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- STORMWATER 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: **PC005**

DATE VERIFIED: **June 5, 2012**

QUALITY ASSURANCE TECHNICIAN: **Leah Hardenbergh**

Leah Hardenbergh

LOCATION: WILLIAMSBURG, VIRGINIA

Stormwater Division

MEMORANDUM

DATE: March 13, 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: PC005

PIN: 4521100001L

Subdivision, Tract, Business or Owner Name (if known): Berkeley's Green

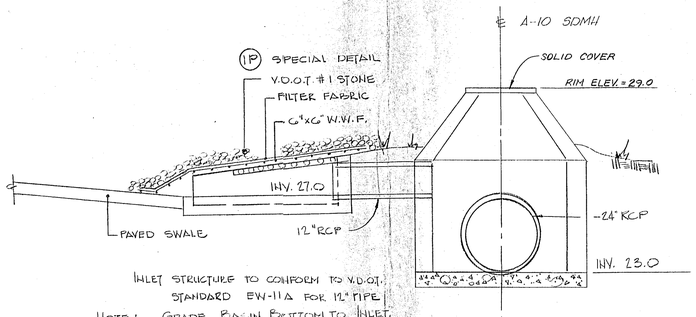
Property Description: Common Area Berkeley's Green Section(s) 1 &2

Site Address:

(For internal use only) **Box** 1 **Drawer:** 1

Agreements: (in file as of scan date) **N** **Book or Doc#:** **Page:**

Comments



INLET STRUCTURE TO CONFORM TO V.D.O.T. STANDARD EW-11A FOR 12" PIPE

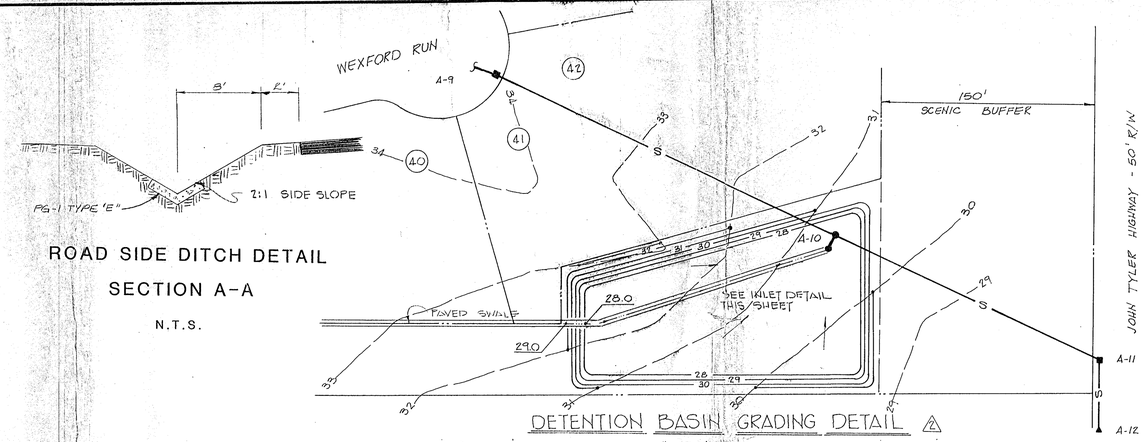
NOTE: GRADE BASIN BOTTOM TO INLET. PROVIDE COVER OVER PIPE AND AGAINST INLET STRUCTURE.

INLET STRUCTURE DETAIL (2)

N.T.S.

DRAINAGE TABLE

STRUC. TYPE	LOCATION	PIPE/DITCH	LENGTH	SLOPE %	INVERT UP	INVERT DOWN	RIM ELEV.	COMMENT
A-1 DI-3C	10+69						32.89	H=3.87, L=12'
		15" RCP	30'	0.35	28.97	28.87		
A-2 DI-3C	10+69						32.89	H=4.53, L=6'
		18" RCP	70'	0.30	28.67	28.46		
A-3 SDMH	15+10 LT.23.0'						33.20	H=4.84
		18" RCP	120'	0.30	28.36	28.00		R=380' PULL JTS. 1/2" (FOR 8' JTS.)
A-4 DI-3C	16+53						32.28	H=4.56, L=6'
		21" RCP	190'	0.22	27.72	27.30		R=380' PULL JTS. 5/8" (FOR 8' JTS.)
A-5 DI-3C	18+40						33.16	H=5.80, L=8'
		21" RCP	170'	0.40	27.20	26.55		
A-7 SDMH	20+10 LT.23.0'						33.40	H=7.
A-6 DI-3B	10+90						34.30	H=6.8, L=8'
		12" RCP	60'	0.70	27.50	27.08		
A-7								
		24" RCP	160'	0.28	26.30	25.85		
A-8 DI-3B	21+58						33.11	H=7.36, L=8'
		24" RCP	120'	0.45	25.75	25.21		
A-9 DI-3C	22+58						32.50	H=7.10, L=8'
		24" RCP	230'	0.50	25.10	23.95		
A-10 SDMH							29.00	SEE INLET STRUCT. DETAIL
		24" RCP	240'	0.40	23.9	22.0		
A-11 DI							22.20	F.C.C. GRATE A, TYPE I
		24" RCP	60'	0.40	22.9	22.7		
A-12 FES								
B-5 FES								FES INV. 27.0
		18" RCP	40'	2.50	27.0	26.0		
B-8 MH-1	10+00 RT.32'						29.10	
B-6 DI-3B	10+40						28.60	H=3.74' MODIFIED, L=12'
		15" RCP	64'	1.0	25.20	24.56		
B-7 DI-3B	10+40						28.60	H=4.29, L=10'
		18" RCP	40'	1.0	24.31	23.91		
B-8								
		24" STL.	40'	1.0	23.41	23.00		
B-9 FES								FES INV. 23.00



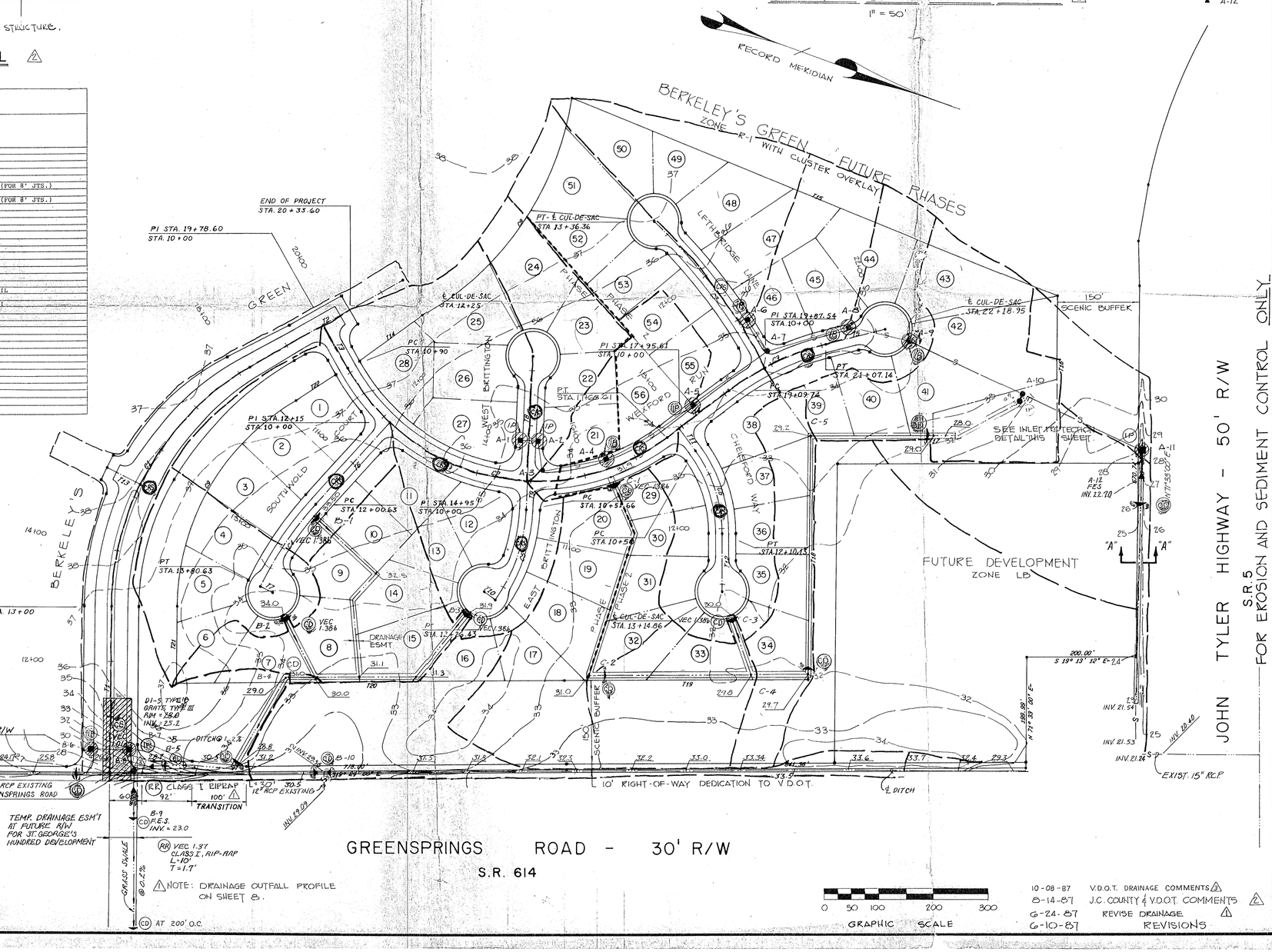
ROAD SIDE DITCH DETAIL

SECTION A-A

N.T.S.

