

Berryville – Clarke County
Government Center
101 Chalmers Court, Suite A
Berryville, VA 22611



[T] 540/955-1099
[F] 540/955-4524
[E] info@berryvilleva.gov
www.berryvilleva.gov

BERRYVILLE
EST. 1798 *Genuine* VIRGINIA

BERRYVILLE PLANNING COMMISSION

Regular Meeting

Tuesday, November 28, 2023 – 7:00 p.m.

101 Chalmers Court – Main Meeting Room – Second Floor

AGENDA

1. Call to Order – William Steinmetz, Chair
2. Approval of Agenda
3. Continued Public Hearing - Rezoning
Friant Enterprises #1, LLC; Friant Enterprises #2, LLC; Friant Enterprises #3, LLC (Owners) (Tony Free, Vice President, DR Horton, Inc., Agent) are requesting a rezoning of the properties identified as 14-A-80 and 14-A-112 consisting of approximately 100 acres. The properties are currently zoned OSR Open Space Residential; DR-1 Detached Residential-1; DR-2 Detached Residential-2; and BP Business Park. The proposed zoning for a portion of the properties identified above is DR-4 Detached Residential-4. RZ 01-23
4. Discussion of Public Hearing
5. Approval of Minutes – October 24, 2023
6. Citizens' Forum
7. Planning Update
8. Other
9. Adjourn

Harry Lee Arnold, Jr.
Mayor

Erecka L. Gibson
Vice Mayor

Council Members

William Steinmetz
Ward 1

Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Ryan Tibbens
Ward 4

Keith R. Dalton
Town Manager

BERRYVILLE PLANNING COMMISSION
Berryville-Clarke County Government Center
Meeting Minutes
DRAFT October 24, 2023

A meeting of the Berryville Planning Commission was held on Tuesday, October 24, 2023 at 7:00 p.m. at the Berryville-Clarke County Government Center in Berryville.

ATTENDANCE: Members of the Planning Commission present: William Steinmetz, Chair; Kim Kemp, Vice Chair; Michael Bell, Gwen Malone, Michelle Marino, Tom Parker, Sheryl Reid

Absent: none

Staff present: Christy Dunkle, Community Development Director, Keith Dalton, Town Manager

Press present: Mickey Powell, Winchester Star

1. CALL TO ORDER – William Steinmetz, Chair

Chair Steinmetz called the meeting to order at 7:00 p.m.

2. APPROVAL OF AGENDA

Mr. Bell made the motion to approve the agenda as presented, seconded by Ms. Malone. The motion passed by voice vote.

3. PUBLIC HEARING – Rezoning – Clarke County Public Schools, Town of Berryville, Paul Howell

The Berryville Planning Commission will hear public comment for the rezoning of land transferred from the Clarke County Public Schools to the Town of Berryville (4,565 square feet from DR-4 Detached Residential to ITL Institutional) and land transferred from the Town of Berryville to the Clarke County Public Schools (12,572 square feet from ITL Institutional to DR-4 Detached Residential) in order to accommodate boundary line adjustments between the properties identified as Tax Map Parcel numbers 14-A-5, 14-A-6, 14-A-7, and 14-A-7A. RZ 02-23

Ms. Dunkle read the public hearing notice and publication information. She said she had received several calls from adjacent property owners requesting clarification of the action. She added that there were no objections to the proposed rezoning.

Ms. Dunkle introduced Mr. Dalton, who described the request. Mr. Dalton said that the process had begun in 2005 with the development of the Clarke County High School and Mosby Boulevard. He said

this action left residual pieces of land separated from their respective parent parcels. He reviewed the maps and square footage for each proposed adjustment and zoning modification.

Mr. Dalton said that if the rezoning was approved by Town Council, easements and deed transfers would be recorded. He added that the Clarke County School Board has approved the action contingent on Town Council approval.

Chair Steinmetz asked if anyone wanted to speak on the matter. There were no speakers. The public hearing was closed at 7:06 p.m.

There being no further discussion, Vice Chair Kemp made the following motion:

I move that the Planning Commission of the Town of Berryville approve the rezoning of 4,565 square feet of land that is to be transferred from the Clarke County School Board's property (Tax Map Parcel 14-((A))-7) to the Town of Berryville's property (Tax Map Parcel 14-((A))-6) from Detached Residential-4 (DR-4) to Institutional (ITL), and the rezoning of 12,572 square feet of land that is to be transferred from the Town of Berryville's property (Tax Map Parcel 14-((A))-6) to the Clarke County School Board's property (Tax Map Parcel 14-((A))-7) from Institutional (ITL) to Detached Residential-4 (DR-4), contingent upon the following:

- a. approval of the proposed boundary line adjustments by the Clarke County School Board, Berryville Town Council, and Paul R. Howell, and
- b. the recordation of the boundary line adjustment and associated deeds completing this boundary line adjustments and transfer of property ownership in the land records of the Circuit Court of Clarke County.

The motion was seconded by Mr. Parker. The motion passed by voice vote.

4. PUBLIC HEARING – Friant Property

Friant Enterprises #1, LLC; Friant Enterprises #2, LLC; Friant Enterprises #3, LLC (Owners) (Tony Free, Vice President, DR Horton, Inc., Agent) are requesting a rezoning of the properties identified as 14-A-80 and 14-A-112 consisting of approximately 100 acres. The properties are currently zoned OSR Open Space Residential; DR-1 Detached Residential-1; DR-2 Detached Residential-2; and BP Business Park. The proposed zoning for a portion of the properties identified above is DR-4 Detached Residential-4. RZ 01-23

Ms. Dunkle read the public hearing notice and publication information. She said she had forwarded an email earlier in the day to Planning Commissioners and that she had not received any other input since the previous meeting.

Ms. Dunkle introduced David Giovannacci, representing D.R. Horton, Inc. Mr. Giovannacci referenced his letter in the Planning Commission packet requesting a deferral on any action to the November

Planning Commission meeting in order to obtain information from the Clarke County Public Schools concerning proffer requirements.

Chair Steinmetz said that, due to the large number of attendees, the three-minute timeframe for public comment will be adhered to. He requested that the conversation be civil in nature and opened the public hearing at 7:09 p.m.

Chair Steinmetz recognized Clissy Friant Funkhouser, Charles Town, WV resident (comments submitted). Ms. Funkhouser said she is one of the owners of the property under consideration for the rezoning. She said the property has been part of Annexation Area B since 1992 and that the parcel was annexed by the Town in 2022. She said she hoped that the development of the property will be an asset to the community and will afford more people the opportunity to be part of the Berryville community.

Chair Steinmetz recognized Sarah Fabiszczak, Clarke County resident. Ms. Fabiszczak said she is worried about the high-density rezoning. She said that the growth in Manassas was significant and that their land use policies had been overturned by their Board of Supervisors. She said she owns a farm and has had to move twice due to urban development and does not want to do so again.

Chair Steinmetz recognized Michael Wilson, Bluemont resident. Mr. Wilson said that, while he is a County resident, all residents have to pay for poorly implemented planning. He said his considerable worries include the terrain, soils, and problems down the road. He said he did not like the trend and that the plan is not good for the Town or the County.

Chair Steinmetz recognized Tim Sinclair, Town resident. Mr. Sinclair said that by-right development numbers should be adhered to that would allow 66 homes on the property. He noted discrepancies in the Transportation Impact Analysis, the timeframe anticipated for construction of the subdivision, and proffer proposals. He added that amending or rezoning the property to a more moderate number would be preferable. He said the by-right number is preferable because it fits with the current infrastructure and public services offered by the Town. Mr. Sinclair said he was concerned about the high visibility on the skyline matching the Town's form and function.

Chair Steinmetz recognized Mary Veilleux, Town resident. Ms. Veilleux voiced concern about land use policies and maintaining that vision. She referenced the lot yields in the sub-areas and said these numbers reflect the general capacity for the property. She asked that Planning Commissioners consider if this is the right fit and if it adheres to the plan. She recommended rejecting the rezoning proposal.

Chair Steinmetz recognized Turner Kobayashi, County resident. Mr. Kobayashi said he is the farm manager at Audley Farm. He said he has concerns about the development based on statistics gleaned from social media, adding that he was unsure about the accuracy of the information. He said this is a defining moment, affecting the community's core fabric and make-up. He recommended forming a special committee that would determine the facts accurately and completely to facilitate a

transparent decision for Town Council and Planning Commission. He added that the committee could include the property owners, developer, Town staff, neighbors, concerned citizens, and Mr. Sinclair representing his group. Mr. Kobayashi said Town Council members could meet with constituents to get direct feedback so they can properly represent the residents. He added that if it is too hard to make a decision, then a public referendum on the matter should be held so the critical thinking and due process would not be made in a vacuum behind closed doors. He concluded by saying this action would help restore public trust.

Chair Steinmetz recognized Richie Blick, Town resident. He said he has lived in Berryville for 23 years and lived on Battletown Drive in a house that backed up to the historic preserve. Mr. Blick said he is a realtor and never worked for this developer. He said the Bel Voi manor had significant historical importance and includes former slave quarters. He said this is an eastern gateway with visibility from the highway and that he is concerned about the 12 to 16 houses that are proposed for the historic preserve area. He said it is shocking to witness the developer's audacity and disregard for history of the developer. He added that he trusted and relies on the zoning and future development plans. Mr. Blick said he is not opposed to the by-right development and referenced concern that residents cannot cross the railroad tracks safely, and referenced the change to the parade route. He said he wants to save the historical protection of the adjacent property.

Chair Steinmetz recognized Lisa Weiss Murphy, County resident. She said her family has been in Clarke County since 1950. She asked that Friant Enterprises reconsider another cheaply built development. She said she does not want what's east of us to move here, and requested innovative design including energy efficient solar, affordable tiny houses, or an affordable housing community, adding that the owner should sell the property to another developer. Ms. Murphy said both the Town and County have planned well up to this point. She said the argument has been for affordable housing for families. She said she did not want an eyesore at the eastern entrance of this special place.

Chair Steinmetz recognized Laura Heck, County resident. Ms. Heck said she is a real estate appraiser. She said she would prefer the current zoning adding that she was concerned about houses on tiny lots being located in the floodplain area. She cited issues with a property she owned in Leesburg. She said she purchased her property and there was not a floodplain until additional development occurred. Ms. Heck said that with the original 66 homes, there would be no adverse effect because the lots would be bigger. She requested that the Planning Commissioners not postpone the vote.

Chair Steinmetz recognized Julie Abrera, Town resident. Ms. Abrera said the impact of 66 houses would tax the neighborhood and the 214 homes and adjoining neighborhoods with more traffic. She said her street has a lot of foot traffic that is shared with cars because there are no sidewalks. She said her road and Bel Voi Drive are dead-end streets and the connection of the access road on the Profundus property would create cut-through traffic on Battletown Drive. She said she did not know the origins or need for this extension. She said there is an expectation of construction traffic and noise with the promise that taxes and fees will benefit the community in the long run. Ms. Abrera said this new neighborhood is designed with no relationship to the existing Town. She said that while

the proposed development checks the boxes of the BADA Plan, this creates another neighborhood that is tucked away with little thought of integrating it into the Town. She asked that we look at the impact beyond revenue and recommended taking a holistic approach to how the Town will function. She said each resident has a role to play in this process. She concluded by saying her hope is that we create opportunities that build a community with a vibrant downtown that our sons and daughters will want to come back to.

Chair Steinmetz recognized Brian K. Snyder, Town resident (comments submitted). Mr. Snyder said he grew up on Bel Voi Drive, moved away, and returned in 2017 to his childhood home. He said he is concerned about the lack of sidewalks, curb, and gutter and that Battletown and Bel Voi drives are not equipped to handle two-way traffic. He added that there are pedestrians including groups, kids in strollers, and children in the neighborhood. He said neighborhoods with through streets have the infrastructure to support those activities. Mr. Snyder said the sidewalk extension will not accommodate Battletown Drive with no tie-in to the proposed new development. He said he hoped that the developer would shoulder future improvements to ensure no degradation to the surrounding neighborhoods.

Chair Steinmetz recognized John MacDonald, Town resident. Mr. MacDonald spoke of issues with homes in the Shenandoah Crossing neighborhood. He said he had unsatisfactory responses from the developer.

Chair Steinmetz recognized Sara Stern, Town resident (comments submitted). Ms. Stern said that Berryville is the County seat for all of Clarke County, and housing that is built can be an asset or detraction. She stated that she is concerned about traffic and congestion, citing current issues at Main and Buckmarsh streets. She voiced concern about climate change and referenced the current severe drought conditions and questioned the adequacy of water availability. She said Berryville has had a big problem with stormwater run-off. Ms. Stern voiced concern about lack of architectural character and that this type of development encouraged families with children as opposed to retired people who are downsizing. She said the proffers offered by the developer are meager. She concluded by saying that allowing one developer to continue to dominate new construction in Berryville virtually eliminates a new home buyer's ability to choose the style and quality of home available.

Chair Steinmetz recognized Dave Jackson, Town resident. Mr. Jackson said he is concerned about street flooding. He said the run-off from over 200 homes would be overwhelming.

Chair Steinmetz recognized Robert Lauten, Town resident. Mr. Lauten recommended against the rezoning. He suggested connecting the proposed subdivision to Cattleman's Lane. He said we have a good comprehensive plan and recommended sticking to the existing plan.

Chair Steinmetz recognized Stan Kerns, Town resident. Mr. Kerns said he served on the Clarke County School Board for 32 years, was the project manager for the Barns of Rose Hill, and is invested in this community. He said he is opposed to the rezoning, adding that he feels helpless to fight the rezoning, adding that he is against the proposal.

Chair Steinmetz recognized Jon Burge, Town resident. Mr. Burge said he has been a residential architect for 25 years and was appointed to the Berryville Architectural Review Board in 2020. He noted incompetent, wasteful processes in the fifth phase of the Hermitage subdivision. He said the main idea of any high-density concepts including cluster development is to reduce the footprints, which fails to propose open space. Mr. Burge said that as an architect, the basic concept of cluster development can create a more vibrant community, not the static repetition and vinyl fencing constructed in phase five. He said the 2015 Berryville Area Plan identifies housing goals that encourage development to be sensitively phased with scaled neighborhoods, adding that the developer has not. He referenced longer timeframes of development to allow the growth to be organic. He concluded by saying 66 houses is plenty.

Chair Steinmetz recognized Weezee Wallace, County resident. Ms. Wallace said she has lived in Clarke County for 23 years. She asked who benefits from this development. She said the Town is struggling to meet the needs of goods and services in the existing population, adding that there is only one grocery store and that she is unable to purchase a pair of shoes in Berryville. Ms. Wallace said 214 new houses means 214 new families, which would impact water, sewer, and schools. She said she understands that Horton has gotten people to assess the damages and costs. She said she was lawyer on Wall Street and doesn't trust an assessment. She discussed the drought and said the climate crisis is real. She said she was unable to find a plumber because they were working to fix the new houses. Ms. Wallace said builder deficiencies are a concern. She referenced the past 35 years and legal authority, yada yada, and said that density is a huge issue here. Ms. Wallace said that it was her understanding that a certain number of building rights were afforded to a prior builder who decided not to use all of them, and all of a sudden, D.R. Horton thinks they can accommodate these units. She concluded by saying the developer's houses make the community look like Ashburn.

Chair Steinmetz recognized Geo Giordano, County resident. Ms. Giordano said she was part of the National Association of Home Builders and national design committee and requested that out-of-the-box thinking should take place for high-density types of units if desired, using historic colors, and not big boxes. She said many Shenandoah Crossing residents are retirees and need to move down, not up. She said the affordability is a concern and that a townhouse option should be considered that would include 2/3 duplexes for retirees and 1/3 townhouses for families. She recommended that sidewalks and recreational areas be included. She encouraged Planning Commissioners not to accept 214 vinyl big box houses.

Chair Steinmetz recognized Mary Ivie, Town resident. Ms. Ivie said she was against this development because it promotes more urban sprawl. She said she has mold and water in her basement and that stormwater is a concern. She referenced Prince William County development and recommended preventing the urban sprawl.

Chair Steinmetz recognized Wingate McKay-Smith, County resident. Ms. McKay-Smith referenced previous membership on the County's Board of Zoning Appeals and Planning Commission in the 1980's and 1990's. She said the first thing those taking BZA training were taught was to be careful of changing the planning and zoning and to update it periodically. She said the original plan was carefully thought out and asked that the Planning Commission consider the original plan for development.

Chair Steinmetz recognized Bob Stieg, County resident (comments attached). Mr. Stieg said he is the manager of Clermont Farm, which is owned by the Virginia Department of Historic Resources. He said access to the property is across East Main Street from the proposed road extension on the Profundus property. He said he is concerned about traffic and about the safety of the school children who take buses to the property.

Chair Steinmetz recognized Ruth Costello, County resident. Ms. Costello said D.R. Horton has had plenty of time for their due diligence and asked that the Planning Commission not postpone the vote.

Chair Steinmetz asked if there were additional comments. There were none.

Due to outstanding agency comments and resubmittal of the sub, Ms. Dunkle recommended continuing the public hearing to the November 28, 2023 meeting. Chair Steinmetz reiterated that Ms. Dunkle will forward all correspondence sent to staff to the administrative and governing bodies. Ms. Marino thanked the public for their comments and encouraged resident to maintain engagement with the Planning Commission through the process. Ms. Dunkle reviewed the process through Town Council's final approval. Ms. Dunkle said that the applicant would need to submit an updated plan two weeks prior to the continued public hearing, and reviewed the timeframes.

Vice Chair Kemp made the motion that the Planning Commission of the Town of Berryville continue the public hearing to the November 28, 2023 meeting for the rezoning of the parcels identified as 14-A-80 and 14-A-112. The motion was seconded by Ms. Malone.

5. APPROVAL OF MINUTES

Ms. Malone made the motion to approve the minutes of the work session and the regular meeting on September 26, 2023 as presented, seconded by Vice Chair Kemp. The motion passed by voice vote.

6. CITIZENS' FORUM

There were no speakers.

7. DISCUSSION – PLANNING UPDATE

There was no further discussion.

8. OTHER

There was no further discussion.

9. ADJOURN

There being no further discussion, Vice Chair Kemp made the motion to adjourn the meeting, seconded by Ms. Malone, with the motion passing by consensus at 8:18 p.m.

William Steinmetz, Chair

Christy Dunkle, Secretary

Hello, my name is Clissy Friant Funkhouser and two of my sisters and I are the owners of the 100-acre parcel that is the subject of tonight's discussion.

This property has been part of the Berryville Area Development Authority's annexation plan B since 1992. That plan is to annex undeveloped land into the town for residential development. The land was officially annexed last year.

The Clarke County comprehensive plan ensures that *county* lands remain low-density and agrarian in nature. So you have the best of both worlds: growth in the town and open spaces in the county.

It is my hope that the development of the property will be an asset for this community, in the same way Battletown Drive has been, which my father, John Friant, developed 60 years ago. In fact, my grandmother was one of the first residents of Battletown Drive and enjoyed the spectacular view of the Blue Ridge Mountains from her porch. This development will afford many more folks the opportunity to enjoy that view along with Berryville's wonderful welcoming community.

Thank you for your time.

10/24/2023 remarks at Berryville Planning Commission meeting.

Statement regarding Rezoning application of the Friant Enterprises LLC properties by Brian Snyder.

Good evening, my name is Brian Snyder. I grew up on Bel Voi Drive, moved away and after my Mother passed away in 2017, my wife and I moved to Berryville into the house that my Mother had lived in since 1984. My sisters and I went to Clarke County Schools as my Mother before us. So we have ties to the town and county.

I want to address a specific area of concern with the Proposed Development and Rezoning request from Friant Enterprises LLC.

The current infrastructure on Battletown Drive and Bel Voi Drive does not have sidewalks, curbs or gutters and the roads are not currently equipped to handle regular two way traffic. Both roads are cul-de-sacs and with no through options they are a walkable community. On any given night you see all ages walking; alone or in groups, with kids in strollers, walking dogs, kids walking back and forth to friends' houses to play or even meet up to catch the bus in the morning.

These activities occur in neighborhoods with through streets and more homes, but those neighborhoods have the infrastructure to support those activities.

The proposed zoning changes and development by Friant Enterprises and D.R.Horton do not offer any proffers to make improvements to the existing neighborhood that would be the primary conduit out onto Main Street/Business Route 7.

I request that any development and/or rezoning approvals require that these infrastructure issues be addressed with specific details for improvement and specific funding sources identified; either through commitments from the town of Berryville or by D.R. Horton/Friant Enterprises in the form of proffers.

The town has announced that it is securing funds to put sidewalks in from the Railroad Tracks on Main Street to Battletown Drive. The proposed improvement does not continue the sidewalks up Main Street/Business 7 to the proposed Profundus (sp) road for access to the Eastern portion of the proposed development. That funding is anticipated by 2025 with construction by 2028-2029 (per discussion at the Working Session of the Planning Commission meeting on September 26, 2023). There is nothing noted in the plans for these improvements to tie into the proposed new development.

If Friant Enterprises/D.R.Horton wants to create a livable community, it must address the impact on the surrounding neighborhoods and larger community. I hope that the financial burden for ensuring no degradation of the surrounding neighborhoods be shouldered by the developer and not the Town of Berryville and the rest of the community that would not benefit from those improvements.

The current development or any proposed rezoning approvals must address these shortcomings in infrastructure to curbs, gutters and roads with an emphasis on the safety issues that would result from any development to the Friant Property.

Thank you for your time.

Brian A Snyder 10/24/23

6 Bel Vor Dr. Berryville

703-728-4667

Good Evening.

I am Sara Stern, and I live in the town of Berryville.

At the risk of repeating some of the concerns that have already been made with respect to DR Horton's request for up-zoning the Friant Land, I would ask you to consider the following.

Traffic and congestion will be created, and will greatly impact the residents on the east end of town as well as the intersection of Rt. 7 business and Rt. 7 by-pass.

We are already experiencing some congestion and back-ups during certain times of the day around Buckmarsh and Main Streets, we do not need or want to add additional traffic congestion to the Town.

Climate change - none of us knows the future. Thankfully, so far, we seem to have enough water, but we are **and want to continue to be** a mainly agricultural county. Water is required for our citizens, our animals and our crops. We have been, and continue to be, in a severe drought situation.

Warren and Frederick Counties are growing with abandon, and they take their water from the Shenandoah just as the Town of Berryville does... but they get theirs first!

This past year, we had a dry winter and a dry summer. The river got very low; in addition, several wells in the county went dry. We cannot know if our future water resources will remain adequate.

Storm Water Run- Off - Berryville has had a big problem with storm water run-off. A large subdivision would mean more pavement and more impermeable surfaces.

Projected Number of Additional Students - The frontage for the cluster houses is such that they would all have to be two-story houses with front-load garages – this not only lacks character and some variety to the architecture, but it encourages families with children as opposed to any retired persons who want to down-size and live on one level.

I have heard that many families in new subdivisions in Loudoun County have rented out their basements in order to afford to live there. I understand that this could also occur in Berryville. In any case, I believe the projected increase in the numbers of students in the DR Horton proposal is grossly underestimated.

The proffers DR Horton has offered as an enticement to re-zone and increase the number of homes on the Friant Land are meager at best.

Loss of Choice - lastly, by allowing DR Horton to continue to dominate all new construction in our town, you are virtually eliminating new home buyer's ability to choose the style and quality of home available in our area. They have already built 220 of the new houses available in the past few years. Don't give them another 214.

For the record, I am including a letter I sent to the Berryville Town Council and Planning Commission in September, expressing a desire for our elected officials to be mindful of the resident's desire for our community to maintain its small-town values, historic character, scenic beauty and sense of community. We do not want to be just another bedroom community for the Washington Metropolitan area.

Thank you for your time and consideration.

To the Berryville Town Council and Planning Commission,

The Town of Berryville is the county seat for all of Clarke County, and the type of housing that is built can either be an asset to the historic, cultural, and natural beauty of our special county or a detraction. All development is not created equal. Some projects can make a community a better place to live, work and visit. The biggest impediment to better development in many communities is a fear of saying "no" and requiring better of developers and builders. This is especially true when it comes to national builders on the stock exchange, who "lawyer-up" and have very deep pockets. They have no real interest in our community except to get-in/get-out and maximize profits for their investors. When they are gone -they are GONE! They have no long-term investment in our community.

We live in a rapidly changing world. The Covid Pandemic reshaped the way we live and work. Many people and businesses can choose to live and work from anywhere. Communities that cannot differentiate themselves will simply have no competitive advantage. This means that quality of life is more important than ever. Successful communities set themselves apart. They know that communities that choose their future are always more successful than those that leave their future to chance. We should be able to choose what we want our town to look and feel like.

The more any community in American comes to look like every other community, the less reason there is to visit. I want our development to compliment what we offer and hope to encourage in our towns and county. And, be a reason for people to want to come visit, spend their tourism dollars in our shops, restaurants, Bed and Breakfasts, breweries, distilleries, and farms etc.

Successful communities pay attention to aesthetics and encourage new construction to fit in with the existing community. Many longtime residents will be upset with how unmanaged growth changes what they love about their hometown. And, newcomers may want to make sure that their adopted hometown doesn't develop the same ugliness or congestion as the one they left.

Many communities have found ways to retain their small-town values, historic character, scenic beauty and sense of community, yet sustain a prosperous economy. And, they have done it without accepting the kind of cookie-cutter development that has turned many communities into faceless places that young people flee, tourists avoid and which no longer instills a sense of pride in residents. Successful communities capitalize on their distinctive assets - their architecture, history, natural surroundings and home-grown businesses. They also utilize a variety of grants, private-sector and market incentives to influence new development, instead of relying solely on government regulations. Communities can grow by choice or by chance.

Look at Staunton, Virginia. When I went to college there in the early 1970's, Staunton's downtown area was dead and the town was in somewhat of a depressed state. Since then, the Historic Staunton Foundation offered free design assistance to any downtown business owner who would restore the facade of their building. They did this after the city council had rejected a measure to create a historic district in downtown Staunton. At first, only one business owner took advantage of the incentive, but then a second owner restored his building facade, and then a third and then many more. Today, there are at least five historic districts in Staunton including the entire downtown, but it all began with incentives. Staunton has turned into a thriving small town with lots to offer residents as well as visitors.

I would love to see us be able to hold onto the lovely, cozy and welcoming feel of our town while striving to make it even better.

Therefore, I respectfully ask you to decline to rezone Sub-Area's 14 & 15 in the Town of Berryville for increased density.

Sincerely,

Sara McIntosh Stern
107 Taylor Street
Berryville, VA
saramstern@gmail.com

Item's from NY Times 8/29/23 Article

The New York Times conducted a months-long examination of groundwater depletion, interviewing more than 100 experts, traveling the country and creating a comprehensive database using millions of readings from monitoring sites. The investigation reveals how America's life-giving resource is being exhausted in much of the country, and in many cases, it won't come back. Huge industrial farms and sprawling cities are draining aquifers that could take centuries or millenniums to replenish themselves if they recover at all.

And around the country, rivers that relied on groundwater have become streams or trickles or memories.

"There is no way to get that back," Don Cline, the associate director for water resources at the United States Geological Survey, said of disappearing groundwater. "There's almost no way to convey how important it is."

But despite the importance, the view of the predicament has often been fragmented. Until now.

This analysis is based on tens of thousands of groundwater monitoring wells that dot the nation. The Times collected data for these wells, which are widely scattered and often poorly tracked, from dozens of federal, state and local jurisdictions.

That database reveals the scope of the crisis in many ways. Every year since 1940, for example, more wells have had falling water levels than rising levels.

One of the biggest obstacles is that the depletion of this unseen yet essential natural resource is barely regulated. The federal government plays almost no role, and individual states have implemented a dizzying array of often weak rules.

The problem is also relatively unexamined at the national scale. Hydrologists and other researchers typically focus on single aquifers or regional changes.

"If we show an area may be depleted in, let's say, two years, well, if someone tries to sell that property, they're not going to be able to."

To get the clearest picture possible of the state of groundwater in the United States, The Times interviewed scientists, policymakers and hydrological experts in

addition to building its national database of millions of measurements from wells used to measure groundwater depth.

The analysis of that data, some of it collected from wells that have been tracked for a century, enabled The Times to cross-reference water levels over time with crop cover and population patterns. Results were also compared against readings from sophisticated satellites that can estimate groundwater changes from space by measuring subtle shifts in gravity.

Recent data from those satellites, which are operated by the Jet Propulsion Laboratory and funded by NASA, also show aquifers in decline.

How aquifers fail

Many aquifers — layers of water-soaked dirt and rock — are being rapidly depleted, permanently damaging them.

The land can settle as water is pumped out, leaving less space for new water to refill the aquifer.

Deeper aquifers beneath impermeable clay and rock can also take thousands of years to recharge.

Climate change is amplifying the problem.

Global warming is shrinking the snowpack that feeds rivers, increasing the reliance on groundwater to sustain communities, lawns and crops, even as rising temperatures mean that plants need more water. A warmer world also causes more surface water to evaporate, leaving less to seep through the ground to replenish overstressed aquifers.

Even in places experiencing more violent rainstorms because of climate change, the heavier rainfall only helps so much. That's because much of the water from extreme downpours races away quickly to the ocean, before it can sit and soak into the aquifer below.

For example, in coastal areas, over pumping can accelerate "saltwater intrusion," the movement of ocean water into the freshwater aquifer, making it first unappetizing, then unhealthy.

Saltwater intrusion is happening in the Northeast, the mid-Atlantic states, Florida, the Gulf Coast and California. "It's pretty widespread," said Dr. Cline of the U.S. Geological Survey.

In Norfolk, Va., and other cities around the country, the groundwater is so dangerously depleted that officials are now, at great cost, pumping treated wastewater into the aquifer to try to stop the water levels from falling.

Then, there's arsenic.

A naturally occurring, cancer-causing heavy metal, arsenic is often trapped in clay, a common soil type. But it can be released into drinking water supplies when aquifers are over pumped.

The technology exists to filter out arsenic from drinking water, Dr. Smith said. But that imposes a cost on low-income families, he added. And it works only if people know their wells have become contaminated in the first place, which can be a particular problem for private well owners, who might not realize what has happened to their water.

The effects of the nation's dwindling supplies of groundwater are visible in another way: The ground itself is breaking apart.

A developer began laying out a subdivision during the housing boom of the mid-2000s, planning 800 homes. The project went bankrupt, a victim of the housing crash. Then, city workers noticed something that prevented other developers from trying again: an unusual crack in the road. The subdivision, it turned out, sat atop an earth fissure.

Pumping water can cause the earth above an aquifer to slump, collapsing the space left behind by the water that was removed. Once that space is lost, it can no longer hold water.

That process, called subsidence, is happening around the country, and more than 80 percent of it is the result of groundwater use, according to the U.S. Geological

Survey. The agency says subsidence has affected more than 47,000 square miles of land and waterways across the United States.

As the land sinks, home foundations, sewer pipes and other structures are damaged. But among the most dramatic consequences of subsidence is a fissure. As softer ground slumps, sometimes an adjacent patch of ground stays put. The resulting movement shears the earth apart.

It adds up to what might be called a climate trap. As rising temperatures shrink rivers in much of the country, farmers and towns have an incentive to pump more groundwater to make up the difference.

Experts call that a self-defeating strategy. By draining aquifers that filled up over thousands or millions of years, regions risk losing access to that water in the future when they might need it even more, as climate change makes rainfall less predictable or droughts more severe.

In Maryland, almost three-quarters of monitoring wells have seen their water levels drop over the past 40 years, some by more than 100 feet. Charles County, which contains fast-growing suburbs of Washington, has used most of its groundwater for homes and agriculture. And it isn't coming back anytime soon.

"Most of the water we're pulling out of the ground is thousands of years old," said Jason Groth, the county's deputy director of planning and growth management. "It's not like it rains on Monday, and by Saturday it's in the aquifer."

Mr. Groth said the county, which gets the vast majority of its water from its own aquifers, will hit a point within a decade where it doesn't have enough water.

David Abrams, communications director for the Maryland Department of the Environment, said the state was improving its data collection and monitoring, and that its programs "have a strong track record of success in protecting our groundwater resources."

Charles County is looking at piping in water from elsewhere or building a treatment plant to remove salt from the Potomac River. But that would increase costs as much as tenfold.

A little more than one-third of America's total volume of drinking water comes from groundwater, according to data from the U.S. Geological Survey. But small and rural communities are disproportionately dependent on wells, which typically cost less than treating and transporting water from rivers and lakes. Of the nation's 143,070 water systems, 128,362 rely primarily on groundwater, according to the Environmental Protection Agency.

Over pumping can have other risks beyond diminishing the supply of water. It can also contaminate aquifers in ways that make the remaining water unsafe or undrinkable.

THE CLERMONT FOUNDATION

*A non-profit organization providing support and management for Clermont Farm (1750) in Clarke County, VA
a property owned by the Virginia Department of Historic Resources, a gift from Elizabeth Rust Williams*

National Register of Historic Places + Virginia Landmarks Register
151 Clermont Lane, Berryville, VA 22261 | Phone: 540-955-0102 | Email: bstieg@clermontfarm.org

Comments to the Berryville Planning Commission Re Proposed Friant/Horton Subdivision 10-24-23

Mr. Chairman, and Members of the Commission:

My name is Bob Stieg, and I am the CEO of The Clermont Foundation. The Foundation manages, funds, and provides educational programming at Clermont Farm, a 360-acre state historic site and working farm owned by the Virginia Department of Historic Resources. The farm is located on the south side of and at the end of East Main Street. The Farm's entrance is at 151 Clermont Lane, directly opposite from the proposed main entrance to the planned Friant subdivision with its requested 214 houses.

We are very concerned about the potential safety of the proposed four-way intersection to be created at the entrance to the farm. Traffic past the farm's entrance is already very high at peak periods, including heavy use east and west by semi-trailer trucks from the Industrial Park and Berryville Graphics. The entire proposed subdivision appears to be almost one giant cul-de-sac, with most of in-going and out-going traffic concentrated at the proposed new intersection opposite the Clermont entrance, adding to the current high levels on East Main Street.. It is not clear how realistic the initially-presented traffic estimates are.

At Clermont we have both public events and regular visits by public school students for history and agriculture classes. Most traffic to and from Clermont is in the direction of downtown Berryville, requiring that school buses and cars leaving Clermont have to make a left-turn across traffic onto East Main Street, where the sight distances are not exceptional and traffic is currently moving at 35-45 mph or better. With these speeds, this turn, difficult now at peak periods, where the sight lines for the new intersection are only up to the top of Grindstone Hill and down to left curve out to By-Pass 7, as the Clermont entrance is about mid-way between these two points.

Given this proposed new intersection as the primary entrance/exit from the Friant development, on what is now a busy section of East Main Street, we want to be sure that:

- A. Realistic future traffic estimates are developed
- B. Appropriate speed limits and deceleration/turn lanes are developed
- C. That there are appropriate traffic controls, including the possibility of a traffic light, to keep this from being a free-for-all intersection with strongly competing flows of industrial and domestic traffic.
- D. Most of all, we want to make sure that school bus traffic to Clermont, both coming and going, is safe for the students.

Thank you.

MARY VEBLUX

For many of us here in this room, the proposal by DR Horton to build 214 homes on the annexed Friant land feels like a giant monster seeking to devour our sweet small town of Berryville and transforming it into something hideous.

Tonight you will hear from a group of citizens who will convince you to reject Horton's proposal for rezoning.

In August, I wondered where I could turn for guidance in this matter and joyfully discovered it right in your own Berryville Area Plan! How glad I am that the land use philosophy of Clarke Co and the Town of Berryville wants to maintain their "vision of protecting its natural and historic resources, agricultural properties and **scenic beauty** by limiting urban and suburban-style development to designated growth areas." In your plan for the Friant property of Sub-area 14 of 7.2 acres adjacent to the railroad tracks, the limit is for 28 residential units. For the Sub area 15 of 63.1 acres, the recommended holding capacity is for 81 residential units, for a total of 109 units for the entire property. How grateful I am for your foresight to understand the limitations of the property.

You are not alone. In your assessment. In 1999, Richmond American, wanting to build 100 homes, performed its own land study and determined that the land had the capacity for only 80. The same conclusion was made in 2015 by another builder- 80 homes was the maximum number of residential units.

The Horton proposal gives the planning commission and the Town Council the opportunity to consider the questions, Is this right for Berryville? Is this what the citizenry would benefit from? Does this fit in your Berryville Area Plan?

I urge you to adhere to your very well thought out plan and reject the rezoning proposal from DR Horton.

BERRYVILLE PLANNING COMMISSION SIGN UP SHEET

18

Public Hearing
Rezoning – Friant Property | DR Horton

October 24, 2023

Name: _____ Town of Berryville Resident? _____

Clissy Friant Funkhouser Yes No

~~Cheryl Lati~~ Yes No

~~Wes Price~~ Yes No

~~Dorothy Price~~ Yes No

Sarah Fabiszak Yes No

MICHAEL WILSON Yes No

Tim Sinclair Yes No

Mary Veilley Yes No

Turner Kobayashi Yes No

~~John D...~~ Yes No

Richard Blick Yes No

Lisa W. Murphy Yes No

Laura Heck Yes No

Ruth Costello Yes No

Julie Abrera Yes No

~~Kenate LeBlanc~~ Yes No

BERRYVILLE PLANNING COMMISSION SIGN UP SHEET

Public Hearing
Rezoning – Friant Property | DR Horton

October 24, 2023

Name: _____ Town of Berryville Resident? _____

Bryan K Snyder ✓ Yes No

John MacDonald ✓ Yes No

SARA STERN ✓ Yes No

Dave Jackson ✓ Yes No

~~Barbara Lake~~ Yes No

Robert Lauter ✓ Yes No

STAN KERNS ✓ Yes No

Jon Burge ✓ Yes No

~~Judys MacDONALD~~ Yes No

SPAKE ~~Wesley Wallace~~ ✓ Yes No

SPAKE ~~Geo Giordano~~ ✓ Yes No

IMMY WIRE MARY WIRE ✓ Yes No

Winkie McKay Smith Yes No

Bob Steyer Yes No

Ruth Costello Yes No

 Yes No

Planning Commission Agenda Item Report Summary

November 28, 2023

Item Title

Continued Public Hearing – Rezoning - Friant Property

Prepared By

Christy Dunkle

Friant Enterprises #1, LLC; Friant Enterprises #2, LLC; Friant Enterprises #3, LLC (Owners) (Tony Free, Vice President, DR Horton, Inc., Agent) are requesting a rezoning of the properties identified as 14-A-80 and 14-A-112 consisting of approximately 100 acres. The properties are currently zoned OSR Open Space Residential; DR-1 Detached Residential-1; DR-2 Detached Residential-2; and BP Business Park. The proposed zoning for a portion of the properties identified above is DR-4 Detached Residential-4. RZ 01-23

Background/History/General Information

September 26, 2023 Staff Report

The properties referenced above were annexed into the Town of Berryville on January 1, 2022. Currently zoned OSR Open Space Residential, DR-1 Detached Residential – 1, DR-2 Detached Residential - 2, BP Business Park, the applicants would like to have a portion of the property rezoned to DR-4 Detached Residential-4. This density increase would allow for the construction of additional single-family homes.

A rezoning requires three items to be approved by Town Council after recommendation of the Planning Commission:

- comprehensive plan amendment (in this case, the Berryville Area Plan is the component plan to the Town's comprehensive plan)*
- zoning map amendment*
- rezoning*

General Information

This property is located within Annexation Area B. The Berryville Area Development Authority is the administrative body that reviews and approves land use actions such as subdivision and site plan review. The property is identified in the Berryville Area Plan (BAP) which is a component plan of the Town and County's comprehensive plans.

In 1992, the Berryville Area Plan was adopted by the Town and County. Sub-areas were identified on all parcels within Annexation Area B. Detailed studies were performed on each of these sub-areas that included, but were not limited to, transportation, historic resources,

and environmental suitability. Land use and zoning were applied to each parcel and a Future Land Use table was created which included lot yields for residentially-zoned parcels. The plan was updated in 2015 and adopted by Town and County officials in 2016.

Of the residential development that occurred in Annexation Area B as of the update of BAP in 2015, 195 residential units were identified as unbuilt. That number has been reduced to 160 unbuilt units as Hermitage V was not under development at the time of the BAP update. The sub-areas (identified on Map 4 – Berryville Area Plan Land Uses (2015)) that did not reach the anticipated densities, include:

Property Information

The parcels included in this request are within sub-areas 13, 14, and 15 identified on the attached Map 4 – Berryville Area Plan Land Uses (2015). Please note: sub-areas 16 and 17 are not part of this rezoning request and are under separate ownership. Full descriptions of sub-areas 13, 14, and 15 follow this staff report. Below is a synopsis of these sub-areas:

- **Sub-area 13 – Buckmarsh Run Conservation Area (32.4 acres)**
Land use: environmental conservation
Current zoning applied: OSR Open Space Residential
Lot yield: 3
Sub-area 13 is adjacent to the Norfolk-Southern railroad tracks and is an environmentally-sensitive area due to Buckmarsh Run and flood-prone characteristics.

- **Sub-area 14 – Northeast Residential Transition Area (7.2 acres)**
Land use: Medium - low density residential
Current zoning applied: BP Business Park
Lot yield: 28
The land use originally applied to this sub-area was light industrial based on its location to the railroad tracks and existing businesses on Cattleman's Lane. The 2015 update modified the land use from industrial to medium-low residential due to concerns about the lack of access as an industrial site and the nature of the adjacent residential land uses.

- **Sub-area 15 – Northeastern Residential Growth Area (63.1 acres)**
Land use: low density residential
Current zoning applied: DR-1 Detached Residential - 1, DR-2 Detached Residential - 2, OSR Open Space Residential
Lot yield: 81
This sub-area surrounds the Bel Voi manor house (sub-area 16) which is under separate ownership. The BAP references sensitivity to land use proposals due to the nature historic residence. The primary access to the proposed development area is identified through the Audley property (sub-area 17).

Descriptions in the BAP note the potential for a master planned-development on sub-areas 13, 14, and 15 that would contain the following elements:

- *Transportation connectivity to adjacent sub-areas;*
- *Cluster design that would reduce infrastructure costs (e.g., roads, utilities) and adverse environmental impacts;*
- *Walkability elements;*
- *View shed protection;*
- *Master planning for public utilities and stormwater infrastructure; and*
- *Cash proffers to mitigate the impact of new development on Town and County capital needs.*

The lot yield identified on the Future Land Use Table in the BAP for these sub-areas totals 112 lots. The developer has proposed using the 102 of the 160 undeveloped lots to increase the density for a total of 214 single-family homes. The sub-area descriptions state that additional density should be considered for a portion of these residual units to be included in these locations.

Proffers

A proffer is a condition offered by the owners of property subject to a rezoning which may be accepted by the locality's governing body in conjunction with its approval of the rezoning. Rezonings with proffers are considered conditional zoning per the Code of Virginia as follows:

It is the purpose of §§ [15.2-2296](#) through [15.2-2300](#) to provide a more flexible and adaptable zoning method to cope with situations found in such zones through conditional zoning, whereby a zoning reclassification may be allowed subject to certain conditions proffered by the zoning applicant for the protection of the community that are not generally applicable to land similarly zoned.

