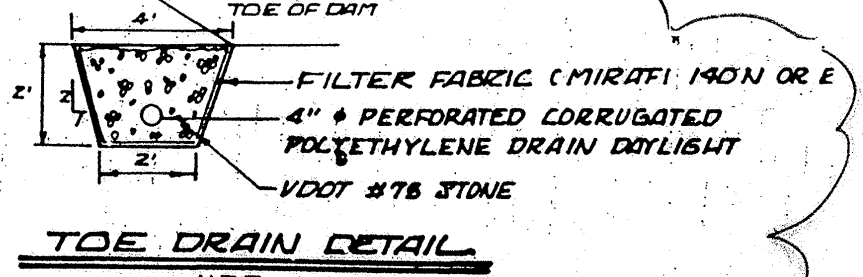
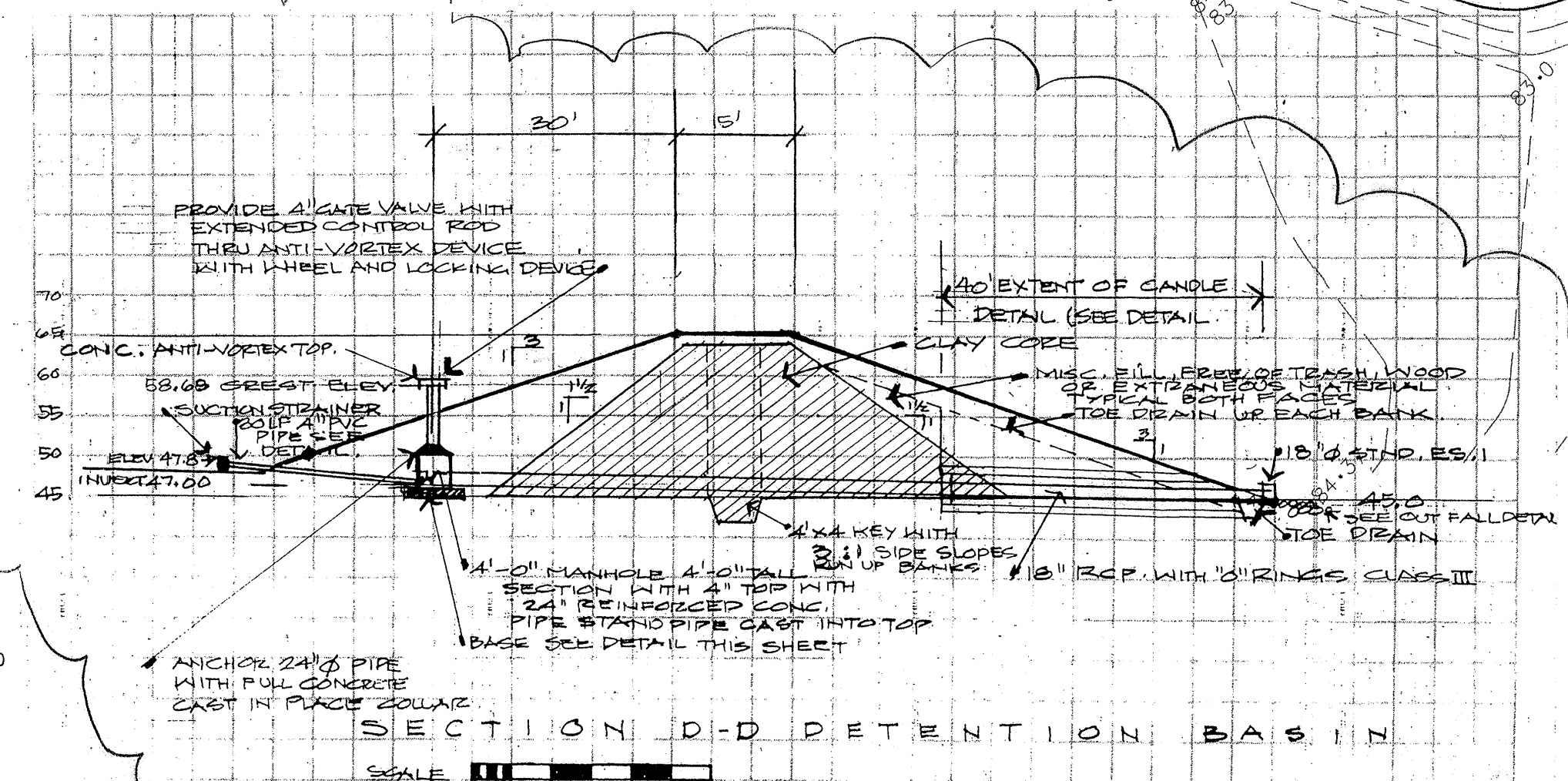
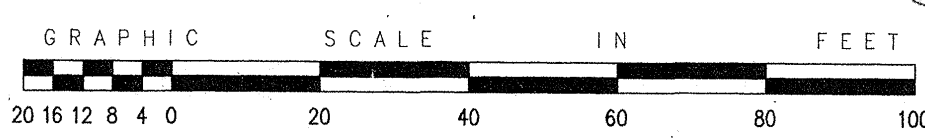
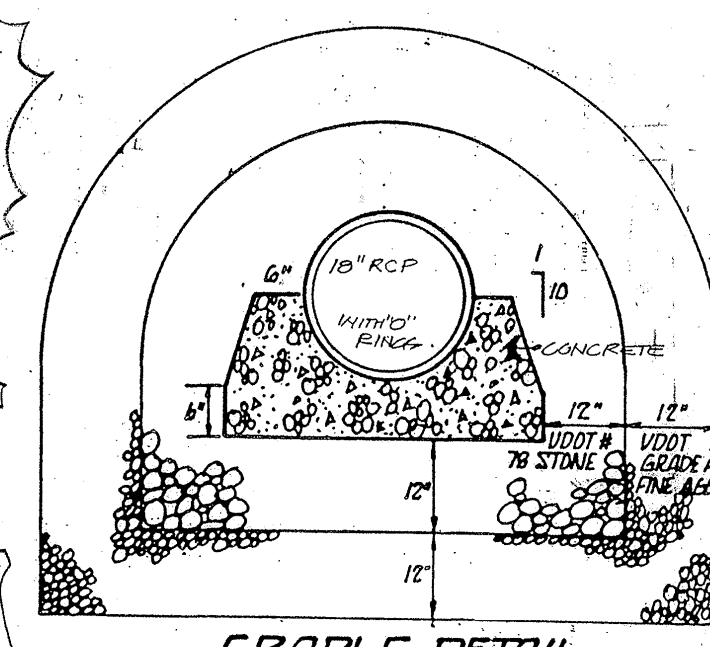
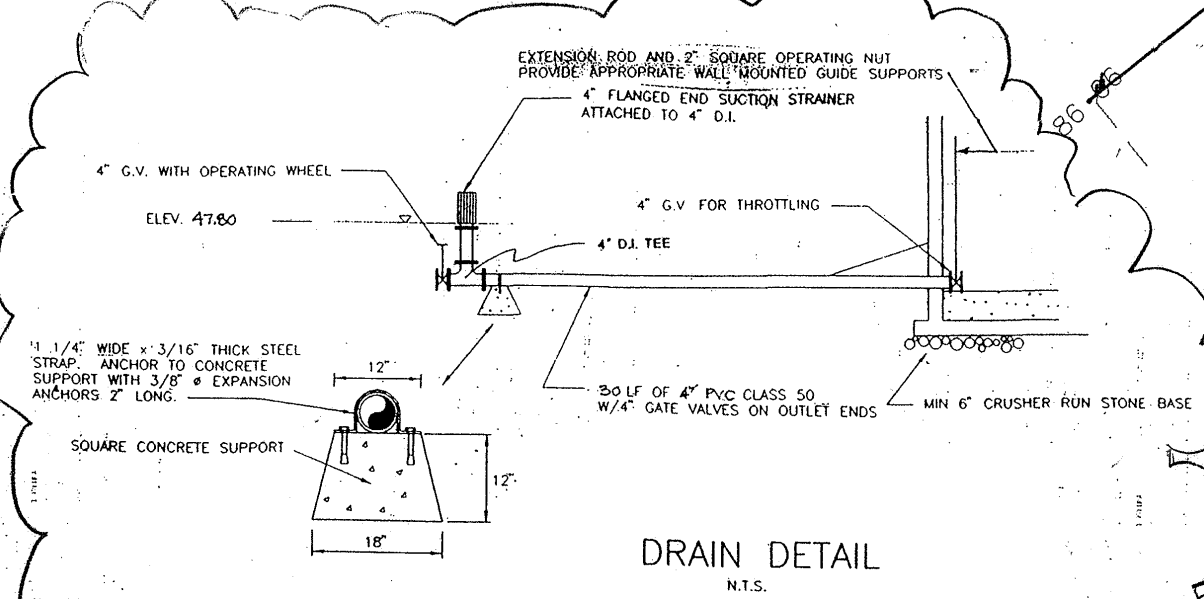


ANTI-VORTEXING TOP



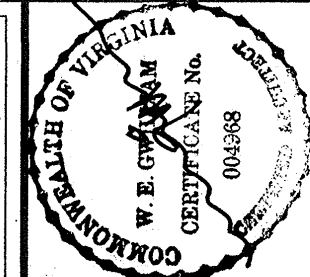
STORM FREQUENCY	PEAK ELEV.	OUTFLOW	INFLOW
2 YEAR	59.78	15.81 CFS	42.00 CFS
10 YEAR	60.30	19.19 CFS	60.40 CFS
100 YEAR	60.61	21.01 CFS	71.40 CFS

FROM SUPPORTING CALC'S

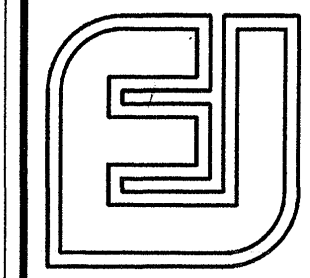


CHAMBREL BMP FOR CHESAPEAKE BAY COMPLIANCE
SCALE 1" = 20'

- GENERAL NOTES - DAM CONSTRUCTION
- EMBANKMENT SURFACES TO BE STRIPPED OF ALL TOPSOIL, ORGANIC MATTER, AND SOFT AND LOOSE SOILS PRIOR TO PLACEMENT OF FILL MATERIALS.
 - SURFACE TO BE PROOF ROLLED WITH A LOADED TANDEM DUMP TRUCK OR SIMILAR EQUIPMENT.
 - AREAS THAT EXHIBIT EXCESSIVE PUMPING OR WEAVING WILL REQUIRE UNDERCUTTING.
 - COMPACTED EMBANKMENT FILL TO BE FREE OF ORGANIC MATTER AND CLASSIFY SM, SC, ML, MH OR CL IN ACCORDANCE WITH UNIFIED SOIL CLASSIFICATION SYSTEM, ASTM D-2487.
 - EMBANKMENT FILL TO BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND SHOULD BE COMPACTED TO AT LEAST 80% OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D-998, STANDARD PROCTOR. FILL SHOULD BE COMPACTED AT MOISTURE CONTENTS WITHIN 2% ABOVE AND 1% BELOW THE OPTIMUM MOISTURE CONTENT FOR THE MATERIAL USED.
 - THE SURFACE OF EACH COMPLETED LIFT OF COMPACTED EMBANKMENT FILL SHOULD BE SCARIFIED TO A DEPTH OF 2 TO 3 INCHES PRIOR TO PLACING ADDITIONAL FILL TO LIMIT THE DEVELOPMENT OF HORIZONTAL SEEPAGE PLANE WITHIN THE EMBANKMENT.
 - COMPACTED EMBANKMENT FILL TO BE PLACED IN HORIZONTAL LIFTS.
 - SURFACES STEEPER THAN 4:1 TO BE BENCHED TO RECEIVE FILL. BENCH HEIGHTS NOT TO EXCEED 2 FEET.
 - BACKFILL ALONG THE PRINCIPAL SPILLWAY CONDUIT SHOULD BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE DURING FILLING.
 - THE PRINCIPAL SPILLWAY PIPE TO BE SUPPORTED ON COMPACTED EMBANKMENT FILL OR AS SHOWN ON THE PLANS.
 - A DRAINAGE FILTER TO BE INSTALLED AROUND THE PRINCIPAL SPILLWAY PIPE FROM THE DOWNSTREAM TIE INTO THE EMBANKMENT AS SHOWN ON THE PLANS.
 - SUFFICIENT CLEARANCE SHOULD BE PROVIDED FOR STANDARD COMPACTION EQUIPMENT TO ACCESS DRIVING BACKFILLING ALONG THE PRINCIPAL SPILLWAY CONDUIT. THE BACKFILL SHOULD BE RAMMED UP AGAINST THE CONDUIT ON A MAXIMUM SLOPE OF 8:1. WHERE ACCESS IS LIMITED, THINNER LIFT THICKNESS, HAND COMPACTION AND TIGHT CONTROL ON MATERIAL QUALITY WILL BE NECESSARY.
 - WHERE TRINCH EXCAVATION FOR THE INSTALLATION OF THE PRINCIPAL SPILLWAY CONDUIT IS NECESSARY, SLOPE TO BE CUT NO STEEPER THAN 2:1.
 - SITE DRAINAGE TO BE PROVIDED TO MAINTAIN SURFACES FREE OF WATER AND TO AVOID SATURATION AND DISTURBANCE OF THE SUBGRADE SOILS PRIOR TO CONSTRUCTING FOUNDATIONS AND PLACING FILL. ANY SOILS THAT HAVE BEEN WEAKENED DUE TO SATURATION AND DISTURBANCE TO BE REMOVED AS RECOMMENDED BY THE ENGINEER.
 - DEWATERING OF THE DAM FOUNDATION AREAS (WELL POINTS OR PUMPING FROM SUMPS) AND THE OVERFLOW OF SURFACE WATER AWAY FROM THE WORK AREA MAY BE NECESSARY TO ALLOW PROPER EXECUTION OF THE CONSTRUCTION WORK. DEWATERING SHOULD BEGIN PRIOR TO GARTHWORKE SO THAT THE SPILLWAY CONDUIT CAN BE INSTALLED AND SURFACE WATER WOULD THEN BE DIVERTED THROUGH THE PRINCIPAL SPILLWAY.
 - THE EMBANKMENT FOUNDATION TO BE FREE OF PORED WATER, EXCESSIVELY MUDDY CONDITIONS AND IN DRAINABLE CONDITION AS NEEDED FOR PROPER EXECUTION OF THE CONSTRUCTION WORK.
 - COMPACTION OF BACKFILL AROUND THE SPILLWAY STRUCTURE IS CRITICAL WITH REGARD TO SEEPAGE. DURING CONSTRUCTION OF THE DRAINAGE FILTER AROUND THE PRINCIPAL SPILLWAY CONDUIT, CARE SHOULD BE EXERCISED WITH RESPECT TO THE INSTALLATION OF THE FINE AND COARSE MATERIALS IN ORDER TO PREVENT CONTAMINATION BY FOREIGN MATTER.



Langley and McDonald, P.C.
Engineers • Surveyors • Planners
Landscape Architects • Environmental Consultants
VIRGINIA BEACH



DES: NLM
DWN: WEG
CHK: NLM
DATE: 04/08
12 MAY 1975

**WILLIAMSBURG COMPREHENSIVE CANCER TREATMENT CENTER
and MEDICAL OFFICE BUILDING**
TREYBURN DRIVE, WILLIAMSBURG, JAMES CITY COUNTY, VIRGINIA
DEVELOPERS: DOCTOR and MRS MARK E. ELLIS

SHEET 6A OF 6
DISK
PROJ. NO. 94025-4
DWG. 5436GW



Langley and McDonald

ENGINEERS•PLANNERS•SURVEYORS

Transmittal

5544 Greenwich Road
☐ Virginia Beach, Virginia 23462
(804) 473-2000

☒ 201 Packets Court
Williamsburg, Virginia 23185
(804) 253-2975

Project: Williamsburg Cancer Treatment Center
To: Darryl Cook From: Steve Romeo
Code Compliance-James City Co. Date: 9-15-97
P.O. Box 8784 Reply requested: ☐ Yes ☐ No
Williamsburg, VA 23187-8784 Reply to: _____

We are sending you:

- ☐ Attached
☐ Under separate cover via:

- ☒ Prints
☐ Copy of letter
☐ Plans
☐ Specifications
☐ Shop drawings
☐ _____

Transmitted as checked below:

- ☐ For your use
☐ As requested
☐ For review and comment
☐ For approval
☐ Return for correction
☐ Approved as noted
☐ Approved
☐ _____



Copies Date No. Description

4	9/15/97		Chambrel BMP Record Drawing

Remarks: 2.65 Below Crest of Riser

Copies

1. File: 96079
2. _____
3. _____
4. _____

Enclosures

- ☐
☐
☐
☐

Langley and McDonald

By: amp

If enclosures are not as noted, kindly notify us at once.

#4

5. Construction Drawings

Site Plan

For

Chambrel Memory Care Facility

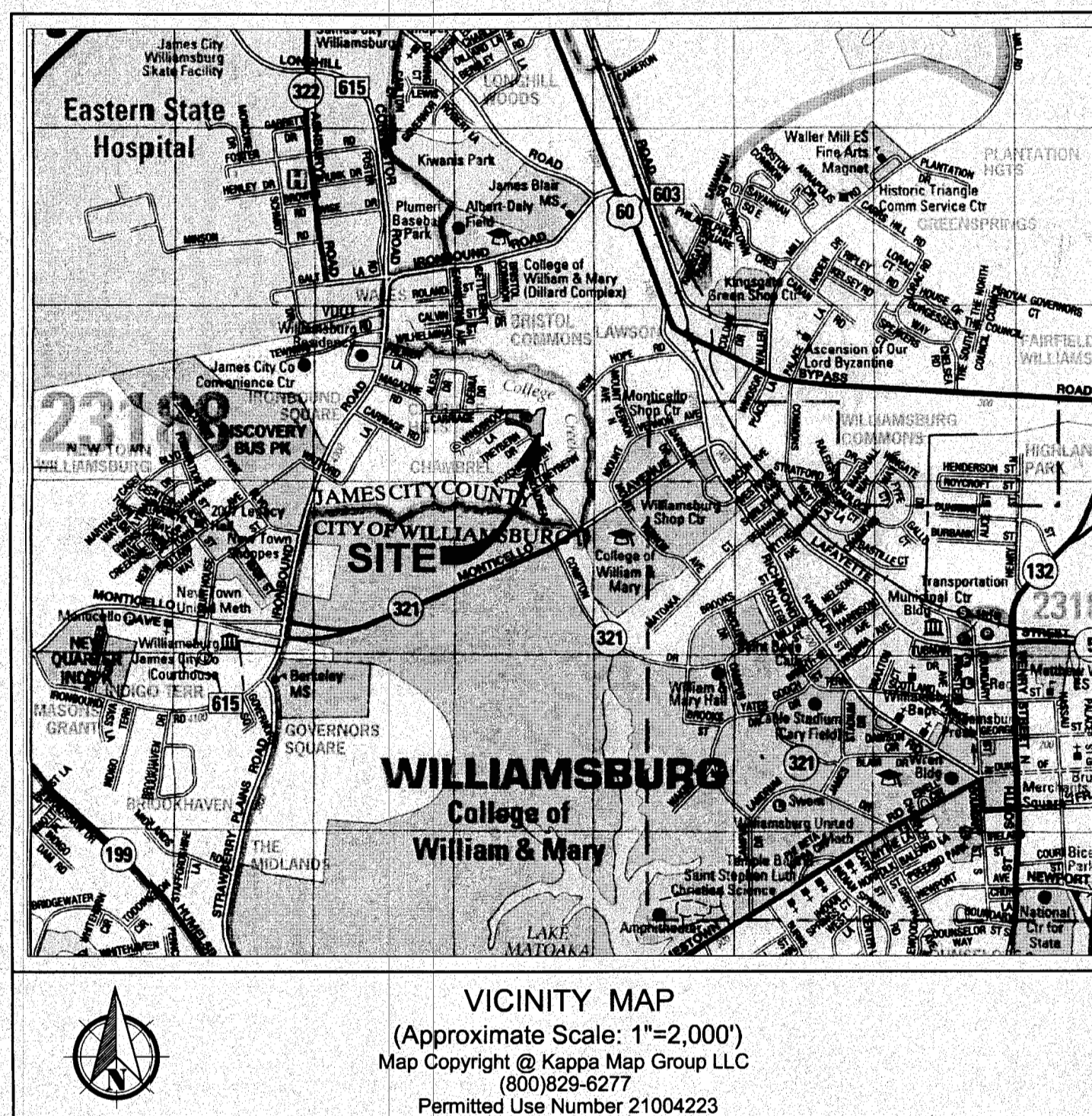
GENERAL NOTES

1. ALL ERRORS OR DISCREPANCIES WITH THE PLANS OR EXISTING SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER OR SURVEYOR OF RECORD BEFORE PROCEEDING WITH THE WORK.
2. CONTOUR INTERVAL IS 1 FOOT.
3. SOLID WASTE DISPOSAL SHALL BE PROVIDED BY A PRIVATE HAULER.
4. THE CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF THE APPROVED PLANS AT THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING MISS UTILITY (1-800-552-7001) FOR EXISTING UTILITY LOCATIONS AT LEAST 3 WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION, AND A PRIVATE UTILITY LOCATOR FOR THE LOCATING OF PRIVATE UTILITIES.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND NOTIFY JAMES CITY SERVICE AUTHORITY PRIOR TO ANY EXCAVATION OR DEMOLITION WITHIN UTILITY CORRIDORS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE DRAWINGS AND FOR EXCAVATION STOCKPILES, STAGING AREAS, MOBILIZATION SITES, BEDDING/BACKFILL STOCKPILES AND OTHER LAND DISTURBANCES NOT SPECIFICALLY ADDRESSED IN THE DRAWINGS OR CONTRACT DOCUMENTS. EROSION AND SEDIMENT CONTROL MEASURES SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK" (LATEST PUBLICATION) AND THE REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITY.
8. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL OWNERS AND RESIDENTS OF PROPERTY ADJACENT TO THE PROJECT 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK, UNLESS OTHERWISE DIRECTED BY THE OWNER. CONSTRUCTION WITHIN EASEMENTS OR ON PUBLIC RIGHT-OF-WAY NECESSITATES NOTICE WHETHER ADJACENT TO OR LOCATED ON THE ADJOINING PROPERTY. FAILURE TO PROVIDE THE MINIMUM NOTIFICATION TIME WILL RESULT IN SUSPENSION OF WORK.
9. THE ABSENCE OF THE OWNER OR THE ENGINEER AT THE JOB SITE DOES NOT, IN ANY WAY, RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE DRAWINGS, CONTRACT DOCUMENTS, ADDENDA, AND WRITTEN AUTHORIZED PLAN REVISIONS.
10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANYBODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.
11. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THE CURRENT JAMES CITY COUNTY STANDARDS AND SPECIFICATIONS, VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS, AND ANY OTHER APPLICABLE CITY OR STATE ORDINANCES, CODES, AND LAWS.
12. THE CONTRACTOR SHALL AT ALL TIMES POSSESS AND MAINTAIN A CURRENT COPY OF THE JAMES CITY SERVICE AUTHORITY STANDARDS AND SPECIFICATIONS, WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS AND A COPY OF THE HAMPTON ROADS PLANNING DISTRICT COMMISSION (HRPDC) REGIONAL STANDARDS AT THE JOB SITE AND READILY AVAILABLE FOR IMMEDIATE REFERENCE.
13. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THE WORK INDICATED.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH LOCAL EMERGENCY SERVICES, AND ALL NECESSARY UTILITY COMPANIES INCLUDING, BUT NOT LIMITED TO, ELECTRICITY, NATURAL GAS, TELECOMMUNICATIONS, CABLE TELEVISION, WATER, SEWER, PETROLEUM TRANSMISSION, AND OTHERS THAT MAY BE REQUIRED.
16. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.
17. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EXISTING SITE IMPROVEMENTS, INCLUDING LANDSCAPING, AS SHOWN ON THE APPROVED PLAN.
18. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL, INCLUDING SOIL AND DEBRIS, FROM THE SITE.
19. A LAND DISTURBING PERMIT AND SILTATION AGREEMENT, WITH SURETY, ARE REQUIRED FOR THIS PROJECT.
20. PRIOR TO OBTAINING A LAND DISTURBING PERMIT, THE OWNER OR CONTRACTOR SHALL OBTAIN A VSMP PERMIT (VIRGINIA STORMWATER MANAGEMENT PROGRAM) FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION FOR THE DISCHARGE OF STORMWATER FROM CONSTRUCTION ACTIVITIES. THIS PERMIT WILL REQUIRE DAILY LOGS OF EARTHWORK, RECORDATION OF STORM EVENTS, LOGS OF MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES, AND OTHER ACTIONS DURING CONSTRUCTION.
21. THE CONTRACTOR WILL IMMEDIATELY REPAIR OR REPLACE CHANNEL STABILIZATION BLANKETS AND EROSION CONTROL MATTINGS IF SITEWORK OR ASSOCIATED UTILITY OPERATIONS SUCH AS CABLE, ELECTRIC, GAS, PHONE, SEWER, WATER, ETC. DAMAGE THEIR FUNCTIONAL INTENT.
22. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT (SECTION 56-265.14 ET. SEQ. CODE OF VIRGINIA, 1950, AS AMENDED) AND HEREBY AGREES TO HOLD THE DEVELOPER AND THE ENGINEER HARMLESS AGAINST ANY LOSS, DAMAGE, OR CLAIMS OF ANY NATURE WHATSOEVER ARISING OUT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS OF SAID ACT.
23. THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT (SECTIONS 58.1-406 THROUGH 58.1-414, CODE OF VIRGINIA, 1950, AS AMENDED). THE CONTRACTOR IS REQUIRED TO VISIT THE SITE AND NOTE THE POSITION OF OVERHEAD CABLES PRIOR TO CONSTRUCTION.
24. THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT, THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.
25. NO OFFSITE LAND DISTURBANCE IS ANTICIPATED FOR THIS PROJECT.
26. ALL OBJECTIONABLE AND DELETERIOUS MATERIAL IS TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A STATE APPROVED FACILITY MEETING THE REQUIREMENTS OF ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
27. ALL PROPOSED UTILITIES SHALL BE PLACED UNDERGROUND.
28. SITE IS SERVED BY PUBLIC WATER AND SEWER.
29. EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. IF EXISTING UTILITIES ARE FOUND TO BE IN CONFLICT WITH PROPOSED SITE IMPROVEMENTS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, OWNER, AND THE UTILITY COMPANY TO EITHER REDESIGN THE PROPOSED IMPROVEMENTS OR RELOCATE THE EXISTING UTILITIES AT THE OWNER'S/DEVELOPER'S EXPENSE.
30. ALL UTILITY AND SURVEY DATA SHOWN ON THE DRAWINGS HAVE BEEN PROVIDED BY AES CONSULTING ENGINEERS. INFORMATION HAS BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES AT THE TIME OF THE SURVEY BUT IS NOT REPRESENTED AS BEING COMPLETE AND ACCURATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT EXISTING UTILITIES AND UNDERGROUND STRUCTURES. DAMAGE TO EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEVELOPER.
31. WATER AND SANITARY SEWER SYSTEMS SHALL MEET THE REQUIREMENTS OF THE LATEST EDITIONS OF THE JAMES CITY SERVICE AUTHORITY (JCSA) DESIGN AND ACCEPTANCE CRITERIA, THE HAMPTON ROADS PLANNING DISTRICT COMMISSION (HRPDC) REGIONAL CONSTRUCTION STANDARDS, AND THE COMMONWEALTH OF VIRGINIA WATERWORKS AND SEWERAGE REGULATIONS. CURRENT COPIES SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
32. PRIVATELY OWNED UTILITIES (I.E. WATER & SEWER LINES) SHOWN ON THIS SITE PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND ENFORCED BY THE CODE COMPLIANCE DIVISION. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PREVENTION ASSOCIATION STANDARD 24, AND THE INTERNATIONAL FIRE CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT OBTAINING REQUIRED PERMITS AND INSPECTIONS.
33. NOTIFY JAMES CITY SERVICE AUTHORITY PRIOR TO ANY EXCAVATION OR DEMOLITION WITHIN UTILITY CORRIDORS.
34. EASEMENTS DENOTED AS "JCSA UTILITY EASEMENTS" ARE FOR THE EXCLUSIVE USE OF THE JAMES CITY SERVICE AUTHORITY AND THE PROPERTY OWNER. OTHER UTILITY SERVICE PROVIDERS DESIRING TO USE THESE EASEMENTS WITH THE EXCEPTION OF PERPENDICULAR UTILITY CROSSLINGS MUST OBTAIN AUTHORIZATION FOR ACCESS AND USE FROM JCSA AND THE PROPERTY OWNER. ADDITIONALLY, JCSA SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE TO IMPROVEMENTS WITHIN THIS EASEMENT, FROM ANY CAUSE."
35. ALL STORM SEWER SHALL BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS, AND THE JAMES CITY COUNTY STANDARDS AND SPECIFICATIONS.
36. OUTDOOR SIGNS ON THE PROPERTY WITHIN THE DISTRICT SHALL COMPLY WITH THE REGULATIONS FOR EXTERIOR SIGNS IN ARTICLE II, DIVISION 3 OF THE ZONING ORDINANCE.
37. RETAINING WALLS AS PROPOSED WITH THIS PROJECT (2' AND TALLER) SHALL BE DESIGNED BY OTHERS AND REQUIRE A PERMIT THROUGH JAMES CITY COUNTY CODES COMPLIANCE DIVISION PRIOR TO COMMENCEMENT OF WORK.

Jamestown District

James City County

Virginia



James City County Project No.: SP-113-11
Original Submittal Date: 12/06/11

INDEX OF SHEETS

SHEET NO.	SHEET DESCRIPTION
1	COVER SHEET
2	DEMOLITION PLAN AND ENVIRONMENTAL INVENTORY
3	SITE AND UTILITY PLAN
4	OFFSITE UTILITY PLAN AND PROFILE
5	PHASE I EROSION AND SEDIMENT CONTROL PLAN
6	DRAINAGE AND PHASE II EROSION AND SEDIMENT CONTROL PLAN
7	GRADING PLAN
8	NOTES AND DETAILS
9	NOTES AND DETAILS
10	LANDSCAPE PLAN
11	LIGHTING PLAN

OWNER/DEVELOPER INFORMATION

OWNER: BROOKDALE SENIOR LIVING, INC.
MR. JAY KEOPF
111 WESTWOOD PLACE, SUITE 400
BRENTWOOD, TN 37027
PHONE: (615) 564-8312
FAX: (615) 221-2289

DEVELOPER: BROOKDALE CHAMBREL AT WILLIAMSBURG
MS. JENNY INKER
3800 TREYBURN DRIVE
WILLIAMSBURG, VA 23185
PHONE: (757) 220-1839
FAX: (757) 229-9367

ARCHITECT: EARL SWENSON ASSOCIATES, INC. (ESA)
MR. DAVID MINNIGAN, A.I.A.
2100 WEST END AVENUE
VANDERBILT PLAZA, SUITE 1200
NASHVILLE, TN 37203
PHONE: (615) 329-9445
FAX: (615) 329-0046

SITE DATA

SITE ADDRESS: 3800 TREYBURN DRIVE, WILLIAMSBURG, VA 23185

TAX MAP PARCEL: 3910100131

ZONING: PUD-R, PLANNED UNIT DEVELOPMENT-RESIDENTIAL (WITH PROFFERS)

DEVELOPMENT REVIEW COMMITTEE (DRC): CASE NO. C-0036-2011 APPROVED BY DRC WITH CONSENT AT PLANNING COMMISSION ON AUGUST 3, 2011

PROPOSED SITE USE: MEMORY CARE FACILITY

ESTIMATED DISTURBED AREA: 1.87 AC.±

NO AREAS WITH AN ELEVATION LESS THAN FOUR FEET ABOVE MEAN SEA LEVEL EXIST ON SITE.

NO WETLANDS EXIST ON SITE.

NO PERENNIAL OR INTERMITTENT STREAMS EXIST ON SITE.

THIS PROPERTY IS IN FLOOD ZONE "X" AS SHOWN ON MAP NUMBER 510201-0230C, DATED 09/28/2007 OF THE FLOOD INSURANCE RATE MAPS FOR JAMES CITY COUNTY, VIRGINIA. ZONE "X" IS DEFINED AS AREAS OUTSIDE THE 500 YEAR FLOOD PLAIN.

THIS SITE IS SITUATED IN THE COLLEGE CREEK WATERSHED OF JAMES CITY COUNTY.

THIS SITE IS LOCATED WITHIN A PRIMARY SERVICE AREA (PSA).

BUILDING USE

CONSTRUCTION TYPE: II-B

USE GROUP: I-2

BUILDING AREA: ±25,052 S.F.

