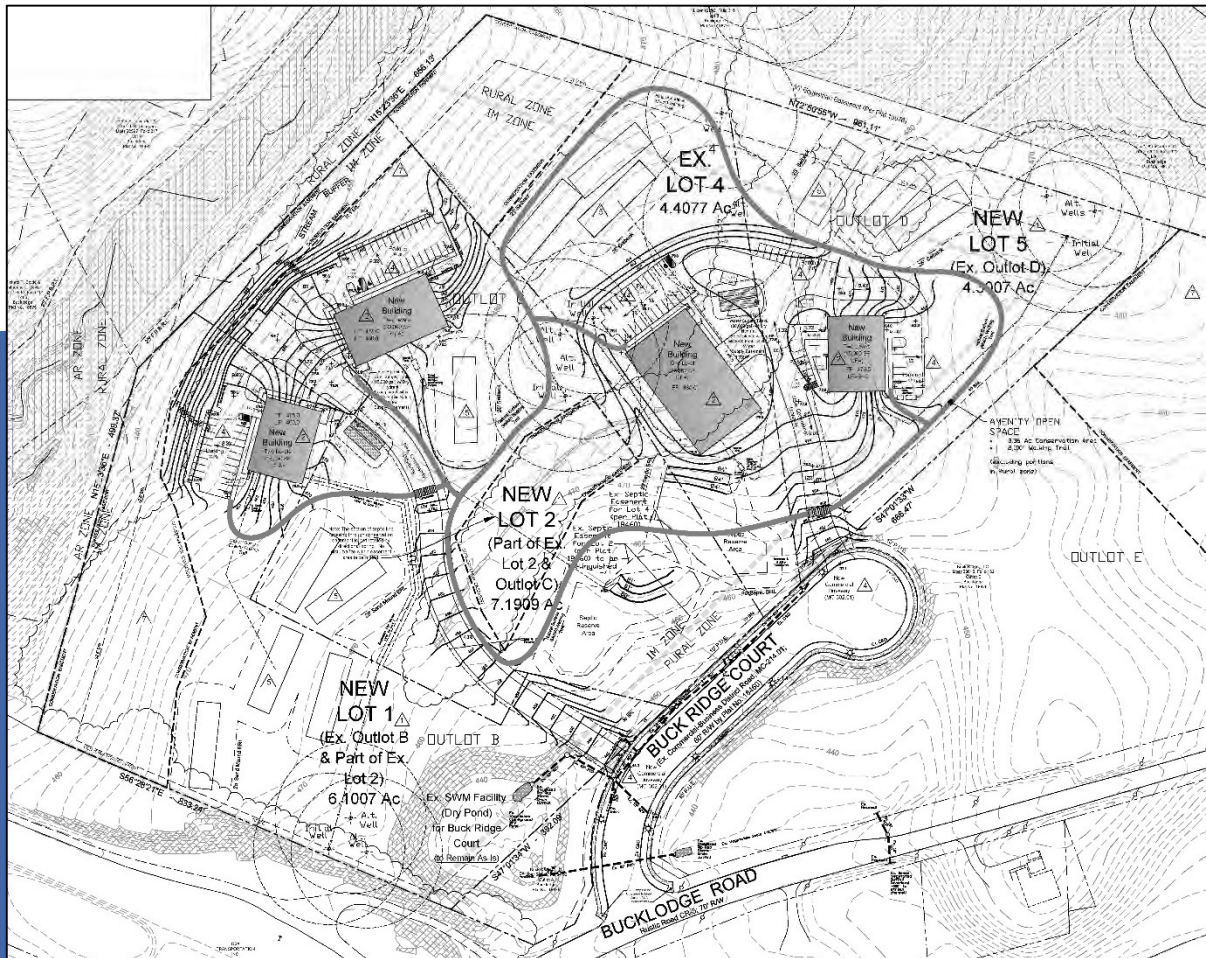


BUCKLODGE TRACT PRELIMINARY PLAN NO. 11989032A



Description

Application to subdivide two existing platted lots and three existing platted outlots into four buildable lots for up to four buildings with a total of 66,667 SF of light industrial uses on 22 acres.

No. 11989032A

Completed: 11-24-2023

MCPB

Item No. 11

12-7-2023

Montgomery County

Planning Board

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LOCATION/ADDRESS

On Buck Ridge Court, north of Bucklodge Road

MASTER PLAN

1985 *Approved and Adopted Boyds Master Plan*

ZONE

IM Zone and Rural Zone

PROPERTY SIZE

22 acres

APPLICANT

Buck Ridge, LLC

ACCEPTANCE DATE

June 15, 2022

REVIEW BASIS

Chapters 50 and 22A

Summary:

- Staff recommends **approval with conditions**.
- The Application satisfies the requirements of Chapter 22A, Forest Conservation Law, by providing on-site reforestation for 5.36 acres.
- The Application provides landscape screening for neighboring existing residential development abutting the Subject Property and for viewsheds from Bucklodge Road, an identified Rustic Road.
- The Application provides an approximately 2,100-foot natural surface walking trail system and approximately 3.36 acres of conservation area for the Amenity Open Area.
- Bucklodge Road is classified as a Rustic Road, and therefore, exempt from frontage improvements.
- Community correspondence has been received for this Application.

TABLE OF CONTENTS

SECTION 1 - RECOMMENDATIONS AND CONDITIONS	3
PRELIMINARY PLAN 1989032A.....	3
SECTION 2 - SITE LOCATION AND DESCRIPTION	7
VICINITY.....	8
PROPERTY DESCRIPTION.....	9
SECTION 3 – APPLICATIONS AND PROPOSAL	9
PREVIOUS APPROVALS.....	9
PROPOSAL	10
SECTION 4 - COMMUNITY CORRESPONDENCE	12
SECTION 5 – ANALYSIS AND FINDINGS FOR PRELIMINARY PLAN #1989032A, 50.4.2.D	13
SECTION 6 - CONCLUSION	21
ATTACHMENTS	21

SECTION 1 - RECOMMENDATIONS AND CONDITIONS

PRELIMINARY PLAN 1989032A

Staff recommends approval with conditions of the Preliminary Plan amendment to subdivide two existing platted lots and three existing platted outlots into four buildable lots for up to four buildings with a total of 66,667 square feet of light industrial uses on 22 acres. All site development elements shown on the latest electronic version of the Preliminary Plan No. 11989032A as of the date of this Staff Report submitted via ePlans to the M-NCPPC, are required except as modified by the following conditions. The following conditions supersede all previous conditions:

GENERAL APPROVAL

1. This Preliminary Plan is limited to four (4) lots for four (4) light industrial buildings up to a combined total of 66,667 square feet.

ADEQUATE PUBLIC FACILITIES AND OUTSIDE AGENCIES

2. The Adequate Public Facilities (“APF”) review for the Preliminary Plan will remain valid for five (5) years from the initiation date (as defined in Montgomery County Code Section 50.4.3.J.5).