The code sections referenced above are included in this staff report.

According to the Albemarle County Land Use Law Handbook (March, 2022), eight essential features of Proffers are as follows:

- *Proffers may impose additional requirements and restrictions to address the impacts of a rezoning or may allow modifications from the requirements of the zoning ordinance.*
- *Proffers must be voluntary, which means that after the locality identifies the impacts arising from the rezoning, it is up to the owner to decide whether they want to address the impacts through proffers or risk having the rezoning denied by the governing body because impacts were not addressed; it is improper for a locality to deny a rezoning simply because the owner did not proffer something requested by the locality.*
- *Proffers must be reasonable.*
- *Once accepted by the governing body, proffers become part of the zoning regulations applicable to the land and they run with the land until it is rezoned (there are exceptions).*
- *Proffers must be in writing.*
- *Proffers must be submitted before the public hearing by the governing body and may not be materially amended once the public hearing begins without holding another public*

hearing, provided that the governing body may waive the requirement for a public hearing if the amendment does not affect conditions of use or density.

- Proffers must be signed by the owner(s) of the land being rezoned.
- Proffers to dedicate substantial land, make substantial cash payments, to construct substantial improvements, or which specify the permitted use or density, may create vested rights in the zoning of the land.

October 24, 2023 Staff Report

David Giovannacci, Director of Land Development for D.R. Horton, has requested that any action on the rezoning to Town Council be deferred until the November 28, 2023 meeting.

No modifications to the application have been submitted by the applicant. Per Mr. Giovannacci's letter dated October 17, 2023, the applicant will be updating the development plan to submit to the Planning Commission for consideration.

Additional documents received since the last meeting include:

- Comment response letter concerning VDOT's comments from Lester Adkins and Robert Browning of Wells + Associates dated October 11, 2023
- Correspondence between the applicant and Clarke County Public Schools Superintendent Rick Catlett
- A map identifying the sub-areas with an overlay of the proposed subdivision layout was distributed to Planning Commissioners at the site visits conducted on October 12, 2023

The documents referenced above are included in this packet.

Please reference the August 22, 2023 Planning Commission packet for the full application at this link: <https://www.berryvilleva.gov/ArchiveCenter/ViewFile/Item/1161> . A full copy of the application is also available to view at the Town Business Office during regular business hours.

Findings/Current Activity

A synopsis of the number of residential units:

Approximate number of units under current zoning: (Sub-Area 15): 66

Please note: Sub-Area 14 is currently zoned BP Business Park and could develop under regulations established in Section 612 of the Berryville Zoning Ordinance.

Units identified in the Berryville Area Plan Land Use Table: (Sub-Areas 13, 14, and 15): 112

Please note: the land use designation for Sub-Area 14 was modified in the 2015 update of the Berryville Area Plan from Light Industrial/Research to Medium-Low Density Residential (4 units/acre)

Residual units identified in Annexation Area B: 160

- Sub-areas 3 and 4 (89 lots)
- Sub-area 18 (45 lots)

- Sub-area 25 (6 lots)
- Sub-area 27A (20 lots)

The number of proposed lots has been reduced from 214 to 198. Proposed houses have been removed from Sub-Area 16.

A memo from Mr. Lawson dated November 16, 2023, includes a synopsis of the updated resubmission.

Schedule/Deadlines

Per Section 508.8 of the Berryville Zoning Ordinance, the Planning Commission shall act upon any proposed amendment within 100 days of the first Planning Commission meeting after the receipt of a complete rezoning application (by November 30, 2023). Town Council shall, under Section 508.9 of the Berryville Zoning Ordinance, act upon any proposed amendment within one year after receipt of a complete application (by August 11, 2024).

Other Considerations

N/A

Recommendation

Due to outstanding concerns related to stormwater management, site access through the adjacent property, and schools, staff is recommending that the applicant request a deferral to the next meeting on January 23, 2024 or recommend denial of the request to Town Council.

Sample Motion

If the applicant requests a deferral to the January meeting:

I move that the Planning Commission of the Town of Berryville continue the public hearing to the January 23, 2024 meeting for the rezoning of the parcels identified as 14-A-80 and 14-A-112 per the applicant's request.

OR

If the applicant DOES NOT request a deferral to the January meeting:

I move that the Planning Commission of the Town of Berryville recommend Town Council deny the rezoning of the parcels identified as 14-A-80 and 14-A-112 due to insufficient information concerning school impacts, stormwater management details, and site access through the Emma property.

Attachments:

- Mr. Lawson's memo dated November 16, 2023
- VDOT comments dated November 14, 2023
- Comments received by staff through 3:00 p.m. on Friday, November 17, 2023
- Submission from DR Horton dated November 14, 2023

Christy Dunkle

From: Audra Wallace <audraw716@gmail.com>
Sent: Thursday, November 16, 2023 6:17 PM
To: Christy Dunkle; william@vamove.com
Cc: Emily Sinclair; Tim Sinclair
Subject: Re: Friant Property Resubmission Re: Evergreen Screening

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Hello again,

One more thing I wanted to add. I have been working in the community association management industry and managed HOA's for over 15 years. I love what I do, but there's a reason I don't live in an HOA myself, and a reason I make the long commute from Berryville to Lansdowne every day. If I wanted to live in or right next to an HOA, I'd just live in Ashburn and be close to work. Coming home to Berryville in Clarke County is supposed to be a retreat and an escape from the madness of suburbia. Much of that feeling of home will be gone for many of us here in Clarke, if this HOA is allowed to be built on this property. It should have never been annexed and rezoned in the first place.

Thank you,

Audra Reed

Sent from my iPhone

On Nov 16, 2023, at 4:16 PM, Audra Reed <audraw716@gmail.com> wrote:

Good afternoon, Ms. Dunkle & Mr. Steinmetz.

Please forward my email to the Planning Commission. My name is Audra (Wallace) Reed and I own the home at 105 Battletown Dr. in Berryville. I have looked at the proposed development of the Friant property (updated as of 11/14/23). Should this rezoning get approved and plans to build proceed (for either DR-4 or DR-2 zoning), I would like to request that the town of Berryville require DR Horton to plant evergreen screening, not only behind high visibility lots, but also along the open space residential portion of the property that backs to house numbers 101, 103, 105, 106, 107, 109, and 111 on Battletown Drive.

I have marked the area in question on the attached diagram. DR Horton's proposal shows evergreen screening behind the high visibility lots. Although there would be no high visibility lots behind 101 through 111 Battletown Drive, the owners of these homes on Battletown will still have high visibility/open view of the children's playground and public street A. Right now I look at a beautiful open field with horses and cows grazing. If plans go through, my view will be changing drastically for the worse. I don't want to look at a playground, pedestrians, or cars driving by - not to mention the noise. I think it is prudent to require evergreen screening behind the whole north side of Battletown Drive, not just some of it.

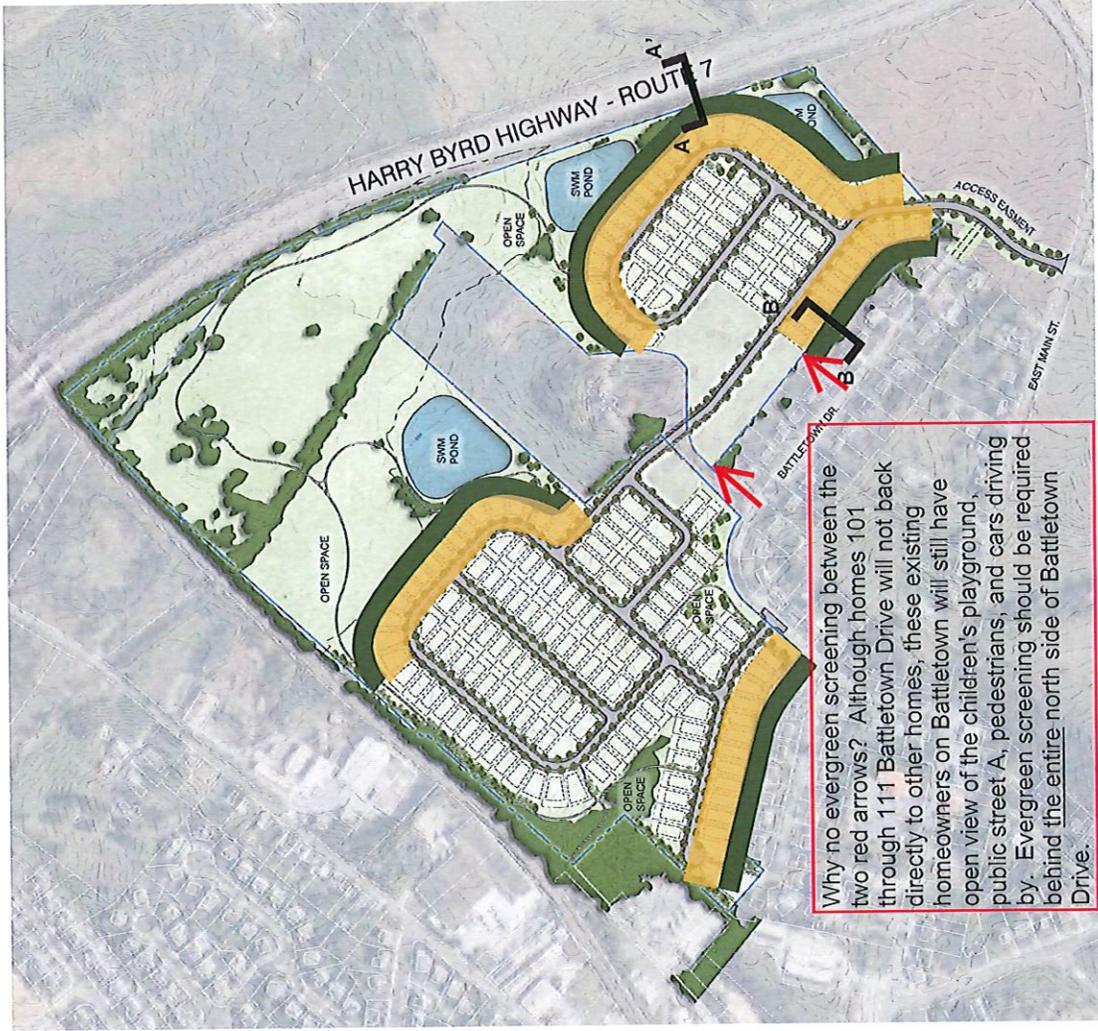
Diagram attached.

Thank you,

Audra Reed
105 Battletown Dr, Berryville, VA 22611
703-999-5813
<Evergreen Screening.pdf>

4.3 SCREENING

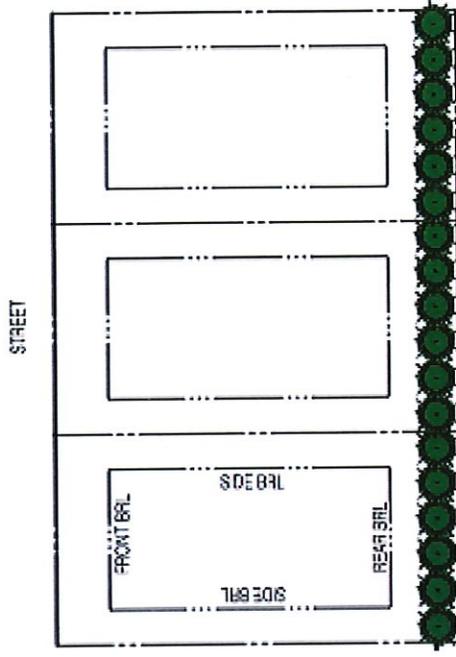
SCREENING PLAN



Legend

-  High Visibility Lot
-  Evergreen Screening Detail

EXAMPLE EVERGREEN SCREENING DIAGRAM



Notes:

-  - Green giant arborvitae, red cedar, variety of spruce species, and/or other similar evergreen species
- Each highlighted lot will include a minimum of 5 evergreen trees
- Evergreen trees may be located on or off the highlighted lots

Christy Dunkle

From: Audra Reed <audraw716@gmail.com>
Sent: Thursday, November 16, 2023 4:17 PM
To: Christy Dunkle; william@vamove.com
Cc: Emily Sinclair; Tim Sinclair
Subject: Friant Property Resubmission Re: Evergreen Screening
Attachments: Evergreen Screening.pdf

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good afternoon, Ms. Dunkle & Mr. Steinmetz.

Please forward my email to the Planning Commission. My name is Audra (Wallace) Reed and I own the home at 105 Battletown Dr. in Berryville. I have looked at the proposed development of the Friant property (updated as of 11/14/23). Should this rezoning get approved and plans to build proceed (for either DR-4 or DR-2 zoning), I would like to request that the town of Berryville require DR Horton to plant evergreen screening, not only behind high visibility lots, but also along the open space residential portion of the property that backs to house numbers 101, 103, 105, 106, 107, 109, and 111 on Battletown Drive.

I have marked the area in question on the attached diagram. DR Horton's proposal shows evergreen screening behind the high visibility lots. Although there would be no high visibility lots behind 101 through 111 Battletown Drive, the owners of these homes on Battletown will still have high visibility/open view of the children's playground and public street A. Right now I look at a beautiful open field with horses and cows grazing. If plans go through, my view will be changing drastically for the worse. I don't want to look at a playground, pedestrians, or cars driving by - not to mention the noise. I think it is prudent to require evergreen screening behind the whole north side of Battletown Drive, not just some of it.

Diagram attached.

Thank you,

Audra Reed
105 Battletown Dr, Berryville, VA 22611
703-999-5813

Christy Dunkle

From: Julie Abrera <jabrera@gmail.com>
Sent: Friday, November 17, 2023 9:34 AM
To: Christy Dunkle
Cc: William Steinmetz; Diane Harrison
Subject: RE: Friant rezoning

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Christy

Thank you. Why has it taken this long to get this answer? The revised traffic study in the current PC packet is the first time I've seen opening Battletown Drive Drive tied into the number houses in the development.

I had asked Willy Steinmetz about this earlier this fall as well. When we queried the developer about this extension at the meeting in August and in a subsequent conversation after the PC public hearing, the response was that the town had requested this and they would put it in if people wanted it. If not, they would remove it. There was no mention of VDOT requirements in any conversation related to this until you mention it in this email.

The initial traffic study was filled with errors and outdated information. It's interesting to see how quickly an updated traffic study was produced. Also, in my initial review, I don't see any projections for the new intersection with the Battletown Drive extension and access road - other than reference to an old study of trips. There will be additional trips on Battletown Drive, greatly impacting the traffic on the street.

The implications to the existing neighborhood of this zoning change continue to grow. The planning commission now has two weeks to review this updated information as does the public. It is my hope that no decisions or recommendations are made until everyone has had adequate time to review (i.e. in early 2024) and the public hearing is extended as long as necessary.

My expectation is not a response from you but passing this on to council and the planning commission. Thanks for all that you do to keep everyone informed. I appreciate it.

Julie
Julie Abrera
703-801-3529

Christy wrote in response to question about origin of Battletown Drive extension;

Julie:

This is a VDOT requirement. I have attached comments from VDOT staff, item 7 is specific language for the regulation.

Please let me know if you have additional questions.

Thanks – Christy

Christy Dunkle

Christy Dunkle

From: Julie Abrera <jabrera@gmail.com>
Sent: Thursday, November 16, 2023 2:12 PM
To: Christy Dunkle
Subject: Re: Updated Friant rezoning information

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Christy,

I've had a chance to glance through this quickly. Can you tell me who is asking for the extension of Battletown Drive to the access road? No one seems to know, and I am seeing references to it in the revised traffic study. The developer said that this request came from the town.

Thanks,

Julie

On Thu, Nov 16, 2023 at 11:18 AM Christy Dunkle <planner@berryvilleva.gov> wrote:

Please see the updated Friant material at this link: <https://www.berryvilleva.gov/DocumentCenter/View/2051/Friant-Resubmission-11142023>

This information is posted on the Town of Berryville website (www.berryvilleva.gov) and included as a "news flash" post. Please forward the link to whomever is interested.

I am anticipating a memo from the applicant outlining the modifications that have been made. This will be posted on the website upon receipt.

BCC: Town Council, Planning Commission, Berryville Area Development Authority

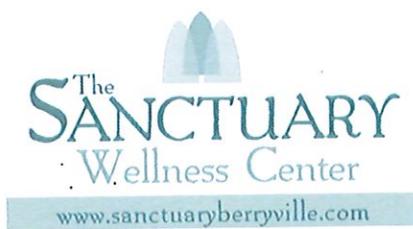
Christy Dunkle

Community Development Director

Town of Berryville, VA

101 Chalmers Court, Ste. A

Berryville, VA 22611



To: The Berryville, VA Town Planning Commission

November 12, 2023

From: Geo Giordano, Business Owner and Resident
The Sanctuary Wellness Center 208 N. Buckmarsh St., Berryville, VA 22611
Geo's Joy Herbal Medicine, LLC
1055 North Hill Lane, Berryville, VA 22611

Thank you for allowing us to submit concerns and ideas regarding the Friant property and DR Horton. In their efforts to increase the single-family density from 66 homes to 214 homes at the East entrance from Rte 7 into Historic Berryville, I offer my thoughts and concerns.

As one of many residents who risk our lives daily attempting to pull out of our lanes and driveways that enter onto Rte 7, **enhanced traffic burden is indeed a concern**. Commuter traffic is travelling 70-80 mph coming and going and is both a danger and a burden on our county's rural infrastructure. 214 SF homes would likely translate into 2 car families who commute daily, possibly adding 428 cars into this situation. As most of us are aware, there are traffic accidents on Rte 7 almost daily, and many have been fatal.

Regarding the new community itself providing views of the mountains, as the Friant's grandmother hoped would happen, it would not be possible with that density of SF homes that are the size of those in Shenandoah Crossing. The argument has already been made that our Town infrastructure cannot support such increased density.

Perhaps DR Horton or another builder would consider building a mix of duplexes for retirees and small SF or townhomes for young family residents. The large vinyl boxes currently being proposed are not what either buyer needs to start out or to move down in size. Large SF homes are so **much less sustainable for HVAC, water, sewer and land use issues**. The total footprint of energy efficient, indoor living spaces with duplexes and townhomes, would allow for more outdoor living space, which is a main reason people choose to come to Clarke County and Berryville.

It seems to make sense to plan for a recycling of all generations with various economic needs, by offering appropriate housing options. With this next community of homes, targeting retirees **would not stress the infrastructure with commuter traffic and school enrollment increases**, and could benefit the interest of the Friant family for more density. There are many who want to escape the traffic and frantic pace of Loudon County at this stage of life. And of course, it makes sense to also provide for young families just starting out, with housing that is

affordable and reasonable in size. If the new community could consider 2/3 of the homes for retirees and 1/3 for young families, it could provide a solution for the infrastructure burden and the cycling of generational needs to make our town more viable.

As for creating a ***more charming, rural, or historic feeling to the entrance of Berryville***, maybe charming wooden signs at all 4 entrances into Berryville could be considered that simply say Welcome to Historic Berryville. And in honor of our devotion to our agricultural heritage, ***perhaps a buffer of native pollinator plants and native trees might be considered as a greeting*** to the East Rte 7B entrance for the town and the new community itself, with a walking trail, and a playground/park space for the varied generations to gather to create and connect as a community. Providing sidewalks and bicycle paths to access downtown would certainly be a good addition to the plan to reduce traffic requirements and allow community connection to the town. ***Developers are often financially responsible for such community improvements.***

I understand that there are concerns that if townhomes are built, these would likely be purchased as investments and turned into rental properties with absentee landlords. Perhaps there is a way to prevent that from happening? It seems clear that there are investors who purchase properties in this town and have little or no motivation to make these properties viable and supportive to the economic health of the larger community. ***Rather than being a tax credit for such owners while standing empty, perhaps they could be a tax burden to the owners and carry monetary penalties?*** I am naïve to how these things are either allowed to happen or prevented. I hope a solution can be reached that will benefit and adhere to our comprehensive plans for both town and county.

Sincerely and Grateful for your Consideration,

Geo Derick Giordano, Registered Medical Herbalist and Business Owner
Active Member of the National Association of Home Builders (NAHB) for 20 years
Active Member of the National Sales and Marketing Council (NSMC) and the Institute for Residential Marketing (IRM) for 15 years, serving as an educator and judge
Active Member of the National Design Committee (NDC) serving as educator and judge for architecture, community land planning and interior design for 15 years
Chair and judge of the Best In American Living Awards Committee (BALA) 10 years



LETTER OF TRANSMITTAL

Date: November 14th, 2023

To: Christy Dunkle, Community Development Director
101 Chalmers Court, Ste. A
Berryville, VA 22611
planner@berryvilleva.gov | (540) 955-4081

Re: Friant Rezoning Project, Clarke County, Berryville, VA

Ms. Dunkle,

DR Horton is proposing to rezone the Friant Property located on Tax Map 14-A-80 & 14-A-112 from (DR-1, DR-2, BP, and OSR) zone to (DR-4 and OSR) zone. DR Horton is proposing to develop 198 single family homes on the Friant Property.

Enclosed please find the following documents for Friant Rezoning Submission.

1. One (1) Copy of the Transmittal Letter
2. One (1) copy of the Signed Rezoning Application.
3. Check in the amount of \$148,700 payable to the 'Town of Berryville.'
4. One (1) copy of the 'Friant Master Zoning Plan' prepared by Dewberry Engineering.
5. One (1) copy of the 'Friant Rezoning Plat' prepared by Dewberry Engineering.
6. One (1) copy of the 'Friant Rezoning Maps' prepared by Dewberry Engineering
7. One (1) copy of the Water/Sewer Capacity Analysis prepared by Dewberry Engineering.
8. One (1) copy of the Water & Sewer Memo written by the Town.
9. One (1) copy of the 'Friant Design Guidelines' prepared by Dewberry Engineering.
10. One (1) copy of the 'Friant Proposed Proffer Statement.'
11. One (1) copy of 'Friant Fiscal Impact Analysis' prepared by Municap.
12. One (1) copy of the 'Town Revenue Summary' prepared by Municap.
13. One (1) copy of the 'County Revenue Summary' prepared by Municap.
14. One (1) copy of the 'Friant Geotechnical Exploration Report' prepared by Universal Engineering Sciences.
15. One (1) copy of 'Friant Geotechnical Study Area Map' prepared by Universal Engineering Sciences.
16. One (1) copy of the 'Friant Traffic Study' prepared by Wells & Associates.
17. One (1) copy of the 'Friant Phase IA Cultural Resource Report' prepared by Dovetail Cultural Resource Group.

AMERICA'S #1 HOME BUILDER SINCE 2002

7925 Jones Branch Drive · Tysons, Virginia 22102 · drhorton.com

D.R. Horton is an Equal Housing Opportunity Builder.



Please let me know if you have any questions or require any additional information. Thank you!

Sincerely,

David Giovannacci, Director of Land Development

dgiovannacci@drhorton.com

301-789-6517

AMERICA'S #1 HOMEBUILDER SINCE 2002

7925 Jones Branch Drive · Tysons, Virginia 22102 · drhorton.com

D.R. Horton is an Equal Housing Opportunity Builder.

LAND DEVELOPMENT APPLICATION TOWN OF BERRYVILLE

(Please print or type)

Current Property Owner Friant Enterprises #1, LLC; Friant Enterprises #2, LLC; Friant Enterprises #3, LLC

Owner's Address 1504 Charles Town, WV 25414

Phone 304-261-6238 (Katherine) & 434-981-1893 (Caroline)

Agent (Contact Person) DR HORTON, INC. TONY FREE, VICE PRESIDENT

Agent's Address 7925 JONES BRANCH DRIVE TYSONS, VA 22102

Phone 301-481-8934

Check Appropriate Request:

- Subdivision - creating more than 2 lots
- Minor Subdivision - single lot divided into 2 lots
- Boundary Line Adjustment
- Site Plan
- Rezoning
- Text Amendment: _____ Zoning or _____ Subdivision Ordinance
- ARB Certificate of Appropriateness
- Town of Berryville Utilities
- Other: _____

Complete As Applicable:

Nature of Request/Proposal: DR HORTON- FRIANT RESIDENTIAL REZONING PROJECT

Tax Map & Parcel Number(s): 14-A-80 & 14-A-112

Size of Project Site: 100 AC.

Proposed # of Lots: 214 Existing Zoning OSR, DR-1, DR-2, BP

Owner or Agent: The information provided is accurate to the best of my knowledge. I understand that the Town may deny, approve, or conditionally approve the request for which I am applying. I certify that all property corners have been clearly staked and flagged.

Signature: Tony Free Date: 8/3/23

Owner: I have read this completed application, understand its intent, and freely consent to its filing. Furthermore, I grant permission to the Town Planning Department and other government agents to enter the property and make such investigations and tests, as they deem necessary. I acknowledge that in accordance with Article X of the Subdivision Ordinance I am responsible for costs incurred for review of subdivision and/or development plans by the Town's engineer and that any other required tests or studies will be carried out at owner/agent expense

Signature: Caroline Revercomb Date: 08/03/2023

OFFICE USE ONLY

Public Hearing Required? _____ Dates Advertised _____

Adjoining Property Owners Notified? _____

Action Taken: _____

G/L expr: W/C expr: Pd/Pl expr:

Check Number 1610592

Date 08/01/23

TOWN OF BERRYVILLE
101 CHALMERS CT SUITE A
DRH Inc Controlled Disbr Acct.

Stub 1 of 1

453030

PO Numb	Invoice Number	Subdv Lot#	Lot Address	Cost Cde	Legal Desc	Gross	Deductions	Amount Paid
	REZONING	44000	NORTHERN VIRGINIA			148,700.00		148,700.00
						148,700.00		148,700.00

THIS CHECK IS PRINTED IN RED AND BLUE INK ON THE FACE ON CHEMICAL AND BLEACH REACTIVE PAPER WITH INVISIBLE FLUORESCENT FIBERS AND BASKETWEAVE ON BACK



Controlled Disbursement
Wells Fargo Bank, N.A.

Check Number 1610592

DRH Inc Controlled Disbr Acct.
1341 Horton Circle
Arlington, TX 76011

56-382
412
453030

Date	Amount
08/01/23	****148,700.00

Void after 6 months from date of issue

Pay ONE HUNDRED FORTY EIGHT THOUSAND SEVEN HUNDRED AND 00/100 *****

To to the
Order Of: TOWN OF BERRYVILLE
101 CHALMERS CT SUITE A
BERRYVILLE VA 22611

D.L. Horton

⑈0610592⑈ ⑆041203824⑆ 9639481879⑈

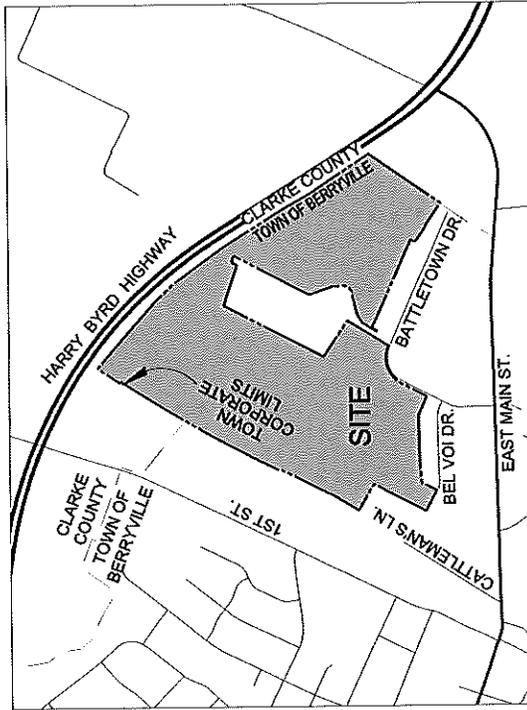
FRIANT

MASTER ZONING PLAN

TOWN OF BERRYVILLE
CLARKE COUNTY COUNTY, VIRGINIA

SUBJECT PARCELS: TAX MAP #14 A 80& 14 A 112

- SHEET INDEX**
- 1.....COVER SHEET
 - 2.....EXISTING CONDITIONS
 - 3.....ZONING PLAN
 - 4.....LAND USE PLAN
 - 5.....OPEN SPACE PLAN
 - 6.....UTILITY PLAN
 - 7.....TRANSPORTATION PLAN



VICINITY MAP
SCALE: 1" = 500'

OWNER
FRIANT ENTERPRISES LP, LLP
1504 EARL RD
CHARLES TOWN, WV 25414

DEVELOPER
D.R. HORTON
7825 JONES BRANCH DRIVE, SUITE 6200
TYSONS, VA 22012
CONTACT: PRIYA TIWARI
(433) 223-3162
ptiwari@cfmorton.com

FRIANT

MASTER ZONING PLAN

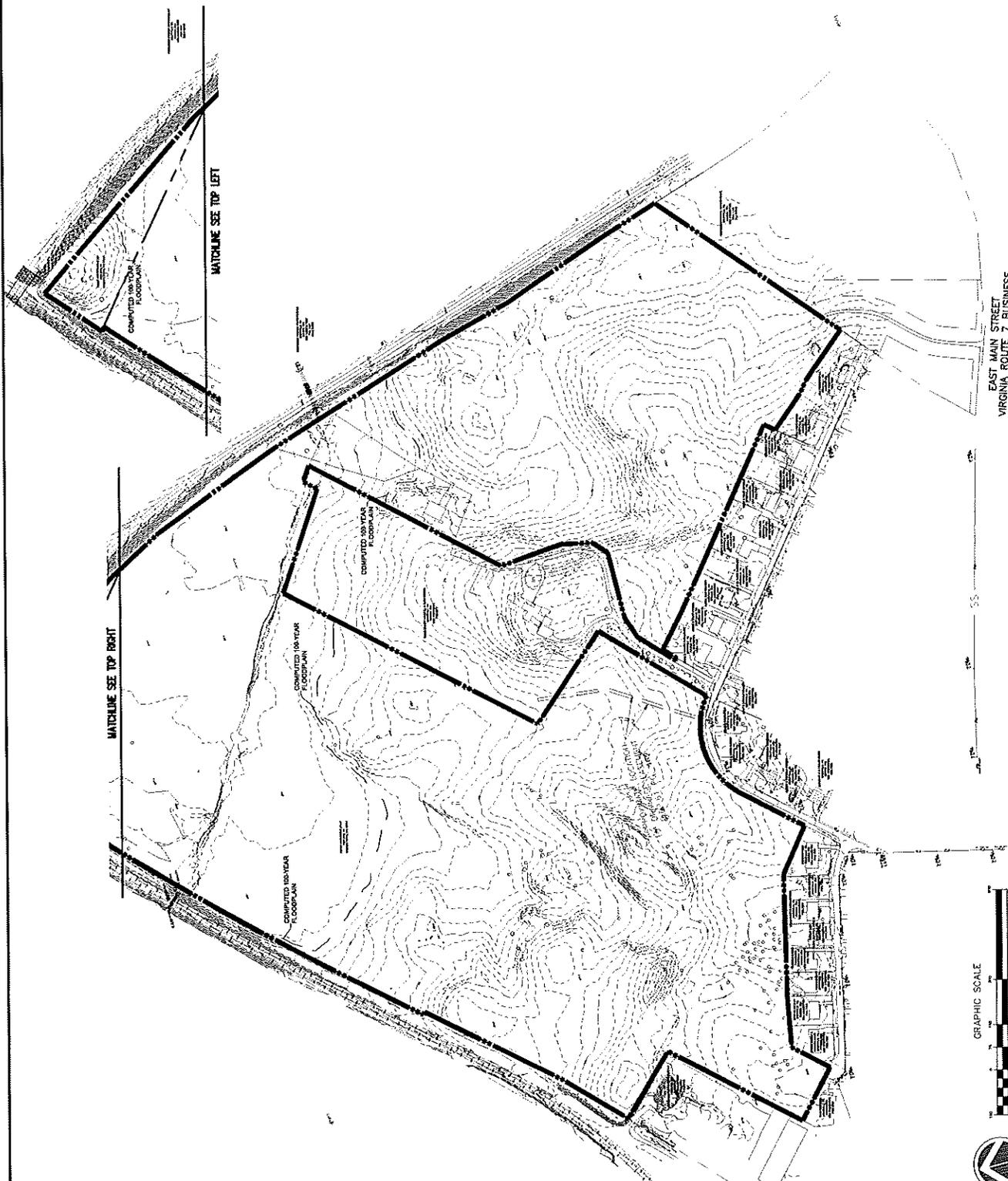
DATE: 07/31/2023
REV. DATE: 11/18/2023
SHEET: 1 OF 7



Dewberry
10000 LITTLE PATTERSON
AVENUE, SUITE 100
TOWN OF BERRYVILLE, VIRGINIA
CLARKE COUNTY, STATE

LEGEND:

- PROJECT BOUNDARY
- COMPUTED 10-YEAR FLOODPLAIN
- EXISTING MAJOR TOPO.
- EXISTING MINOR TOPO.
- EXISTING 1-5% SLOPE
- EXISTING 25%+ SLOPE
- WETLANDS
- EXISTING TREE CANOPY



GRAPHIC SCALE
 1 inch = 50 ft.

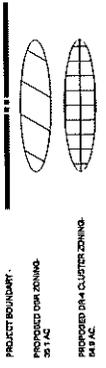
EAST MAIN STREET
 VIRGINIA ROUTE 7 BUSINESS
 WAYSIDE, VIRGINIA 22186

**FRIANT
 EXISTING CONDITIONS**

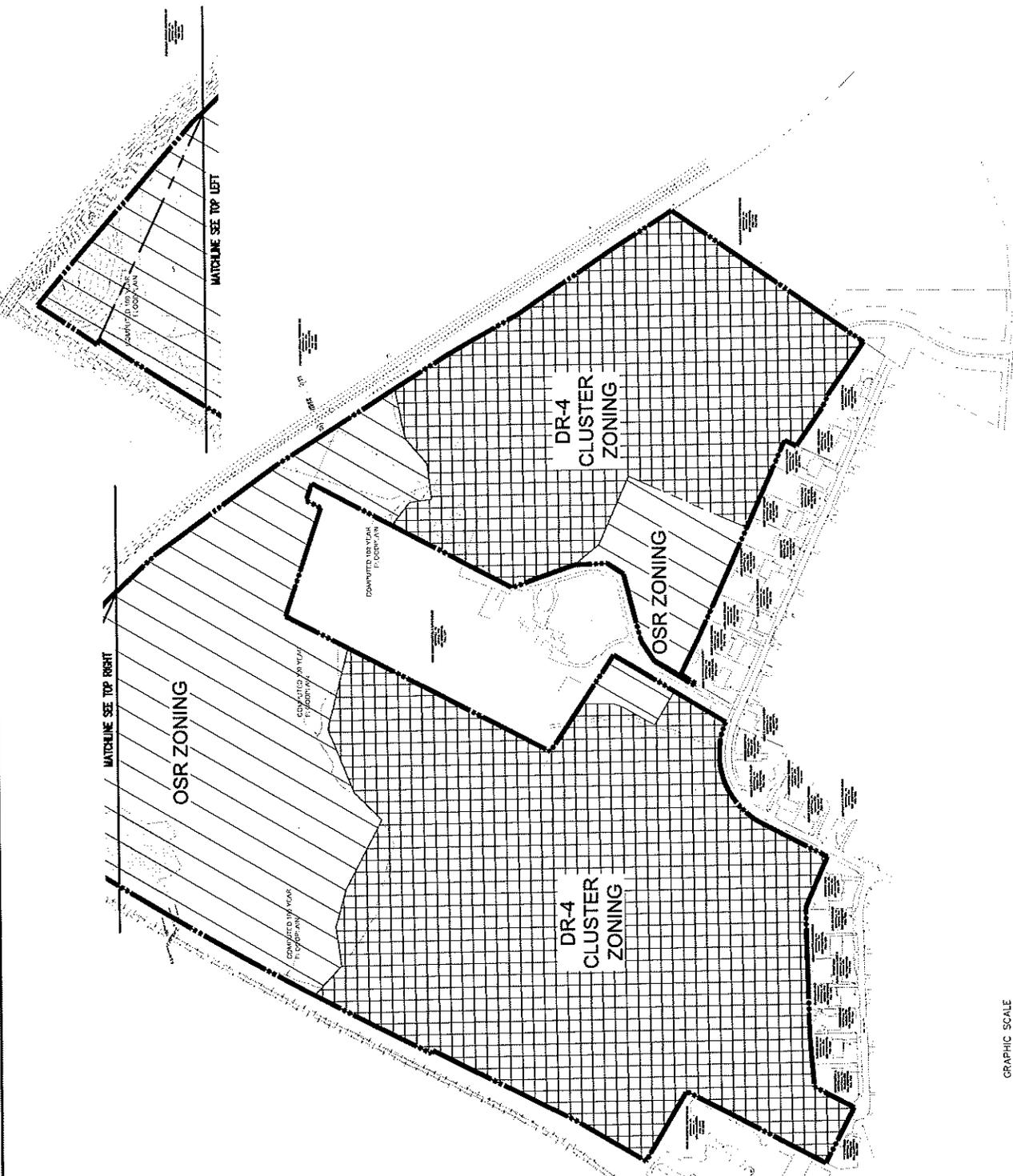
DATE: 07/31/2023
 SCALE: 1" = 50'
 SHEET: 2 OF 7
 TOWN OF BERRYVILLE, VIRGINIA
 CLARKE COUNTY, STATE



LEGEND:



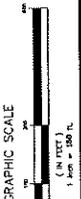
PROJECT BOUNDARY
 PROPOSED DR-4 CLUSTER ZONING
 33.7 AC
 PROPOSED OSR CLUSTER ZONING
 14.8 AC

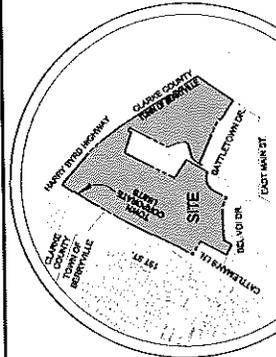


**FRIANT
 PROPOSED ZONING PLAN**

DATE: 07/31/2023
 REV. DATE: 11/18/2023
 SHEET: 3 OF 7

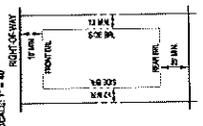
TOWN OF BERRYVILLE, VIRGINIA
 CLARKE COUNTY, STATE





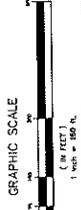
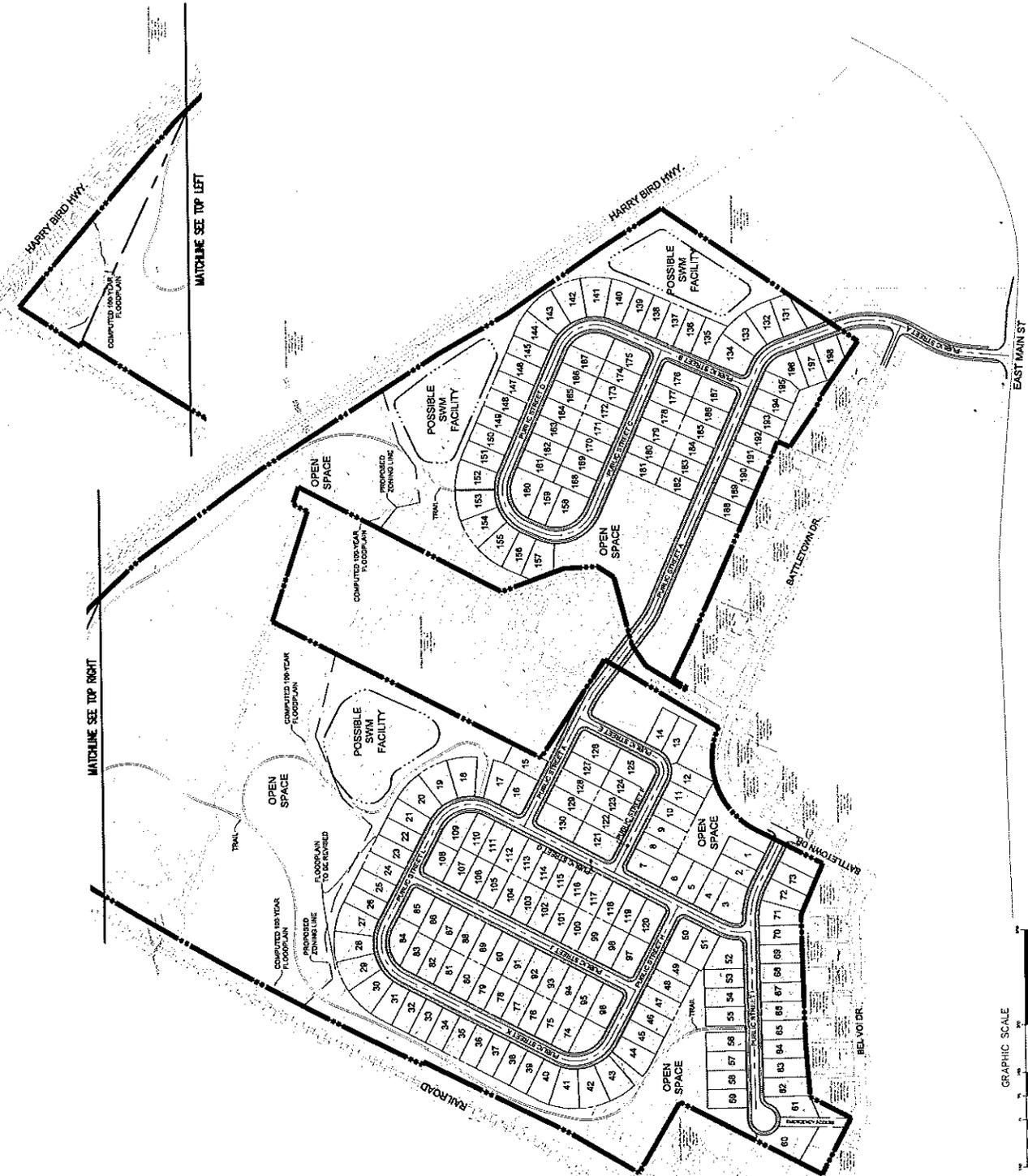
VICINITY MAP
SCALE 1" = 1000'

