

HENDERSON COUNTY
Planning Department

101 East Allen Street • Hendersonville, NC 28792
Phone 828-697-4819 • Fax 828-697-4533

MEMORANDUM

TO: Henderson County Planning Board
FROM: Matt Card, Planner
DATE: January 12, 2007
**SUBJECT: Revised Combined Master Plan and Development Plan Review for The
Boulders at Stoney Mountain Major Subdivision (File # 07-M01)**

PROJECT OVERVIEW

Mr. Peter Brower, owner, through Mr. Eric McAbee with McAbee & Associates, agent, submitted a revised Combined Master Plan and Development Plan application for a major subdivision titled The Boulders at Stoney Mountain. On August 15, 2006 the Planning Board approved the original Combined Master Plan and Development Plan for the subdivision. The subdivision was approved with a total of 42 single-family lots. The project site is located on four (4) parcels of land totaling forty (40) acres off Randy Drive.

The Planning Board approved the subdivision with individual wells and septic systems. Pursuant to Section 170-21, B (3) of the HCSO, the Planning Board made an exception to Section 170-20, B (2) of the HCSO which requires subdivisions to connect to public utilities if it is within a certain distance to the project. According to the revised Combined Master Plan and Development Plan, public water (City of Hendersonville) is located 500 feet from the project along Lyndhurst Drive. Public sewer is located 3,500 feet away from the project site along US Hwy 25.

The applicant is now proposing to extend both public water (City of Hendersonville) and public sewer (Cane Creek Sewer District) to the project site. The applicant will utilize a series of pump stations to extend water and sewer through the site. The applicant has proposed to increase the density of the project to a total of 68 single-family lots. The Plans also show a water tank located at the northwest corner of the project.

The subdivision will be accessed through a small parcel located on Randy Drive (see vicinity map). Private roads are proposed. One alternate turnaround is proposed. Three limited local residential roads, Beryl Lane, Antimony Way and Topaz Trail (portion) are proposed. Slate Way, Topaz Trail and Sunstone Drive are proposed to be collector roads while the remaining roads will be built to private local residential road standards. Some roads will be built with valley gutter (see attached Plan). The project is located in the County's R-15 zoning district which requires a minimum lot size of 15,000 square-feet.

STAFF COMMENTS

Staff has reviewed the submitted revised Combined Master Plan and Development Plan for The Boulders at Stoney Mountain for conformance with the Henderson County Subdivision Ordinance (HCSO) and offers the comments that follow.

Standard Comments

1. **Final Plat Requirements.** The Final Plat(s) must meet the requirements of Appendix 7 of the Subdivision Ordinance.
2. **Private Roads.** Because private roads are proposed, the final plat(s) must contain a note stating: *The private roads indicated on this final plat may not meet the requirements of the North Carolina Department of Transportation for acceptance into the state road system* (HCSO 170-21B and Appendix 7).
3. **Soil Erosion and Sedimentation Control.** The Developer should submit notice from NCDENR that a soil erosion and sedimentation control plan has been received or provide documentation that no plan is required prior to Final Plat approval.
4. **Water and Sewer Approval.** The applicant has proposed public water (City of Hendersonville) and public sewer (Cane Creek Sewer District). According to the HCSO, the applicant must provide evidence that the water supply and sewer system plans have been approved by the appropriate agency. All public or private (community) water supply and sewerage systems shall be installed and shall meet the requirements of the Henderson County Health Department or other government authorities having jurisdiction thereof. The development plan may be approved contingent on final approval from such agencies; however, the final plat shall not be approved until all such final approvals have been obtained. Any subdivision served by a public water system shall meet the respective county or municipality's minimum requirements for fire hydrants installation (HSCSO 170-20). See comment # 6 below regarding availability of sewer to the subdivision.
5. **Road Grade.** A professional engineer or professional land surveyor must certify on the final plat that no portion of private roads have grades that exceed the maximum allowable grade, which is 18 percent grade for paved local residential roads and 16 percent grade for paved collector roads.

Development Plan Comments

6. **Availability of Sewer.** Gary Tweed, County Engineer, and Doyle Freeman, Manager of Cane Creek Sewer Service, submitted comments regarding the availability of sewer service to the project (see attached). The applicant should contact Mr. Tweed and Mr. Freeman for more information. Approval of this project should be contingent upon the applicant successfully obtaining approval of the sewer extension.
7. **Minimum Curve Radius.** All subdivision roads must meet the private road standards found in Section 170-21 of the HCSO. Roads must also meet the standards for minimum curve radius (Section 170-21(F)). It appears that on the Plan some of the curve radii are less than the 90-foot minimum for private local residential roads and the 110-foot minimum for private collector roads. Where the existing cross slope on private local residential roads is 15 percent or greater, a minimum centerline radius of 60 feet shall be permitted. Where the existing cross slope on private collector roads is 15% or greater a

minimum centerline radius of 80 feet is permitted. It appears on the Plan that the applicant is requesting these reductions. The applicant is also requesting to reduce the shoulder widths in certain areas in accordance with Section 170-21, Table 1 of the HCSO. The Final Plat(s) must have a notation that states where the existing cross slope exceeds 15 percent a minimum centerline radius of 60 feet and 80 feet, respectively, are permitted (170-21F of the HCSO). The applicant should also provide a note on the final plat regarding the shoulder reduction.

8. **Collector Road Standards.** The section of Jasper Drive along lot 24 must be built to collector road standards because it appears 25 lots are served by this section of Jasper Drive including lot 24.

Review Agency Comments

9. **Comments from Property Addressing.** See attached comments from the Henderson County Property Addressing office, all road names must be approved before a final plat is approved.
10. **Comments from Zoning Administrator.** See comments from Natalie Berry, Henderson County Zoning Administrator.

STAFF RECOMMENDATION

Staff has found that the proposed revised Combined Master Plan and Development Plan for The Boulders at Stoney Mountain appears to meet the standards of the Henderson County Subdivision Ordinance except for the comments listed above in Staff Comments section of the memorandum. Staff recommends approval of the revised Combined Master Plan and Development Plan subject to the above listed-comments being addressed and the developer addressing any other issues raised by the Planning Board.

PLANNING BOARD ACTION

Suggested Motion

I move that the Planning Board find and conclude that the revised Combined Master Plan and Development Plan complies with the provisions of the Subdivision Ordinance except for those matters addressed in Staff Comments section of the memo that need to be addressed;

AND

I further move that the revised Combined Master Plan and Development Plan be approved subject to the following conditions: the applicant satisfies any conditions that result from the comments listed above and any other conditions that may result from discussion at the Planning Board meeting.

APPOINTMENT OF AGENT FORM (OPTIONAL)

I Peter M. Brower, Trustee owner of property located on Randy Drive
(name) (street name)

recorded in 1267/125 and having a parcel identification number (PIN) of 9660-00-9720
(deed book / page)

located in Henderson County, North Carolina, do hereby appoint ERIC S. McAfee, PLS
(agent's name)

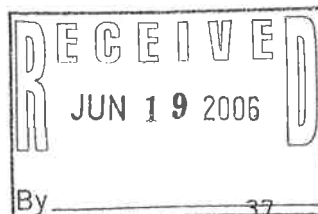
to represent me in an application for subdivision of land and authorize him/her to act as my agent in all matters, formal and informal except as stated herein, and authorize him / her to receive all official correspondence. I however understand that as the listed property owner, I must sign all affidavits and statements required by this Ordinance.

Property Owner

Peter M. Brower, Trustee
Profit Sharing Plan

6-19-06

date



**Henderson County
Planning Department**

101 East Allen Street Hendersonville, North Carolina 28792
Phone (828) 697-4819 Fax (828) 697-4533

August 16, 2006

Mr. Eric Mcabee
Mcabee & Associates
3 Mcabee Trail
Fairview, NC 28730

**Re: Combined Master Plan and Development Plan for The Boulders at Stoney Mountain
Major Subdivision (Subdivision File # 2006-M30)**

Dear Mr. Mcabee:

This letter confirms the conditional approval from the Henderson County Planning Board on August 15, 2006 of the Combined Master Plan and Development Plan for The Boulders at Stoney Mountain. The plan is approved subject to completion of the following conditions:

1. **Minimum Curve Radius.** All subdivision roads must meet the private road standards found in Section 170-21 of the HCSO. Roads must also meet the standards for minimum curve radius (Section 170-21(F)). It appears that on the Plan some of the curve radii are less than the 90-foot minimum for private local residential roads and the 80-foot minimum for private collector roads. In areas where the cross slope does not exceed 15 percent the centerline curve radii must comply with the minimum of 90 feet for local residential roads and 110 feet for collector roads. Where the existing cross slope on private local residential roads is 15 percent or greater, a minimum centerline radius of 60 feet shall be permitted. Where the existing cross slope on private collector roads is 15% or greater a minimum centerline radius of 80 feet is permitted. The Final Plat(s) must have a notation that states where the existing cross slope exceeds 15 percent a minimum centerline radius of 60 feet and 80 feet, respectively, are permitted (170-21F of the HCSO).
2. **Collector Road Standards.** The section of road between Sunstone Drive and Slate Way must be built to collector road standards because it appears that more than 24 lots are served by this section of road. It is unclear on the Plan which category of private road standards this section will be built to and the road name for this section of road.
3. **Turnarounds.** It is unclear, but it appears that Feldspar Lane is over 300 feet in length. According to Section 170-21, H of the HCSO, vehicle turn around areas shall be provided at the end of all dead-end roads that exceed 300 feet. The applicant's agent stated at the Planning Board meeting that the length of the road was less than 300 feet. No additional conditions were made by the Planning Board.
4. **Road Grade.** A professional engineer or professional land surveyor must certify on the final plat that no portion of private roads have grades that exceed the maximum

allowable grade, which is 18 percent grade for paved local residential roads and 16 percent grade for paved collector roads.

5. **Water and Sewerage Systems.** According to Section 170-20, B(1) of the Subdivision Ordinance, a subdivision shall be required to connect to a public water supply system when the subdivision is located within a distance from the existing water system equal to the product of 100 feet multiplied by the number of lots proposed for the subdivision. According to the Plan the project site is located within 1100 feet of the nearest public water line (City of Hendersonville). According to Section 170-20, B(2) of the Subdivision Ordinance, a subdivision shall be required to connect to a public sewer system when the subdivision is located within a distance equal to the product of 50 feet multiplied by the number of proposed lots; however, the maximum distance required for connection shall be 2,500 feet. According to the Plan, the project site lies within 3,500 feet of the nearest public sewer line (City of Hendersonville). **The applicant will not be required to connect to the public sewer line.** Section 170-21, B(3) states that exceptions to connecting to public water may be allowed on the basis of terrain, availability of acquiring easements, denial of allocation by the public utility, insufficient capacity of the public system or other circumstances which are unusual or unique to the site. The Planning Board recommended to the Planning Department that the requirement of connecting to public water be waived pursuant to Section 170-20, B(3) of the HCSO. Based on the Planning Board's recommendation, the topography of the land and cost associated with extending to public water, Planning Staff has determined that it is not economically feasible for the Boulders at Stoney Mountain to connect to the public water system and is therefore waiving this requirement. **The applicant will not be required to connect to the public water line.**
6. **Final Plat Requirements.** The Final Plat(s) must meet the requirements of Appendix 7 of the Subdivision Ordinance.
7. **Private Roads.** Because private roads are proposed, the final plat(s) must contain a note stating: *The private roads indicated on this final plat may not meet the requirements of the North Carolina Department of Transportation for acceptance into the state road system (HCSO 170-21B and Appendix 7).*
8. **Soil Erosion and Sedimentation Control.** The Developer should submit notice from NCDENR that a soil erosion and sedimentation control plan has been received or provide documentation that no plan is required prior to Final Plat approval.
9. **Comments from Property Addressing.** All road names must be approved by the Property Addressing office before a final plat is approved by the Planning Department.
10. **Review Agency Comments.** The Planning Board made no other additional conditions based on the review agency comments.

Upon completion of these conditions, (except those that do need to be satisfied until the Final Plat is submitted) the applicant may proceed with the establishment of erosion and sedimentation

control measures, clearing and other land improvement activities associated with the project. Development Plan approval shall be valid for two years, however, for just cause, the Planning Board may grant extensions of development plan approval for a maximum of one additional year. All improvements must be completed within the two year approval period unless an extension is granted. After completion of the infrastructure improvements (unless an improvement guarantee is posted with Henderson County) and the conditions of approval, the Final Plat for the subdivision may be approved administratively by the Planning Department, subject to Section 170-16D and 170-38 (if an improvement guarantee is posted with Henderson County) of the Subdivision Ordinance. If you have any questions or if I can be of any further assistance, please contact me at 697-4532.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Card". The signature is fluid and cursive, with the first name "Matt" being more prominent than the last name "Card".

Matt Card, Planner
Henderson County Planning Department

Matthew Card

From: Gary Tweed [ctyeng@henderson.lib.nc.us]
Sent: Thursday, January 04, 2007 10:28 AM
To: Matthew Card
Cc: Doyle Freeman
Subject: Fw: Review Agency Letters
Attachments: Boulders at Stoney Mtn.pdf; Soapstone Creek Estates.pdf

Matt, I have not comment on Soapstone Estates Project. On Boulders at Stoney Mountain the cover states that the developer plans to extend public sewer from the Cane Creek Water and Sewer District. There are no gravity sewer line in the area. The closest Cane Creek Line is a force main that is on US Highway 25. The long range plan for Cane Creek is to eliminate this force main by extending the interceptor up Mud Creek to the Mountain Home Industrial Park. So I do not know that Cane Creek Sewer will be available for this project. Developer should contact either Doyle Freeman at the Utilities office or my office.

Thanks

Gary T. Tweed, P.E.
 County Engineer
 Henderson County
 802 Stoney Mountain Road
 Hendersonville, N.C. 28791
 828-698-5115

----- Original Message -----

From: Kathleen Scanlan
To: Seth Swift ; spage@henderson.k12.nc.us ; carey@hendersoncountync.org ; saml@hendersoncountync.org ; rhyder@hendersoncountync.org ; ctyeng@hendersoncountync.org ; nberry@hendersoncountync.org ; bblaine@henderson.k12.nc.us ; bcaldwell@henderson.k12.nc.us ; cgriffin@hendersoncountync.org ; laynetb@hendersoncountync.org ; don.holebrooks@ncmail.net ; laurie.moorhead@ncmail.net ; autumnr@hendersoncountync.org ; ctyeng@hendersoncountync.org ; dfreeman@hendersoncountync.org ; number44@hotmail.com
Sent: Thursday, January 04, 2007 9:36 AM
Subject: FW: Review Agency Letters

Please review and send your comments to :
 Matt Card at mscard@hendersoncountync.org
 Thank You.

Kathleen Scanlan, Administrative Assistant
 Henderson County Planning Department
 Phone: 828-697-4819, Ext. 1051
 Fax: 828-697-4533
kscanlan@hendersoncountync.org

Matthew Card

From: Doyle Freeman [dfreeman@hendersoncountync.org]
Sent: Friday, January 05, 2007 2:22 PM
To: Matthew Card
Cc: Gary Tweed; Trevor McMinn
Subject: RE: Boulders At Stoney Mountain

From: Doyle Freeman [mailto:dfreeman@hendersoncountync.org]
Sent: Friday, January 05, 2007 2:20 PM
To: 'Doyle Freeman'
Cc: Gary Tweed (ctyeng@hendersoncountync.org); Trevor McMinn (tmcminn@hendersoncountync.org)
Subject: RE: Boulders At Stoney Mountain

Matt:

Re: Boulders at Stoney Mountain

Concerning sewer service for the above referenced project, capacity shouldn't be an issue. What the developer needs to be aware of as Gary stated is that we plan to build a gravity sewer line up to the Mtn. Home Industrial Park, thus eliminating the pump station/force main. The developer of course would pay the CCWSD capacity depletion fees and any impact fees the City of Hendersonville may require, also an additional facility fee would have to be paid to Metropolitan Sewerage District of Buncombe when the gravity sewer line to Mtn. Home is built and the wastewater flows are diverted to MSD for treatment. Currently this fee is \$1,300,00 per residential unit and I'm sure will be increasing yearly. There is also the issue that a pump station would need to be built somewhere along Hwy. 25 to pump back to the proposed Mtn. Home gravity system. The developer will have to construct a pump station/force main to even connect to the existing CCWSD sewer system, which he would have to own and maintain. This would be a private system that would serve only this subdivision. The sewer use ordinance would prohibit properties along the force main route to connect to the system serving this proposed development.

If you have any questions, please let me know.