PLAN VALIDITY PERIOD

3. The Preliminary Plan will remain valid for three (3) years from its initiation date (as defined in Montgomery County Code Section 50.4.2.G), and before the expiration date of this validity period, a final record plat for all property delineated on the approved Preliminary Plan must be recorded in the Montgomery County Land Records or a request for an extension filed.

OUTSIDE AGENCIES

4. The Planning Board has reviewed and accepts the recommendations of the Montgomery County Department of Transportation (“MCDOT”) in its letter dated October 27, 2023, and incorporates them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations in the letter, which may be amended by MCDOT if the amendment does not conflict with any other conditions of the Preliminary Plan approval.
5. Before recording a plat for the Subject Property, the Applicant must satisfy MCDOT’s requirements for access and improvements.
6. The Planning Board has reviewed and accepts the recommendations of the Montgomery County Department of Permitting Services (“MCDPS”) – Water Resources Section in its stormwater management concept letter dated October 20, 2023, and incorporates them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations in the letter, which may be amended by MCDPS – Water Resources Section

if the amendment does not conflict with any other conditions of the Preliminary Plan approval.

7. The Planning Board has reviewed and accepts the recommendations of the MCDPS – Well and Septic Section in its letter dated July 12, 2023, and incorporates them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations in the letter, which may be amended by MCDPS – Well and Septic Section if the amendment does not conflict with any other conditions of the Preliminary Plan approval.
8. The Planning Board has reviewed and accepts the recommendations of the MCDPS, Fire Department Access and Water Supply Section in its letter dated June 7, 2023, and incorporates them as conditions of approval. The Applicant must comply with each of the recommendations in the letter, which MCDPS may amend if the amendment does not conflict with other conditions of Preliminary Plan approval.

OTHER APPROVALS

9. Before approval of a record plat or any demolition, clearing or grading for the Subject Property, the Applicant must receive Staff certification of this Preliminary Plan.

ENVIRONMENT AND NOISE

10. The Applicant must schedule the required site inspections by M-NCPPC Forest Conservation Inspection Staff per Section 22A.00.01.10 of the Forest Conservation Regulations.
11. The Applicant must comply with all tree protection and tree save measures shown on the approved Final Forest Conservation Plan. Tree save measures not specified on the Final Forest Conservation Plan may be required by the M-NCPPC Forest Conservation Inspection Staff.
12. The Limits of Disturbance (“LOD”) shown on the Final Sediment and Erosion Control Plan must be consistent with the LOD shown on the approved Final Forest Conservation Plan.
13. Before recordation of the plat and the start of any demolition, clearing, grading, or construction, whichever comes first, for this development Application, the Applicant must:
 - a) Record a Category I Conservation Easement over all areas of forest retention, forest planting and environmental buffers as specified on the approved Final Forest Conservation Plan. The Category I Conservation Easement must be in a form approved by the M-NCPPC Office of the General Counsel and must be recorded in the Montgomery County Land Records by deed. The Book/Page for the easement must be referenced on the record plat.
 - b) Install permanent conservation easement signage along the perimeter of the conservation easements as shown on the FCP, or as directed by the M-NCPPC Forest Conservation Inspection Staff.
 - c) Install the permanent conservation easement fencing along the perimeter of the conservation easements as shown on the FCP, or as directed by the M-NCPPC Forest Conservation Inspection Staff.
 - d) Execute a five-year Maintenance and Management Agreement (“MMA”) in a form approved by the M-NCPPC Office of the General Counsel. The MMA is required for all forest planting areas, mitigation tree plantings, including variance tree mitigation

plantings, and landscape plantings credited toward meeting the requirements of the FCP. The MMA includes invasive species management control measures as deemed necessary by the M-NCPPC Forest Conservation Inspection Staff.

- e) Submit financial surety, in a form approved by the M-NCPPC Office of the General Counsel, to the M-NCPPC Planning Department for the 5.36 acres of new forest planting and maintenance, including invasive species management controls, credited toward meeting the requirements of the FCP.
14. The Applicant must install the Afforestation/Reforestation plantings as shown on the approved FCP, within the first planting season following the release of the first Sediment and Erosion Control Permit from the Montgomery County Department of Permitting Services for the Subject Property, or as directed by the M-NCPPC Forest Conservation Inspection Staff.

TRANSPORTATION

Existing Frontage Improvements

15. The Applicant must provide the following dedications and show them on the record plat(s) for the following existing roads:
- a) All land necessary to accommodate a minimum of forty (40) feet from the existing pavement centerline along the Project Area frontage for Buck Ridge Court.

SURETY

16. Before issuance of any building permit or sediment control permit, whichever comes first, the Applicant must enter into a Surety and Maintenance Agreement with the Planning Board in a form approved by the M-NCPPC Office of General Counsel that outlines the responsibilities of the Applicant. The Agreement must include a performance bond or other form of surety, with the following provisions.
- a) A cost estimate of the materials and facilities, which, upon Staff approval, will establish the surety amount.
 - b) The cost estimate must include a natural surface trail and landscape screening.
 - c) Completion of all improvements covered by the surety will be followed by inspection and potential reduction of the surety.
 - d) The bond or surety for each item shall be clearly described within the Surety & Maintenance Agreement, including all relevant conditions.

RECORD PLATS

17. There shall be no clearing or grading of the site before recordation of plat(s).

Easements

18. The record plat must show necessary easements.
19. The record plat must reflect common ingress/egress and utility easements over all shared driveways.

20. The record plat must reflect a common use and access covenant for the benefit of the public over all trails, sidewalks and paths not included in a public right-of-way or private street parcel. The covenant must be in a form approved by the M-NCPPC Office of the General Counsel and recorded among the Montgomery County Land Records.

Notes and Labels

21. The record plat must reflect all areas under common ownership.
22. The record plat must reference the Common Open Space Covenant recorded among the Montgomery County Land Records at Book 28045 Page 578 (“Covenant”).

LANDSCAPE AND LIGHTING PLANS

23. A landscape and lighting plan must be included in the Certified Preliminary Plan with the following items:
 - a) Landscape screening and amenity open space, including a natural surface trail.

CERTIFIED PRELIMINARY PLAN

24. The certified Preliminary Plan must contain the following notes:
 - a) *Unless specifically noted on this plan drawing or in the Planning Board conditions of approval, the building footprints, building heights, on-site parking, site circulation, and sidewalks shown on the Preliminary Plan are illustrative. The final locations of buildings, structures and hardscape will be determined at the time of issuance of building permit(s). Please refer to the zoning data table for development standards such as setbacks, building restriction lines, building height, and lot coverage for each lot.*
 - b) *The Applicant must schedule an on-site preconstruction meeting with M-NCPPC inspection staff before any demolition, clearing, or grading occurs on-site. The Applicant, along with their representatives, must attend the pre-construction meeting with the M-NCPPC inspector. A copy of the approved Certified Preliminary Plan is required to be on-site at all times.*
25. Before submittal of the Certified Preliminary Plan, the Applicant must make the following changes:
 - a) Show resolutions and approval letters on the certified set.
 - b) Include the approved Fire and Rescue Access plan in the certified set.

