

## **REQUEST FOR COMMITTEE ACTION**

### **HENDERSON COUNTY TECHINICAL REVIEW COMMITTEE**

**MEETING DATE:** August 17, 2021

**SUBJECT:** Revised Combined Master and Phase III Development Plan for Couch Mountain (Formerly Luna Ridge) Major Subdivision (2019 – M03)

**STAFF CONTACT:** Matt Champion, Zoning Administrator

**ATTACHMENTS:** 1. Staff Report  
2. Combined Revised Master & Phase III Development Plan  
3. Original Phase III Development Plan

#### **SUMMARY OF REQUEST:**

A subdivision application was submitted on behalf of property owners Luna Ridge, LLC on August 3, 2021. The application is for a Combined Revised Master and Phase III Development Plan for Couch Mountain Major Subdivision, consisting of a total of 81 lots for single family dwellings and an additional 3,152 linear feet of new private roadway. The subject area is located off Hutch Mountain Rd. (SR 1556) and contains 394.2 acres. Phase III is approximately 58.8 acres on PIN: 9661-97-6534.

#### **TECHNICAL REVIEW COMMITTEE ACTION REQUESTED:**

Staff has found that the Revised Master and Phase III Development Plan meet the standards of the subdivision regulations of Chapter 42, Henderson County Land Development Code (LDC). Staff recommends the Master Plan and Phase III Development Plan be subject to the developer addressing any issues raised by the TRC and addressing the comments listed in the Staff Report.

#### **Suggested Motion:**

I move that the TRC forward the Combined Revised Master and Phase III Development Plan on to the Planning Board for further review as long as they meet all technical requirements based on the Henderson County Land Development Code and recommendations of the Henderson County Comprehensive Plan and any conditions in the staff report or as discussed by the TRC.

**Henderson County Planning Department Staff Report**

**Combined Revised Master and Phase III Development Plan  
Couch Mountain Major Residential Subdivision (2019-M03)**

**Property Owner(s): Luna Ridge, LLC**  
**Applicant: Andy Baker, Managing Member of Luna Ridge, LLC**  
**PIN: 9661-97-8633 (Phase III)**

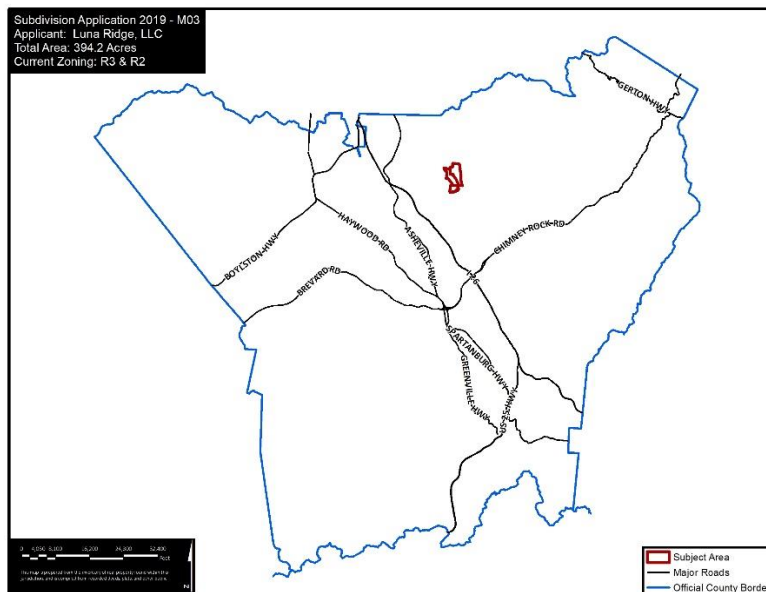
**Master & Development Plan Comments:**

According to Chapter 42, Henderson County Land Development Code (LDC) §42-341), the purpose of a Master Plan is to provide general information about the proposed development to allow for an assessment of its impact on the orderly growth and development of the County, environmental quality, land values, natural features identified on the site analysis sketch and the County’s roads and governmental services. During the review of the Combined the Master and Development Plan, the Technical Review Committee should take into consideration: applicable recommendations of the *Henderson County Comprehensive Plan*, the potential use of the land to be subdivided, and the impact of the subdivision and proposed use whether residential, commercial, or industrial.

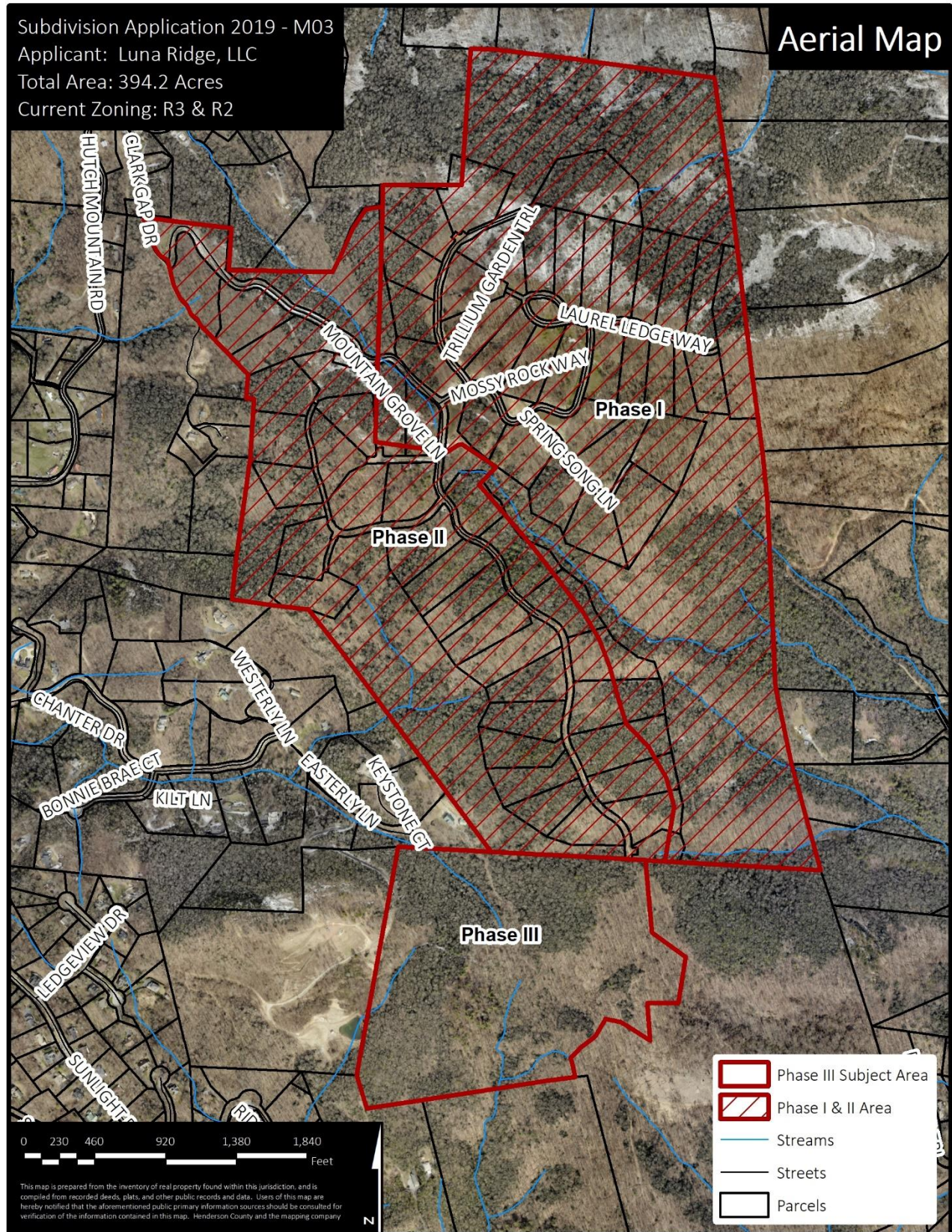
When reviewing the Combined Master and Development Plan it is important to consider that, due to severe topographic conditions, inadequate road access, distance from services, unique natural areas, soils that do not easily support soil drainage systems and/or the proximity to existing and incompatible land uses/zoning, all land may not be suitable to be subdivided for the purpose of dense development (LDC §42-75).

Staff has reviewed the submitted revised Combined Master and Phase III Development Plan for the Couch Mountain Major Subdivision, taking into consideration the recommendations of the *Henderson County Comprehensive Plan* and reviewing the plan for conformance with Henderson County Land Development Code. Staff offers the following comments:

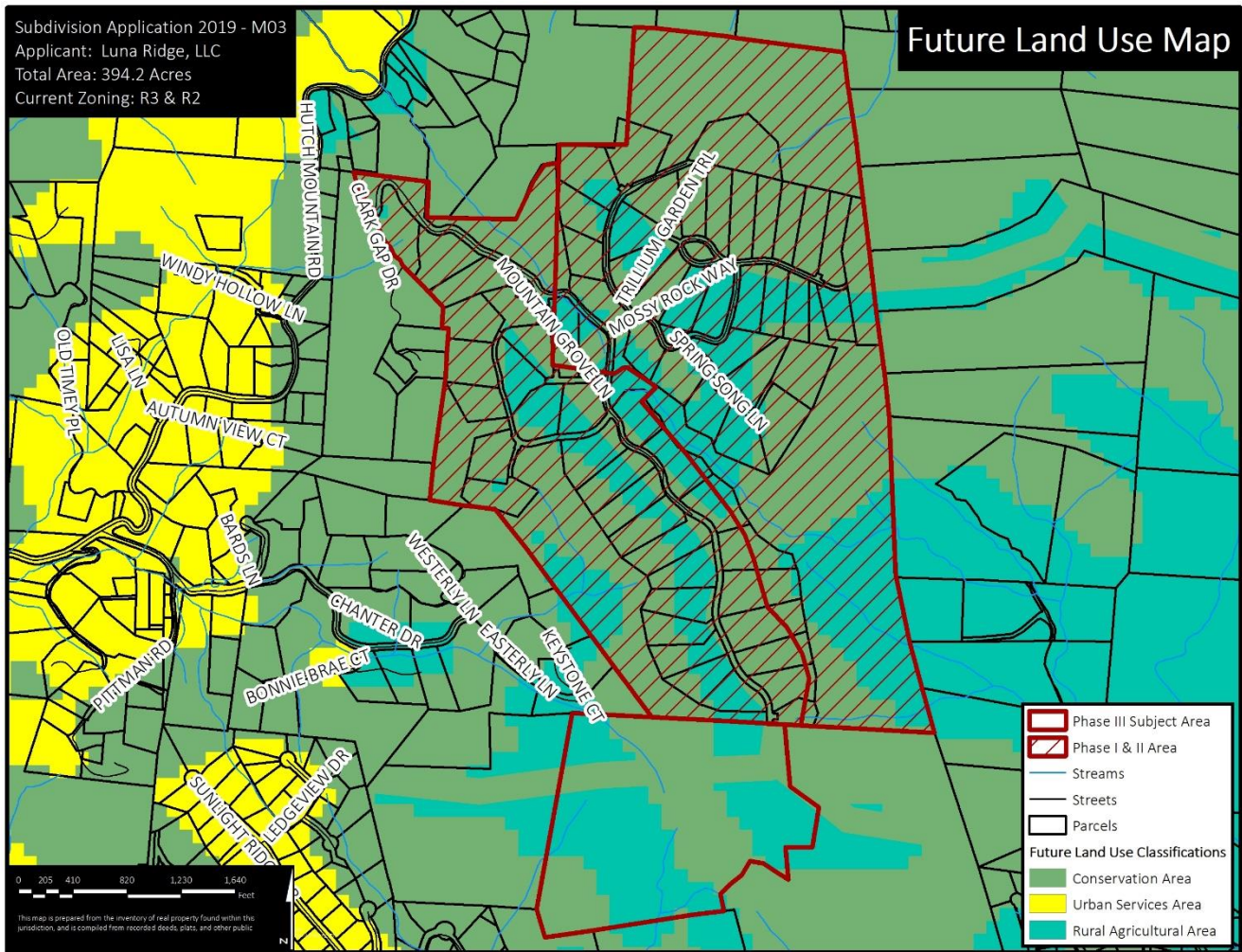
**Map A: County Context**



### Map B: Aerial Imagery

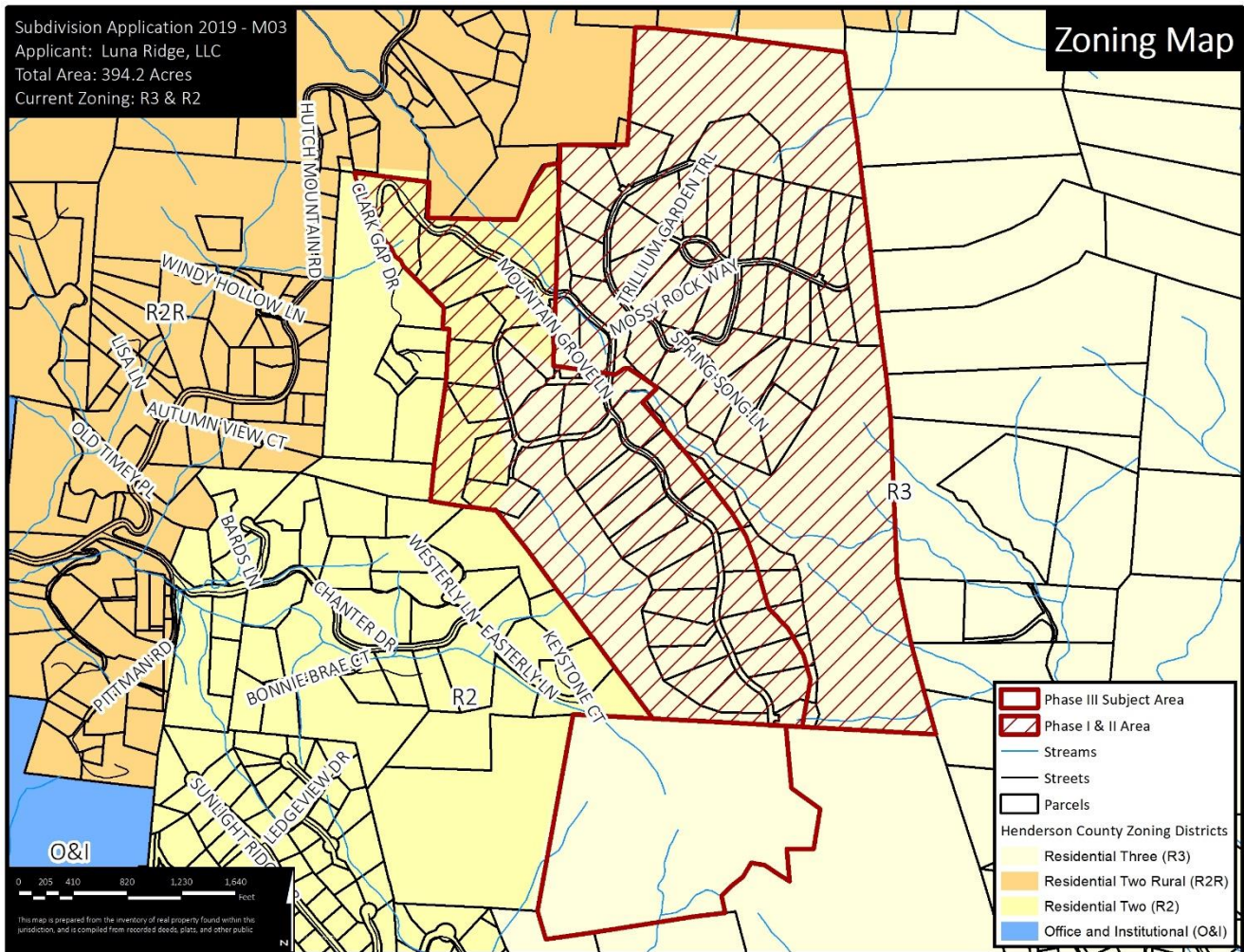


**Map C: County Comprehensive Plan Future Land Use Map**



1. **Henderson County Comprehensive Plan (CCP).** The Future Land Use Map of the CCP shows the Subject Area as being located within an area of Conservation with some Rural Agriculture Area within it.
  - a. **Conservation Area:** “This category includes land areas that are intended to remain largely in their natural state, with only limited development. Such areas should be targeted for protection through regulations and incentives.”
  - b. **Rural Agriculture Area:** “The RAA covers those portions of the county that are predominantly rural and are characterized by low-density residential development with substantial land areas devoted to agriculture and undeveloped lands. Land use policies will seek to retain that character.”

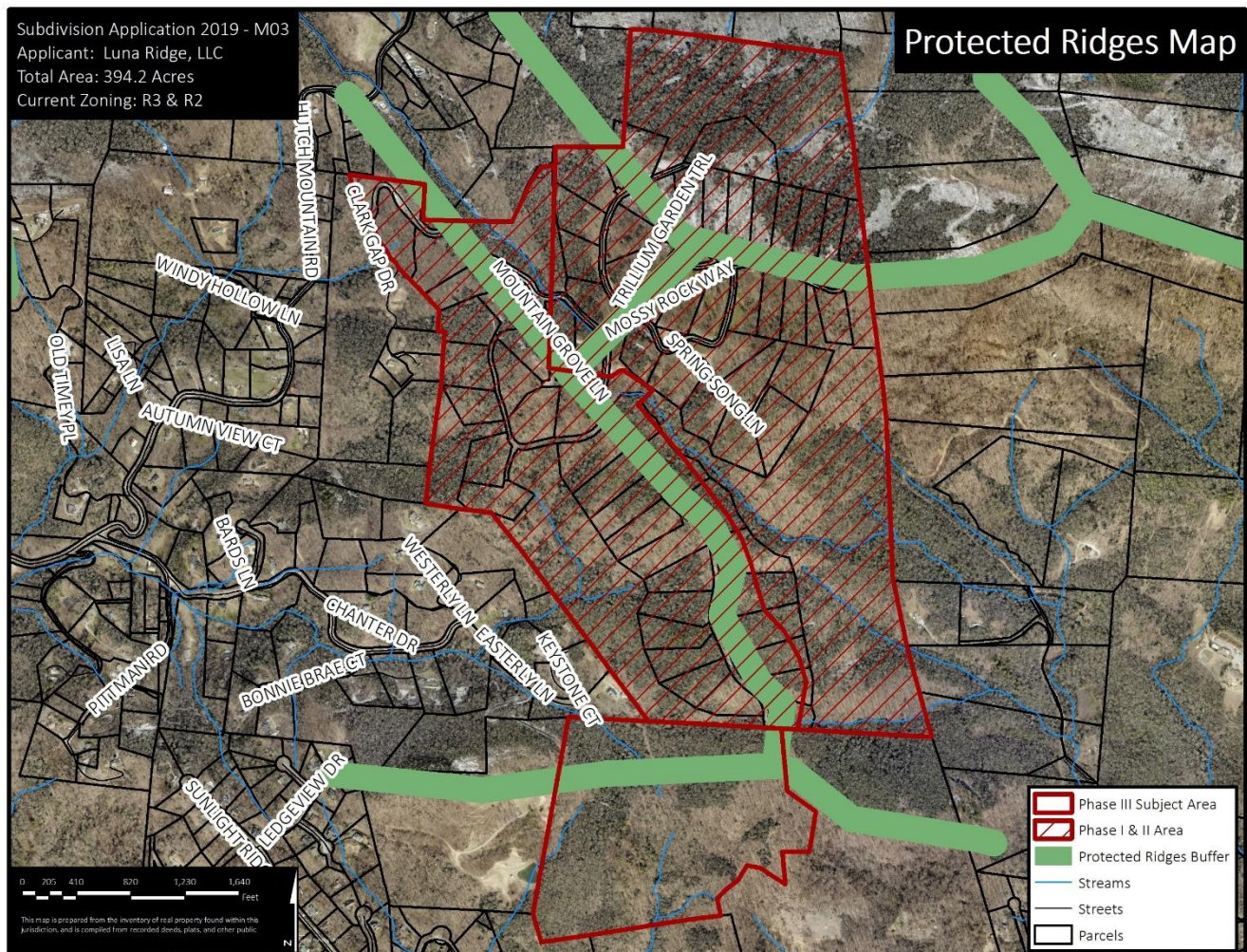
**Map D: Official Zoning Map**



2. **Chapter 42, Henderson County Land Development Code (LDC).** According to Chapter 42, Henderson County Land Development Code (LDC) and its Official Zoning Map adopted September 19, 2007 (as amended), the proposed project site is located within the Residential Three (R3) Zoning District and Residential Two (R2) Zoning District.
  - a. **Residential Three (R3):** “The purpose of Residential District Three (R3) is to foster orderly growth where the *principal use* of land is low density residential. The intent of this district is to allow for *residential development* consistent with the recommendations of the *Comprehensive Plan*. This general *use district* is typically meant to be utilized in areas designated as Rural (RAA) in the *Comprehensive Plan*.
    - i. R3 allows for a standard density of 0.66 units per acre. The overall density for the proposed Couch Mountain Subdivision is 0.21 units per acre.
  - b. **Residential Two (R2):** “The purpose of Residential District Two (R2) is to foster orderly growth where the principal use of land is residential. The intent of this district is to allow for low to medium density residential development consistent with the recommendations of the *Comprehensive Plan*. This general use district is typically meant to be utilized in areas designated as Transitional (RTA) in the *Comprehensive Plan*.”

- i. R2 allows for a standard density of 1 unit per acre. As stated previously, the overall density for Couch Mountain is 0.21 units per acre.
3. **Water and Sewer Availability.** The applicant proposes the use of individual water and septic systems for each lot in the subdivision. Applicant has presented a Report of Findings from Land Resource Management for a preliminary soil investigation as well as a well permit and well construction record from AAA Sweetwater Well & Pump, Inc.
  4. **Road System:** The subdivision will be served by private roads built in accordance with the Subdivision Local Road standards required in the LDC. The total of new roads proposed in the original Phase III approval was 3,899 linear feet. The revised Phase III shows a new total of 3,152 linear feet. Road profiles on the attached plan specify that the maximum grade does not exceed 18% on any of the proposed roads. There is a combination of 14', 16' and 18' road widths proposed, with 3' and 4' shoulders. The applicant will be required to submit a list of proposed road names to the Property Addressing Coordinator for all proposed new roads. The entrance road, Clark Gap Rd., is a private road within a 50'-60' wide right of way. Applicant has re-graded and paved Clark Gap Rd. to its intersection with Hutch Mountain Rd. (SR 1556) to accommodate the additional lots.

**Map E: Protected Ridges**



5. **Protected Ridges:** The project site is partially encumbered by the protected ridges buffer. Section §42-252 of the LDC regulates the construction and permitting of “tall buildings” within the protected ridge buffer.
- a. “Tall buildings or structures” include any building, structure or unit within a multiunit building with a vertical height of more than 40 feet measured from the top of the foundation of said building, structure or unit and the uppermost point of said building, structure or unit; provided, however, that where such foundation measured from the natural finished grade of the crest or the natural finished grade of the high side of the slope of a ridge exceeds 3 feet, then such measurement in excess of 3 feet shall be included in the 40-foot limitation described herein; provided, further, that no such building, structure or unit shall protrude at its uppermost point above the crest of the ridge by more than 35 feet.
6. **Total Project Proposal Summary:**
- 81 single-family lots (34 Lots in Phase I, 33 Lots in Phase II, & 14 Lots in Phase III)
  - Overall density of 0.21 units/acre (0.17 units/acre in Phase I, 0.24 units/acre in Phase II, & 0.24 units/acre in Phase III)
  - Smallest lot in Phase I is 2.09 acres, Phase II is 2.17 acres, & Phase III is 2.21 acres
  - 33.0% Open Space (98.3 acres in Phase I, 29.85 acres in Phase II, & 1.77 acres in Phase III)
  - 12,732LF of private roads (5,809LF in Phase I, 3,771LF in Phase II & 3,152LF in Phase III)
  - Individual well and septic systems
  - Gated Entrance

### **Master & Development Plan Comments:**

1. **Soil Erosion and Sedimentation Control Plan.** The Applicant shall submit written notice from the appropriate local agencies verifying that an Erosion and Sedimentation Control Plan has been received or a written notice from a professional land surveyor, engineer, landscape architect, architect, or professional planner certifying that no plan is required (LDC §42-95B).
2. **Water Quality.** The Applicant shall submit written notice from the appropriate local agencies verifying that a Stormwater Management Permit has been received (LDC §42-95E).
3. **Private Roads.** Private roads shall be constructed in accordance with the Private Subdivision Local Road standards stated in Chapter 42 (LDC§42-109). Additionally, subdivisions of 35 or more lots shall provide a minimum of two entrance roads. The second entrance road may be specifically waived by the approving authority where unique circumstances exist (LDC §42-95A (1)).
4. **Shoulder Stabilization.** All areas disturbed by the construction of a public road, including cut and fill slopes, shoulders and ditch banks, shall be seeded to stabilize the soil and prevent erosion. Seeding should be done as soon as feasible after road construction (LDC §42-102).
5. **Road Drainage, Culverts and Shoulder Stabilization.** Road or drainage structures shall be constructed in accordance with state roads standards. Road drainage side ditches shall be constructed with sufficient depth and width to carry the expected volume of storm water runoff (LDC §42-100). All areas disturbed by the construction of a public road, including cut and fill

slopes, shoulders and ditch banks, shall be seeded to stabilize the soil and prevent erosion. Seeding should be done as soon as feasible after road construction (LDC §42-105).