BUILDING RATIO: ±25,052 S.F. / ±215,553 S.F. = ±11.62%

BUILDING HEIGHT: 25'-0" FROM FINISHED FLOOR (1-STORY)

SITE STATISTICS

SITE AREA:	±215,553 S.F.	±4.95 AC.	100% OF SITE
EXISTING IMPERVIOUS AREA:	±61,593 S.F.	±1.41 AC.	±28.57% OF SITE
PROPOSED IMPERVIOUS AREA:			
- BUILDING:	±25,052 S.F.	±0.58 AC.	±11.62% OF SITE
- PARKING, C&G, SIDEWALKS, PATIOS:	±40,310 S.F.	±0.93 AC.	±18.70% OF SITE
- TOTAL:	±65,362 S.F.	±1.50 AC.	±30.32% OF SITE
NET INCREASE IN IMPERVIOUS AREA:	±3,769 S.F.	±0.09 AC.	±1.75% OF SITE
PROPOSED OPEN AREA:	±150,191 S.F.	±3.45 AC.	±69.68% OF SITE

PARKING CALCULATIONS

EXISTING INDEPENDENT LIVING (IL) COTTAGES

-SPACES REQUIRED: 35 SPACES (1 SPACE / IL COTTAGE)
-SPACES PROVIDED: 35+ SPACES

EXISTING INDEPENDENT LIVING (IL) APARTMENTS & ASSISTED LIVING (AL) BEDS

-SPACES REQUIRED: 192 SPACES (1 SPACE / IL UNIT & 1 SPACE / 2 AL BEDS) = (165 UNITS / 1) + (53 BEDS / 2)
-SPACES PROVIDED: 218 SPACES (LOCATED THROUGHOUT CAMPUS)

PROPOSED MEMORY CARE BUILDING

-SPACES REQUIRED: 16 SPACES (1 SPACE / 2 BEDS) = (32 BEDS / 2)
-SPACES PROVIDED: 64 SPACES (LOCATED WITHIN EX. PARKING LOT JUST SOUTHEAST OF PROPOSED BUILDING) INCLUDING 3 NEW HANDICAP SPACES

PLANNING DIVISION

AUG 23 2011

RECEIVED

PLANNING DIVISION

FEB 11 2013

RECEIVED

COUNTY OF JAMES CITY
FINAL SITE PLAN

APPROVALS

Fire Dept. STAV DATE 2/11/13

Health Dept. STAV DATE 2/11/13

VDOT STAV DATE 2/11/13

Planning STAV DATE 2/11/13

Environ. STAV DATE 2/11/13

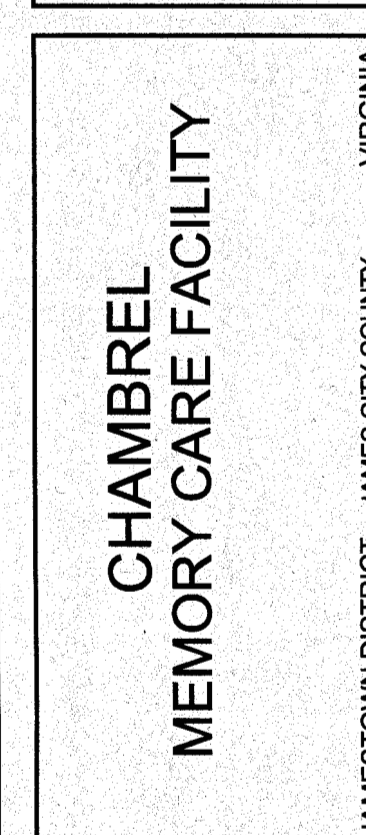
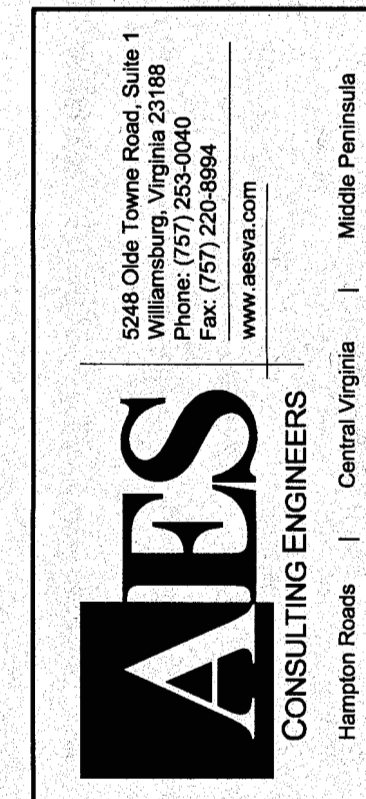
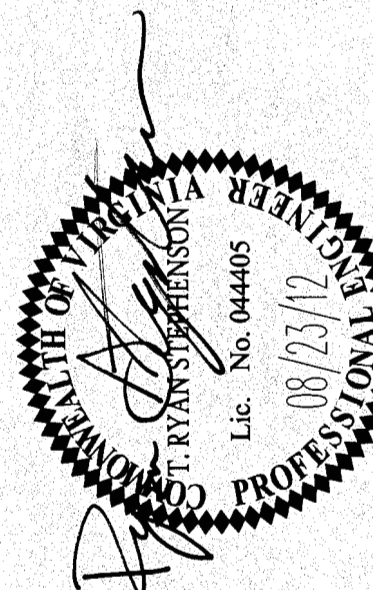
Zoning Adm. STAV DATE 2/11/13

JCSA STAV DATE 2/11/13

County Eng. _____

REA _____

Other _____



Project Contacts: HWP/ITRS
Project Number: 7645-02
Scale: N/A Date: 12/06/11
Sheet Title: Cover Sheet
Sheet Number: 1

Rev.	Date	Description	Revised By
3	08/23/12	REVISED PER JAMES CITY COUNTY COMMENTS	TRS
2	06/28/12	REVISED PER JAMES CITY COUNTY COMMENTS	TRS
1	02/03/12	REVISED PER JAMES CITY COUNTY COMMENTS	TRS



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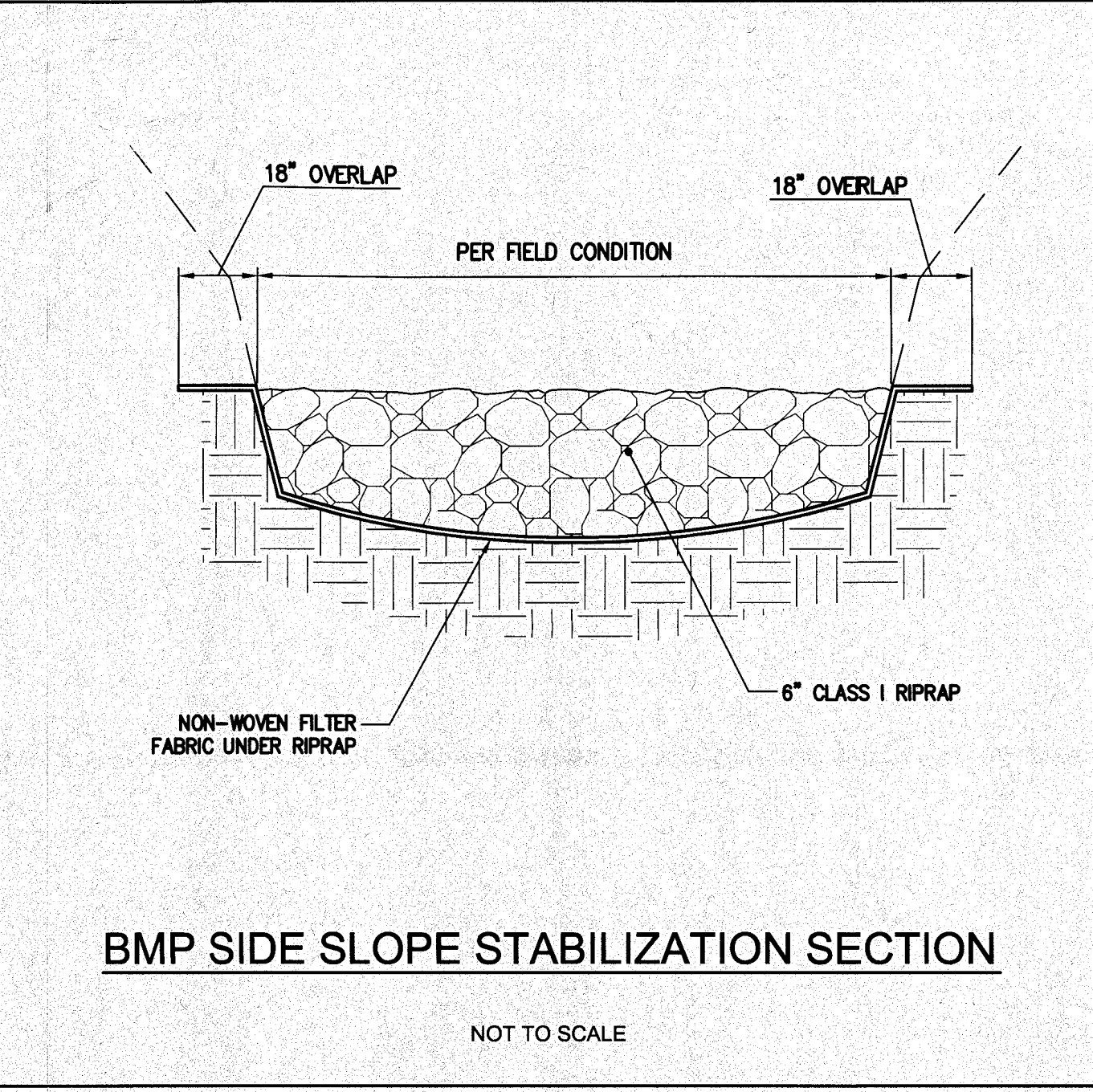
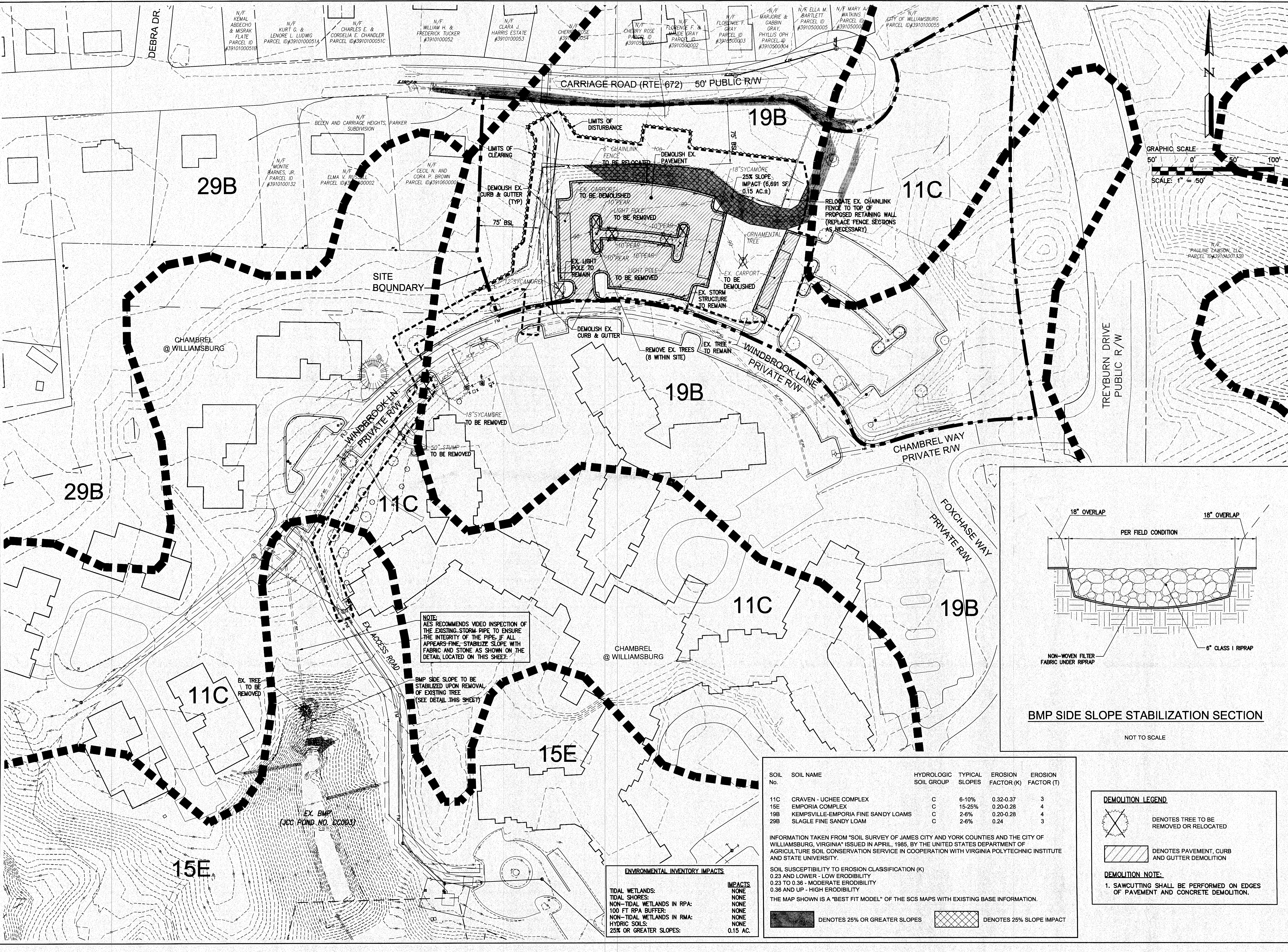
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**CHAMBREL
 MEMORY CARE FACILITY**

JAMESTOWN DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	HWP/TRS
Project Number:	7645-02
Scale:	Date:
1"=50'	12/06/11
Sheet Title:	
DEMOLITION PLAN AND ENVIRONMENTAL INVENTORY	
Sheet Number	
2	



SOIL No.	SOIL NAME	HYDROLOGIC SOIL GROUP	TYPICAL SLOPES	EROSION FACTOR (K)	EROSION FACTOR (T)
11C	GRAVEN - UCHEE COMPLEX	C	6-10%	0.32-0.37	3
15E	EMPORIA COMPLEX	C	15-25%	0.20-0.28	4
19B	KEMPSVILLE-EMPORIA FINE SANDY LOAMS	C	2-6%	0.20-0.28	4
29B	SLAGLE FINE SANDY LOAM	C	2-6%	0.24	3

INFORMATION TAKEN FROM "SOIL SURVEY OF JAMES CITY AND YORK COUNTIES AND THE CITY OF WILLIAMSBURG, VIRGINIA" ISSUED IN APRIL, 1985, BY THE UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.

SOIL SUSCEPTIBILITY TO EROSION CLASSIFICATION (K)
 0.23 AND LOWER - LOW ERODIBILITY
 0.23 TO 0.36 - MODERATE ERODIBILITY
 0.36 AND UP - HIGH ERODIBILITY

THE MAP SHOWN IS A "BEST FIT MODEL" OF THE SCS MAPS WITH EXISTING BASE INFORMATION.

DENOTES 25% OR GREATER SLOPES
 DENOTES 25% SLOPE IMPACT

DEMOLITION LEGEND

DENOTES TREE TO BE REMOVED OR RELOCATED

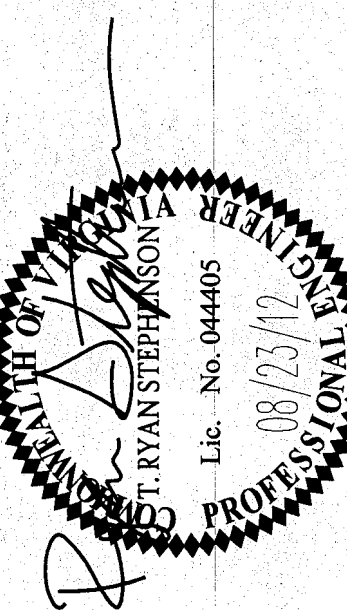
DENOTES PAVEMENT, CURB AND GUTTER DEMOLITION

DEMOLITION NOTE:
 1. SAWCUTTING SHALL BE PERFORMED ON EDGES OF PAVEMENT AND CONCRETE DEMOLITION.

ENVIRONMENTAL INVENTORY IMPACTS

TIDAL WETLANDS:	NONE
NON-TIDAL WETLANDS IN RPA:	NONE
NON-TIDAL WETLANDS IN RMA:	NONE
HYDRIC SOILS:	NONE
25% OR GREATER SLOPES:	0.15 AC.

Rev.	Date	Description
1	02/03/12	REVISED PER JAMES CITY COUNTY COMMENTS
2	06/28/12	REVISED PER JAMES CITY COUNTY COMMENTS
3	08/23/12	REVISED PER JAMES CITY COUNTY COMMENTS



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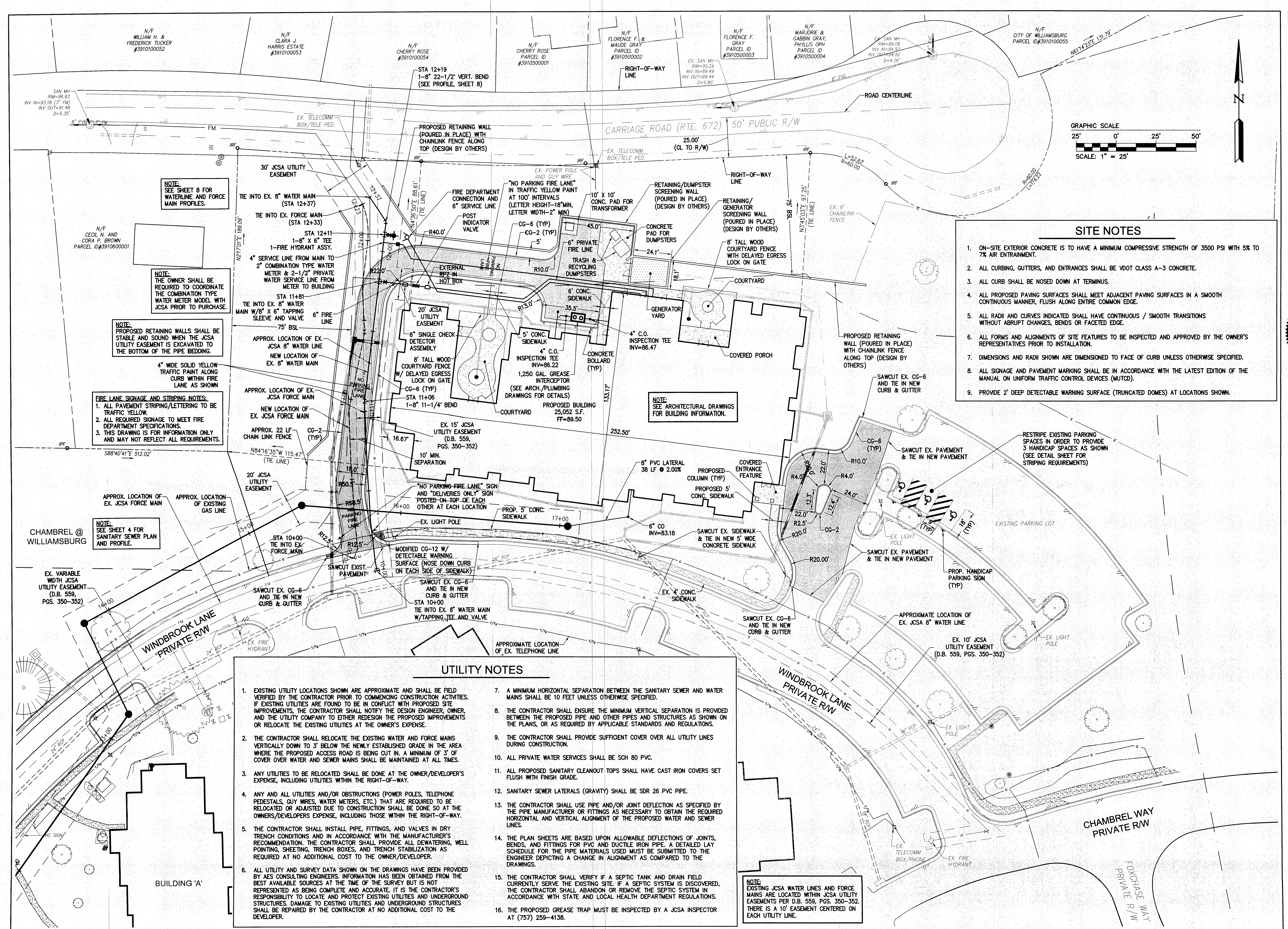
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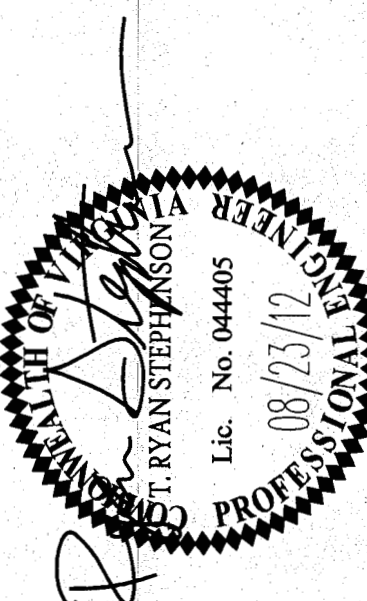
**CHAMBREL
 MEMORY CARE FACILITY**

JAMESTOWN DISTRICT | JAMES CITY COUNTY | VIRGINIA

Project Contacts: HWP/TRS
 Project Number: 7645-02
 Scale: 1"=25' Date: 12/06/11
 Sheet Title: SITE AND UTILITY PLAN
 Sheet Number: 3



Revised By	Date	Description
TRIS		REVISED PER JAMES CITY COUNTY COMMENTS
TRIS		REVISED PER JAMES CITY COUNTY COMMENTS
TRIS		REVISED PER JAMES CITY COUNTY COMMENTS



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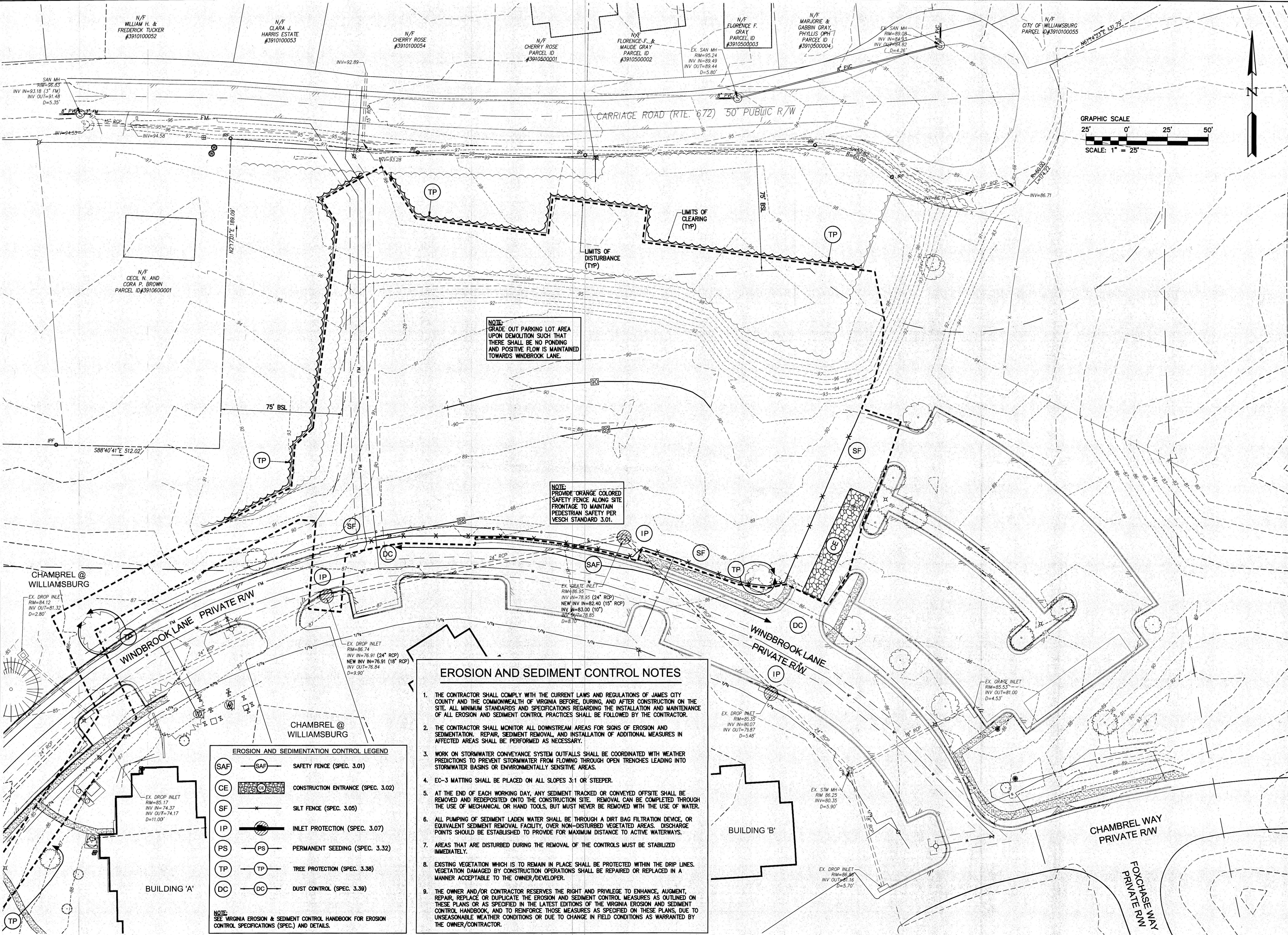
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 MEMORY CARE FACILITY**

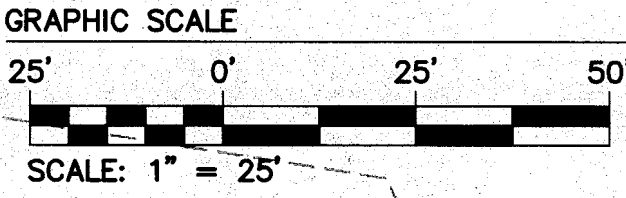
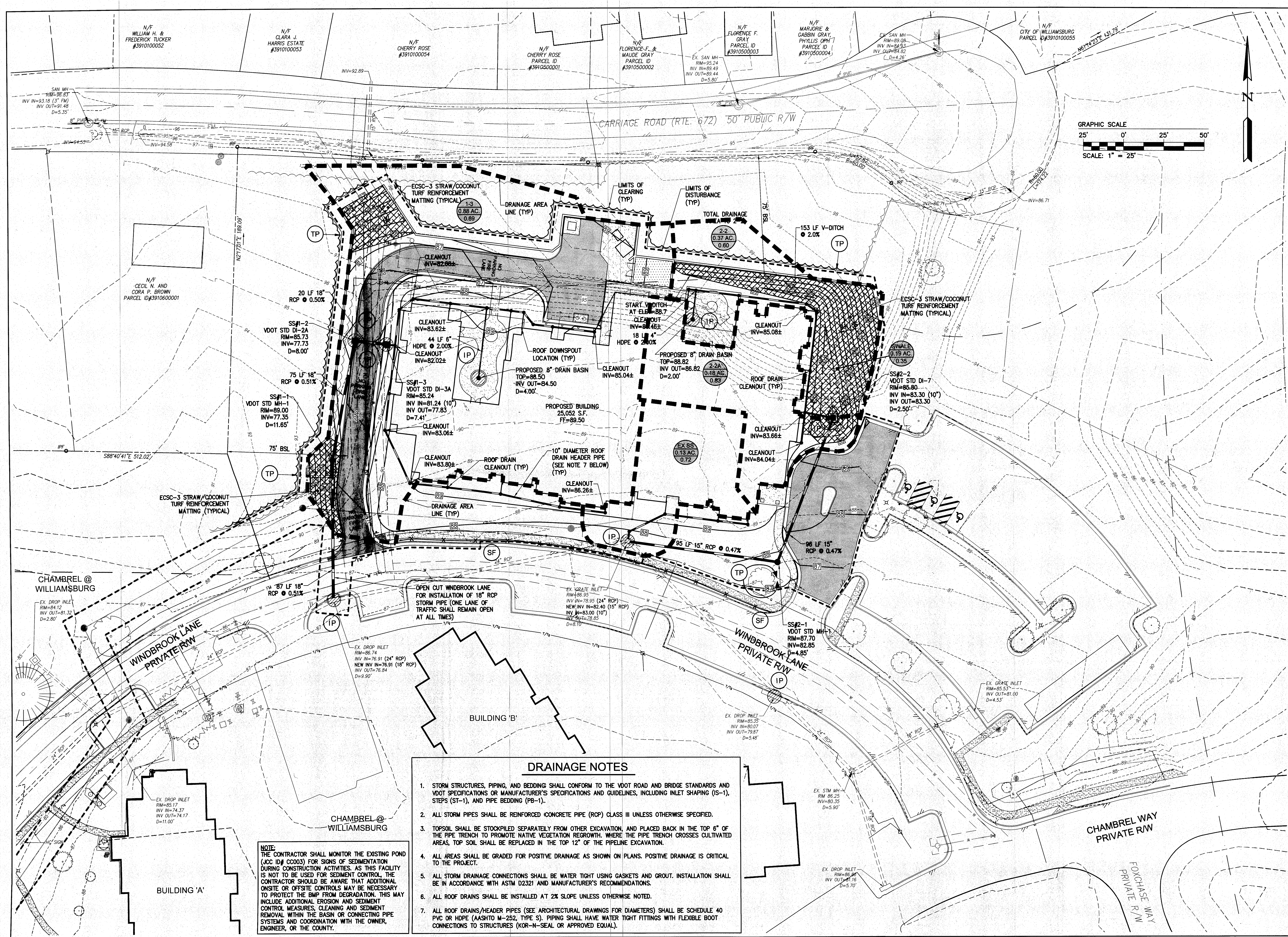
JAMESTOWN DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts: HWP/TRS
 Project Number: 7645-02
 Scale: 1"=25'
 Date: 12/06/11

Sheet Title:
**PHASE I
 EROSION AND
 SEDIMENT
 CONTROL PLAN**

Sheet Number
5



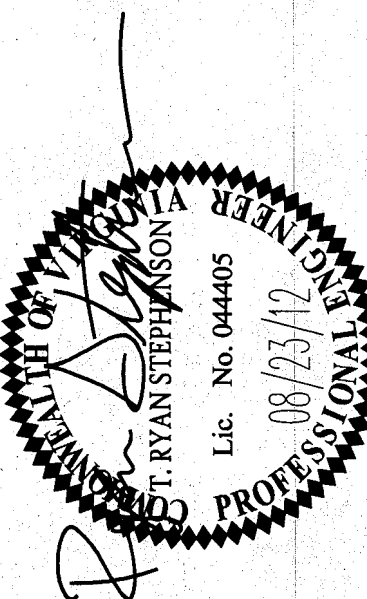


DRAINAGE NOTES

1. STORM STRUCTURES, PIPING, AND BEDDINGS SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS OR MANUFACTURER'S SPECIFICATIONS AND GUIDELINES, INCLUDING INLET SHAPING (IS-1), STEPS (ST-1), AND PIPE BEDDING (PB-1).
2. ALL STORM PIPES SHALL BE REINFORCED CONCRETE PIPE (RCP) CLASS III UNLESS OTHERWISE SPECIFIED.
3. TOPSOIL SHALL BE STOCKPILED SEPARATELY FROM OTHER EXCAVATION, AND PLACED BACK IN THE TOP 6" OF THE PIPE TRENCH TO PROMOTE NATIVE VEGETATION REGROWTH. WHERE THE PIPE TRENCH CROSSES CULTIVATED AREAS, TOP SOIL SHALL BE REPLACED IN THE TOP 12" OF THE PIPELINE EXCAVATION.
4. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AS SHOWN ON PLANS. POSITIVE DRAINAGE IS CRITICAL TO THE PROJECT.
5. ALL STORM DRAINAGE CONNECTIONS SHALL BE WATER TIGHT USING GASKETS AND GROUT. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 AND MANUFACTURER'S RECOMMENDATIONS.
6. ALL ROOF DRAINS SHALL BE INSTALLED AT 2% SLOPE UNLESS OTHERWISE NOTED.
7. ALL ROOF DRAINS/HEADER PIPES (SEE ARCHITECTURAL DRAWINGS FOR DIAMETERS) SHALL BE SCHEDULE 40 PVC OR HDPE (AASHTO M-252, TYPE S). PIPING SHALL HAVE WATER TIGHT FITTINGS WITH FLEXIBLE BOOT CONNECTIONS TO STRUCTURES (KOR-N-SEAL OR APPROVED EQUAL).

NOTE:
THE CONTRACTOR SHALL MONITOR THE EXISTING POND (JCC ID# CC003) FOR SIGNS OF SEDIMENTATION DURING CONSTRUCTION ACTIVITIES. AS THIS FACILITY IS NOT TO BE USED FOR SEDIMENT CONTROL, THE CONTRACTOR SHOULD BE AWARE THAT ADDITIONAL ONSITE OR OFFSITE CONTROLS MAY BE NECESSARY TO PROTECT THE BMP FROM DEGRADATION. THIS MAY INCLUDE ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES, CLEANING AND SEDIMENT REMOVAL WITHIN THE BASIN OR CONNECTING PIPE SYSTEMS AND COORDINATION WITH THE OWNER, ENGINEER, OR THE COUNTY.

Rev.	Date	Revised By	Description
3	08/22/12	REVISOR	REVISED PER JAMES CITY COUNTY COMMENTS
2	06/28/12	REVISOR	REVISED PER JAMES CITY COUNTY COMMENTS
1	03/02/12	REVISOR	REVISED PER JAMES CITY COUNTY COMMENTS



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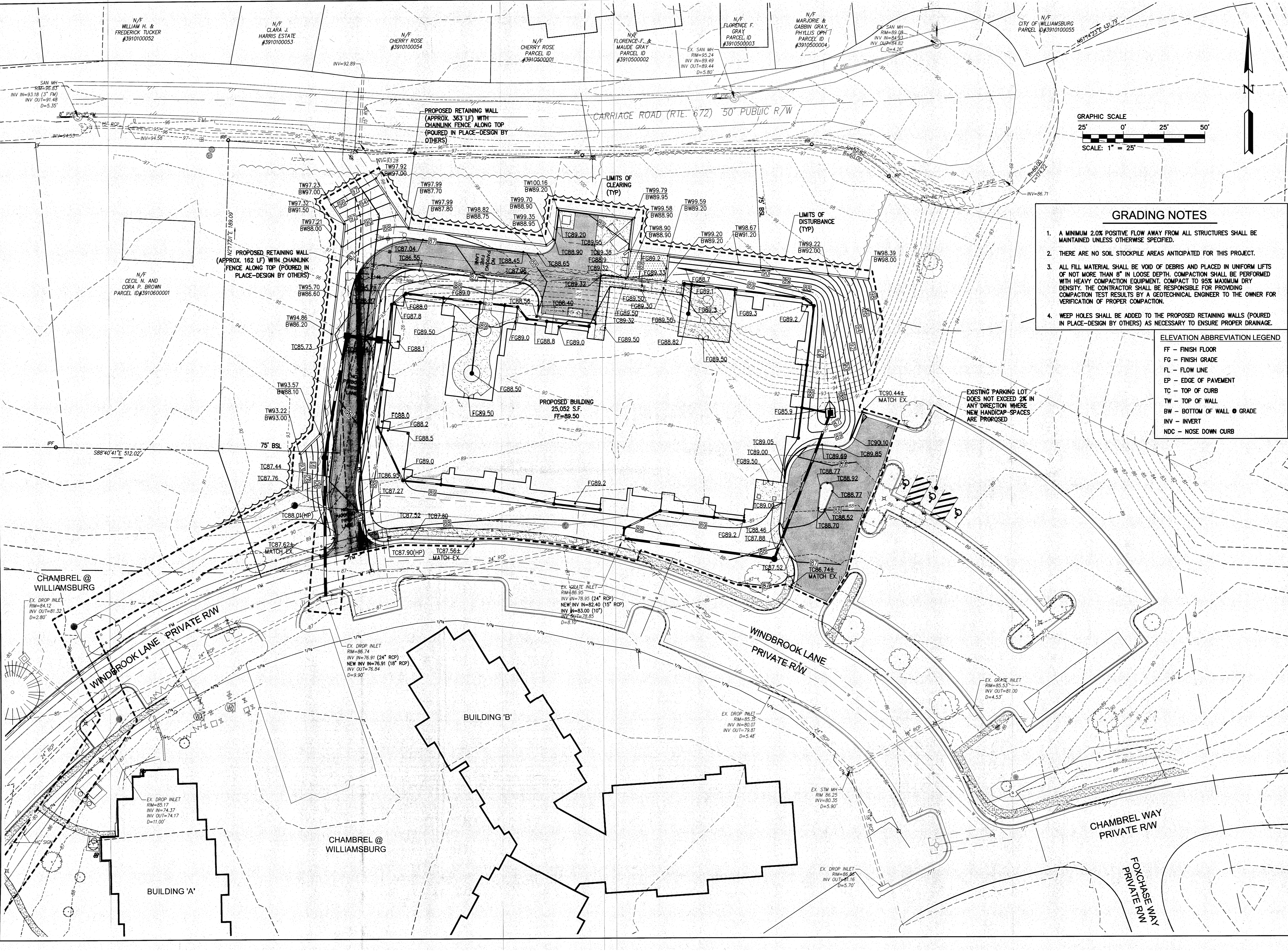
**CHAMBERL
MEMORY CARE FACILITY**

JAMESTOWN DISTRICT | JAMES CITY COUNTY | VIRGINIA

Project Contacts: HWP/TRS
Project Number: 7645-02
Scale: 1"=25'
Date: 12/06/11

Sheet Title:
**DRAINAGE AND
PHASE II EROSION
AND SEDIMENT
CONTROL PLAN**

Sheet Number:
6



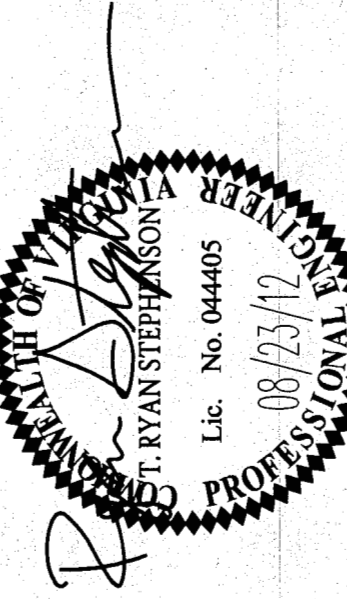
GRADING NOTES

1. A MINIMUM 2.0% POSITIVE FLOW AWAY FROM ALL STRUCTURES SHALL BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
2. THERE ARE NO SOIL STOCKPILE AREAS ANTICIPATED FOR THIS PROJECT.
3. ALL FILL MATERIAL SHALL BE VOID OF DEBRIS AND PLACED IN UNIFORM LIFTS OF NOT MORE THAN 8" IN LOOSE DEPTH. COMPACTION SHALL BE PERFORMED WITH HEAVY COMPACTION EQUIPMENT. COMPACT TO 95% MAXIMUM DRY DENSITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPACTION TEST RESULTS BY A GEOTECHNICAL ENGINEER TO THE OWNER FOR VERIFICATION OF PROPER COMPACTION.
4. WEEP HOLES SHALL BE ADDED TO THE PROPOSED RETAINING WALLS (POURED IN PLACE-DESIGN BY OTHERS) AS NECESSARY TO ENSURE PROPER DRAINAGE.