Thanks,
Doyle

Note:

I just received a sewer service request from Gary Davis, P.E., for the project. Gary says the developer doesn't want to pay our capacity depletion fees (\$10,200.00) at this time until he knows if the project will be approved. I informed Gary Davis that a wastewater allocation could not be secured from The City of Hendersonville until our fees were paid, but would let you know that at least we had received the application for sewer service. As of now sewer service has not been approved and may not be available.

Doyle

1/5/2007

HENDERSON COUNTY PLANNING DEPARTMENT

REVIEW AGENCY RESPONSE FORM

I have reviewed the plan(s) for subdivision application #2007-M01 (Boulders at Stoney Mountain) and offer the following comments:

Only Gannett Ridge & Feldspar Dr
are only reserved names all other
need to be changed

(If necessary use back of form or additional sheets for comments)

Reviewed By [Signature]

Agency Prop Add

Date 11-07

Please Return to:

Matt Card, Planner
Henderson County Planning Department
101 East Allen Street
Hendersonville, NC 28792
mscard@hendersoncountync.org

File No. 2007-M01

HENDERSON COUNTY PLANNING DEPARTMENT

REVIEW AGENCY RESPONSE FORM

I have reviewed the plans for subdivision application #2007-M01 (Boulders at Stoney Mountain) and offer the following comments:

Zoning District = R-15 Acreage = 39.922 Acres/43,560 square feet = 1738915.20 square feet/15,000 square feet = 115.93 lots allowed. Developer proposes 68 lots. Zoning Ordinance allows for such density.

Water Supply Watershed District = N/A

Special Flood Hazard Area = N/A

Minimum Lot Area (sq. ft.)	Minimum Lot Area Per Dwelling (Family) Unit (sq. ft.)	Maximum Building Height (ft.)	Minimum Front Yard Setback From Center Line of Street		Minimum Yards	
			Major ¹ (ft.)	All Others (ft.)	Side (ft.)	Rear (ft.)
15,000	15,000 (1 family) 7,500 (2 or more families)	35	75	50	15	15

NOTES:

¹ Where the major street is more than two lanes, including parking lanes, setback requirements shall be measured and begin at a point on the pavement 12 feet from the edge of the paved street abutting the property in subject.

(If necessary use back of form or additional sheets for comments)

Natalie J. Berry

Reviewed By

Zoning Administration

Agency

1/5/2007

Date

Please Return to:

Matt Card, Planner
Henderson County Planning Department
101 East Allen Street
Hendersonville, NC 28792
mcard@hendersoncountync.org

File No. #2007-M01

HENDERSON COUNTY SUBDIVISION APPLICATION FORM

12-15-2006

Date of Application

The Boulders At Stoney Mountain

Subdivision Name

2007-M01

Application Number

☒ Major Subdivision☐ Minor Subdivision☐ Other

Property Owners Name: Peter Brower

Address: 6808 Via Regina

City, State, Zip: Boca Raton, FL 33433

Owner's Agent: ERIC McAbec, PLS

Telephone No: (828) 628-1295

PIN 9660-00-9720 9660-10-5766
9660-11-3349

Deed Book/Page 1267/122, 1267/125, 1267/128

Zoning District R-15 Fire District Mountain Home Watershed None

Location Henderson County

of

property

to

be

divided: Randy Drive (SR 2033)

Type of Subdivision: ☒ Residential () Commercial () Industrial Present Use Underdeveloped Woodlands

No. Lots Created 68 Original Tract Size 40 Ac. New Tract Size No. New Lots 68

Road System: () Public ☒ Private () Combination Public and PrivateWater System: () Individual () Community ☒ MunicipalSewer System: () Individual () Community ☒ Municipal

Fee: \$ 400

Paid

Method

I certify that the information shown above is true and accurate and is in conformance with the Henderson County Subdivision Ordinance.

Eric S McAbec
APPLICANT (OWNER OR AGENT)12/15/2006
DATE

Development

Plan

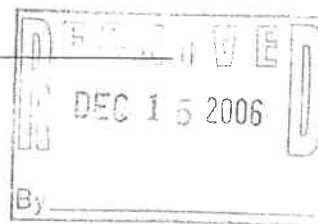
Approval

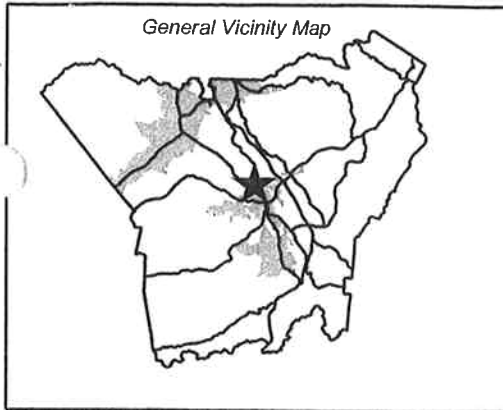
/

Conditions

Final Plat Approval:

Plat Recorded





The Boulders at Stoney Mountain

PROPERTY OWNERS: Mr. Peter Brower
 DEVELOPER/AGENT: McAbee & Associates
 ZONING: R-15
 WATERSHED: None
 WATER SYSTEM: Individual
 SEWER SYSTEM: Individual
 ROAD SYSTEM: Private

LEGEND

- Roads
- Parcels
- Surface Water
-  The Boulders at Stoney Mountain



NOTES:

- 1) THIS PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE PER FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NUMBER 370125-0005 B, EFFECTIVE DATE MARCH 1, 1982.
- 2) PROPERTY SUBJECT TO ALL RIGHTS-OF-WAY AND EASEMENTS OF RECORD, INCLUDING, BUT NOT LIMITED TO, THOSE SHOWN HEREON.
- 3) SURVEYOR WAS NOT PROVIDED WITH A LEGAL TITLE SEARCH. THERE MAY EXIST EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS PERTINENT TO THIS PROPERTY THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE THAT ARE NOT SHOWN ON THIS SURVEY.
- 4) SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT SURVEYED OR CONSIDERED AS PART OF THIS SURVEY. NO EVIDENCE OR STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONDITIONS, CONTAINERS, OR FACILITIES THAT MAY AFFECT THE USE OF THIS PROPERTY.
- 5) ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES. THE COMBINED GRID FACTOR IS 0.99976366.
- 6) AREAS BY COORDINATE COMPUTATION.
- 7) SUBJECT PROPERTY IS SPLIT ZONED (AS SHOWN). HENDERSON COUNTY ZONING CLASSIFICATION IS R-15. CITY OF HENDERSONVILLE ZONING CLASSIFICATION IS R-20.
- 8) SUBJECT PROPERTY PINS: 0600-11-4780, 0600-11-3348, 0600-00-8720, & 0600-00-5848.
- 9) THE TATHAM FARM PROPERTY (PIN 0600-00-8720) SHOWN HEREON IS SUBJECT TO A RIGHT OF EASEMENT AND INGRESS AND EGRESS TO AND FROM A SPRING, SITUATED ON THE TATHAM FARM PROPERTY, ALONG WITH A RIGHT OF WAY TO SAID SPRING PER DB 450 PG 313.
- 10) THE TATHAM FARM PROPERTY (PIN 0600-00-8720) SHOWN HEREON RESERVES A RIGHT OF WAY OVER THE EAST LINE OF THE MCCOY PROPERTY (PIN 0600-00-8284) PER DB 450 PG 313.
- 11) TOPOGRAPHICAL INFORMATION SHOWN HEREON PERFORMED BY PHOTOGRAMMETRIC SURVEY METHODS AND PROVIDED BY: TRIANGLE AERIAL SURVEYS INC. 4208 SIX FORDS ROAD SUITE 257 RALEIGH, N.C. 27609 CONTACT: AL BOLIVAR PE, PLS, CP
- 12) AREAS MARKED "SEE NOTE 12" WERE OBTAINED DUE TO DENSE VEGETATION.

LEGEND:

- DB = DEED BOOK
DB = DEED BOOK
PG = PAGE
R/W = RIGHT-OF-WAY
P- = OVERHEAD POWER LINE
REF = RESURF. FOUND
IPN = IRON PIN FOUND
LPIE = IRON PIPE FOUND
R/S = REBAR SET
PKS = PK NAIL SET
C.OAK = CHESTNUT OAK
UNMARKED POINT
F/L = FENCE LINE
PGB = POINT OF BEGINNING
R/W MON. = R/W MONUMENT
H.C. = HENDERSON COUNTY
APX. = APPROXIMATE
TREE LINE

REFERENCES:

- DB 604 PG 53
DB 418 PG 685
DB 515 PG 413
DB 450 PG 313
DB 604 PG 53
DB 880 PG 721
DB 840 PG 528
DB 1007 PG 708
DB 784 PG 253
DB 582 PG 425
DB 520 PG 77
DB 1080 PG 674
DB 584 PG 331
DB 678 PG 286
DB 480 PG 383
DB 501 PG 277
DB 887 PG 317
PLAT SLIDE 1998
PLAT SLIDE 3328
PLAT SLIDE 3748
PLAT SLIDE 78

LINE	LENGTH	BEARING
L1	0.90	N45°30'20"E
L2	14.44	N72°41'11"E
L3	31.62	N69°54'38"E
L4	23.66	N62°22'13"E
L5	12.42	S10°33'29"E
L6	42.20	N18°48'20"E
L7	42.47	S41°42'18"E
L8	70.10	N10°53'12"E
L9	52.01	N52°28'12"E
L10	33.75	N25°27'20"E
L11	21.67	N18°22'11"E
L12	16.95	N19°38'30"W
L13	29.16	N09°23'11"E
L14	73.44	N58°38'54"W
L15	23.45	N69°35'13"W
L16	49.20	N75°00'20"W
L17	22.32	S65°26'18"W
L18	38.62	S85°31'11"W
L19	40.72	N80°58'30"W
L20	61.48	S81°23'22"W
L21	49.48	S55°47'20"W
L22	37.63	N69°22'01"W

5' EAST OF AND WITH CL BRANCH (PER DB 450 PG 286 & DB 450 PG 313)

WITH CL ROAD BED (PER DB 416 PG 585 & DB 515 PG 413)

PIN: 0600-00-1070
ROBERT LEE MILLER
DB 580 PG 585

PIN: 0600-01-2183
OLLIE OLA MCCARLEY
DB 501 PG 277

PIN: 0600-01-4785
JOHN E. JENKINS
MERCEDES JENKINS
DB 085 PG 108
PLAT SLIDE 1008

PIN: 0600-01-8734
THE BAYLESS CORPORATION
PLAT SLIDE 1008

PIN: 0600-12-1084
RUTH E. LANE
DB 587 PG 317

PIN: 0600-11-4800
SHIRLEY J. MC FALLS
TILLIE E. GOFF
DB 1114 PG 188

Common Area
0.044 ACRES
(1004 SQ. FT.)

TOTAL AREA OF SURVEY
39.922 ACRES

PIN: 0600-22-8750
DAVID L. BAYLESS
NANCY BAYLESS
DB 600 PG 721

PIN: 0600-11-7804
DAVID L. BAYLESS
NANCY BAYLESS
PLAT SLIDE 3320

PIN: 0600-11-8453
DAVID L. BAYLESS
NANCY BAYLESS
PLAT SLIDE 3328

PIN: 0600-11-6242
DAVID MICHAEL BAYLESS
BETH BAYLESS SHEFFIELD
MELINDA BAYLESS QUINN
DB 1084 PG 237
PLAT SLIDE 3320

PIN: 0600-11-0054
DAVID MICHAEL BAYLESS
BETH BAYLESS SHEFFIELD
MELINDA BAYLESS QUINN
DB 1011 PG 596
PLAT SLIDE 3328

PIN: 0600-20-1800
ILENE S. MORTON
DB 840 PG 520

PIN: 0600-10-8780
FRED HIGGINS
SUZANNE STIFFLER HIGGINS
DB 1007 PG 758
PLAT SLIDE 78

PIN: 0600-10-3123
ANN STEPP
DB 682 PG 425

PIN: 0600-10-5158
ANN STEPP
DB 528 PG 77

PIN: 0600-10-1034
RANDALL ELLIS LANNING
DB 1000 PG 874

PIN: 0600-00-0071
JOHN L. HACKNEY
WANDA HACKNEY
TR. 1 - PLAT SL. 3748

PIN: 0600-00-0088
JOHN L. HACKNEY
WANDA HACKNEY
TR. 2 - PLAT SL. 3748

PIN: 0600-00-5985
RANDALL ELLIS LANNING
DB 584 PG 381

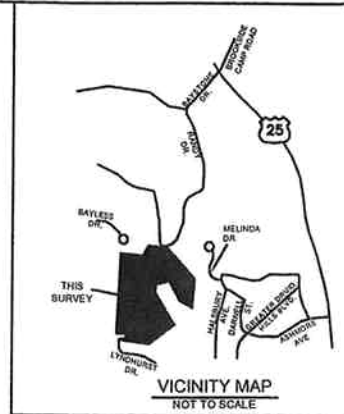
PIN: 0600-00-0984
FREDERICK PHILLIPS MCCOY
DB 810 PG 286
BACK REF. DB 450 PG 383

BARN ENCROACHES

PROJECT SUMMARY
Total Project Area = 39.922 Acres
Number of Proposed Lots = 68
Minimum Lot Size = 0.344 Acres (15,000 Sq. Ft.)
Maximum Lot Size = 0.870 Acres (42,512 Sq. Ft.)
Length of Proposed Private Roads = 7657 LF
Water System: Public
Sewer System: Public
Distance to Public Water System = 600'
Distance to Public Sewer System = 3500'
Current Zoning Classification: R-15
Front Building Setback = 50'
Side Building Setback = 10'
Rear Building Setback = 15'
Perennial Seasonal Acreage: None

SCALE 1" = 100'

DEC 1 2 2000



McAbee & Associates, PA
Professional Land Surveyors
Wallace S. McAbee, PLS
Eric S. McAbee, PLS
3 McAbee Trail
Fairview North Carolina, 28750
(828) 626-1256
(828) 626-1294
Fax (828) 626-1294

Site Plan for:

The Boulders
@ Stoney Mountain

HENDERSONVILLE TOWNSHIP
HENDERSON COUNTY, N.C.

PIN# 0600-00-9720

C1

Date: 06-10-00
Drawn By: ESM
Checked By: ESM
Scale: 1" = 100'

THE BOULDERS AT STONEY MOUNTAIN

HENDERSON TOWNSHIP, HENDERSON COUNTY

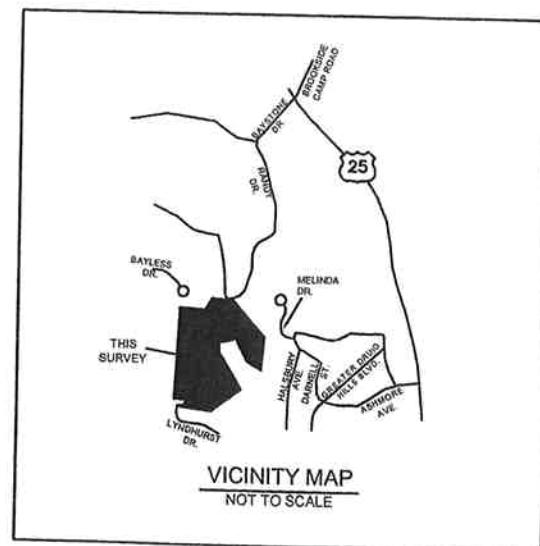
NORTH CAROLINA

DECEMBER 2006

COMBINED MASTER AND DEVELOPMENT PLAN

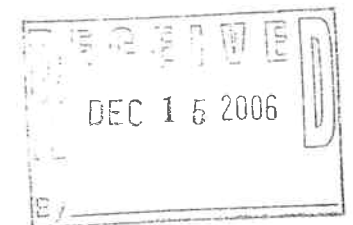
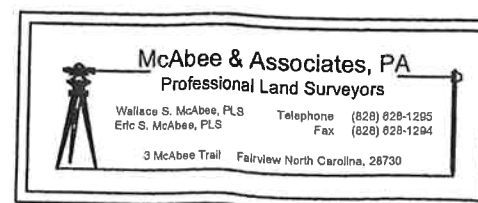
SHEET INDEX

C1	SITE PLAN
C2	SITE GRADING PLAN
C3	STORM WATER/EROSION CONTROL PLAN
C4	STORM WATER/EROSION CONTROL PLAN
U1	UTILITY PLAN
U2	UTILITY PLAN
RP1	VERTICAL ROAD PROFILES
RP2	VERTICAL ROAD PROFILES
RT1	TYPICAL ROAD SECTIONS
RT2	TYPICAL ROAD SECTIONS
RT3	TYPICAL ROAD SECTIONS
D1	EROSION CONTROL DETAILS
D2	STORM WATER STRUCTURES TABLES
D3	EROSION CONTROL/STORMWATER DETAILS
D4	WATER SYSTEM DETAILS



BEFORE YOU DIG

CALL 1-800-632-4949
N.C. ONE CALL CENTER
IT'S THE LAW!



