

ROAD CL DATA

LINE DATA:

L1:
BEARING - N66°34'21"W
L = 16.74'

L2:
BEARING - N00°56'53"E
L = 479.21'

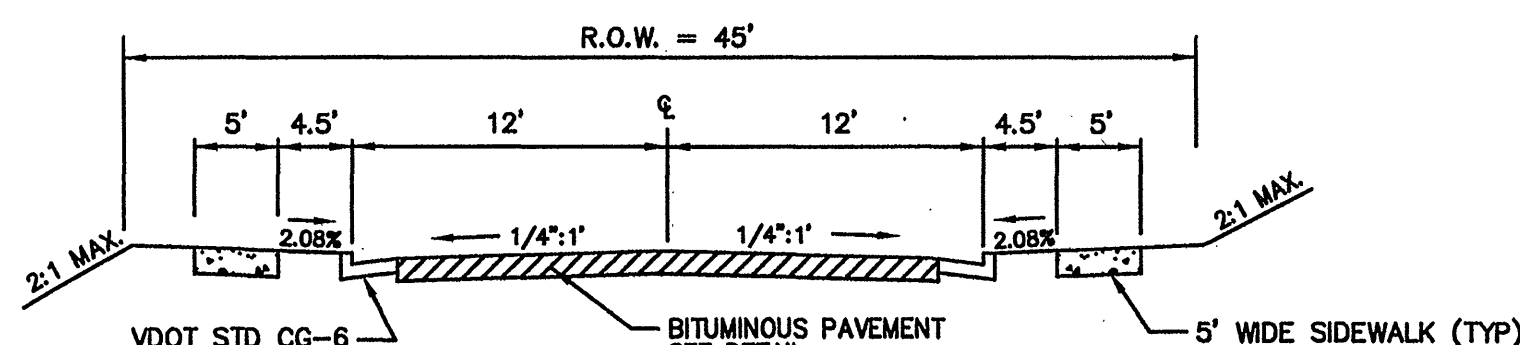
L3:
BEARING - N56°28'40"E
L = 6.17'

CURVE DATA:

C1: R = 200.00'
DELTA = 67°31'14"
T = 133.69'
L = 235.69'
CH = N32°48'44"W
d = 222.29'
PC = 10+16.74
PT = 12+52.43

C2: R = 200.00'
DELTA = 55°31'47"
T = 105.29'
L = 193.84'
CH = N28°42'46"E
d = 186.34'
PC = 17+31.43
PT = 19+25.47

TYPICAL ROAD SECTION



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DESIGN SPEED = 25 MPH
DESIGN ADT = 270

SEE SHEET C-12 FOR PAVEMENT DESIGN
CBR TESTS AND FINAL PAVEMENT SPECIFICATIONS
TO BE PROVIDED TO THE DESIGN ENGINEER FOR
APPROVAL PRIOR TO INSTALLATION

NOTE: G.C. SHALL ENSURE THAT A MINIMUM CLEAR ZONE OF 1' IS MAINTAINED
BETWEEN THE BACK OF CURB AND ANY ABOVE-GROUND UTILITY STRUCTURES.

STORM STRUCTURE SCHEDULE:

- 1 VDOT STD. DI-38
THROAT = 16'
TOP = 1397.31
INV. OUT=1390.0
- 2 27 LF OF 15" N-12
PIPE AT 14.07%
INV. IN =1390.0
INV. OUT=1386.2
- 3 VDOT STD. DI-38B
THROAT = 14'
TOP = 1397.31
INV. IN =1386.2
INV. OUT =1386.1
- 4 30 LF OF 15" N-12
PIPE AT 7.67%
INV. IN =1386.1
INV. OUT=1383.8
- 5 VDOT STD. DI-1
TOP = 1384.5
INV. OUT=1379.5
- 6 80 LF OF 15" N-12
PIPE AT 1.00%
INV. IN =1379.5
INV. OUT=1378.6
- 7 VDOT STD. DI-38B
THROAT = 14'
TOP = 1387.57
INV. IN =1378.6
INV. OUT=1378.5
- 8 VDOT STD. DI-38
THROAT = 12'
TOP = 1384.7
INV. OUT=1380.2
- 9 45 LF OF 15" N-12
PIPE AT 3.56%
INV. IN =1380.2
INV. OUT=1378.6