DETENTION BASIN GRADING DETAIL (2)

1" = 50'



GREENSPRINGS ROAD - 30' R/W

S.R. 614

(1) NOTE: DRAINAGE OUTFALL PROFILE ON SHEET 8.

0 50 100 200 300

GRAPHIC SCALE

10-08-87	V.D.O.T. DRAINAGE COMMENTS (3)
8-14-87	J.C. COUNTY & V.D.O.T. COMMENTS (2)
6-24-87	REVISE DRAINAGE (1)
6-10-87	REVISIONS

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

DES.	B.L.M.
DWN	B.L.M./S.A.W.
CHK	N.H.M.
DATE	6-10-87

LAND DEVELOPMENT INCORPORATED

BERKELEY'S GREEN PHASES 1&2

DRAINAGE AREAS

EROSION AND SEDIMENT CONTROL PLAN

JAMES CITY COUNTY, VIRGINIA

JOHN TYLER HIGHWAY - 50' R/W

S.R. 5

FOR EROSION AND SEDIMENT CONTROL ONLY

PROJ. NO.	85040
FLD. BK. NO.	
SHEET	3 OF 15
DWG.	2361AW

Property boundary supplied by Langely and McDonald - Engineers, Planners, Surveyers, Virginia Beach - Williamsburg, Virginia.
(Plan entitled First Colony Estates - Dated 06-19-86).
(Plan entitled Berkeley's Hundred - Dated 03-30-87).
MASTER PLAN BY ART ROBS DESIGN GROUP, VIRGINIA BEACH, VIRGINIA
DRAINAGE OVERLAY BY LANGLEY McDONALD, P.C.

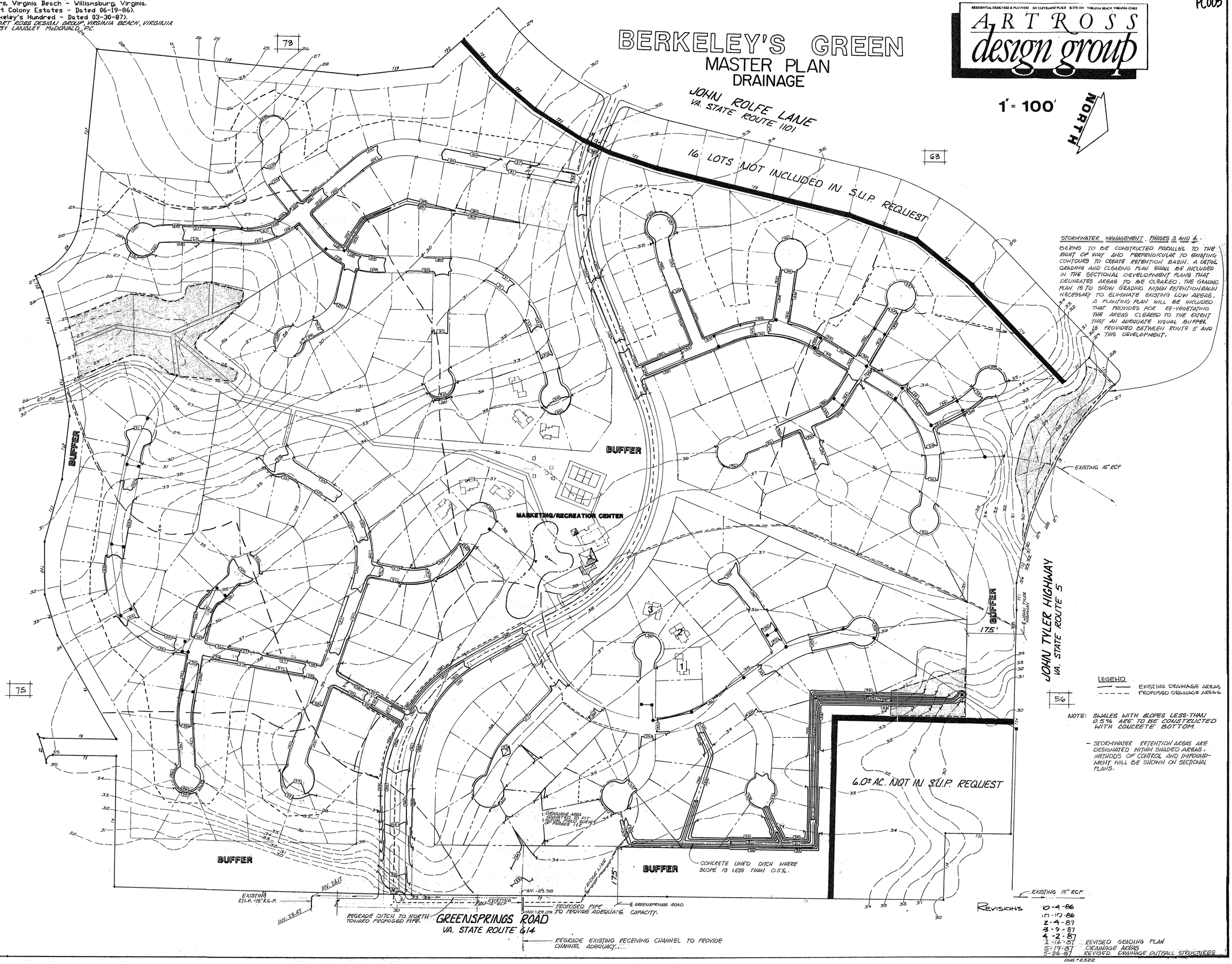
PC005

RESIDENTIAL DESIGNERS & PLANNERS 301 CLEVELAND PLACE SUITE 104 VIRGINIA BEACH, VIRGINIA 23462
ART ROSS design group

BERKELEY'S GREEN
MASTER PLAN
DRAINAGE

1" = 100'

NORTH



STORMWATER MANAGEMENT. PHASES 3 AND 4.
BERMS TO BE CONSTRUCTED PARALLEL TO THE RIGHT OF WAY AND PERPENDICULAR TO EXISTING CONTOURS TO CREATE RETENTION BASIN. A DETAIL GRADING AND CLEARING PLAN SHALL BE INCLUDED IN THE SECTIONAL DEVELOPMENT PLANS THAT DELINEATES AREAS TO BE CLEARED. THE GRADING PLAN IS TO SHOW GRADING WITHIN RETENTION BASIN NECESSARY TO ELIMINATE EXISTING LOW AREAS. A PLANTING PLAN WILL BE INCLUDED THAT PROVIDES FOR RE-VEGETATING THE AREAS CLEARED TO THE EXTENT THAT AN ADEQUATE VISUAL BUFFER IS PROVIDED BETWEEN ROUTE 5 AND THIS DEVELOPMENT.

LEGEND
EXISTING DRAINAGE AREAS
PROPOSED DRAINAGE AREAS

NOTE: SWALES WITH SLOPES LESS THAN 0.5% ARE TO BE CONSTRUCTED WITH CONCRETE BOTTOM.

- STORMWATER RETENTION AREAS ARE DESIGNATED WITHIN SHADED AREAS. METHODS OF CONTROL AND IMPOUNDMENT WILL BE SHOWN ON SECTIONAL PLANS.

REVISIONS
10-4-86
10-10-86
2-4-87
3-9-87
4-2-87
1-14-87 - REVISED GRADING PLAN
5-19-87 - DRAINAGE AREAS
5-26-87 - REVISED DRAINAGE OUTFALL STRUCTURES

DWG. # 2322

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Subject

Computed By Checked By

Project No.
Client
Date Sheet No.

BERKELEY'S GREEN
PHASES 1 & 2

DRAINAGE COMPUTATIONS

REVISED 10-7-87

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Subject: BERKELEY'S GREEN DRAINAGE CALCULATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: ~~5-5-87~~ Sheet No. 1

REVISED 8-14-87

INLET SPACING:

ROLL CURB & GUTTER AT 10 YR. STORM

SPREAD BASED ON 4" (0.33') DEPTH AT CURB

(SEE CHART 3 PAGE 4-43)

ALSO DEPTH ON ROLL CURB & GUTTER FROM "SUBDIVISION STREET REQUIREMENTS" TABLE IV, PAGE 16.

S_x = 1/4 PER FOOT = 2.08%

S = 0.5%

d = 4"

Q = 3.1 cfs

* INLETS SPACED SUCH THAT GUTTER FLOW IS LIMITED TO 3.1 cfs

$Q_{10} = CiA = 3.1 cfs = 0.35 * 5 * A$ at $t_c = 15$ min.