SECTION 2 - SITE LOCATION AND DESCRIPTION

The Subject Property is located on Buck Ridge Court, to the north of Bucklodge Road (Rustic Road), and consists of 22 acres in the Moderate Industrial (IM) and Rural (R) Zones (“Property” or “Subject Property”). The 22 acres consists of two recorded buildable lots and three recorded outlots. The Subject Property is located within the Boyds general area as identified by the 1985 *Approved and Adopted Boyds Master Plan* (“Master Plan”).

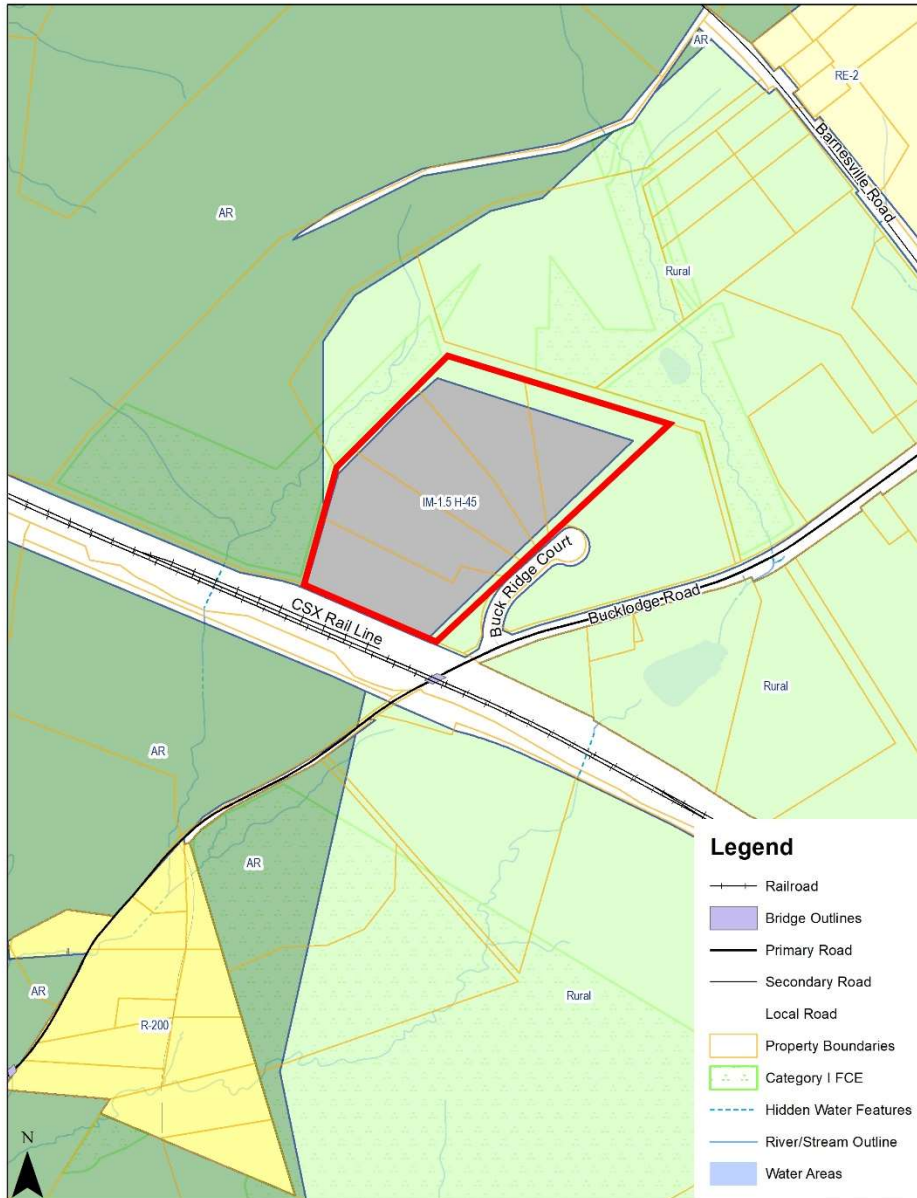


Figure 1 – Zoning Map

VICINITY

The surrounding properties are predominantly residential in character on a mix of large estate and smaller lots, all within the AR and Rural Zones. The surrounding properties range in size and contain single-family detached residential houses. The Subject Property abuts residential properties to the north, south, and east which are zoned AR and Rural. The western edge of the Subject Property is bounded by the CSX rail line, which extends to the northwest and southeast. To the west, on the opposite side of the rail line, is additional residential development on AR and Rural zoned land. Farther away to the east is Little Seneca Lake and to the southeast is Hoyles Mill Conservation Park.



Figure 2 – Aerial View of the Subject Property

PROPERTY DESCRIPTION

The Subject Property is 22 acres in size and consists of two recorded buildable lots and three recorded outlots, as shown on Plat No. 18460 (Attachment F). The Subject Property fronts on Buck Ridge Court, which intersects with Bucklodge Road, which is an identified Rustic Road. The Property, as depicted in Figures 1 and 2 above, is currently vacant and undeveloped, and includes a small portion of existing forest stand. As part of the original approval, Preliminary Plan No. 119890320, Buck Ridge Court was constructed as a public street and includes a public sidewalk, streetlights, storm drains, and a stormwater management facility.

The Property is located within the Little Seneca Creek watershed, which is classified by the State of Maryland as Use Class I, P waters. There are no sensitive environmental features located on the Property. No known rare, threatened, or endangered species or habitats exist on the Subject Property. There are no streams, wetlands, or floodplains located onsite. However, along the western property line there is an area of Stream Valley Buffer (“SVB”) from a stream on an adjacent property. There are no designated historic sites on or near the Property.

SECTION 3 – APPLICATIONS AND PROPOSAL

PREVIOUS APPROVALS

Preliminary Plan No. 119890320

Preliminary Plan Application No. 119890320 was approved by a Planning Board Memorandum dated June 10, 1991, to subdivide the Subject Property into two buildable lots and three outlots for two industrial buildings, limited to 7,760 square feet per building for a cumulative total of 15,520 square feet of industrial use (Figure 3). The plan was validated via record plat, and the road associated with the approval was constructed, but the rest of the Project was never implemented and the APF has expired.