OWNER/DEVELOPER:

PETER BROWER
6808 VIA REGINA
BOCA RATON, FL 33433
561-212-7319

LAND PLANNER &
LAND SURVEYOR

MCABEE & ASSOCIATES
3 MCABEE TRAIL
FAIRVIEW, NC 28730
828-628-1295
CONTACT: ERIC MCABEE

NOTES:

- 1) THIS PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE PER FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NUMBER 170125-0005 B, EFFECTIVE DATE MARCH 1, 1992.
- 2) PROPERTY SUBJECT TO ALL RIGHTS-OF-WAY AND EASEMENTS OF RECORD, INCLUDING, BUT NOT LIMITED TO, THOSE SHOWN HEREON.
- 3) SURVEYOR WAS NOT PROVIDED WITH A LEGAL TITLE SEARCH. THERE MAY EXIST EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS PERTINENT TO THIS PROPERTY THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE THAT ARE NOT SHOWN ON THIS SURVEY.
- 4) SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT SURVEYED OR CONSIDERED AS PART OF THIS SURVEY. NO EVIDENCE OR STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONDITIONS, CONTAINERS, OR FACILITIES THAT MAY AFFECT THE USE OF THIS PROPERTY.
- 5) ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES. THE COMBINED GRID FACTOR IS 0.99978369.
- 6) AREAS BY COORDINATE COMPUTATION.
- 7) SUBJECT PROPERTY IS SPLIT ZONED (AS SHOWN). HENDERSON COUNTY ZONING CLASSIFICATION IS R-15. CITY OF HENDERSONVILLE ZONING CLASSIFICATION IS R-20.
- 8) SUBJECT PROPERTY PINS: 0660-11-4765, 0660-11-3348, 0660-10-9723, & 0660-10-5646.
- 9) THE TATHAM FARM PROPERTY (PIN 0660-00-8720) SHOWN HEREON IS SUBJECT TO A RIGHT OF EASEMENT AND INGRESS AND EGRESS TO AND FROM A SPRING, SITUATED ON THE TATHAM FARM PROPERTY, ALONG WITH A RIGHT OF WAY TO SAID SPRING PER DB 456 PG 313.
- 10) THE TATHAM FARM PROPERTY (PIN 0660-00-8720) SHOWN HEREON RESERVES A RIGHT OF WAY OVER THE EAST LINE OF THE MOODY PROPERTY (PIN 0660-00-8284) PER DB 459 PG 313.
- 11) TOPOGRAPHICAL INFORMATION SHOWN HEREON PERFORMED BY PHOTOGRAMMETRIC SURVEY METHODS AND PROVIDED BY: TRIANGLE AERIAL SURVEYS INC. 4208 SOK FORDS ROAD SUITE 257 RALEIGH, N.C. 27609 CONTACT: AL BOLIVAR PE, PLS, CP
- 12) AREAS MARKED "SEE NOTE 12" WERE OBSERVED DUE TO DENSE VEGETATION.

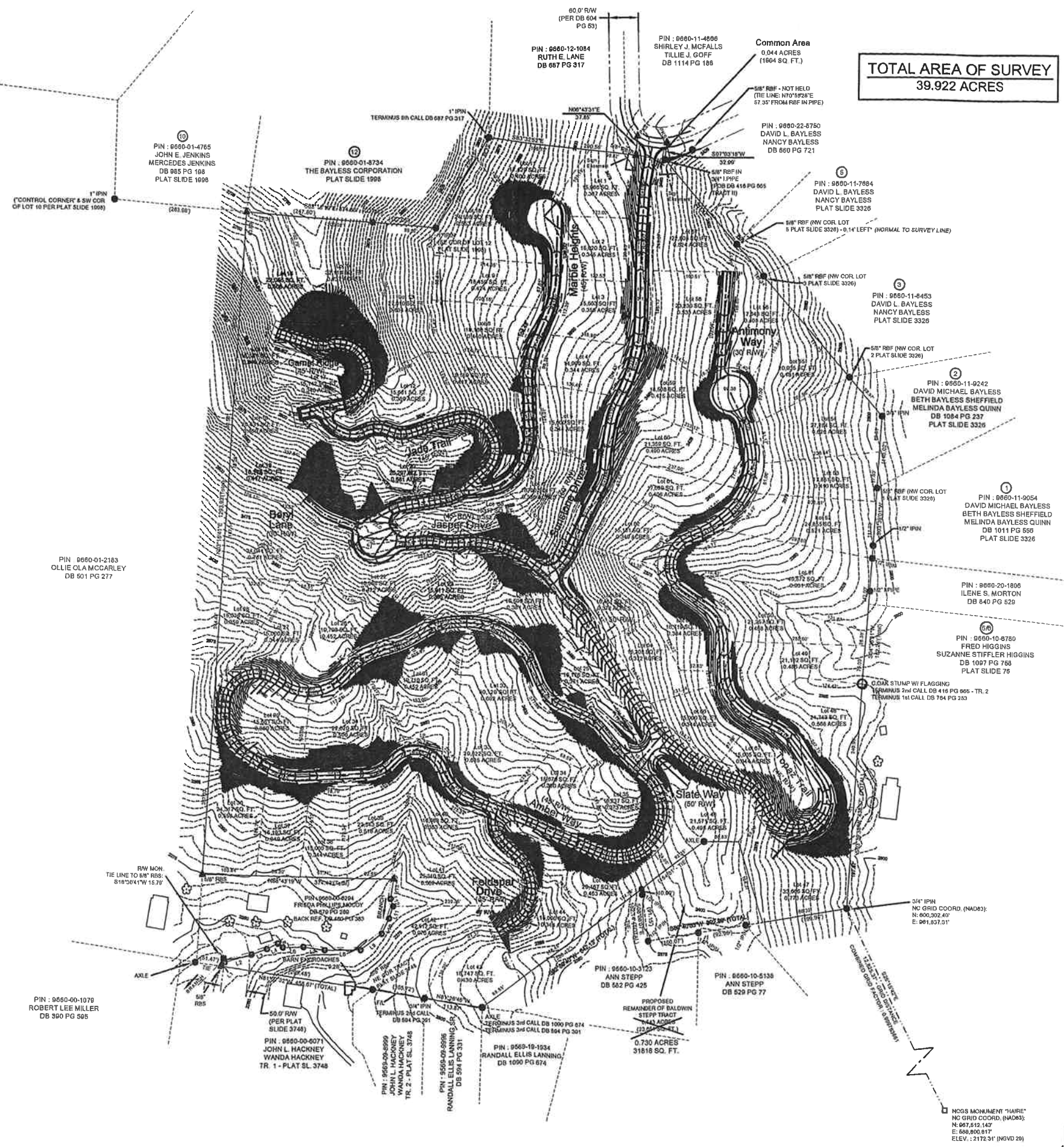
LEGEND:

- DB ... DEED BOOK
- DB ... DEED BOOK
- PO ... PAGE
- R/W ... RIGHT-OF-WAY
- P ... OVERHEAD POWER LINE
- RF ... REBAR FOUND
- IPN ... IRON PIN FOUND
- LIPE ... IRON PIPE FOUND
- RBS ... REBAR SET
- PGS ... PK NAIL SET
- COAK ... CHESTNUT OAK
- UNMARKED POINT
- F/L ... FENCE LINE
- POB ... POINT OF BEGINNING
- R/W MON ... R/W MONUMENT
- H.C. ... HENDERSON COUNTY
- APPRX ... APPROXIMATE TREE LINE
- TW ... TOP OF WALL ELEVATION
- BW ... BOTTOM OF WALL ELEVATION
- HP ... HIGH POINT
- LP ... LOW POINT

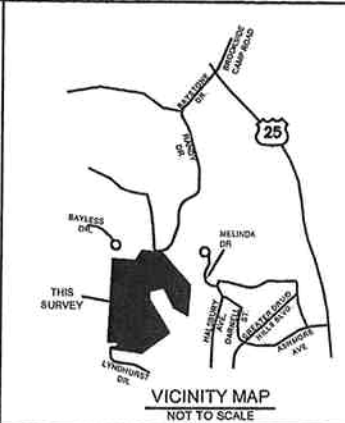
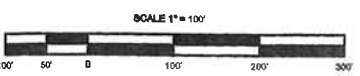
LINE	LENGTH	BEARING
L1	5.99	N44°09'20"E
L2	54.44	N72°41'31"E
L3	31.62	N59°54'50"E
L4	23.55	N82°22'13"E
L5	12.42	S30°53'20"E
L6	40.20	N48°46'20"E
L7	42.47	S51°42'13"E
L8	70.10	N48°03'13"E
L9	52.01	N52°38'12"E
L10	33.35	N25°27'30"E
L11	24.67	N18°32'01"E
L12	15.62	N19°25'30"W
L13	26.16	N09°23'11"E
L14	73.44	N55°38'54"W
L15	33.45	N55°35'13"W
L16	46.20	N70°00'30"W
L17	22.22	S19°26'18"W
L18	36.62	S40°31'11"W
L19	40.73	N80°55'30"W
L20	66.48	S81°22'27"W
L21	46.49	S69°47'33"W
L22	37.83	N69°22'01"W

5' EAST OF AND WITH CL BRANCH (PER DB 450 PG 289 & DB 459 PG 313)

WITH CL ROAD BED (PER DB 418 PG 665 & DB 515 PG 413)



PROJECT SUMMARY
 Total Project Area = 39.922 Acres
 Number of Proposed Lots = 68
 Minimum Lot Size = 0.344 Acres (15,000 Sq. Ft.)
 Maximum Lot Size = 0.976 Acres (42,512 Sq. Ft.)
 Length of Proposed Private Roads = 7657 LF
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 Current Zoning Classification: R-15
 Front Building Setback = 50'
 Side Building Setback = 15'
 Rear Building Setback = 15'
 Perennial Streams Affected: None



Grading & Storm Drainage Plan for:
The Boulders
@ Stoney Mountain

PIN: 0660-00-9720

C2

HENDERSONVILLE TOWNSHIP
 HENDERSON COUNTY, N.C.

No.	Date	By	Description
1	1/23		ADDED AERIAL TOPOGRAPHY CONTOURS

McAbee & Associates, PA
 Professional Land Surveyors
 William S. McAbee, PLS
 Eric S. McAbee, PLS

Telephone: (828) 628-1265
 Fax: (828) 628-1264

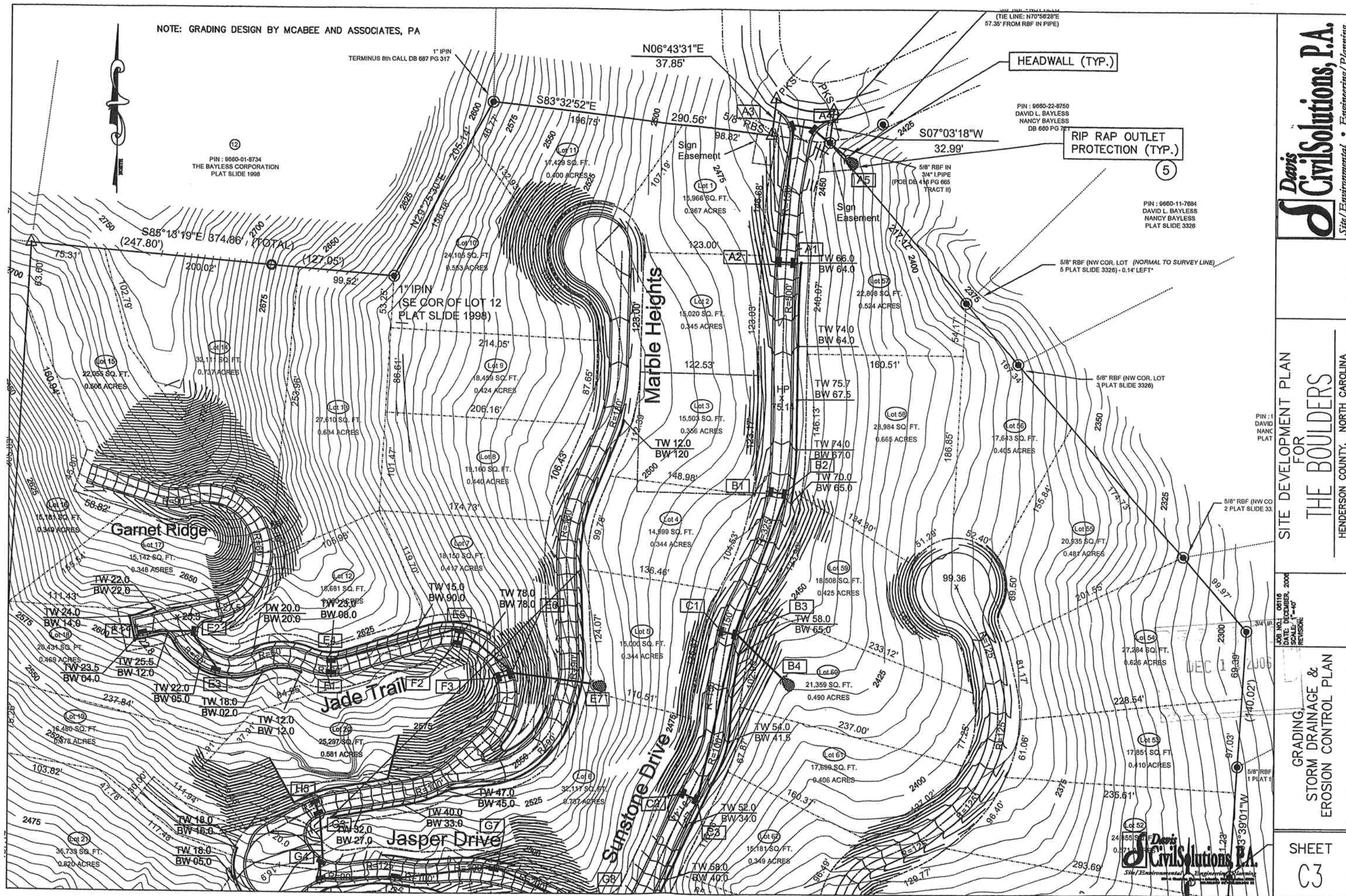
3 McAbee Trail
 Fairview North Carolina, 28730

McAbee & Associates, PA
 Professional Land Surveyors
 William S. McAbee, PLS
 Eric S. McAbee, PLS

Telephone: (828) 628-1265
 Fax: (828) 628-1264

3 McAbee Trail
 Fairview North Carolina, 28730

NOTE: GRADING DESIGN BY MCABEE AND ASSOCIATES, PA



Davis
CivilSolutions, P.A.
Site/Environmental • Engineering/Planning

SITE DEVELOPMENT PLAN
FOR
THE BOULDERS
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 08116
DATE: DECEMBER, 2006
SCALE: 1"=40'
REVISION:

GRADING,
STORM DRAINAGE &
EROSION CONTROL PLAN

SHEET
C3

NOTE: GRADING DESIGN BY MCABEE AND ASSOCIATES, P.A.