- NOTES:**
1. SITE OWNER: FRIANT ENTERPRISES, L.P.
 2. UNBUILT SITE AREA: 110.3 AC
 3. NET DEVELOPABLE AREA: 100.0 AC
 4. EXISTING ZONING: OES (OPEN SPACE RECREATIONAL), SP (BUSINESS PARK, DR & DETACHED RESIDENTIAL), DR-1 (DETACHED RESIDENTIAL)
 5. PROPOSED ZONING: DR-4 (CLUSTER DETACHED RESIDENTIAL), OES (OPEN SPACE, RECREATIONAL)
 6. THE MAPS ARE PRELIMINARY AND SHOWN HEREIN WERE PREPARED BY ENGINEER AND ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING
 7. FRIANT IS A FEDERAL REGISTERED SERVICE MARK AND IS LOCATED WITHIN THE AREA PROPOSED TO BE ACQUIRED FOR THE PROJECT AND IS SHOWN ON THE MAP.
 8. TOPOGRAPHIC INFORMATION SHOWN HEREON FOR DEVELOPMENT 2021 SURVEY
 9. EXISTING ELEVATION TO BE REVISED IN ACCORDANCE WITH PLAN DURING THE FINAL ENGINEERING STAGE
- TABULATIONS**
- TOTAL LOTS PROPOSED: 198 UNITS
 PROPOSED DENSITY: 1.08 DU/AC & NET ASD 2.87 DU/AC
 ALL DETACHED UNITS (DU) TO BE SINGLE FAMILY DETACHED
- DR-4 CLUSTER DEVELOPMENT STANDARDS**
- MAX HEIGHT: RESIDENTIAL USE: 12 FEET
 - SINGLE FAMILY DETACHED MINIMUM LOT AREA: 10,000 SF
 - SINGLE FAMILY DETACHED MINIMUM LOT WIDTH: 30 FT
 - SINGLE FAMILY DETACHED MINIMUM CORNER LOT WIDTH: 35 FT
 - SINGLE FAMILY DETACHED MINIMUM REAR YARD: 15 FT
 - SINGLE FAMILY DETACHED MINIMUM REAR YARD FOR PRIMARY STRUCTURE: 25 FT
 - SINGLE FAMILY DETACHED MINIMUM REAR YARD FOR PRIMARY STRUCTURE: 5 FT
 - SINGLE FAMILY DETACHED MINIMUM FRONT YARD FOR PRIMARY STRUCTURE: 15 FT
 - SINGLE FAMILY DETACHED MINIMUM FRONT YARD FOR GARAGE STRUCTURED FOR VEHICLES: 25 FT
 - SINGLE FAMILY DETACHED MINIMUM BUILDING HEIGHT: 35 FT



**FRIANT
LAND USE PLAN**

DATE: 07/31/2023
 REV DATE: 11/01/2023
 SHEET: 4 OF 7
 TOWN OF BERRAVILLE, VIRGINIA
 CLARKE COUNTY, STATE



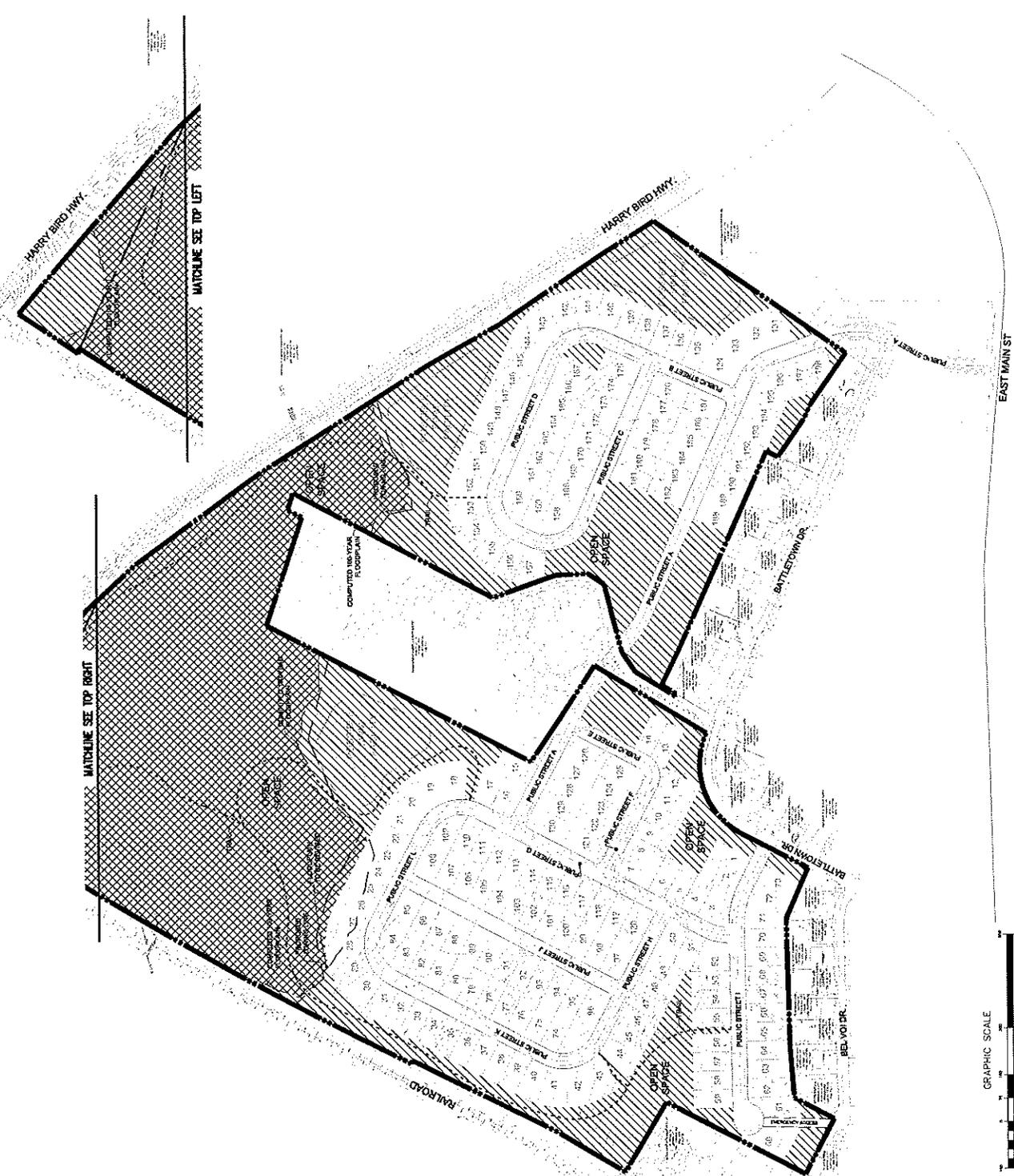
OPEN SPACE TABULATION:

Required Open Space Net Site Area: 200.0 AC. Computed Floodplain: 28.9 AC. 20% Buffer: 0.3 AC. Total Open Space Required: 29.2 AC.	20% of Net Site Area
Provided Open Space Total Open Space Provided	28.9 AC or 14.5%
Required Active Open Space Total Active Open Space Required	1% of Net Site Area 2.0 AC
Proposed Active Open Space Total Active Open Space Provided	3.3 AC or 1.7%

NOTES:
THE OPEN SPACE TABULATION ABOVE DEMONSTRATES COMPLIANCE WITH DM-4 AS A CONDITION OF THE DEVELOPMENT APPROVAL. THE COMPUTED FLOODPLAIN IS ALSO REQUIRED TO BE OPEN SPACE. THE COMPUTED FLOODPLAIN IS ALSO REQUIRED TO BE OPEN SPACE. THE TOTAL OF OPEN SPACE PROVIDED IS APPROXIMATELY 32.2 AC, AN APPROXIMATE TOTAL OF 16.1% OF NET SITE AREA PROVIDED ON BEHALF OF THE PROJECT ORIGINATOR.

LEGEND:

- DM-4 OPEN SPACE AREA
- REQUIRED COMPUTED FLOODPLAIN OPEN SPACE
- PROJECT BOUNDARY
- COMPLETED FLOODPLAIN
- PROPOSED YML

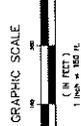


**FRIANT
OPEN SPACE PLAN**

DATE: 07/31/2023
 REV: 07/27/2023
 SHEET: 5 OF 7



Dewberry
 Engineers Inc.
 10000
 10000



- NOTES:**
1. PROPOSED WATER AND SANITARY SEWER LINES SHOWN ARE CONNECTION LINES FROM EXISTING MAINS TO THE PROPOSED FACILITIES. THE FINAL LAYOUT IS SUBJECT TO THE TOWN OF BERRYVILLE AND WILL BE DETERMINED WITH FINAL ENGINEERING.
 2. SIZE OF PROPOSED CONNECTION LINES SHOWN HEREON WILL BE DETERMINED BY FINAL ENGINEERING AND WILL BE BASED UPON CAPACITY NEEDED TO SERVE THE PROJECT.
 3. ALL UTILITIES SHOWN WITHIN THE PROJECT LIMITS INCLUDING PUBLIC WATER AND SANITARY SEWER SHALL BE SERVED WITH PUBLIC WATER AND SANITARY SEWER. PROPOSED UTILITY ALIGNMENTS AND CONNECTION POINTS ARE PRELIMINARY, SUBJECT TO CHANGE WITH FINAL ENGINEERING, AND ARE SUBJECT TO APPROVAL BY THE TOWN OF BERRYVILLE.
 4. OFF-SITE UTILITY CONNECTIONS SHALL INCLUDE APPLICABLE EASEMENT ACQUISITION PRIOR TO THE START OF CONSTRUCTION OF THE PROJECT.

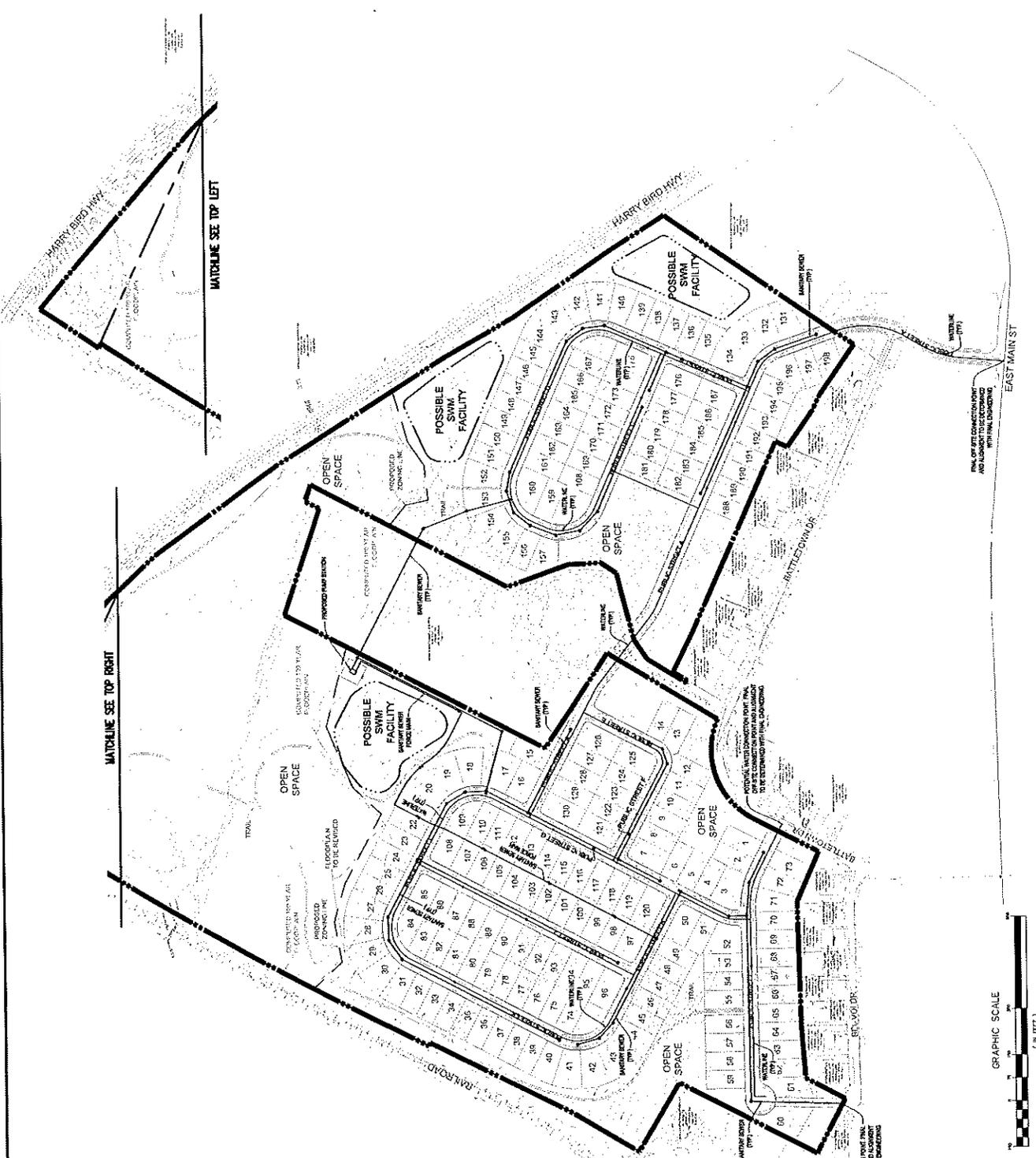
- LEGEND:**
- POSSIBLE WATER LINE LOCATION
 - POSSIBLE FORCE MAIN LOCATION
 - POSSIBLE SANITARY SEWER LINE LOCATION
 - LIMITS OF CLEARING & GRADING
 - PROJECT BOUNDARY

**FRIANT
UTILITY PLAN**

DATE: 07/31/2023
 DRAWN BY: J. BERRY
 SHEET: 6 OF 7

TOWN OF BERRYVILLE, VIRGINIA
 CLARKE COUNTY, STATE

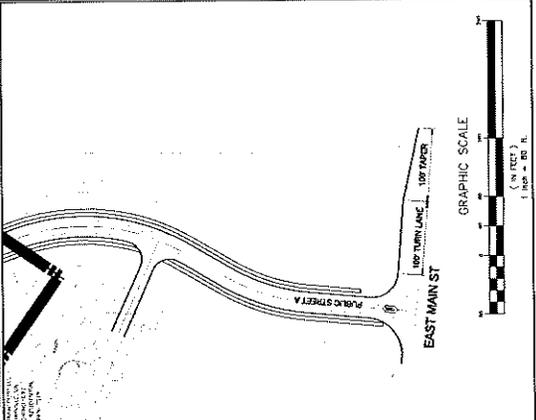
Dewberry
 Engineers Inc.



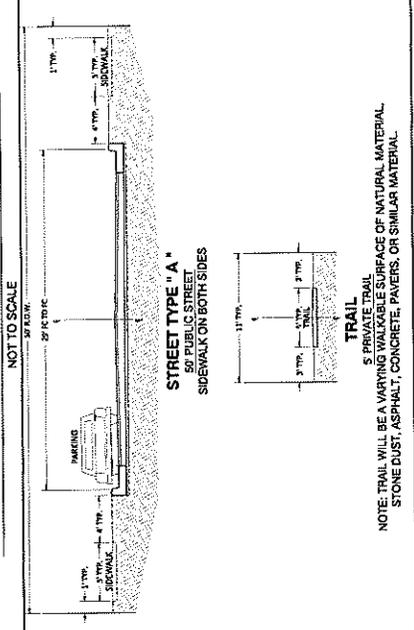
123

- ESTIMATED ANNUAL DAILY TRIP (ADT)
- ESTIMATED TRAFFIC SIGNAL
- PROJECT BOUNDARY
- PROPOSED TRAIL

PROFUNDUS PROPERTY CONNECTION



TYPICAL TRANSPORTATION FACILITY SECTIONS



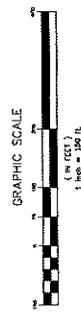
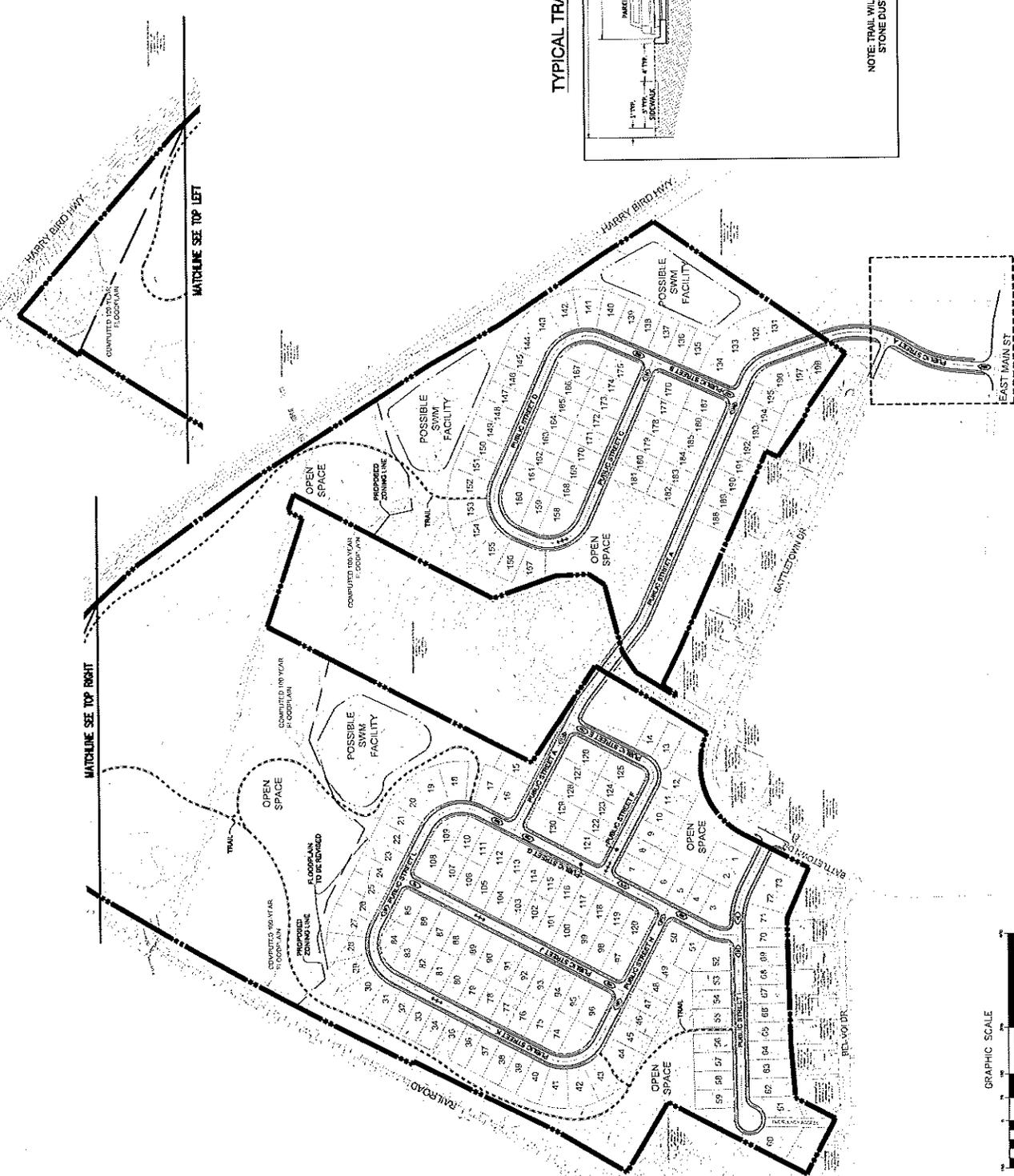
FRIANT TRANSPORTATION PLAN

DATE: 07/31/2023
 REV DATE: 11/08/2023
 SHEET: 7 OF 7

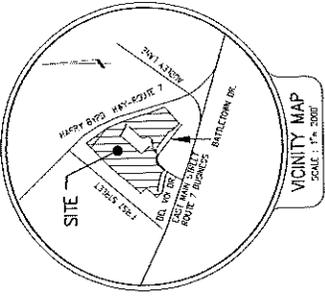
TOWN OF BERRVILLE, VIRGINIA
 CLARKE COUNTY, STATE



NOTE: STREET TO FOLLOW 100' EASEMENT



PROFUNDUS PROPERTY CONNECTION



TRACED	AREA	PERCENT
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2	14523.4	100.00
3	14523.4	100.00
4	14523.4	100.00
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TRACED	AREA	PERCENT
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52	14523.4	100.00
53	14523.4	100.00
54	14523.4	100.00
55	14523.4	100.00
56	14523.4	100.00
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93	14523.4	100.00
94	14523.4	100.00
95	14523.4	100.00
96	14523.4	100.00
97	14523.4	100.00
98	14523.4	100.00
99	14523.4	100.00
100	14523.4	100.00

AREAS PROPOSED FOR REZONING:
 10.8 AC. 9.8 AC.
 20.8 AC. 20.8 AC.
 20.8 AC. 20.8 AC.

OWNERS OF THE PROPERTY:
FRIANT ENTERPRISES #1, LLC
FRIANT ENTERPRISES #2, LLC
 AND
FRIANT ENTERPRISES #3, LLC
 D.B. 623 PC. 443

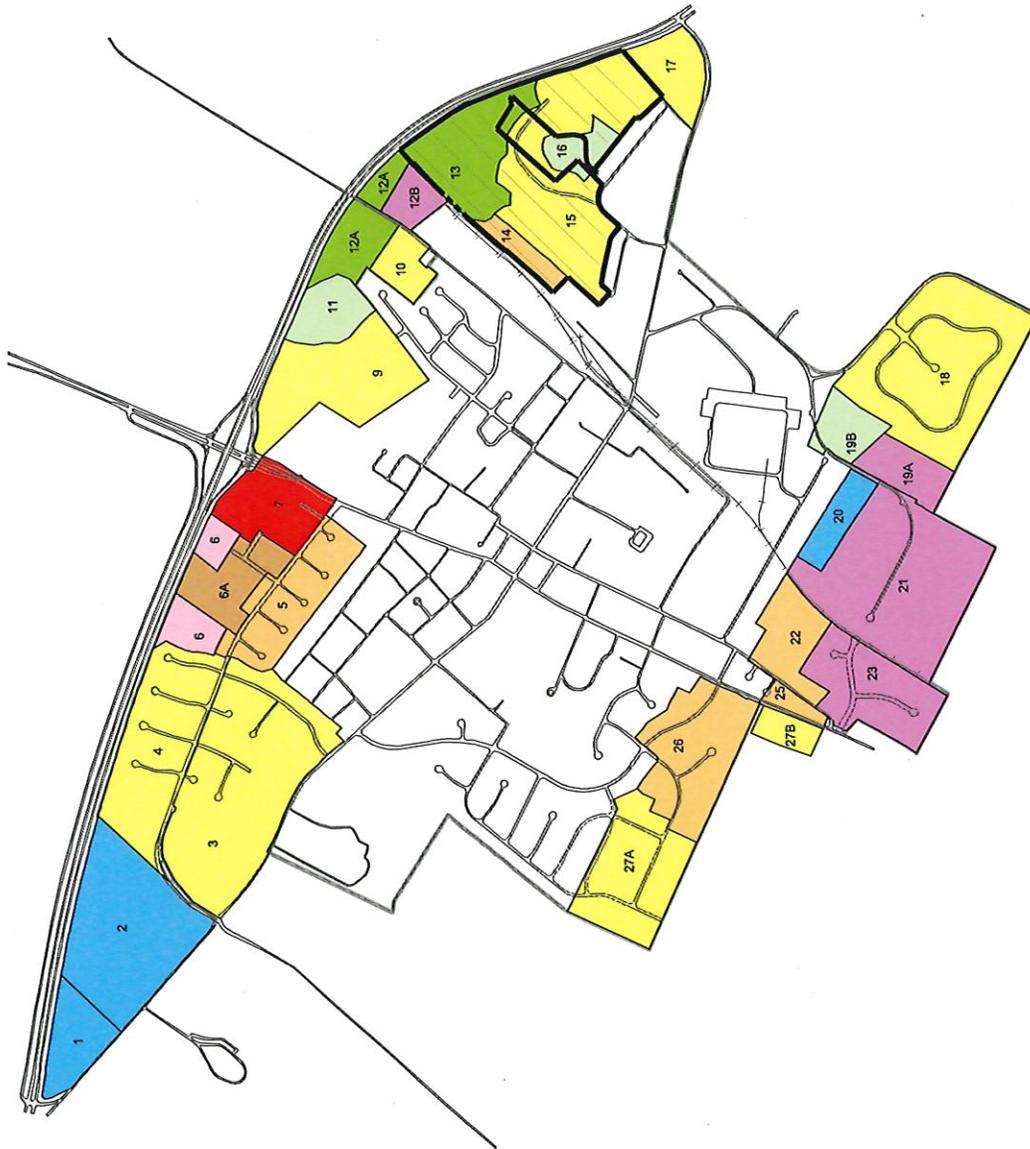
TOWN OF BIRMINGHAM
 CLARKE COUNTY, VIRGINIA
 SCALE: 1" = 200'



- NOTES:
- NO TITLE REPORT FURNISHED.
 - THE AREAS FOR REZONING AS SHOWN HEREON ARE BASED UPON A CURRENT FLD SURVEY MADE BY DEWBERRY ENGINEERS INC. AND THE BOUNDARIES SHOWN ARE BASED UPON THE SURVEY DATA. THE CONTRIBUTION MAY DIFFER FROM THAT SHOWN ON THE CLARKE COUNTY MAPPER.

LEGEND:

- ~ Existing Roads
- ~ Proposed Roads
- ~ Railroads
- Berryville Town Limits as of 01/01/07
- Low Density Residential (2 units/acre)
- Medium-Low Density Residential (4 units/acre)
- Medium Density Older Persons Residential
- Highway-Visitor Commercial
- Business/Office
- Light Industrial/Research
- Institutional/Public
- Environmental Conservation
- Historical/Cultural Preservation
- PROJECT SITE



**FRIANT PROPERTY
EXISTING LAND USE PLAN**

DATE: 11/09/2023

SHEET: 1 OF 2

TOWN OF BERRYVILLE, VIRGINIA
CLARKE COUNTY, VIRGINIA

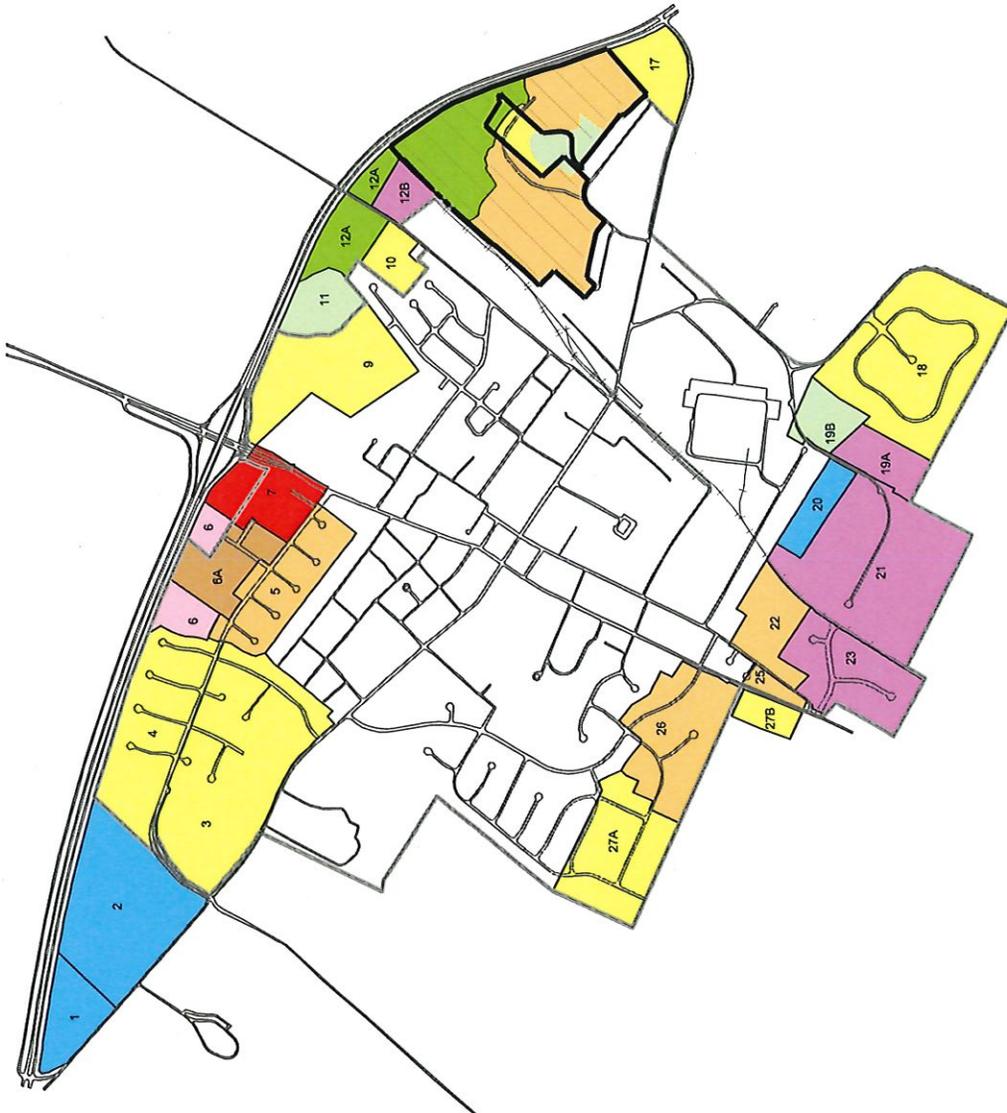


Dewberry
Engineers Inc.
1225 HAYWOOD BLVD.
DANVILLE, VA 24040
TEL: 753.466.2711
FAX: 753.466.2742



LEGEND:

- Existing Roads
- Proposed Roads
- Railroads
- Berryville Town Limits as of 01/01/07
- Low Density Residential (2 units/acre)
- Medium-Low Density Residential (4 units/acre)
- Medium Density Older Persons Residential
- Highway-Visitor Commercial
- Business/Office
- Light Industrial/Research
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**FRIANT PROPERTY
PROPOSED LAND USE PLAN**

DATE: 11/09/2023

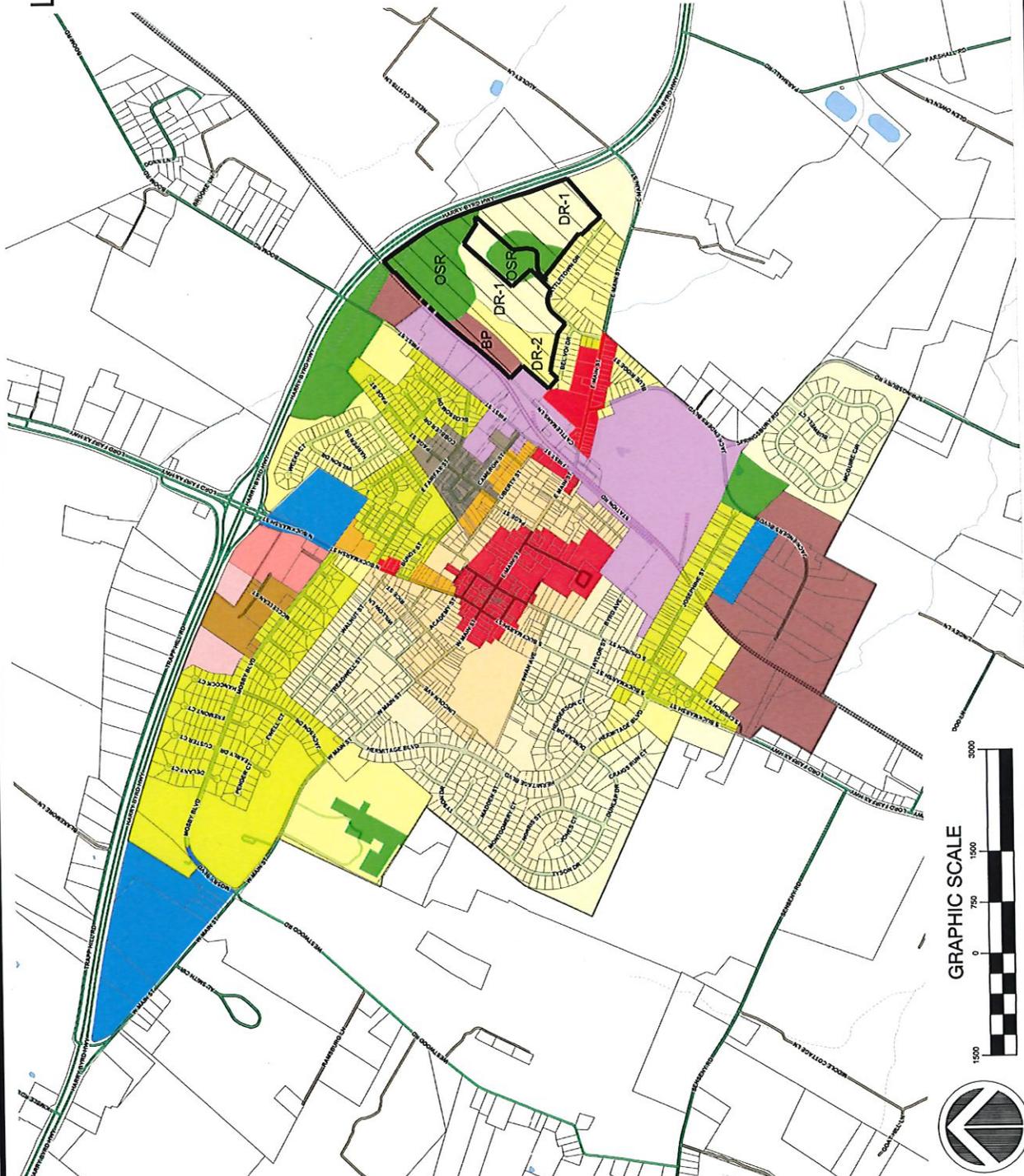
SHEET: 2 OF 2

TOWN OF BERRYVILLE, VIRGINIA
CLARKE COUNTY, VIRGINIA



LEGEND:

- Parcels
- Berryville Zoning
 - Detached Res-1 (DR-1)
 - Detached Res-2 (DR-2)
 - Detached Res-4 (DR-4)
 - Residential-1 (R-1)
 - Residential-2 (R-2)
 - Residential-3 (R-3)
 - Attached Res (AR)
 - Older Persons Res (OPR)
 - Open Space Res (OSR)
 - Business (B)
 - Business Park (BP)
 - Bus Commercial (BC)
 - Light Commercial (C-1)
 - Downtown Commercial (C)
 - Light Industrial (L-1)
 - Institutional (ITL)
- Clarke County Boundary
- PROJECT SITE
- Major Roads
- Interstate
- US Highway
- State Highway
- Surrounding Counties Opaque
- Clarke County Roads
- Private Roads
- Rail
- Buildings
- Appalachian Trail
- Streams
- Perennial Streams
- Intermittent Streams
- Ponds
- Rivers



**FRIANT PROPERTY
EXISTING ZONING PLAN**

DATE: 11/09/2023

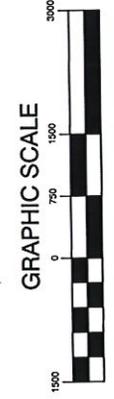
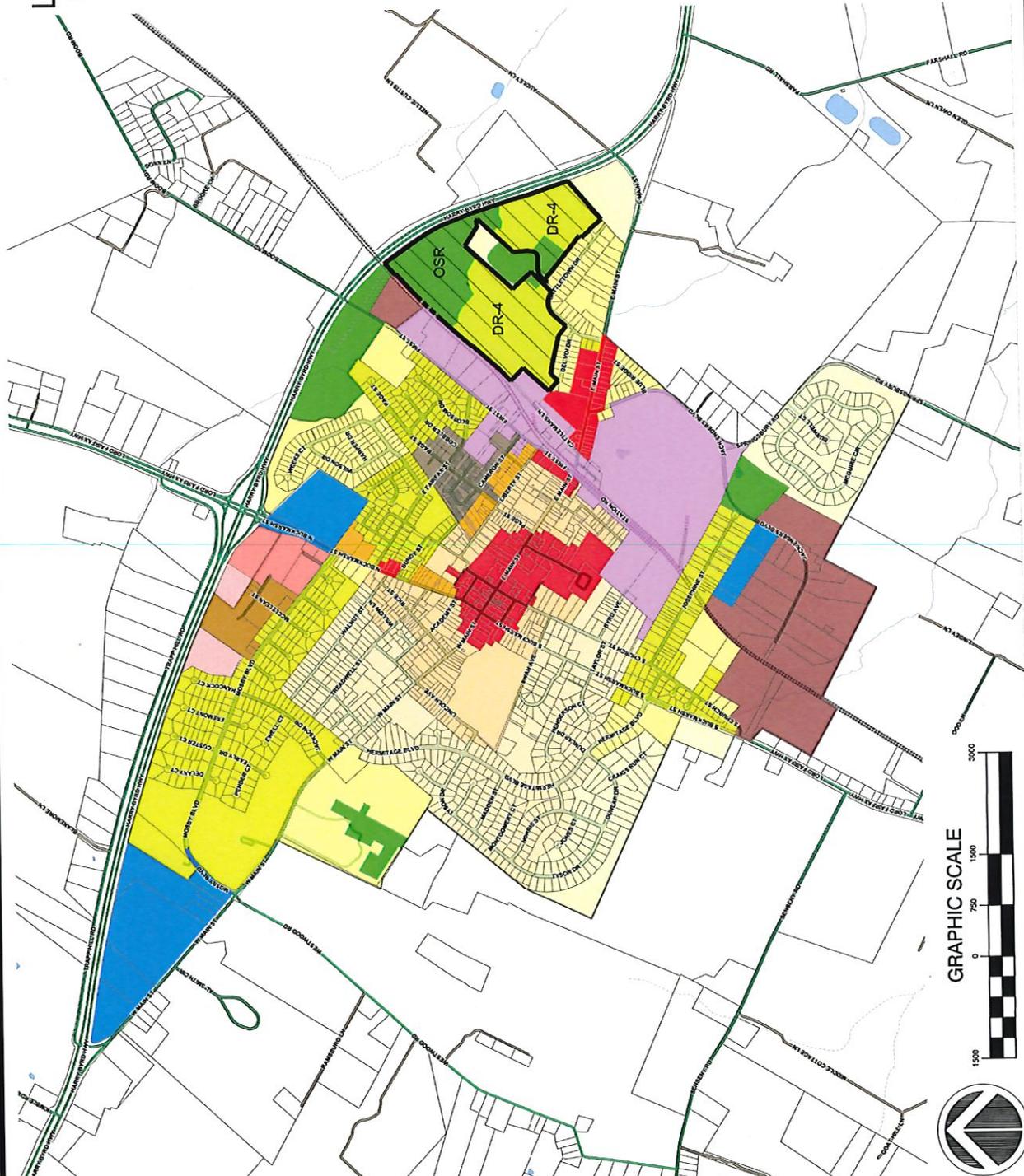
SHEET: 1 OF 2

TOWN OF BERRYVILLE, VIRGINIA
CLARKE COUNTY, VIRGINIA



LEGEND:

- Parcels
- Berryville Zoning
 - Detached Res-1 (DR-1)
 - Detached Res-2 (DR-2)
 - Detached Res-4 (DR-4)
 - Residential-1 (R-1)
 - Residential-2 (R-2)
 - Residential-3 (R-3)
 - Attached Res (AR)
 - Older Persons Res (OPR)
 - Open Space Res (OSR)
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 - Bus Commercial (BC)
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 - Private Roads
 - Roads
- Rail
- Buildings
- Appalachian Trail
- Streams
 - Perennial Streams
 - Intermittent Streams
- Ponds
- Rivers



**FRIANT PROPERTY
PROPOSED ZONING PLAN**

DATE: 11/09/2023
SHEET: 2 OF 2
TOWN OF BERRYVILLE, VIRGINIA
CLARKE COUNTY, VIRGINIA





December 9, 2021

Town of Berryville
 101 Chalmers Court
 Suite A
 Berryville, VA 226611

Friant – Water & Sanitary Sewer Capacity

This memo aims to verify downstream capacity in the existing water distribution and sewage collection systems in the Town of Berryville. Site layout and proposed tie-ins are shown in Attachment 1. The current Friant subdivision design contains 214 single family detached units.

Water Distribution System Analysis:

Water demand was calculated using the standards set in the section IV. Water & Sewer of the *Town of Berryville Construction Standards and Specifications – April 2015 (Updated 2021)* and shown below in Table 1.

Table 1: Estimated Water Demand Requirements

WATER DEMAND				
Units	Residential Pop. (N)	Ave. Daily Demand (R) (gpd)	Max. Daily Water Demand (M) (gpd)	Peak Hour Demand (gpm)
214	588.5	58,850	117,700	366.1

The preliminary water distribution system was modeled in WaterGEMS using a reservoir with an elevation of 759.30 (as derived from the attached Town of Berryville Flow study - Hydrant ID 108). The preliminary water model proposes 8” waterline throughout the site and proposes two connection points to existing 8” waterline.

The water model was run for the scenarios of Average Day, Max Day, Peak Hour, and Max Day + Fire Flow. In all scenarios, the water pressure throughout the site was above the allowable limit of 30 psi. In the Max Day + Fire Flow scenario, the minimum fire protection of 750 gpm was met at all preliminary hydrant locations. Table 2 below shows the water model report from the Peak Hour scenario (this is the scenario with the highest demands and that yields the lowest pressures). As shown, the lowest pressure in the model in this scenario is 65 psi.

Table 2: Preliminary Peak Hour Water Model Analysis

PEAK HOUR SCENARIO				
Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-10	552	0	726.45	75
J-9	554	83	726.33	75
J-27	558	69	728.84	74
J-26	558	65	728.99	74
J-28	558	65	728.8	74
J-19	560	0	727.18	72
J-16	560	65	726.32	72
J-23	560	65	736.42	76
J-18	560.95	0	727.06	72
J-25	562	69	729.36	72
J-40	562	0	739.41	77
EX-1	562	111	734.56	75
J-12	562	73	726.85	71
J-7	562	73	726.27	71
J-8	562	76	726.27	71
J-29	563	76	728.96	72
J-15	564.98	0	726.32	70
J-17	566	86	726.97	70
J-22	568	0	731.01	71
J-24	568	0	730.74	70
J-13	568.55	65	726.93	69
J-14	569	69	726.33	68
J-20	570	69	728.71	69
EX-3	571	65	759.3	81
J-2	572	73	728.21	68
EX-2	572	123	730.93	69
J-3	572.18	0	728.05	67
J-1	574	61	728.14	67
J-4	574	65	727	66
J-6	574	69	726.42	66
J-21	575	89	729.37	67
J-5	576	0	726.56	65
J-139	590	0	749.47	69

Sewage Collection System Analysis:

The estimated sanitary flows at the project tie in were also calculated using the standards set in section IV. Water & Sewer of the *Town of Berryville Construction Standards and Specifications – April 2015 (Updated 2021)* and shown below in Table 3.

Table 3: Estimated Sanitary Sewer Demand Requirements

SEWER DEMAND		
Units	Residential Pop. (N)	Ave. Daily Demand (R) (gpd)
214	749	74,900

The Friant subdivision proposes 214 single family detached units. The preliminary sanitary analysis proposes 178 units to be collected and conveyed to a proposed pump station on site. A proposed force main will convey the flow from the pump station to a proposed sanitary manhole on site where it will join the onsite gravity system that conveys the remaining 36 units before tying into existing manhole 57. Using a peak flow factor of 4, the existing sanitary sewer system was analyzed from structure EX 57 to EX 49 (within Main Street), and calculations show that the existing system has more than enough capacity to accept the additional sewage flow from the proposed Friant subdivision.