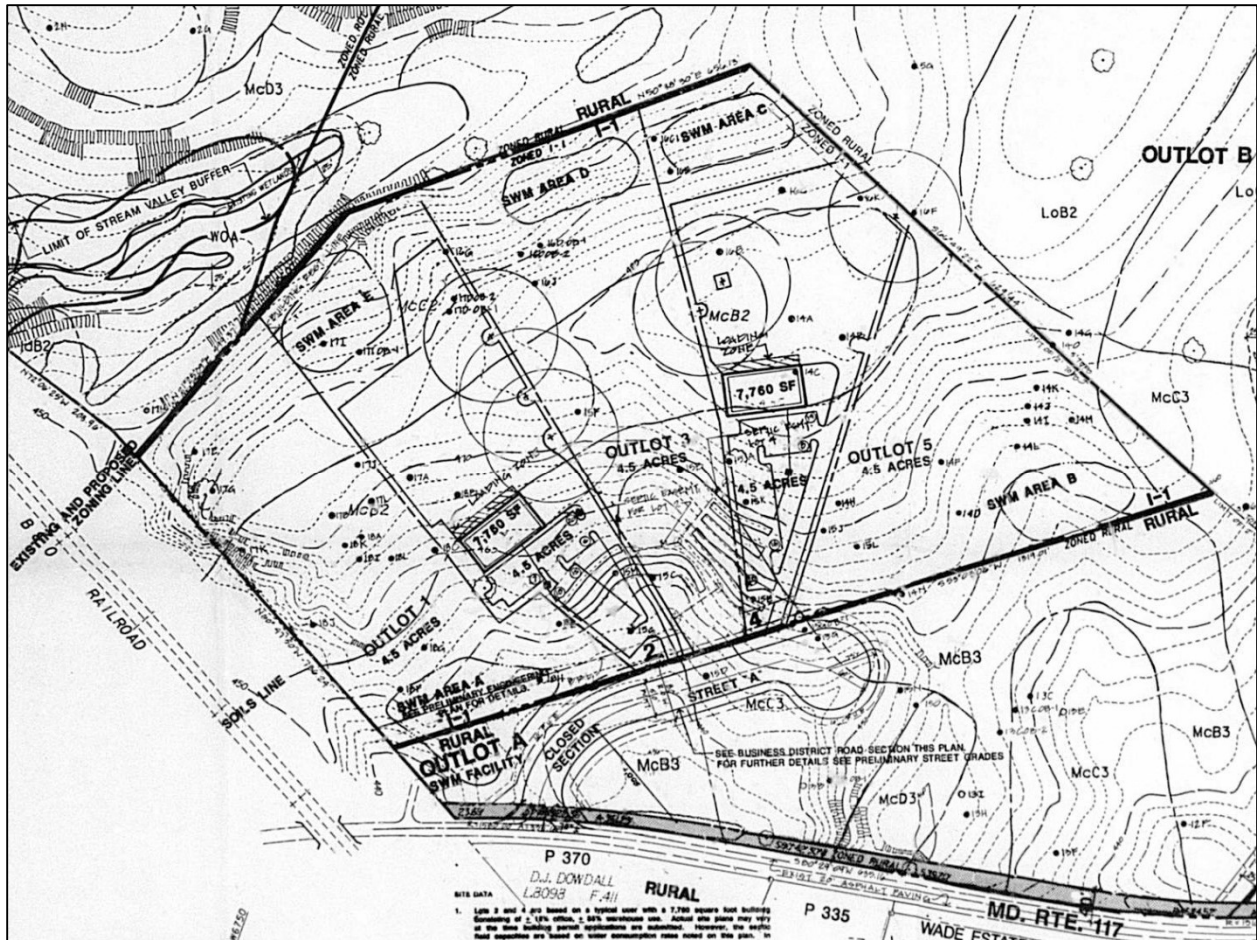


Figure 3 – Originally Approved Preliminary Plan Layout

PROPOSAL

Preliminary Plan No. 11989032A

Preliminary Plan Application No. 11989032A, Bucklodge Tract Property (“Preliminary Plan”) was submitted on June 15, 2022, by Buck Ridge LLC (“Applicant”) to subdivide two existing platted lots and three existing platted outlots on the Subject Property into four buildable lots for up to four buildings with a total of 66,667 SF of light industrial uses on 22 acres in the IM zone.

have screened views to the conceptually proposed industrial building areas due to retained forest, reforestation plantings on-site, and new landscaping. Off-site views of the industrial buildings from Bucklodge Road will be screened by new landscaping, which will be planted along the frontage of existing Outlots A and E and the southern edge of Lot 5.

OPEN SPACE

The Applicant is providing amenity open space in the form of a 3.36-acre conservation area and a 2,100-foot-long system of interconnected natural-surface trails that provide access to the four proposed buildings, as well as help facilitate pedestrian navigation around the Subject Property.

TRANSPORTATION

Each lot will be accessed from Buck Ridge Court, located off Bucklodge Road, a Rustic Road. The industrial buildings will be accessed by two shared driveways, with surface parking located to the sides and rears of the buildings (Figure 4). Lots 1 and 2 will utilize a new shared driveway and Lots 4 and 5 will also utilize a new shared driveway.

ENVIRONMENT

The Property is subject to the Montgomery County Forest Conservation Law, Chapter 22A of the County Code, and requires a Forest Conservation Plan. The Preliminary Plan amendment complies with the Montgomery County Environmental Guidelines and the Forest Conservation Law, as conditioned in the Staff Report and described below.

Natural Resource Inventory/Forest Stand Delineation

The Natural Resource Inventory/Forest Stand Delineation (“NRI/FSD”) 420211540 for this Property was approved in May 2021. The NRI/FSD identifies the environmental features and forest resources on the Subject Property. The NRI/FSD identifies the 22-acre Subject Property located within the Seneca Creek Watershed, which is classified as Use Class I-P by the State of Maryland. The Subject Property contains approximately 4.12 acres of forest which is comprised of three separate forest stands. In addition, the Property contains 5 trees that have a diameter at breast height (“DBH”) of 24 inches or greater, 3 of which have a DBH of 30” or more.

SECTION 4 - COMMUNITY CORRESPONDENCE

The Applicant has met all proper signage and noticing requirements for the Preliminary Plan Amendment. As of the date of this report, Staff received community correspondence from Boyd’s Civic Association and several neighbors regarding this Application (Attachment E). The correspondence received included questions and concerns regarding the visibility of the proposed

industrial buildings from existing homes and Bucklodge Road, the proposed industrial use, forest clearance on the Subject Property, traffic impacts on Bucklodge Road, and general procedural questions. Staff worked closely with the Applicant to provide landscape screening around the surface parking lots and along Bucklodge Road. These plantings include shade trees, ornamental trees, evergreens, ornamental grasses, and assorted shrubs, which help to address concerns regarding screening.

Additionally, the approval will limit the number of buildings located on the Subject Property. This ultimately reduces the overall visibility from Bucklodge Road and existing residences. Regarding the proposed industrial use on the Subject Property, the use is permitted within the IM zone and was previously approved under the original Preliminary Plan (No. 119890320). Staff worked closely with the Applicant to minimize the amount of disturbance to the existing forest stand and meet all reforestation requirements by planting on-site versus off-site. Providing the reforestation on-site also helps to screen the proposed industrial buildings from view from the neighboring homes. Based on the proposed use, traffic impacts to Bucklodge Road will be minimal. Since Bucklodge Road is a Rustic Road, Staff has worked with the Applicant to revise the plan to prevent any extraneous impacts and to protect the natural features of the road. As a result, the Application will have a negligible impact on Bucklodge Road. Staff addressed the procedural questions as they pertained primarily to the Preliminary Plan review process. With these revisions, the Application as proposed, and the implementation of all applicable code requirements, address the concerns raised in the correspondence.