6. **Road Name Approval.** Proposed road names for a private and/or public road shall be preapproved by Henderson County in accordance with Chapter 42 of the Henderson County Code, Property Addressing (LDC §42-103). The names of the proposed roads and easements should be confirmed with the development plan approval.
7. **Road Name Signs and Regulatory Signs.** Road name signs and regulatory signs shall be provided in accordance with Chapter 142 of the Henderson County Code. Road name signs and regulatory signs must be acquired and installed prior to final plat approval (LDC §42-104).
8. **Street Tree Requirements.** According to the street tree requirements of Chapter 42 (LDC §42-95H) the applicant must provide one tree per 50 linear feet of property abutting an internal road. Trees may be placed in groups with a minimum spacing of no less than 15 feet and a maximum spacing of no more than 65 feet. The trees may be placed within the right-of-way or within 20 feet of the edge of the right-of-way. The applicant may use existing trees in accordance with LDC §42-185 instead of planting new trees. These existing trees must also be located within the right-of-way or 20 feet off the edge of the right-of-way as required by LDC §42-185.
9. **Perennial and Intermittent Surface Water Buffer.** All built-upon area shall be a minimum of 30 feet landward of all perennial and intermittent surface water, as defined in LDC §42-251.
10. **Miscellaneous Advisory Provisions.** The Applicant should become familiar with the Miscellaneous Advisory Provisions of Chapter 42 (LDC §42-87).
11. **Final Plat Requirements.** The Final Plat(s) must meet the requirements provided by the Planning Department whenever a subdivision of land occurs (LDC §42-343).







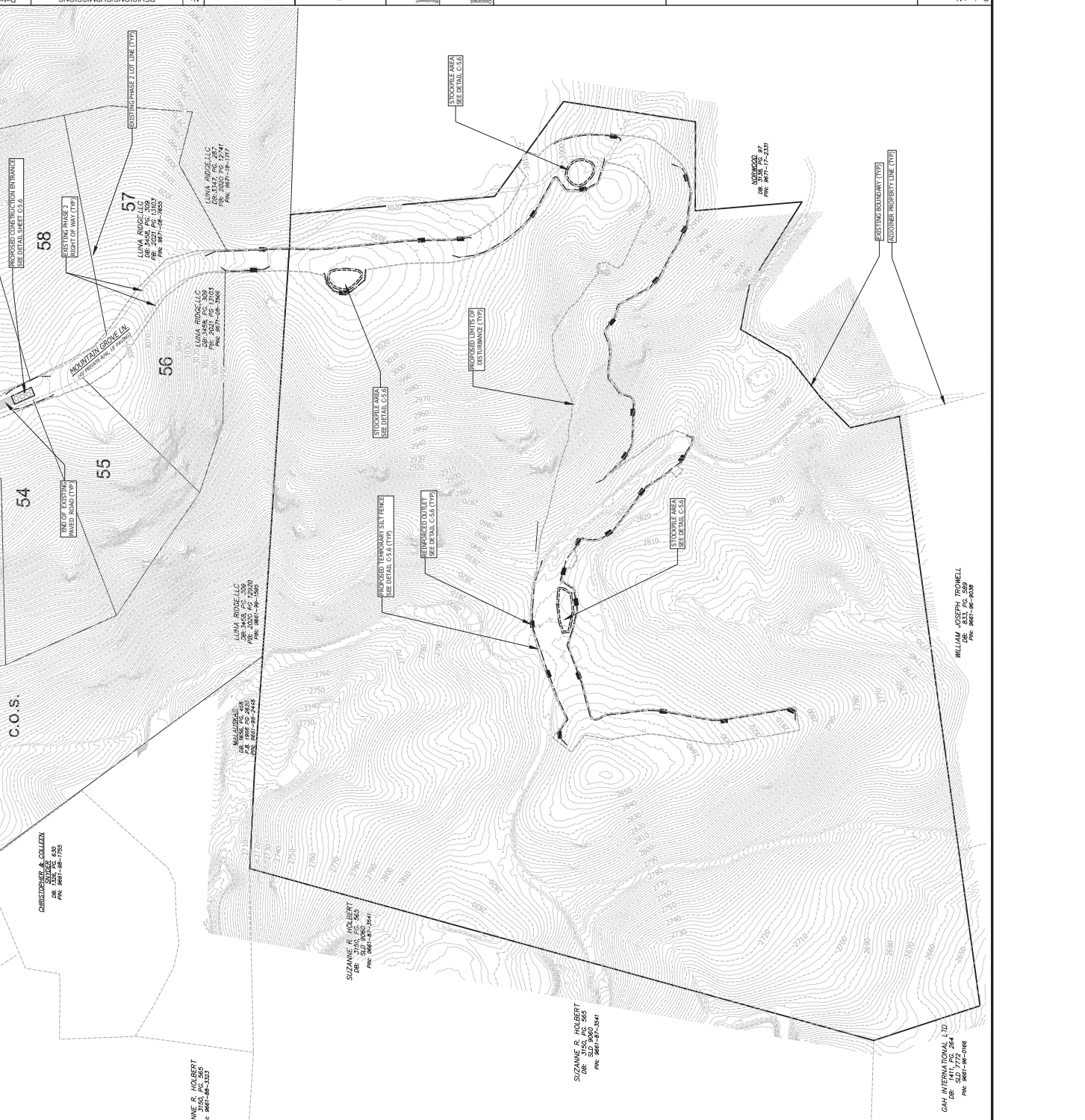


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 17 Arlington Street, Asheville, N.C. 28801  
 Phone: 1-828-232-7070  
 Fax: 1-828-232-1331  
 www.brooks.com

DATE: 08/03/2021  
 DRAWN BY: MCB  
 CHECKED BY: AS NOTED  
 PROJECT NO: 486519

Professional Engineer Seal: William Joseph Fromell, No. 9667-96-9029

No.	REVISIONS/SUBMISSIONS	Date
1	SUBMITTAL TO HENDERSON COUNTY	03/21/21
2	STORM AND ESC PLANS	04/02/21
3	STORM AND ESC RESUBMISSION	08/02/21



- ### EROSION CONTROL PLAN LEGEND
- EAST BOUNDARY
  - - - EAST ADJOINER
  - EAST STREAM
  - - - EAST STREAM BUFFER
  - EAST OVERHEAD UTILITIES
  - EAST POWER POLE
  - EAST STORM DRAIN
  - TEMP. SILT FENCE
  - LIMITS OF DISTURBANCE
  - TEMP. CHECK DAM
  - OUTLET PROTECTION
  - PROP. EC SLOPE MATTING
- ### EROSION CONTROL NOTES
1. ALL EROSION MEASURES AND PRACTICES SHALL BE MAINTAINED WITHIN THE EROSION CONTROL PLAN AND SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
  2. FOLLOWING RECOMMENDATIONS MUST BE MET:
    1. ARE A VIOLETATION OF THE PERMIT.
    2. DEPOSITION OF SEDIMENT OFFSITE OR IN A STREAM OR WETLAND.
    3. VISIBLE DEPOSITION OF SEDIMENT SHALL BE REPORTED TO NOED.
    4. A WRITTEN RECORD OF THE DAILY RAINFALL AMOUNTS SHALL BE MAINTAINED ON SITE.
    5. A WRITTEN RECORD OF THE DAILY RAINFALL AMOUNTS SHALL BE MAINTAINED ON SITE.
    6. AT LEAST ONCE PER WEEK, EACH EROSION CONTROL MEASURE SHALL BE INSPECTED AND RECORDED TO VERIFY THAT IT IS OPERATING CORRECTLY.
    7. EVIDENCE OF ANY EROSION CONTROL MEASURE THAT IS OPERATING INCORRECTLY SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
    8. ANY VISIBLE SEDIMENTATION LEAVING THE SITE OR ENTERING ANY WATERWAY SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
    9. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF EROSION CONTROL MEASURES ARE MAINTAINED AT ALL TIMES, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED BY PHONE OR IN WRITING.
    10. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF EROSION CONTROL MEASURES ARE MAINTAINED AT ALL TIMES, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED BY PHONE OR IN WRITING.
    11. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF EROSION CONTROL MEASURES ARE MAINTAINED AT ALL TIMES, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED BY PHONE OR IN WRITING.
    12. PROVIDE WATERBENT DOWNS ON ANY STORM DRAINS WHERE VELOCITIES EXCEED 5 FT/SEC. AND IN DOWNSPACES ARE TO BE WITHIN THE LIMITS OF THE STORM DRAIN. PROVIDE 18" X 18" X 18" DRAINAGE STRUCTURES AT ALL STORM DRAIN OUTLETS AND SURFACE WATERWAYS.







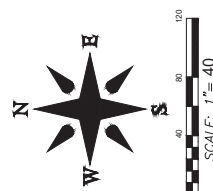
LUNA RIDGE, LLC  
 DB: 3458, PG. 309  
 P.B: 2020 PG 12920  
 PIN: 9661-99-1595

MALALAUSKAS  
 DB: 1656, PG. 468  
 P.B: 1998 PG 2620  
 PIN: 9661-98-2445

SUZANNE R. HOLBERT  
 DB: 3150, PG. 565  
 SLD 9060  
 PIN: 9661-87-3541

**SITE PLAN LEGEND**

---	EXIST BOUNDARY
---	EXIST ADJUTORY WAY
---	EXIST ADJUTORY WAY
---	EXIST STREAM
---	EXIST WATER OFFER
---	EXIST WETLAND
---	EXIST EDGE OF GRAVEL
---	EXIST WATER EASEMENT
---	EXIST OVERHEAD UTILITIES
---	NEW FOOT PATHS
---	NEW DRIVEWAY EASEMENT
---	BUILDING SETBACK LINE
---	NEW PARTMENT