ELEVATION ABBREVIATION LEGEND

- FF - FINISH FLOOR
- FG - FINISH GRADE
- FL - FLOW LINE
- EP - EDGE OF PAVEMENT
- TC - TOP OF CURB
- TW - TOP OF WALL
- BW - BOTTOM OF WALL
- INV - INVERT
- NDC - NOSE DOWN CURB

Revised By	Date	Description
TR5		REVISED PER JAMES CITY COUNTY COMMENTS
TR5		REVISED PER JAMES CITY COUNTY COMMENTS
TR5		REVISED PER JAMES CITY COUNTY COMMENTS



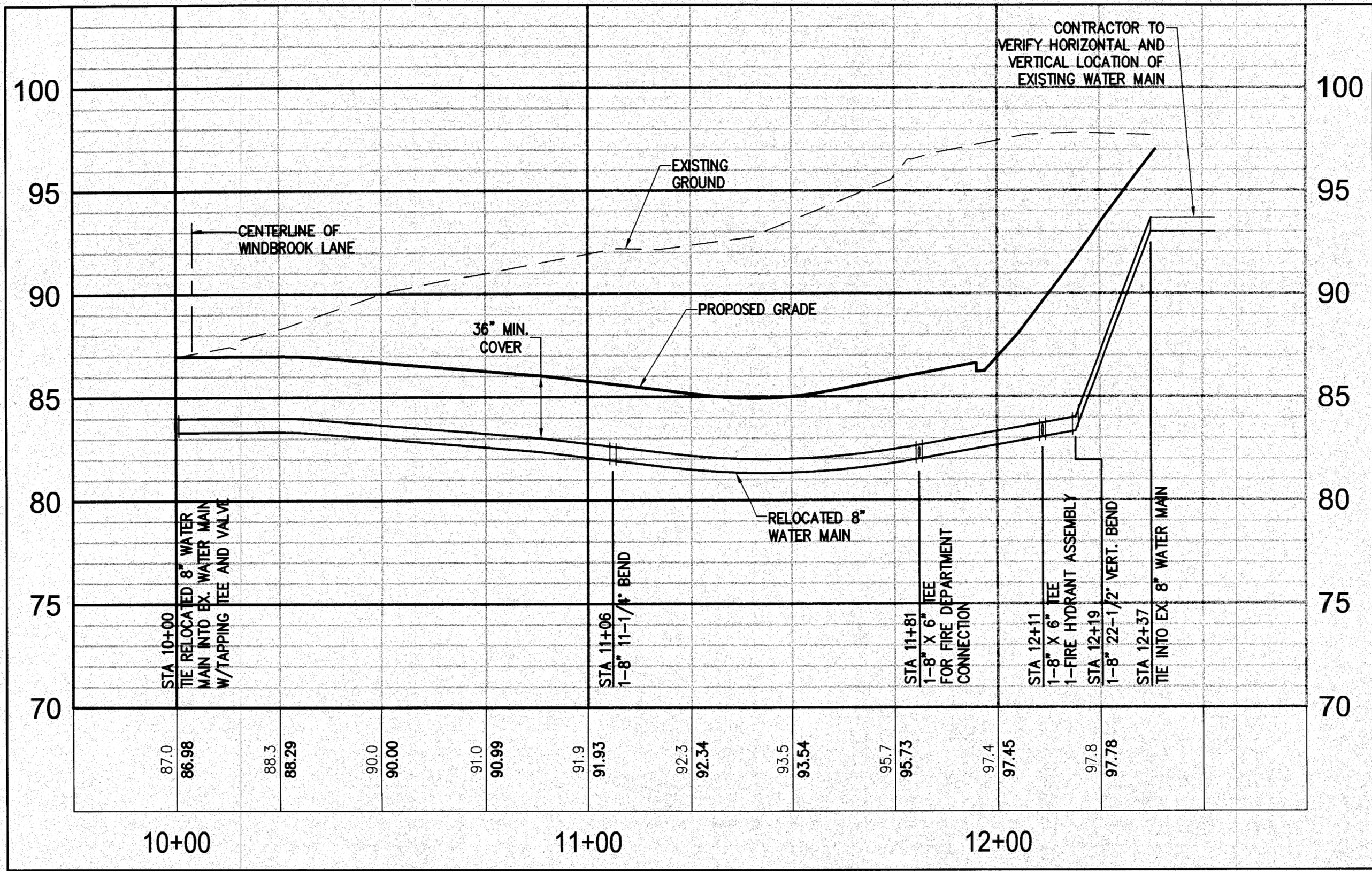
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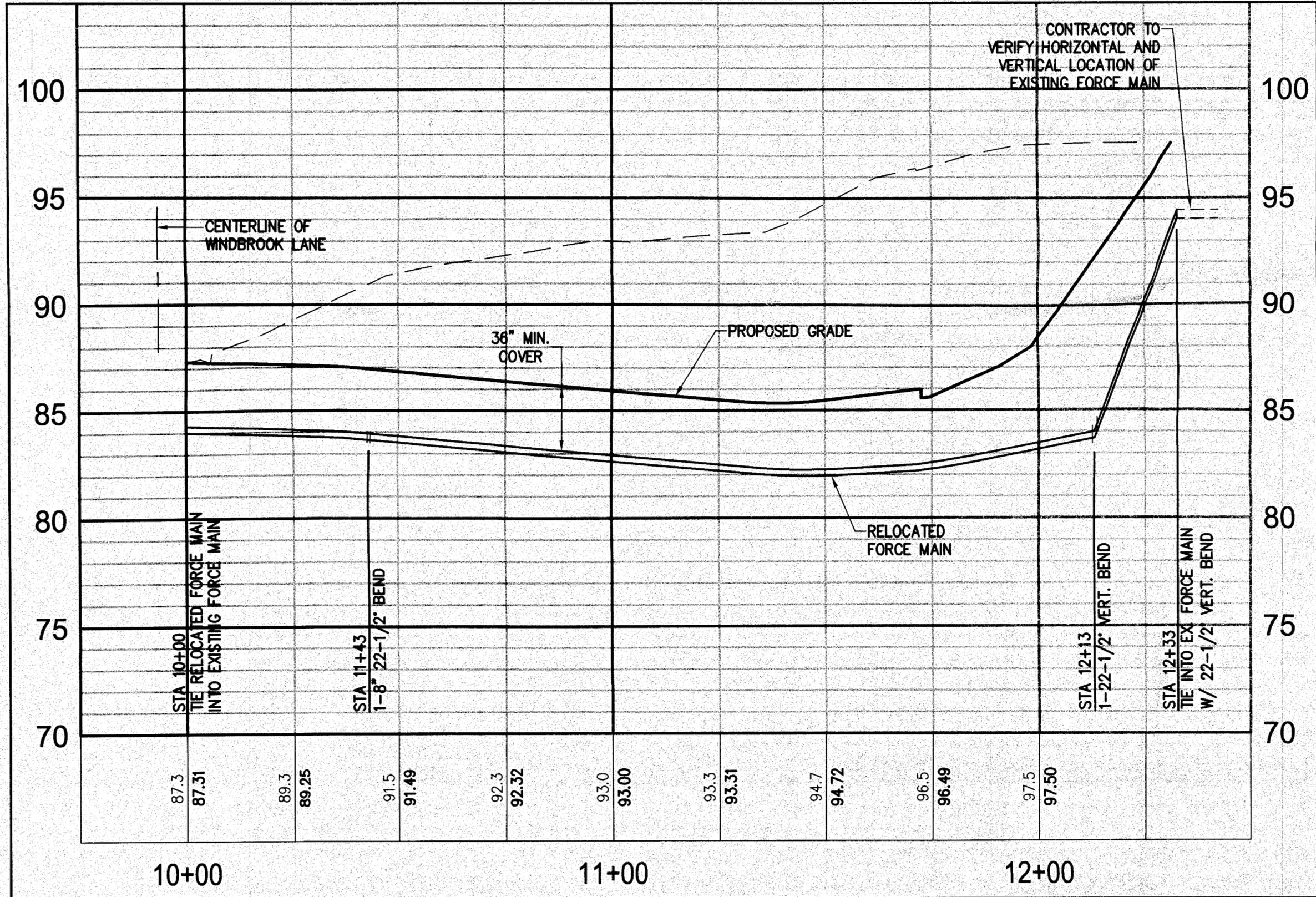
**CHAMBREL
MEMORY CARE FACILITY**

JAMESTOWN DISTRICT | JAMES CITY COUNTY | VIRGINIA

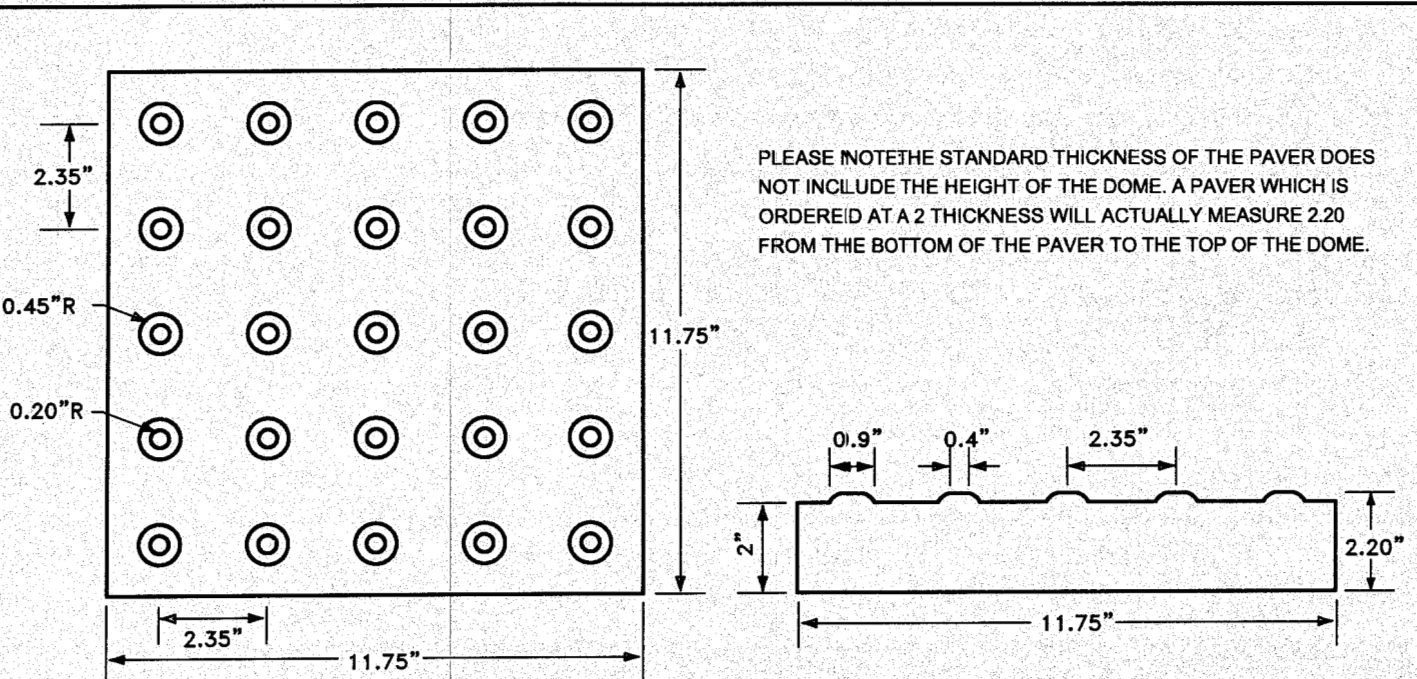
Project Contacts: HWP/TRS
Project Number: 7645-02
Scale: 1"=25'
Date: 12/06/11
Sheet Title: GRADING PLAN
Sheet Number: 7



RELOCATED WATER LINE PROFILE



RELOCATED FORCE MAIN



DETECTABLE WARNING SURFACE

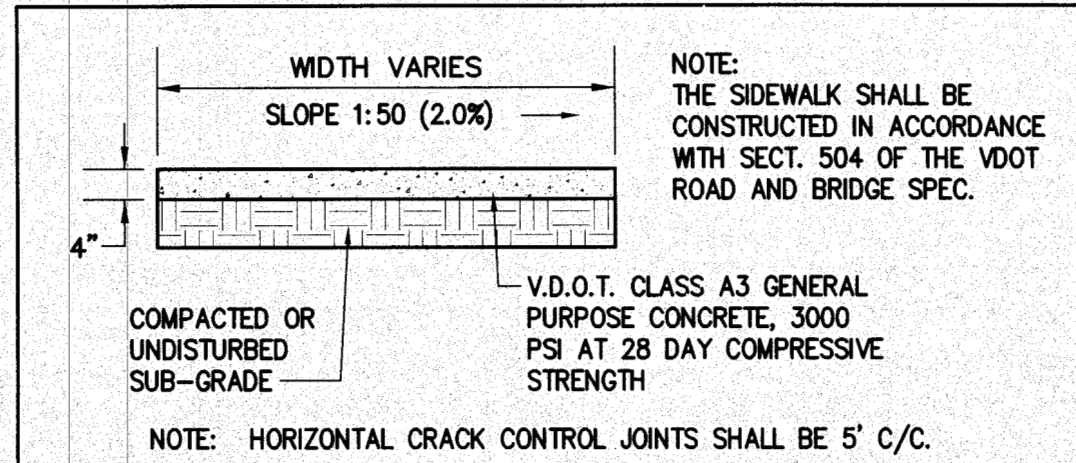
N.T.S.

JCSA/HRPDC DETAIL REFERENCES

- HRPDC
EW_01 PIPE BEDDING DETAILS (TYPE III FOR DIP & TYPE IV FOR PVC)
SS_01 STANDARD PRECAST CONCRETE MANHOLE
SS_07 SANITARY SEWER MANHOLE INVERT SHAPING
SS_08 CONNECTION INTO EXISTING MANHOLES
SS_09 SANITARY SEWER MANHOLE CASTING (24")
SS_10 SANITARY SEWER MANHOLE COVER (24")
SS_11 SANITARY SEWER LATERAL CLEAN OUT FRAME AND COVER
SS_14 SANITARY SEWER SERVICE CONNECTION
WD_06 FIRE HYDRANT SETTING (TYPE I)
WD_09 TEMPORARY MANHOLE FOR TEST & CHLORINATION
WS_01 STANDARD VALVE BOX FRAME AND COVER
WS_02 VALVE SETTING DETAIL

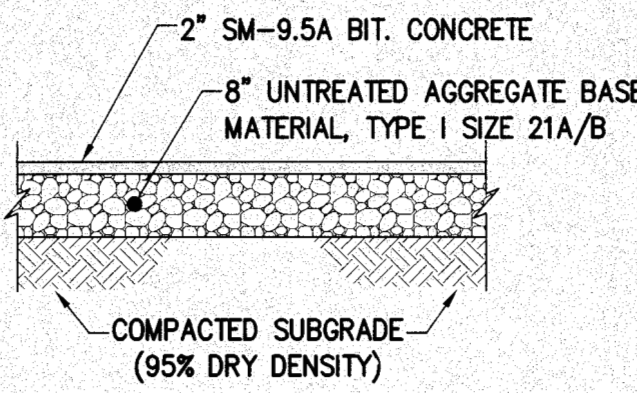
- JCSA
PC_1 PIPE CROSSING DETAIL
JR_1 JOINT RESTRAINT TABLE
WI_3.0 TYPICAL WATER METER INSTALLATION
WI_5.0 1-1/2" & 2" WATER METER SETTING
WI_7.0 DETECTOR CHECK VALVE ASSEMBLY FOR FIRE SUPPRESSION SYSTEMS

REFER TO THE LATEST EDITIONS OF THE HAMPTON ROADS PLANNING DISTRICT COMMISSION REGIONAL (HRPDC) CONSTRUCTION STANDARDS AND JAMES CITY SERVICE AUTHORITY (JCSA) DESIGN AND ACCEPTANCE CRITERIA FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS.



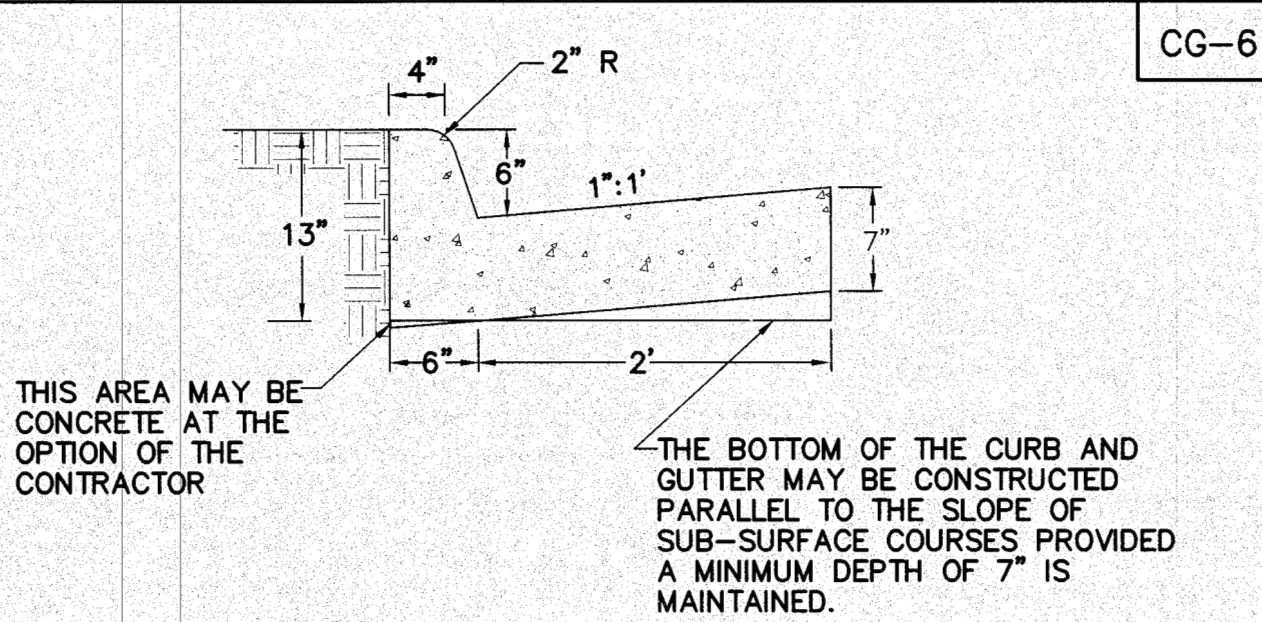
SIDEWALK DETAIL

N.T.S.



TYPICAL PAVEMENT SECTION

N.T.S.



NOTE: COMBINATION CURB AND GUTTER HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS A RADIAL COMBINATION CURB AND GUTTER.

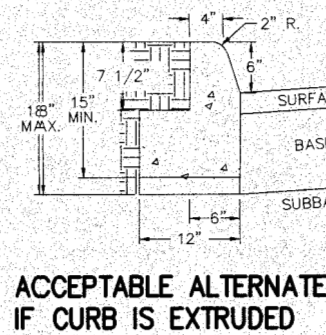
THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

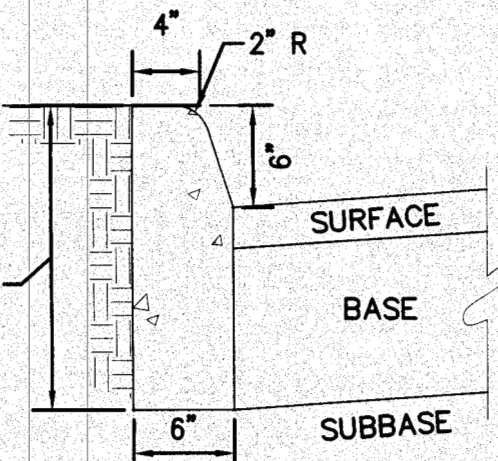
COMBINATION CURB AND GUTTER

N.T.S.

D-CG6



SEE NOTE 4



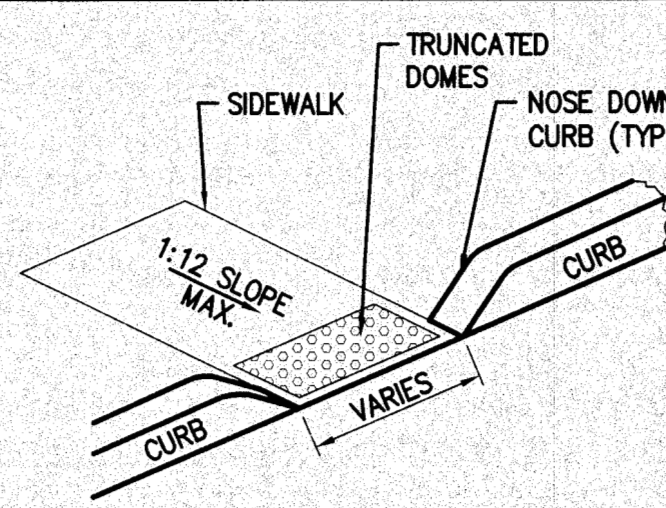
STANDARD 6" CURB

N.T.S.

NOTES:

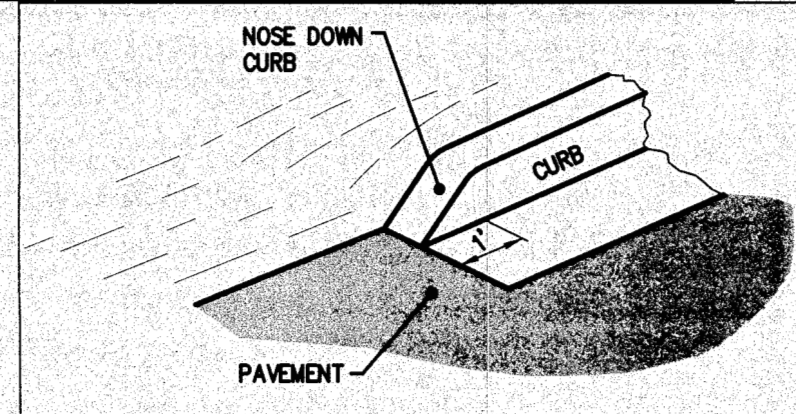
- THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
- CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
- CURB HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.
- THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
- CG-2 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

CG-2



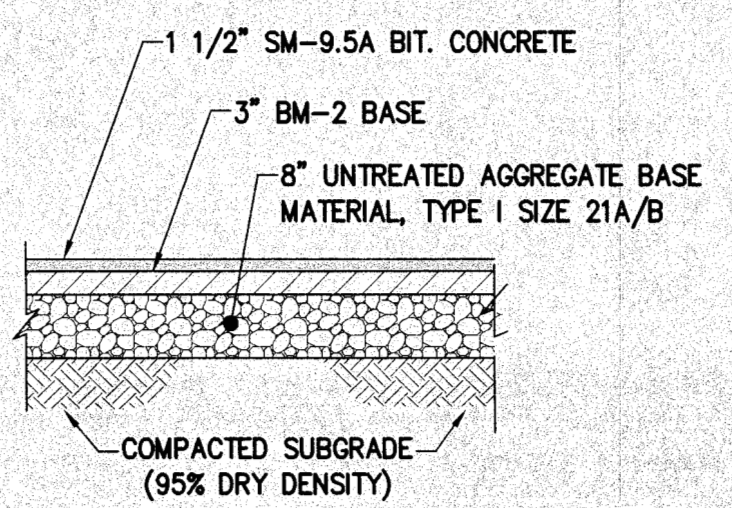
TYPICAL SIDEWALK RAMP

N.T.S.



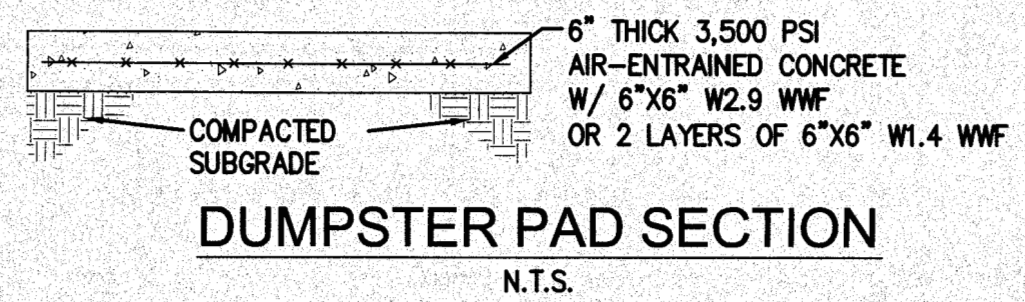
NOSE DOWN CURB

N.T.S.



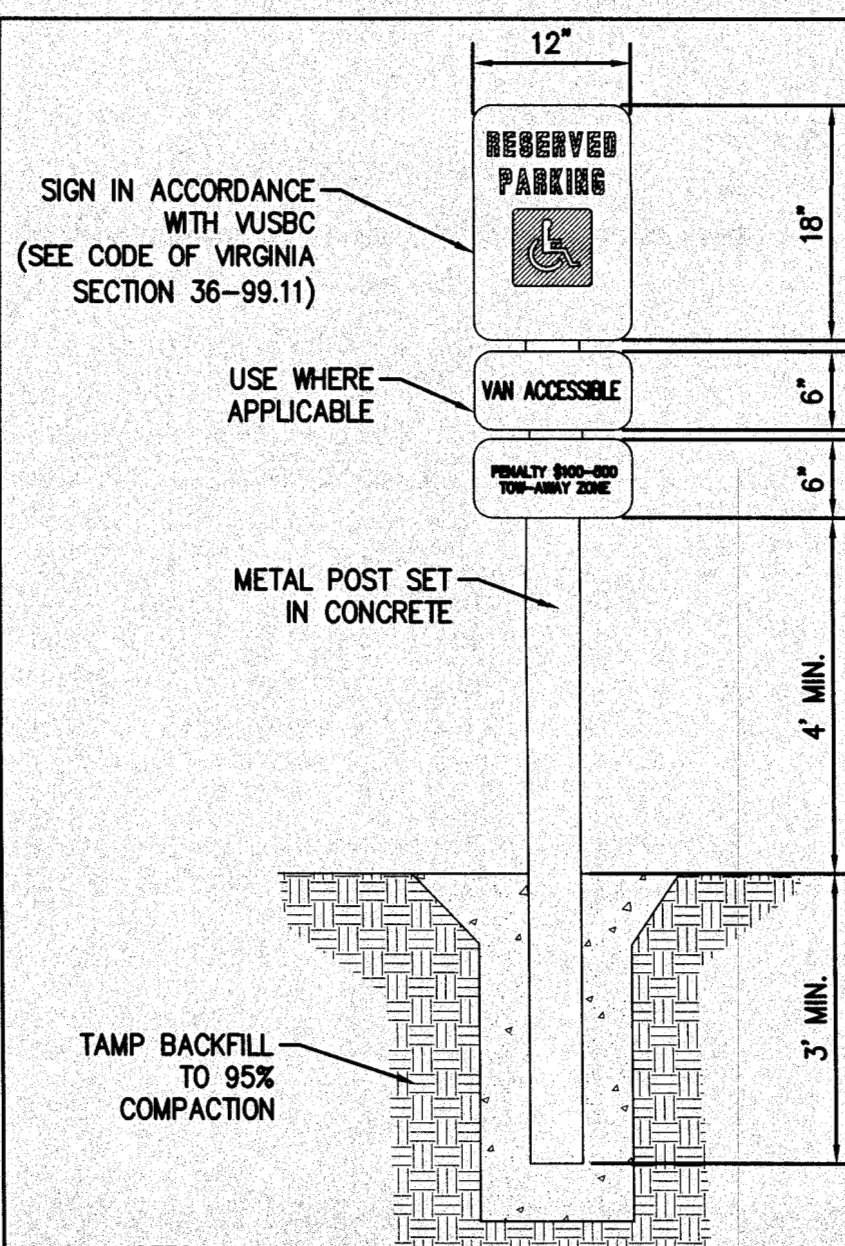
HEAVY DUTY PAVEMENT SECTION (FOR ACCESS ROAD)

N.T.S.



DUMPSTER PAD SECTION

N.T.S.



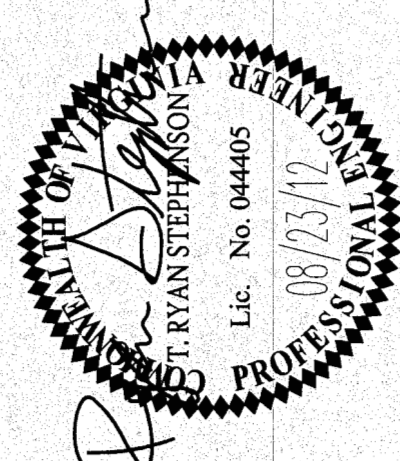
NOTES:
THE SIGN SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 701 AND INSTALLED PER INSTALLATION DETAIL WSP-1 TYPE C OF THE VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS.

HANDICAP SIGN DETAIL

N.T.S.

- JCSA GENERAL NOTES FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS
(Revised March 2008)
- ALL COMPONENTS OF THE WATER DISTRIBUTION AND SANITARY SEWER SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE JCSA DESIGN AND ACCEPTANCE CRITERIA FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, THE HRPDC REGIONAL CONSTRUCTION STANDARDS (FOURTH EDITION WITH AMENDMENTS DATED OCTOBER 2008), AND THE COMMONWEALTH OF VIRGINIA DEPARTMENT OF HEALTH WATERWORKS AND SANITARY SEWERAGE REGULATIONS. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. A COPY OF THE JCSA DESIGN AND ACCEPTANCE CRITERIA AND HRPDC REGIONAL CONSTRUCTION STANDARDS MUST BE KEPT ON-SITE BY THE CONTRACTOR DURING TIME OF INSTALLING, TESTING, AND CONVEYING FACILITIES TO JCSA.
 - THE CONTRACTOR/DEVELOPER SHALL ACQUIRE A CERTIFICATE TO CONSTRUCT WATER AND SANITARY SEWER FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY WATER OR SANITARY SEWER FACILITIES.
 - A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN JCSA, THE DEVELOPER, THE CONTRACTOR INCLUDING RELEVANT SUBCONTRACTOR(S), AND THE PROJECT ENGINEER PRIOR TO ISSUANCE OF A JCSA CERTIFICATE TO CONSTRUCT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE THIS MEETING WITH JCSA AND COORDINATE WITH THE OTHER ATTENDEES.
 - THE DEVELOPER'S REPRESENTATIVE SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND RECEIVE JCSA APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL MATERIALS ORDERED AND INSTALLED PRIOR TO JCSA'S REVIEW AND ACCEPTANCE WILL BE AT THE CONTRACTOR'S/DEVELOPER'S RISK.
 - PIPE LINES AND SERVICES SHALL BE INSTALLED AFTER GRADING TO WITHIN 6-INCHES OF FINAL GRADE AND PRIOR TO PLACEMENT OF BASE MATERIAL.
 - ALL WATER MAINS SHALL BE FULLY FLUSHED, PRESSURE TESTED, AND DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLES OBTAINED, IN ACCORDANCE WITH JCSA DESIGN AND ACCEPTANCE CRITERIA. FLUSHING OF WATER MAINS SHALL BE SCHEDULED WITH THE JCSA INSPECTOR MINIMUM 3 BUSINESS DAYS PRIOR TO THE FLUSHING. CONTRACTOR SHALL PROVIDE THE REQUIRED DURATION AND VOLUME TO THE INSPECTOR. FLUSHING WILL BE SCHEDULED ONLY ON MONDAYS, UNLESS AUTHORIZED OTHERWISE BY JCSA, AND WILL BE ON A FIRST COME-FIRST SERVE BASIS.
 - ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION WILL BE PROVIDED BY JCSA. THESE INSPECTIONS DO NOT RELIEVE THE DEVELOPER/CONTRACTOR/OWNER FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING A WATER DISTRIBUTION AND SANITARY SEWER SYSTEM IN STRICT ACCORDANCE WITH THE JCSA DESIGN AND ACCEPTANCE CRITERIA.
 - ANY FIELD MODIFICATIONS OR CHANGES TO THE APPROVED PLANS SHALL BE VERIFIED AND CHECKED BY THE ENGINEER OF RECORD AND APPROVED BY JCSA PRIOR TO ANY FIELD MODIFICATIONS OR CHANGES. ALL APPROVED CHANGES AND FIELD MODIFICATIONS SHALL BE ACCURATELY INDICATED ON THE RECORD DRAWINGS.
 - ALL LOTS SHALL BE PROVIDED WITH WATER SERVICE AND SANITARY SEWER CONNECTIONS. THE CONNECTIONS SHALL BE EXTENDED FROM THE MAIN TO THE PROPERTY LINE OR EASEMENT LINE, AND SHALL TERMINATE WITH A YOKE IN A METER BOX, OR AT THE CLEAN OUT, SET AT FINAL FINISHED GRADE. METERS FOR ALL LOTS (UNITS) SHALL BE PAID FOR BY THE DEVELOPER OR BUILDER AND INSTALLED BY JCSA.
 - ANY REQUIRED EASEMENTS, PERMITS AND APPROVALS SHALL BE ACQUIRED BY THE DEVELOPER PRIOR TO COMMENCEMENT OF WATER MAIN AND/OR SANITARY SEWER CONSTRUCTION.
 - THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION. THE CONTRACTOR SHALL ALSO NOTIFY "MISS UTILITY" AT 1-800-552-7001 OR 811 PRIOR TO PERFORMING ANY UNDERGROUND EXCAVATION.
 - WATER METER BOX INSTALLATION SHALL MAINTAIN A MINIMUM 18-INCH HORIZONTAL EDGE-TO-EDGE CLEARANCE FROM DRIVEWAYS AND/OR DRIVE PATHS, SIDEWALKS, BIKE PATHS, CURBING AND ADJACENT WATER METER BOXES.
 - ONLY JCSA PERSONNEL ARE AUTHORIZED TO OPERATE VALVES ON EXISTING JCSA WATER MAINS AND SANITARY FORCE MAINS. ONCE A SYSTEM HAS BEEN HYDRAULICALLY ENERGIZED, JCSA WILL BE RESPONSIBLE FOR OPERATING THE VALVES. THE CONTRACTOR SHALL CONTACT JCSA OPERATIONS AT 757-228-7421 IF THERE IS AN EMERGENCY OR NEED TO OPEN/CLOSE A VALVE.
 - ANY EXISTING UNUSED WELL(S) SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE.
 - BEDDING OF JCSA UTILITIES SHALL BE IN ACCORDANCE WITH HRPDC DETAIL EW_01.
 - NO TREES, SHRUBS, STRUCTURES, FENCES, IRRIGATION MAINS, INVISIBLE PET FENCES OR OTHER OBSTACLES SHALL BE PLACED WITHIN AN EASEMENT WHICH WOULD RENDER THE EASEMENT INACCESSIBLE BY EQUIPMENT. SHRUBS SHALL BE A MINIMUM OF 5 FEET, AND TREES A MINIMUM OF 10 FEET, FROM THE CENTER OF WATER AND SANITARY SEWER PIPELINES.
 - JOINT RESTRAINT SHALL BE PROVIDED IN ACCORDANCE WITH MINIMUM REQUIREMENTS OF JCSA DETAIL JR_1, UNLESS SHOWN OTHERWISE ON THE PLANS. ALL PRESSURE PIPELINES SHALL HAVE JOINT RESTRAINT. FIRE HYDRANTS SHALL BE RESTRAINED AT LEAST ONE FULL JOINT OF PIPE IN EACH DIRECTION ON THE MAINLINE.
 - PROPOSED WATER AND SANITARY SEWER SYSTEMS SHALL MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 5- FEET FROM OTHER UTILITIES AND STRUCTURES, INCLUDING BUT NOT LIMITED TO STORM SEWERS, STREET LIGHTS, ETC. WATER AND SANITARY SEWER FACILITIES SHALL HAVE A MINIMUM 10-FOOT HORIZONTAL EDGE-TO-EDGE SEPARATION.
 - ANY PROPOSED BACKFLOW PREVENTION DEVICE AND/OR GREASE TRAP MUST BE INSPECTED BY THE JCSA UTILITY SPECIAL PROJECTS COORDINATOR AT (757) 258-4138.
 - THE CONTRACTOR/DEVELOPER SHALL ACQUIRE A CERTIFICATE TO CONSTRUCT WATER AND SANITARY SEWER FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY WATER OR SANITARY SEWER FACILITIES. PLUMBING INSIDE OF PROPOSED BUILDINGS MUST BE INSPECTED BY JCSA'S UTILITY SPECIAL PROJECTS COORDINATOR AT (757) 258-4138, FOR POTENTIAL CROSS CONNECTIONS. ANY CROSS CONNECTIONS MUST BE PROTECTED BY THE APPROPRIATE BACKFLOW PREVENTION DEVICE(S).
 - EASEMENTS DENOTED AS "JCSA UTILITY EASEMENTS" ARE FOR THE EXCLUSIVE USE OF THE JAMES CITY SERVICE AUTHORITY AND THE PROPERTY OWNER. OTHER UTILITY SERVICE PROVIDERS DESIRING TO USE THESE EASEMENTS WITH THE EXCEPTION OF PERPENDICULAR UTILITY CROSSINGS MUST OBTAIN AUTHORIZATION FOR ACCESS AND USE FROM JCSA AND THE PROPERTY OWNER. ADDITIONALLY, JCSA SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE TO IMPROVEMENTS WITHIN THIS EASEMENT, FROM ANY CAUSE.
 - JCSA SHALL NOT BE HELD RESPONSIBLE FOR ANY PAVEMENT SETTLEMENT DUE TO PIPE BEDDING, BACKFILLING, BACKFILL MATERIALS OR COMPACTION FOR WATER OR SANITARY SEWER FACILITIES FOR THIS PROJECT.
 - FIRE HYDRANTS TO BE INSTALLED WITHIN EXISTING OR PROPOSED VDOT RIGHT-OF-WAYS SHALL BE LOCATED IN ACCORDANCE WITH VDOT REQUIREMENTS.
 - PRIVATELY OWNED UTILITIES, (E.G., WATER AND SEWER LINES AND PRIVATE FIRE SERVICE MAINS), SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, AND ENFORCED BY THE JAMES CITY COUNTY CODES COMPLIANCE DIVISION. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 24, AND THE VIRGINIA STATEWIDE FIRE PREVENTION CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT FIRST OBTAINING THE REQUIRED PERMITS AND INSPECTIONS.
 - SANITARY SEWER LATERALS SHALL NOT CONNECT TO THE MAINLINE WITHIN 5- FEET OF A MANHOLE. LATERALS UPSTREAM AND WITHIN 5- FEET OF THE MANHOLE SHALL CONNECT DIRECTLY INTO THE MANHOLE WHERE NECESSARY.