SECTION 5 – ANALYSIS AND FINDINGS FOR PRELIMINARY PLAN 1989032A, 50.4.2.D

The Planning Board approved Preliminary Plan No. 119890320, by a Planning Board Memorandum dated June 10, 1991, to create two buildable lots and three outlots for two industrial buildings, limited to 7,760 square feet per building for a cumulative total of 15,520 square feet of industrial use on the Subject Property with conditions.

Preliminary Plan Amendment 11989032A requests to subdivide two existing platted lots and three existing platted outlots into four buildable lots for up to four buildings, with a combined total of 66,667 SF of light industrial uses on 22 acres. The proposed Preliminary Plan Amendment meets the following findings in the Subdivision Regulations:

- 1. The layout of the subdivision, including size, width, shape, orientation and density of lots, and location and design of roads is appropriate for the subdivision given its location and the type of development or use contemplated and the applicable requirements of Chapter 59.***

The Preliminary Plan meets all applicable sections of the Subdivision Regulations. The proposed lots size, width, shape, and orientation are appropriate for the location of the subdivision, taking into account the recommendations of the Master Plan, and for the proposed use (Industrial) to be located on the Subject Property.

The proposed lots were reviewed for compliance with the dimensional requirements for the IM Zone as specified in the Zoning Ordinance in effect after October 30, 2014. Proposed Lot 1 (6.10 acres), Proposed Lot 2 (7.19 acres), Proposed Lot 4 (4.41 acres), and Proposed Lot 5 (4.30 acres) will meet all of the dimensional requirements for area and frontage and can accommodate the proposed industrial use, which can reasonably meet the width and setback requirements within that zone. Additionally, the size and shape of the lots is determined by the requirements to accommodate on-site well and septic systems. A summary of this review is included in Table 1. The Preliminary Plan has been reviewed by other applicable County agencies, all of whom have recommended approval.

Table 1: Bucklodge Tract Preliminary Plan Data Table for IM Zone, Standard Method, Section 59.4.8.1

IM Zone	Required	Proposed Lot 1	Proposed Lot 2	Proposed Lot 4	Proposed Lot 5
Amenity Open Space (Tract>10,000 SF)	10% of Site Area (1.8 acres)	2.4 acres			
Min. Lot Area	---	265,746 sq. ft. (+/-) (6.10 acres)	313,235 sq. ft. (+/-) (7.19 acres)	192,000 sq. ft. (+/-) (4.41 acres)	187,337 sq. ft. (+/-) (4.30 acres)
Max. Gross Floor Area (GFA)	---	15,000 sq. ft.	20,000 sq. ft.	16,667 sq. ft.	15,000 sq. ft.
Max. Density, FAR	1.5	0.06	0.07	0.09	0.08
Min. Front Setback	10 ft.	10 ft. or greater	10 ft. or greater	10 ft. or greater	10 ft. or greater
Min. Side Street Setback	10 ft.	N/A	N/A	N/A	N/A
Min. Side Setback Abutting AR or Rural Zones	1.5 x Setback for Abutting Zone (1.5x20 ft.=30 ft.)	30 ft. or greater	N/A	N/A	30 ft. or greater
Min. Side Setback Abutting Industrial Zones	0 ft.	0 ft.	0 ft.	0 ft.	0 ft.
Min. Side Setback Abutting Other Zones	10 ft.	10 ft. or greater	N/A	N/A	N/A
Min. Rear Setback Abutting AR or Rural Zones	1.5 x Setback for Abutting Zone (1.5x35 ft.=52.5 ft.)	52.5 ft. or greater	52.5 ft. or greater	52.5 ft. or greater	52.5 ft. or greater
Min. Rear Setback Abutting Industrial Zones	0 ft.	N/A	N/A	N/A	N/A

IM Zone	Required	Proposed Lot 1	Proposed Lot 2	Proposed Lot 4	Proposed Lot 5
Min. Rear Setback Abutting Other Zones	10 ft.	N/A	N/A	N/A	N/A
Min. Rear Setback, Alley	0 ft.	N/A	N/A	N/A	N/A
Max. Principal Building Height	45 ft.	45 ft. or less	45 ft. or less	45 ft. or less	45 ft. or less
Max. Accessory Structure Height	45 ft.	45 ft. or less	45 ft. or less	45 ft. or less	45 ft. or less
Site Plan Required	No	No	No	No	No
Min. Parking Required	1.5 spaces / 1,000 SF of GFA	23 spaces	30 spaces	25 spaces	23 spaces
Min. Accessible Parking Required	1 space / 25 spaces, inc. 1 van accessible space	1 (1 van)	2 (1 van)	1 (1 van)	1 (1 van)
Min. Bicycle Spaces	0.5 spaces / 10,000 SF of GFA	1 space	1 space	1 space	1 space

2. The Preliminary Plan substantially conforms to the Master Plan.

a) Land Use

The proposed industrial development will be located in Boyds just north of the CSX railroad tracks, on the west side of Bucklodge Road within the 1985 *Boyds Master Plan*. Bucklodge Road was recently designated as a Rustic Road by the 2023 *Rustic Roads Functional Master Plan Update*.

The 1985 *Boyds Master Plan* does not have specific recommendations for the Subject Property. The main purpose of the Master Plan was to determine if it was appropriate to permit a large rock quarry in Boyds for the extraction of a large diabase rock deposit, given the opposition of the use by many residents. The Master Plan did designate areas that were suitable for the extraction of mineral resources under stringent conditions if an application for the use were ever filed. The diabase extraction area from the Master Plan was located south of the Subject Property to the east and west of Hoyles Mill and White Ground Roads (two roads also in the Rustic Roads Program). The extraction of the diabase never came to fruition and a portion of the area was incorporated into the Hoyles Mill Conservation Park.