A = 1.77 ACRES = 77,163 ☐

<u>USE MODIFIED D1-3 SERIES TO REDUCE "H" FROM MINIMUM.</u>

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Subject: BERKELEY'S GREEN PH 1 & 2
DRAINAGE CALCULATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: 8-14-87 Sheet No. 2

Q_{10} BASED 10yr STORM RETURN FREQUENCY

STRUCTURE	Q_{10} cfs	S_x FT/FT	CURB TYPE	W W×1.8	L FT	P FT	d CHART 17	d/h d/0.46	<1.2 WEIR	T FT SPREAD d/S_x
A-1 SAG	3.8 ✓	0.0208	CG-6	3.6	2.5	6.1	0.4	0.87	O.K	19.2
					4	7.6	0.36	0.78	O.K	17.3
					8	11.6	0.28		O.K.	13.5
					10	13.6	0.24		O.K	11.5
USE L=12'					12	15.6	0.22	0.28	O.K	10.5'
					14	17.6	0.21			10.1
A-2 SAG	2.0	0.0208	CG-6	3.6	6	9.6	0.21	0.46	O.K.	10.1
A-4 SAG	2.0	0.0208	CG-6	3.6	8	11.6	0.18			8.65
					6	9.6	0.21			10.1
A-5 ON GRADE	SEE SHEET 3				8					10
A-6	SEE SHEET 4				8					9.5
A-8	SEE SHEET 4				8					9.5
A-9 SAG	2.1	0.0208	CG-6	3.6	8	11.6	0.18			8.7

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Subject BERKELEY'S GREEN PH. 1&2
DRAINAGE CALCULATIONS
Computed By BLM Checked By

Project No. 85040
Client LAND DEVELOPMENT
Date 8-14-87 Sheet No. 3

A-5

$Q = 2.8$ cfs
$n = 0.015$
$S_x = 0.0208$
$W = 2'$ CG-6
$S_w = 0.0833$
$S = 0.5\%$

$d = 0.32'$

$T = 11^{FT}$ Q_{10}

Q AT $i = 3.5''$ CA = 0.56 Q = 1.96 SAY 2.0 cfs

$T = 9.5^{FT}$

$W/T = 2/9.5 = 0.21$, $S_w/S_x = 0.0833/0.0208 = 4$

E_o (CHART 10) = 0.6

$a = 12 \times W (S_w - S_x)$ + local depression.

$= 12 \times 2 (0.0833 - 0.0208) + 2''$

$a = 3.5$

$S'_w = a / 12W = 3.5 / 12 \times 2 = 0.146$

$S_e = S_x + S'_w E_o = 0.0208 + 0.146 \times 0.6 = 0.108$

L_T = (CHART 15) = 8^{FT} D1-3B 100% interception

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Subject: BERKELEYS GREEN
DRAINAG CALCULATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: 8-14-87 Sheet No. 4

A-6

$Q_{10} = 3.0$
$Q_{3.5} = 2.1$
$n = 0.015$
$S_x = 0.0208$
$W = 2$
$S_w = 0.0833$
$S = 0.5$

$d = 0.28$

$T = 10'$
$W/10 = 2/10 = 0.20$, $S_w/S_x = 4.0$

E_o (CHART 10) = 0.57

$a = 12 \times 2 (0.0833 - 0.0208) + 2'' = 3.5''$

$S'_w = 0.146$

$S_e = S_x + S'_w E_o = 0.0208 + 0.146 \times 0.57 = 0.104$

$L_T = \underline{8^{FT}}$ D1-3B

A-8

$Q_{10} = 2.7$ cfs
$Q_{3.5} = 1.9$ cfs
$n = 0.015$
$S_x = 0.0208$
$S_w = 0.0833$
$W = 2'$
$S = 0.48$

$d = 0.25$
$T = 9.5$

$W/T = 0.21$, $S_w/S_x = 4.0$
$E_o = 0.6$
$a = 3.5$
$S'_w = 0.146$
$S_e = 0.108$

L_T (chart 15) = 8^{FT}

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Subject DRAINAGE CALCULATIONS
INLET SIZING
Computed By BLM Checked By

Project No. 85040
Client LAND DEVELOPMENT
Date 10-8-87 Sheet No. 4.1

B-6

$Q_{3.5} = 0.77 \times 3.5 = 2.70$ cfs

$n = 0.015$

$S_x = 0.0208$

$W = 2$ STD CG-6

$S = 1.46\% = 0.0146\%$

$S_w = 0.0833$

$d = 0.30$ chart 6

$T = 8$

$W/T = 2/8 = 0.25$

$S_w/S_x = 0.0833/0.0208 = 4$

$E_o = (\text{CHART } 10A) = 0.65$

$a = 12 * W (S_w - S_x) + 2'' = 12 * 2 * (0.0833 - 0.0208) + 2'' =$

$a = 3.5''$

$S'_w = a / (12 * 2) = 3.5 / (12 * 2) = 0.146$

$S_e = S_x + S'_w E_o = 0.0208 + 0.146 \times 0.65 = 0.1084$

$L_T = K Q^{0.42} S^{0.3} (1/n S_e)^{0.6} =$

$= 0.6 * 2.7^{0.42} * 0.0146^{0.3} (1/0.015 * 0.1084)^{0.6} =$

$L_T = 12^{FT}$

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Subject: DRAINAGE CALCULATIONS
INLET SIZING
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: 10-8-8 Sheet No. 4.2

B-7

$Q_{3.5} = 0.62 \times 3.5 = 2.17$ cfs

$n = 0.015$

$S_x = 0.0208$

$S_w = 0.0833$

$W = 2'$

$S = 1.46\%$

$d = 0.3'$

$T = 7.0'$

$W/T = 2/7 = 0.29$

$S_w/S_x = 0.0833/0.0208 = 4$

$E_o = 0.72$

$a = 3.5''$

$S'_w = 0.146$

$S_e = S_x + S'_w E_o = 0.0208 + 0.146 \times 0.72 = 0.1259$

$L_T = 0.6 * 2.17^{0.42} * 0.0146^{0.3} * (1/0.015 * 0.1259)^{0.6} = 10.07$

use $L_T = 10'$

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Subject BERKELEYS GREEN DRAINAGE COMPUTATION
Computed By BUM Checked By

Project No. 85040
Client LAND DEVEL. INC
Date 9-17-87 Sheet No. 4.3

SPREAD CALCULATION FOR ENTRANCE ROAD BERKELEYS GREEN

SOUTH SIDE OF ENTRANCE ROAD:

1. AREA = 300 x 50 + 100 x 50 + 300 x 40 + 300 x 30 = 41,000 ⌀
= 0.94 Ac

C = 0.6
i = 3.5

Q = CIA = 0.94 x 0.6 x 3.5 = 2.0 cfs

S = 0.4%

FIND T? FROM CHART 6

T = 9.7 FT

2. AREA = 41,000 ⌀ + 300 x 50 = 1.29 Ac.

C = 0.6
i = 3.5

Q = CIA = 1.29 x 0.6 x 3.5 = 2.7 cfs

S = 1.43%

T = 8.3 FT

3. Area = 300 x 50 + 300 x 40 + 100 + 30 = 30000 ⌀ = 0.7 Ac

S = 0.4%

Q = CiA = 0.6 x 3.5 x 0.7 = 1.47 cfs

T = 8.3 FT

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: BERKELEYS GREEN DRAINAGE COMPUTATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC
Date: 9-17-87 Sheet No. 4.4

4. Area = 30,000 ϕ + 300 x 50' = 45,000 ϕ = 1.03 Ac.

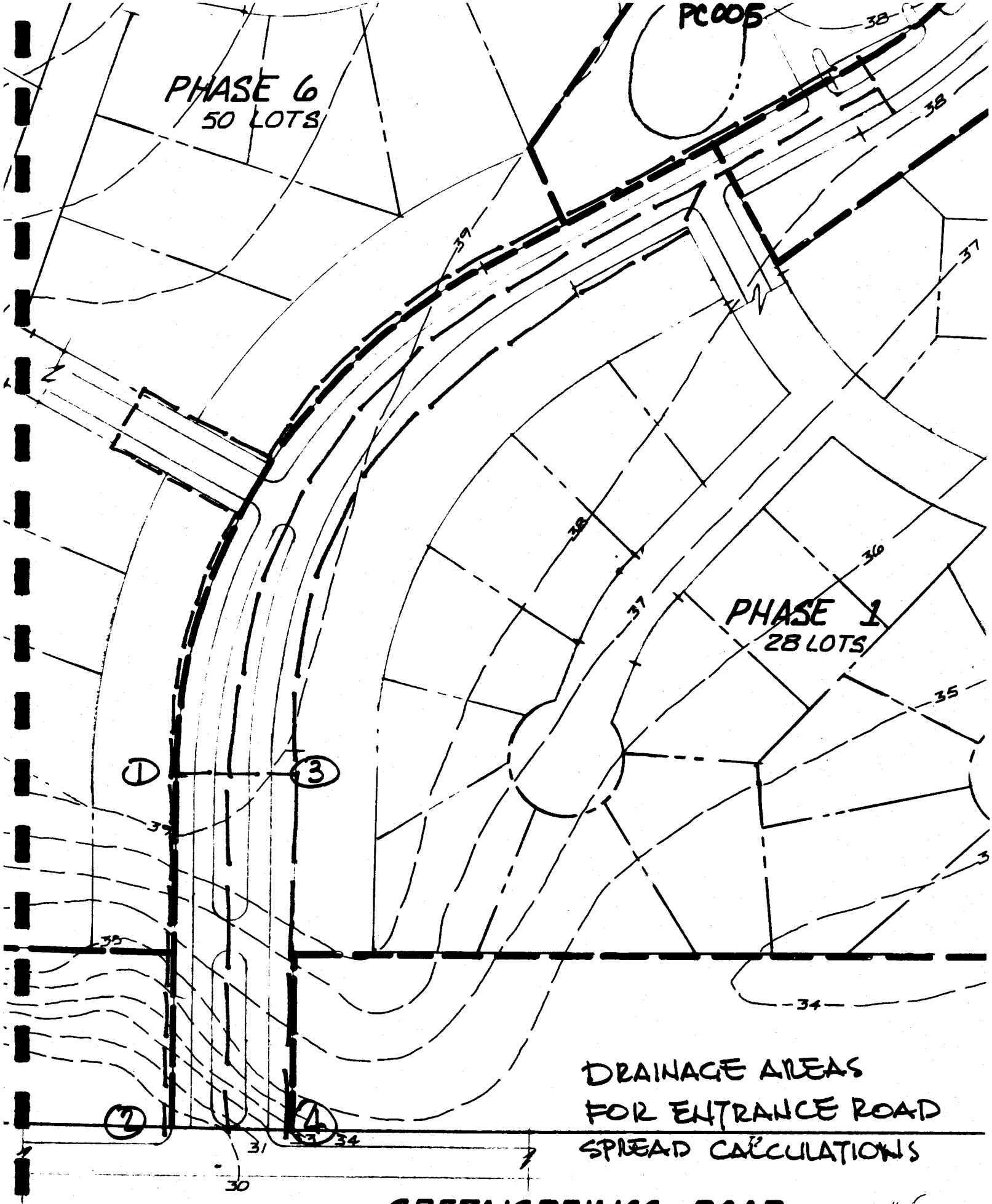
S = 1.43%

Q = CIA = 0.6 x 1.03 Ac x 3.5 = 2.2 cfs

T = 7.5 FT

AT S = 1.43% AND T = 10'

Q = 4.0 cfs.