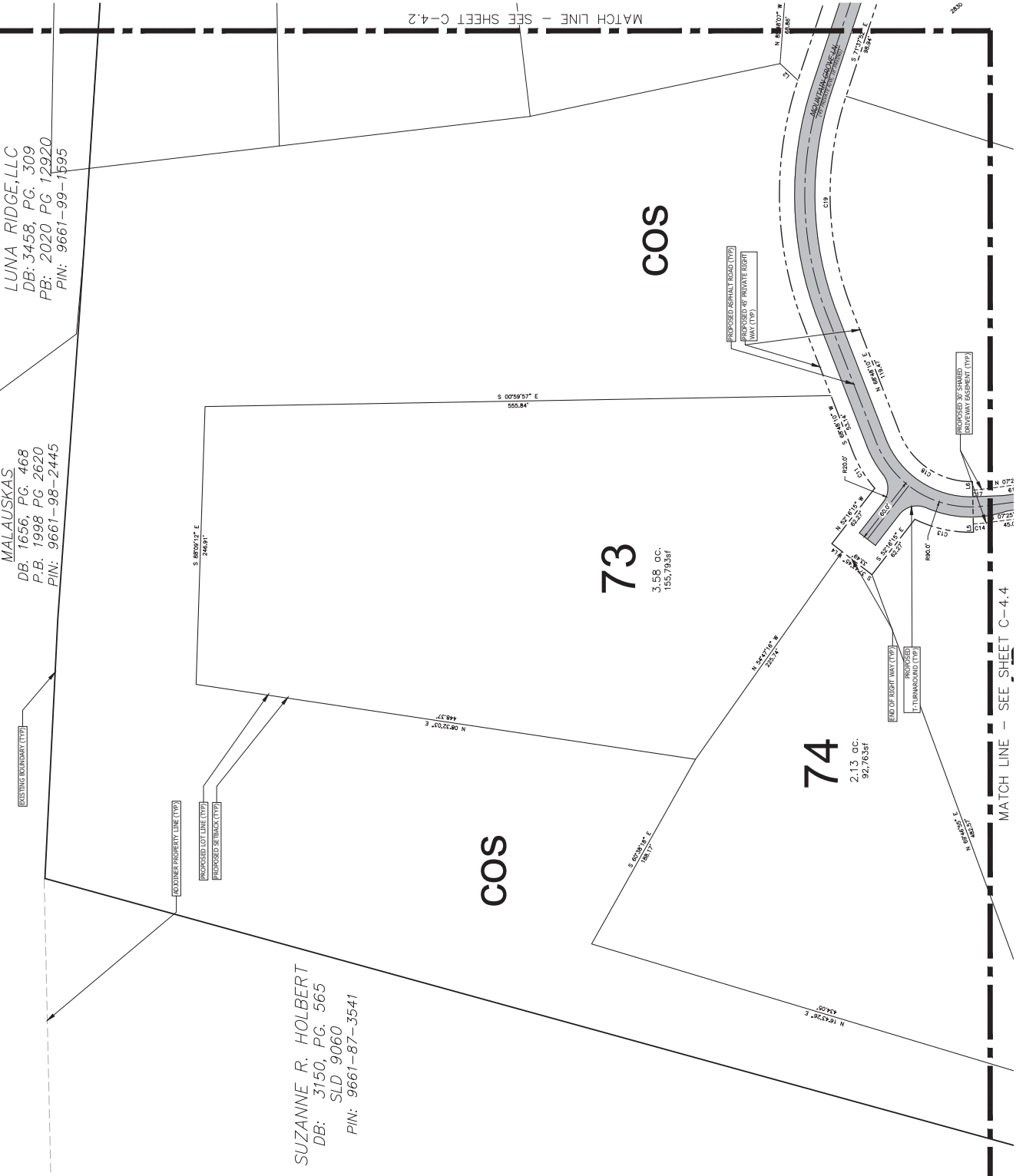


**SITE AND ZONING NOTES**

PROPERTY ZONING: R3  
 PROPERTY SIZE: 38.14(PL.3)  
 PROPERTY STEEPER THAN 10%: 9.31 AC (8.82%)  
 MINIMUM LOT AREA: 1.0 AC (10.0%)  
 MINIMUM LOT PROPOSED: 0.73 ACRES  
 MINIMUM LOT WIDTH: 20.00 F.O.W.  
 MINIMUM BUILDING HEIGHT: 10'  
 FRONT 10' (LOCAL)  
 SIDE 10'  
 COMMON OPEN SPACE: 1.77 AC (3.3% PH.3)  
 ALL DIMENSIONS ARE FROM FACE OF ASPHALT FACE OF CURB FACE OF WALL, UNLESS OTHERWISE NOTED.  
 ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DEVELOPMENT ORDINANCES OF HENDERSON CO.

**DEVELOPMENT DATA**


PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
 PIN NUMBER: 9661-99-1595  
 ZONING REVIEW: HENDERSON COUNTY  
 EROSION CONTROL REVIEW: HENDERSON COUNTY  
 ZONING CLASSIFICATION: R3  
 PROPOSED DENSITY: 0.21 (PL.3) (TOTAL UTILITIES)  
 PROPOSED LINEAR FEET OF ROAD: 3,155.16(PL.3)  
 WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL PUBLIC WATER AND SEWER SYSTEMS ARE 1/2 MILE OR A PART AND PRESERVATION DISTRICT.  
 PROPERTY OWNER: 5 MILES FROM THE SITE  
 CONTACT: ANDY BAKER  
 ADDRESS 2: SWANNANOVA, NC 28778  
 DEVELOPER: LUNA RIDGE, LLC  
 ADDRESS: 1770 HIGHWAY 700  
 PHONE: 828-682-3515  
 EMAIL: ANDY@LUNARIDGE.COM  
 ENGINEER: SUZANNE R. HOLBERT  
 CONTACT: JOHN KENNEDY  
 ADDRESS 2: 1770 HIGHWAY 700  
 PHONE: 828-682-3515

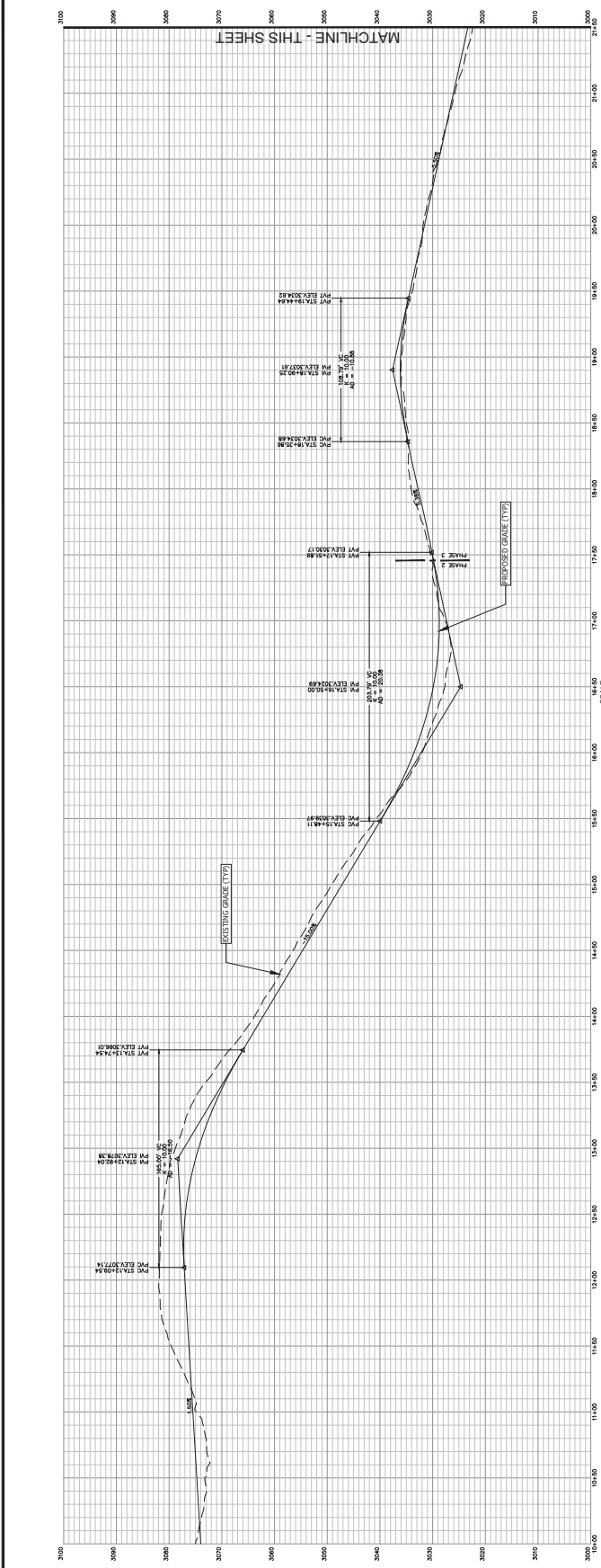
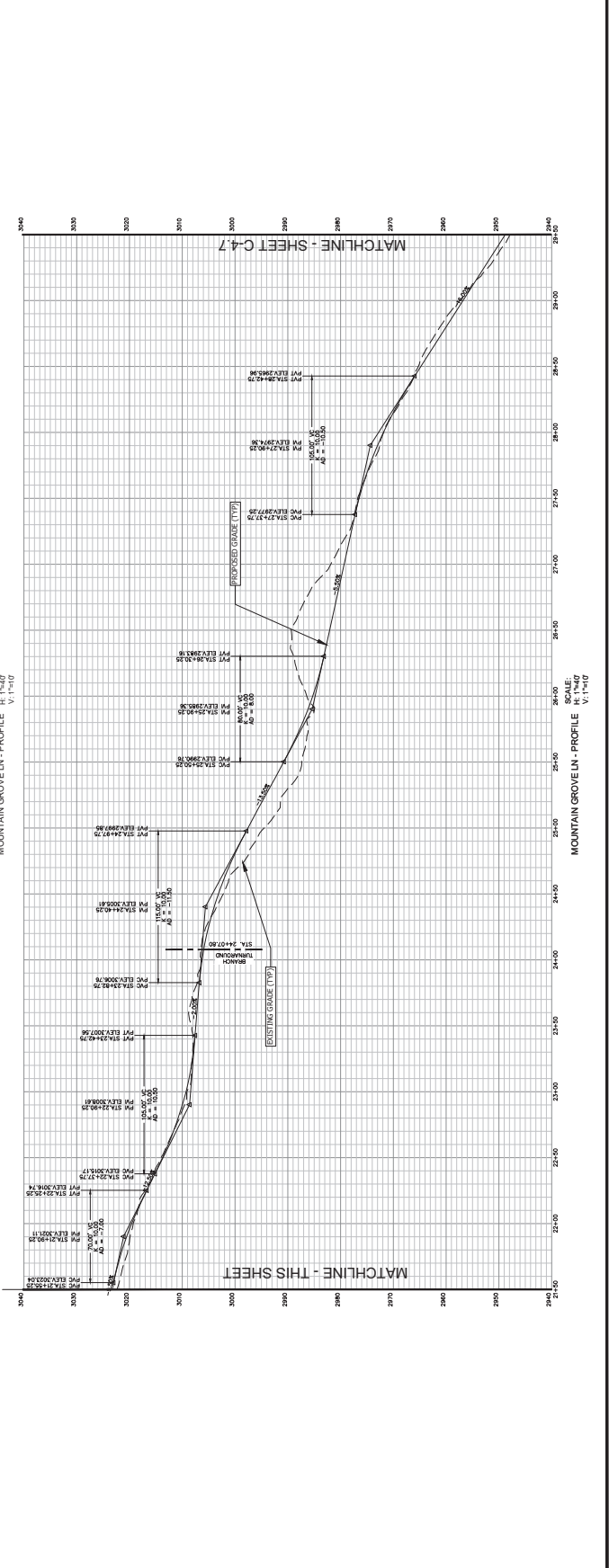








ROAD PROFILES Drawing Title HENDERSON COUNTY NORTH CAROLINA		Planning • Engineering • Surveying Environmental Services • <b>BROOKS</b> ENGINEERING ARCHITECTS	
Project No: <b>486519</b>		C-4.6 DEVELOPMENT PLAN	
COUCH MOUNTAIN SUBDIVISION (PHASE 3)		PERMIT SET  	
17 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooks.com		Date: 08/03/2021 Scale: AS NOTED MCB JHB	
No. REVISIONS/SUBMISSIONS Date		1 SUBMITTAL TO HENDERSON COUNTY 03/24/21 2 STORM AND ESC REVISIONS 04/06/21 3 STORM AND ESC REVISIONS 08/02/21	

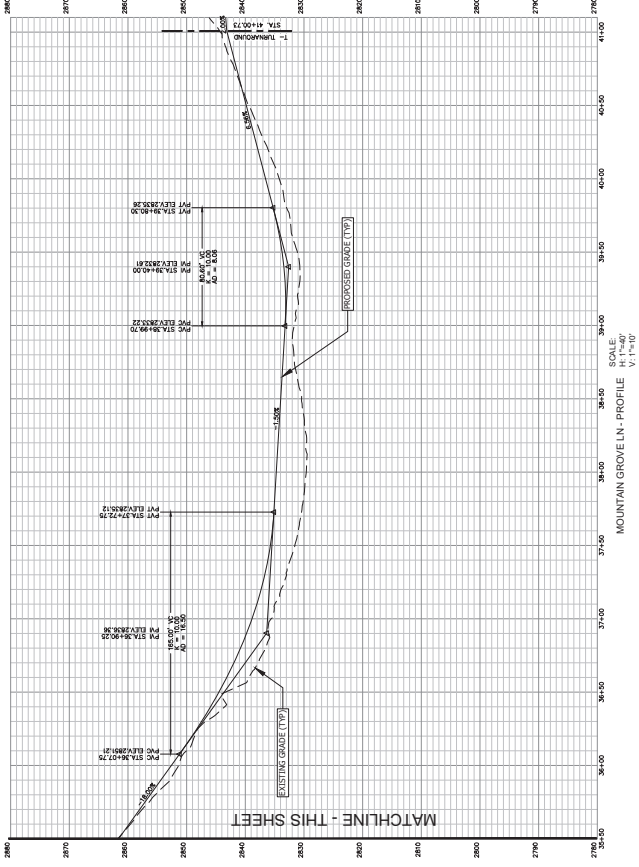
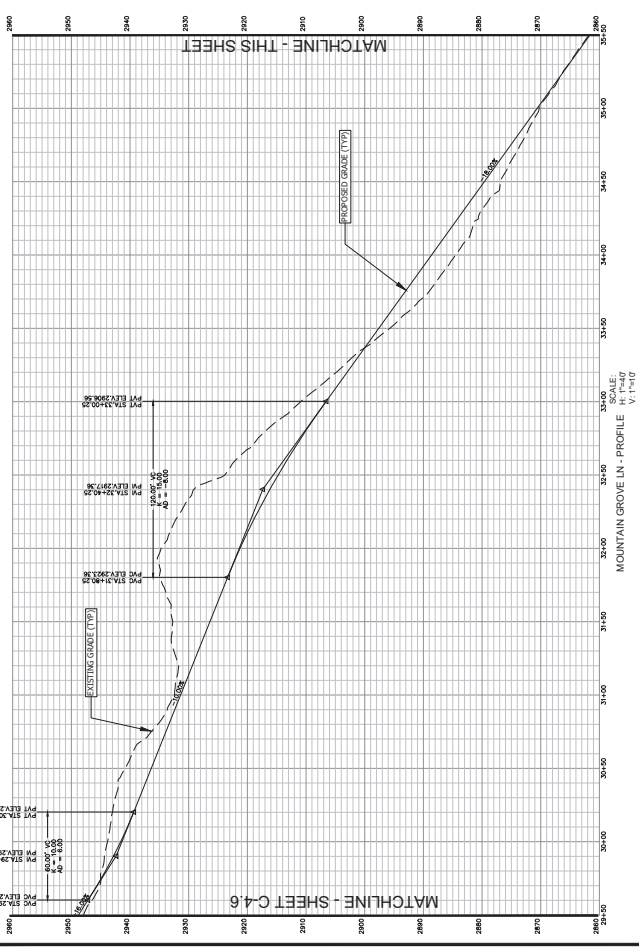
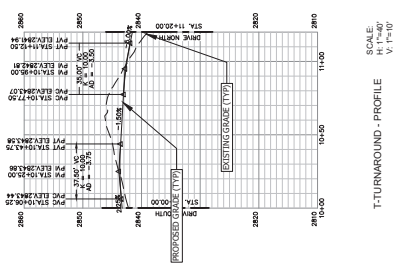