Table 4: Sanitary Sewer Analysis

SANITARY SEWER COMPUTATIONS																	
Manhole Number		Average Daily Flow Determination (gpd)			Flow Million Gallons Per Day (mgd)				Pipe Run				Capacity of Pipe (full)			% Full	
		By Residential Units			Incr.	Total Avg. Daily	Peak Flow Factor	Peak Flow	Manning's "N" Value .014				MGD	CFS	Velocity (fps)		
From	To	Units	Total Units	Flow (gpd)					Length (ft)	Dia. (In.)	Slope (%)	Upper Invert				Lower Invert	
FRIANT	EX 57	214	214	74,900	0.075	0.075	4.00	0.30		8	0.50			0.51	0.79	2.27	59%
EX 57	EX56	5	219	76,650	0.077	0.077	4.00	0.31	200.90	8	1.05	587.35	585.24	0.74	1.15	3.29	41%
EX56	EX 55	9	228	79,800	0.080	0.080	4.00	0.32	500.90	8	0.99	585.19	580.24	0.72	1.12	3.19	44%
EX 55	EX 54	9	237	82,950	0.083	0.083	4.00	0.33	498.40	8	1.01	580.19	575.16	0.73	1.13	3.23	46%
EX 54	EX 53	2	239	83,650	0.084	0.084	4.00	0.33	187.00	8	0.88	575.11	573.46	0.68	1.05	3.02	49%
EX 53	EX 52	5	244	85,400	0.085	0.085	4.00	0.34	282.45	8	1.76	573.37	568.40	0.96	1.49	4.26	36%
EX 52	EX 51	2	246	86,100	0.086	0.086	4.00	0.34	300.20	8	3.66	568.37	557.39	1.38	2.15	6.15	25%
EX 51	EX 50	24	270	94,500	0.095	0.095	4.00	0.38	188.30	8	3.42	557.36	550.92	1.34	2.07	5.94	28%
EX 50	EX 49		270	94,500	0.095	0.095	4.00	0.38	184.30	8	1.11	550.82	548.77	0.76	1.18	3.39	50%



EAST MAIN STREET
 VIRGINIA ROUTE 7 BUSINESS
 VARIABLE WIDTH R/W

- 8" WATERLINE
- 8" SANITARY SEWER
- 4" FORCE MAIN
- GRAVITY TO EX.
- BEL VOI SANITARY

FRIANT PROPERTY - 214 LOTS
 DEC. 8 2021 TOWN UTILITIES



Dewberry

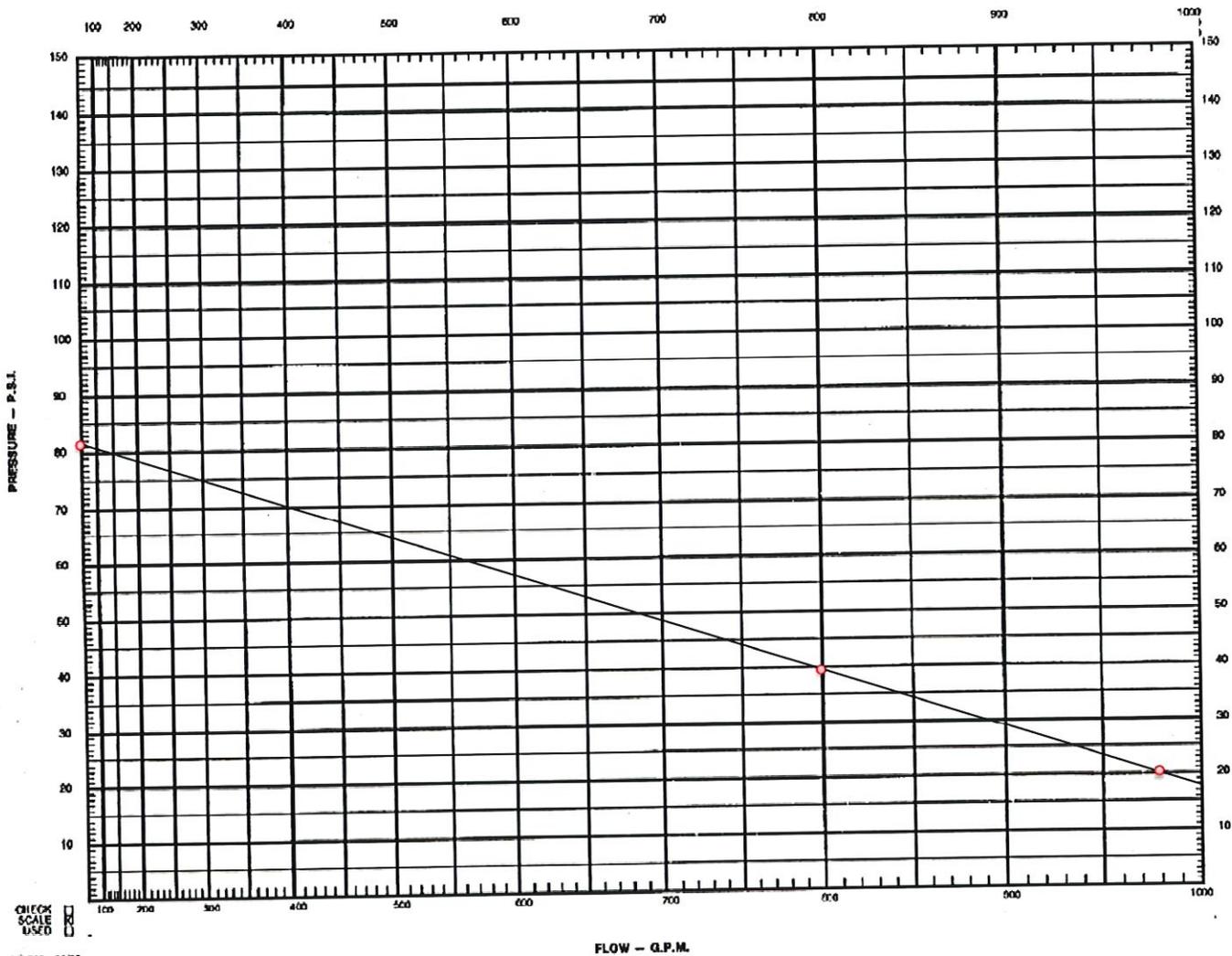


WATER DISTRIBUTION SYSTEMS

FLOW STUDY

Client Name:	Dewberry Engineering		
System Name:	Town of Berryville		
Test Location:	End of East Main (Test #3)		
Residual Hydrant Information		Flow Hydrant Information	
Hydrant ID: 105	Line Size: 8"	Hydrant ID: 108	Line Size: 8"
Static Pressure: 81.5psi		Opening Size: 2.5"	Nozzle Coefficient: 0.9
Residual (Dynamic) Pressure: 39psi		Full Open Pitot Reading: 12.5psi	
Pressure Delta: 42.5psi		GPM Rating Full Open: 600	
Fire Flow Capacity @ 20psi: 980 GPM			

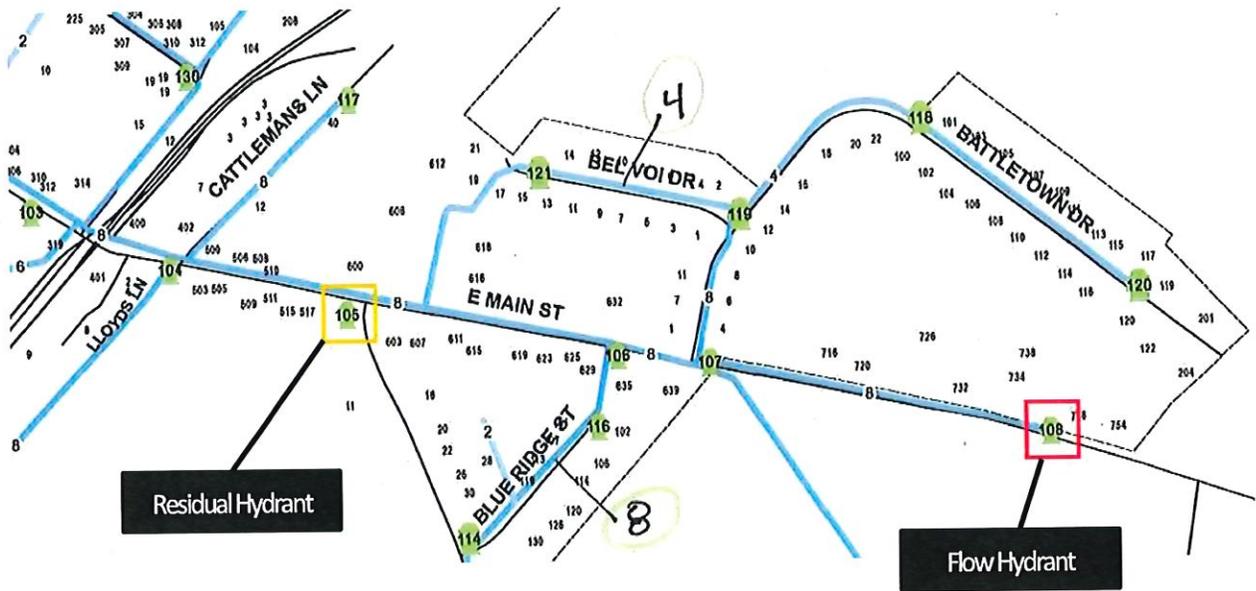
WATER SUPPLY GRAPH NO. N ^{1.85}



LC-013 11/83



HYDRANT LOCATION MAP:



Berryville – Clarke County
Government Center
101 Chalmers Court, Suite A
Berryville, VA 22611



[T] 540/955-1099
[F] 540/955-4524
[E] info@berryvilleva.gov
www.berryvilleva.gov

**TOWN OF
BERRYVILLE
VIRGINIA**

September 21, 2023

Mr. David M. Giovannacci
Land Development Manager
D.R. HORTON NORTHERN VIRGINIA DIVISION
7925 Jones Branch Dr. Ste. 6200
Tysons, VA 22102

Dear David:

This letter is written in response to your request for a determination on the following matters concerning the subdivision of those parcels identified as Tax Map Parcels 14-((A))-80 and 14-((A))-112 into a development containing 214 single-family detached dwellings:

- 1) Adequacy of wastewater collection system from the manhole located on the western terminus of Bel Voi Drive east to Battletown Drive, from the intersection of Bel Voi and Battletown Drives south to the intersection of Battletown Drive and East Main Street.
- 2) Capacity to meet wastewater treatment needs for 214 single-family detached dwellings.
- 3) Adequacy of the water distribution system from the fire hydrant located in the vicinity of 2 Bel Voi Drive and from the fire hydrant located in the vicinity of 754 East Main Street.
- 4) Capacity to meet water treatment needs for 214 single-family detached dwellings.

The Town provides the following responses to your request:

- 1) The Town's consulting engineer reviewed the wastewater collection system analysis authored by Dewberry and determined that the existing collection system in the subject area* has sufficient excess capacity to accommodate the proposal.

The existing sewer collection will be connected to the proposed development's system on Bel Voi Drive. Connections to the Town's system will be made at the

Harry Lee Arnold, Jr.
Mayor

Erecka L. Gibson
Vice Mayor

Council Members

William Steinmetz
Ward 1

Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Ryan Tibbens
Ward 4

Keith R. Dalton
Town Manager

developer's expense. Further, any easements required for utility extension or construction must be obtained by the developer.

The required sewer pump station will be constructed at the developer's expense.

To the best of our knowledge, Dewberry's review did not verify the condition of the sewer collection system in question by television inspection or other means.

* The Town understands that the sewer main section from the intersection of East Main Street to the 18" diameter interceptor has not been evaluated. This section must be included in Dewberry's analysis. Once this work had been completed and reviewed by the Town's consulting engineer, the Town will address this matter in a subsequent letter.

- 2) At present, the Town's wastewater treatment plant can support the proposed number of single-family units (214) based on the calculated average daily demand of 74,900 GPD.

This statement does not reserve capacity for your proposed development. Capacity will be consumed on a first come, first served basis.

- 3) The Town's consulting engineer reviewed the water distribution system analysis authored by Dewberry and determined that the existing distribution system is sufficiently sized to permit the proposed development to provide service that meets both domestic and fire flow requirements.

The existing water distribution system will, at a minimum, be connected to the proposed development's system off of East Main Street, Battletown Drive (in two locations, including at its eastern terminus), and at the western terminus of Bel Voi Drive. Extensions of and connections to the Town's system will be made at the developer's expense. Further, any easements required for utility extension or construction must be obtained by the developer.

- 4) At present, the Town's water treatment plant can support the proposed number of single-family units (214 SF Units) based on the calculated average daily demand of 58,850 GPD and a calculated maximum daily demand of 117,700 GPD.

This statement does not reserve capacity for your proposed development. Capacity will be consumed on a first come, first served basis.

Giovannacci
September 21, 2023
Page 3 of 3

The Town will conduct additional review of these matters when a preliminary subdivision plan is submitted for the development in question. All public improvements will be designed and constructed in conformity with applicable regulations, including the version of the Town of Berryville Construction Standards and Specifications manual in effect at time of review. Prior to issuance of Certificates of Occupancy for dwellings, the availability fees for the respective connection/parcel must be paid in full.

Nothing in this letter is intended to imply approval of the rezoning that is required to increase the yield on the subject property, or the approval of the proposed subdivision.

Sincerely,



Keith R. Dalton
Town Manager

Cc: Town Council
Jean Petti, Deputy Town Manager
Christy Dunkle, Director of Community Development
Rick Boor, Director of Public Works
Cindy Poulin, Director of Finance/Treasurer
Morgan Pearson, Utility Clerk
Ernest Bussert, Chief Plant Operator
Thomas Frederick, Pennoni
Matt Youngblood, Pennoni



December 9, 2021

Town of Berryville
 101 Chalmers Court
 Suite A
 Berryville, VA 226611

Erant – Water & Janitary Sewer Capacity

This memo aims to verify downstream capacity in the existing water distribution and sewage collection systems in the Town of Berryville. Site layout and proposed tie-ins are shown in Attachment 1. The current erant subdivision design contains 214 single family detached units

Water Distribution System Analysis:

Water demand was calculated using the standards set in the section IV. Water & Sewer of the *Town of Berryville Construction Standards and Specifications – April 2015 (Updated 2021)* and shown below in Table 1.

Table 1: Estimated Water Demand Requirements

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The preliminary water distribution system was modeled in WaterGEMS using a reservoir with an elevation of 759.30 (as derived from the attached Town of Berryville Flow study - Hydrant ID 108). The preliminary water model proposes 6" waterline throughout the site and proposes two connection points to existing 8" waterline.

The water model was run for the scenarios of Average Day, Max Day, Peak Hour, and Max Day + Fire Flow. In all scenarios, the water pressure throughout the site was above the allowable limit of 30 psi. In the Max Day + Fire Flow scenario, the minimum fire protection of 750 gpm was met at all preliminary hydrant locations. Table 2 below shows the water model report from the Peak Hour scenario (this is the scenario with the highest demands and that yields the lowest pressures). As shown, the lowest pressure in the model in this scenario is 65 psi.

Table 2: Preliminary Peak Hour Water Model Analysis

PEAK HOUR SCENARIO				
Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-10	552	0	726.45	75
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J-27	558	69	728.84	74
J-26	558	65	728.99	74
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J-19	560	0	727.18	72
J-16	560	65	726.32	72
J-23	560	65	736.42	76
J-18	560.95	0	727.06	72
J-25	562	69	729.36	72
J-40	562	0	739.41	77
EX-1	562	111	734.56	75
J-12	562	73	726.85	71
J-7	562	73	726.27	71
J-8	562	76	726.27	71
J-29	563	76	728.96	72
J-15	564.98	0	726.32	70
J-17	566	86	726.97	70
J-22	568	0	731.01	71
J-24	568	0	730.74	70
J-13	568.55	65	726.93	69
J-14	569	69	726.33	68
J-20	570	69	728.71	69
EX-3	571	65	759.3	81
J-2	572	73	728.21	68
EX-2	572	123	730.93	69
J-3	572.18	0	728.05	67
J-1	574	61	728.14	67
J-4	574	65	727	66
J-6	574	69	726.42	66
J-21	575	89	729.37	67
J-5	576	0	726.56	65
J-139	590	0	749.47	69

Sewage Collection System Analysis:

The estimated sanitary flows at the project tie in were also calculated using the standards set in section IV, Water & Sewer of the *Town of Berryville Construction Standards and Specifications – April 2015 (Updated 2021)* and shown below in Table 3.

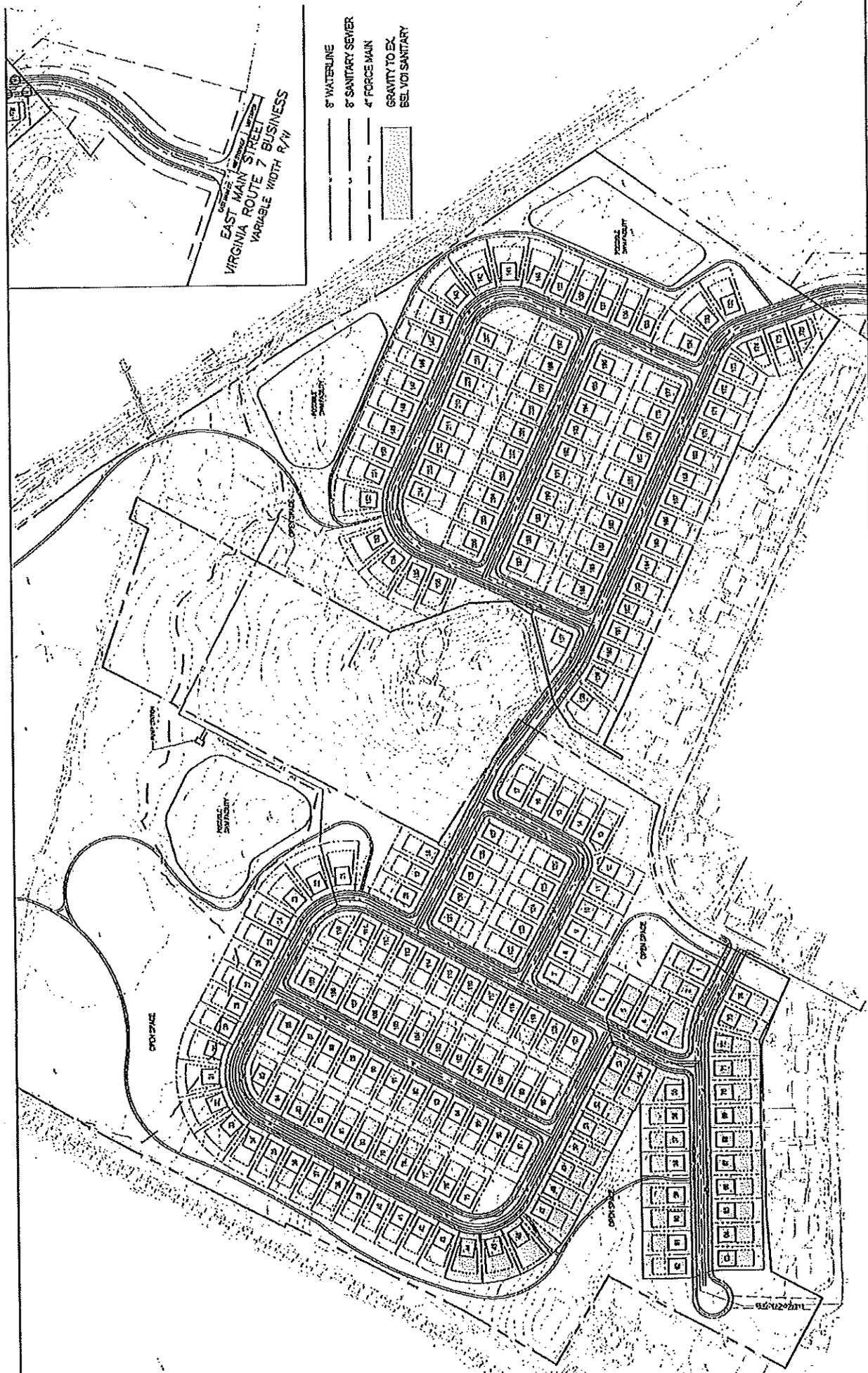
Table 3: Estimated Sanitary Sewer Demand Requirements

SEWER DEMAND		
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Table 4: Sanitary Sewer Analysis

Manhole Number		Average Daily Flow Determination (gpd)			Flow (Million Gallons Per Day) (mgd)					Pipe Run				Capacity of Pipe (in. dia)		% Full	
From	To	Units	Total Units	Flow (gpd)	Incr.	Total Invs. Daily	Peak Flow Factor	Peak Flow	Length (ft)	Dia. (in.)	Slope (%)	Upper Invert	Lower Invert	MG	cfs		Vel. ft./sec
RIAK*	EX 57	214	214	74,900	0.075	0.075	4.00	0.30	6	6	0.50			0.11	0.79	2.27	59%
EX 57	EX 56	5	219	76,650	0.077	0.077	4.00	0.31	220.90	8	1.05	557.35	538.4	0.74	1.15	3.29	41%
EX 56	EX 55	9	228	79,800	0.080	0.080	4.00	0.32	560.90	8	0.89	565.9	580.4	0.72	1.1	3.19	42%
EX 55	EX 54	9	237	81,950	0.083	0.083	4.00	0.33	493.0	6	1.0	581.9	575.6	0.75	1.13	3.23	46%
EX 54	EX 53	1	238	83,650	0.084	0.084	4.00	0.33	187.00	6	0.88	575.1	573.46	0.63	1.05	3.02	49%
EX 53	EX 52	5	243	85,400	0.085	0.085	4.00	0.34	282.5	6	1.7	573.37	584.0	0.96	1.49	4.26	36%
EX 52	EX 51	2	245	86,100	0.086	0.086	4.00	0.34	170.20	8	1.6	568.37	557.39	1.33	2.3	6.15	25%
EX 51	EX 50	2	247	86,800	0.087	0.087	4.00	0.35	183.30	6	3.42	557.35	550.2	1.34	2.07	5.94	24%
EX 50	EX 49	2	249	87,500	0.088	0.088	4.00	0.35	184.30	8	1.1	553.02	548.77	0.76	1.10	3.19	50%



FRIANT PROPERTY - 214 LOTS
 DEC. 8, 2021 TOWN UTILITIES



Dewberry

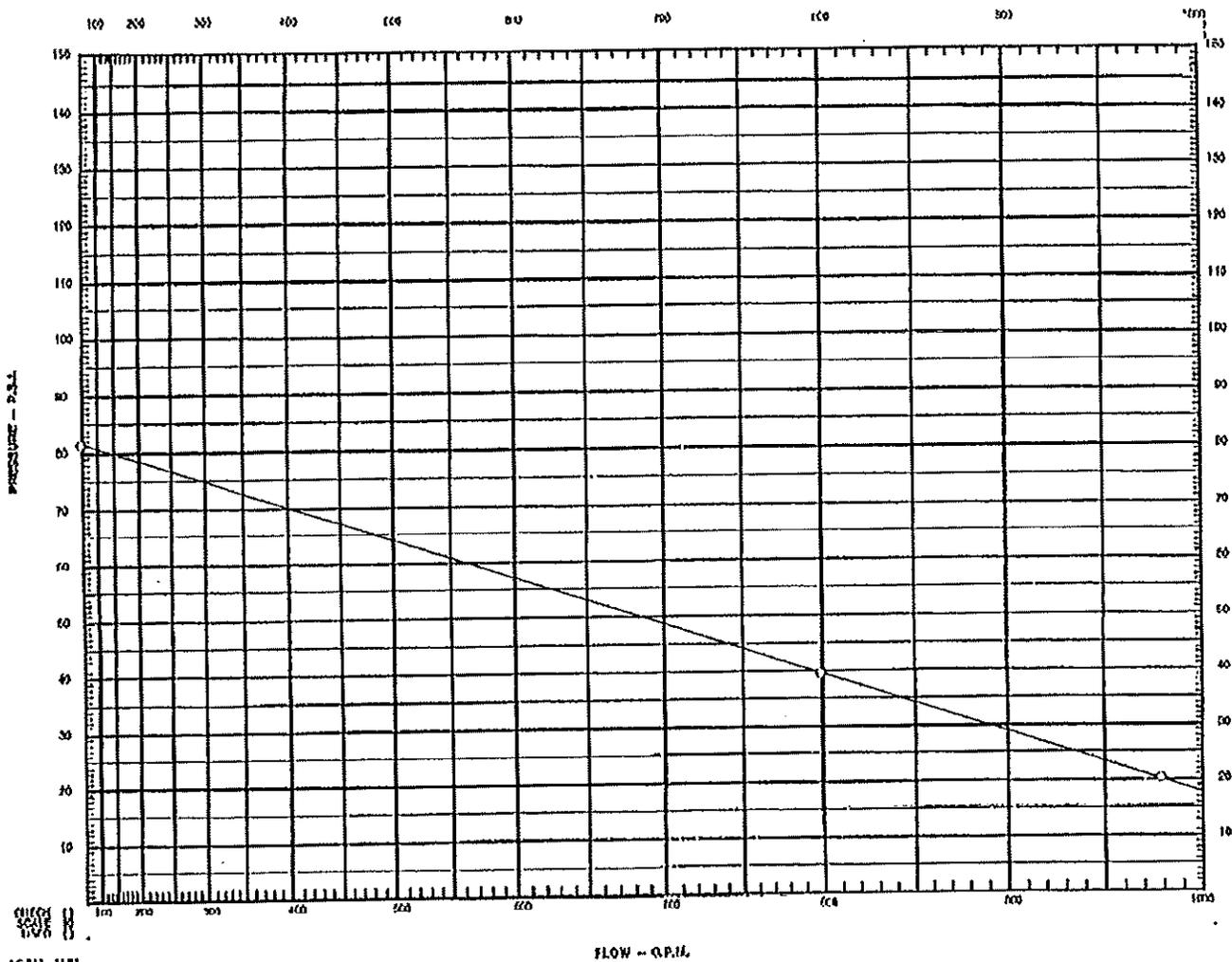


WATER DISTRIBUTION SYSTEMS

FLOW STUDY

Client Name:	Dewberry Engineering		
System Name:	Town of Berryville		
Test Location:	End of East Main (Test #3)		
Residual Hydrant Information		Flow Hydrant Information	
Hydrant ID: 105	Line Size: 8"	Hydrant ID: 108	Line Size: 8"
Static Pressure: 81.5psi		Opening Size: 2.5"	Nozzle Coefficient: 0.9
Residual (Dynamic) Pressure: 39psi		Full Open Pitot Reading: 12.5psi	
Pressure Delta: 42.5psi		GPM Rating Full Open: 600	
Fire Flow Capacity @ 20psi: 980 GPM			

WATER SUPPLY GRAPH NO. N 1.85

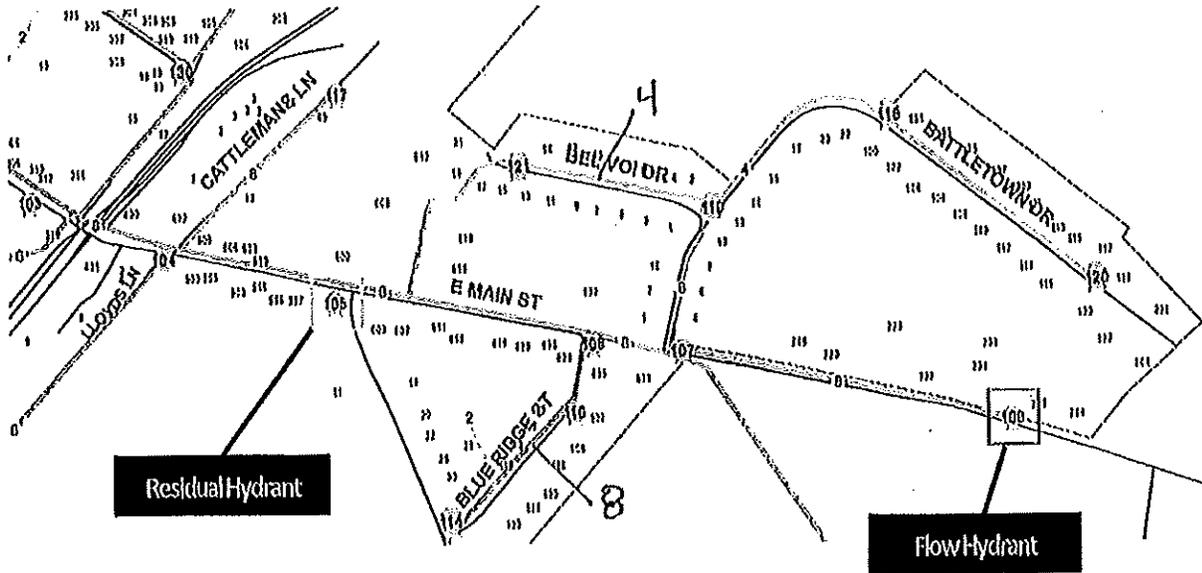


1000 1100

FLOW - G.P.M.



HYDRANT LOCATION MAP:



August 24, 2023

Town of Berryville
107 Chambers Court
Suite A
Berryville, VA 226611

Friant – Water & Sanitary Sewer Capacity

Dear Town of Berryville,

As discussed, we reviewed the study completed by Dewberry Engineers Inc. which attempted to verify the downstream capacity in the existing water distribution and sewage collection systems for the Town of Berryville.

An 8" waterline, along with two connection points that will be made to the existing 8" waterline, is proposed throughout the Friant subdivision design which consists of 214 Single Family Detached Units. The preliminary sanitary analysis proposes 178 units to be collected and conveyed to a proposed pump station on site. A proposed force main will then convey the flow from the pump station to a proposed sanitary manhole on site where it will join the onsite gravity system that conveys the remaining 36 units before tying into an existing manhole. The water and sewer analysis is only for single family detached homes, with no commercial or multi family units.

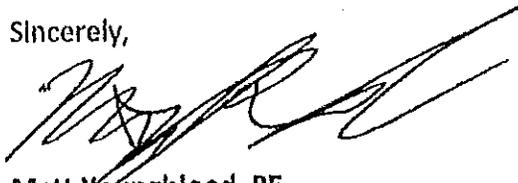
Dewberry used the standards set forth in the *Town of Berryville Construction Standards and Specifications – April 2015 (Updated 2021)* to perform a number of Water Demand & Sewer Demand calculations to ensure that they met all of the town's regulatory requirements. We reviewed *Section IV, Water & Sewer* of the document to ensure that these standards called out in the Town of Berryville's Code have been met.

We backchecked all the numbers in Table 1 (Units, Residential Population, Average Daily Demand, Max Daily Water Demand, and the Peak Four Demand) and all the values are accurate and in accordance with the standards called out in the town's code. The water model data in Table 2 shows that the system will meet the allowable limit of 30 psi and minimum fire protection of 750 gpm. The proposed water distribution has two existing waterline connection points to provide a looped system and there is only one proposed street that is not looped for approximately 17 units.

The same procedure was also used to backcheck Dewberry's values for the Sewer Demand Requirements in Table 3 and the Sanitary Sewer Analysis in Table 4. All these values were determined to be accurate as well. Using a peak flow factor of 4 for the sewer they have shown that there is adequate capacity for the sewer system. There were not any Pump Station or Force Main design calculations submitted. The PS/force main information will need to be submitted with the subdivision plan to show it is adequately sized for the 178 units.

Should you have any other questions or concerns regarding the Friant Water and Sanitary Sewer Capacity, please feel free to contact me at any time.

Sincerely,



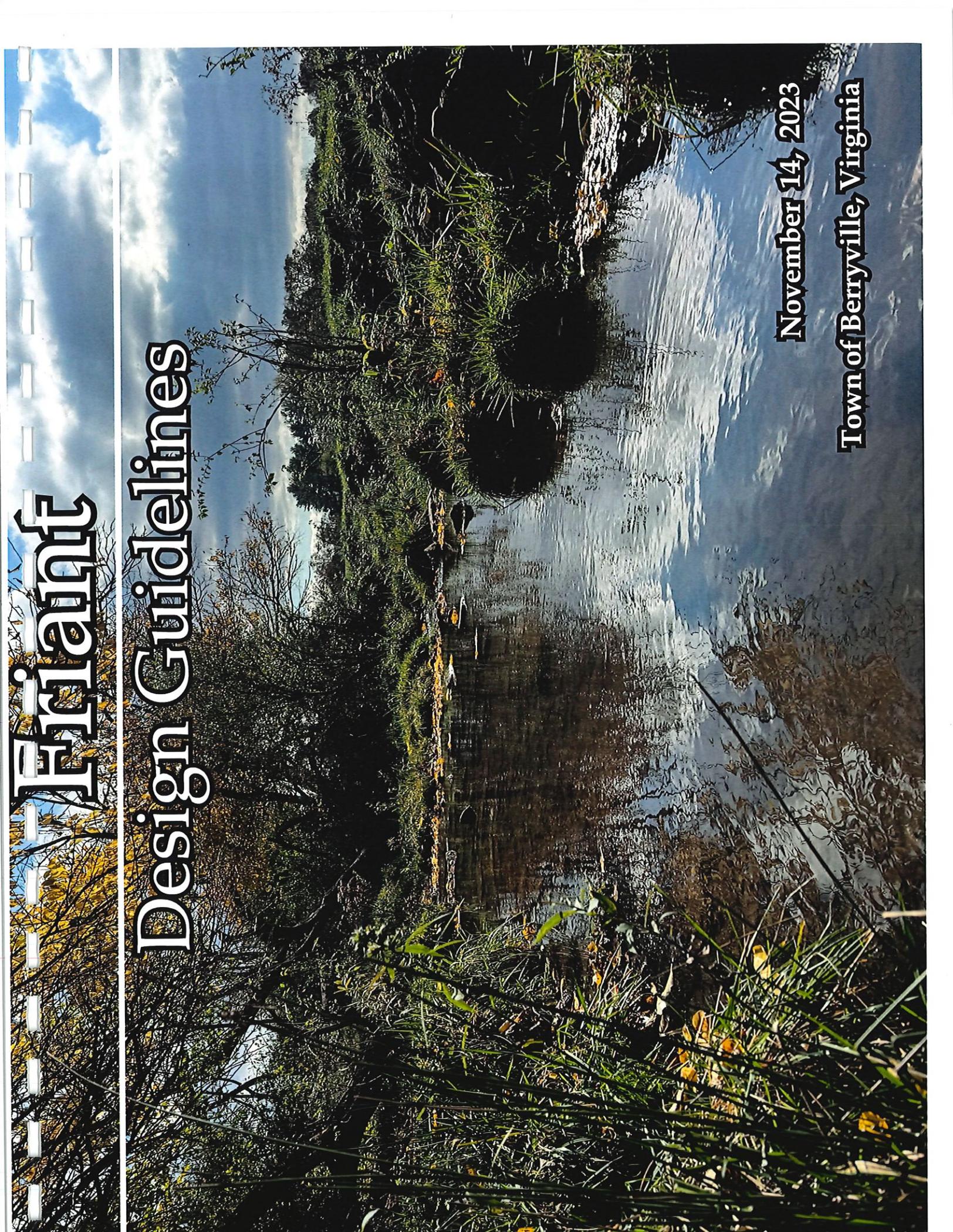
Matt Youngblood, PE
Director of Municipal Services

Triant

Design Guidelines

November 14, 2023

Town of Berryville, Virginia



Prepared For:

DR·HORTON®
America's Builder

D.R. Horton, Inc.
7925 Jones Branch Drive Suite 6200
Tysons Corner, VA 22102

Prepared By:

 **Dewberry®**

Dewberry Engineers Inc.
13575 Heathcote Boulevard, Suite 130
Gainesville, VA 20155-6693



Section 1: Project Summary

- 1.1 Project Introduction
- 1.2 Project Location
- 1.3 Basis of Development
- 1.4 Master Plan

Section 2: Transportation Design

- 2.1 Vehicular Transportation Plan
- 2.2 Pedestrian Transportation Plan
- 2.3 Front Street and Trail Details
- 2.4 Turn Lane Improvement

Section 3: Open Space

- 3.1 Open Space Area
- 3.2 Open Space Amenities

Section 4: Landscaping

- 4.1 Landscape Standards
- 4.2 Residential Landscape and Hardscape Guidelines
- 4.3 Screening
- 4.4 Plant Palette

Section 5: Residential Architecture

Design Guidelines

- 5.1 Building Design Guidelines
- 5.2 Single Family Detached Lot Development Standards



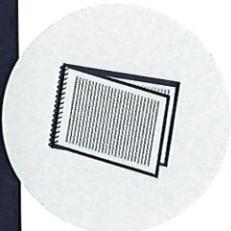
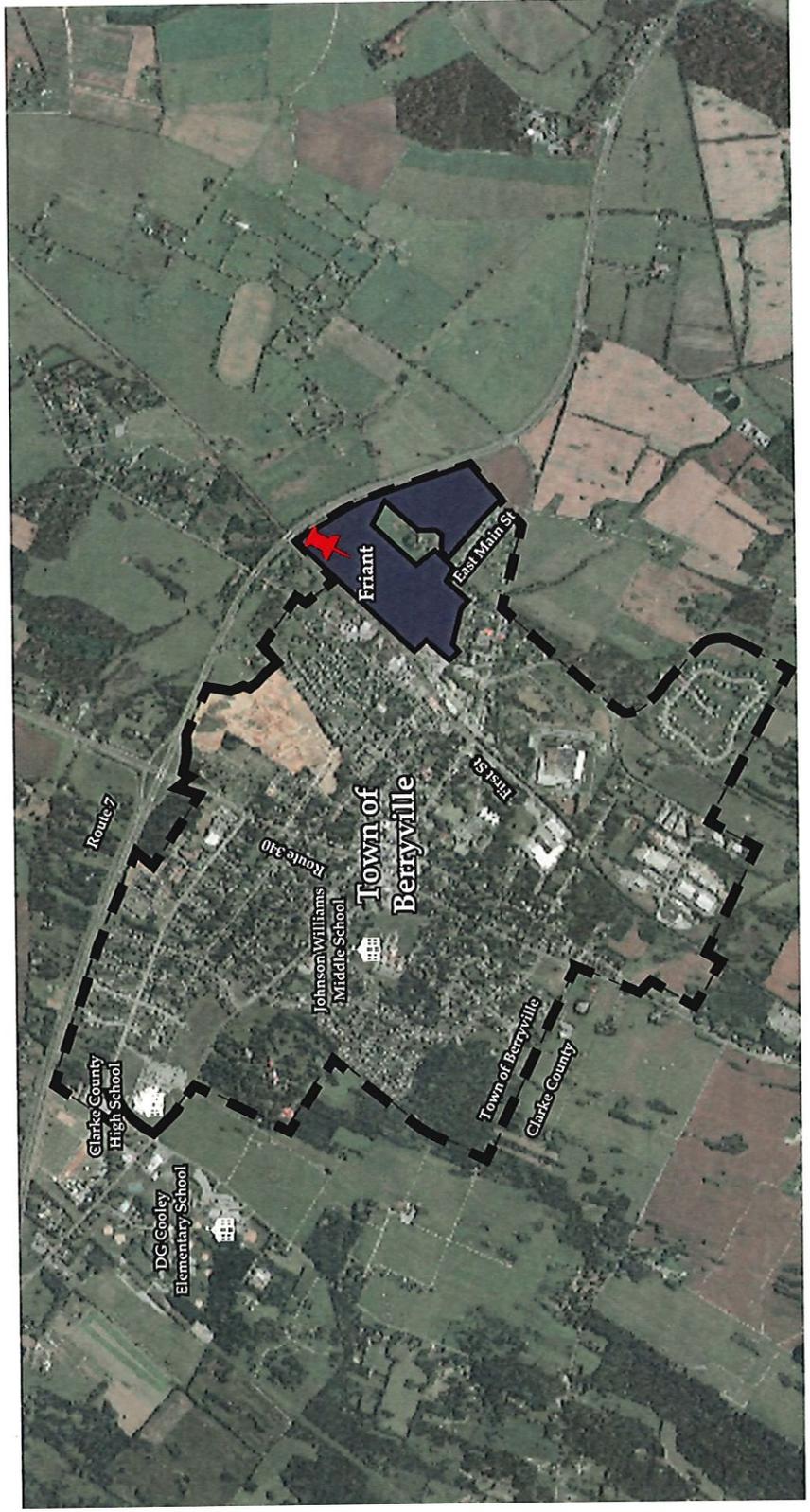
SECTION 1: PROJECT SUMMARY

1.1 PROJECT INTRODUCTION

Friant is a proposed residential community located in the Town of Berryville, in Clarke County, VA. The Friant property is roughly 100 acres and is within the Berryville Area Plan's designated growth area. The single-family residential community is proposed to consist of 198 clustered residential lots and more than half of the property will become open space.

1.2 PROJECT LOCATION

As outlined in the introduction, Friant is located in the Town of Berryville. More specifically, it is located in the northeastern-most portion of the Town. Friant is well located for easy access to Route 7 while also being close to downtown Berryville and its local amenities and basic needs services, including public schools, which are only 2-3 miles from the Friant property.



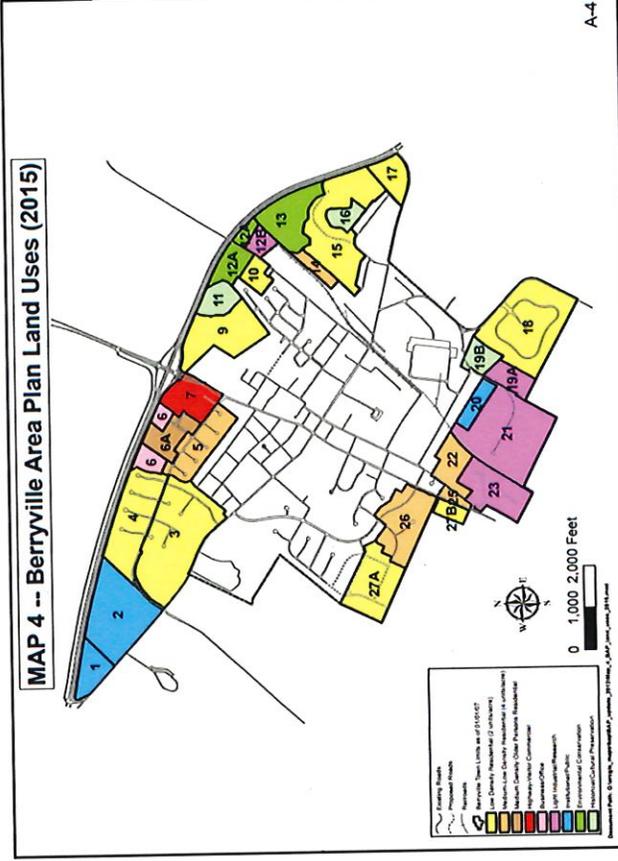
1.3 BASIS OF DESIGN

The Friant development plan has been developed using the guiding principles of the Berryville Area Plan (the Plan). As outlined in this plan Clarke County and the Town of Berryville worked together to create a plan to protect the County's natural and historic resources, agricultural properties, and scenic beauty while at the same time preserving the Town's vibrancy as the primary growth area. Within the designated growth areas the Plan further outlines specific goals for designated sub-areas. The Friant project consists of sub-areas 13, 14, 15, and a portion of 16. Sub-area 13 is planned for environmental conservation which has been incorporated into the Friant development plan. Sub-Areas 14 and 15 are planned for medium-low density residential (1-2 units per acre) and low density (1-2 units per acre) residential development respectively. However, the plan does state that both areas 14 and 15 could support medium-low density residential development under a cohesive master plan for areas 13, 14, and 15. The Plan further states that planned residential density that was not constructed with previous projects within the growth area should be considered for area 15. It is also outlined in the Plan that connectivity between the east and west sides of area 15 is a challenge and can only be achieved with the cooperation of the owners of the Bel Voi parcel, sub-area 16. Sub-area 16 is planned for historic and cultural preservation. Based on the Plan's outline for these areas as well specific design elements for areas 14 and 15 outlined below as A-F the cohesive master plan of development was created for the Friant property.