GREENSPRINGS ROAD
VA. STATE ROUTE 614

4.5

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject Berkeleys Green
Phase 1 & 2 Drainage Cal.
Computed By BLH Checked By

Project No. 35000
Client Land Devel.
Date 9-19-87 Sheet No. 4.6

Ref. Chart 6 V.D.O.T. Drainage Manual.

PAVEMENT SPREADS see following sht. for computations of gutter slopes

A-4 South

Area = 0.23 Ac

Q = CIA = 0.35 x 3.5 x 0.23 = 0.28 cfs

T = 4.5' SPEAD AT S = 0.12%

A-4 North

Area = 0.98 Ac

Q = CIA = 0.35 x 3.5 x 0.98 = 1.2 cfs

T = 9.5' AT S = 0.13%

A-1 EAST

Area = 1.1 Ac
Q = CIA = 0.35 x 3.5 x 1.1 = 1.3 cfs

T = 9.2' at S = 0.2%

A-1 west

Area = 1.1 Ac
Q = CIA = 0.35 x 3.5 x 1.1 = 1.3 cfs

T = 9.2' at S = 0.2%

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: Berkeleys Green 1&2
Drainage Calculations
Computed By: BCM Checked By:

Project No. 85040
Client: Land Development
Date: 9-13-87 Sheet No. 4.T

A-2 EAST

Area = 1Ac
$Q_x = CiA = 0.35 \times 3.5 \times 1.0 = 1.2$ cfs

$T = 9.1'$ @ $S = 0.2\%$

A-2 WEST

Area = 0.12 Ac
$Q = CiA = 0.9 \times 3.5 \times 0.12 = 0.37$ cfs

$T = 4.8'$ @ $S = 0.2\%$

B-1 EAST

Area = 1.15 Ac

$Q = CiA = 0.35 \times 3.5 \times 1.15 = 1.4$ cfs

$T = 9'$ @ $S_1 = -0.24\%$

B-1 west

Area = 0.95 Ac

$Q = CiA = 0.35 \times 3.5 \times 0.95 = 1.2$ cfs

$T = 8.5'$ @ $S_2 = +0.25$

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: BERKELEYS GREEN 1 & 2
DRAINAGE CALCULATIONS
Computed By: BLW Checked By:

Project No. 85040
Client: Land Devel. Inc
Date: 9-19-87 Sheet No. 4.8

$S = rx + g_1$ Reference Page 4-10 Drainage Manual

$r = g_2 - g_1 \div L$

FIND GUTTER SLOPES AT EDGE OF ROOF INLETS!

A-4 L = 6' (THROAT LENGTH)

V.C. DATA
L = 50
$g_1 = -0.65$
$g_2 = +0.5$

$r = 0.5 - (-0.65) \div 0.5 = +2.3$

slope = $rx + g_1$

find actual gutter slope at 5' before and 6' after PVI or location of inlet station 16+53 which is immediately upstream of hydraulic influence.

$X_1 = 23'$
$X_2 = 34'$

$S_1 = 2.3 \times .23 + -0.65 =$
$S_1 = -0.12\%$

$S_2 = 2.3 \times .34 + -0.65 = 0.13\%$

A-1 & A-2

V.C. DATA
L = 50'
$g_1 = -0.49\%$
$g_2 = +0.79\%$
$r = 0.79 - (-0.49) \div 0.5 = 2.56\%$ per sta

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: Berkeleys Green 1&2
Drainage Calculations
Computed By: BLM Checked By:

Project No. 85040
Client: Land Devel Inc
Date: 9-19-87 Sheet No. 4.9

A-1 find actual gutter slope at ℄ before and 9 after PVI - points immediately upstream & hydraulic influence:

$x_1 = 11'$
$x_2 = 28'$

$S_1 = 2.56 \times 0.11 + -0.49 = -0.2\%$

$S_2 = 2.56 \times 0.28 + -0.49 = +0.2\%$

B-1 L = 6'
V.C. DATA
$g_1 = -0.5$
$g_2 = +1.7\%$
$L = 50^{ft}$
$r = 1.7 - -0.5 \div .5 = 4.4\%$ per sta.

find actual gutter slope at 5' before and 5' after location of curb notch:

$S_1 = rx + g_1$
$S_1 = 4.4 \times 0.06 + -0.5 = -0.24\%$

$S_2 = 4.4 \times 0.17 + -0.5 = +0.25\%$

PC005

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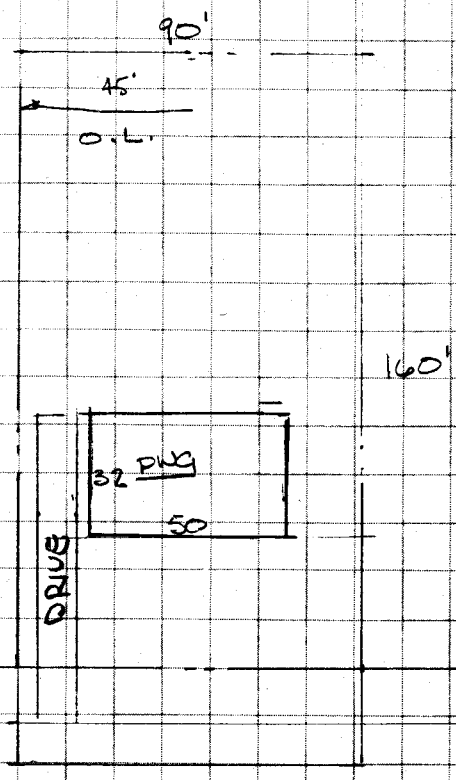
VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: DRAINAGE
BERKELEYS GREEN

Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: Sheet No. 5

TYPICAL LOT WEIGHTED "C" VALUE
FOR RUNOFF COMPUTATIONS



185 x 50	=	16,650	⌀
HOUSE	=	1,600	⌀
ROAD	=	900	⌀
DRIVE	=	960	⌀
LOT	=	13,190	⌀

			CA
HOUSE	1,600 ⌀	x 0.9 =	1440
ROAD	900 ⌀	x 0.9 =	810
DRIVE	960 ⌀	x 0.9 =	864
LAWN	13,190 ⌀	x 0.2 =	2638
TOTAL	16,650 ⌀	=	5752

WEIGHTED "C" = 0.35

PC005

REVISED 8-14-87

PROJECT BERKELEYS GREEN
JOB NO. 85040
DATE 4-9-87 SHEET 6 OF
DESIGN FORMULA Q=CIA FREQ. 10 YR.

STORM SEWER DESIGN COMPUTATIONS

COMPUTED BY BLM CHECKED BY

LANGLEY AND McDONALD
ENGINEERS·PLANNERS·SURVEYORS
VIRGINIA BEACH, VIRGINIA

LOCATION STREET	LOCATION POINT	AREA ACRES "A"	RUNOFF COEF. "C"	"A" x "C" INCRE.	"A" x "C" ACCUM.	INLET TIME MIN.	RAIN INTEN. INCH	RUNOFF Q CFS	PIPE (DITCH) SIZE	CAPACITY CFS	VELO. FT./SEC.	LENGTH FEET	% SLOPE ~~FT/FT~~	FALL FT.	INVERT ELEV. UP	INVERT ELEV. DOWN	REMARKS
A-1	A-2	2.14	0.35	0.75	—	15	5.0	3.8	15		3.0	25	0.35	0.1			
A-2	A-3	1.12	0.35	0.39	1.14	15.14	5.0	2.0 / 5.7	15		3.2	70	0.8	0.21			
A-3	A-4	—	—	—	—	15.50	5.0	5.7	18		3.2	120	0.3	0.36			
A-4	A-5	1.12	0.35	0.39	1.53	16.13	4.9	1.95 / 7.5	21		3.0	190	0.22	0.41			
A-5	A-7	1.61	0.35	0.56	2.09	17.19	4.7	2.8 / 9.8	21		4.0	170	0.40	0.64			
A-6	A-7	1.72	0.35	0.60	—	15.0	5.0	2.1 / 3.0	12		3.6	60	0.7	0.42			
A-7	A-8				2.69	17.36	4.5	— / 12.1	24		2.7	160	0.28	0.45			
A-8	A-9	1.52	0.35	0.53	3.22	18.58	4.4	2.7 / 14.2	24		4.4	120	0.45	0.54			
A-9	A-10	1.32	0.35	0.48	3.70	19.02	4.4	2.1 / 16.3	24		5.0	230	0.50	1.15			
	A-10					19.58											