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Prepared	MCB
Checked	AS NOTED
Drawn	AS NOTED
Scale	AS NOTED
Date	08/03/2021

PERMIT SET

No.	1	SUBMITTAL TO HENDERSON COUNTY	03/24/21
	2	STORM AND ESC RESUBMISSION	04/06/21
	3	STORM AND ESC RESUBMISSION	08/02/21
Revisions/Comments appear with a unique color and change mark on this sheet.			



**GRADING AND STORMWATER LEGEND**

---	EXIST BOUNDARY
---	EXIST ADJOINER WAY
---	EXIST STREAM
---	EXIST STREAM BUFFER
---	EXIST OVERHEAD UTILITIES
---	EXIST UNDERGROUND UTILITIES
---	EXIST STORM DRAIN
---	PROP. LOT LINE
---	NEW OUTLET PROTECTION
---	PROPOSED STORM PIPE
---	PERMANENT DIMENSION SWALE
---	PERMANENT TERRAP SWALE



**STORM AND EROSION NOTES**

PROPERTY STEEPER THAN 15% (15% TO 25% TOTAL)  
 PROJECT DENSITY: 0.24 UPH/3.12 TOTAL UNITS/ACRE  
 ROADS: 1.0% ACROSS  
 HOUSES & GARAGES: 10% TO 15% UPH/1.00 TOTAL UNITS/ACRE

**EROSION CONTROL NOTES:**

- SEE SHEET C-5.0 FOR STABILIZATION TIME
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FALL NOT PROVIDED FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED TO CONTROL OR TREAT THE SEDIMENT SOURCE APPROVED SHOWING MOVED EROSION CONTROL DEVICES.

**STORMWATER NOTES:**

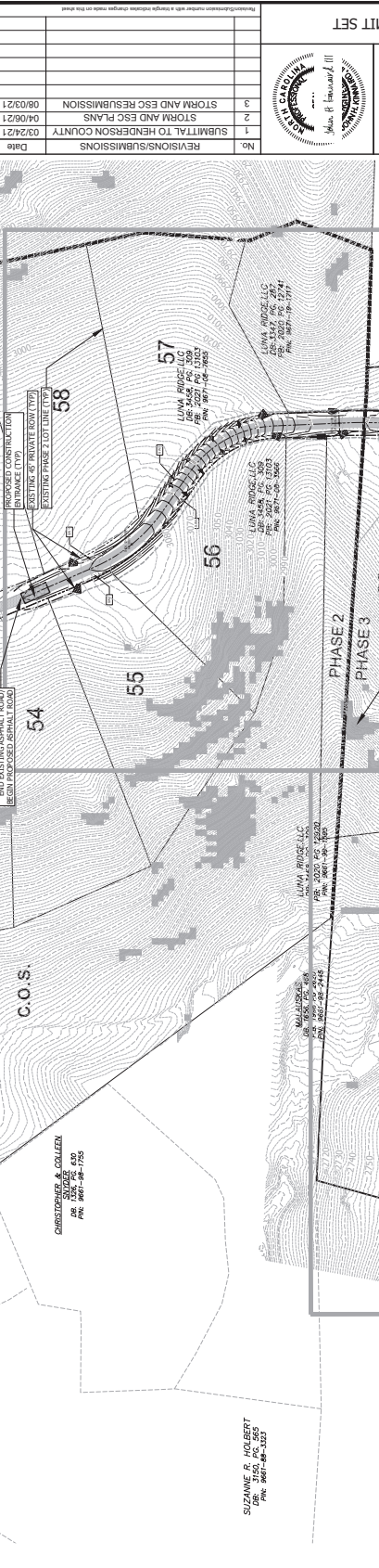
- ALL STREETS AND DRIVEWAYS SHALL HAVE A 3% SETBACK FOR ALL PAVEMENT SURFACES.
- ALL PIPES SHALL BE DOUBLE WALL HOPE WITH MINIMUM COVER OF 30" AND SHALL HAVE A DRAINER, GREATER THAN 3" AND FASTER THAN 1/8" PER FOOT.
- ALL FILL SCOPES SHALL BE COMPACTED FULL DENSITY (STANDARD PROCTOR) SHALL BE APPROVED SHOWING MOVED EROSION CONTROL DEVICES.
- 10 FEET SHALL BE SEDED AND COVERED WITH MATING STONES SHOWN IN THE PLANS.
- ANY BORROW OR WASTE SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

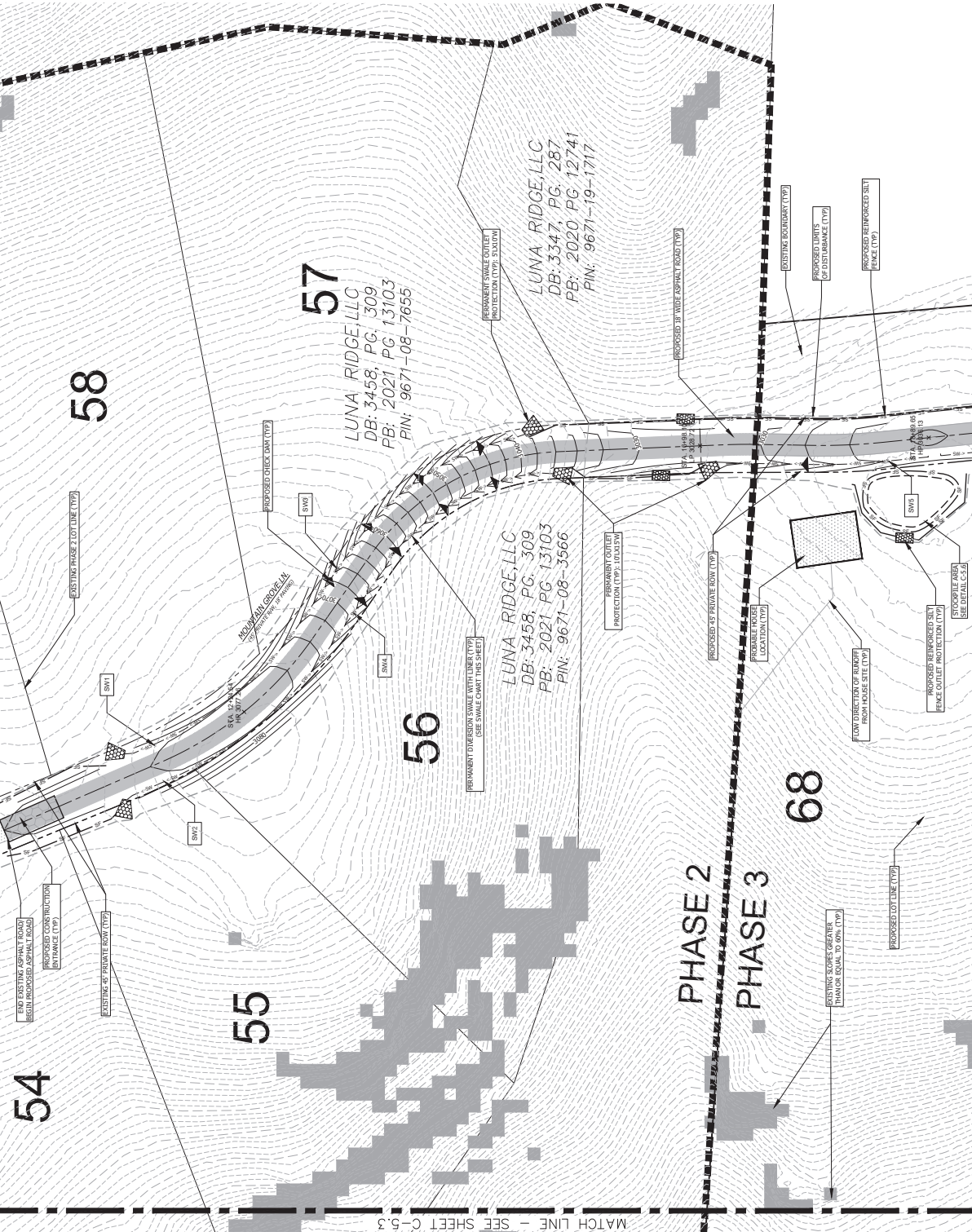
**DEVELOPMENT DATA**

PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
 PIN NUMBER: 965.02.628.3  
 PROPERTY SIZE: 28.6 AC (PH. 31.2) 2.42 AC (TOTAL)  
 EROSION CONTROL: NEW HENDERSON COUNTY  
 ZONING CLASSIFICATION: R-3  
 PROPOSED NUMBER OF UNITS: 31 (PH. 31.2) (TOTAL)  
 PROPOSED LINEAR FEET OF ROAD: 3,182 (PH. 31.2)  
 PORTIONS OF LOTS 88.09 TO 77.1 ARE WITHIN 10' WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL PUBLIC WATER AND SEWER SYSTEMS ARE APPROXIMATELY 1.5 MILES FROM THE SITE

PHO CONTACT: ABEY BAKER  
 ADDRESS: 21 SWANNANOCKA RD #217A  
 DEVELOPER: LUNA RIDGE LLC  
 ADDRESS: 120 HIGH HICKORY TRAIL  
 ADDRESS: SWANNANOCKA, NC 28778  
 PHONE: 919.852.5813  
 ENGINEER: JOHN INMANARD  
 ADDRESS: 17 ARINGTON STREET  
 ADDRESS: WASHINGTON, NC 28788  
 EMAIL: JINMANARD@BROOKS-ENR.COM  
 PHONE: 919.852.5200



<p>PERMIT SET</p>		<p>REVISIONS/PERMISSIONS</p> <table border="1"> <tr> <th>No.</th> <th>Date</th> <th>Description</th> </tr> <tr> <td>1</td> <td>03/21/21</td> <td>SUBMITTAL TO HENDERSON COUNTY</td> </tr> <tr> <td>2</td> <td>04/20/21</td> <td>STORM AND ESC REVISIONS</td> </tr> <tr> <td>3</td> <td>08/02/21</td> <td>STORM AND ESC RESUBMISSION</td> </tr> </table>		No.	Date	Description	1	03/21/21	SUBMITTAL TO HENDERSON COUNTY	2	04/20/21	STORM AND ESC REVISIONS	3	08/02/21	STORM AND ESC RESUBMISSION
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1	03/21/21	SUBMITTAL TO HENDERSON COUNTY													
2	04/20/21	STORM AND ESC REVISIONS													
3	08/02/21	STORM AND ESC RESUBMISSION													
<p>PROJECT NO: 486519</p>		<p>DRAWING TITLE: C-5.0</p>													
<p>DEVELOPMENT PLAN</p>		<p>COUCH MOUNTAIN SUBDIVISION (PHASE 3)</p>													
<p>HENDERSON COUNTY</p>		<p>NORTH CAROLINA</p>													
<p>Planning • Engineering • Surveying • Environmental Services •</p> <p><b>BROOKS ENGINEERING ARCHITECTS</b></p> <p>17 Arlington Street          Asheville, N.C. 28801          Phone: 1-828-232-4700          Fax: 1-828-232-1311          www.brooks.com</p>															