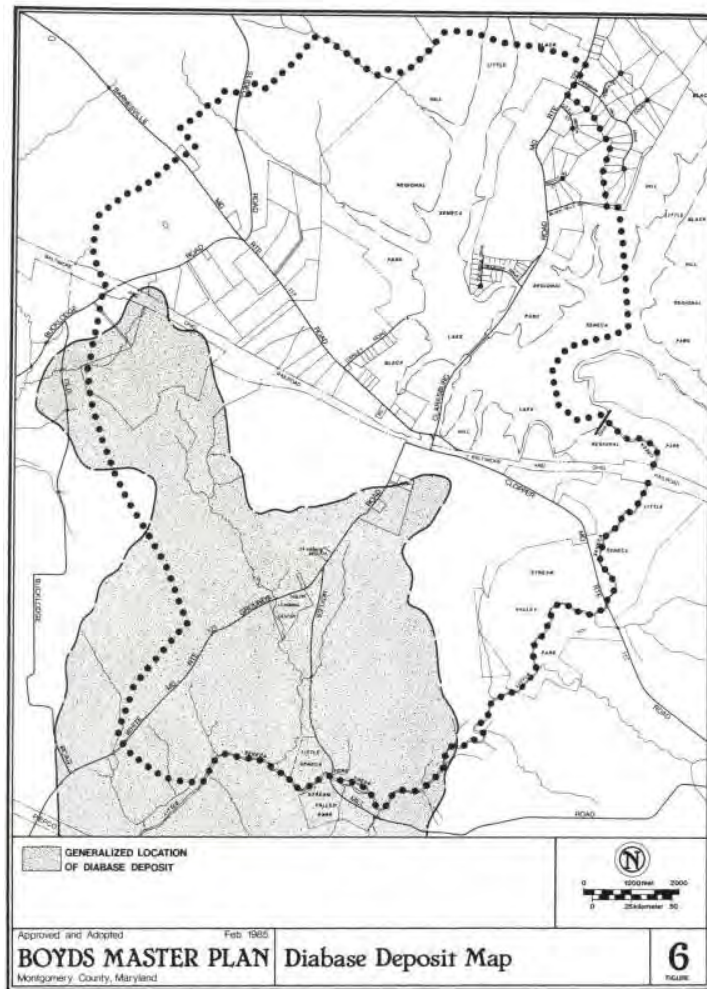


Figure 4 - General Location of the Diabase Deposit

The eastern edge of the Subject Property is located along Bucklodge Road, a designated Rustic Road. Rustic Roads are historic and scenic roadways that reflect the agricultural character and rural origins of the County. Each road in the Rustic Roads Program has a written profile that provides a history of the road, the traveling experience along the road, environmental features along or near the road, the road characteristics (i.e. the extents, width, surface, lanes and shoulder of the road), and a map that identifies features that contribute to its designation as a Rustic Road. The significant features of Rustic Roads must be preserved when the road is maintained or improved. The significant features along Bucklodge Road are as follows:

- Numerous long views across fields
- Wooded areas
- Hedgerows along road
- Roadside embankments
- Views of horse fields
- National Register-eligible two-lane bridge over Bucklodge Branch

- One-lane bridge over Bucklodge Branch tributary
- Seneca sandstone building very close to road
- Seneca sandstone wall along the road at Friends Advice

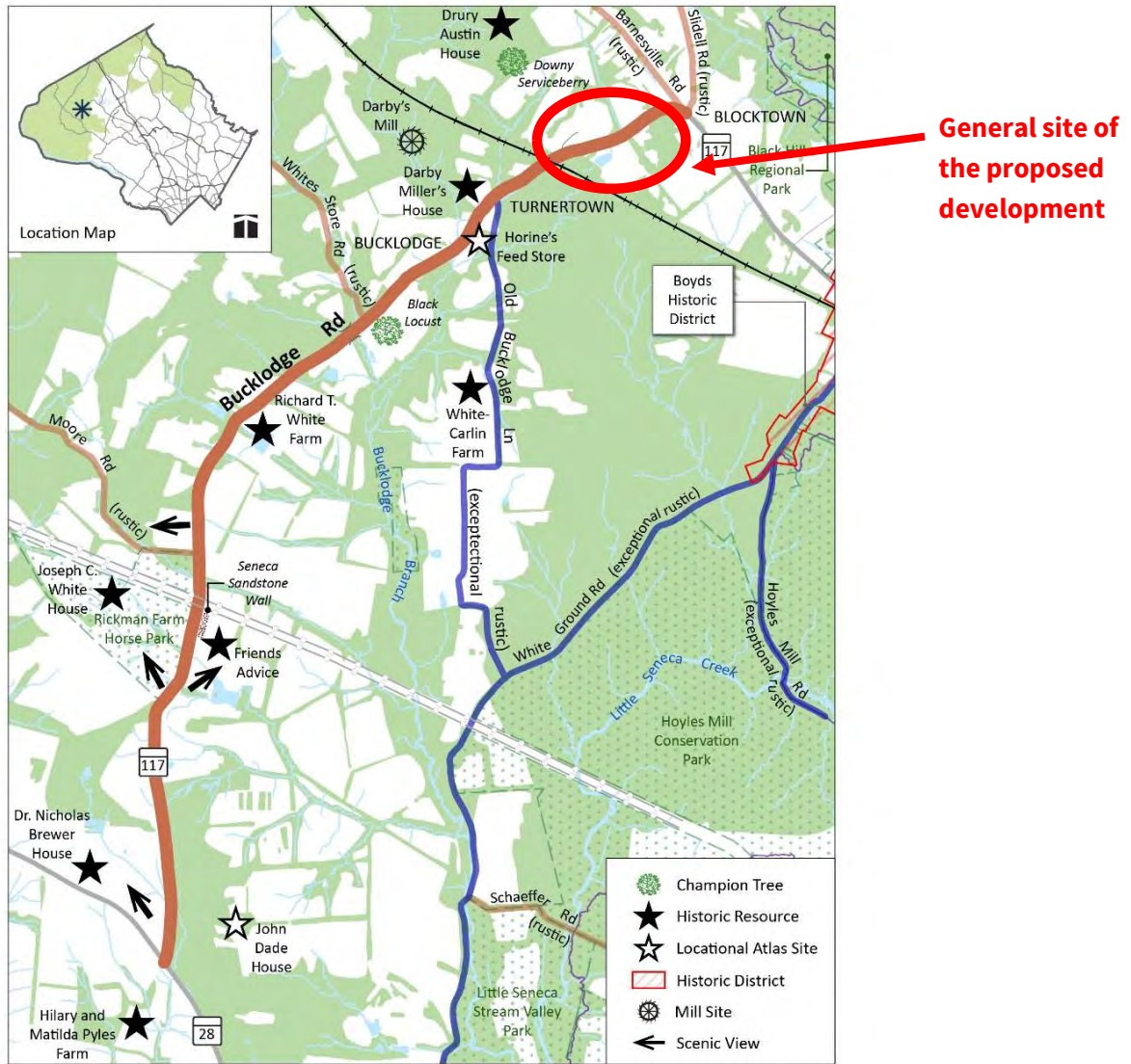


Figure 5 - Map of Bucklodge Road (2023 Rustic Roads Functional Master Plan Update)

The significant features contribute to the character that defines Bucklodge Road as a Rustic Road. All of these features will be preserved. Although there are no scenic views or significant features within the immediate vicinity of the Subject Property, Staff has worked with the applicant to ensure that there will be proper screening to minimize the impacts of development as seen from the Rustic Road so that it does not detract or negatively impact the character of Bucklodge Road.

b) Environment

The Master Plan does not provide any environmental recommendations for the Subject Property.

c) Transportation

The Subject Property is located on two frontages – Buck Ridge Court and Bucklodge Road. Egress and ingress points are derived from Buck Ridge Court, itself accessed from Bucklodge Road. Buck Ridge Court carries no designation in the 2018 Master Plan of Highways and Transitways or the 2018 Bicycle Master Plan. Buck Ridge Court was constructed to Commercial/Business District Street specifications with an approximate right-of-way ("ROW") of 80 feet. The Applicant will provide 40 feet of dedication from the existing pavement centerline along the Subject Property frontage for Buck Ridge Court to accommodate all land necessary to achieve the complete Master Plan ROW. The entirety of the site is located within a Road Code Rural Zone. Typically, properties of more than 25,000 square feet in a rural zone are precluded from providing pedestrian or bicycle facilities as outlined in Section 49-33(1)(A) of the County Code.