PROJECT BERKELEYS GREEN
JOB NO. 85040
DATE 10-7-87 SHEET 7 OF
DESIGN FORMULA Q=CIA FREQ. 2yr

STORM SEWER DESIGN COMPUTATIONS

COMPUTED BY BLM CHECKED BY

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ENGINEERS·PLANNERS·SURVEYORS
VIRGINIA BEACH, VIRGINIA

LOCATION		AREA ACRES "A"	RUNOFF COEF. "C"	"A" x "C"		INLET TIME MIN.	RAIN INTEN. INCH	RUNOFF Q CFS	PIPE (DITCH) SIZE	CAPA-CITY CFS	VELO. FT./SEC.	LENGTH FEET	SLOPE FT/FT	FALL FT.	INVERT ELEV.		REMARKS
STREET	POINT			INCRE.	ACCUM.										UP	DOWN	
	C-1	0.15	0.8	0.12		10	4.6	0.6	0.4	0.67	1.4	380	0.18%				
	C-2	2.5	0.35	0.88	1.0	14.7	4.1	4.1	0.8	5.7	3.0	300	0.33%				
	C-3	1.7	0.35	0.60	—	10	4.6	2.7	0.5	3.7	4.9	120	0.17%				
	C-4	1.4	0.35	0.49	2.09	16.4	3.8	7.9	1.2	9.3	2.1	540	0.1%				
	C-5	1.4	0.35	0.49	2.58	20.7	3.4	8.8	1.2	9.3	2.1	280	0.1%				
C-5	A-10	1.9	0.35	0.67	3.25	22.9	3.1	10.1				400					

SEE SHEETS 8 THROUGH 17 FOR ON SITE RETENTION!

PC005

PC005

7.1

HYDRALUIC GRADE LINE

PROJECT: Berkeley's Green Phase 1 and 2
JOB NO.: 85040
DATE: August 14, 1987

PREPARED BY: LANGLEY & McDONALD, P.C.
COMPUTED BY: Billy Mehaffey
SHEET 1 OF 1

CONCRETE PIPE n= 0.013

INLET STATION	OUTLET SURFACE ELEV	D(O)	Q(O)	L(O)	SF(O)	H(F)	V(O)	H(O)	Q(I)	D(I)	V(I)	Q*V	JUNCTION LOSS V^2/2G	H(I)	ANGLE	K	H(>)	H(T)	1.3* H(T)	0.5*H(T)	FINAL H	INLET SURFACE ELEV	RIM ELEV
A-11	24.30	24	19.9	50	0.0078	0.39	6.33	0.16	19.9	24	6.33	126	0.62	0.22	90	0.70	0.44	0.81	1.05	0.53	0.92	25.22	26.20
A-10	25.22	24	19.9	240	0.0078	1.87	6.33	0.16	16.3	24	5.19	95	0.42	0.15	0	0.00	0.00	0.30	0.39	0.20	2.06	27.28	29.00
									3.6	10	6.4	23	0.63	0.22	90	0.70	0						
A-9	27.28	24	16.3	230	0.0052	1.20	5.19	0.10	14.2	24	4.52	64	0.32	0.11	10	0.05	0.02	0.23	0.30	0.15	1.35	28.63	32.50
A-8	28.63	24	14.2	120	0.0040	0.47	4.52	0.08	12.1	24	3.85	47	0.23	0.08	20	0.16	0.04	0.20	0.26	0.13	0.60	29.23	33.11
A-7	29.23	24	12.1	160	0.0029	0.46	3.85	0.06	9.8	21	4.07	40	0.26	0.09	10	0.05	0.01	0.16	0.21	0.10	0.56	0.00	33.40
									3.0	12	3.82	11	0.23	0.08	90	0.70	0.16	0.30	0.38	0.19	0.65	29.88	33.40
A-5	29.88	21	9.8	170	0.0038	0.65	4.07	0.06	7.5	21	3.12	23	0.15	0.05	0	0.00	0.00	0.12	0.15	0.08	0.73	30.61	33.16
A-4	30.61	21	7.5	190	0.0023	0.43	3.12	0.04	5.7	18	3.23	18	0.16	0.06	10	0.05	0.01	0.10	0.13	0.07	0.49	31.11	32.28
A-3	31.11	18	5.7	120	0.0030	0.36	3.23	0.04	5.7	18	3.23	18	0.16	0.06	90	0.70	0.11	0.21	0.27	0.14	0.49	31.60	33.20
A-2	31.60	18	5.7	70	0.0030	0.21	3.23	0.04	3.8	15	3.10	12	0.15	0.05	90	0.70	0.10	0.20	0.26	0.13	0.34	31.93	32.89
A-1	31.93	15	3.8	25	0.0035	0.09	3.10	0.04	0.0	0	0.00	0	0.00	0.00		0.00	0.00	0.04	0.05	0.02	0.11	32.05	32.89

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: BERKELEY'S GREEN
DRAINAGE COMPUTATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: 4-30-87 Sheet No. 8

AREAS "A" & C
DRAINAGE AREA WITH OUT FALL AT RT 5 & GREENSPRINGS RD.

PRE-DEVELOPMENT CONDITIONS

AREA = 30.5 Ac

C = 0.25

Q = CiA = 30.5 Ac × 0.25 i = 7.63 i

t_c = OVERLAND + CHANNELIZED

- OVERLAND FROM VDH PL. 5-1 PG V-6

L = 100'
AVERAGE GRASS - CHARACTER OF GROUND
% SLOPE = 38 - 37.5 / 100' × 100% = 0.5%

t_c O.L. = 17 min

- CHANNELIZED

DROP = 37.5 - 21.2 = 16.3
LENGTH = 1600 LF

t_c = 13 min

t_c = 17 + 13 = 30 MIN

RUNOFF			TOTAL
Q_2 =	7.63 ×	2.7 =	20.6 cfs
Q_{10} =	7.63 ×	3.6 =	27.5 cfs
Q_{100} =	7.63 ×	4.8 =	36.6 cfs

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Subject: BERKELEY'S GREEN DRAINAGE CALCULATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: 4-30-87 Sheet No. 9

AREA EXCLUDED FROM DEVELOPMENT.

	CA
6.02 Ac x 0.25	1.51
0.92 Ac x 0.65	0.60
CA =	2.11

Q_2 = 2.11 * 2.7 = 5.7 cfs
Q_{10} = 2.11 * 3.6 = 7.6 cfs
Q_{50} = 2.11 * 4.8 = 10.1 cfs

THEREFORE PRE DEVELOPMENT CONTRIBUTION OF THIS PROJECT TO THE OVERALL DRAINAGE AREA: (DRAINAGE AREAS A & C)

Q_2 = 20.6 cfs − 5.7 cfs = 14.9 cfs
Q_{10} = 27.5 cfs − 7.6 cfs = 19.9 cfs
Q_{50} = 36.6 cfs − 10.1 cfs = 26.5 cfs

RELEASE ALL FLOW FROM DRAINAGE AREA "A" (PIPE SYSTEM) FOR 10 yr STORM DURATION

PREDEVELOPMENT Q_{10} = 19.9 cfs
DEVELOPED FOR AREA "A" Q_{10} = 16.3 cfs

PEAK RELEASE RATE FROM AREA "C" = 3.6 cfs

* RETENTION FOR AREA "C" MUST BE SUCH THAT PEAK OUT FLOW IS 3.6 cfs. TO ASSURE THAT DEVELOPED PEAK RUNOFF DOES NOT EXCEED PRE DEVELOPMENT RUNOFF.

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Subject BERKELEY'S GREEN
DRAINAGE CALCULATIONS
Computed By BLM Checked By

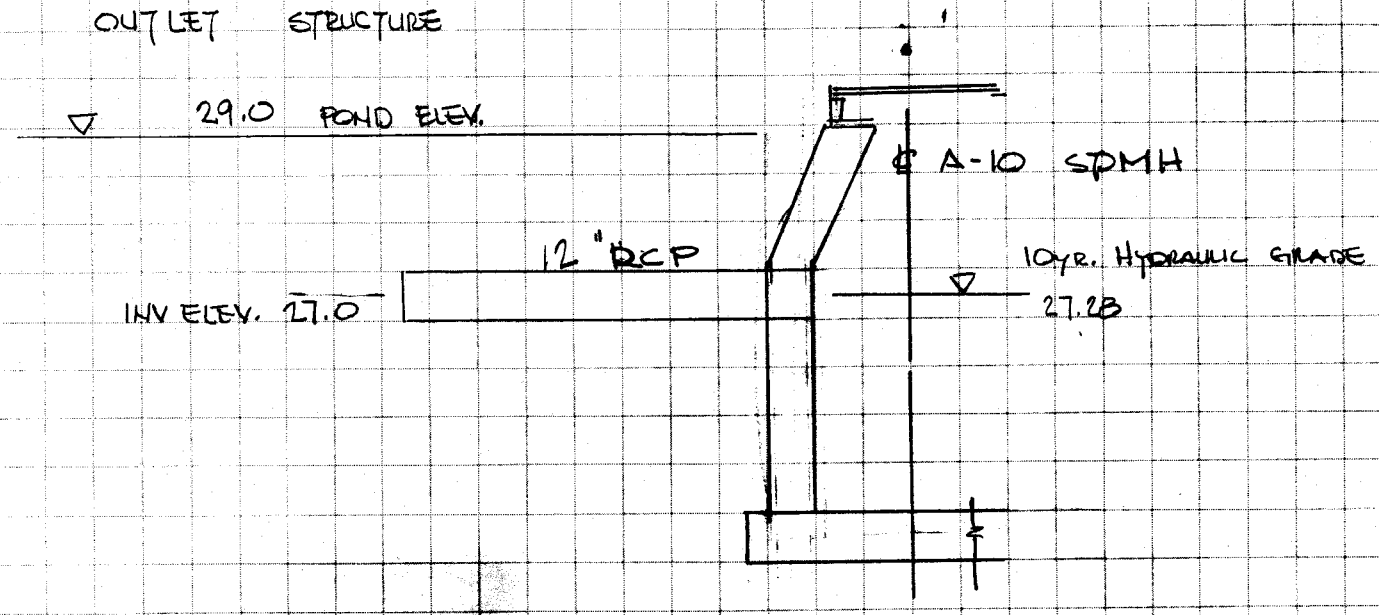
Project No. 85040
Client LAND DEVEL. INC
Date ~~4-30-87~~ Sheet No. 10
8-14-87 REVISED

POND IDENTIFIER "C" SEE COMPUTER PRINT OUT FOR STORM ROUTING.