SUB-AREA 14 + 15 DESIGN ELEMENTS

The following design elements outlined in the Berryville Area Plan were used as guiding principles in the development

- A** Transportation and Connectivity Improvements
- B** Cluster Design to reduce infrastructure costs and adverse environmental impacts.
- C** Walkability elements including sidewalks and walking trails.
- D** View shed protection.
- E** Master planning for public water, public sewer, and stormwater infrastructure
- F** Cash proffers or other developer-funded improvements to mitigate the impact of new development on Town and County capital needs.



Berryville Area Plan Notes:

Note 1 - The Town of Berryville is ideally suited to provide urban levels of service as the County's primary designated growth area for residential and business uses.

Note 2 - If supported by a master plan of development that effectively addresses these and other elements, Sub-Area 15 could support medium-low density residential development at a density of 4 units per acre.

Note 3 - Of the residential development that has occurred in Annexation Area B through 2015, 195 residential units of the planned yield have not been constructed. Additional density that would allow for a portion of these units to be included in this Sub-Area should be considered.

Note 4 - Connectivity between the west and east sides of Sub-Area 15 can only be achieved with future cooperation with the owner of the Bel Voi parcel.

BERRYVILLE AREA PLAN UNUSED LOTS

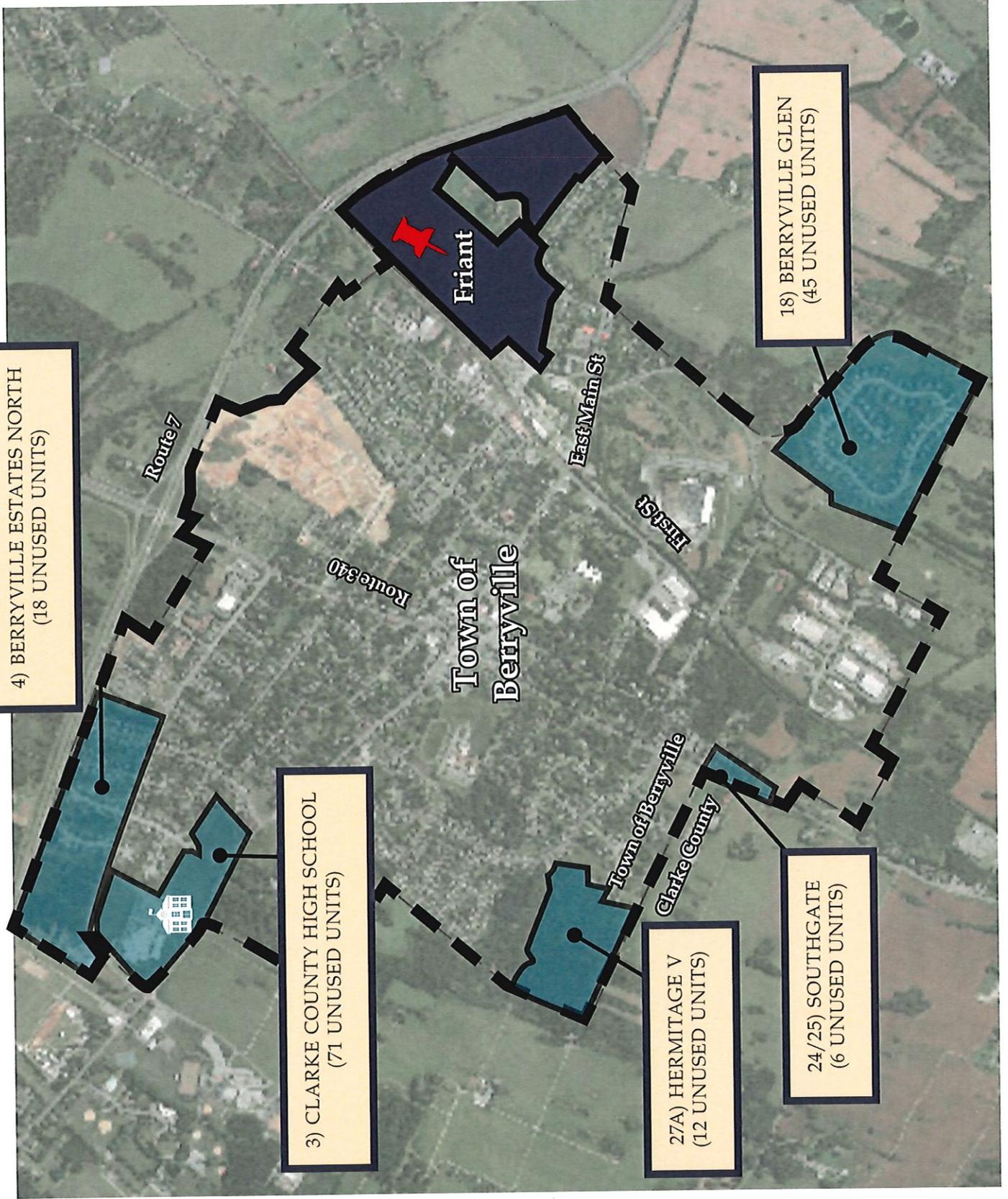
4) BERRYVILLE ESTATES NORTH
(18 UNUSED UNITS)

3) CLARKE COUNTY HIGH SCHOOL
(71 UNUSED UNITS)

27A) HERMITAGE V
(12 UNUSED UNITS)

24/25) SOUTHGATE
(6 UNUSED UNITS)

18) BERRYVILLE GLEN
(45 UNUSED UNITS)



UNUSED LOTS INFORMATION

152 unused lots from the Berryville Area Plan

SUB AREA	TITLE	PLANNED LAND USE	RES. TYPES	PLANNED DENSITY	REMAINING RES. UNITS
3	CCHS/ Battlefield Estates South	Low-Density Res.	SFD	2 RU/AC	71
4	Battlefield Estates North	Low-Density Res.	SFD	2 RU/AC	18
18	Berryville Glen	Low-Density Res.	SFD	2 RU/AC	45
24	Southgate/Northern Portion (REMOVED)				3
25	Southgate Residential Area	Med-Low Density Res	SFD	4 RU/AC	3
27A	Herritage Residential Growth Area	Low-Density Res.	SFD	2 RU/AC	12

I.4 MASTER PLAN

Proposed Density = 2.87 units per net developable site area.

Proposed Density = 1.98 units per gross site area



As outlined in the Berryville Area Plan the development is clustered to reduce infrastructure needs and preserve environmental resources. The development will have two new entrances but will primarily be accessed from a new entrance road that will connect to East Main Street and include a turn lane. The new entrance road will also provide a connection to the existing Battletown Drive to further enhance connectivity options within the Town. All the Friant residential streets will include sidewalks on both sides of the street and a trail system will be developed in the preserved open space areas to provide a generous internal pedestrian circulation system. As outlined on the Master Zoning Plan, a majority of the project will become open space. Select areas of this open space will be developed to provide active and passive recreation opportunities. Public water and sanitary sewer services will be provided to each home and on-site stormwater management will be provided.

A Goal: Transportation and Connectivity Improvements

The development will have two new entrances but will primarily be accessed from a new entrance road that will connect to East Main Street and include a turn lane. The new entrance road will also provide a connection to the existing Battletown Drive to further enhance connectivity options within the Town and maintain the secondary street network within the Town limits.

According to the Berryville Area Plan Chapter 2 Section C, "transportation planning for the Sub-Area should emphasize sensitively located linkages to and through Battletown Subdivision and the other Sub-Areas that make up this quadrant However, given the low capacity nature of Battletown's residential streets, additional access options to Sub-Area 15 should be explored".

B Goal: Cluster Design to reduce infrastructure costs and adverse environmental impacts.

The Friant development is clustered to reduce infrastructure and preserved environmental resources, with a proposed density of 2.87 DU/AC

According to the Berryville Area Plan Chapter 2 Section C, " Zoning requirements should encourage that residential development be planned in clusters. Cluster design for the residential neighborhood would provide the opportunity to reserve sensitive environmental areas and natural drainage ways, which would in turn, provide for more efficient use of the land." This chapter also states that "Sub-Area 15 could support medium-low density residential development at a density of 4 units per acre. The original Berryville Area Plan identified Future Land Uses in Table V-1 and included planned yields for respective commercial and residential development. Of the residential development that has occurred in Annexation Area B through 2015, 195 residential units of the planned yield have not been constructed. Additional density that would allow for a portion of these units to be included in this Sub-Area should be considered."

C Goal: Walkability elements including sidewalks and walking trails.

All the Friant residential streets will include sidewalks on both sides of the street, creating about 3.5 miles of sidewalk. A trail system will also be developed in the preserved open space areas to provide an additional 1.5 miles of pedestrian circulation system.

According to the Berryville Area Plan Chapter I Section D, "communities that are walkable and that provide bicycling facilities provide benefits to their citizens by having a healthier and more active population, reduced transportation costs to citizens, improved air quality, and increased traffic to local businesses."

D Goal: View shed protection.

View shed protection of the property from Route 7 is being provided by locating a majority of the proposed development about a quarter of a mile away from Route 7. Where development has been planned closer to Route 7, the natural terrain of the property is elevated. Using this natural elevated area and supplementing it with an evergreen tree screen will provide view shed protection from Route 7.

According to the Berryville Area Plan Chapter 2 Section C, "the land is highly visible from the Route 7 Bypass. In this regard, future development must be carefully sited".

E Goal: Master planning for public water, public sewer, and stormwater infrastructure

Public water and sanitary sewer services will be provided to each home and on-site stormwater management will be provided through the implementation of three on-site stormwater management ponds.

F Goal: Cash proffers or other developer-funded improvements to mitigate the impact of new development on Town and County capital needs.

Cash proffers are being provided as outlined in the proffer statement.

PHASING PLAN



- A** Construction and vehicular access established across Bel Voi from East Main Street to provide interparcel connection and connectivity.
- B** Entrances to Battletown Drive constructed to Town of Berryville standards. Entrance shall remain closed and used for emergency vehicle access only until such time as outlined in the proffers.
- C** Right turn lane and taper shall be constructed and open to traffic when warranted.
- D** A left turn lane and taper shall be constructed and open to traffic when warranted.
- E** Prior to issuing the 100th occupancy permit the trail system shown herein shall be constructed and opened for use.
- F** The tot lot shown herein shall be constructed and open for use prior to the issuance of the 100th occupancy permit
- G** Construction entrance from E. Main St.

SECTION 2: TRANSPORTATION DESIGN

2.1 VEHICULAR TRANSPORTATION

The Friant project should consist of internal residential streets that provide two-way vehicular circulation with on-street parking. The project should be provided with two vehicular connection points, one from East Main Street which shall include a turn lane and one from Battletown Drive. In addition to those connections to the Friant development a connection should also be made from the end of existing Battletown Drive to the new connection road from East Main Street.

VEHICULAR TRANSPORTATION PLAN



2.2 PEDESTRIAN TRANSPORTATION

The Friant project internal residential streets shall be provided with sidewalks on both sides of the proposed streets. Furthermore, pedestrian connections in the form of sidewalks, trails, and the like shall be provided amenity areas developed within the provided open space. The open space area shall also be enhanced with an internal trail system providing multiple trails systems and connections for public access to the open space areas.

PEDESTRIAN TRANSPORTATION PLAN



Proposed Sidewalk
+/- 18,000 FT
= 3.5 MI

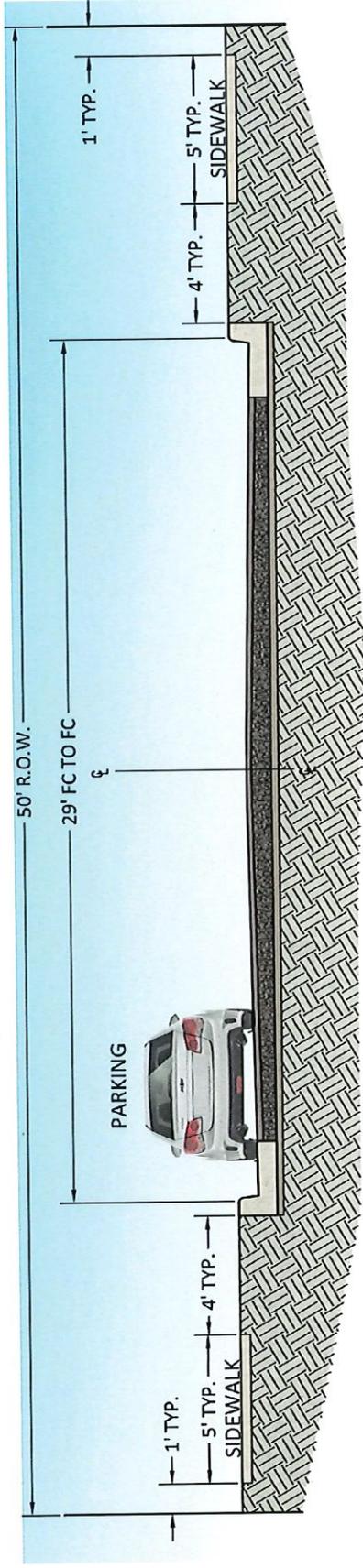
Proposed Trail
+/- 6,600 FT
= 1.25 MI

2.3 STREET AND TRAIL DETAILS

The proposed streets within the Friant project site will include sidewalks and trails for safe pedestrian circulation.

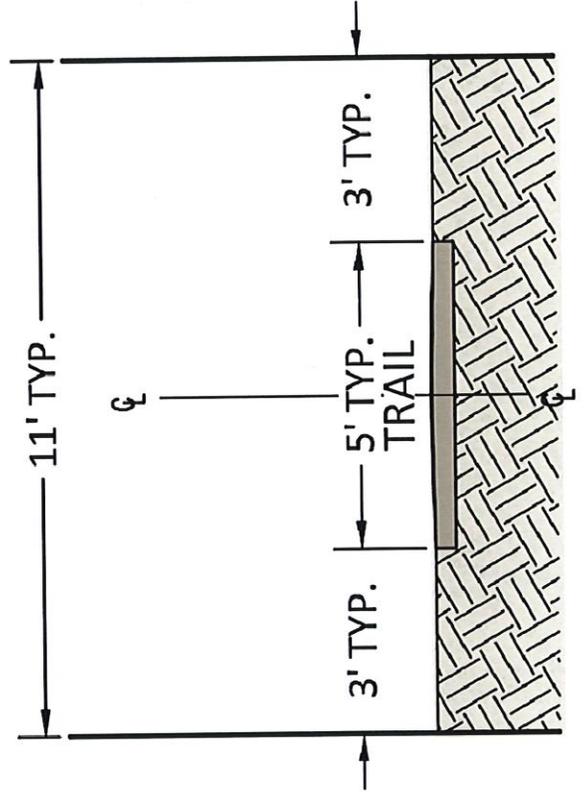
RESIDENTIAL STREET

50' Public Street with sidewalk on both sides



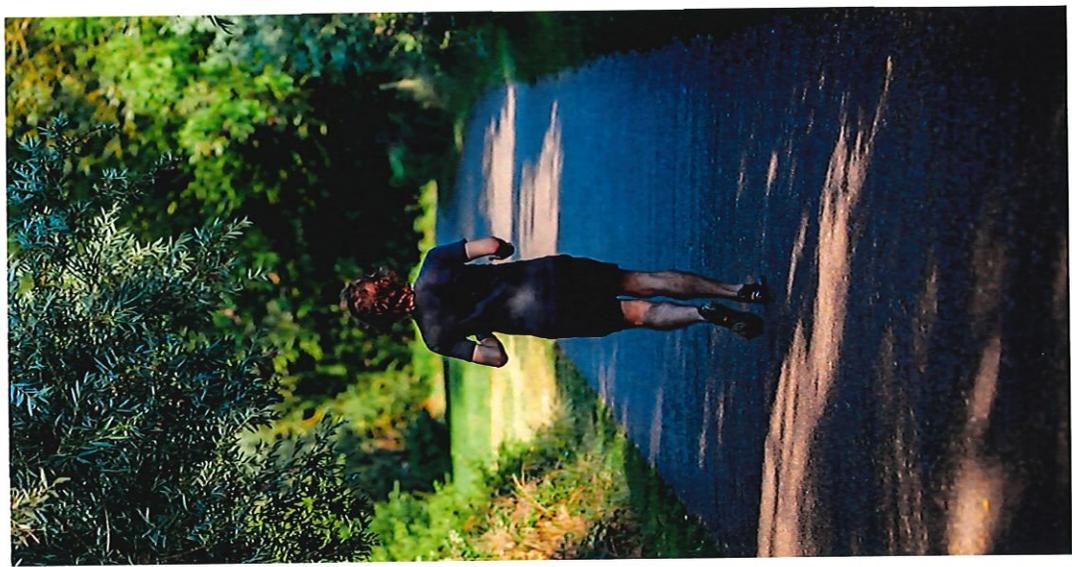
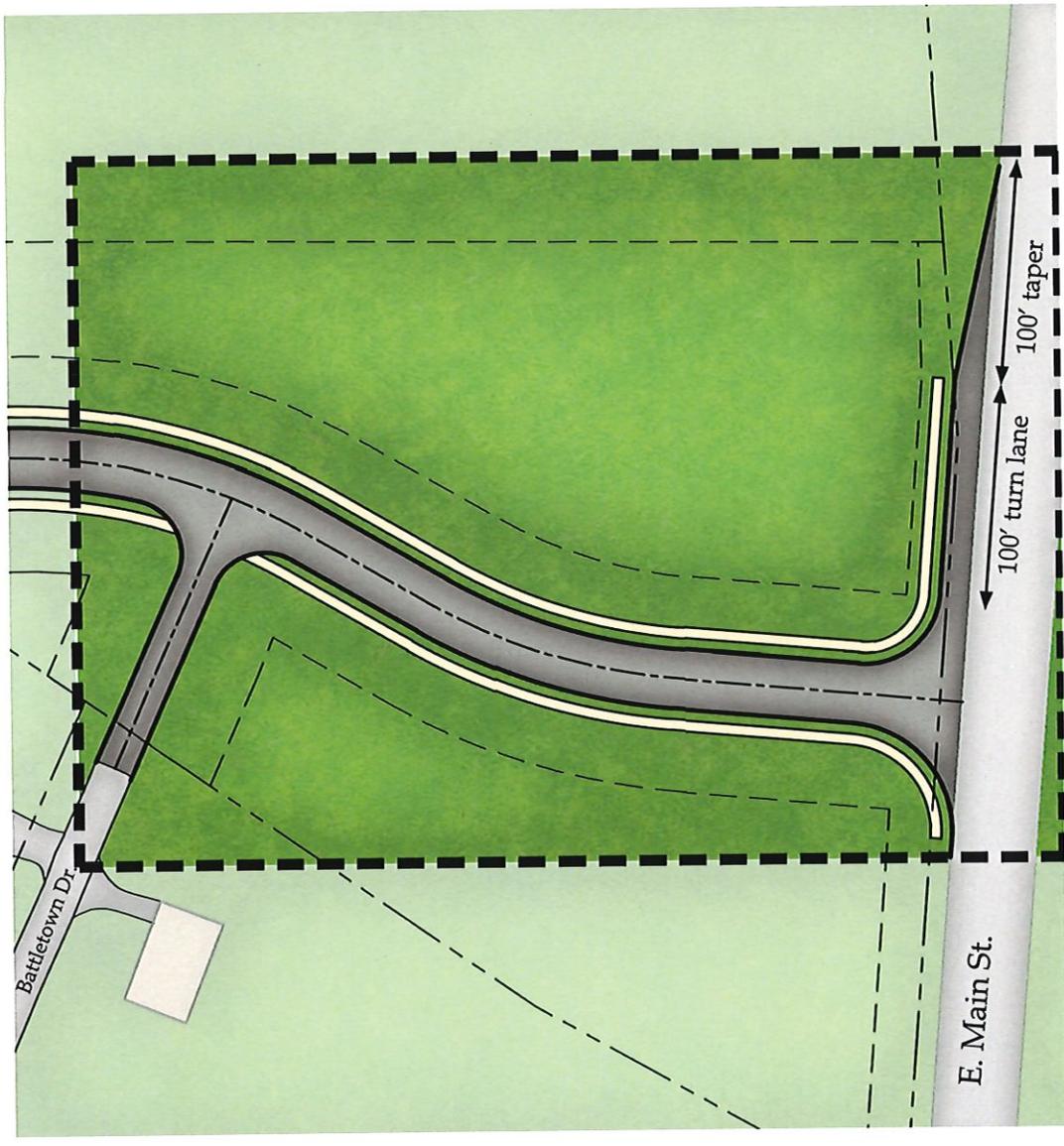
PRIVATE TRAIL

5' private trail with a variable walking surface of natural material, stone dust, asphalt, concrete, pavers, or similar material





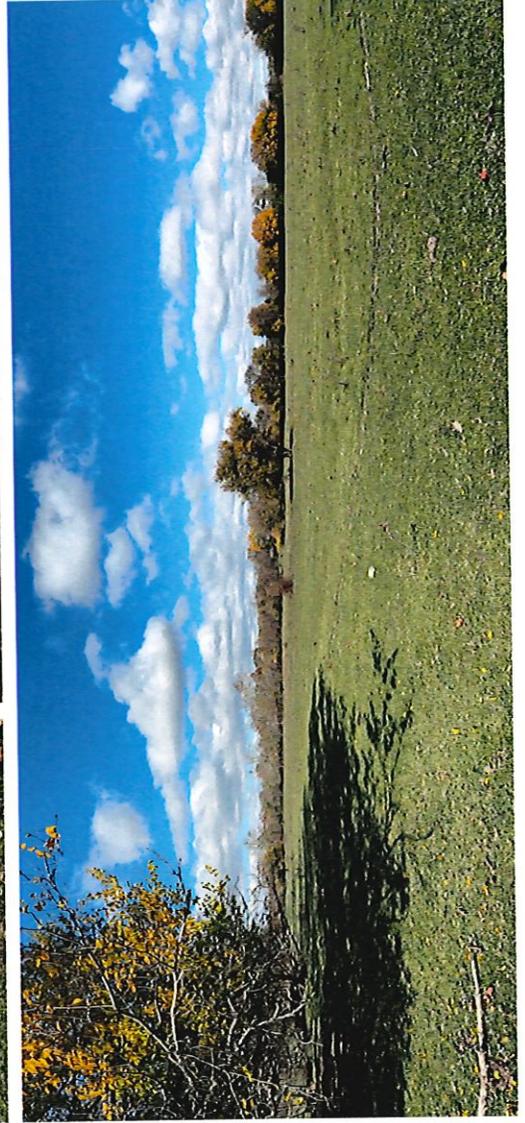
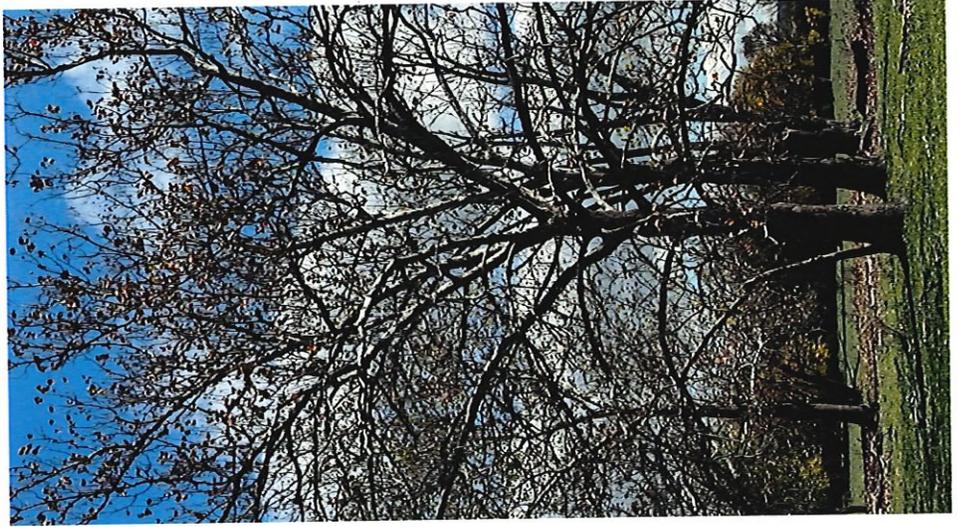
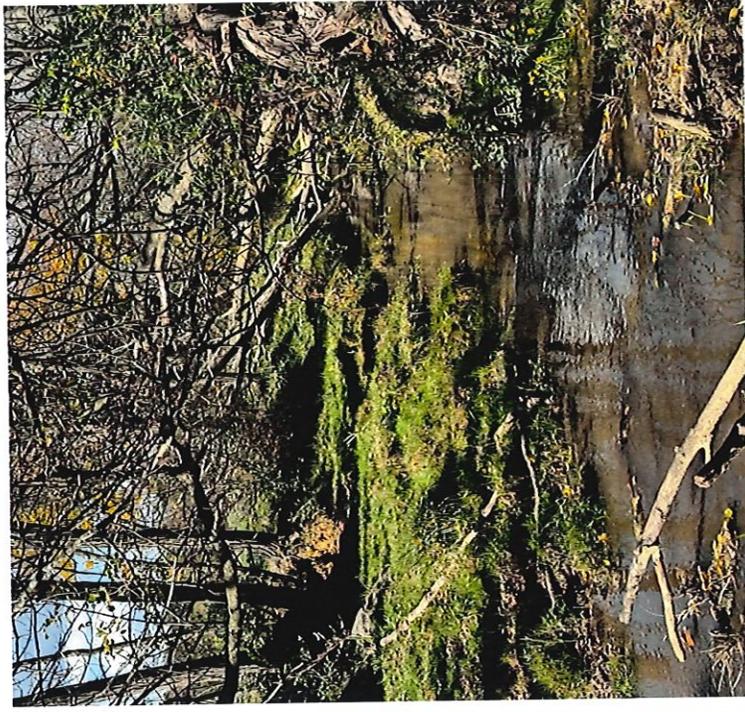
2.4 TURN LANE IMPROVEMENTS



SECTION 3: OPEN SPACE

3.1 OPEN SPACE AREA

In order to adhere to the cluster design principles of the Master Plan a majority of the Friant development should be developed and/or preserved as open space. Select areas within the open space should be provided with amenities to promote active and passive recreation for the public. Access to these facilities shall be provided with a trail system that connects to the proposed public street network.



52.2
Acres
of
Open
Space
or 52 %
of the
project

Legend
Planned Open Space



OPEN SPACE PLAN



3.2 OPEN SPACE AMENITIES

AMENITIES PLAN



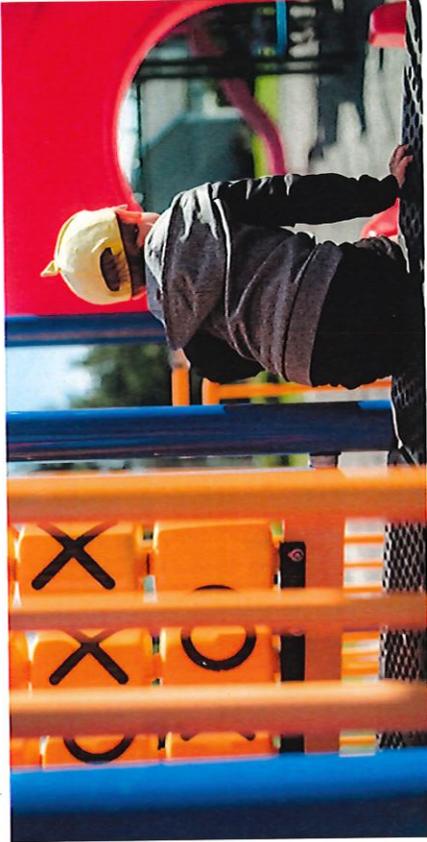
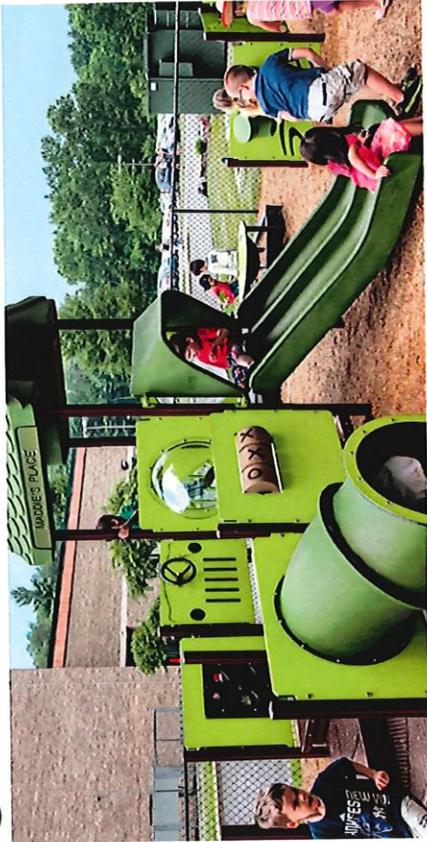
A Dog Park: An enclosed dog park with benches and seating for users



B Children's Playground Ages 5-12: A playground with age appropriate play equipment for children ages 5 to 12



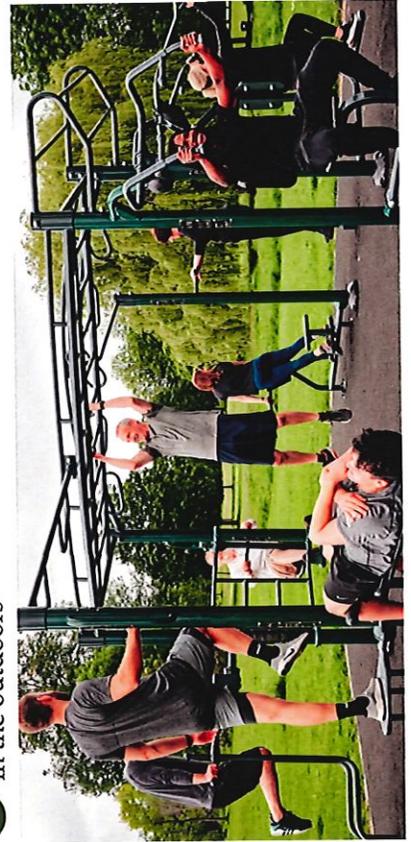
C Tot Lot: A tot lot is proposed for children ages 3 to 5 years old.



D Fire Pits + Pavilion: Fire pits will be proposed within an open space area, facing a wooded buffer, allowing users to enjoy a quiet evening or afternoon with friends around the fire. Pavilion structures are proposed near the trail to allow people to stop under a sheltered area, or for users to gather and enjoy the outdoors.



E Exercise Equipment: Exercise equipment will be proposed along the trail, allowing users to enjoy the benefits of cardio and strength training in the outdoors.



SECTION 4: LANDSCAPING

4.1 LANDSCAPE STANDARDS

1. PLANTING DESIGN GUIDELINES AND GENERAL REQUIREMENTS

A. Landscape material selections shall respond to the surrounding architecture and shall reinforce and define the public open space within the site. In general, street tree species shall correspond to the specific street type they are located on. This will help define the overall hierarchy of street connections and create clear pedestrian and vehicular zones. Overall, landscape selections will be based on year round interest, the ecology of the site, the need to define spaces, and the theme of the design.

B. Plants shall be selected based on their ultimate height, width, and growth habit in relation to the space where they will be planted. When planted adjacent to buildings, plantings should not obscure the building's architectural features.

C. To the extent possible, regional indigenous species are to be integrated into the planting designs.

D. Plant materials shall be resistant to disease and damage by deer and other fauna of the area.

E. There shall be a diverse mix of plant species to avoid monoculture and ensure seasonal interest. No more than 33% of plantings shall be of any one species.

F. Non-native species may be used in high visibility areas (e.g. entrance features, adjacent to buildings), however invasive and aggressively spreading species are not permitted.

G. All plant beds shall be fully prepared as per the plan specifications.

H. Minimum Plant Size:

Street/Shade Trees: 2" - 2.5" cal.
Ornamental Trees: 1.5" - 1.75" cal.
Evergreen Trees: 6' height
Shrubs: 24" -36"

I. Plant Mixture:

Street/Shade Trees: Minimum of 40% of all trees.

Ornamental Trees: Minimum of 15% and maximum of 25% of all trees.

Evergreen Trees: Minimum of 35% of all trees (primarily located within screening areas).

Shrubs: Minimum of 50% shall be evergreen.

2. EXISTING VEGETATION

A. General Guidelines: Existing stands of vegetation shall be preserved whenever possible.

B. Buffer Credits: Existing vegetation may be used to meet landscape buffer requirements. To be credited, existing vegetation stands must meet the buffer width requirement and be in good health. Existing buffer areas shall be supplemented where necessary with planted trees and shrubs to achieve the minimum number of trees and shrubs required.

3. STREET TREES

A. General Requirements: Shade trees shall be planted as street trees along all rights-of-way within the project area.

B. Spacing: Shade trees shall be planted at a minimum, one tree approximately every 40 feet with the centerline of the roadway as the basis of measurement.

4. RESIDENTIAL LANDSCAPING

Landscape Plantings for individual homes should consist of a limited variety of trees, shrubs, and groundcovers to create an attractive well-organized cohesive landscape. Shrubs and groundcovers should be planted in masses of a single species or cultivar in sufficient numbers to create beds or drifts of plants.



4.2 RESIDENTIAL LANDSCAPE AND HARDSCAPE GUIDELINES

LANDSCAPING

Lot landscaping and screening can add a lot of value and create an aesthetically pleasing streetscape throughout the community. The following guidelines shall be considered:

- Foundation plantings must be included on every house prior to occupancy.
- Lots with walk-out basements or exposed foundations shall include landscaping to break up large architecture planes.
- Columnar or taller evergreens shall be used to “soften” the architecture.
- Corner lots or high vis lots shall have landscape screening to screen rear or sides of houses from the street.
- Lots that back to other lots shall include landscaping at the rear of the property to create a visual screen between adjacent lots. Landscape material shall be located outside drainage or utility easements.

FENCES

Fences will be permitted within the Friant community but must follow the guidelines below:

- Fence material shall be vinyl, wrought iron or aluminum.
- Vinyl fencing must be white; including vinyl covered picket fencing.
- Vertical vinyl covered black picket fencing is permitted.
- Maximum fence height shall be six (6) feet.
- Side yard fencing shall be a minimum of five (5) feet behind the front plane of the house.
- Corner lot fencing layout shall not extend beyond the front plane of the house on the perpendicular street.
- No front yard fencing shall be allowed.
- Fencing shall not be used to satisfy upgraded architectural requirements.

HVAC EQUIPMENT AND GENERATORS

- HVAC & generators shall be placed in the rear yard whenever possible.
- HVAC & generators shall be screened from view of the street or adjacent lots with a fence or opaque landscape screen.
- No equipment shall be placed on the side of the house that abuts two public streets.

4.3 SCREENING

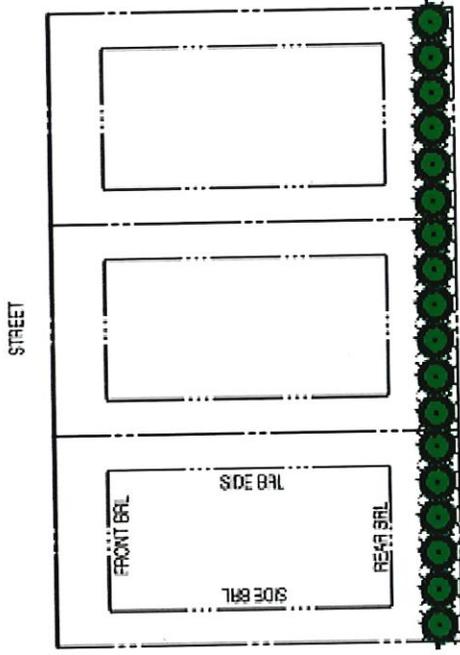
SCREENING PLAN



Legend

-  High Visibility Lot
-  Evergreen Screening Detail

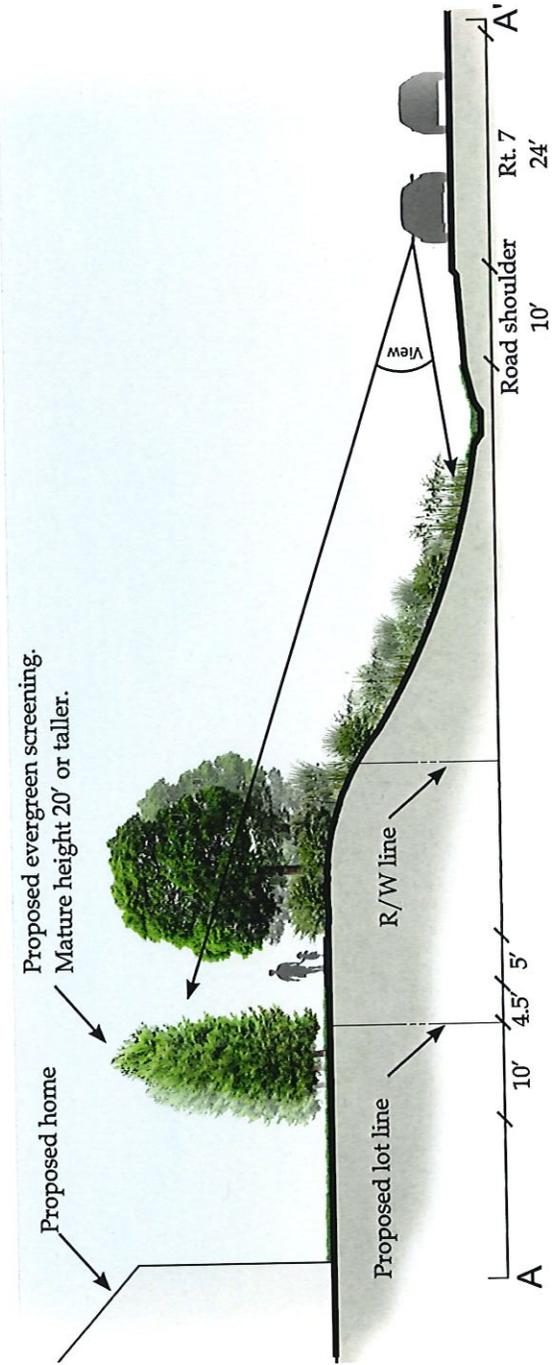
EXAMPLE EVERGREEN SCREENING DIAGRAM



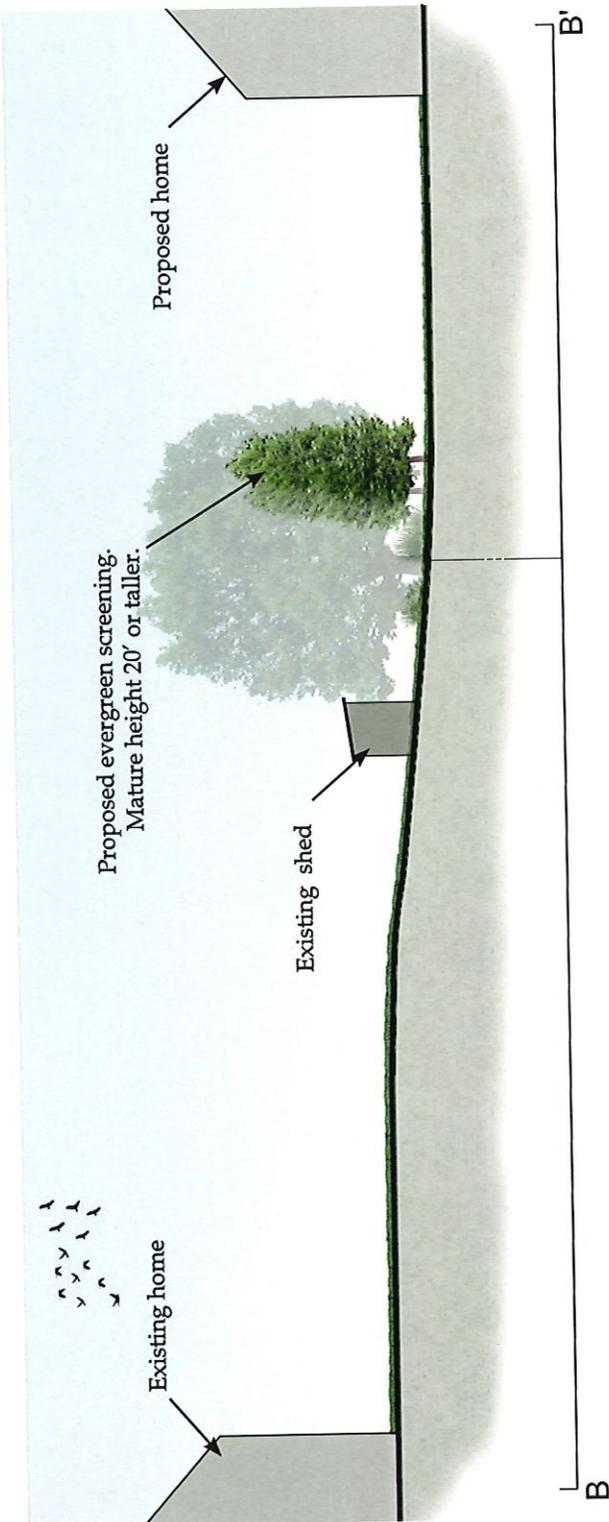
Notes:

-  - Green giant arborvitae, red cedar, variety of spruce species, and/or other similar evergreen species
- Each highlighted lot will include a minimum of 5 evergreen trees
- Evergreen trees may be located on or off the highlighted lots

ROUTE 7 CROSS SECTION A - A'



CROSS SECTION B - B'