Secondarily, the portion of the Subject Property with frontage on Bucklodge Road is excluded from constructing bicycle and pedestrian facilities. Bucklodge Road is classified as a Rustic Road in the 2023 *Rustic Roads Functional Master Plan*. Section 49-33(1)(B) stipulates that roads classified as rustic or exceptional rustic are exempt from frontage improvements.

Pedestrian access is provided via a system of internal natural surface trails connecting each lot. A 5-foot sidewalk exists along both sides of Buck Ridge Court.

The Subject Property is not transit accessible. There are no existing Ride On bus routes near Buck Ridge Court (property frontage), Bucklodge Road (east-west arterial), or Barnesville Road (north-south arterial). The Boyds MARC Station is located approximately two miles southeast of the Subject Property at the confluence of Clopper and White Ground Roads.

3. Public facilities will be adequate to support and service the area of the subdivision.

a) Roads and other Transportation Facilities

As discussed in the section below, adequate public facilities exist to support and service the Subject Property under Section 50.4.3.J of the Subdivision Regulations. The Property is located in the Rural West Policy Area, categorized as a green Policy Area under the 2020 – 2024 Growth and Infrastructure Policy (the "GIP").

b) Local Area Transportation Review (LATR)

This Application was reviewed under the 2020 - 2024 *Growth and Infrastructure Policy* and associated 2022 *Local Area Transportation Review* ("LATR") Guidelines. As demonstrated on the Applicant's Traffic Statement, dated May 9, 2022, the Preliminary Plan is exempt from completing a Transportation Impact Study ("TIS") because the Site will not generate 50 or more net-new peak-hour person trips. The Subject Property is projected to generate a net increase of 43 morning peak-hour person trips and 25 evening peak-hour person trips. Therefore, it is exempt from additional review under both LATR and the GIP. Roads and other transportation facilities are adequate to support the Application.

The new peak-hour person trips were calculated by subtracting the proposed future generated by the previously approved use as general light industrial. Based on the trip generation table, the proposed development will not exceed the 50 peak-hour person trip threshold, exempting the Project from a Transportation Impact Study. A summary of the trip generation analysis is provided in Table 2 below. As a note of clarification, Applicants are permitted to request credit for any existing trips per Existing Use Trip Credits. Per LATR guidelines, if use and occupancy permits were issued more than 12 years before the most recent Transportation Exemption or Impact Statement, the Applicant(s) can take credit for existing trips based on the current LATR methodology for trip generation. The previous site approval is from 1991, thereby satisfying the requirement.

Table 2: Trip Generation Analysis

ITE Trip Generation						
Proposed	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
ITE Generation Code – 110 (General Light Industrial) @ 66,667 sq. ft.	43	6	49	4	26	30
Total Vehicle Trips Per ITE 11 th Edition	43	6	49	4	26	30
Policy Area Adjustment Factor (Rural West – 100%)	43	6	49	4	26	30
Total LATR Adjusted Vehicle Trips by Mode Share (Auto Driver at 76.1% for Rural West Policy Area)						
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Auto Driver	43	6	49	4	26	30
Auto Passenger	11	2	13	1	7	8
Transit	0	0	0	0	0	0
Non-Motorized (Bike)	2	0	3	0	1	1
Total Person Trips	56	8	64	5	34	39
Previous Site Approval						
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
ITE Generation Code – 110 (General Light Industrial) @ 66,667 sq. ft.	14	2	16	2	9	11
Total Vehicle Trips Per ITE 11 th Edition	14	2	16	2	9	11
Policy Area Adjustment Factor (Rural West – 100%)	14	2	16	2	9	11
Total LATR Adjusted Vehicle Trips by Mode Share (Auto Driver at 76.1% for Rural West Policy Area)						
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Auto Driver	14	2	16	2	9	11
Auto Passenger	3	1	4	0	3	3
Transit	0	0	0	0	0	0
Non-Motorized (Bike)	1	0	1	0	0	0
Total Person Trips	18	3	21	2	12	14
	AM Peak Hour			PM Peak Hour		

Net Trip Generation	Proposed	56	8	64	5	34	39
	Previous Site Approval	18	3	21	2	12	14
	TOTAL PERSON TRIPS	38	5	43	3	22	25

*Pedestrian trips are calculated by adding the number of estimated non-vehicular trips to the number of estimated transit trips. Trip generation rates are based on the ITE Trip Generation Manual, 11th Edition and adjusted as detailed in the 2022 LATR Guidelines. Figures are rounded to nearest whole number. Source: Lenhart Traffic Consulting Local Area Transportation Review – May 9th, 2022, modified by staff.

c) Other Public Facilities and Services

Other public facilities and services are available and adequate to serve the proposed lot. The lot will be served by on-site wells and septic systems. The Application has been reviewed by the MCDPS, Well and Septic Section, and was approved on July 12, 2023 (Attachment D).

The Application has been reviewed by the MCDPS, Fire Department Access and Water Supply Section, and a Fire Access Plan was approved on June 7, 2023 (Attachment D). The Fire Department Access Plan provides fire compliant entrances and drives to adequately access the proposed buildings. The entrances and drives meet all required turning radii, widths, and turnaround requirements for fire trucks serving the Subject Property.

Electric and telecommunications services are available and adequate to serve the Subject Property. Other public facilities and services, such as police stations, firehouses, and health services are currently operating within the standards set by the Growth and Infrastructure Policy currently in effect. The Application can be adequately served by all applicable public facilities and services. Because this Application proposes to create new lots for light industrial uses with no new dwelling units, it does not have an impact on schools.

4. All Forest Conservation Law, Chapter 22A requirements are satisfied.

a) Preliminary/Final Forest Conservation Plan

The Application meets the requirements of Chapter 22A of the Montgomery County Forest Conservation Law (“FCL”) and the Montgomery County Planning Department’s Environmental Guidelines. As required by Chapter 22A, a Forest Conservation Plan was submitted with the Application. The total net tract area for forest conservation purposes is 22.12 acres which includes the Subject Property of 22 acres, plus off-site work of 0.12 acres. The Subject Property is zoned IM and is classified as Institutional Development Area (IDA) as defined in Section 22A-3 of the FCL and specified in the Trees Technical Manual. The Subject Property contains 4.12 acres of forest. The Applicant proposes to remove 2.68 acres of forest and retain 1.44 acres of forest. This results in a total reforestation requirement of 5.36 acres as calculated in the Forest Conservation Worksheet. The Applicant proposes to meet this requirement by planting onsite and immediately adjacent to the Subject Property on existing Outlot E.

All areas of forest retention, planting, or environmentally sensitive areas will be placed into Category I conservation easements.