Revised	Date	Description
1	02/03/12	REVISED PER JAMES CITY COUNTY COMMENTS
2	06/26/12	REVISED PER JAMES CITY COUNTY COMMENTS
3	06/26/12	REVISED PER JAMES CITY COUNTY COMMENTS



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AES
CONSULTING ENGINEERS

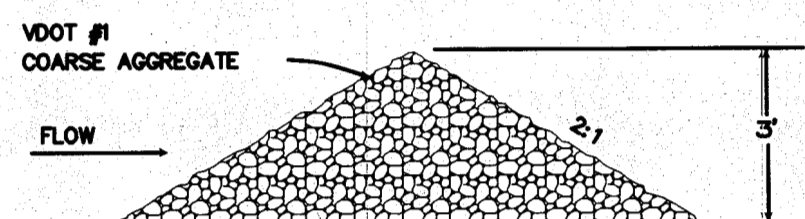
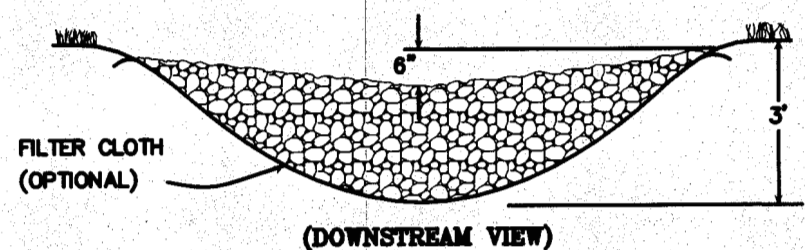
Hampton Roads | Central Virginia | Middle Peninsula

**CHAMBREL
MEMORY CARE FACILITY**

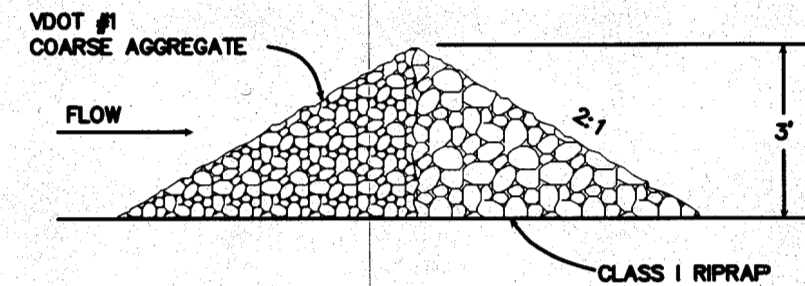
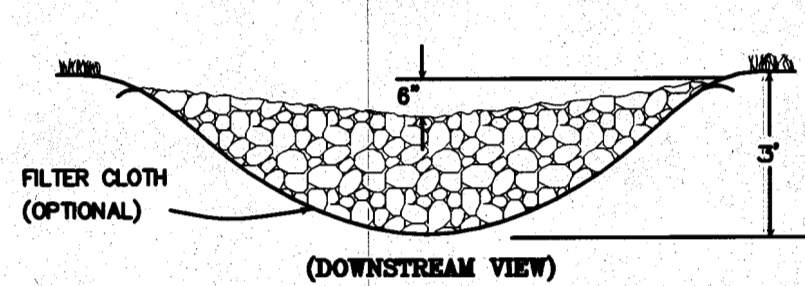
Project Contacts: HWP/TRS
Project Number: 7545-02
Scale: N/A Date: 12/06/11
Sheet Title: NOTES AND DETAILS
Sheet Number: 8

ROCK CHECK DAM

2 ACRES OR LESS OF DRAINAGE AREA:

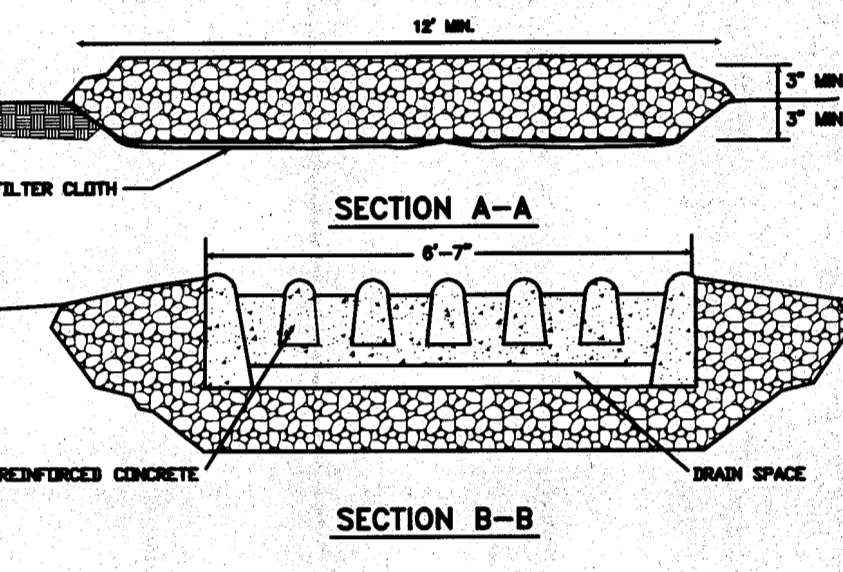
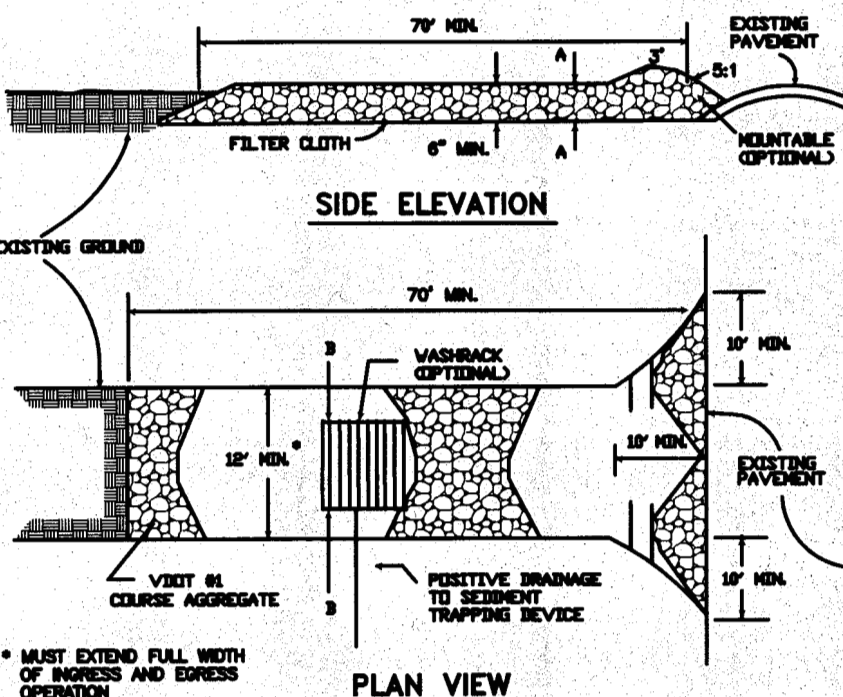


2-10 ACRES OF DRAINAGE AREA:



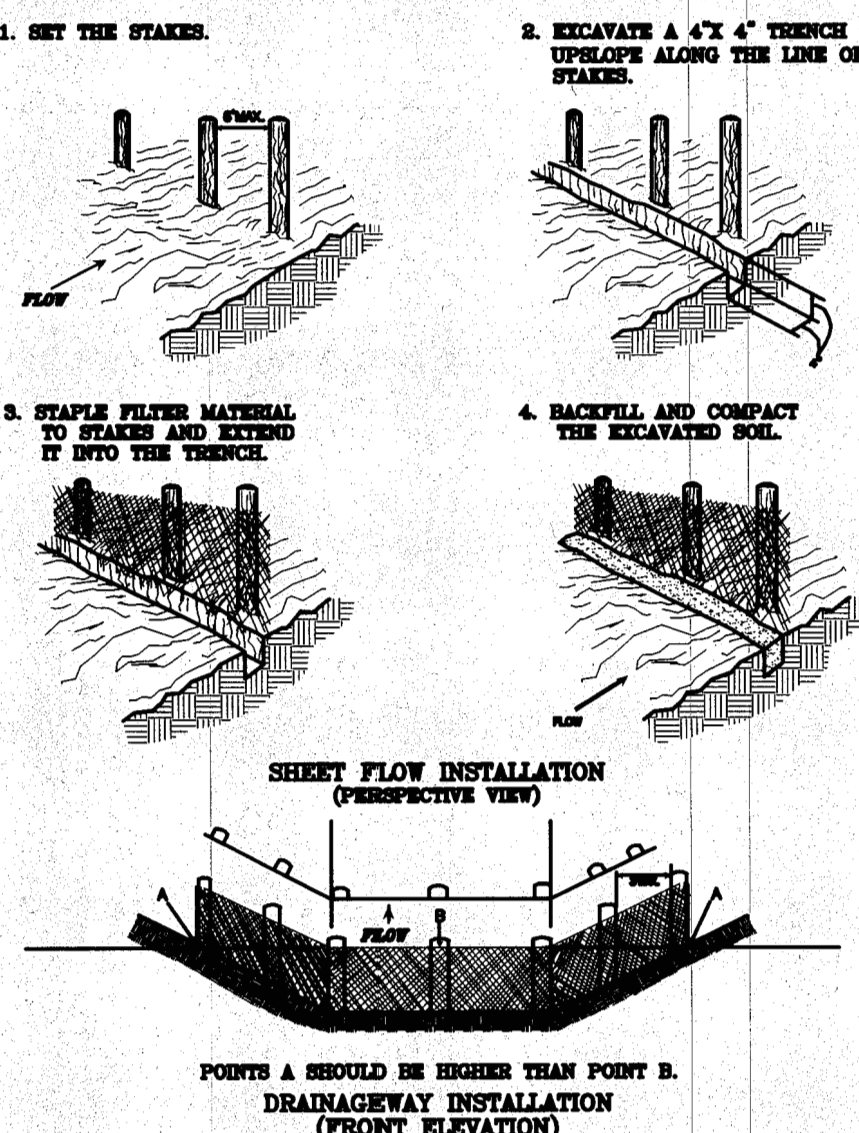
CLASS I RIPRAP
Plate 3.20-1

STONE CONSTRUCTION ENTRANCE



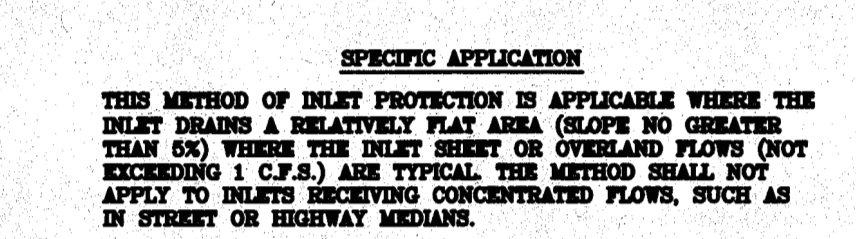
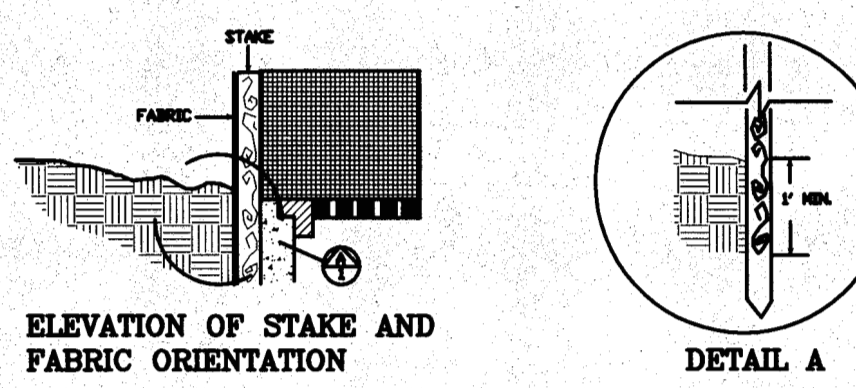
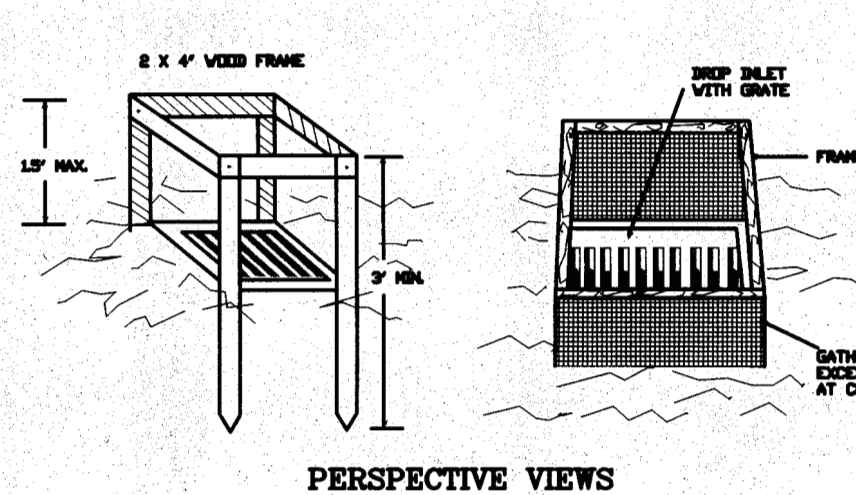
CE
Plate 3.02-1

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)



SF
Plate 3.05-2

SILT FENCE DROP INLET PROTECTION



IP
Plate 3.07-1

SITE SPECIFIC SEEDING MIXTURES FOR COASTAL PLAIN AREA

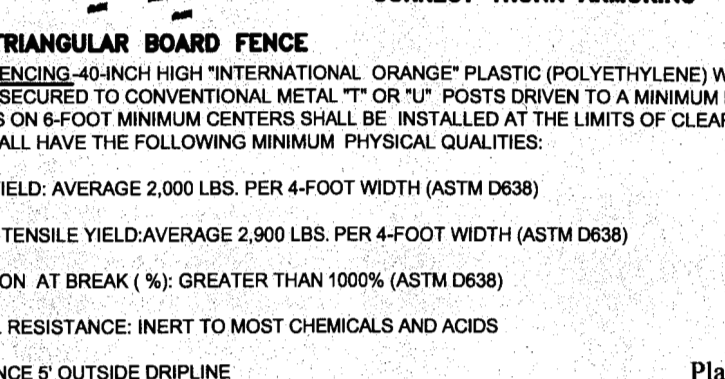
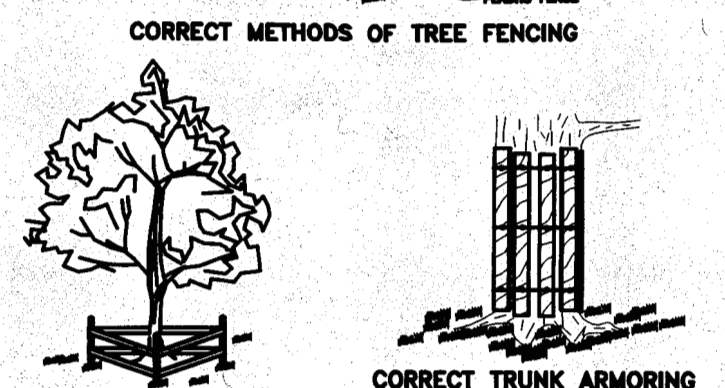
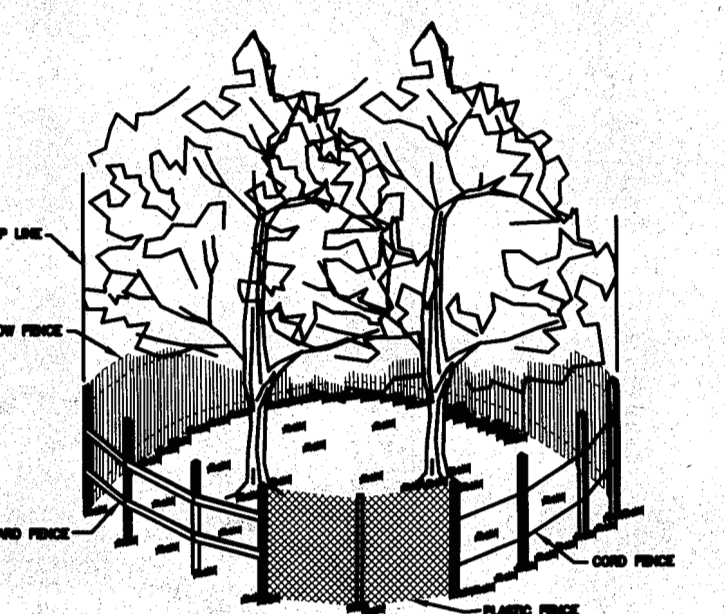
MINIMUM CARE LAWN	TOTAL LBS. PER ACRE
KENTUCKY 31 OR TURF-TYPE TALL FESCUE OR COMMON BERMAUDA GRASS **	175-200 LBS.
HIGH-MAINTENANCE LAWN	75 LBS.
KENTUCKY 31 OR TURF-TYPE TALL FESCUE OR HYBRID BERMAUDAGRASS (SEED)**	200-250 LBS.
HYBRID BERMAUDAGRASS (SEED)**	40 LBS. (UNHALLED) 30 LBS. (HALLED)
GENERAL SLOPE (3:1 OR LESS)	
KENTUCKY 31 FESCUE	128 LBS.
RED TOP GRASS	2 LBS.
SEASONAL NURSE CROP *	20 LBS.
SEASONAL NURSE CROP *	150 LBS.
LOW MAINTENANCE SLOPE (STEEPER THAN 3:1)	
KENTUCKY 31 FESCUE	93-108 LBS.
COMMON BERMAUDAGRASS **	0-15 LBS.
RED TOP GRASS	2 LBS.
SEASONAL NURSE CROP *	20 LBS.
SEASONAL NURSE CROP *	150 LBS.

* USE SEASONAL CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:
FEBRUARY, MARCH THROUGH APRIL.....ANNUAL RYE
MAY 1ST THROUGH AUGUST.....FOXTAIL MILLET
SEPTEMBER, OCTOBER THROUGH NOVEMBER 15TH.....ANNUAL RYE
NOVEMBER 16TH THROUGH JANUARY.....WINTER RYE

** MAY THROUGH OCTOBER, USE HALLED SEED. ALL OTHER SEEDING PERIODS, USE UNHALLED SEED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.

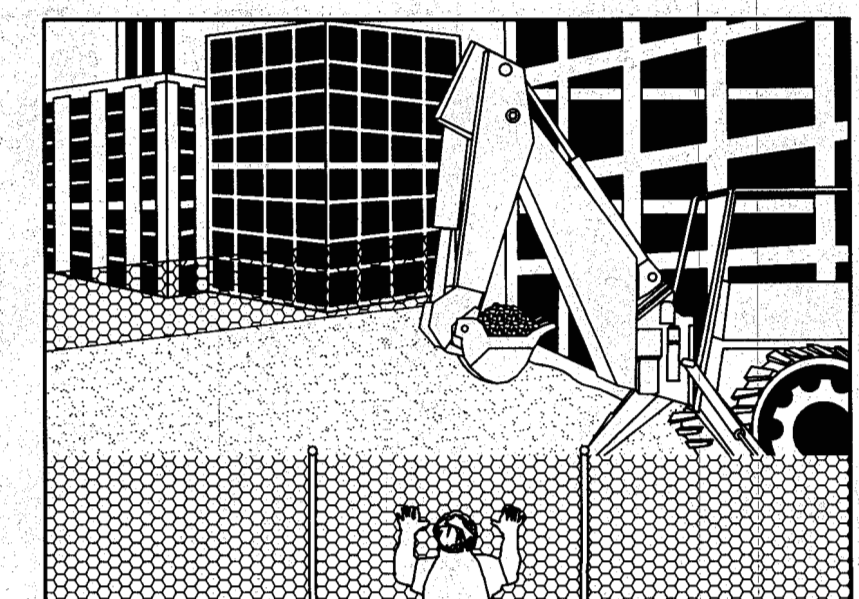
PS
Table 3.32-D

FENCING AND ARMORING

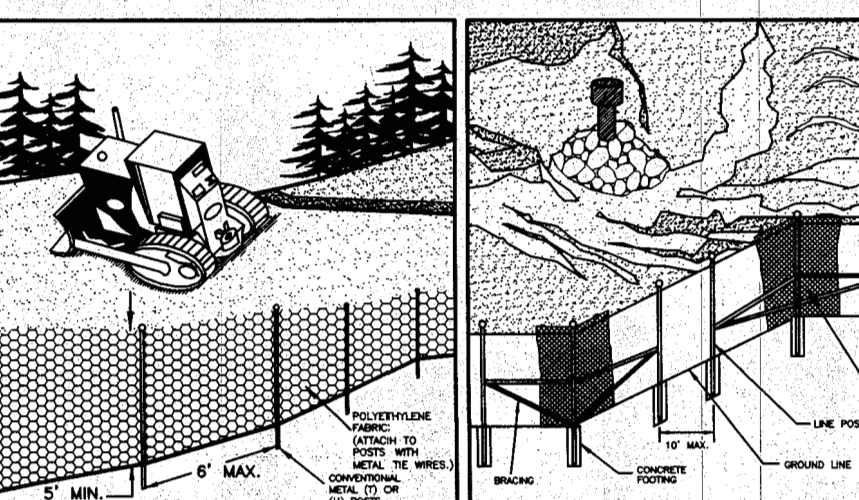


TP
Plate 3.38-2

SAFETY FENCE



PERSPECTIVE VIEW
PLASTIC FENCE



PERSPECTIVE VIEW
METAL FENCE

SF
Plate 3.01-1

VDOT REFERENCE TABLE

DI-2.....	104.03-104.04
DI-3.....	104.09-104.11
DI-7.....	104.22-104.24
MH-1.....	106.01-106.05
IS-1.....	106.08
ST-1.....	106.09
PB-1.....	107.00-107.04
CG-2.....	201.01
CG-6.....	201.03

TS
Table 3.31-C

EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:
THE 4.56 ACRE SITE LOCATED WITHIN THE 54.39 ACRE PARCEL OWNED BY BROOKDALE SENIOR LIVING, INC. WITHIN CHAMBREL IN JAMES CITY COUNTY, VIRGINIA WILL BE UTILIZED FOR THE CONSTRUCTION OF A 32 BED MEMORY CARE FACILITY. THIS BUILDING WILL BE CONSTRUCTED WHERE A PARKING LOT WAS PREVIOUSLY CONSTRUCTED. THERE WILL BE ONE PRIVATE ACCESS ROAD PROVIDED FOR DELIVERIES TO THE REAR AND AN ACCESS TO THE FRONT OF THE BUILDING LOCATED WITHIN THE EXISTING ADJACENT PARKING LOT. NECESSARY WATER, SANITARY SEWER AND STORM SYSTEMS ARE PROVIDED AND THE CURRENT PARKING CONFIGURATION IS ADEQUATE FOR THE PROPOSED BUILDING.

EXISTING SITE CONDITIONS:
THE SITE IS MOSTLY CLEARED WITH TWO EXISTING PARKING LOTS LOCATED ON GENTLY SLOPING TERRAIN. THE REMAINDER OF THE SITE AREA IS WOODED. DRAINAGE ON SITE CURRENTLY FLOWS INTO THE EXISTING STORM SYSTEM WHICH LEADS TO THE EXISTING STORMWATER MANAGEMENT POND (CC003) LOCATED WITHIN CHAMBREL TO THE SOUTHWEST OF THE PARCEL. THERE ARE NO WETLANDS OR RPA BUFFERS ON THE PROPERTY AND A SMALL AMOUNT OF STEEP SLOPES LOCATED NORTH OF THE EXISTING PARKING LOT TO BE DEMOLISHED. THE SITE LIES WITHIN THE COLLEGE CREEK WATERSHED.

ADJACENT PROPERTIES:
THE PROJECT SITE IS BOUNDED BY CARRIAGE HEIGHTS SUBDIVISION TO THE NORTH AND WEST, TREYBURN LANE TO THE EAST AND PREVIOUSLY CONSTRUCTED CHAMBREL TO THE SOUTH.

OFF-SITE AREAS:
EXCESS MATERIAL SHALL BE DISPOSED OF OFF-SITE ACCORDINGLY.

SOIL DESCRIPTION:
THE SOIL CONSERVATION SERVICE HAS IDENTIFIED THIS SITE AS CONTAINING SOIL TYPES 11C AND 19B.

CRITICAL AREAS:
THERE ARE NO CRITICAL AREAS ON THE PROJECT SITE.

EROSION AND SEDIMENT CONTROL MEASURES:
EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILT FENCE AND INLET PROTECTION (SEE LEGEND THIS SHEET) WILL BE UTILIZED AND INSTALLED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK TO MINIMIZE THE TRANSPORTATION OF SEDIMENT OUTSIDE THE PROJECT SITE.

PERMANENT STABILIZATION:
PERMANENT SEEDING AND LANDSCAPING WILL BE USED TO STABILIZE THE SITE AFTER CONSTRUCTION IS COMPLETE.

STORMWATER MANAGEMENT/BMP:
STORMWATER RUNOFF FROM THE PROJECT SITE WILL BE DIRECTED TO THE PREVIOUSLY CONSTRUCTED STORMWATER MANAGEMENT POND (CC003) LOCATED SOUTHWEST OF THE PROJECT AREA VIA THE PROPOSED STORM SYSTEMS WHICH LEAD INTO THE EXISTING STORM STRUCTURES ALONG WINDBROOK LANE. THE EXISTING WET POND BMP ACCOUNTS FOR BOTH WATER QUANTITY AND QUALITY FOR THE SITE.

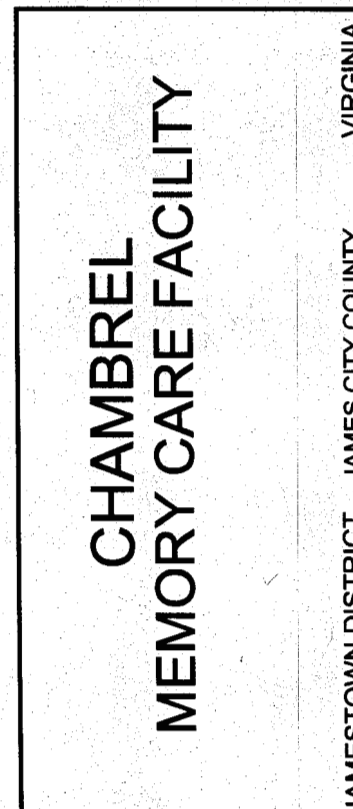
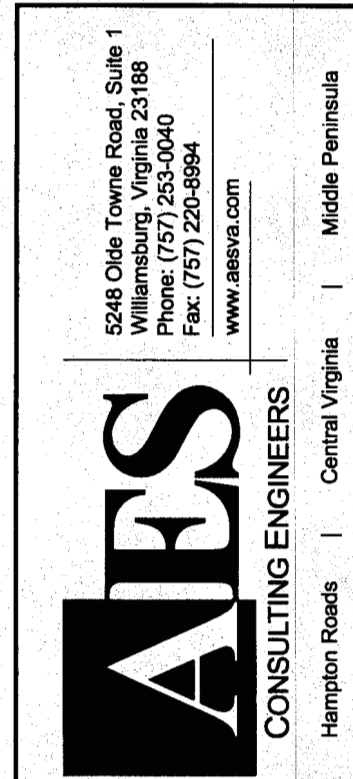
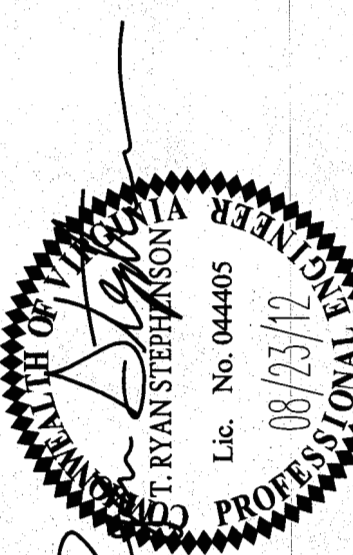
SOIL STABILIZATION MAT DITCH INSTALLATION

N.T.S.

SEQUENCE OF CONSTRUCTION

1. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED 48 HOURS PRIOR WITH THE ENGINEERING AND RESOURCE PROTECTION DIVISION'S EROSION AND SEDIMENT CONTROL INSPECTOR BEFORE ANY LAND DISTURBING ACTIVITIES CAN BE STARTED ON THE SITE.
2. INSTALL CONSTRUCTION ENTRANCE.
3. INSTALL SILT FENCE AND TREE PROTECTION.
4. PERFORM CLEARING OPERATION.
5. PROVIDE TEMPORARY SEEDING.
6. DEMO EXISTING FEATURES PER DEMOLITION PLAN.
7. ROUGH GRADE AND INSTALL STORM SYSTEM.
8. INSTALL UTILITIES (DURING INSTALLATION OF CROSS-COUNTRY SANITARY SEWER SYSTEM, ENSURE ONE LANE OF TRAFFIC REMAINS OPEN AT ALL TIMES WHILE THE OPEN CUTTING OF WINDBROOK LANE IS BEING CONDUCTED).
9. INSTALL STONE BASE FOR PAVEMENT AREAS.
10. BEGIN BUILDING CONSTRUCTION.
11. PAVE PARKING LOT AREAS AND INSTALL LANDSCAPING & LIGHTING.
12. REPAIR ANY INADVERTENT EROSION AND REMOVE ANY SEDIMENTATION. DRESS, MULCH, SOD, AND SEED ALL DISTURBED AREAS AS NECESSARY TO EFFECT PERMANENT VEGETATIVE COVER.
13. REMOVE EROSION AND SEDIMENT CONTROL MEASURES WITHIN THIRTY DAYS AFTER FINAL SITE STABILIZATION, AND ONLY AFTER APPROVAL FROM JAMES CITY COUNTY ENVIRONMENTAL DIVISION INSPECTOR.

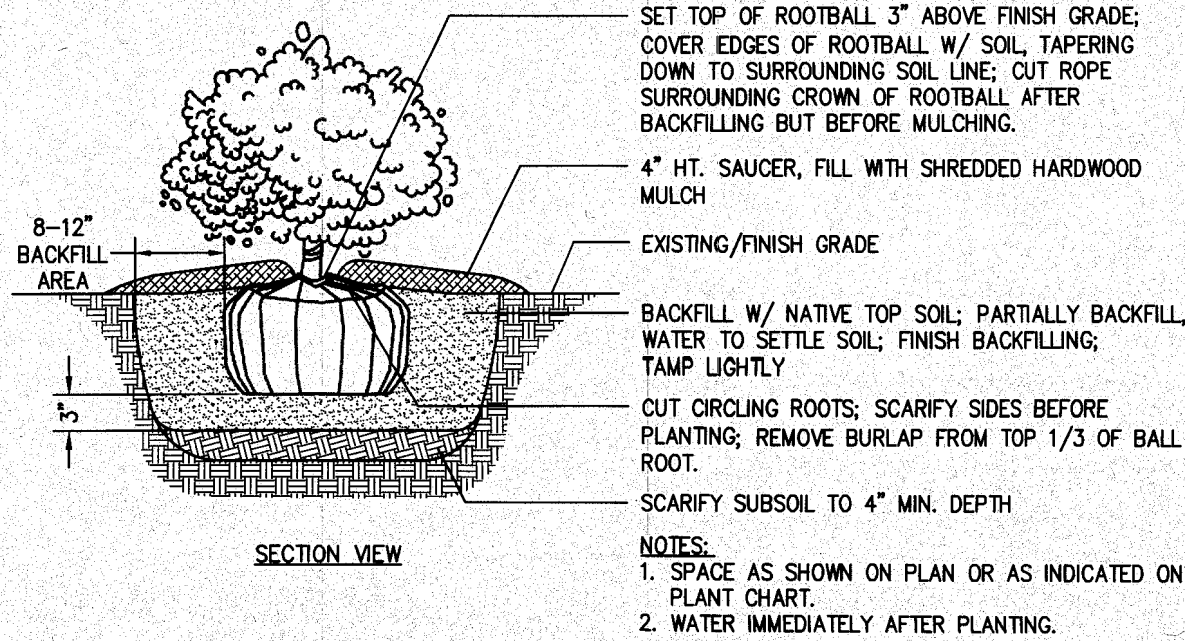
Revised By	Date	Revised For	Comments
1	08/23/12	REVISED PER JAMES CITY COUNTY COMMENTS	
2	08/28/12	REVISED PER JAMES CITY COUNTY COMMENTS	
3	08/23/12	REVISED PER JAMES CITY COUNTY COMMENTS	



Project Contacts:	HWP/TRS
Project Number:	7645-02
Scale:	N/A
Date:	12/06/11
Sheet Title:	NOTES AND DETAILS
Sheet Number:	9

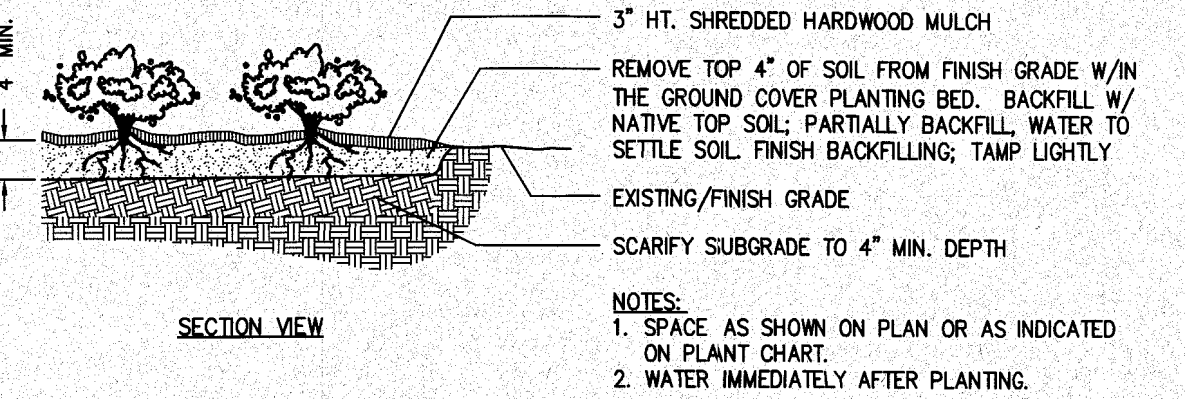
GENERAL NOTES

- ALL PLANT STOCK SHALL MEET THE MINIMUM STANDARDS & SPECIFICATIONS DESCRIBED IN THE "AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL PLANT MATERIAL SHALL BE INSTALLED AS SPECIFIED IN THE VNLA STANDARDIZED LANDSCAPE SPECIFICATIONS, LATEST EDITION.
- THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTING SHOWN ON THE DRAWINGS. WHERE DISCREPANCIES EXIST BETWEEN THE PLANS & THE PLANT LIST, THE PLANS SHALL TAKE PRECEDENCE.
- GROUPINGS OF PLANTS SHALL BE MULCHED IN CONTINUOUS PLANT BEDS.
- AREAS DISTURBED BY CONSTRUCTION, NOT OTHERWISE WITHIN PLANT BEDS OR COVERED IN SITE CONTRACT, ARE TO BE SODED OR SEEDED WITH A STATE CERTIFIED TURF-TYPE TALL FESCUE VARIETY SELECTED FROM THE FOLLOWING LIST:
Blonde, Bingo, Cochise II, Constitution, Coyote II, Crossfire II, Endeavor, Fidelity, Good-en, Grande, Greenkeeper, N/A, Inferno, Kalahari, Megalon, Masterpiece, Onyx, Padre, Picasso, Penn 1901, Quest, Raptor, Rebel Exodo, Renaissance, Revolution, St. 8250, St. 8300, Tornado, Titanium, Wolfpack, Wolfpack, WYZZE.
- AREAS OF THE SITE DEPICTED AS "TURF" REPRESENT MAINTAINED TURF AND CAN INCLUDE ALREADY ESTABLISHED TURF AREAS. THESE AREAS DO NOT SOLELY REPRESENT PROPOSED TURF. THE TOTAL AMOUNT OF PROPOSED TURF, AS WELL AS IF SEED OR SOD IS USED, SHALL BE DETERMINED AT THE OWNER'S DISCRETION.
- TREES SUPPORT STAKING IS OPTIONAL FOR TREES THAT ARE 1" CAL. OR 6' HT. OR LESS. ALL TREE STAKING SHALL BE REMOVED AFTER 1-2 GROWING SEASONS.
- ALL TREES ARE TO BE PLANTED SO TOP OF ROOT BALL IS 3" ABOVE FINISH GRADE.
- TREE SHALL BE INSTALLED PLUMB & STRAIGHT.
- PRUNE ALL SUCKERS, RUBBING OR CROSSED BRANCHES, CODOMINANT LEADERS, NARROW CROTCH ANGLES, WATER SPROUTS, BROKEN BRANCHES.
- DO NOT PRUNE CENTRAL LEADER OR BRANCH TIPS.
- REMOVE TAGS, LABELS & PLASTIC SLEEVING.
- DO NOT WRAP TRUNK.
- IF PLANT MATERIAL IS CONTAINER-GROWN, REMOVE TOP OF WIRE BASKET, OR REMOVE CONTAINER & CUT CIRCULING ROOT; IF FIELD-GROWN, CUT ROPE SURROUNDING BOTTOM OF TREE TRUNK AFTER BACKFILLING BUT BEFORE MULCHING & REMOVE BURLAP FROM TOP 1/3 OF BALL ROOT.
- REMOVE ALL STAKES, STRAPS, WIRES, RUBBER HOSES, ETC. AFTER 1-2 GROWING SEASONS.
- PLANT SUBSTITUTIONS WILL NOT BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE PRIOR TO INSTALLATION.
- ALL INSTALLED PLANT MATERIAL SHALL BE SUBJECT TO REGULAR MAINTENANCE, INCLUDING FERTILIZATION, PRUNING, REPLACEMENT, INSECT AND DISEASE CONTROL, WATERING, MULCHING, AND WEED CONTROL.
- CONTRACTORS ARE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO THE BEGINNING OF WORK AND AVOIDING THEM DURING LANDSCAPING OPERATIONS.