1" IPIN
DB 000 PG 317

⑫
PIN : 0660-01-8734
THE BAYLESS CORPORATION
PLAT SLIDE 1998

PIN : 0660-22-8750
DAVID L. BAYLESS
NANCY BAYLESS
DB 000 PG 721

⑤
PIN : 0660-11-7884
DAVID L. BAYLESS
NANCY BAYLESS
PLAT SLIDE 3326

PIN : 1
DAVID
NANCY
PLAT

SITE DEVELOPMENT PLAN
FOR

THE BOULDERS

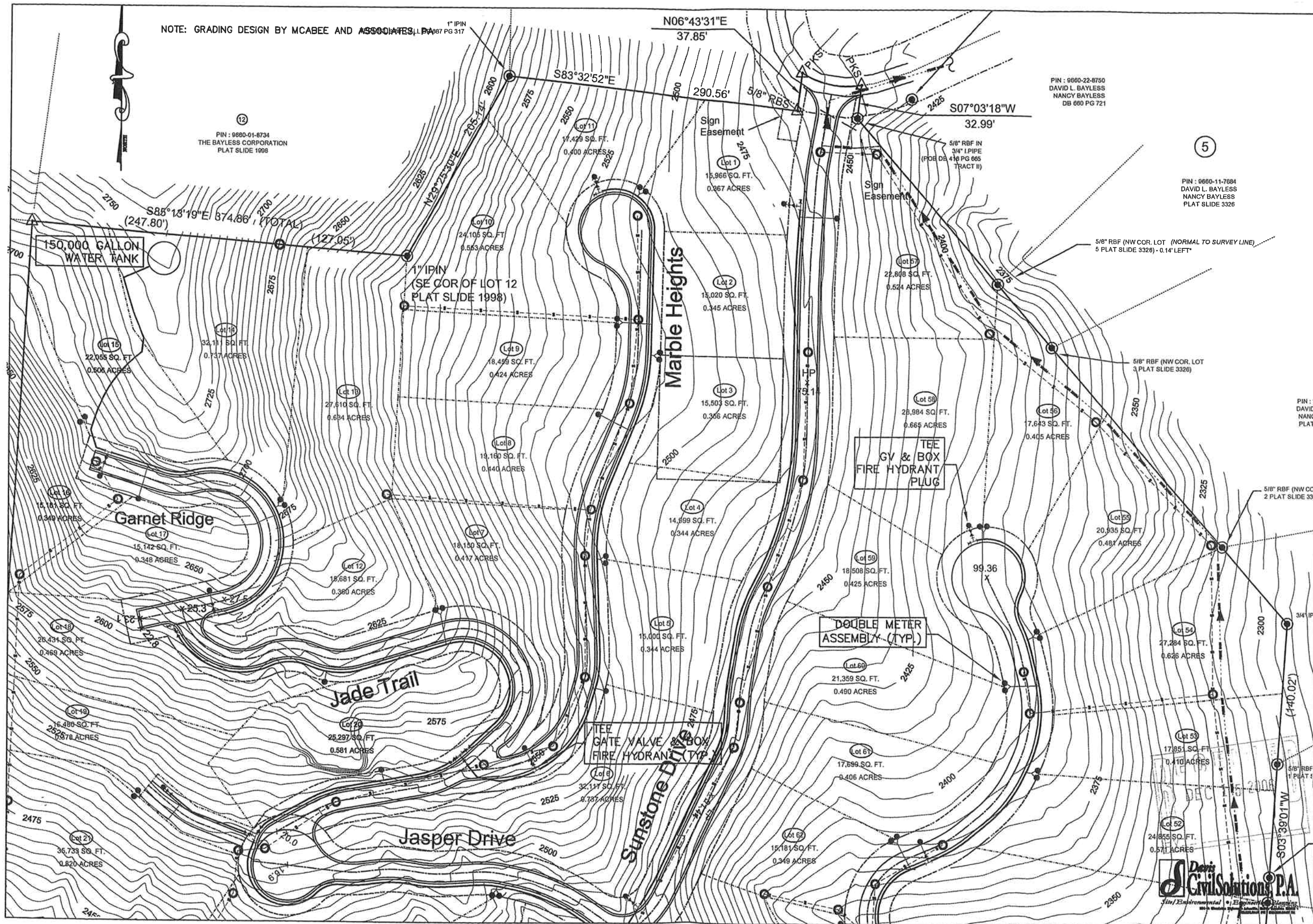
HENDERSON COUNTY, NORTH CAROLINA

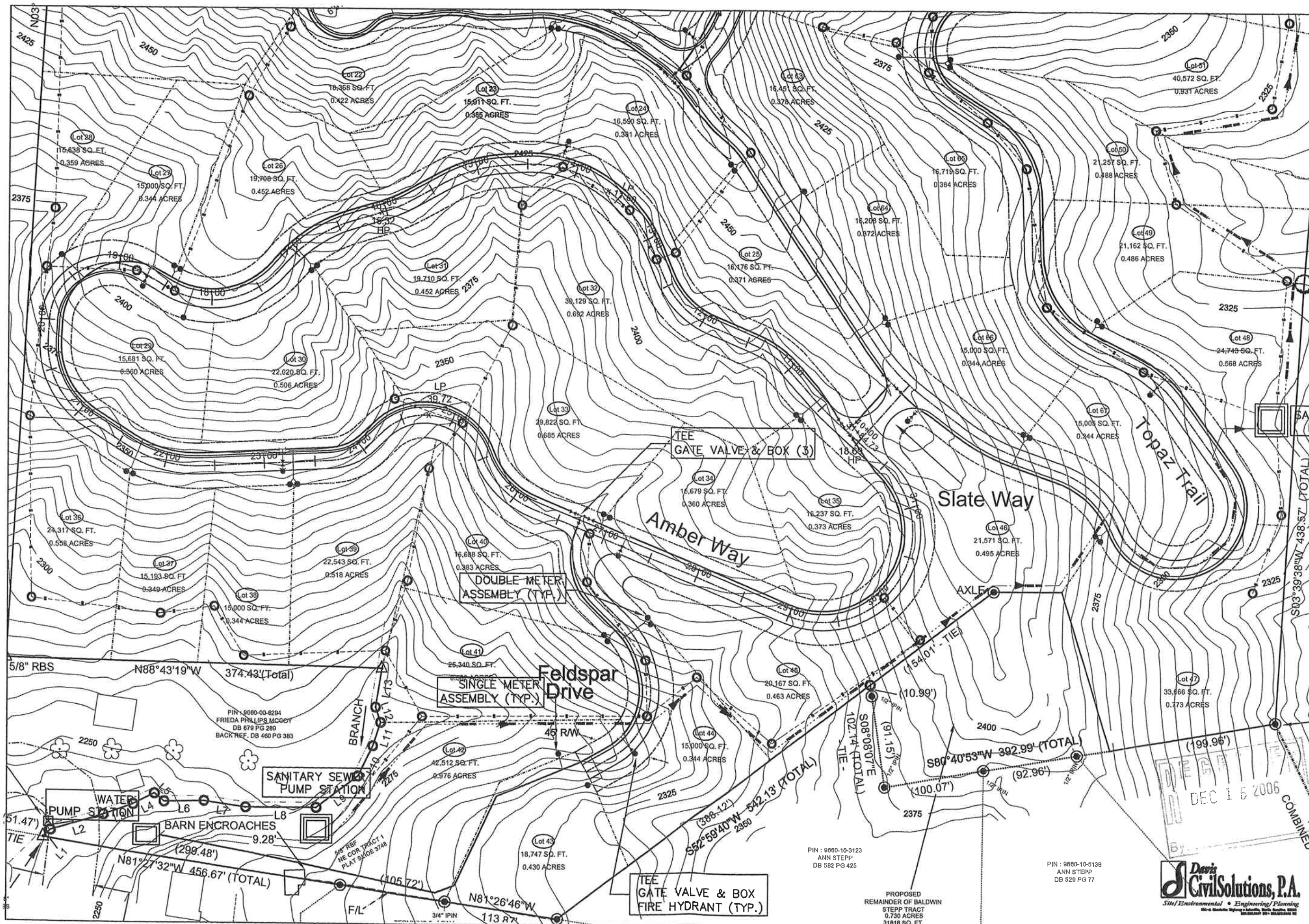
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DATE: DECEMBER, 2008
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REVISION:

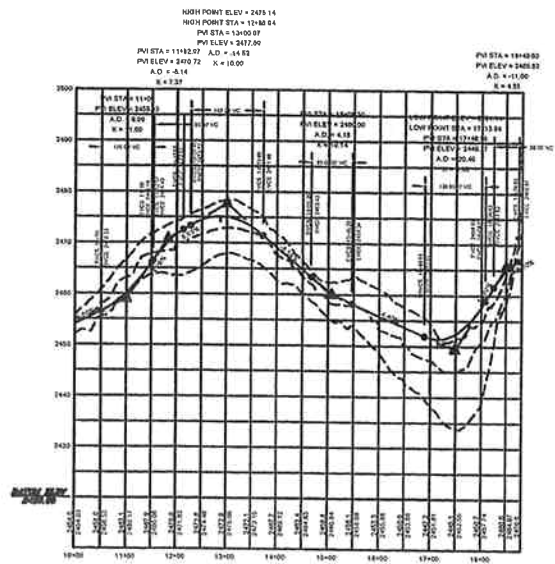
UTILITIES

SHEET
U1

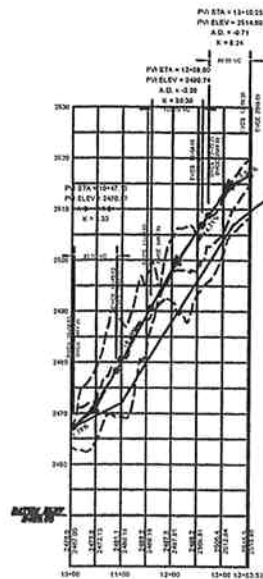
Davis
CivilSolutions, P.A.
Site/Environmental • Engineering/Planning



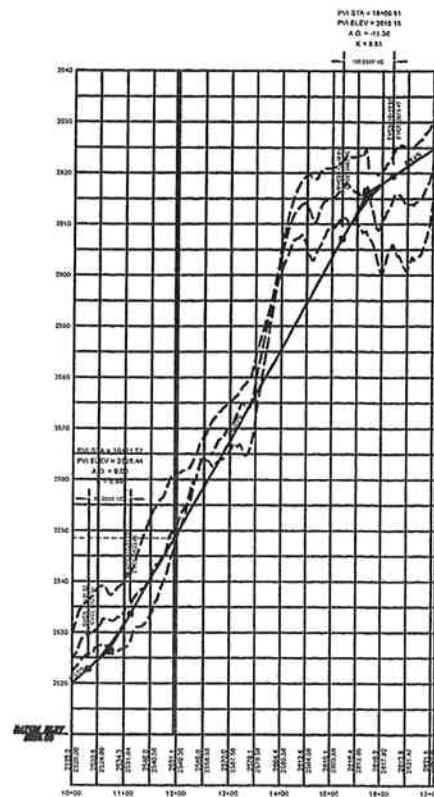




Sunstone Drive



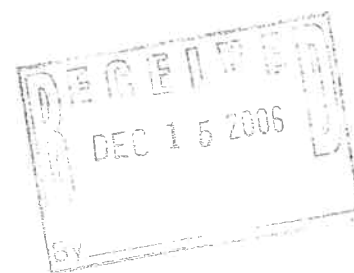
Jasper Drive



Jade Trail



Slate Way

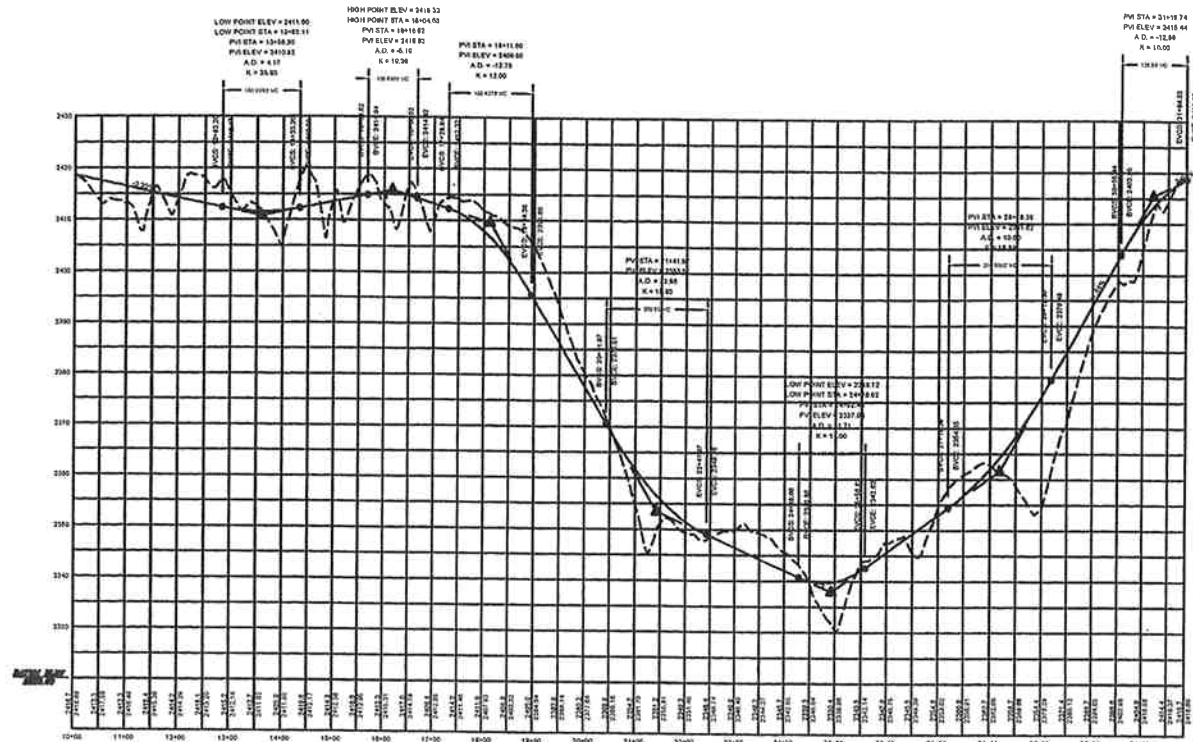


McAbee & Associates, PA
Professional Land Surveyors
Wallace S. McAbee, PLS Telephone (823) 623-1295
Eric S. McAbee, PLS Fax (823) 623-1294
3 McAbee Trail Fairview North Carolina, 28730

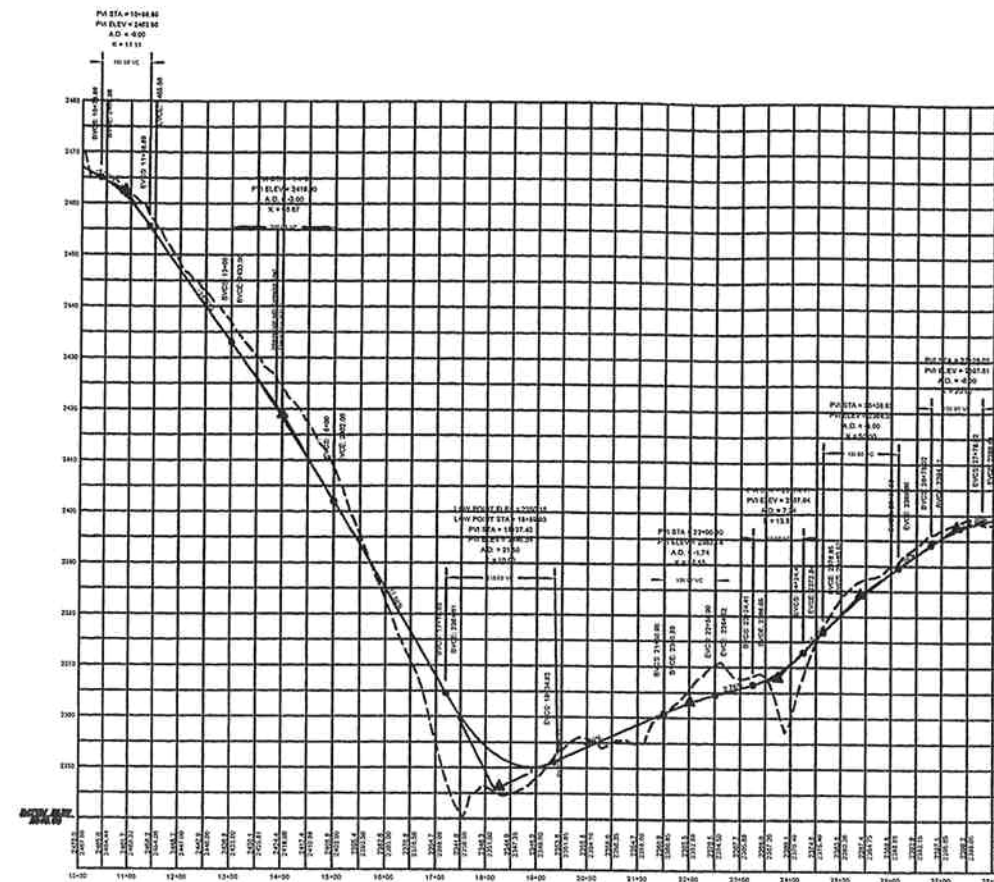
No.	Date	Description	By
1	1/23	ADDED AERIAL TOPOGRAPHY CONTOURS	

Vertical Road Profiles for:
The Boulders
@ Stoney Mountain

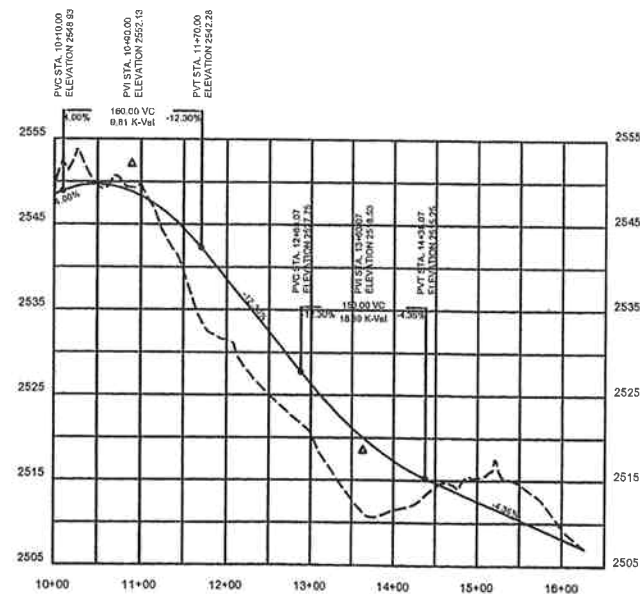
HENDERSONVILLE TOWNSHIP
HENDERSON COUNTY, N.C.