3.2 cfs MAXIMUM DISCHARGE

STORAGE = 26,336 C.F.
DESIGN ELEV. 29.0

OUTLET STRUCTURE



12" RCP INLET CONTROL

$Q = C A \sqrt{2gh}$ C = 0.40 Ref. DRAINAGE MANUAL

$Q = 0.4(0.785)\sqrt{2 \times 32.2 \times 1.5}$ 12" RCP A = 0.785

Q = 3.1 cfs ≅ 3.2 12" pipe WITH HEADWALL O.K.

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WILLIAMSBURG, VIRGINIA
5/1/87

HYDROLOGIC REPORT FOR BERKELEY'S GREEN

UNIVERSAL RATIONAL HYDROGRAPH

Q(PEAK) = C*I*A
10 YEAR STORM FREQUENCY

BASIN IDENTIFIER C
DISCHARGES INTO A SYSTEM

BASIN AREA = 10.65 ACRES
RUNOFF COEFF. = .30
RAINFALL INT. = 4.10 IN/HR

TIME (MIN)	RUNOFF (C.F.S.)
0.0	0.0
12.0	.5
24.0	1.0
36.0	1.8
48.0	2.5
60.0	7.8
72.0	13.1
84.0	8.6
96.0	4.0
108.0	3.7
120.0	3.3
132.0	2.4
144.0	1.6
156.0	1.1
168.0	.6
180.0	.6
192.0	.5
204.0	.4
216.0	.3
228.0	.1
240.0	0.0
252.0	0.0
264.0	0.0
276.0	0.0
288.0	0.0
300.0	0.0
312.0	0.0
324.0	0.0
336.0	0.0
348.0	0.0

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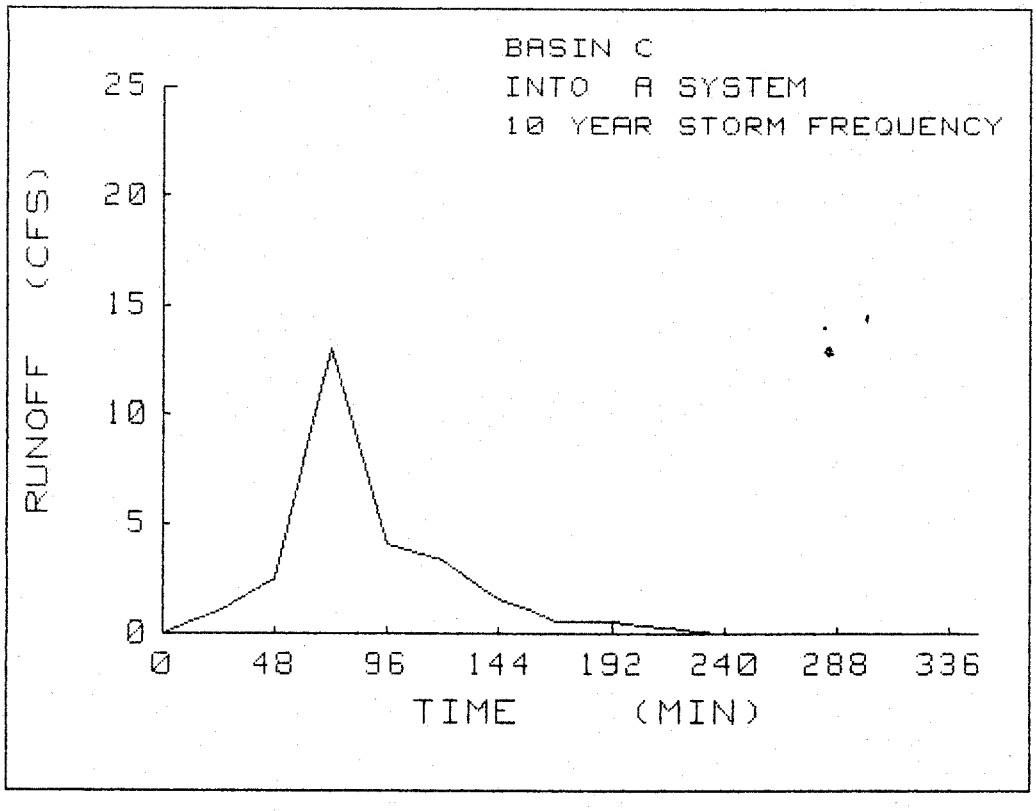
HYDROLOGIC REPORT FOR BERKELEY'S GREEN



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HYDROLOGIC REPORT FOR

BERKELEY'S GREEN

POND DEPTH VS STORAGE PROVIDED

POND IDENTIFIER C

ELEV feet	DEPTH feet	AREA sq.ft.	VOLUME cu.ft.	SUM VOL cu.ft.	OUTFLOW c.f.s.
27.0		0.0		0.0	0.00
	1.0		8150.0		
28.0		16300.0		8150.0	0.00
	.6		10149.0		
28.6		17530.0		18299.0	0.00
	.2		3547.0		
28.8		17940.0		21846.0	1.00
	.1		1804.3		
28.9		18145.0		23650.3	1.95
	.1		1824.7		
29.0		18350.0		25475.0	2.40
	.1		1843.3		
29.1		18515.0		27318.3	4.20
	.9		17331.7		
30.0		20000.0		44650.0	6.80

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HYDROLOGIC REPORT FOR BERKELEY'S GREEN

STAGE, STORAGE & DISCHARGE

POND IDENTIFIER C

ELEV	STORAGE (CU.FT.)	OUTFLOW (CFS)	2S/T+O (CFS)
27.0	0.0	0.0	0.0
28.0	8150.0	0.0	22.6
28.6	18299.0	0.0	50.8
28.8	21846.0	1.0	61.7
28.9	23650.3	2.0	67.6
29.0	25475.0	2.4	73.2
29.1	27318.3	4.2	80.1
30.0	44650.0	6.8	130.8

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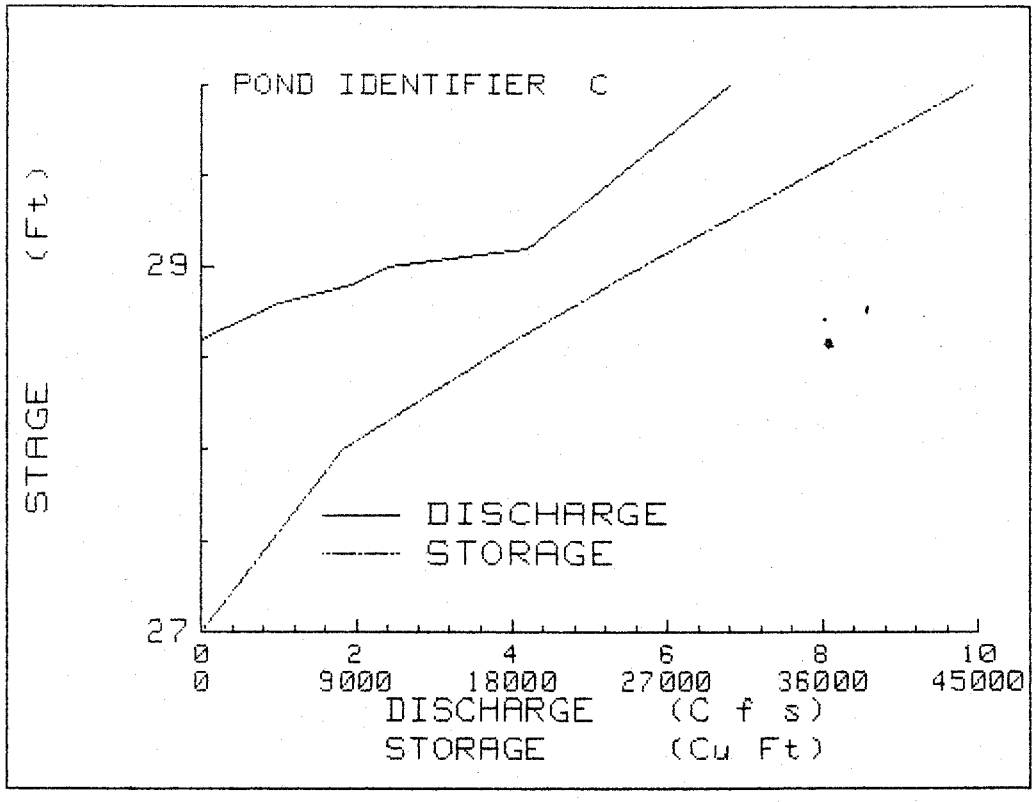
HYDROLOGIC REPORT FOR BERKELEY'S GREEN