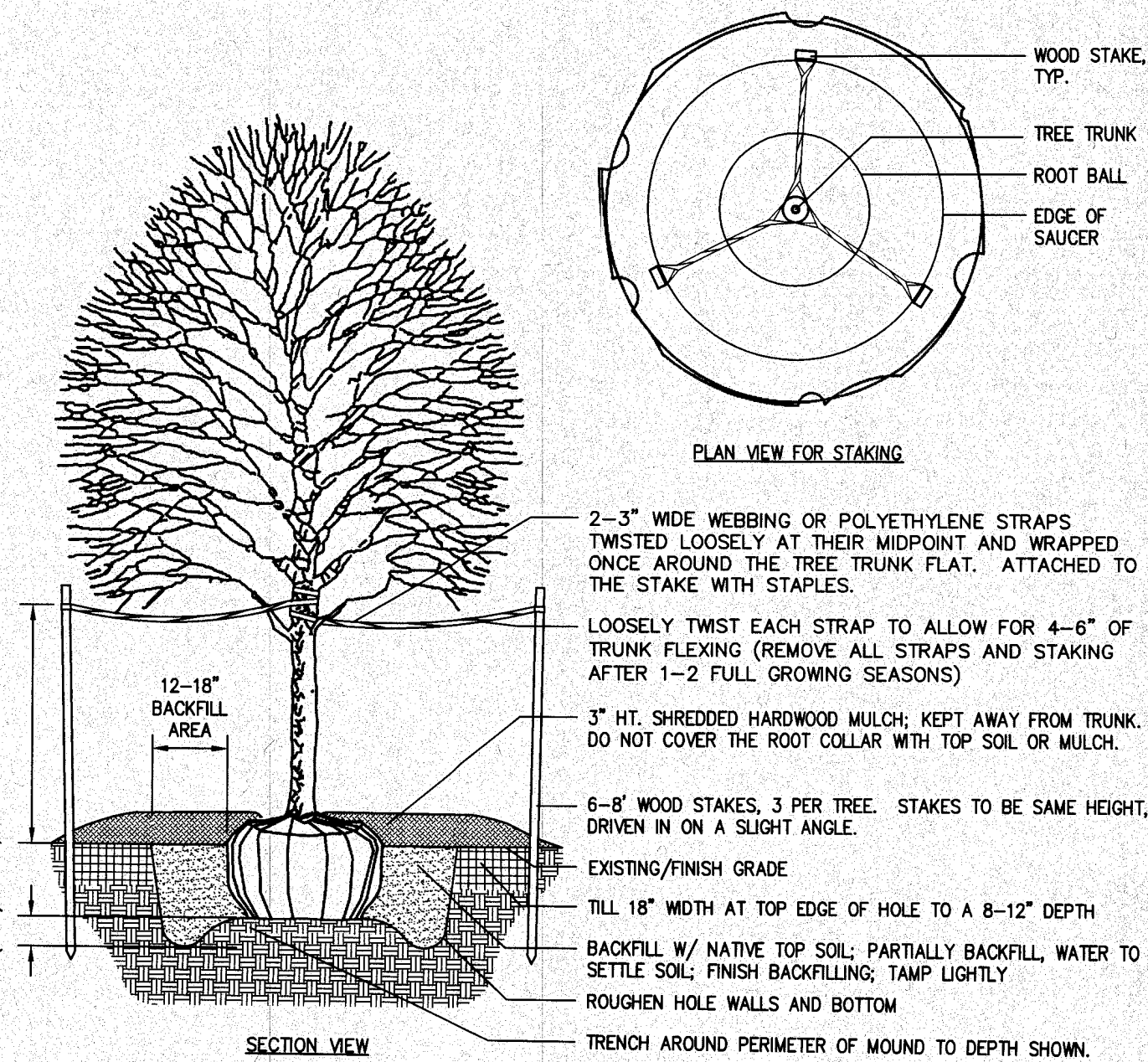
SHRUB PLANTING

NOT TO SCALE



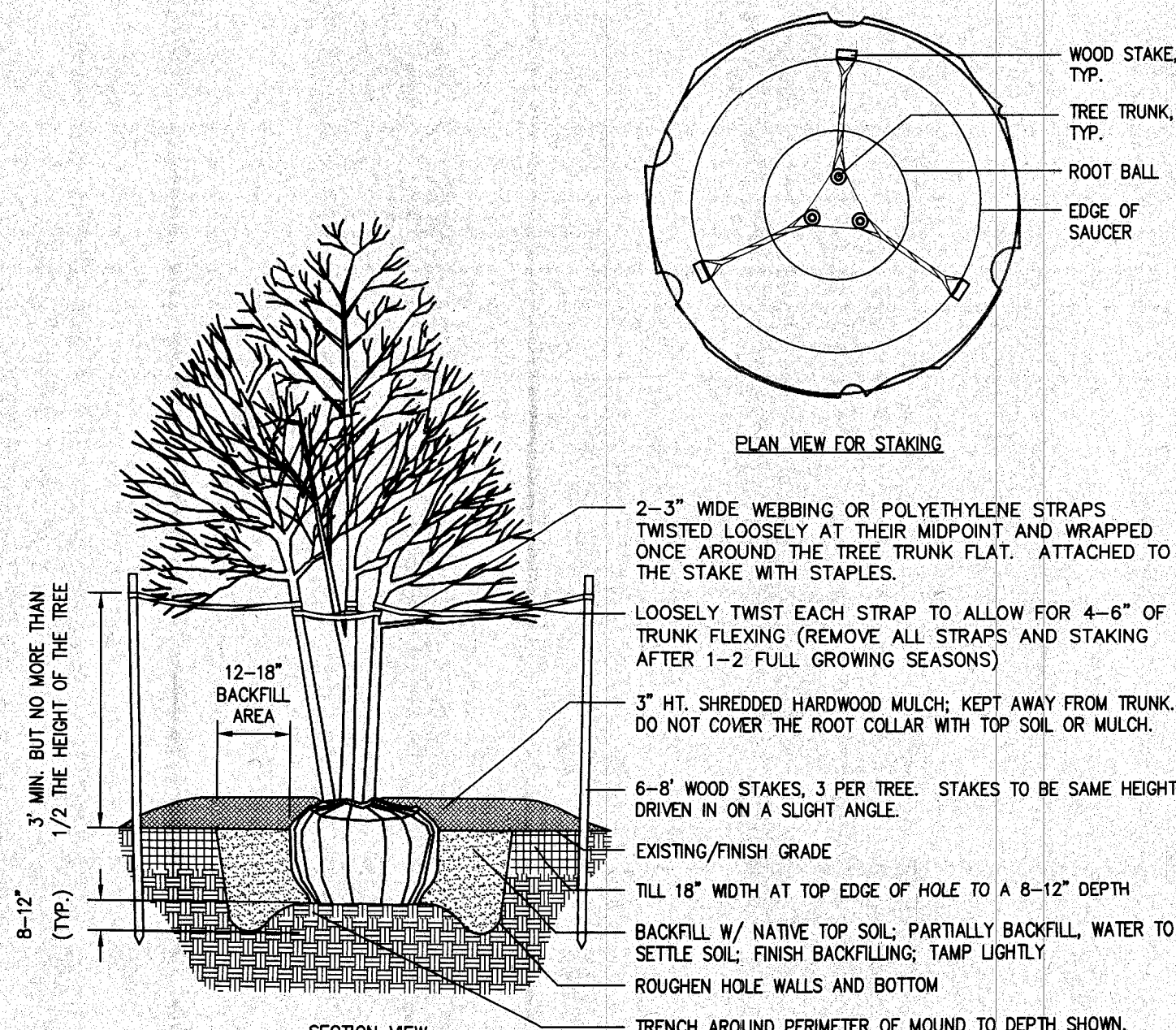
GROUND COVER PLANTING BED

NOT TO SCALE



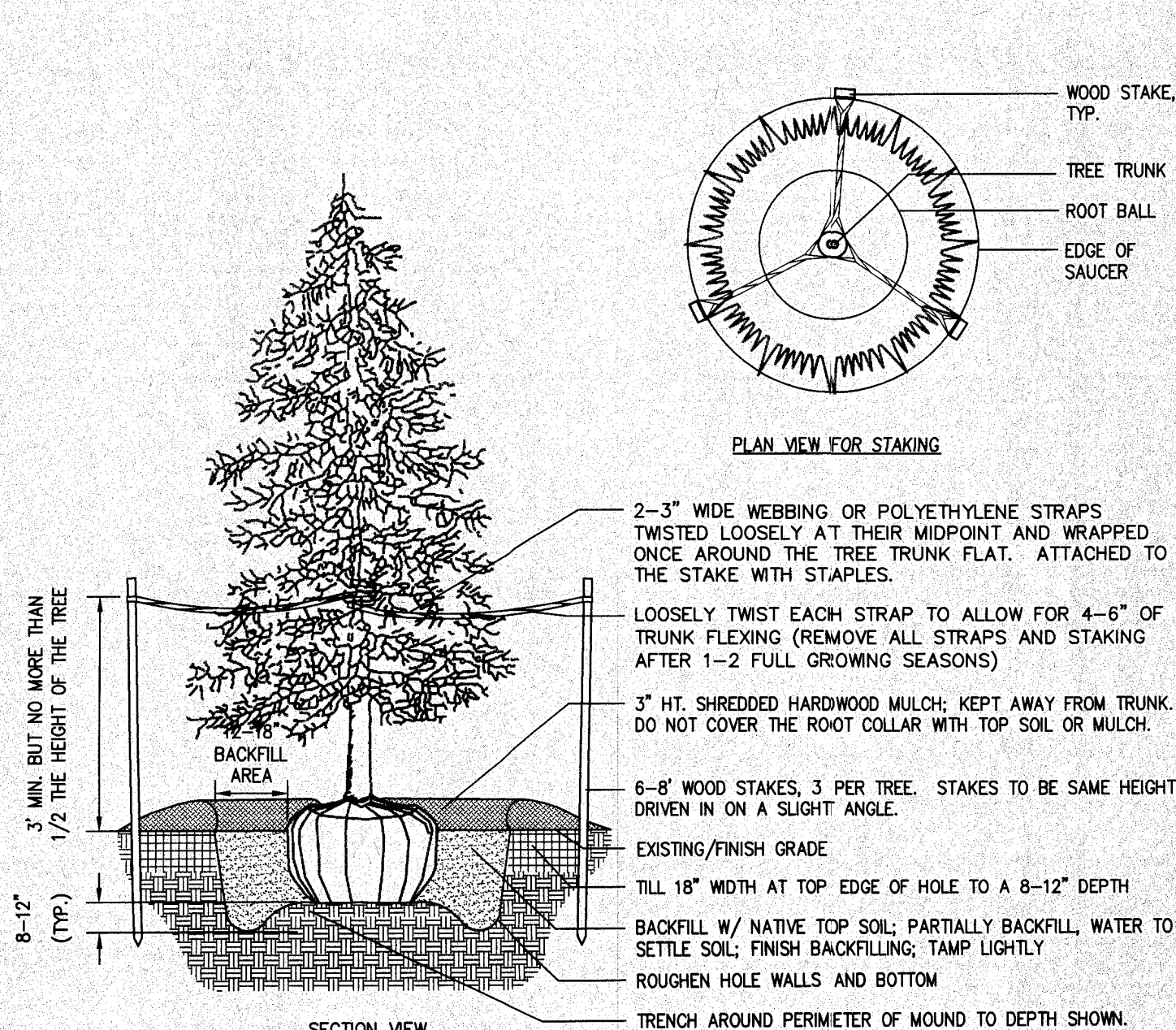
DECIDUOUS TREE PLANTING

NOT TO SCALE



MULTI-STEM TREE PLANTING

NOT TO SCALE



EVERGREEN TREE PLANTING

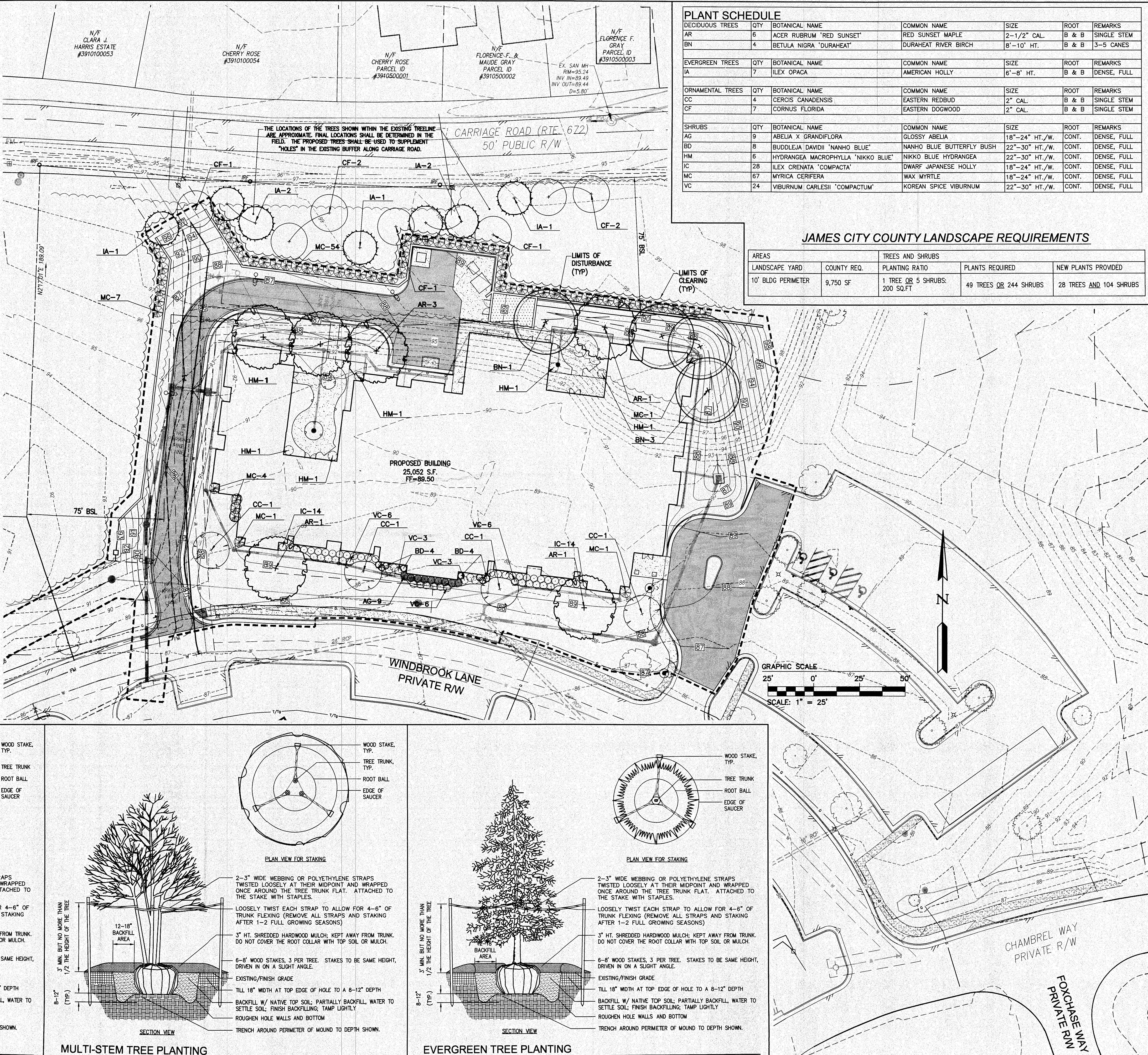
NOT TO SCALE

PLANT SCHEDULE

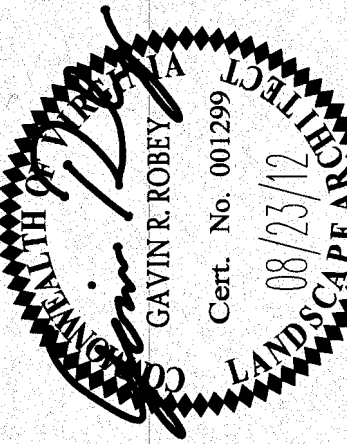
DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
AR	6	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	2-1/2" CAL.	B & B	SINGLE STEM
BN	4	BETULA NIGRA 'DURAHEAT'	DURAHEAT RIVER BIRCH	8'-10' HT.	B & B	3-5 CANES
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
IA	7	ILEX OPACA	AMERICAN HOLLY	6'-8' HT.	B & B	DENSE, FULL
ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CC	4	CERCIS CANADENSIS	EASTERN REDBUD	2" CAL.	B & B	SINGLE STEM
CF	7	CORNUS FLORIDA	EASTERN DOGWOOD	2" CAL.	B & B	SINGLE STEM
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
AG	9	ABELIA X GRANDIFLORA	GLOSSY ABELIA	18"-24" HT./W.	CONT.	DENSE, FULL
BD	8	Buddleja Davidii 'Nanho Blue'	NANHO BLUE BUTTERFLY BUSH	22"-30" HT./W.	CONT.	DENSE, FULL
HM	6	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'	NIKKO BLUE HYDRANGEA	22"-30" HT./W.	CONT.	DENSE, FULL
IC	28	ILEX CRENATA 'COMPACTA'	DWARF JAPANESE HOLLY	18"-24" HT./W.	CONT.	DENSE, FULL
MC	67	MYRICA CERIFERA	WAX MYRTLE	18"-24" HT./W.	CONT.	DENSE, FULL
VC	24	VIBURNUM CARLESII 'COMPACTUM'	KOREAN SPICE VIBURNUM	22"-30" HT./W.	CONT.	DENSE, FULL

JAMES CITY COUNTY LANDSCAPE REQUIREMENTS

AREAS		TREES AND SHRUBS		
LANDSCAPE YARD	COUNTY REQ.	PLANTING RATIO	PLANTS REQUIRED	NEW PLANTS PROVIDED
10' BLDG PERIMETER	9,750 SF	1 TREE <u>OR</u> 5 SHRUBS: 200 SQ.FT	49 TREES <u>OR</u> 244 SHRUBS	28 TREES <u>AND</u> 104 SHRUBS



TIS	TIS	TIS	Revised By
REVISED PER JAMES CITY COUNTY COMMENTS	REVISED PER JAMES CITY COUNTY COMMENTS	REVISED PER JAMES CITY COUNTY COMMENTS	Description
3	2	1	Date
08/23/12	08/23/12	02/03/12	Rev.



5248 Old Towne Road, Suite 1
Hampton Roads, VA 23666
Phone: (757) 253-0044
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www.aesva.com

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CONSULTING ENGINEERS

Hampton Roads | Central Virginia | Middle Peninsula

CHAMBREL
MEMORY CARE FACILITY

JAMESTOWN DISTRICT | JAMES CITY COUNTY | VIRGINIA

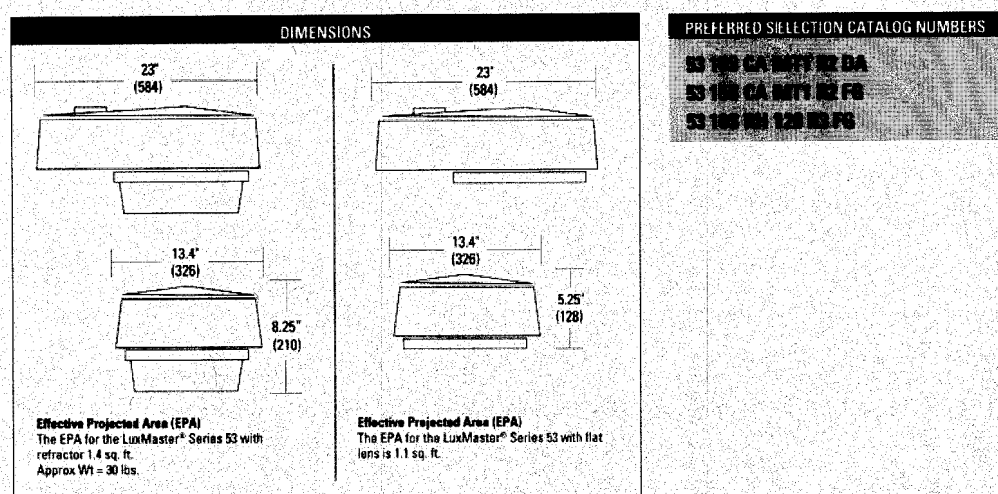
Project Contacts: GRR
Project Number: 7645-02
Scale: 1"=25' Date: 12/06/11

Sheet Title:
LANDSCAPE PLAN

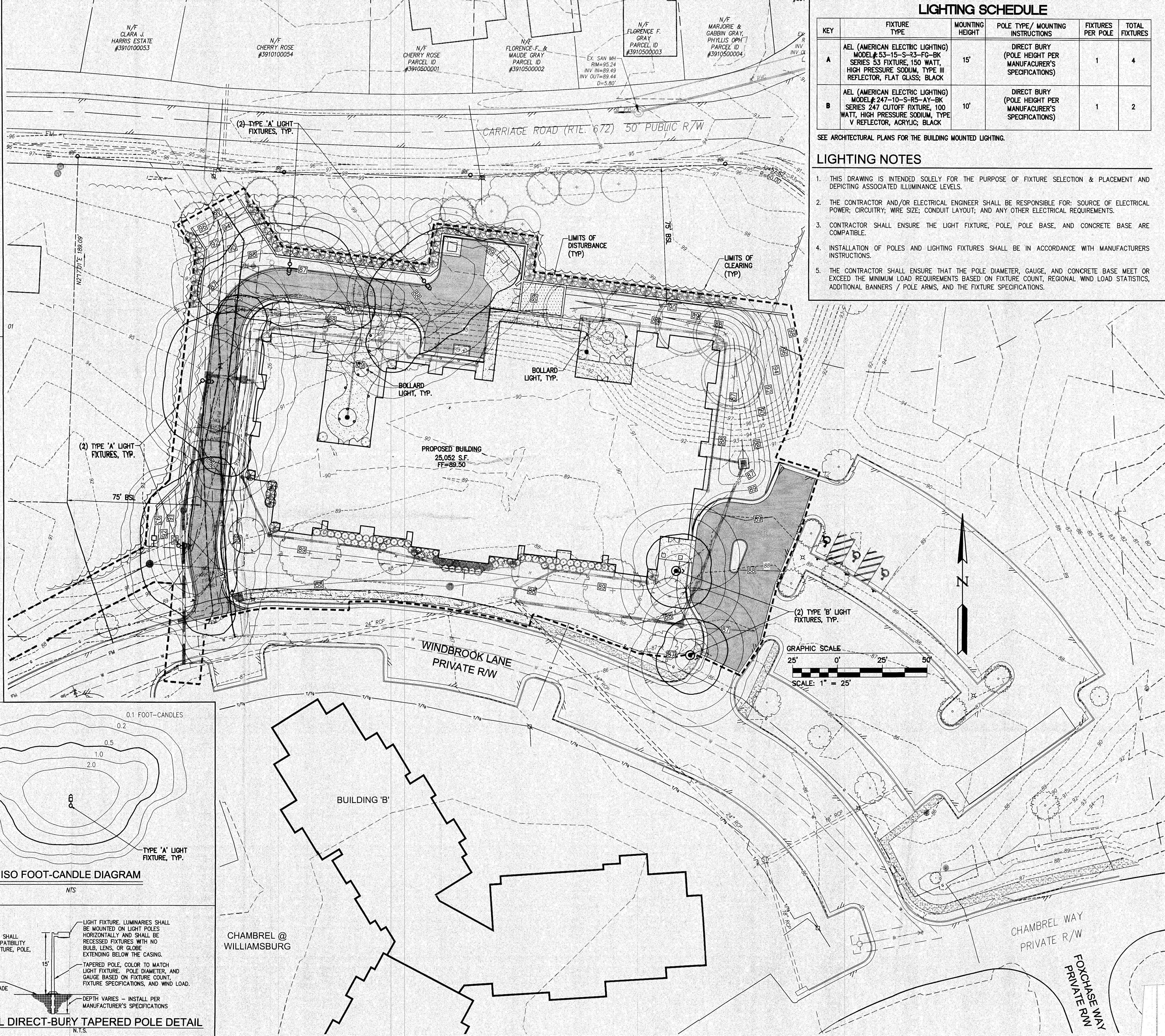
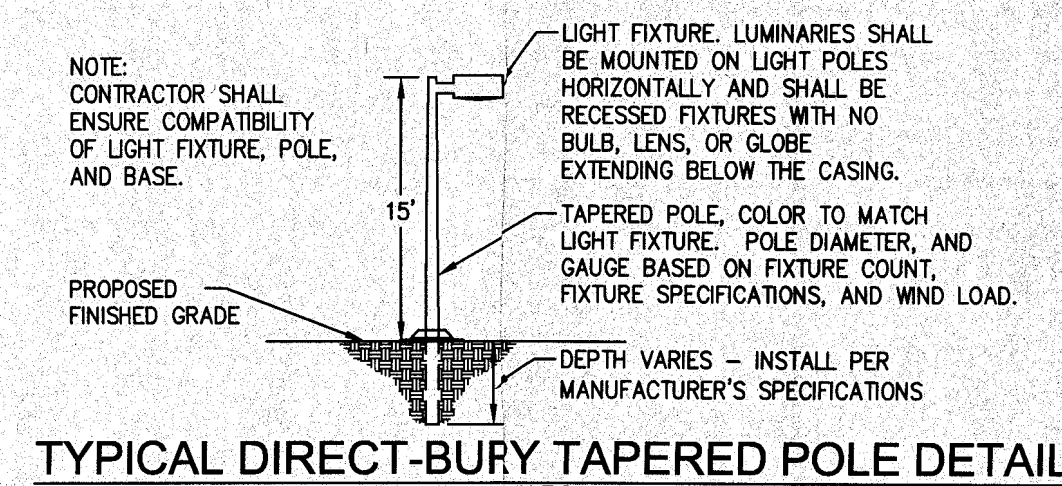
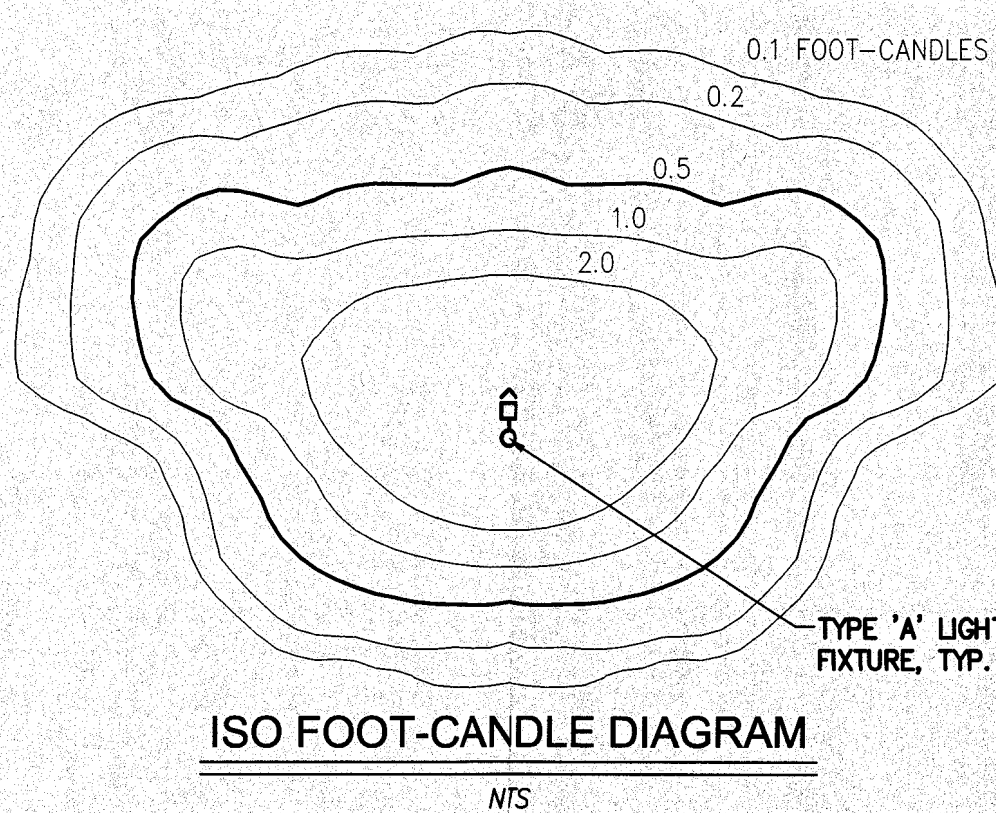
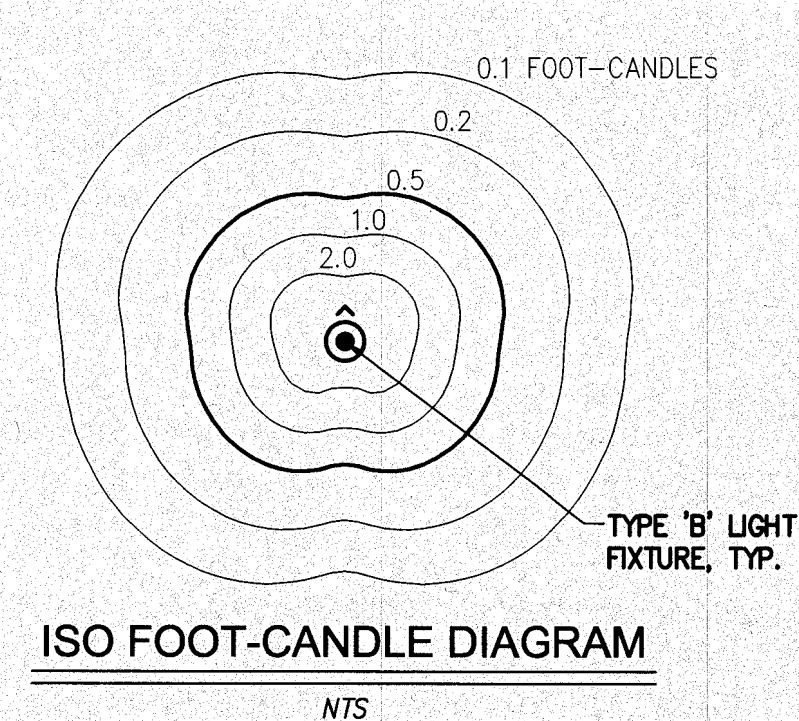
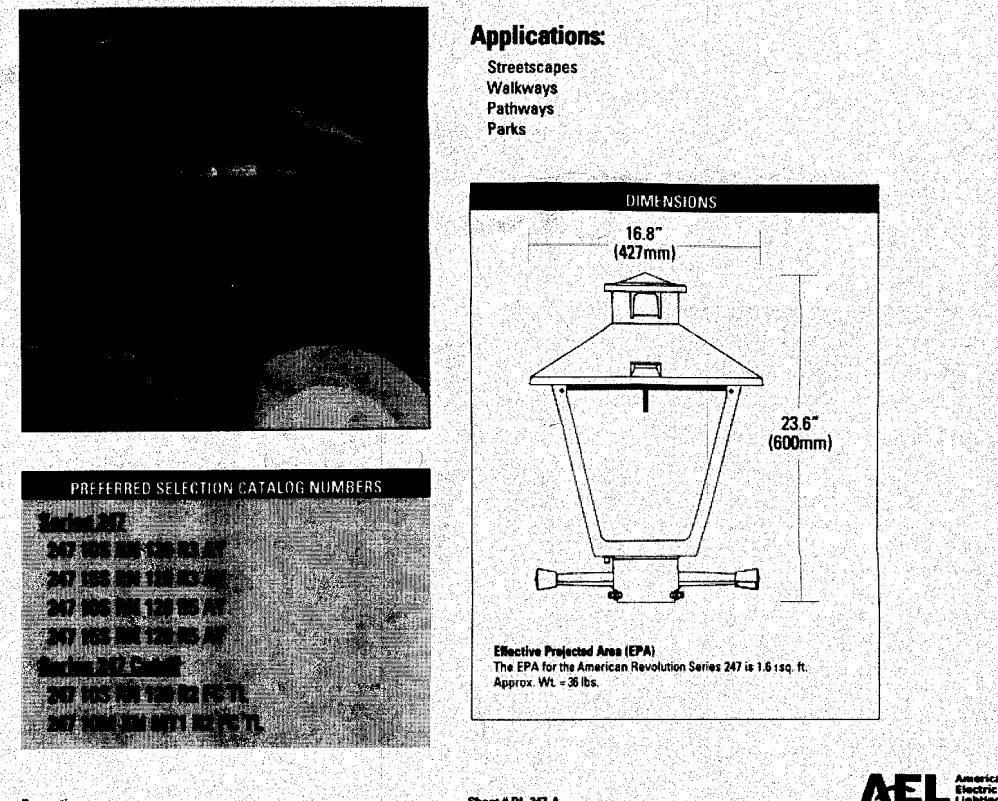
Sheet Number
10



Features:
Durable die-cast aluminum housing for long-life performance
Optical assembly designed for maximum performance
Removable ballast tray electrical system for installation and maintenance ease
"Breathing Seal" developed by American Electric prevents contaminants from entering optical assembly for maximum efficiency
Optics available in flat tempered glass, sag glass, drop acrylic and drop polycarbonate
Available in a variety of IES light distributions patterns and cutoff classifications
Standard product is designed for mount to pipe, mast arm. Direct pole mount arms are available
All electrical components warranted by American Electric Lighting's 6-year guarantee
UL Listed
Moist base, ESR, socket standard
Suitable for -30°C MH / -40°C HPS
Complies with ANSI: C136.2, C136.10, C136.14, C136.15



Features:
Die-cast aluminum housing and hood for long-life performance
Die-cast trigger latch (TL) option available for easy access to internal components
Optical assembly designed for maximum performance
Hinged hood and captive screw provision afford quick, easy access to electrical and optical area for relamping or servicing
Simpler with three set screws allows secure installation to pole sizes 2-3/8" or 3" O.D.
ESR moist base socket standard
All electrical components warranted by American Electric Lighting's 6-year guarantee
Complies with ANSI: C136.2, C136.10, C136.15, C136.31 (regulator only), C136.16 (PC only)
Suitable for -30°C MH & / -40°C HPS
Full cutoff version is "Nighttime Friendly™"



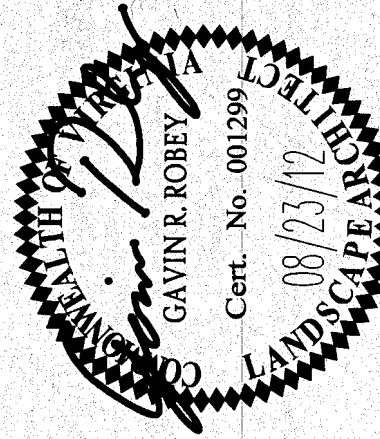
LIGHTING SCHEDULE					
KEY	FIXTURE TYPE	MOUNTING HEIGHT	POLE TYPE/ MOUNTING INSTRUCTIONS	FIXTURES PER POLE	TOTAL FIXTURES
A	AEL (AMERICAN ELECTRIC LIGHTING) MODEL # 53-15-S-R3-FG-BK SERIES 53 FIXTURE, 150 WATT, HIGH PRESSURE SODIUM, TYPE III REFLECTOR, FLAT GLASS; BLACK	15'	DIRECT BURY (POLE HEIGHT PER MANUFACTURER'S SPECIFICATIONS)	1	4
B	AEL (AMERICAN ELECTRIC LIGHTING) MODEL # 247-10-S-R5-AY-BK SERIES 247 CUTOFF FIXTURE, 100 WATT, HIGH PRESSURE SODIUM, TYPE V REFLECTOR, ACRYLIC; BLACK	10'	DIRECT BURY (POLE HEIGHT PER MANUFACTURER'S SPECIFICATIONS)	1	2

SEE ARCHITECTURAL PLANS FOR THE BUILDING MOUNTED LIGHTING.