- 10 81 LF OF 15" N-12
PIPE AT 2.59%
INV. IN =1378.5
INV. OUT=1376.4
- 11 VDOT STD. MH-2
TOP = 1388.0
INV. IN =1383.8 (STR. #4)
INV. IN =1376.4 (STR. #10)
INV. OUT=1376.3
- 12 32 LF OF 24" N-12
PIPE AT 0.94%
INV. IN =1376.3
INV. OUT=1376.0
- 13 62 LF OF 24" RCP
PIPE AT 1.13%
W/ RUBBER GASKET
WATERTIGHT JOINTS
INV. IN =1375.0
INV. OUT=1374.3
- 14 VDOT STD. DI-7
TYPE III GRATE
TOP = 1380.25
INV. IN =1374.3
INV. OUT=1374.2
- 15 55 LF OF 24" N-12
PIPE AT 0.91%
INV. IN =1374.2
INV. OUT=1373.7
- 16 282 LF OF 30" CLASS
V RCP AT 14.96%
INV. IN =1460.2
INV. OUT=1418.0
- 17 VDOT STD. DI-7
TYPE III GRATE
TOP = 1379.0
INV. IN =1373.7
INV. OUT=1373.6
- 18 65 LF OF 24" N-12
PIPE AT 0.92%
INV. IN =1373.6
INV. OUT=1373.0

SANITARY SEWER SCHEDULE:

FROM	INV. IN	TO	INV. OUT	
EX	1299.53	A	1299.62	22'-8" SDR-35 PVC @ 0.41%
A	1299.72	B	1300.19	86'-8" SDR-35 PVC @ 0.41%
B	1300.29	C	1300.56	66'-8" D.I. PIPE @ 0.41%
C	1300.66	D	1300.79	33'-8" D.I. PIPE @ 0.40%
D	1300.89	E	1303.9	83'-8" SDR-35 PVC @ 3.63%
E	1304.0	F	1323.25	190'-8" SDR-35 PVC @ 10.19%
F	1323.35	G	1355.2	276'-8" SDR-35 PVC @ 11.54%
G	1355.3	H	1369.5	208'-8" SDR-35 PVC @ 6.83%
H	1369.6	I	1372.0	102'-8" SDR-35 PVC @ 2.35%
I	1372.1	J	1377.0	66'-8" SDR-35 PVC @ 7.42%
J	1377.1	K	1388.5	84'-8" SDR-35 PVC @ 13.57%
K	1388.6	L	1431.0	276'-8" SDR-35 PVC @ 15.36%
L	1431.1	M	1450.0	192'-8" SDR-35 PVC @ 9.84%
M	1456.1	N	1459.4	122'-8" SDR-35 PVC @ 2.70%

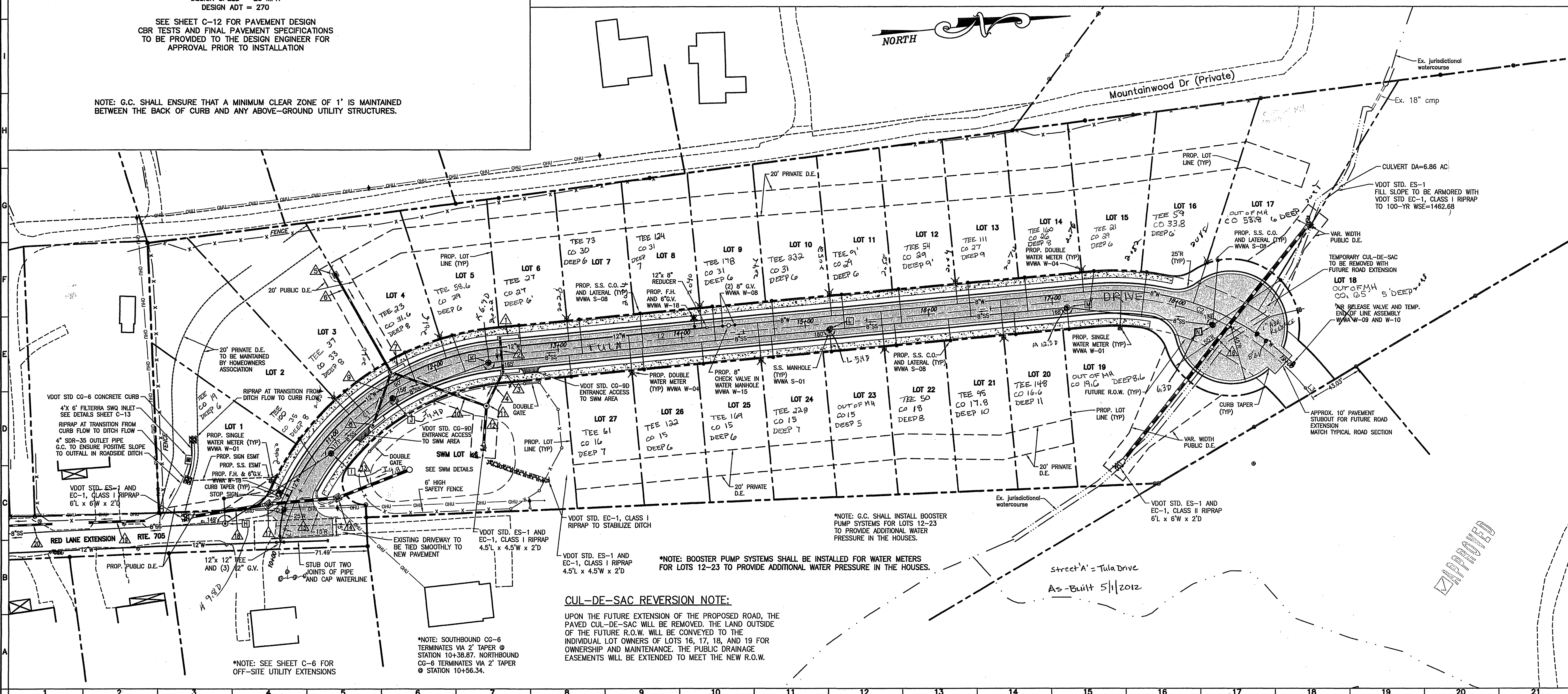
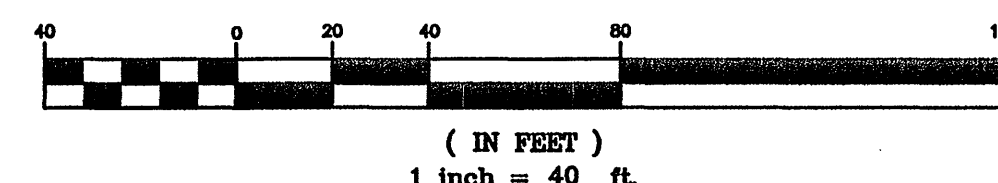
NOTES:

- ALL SANITARY SEWER PIPE SHALL BE SDR-35 PVC PIPE UNLESS OTHERWISE SPECIFIED.
- PROPOSED DUCTILE IRON PIPE SHALL BE PROTECTO 401 CERAMIC EPOXY-LINED DUCTILE IRON PIPE OR EQUIVALENT.
- SEE SHEET C-12 FOR TABLE OF MINIMUM SEWERABLE FINISHED FLOOR ELEVATIONS.
- REFER TO SHEET C-13 FOR CONCEPTUAL OVERLOT GRADING PLAN.

PERMITTING NOTE:

THE NATURAL DRAINAGE COURSE ON-SITE MAY BE JURISDICTIONAL BASED ON THE "PRELIMINARY JURISDICTIONAL DETERMINATION" PROVIDED BY THE U.S. ARMY CORPS OF ENGINEERS, DATED MAY 24, 2010. THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FROM UNITED STATES ARMY CORPS OF ENGINEERS AND/OR DEPARTMENT OF ENVIRONMENTAL QUALITY FOR PROPOSED CULVERT #16 AND FOR THE INSTALLATION OF THE PROPOSED SANITARY SEWER LINE FROM MANHOLE 'C' TO MANHOLE 'D' CROSSING THE EXISTING CREEK. THE G.C. SHALL ENSURE THAT ALL REQUIRED PERMITS ARE IN HAND PRIOR TO ANY DISTURBANCE TO THE EXISTING WATERCOURSES.

GRAPHIC SCALE



CUL-DE-SAC REVERSION NOTE:

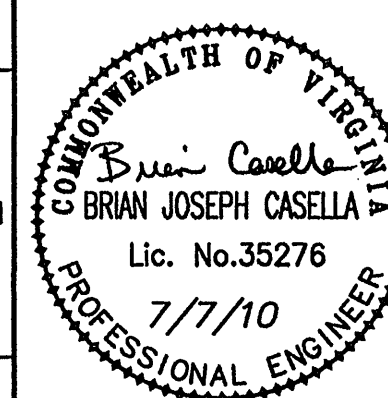
UPON THE FUTURE EXTENSION OF THE PROPOSED ROAD, THE PAVED CUL-DE-SAC WILL BE REMOVED. THE LAND OUTSIDE OF THE FUTURE R.O.W. WILL BE CONVEYED TO THE INDIVIDUAL LOT OWNERS OF LOTS 16, 17, 18, AND 19 FOR OWNERSHIP AND MAINTENANCE. THE PUBLIC DRAINAGE EASEMENTS WILL BE EXTENDED TO MEET THE NEW R.O.W.

New River Valley
Richmond
Roanoke
Shenandoah Valley

RESIDENTIAL LAND DEVELOPMENT ENGINEERING
SITE DEVELOPMENT ENGINEERING
LAND USE PLANNING & ZONING
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WETLAND DELINEATIONS & STREAM EVALUATIONS

Balzer and Associates, Inc.

1208 Corporate Circle
Roanoke, VA 24018
540-772-9580
FAX 540-772-8050



ST. CLAIR GARDENS
LAYOUT & UTILITY PLAN
CATAWBA DISTRICT
ROANOKE COUNTY, VIRGINIA

DRAWN BY CPB
DESIGNED BY CPB
CHECKED BY BJC
DATE 01-08-10
SCALE 1"=40'

REVISIONS:
03-25-10
04-30-10
05-27-10
07-07-10

SHEET NO.

C-4
JOB NO. R0800098.00