4.4 PLANT PALETTE

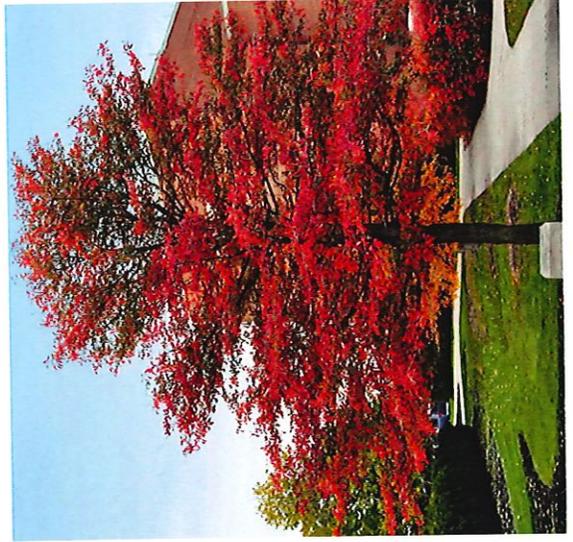
EXAMPLE CANOPY TREES

SCIENTIFIC NAME	COMMON NAME
Liriodendron tulipifera	Tulip Poplar
Nyssa sylvatica	Black Tupelo
Quercus alba	White Oak
Quercus rubra	Red Oak

Quercus rubra



Nyssa sylvatica



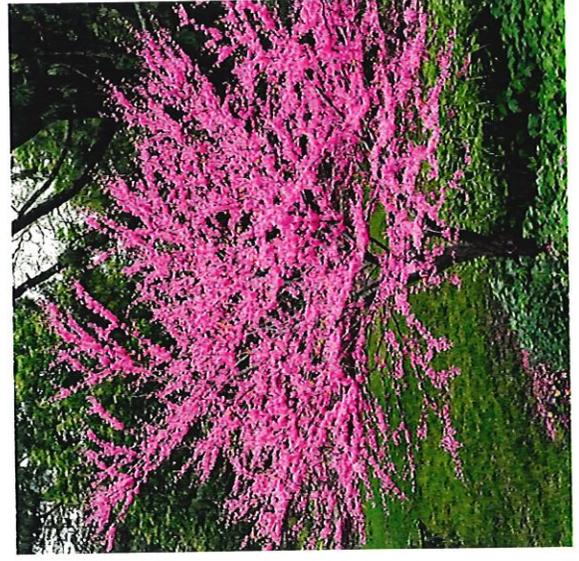
EXAMPLE ORNAMENTAL TREES

SCIENTIFIC NAME	COMMON NAME
Amelanchier arborea	Downey Serviceberry
Cercis canadensis	Redbud
Magnolia virginiana	Sweetbay Magnolia

EXAMPLE EVERGREEN TREES

SCIENTIFIC NAME	COMMON NAME
Juniperus virginiana	Eastern Red Cedar
Picea virginiana	Virginia Pine
Thuja x Green Giant	Green Giant Arborvitae

Cercis canadensis



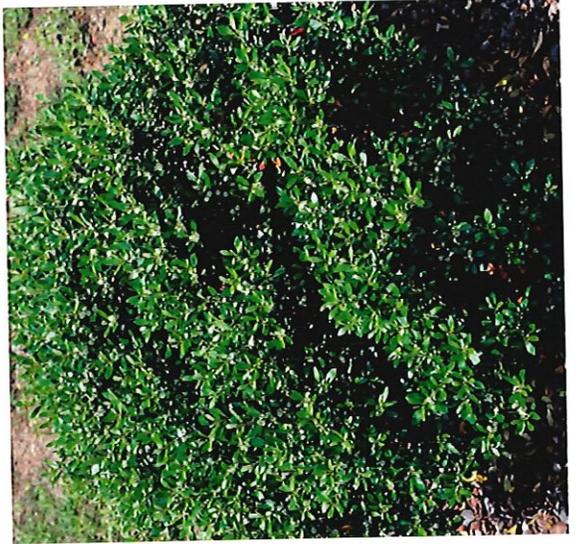
EXAMPLE SHRUBS

SCIENTIFIC NAME	COMMON NAME
<i>Clethra alnifolia</i>	Summersweet
<i>Ilex glabra</i>	Inkberry
<i>Viburnum dentatum</i>	Arrowwood Viburnum

Thuja x Green Giant



Ilex glabra



EXAMPLE HERBACEOUS

SCIENTIFIC NAME	COMMON NAME
<i>Asclepias tuberosa</i>	Butterfly Weed
<i>Geranium maculatum</i>	Wild Geranium
<i>Rudbeckia hirta</i>	Black Eyed Susan

Rudbeckia hirta

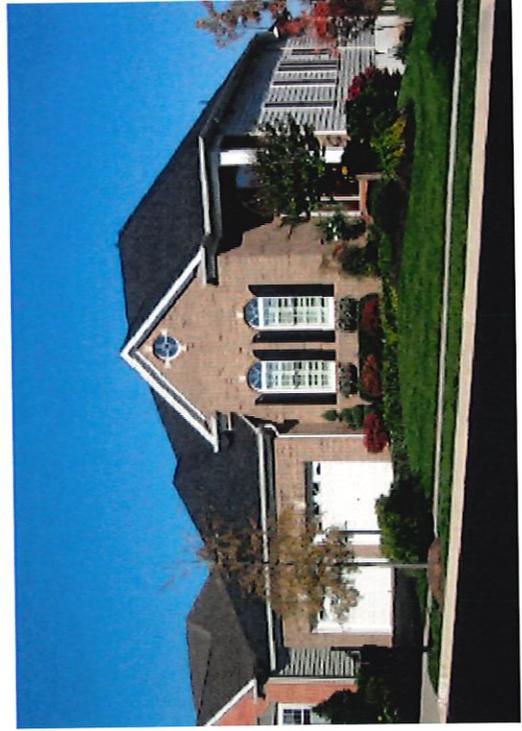
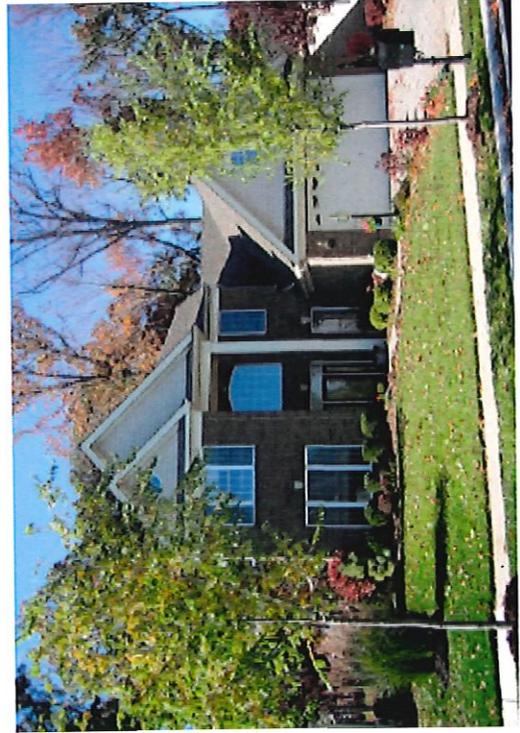


SECTION 5: RESIDENTIAL ARCHITECTURE DESIGN GUIDELINES

5.1 BUILDING DESIGN GUIDELINES

Building design guidelines seek to create a distinct yet coherent architecture that will foster a unique identity for Friant and form the backdrop to a rich street level experience. These guidelines will help distinguish the community, help define its character and eventually raise its value in the marketplace. The following set of principles will be applied to each of the buildings, irrespective of its use or location.

1. Build in the tradition of simple yet elegant designs. Building architecture and elevations promote a more contemporary nature through the use of simple unifying roof and window lines and careful selection of materials. The building aesthetic should emerge from elevation components and building details rather than from mere ornamentation.
2. Use traditional, high quality and durable materials throughout the community. - When walls are constructed of more than one material, changes in material shall be permitted along a horizontal or vertical line and should reinforce a base, middle and top for the building.



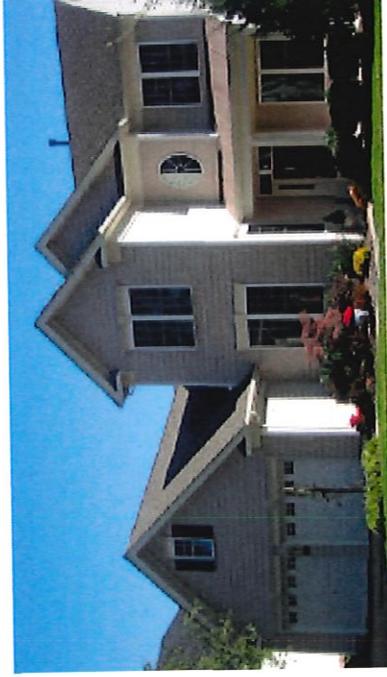
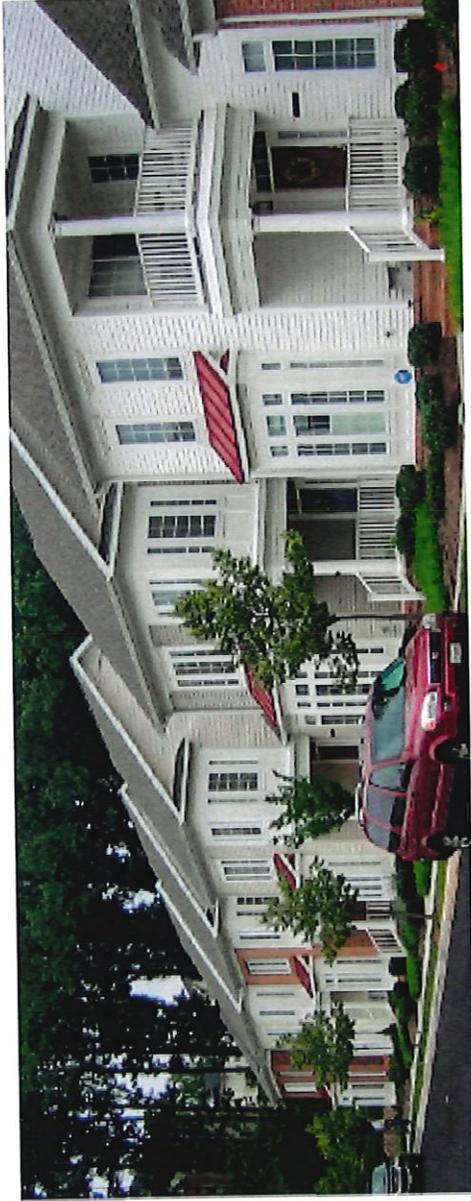
Building walls shall be of the following materials:

- Brick: A variety of traditional brick colors and modules and bonding variations are encouraged.
- Stone: Natural stone and stone veneer are permitted and shall be laid predominantly rectilinear stones in a horizontal pattern. Cast stone shall be permitted as sills, headers and accents.
- Siding: Cement or fiber board siding or high quality vinyl or its equivalent is the prescribed siding material where brick or stone is not utilized. Aluminum siding is not permitted. A variance in color and texture is encouraged.

3. Variety: No more than four (4) out of every ten (10) continuous lots can be the same elevation. In addition, lots next to, across or diagonally across the street from each other cannot be the same elevation. No identical color schemes for single family detached houses shall be repeated within three consecutive lots.

4. Emphasize main entries of each home regardless of elevation. The main entrance to each home should be easily identifiable from the main travel ways through the use of materials and forms.

5. Within the parameters of the principles as described herein, in addition to modern building practices and current market feasibility and projections, the architecture shall be complementary, to the extent practical, to the architecture as typically found in Clarke County and the Town of Berryville



The architecture shown herein is a representation of builders' architecture that may be built in the Friant development but does not represent the full sampling of architecture that may be provided within the community.

WALK OUT BASEMENTS, EXPOSED FOUNDATIONS, AND SLAB TREATMENT

Lots with walk out basements or exposed foundations, including front porch or stoops, shall be finished with an architectural CMU or stone material.

Approved finishes included:

- Patterned form-liner; must also be painted to compliment architecture color scheme
- Stone or brick; must match the material being used as water table treatment
- Split-faced CMU block; color of block must compliment architecture color scheme. Zero barrier entry lots are housing designed to accommodate aging population and buyers with disabilities that affect mobility. To accommodate the need, these housing units limit architectural elements such as stoops and porches. Builders are encouraged to pull masonry materials up from the foundation to the bottom of the lowest window in the front façade across the entire front elevation.

If a zero-barrier entry house is proposed on a high visibility lot, the application will be managed on a case-by-case basis with the developer.

ELEVATIONS AND MATERIALS

Creating a unique and diverse streetscape throughout Friant is a high priority. Therefore, limitations are placed on the frequency and location of elevations that can be used on adjacent lots. The following guidelines shall be followed:

- Building elevations will be reviewed and approved by the developer prior to construction to ensure a cohesive theme throughout the community.
- No more than 4 (four) out of every 10 (ten) continuous lots can be the same elevation.
- Lots next to, across or diagonally across the street from each other can not be the same elevation.
- No identical color schemes for single family detached houses shall be repeated within three consecutive lots.
- Accent materials shall be varied to create more differentiation between lots.
- 1 level models shall add architectural features to the road facing roof to break up vast roof planes.

- Garage dominate elevations should utilize varying front yard setbacks and a mix of models and elevations to keep variety in the streetscape.
- Accessory structures exterior color must match the main color of the primary structure.
- All driveways and lead walks shall be broom finished concrete or pavers. Traditional, high-quality and durable building materials shall be used throughout the community. Building materials shall meet all current Local, State, and Federal building codes and regulations.

PARKING

All single-family detached lots are to provide a minimum of two (2) off street parking spaces on a driveway with a minimum width and depth of eighteen (18) feet.

SINGLE FAMILY DETACHED HIGH VISIBILITY LOTS

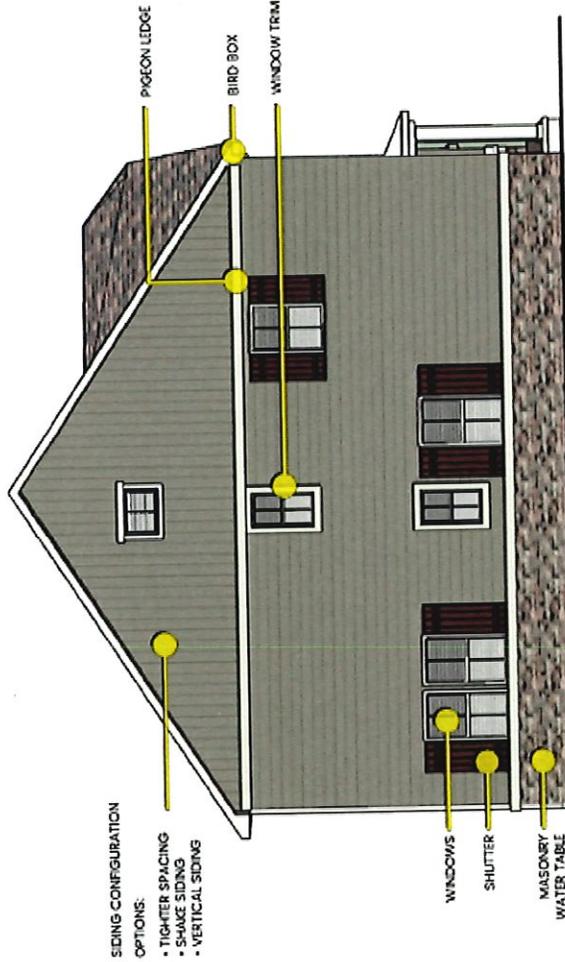
High Visibility (HV) lots are corner / end units, or units that have the side or rear elevation facing a roadway. HV lots are not required if there is a thirty (30) feet or more landscape buffer between the lot and the roadway. HV lots will be required to provide the masonry treatment illustrated below. Three (3) additional architectural treatments listed below must also be provided.

Features required:

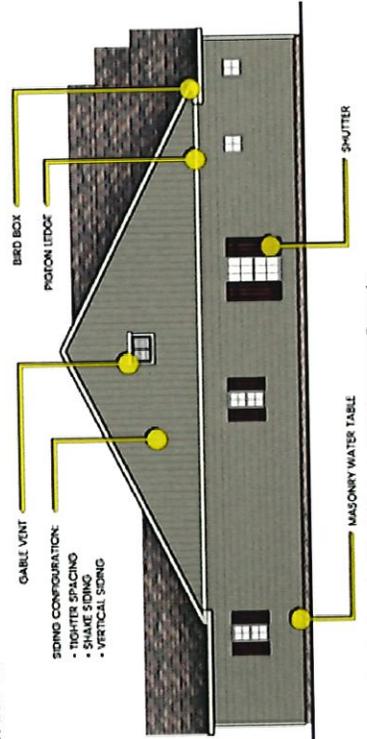
- Masonry water table; masonry used on the side elevation shall match masonry used on the front.

Optional features:

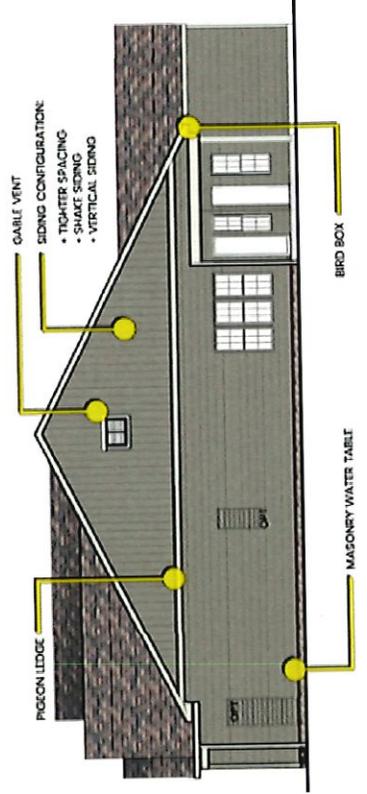
- Shutters
 - Trimmed windows
 - Pigeon ledge, which is a break in building elevation running eave to eave.
 - Bird box, which is a return on the eave. See example (right)
 - Siding above pigeon ledge shall be architecturally different from main portion of the house.
- Pigeon ledge options include:
- Tighter spaced siding
 - Shake siding
 - Vertical siding
- A minimum of one optional feature shall be provided on each unit level



2-Story Single Family Detached High Vis Lots (HV) Elevation Example



1-Story Single Family Detached High Vis Lots (HV) Elevation Example



5.2 SINGLE FAMILY DETACHED LOT DEVELOPMENT STANDARDS

Each application shall be required to meet the setbacks requirements herein. The layouts shown are for demonstrative purposes only.

Minimum Side Yard, 10'

Minimum Rear Yard, 25'

Minimum Front Yard, 15'

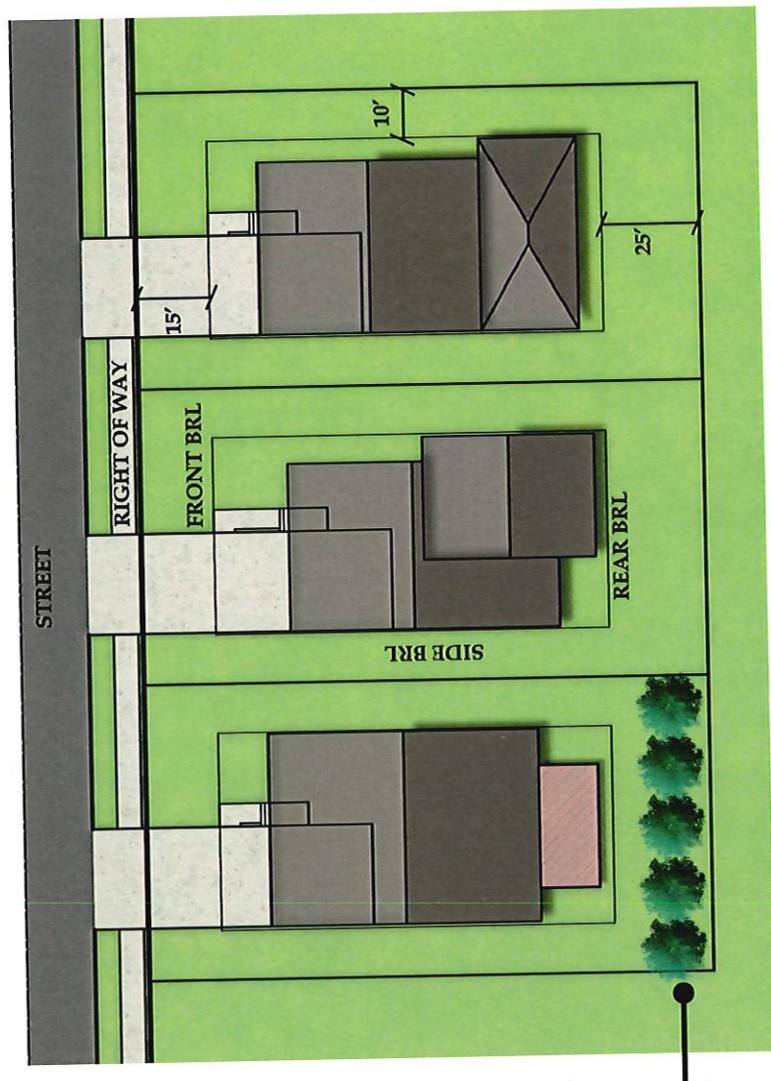
Minimum Front Yard for Garages, 25'

Minimum Lot Size, 7,500 SF

Maximum Lot Size, 20,000 SF

Minimum Lot Width, 60'

Minimum Corner Lot Width, 75'

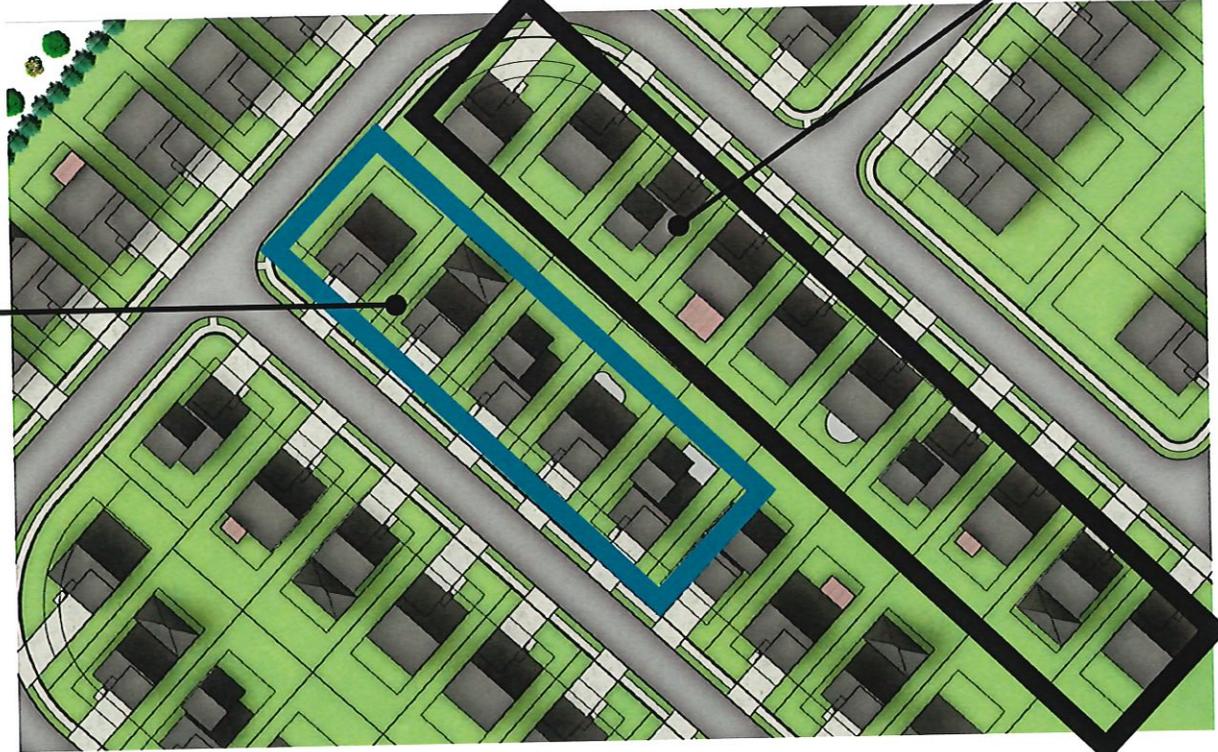


* Example of lot sized with setback for illustrative purposes only

SCREENING TREATMENT FOR HIGH VISIBILITY LOTS

3 LOTS OUT OF EVERY 5 LOTS TO BE
STANDARD SETBACK

2 LOTS OUT OF EVERY 5 LOTS TO BE
ALTERNATE SETBACK



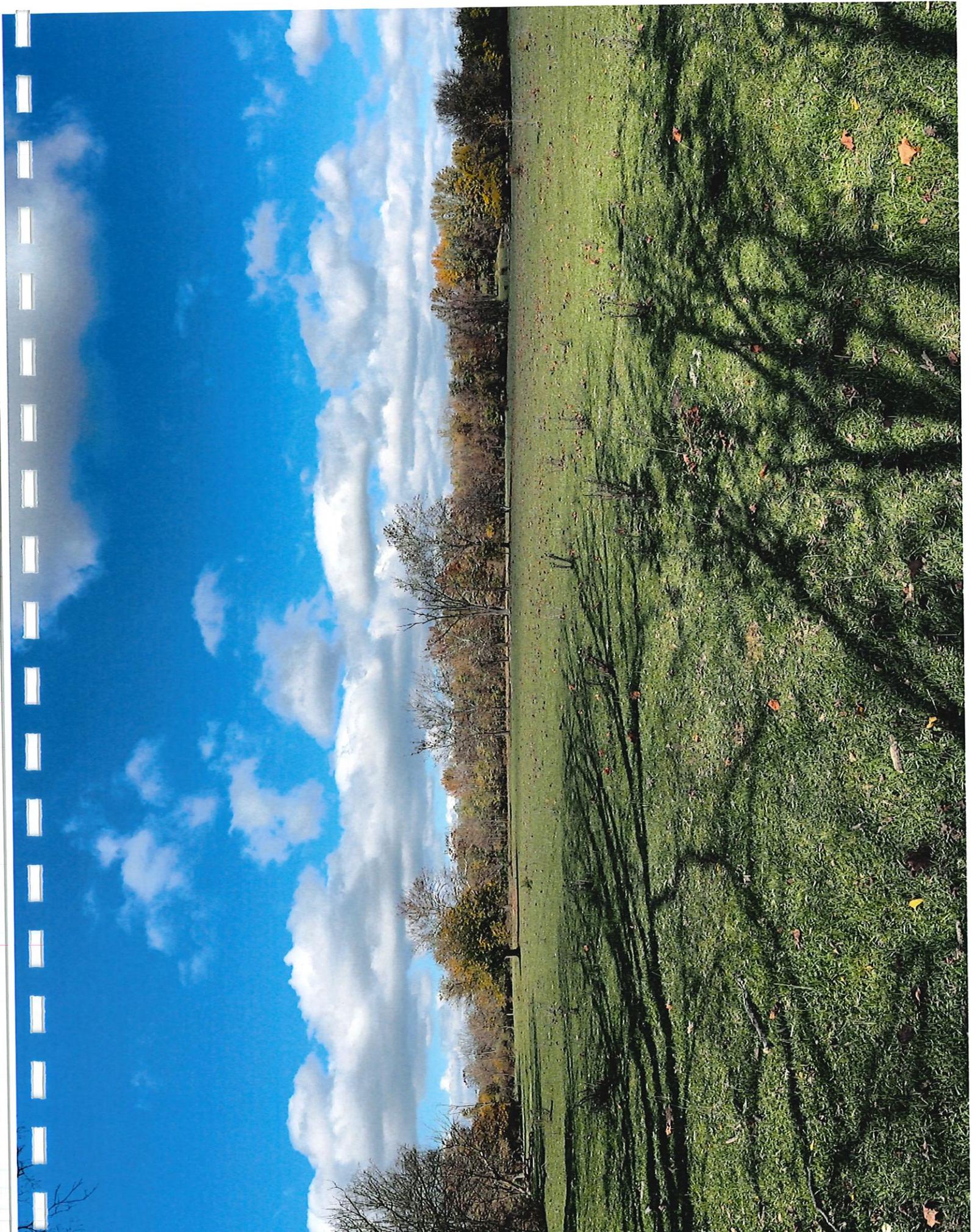
ELEVATION AND MATERIALS

Creating a unique and diverse streetscape throughout Friant is a high priority. Therefore, limitations are placed on the frequency and location of elevations that can be used on adjacent lots. The following guidelines shall be followed:

- No more than 4 (four) out of every 10 (ten) continuous lots can be the same elevation.
- Lots next to, across or diagonally across the street from each other can not be the same elevation.
- No identical color schemes for single family detached houses shall be repeated within three consecutive lots.
- Accent materials shall be varied to create more differentiation between lots.
- 1 level models shall add architectural features to the road facing roof to break up vast roof planes.
- Garage dominate elevations should utilize varying front yard setbacks and a mix of models and elevations to keep variety in the streetscape.
- Accessory structures exterior color must match the main color of the primary structure.

Traditional, high-quality and durable building materials shall be used throughout the community. Building materials shall meet all current Local, State, and Federal building codes and regulations.

NO MORE THAN 4 LOTS OUT OF 10 LOTS
SHALL HAVE THE SAME ELEVATION SAME
SIDE OR ACROSS THE STREET



PROFFER STATEMENT

REZONING: RZ# _____
Detached Residential – 1 (DR 1), Detached Residential – 2 (DS 2),
Business Park (BP) and Open Space Residential (OSR) to ___ acres
Detached Residential – 4 (DR 4) and _____ acres Open Space
Residential (OSR)

PROPERTY: 100.041 Acres +/-;
Tax Map Parcels 14-A-80 and 14-A-112 (the “Properties”)

RECORD OWNERS: Friant Enterprises #1, LLC, Friant Enterprises #2, LLC, and Friant
Enterprises #3, LLC (collectively, the “Owners”)

APPLICANT: D.R. Horton, Inc. (the “Applicant”)

**ORIGINAL DATE
OF PROFFERS:** _____, 2023

REVISION DATE(S): _____

The undersigned Owners hereby proffer that the use and development of the above-referenced parcels, which are requested to be rezoned, shall be in strict conformance with the following conditions, which shall supersede all other proffers on the Properties that may have been made prior hereto. In the event that the above-referenced conditional rezoning is not granted as applied for by the Owners, these proffers shall be deemed withdrawn and shall be null and void. Further, these proffers are contingent upon final rezoning of the Properties with “final rezoning” defined as that rezoning which is in effect on the day following the last day upon which the Town Council of the Town of Berryville, Virginia (the “Town”) decision granting the rezoning may be contested in the appropriate court. If the Town’s decision is contested, and the Owners elect not to submit development plans until such contest is resolved, the term rezoning shall include the day following entry of a final court order affirming the decision of the Town which has not been appealed, or, if appealed, the day following which the decision has been affirmed on appeal.

The headings of the proffers set forth below have been prepared for convenience or reference only and shall not control or affect the meaning or be taken as an interpretation of any provision of the proffers. The improvements proffered herein shall be provided at the time of development of that portion of the Properties adjacent to or including the improvement or other proffered requirement, unless otherwise specified herein. Any proffered conditions that would prevent the Owners from conforming with State and/or Federal regulations shall be considered null and void. The term “Owners” as referenced herein shall include within its meaning all future owners and successors in interest. When used in these Proffers, “MZP” shall refer to the plan entitled “Friant Master Zoning Plan” dated July 31, 2023 and revised November 8, 2023, and shall include the following:

1. **LAND USE:**

- 1.1 Residential development of the Properties shall be limited to a maximum of 198 single-family detached dwelling units in accordance with the requirements of the Town's Zoning Ordinance and Subdivision Ordinance.
- 1.2 The minimum amount of open space to be provided for the Properties, in their entirety, is twenty percent (20%) of the entire parcels subject to the rezoning which is generally 20.0082 acres as shown on the MZP.
- 1.3 The Properties shall be developed in general conformance with the MZP subject to minor modifications upon the time of final engineering.

2. SITE DEVELOPMENT:

- 2.1 Prior to the issuance of the 100th occupancy permit, the Applicant shall deliver a top lot and workout stations which shall be installed on the Properties in general conformance with the MZP and design guidelines.
- 2.2 Prior to the issuance of the 100th occupancy permit, the Applicant shall deliver a public trail system which shall be installed on the Properties in general conformance with the MZP and design guidelines.
- 2.3 Prior to the issuance of the 132nd occupancy permit, the Applicant shall dedicate a portion of the open space in the subdivision as a scenic easement to an appropriate conservation authority or agency. The location of the scenic easement shall be in general conformance with MZP.
- 2.4 All development shall be in substantial conformance with the attached and incorporated Design Guidelines.

3. CREATION OF HOMEOWNERS' ASSOCIATION:

- 3.1 The Properties shall be made subject to a homeowners' association ("HOA") that shall be responsible for the ownership, maintenance and repair of all common areas, including any conservation areas that may be established in accordance herewith not dedicated to the Town or others, for each area subject to their jurisdiction, and shall be provided such other responsibilities, duties and powers as are customary for such associations or as may be required for such HOA herein. The HOA shall be created not later than the date upon which the first building permit is issued.
- 3.2 In addition to such other duties and responsibilities as may be assigned, the HOA shall have title to and responsibility for (i) all common open areas not otherwise dedicated to public use, (ii) common buffer areas located outside of residential lots, and (iii) ownership and maintenance of stormwater management facilities. The HOA shall be responsible for all areas on the MZP that are not otherwise dedicated for public use.

4. SCHOOL/FIRE & SAFETY/POLICE/PROMOTION OF WALKABILITY:

4.1 The Applicant shall make a proffer for public schools for any impacts caused by the development that is in excess of students generated by the by right development.

5. WATER & SEWER:

5.1 The Applicant shall be responsible for connecting the Properties to public water and sewer and for constructing all facilities required for such connection. All water and sewer infrastructure shall be constructed in accordance with the requirements of the Town.

5.2 The Applicant shall dedicate to the Town any and all water and sewer lines as well as any sewage pump stations constructed on the Properties, subject to the Town engineer's approval along with any necessary easements to permit access to and maintenance of said water lines, sewer lines, sewage pump stations, and any other associated public water and sewer improvements.

5.3 All provisions of Section 5 of the Proffers are also subject to the Town's existing water and sewer ordinances.

6. STORMWATER MANAGEMENT:

6.1 Stormwater management and Best Management Practices (BMP) for the Properties shall be provided in accordance with Virginia Stormwater Management Regulations and in substantial conformance with the MZP.

7. TRANSPORTATION:

7.1 Design of the roadway system shall be substantially consistent with the final approved MZP. The exact location and design of proffered improvements shall be subject to reasonable adjustment upon final engineering thereof, as approved by the Town Engineer.

7.2 Prior to the issuance of the first building permit, the Applicant shall install a temporary construction road and construction entrance from East Main Street through the adjoining property identified as Clarke County Tax Map No. 14-A-110 and across the property identified as Clarke County Tax Map No. 14-A-81 as needed and permitted to the Properties. Said temporary construction road and construction entrance shall be the sole means of access to and from the Properties during the construction of the subdivision and the residential units. There shall be no construction traffic permitted to gain access to the subdivision via the existing Battletown community streets.

7.3 The connection from the Properties to Battletown Drive shall be designed to meet the Virginia Department of Transportation standards and shall be considered

Emergency Access only unless otherwise acted upon by Council after all units are built out.

- 7.4 Within the Virginia Department of Transportation right of way and consistent with the terms of that agreement dated July 13, 1990 by and between Profundus Virginia Properties, Inc. and Friant Enterprises, and as recorded in Deed Book 207 at Page 44, in Deed Book 588 at Page 849, and in Plat Book 12 at Page 4, there will be the construction of a right turn taper on East Main Street that will be installed and/or construction of a left turn lane on East Main Street turning into the new entrance into the Profundus property when warranted by and approved by the Virginia Department of Transportation.
- 7.5 All public streets and roads shall be designed and constructed in accordance with the Virginia Department of Transportation subdivision street requirements and subject to review and approval by the Town.
- 7.6 All sidewalks shall be constructed in accordance with the Town's Zoning Ordinance and Subdivision Ordinance in the general locations as shown on the MZP to accommodate pedestrian movement.
- 7.7 There will be a payment to the Town in the amount of One Thousand Two Hundred and 00/100 Dollars (\$1,200.00) per unit to be used at the discretion of the Town and which is being made to allow for the installation of a sidewalk which shall connect the Properties along the existing right of way of Battletown Drive and to connect to the SmartScale sidewalk being installed on East Main Street.

8. ESCALATOR CLAUSE:

- 8.1 In the event the monetary contributions set forth in these Proffers are paid to the Town within eighteen (18) months of the approval of this rezoning, as applied for by the Owner, said contributions shall be in the amounts as stated herein. Any monetary contributions set forth in these Proffers which are paid to the Town after eighteen (18) months following the approval of this rezoning shall be adjusted in accordance with the Urban Consumer Price Index ("CPI-U") published by the United States Department of Labor, such that at the time the contributions are paid, they shall be adjusted by the percentage change in the CPI-U from that date eighteen (18) months after the approval of this rezoning to the most recently available CPI-U to the date the contributions are paid, subject to a cap of six percent (6%) per year, non-compounded.

9. EXCLUSION OF PUBLIC PROPERTY FROM PROFFERS:

- 9.1 Any portion of the Properties may hereafter be dedicated for public street purposes (or otherwise conveyed to a public entity) shall, upon such dedication, be excluded

from the terms and conditions of these Proffers and the remainder of the Properties shall continue to be subject to the full force and effect of these Proffers.

10. SEVERABILITY:

10.1 In the event any portion of these Proffers are subsequently determined to be illegal or unenforceable, the remaining Proffers shall continue in full force and effect.

11. BINDING EFFECT:

11.1 These Proffers run with the land and shall be binding upon all heirs, executors, administrators, assigns and successors in interest of the Owners.

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Respectfully submitted,

FRIANT ENTERPRISES #1, LLC

By:
Its:

STATE/Commonwealth of _____, AT LARGE
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____,
2023, by _____, _____ of FRIANT ENTERPRISES #1,
LLC.

NOTARY PUBLIC

My commission expires: _____
Registration number: _____

FRIANT ENTERPRISES #2, LLC

By:
Its:

STATE/Commonwealth of _____, AT LARGE
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____,
2023, by _____, _____ of FRIANT ENTERPRISES #2,
LLC.

NOTARY PUBLIC

My commission expires: _____
Registration number: _____

FRIANT ENTERPRISES #3, LLC

By:
Its:

STATE/Commonwealth of _____, AT LARGE
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____,
2023, by _____, _____ of FRIANT ENTERPRISES #3,
LLC.

NOTARY PUBLIC

My commission expires: _____
Registration number: _____

D.R. HORTON, INC.

By:
Its:

STATE/Commonwealth of _____, AT LARGE
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____,
2023, by _____, _____ of D.R. HORTON, INC.

NOTARY PUBLIC

My commission expires: _____
Registration number: _____

**Friant Property
Town of Berryville, Virginia**

Fiscal Impact Analysis

Prepared By:

MUNICAP, INC.
— PUBLIC FINANCE —

November 3, 2023

Friant Property Town of Berryville, Virginia

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**Friant Property
Town of Berryville, Virginia**

Summary of Fiscal Impacts

<i>Fiscal Impacts to the Town of Berryville</i>	Cumulative Impacts	
	Annual Impacts ¹	30 Years ²
Real property tax revenues (residential)	\$224,132	\$8,221,721
Personal property tax revenues (vehicles)	\$169,738	\$6,408,397
Vehicle license fees	\$11,045	\$300,890
Utility tax revenues	\$14,256	\$388,368
Additional tax revenues	\$56,092	\$2,117,719
Total projected tax revenues to the Town of Berryville	\$475,263	\$17,437,095
Projected Town of Berryville expenditures	(\$132,789)	(\$5,013,391)
Net new revenues to the Town of Berryville	\$342,474	\$12,423,704
		Schedule III-B
		Schedule VII
		Schedule VII
		Schedule VII
		Schedule VI-B
		Schedule VII
		Schedule IX
		Schedule IX

Temporary Jobs from Construction³

<i>Temporary Construction Employment Impacts:</i>	Temporary Jobs from Construction ³ (Jobs and Income)		
	Temporary Jobs	Annual Income	Income per Employee
Temporary:			
Direct impacts (full time equivalents)	697	\$44,539,714	\$63,922
Indirect and induced impacts	122	\$5,342,736	\$43,655
Total temporary impacts	819	\$49,882,449	

MuniCap, Inc.

3-Nov-23

¹Represents stabilized annual impacts, excluding inflation.

²Represents cumulative impacts over the period shown, including inflation.

³Jobs and wages represent one year duration of construction employees. See Appendix D.

**Friant Property
Town of Berryville, Virginia**

Development Summary

**Friant Property
Town of Berryville, Virginia**

Schedule I: Summary of Proposed Development

Property Type	Property Area ¹		Estimated Assessed Value ²		Total Estimated Assessed Value	
	Units	GSF Per Unit	GSF	Per Unit	Per SF	Assessed Value
Residential Single-family detached	198	2,500	495,000	\$565,990	\$226	\$112,066,020
Total	198		495,000			\$112,066,020

MunitCap, Inc.

3-Nov-23

¹Based on information provided by DR Horton.

²See Appendix C.

*Friant Property
Town of Berryville, Virginia*

Schedule II: Projected Construction Completion¹

Development Year Ending	Single-Family Detached			
	Units	Cumulative	GSF	Cumulative
31-Dec-23	0	0	0	0
31-Dec-24	0	0	0	0
31-Dec-25	98	98	245,000	245,000
31-Dec-26	50	148	125,000	370,000
31-Dec-27	50	198	125,000	495,000
31-Dec-28	0	198	0	495,000
31-Dec-29	0	198	0	495,000
31-Dec-30	0	198	0	495,000
31-Dec-31	0	198	0	495,000
31-Dec-32	0	198	0	495,000
31-Dec-33	0	198	0	495,000
31-Dec-34	0	198	0	495,000
31-Dec-35	0	198	0	495,000
31-Dec-36	0	198	0	495,000
31-Dec-37	0	198	0	495,000
31-Dec-38	0	198	0	495,000
31-Dec-39	0	198	0	495,000
31-Dec-40	0	198	0	495,000
31-Dec-41	0	198	0	495,000
31-Dec-42	0	198	0	495,000
31-Dec-43	0	198	0	495,000
31-Dec-44	0	198	0	495,000
31-Dec-45	0	198	0	495,000
31-Dec-46	0	198	0	495,000
31-Dec-47	0	198	0	495,000
31-Dec-48	0	198	0	495,000
31-Dec-49	0	198	0	495,000
31-Dec-50	0	198	0	495,000
31-Dec-51	0	198	0	495,000
31-Dec-52	0	198	0	495,000
Total	198		495,000	

MuniCap, Inc.

3-Nov-23

¹Based on information provided by DR Horton.