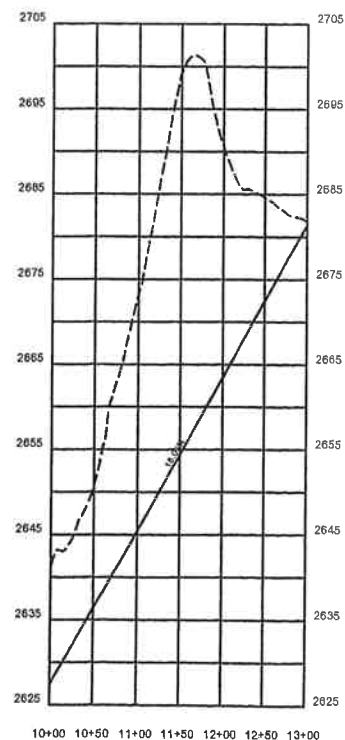
Amber Way



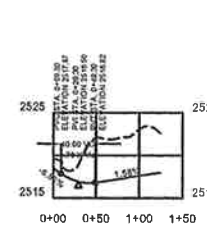
Topaz Trail



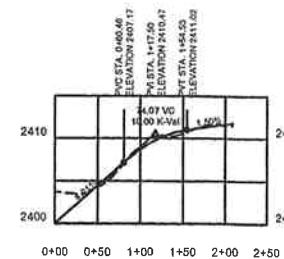
Marble Heights



Garnet Ridge



Beryl Lane



Antimony Way

DEC 15 2005

Vertical Road Profiles for:
The Boulders @ Stoney Mountain

HENDERSONVILLE TOWNSHIP
HENDERSON COUNTY, N.C.

PRIME 9680-00-9720

Scale: 1" = 10'

RP2

No.	Date	Description	By
1	1/23	ADDED AERIAL TOPOGRAPHY CONTOURS	

McAbee & Associates, PA
Professional Land Surveyors

William S. McAbee, P.L.S. Telephone (828) 628-1205
Eric S. McAbee, P.L.S. Fax (828) 628-1204

3 McAbee Trail Fairview North Carolina, 28730

DRWING NO. 0-05-1835

Marble Heights

Garnet Ridge

Amber Way

Beryl Lane

Antimony Way

Topaz Trail

McAbee & Associates, PA
Professional Land Surveyors
Wallace S. McAbee, PLS
Eric S. McAbee, PLS
3 McAbee Trail
Fayetteville, North Carolina, 28730
Telephone (828) 625-1756
Fax (828) 625-1754

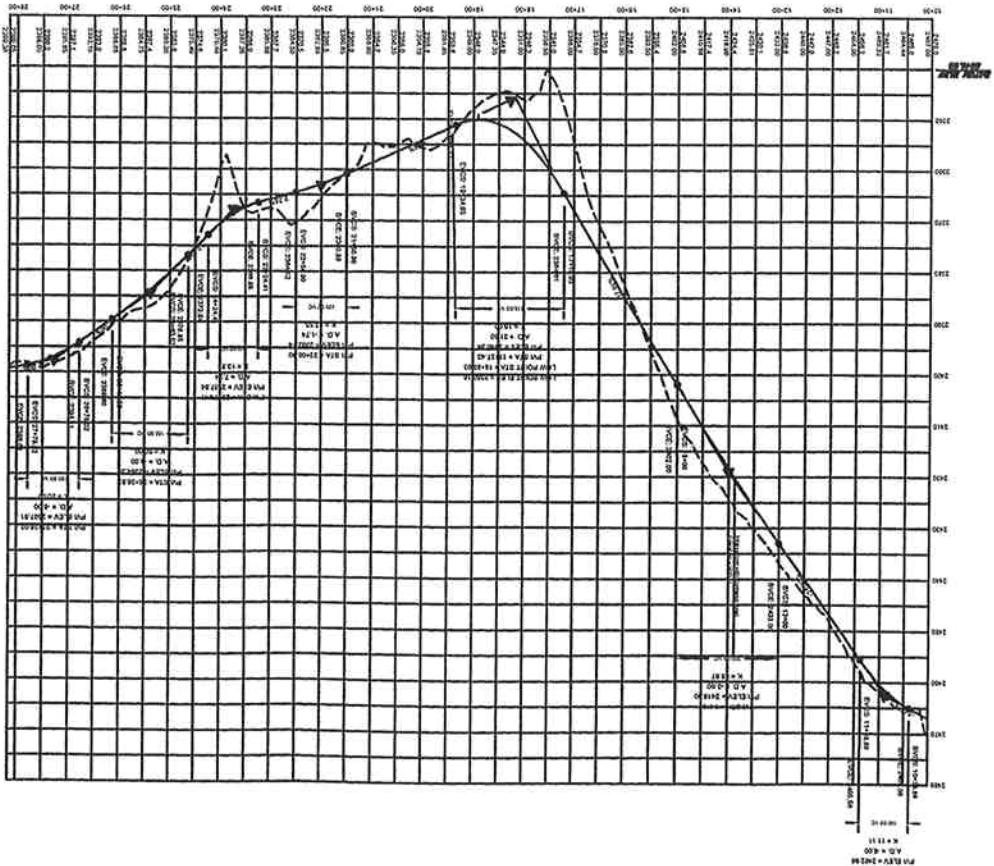
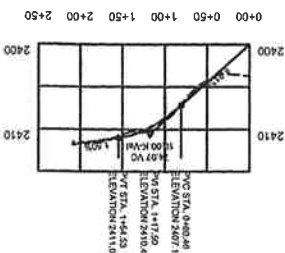
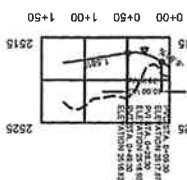
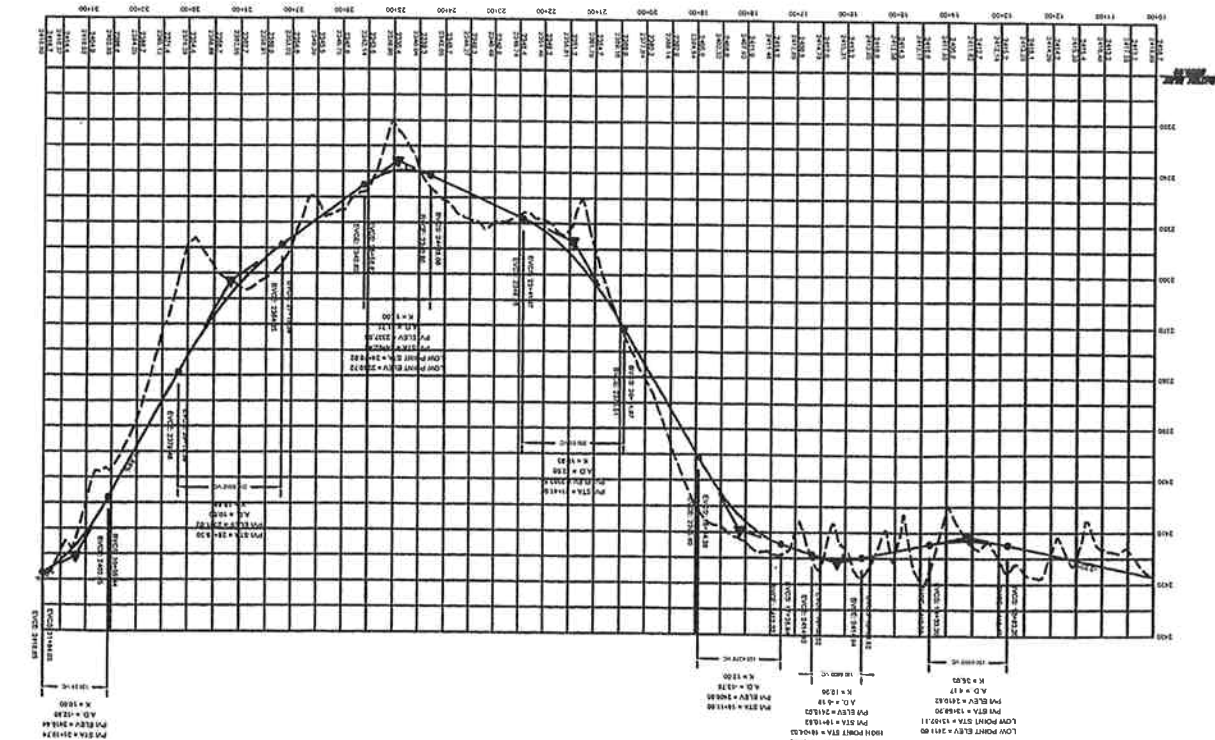
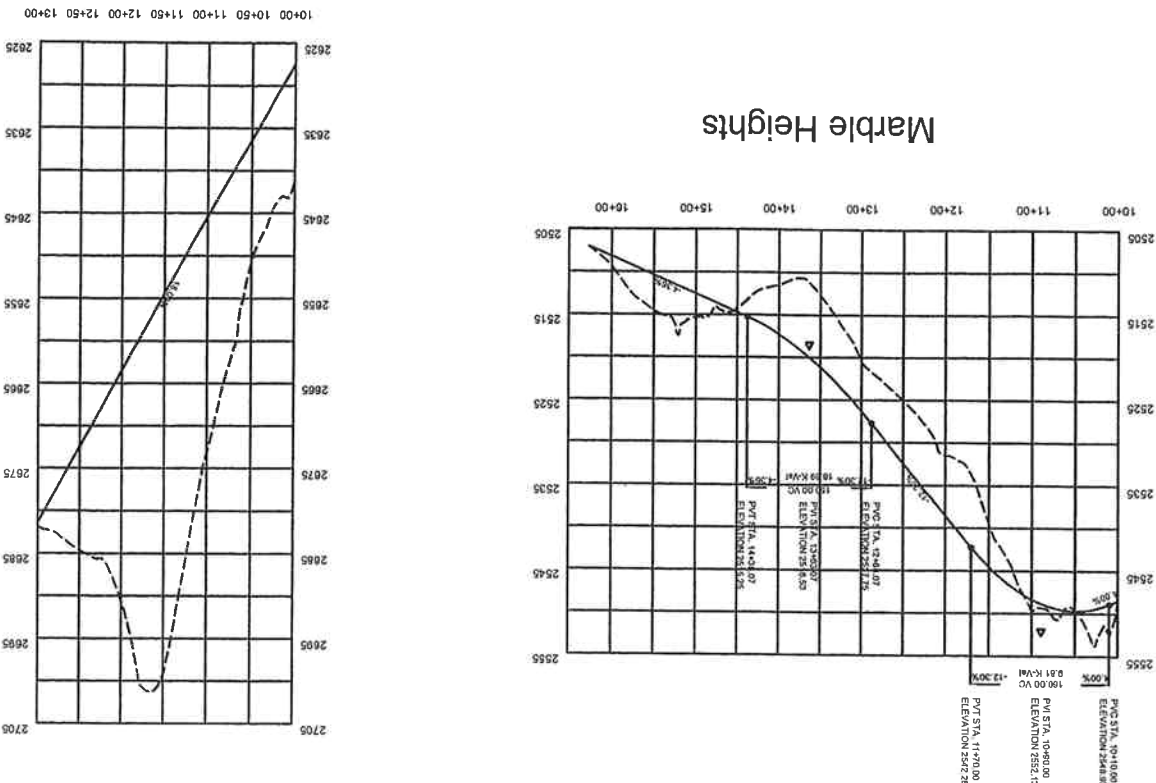
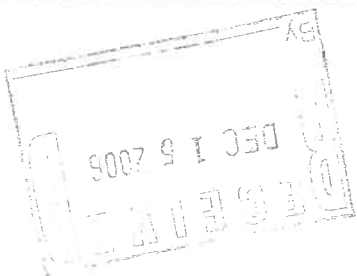
No.	Date	Description	By
1	1/23	ADDED AERIAL TOPOGRAPHY CONTOURS	

Vertical Road Profiles for:
The Boulders
@ Stoney Mountain
PIN# 9680-00-9720

HENDERSONVILLE TOWNSHIP
HENDERSON COUNTY, N.C.

06-19-09
Drawn By: ESM
Checked By: GAK-1958
Scale: 1" = 10'

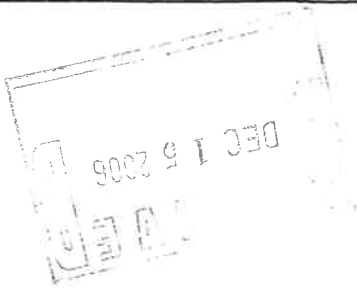
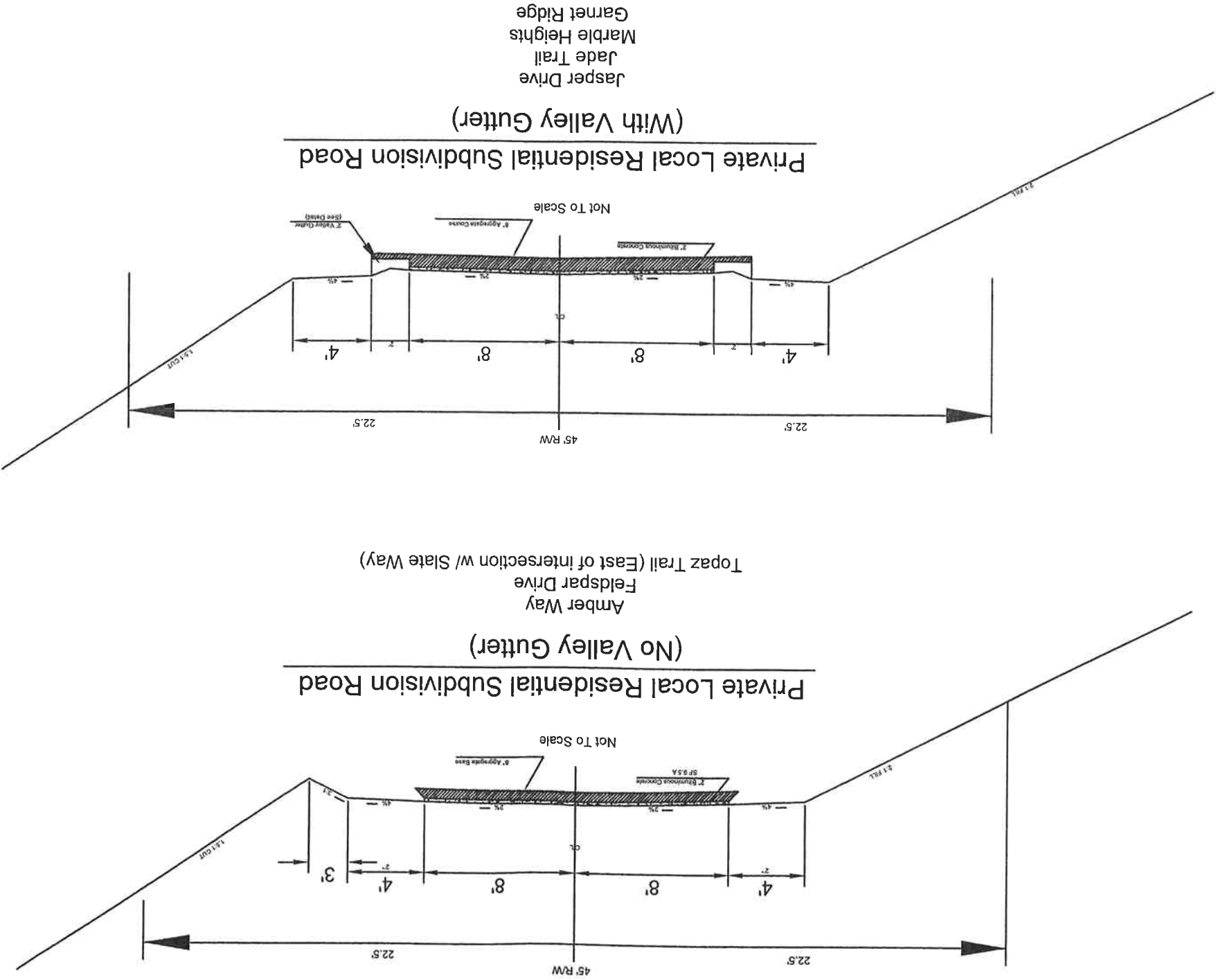
RP2



1. Top 6" of compacted subgrade is to be compacted to minimum of 98% Standard Proctor and certified by Geotechnical Engineer.
2. Aggregate base course to be compacted to minimum 100% Standard Proctor and certified by Geotechnical Engineer.
3. Geotechnical Engineer to certify stone depth prior to installing bituminous concrete surface course.