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HYDROLOGIC REPORT FOR BERKELEY'S GREEN

HYDROGRAPH RESERVOIR ROUTING

BASIN IDENTIFIER C
POND IDENTIFIER C
10 YEAR STORM FREQUENCY

T	I1	I2	2S1/T	O1	2S2/T +O2	O2	2S2/T
12.0	0.0	.5	0.0	0.0	.5	0.0	.5
24.0	.5	1.0	.5	0.0	2.1	0.0	2.1
36.0	1.0	1.8	2.1	0.0	4.9	0.0	4.9
48.0	1.8	2.5	4.9	0.0	9.1	0.0	9.1
60.0	2.5	7.8	9.1	0.0	19.4	0.0	19.4
72.0	7.8	13.1	19.4	0.0	40.2	0.0	40.2
84.0	13.1	8.6	40.2	0.0	61.9	1.0	60.9
96.0	8.6	4.0	60.9	1.0	72.4	2.3	70.1
108.0	4.0	3.7	70.1	2.3	75.4	3.0	72.4
120.0	3.7	3.3	72.4	3.0	76.4	3.2	73.2
132.0	3.3	2.4	73.2	3.2	75.6	3.0	72.6
144.0	2.4	1.6	72.6	3.0	73.5	2.5	71.0
156.0	1.6	1.1	71.0	2.5	71.2	2.2	69.0
168.0	1.1	.6	69.0	2.2	68.4	2.0	66.4
180.0	.6	.6	66.4	2.0	65.5	1.6	63.9
192.0	.6	.5	63.9	1.6	63.4	1.3	62.1
204.0	.5	.4	62.1	1.3	61.8	1.0	60.8
216.0	.4	.3	60.8	1.0	60.5	.9	59.6
228.0	.3	.1	59.6	.9	59.1	.8	58.4
240.0	.1	0.0	58.4	.8	57.7	.6	57.1
252.0	0.0	0.0	57.1	.6	56.5	.5	56.0
264.0	0.0	0.0	56.0	.5	55.4	.4	55.0
276.0	0.0	0.0	55.0	.4	54.6	.3	54.2
288.0	0.0	0.0	54.2	.3	53.9	.3	53.6
300.0	0.0	0.0	53.6	.3	53.3	.2	53.1
312.0	0.0	0.0	53.1	.2	52.9	.2	52.7
324.0	0.0	0.0	52.7	.2	52.5	.2	52.3
336.0	0.0	0.0	52.3	.2	52.2	.1	52.1
348.0	0.0	0.0	52.1	.1	51.9	.1	51.8

MAXIMUM ELEVATION = 29.0 FT
MAXIMUM STORAGE = 26335.9 CU FT
MAXIMUM DISCHARGE = 3.2 CFS

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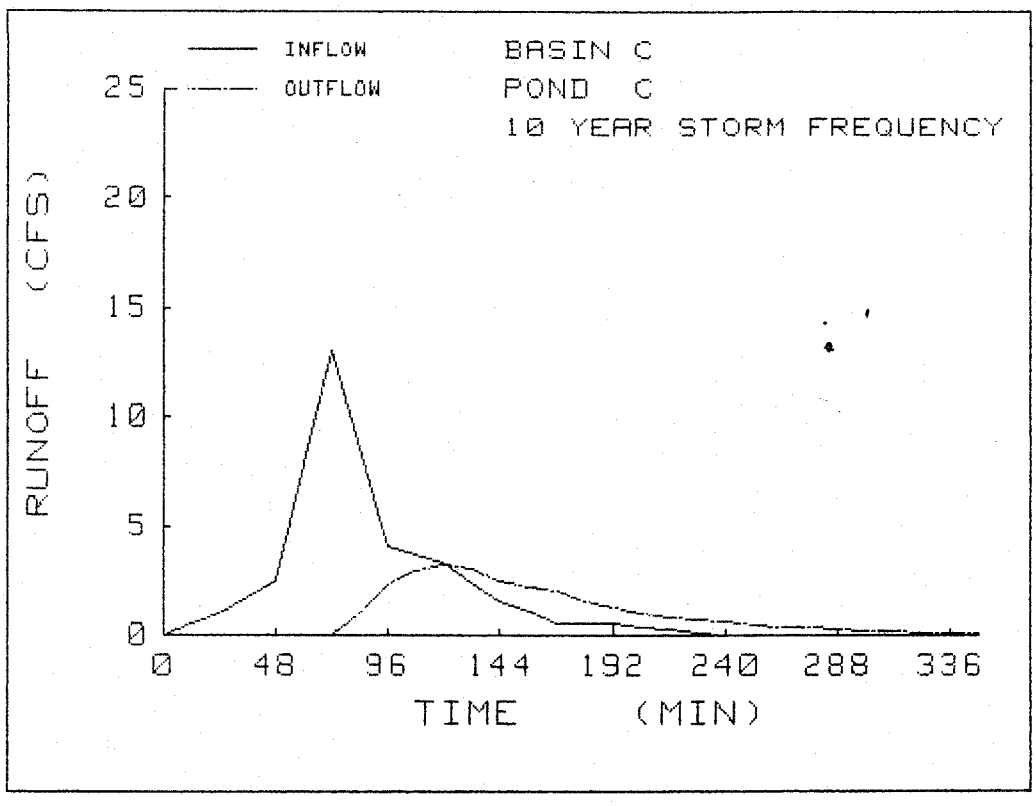
5/1/87

HYDROLOGIC REPORT FOR BERKELEY'S GREEN



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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: Berkeley Green Ph 2 Drainage Calculations
Computed By: BLM Checked By:

Project No. 35040
Client: and Sevel Inc
Date: 10-6-87 Sheet No. 18
REVISED

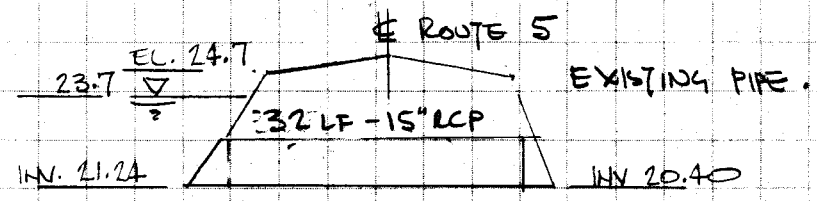
Q_{10} = 27.5 cfs (see page 8 of Drainage calculations)

Upgrade culvert under Greenspring Road to have adequate capacity of post-development condition. The Pre-development runoff of 27.5 cfs is adequate because runoff from this development has been retained on site to limit developed runoff to pre-development condition.

To upgrade culvert under VA. Route 5:

1. Find capacity of existing 15" RCP UNDER ROUTE 5.

a. Assume inlet control:
h = 2.46'



$Q = C \times A \times \sqrt{2gh}$

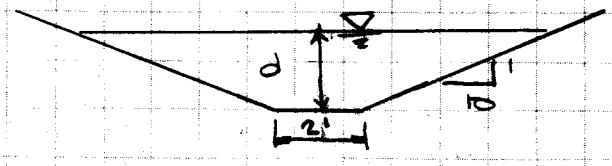
Area 15" RCP = 1.227 ϕ

$Q = 0.5 \times 1.23 \times \sqrt{2 \times 32.2 \times 2.46}$

Q = 7.7 cfs CAPACITY OF EXISTING 15" RCP

b: Assume outlet control:

FIND WATER SURFACE ELEVATION AT OUTLET:



RECEIVING CHANNEL SECTION

S = 0.15%
n = 0.035
Q_{10} = 27.5 cfs
DESIGN CONDITION

AT d = 1.35, Q = 27.6 cfs, V = 1.32 fps

d = h_o = 1.35'

PC005

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject Berkeley Green 1 & 2 Drainage Calculations
Computed By BLM Checked By

Project No. 85090
Client Land Devel. Inc
Date 10-6-87 Sheet No. 19
REVISED

$S_o = 21.24 - 20.40 \div 32 = 0.0263\ ^{FT}/_{FT} = 2.63\%$

$S_o L = 0.84^{FT}$

$$H = \left[1 + K_e + \frac{29 n^2 L}{R^{1.33}}\right] V^2/2g$$

$K_e = 0.5$
$n = 0.015$
$L = 32'$
$R = A \div WP = \frac{D^2 \pi}{4} \times \frac{1}{D \pi} = \frac{D\pi}{4} = \frac{1.25 \times \pi}{4} = 0.9817'$

$V = Q \div A = 7.7\ ^{ft^3}/_{sec} \times \frac{4}{1.25 \times \pi} = 7.84\ fps$

$$H = \left[1 + 0.5 + \left(\frac{29 \times 0.015 \times 32}{0.9817^{1.33}}\right)\right] 7.84 / 64.4 = 1.92^{FT}$$

	20.40	INV. ELEV. AT OUTLET.
+	1.35	TAILWATER DEPTH
	21.75	TAILWATER ELEV.
+	1.92	HEAD REQUIRED TO DRIVE 7.7 cfs
	23.67	HEAD WATER ELEV. WHEN CULVERT IS OPERATING UNDER OUTLET CONTROL

COMPARED WITH ELEV. 23.7 FOR INLET CONTROL.