**Friant Property
Town of Berryville, Virginia**

Projected Fiscal Impacts

Friant Property
Town of Berryville, Virginia

Schedule III-A: Projected Real Property Tax - Projected Assessed Value

Development Year Ending	Assessed As Of ¹	Tax Due Date ²	Fiscal Year Ending ²	Inflation Factor ³	Single-Family Detached		
					Units ⁴	Value Per Unit ⁵	Total Assessed Value
31-Dec-23	1-Jan-24	5-Dec-24	30-Jun-25	100.0%	0	\$565,990	\$0
31-Dec-24	1-Jan-25	5-Dec-25	30-Jun-26	100.0%	0	\$565,990	\$0
31-Dec-25	1-Jan-26	5-Dec-26	30-Jun-27	100.0%	98	\$565,990	\$55,467,020
31-Dec-26	1-Jan-27	5-Dec-27	30-Jun-28	100.0%	148	\$565,990	\$83,766,520
31-Dec-27	1-Jan-28	5-Dec-28	30-Jun-29	108.2%	198	\$612,646	\$121,303,864
31-Dec-28	1-Jan-29	5-Dec-29	30-Jun-30	108.2%	198	\$612,646	\$121,303,864
31-Dec-29	1-Jan-30	5-Dec-30	30-Jun-31	108.2%	198	\$612,646	\$121,303,864
31-Dec-30	1-Jan-31	5-Dec-31	30-Jun-32	108.2%	198	\$612,646	\$121,303,864
31-Dec-31	1-Jan-32	5-Dec-32	30-Jun-33	117.2%	198	\$663,147	\$131,303,204
31-Dec-32	1-Jan-33	5-Dec-33	30-Jun-34	117.2%	198	\$663,147	\$131,303,204
31-Dec-33	1-Jan-34	5-Dec-34	30-Jun-35	117.2%	198	\$663,147	\$131,303,204
31-Dec-34	1-Jan-35	5-Dec-35	30-Jun-36	117.2%	198	\$663,147	\$131,303,204
31-Dec-35	1-Jan-36	5-Dec-36	30-Jun-37	126.8%	198	\$717,812	\$142,126,810
31-Dec-36	1-Jan-37	5-Dec-37	30-Jun-38	126.8%	198	\$717,812	\$142,126,810
31-Dec-37	1-Jan-38	5-Dec-38	30-Jun-39	126.8%	198	\$717,812	\$142,126,810
31-Dec-38	1-Jan-39	5-Dec-39	30-Jun-40	126.8%	198	\$717,812	\$142,126,810
31-Dec-39	1-Jan-40	5-Dec-40	30-Jun-41	137.3%	198	\$776,983	\$153,842,630
31-Dec-40	1-Jan-41	5-Dec-41	30-Jun-42	137.3%	198	\$776,983	\$153,842,630
31-Dec-41	1-Jan-42	5-Dec-42	30-Jun-43	137.3%	198	\$776,983	\$153,842,630
31-Dec-42	1-Jan-43	5-Dec-43	30-Jun-44	137.3%	198	\$776,983	\$153,842,630
31-Dec-43	1-Jan-44	5-Dec-44	30-Jun-45	148.6%	198	\$841,031	\$166,524,211
31-Dec-44	1-Jan-45	5-Dec-45	30-Jun-46	148.6%	198	\$841,031	\$166,524,211
31-Dec-45	1-Jan-46	5-Dec-46	30-Jun-47	148.6%	198	\$841,031	\$166,524,211
31-Dec-46	1-Jan-47	5-Dec-47	30-Jun-48	148.6%	198	\$841,031	\$166,524,211
31-Dec-47	1-Jan-48	5-Dec-48	30-Jun-49	160.8%	198	\$910,359	\$180,251,161
31-Dec-48	1-Jan-49	5-Dec-49	30-Jun-50	160.8%	198	\$910,359	\$180,251,161
31-Dec-49	1-Jan-50	5-Dec-50	30-Jun-51	160.8%	198	\$910,359	\$180,251,161
31-Dec-50	1-Jan-51	5-Dec-51	30-Jun-52	160.8%	198	\$910,359	\$180,251,161
31-Dec-51	1-Jan-52	5-Dec-52	30-Jun-53	174.1%	198	\$985,402	\$195,109,654
31-Dec-52	1-Jan-53	5-Dec-53	30-Jun-54	174.1%	198	\$985,402	\$195,109,654

3-Nov-23

MuniCap, Inc.

¹Real property is assessed for taxation as of January 1. Real property taxes are paid in two installments, on June 5 and on December 5. Source: Town of Berryville Town Office.

²Property assessed as of January 1, 2024 will pay its final property tax payment of the year on December 5, 2024, which corresponds with fiscal year ending June 30, 2025.

³Assumes an annual inflation rate of 2%. Inflation rate accounts for increasing assessed value. The Town of Berryville calculates real estate property tax using assessments provided by the Clarke County Commissioner of the Revenue. Property in Clarke County is reassessed every four years; as a result, the inflation factor is set to adjust in the years of revaluation. The last revaluation went into effect in 2020. Source: Clarke County Commissioner of the Revenue office.

⁴See Schedule II.

⁵See Schedule I.

*Friant Property
Town of Berryville, Virginia*

Schedule III-B: Projected Real Property Tax - Projected Tax Revenues

Development Year Ending	Assessed As Of ¹	Final Tax Date ²	Fiscal Year Ending ²	Inflation Factor ³	Total Estimated Assessed Value ⁴	Town Tax Rate Per \$100 A.V. ⁵	Estimated Real Property Tax Revenues
31-Dec-23	1-Jan-24	5-Dec-24	30-Jun-25	100.0%	\$0	\$0.2000	\$0
31-Dec-24	1-Jan-25	5-Dec-25	30-Jun-26	100.0%	\$0	\$0.2000	\$0
31-Dec-25	1-Jan-26	5-Dec-26	30-Jun-27	100.0%	\$55,467,020	\$0.2000	\$110,934
31-Dec-26	1-Jan-27	5-Dec-27	30-Jun-28	100.0%	\$83,766,520	\$0.2000	\$167,533
31-Dec-27	1-Jan-28	5-Dec-28	30-Jun-29	108.2%	\$121,303,864	\$0.2000	\$242,608
31-Dec-28	1-Jan-29	5-Dec-29	30-Jun-30	108.2%	\$121,303,864	\$0.2000	\$242,608
31-Dec-29	1-Jan-30	5-Dec-30	30-Jun-31	108.2%	\$121,303,864	\$0.2000	\$242,608
31-Dec-30	1-Jan-31	5-Dec-31	30-Jun-32	108.2%	\$121,303,864	\$0.2000	\$242,608
31-Dec-31	1-Jan-32	5-Dec-32	30-Jun-33	117.2%	\$131,303,204	\$0.2000	\$262,606
31-Dec-32	1-Jan-33	5-Dec-33	30-Jun-34	117.2%	\$131,303,204	\$0.2000	\$262,606
31-Dec-33	1-Jan-34	5-Dec-34	30-Jun-35	117.2%	\$131,303,204	\$0.2000	\$262,606
31-Dec-34	1-Jan-35	5-Dec-35	30-Jun-36	117.2%	\$131,303,204	\$0.2000	\$262,606
31-Dec-35	1-Jan-36	5-Dec-36	30-Jun-37	126.8%	\$142,126,810	\$0.2000	\$284,254
31-Dec-36	1-Jan-37	5-Dec-37	30-Jun-38	126.8%	\$142,126,810	\$0.2000	\$284,254
31-Dec-37	1-Jan-38	5-Dec-38	30-Jun-39	126.8%	\$142,126,810	\$0.2000	\$284,254
31-Dec-38	1-Jan-39	5-Dec-39	30-Jun-40	126.8%	\$142,126,810	\$0.2000	\$284,254
31-Dec-39	1-Jan-40	5-Dec-40	30-Jun-41	137.3%	\$153,842,630	\$0.2000	\$307,685
31-Dec-40	1-Jan-41	5-Dec-41	30-Jun-42	137.3%	\$153,842,630	\$0.2000	\$307,685
31-Dec-41	1-Jan-42	5-Dec-42	30-Jun-43	137.3%	\$153,842,630	\$0.2000	\$307,685
31-Dec-42	1-Jan-43	5-Dec-43	30-Jun-44	137.3%	\$153,842,630	\$0.2000	\$307,685
31-Dec-43	1-Jan-44	5-Dec-44	30-Jun-45	148.6%	\$166,524,211	\$0.2000	\$333,048
31-Dec-44	1-Jan-45	5-Dec-45	30-Jun-46	148.6%	\$166,524,211	\$0.2000	\$333,048
31-Dec-45	1-Jan-46	5-Dec-46	30-Jun-47	148.6%	\$166,524,211	\$0.2000	\$333,048
31-Dec-46	1-Jan-47	5-Dec-47	30-Jun-48	148.6%	\$166,524,211	\$0.2000	\$333,048
31-Dec-47	1-Jan-48	5-Dec-48	30-Jun-49	160.8%	\$180,251,161	\$0.2000	\$360,502
31-Dec-48	1-Jan-49	5-Dec-49	30-Jun-50	160.8%	\$180,251,161	\$0.2000	\$360,502
31-Dec-49	1-Jan-50	5-Dec-50	30-Jun-51	160.8%	\$180,251,161	\$0.2000	\$360,502
31-Dec-50	1-Jan-51	5-Dec-51	30-Jun-52	160.8%	\$180,251,161	\$0.2000	\$360,502
31-Dec-51	1-Jan-52	5-Dec-52	30-Jun-53	174.1%	\$195,109,654	\$0.2000	\$390,219
31-Dec-52	1-Jan-53	5-Dec-53	30-Jun-54	174.1%	\$195,109,654	\$0.2000	\$390,219
Total							\$8,221,721

3-Nov-23

MuniCap, Inc.

¹Real property is assessed for taxation as of January 1. Real property taxes are paid in two installments, on June 5 and on December 5. Source: Town of Berryville Town Office.

²Property assessed as of January 1, 2024 will pay its final property tax payment of the year on December 5, 2024, which corresponds with fiscal year ending June 30, 2025.

³Assumes an annual inflation rate of 2%. Inflation rate accounts for increasing assessed value. The Town of Berryville calculates real estate property tax using assessments provided by the Clarke County Commissioner of the Revenue. Property in Clarke County is reassessed every four years; as a result, the inflation factor is set to adjust in the years of revaluation. The last revaluation went into effect in 2020. Source: Clarke County Commissioner of the Revenue office.

⁴See Schedule III-A.

⁵Represents the rate for tax year 2023. Source: Town of Berryville, Virginia Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

**Friant Property
Town of Berryville, Virginia**

Schedule IV-A. Projected Personal Property Tax Revenues from Vehicles and License Fees - Annual

Table 1: Estimated Personal Property Tax Revenues - Vehicles

Development Type	Estimated No. of Units	Number of Vehicles		Assessed Value Per Vehicle ^{2,3}	Town Personal Property Tax Rate (Per \$100)	Projected Personal Property Tax	Property Tax per Vehicle		Total Personal Property Tax Revenue from Vehicles ¹
		Estimated Vehicles Per Household ¹	Estimated No. of Vehicles				Effective Personal Property Tax	PPTRA Tax Credit (0%) ^{5,7}	
Single-family detached	198	2.23	442	\$30,736	\$1.25	\$584	\$0	\$384	\$169,738

Table 2: Estimated Vehicle License Fees

Development Type	Estimated No. of Units	Estimated Vehicles Per Household ¹	Estimated No. of Vehicles	Annual Vehicle License Fees ⁵	Total Estimated Vehicle License Fees ⁵
Single-family detached	198	2.23	442	\$25	\$11,045

Table 3: Total Vehicle-Related Revenues

Development Type	Total Personal Property Tax Revenue	Total Estimated Vehicle License Fees	Total Taxes and Fees
Single-family detached	\$169,738	\$11,045	\$180,783

MuniCap, Inc.

3-Nov-23

¹Based on average number of vehicles per owner-occupied units in the Town of Berryville. Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates.

²Average retail selling price (\$30,736) of used vehicles sold as of December 2022. Source: NADA Annual Report 2022.

³The Town of Berryville appraises personal property at 100% of the fair market value of cars. Source: Town of Berryville, Virginia, Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

⁴Represents the Fiscal Year 2023 tax rate. Source: Town of Berryville, Virginia Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

⁵Pursuant to Title 58, Chapter 35.1 of the Code of Virginia, tax relief set by the taxing jurisdiction is provided on qualifying vehicles with an assessed value under \$20,000. The assumed average retail sales price is \$30,736, however for purposes of estimating taxes the State cap of \$20,000 is assumed. The taxing jurisdiction is ultimately reimbursed for this relief by the State of Virginia and therefore this relief is not included as a deduction in revenue generation.

⁶Figure assumes full build-out and is expressed in current dollars.

⁷For tax year the Town Council approved a 70% credit of all qualified vehicles.

⁸Source: Town of Berryville, Virginia, Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

Triant Property
Town of Berryville, Virginia

Schedule IV-B: Projected Personal Property Tax Revenues and Fees from Vehicles - 30 Years

Revenue Period Ending	Tax Due Date ¹	Fiscal Year Ending ¹	Inflation Factor ²	Personal Property Tax Revenues ³	Vehicles License Fees ³	Total
31-Dec-23	5-Dec-24	30-Jun-25	100.0%	\$0	\$0	\$0
31-Dec-24	5-Dec-25	30-Jun-26	102.0%	\$0	\$0	\$0
31-Dec-25	5-Dec-26	30-Jun-27	104.0%	\$87,406	\$5,467	\$92,872
31-Dec-26	5-Dec-27	30-Jun-28	106.1%	\$134,641	\$8,256	\$142,896
31-Dec-27	5-Dec-28	30-Jun-29	108.2%	\$183,730	\$11,045	\$194,775
31-Dec-28	5-Dec-29	30-Jun-30	110.4%	\$187,404	\$11,045	\$198,449
31-Dec-29	5-Dec-30	30-Jun-31	112.6%	\$191,153	\$11,045	\$202,197
31-Dec-30	5-Dec-31	30-Jun-32	114.9%	\$194,976	\$11,045	\$206,020
31-Dec-31	5-Dec-32	30-Jun-33	117.2%	\$198,875	\$11,045	\$209,920
31-Dec-32	5-Dec-33	30-Jun-34	119.5%	\$202,853	\$11,045	\$213,898
31-Dec-33	5-Dec-34	30-Jun-35	121.9%	\$206,910	\$11,045	\$217,955
31-Dec-34	5-Dec-35	30-Jun-36	124.3%	\$211,048	\$11,045	\$222,093
31-Dec-35	5-Dec-36	30-Jun-37	126.8%	\$215,269	\$11,045	\$226,314
31-Dec-36	5-Dec-37	30-Jun-38	129.4%	\$219,574	\$11,045	\$230,619
31-Dec-37	5-Dec-38	30-Jun-39	131.9%	\$223,966	\$11,045	\$235,011
31-Dec-38	5-Dec-39	30-Jun-40	134.6%	\$228,445	\$11,045	\$239,490
31-Dec-39	5-Dec-40	30-Jun-41	137.3%	\$233,014	\$11,045	\$244,059
31-Dec-40	5-Dec-41	30-Jun-42	140.0%	\$237,674	\$11,045	\$248,719
31-Dec-41	5-Dec-42	30-Jun-43	142.8%	\$242,428	\$11,045	\$253,473
31-Dec-42	5-Dec-43	30-Jun-44	145.7%	\$247,276	\$11,045	\$258,321
31-Dec-43	5-Dec-44	30-Jun-45	148.6%	\$252,222	\$11,045	\$263,267
31-Dec-44	5-Dec-45	30-Jun-46	151.6%	\$257,266	\$11,045	\$268,311
31-Dec-45	5-Dec-46	30-Jun-47	154.6%	\$262,411	\$11,045	\$273,456
31-Dec-46	5-Dec-47	30-Jun-48	157.7%	\$267,660	\$11,045	\$278,705
31-Dec-47	5-Dec-48	30-Jun-49	160.8%	\$273,013	\$11,045	\$284,058
31-Dec-48	5-Dec-49	30-Jun-50	164.1%	\$278,473	\$11,045	\$289,518
31-Dec-49	5-Dec-50	30-Jun-51	167.3%	\$284,043	\$11,045	\$295,088
31-Dec-50	5-Dec-51	30-Jun-52	170.7%	\$289,723	\$11,045	\$300,768
31-Dec-51	5-Dec-52	30-Jun-53	174.1%	\$295,518	\$11,045	\$306,563
31-Dec-52	5-Dec-53	30-Jun-54	177.6%	\$301,428	\$11,045	\$312,473
Total						\$6,709,287

miCap, Inc.

3-Nov-23

¹Personal property for tax year 2023 will pay its final property tax payment on December 5, 2024. Source: Town of Berryville Town Office. This corresponds with fiscal year ending June 30, 2025.

²Personal property tax revenues have an assumed inflation rate of 2%. Vehicle license fees have an assumed inflation rate of 0%.

³See Schedule IV-A.

**Friant Property
Town of Berryville, Virginia**

Schedule V-A: Projected Utility Tax Revenues - Electric

Table 1: Annual Electric Utility Tax Revenue - Consumption Utility Tax Revenue

Property Use	Estimated No. of Units ¹	Average Annual Electric Consumption Per Unit ² (kWh)	Total Annual Electric Consumption (kWh)	Town Electric Utility Tax Rate ³	Annual Electric Utility Tax Revenue	Months Per Year	Monthly Tax Revenue Per Unit
Single-family detached	198	12,402	2,455,596	\$0.003540	\$8,693	12	\$3.66

Table 2: Annual Electric Utility Tax Revenue - Determination of Maximum

Property Use	Electric Utility Tax Revenue Per Unit	
	Monthly Tax	Residential Cap Revenue Per Unit ³
Single-family detached	\$3.66	\$3.00

Table 3: Annual Electric Utility Tax Revenue - Projected Total Annual Electric Utility Tax Revenue

Property Use	Monthly Tax Revenue Per Unit	New Units ¹	Total Monthly Revenue	Months Per Year	Total Annual Electric Utility Tax Revenue ⁴
Single-family detached	\$3.00	198	\$594.00	12	\$7,128

MuniCorp, Inc.

3-Nov-23

¹See Schedule I.

²Based on national average consumption for single-family detached. Source: U.S. Energy Information Administration 2020 Annual household site fuel consumption in the U.S. - totals and averages, 2020.

³Residential consumers are subject to an electric utility rate of \$0.003540 on each kWh delivered monthly, not to exceed a maximum of three dollars (\$3.00). Source: Town of Berryville, Virginia Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

⁴Figure assumes full build-out and is expressed in current dollars.

**Friant Property
Town of Berryville, Virginia**

Schedule V-B: Projected Utility Tax Revenues - Natural Gas

Table 1: Annual Natural Gas Utility Tax Revenue - Consumption Utility Tax Revenue

Property Use	Estimated No. of Units ¹	Average Annual Natural Gas Consumption Per Unit ² (CCF)	Total Annual Natural Gas Consumption (CCF)	Town Natural Gas Utility Tax Rate ³	Annual Natural Gas Utility Tax Revenue	Months Per Year	Monthly Tax Revenue Per Unit
Single-family detached	198	671	132,858	\$0.210000	\$27,900	12	\$11.74

Table 2: Annual Natural Gas Utility Tax Revenue - Determination of Maximum

Natural Gas Utility Tax Revenue Per Unit	Residential Cap
Monthly Tax Revenue Per Unit	Per Unit ³
Single-family detached	\$3.00

Table 3: Annual Natural Gas Utility Tax Revenue - Projected Total Annual Natural Gas Utility Tax Revenue

Property Use	Monthly Tax Revenue Per Unit	New Units ¹	Total Monthly Revenue	Months Per Year	Total Annual Natural Gas Utility Tax Revenue ⁴
Single-family detached	\$3.00	198	\$594.00	12	\$7,128

MiniCap, Inc.

3-Nov-23

¹See Schedule I.

²Based on national average consumption for single-family detached. Source: U.S. Energy Information Administration 2020 Annual household site fuel consumption in the U.S. - totals and averages, 2020.

³Residential consumers are subject to a natural gas utility rate of \$0.210 on each CCF delivered monthly, not to exceed a maximum of three dollars (\$3.00). Source: Town of Berryville, Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

⁴Figure assumes full build-out and is expressed in current dollars.

*Friant Property
Town of Berryville, Virginia*

Schedule V-C: Projected Utility Tax Revenues - Total Over 30 Years

Revenue Period Ending	Fiscal Year Ending	Inflation Factor ¹	Projected Utility Tax Revenues		
			Electric	Gas	Total
31-Dec-23	30-Jun-25	100.0%	\$0	\$0	\$0
31-Dec-24	30-Jun-26	100.0%	\$0	\$0	\$0
31-Dec-25	30-Jun-27	100.0%	\$3,528	\$3,528	\$7,056
31-Dec-26	30-Jun-28	100.0%	\$5,328	\$5,328	\$10,656
31-Dec-27	30-Jun-29	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-28	30-Jun-30	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-29	30-Jun-31	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-30	30-Jun-32	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-31	30-Jun-33	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-32	30-Jun-34	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-33	30-Jun-35	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-34	30-Jun-36	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-35	30-Jun-37	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-36	30-Jun-38	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-37	30-Jun-39	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-38	30-Jun-40	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-39	30-Jun-41	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-40	30-Jun-42	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-41	30-Jun-43	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-42	30-Jun-44	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-43	30-Jun-45	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-44	30-Jun-46	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-45	30-Jun-47	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-46	30-Jun-48	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-47	30-Jun-49	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-48	30-Jun-50	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-49	30-Jun-51	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-50	30-Jun-52	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-51	30-Jun-53	100.0%	\$7,128	\$7,128	\$14,256
31-Dec-52	30-Jun-54	100.0%	\$7,128	\$7,128	\$14,256
Total			\$194,184	\$194,184	\$388,368

MuniCap, Inc.

3-Nov-23

¹Assumes an annual inflation rate of 0%. Based on a review of available data going back to 2019, the Town of Berryville has not raised utility tax rates. Source: Town of Berryville, Virginia Fiscal Year 2019 Operating Budget and Capital Improvement Plan 2019-2023.

²See Schedules V-A and V-B. Revenues are shown over time, based on the anticipated absorption of the development. See Schedule II for absorption.

**Friant Property
Town of Berryville, Virginia**

Schedule VI-A: Projected Additional Revenues to the Town of Berryville - Annual

Annual Revenues ¹	Current County Revenues ²	Basis for Projecting Revenues ³	Current County Service Factors ⁴	Revenues by Factor ³ Service Population	Projected Increase in Service Factor ⁵	Total Additional Revenues ⁶
Fund balance forward	\$0	not impacted	-	-	-	-
Current real estate taxes	\$1,355,575	Schedule III-B	-	-	-	-
Delinquent real estate taxes	-	not impacted	-	-	-	-
Utility real estate taxes	\$11,200	not impacted	-	-	-	-
Current personal property taxes	\$440,000	Schedule IV	-	-	-	-
Delinquent personal property taxes	-	not impacted	-	-	-	-
Refuse collection (extra totes)	\$13,000	not impacted	-	-	-	-
Machinery and tools	\$175,000	not impacted	-	-	-	-
Tax penalties	\$8,000	not impacted	-	-	-	-
Tax interest	\$2,000	not impacted	-	-	-	-
Local sales tax	\$280,000	service population	6,697	\$42	552	\$23,097
Consumer utility tax	\$100,000	Schedule V-C	-	-	-	-
Business license	\$240,000	not impacted	-	-	-	-
Rec franchise fees	\$35,000	not impacted	-	-	-	-
Auto license	\$102,000	Schedule IV	-	-	-	-
Bank franchise tax	\$150,000	not impacted	-	-	-	-
Cigarette tax	\$13,000	not impacted	-	-	-	-
Lodging tax	\$10,000	not impacted	-	-	-	-
Meals tax (4%)	\$400,000	service population	6,697	\$60	552	\$32,995
Land use application fees	\$1,000	not impacted	-	-	-	-
Zoning & subdivision fees	\$10,000	not impacted	-	-	-	-
Court fines	\$12,000	not impacted	-	-	-	-
Parking meter fines	\$2,000	not impacted	-	-	-	-
Essumons	\$1,000	not impacted	-	-	-	-
Interest on deposits	\$95,000	not impacted	-	-	-	-
Rental of property	\$12,500	not impacted	-	-	-	-
Water tank site lease	\$86,000	not impacted	-	-	-	-
Charge card rebate	\$17,000	not impacted	-	-	-	-
Parking meters	\$8,000	not impacted	-	-	-	-
Sale of publications	-	not impacted	-	-	-	-
Miscellaneous revenues	\$5,000	not impacted	-	-	-	-
Recovered costs	-	not impacted	-	-	-	-
Revenue from Commonwealth	\$949,172	not impacted	-	-	-	-
Revenue from Federal government	-	not impacted	-	-	-	-
Revenue from other sources	\$1,000	not impacted	-	-	-	-
	\$4,504,447			\$102		\$56,092

MuniCorp, Inc.

3,166-23

¹ Not all sources of revenues are expected to be impacted as a result of the project. Revenues shown represent general fund revenues only.

² Source: Town of Berryville, Virginia FY 2024 Operating Budget & Capital Improvement Program FY 2024-2028.

³ Method of apportioning revenues: Per service revenues are calculated by taking current revenues and apportioning them among the current service population.

⁴ Represents current statistics for the Town. See Appendix A.

⁵ Represents projected increase to the Town as a result of the proposed development. See Appendix A.

⁶ Represents total increase in revenues as a result of proposed project on an annual basis. Figures assume full build-out and are expressed in current dollars.

*Friant Property
Town of Berryville, Virginia*

Schedule VI-B: Projected Additional Revenues to the Town of Berryville - 30 Years

Development Year Ending	Fiscal Year Ending	Inflation Factor ¹	Projected Additional Revenues to the Town of Berryville		
			Service Population Revenues		Total Service Population Revenues
			Revenues Per Service Population ²	Anticipated Service Population ³	
31-Dec-23	30-Jun-25	100.0%	\$102	0	\$0
31-Dec-24	30-Jun-26	102.0%	\$104	0	\$0
31-Dec-25	30-Jun-27	104.0%	\$106	273	\$28,884
31-Dec-26	30-Jun-28	106.1%	\$108	413	\$44,493
31-Dec-27	30-Jun-29	108.2%	\$110	552	\$60,715
31-Dec-28	30-Jun-30	110.4%	\$112	552	\$61,930
31-Dec-29	30-Jun-31	112.6%	\$114	552	\$63,168
31-Dec-30	30-Jun-32	114.9%	\$117	552	\$64,432
31-Dec-31	30-Jun-33	117.2%	\$119	552	\$65,720
31-Dec-32	30-Jun-34	119.5%	\$121	552	\$67,035
31-Dec-33	30-Jun-35	121.9%	\$124	552	\$68,375
31-Dec-34	30-Jun-36	124.3%	\$126	552	\$69,743
31-Dec-35	30-Jun-37	126.8%	\$129	552	\$71,138
31-Dec-36	30-Jun-38	129.4%	\$131	552	\$72,560
31-Dec-37	30-Jun-39	131.9%	\$134	552	\$74,012
31-Dec-38	30-Jun-40	134.6%	\$137	552	\$75,492
31-Dec-39	30-Jun-41	137.3%	\$139	552	\$77,002
31-Dec-40	30-Jun-42	140.0%	\$142	552	\$78,542
31-Dec-41	30-Jun-43	142.8%	\$145	552	\$80,113
31-Dec-42	30-Jun-44	145.7%	\$148	552	\$81,715
31-Dec-43	30-Jun-45	148.6%	\$151	552	\$83,349
31-Dec-44	30-Jun-46	151.6%	\$154	552	\$85,016
31-Dec-45	30-Jun-47	154.6%	\$157	552	\$86,717
31-Dec-46	30-Jun-48	157.7%	\$160	552	\$88,451
31-Dec-47	30-Jun-49	160.8%	\$163	552	\$90,220
31-Dec-48	30-Jun-50	164.1%	\$167	552	\$92,024
31-Dec-49	30-Jun-51	167.3%	\$170	552	\$93,865
31-Dec-50	30-Jun-52	170.7%	\$173	552	\$95,742
31-Dec-51	30-Jun-53	174.1%	\$177	552	\$97,657
31-Dec-52	30-Jun-54	177.6%	\$180	552	\$99,610
Total					\$2,117,719

MuniCap, Inc.

3-Nov-23

¹Assumes an annual inflation rate of 2%.

²See Schedule VI-A.

³See Appendix B.

**Friant Property
Town of Berryville, Virginia**

Schedule VII: Total Projected Revenues to the Town of Berryville

Fiscal Year	Inflation Factor	Projected Real Property Tax (Schedule III-B)	Projected Vehicle Personal Property Tax (Schedule IV) ¹	Projected Vehicle License Fee (Schedule IV) ¹	Projected Utility Tax Revenues (Schedule V-C)	Projected Additional Tax Revenues (Schedule VI-B)	Total Projected Revenues
30-Jun-25	100.0%	\$0	\$0	\$0	\$0	\$0	\$0
30-Jun-26	102.0%	\$0	\$0	\$0	\$0	\$0	\$0
30-Jun-27	104.0%	\$110,934	\$87,406	\$5,467	\$7,056	\$28,884	\$239,747
30-Jun-28	106.1%	\$167,533	\$134,641	\$8,256	\$10,656	\$44,493	\$365,579
30-Jun-29	108.2%	\$242,608	\$183,730	\$11,045	\$14,256	\$60,715	\$512,354
30-Jun-30	110.4%	\$242,608	\$187,404	\$11,045	\$14,256	\$61,930	\$517,243
30-Jun-31	112.6%	\$242,608	\$191,153	\$11,045	\$14,256	\$63,168	\$522,229
30-Jun-32	114.9%	\$242,608	\$194,976	\$11,045	\$14,256	\$64,432	\$527,316
30-Jun-33	117.2%	\$262,606	\$198,875	\$11,045	\$14,256	\$65,720	\$552,503
30-Jun-34	119.5%	\$262,606	\$202,853	\$11,045	\$14,256	\$67,035	\$557,795
30-Jun-35	121.9%	\$262,606	\$206,910	\$11,045	\$14,256	\$68,375	\$563,192
30-Jun-36	124.3%	\$262,606	\$211,048	\$11,045	\$14,256	\$69,743	\$568,698
30-Jun-37	126.8%	\$284,254	\$215,269	\$11,045	\$14,256	\$71,138	\$595,961
30-Jun-38	129.4%	\$284,254	\$219,574	\$11,045	\$14,256	\$72,560	\$601,689
30-Jun-39	131.9%	\$284,254	\$223,966	\$11,045	\$14,256	\$74,012	\$607,532
30-Jun-40	134.6%	\$284,254	\$228,445	\$11,045	\$14,256	\$75,492	\$613,491
30-Jun-41	137.3%	\$307,685	\$233,014	\$11,045	\$14,256	\$77,002	\$643,002
30-Jun-42	140.0%	\$307,685	\$237,674	\$11,045	\$14,256	\$78,542	\$649,202
30-Jun-43	142.8%	\$307,685	\$242,428	\$11,045	\$14,256	\$80,113	\$655,526
30-Jun-44	145.7%	\$307,685	\$247,276	\$11,045	\$14,256	\$81,715	\$661,977
30-Jun-45	148.6%	\$333,048	\$252,222	\$11,045	\$14,256	\$83,349	\$693,920
30-Jun-46	151.6%	\$333,048	\$257,266	\$11,045	\$14,256	\$85,016	\$700,632
30-Jun-47	154.6%	\$333,048	\$262,411	\$11,045	\$14,256	\$86,717	\$707,477
30-Jun-48	157.7%	\$333,048	\$267,660	\$11,045	\$14,256	\$88,451	\$714,460
30-Jun-49	160.8%	\$360,502	\$273,013	\$11,045	\$14,256	\$90,220	\$749,036
30-Jun-50	164.1%	\$360,502	\$278,473	\$11,045	\$14,256	\$92,024	\$756,301
30-Jun-51	167.3%	\$360,502	\$284,043	\$11,045	\$14,256	\$93,865	\$763,711
30-Jun-52	170.7%	\$360,502	\$289,723	\$11,045	\$14,256	\$95,742	\$771,269
30-Jun-53	174.1%	\$390,219	\$295,518	\$11,045	\$14,256	\$97,657	\$808,695
30-Jun-54	177.6%	\$390,219	\$301,428	\$11,045	\$14,256	\$99,610	\$816,559
Total		\$8,221,721	\$6,408,397	\$300,890	\$388,568	\$2,117,719	\$17,437,095

MaintCap, Inc. 3-Nov-23

¹Revenues were phased in with absorption. See Schedule II.

**Friant Property
Town of Berryville, Virginia**

Schedule VIII-A: Projected Additional Expenditures to the Town of Berryville - Annual

Annual Expenditures ¹	Current Town Expenditures ²	Basis for Projecting Expenditures ³	Current Town Service Factors ⁴	Expenditures by Factor ³ Per Resident	Projected Increase in Service Factor ⁵	Total Additional Expenditures ⁶
Town council	\$34,350	not impacted	-	-	-	-
Town clerk	\$7,550	not impacted	-	-	-	-
Town manager	\$142,000	not impacted	-	-	-	-
Legal services	\$50,000	not impacted	-	-	-	-
Personnel	\$467,430	not impacted	-	-	-	-
Independent auditor	\$20,000	not impacted	-	-	-	-
Town treasurer	\$98,200	not impacted	-	-	-	-
Finance/accounting	\$143,100	not impacted	-	-	-	-
Central admin/purchasing	\$120,950	not impacted	-	-	-	-
Risk management	\$65,500	not impacted	-	-	-	-
Engineering services	\$5,000	not impacted	-	-	-	-
Elections	\$4,000	not impacted	-	-	-	-
Public defender fees	\$2,000	not impacted	-	-	-	-
Police department	\$881,750	service population	6,697	\$132	552	\$72,734
Traffic control	\$2,500	not impacted	-	-	-	-
Emergency services	\$5,000	service population	6,697	\$1	552	\$412
Volunteer fire department	\$58,500	service population	6,697	\$9	552	\$4,826
Correction and detention	-	not impacted	-	-	-	-
Public works administration	\$73,100	not impacted	-	-	-	-
Highways, streets, bridge and sidewalks	\$286,000	service population	6,697	\$43	552	\$23,591
VDOT street maintenance	\$503,000	not impacted	-	-	-	-
Street lights	\$90,000	not impacted	-	-	-	-
Snow removal	\$22,000	not impacted	-	-	-	-
Parking meters and lots	\$2,000	not impacted	-	-	-	-
Street and road cleaning	-	not impacted	-	-	-	-
Refuse collection	\$350,000	service population	6,697	\$52	552	\$28,871
Refuse disposal	\$50,000	not impacted	-	-	-	-
General properties	\$52,100	not impacted	-	-	-	-
Building services	\$79,900	not impacted	-	-	-	-
Parks and recreation	\$19,500	per resident	4,574	\$4	552	\$2,355
Planning	\$107,950	not impacted	-	-	-	-
Board of zoning appeals	\$1,250	not impacted	-	-	-	-
Economic development	\$27,500	not impacted	-	-	-	-
Planning commission	\$6,500	not impacted	-	-	-	-
Berryville area development authority	\$3,500	not impacted	-	-	-	-
Architectural review board	\$500	not impacted	-	-	-	-
Tree board	\$0	not impacted	-	-	-	-
Capital outlay	\$435,238	not impacted	-	-	-	-
Contingency	\$114,979	not impacted	-	-	-	-
Debt service	\$121,600	not impacted	-	-	-	-
	\$4,504,447			\$4	\$256	\$132,789

MuniCap, Inc.
¹Not all expenditures are expected to be impacted as a result of the project. Expenditures shown reflect general fund expenditures only.
²Source: Town of Berryville, Virginia FY 2024 Operating Budget & Capital Improvement Program FY 2024-2028.
³Method of apportioning expenditures: Per resident costs are calculated by taking current expenditures and apportioning them among current resident population. Service population costs are calculated by taking current expenditures and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County).
⁴See Appendix A.
⁵Represents the projected increase to the Town resulting from the new development. See Appendix A.
⁶Represents the total increase in costs as a result of the proposed development on an annual basis. Figures assume full build-out and are expressed in current dollars.

**Friant Property
Town of Berryville, Virginia**

Schedule VIII-B: Projected Additional Expenditures to the Town of Berryville - 30 Years

Development Year	Fiscal Year	Inflation Factor ¹	Resident Costs			Service Population Costs			Total Projected Additional Expenditures
			Cost Per Resident ²	Anticipated Residents ³	Total Resident Cost	Cost Per Service Population ²	Anticipated Service Population ³	Total Service Population Cost	
31-Dec-23	30-Jun-25	100.0%	\$4	0	\$0	\$236	0	\$0	\$0
31-Dec-24	30-Jun-26	102.0%	\$4	0	\$0	\$241	0	\$0	\$0
31-Dec-25	30-Jun-27	104.0%	\$4	273	\$1,213	\$246	273	\$67,166	\$68,379
31-Dec-26	30-Jun-28	106.1%	\$5	413	\$1,868	\$251	413	\$103,463	\$105,332
31-Dec-27	30-Jun-29	108.2%	\$5	552	\$2,549	\$256	552	\$141,186	\$143,735
31-Dec-28	30-Jun-30	110.4%	\$5	552	\$2,600	\$261	552	\$144,009	\$146,609
31-Dec-29	30-Jun-31	112.6%	\$5	552	\$2,652	\$266	552	\$146,889	\$149,542
31-Dec-30	30-Jun-32	114.9%	\$5	552	\$2,705	\$271	552	\$149,827	\$152,533
31-Dec-31	30-Jun-33	117.2%	\$5	552	\$2,759	\$277	552	\$152,824	\$155,583
31-Dec-32	30-Jun-34	119.5%	\$5	552	\$2,815	\$282	552	\$155,880	\$158,695
31-Dec-33	30-Jun-35	121.9%	\$5	552	\$2,871	\$288	552	\$158,998	\$161,869
31-Dec-34	30-Jun-36	124.3%	\$5	552	\$2,928	\$294	552	\$162,178	\$165,106
31-Dec-35	30-Jun-37	126.8%	\$5	552	\$2,987	\$299	552	\$165,421	\$168,408
31-Dec-36	30-Jun-38	129.4%	\$6	552	\$3,047	\$305	552	\$168,730	\$171,776
31-Dec-37	30-Jun-39	131.9%	\$6	552	\$3,107	\$312	552	\$172,104	\$175,212
31-Dec-38	30-Jun-40	134.6%	\$6	552	\$3,170	\$318	552	\$175,547	\$178,716
31-Dec-39	30-Jun-41	137.3%	\$6	552	\$3,233	\$324	552	\$179,057	\$182,290
31-Dec-40	30-Jun-42	140.0%	\$6	552	\$3,298	\$331	552	\$182,639	\$185,936
31-Dec-41	30-Jun-43	142.8%	\$6	552	\$3,364	\$337	552	\$186,291	\$189,655
31-Dec-42	30-Jun-44	145.7%	\$6	552	\$3,431	\$344	552	\$190,017	\$193,448
31-Dec-43	30-Jun-45	148.6%	\$6	552	\$3,500	\$351	552	\$193,818	\$197,317
31-Dec-44	30-Jun-46	151.6%	\$6	552	\$3,570	\$358	552	\$197,694	\$201,263
31-Dec-45	30-Jun-47	154.6%	\$7	552	\$3,641	\$365	552	\$201,648	\$205,289
31-Dec-46	30-Jun-48	157.7%	\$7	552	\$3,714	\$372	552	\$205,681	\$209,394
31-Dec-47	30-Jun-49	160.8%	\$7	552	\$3,788	\$380	552	\$209,794	\$213,582
31-Dec-48	30-Jun-50	164.1%	\$7	552	\$3,864	\$387	552	\$213,990	\$217,854
31-Dec-49	30-Jun-51	167.3%	\$7	552	\$3,941	\$395	552	\$218,270	\$222,211
31-Dec-50	30-Jun-52	170.7%	\$7	552	\$4,020	\$403	552	\$222,635	\$226,655
31-Dec-51	30-Jun-53	174.1%	\$7	552	\$4,100	\$411	552	\$227,088	\$231,188
31-Dec-52	30-Jun-54	177.6%	\$8	552	\$4,182	\$419	552	\$231,630	\$235,812
Total					\$88,916	\$4,924,476	\$5,013,391		

MuniCorp, Inc. 3-Nov-23

¹Assumes an annual inflation rate of 2%.

²See Schedule VIII-A.

³See Appendix B.

*Friant Property
Town of Berryville, Virginia*

Schedule IX: Comparison of Projected Revenues and Expenditures

Fiscal Year Ending	Total Estimated Revenues (Schedule VII)	Total Estimated Expenditures (Schedule VIII-B)	Net Fiscal Impact to the Town of Berryville
30-Jun-25	\$0	\$0	\$0
30-Jun-26	\$0	\$0	\$0
30-Jun-27	\$239,747	(\$68,379)	\$171,368
30-Jun-28	\$365,579	(\$105,332)	\$260,247
30-Jun-29	\$512,354	(\$143,735)	\$368,619
30-Jun-30	\$517,243	(\$146,609)	\$370,633
30-Jun-31	\$522,229	(\$149,542)	\$372,688
30-Jun-32	\$527,316	(\$152,533)	\$374,783
30-Jun-33	\$552,503	(\$155,583)	\$396,920
30-Jun-34	\$557,795	(\$158,695)	\$399,100
30-Jun-35	\$563,192	(\$161,869)	\$401,324
30-Jun-36	\$568,698	(\$165,106)	\$403,592
30-Jun-37	\$595,961	(\$168,408)	\$427,553
30-Jun-38	\$601,689	(\$171,776)	\$429,913
30-Jun-39	\$607,532	(\$175,212)	\$432,320
30-Jun-40	\$613,491	(\$178,716)	\$434,775
30-Jun-41	\$643,002	(\$182,290)	\$460,711
30-Jun-42	\$649,202	(\$185,936)	\$463,266
30-Jun-43	\$655,526	(\$189,655)	\$465,871
30-Jun-44	\$661,977	(\$193,448)	\$468,529
30-Jun-45	\$693,920	(\$197,317)	\$496,603
30-Jun-46	\$700,632	(\$201,263)	\$499,368
30-Jun-47	\$707,477	(\$205,289)	\$502,189
30-Jun-48	\$714,460	(\$209,394)	\$505,065
30-Jun-49	\$749,036	(\$213,582)	\$535,454
30-Jun-50	\$756,301	(\$217,854)	\$538,447
30-Jun-51	\$763,711	(\$222,211)	\$541,500
30-Jun-52	\$771,269	(\$226,655)	\$544,613
30-Jun-53	\$808,695	(\$231,188)	\$577,507
30-Jun-54	\$816,559	(\$235,812)	\$580,746
Total	\$17,437,095	(\$5,013,391)	\$12,423,704

**Friant Property
Town of Berryville, Virginia**

Appendices

*Friant Property
Town of Berryville, Virginia*

Appendix A: Revenues and Costs to the Town of Berryville (Allocation Factors)

Town of Berryville permanent population ¹	4,574
Town of Berryville labor force ²	2,438
Non-resident workers ²	2,123
Employee population equivalent (100% of Non-resident workers)	2,123
Total service population (Town of Berryville permanent population + employee population equivalent)	6,697
Percent of newly created Town of Berryville employees assumed to live in the Town of Berryville ²	13%
Percent of newly created Town of Berryville employees assumed to live outside the Town of Berryville ²	87%
Service population rates:	
Resident	1.00
Employee ³	1.00
Expected resident increase:	
Single-family detached units ⁴	198
Persons per unit ⁵	2.79
Total estimated resident population increase	552
Total projected service population increase⁶	552

UniCap, Inc.