Notes:

* Shoulder may be reduced to 2' where existing cross-slope exceeds 20%



McAbbee & Associates, PA
Professional Land Surveyors
Wade S. McAbbee, P.L.S.
Eric S. McAbbee, P.L.S.
3 McAbbee Trail
Fayetteville, North Carolina 28720
Telephone (828) 628-1205
Fax (828) 628-1204

No.	Date	Description	By
1	1/23	ASCEB ALPMA TOPOGRAPHIC CONTOURS	

Vertical Road Profiles for:
The Boulders
@ Stoney Mountain
P/N# 8660-00-9720

HENDERSONVILLE TOWNSHIP
HENDERSON COUNTY, N.C.

Date: 05-15-06
Drawing No: 0-00-1503
Scale: 1" = 10'

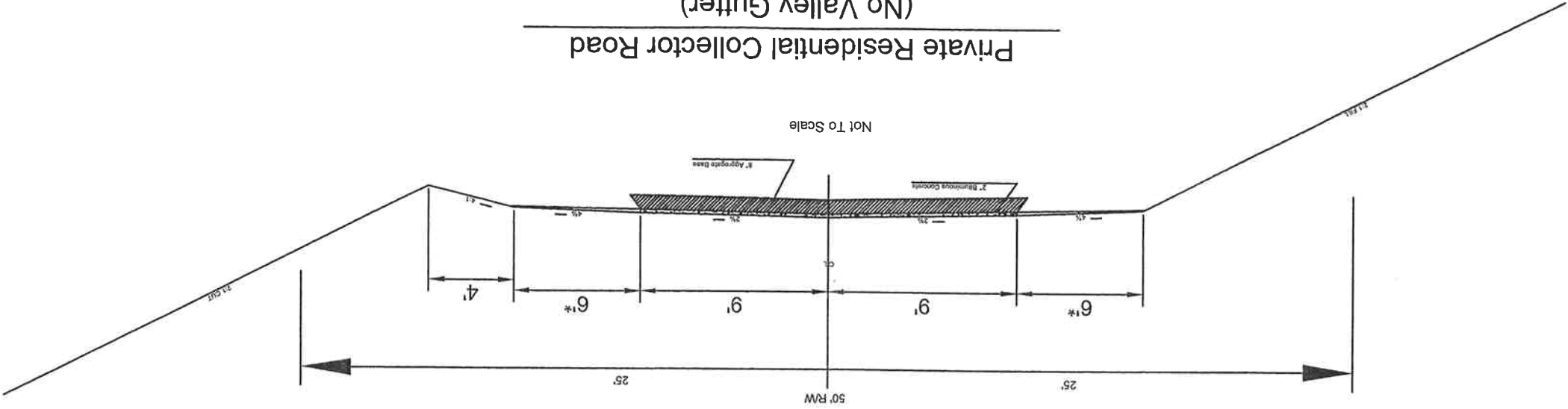
RT1

1. Top 6" of compacted subgrade is to be compacted to minimum of 98% Standard Proctor and certified by Geotechnical Engineer.
2. Aggregate base course to be compacted to minimum 100% Standard Proctor and certified by Geotechnical Engineer.
3. Geotechnical Engineer to certify stone depth prior to installing bituminous concrete surface course.

* Shoulder may be reduced to 4' where existing cross-slope is 10%-20%
 * Shoulder may be reduced to 2' where existing cross-slope exceeds 20%

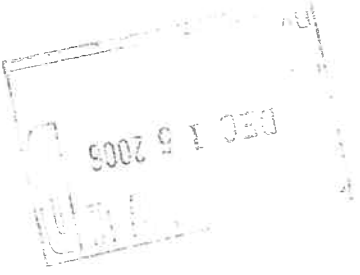
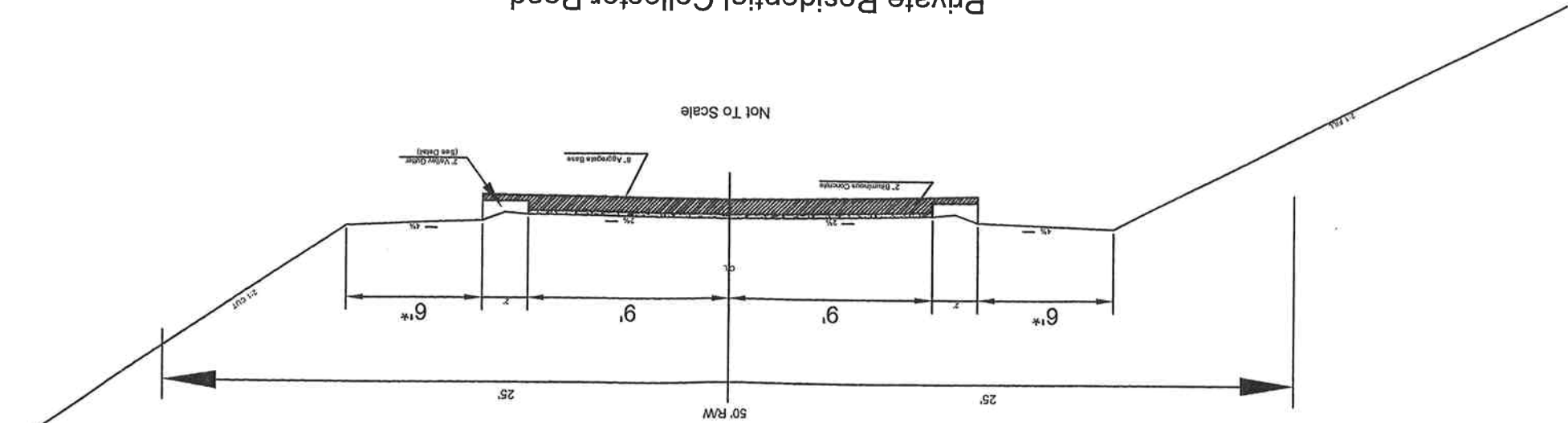
Slate Way
 Topaz Trail (Between Slate Way & Sunstone Drive)

Private Residential Collector Road (No Valley Gutter)



Sunstone Drive

Private Residential Collector Road (With Valley Gutter)



McAbee & Associates, PA
 Professional Land Surveyors
 Wallace S. McAbee, P.E.
 Eric S. McAbee, P.L.S.
 3 McAbee Trail Fairview North Carolina, 28720
 Telephone (828) 628-1285
 Fax (828) 628-1284

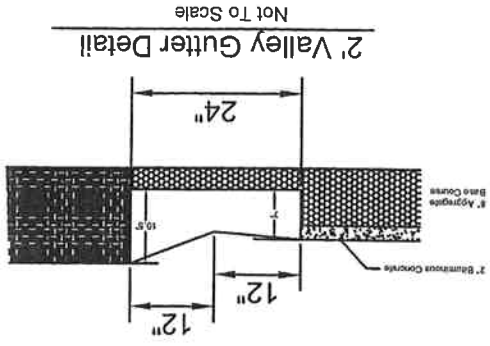
No.	Date	Description	By
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Vertical Road Profiles for:
The Boulders
@ Stoney Mountain
 PIN# 9660-00-9720

HENDERSONVILLE TOWNSHIP
 HENDERSON COUNTY, N.C.

Date: 05-15-06
 Drawn By: SSJ
 Drawing No: 0-05-1863
 Scale: 1" = 100'

RT2



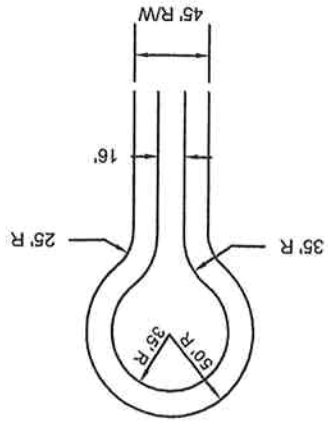
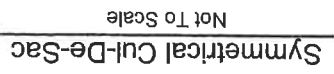
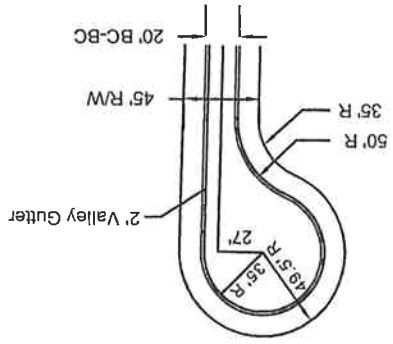
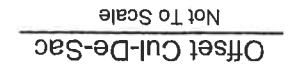
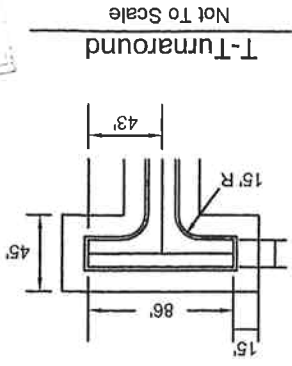
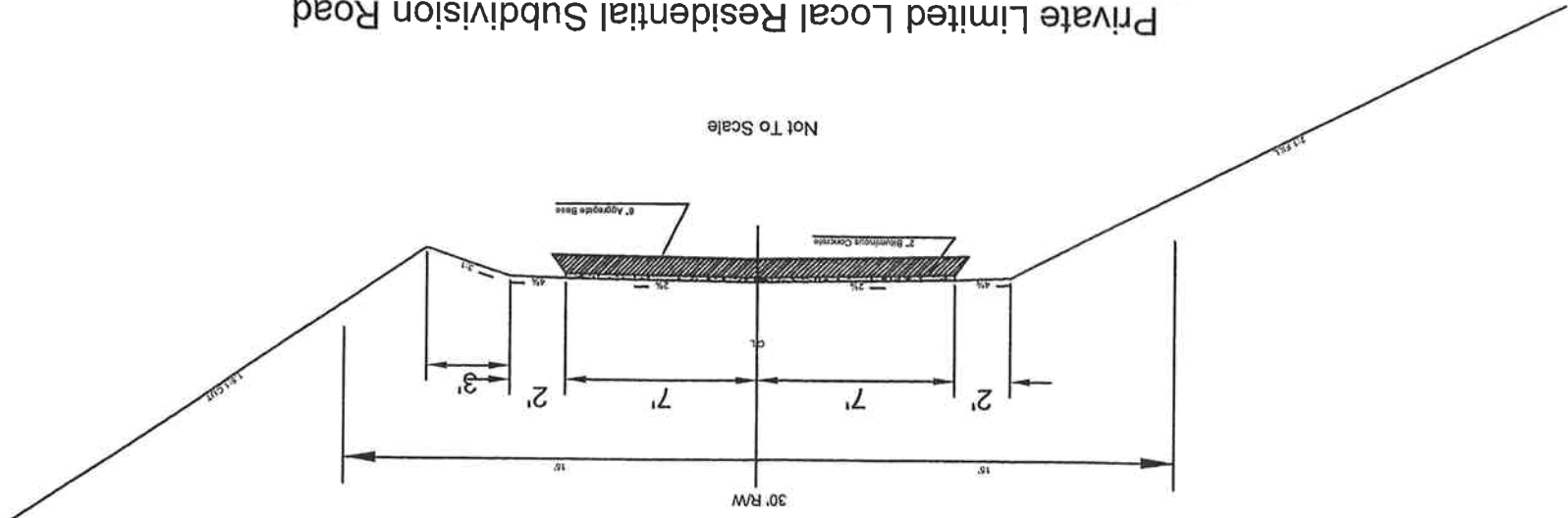
Notes.	
1	Valley Gutter to be constructed of 4000 psi concrete.
2	Correction joints to be provided at 10' intervals and all rigid structures intervals and all rigid structures.

1. Top 6" of compacted subgrade is to be compacted to minimum of 98% Standard Proctor and certified by Geotechnical Engineer.
2. Aggregate base course to be compacted to minimum 100% Standard Proctor and certified by Geotechnical Engineer.
3. Geotechnical Engineer to certify stone depth prior to installing bituminous concrete surface course.

Notes:

Beryl Lane
Antimony Way
Topaz Trail (East of intersection w/ Slate Way)

Private Limited Local Residential Subdivision Road
(No Valley Gutter)



DEC 16 2006

McAbbee & Associates, PA
Professional Land Surveyors
Alliance S. McAbbee, PLS Telephone (828) 828-1295
c/s, McAbbee, PLS Fax (828) 828-1294
3 McAbbee Trail Fairview North Carolina, 28730

[illegible]

Vertical Road Profiles for:
The Boulders
@ Stoney Mountain

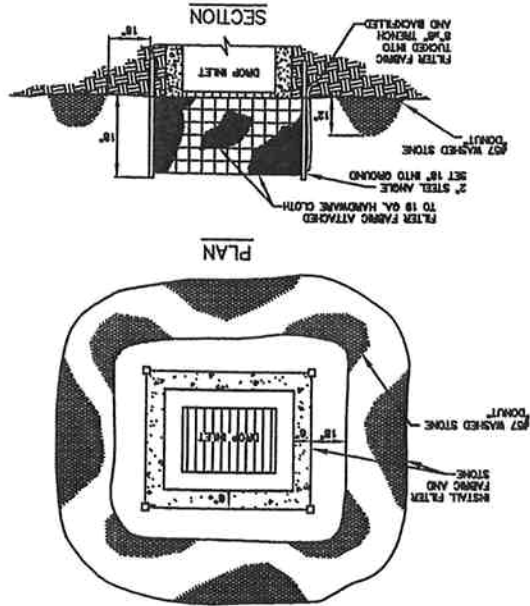
HENDERSONVILLE TOWNSHIP
HENDERSON COUNTY, N.C.

RT3

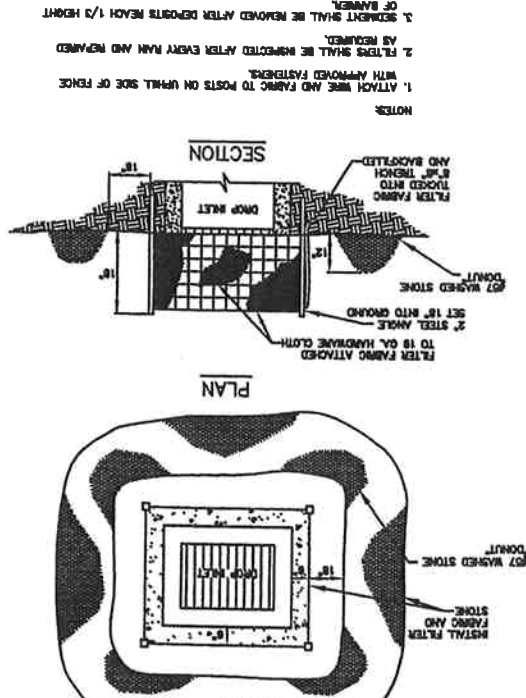
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 Drawn By: ESM
 Drawing No: G-06-1805
 Scale: 1" = 100'

EROSION CONTROL NOTES

GENERAL CONSTRUCTION NOTES CONT'D.

[illegible]

GENERAL CONSTRUCTION NOTES CONT'D.