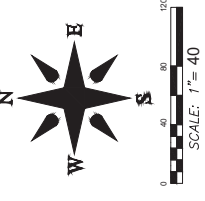
**SWALE CHART**

Swale	Up	Down	Swale	Side	Swale	Flow Depth	Velocity	Base Slope	Reinforcement
SW1	3075.0'	3075.0'	3.0	0.5'	1.6'	1.4 fpm	0.1 m/s	0.1 m/sf	MAG SCI 505BN (Temporary)
SW2	3076.0'	3074.3'	3.0	0.5'	1.6'	2.0 m	1.7 fpm	0.2 psf	MAG SCI 505BN (Temporary)
SW3	3076.0'	3038.0'	3.0	0.5'	3.28'	11.6%	1.9 m	4.7 fpm	MAG SCI 505BN (Temporary)
SW4	3076.0'	3035.6'	3.0	0.5'	3.24'	12.5%	1.9 m	4.7 fpm	MAG SCI 505BN (Temporary)
SW5	3035.0'	3028.0'	3.0	0.5'	1.75'	4.0%	1.8 m	2.8 fpm	MAG SCI 505BN (Temporary)

**SWALE CALCULATIONS**

**GRADING AND STORMWATER LEGEND**

- EXIST BOUNDARY
- EXIST ADJOINER
- EXIST STREAM
- EXIST STREAM BUFFER
- EXIST OVERHEAD UTILITIES
- EXIST HANGOVER UTILITIES
- EXIST STORM DRAIN
- PROP. PAVED ROAD
- PROP. LOT LINE
- NEW OUTLET PROTECTION
- PROPOSED STORM PIPE
- PERMANENT DIMENSION SWALE
- PERMANENT BIRAP SWALE



**STORM AND EROSION NOTES**

PROPERTY STEEPER THAN 15% SHALL BE CONSIDERED AS A 15% SLOPE UNLESS OTHERWISE NOTED.

PROJECT DENSITY: 0.24 UPG/AC (TOTAL)  
IMPERVIOUS DENSITY: 0.24 UPG/AC (TOTAL)

ROADS: 10% GRADES  
10% SLOPES & CORNERS TO 10% OF LOTS

**EROSION CONTROL NOTES:**

- SEE SHEET C-4.0 FOR STABILIZATION TIME
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FALL NOT PROVIDED FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED TO CONTROL OR TREAT THE SEDIMENT SOURCE AND TO PREVENT SEDIMENT FROM ENTERING APPROVED SHOWING MOVED EROSION CONTROL DEVICES.

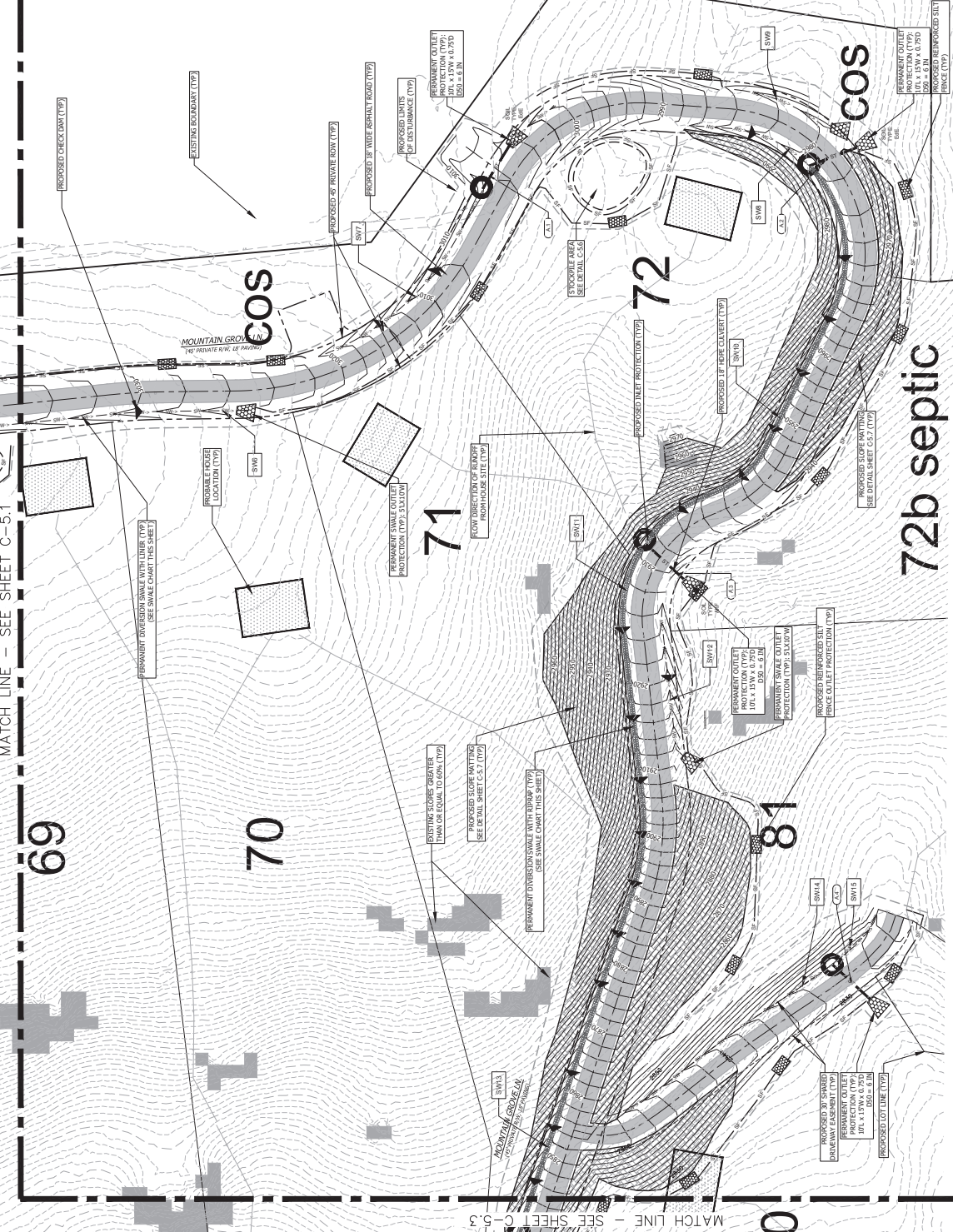
**STORMWATER NOTES:**

- ALL STORMWATER SHALL BE COLLECTED AND CONVEYED TO A 30' SETBACK FOR ALL STREETS AND SHALL BE CONVEYED TO A 30' SETBACK FOR ALL PRIVATE ROADS.
- ALL PIPES SHALL BE DOUBLE WALL HOPE WITH MINIMUM COVER OF 30' AND SHALL HAVE A MINIMUM COVER OF 30'.
- ALL FILL SLOPES SHALL BE COMPACTED FULL DENSITY (STANDARD PROCTOR) SHALL BE 95% AND SHALL BE PROPERLY BENTON AD DRAINERS, GREATER THAN 3" AND FASTER THAN 10 FEET SHALL BE SEEDED AND COVERED WITH MULCH AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND MAINTENANCE PERIODS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE EDITION OF THE NATIONAL SWALE DESIGN MANUAL FOR DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HERNDON CO.

**DEVELOPMENT DATA**

PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
PIN NUMBER: 965127-02X  
PROPERTY SIZE: 28.6 AC (PH. 3) 28.6 AC (TOTAL)  
EROSION CONTROL: SEE SHEET C-4.0, HERNDON COUNTY ZONING CLASSIFICATION: R-3  
PROPOSED NUMBER OF UNITS: 31 (PH. 3) 31 (TOTAL)  
PROPOSED LINEAR FEET OF ROAD: 3152.1 (L.F.) 3282.0 (TOTAL)  
PORTIONS OF LOTS 88.09 70.71 ARE WITHIN 10' WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL PUBLIC WATER AND SEWER SYSTEMS ARE APPROXIMATELY 1.5 MILES FROM THE SITE  
PHOTO CONTACT: ABEY BAKER  
ADDRESS: 2225 W. WYOMING ST.  
ASHEVILLE, NC 28804  
DEV. OWNER: LUNA RIDGE, LLC  
ADDRESS: 124 HIGH HICKORY TRAIL  
ASHEVILLE, NC 28804  
PHONE: 828-232-3433  
ENGINEER: JOHN KENNEDY  
CONTACT: JOHN KENNEDY  
ADDRESS: 17 ARRLINGTON ST.  
ASHEVILLE, NC 28801  
E-MAIL: JKENNEDY@BROOKSARCH.COM  
PHONE: 828-232-4700

No.	REVISIONS/SUBMISSIONS	DATE
1	SUBMITTAL TO HERNDON COUNTY	03/22/21
2	STORM AND EROSION PLANS	04/02/21
3	STORM AND EROSION PLANS	08/02/21



Swale Name	Swale Type	Invert	Down	Side	Slope - Z	Length	Slope	Flow depth	Velocity	Shear Stress	Reinforcement
SW6	GRASS	3025.0'	3025.0'	3.0	0.5%	205.1'	4.9%	1.8	3.2 fps	0.5 psf	MAG SC150BN (Temporary)
SW7	GRASS	3026.0'	3026.0'	3.0	0.5%	190.1'	7.5%	2.5	4.5 fps	1.0 psf	MAG SC150BN (Temporary)
SW8	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW9	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW10	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW11	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW12	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW13	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW14	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)
SW15	GRASS	2978.2'	2978.2'	3.0	0.5%	104.1'	7.5%	2.8	4.5 fps	1.1 psf	MAG SC150BN (Temporary)

Station	Name	Elevation	Invert	Size	Material	Length	Slope	Flow depth	Velocity	450 Stone Size	Apron Thickness	Pool Length	Pool Width
2+00	A.1	3006.3'	3006.3'	18.0"	HDPE	55.1'	1.5%	3.5	3.5 fps	6"	6"	10'	15'
2+10	A.2	2976.7'	2976.7'	18.0"	HDPE	43.1'	6.0%	2.6	7.8 fps	6"	6"	10'	15'
3+00	A.3	2924.1'	2924.1'	18.0"	HDPE	44.1'	10.0%	4.3	14.5 fps	6"	6"	10'	15'
3+50	A.4	2827.5'	2827.5'	18.0"	HDPE	42.1'	2.6%	2.0	3.4 fps	6"	6"	10'	15'

**GRADING AND STORMWATER LEGEND**

- EXIST BOUNDARY
- EXIST ADJACENT WAY
- EXIST STREAM
- EXIST STREAM BUFFER
- EXIST OVERHEAD UTILITIES
- EXIST UNDERGROUND UTILITIES
- EXIST STORM DRAIN
- PROP. LOT LINE
- PROP. PAVED ROAD
- NEW OUTLET PROTECTION
- PROP. R.O.W.
- PROPOSED STORM PIPE
- PERMANENT DIMENSION SWALE
- PERMANENT RIPRAP SWALE



**STORM AND EROSION NOTES**

- SEE SHEET C-5.1 FOR STABILIZATION TIME
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FALL NOT PROVIDED FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL MEASURES SHALL BE PROVIDED TO CONTROL OR TREAT THE SEWAGE SOURCE PRIOR TO ANY BORROW OR WASTE SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.

**STORMWATER NOTES:**

- ALL STORMWATER SHALL BE STORED IN A 30' SETBACK FOR 12 HOURS & DISCHARGED TO THE STREET.
- ALL PIPE SHALL BE DOUBLE WALL HDPE WITH A MINIMUM COVER OF 30" AND SHALL HAVE A 1% SLOPE.
- ALL FILL SLOPES SHALL BE COMPACTED FULL DENSITY (STANDARD PROCTOR) SHALL BE 95% AND DRAINAGE SHALL BE PROPERLY BENT AND DRAINERS GREATER THAN 3" AND FASTER THAN 4" SHALL BE SEEDED AND COVERED WITH 2" OF MULCH.
- ALL SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES AS SHOWN IN THE PLANS.
- ANY BORROW OR WASTE SITE SHALL BE RECLAIMED TO ORIGINAL OR BETTER CONDITION PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.