LIGHTING NOTES

- THIS DRAWING IS INTENDED SOLELY FOR THE PURPOSE OF FIXTURE SELECTION & PLACEMENT AND DEPICTING ASSOCIATED ILLUMINANCE LEVELS.
- THE CONTRACTOR AND/OR ELECTRICAL ENGINEER SHALL BE RESPONSIBLE FOR: SOURCE OF ELECTRICAL POWER; CIRCUITRY; WIRE SIZE; CONDUIT LAYOUT; AND ANY OTHER ELECTRICAL REQUIREMENTS.
- CONTRACTOR SHALL ENSURE THE LIGHT FIXTURE, POLE, POLE BASE, AND CONCRETE BASE ARE COMPATIBLE.
- INSTALLATION OF POLES AND LIGHTING FIXTURES SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- THE CONTRACTOR SHALL ENSURE THAT THE POLE DIAMETER, GAUGE, AND CONCRETE BASE MEET OR EXCEED THE MINIMUM LOAD REQUIREMENTS BASED ON FIXTURE COUNT, REGIONAL WIND LOAD STATISTICS, ADDITIONAL BANNERS / POLE ARMS, AND THE FIXTURE SPECIFICATIONS.

Rev.	Date	Description	Reviewed By
1	06/28/12	REVISED PER JAMES CITY COUNTY COMMENTS	TBS
2	06/28/12	REVISED PER JAMES CITY COUNTY COMMENTS	TBS
3	06/28/12	REVISED PER JAMES CITY COUNTY COMMENTS	TBS

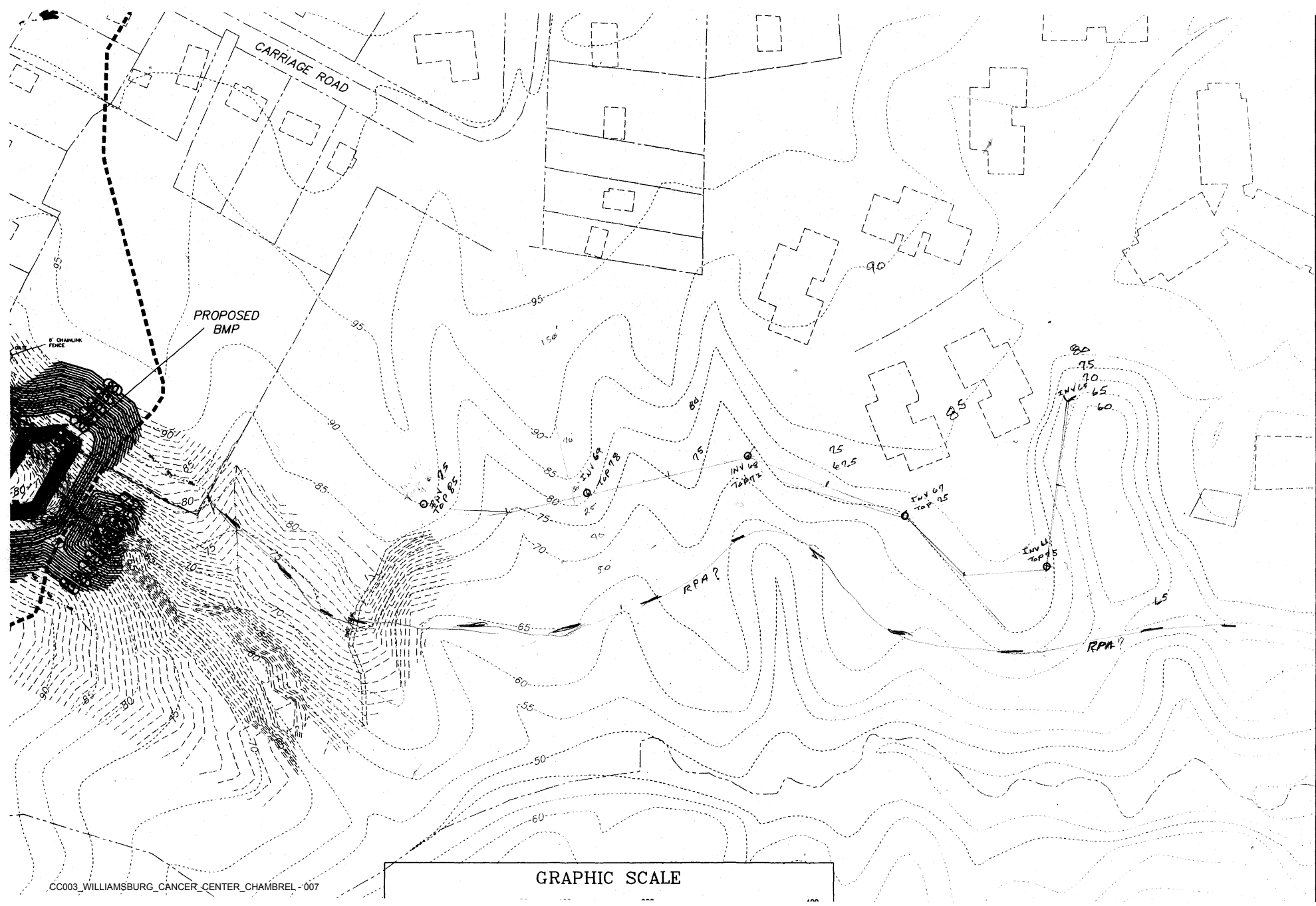


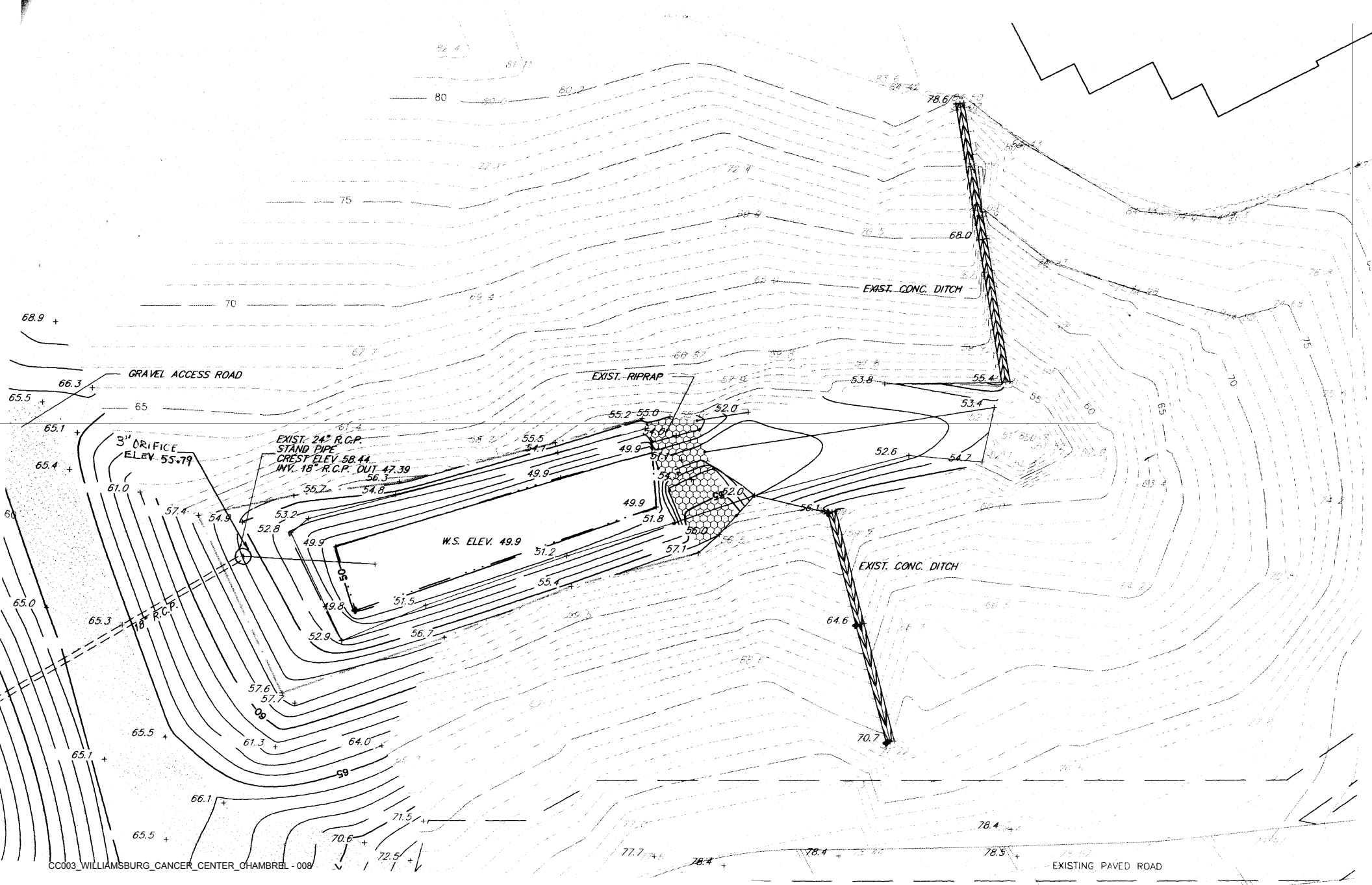
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Middle Peninsula, VA 23053-1700
Phone: (757) 253-0940
Fax: (757) 220-0994
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Middle Peninsula
Staffing Virginia

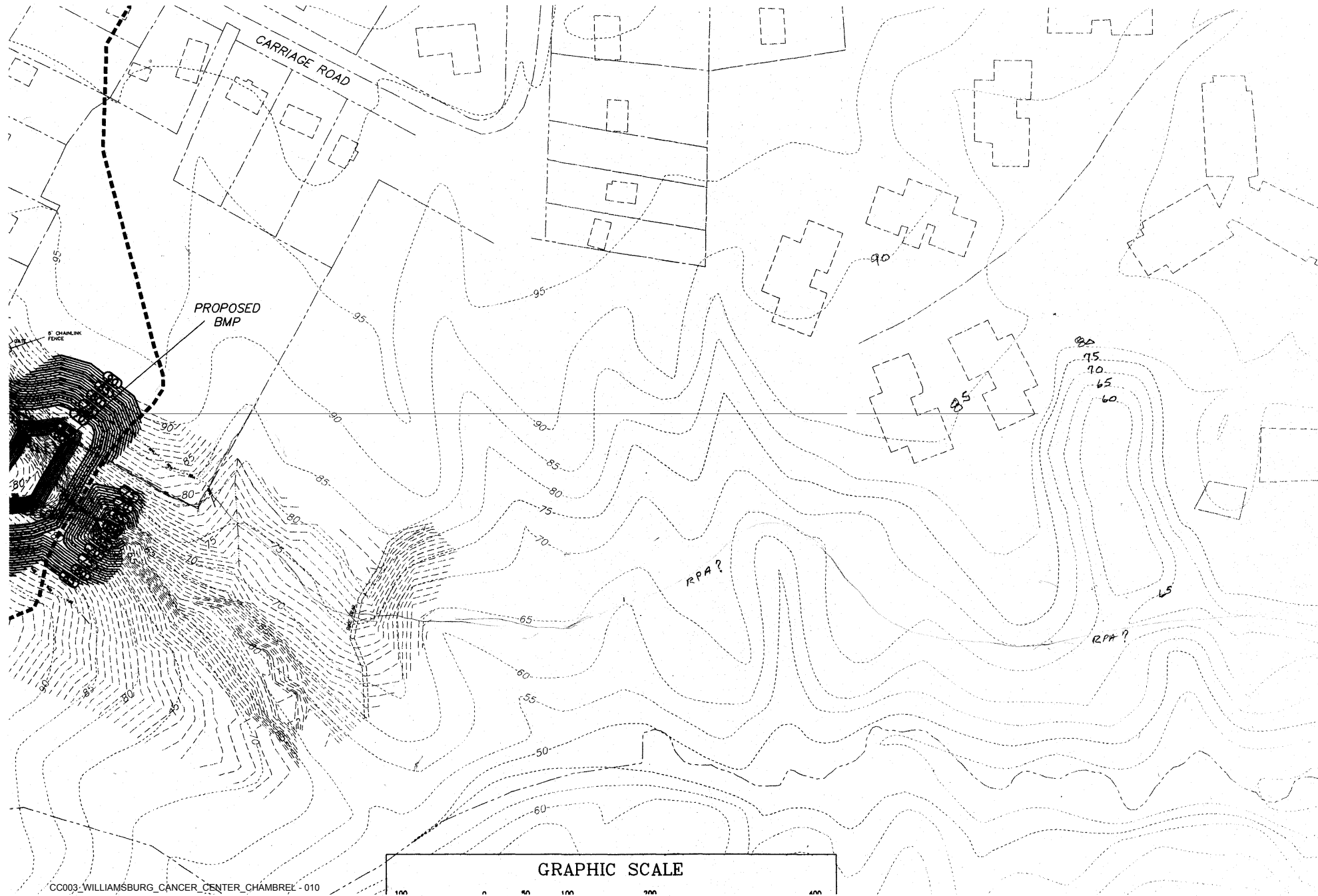
PROJECT CONTACT: GRR
PROJECT NUMBER: 7845-02
SCALE: 1"=25'
DATE: 12/06/11
SHEET TITLE: LIGHTING PLAN

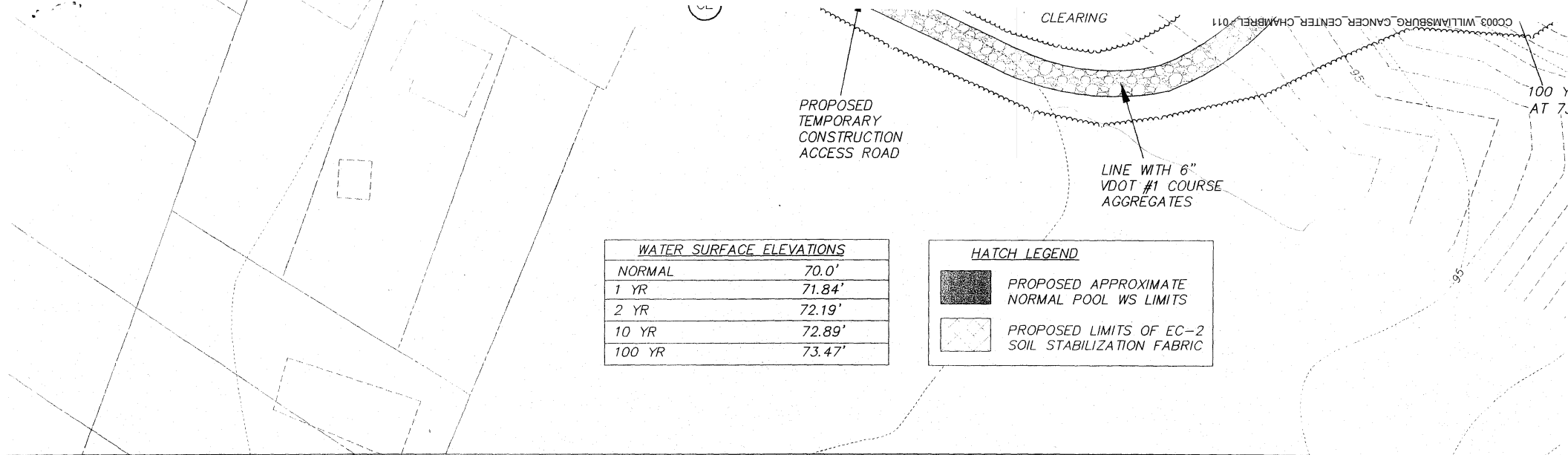
CHAMBREL @ WILLIAMSBURG
MEMORY CARE FACILITY
JAMES CITY COUNTY
DISTRICT 9
VIRGINIA



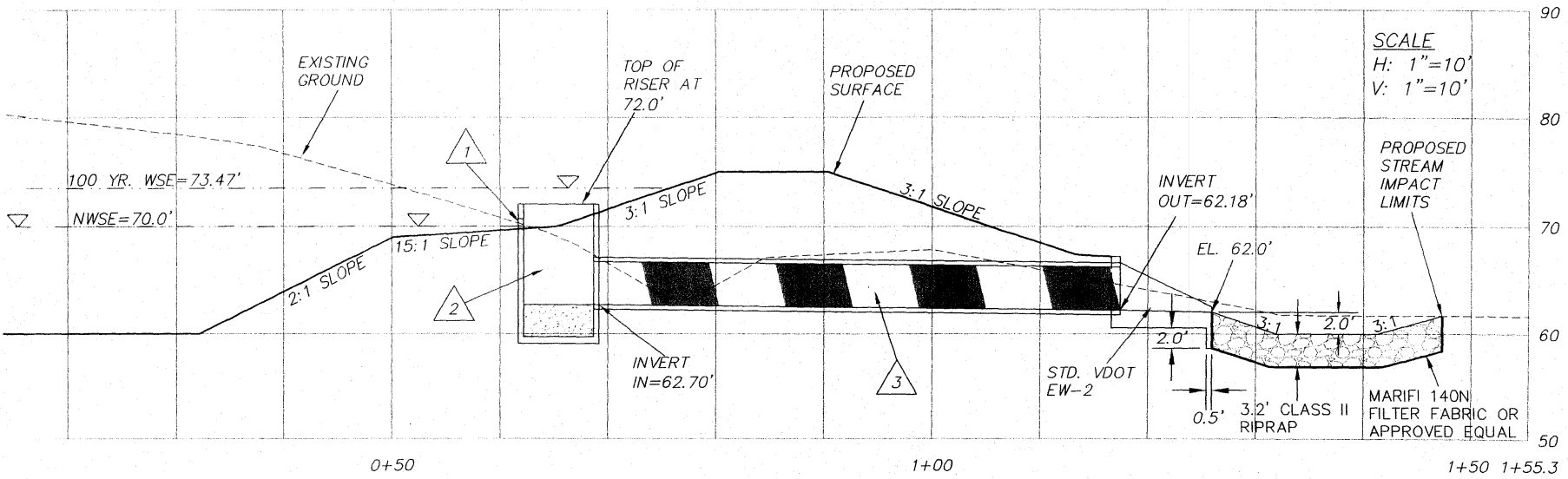




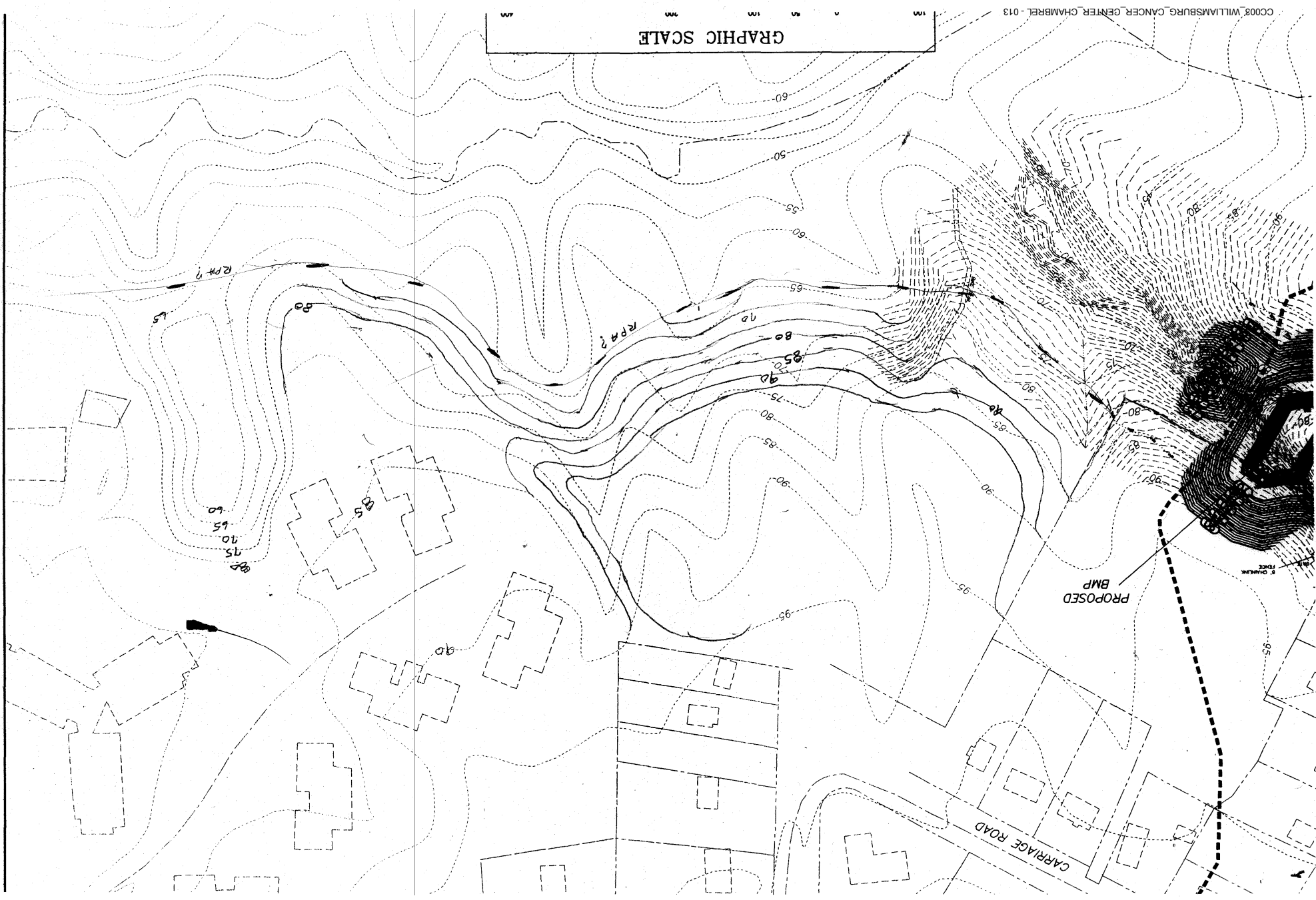




A-A



GRAPHIC SCALE



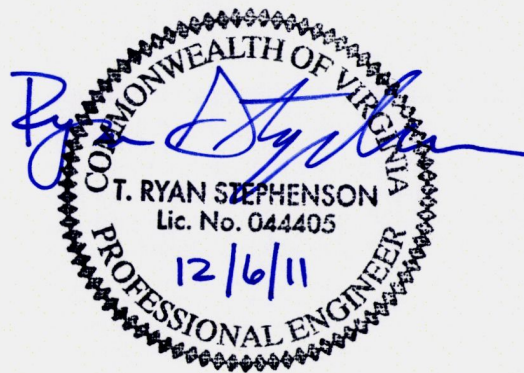


6. Design Calculations

Chambrel Memory Care Facility

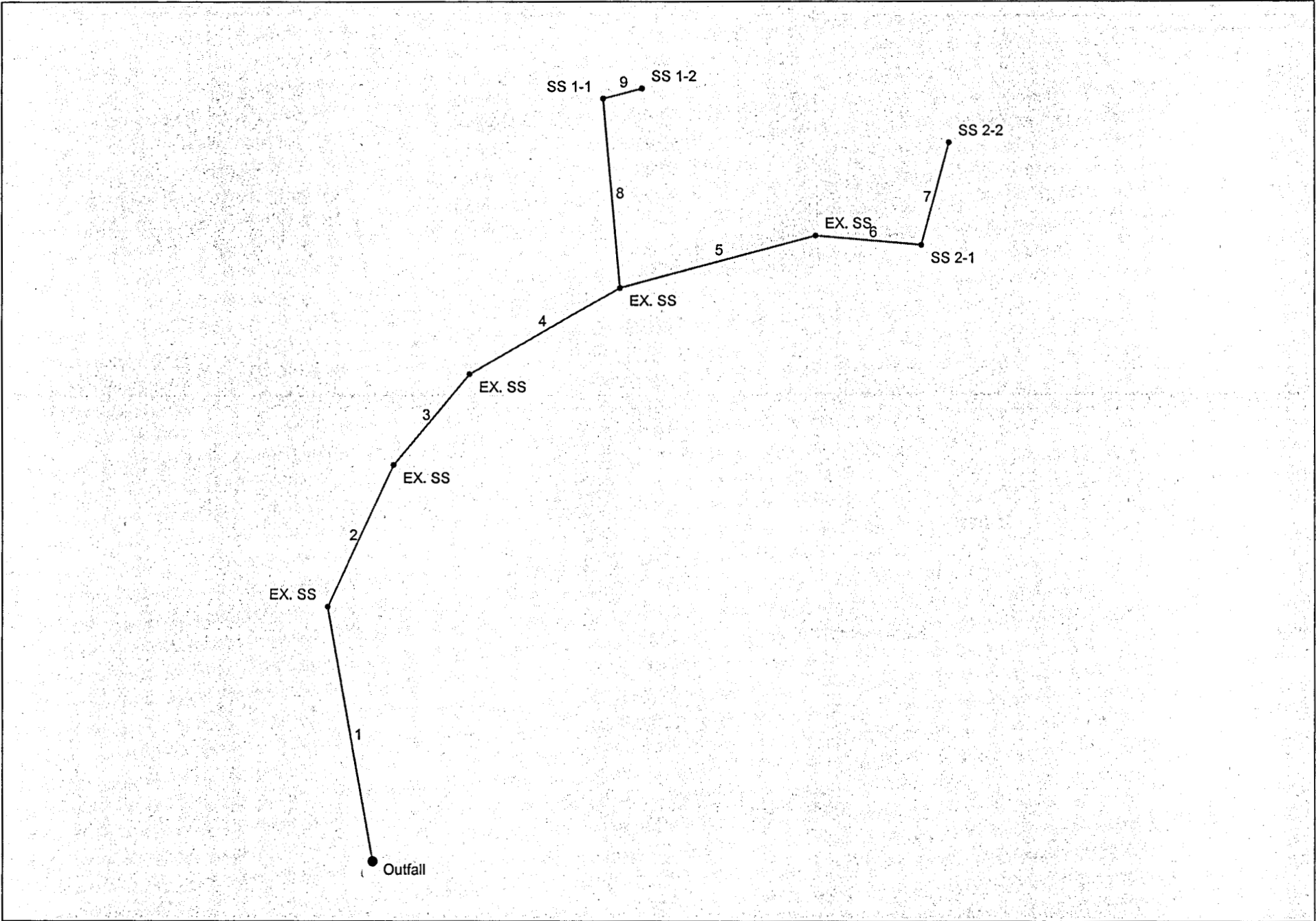
Drainage Calculations

December 6, 2011



Prepared by:
T. Ryan Stephenson, P.E.

7645-02 Storm System



Project File: 7645-02 Storm System.stm	Number of lines: 9	Date: 12-05-2011
--	--------------------	------------------

Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	233.0	0.00	1.45	0.00	0.00	0.92	0.0	8.9	6.3	5.80	61.49	3.19	24	7.39	52.30	69.52	60.30	70.37	0.00	80.02	
2	1	141.0	0.00	1.45	0.00	0.00	0.92	0.0	8.5	6.4	5.91	22.62	5.31	24	1.00	70.15	71.56	70.85	72.42	80.02	83.38	
3	2	107.0	0.00	1.45	0.00	0.00	0.92	0.0	8.0	6.5	6.02	35.12	3.76	24	2.41	71.59	74.17	72.83	75.04	83.38	85.17	
4	3	156.0	0.00	1.45	0.00	0.00	0.92	0.0	7.4	6.7	6.18	28.46	4.09	24	1.58	74.37	76.84	75.46	77.72	85.17	86.74	
5	4	182.0	0.13	0.53	0.72	0.09	0.32	5.0	6.0	7.1	2.30	23.35	2.25	24	1.07	76.91	78.85	78.15	79.39	86.74	86.95	
6	5	✓ 96.0	0.00	0.40	0.00	0.00	0.23	0.0	5.5	7.3	1.66	4.42	3.35	✓ 15	✓ 0.47	✓ 82.40	✓ 82.85	82.93	83.38	86.95 ✓	87.60 ✓	2-1 → Ex
7	6	✓ 96.0	0.40	0.40	0.57	0.23	0.23	5.0	5.0	7.5	1.71	4.42	2.91	✓ 15	✓ 0.47	✓ 82.85	83.30 ✓	83.57	83.83	87.60 ✓	85.80 ✓	2-2 → 2-1
8	4	✓ 172.0	0.00	0.92	0.00	0.00	0.60	0.0	5.2	7.4	4.44	7.34	3.67	✓ 18	✓ 0.49	✓ 76.91	✓ 77.75	78.15	78.57	86.74 ✓	89.50 ✓	1-1 → Ex
9	8	✓ 36.0	0.92	0.92	0.65	0.60	0.60	5.0	5.0	7.5	4.48	7.83	3.12	✓ 18	✓ 0.56	✓ 77.75	✓ 77.95 ✓	78.98	79.01	89.50 ✓	84.76 ✓	1-2 → 1-1
7645-02 Storm System																Number of lines: 9				Run Date: 12-05-2011		
NOTES: Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74; Return period = 10 Yrs. ; c = cir e = ellip b = box																						



Project: Chambrel Memory Care Facility
 Project No.: 7645-02
 Subject: Channel Design
Swale @ Storm Structure 2-2
 Date: December 6, 2011
 Calculated By: TRS

Design Point:

Storm Structure 2-2

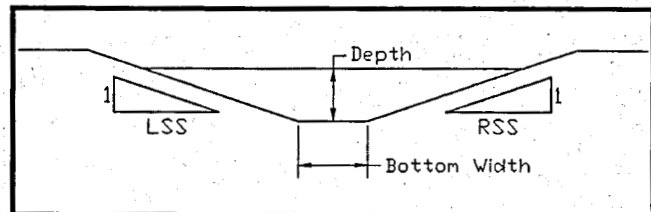
2 Year Storm - Velocity Check

Drainage Area = 0.21 Acres (Area draining to Design Point)
 C = 0.35 (Runoff Coefficient)
 I = 4.52 in/hr (Design Rainfall Intensity) 10 Minutes

Q = C I A (Peak Flow)
 = 0.35 x 4.52 x 0.21
 = 0.33 CFS

Channel Characteristics

Rt. Side Slope = 3.00 :1
 Lt. Side Slope = 3.00 :1
 Base Width = 0.00 Ft.
 Max. Depth = 1.00 Ft.
 Channel Slope = 2.00 %
 Mannings (n) = 0.035 Short Grass



Depth of Flow = 0.27 Ft.
 Area = 0.22 SF
 Hydraulic Radius = 0.13 Ft.
 Velocity (V) = 1.52 Ft./sec. (From Manning's Equation)
 Flow (Q) = 0.33 CFS (From Continuity Equation Q=AV)
 Wetted Perimeter = 1.70 Ft.

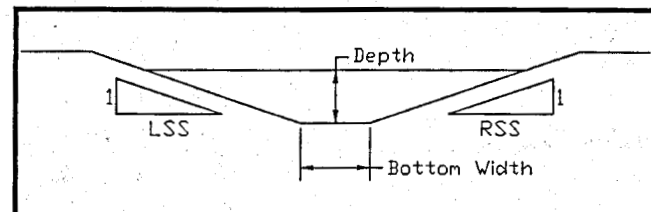
10 Year Storm - Capacity Check

Drainage Area = 0.21 Acres (Area draining to Design Point)
 C = 0.35 (Runoff Coefficient)
 I = 6.00 in/hr (Design Rainfall Intensity) 10 Minutes

Q = C I A (Peak Flow)
 = 0.35 x 6.00 x 0.21
 = 0.44 CFS

Channel Characteristics

Rt. Side Slope = 3.00 :1
 Lt. Side Slope = 3.00 :1
 Base Width = 0.00 Ft.
 Max. Depth = 1.00 Ft.
 Channel Slope = 2.00 %
 Mannings (n) = 0.035 Short Grass



Depth of Flow = 0.30 Ft.
 Area = 0.27 SF
 Hydraulic Radius = 0.14 Ft.
 Velocity (V) = 1.63 Ft./sec. (From Manning's Equation)
 Flow (Q) = 0.44 CFS (From Continuity Equation Q=AV)
 Wetted Perimeter = 1.89 Ft.