[illegible][illegible]

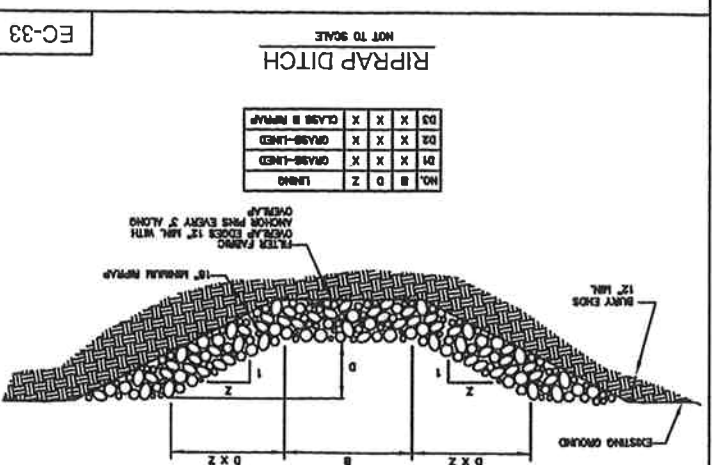
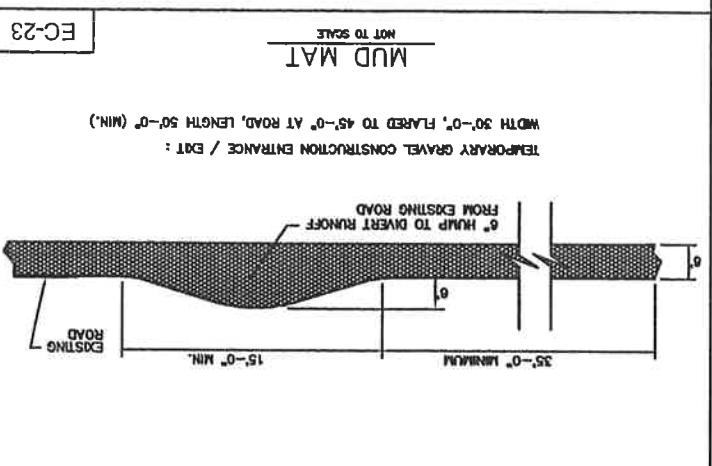
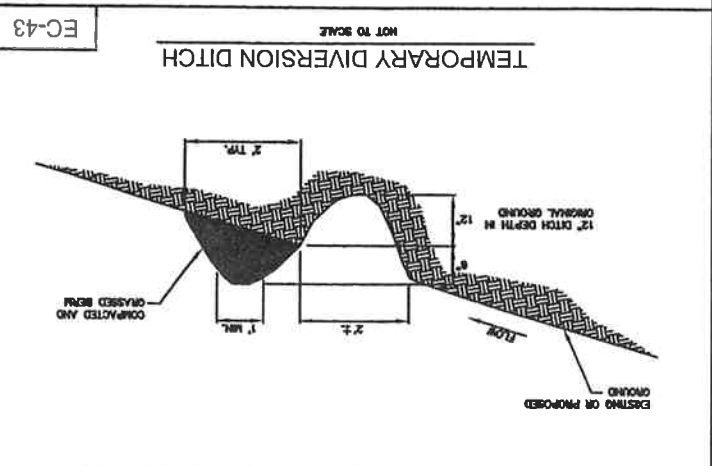
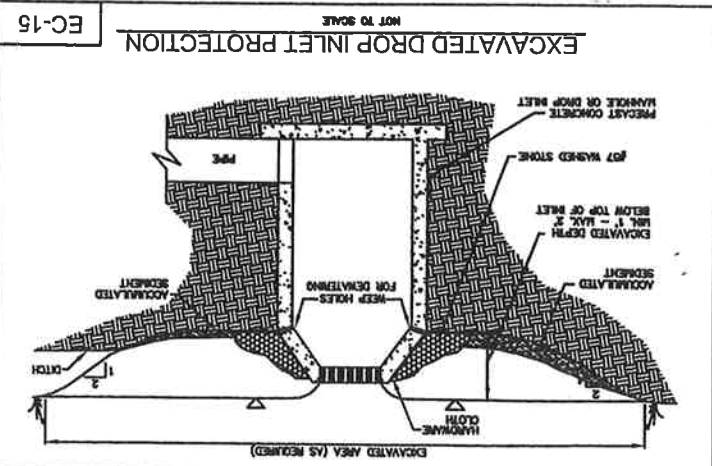
STORM DRAINAGE STRUCTURE	TYPE	TOP ELEVATION	INV. ELEV.
A1	CURB W/LET	2488.0	2482.0
A2	CURB W/LET	2488.0	2481.0
A3	CURB W/LET	2488.0	2482.0
A4	CURB W/LET	2484.0	2480.0
A5	HEADWALL	2440.0	2440.0
B1	CURB W/LET	2470.4	2466.4
B2	CURB W/LET	2455.4	2451.4
B3	CURB W/LET	2458.8	2444.4
B4	HEADWALL	2438.0	2438.0
C1	CURB W/LET	2444.8	2444.8
C2	CURB W/LET	2447.4	2447.4
C3	CURB W/LET	2448.4	2448.4
E1	CURB W/LET	2822.8	2818.8
E2	CURB W/LET	2820.0	2820.0
E3	CURB W/LET	2820.8	2818.8
E4	CURB W/LET	2807.0	2802.0
E5	CURB W/LET	2882.7	2877.7
E6	CURB W/LET	2871.0	2868.0
F1	CURB W/LET	2407.0	2403.0
F2	CURB W/LET	2882.7	2878.7
F3	CURB W/LET	2871.0	2867.0
G3	CURB W/LET	2827.3	2822.3
G4	CURB W/LET	2814.0	2810.0
G5	CURB W/LET	2814.0	2808.0
G6	CURB W/LET	2803.0	2798.0
G7	CURB W/LET	2488.0	2482.0
G8	CURB W/LET	2467.5	2463.0
G9	CURB W/LET	2488.0	2481.0

STORM DRAINAGE STRUCTURE	TYPE	TOP ELEVATION	INV. ELEV.
010	CURB W/LET	2482.3	2482.3
018	CURB W/LET	2384.0	2384.0
020	CURB W/LET	2381.5	2382.18
021	HEADWALL	2338.0	2338.0
H1	CURB W/LET	2482.3	2482.3
H3	CURB W/LET	2388.0	2388.0
H4	CURB W/LET	2381.5	2382.18
H5	CURB W/LET	2387.2	2382.3
H6	CURB W/LET	2370.4	2368.4
H7	CURB W/LET	2370.4	2368.4
K7	CURB W/LET	2370.4	2368.4
K8	HEADWALL	2350.0	2350.0
L2	HEADWALL	2387.5	2412.8
M1	CURB W/LET	2418.8	2418.8
M2	CURB W/LET	2418.8	2418.8
M3	CURB W/LET	2382.3	2388.0
M4	CURB W/LET	2384.0	2371.0
M5	CURB W/LET	2384.3	2384.3
M6	CURB W/LET	2348.2	2348.2
M7	CURB W/LET	2343.0	2338.0
M8	CURB W/LET	2338.5	2334.5
M9	DOUBLE CURB W/LET	2338.5	2338.5
N10	HEADWALL	2227.0	2227.0
O1	CURB W/LET	2378.0	2372.0
O2	CURB W/LET	2380.3	2380.3
O3	CURB W/LET	2348.2	2343.2
P6	CURB W/LET	2348.0	2343.0
P8	CURB W/LET	2348.0	2343.0
Q2	CURB W/LET	2372.3	2368.3
Q3	CURB W/LET	2348.0	2343.0
Q4	CURB W/LET	2348.0	2343.0

STORM DRAINAGE STRUCTURE	TYPE	TOP ELEVATION	INV. ELEV.
04	HEADWALL	2377.0	2377.0
R1	CURB W/LET	2418.8	2408.8
R2	CURB W/LET	2418.8	2408.8
R3	HEADWALL	2387.5	2387.5

PIPE	MATERIAL	LENGTH	SIZE	SLOPE
A1-A2	CMP	20 LF	18"	0.0000%
A2-A3	CMP	140 LF	18"	0.0443%
A3-A4	CMP	20 LF	18"	0.1000%
A4-A5	CMP	40 LF	18"	0.2500%
B1-B2	CMP	20 LF	18"	0.0000%
B2-B3	CMP	180 LF	18"	0.4008%
C1-B3	CMP	30 LF	18"	0.5100%
B3-B4	CMP	30 LF	18"	0.1880%
C2-C3	CMP	20 LF	18"	0.0000%
C3-B3	CMP	174 LF	18"	0.0118%
E1-E2	CMP	88 LF	18"	0.0218%
E2-E3	CMP	48 LF	18"	0.0711%
E3-E4	CMP	120 LF	18"	0.1233%
E4-F1	CMP	30 LF	18"	0.0000%
E4-E5	CMP	138 LF	18"	0.2541%
F3-E3	CMP	20 LF	18"	0.0000%
E3-E8	CMP	85 LF	18"	0.1800%
F3-E8	CMP	20 LF	18"	0.0000%
F3-E9	CMP	20 LF	18"	0.0000%
M3-M4	BOCMF+	85 LF	18"	0.0847%
M3-M5	BOCMF+	20 LF	18"	0.0000%
M4-M5	BOCMF+	110 LF	18"	0.1018%
M5-O2	DP (CL350)	20 LF	18"	0.2400%

PIPE	MATERIAL	LENGTH	SIZE	SLOPE
03-04	CMP	50 LF	18"	0.2440%
04-05	CMP	20 LF	18"	0.1000%
05-06	CMP	90 LF	18"	0.1120%
06-07	CMP	100 LF	18"	0.1700%
07-08	CMP	125 LF	18"	0.1500%
08-09	CMP	20 LF	18"	0.0887%
09-10	CMP	70 LF	18"	0.0871%
10-11	CMP	20 LF	18"	0.1000%
11-12	CMP	85 LF	18"	0.1475%
12-13	CMP	85 LF	18"	0.1475%
13-14	DP (CL350)	75 LF	18"	0.1487%
14-15	BOCMF+	20 LF	18"	0.0000%
15-16	BOCMF+	20 LF	18"	0.0000%
16-17	BOCMF+	20 LF	18"	0.0000%
17-18	BOCMF+	20 LF	18"	0.0000%
18-19	BOCMF+	20 LF	18"	0.0000%
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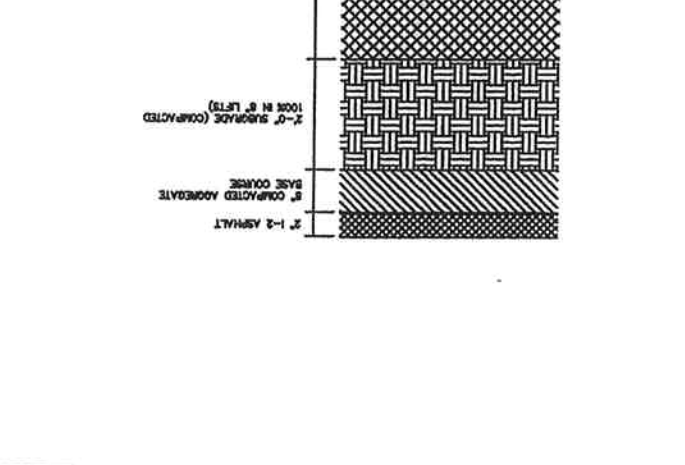
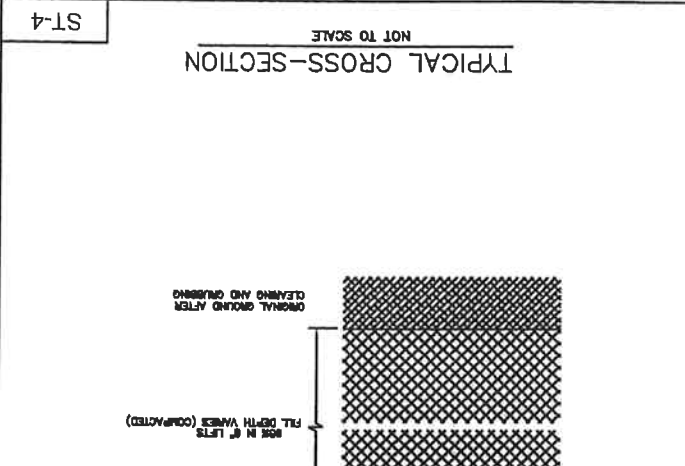
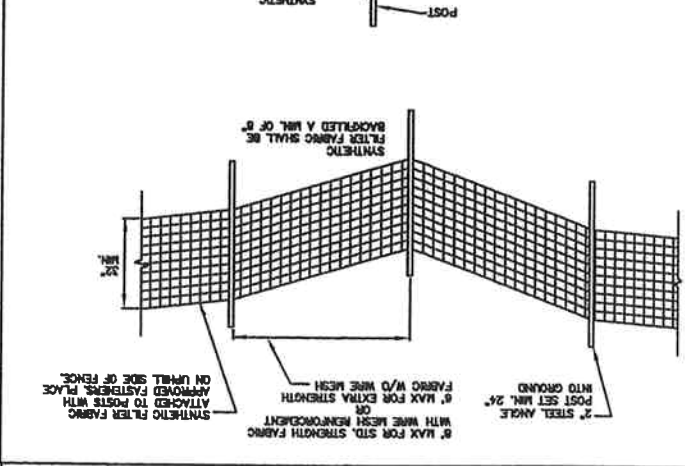
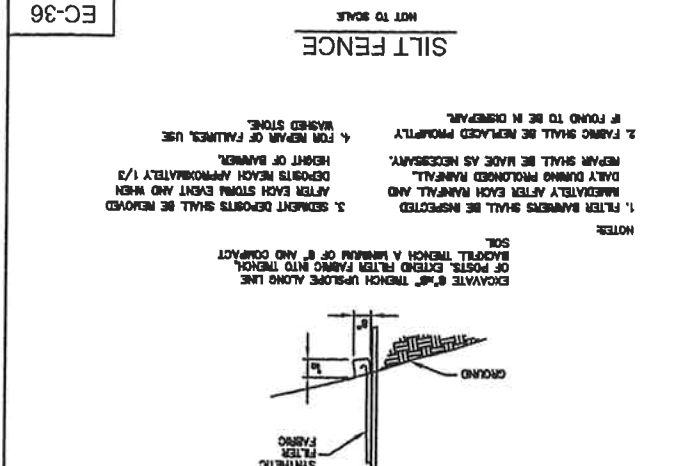
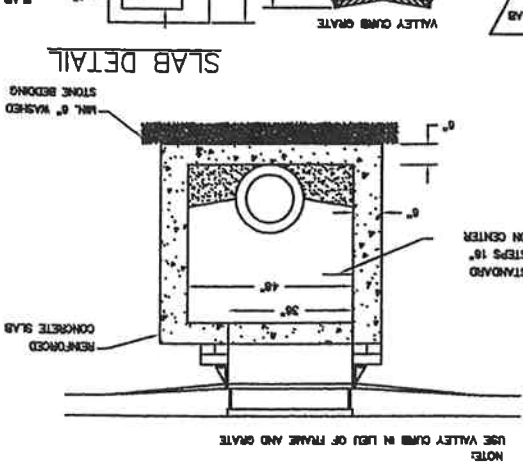
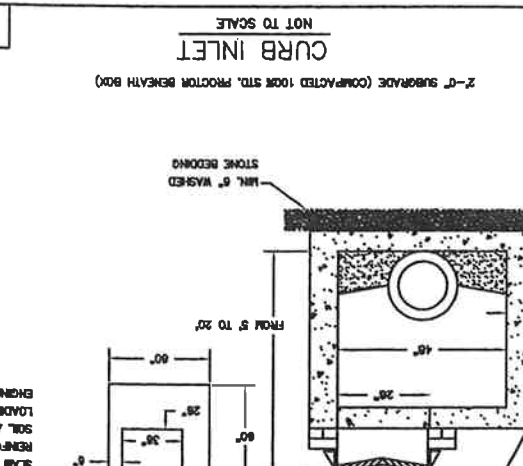
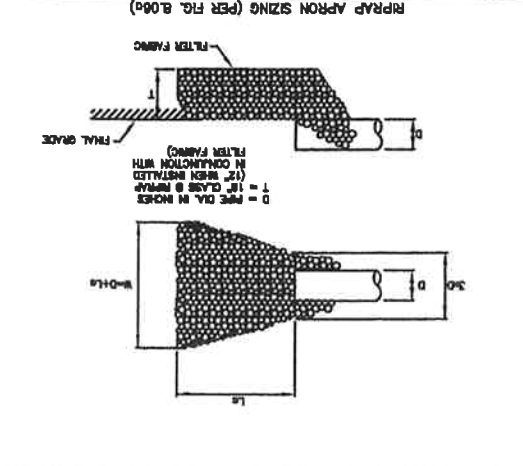


RIPRAP AT PIPE OUTLET

NOT TO SCALE

FIG. 8.06A REQUIRES A 75' APRON US ANY CORN OF EXHAUSTING AND NO WELLS. STEAM PIPE WILL INCLUDE CONCRETE HEADWALLS AND BURNING THE PIPE INLET 12\"/>