**DEVELOPMENT DATA**

PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
 PIN NUMBER: 96512 A23X  
 PROJECT DATE: 08/03/2021  
 PROJECT DENSITY: 0.24 UPH/3.12 AC TOTAL  
 EROSION CONTROL: NEW HERNDON COUNTY ZONING CLASSIFICATION: R-3  
 PROPOSED NUMBER OF UNITS: 63 (45 UPH TOTAL)  
 PORTIONS OF LOTS 88.09 TO 71 ARE WITHIN 10' BUFFER ZONE OF MOUNTAIN GROVE LANE  
 WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL PUBLIC WATER AND SEWER SYSTEMS ARE APPROXIMATELY 1.5 MILES FROM THE SITE

CONTACT: ABEY BAKER  
 ADDRESS: 2222 W. WYOMING ST. #200  
 ADDRESS: WYOMING, NC 27157  
 PHONE: 336.845.5433  
 CONTACT: JOHN HANNAH  
 ADDRESS: 17 JASPER ST.  
 ADDRESS: ASHEVILLE, NC 28801  
 EMAIL: JHANNAH@BROOKSARCH.COM  
 PHONE: 828.232.4700

No.	REVISIONS/SUBMISSIONS	Date
1	SUBMITTAL TO HENDERSON COUNTY	03/24/21
2	STORM AND ESC PLANS	04/06/21
3	STORM AND ESC RESUBMISSION	08/02/21

Station	Pipe Name	Pipe Size	Road Elevation	Up Invert	Down Invert	Pipe Slope	Length	Slope	Flow Depth	Velocity	450 Stone Size	Alapon Thickness	Pad Length	Pad Width
30+43	A.5	18.00"	2540.5	2552.0	2537.0	1:2.0%	46.0'	1:2.0%	2.0'	17.3 FPS	0"	9"	70"	73"

**GRADING AND STORMWATER LEGEND**

- EXIST BOUNDARY
- EXIST ADJACENT WAY
- EXIST STREAM
- EXIST STREAM BUFFER
- EXIST OVERHEAD UTILITIES
- EXIST MANHOLE UTILITIES
- EXIST STORM DRAIN
- PROP. LOT LINE
- PROP. R.O.W.
- NEW OUTLET PROTECTION
- EXIST STORM PIPE
- PROPOSED STORM PIPE
- PERMANENT DIMENSION SWALE
- PERMANENT TERRAP SWALE



**STORM AND EROSION NOTES**

PROPERTY STEEPER THAN 1:1. ALL TOTALS ARE IN FEET UNLESS OTHERWISE NOTED.

PROJECT DENSITY: 0.24 UPH/3.1221 TOTAL UNITS/ACRE

IMPERVIOUS COVER: 10% (ASPHALT)

ROADS: 10% (ASPHALT)

HOUSES & GARAGES: 10% (ASPHALT)

EROSION CONTROL NOTES:

- SEE SHEET C-5.1 FOR STABILIZATION TIME
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL NOT PROVIDED FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED TO CONTROL OR TREAT THE SEDIMENT SOURCE TO PREVENT EROSION AND SEDIMENT APPROVED SHOWING MODIFIED EROSION CONTROL DEVICES.

STORMWATER NOTES:

- ALL STREMS SHALL HAVE A 3' SETBACK FOR MINIMUM COVER OF 30'.
- ALL PIPES SHALL BE DOUBLE WALL HOPE WITH MINIMUM COVER OF 30'.
- ALL FILL SLOPES SHALL BE COMPACTED FULL DENSITY (STANDARD PROCTOR) SHALL BE 10% DENSER, GREATER THAN 3' AND FILLER THAN 18 FEET SHALL BE SEDED AND COVERED WITH MATRIOS AS SHOWN IN THE PLANS.
- ANY BORROW OR WASTE SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.

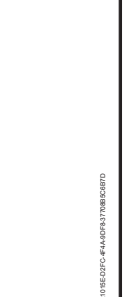
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

**DEVELOPMENT DATA**

PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
 PIN NUMBER: 96617-87-354  
 PROPERTY SIZE: 2.80 AC. (TOTAL)  
 EROSION CONTROL: HENDERSON COUNTY  
 ZONING CLASSIFICATION: R-3  
 PROPOSED NUMBER OF UNITS: 31 (PH. 3) (TOTAL)  
 PROPOSED LINEAR FEET OF ROAD: 3,182.14 (PH. 3)  
 PORTIONS OF LOTS 88.09 TO 7.71 ARE WITHIN 1/2 MILE OF A PUBLIC WATER AND SEWER SYSTEMS ARE APPROXIMATELY 1.5 MILES FROM THE SITE

PROP. CONTACT: ABEY BAKER  
 ADDRESS: 2700 WOODHURST DR  
 ADDRESS: SWANANNOVA, NC 28774

DEVELOPER: LUNA RIDGE, LLC  
 ADDRESS: 124 HIGH HICKORY TRAIL  
 ADDRESS: SWANANNOVA, NC 28774  
 PHONE: 828-525-5333  
 CONTACT: JOHN ANNARD  
 ADDRESS: 177 WASHINGTON ST  
 ADDRESS: SWANANNOVA, NC 28774  
 PHONE: 828-525-2100



JUNA RIDGE, LLC  
 3150 PG. 565  
 2020 PG. 12020  
 V: 9661-99-1595





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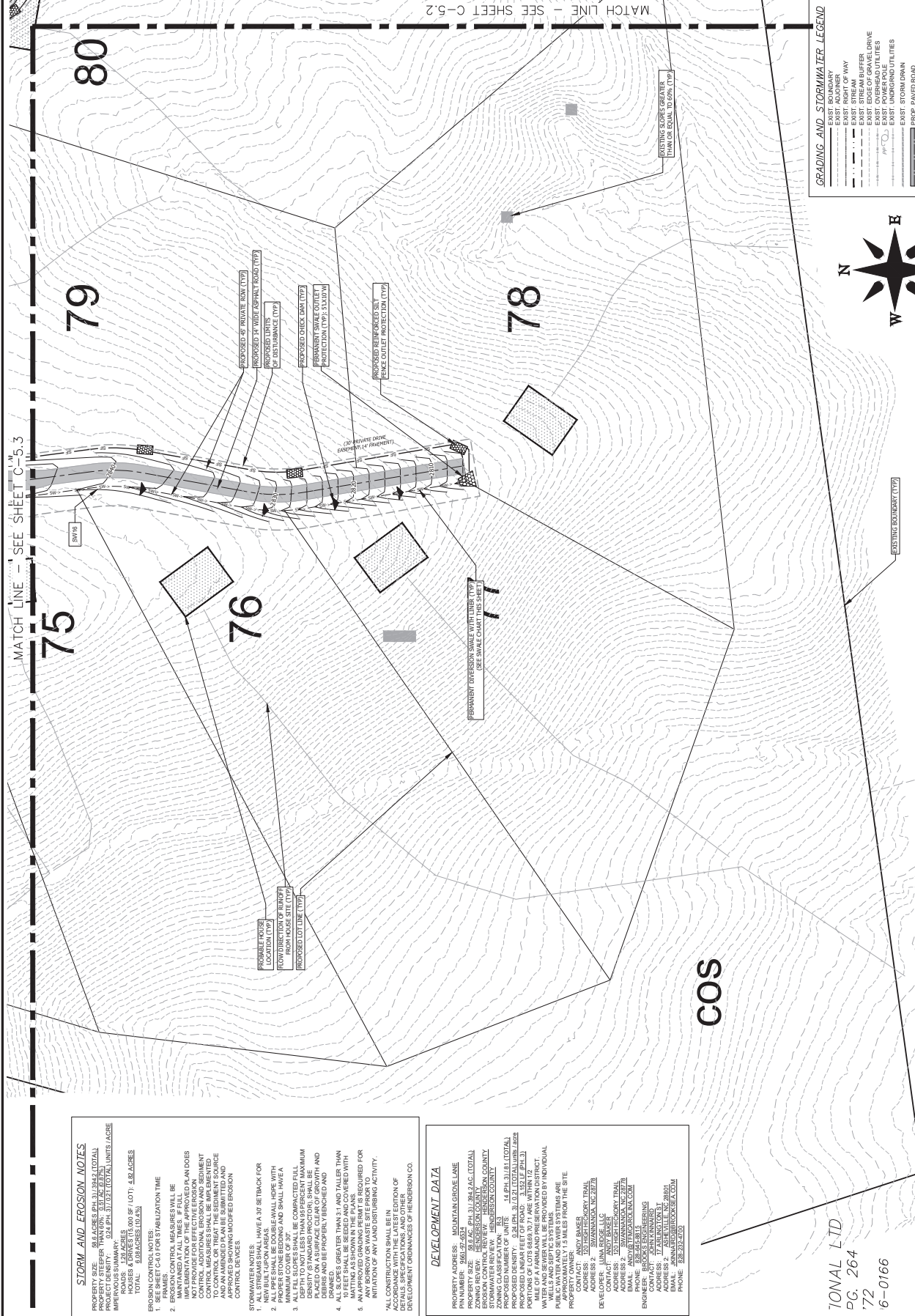
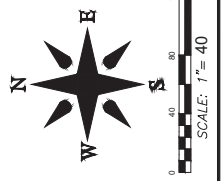


PERMIT SET

No.	REVISIONS/SUBMISSIONS	Date
1	SUBMITTAL TO HENDERSON COUNTY	03/21/21
2	STORM AND ESC PLANS	04/02/21
3	STORM AND ESC RESUBMISSION	08/02/21

GRADING AND STORMWATER LEGEND

---	EXIST. BOUNDARY
---	EXIST. RIGHT OF WAY
---	EXIST. STREAM
---	EXIST. BOULEVARD DRIVE
---	EXIST. OVERHEAD UTILITIES
---	EXIST. UNDERGROUND UTILITIES
---	EXIST. STORM DRAIN
---	PROP. PAVED ROAD
---	PROP. LOT LINE
---	PROP. R.O.W.
---	NEW OUTLET PROTECTION
---	PROPOSED STORM PIPE
---	PERMANENT DIVERSION SWALE
---	PERMANENT RIMPAP SWALE



**STORM AND EROSION NOTES**  
 PROPERTY SIZE: 8.6 ACRES (P.L. 31) 3.92 AC (TOTAL)  
 PROJECT AREA: 8.6 ACRES (P.L. 31) 3.92 AC (TOTAL)  
 IMPROVEMENTS SUMMARY:  
 PROPOSED IMPROVEMENTS:  
 HOUSES: 4 (P.L. 31) 1.00 SF (1.01) 4.82 ACRES  
 TOTAL: 8.6 ACRES (10.43)

**EROSION CONTROL NOTES:**  
 1. SETBACK: 10 FT FOR 50% VEGETATION TIME FRAME  
 2. EROSION CONTROL MEASURES WILL BE IMPLEMENTED WITHIN 30 DAYS OF THE APPROVED PLAN AND CONTROL MEASURES SHALL BE MAINTAINED AND MONITORED THROUGHOUT CONSTRUCTION AND AN AMENDED PLAN BE SUBMITTED AND APPROVED SHOWING MODIFIED EROSION CONTROL MEASURES  
 3. STORMWATER NOTES:  
 a. ALL STREAMS SHALL HAVE A 30' SETBACK FOR NEW BUILT TYPICAL AREAS  
 b. PROPER STONE BEDDING AND SHALL HAVE A DEPTH TO NOT LESS THAN 45% PERCENT MAXIMUM PLACED ON A SURFACE CLEAR OF GROWTH AND DEBRIS AND BE PROPERLY BEDDED AND  
 c. ALL SLOPES GREATER THAN 3:1 AND TALLER THAN 4 FEET SHALL BE REINFORCED WITH MATING AS SHOWN IN THE PLANS  
 4. AN APPROVED GRADING PERMIT IS REQUIRED FOR INITIATION OF ANY LAND DISTURBING ACTIVITY.  
 \*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DEVELOPMENT ORDINANCES OF HENDERSON CO.

