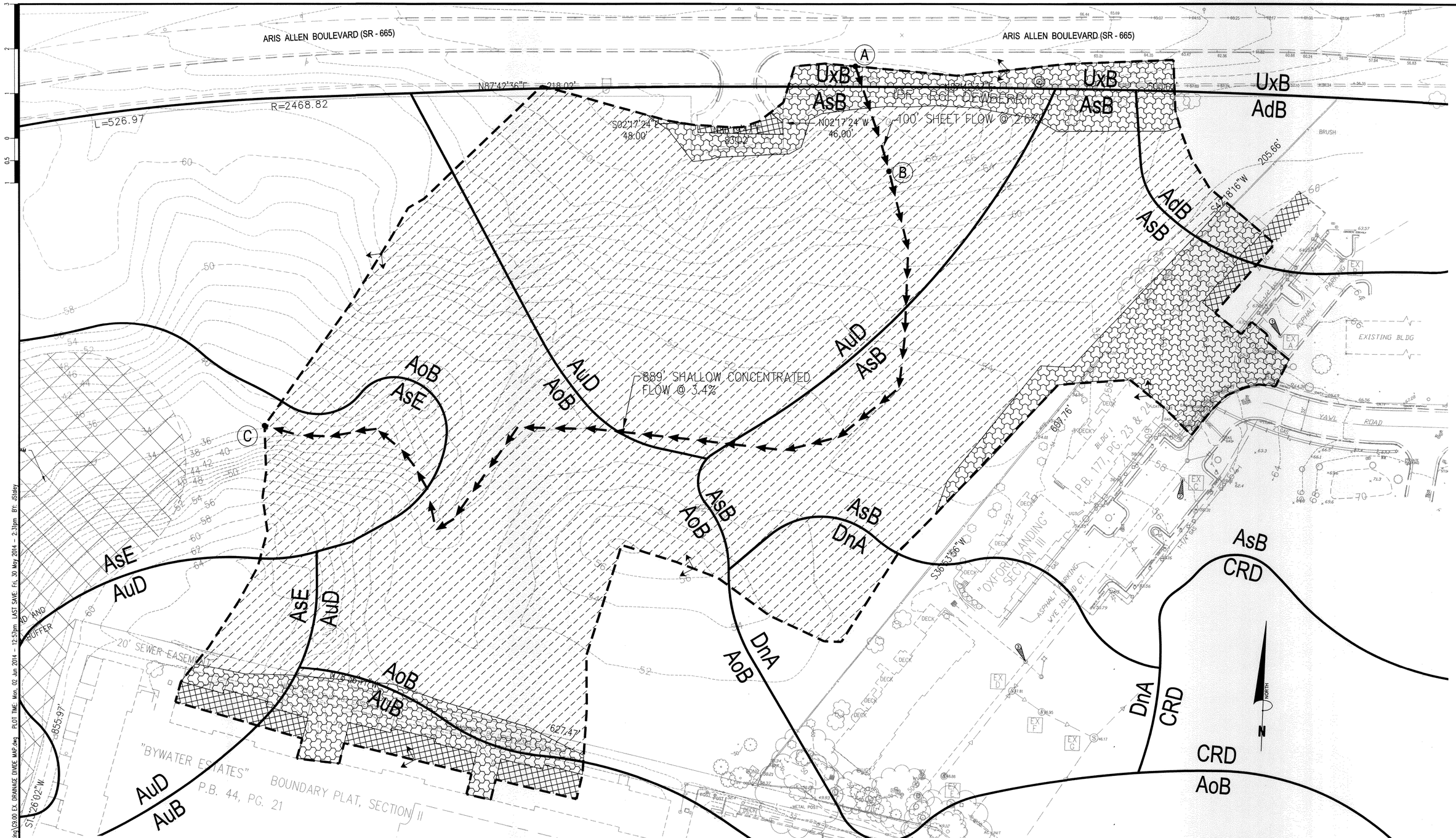

EXISTING DRAINAGE AREA

ACRES = 8.52
IMPERVIOUS ACRES = 0.20
'C' = 0.27
Tc (HOURS) = 0.29

3.2.1 Rational Method

For drainage areas of 2.0 acres or less, Table 3-3 is used:

Table 3-3 – Small Drainage Area Time of Concentration

'C' Factor	TC (minutes)
≥ 0.8	5
0.65-0.79	7
0.40-0.64	10
≤ 0.39	15

RUNOFF COEFFICIENT

"C" FACTORS VALUES
IMPERVIOUS AREA = 0.90
LAWN/OPEN AREA = 0.25

$$"C" = \frac{(0.20 \times 0.90) + (8.32 \times 0.25)}{8.52}$$

"C" = 0.27

TIME OF CONCENTRATION (SMALL DRAINAGE AREAS)

$$Tc = Tt + \frac{L - 100}{60V}$$

L = 989 FT.

Tt FOR THE FIRST 100 FT. = 15 MIN.
(BASED ON A "C" FACTOR OF 0.27. REFER TO TABLE 3-3, LEFT)

V = 7 FPS (FOR AN AVG. DRAINAGE AREA SLOP OF 7% OR LESS)

SOLVING FOR Tc:
Tc = 0.29 HOURS (17.1 MIN.)

LEGEND

IMPERVIOUS
MEADOW
WOODS
SOILS DnA AoB

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

THESE PLANS ARE BASED UPON PLANS TITLED 'ARIS ALLEN BOULEVARD, LLC MIXED RESIDENTIAL' CREATED BY BOWMAN CONSULTING, PORTIONS OF WHICH ARE USED HEREIN.

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NO.	DATE	REVISION	BY

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PROJECT
ARIS T. ALLEN BOULEVARD
RESIDENTIAL PLANNED DEVELOPMENT
PART 1 - LOTS 26 - 31, 47 & 48
6TH ELECTION DISTRICT
CITY OF ANNAPOLIS, MARYLAND
TAX MAP/GRID: 51E/8

STATE OF MARYLAND
PIERO VAN MEULTE
No. 21875
REGISTERED PROFESSIONAL ENGINEER
5/7/14

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
License No.: 21875 Expiration Date: 2/12/16

SHEET TITLE
GRADING PERMIT NO. GRD 14 - 0006
EXISTING DRAINAGE DIVIDE PLAN

PROJECT NO.	130003.01
SCALE	AS SHOWN
DATE	5/30/2014
DRAWN BY	JDS/CLW
CHECKED BY	PVM/TJC
DRAWING NO.	C9.00

25 OF 66 SHTS

FILE NAME: P:\Proj130\130003.01 Aris T. Allen Property\10_Dwgs\CADD\Working\C9.00 EX. DRAINAGE DIVIDE MAP.dwg PLOT TIME: Mon, 02 Jun 2014 - 12:57pm LAST SAVE: Fri, 30 May 2014 - 2:31pm BY: JSlaley