OUTLET	PIPE DIAMETER (IN)	APRON LENGTH (FEET)	APRON WIDTH (FEET)	APRON THICKNESS (IN)	APRON TYPE
1	12	75	12	12	CONCRETE
2	18	75	12	12	CONCRETE
3	24	75	12	12	CONCRETE
4	30	75	12	12	CONCRETE
5	36	75	12	12	CONCRETE
6	42	75	12	12	CONCRETE
7	48	75	12	12	CONCRETE
8	54	75	12	12	CONCRETE
9	60	75	12	12	CONCRETE
10	66	75	12	12	CONCRETE
11	72	75	12	12	CONCRETE
12	78	75	12	12	CONCRETE
13	84	75	12	12	CONCRETE
14	90	75	12	12	CONCRETE
15	96	75	12	12	CONCRETE
16	102	75	12	12	CONCRETE
17	108	75	12	12	CONCRETE
18	114	75	12	12	CONCRETE
19	120	75	12	12	CONCRETE
20	126	75	12	12	CONCRETE



DEC 15 2006

DATE: JULY 2006
SCALE: 1"=100'
REVISION:

EROSION CONTROL AND
STORM WATER PLAN FOR
THE BOULDERS

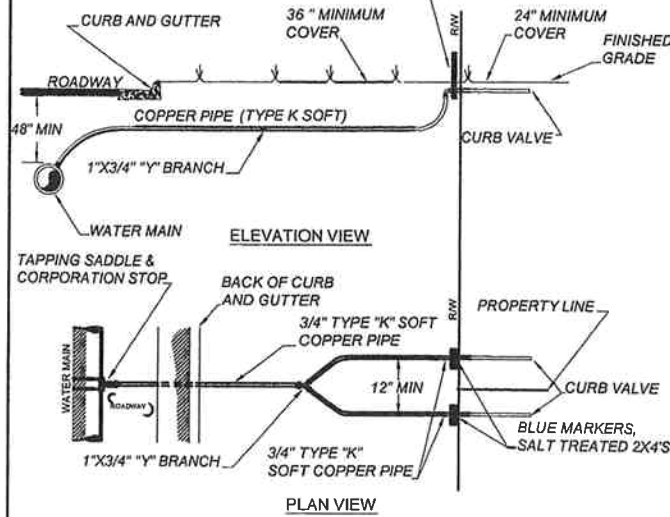
HENDERSON COUNTY, NORTH CAROLINA

Davis Civil Solutions, P.A.
Site/Environmental • Engineering/Planning

GENERAL NOTES FOR WATER

- WATER CONSTRUCTION ON THIS SITE IS AUTHORIZED BY PERMITS ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, AND NATURAL RESOURCES (NCDENR), AND THE TOWN OF HENDERSONVILLE. THE WORK IS SUBJECT TO INSPECTIONS AT ALL TIMES BY REPRESENTATIVES OF NCDENR, THE OWNER, OR THE ENGINEER. THE PERMITS REQUIRE CERTIFICATION OF COMPLETION BY THE ENGINEER OF THE WATER SYSTEMS PRIOR TO ISSUANCE OF FINAL OPERATION APPROVAL BY NCDENR.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES, DRAINAGE AND OTHER UNDERGROUND FACILITIES BOTH EXISTING AND PROPOSED, AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO CONSTRUCTION.
- INSTALL FERROUS PIPING FOR BOTH WATER AND SEWER WITHIN 10 FT. OF A CROSSING IF:
 - SEWER LINE CROSSES OVER WATER, OR
 - VERTICAL CLEARANCE BETWEEN WATER AND SEWER IS LESS THAN 18 INCHES.
- MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS UNLESS LAID IN SEPARATE TRENCHES WITH THE BOTTOM OF THE WATER LINE AT LEAST 18 INCHES ABOVE THE TOP OF SEWER, OR USE FERROUS MATERIAL FOR BOTH WATER AND SEWER.
- MAINTAIN 12 INCHES VERTICAL SEPARATION BETWEEN STORM DRAIN AND WATER, OR INSTALL FERROUS MATERIAL ON WATER LINE WITHIN 10 FEET EACH SIDE OF CROSSING.
- COORDINATE EXACT LOCATIONS OF VALVES, METERS, BACK FLOW PREVENTION DEVICES, AND SERVICE LINES WITH THE DETAILED ARCHITECTURAL, PLUMBING, AND LANDSCAPING PLANS.
- ALL WATER MAINS SHALL HAVE 3 FEET MINIMUM COVER AND BE CONSTRUCTED OF A FERROUS MATERIAL.
- MATERIALS AND INSTALLATION FOR WATER LINES SHALL CONFORM TO TOWN OF HENDERSONVILLE, STANDARD SPECIFICATIONS AND CURRENT DESIGN GUIDELINES, UNDER THE INSPECTION OF THE TOWN OF HENDERSONVILLE AND BY A NORTH CAROLINA LICENSED UTILITY CONTRACTOR. UPON COMPLETION AND ACCEPTANCE, WATER LINES SHALL BE MAINTAINED BY THE CITY OF ASHEVILLE.
- CONTRACTOR SHALL PROTECT EXISTING UTILITIES DURING CONSTRUCTION. REPAIRS SHALL BE MADE IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY N.C. ONE-CALL CENTER & APPROPRIATE UTILITY AGENCY PRIOR TO PERFORMING ANY WORK.
- ALL WATER METERS MUST BE INSTALLED AT OR AHEAD OF THE ROAD RIGHT-OF-WAY LINE. IN AREAS WHERE GRADING MAY PRESENT A CONFLICT WITH THIS REQUIREMENT.
- THE TOWN OF HENDERSONVILLE REQUIRES A 3-FOOT MAXIMUM SEPARATION BETWEEN THE BACK OF CURB / EDGE OF PAVEMENT AND THE WATER LINES.
- THE WATER METERS MUST BE PLACED IN FRONT OF THE DWELLING WHICH THEY SERVE AND THEY MUST BE LOCATED IN RELATIVELY FLAT AREAS, NOT STEEP BANKS OR SLOPES, AT A MAXIMUM OF 5 FEET OFF THE BACK OF CURB OR EDGE OF PAVEMENT.
- ALL WATER METER FITTINGS SHALL BE LEAD FREE BRASS.
- CONTRACTOR MUST PROVIDE EROSION CONTROL DEVICES TO CONTROL RUNOFF FROM THE CONSTRUCTION SITE. CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES THAT MAY BE LEVIED DUE TO POLLUTION CREATED DURING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS DURING CONSTRUCTION AND SHALL REPAIR ROADS PER REQUIREMENTS OF THE TOWN OF HENDERSONVILLE. NO OPEN CUTS OF EXISTING ROADS SHALL BE ALLOWED EXCEPT WHERE INDICATED ON THE DRAWINGS OR WHERE SPECIFIC PERMISSION IS GRANTED BY THE TOWN OF HENDERSONVILLE. SAND OR SIMILAR MATERIAL APPROVED BY TOWN OF HENDERSONVILLE SHALL BE PLACED AS A PROTECTIVE BARRIER BETWEEN TRACK EQUIPMENT AND THE ROAD AND CLEANED UP PROPERLY AFTER CONSTRUCTION.

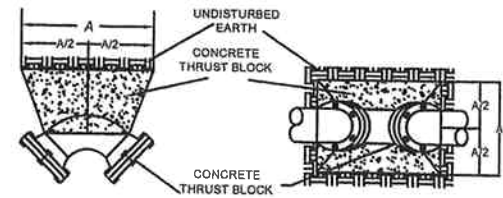
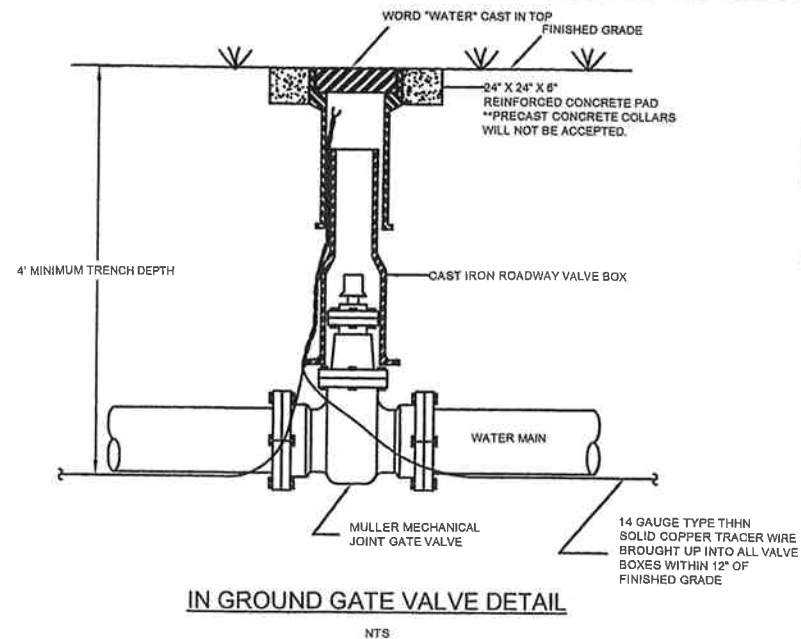
INSTALL A 2X4" TREATED WOOD MARKER, PAINTED BLUE. DRILL A 1" HOLE 4" FROM THE BOTTOM, CENTER AND INSERT A 3/8" BRASS NIPPLE THROUGH THE HOLE TO A 3/4" CURB VALVE. SEE SERVICE LATERAL DETAIL FOR METER LOCATION.



NOTES:
 MAXIMUM ALLOWABLE SERVICES IS 2 - 5/8" METERS SERVED BY A 1 INCH TAP AND SERVICE LINE.
 METERS SHALL BE EQUALLY OFFSET FROM PROPERTY LINE. MINIMUM LENGTH OF BRASS NIPPLE SHALL BE 12 INCHES (12").
 INSTALL 14 GAUGE TYPE THINN SOLID COPPER TRACER WIRE ALONG SERVICE LATERAL, TIED TO THE WATER MAIN TRACER WIRE & END WITH A 3' COIL ANCHORED TO THE TOP OF THE PRESSURE TREATED WOOD MARKER.
 ALL TRACER WIRE CONNECTIONS MUST BE TIED USING SPLIT BOLT CONNECTORS & WRAPPED WITH ELECTRICAL PUTTY & WATERPROOF TAPE.

MULTI-BRANCH SERVICE LATERAL

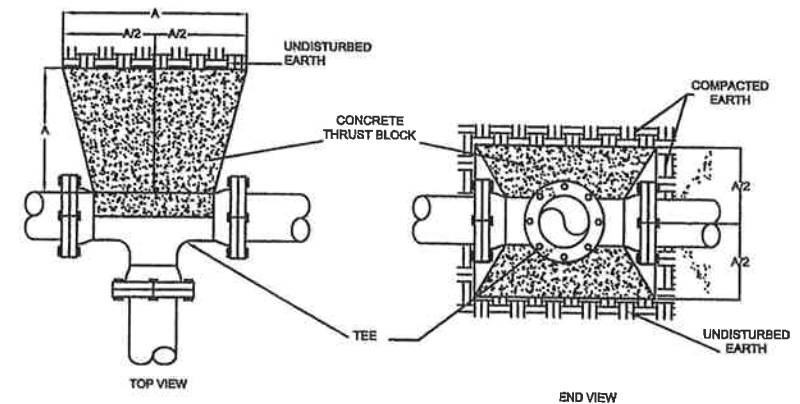
NTS CITY OF HENDERSONVILLE



NOTE:
 INSTALL A LAYER OF 4MIL POLYETHYLENE BETWEEN THE CONCRETE AND THE FITTING.

TYPICAL THRUST BLOCK FOR BENDS

NTS



TYPICAL THRUST BLOCK FOR TEES

NTS

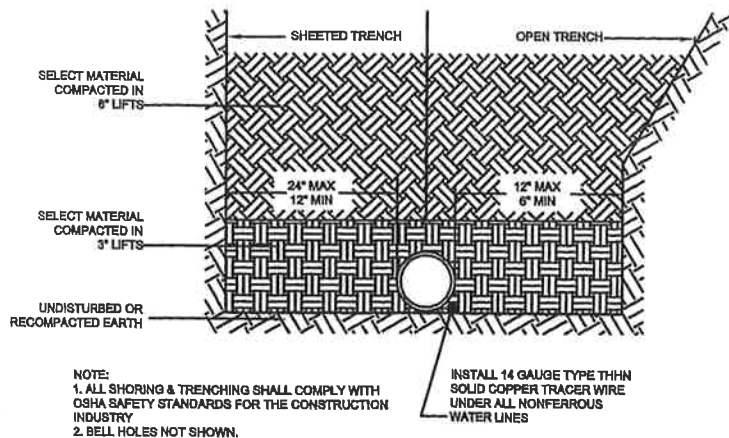
VALUES FOR "A"

SIZE	11 1/4" BEND	22 1/2" BEND	45" BEND	90" BEND	TEE
6"	12	12	12	18	16
8"	12	12	16	22	22
10"	12	14	20	28	28
12"	12	18	24	32	32
14"	14	20	28	38	38
16"	16	22	32	42	42
18"	18	26	36	48	48
20"	20	28	40	52	52
24"	24	34	46	64	64

NOTES:
 CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATION OF ALL PUBLIC UNDERGROUND UTILITIES. PRIOR TO EXCAVATION CALL NORTH CAROLINA ONE CALL FOR LOCATIONS AT 1-800-832-4949.

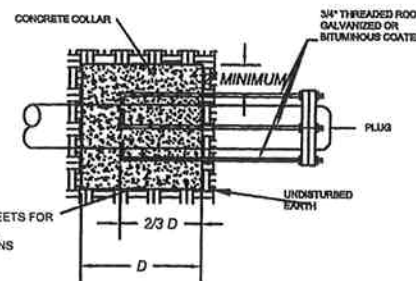
CONTRACTOR IS RESPONSIBLE FOR RESEEDING ALL DISTURBED AREAS AS SOON AS POSSIBLE

CONTRACTOR IS REQUIRED TO COMPLY WITH THE NORTH CAROLINA ADMINISTRATIVE CODE, RULES GOVERNING PUBLIC WATER SYSTEMS, TITLES 15A NCAC 18C.0908



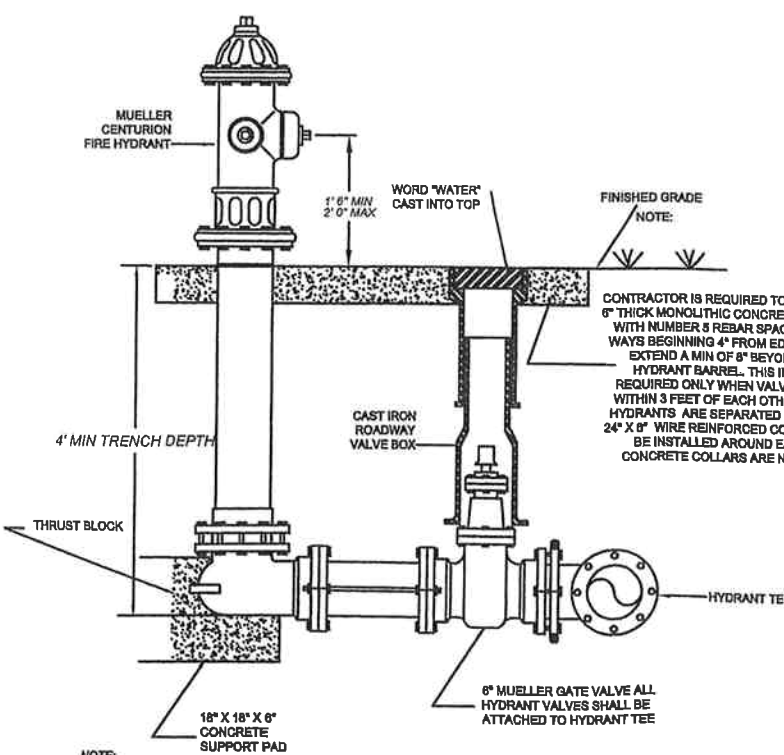
TYPICAL TRENCHING DETAIL

NTS



PLUG DEADMAN

NTS



NOTE:
 1. ALL HYDRANTS SHALL BE GIVEN A FRESH COAT OF MANUFACTURES STANDARD YELLOW PAINT AFTER INSTALLATION.
 2. BACK FILL SHALL BE COMPACTED IN MAXIMUM 4" LIFTS AROUND VALVE BOX & HYDRANT BARREL.

FIRE HYDRANT INSTALLATION

NTS