**DEVELOPMENT DATA**  
 PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
 PROPERTY SIZE: 8.6 AC (P.L. 31) 3.92 AC (TOTAL)  
 ZONING REVIEW: HENDERSON COUNTY  
 STORMWATER REVIEW: HENDERSON COUNTY  
 PROPOSED NUMBER OF UNITS: 14 (P.L. 31) 1.00 (TOTAL)  
 PROPOSED DENSITY: 0.24 (P.L. 31) 0.24 (TOTAL) PER ACRE  
 VALUE OF A FARM AND PRESERVATION DISTRICT: NONE  
 WELLS AND SEPTIC SYSTEMS: NONE  
 PUMP/STATION: NONE  
 PROPERTY OWNER: BOB BANKS  
 ADDRESS: 100 LIGHTHOUSE TRAIL  
 ADDRESS 2: SWANANNOVA, NC 28778  
 CONTACT: BOB BANKS  
 ADDRESS: 100 LIGHTHOUSE TRAIL  
 ADDRESS 2: SWANANNOVA, NC 28778  
 EMAIL: ANDREW@BANKSINC.COM  
 PHONE: 828-232-4700  
 ENGINEER: BROOKS ENGINEERING  
 ADDRESS: 17 ARRLINGTON STREET  
 ADDRESS 2: ASHEVILLE, NC 28801  
 PHONE: 828-232-4700

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 PG. 264  
 '72  
 6-0166

Swale Name	Swale Type	Up Invert	Down Invert	Side Slope - Z	Side Slope - H	Length	Stops	Velocity	Shear Stress	Reinforcement
SW16	GRASS	2821.4	2807.0	3:1	0.5:1	150 FT	7.2%	3.0 ft/s	7.3 psf	1416 S2250 (PERMANENT)







**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCGO1 CONSTRUCTION GENERAL PERMIT**

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCGO1 Construction General Permit (Sections E and F, respectively). The permittee shall comply with all applicable rules and regulations of the NCGO1 Construction General Permit. The permittee shall comply with all details and specifications shown on this plan sheet that are not in conflict with the NCGO1 Construction General Permit. The permittee shall not apply, modify, or delete any details or specifications on this plan sheet without the approval of the delegated authority having jurisdiction. All details and specifications shown on this plan sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

**SECTION E: GROUND STABILIZATION**

**Requirements for Ground Stabilization Timeframes:**

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
(e) Areas with slopes flatter than 4:1	14	-7 days for Perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**GROUND STABILIZATION SPECIFICATION**

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Rapid erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with mulch and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement, matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt, or retaining walls</li> <li>Non-erosion control products with grass seed</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project site to contain construction and domestic wastes.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (where possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

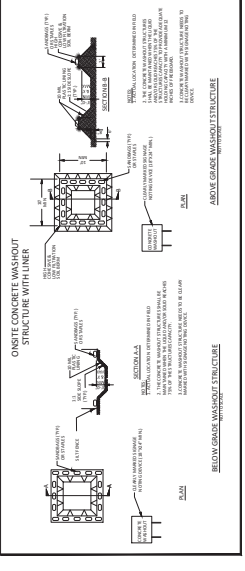
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sited and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the applicable plan and any additional requirements. Soil stabilization is defined as vegetative application or other methods that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



**CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Stormwater accumulated within the washout may not be pumped into or discharged to the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, when applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Manage washout from mortar mixers in accordance with the above item and in addition place storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlets (6) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad.
- Install at least one diverting concrete curb to the washout to be approved by the approving authority.
- Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

**HAZARDOUS AND TOXIC WASTE**

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19**

498519 C-6.0 DEVELOPMENT PLAN COUCH MOUNTAIN SUBDIVISION (PHASE 3) NORTH CAROLINA

PERMITS SET

REVISIONS/SUBMISSIONS

DATE

1 SUBMITTAL TO HENDERSON COUNTY 08/24/21

2 STORM AND ESC PLANS 08/02/21

3 STORM AND ESC RESUBMISSION 08/02/21

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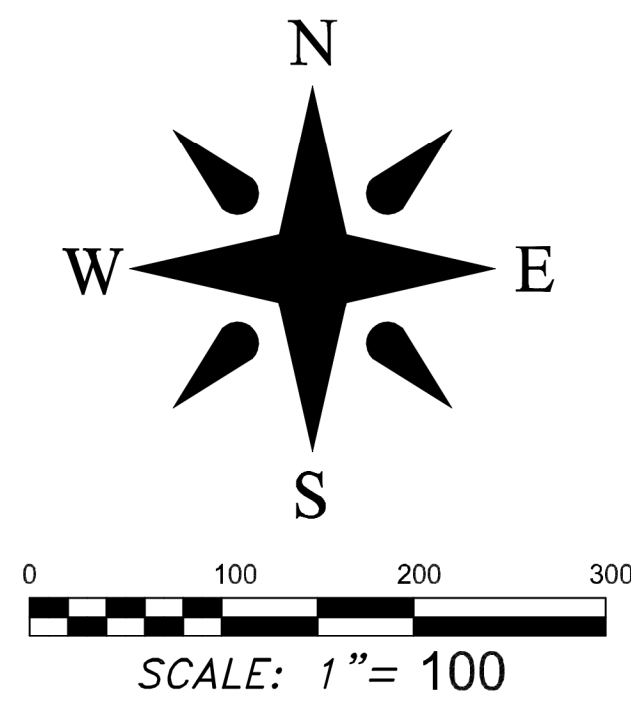
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**SITE PLAN LEGEND**

---	EXIST. BOUNDARY
- - -	EXIST. ADJOINER
- · - · -	EXIST. RIGHT OF WAY
---	EXIST. STREAM
---	EXIST. STREAM BUFFER
---	EXIST. WETLAND
---	EXIST. EDGE OF GRAVEL
---	EXIST. SEWER EASEMENT
---	EXIST. WATER EASEMENT
---	EXIST. OVERHEAD UTILITIES
---	NEW PROPERTY LINES
---	NEW RIGHT OF WAY
---	NEW DRIVEWAY EASEMENT
---	BUILDING SETBACK LINE
---	NEW PAVEMENT



**SITE AND ZONING NOTES**

PROPERTY ZONING: R3  
 PROPERTY SIZE: 58.8 (PH. 3)  
 PROPERTY STEEPER THAN 60%: 0.51 AC (0.87%)

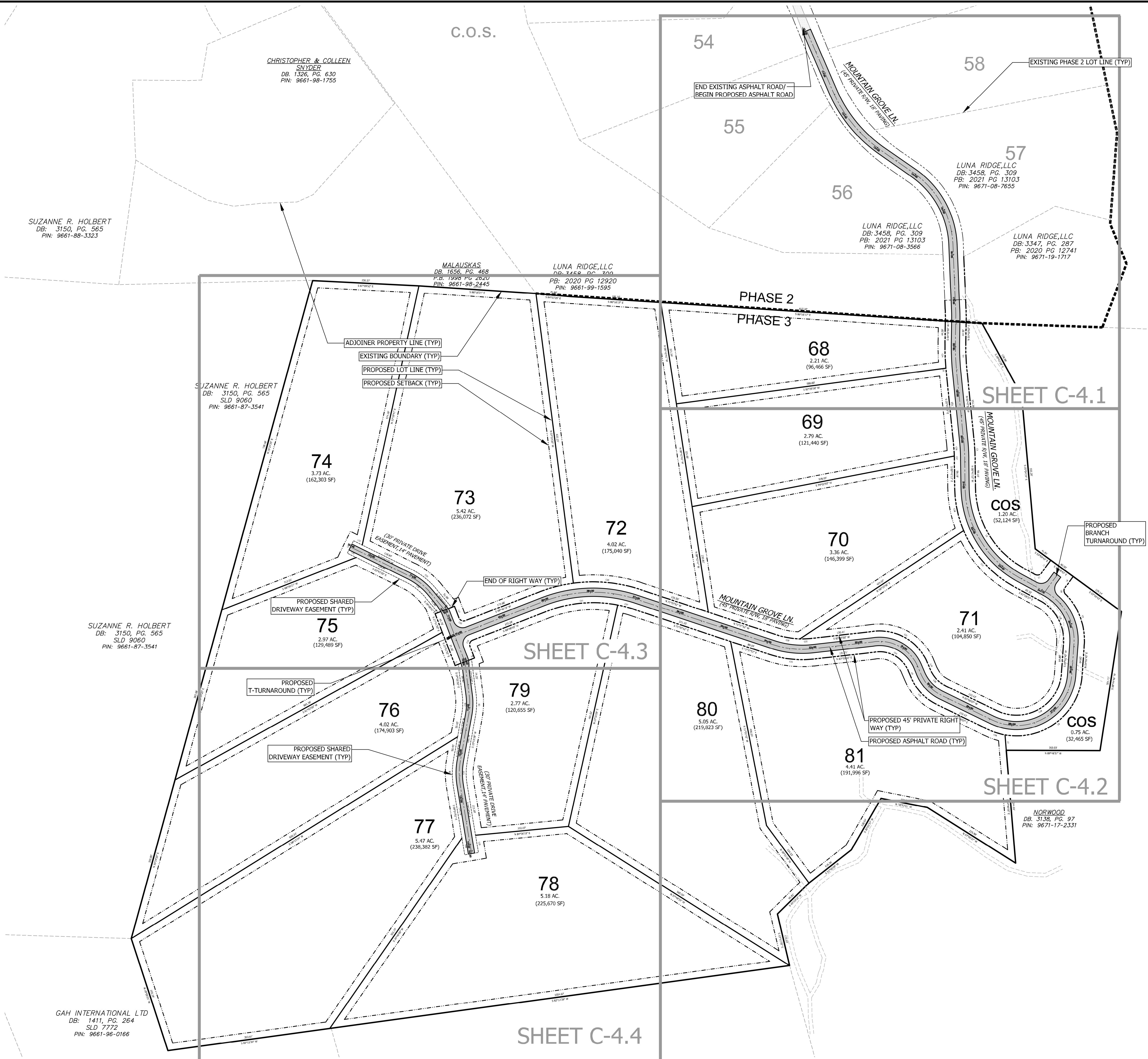
MINIMUM LOT SIZE: 1.5 ACRES  
 SMALLEST PROPOSED LOT: 2.21 ACRES  
 MINIMUM LOT WIDTH: 30' @ R.O.W.  
 MAXIMUM BUILDING HEIGHT: 40'  
 SETBACKS:  
 FRONT: 15' (LOCAL)  
 REAR: 15'  
 SIDE: 15'  
 COMMON OPEN SPACE PROVIDED: 1.95 ACRES (PH. 3)

\*ALL DIMENSIONS ARE FROM EDGE OF ASPHALT, FACE OF CURB, FACE OF WALL, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.

\*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

**DEVELOPMENT DATA**

PROPERTY ADDRESS: MOUNTAIN GROVE LANE  
 PIN NUMBER: 9661-97-6534  
 PROPERTY SIZE: 58.8 AC. (PH. 3) / 394.2 AC. (TOTAL)  
 ZONING REVIEW: HENDERSON COUNTY  
 EROSION CONTROL REVIEW: HENDERSON COUNTY  
 STORMWATER REVIEW: HENDERSON COUNTY  
 ZONING CLASSIFICATION: R-3  
 PROPOSED NUMBER OF UNITS: 14 (PH. 3) / 81 (TOTAL)  
 PROPOSED DENSITY: 0.24 (PH. 3) / 0.21 (TOTAL) units / acre  
 PROPOSED LINEAR FEET OF ROAD: 3,899 LF (PH. 3)  
 PORTIONS OF LOTS 68, 69, 70, 71 ARE WITHIN 1/2 MILE OF A FARMLAND PRESERVATION DISTRICT.  
 WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC SYSTEMS.  
 PUBLIC WATER AND SEWER SYSTEMS ARE APPROXIMATELY 1.5 MILES FROM THE SITE.  
 PROPERTY OWNER:  
 CONTACT: JAMES NERING  
 ADDRESS: 3325 PIEDMONT RD NE  
 ADDRESS 2: ATLANTA, GA 30305  
 DEVELOPER: LUNA RIDGE, LLC  
 CONTACT: ANDY BAKER  
 ADDRESS: 120 HIGH HICKORY TRAIL  
 ADDRESS 2: SWANNANOVA, NC 28778  
 EMAIL: ANDY@TFMNCAROLINA.COM  
 PHONE: 828-645-8815  
 ENGINEER: BROOKS ENGINEERING  
 CONTACT: JOHN KINNAIRD  
 ADDRESS: 17 ARLINGTON ST  
 ADDRESS 2: ASHEVILLE, NC 28801  
 EMAIL: JKINNAIRD@BROOKSEA.COM  
 PHONE: 828-232-4700



Project No: <b>486519</b>	COUCH MOUNTAIN SUBDIVISION (PHASE 3)		Date 03/24/21
	DEVELOPMENT PLAN		
Drawing Title: <b>OVERALL SITE PLAN</b>	HENDERSON COUNTY		REVISIONS/SUBMISSIONS
	NORTH CAROLINA		
<b>BROOKS ENGINEERING ASSOCIATES</b> Planning • Engineering • Surveying • Environmental Services •			
Reviewed: MCB Scale: AS NOTED Drawn: JHK Checked: JHK Date: 03/24/21		17 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com	
No. 1 SUBMITTAL TO HENDERSON COUNTY			

File Location: L:\2019 Projects\486519 ITM\_Huch Mountain\DWG\486519-COUCH MOUNTAIN-CIVIL-BASE Phase3.dwg