∴ CULVERT WILL PASS 7.7 cfs WITH WATER SURFACE ELEVATION OF 23.7 AT INLET.

27.5 cfs − 7.7 cfs = 19.8 cfs TO BE CARRIED BY NEW CULVERTS

19.8 cfs ÷ 2 = 9.9 cfs per each PIPE.

18" RCP WITH SAME WATER SURFACE ELEVATION

$Q = C \times A \times \sqrt{2gh}$, $h = 2.46'$, $A = 1.5^2 \pi/4 = 1.77\ ft^2$

$Q = 0.5 \times 1.77 \times \sqrt{64.4 \times 2.46} = 11.14$ cfs

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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: Berkeley Green 1&2 Drainage Calculations
Computed By: BLM Checked By:

Project No. 85040
Client: Land Development
Date: 10-6-87 Sheet No. 20
REVISED

∴ 2 - 18" RCP PLUS EXISTING 15" RCP HAS ADEQUATE CAPACITY TO CONVEY Q_{10} = 27.5 cfs, WHEN ALL CULVERT ARE OPERATING UNDER INLET CONTROL

USE 2 - 18" ϕ 32 LF STEEL PIPE CULVERTS AT 2.5% SLOPE
WALL THICKNESS = 3/8" COATED BOTH SIDE BITUMINOUS MATERIAL USE MODIFIED EW-6 TO ALLOW 1 - 15" RCP AND 2 - 18" STEEL PIPES.

PC005

Langley and McDonald
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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject: BERKELEY'S GREEN DRAINAGE CALCULATIONS
Computed By: BLM Checked By:

Project No. 85040
Client: LAND DEVEL. INC.
Date: 6-2-87 Sheet No. 21

CAPACITY OF EXISTING 12" RCP @ 1.8% (~~B-10~~)
(UNDER GREENSPRINGS ROAD NORTH OF ENTRANCE ROAD)

CA = 0.55 t_c = 15 i_2 = 3.9
i_{10} = 5.1
i_{50} = 6.7

Q_2 = 0.55 x 3.9 = 2.1 cfs
Q_{10} = 0.55 x 5.1 = 2.8 cfs
Q_{50} = 0.55 x 6.7 = 3.7 cfs

* FIND HEAD WATER REQ'D TO PASS 10YR Q.

1ST ASSUME INLET CONTROL

HW/D = 1.1 FROM CHART 2 "DRAINAGE MANUAL"

H.W = 1' x 1.1 = 1.1' ABOVE INVERT IN.

ELEV. H.W. = 29.58 + 1.1 = 30.68 ~ 30.7

ELEV. EP. = 31.5

FREEBOAD AT EXISTING 12" RCP TO PASS Q FROM 10YR STORM = 0.8'

2ND ASSUME TAILWATER CONTROL

RECEIVING CHANNEL — VEE DITCH @ 0.2% SLOPE n = 0.035

TAILWATER DEPTH = ~ 1.0 , ELEV. AT INVERT OUT = 1.0 + 29.09 = 30.09

$H = [1 + 0.5 + (29 \times (0.013)^2 \times 27 / 0.5^{1.33})]\ 3.565^2/64.4$

H = 0.36'

ELEV. AT INLET = 30.09 + 0.36 = 30.45

PC005

Langley and McDonald
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VIRGINIA BEACH - WILLIAMSBURG, VIRGINIA

Subject BERKELEY'S GREEN
DRAINAGE CALCULATIONS
Computed By BUM Checked By

Project No. 85040
Client AND DEVEL. INC
Date ~~6-2-87~~ 9-30-87 Sheet No. 22

∴ EXIST 12" RCP OPERATES UNDER INLET CONTROL.

HEAD WATER ELEVATION = 30.7
TAIL WATER ELEVATION = 30.1

PROJECT BERKELEYS GREEN
JOB NO. 85040
DATE 10-7-87 SHEET 23 OF
DESIGN FORMULA Q=CIA FREQ. 10YR

STORM SEWER DESIGN COMPUTATIONS

COMPUTED BY BLM CHECKED BY

LANGLEY AND McDONALD
ENGINEERS·PLANNERS·SURVEYORS
VIRGINIA BEACH, VIRGINIA

LOCATION STREET	LOCATION POINT	AREA ACRES "A"	RUNOFF COEF. "C"	"A" x "C" INCRE.	"A" x "C" ACCUM.	INLET TIME MIN.	RAIN INTEN. INCH	RUNOFF Q CFS	PIPE (DITCH) SIZE	CAPA-CITY CFS	VELO. FT./SEC.	LENGTH FEET	SLOPE FT/FT	FALL FT.	INVERT ELEV. UP	INVERT ELEV. DOWN	REMARKS
PAVED	DITCH		SYSTEM		STORM FREQUENCY =				2YR.								
	B-1	2.1	0.35	0.74	0.74	15	3.9	2.9	0.6	3.9	3.6	370	.007				
	B-2	1.6	0.35	0.56	0.56	15	3.9	2.2	0.4	2.8	5.8	130	.031				
	B-3	1.5	0.35	0.53	0.53	15	3.9	2.1	0.6	2.9	2.7	150	.004				
	B-4	3.0	0.35	1.05	2.88	18	3.6	10.4	0.9	13.6	5.6	240	.010				
		1.1															
PIPE	SYSTEM		STORM FREQUENCY = 10 YR														
	B-5	1.1	0.25	0.28	3.16	18.7	4.7	14.9	18	16.3	8.1	40	2.5%				
	B-6	1.29	0.6	0.77	0.77	5	7.1	5.5	15	6.0	4.3	64	1.0%				
	B-7	1.03	0.6	0.62	1.39	5.2	7.1	9.9	18	10.9	5.4	40	1.0%				
	B-8				4.27	18.8	4.7	20.0	24	22.0	6.2	40	1.0%				
	B-9	FES															

PC005

2009

PC005

Submit by Email | Print Form

James City County Stormwater Division
Stormwater Management / BMP Inspection Report
Detention and Retention Pond Facilities

County BMP ID Code: PC005

Name of Facility: Berkleys Green | BMP No: 1of 2 | Date: Sep 2, 2008

Location: 3436 Wexford Run

Owner Name: Berkleys Green Owners Association

Inspector Name: David Greshamer/Spotswood Johnson

Type of Facility: Detention/Retention Pond Facility

Weather Conditions: Warm/Clear

Type: ☐ Final Inspection ☒ County BMP Inspection Program ☐ Owner Inspection

If an inspection item is not applicable, mark NA, otherwise mark the appropriate column.

O.K - The item checked is in adequate condition and the maintenance program is currently satisfactory. No action required.

Routine - The item checked requires attention, but does not present an immediate threat to the function/integrity of the BMP.

Urgent - The item checked requires immediate attention to keep the BMP operational and to prevent damage to the facility.

Provide an explanation and details in the comment column, if routine or urgent are marked.

Facility Item	O.K.	Routine	Urgent	Comments
Embankments and Side Slopes:N/A				
Grass Height				
Vegetation Condition				
Tree Growth				
Erosion				
Trash & Debris				
Seepage				
Fencing or Benches				
Interior Landscaping/ Planted Areas:	☒ **None**	☐ **Constructed Wetland Shallow Marsh**	☐ **Naturally Established Vegetatation**	
Vegetated Conditions	N/A			
Trash & Debris	N/A			
Floating Material	N/A			
Erosion	N/A			
Sediment	N/A			
Dead Plant	N/A			
Aesthetics	N/A			
Other				

Notes: Area is overgrown with small trees.

PC005

Facility Item	O.K.	Routine	Urgent	Comments
Water Pools:	☐ **Permanent Pool (Retention Basisn)**	☐ **Shallow Marsh (Detention Basin)**	☒ **None, Dry (Detention Basin)**	
Shoreline Erosion	X			
Algae	X			
Trash & Debris	X			
Sediment		X		
Aesthetics		X		
Other				
Inflows (Describe Types/Locations):Concrete Channel				
Condition of Structure	X			
Erosion	X			
Trash & Debris	X			
Sediment		X		
Outlet Protection	X			
Other				
Principal Flow control Structure - Riser, Intake, etc. (Describe Type): 12" RCP/ Manhole				
Condition of Structure	X			
Corrosion	X			
Trash & Debris		X		Trash rack is partially blocked
Sediment	X			
Vegetation	X			
Other				
Principal Outlet Structure - Barrel, conduit, etc.: 12" RCP				
Condition of Structure	X			
Settlement		X		Settlement trench 50% out to Rt. 5
Trash & Debris	X			
Erosion/Sediment	X			
Outlet Protection	X			
Other				
Emergency Spillway (Overflow):N/A				
Vegetation				
Lining				
Erosion				
Trash & Debris				
OTher				

Notes

PC 005

Facility Item	O.K.	Routine	Urgent	Comments
Nuisance Type conditions:				
Mosquito Breeding	X			
Animal Burrows	X			
Graffitti	X			
Other				
Surrounding Perimeter Conditions:				
Land Uses	X			
Vegetation	X			
Trash & Debris	X			
Aesthetics	X			
Access/Maintenance Roads or Paths			X	NONE
Other				

Remarks

BMP is overgrown with small trees
There is no access path
There is sediment build up at intake
Trash Rack is partially blocked
There is a settlement trench about 50% towards the outfall at Rt. 5

Last Inspection was 10/2000

Overall Stormwater Division Internal Rating: 3

Signature

Date Sep 2, 2008

Title Inspector II