3-Nov-23

¹Source: Town of Berryville, Fiscal Year 2024 Operating Budget and Capital Improvement Plan.

²Source: U.S. Census Bureau, Center for Economic Studies, LEHD (OnTheMap application, 2018 data).

³Service rate assumes full-time employees generates costs at the same rate as full-time residents.

⁴See Schedule I.

⁵Source: Based on estimates provided by the United States Census Bureau, American Community Survey 2021 5-Year Estimates.

See Appendix B.

*Friant Property
Town of Berryville, Virginia*

Appendix B: Projected Residents and Service Population

Development Year Ending	Single-Family Detached			Service Population Increase			Total Service Population ⁶
	Projected Units ¹	Residents Per Unit ²	Total Residents	Projected Service Employees			
				Employees ³	Service Percentage ⁴	Service Employees ⁵	
31-Dec-23	0	2.79	0	0	87.1%	0	0
31-Dec-24	0	2.79	0	0	87.1%	0	0
31-Dec-25	98	2.79	273	0	87.1%	0	273
31-Dec-26	148	2.79	413	0	87.1%	0	413
31-Dec-27	198	2.79	552	0	87.1%	0	552
31-Dec-28	198	2.79	552	0	87.1%	0	552
31-Dec-29	198	2.79	552	0	87.1%	0	552
31-Dec-30	198	2.79	552	0	87.1%	0	552
31-Dec-31	198	2.79	552	0	87.1%	0	552
31-Dec-32	198	2.79	552	0	87.1%	0	552
31-Dec-33	198	2.79	552	0	87.1%	0	552
31-Dec-34	198	2.79	552	0	87.1%	0	552
31-Dec-35	198	2.79	552	0	87.1%	0	552
31-Dec-36	198	2.79	552	0	87.1%	0	552
31-Dec-37	198	2.79	552	0	87.1%	0	552
31-Dec-38	198	2.79	552	0	87.1%	0	552
31-Dec-39	198	2.79	552	0	87.1%	0	552
31-Dec-40	198	2.79	552	0	87.1%	0	552
31-Dec-41	198	2.79	552	0	87.1%	0	552
31-Dec-42	198	2.79	552	0	87.1%	0	552
31-Dec-43	198	2.79	552	0	87.1%	0	552
31-Dec-44	198	2.79	552	0	87.1%	0	552
31-Dec-45	198	2.79	552	0	87.1%	0	552
31-Dec-46	198	2.79	552	0	87.1%	0	552
31-Dec-47	198	2.79	552	0	87.1%	0	552
31-Dec-48	198	2.79	552	0	87.1%	0	552
31-Dec-49	198	2.79	552	0	87.1%	0	552
31-Dec-50	198	2.79	552	0	87.1%	0	552
31-Dec-51	198	2.79	552	0	87.1%	0	552
31-Dec-52	198	2.79	552	0	87.1%	0	552

UniCap, Inc.

3-Nov-23

¹See Schedule II.

²See Appendix A.

³As this development is entirely residential, this study does not include a separate calculation of projected employees at the site.

⁴Represents the percentage of employees assumed to work, but not live, within the Town of Berryville. See Appendix A.

⁵Represents the increase in employees who work but do not live in the Town of Berryville as a result of the proposed development.

⁶Represents the increase in service employees and residents as a result of the proposed development.

**Friant Property
Town of Berryville, Virginia**

Appendix C-1: Projected Assessed Value - Comparison of Valuation Methods¹

Property Type	Comparable Properties ²	Developer Sales Price ³
Single-family detached	\$407,417	\$565,990
Per unit	\$166	\$226
Per GSF		

MuniCap, Inc.

3-Nov-23

¹Valuation approach chosen for each type of development is underlined and shown in bold and italics.

²See Appendix C-2.

³Provided by D.R. Horton.

Residential Property
Town of Berryville, Virginia

Appendix C-2: Projected Assessed Value - Comparable Properties¹

Development Type	Account Identifier	Address	County	Year Built	Building Area		Total Assessed Value ²			Assessed Value ²			
					GSF	Units	Land	Building	Total	All Properties		Most Comparable	
										Per GSF	Per Unit	Per GSF	Per Unit
<i>Single-Family Detached</i>	14G-2--11	408 Weeks Court	Clarke County	2021	1,649	1	\$95,000	\$209,900	\$304,900	\$185	\$304,900	-	-
Shenandoah Crossing	14G-2--47	409 Weeks Court	Clarke County	2021	1,906	1	\$95,000	\$201,600	\$296,600	\$156	\$296,600	-	-
Shenandoah Crossing	14G-2--12	412 Weeks Court	Clarke County	2021	1,906	1	\$95,000	\$211,700	\$306,700	\$161	\$306,700	-	-
Shenandoah Crossing	14G-2--49	417 Weeks Court	Clarke County	2021	1,906	1	\$95,000	\$211,700	\$306,700	\$161	\$306,700	-	-
Shenandoah Crossing	14G-2--17	432 Weeks Court	Clarke County	2021	1,906	1	\$95,000	\$221,800	\$316,800	\$166	\$316,800	-	-
Shenandoah Crossing	14G-1--48	436 Weeks Court	Clarke County	2021	2,512	1	\$95,000	\$290,600	\$385,600	\$154	\$385,600	\$154	\$385,600
Shenandoah Crossing	14G-1--56	440 Weeks Court	Clarke County	2021	2,511	1	\$95,000	\$291,800	\$386,800	\$154	\$386,800	\$154	\$386,800
Shenandoah Crossing	14G-1--55	500 Weeks Court	Clarke County	2021	2,196	1	\$95,000	\$309,300	\$404,300	\$184	\$404,300	\$184	\$404,300
Shenandoah Crossing	14G-1--47	526 Weeks Court	Clarke County	2021	2,510	1	\$95,000	\$343,500	\$438,500	\$175	\$438,500	\$175	\$438,500
Shenandoah Crossing	14G-1--54	504 Weeks Court	Clarke County	2021	2,511	1	\$95,000	\$304,800	\$399,800	\$159	\$399,800	\$159	\$399,800
Shenandoah Crossing	14G-1--46	530 Weeks Court	Clarke County	2021	2,510	1	\$95,000	\$334,500	\$429,500	\$171	\$429,500	\$171	\$429,500
Shenandoah Crossing	14G-1--45	534 Weeks Court	Clarke County	2021	2,510	1	\$95,000	\$346,100	\$441,100	\$176	\$441,100	\$176	\$441,100
Average					2,211					\$167	\$368,108	\$166	\$407,417

3-Nov-23

¹Comparable assessed value chosen for each type of development is underlined and shown in bold and italics. **Additional research may be required.**
²Source: Clarke County Commissioner of the Revenue Office. Values are as of June 23, 2023.

*Friant Property
Town of Berryville, Virginia*

Appendix D: Jobs and Indirect Impacts - Temporary Construction

	<u>Total</u>
Total estimated construction costs ¹	\$89,652,816
Total construction jobs ²	717
Construction full-time equivalent factor ³	0.9714
Total construction full-time equivalent employees ("FTE's")	697
Total construction labor income ²	\$44,539,714
Labor income to wage factor ⁴	1.1845
Total wages	\$37,601,280
Average labor income per construction FTE -- annual	\$63,922
Average wage per construction FTE -- annual	\$53,964
Multiplier for construction wages ²	1.1200
Total income	\$49,882,449
Indirect and induced income	\$5,342,736
Multiplier for construction jobs ²	1.1706
Total jobs	840
Indirect and induced jobs	122
Multiplier for construction output ²	1.3225
Total economic output	\$118,566,112
Indirect and induced output	\$28,913,296

MuniCap, Inc.

3-Nov-23

¹Construction cost estimates are based on 80% of the anticipated assessed value on Schedule I.

²Construction wages, output, and indirect and induced jobs are calculated using IMPLAN software by IMPLAN Group, LLC. IMPLAN software calculates labor income and the number of jobs based on industry multipliers derived from National Income and Product Accounts data published by the U.S. Bureau of Economic Analysis. This data is then indexed to local industry data compiled by the U.S. Census Bureau. For ease of interpretation, multipliers are shown to illustrate the effects the construction at Friant Property will have in Clarke County, as information related to the Town of Berryville as not available. The multiplier for construction jobs is 1.1706, meaning that for each construction job at Friant Property, 1.1706 jobs will be created in Clarke County, including the one job at Friant Property. Similarly, the multiplier for construction wages is 1.1200, meaning that for every \$1.00 paid in construction wages at Friant Property, \$1.1200 will be paid in Clarke County, including the \$1.00 at Friant Property. The multiplier for construction output is 1.2236, meaning that for each construction dollar received at Friant Property, the economic output in Clarke County will be \$1.2236, including the \$1.00 at Friant Property.

³Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by IMPLAN Group LLC, converts total jobs into total full-time equivalent employees ("FTE's").

⁴Total labor income includes wages and salary, benefits, payroll taxes, and proprietor's income. This factor, provided by IMPLAN Group LLC, converts total labor income into direct wages and salary.

**Friant Property
Town of Berryville, Virginia**

Summary of Fiscal Impacts

<i>Fiscal Impacts to the Town of Berryville</i>	Cumulative Impacts	
	Annual Impacts ¹	30 Years ²
Real property tax revenues (residential)	\$224,132	\$8,221,721
Personal property tax revenues (vehicles)	\$169,738	\$6,408,397
Vehicle license fees	\$11,045	\$300,890
Utility tax revenues	\$14,256	\$388,368
Additional tax revenues	\$56,092	\$2,117,719
Total projected tax revenues to the Town of Berryville	\$475,263	\$17,437,095
Projected Town of Berryville expenditures	(\$132,789)	(\$5,013,391)
Net new revenues to the Town of Berryville	\$342,474	\$12,423,704
		Schedule III-B
		Schedule VII
		Schedule VII
		Schedule VII
		Schedule VI-B
		Schedule VII
		Schedule IX
		Schedule IX

Temporary Jobs from Construction³

<i>Temporary Construction Employment Impacts:</i>	Temporary Jobs from Construction ³ (Jobs and Income)		
	Temporary Jobs	Annual Income	Income per Employee
Temporary:			
Direct impacts (full time equivalents)	697	\$44,539,714	\$63,922
Indirect and induced impacts	122	\$5,342,736	\$43,655
Total temporary impacts	819	\$49,882,449	

MantiCap, Inc.

3-Nov-23

¹Represents stabilized annual impacts, excluding inflation.

²Represents cumulative impacts over the period shown, including inflation.

³Jobs and wages represent one year duration of construction employees. See Appendix D.

Friant, Hermitage Phase 5 and Shenandoah/Fellowship Revenue Summary
Clarke County, VA

Estimated Annual Revenues to Clarke County from Friant, Hermitage, and Shenandoah/Fellowship Developments

	<i>Friant</i>	<i>Hermitage Phase 5</i>	<i>Shenandoah/Fellowship</i>
Units ¹	198	71	132
Estimated new residents ²	552	198	368
Average assessed value ¹	\$565,990	\$670,000	\$600,000
Real property tax rate ³	\$0.60	\$0.60	\$0.60
Annual tax per unit	\$3,396	\$4,020	\$3,600
Total development real property tax revenues	\$672,396	\$285,420	\$475,200
Cars per household ⁴	2.23	2.23	2.23
Total cars per development	442	158	295
Personal property tax per vehicle ⁵	\$1,313	\$1,313	\$1,313
Annual personal property tax	\$2,927	\$2,929	\$2,929
Total development personal property tax revenues	\$579,625	\$207,966	\$386,641
Per resident additional revenues ⁶	\$191	\$191	\$191
Total additional revenues	\$105,544	\$37,858	\$70,363
Total estimated annual revenues	\$1,357,565	\$531,244	\$932,203
Total estimated revenues per unit	\$6,856	\$7,482	\$7,062

¹ Provided by D.R. Horton.

² Source: Based on persons per unit estimate (2.79 per unit) provided by the United States Census Bureau, American Community Survey 2021 5-Year Estimates.

³ Represents the rate for tax year 2023. Source: Clarke County CY 2023 Tax Rate Resolution.

⁴ Based on average number of vehicles per owner-occupied unit in the Town of Berryville. Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates.

⁵ Applies the personal property tax rate (\$4.271 per \$100) as identified in the CY2023 Tax Rate Resolution to the average assessed value per vehicle (\$30,736) as identified in the NADA Annual Report.

⁶ Based on Clarke County FY24 Budget. Anticipated revenues to be impacted include sales and use tax, meals tax, fees for ambulance and rescue services, recreation center fees, swimming pool fees, and parks program fees. Analysis evaluates resident impacts only and does not evaluate impacts from employees and total service population (i.e. employees and residents combined).



UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

LOCATIONS:

- Atlanta
- Charlotte
- Daytona Beach
- DC Metro
- Fort Myers
- Fort Pierce
- Gainesville
- Jacksonville
- Miami
- Ocala
- Orlando (Headquarters)
- Palm Coast
- Panama City
- Pensacola
- Rockledge
- Sarasota
- St. Petersburg
- Tampa
- Tifton
- West Palm Beach

August 3, 2023

D.R. Horton
7925 Jones Branch Dr., Ste. 6220
Tyson's VA 22102

Attention: Mr. Stephen Lucas
Entitlements Analyst
SJLucas@drhorton.com

Reference: **Geotechnical Exploration**
Friant Property Residential Development
29 Battletown Drive
Berryville, Clarke County, VA
UES Project No. 0528.G0836

Dear Mr. Lucas:

Universal Engineering Sciences (UES) has completed a geotechnical exploration at the above-referenced site in Winchester, Virginia. Our scope of services was performed in general accordance with UES Proposal No. 0528.G0836.

This report contains the results of our study, an engineering interpretation of the subsurface data obtained with respect to the presence of karst subsurface anomalies, geotechnical design recommendations, and construction and site preparation considerations pertaining to mitigation of Karst terrane features.

INTRODUCTION

GENERAL

UES previously performed a geotechnical exploration for the subject property in December, 2021. The results of our geotechnical exploration can be found in our *Report of Geotechnical Exploration* dated December 29, 2021. As part of this geotechnical exploration, and as required by Clark County, Virginia, a geophysical survey was conducted throughout the property. The geophysical survey was performed by Forrest Environmental Services, Inc. subcontracted by UES to determine the presence of any surface and/or subsurface anomalies related to Karst terrane. Based on the results of the geophysical survey, it was recommended to perform additional testing to explore the nature and extent of the anomalies detected. This letter report contains the results and interpretation of field data from the additional field testings

SITE AND PROJECT DESCRIPTION

The subject property is comprised of Clarke County Tax Map No. 14 A 80. More specifically, the site is located at 29 Battletown Drive in Clarke County, Virginia. The site is mostly undeveloped with sparse trees, natural grasses and fences to cordon off grazing livestock. A cursory review of available historical aerials for the site shows the property has been generally used for agricultural purposes and maintained in its current condition for some time. No water features were observed during our site visit.

We were provided a *Composite Grading Plan* prepared by Dewberry dated October, 2021 that showed the site configurations of the proposed house lots, roadway alignments and stormwater management facilities.

SUBSURFACE EXPLORATION

The soil test borings for the field exploration were performed with an truck mounted D50 drill and consisted of a total of seventeen (17) soil test borings designated AP-1 through AP-17 and nineteen (19) corresponding offsets designated AP-1A, AP1-B, AP-2A, AP-2B, AP-3A and AP-5A through AP-17A. The borings were extended to depths of ranging from 40 feet below the existing ground surface and auger refusal. Drilling without sampling, also known as Auger Probes, was performed in the borings for this phase of the project.

Horizontal and vertical survey control was not provided for the test boring locations prior to or during our field exploration program. UES personnel located the borings on site by using the provided site plan, existing on-site landmarks, and by using a handheld GPS device. The boring locations should be considered approximate and accurate to the degree of the methods described. If more exact locations are desired, a professional surveyor should be engaged to have the borings located in the field. The approximate locations of the borings and test pits performed for this geotechnical exploration are shown on the attached "Test Location Plan" in Appendix B.

SUBSURFACE CONDITIONS

GENERAL

The boring logs and related information included in this report are indicators of subsurface conditions only at the specific locations and times noted. Subsurface conditions, including groundwater levels and the presence of deleterious materials, at other locations on the site may differ significantly from conditions which, in the opinion of UES, exist at the sampling locations. Note, too, that the passage of time may affect conditions at the sampling locations.

AREA GEOLOGY

The site is located within the northern corner of the Ridge and Valley geophysical province of Virginia. The Ridge and Valley geophysical province is comprised of Paleozoic sedimentary rocks including sandstones, shales, limestones, siltstones and dolostones that are mildly folded or nearly horizontal of Devonian, Mississippian and Pennsylvanian age. These strata were deposited in the huge Paleozoic sedimentary basin that lay west of the rising Appalachian Mountains that was uplifted during the Alleghenian and Tertiary orogeny. The present landscape is characterized by long, parallel, narrow, even-crested ridges rising above intervening valleys of varying size. According to the USGS, the Conococheague Formation is listed as the underlying parent bedrock of the site and is comprised of limestone, dolomite and calcareous sandstone.

GEOPHYSICAL SURVEY SUMMARY

A geophysical survey was performed for this site in general accordance with requirements of Clarke County, VA. The results of this survey are included in the appendix of our previous report dated December 29th, 2021. Several subsurface anomalies were detected in the course



of the ERI testing. These areas shall be observed during development. The following is a summary of the anomalies found during the geophysical survey and those which were tested during this most recent geotechnical exploration.

The following summarizes the findings of the Karst survey performed by Forrest Environmental. For more detailed information, please refer to the report from Forrest Environmental in the Appendix.

- ER Line 1: Three conductive anomalies 25 to 50 feet below the ground surface. Anomalies appear to be mud seams/caverns and a solution channel.
- ER Line 2: Three resistive anomalies 25 to 50 feet below the ground surface. Anomalies appear to be air filled voids. Three conductive anomalies 25 feet below the ground surface appear to be solution channels.
- ER Line 3: Three conductive anomalies 5 to 60 feet below the ground surface and appear to be a solution channel and a saturated fracture.
- ER Line 4: One resistive anomaly appears to be limestone float.
- ER Line 5: Three conductive anomalies 5 to 60 feet below the ground surface. Anomalies appear to be a mud seam/cavern, a solution channel and a saturated fracture.
- ER Line 6: Two conductive anomalies 50 and 20 feet below the ground surface appear to be mud seam/cavern and solution channel, respectively.

AUGER REFUSAL

Auger probes were performed along the previous ERI alignments in order to explore the nature of the subsurface anomalies that need to be observed during development. Auger refusal was encountered throughout the site and is defined as the limit of selected drill tools to advance the borings or continue cutting the material to extend the boring to greater depths. Based on our previous work on this site, auger refusal likely occurred at interface of the underlying parent bedrock and/or on pinnacles of bedrock throughout the site. Additionally, auger refusal depths were erratic and in line with the geophysical survey suggesting that pinnacles of parent bedrock are present throughout the site. Auger refusal was encountered in the following borings and depths shown in Table I.

**TABLE I
 AUGER REFUSAL DEPTHS**

BORING ID	REFUSAL DEPTH (ft)		BORING ID	REFUSAL DEPTH (ft)
AP-1	2.0		AP-9A	14.5
AP-1A	3.5		AP-10	21.5
AP-1B	4.5		AP-10A	9.5
AP-2	3.0		AP-11	9.5



**TABLE I
 AUGER REFUSAL DEPTHS**

BORING ID	REFUSAL DEPTH (ft)	BORING ID	REFUSAL DEPTH (ft)
AP-2A	6.5	AP-11A	14.0
AP-2B	11.0	AP-12	8.5
AP-4	10.5	AP-12A	3.0
AP-4A	15.0	AP-13	3.5
AP-5	10.0	AP-13A	3.5
AP-5A	15.5	AP-14	12.0
AP-6	14.0	AP-14A	20.5
AP-6A	12.5	AP-15	6.0
AP-7	7.0	AP-15A	14.0
AP-7A	20.5	AP-16	9.0
AP-8	5.0	AP-16A	16.5
AP-8A	25.5	AP-17	8.0
AP-9	15.5	AP-17A	3.5

GROUNDWATER

Groundwater was not observed within the borings at the completion drilling after the augers had been removed. Groundwater was not observed within the remainder of the soil test borings. This could be due to the fine-grained nature of the surficial soils coupled with their low permeability and high runoff class. While we do not anticipate groundwater to impact site development, groundwater often varies seasonally and climatically and could be present at depths or locations not explored for the preparation of this report. If more accurate water level readings are required for stormwater management facility design, we recommend installing temporary piezometers and monitoring the water levels after a suitable stabilization period.

GEOTECHNICAL ASSESSMENT AND SITE PREPARATION

Generally, the auger probes performed for this phase of geotechnical exploration could not be extended to the target depths estimated from the ERI profiles of the geophysical survey due to shallow refusals on parent bedrock for the majority of anomalies explored. The exception being Boring AP-4 which was extended to the target depth of 40 feet. It is likely that this anomaly has weathered to at least 40 feet below the existing ground surface and the solution channel indicated on ERI line 3 of the geophysical survey could be present do greater depths.

We recommend following the guidelines listed below to mitigate risk of subsidence:

While the bedrock above the anomalies appears to be sound, and the throats of infiltration or solution channels was not encountered during this geotechnical exploration, future solution and migration of soils through these subsurface features



could still be possible if control of surface runoff is not properly executed. We recommend that local grading and drainage requirements and practices be followed to reduce the chance that infiltration of surface water into the subsurface anomalies occurs after completion of construction.

Utilizing suitably impermeable soils as structural fill can mitigate the risk of infiltration of surface waters to the anomalies causing ground subsidence/sinkholes. **Based on visual and laboratory classifications from our previous geotechnical exploration, the onsite soils appear to be suitable for use as impermeable fills for project development.**

Additionally, since site grading activities can change the existing runoff and drainage characteristics of the site, we recommend you monitor the site for subsidence or sinkhole activity during and after construction. Any sinkholes discovered should be excavated and the throat sealed off with a reverse graded filter. Additional methods of preventing infiltration and sealing off repaired sinkholes include the use of impermeable geosynthetic membranes. While effective, the use of these membranes can be cost prohibitive for projects of this size and should be reserved for more severe cases such as beneath stormwater ponds or detention areas.

We recommend comprehensive erosion control meeting or exceeding the Clark County, Virginia stormwater management requirements. Excavations should not be left open for extended periods of time. The final lifts of mass fills, swales and pond liners should be constructed with low permeability materials.

CLOSING

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact the undersigned if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES



Parham Safarian Bahri, PE
Geotechnical Department Manager
Virginia PE License No. 0402061951



APPENDIX A



UNIVERSAL
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BASEMAP: Open Street Map 2021

GEOTECHNICAL EXPLORATION

Friant Property
29 Battletown Drive
Berryville, VA



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SITE LOCATION PLAN

REFERENCE: Open Street Map 2021

DRAWN BY: RDB

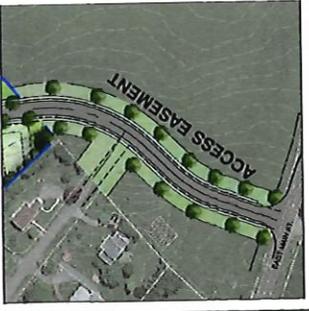
DATE: 12/30/2021

CHECKED BY:

DATE:

REPORT NO:

FIGURE NO: A-1



- APPROXIMATE UTILITY AND/OR PROBE LOCATION
- APPROXIMATE FORESET ENVIRONMENTAL DR. LINE ALIGNMENT
- APPROXIMATE LOCATION OF SUBSURFACE ANOMALY AREA TO BE OCCUPIED DURING DEVELOPMENT
- APPROXIMATE EDGE DR. LINE ALIGNMENT

HARRY BYRD HIGHWAY - ROUTE 7

BATTLETOWN DR.

BEL VOI DR.

FRIANT PROPERTY
 February 22, 2022 Preliminary Layout - 214 Lots



DR-HORION
America's Builder

Dewberry



APPENDIX B



UNIVERSAL
ENGINEERING SCIENCES



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-1**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▾ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0						Drilling Without Sampling Performed From 0 To 3.5 Feet Below Ground Surface.						
2						3.5 Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-1A**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▽ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0						Drilling Without Sampling Performed From 0 To 3.5 Feet Below Ground Surface.						
3.5						Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: **AP-1B**
SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

LOCATION: SEE ATTACHED BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):

▽ <24HR WATER TABLE (ft):

▼ >24HR WATER TABLE (ft):

DATE OF READING:

DATE STARTED:

DATE FINISHED:

DRILLED BY: All American Geotech

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0						Drilling Without Sampling Performed From 0 To 4.5 Feet Below Ground Surface.						
4.5						Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION:

AP-2

SHEET:

1 of 1

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0						Drilling Without Sampling Performed From 0 To 3 Feet Below Ground Surface.						
3						Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-2A**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▾ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0 					█	Drilling Without Sampling Performed From 0 To 6.5 Feet Below Ground Surface.						
5												
6.5						Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-2B**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					●	Drilling Without Sampling Performed From 0 To 11 Feet Below Ground Surface.						
5					●							
10					●							
11					●	Auger Refusal No Groundwater Encountered	11.0					

BORING_LOG_0528.G0836_FRIANT_PROPERTY_KARST_EXPLORATION.GPJ_CHARLOTTE_UES.GDT_3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-3**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▽ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 40 Feet Below Ground Surface.						
5					█							
10					█							
15					█							
20					█							
25					█							
30					█							
35					█							
40					█	Boring Terminated No Groundwater Encountered	40.0					

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

BORING DESIGNATION: **AP-4**
 SHEET: **1 of 1**

CLIENT: DR Horton
 LOCATION: SEE ATTACHED BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▽ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 10.5 Feet Below Ground Surface.						
5					█							
10.5					█	Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: **AP-4A**

SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0						Drilling Without Sampling Performed From 0 To 15 Feet Below Ground Surface.						
5												
10												
15						Auger Refusal No Groundwater Encountered	15.0					

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: AP-5
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 10 Feet Below Ground Surface.						
5					█							
10					█	Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

BORING DESIGNATION: **AP-5A**
 SHEET: **1 of 1**

CLIENT: DR Horton
 LOCATION: SEE ATTACHED BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▽ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 15.5 Feet Below Ground Surface.						
5					█							
10					█							
15.5					█	Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION:

AP-6

SHEET:

1 of 1

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY:

All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0						Drilling Without Sampling Performed From 0 To 14 Feet Below Ground Surface.						
5												
10												
14						Auger Refusal No Groundwater Encountered	14.0					

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE, NC 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Explorattion
Berryville, Virginia

BORING DESIGNATION: **AP-7**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
▽ <24HR WATER TABLE (ft):
▼ >24HR WATER TABLE (ft):
DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					●	Drilling Without Sampling Performed From 0 To 7 Feet Below Ground Surface.						
5					●							
7					●	Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-7A**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
▽ <24HR WATER TABLE (ft):
▽ >24HR WATER TABLE (ft):
DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					●	Drilling Without Sampling Performed From 0 To 20.5 Feet Below Ground Surface.						
5					●							
10					●							
15					●							
20					●							
20.5					●	Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-8**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0						Drilling Without Sampling Performed From 0 To 5 Feet Below Ground Surface.						
5						Auger Refusal No Groundwater Encountered	5.0					



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: AP-8A
SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0						Drilling Without Sampling Performed From 0 To 25.5 Feet Below Ground Surface.						
5												
10												
15												
20												
25												
25.5						Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE, NC 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: AP-9
SHEET: 1 of 1

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▽ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					●	Drilling Without Sampling Performed From 0 To 15.5 Feet Below Ground Surface.						
5					●							
10					●							
15.5					●	Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: AP-9A
SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
▽ <24HR WATER TABLE (ft):
▽ >24HR WATER TABLE (ft):
DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					●	Drilling Without Sampling Performed From 0 To 14.5 Feet Below Ground Surface.						
5					●							
10					●							
14.5					●	Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

CLIENT: DR Horton

LOCATION: SEE ATTACHED BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **AP-10**
 SHEET: **1 of 1**

G.S. ELEVATION (ft):	DATE STARTED:	
▽ <24HR WATER TABLE (ft):	DATE FINISHED:	
▼ >24HR WATER TABLE (ft):	DRILLED BY: All American Geotech	
DATE OF READING:	TYPE OF SAMPLING: N/A	

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					●	Drilling Without Sampling Performed From 0 To 21.5 Feet Below Ground Surface.						
5					●							
10					●							
15					●							
20					●							
21.5					●	Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: **AP-10A**

SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 9.5 Feet Below Ground Surface.						
5					█							
9.5					█	Auger Refusal No Groundwater Encountered	9.5					

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: **AP-11**
SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

LOCATION: SEE ATTACHED BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):

▽ <24HR WATER TABLE (ft):

▼ >24HR WATER TABLE (ft):

DATE OF READING:

DATE STARTED:

DATE FINISHED:

DRILLED BY: All American Geotech

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 9.5 Feet Below Ground Surface.						
5					█							
9.5					█	Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

BORING DESIGNATION AP-11A
SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

LOCATION: SEE ATTACHED BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):

▽ <24HR WATER TABLE (ft):

▽ >24HR WATER TABLE (ft):

DATE STARTED:

DATE FINISHED:

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 14 Feet Below Ground Surface.						
5					█							
10					█							
14					█	Auger Refusal No Groundwater Encountered	14.0					



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

BORING DESIGNATION: **AP-12**
 SHEET: **1 of 1**

CLIENT: DR Horton
 LOCATION: SEE ATTACHED BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▾ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					●	Drilling Without Sampling Performed From 0 To 8.5 Feet Below Ground Surface.						
5					●							
8.5					●	Auger Refusal No Groundwater Encountered	8.5					

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: AP-12A

SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 3 Feet Below Ground Surface.						
3						Auger Refusal No Groundwater Encountered						

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-13**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 3.5 Feet Below Ground Surface.						
3.5						Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

BORING DESIGNATION: AP-13A
 SHEET: **1 of 1**

CLIENT: DR Horton
 LOCATION: SEE ATTACHED BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▾ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 3.5 Feet Below Ground Surface.						
3.5						Auger Refusal No Groundwater Encountered						

BORING LOG: 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

BORING DESIGNATION: **AP-14**
 SHEET: **1 of 1**

CLIENT: DR Horton
 LOCATION: SEE ATTACHED BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 ∇ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 12 Feet Below Ground Surface.						
5					█							
10					█							
12					█	Auger Refusal No Groundwater Encountered	12.0					

BORING LOG: 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: AP-14A
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					●	Drilling Without Sampling Performed From 0 To 20.5 Feet Below Ground Surface.						
5					●							
10					●							
15					●							
20					●							
20.5					●	Auger Refusal No Groundwater Encountered						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-15**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
▽ <24HR WATER TABLE (ft):
▽ >24HR WATER TABLE (ft):
DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 6 Feet Below Ground Surface.						
5					█							
6					█	Auger Refusal No Groundwater Encountered	6.0					

BORING LOG: U528.G0836.FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GD1 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: **AP-15A**

SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0						Drilling Without Sampling Performed From 0 To 14 Feet Below Ground Surface.						
5												
10												
14						Auger Refusal No Groundwater Encountered	14.0					

BORING LOG 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
 Friant Property - Karst Exploration
 Berryville, Virginia

BORING DESIGNATION: **AP-16**
 SHEET: **1 of 1**

CLIENT: DR Horton
 LOCATION: SEE ATTACHED BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▽ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
 DATE FINISHED:
 DRILLED BY: All American Geotech
 TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					●	Drilling Without Sampling Performed From 0 To 9 Feet Below Ground Surface.						
5					●							
9					●	Auger Refusal No Groundwater Encountered	9.0					



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: AP-16A

SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▽ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 16.5 Feet Below Ground Surface.						
5					█							
10					█							
15					█							
16.5					█	Auger Refusal No Groundwater Encountered	16.5					



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836
REPORT NO.:

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

BORING DESIGNATION: **AP-17**
SHEET: **1 of 1**

CLIENT: DR Horton
LOCATION: SEE ATTACHED BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
 ▽ <24HR WATER TABLE (ft):
 ▼ >24HR WATER TABLE (ft):
 DATE OF READING:

DATE STARTED:
DATE FINISHED:
DRILLED BY: All American Geotech
TYPE OF SAMPLING: N/A

DEPTH (FT.)	SAMP LE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYM BOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0					█	Drilling Without Sampling Performed From 0 To 8 Feet Below Ground Surface.						
5					█							
8					█	Auger Refusal No Groundwater Encountered	8.0					

BORING LOG US28 G0836 FRIANT PROPERTY KARST EXPLORATION GPJ CHARLOTTE UES.GDI 3/31/22



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0528.G0836

REPORT NO.:

BORING DESIGNATION: **AP-17A**

SHEET: **1 of 1**

PROJECT: GEOTECHNICAL EXPLORATION
Friant Property - Karst Exploration
Berryville, Virginia

CLIENT: DR Horton

G.S. ELEVATION (ft):

DATE STARTED:

LOCATION: SEE ATTACHED BORING LOCATION PLAN

▽ <24HR WATER TABLE (ft):

DATE FINISHED:

REMARKS:

▼ >24HR WATER TABLE (ft):

DRILLED BY: All American Geotech

DATE OF READING:

TYPE OF SAMPLING: N/A

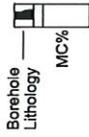
DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	POCKET PEN. (tsf)
									LL	PI		
0.0					█	Drilling Without Sampling Performed From 0 To 3.5 Feet Below Ground Surface.						
3.5						Auger Refusal No Groundwater Encountered						

BORING LOG: 0528.G0836 FRIANT PROPERTY KARST EXPLORATION.GPJ CHARLOTTE UES.GDT 3/31/22

GENERALIZED SUB-SURFACE PROFILE

PROFILE LEGEND

AP-9 — Boring/Test Pit Number



BT=Boring Terminated
AR=Auger Refusal
TPI=Test Pit Terminated
TR=Trackhoe Refusal

▽ <24HR Water Level Reading
▼ +24HR Water Level Reading

NOTE:
This subsurface profile is provided for graphical representation of the boring logs only. Actual horizontal and vertical stratigraphy may be more gradual than indicated on this subsurface profile.

Vertical Scale: AS SHOWN
Horizontal Scale: NOT TO SCALE

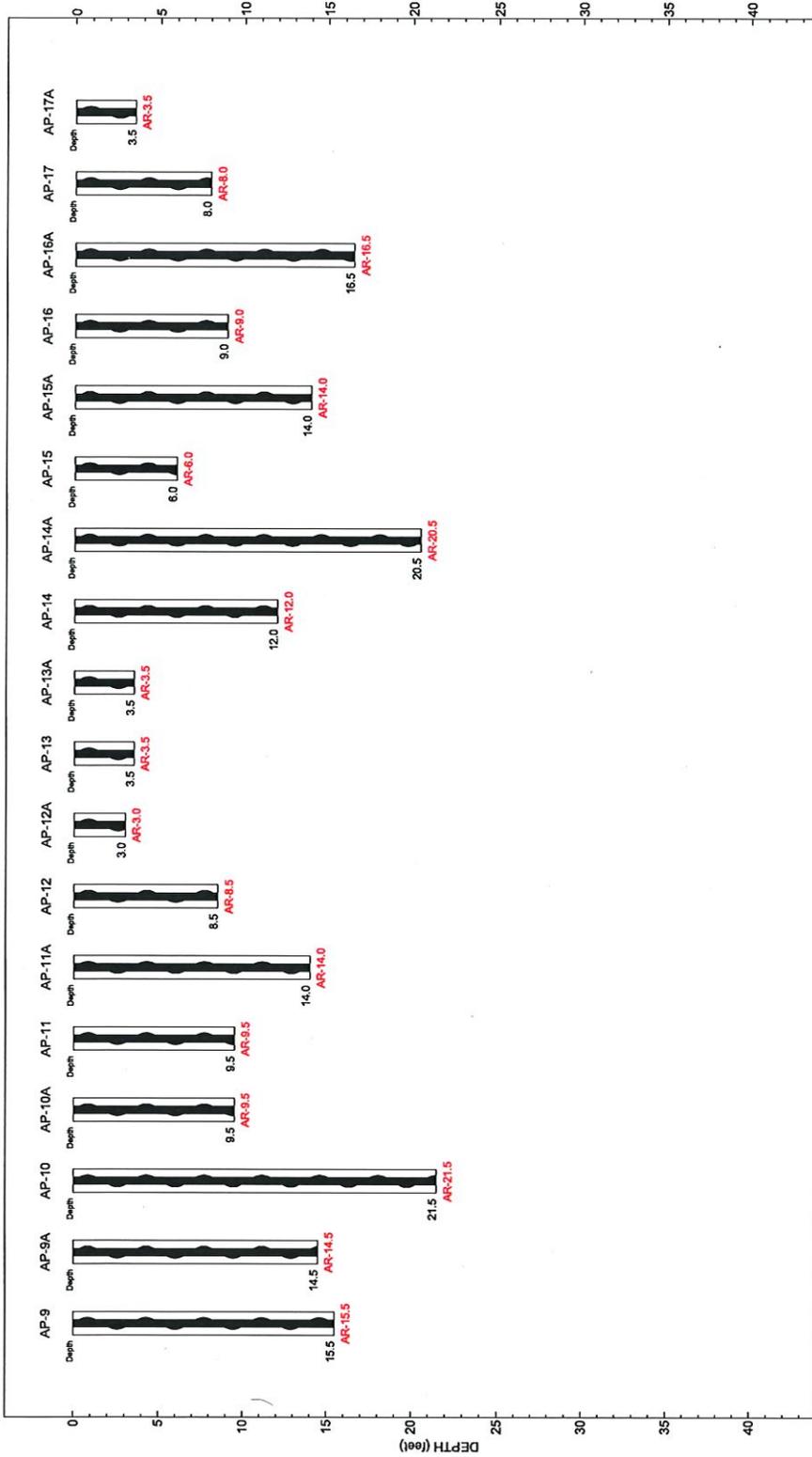
Universal Engineering Sciences, LLC
14221-B Willard Road, Ste. 700&800
Chantilly, VA 20151

GEOTECHNICAL EXPLORATION
Pierot Property - Aune Exploration
Bryansville, Virginia



PROFILE NO:2
PAGE NO: B-3

JOB NUMBER: 0528 09836
REPORT NUMBER:



Lithology Graphics





SYMBOLS AND ABBREVIATIONS

<u>SYMBOL</u>	<u>DESCRIPTION</u>
N-Value	No. of Blows of a 140-lb. Weight Falling 30 Inches Required to Drive a Standard Spoon 1 Foot
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
	Sample from Auger Cuttings
	Standard Penetration Test Sample
	Thin-wall Shelby Tube Sample (Undisturbed Sampler Used)
RQD	Rock Quality Designation
	Stabilized Groundwater Level
	Seasonal High Groundwater Level (also referred to as the W.S.W.T.)
NE	Not Encountered
GNE	Groundwater Not Encountered
BT	Boring Terminated
-200 (%)	Fines Content or % Passing No. 200 Sieve
MC (%)	Moisture Content
LL	Liquid Limit (Atterberg Limits Test)
PI	Plasticity Index (Atterberg Limits Test)
NP	Non-Plastic (Atterberg Limits Test)
K	Coefficient of Permeability
Org. Cont.	Organic Content
G.S. Elevation	Ground Surface Elevation

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS More than 50% retained on the No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW Well-graded gravels and gravel-sand mixtures, little or no fines
			GP Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM Silty gravels and gravel-sand-silt mixtures
			GC Clayey gravels and gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS 5% or less passing No. 200 sieve	SW** Well-graded sands and gravelly sands, little or no fines
			SP** Poorly graded sands and gravelly sands, little or no fines
		SANDS with 12% or more passing No. 200 sieve	SM** Silty sands, sand-silt mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less	ML Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	
		CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays	
		OL Organic silts and organic silty clays of low plasticity	
	SILTS AND CLAYS Liquid limit greater than 50%	MH Inorganic silts, micaceous or diamicaceous fine sands or silts, elastic silts	
		CH Inorganic clays or clays of high plasticity, fat clays	
		OH Organic clays of medium to high plasticity	
		PT Peat, muck and other highly organic soils	

*Based on the material passing the 3-inch (75 mm) sieve
 ** Use dual symbol (such as SP-SM and SP-SC) for soils with more than 5% but less than 12% passing the No. 200 sieve

RELATIVE DENSITY
(Sands and Gravels)

Very loose – Less than 4 Blow/Foot
 Loose – 4 to 10 Blows/Foot
 Medium Dense – 11 to 30 Blows/Foot
 Dense – 31 to 50 Blows/Foot
 Very Dense – More than 50 Blows/Foot

CONSISTENCY
(Sils and Clays)

Very Soft – Less than 2 Blows/Foot
 Soft – 2 to 4 Blows/Foot
 Firm – 5 to 8 Blows/Foot
 Stiff – 9 to 15 Blows/Foot
 Very Stiff – 16 to 30 Blows/Foot
 Hard – More than 30 Blows/Foot

RELATIVE HARDNESS
(Limestone)

Soft – 100 Blows for more than 2 Inches
 Hard – 100 Blows for less than 2 Inches

MODIFIERS

These modifiers Provide Our Estimate of the Amount of Minor Constituents (Silt or Clay Size Particles) in the Soil Sample
 Trace – 5% or less
 With Silt or With Clay – 6% to 11%
 Silty or Clayey – 12% to 30%
 Very Silty or Very Clayey – 31% to 50%

These Modifiers Provide Our Estimate of the Amount of Organic Components in the Soil Sample
 Trace – Less than 3%
 Few – 3% to 4%
 Some – 5% to 8%
 Many – Greater than 8%

These Modifiers Provide Our Estimate of the Amount of Other Components (Shell, Gravel, Etc.) in the Soil Sample
 Trace – 5% or less
 Few – 6% to 12%
 Some – 13% to 30%
 Many – 31% to 50%

APPENDIX C



UNIVERSAL
ENGINEERING SCIENCES

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply this report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an

assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by:* the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.*

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help

others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold-prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical-engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your GBC-Member geotechnical engineer for more information.



8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

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CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.





- APPROXIMATE UAGP PROBE LOCATION
- APPROXIMATE FOREST ENVIRONMENTAL ERI LINE ALIGNMENT
- APPROXIMATE LOCATION OF SUBSURFACE DEVELOPMENT TO BE OBSERVED DURING DEVELOPMENT
- APPROXIMATE EDGE ERI LINE ALIGNMENT