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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject CANCER TREATMENT

CENTER

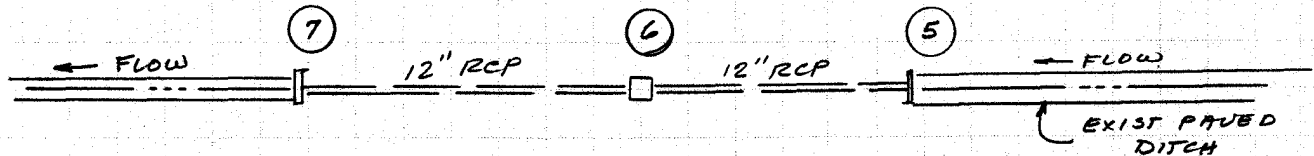
Computed By MRG Checked By _____

Project No. 94254

Client _____

Date 10/27/94 Sheet No. _____

RUNOFF @ TRAYBURN DRIVE ENTRANCE



* EXISTING FLOW (5 to 6)

TOTAL AREA 0.8163 Ac
PAVED AREA 0.1710 Ac

$$\begin{aligned} 0.171 @ 0.9 &= 0.1539 \\ 0.6453 @ 0.25 &= 0.1613 \\ \hline &0.3152 \end{aligned}$$

$$\begin{aligned} CA_{TOTAL} &= 0.3152 \\ t_c &= 10 \text{ min.} \\ I_{10} &= 5.93 \text{ in/hr} \\ Q_{10} &= 1.87 \text{ cfs} \end{aligned}$$

* ADD PROP. FLOW @ 6 to 7

TOTAL AREA = 0.9705 Ac
PAVED AREA = 0.3252 Ac

$$\begin{aligned} 0.3252 @ 0.9 &= 0.2926 \\ 0.6453 @ 0.25 &= 0.1613 \\ \hline &0.4539 \end{aligned}$$

$$\begin{aligned} CA_{TOTAL} &= 0.4539 \\ t_c &= 10 \text{ min} \\ I_{10} &= 5.93 \text{ in/hr} \\ Q_{10} &= 2.69 \text{ cfs} \end{aligned}$$

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: CANCER TREATMENT CTR

Comment: Flow in Exist Conc. Ditch

Solve For Depth

Given Input Data:

Left Side Slope..	2.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.015
Channel Slope....	0.0200 ft/ft
Discharge.....	1.87 cfs

Computed Results:

Depth.....	0.44 ft
Velocity.....	4.76 fps
Flow Area.....	0.39 sf
Flow Top Width..	1.77 ft
Wetted Perimeter	1.98 ft
Critical Depth...	0.56 ft
Critical Slope...	0.0058 ft/ft
Froude Number....	1.78 (flow is Supercritical)

Open Channel Flow Module, Version 3.09 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: CANCER TREATMENT CTR

Comment: Conc Entrance @ 6 to 7

Solve For Actual Depth

Given Input Data:

Diameter.....	1.00 ft
Slope.....	0.0200 ft/ft
Manning's n.....	0.013
Discharge.....	2.69 cfs

Computed Results:

Depth.....	0.52 ft
Velocity.....	6.52 fps
Flow Area.....	0.41 sf
Critical Depth...	0.70 ft
Percent Full.....	51.99 %
Full Capacity...	5.04 cfs
QMAX @ 0.94D.....	5.42 cfs
Froude Number.....	1.79 (flow is Supercritical)

Open Channel Flow Module, Version 3.09 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: CANCER TREATMENT CTR

Comment: Conc Entrance @ 5 to 6

Solve For Actual Depth

Given Input Data:

Diameter.....	1.00 ft
Slope.....	0.0200 ft/ft
Manning's n.....	0.013
Discharge.....	1.87 cfs

Computed Results:

Depth.....	0.42 ft
Velocity.....	5.94 fps
Flow Area.....	0.31 sf
Critical Depth....	0.58 ft
Percent Full.....	42.18 %
Full Capacity.....	5.04 cfs
QMAX @.94D.....	5.42 cfs
Froude Number.....	1.85 (flow is Supercritical)

Open Channel Flow Module, Version 3.09 (c) 1990
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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject CANCER TREATMENT

CENTER

Computed By MRG Checked By _____

Project No. 94254

Client _____

Date 10/13/94 Sheet No. _____

RUNOFF CALCULATIONS @ (3) TO (4)

$$A = 1.01 A_c$$

$$C = 0.3754$$

$$CA = 0.3796$$

$$t_c = 10 \text{ min.}$$

$$I_{10} = 5.93 \text{ in/hr.}$$

$$Q_{10} = 2.2510 \Rightarrow 2.25 \text{ cfs}$$

FILE: CANCER3.MRG
 Project: CANCER TREATMENT CENTER
 Location:
 Design:
 Date: 13-Oct-94

LANGLEY and McDONALD, P.C.
 201 Packets Court
 Williamsburg, Virginia 23185

WEIGHTED "C" VALUE CALCULATIONS

STD. METHOD

Area	Coeff.	C x A
0.6192 @	0.25 =	0.1548
0.8375 @	0.9 =	0.7538
		0.90855

$$0.90855 / 1.4567 = 0.623704 \text{ (weighted coefficient)}$$

INLET No.	TOTAL AREA	PAVED AREA	PERVIOUS AREA	WEIGHTED "C" VALUE
1	1.0112	0.1951	0.8161	0.3754
2	0.8716	0.1446	0.7270	0.3579

s13H FILE: CANCER1.MRG
 Project: CANCER TREATMENT CENTER
 Location: James City County, Virginia
 Design: M. Gordon
 Date: Oct. 14, 1994
 Revision:
 Yr. Storm: 10
 N Value: 0.013

Sheet 1 of

LANGLEY and McDONALD, P.C.
 201 Packets Court
 Williamsburg, Virginia 23185

STORM SEWER DESIGN COMPUTATIONS

FROM PT.	TO PT.	DRAIN. AREA	RUN-OFF COEFF.	C x A INCR.	C x A ACCUM.	INLET TIME	RAIN FALL	RUNOFF "Q" INCR.	RUNOFF "Q" ACCUM.	INVERT ELEV. UP	INVERT ELEV. LOW	LENGTH	SLOPE	PIPE DIAM.
		acres	"C"			min.	in/hr	cfs	cfs			ft.	ft./ft.	inches
		[E]	[E]			[E]				[E]		[E]		[E]
1	2	0.87	0.36	0.31	0.31	10.00	5.93	1.85	1.85	51.21	50.94	70	0.0038	12

FROM PT.	TO PT.	VELOCITY ft./sec.	CAPACITY cfs	FLOW TIME min.	FLOW RATIO Qp/Qf	VELOCITY RATIO Vp/Vf	REMARKS
1	2	3.17	2.20	0.37	0.84	1.13	

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: CANCER TREATMENT CTR

Comment: PG-4 FROM 2 TO 5

Solve For Depth

Given Input Data:

Bottom Width.....	1.00 ft
Left Side Slope..	2.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.015
Channel Slope....	0.3339 ft/ft
Discharge.....	1.85 cfs

Computed Results:

Depth.....	0.12 ft
Velocity.....	12.19 fps
Flow Area.....	0.15 sf
Flow Top Width...	1.49 ft
Wetted Perimeter.	1.55 ft
Critical Depth...	0.37 ft
Critical Slope...	0.0056 ft/ft
Froude Number....	6.72 (flow is Supercritical)

Open Channel Flow Module, Version 3.09 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: CANCER TREATMENT CTR

Comment: PG-4 FROM 3 TO 4

Solve For Depth

Given Input Data:

Bottom Width.....	1.00 ft
Left Side Slope..	2.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.015
Channel Slope....	0.2736 ft/ft
Discharge.....	2.25 cfs

Computed Results:

Depth.....	0.14 ft
Velocity.....	12.11 fps
Flow Area.....	0.19 sf
Flow Top Width..	1.58 ft
Wetted Perimeter.	1.64 ft
Critical Depth...	0.41 ft
Critical Slope...	0.0055 ft/ft
Froude Number....	6.22 (flow is Supercritical)

Open Channel Flow Module, Version 3.09 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708



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Subject _____

Computed By _____ Checked By _____

Project No. _____

Client _____

Date 5/23/94 Sheet No. A

PRE-DEV. POLLUTANT RUNOFF FROM PROPOSED MED. FACIL.

USING DEFAULT 16% IMPERV.

$$[0.05 + 0.009(16)] \times 44c. \times 2.33 = 1.8 \text{ LB/YR.}$$

ASSUMING 0% IMPERV. COVER

$$[0.05 + 0.009(0)] \times 44c. \times 2.33 = 0 \text{ LB/YR.}$$

PRE-DEV. POLLUTANT RUNOFF FROM PROPOSED NURSING FACIL.

USING DEFAULT 16% IMPERV.

$$[0.05 + 0.009(16)] \times 54c. \times 2.33 = 2.26 \text{ LB/YR}$$

ASSUMING 0% IMPERV. COVER

$$[0.05 + 0.009(0)] \times 54c. \times 2.33 = 0 \text{ LB/YR.}$$

POST-DEV. POLLUTANT RUNOFF FROM PROPOSED MED. FACIL.

ASSUMING 46% IMPERV. SURFACE

$$[0.05 + 0.009(46)] \times 44c. \times 2.33 = 4.3 \text{ LB/YR.}$$

POST-DEV. POLLUTANT RUNOFF FROM PROPOSED NURSING FACIL.

ASSUMING 49% IMPERV. SURFACE

$$[0.05 + 0.009(45)] \times 54c. \times 2.33 = 5.3 \text{ LB/YR.}$$

TOTAL REMOVAL REQMT. BASED UPON DEFAULT 16%

$$(4.3 \text{ LB/YR} + 5.3 \text{ LB/YR}) - (1.8 \text{ LB/YR} + 2.3 \text{ LB/YR}) = 5.5 \text{ LB/YR.}$$

TOTAL REMOVAL REQMT. BASED UPON 0% PRE-DEV. IMPERV. COVER

$$4.3 \text{ LB/YR.} + 5.3 \text{ LB/YR.} = 9.6 \text{ LB/YR.}$$



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Subject _____

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Project No. _____

Client _____

Date 5/23/94 Sheet No. B

ACTUAL REMOVAL

OF 14 AC. DRAINING TO PROPOSED DETEN. BASIN

40% TOWNHOUSE @ 40% IMPERV.

60% APARTMENTS @ 55% IMPERV.

COMPOSITE IMPERV. PERCENT

14 AC. x 40% x ^{FROM CBLAM PG. C-10} 40% IMPERV. = 2.2 AC IMPERV.

14 AC x 60% x 55% IMPERV. = 4.6 AC IMPERV.

$6.8 \text{ AC.} \div 14 = 48.7\% \text{ IMPERV.}$

POLLUTANT RUNOFF FROM 14 DEV. ACRES @ 48.7% IMPERV.

$[0.05 + 0.009(48.7\%)] \times 14 \times 2.33 = 15.9 \text{ LB/YR.}$

ASSUMING A 50% EFFICIENT 4th WET POND

ACTUAL REMOVAL IS:

$15.9 \text{ LB/YR} \times \frac{40\%}{50\%} = \frac{6.36}{7.9} \text{ LB/YR. REMOVAL.}$

REMOVAL REQMT. BASED UPON DEFAULT VALUE = 5.5 LB/YR.

REMOVAL REQMT. BASED UPON ASSUMED

PRE-DEV. 0% IMPERV. = 9.6 LB/YR.



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Client _____

Date 5/23/94 Sheet No. C

VOLUME REQMTS. FOR 4 V_r DETEN. BASIN
ASSUMING 14 AC. DRAINAGE AREA @ 48.7% IMPERV.

$$Vol = \frac{(R_m)(R_v)}{12} A$$

$$R_v = 0.05 + 0.009(48.7) = 0.49$$

$$R_m = 0.45''$$

$$Vol = \frac{(0.45)(0.49)}{12} (14) = 0.26 \text{ Ac-FT.} \times 4 = 1.0 \text{ Ac-FT}$$

$$1.0 \text{ Ac-FT} = 43560 \text{ C.F.}$$



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Subject _____

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Project No. _____

Client _____

Date 5/23/94 Sheet No. D.

FLOW ATTENUATION CALCS.

AT BASIN - FOR 14 AC. DRAINING TO IT
ASSUME $T_c = 7.5$ MIN. EXISTING.

$$Q_2 = 14(0.6)(4.7"/hr) = 39.5 \text{ c.f.s.}$$
$$Q_{10} = 14(0.6)(6.0"/hr) = 50.4 \text{ c.f.s.}$$
$$Q_{100} = 14(0.6)(8.2"/hr) = 69.0 \text{ c.f.s.}$$

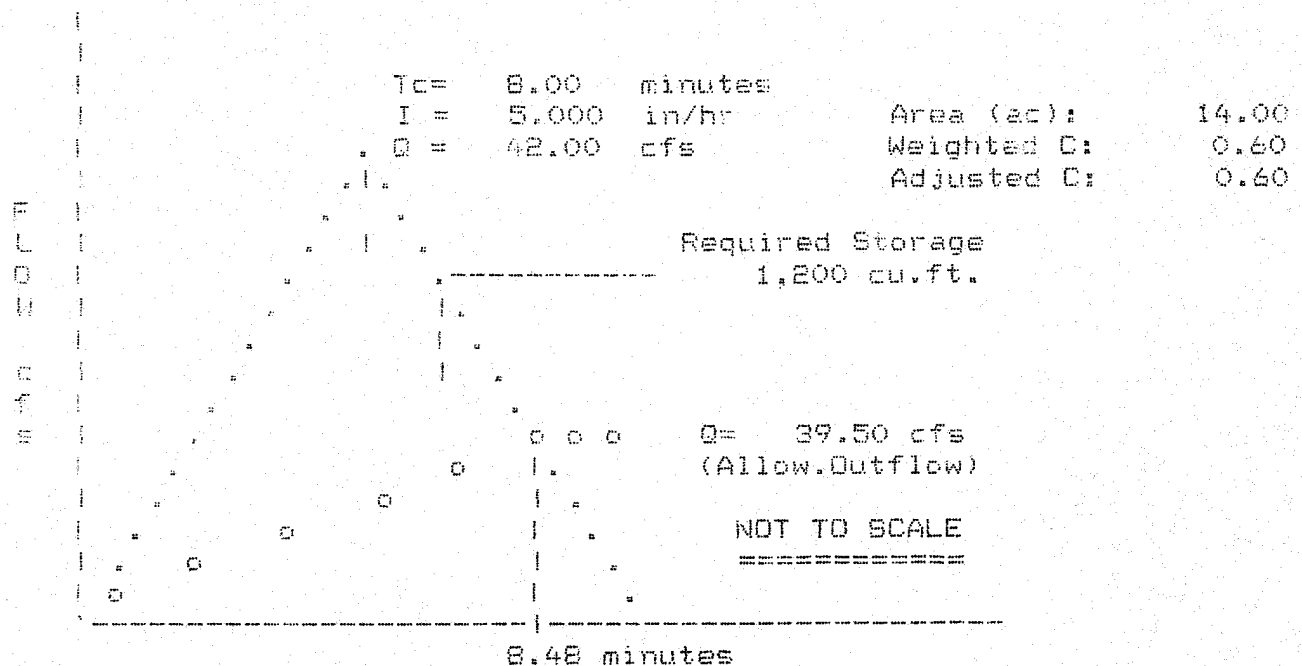
Quick TR-55 Ver.5.46 S/N:1315430271
Executed: 17:58:13 11-01-1994

①

MODIFIED RATIONAL METHOD
---- Graphical Summary for Maximum Required Storage ----

BMP AT CHAMBREL

```
*****
* RETURN FREQUENCY: 2 yr | Allowable Outflow: 39.50 cfs *
* 'C' Adjustment: 1.000 | Required Storage: 1,200 cu.ft. *
* STORM DURATION = Tc for Max.Storage *
*-----*
* Peak Inflow: 42.00 cfs | Inflow .HYD stored: 20UTMF .HYD *
*****
```



2

Quick TR-55 Ver.5.46 S/N:1315430271
Executed: 17:58:13 11-01-1994

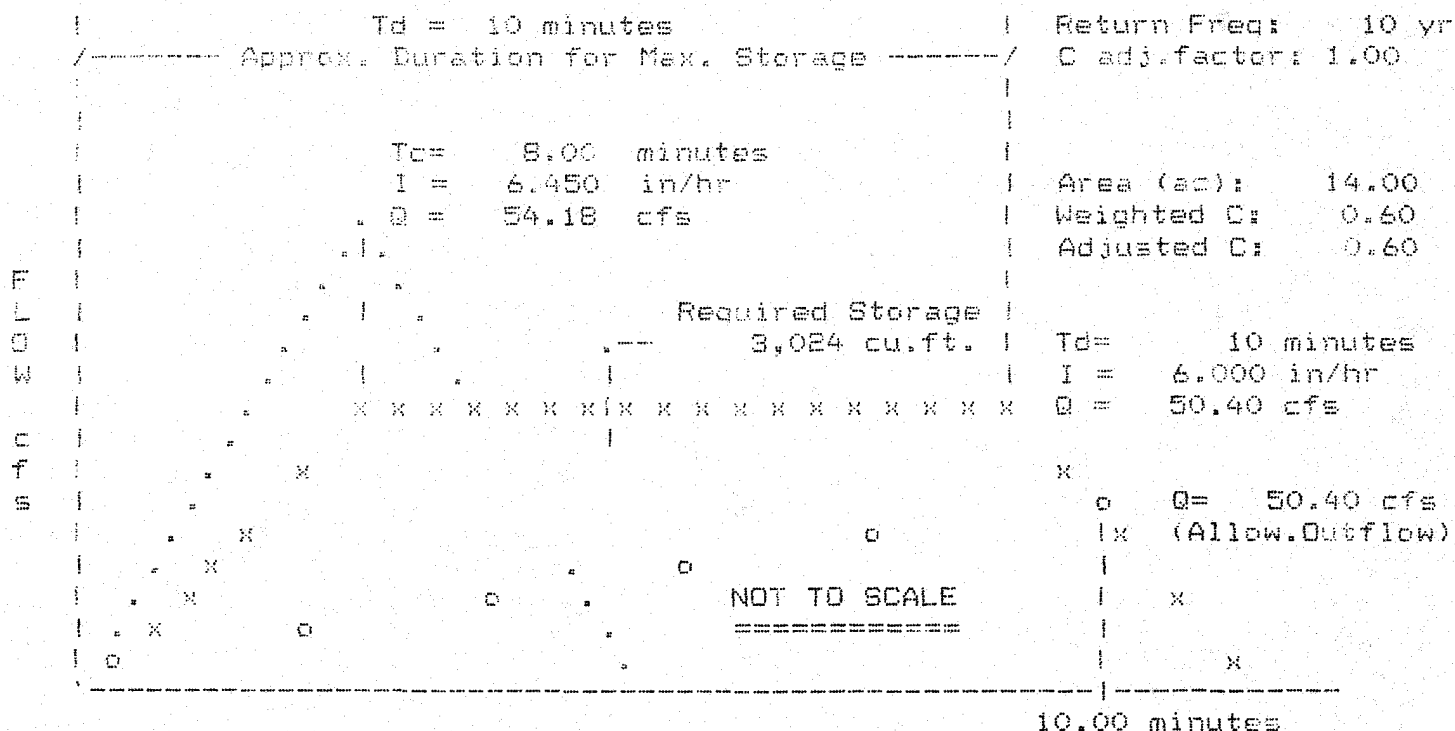
MODIFIED RATIONAL METHOD

---- Graphical Summary for Maximum Required Storage ----

First peak outflow point assumed to occur at inflow recession leg.

BMP AT CHAMBREL

```
*****
* RETURN FREQUENCY: 10 yr      | Allowable Outflow: 50.40 cfs *
* 'C' Adjustment: 1.000      | Required Storage: 3,024 cu.ft. *
*-----*
* Peak Inflow: 50.40 cfs      | Inflow .HYD stored: 100UTMF .HYD *
*****
```

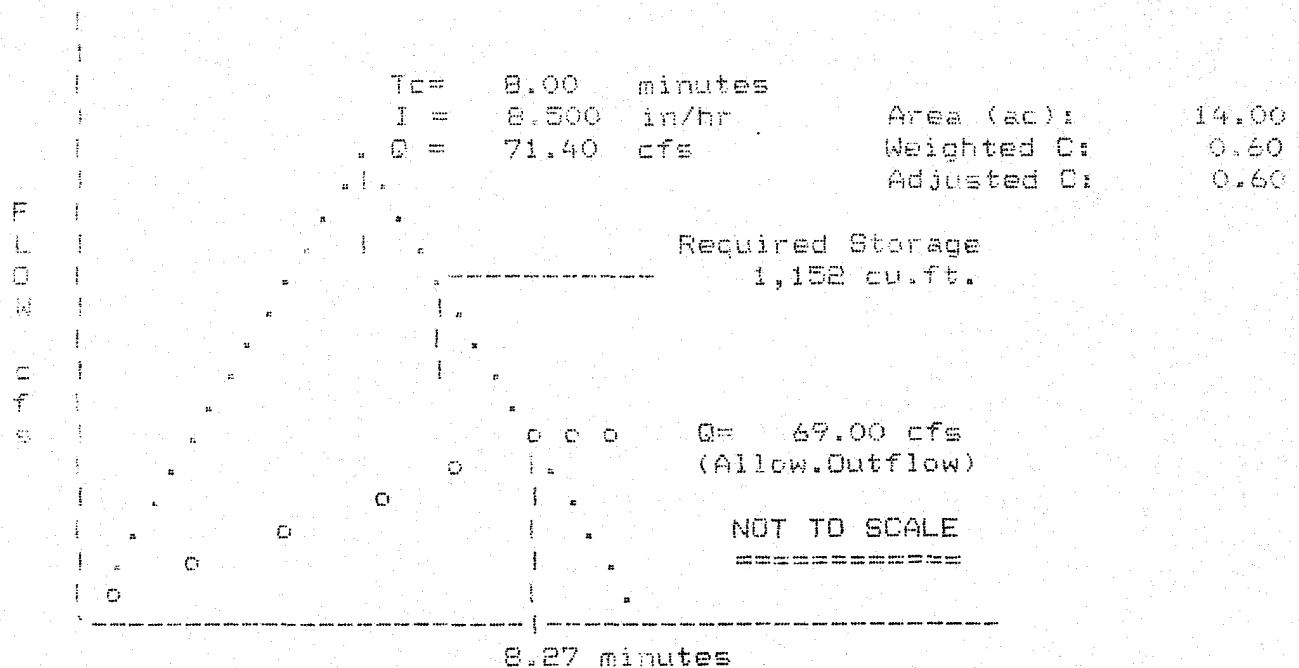


Quick TR-55 Ver.5.46 S/N:1315430271
Executed: 17:58:13 11-01-1994

MODIFIED RATIONAL METHOD
---- Graphical Summary for Maximum Required Storage ----

BMP AT CHAMBREL

```
*****
*                                     |                                     *
* RETURN FREQUENCY: 100 yr         | Allowable Outflow:    69.00 cfs   *
* 'C' Adjustment: 1.000           | Required Storage:   1,152 cu.ft. *
*                                     |                                     *
* STORM DURATION = Tc for Max.Storage                                     *
*-----*
* Peak Inflow:    71.40 cfs         | Inflow .HYD stored: 100DUTMF.HYD *
*****
```



Quick TR-55 Ver.5.46 S/N:1315430271
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BMP AT CHAMBREL

**** Modified Rational Hydrograph ****

Weighted C = 0.600 Area= 14.000 acres Tc = 8.00 minutes

Adjusted C = 0.600 Td= 8.00 min. I= 5.00 in/hr Qp= 42.00 cfs

RETURN FREQUENCY: 2 year storm Adj.factor = 1.00

Output file: 20UTMF .HYD

HYDROGRAPH FOR MAXIMUM STORAGE
 For the 2 Year Storm

Time !	Time increment = 1.00 Minutes						
Minutes!	Time on left represents time for first Q in each row.						
0.00	0.00	5.25	10.50	15.75	21.00	26.25	31.50
7.00	36.75	42.00	36.75	31.50	26.25	21.00	15.75
14.00	10.50	5.25	0.00				

Quick TR-55 Ver.5.46 S/N:1315430271
 Executed: 17:58:13 11-01-1994

EMP AT CHAMBREL

**** Modified Rational Hydrograph ****

Weighted C = 0.600 Area= 14.000 acres Tc = 8.00 minutes

Adjusted C = 0.600 Td= 10.00 min. I= 6.00 in/hr Qp= 50.40 cfs

RETURN FREQUENCY: 10 year storm Adj.factor = 1.00

Output file: 100UTMF .HYD

HYDROGRAPH FOR MAXIMUM STORAGE

For the 10 Year Storm

Time	Time increment = 1.00 Minutes						
Minutes	Time on left represents time for first Q in each row.						
0.00	0.00	6.30	12.60	18.90	25.20	31.50	37.80
7.00	44.10	50.40	50.40	50.40	44.10	37.80	31.50
14.00	25.20	18.90	12.60	6.30	0.00		

Quick TR-55 Ver.5.46 S/N:1315430271
Executed: 17:58:13 11-01-1994

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BMP AT CHAMBREL

**** Modified Rational Hydrograph ****

Weighted C = 0.600 Area= 14.000 acres Tc = 8.00 minutes

Adjusted C = 0.600 Td= 8.00 min. I= 8.50 in/hr Qp= 71.40 cfs

RETURN FREQUENCY: 100 year storm Adj.factor = 1.00

Output file: 100OUTMF.HYD

HYDROGRAPH FOR MAXIMUM STORAGE
For the 100 Year Storm

Time	Time increment = 1.00 Minutes						
Minutes	Time on left represents time for first Q in each row.						
0.00	0.00	8.93	17.85	26.78	35.70	44.63	53.55
7.00	62.48	71.40	62.48	53.55	44.63	35.70	26.78
14.00	17.85	8.93	0.00				

Quick TR-55 Ver.5.46 S/N:1315430271
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BMP AT CHAMBREL

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$$Q = \text{adj} * C * I * A$$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres
adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 2 years
'C' adjustment, k = 1
Adj. 'C' = Wtd. 'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	I (min)	Tc	Wtd. 'C'	II	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
-------------------	---------------	---------------	------------	----	-------------	----	-------------	------------	----------------	-----------------

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POND--2 Version: 5.17
S/N: 1295130250

CHAMBREL POND

CALCULATED 11-01-1994 18:15:36
DISK FILE: b:MMF1 .VOL

Planimeter scale: 1 inch = 40 ft.

Elevation (ft)	Planimeter (sq.in.)	Area (sq.ft)	$A1+A2+\text{sqr}(A1*A2)$ (sq.ft)	* Volume (cubic-ft)	Volume Sum (cubic-ft)
50.00	0.80	1,280	0	0	0
55.00	3.90	6,240	10,346	17,244	17,244
58.68	*I*	10,625	25,007	30,675	47,919
60.00	7.80	12,480	27,545	45,908	63,151
65.00	11.20	17,920	45,355	75,591	138,743

I ---> Interpolated area from closest two planimeter readings.

* Incremental volume computed by the Conic Method for Reservoir Volumes.

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Outlet Structure File: MMF1 .STR

POND-2 Version: 5.17

S/N: 1295130250

Date Executed:

Time Executed:

CHAMBREL BMP MONTICELLO MEDICAL FACILITY

***** COMPOSITE OUTFLOW SUMMARY *****

Elevation (ft)	Q (cfs)	Contributing Structures
58.68	0.0	1
59.18	6.9	1
59.68	15.1	1
60.18	18.5	1
60.68	21.4	1
61.18	23.9	1
61.68	26.2	1
62.18	28.3	1
62.68	30.3	1
63.00	31.4	1

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Outlet Structure File: MMF1 .STR

POND-2 Version: 5.17

S/N: 1295130250

Date Executed:

Time Executed:

CHAMBREL BMP MONTICELLO MEDICAL FACILITY

Outlet Structure File: b:MMF1 .STR
Planimeter Input File: b:MMF1 .VOL
Rating Table Output File: b:MMF1 .PND

Min. Elev.(ft) = 58.68 Max. Elev.(ft) = 63 Incr.(ft) = .5

Additional elevations (ft) to be included in table:

SYSTEM CONNECTIVITY

Structure	No.	Q Table	Q Table
STAND PIPE	1	->	1

Outflow rating table summary was stored in file:

b:MMF1 .PND

Outlet Structure File: MMF1 .STR

POND-2 Version: 5.17

S/N: 1295130250

Date Executed:

Time Executed:

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CHAMBREL BMP MONTICELLO MEDICAL FACILITY

>>>>> Structure No. 1 <<<<<<
(Input Data)

STAND PIPE

Stand Pipe with weir or orifice flow

E1 elev.(ft)? 58.68
E2 elev.(ft)? 63.001
Crest elev.(ft)? 58.68
Diameter (ft)? 2.0
Weir coefficient? 3.1
Orifice coefficient? .60
Start transition elev.(ft) @ ?
Transition height (ft)?

Outlet Structure File: MMF1 .STR

POND-2 Version: 5.17
Date Executed:

S/N: 1295130250
Time Executed:

CHAMBREL BMP MONTICELLO MEDICAL FACILITY

Outflow Rating Table for Structure #1
STAND PIPE Stand Pipe with weir or orifice flow

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation	Messages
58.68	0.0	Weir:	H =0.0
59.18	6.9	Weir:	H =.5
59.68	15.1	Orifice:	H =1.0
60.18	18.5	Orifice:	H =1.5
60.68	21.4	Orifice:	H =2.0
61.18	23.9	Orifice:	H =2.5
61.68	26.2	Orifice:	H =3.0
62.18	28.3	Orifice:	H =3.5
62.68	30.3	Orifice:	H =4.0
63.00	31.4	Orifice:	H =4.32

Weir $C_w = 3.1$ Weir length = 6.283186 ft
Orifice $C_o = .6$ Orifice area = 3.141593 sq.ft.
 $Q \text{ (cfs)} = (C_w * L * H^{1.5}) \text{ or } (C_o * A * \sqrt{2 * g * H})$
No transition used, transition height = 0.0
Weir equation = Orifice equation @ elev. = 59.45661 ft

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```
*****
*
*   CHAMBREL BMP   MONTICELLO MEDICAL FACILITY
*
*
*
*
*
*****
```

Inflow Hydrograph: b:2OUTMF .HYD
 Rating Table file: b:MMF1 .PND

----INITIAL CONDITIONS----
 Elevation = 58.68 ft
 Outflow = 0.00 cfs
 Storage = 47,919 cu-ft

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)
58.68	0.0	47,919
59.18	6.9	53,402
59.68	15.1	59,232
60.18	18.5	65,414
60.68	21.4	71,869
61.18	23.9	78,573
61.68	26.2	85,546
62.18	28.3	92,773
62.68	30.3	100,279
63.00	31.4	105,223

INTERMEDIATE ROUTING
 COMPUTATIONS

2S/t (cfs)	2S/t + 0 (cfs)
1597.0	1597.0
1779.7	1784.6
1974.0	1989.1
2180.0	2198.5
2395.1	2416.5
2618.7	2642.6
2851.0	2877.2
3092.0	3120.3
3342.0	3372.3
3506.7	3538.1

Time increment (t) = 1.0 min.

POND-2 Version: 5.17 S/N: 1295130250
EXECUTED: 11-01-1994 18:19:45

Page 2

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:20UTMF .HYD
Outflow Hydrograph: b:OUT .HYD

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INFLOW HYDROGRAPH

ROUTING COMPUTATIONS

TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - 0 (cfs)	2S/t + 0 (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
0.0	0.00	---	1597.0	1597.0	0.00	58.68
1.0	5.25	5.3	1601.8	1602.2	0.19	58.69
2.0	10.50	15.8	1616.1	1617.6	0.75	58.73
3.0	15.75	26.3	1639.0	1642.3	1.65	58.80
4.0	21.00	36.8	1670.0	1675.8	2.87	58.89
5.0	26.25	47.3	1708.5	1717.3	4.38	59.00
6.0	31.50	57.8	1754.0	1766.3	6.16	59.13
7.0	36.75	68.3	1805.5	1822.2	8.34	59.27
8.0	42.00	78.8	1862.6	1884.3	10.86	59.42
9.0	36.75	78.8	1915.0	1941.3	13.17	59.56
10.0	31.50	68.3	1953.5	1983.2	14.86	59.67
11.0	26.25	57.8	1980.3	2011.3	15.46	59.73
12.0	21.00	47.3	1996.1	2027.6	15.72	59.77
13.0	15.75	36.8	2001.3	2032.9	15.81	59.78
14.0	10.50	26.3	1996.1	2027.5	15.72	59.77
15.0	5.25	15.8	1980.9	2011.8	15.47	59.73
16.0	0.00	5.3	1956.2	1986.1	14.98	59.67

POND-2 Version: 5.17 S/N: 1295130250
EXECUTED: 11-01-1994 18:19:45

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***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:2OUTMF .HYD
Outflow Hydrograph: b:OUT .HYD

Starting Pond W.S. Elevation = 58.68 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	42.00 cfs
Peak Outflow	=	15.81 cfs
Peak Elevation	=	59.78 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	47,919 cu-ft
Peak Storage From Storm	=	12,606 cu-ft
Total Storage in Pond	=	60,525 cu-ft

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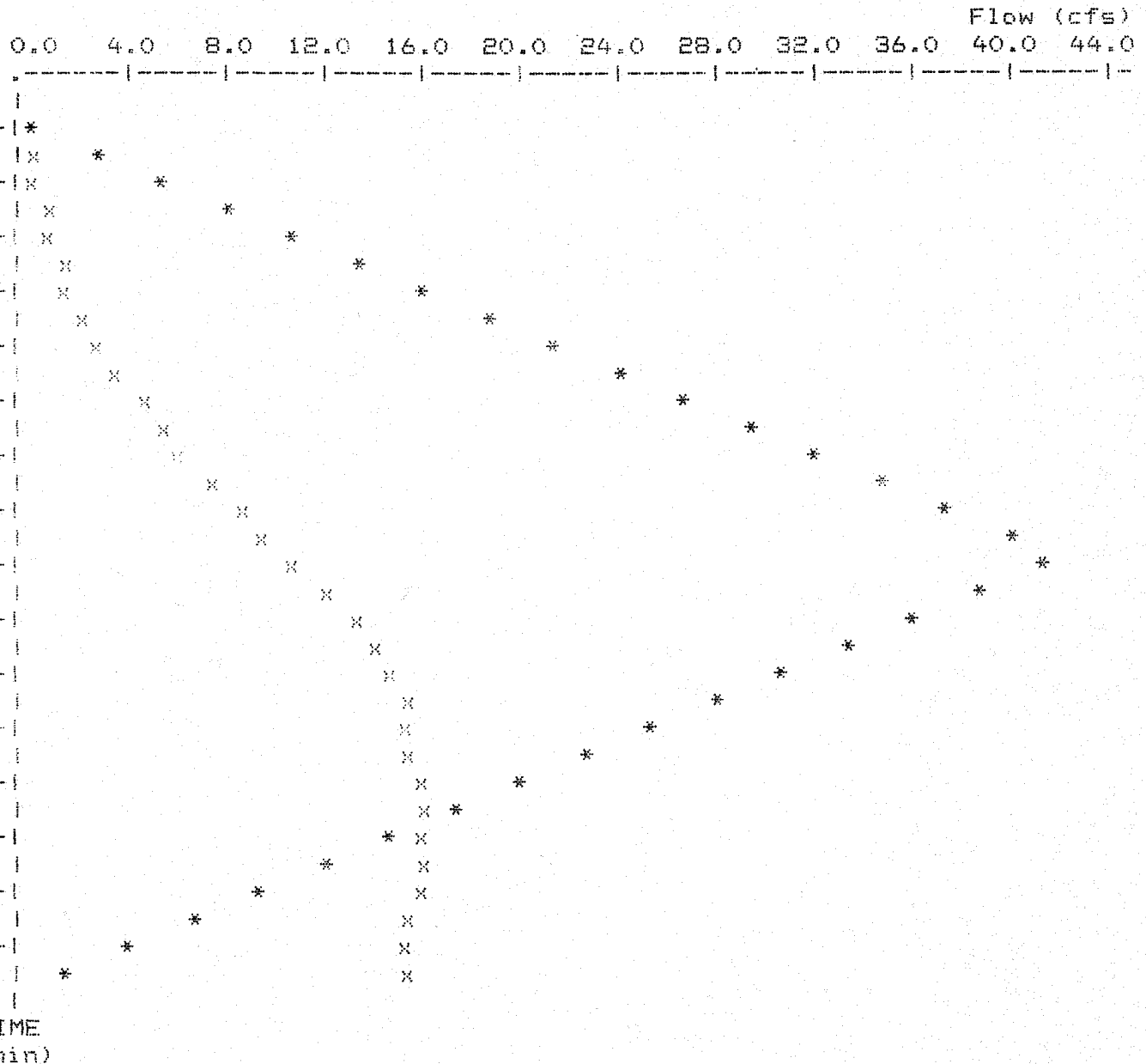
POND-2 Version: 5.17 S/N: 1295130250

Page 4

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:2OUTMF .HYD
Outflow Hydrograph: b:OUT .HYD

EXECUTED: 11-01-1994
18:19:45

Peak Inflow = 42.00 cfs
Peak Outflow = 15.81 cfs
Peak Elevation = 59.78 ft



x File: b:2OUTMF .HYD Qmax = 15.8 cfs
* File: b:OUT .HYD Qmax = 42.0 cfs

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```
*****
*
*   CHAMBREL BMP      MONTICELLO MEDICAL FACILITY
*
*
*
*
*
*****
```

Inflow Hydrograph: b:10OUTMF .HYD
 Rating Table file: b:MMF1 .PND

-----INITIAL CONDITIONS-----

Elevation = 58.68 ft
 Outflow = 0.00 cfs
 Storage = 47,919 cu-ft

GIVEN POND DATA			INTERMEDIATE ROUTING COMPUTATIONS	
ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)	2S/t (cfs)	2S/t + O (cfs)
58.68	0.0	47,919	1597.0	1597.0
59.18	6.9	53,402	1779.7	1786.6
59.68	15.1	59,232	1974.0	1989.1
60.18	18.5	65,414	2180.0	2198.5
60.68	21.4	71,269	2395.1	2416.5
61.18	23.9	78,578	2618.7	2642.6
61.68	26.2	85,546	2851.0	2877.2
62.18	28.3	92,778	3092.0	3120.3
62.68	30.3	100,279	3342.0	3372.3
63.00	31.4	105,223	3506.7	3538.1

Time increment (t) = 1.0 min.

POND-2 Version: 5.17 S/N: 1295130250
EXECUTED: 11-01-1994 13:22:01

Page 2

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:100UTMF .HYD
Outflow Hydrograph: b:DUT .HYD

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INFLOW HYDROGRAPH

ROUTING COMPUTATIONS

TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - 0 (cfs)	2S/t + 0 (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
0.0	0.00	-----	1597.0	1597.0	0.00	58.68
1.0	6.30	6.3	1602.8	1603.3	0.23	58.70
2.0	12.60	18.9	1619.9	1621.7	0.90	58.75
3.0	18.90	31.5	1647.4	1651.4	1.98	58.82
4.0	25.20	44.1	1684.7	1691.5	3.44	58.93
5.0	31.50	56.7	1730.9	1741.4	5.25	59.06
6.0	37.80	69.3	1785.3	1800.2	7.45	59.21
7.0	44.10	81.9	1846.8	1867.2	10.16	59.38
8.0	50.40	94.5	1915.0	1941.3	13.17	59.56
9.0	50.40	100.8	1984.7	2015.8	15.53	59.74
10.0	50.40	100.8	2052.2	2085.5	16.67	59.91
11.0	44.10	94.5	2111.4	2146.7	17.66	60.06
12.0	37.80	81.9	2156.5	2193.3	18.41	60.17
13.0	31.50	69.3	2188.0	2225.8	18.86	60.24
14.0	25.20	56.7	2206.5	2244.7	19.11	60.29
15.0	18.90	44.1	2212.2	2250.6	19.19	60.30
16.0	12.60	31.5	2205.5	2243.7	19.10	60.28
17.0	6.30	18.9	2186.7	2224.4	18.84	60.24
18.0	0.00	6.3	2156.2	2193.0	18.41	60.17

19

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:10OUTMF .HYD
Outflow Hydrograph: b:OUT .HYD

Starting Pond W.S. Elevation = 58.68 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	50.40 cfs
Peak Outflow	=	19.19 cfs
Peak Elevation	=	60.30 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	47,919 cu-ft
Peak Storage From Storm	=	19,037 cu-ft

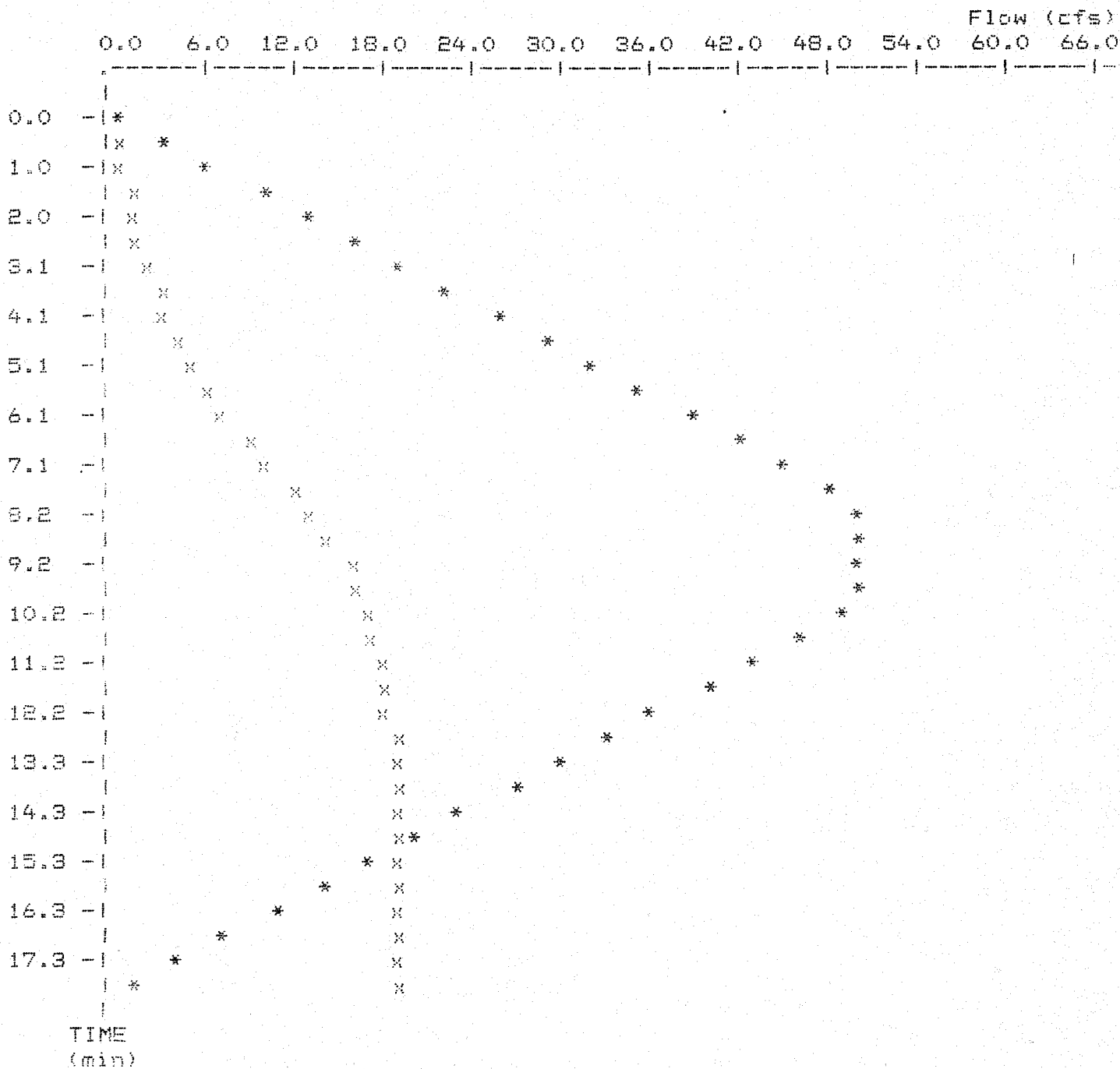
Total Storage in Pond	=	66,956 cu-ft

20

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:10OUTMF .HYD
Outflow Hydrograph: b:OUT .HYD

EXECUTED: 11-01-1994
18:22:01

Peak Inflow = 50.40 cfs
Peak Outflow = 19.19 cfs
Peak Elevation = 60.30 ft



x File: b:10OUTMF .HYD Qmax = 19.2 cfs
* File: b:OUT .HYD Qmax = 50.4 cfs

```
*****
*
*   CHAMBREL BMP   MONTICELLO MEDICAL FACILITY
*
*
*
*
*
*****
```

21

Inflow Hydrograph: b:100OUTMF.HYD
 Rating Table file: b:MMF1 .PND

-----INITIAL CONDITIONS-----

Elevation = 58.68 ft
 Outflow = 0.00 cfs
 Storage = 47,919 cu-ft

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)
58.68	0.0	47,919
59.18	6.9	53,402
59.68	15.1	59,232
60.18	18.5	65,414
60.68	21.4	71,869
61.18	23.9	78,578
61.68	26.2	85,546
62.18	28.3	92,778
62.68	30.3	100,279
63.00	31.4	105,223

INTERMEDIATE ROUTING
 COMPUTATIONS

ES/t (cfs)	ES/t + O (cfs)
1597.0	1597.0
1779.7	1786.6
1974.0	1989.1
2150.0	2192.5
2395.1	2416.5
2618.7	2642.6
2851.0	2877.2
3092.0	3120.3
3342.0	3372.3
3506.7	3528.1

Time increment (t) = 1.0 min.

POND-2 Version: 5.17 S/N: 1295130250
EXECUTED: 11-01-1994 18:23:58

Page 2

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:1000UTMF.HYD
Outflow Hydrograph: b:OUT .HYD

22

INFLOW HYDROGRAPH

ROUTING COMPUTATIONS

TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - 0 (cfs)	2S/t + 0 (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
0.0	0.00	-----	1597.0	1597.0	0.00	58.68
1.0	8.93	8.9	1605.2	1605.9	0.32	58.70
2.0	17.85	26.8	1629.5	1632.0	1.28	58.77
3.0	26.78	44.6	1668.5	1674.1	2.81	58.88
4.0	35.70	62.5	1721.2	1731.0	4.88	59.03
5.0	44.63	80.3	1786.5	1801.6	7.51	59.22
6.0	53.55	98.2	1863.0	1884.7	10.87	59.42
7.0	62.48	116.0	1949.6	1979.0	14.69	59.66
8.0	71.40	133.9	2050.2	2083.5	16.63	59.91
9.0	62.48	133.9	2147.6	2184.1	18.27	60.15
10.0	53.55	116.0	2224.9	2263.6	19.37	60.33
11.0	44.63	98.2	2282.7	2323.1	20.16	60.47
12.0	35.70	80.3	2321.7	2363.1	20.69	60.56
13.0	26.78	62.5	2342.2	2384.2	20.97	60.61
14.0	17.85	44.6	2344.9	2386.9	21.01	60.61
15.0	8.93	26.8	2330.0	2371.6	20.80	60.53
16.0	0.00	8.9	2293.2	2339.0	20.37	60.50

POND-2 Version: 5.17 S/N: 1295130250
EXECUTED: 11-01-1994 18:23:58

Page 3

23

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:100OUTMF.HYD
Outflow Hydrograph: b:OUT .HYD

Starting Pond W.S. Elevation = 58.68 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	71.40 cfs
Peak Outflow	=	21.01 cfs
Peak Elevation	=	60.61 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	47,919 cu-ft
Peak Storage From Storm	=	23,072 cu-ft

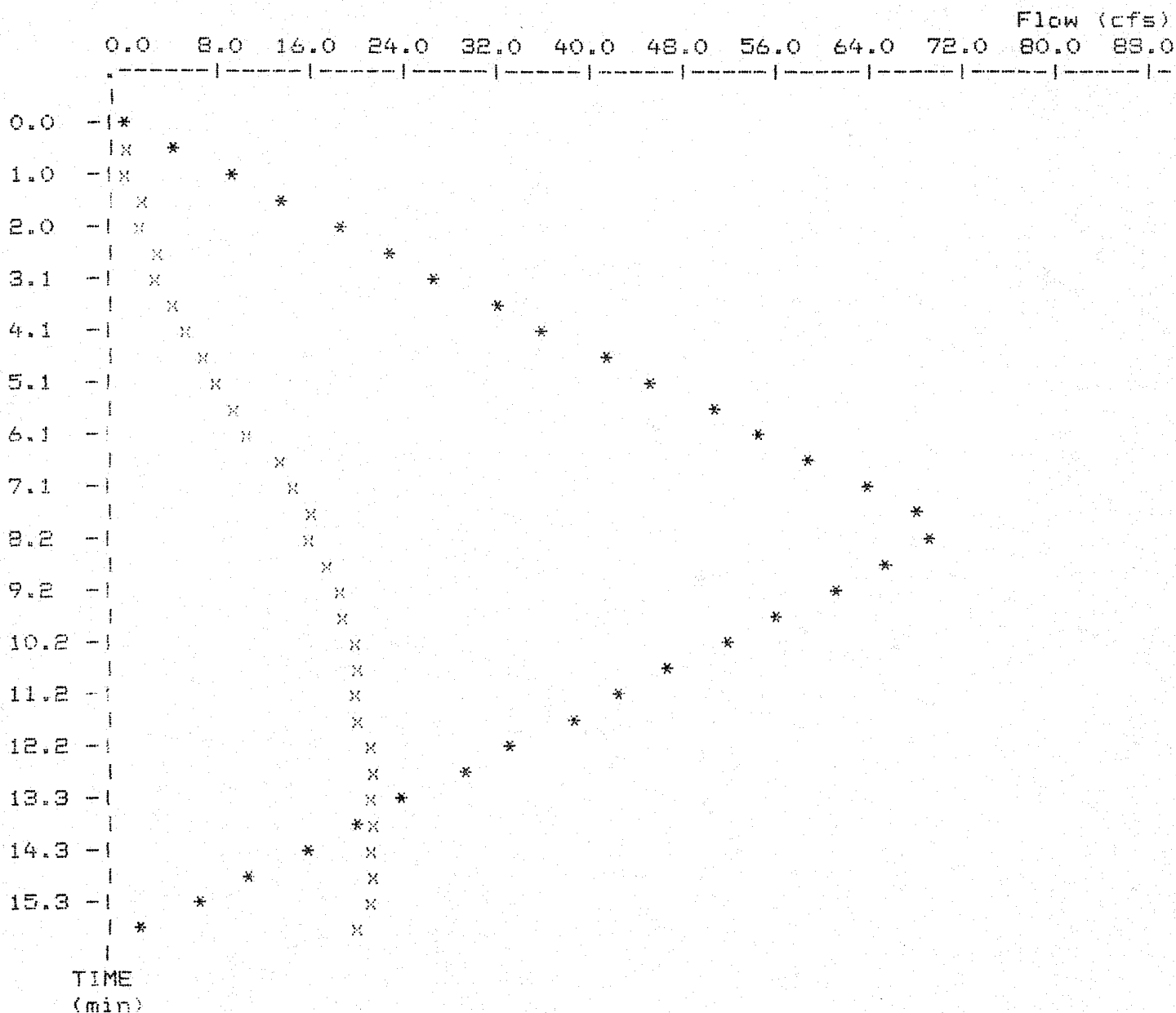
Total Storage in Pond	=	70,990 cu-ft

Pond File: b:MMF1 .PND
Inflow Hydrograph: b:100OUTMF.HYD
Outflow Hydrograph: b:OUT .HYD

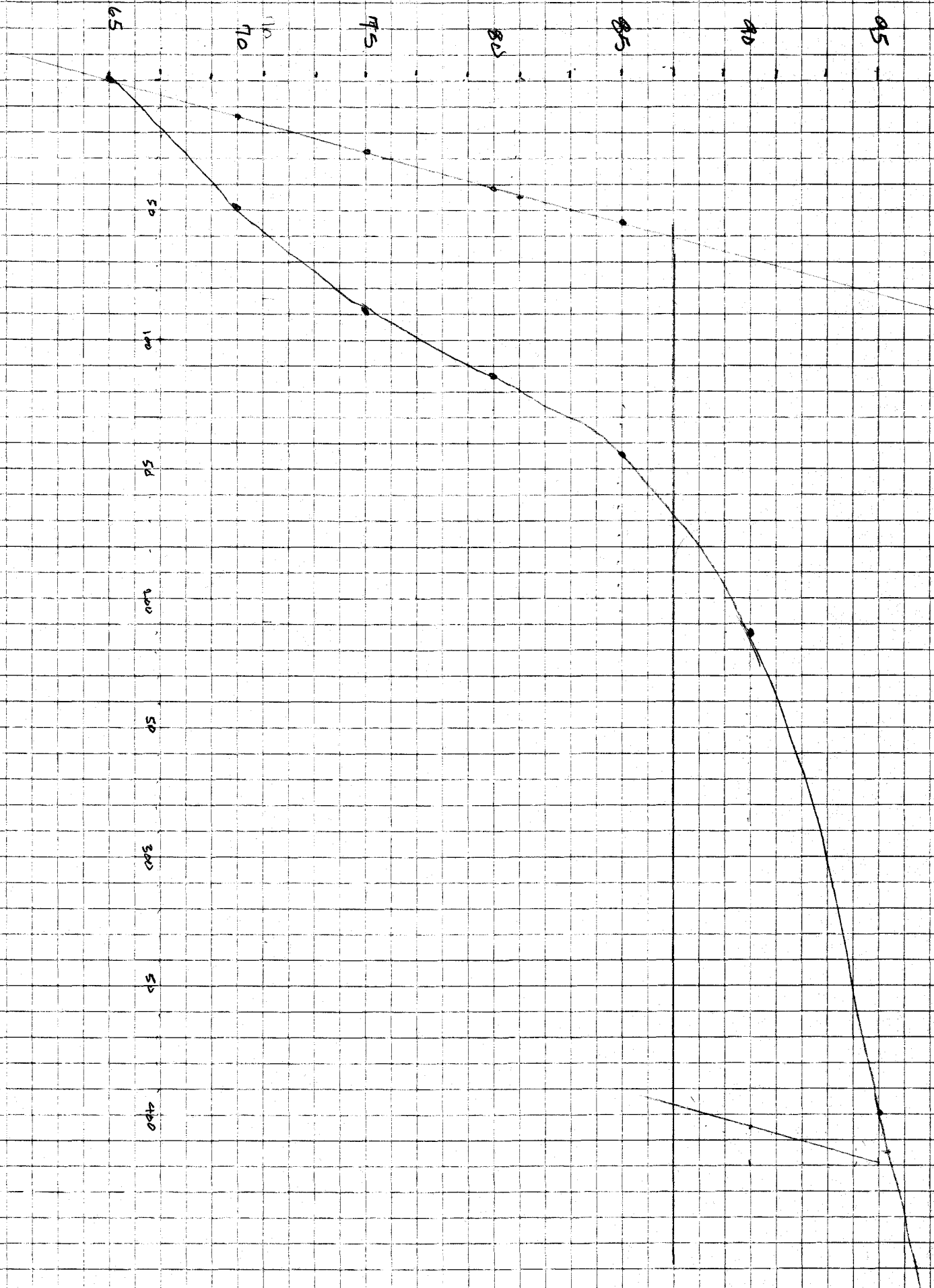
24

EXECUTED: 11-01-1994
18:23:58

Peak Inflow = 71.40 cfs
Peak Outflow = 21.01 cfs
Peak Elevation = 60.61 ft



x File: b:100OUTMF.HYD Qmax = 21.0 cfs
* File: b:OUT .HYD Qmax = 71.4 cfs



**MONTICELLO AVENUE
MEDICAL AND COMPREHENSIVE CANCER CARE FACILITY
CHESAPEAKE BAY NARRATIVE**

Due to site topography and development levels necessary to meet financial feasibility, it became necessary to consider off-site areas to meet the Chesapeake Bay Preservation Ordinance requirement. The contiguous Chambrel Retirement Community presented an opportunity to provide a pollutant removal that not only met but exceeded the removal levels required by the proposed project.

For the proposed Medical Facility, Sheet A of the accompanying calculations shows that the existing pollutant runoff is 1.8 lb./year, based upon the 16% default value. Upon development, Sheet A shows a pollutant runoff of 4.3 lb./year. The removal required is the difference between these two numbers, 2.5 lb./year. Sheet B of the calculations shows that the pollutant removal provided by the proposed basin (a BMP with a 50% efficiency rating), intercepting the flow from 14 acres of the Chambrel site, is 7.9 lb./year.

Until the proposed nursing care facility is built at Chambrel, this level of excess removal will continue. With future construction of the proposed nursing care facility at Chambrel, the required pollutant removal is 5.5 lb./year, versus 7.9 lb./year actually provided (see Page B of attached calculations). These figures are based on the Virginia Chesapeake Bay Default calculation procedure outlined in Appendix C of the Chesapeake Bay Local Assistance Manual *Vol 10 AB of 2003*

Pages 1-7 of the calculations show the hydrographs generated by the modified rational method for areas draining to the proposed detention basin. The hydrographs are based upon a 0.6 runoff coefficient and a time of concentration of 8 minutes. The calculated runoff peak flows, currently existing, (Q) for the 2, 10 and 100 year storms are as follows:

2	year - 39.5 c.f.s. (Page 1)
10	year - 50.4 c.f.s. (Page 2)
100	year - 69.0 c.f.s. (Page 3)

Page 8 of the calculations show the characteristics of the detention basin. At the elevation of the standpipe rim, 58.68, a pond volume of 47,919 cubic feet is shown. This compares with a required 4 V, volume of 43,560 cubic feet shown on Sheet C.

*Camps for CC003; SP-127-95
As submitted under
Expansion Plans SP-46-04.*

The basin's peak outflows, elevations and existing peak flows for the 14 acres draining to it are shown as follows:

<u>STORM</u>	<u>EXISTING "Q"</u>	<u>BASIN "Q"</u>	<u>PEAK EL.</u>
2	39.5	15.8	59.78 (PG. 15)
10	50.4	19.2	60.30 (PG. 19)
100	69.0	21.0	60.61 (PG. 23)

The proposed impoundment structure's crest is elevation 65. This is nearly 4.5 feet higher than the 100 year storm water surface elevation, therefore, an emergency spillway is not necessary.



$$V_p = 4 \cdot V_r$$

V_p = VOLUME OF PERMANENT POOL

$$V_r = 0.5 \cdot R_v \cdot A \cdot 3630$$

$$R_v = 0.05 + 0.009 \cdot I$$

I = % IMP. OF WATERSHED ON SITE

$$V_r = 0.5 \cdot (0.05 + 0.009 \cdot \frac{I}{A}) \cdot A \cdot 3630$$

$$\therefore V_r =$$

$$V_p = 4 \cdot V_r =$$

FROM 1994 GUIDANCE
CALCULATIONS.

ORIGINAL
FROM COMPUTATIONS:

40% TOWNHOUSES @ 40% IMP.

60% APARTMENTS @ 90% IMP.

COMPOSITE IMP.

2.2 AC (IMP. FROM TOWNHOUSES)
4.6 AC (" " APARTMENTS)

$$\frac{6.8 \text{ AC TOTAL IMP.}}{14 \text{ AC SITE AREA}} = 48.7\% \text{ TOTAL IMP. AREA}$$

$$\therefore V_r = 0.5 (0.05 + 0.009 \cdot 48.7) \cdot 14 \cdot 3630 = 12,407$$

$$4 \cdot V_r = 49,630$$

← THIS IS PERMANENT POOL VOLUME
OCCURRING @ +/- ELEV. 99.00

ROUTINGS GO FROM HERE!



Langley and McDonald
A PROFESSIONAL CORPORATION
ENGINEERS • PLANNERS • SURVEYORS
VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject _____

Computed By _____ Checked By _____

Project No. _____

Client _____

Date 5/23/94 Sheet No. C

VOLUME REQMTS. FOR 4 V_r DETEN. BASIN
ASSUMING 14 AC. DRAINAGE AREA @ 48.7% IMPERV.

$$Vol = \frac{(R_m)(R_v)}{12} A$$

$$R_v = 0.05 + 0.009(48.7) = 0.49$$

$$R_m = 0.45$$

$$Vol = \frac{(0.45)(0.49)}{12} (14) = 0.26 \text{ AC-FT.} \times 4 = 1.0 \text{ AC-FT}$$

$$1.0 \text{ AC-FT} = 43560 \text{ C.F.}$$

6/27/05	WETLAND DELINEATION DATA FORM
8/5/05	REQUEST FOR USACE WETLAND CONFIRMATION
9/22/05	USACE WETLAND CONFIRMATION
1/13/06	USACE ADDDDITIONAL WETLAND IMPACT
5/3/06	INDIVIDUAL PERMIT APPLICATION
6/22/06	USACE QUESTIONS PROJECT NEED
7/28/06	ADDITIONAL INFORMATION TO USACE
7/31/06	ADDITIONAL INFORMATION TO DEQ
11/30/06	USACE PERMIT
1/31/07	CHES BAY BOARD EXCEPTION
7/30/07	EMAIL FROM TIMMONS



CANCER TREATMENT CENTER

1. MEDICAL SITE -

4 AC

2. PROPOSED NURSING FACILITY -

5 AC

3. 14 AC WATERSHED

9 AC Developed

5 AC Undeveloped (to be nursing facility)

BMPs/NOS	SITE	NOS	TOTAL
			DA Controlled
a) 6 Pt -	Med Site	1.6 ac	6.7
	Nursing Site	2.0 ac	8.4
			15.1
b) 8 Pt	Med Site	0.8	5
	Nursing Site	1.0	6.25
			11.25
c) 9 Pt	Med Site	0.4	4.45
	Nursing Site	0.5	5.55
			10.00

Need to control up to 14 ac of watershed



OXFORD

July 19, 1994

Vincent A. Campana, Jr.
Director, Commercial Sales & Leasing
Drucker & Falk
9286 Warwick Blvd.
Newport News, VA 23607

7200 Wisconsin Avenue, 11th Floor
Bethesda, Maryland 20814-4815
Telephone: (301) 654-3100
Facsimile: (301) 654-8151

Post-It Fax Note 7671		Date 7/19	# of pages 1
To: Norm Mason		From: V. Campana	
Cc: Dept. [unclear] + McDonald		Cc: Drucker & Falk	
Phone #		Phone # 873-1401	
Fax # 229-0049		Fax # 873-0727	

Dear Mr. Campana:

This letter will confirm for you that Williamsburg Oxford Limited Partnership, D/B/A Chambrel at Williamsburg ("Chambrel") strongly supports your construction of a Storm Water Management Facility ("Facility") to be constructed on the Chambrel property for the benefit of Chambrel and the Ellis Development Project ("Project"). We recognize this Facility would be constructed at a sufficient size to incorporate the requirements of both the Project and a yet to be constructed Nursing Home consisting of approximately 150 beds at the back of the Chambrel property. Also, we understand any costs associated with this Facility incurred by Chambrel will be reimbursed by the Project.

Please proceed with your current plans including the drafting of the required easements to be granted related to the Project and forward the documents to my attention upon completion for review and comment. The additional items previously discussed including location of Chambrel signage and the aesthetic appeal of the Facility should be approved by the Executive Director of the Chambrel prior to forwarding requests to my attention.

Nothing contained in this letter is intended to grant any rights to the Project by Chambrel or to waive any rights of Chambrel to approve the final plans for the Facility or the related documents granting an easement for the Project.

I hope this letter will be helpful, and look forward to the successful completion of the Facility. Please contact me if you have any questions.

Sincerely,
WILLIAMSBURG - OXFORD LIMITED PARTNERSHIP,
By: OXFORD INVESTMENT CORPORATION, GENERAL PARTNER.


Douglas A. Hewing
Assistant Vice President

File
94-25

Real Estate Investment Services

7. Reports

8. Correspondence

Wayland Bass

From: Marion Paine
Sent: Thursday, July 26, 2007 4:33 PM
To: 'smoniak@brookdaleliving.com'; 'amarston@aesva.com'; Wayland Bass
Cc: 'mburin@brookdaleliving.com'; Leo Rogers; Rick Hanson
Subject: Regional Pond

Thank you for meeting to talk further about relocation of the pond. I apologize if you thought we would have Timmons data for you today and hope Timmons will provide that quickly for you.

I reviewed my records and found that Peter Saunders gave us permission to conduct soil borings on the undeveloped portion of the Chambrel property to investigate the possible location for the regional pond on June 8, 2005.

It is certainly unfortunate that the county and Chambrel have been working on similar projects without the benefit of cooperating and sharing information. I hope now that discussions have resumed we can prevent further duplication of efforts or working at cross-purposes.

Wayland or I will be in touch next week after he has discussed modifying the design with our county staff.

*Marion O. Paine
Community Development Planner
James City County Office of Housing and Community Development
5320 Palmer Lane, Suite 1A
Williamsburg, VA 23188-2674
757-259-5347
757-220-0640 (Fax)
mpaine@james-city.va.us*

Wayland Bass

From: Ben Virts [Ben.Virts@timmons.com]
Sent: Monday, July 30, 2007 3:35 PM
To: Mike Woolson; Wayland Bass
Cc: Michelle Virts; Chris Dodson; Andrew Gould
Subject: Ironbound BMP: Relocation Permitting

Mike and Wayland:

As a follow up to our conversation I am providing a summary of our comments from this morning. The focus of our call was the feasibility from a regulatory permitting standpoint of relocating the Ironbound Regional BMP to a location lower in the watershed to capture a greater drainage area than is currently proposed. Our concerns included the following:

Relocating the BMP at this time provides the following concerns:

- During a regulatory pre-application meeting held onsite prior to permitting, the Corps of Engineers (COE) expressed their desire to avoid stream impacts below where the BMP is currently proposed for the following reasons:
 - The current location of the BMP impacts a degraded stream channel and addresses an area of severe bank erosion, sediment contribution to the stream, head cutting, and residential solid waste that has been dumped in the stream headwaters in past years. This area is serving as a point source for refuse traveling downstream.
 - The impoundment of the BMP is located at the junction of two intermittent stream channels and impacts a short distance of perennial stream where these two streams join. The intermittent streams that will be impacted by the BMP are degraded. However, the perennial stream channel below the proposed BMP location is in relatively good condition and is relatively stable. The downstream portions of the channel below the proposed BMP location are a higher quality resource than the proposed impact streams.
- The COE requested that we design to minimize impacts to the perennial channel and we have obtained an Individual Permit for the project with this in mind (issued Nov. 30, 2006). Requesting a permit modification that presents a redesign including more perennial channel impacts would be a difficult sell since they are aware that the project can be undertaken with less impact under the currently permitted design.
- The James City County Wetlands Board has approved the current project and the RPA impacts required. Similar to above, gaining approval of a design with greater RPA impacts may be difficult.
- The DEQ permit has not been issued yet, but the process is nearing completion. In line with the guidance of the COE, the DEQ has focused their attention on minimizing the impacts to the stable perennial channel downstream of the current BMP location. Presenting greater perennial impacts may be difficult.
- Presenting a new design and reentering the permitting process with each of the agencies noted above will delay construction for the required agency processing times.
- The forebay associated with the Bay Aging Housing Project is located immediately upstream of the currently proposed BMP and was proposed as a maintenance feature for the BMP during permitting. This forebay has been constructed and is currently in place. Relocation the BMP may require an additional forebay to be constructed and/or require additional maintenance features for the BMP if a forebay will not be in place similar to the currently proposed location.
- An offsite stream restoration site has been identified for the proposed BMP impacts. The site is anticipated to provide sufficient credit units for the permitted BMP impacts, but not a significant excess. If a redesign requires compensatory mitigation above that proposed by the current design, an additional restoration site or the purchase of mitigation bank credits may be required for permit approvals.

Please let us know if we can provide any additional information. Thank You.

Ben Virts, WPIT
Environmental Project Manager
TIMMONS GROUP

Your Vision Achieved Through Ours
 Office: 804-200-6442
 Mobile: 804-928-8424
 Fax: 804-560-1648

9/18/2007

CC003_WILLIAMSBURG_CANCER_CENTER_CHAMBREL - 063

KAUFMAN & CANOLES

— | A Professional Corporation | —
Attorneys and Counselors at Law

Alvin P. Anderson
757 / 259-3815
apanderson@kaufcan.com

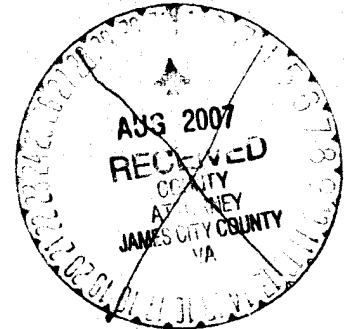
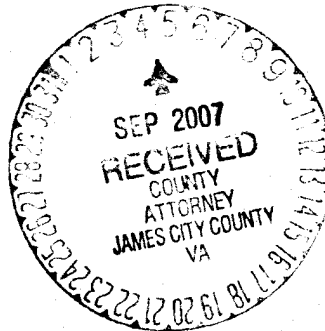
757 / 259-3800
fax: 757 / 259-3838

Mailing Address:
P.O. Box 6000
Williamsburg, VA 23188

4801 Courthouse Street
Suite 300
Williamsburg, VA 23188

August 31, 2007

Leo P. Rogers, Esq.
County Attorney
P.O. Box 8784
Williamsburg, VA 23187-8784



**RE: CMCP-Williamsburg, LLC; BLC-Williamsburg, LLC; and
Brookdale Senior Living t/a Chambrel at Williamsburg v.
James City County
Our File No. 0127784**

Dear Leo:

On August 24, 2007, I received 27 pages of copied material from you pursuant to the Freedom of Information Request previously provided to the County on August 8, 2007. Upon receipt of these materials I immediately shared the same with Jim Money, Senior Vice-President/Marketing & Development with Brookdale Senior Living; with G. Archer Marston, Vice-President with AES Consulting Engineers; and, of course, with the environmental regulatory attorneys within our firm. After that review, all of us have come to various conclusions one of which is that there might well be additional materials which were overlooked in the assembly by the County of the response to the Freedom of Information Act request. I would respectfully request that you make an additional inquiry to ensure that the 27 pages received constitutes a full, fair and complete response.

Notwithstanding the above, and consistent with my commitment to you upon receipt of the materials on August 24, 2007, I have included herewith a copy of a letter from Mr. Marston regarding the additional information requested from AES, the preliminary scope of work with which AES has been charged, and the possible schedule within which its work might be completed.

This letter is written in the interest of promoting a compromise/settlement and, accordingly, no portion of this letter or the attached may later be used in any proceeding for any purpose without the express written permission of my client obtained through me.

Disclosure Required by Internal Revenue Service Circular 230: This communication is not a tax opinion. To the extent it contains tax advice, it is not intended or written by the practitioner to be used, and it cannot be used by the taxpayer, for the purpose of avoiding tax penalties that may be imposed on the taxpayer by the Internal Revenue Service.

August 31, 2007

Page 2

After the additional information is provided, I would welcome a meeting between the representatives of the Timmons Group and AES to address the engineering issues involved.

Very truly yours,

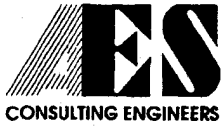
A handwritten signature in black ink, appearing to read 'Alvin'.

Alvin P. Anderson

APA/df

WMB\6164543\1

cc: James Money
R. Barrow Blackwell, Esq.
Marina Phillips, Esq.



5248 Olde Towne Road, Suite 1, Williamsburg, VA 23188
614 Moorefield Park Drive, Richmond, VA 23236
6632 Main Street, Gloucester, VA 23061

(757) 253-0040
(804) 330-8040
(804) 693-4450
www.aesva.com

August 30, 2007

Mr. Alvin P. Anderson, Esq.
Kaufman and Canoles
P.O. Box 6000
Williamsburg, Virginia 23188

**RE: Brookdale/Chambrel
AES Project No. 7645-01**

Dear Alvin,

AES is currently in the process of conducting topographic and wetland surveys of the portion of the Chambrel site designated for the expansion of the facility. The wetland field work necessary to allow AES to complete the topographic and location surveys will be complete by Tuesday, September 4th. We anticipate having a base map completed and a preliminary design of a stormwater management facility which could potentially be shared by the County and Chambrel by the end of September.

In order to accomplish this preliminary design we will need a copy of the pond calculations as well as a current set of plans for the proposed County pond (the previously provided set was a 50% submittal). We request that you obtain these items, on behalf of our client, for our use.

Please feel free to contact me if you have any questions or require additional information.

Sincerely,

AES Consulting Engineers

A handwritten signature in dark ink, appearing to read 'G. Archer Marston, III', is written over a horizontal line.

G. Archer Marston, III, P.E.
Vice President

S:\Jobs\7645\01-ChambrelExpansion\Admin\Correspondence\Letters\764501L01-gam.doc

9. Inspection Records

10. Misc. (ex. photos)

Date Record Created:

WS_BMPNO:

CC003

Print
Record

Created By:

WATERSHED CC
BMP ID NO 003
PLAN NO SP-127-95
TAX PARCEL (39-1)(1-131)
PIN NO 391010000131
CONSTRUCTION DATE 2/15/1996
PROJECT NAME Chambrel Cancer Treatment Center
FACILITY LOCATION 3800 Treyburn Drive
CITY-STATE Williamsburg, VA
CURRENT OWNER Williamsburg Oxford Ltd. Partnership
OWNER ADDRESS 7537 East McDonald Drive
OWNER ADDRESS 2
CITY-STATE-ZIP CODE Scottsdale, AZ 85250
OWNER PHONE
MAINT AGREEMENT Yes
EMERG ACTION PLAN No

PRINTED ON
Wednesday, March 10, 201
2:28:36 PM

Get Last BMP No

Return to Menu

MAINTENANCE PLAN

SITE AREA acre

No

9

LAND USE

Insitutional

old BMP TYP

Wet Pond

JCC BMP CODE

A2 Wet Pond

POINT VALUE

9

SVC DRAIN AREA acres

14

SERVICE AREA DESCR

Cancer Treat & Nursing Center

IMPERV AREA acres

6.80

RECV STREAM

Lake Matoca

EXT DET-WQ-CTRL

Yes

WTR QUAL VOL acre-ft

1.1

CHAN PROT CTRL

No

CHAN PROT VOL acre-ft

0

SW/FLOOD CONTROL

Yes

GEOTECH REPORT

No

CTRL STRUC DESC

RCP Standpi

CTRL STRUC SIZE inches

24

OTLT BARRL DESC

RCP

OTLT BARRL SIZE Inch

18

EMERG SPILLWAY

No

DESIGN HW ELEV

65

PERM POOL ELEV

49.9

2-YR OUTFLOW cfs

15.81

10-YR OUTFLOW cfs

19.20

REC DRAWING

Yes

CONSTR CERTIF

No

LAST INSP DATE 2/1/2001

Inspected by:

INTERNAL RATING

4

MISC/COMMENTS

West of site buildings. Offsite BMP.

Additional Comments:

WATERSHED	CC	MAINTENANCE PLAN	No	CTRL STRUC DESC	RCP Standpi
BMP ID NO	003	SITE AREA acre	9	CTRL STRUC SIZE inches	24
PLAN NO	54127-95	LAND USE	Insitutional	OTLT BARRL DESC	RCP
TAX PARCEL	(39-1)(1-131)	old BMP TYP	Wet Pond	OTLT BARRL SIZE inch	18
PIN NO	391010000131	JCC BMP CODE			
CONSTRUCTION DATE	1/01/98	POINT VALUE	9	EMERG SPILLWAY	No
PROJECT NAME	Chambrel Cancer Treatment Center			DESIGN HW ELEV	65
FACILITY LOCATION	3800 Treyburn Drive			PERM POOL ELE	49.9
CITY-STATE	Williamsburg, VA	SVC DRAIN AREA acres	14	2-YR OUTFLOW cfs	15.80
CURRENT OWNER	Williamsburg Oxford Ltd. Partnership			10-YR OUTFLOW cfs	19.20
OWNER ADDRESS	7537 East McDonald Drive			REC DRAWING	Yes
OWNER ADDRESS 2		SERVICE AREA DESCR	Cancer Treat & Nursing Center		
CITY-STATE-ZIP CODE	Scottsdale, AZ 85250	IMPERV AREA acres	6.80	CONSTR CERTI	No
OWNER PHONE		RECV STREAM	Lake Matoca		
MAINT AGREEMENT	Yes	EXT DET-WQ-CTRL	Yes	LAST INSP DATE	2/1/2001
EMERG ACTION PLAN	No	WTR QUAL VOL acre-ft	1.1	INTERNAL RATING	4
		CHAN PROT CTRL	No	MISC/COMMENTS	
		CHAN PROT VOL acre-ft	0	West of site buildings.	
		SW/FLOOD CONTROL	Yes		
		GEOTECH REPORT	No		

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Environmental
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Attn: Scott Thomas, PE