5. All stormwater management, water quality plan, and floodplain requirements of Chapter 19 are satisfied.

The Preliminary Plan Application received a stormwater management plan approval from the Montgomery County Department of Permitting Services, Water Resources Section on October 20, 2023 (Attachment D). The Application will meet stormwater management goals through the use of micro-bioretenion, micro-infiltration, and a raingarden to provide full ESD.

6. Any burial site of which the applicant has actual notice or constructive notice or that is included in the Montgomery County Cemetery Inventory and located within the subdivision boundary is approved under Subsection 50-4.3.M.

Not applicable to this Property.

7. Any other applicable provisions specific to the property and necessary for approval of the subdivision is satisfied.

No other provisions apply to the Subdivision.

SECTION 6 - CONCLUSION

As conditioned, the Bucklodge Tract Preliminary Plan Amendment satisfies the findings under Section 50.4.3 and the applicable standards of the Zoning Ordinance, substantially conforms to the recommendations of the 2005 *Approved and Adopted Boyds Master Plan* and satisfies the findings of the Subdivision Regulations. Staff recommends approval of the Bucklodge Tract Preliminary Plan Amendment with the conditions specified at the beginning of this report.

ATTACHMENTS

Attachment A: Statement of Justification

Attachment B: Preliminary Plan Composite

Attachment C: Prior Approvals

Attachment D: Agency Letters

Attachment E: Community Correspondence

Attachment F: Record Plat No. 18460

Attachment G: Storm Drain Analysis and Report

Benning & Associates, Inc.

Land Planning Consultants
8933 Shady Grove Court
Gaithersburg, MD 20877
(301)948-0240

May 2, 2022 (Revised 03-13-2023)

Mr. Patrick Butler, Chief
Upcounty Planning Division
Montgomery County Planning Department
2425 Reddie Drive
Wheaton, MD 20902

Re: Statement of Justification for Bucklodge - MNCPPC #11989032A

Dear Mr. Butler,

This statement accompanies an application to amend the previously approved Preliminary Plan for the subject property. The property is located within the IM (moderate industrial) zone and Rural zone and consists of 22 acres of land comprised of 2 plat recorded building lots and 3 plat recorded outlots. The properties were all included on plat number 18460 as recorded in the Montgomery County Land Records on April 9, 1992.

In addition to the recording of the lots and outlots shown on plat 18460, street dedication was also provided. A new public street, Buck Ridge Court, was subsequently built along with related features which include a public sidewalk, streetlights, storm drains, and a stormwater management facility. Except for these public improvements, the subject property remains vacant and unimproved.

The original plan was limited by the availability of septic systems on the lot for on-site sewage disposal. A consent agreement recorded at Liber 10050 folio 105 limited the development of the site to two buildings of 7,760 square feet each (15,520 square feet of gross floor area total) on the two approved lots. With a floor area ratio (FAR) of 1.5 allotted to the site (1,176,120 square feet on 18 acres), the 15,520 square feet of GFA amounted to only 1.3% of the potential GFA on the site.

The applicants wish to make better use of the property than what is possible from the original approval. Accordingly, the septic limitations have been overcome by the use of sand mound septic systems which were not available for use when the original Preliminary Plan was approved. Testing for sand mound septic systems was successfully completed on each of the lots and outlots and updated plans proposing an increase in the number of buildings and buildings size were presented to the Well & Septic office of the Department of Permitting Services for review. After several reviews by the Well & Septic office, we have determined that the currently available options for

on-site sewage disposal will permit up to 4 buildings with a total GFA of 66,667 square feet (an increase of 51,147 square feet from the original approval). This is still less than 6% of the permissible GFA according to the master plan and zoning.

Given the above, the amended Preliminary Plan proposes the following updates which include previously approved square footages:

- Outlot B is to become Lot 1 with a total GFA of 15,000 square feet
- The lot line between new Lot 1 and existing Lot 2 is to be modified to allow for a better placement of the building on Lot 1.
- Existing Lot 2 (as modified per above) is to be combined with Outlot C into one new lot with a new total GFA of 20,000 square feet
- Existing Lot 4 is to remain as-is with a new total GFA of 16,667 square feet
- Outlot D is to become new Lot 5 with a total GFA of 15,000 square feet

Regarding the required findings of Chapter 50.4.2.D for approval of a Preliminary Plan, please note the following:

the layout of the subdivision, including size, width, shape, orientation and density of lots, and location and design of roads is appropriate for the subdivision given its location and the type of development or use contemplated and the applicable requirements of Chapter 59;

Much of the layout of the site was determined earlier at the time of the original Preliminary Plan approval. The new plan proposes the consolidation of a lot and outlot which results in one less lot overall and a total of 4 new buildings. Each of the lots (existing or new) are of a size and shape which can accommodate the necessary features which include new industrial buildings, driveways and parking area, on-site wells for water supply, on-site sewage disposal systems, and stormwater management measures. Each of the lots and the overall development in total meet all of the development standards applicable to property in the IM zone.

the preliminary plan substantially conforms to the master plan;

The property is located within the limits of the Boyds Master Plan as approved and adopted in 1985 and is currently zoned IM (moderate industrial) and Rural. Page 9 of the 1985 master plan identifies “22 acres of light industrial (I-1) zoning at the northwest intersection of Bucklodge Road and the B&O Railroad”. The area of the property zoned for industrial uses was reduced later to about 18 acres by zoning map amendment which occurred subsequent to the 1985 master plan. Also, the I-1 zone became the “IM” zone on October 30, 2014 by District Map Amendment G-956.

The 1985 master plan states “low intensity uses, such as warehousing, are envisioned” for this industrial site. Furthermore, the Zoning Ordinance states the IM zone “is intended to provide land for industrial activities where major transportation links are not typically necessary and noise, dust, vibration, glare, odors, and other adverse environmental impacts are usually minimal.” The Preliminary Plan substantially conforms to the Master Plan and the Zoning Ordinance by proposing a modest amount of industrial-type development on a 22-acre site with uses as permitted in the current IM zone such as warehousing or other similar uses.

The Master Plan confirms that the subject property is not located within an area which is served by public water or public sewer. The Preliminary Plan conforms to the Master Plan by providing for the use of private wells and private septic systems.

public facilities will be adequate to support and service the area of the subdivision;

The property is located approximately 1/3 of a mile west of Barnesville Road, Maryland Route 117, and adjacent to Bucklodge Road, a County maintained roadway. The site is accessed from Buck Ridge Court, a commercial-business district public street built expressly to provide access to the industrial uses planned for the site. Utility services are available in the nearby public streets. As the property is not in an area which is served by public water or sewer, on-site wells and septic systems will be provided in accordance with the standards of the Department of Permitting Services.

The development will provide new on-site water supply cisterns (30,000 gallon) within a public safety water supply easement to allow the fire department to provide fire protection services to the proposed new buildings and to the nearby community at-large.

all Forest Conservation Law, Chapter 22A requirements are satisfied;

While the original Preliminary Plan approval in 1989 was not subject to the Forest Conservation Law, the Law now applies since new development is planned. Accordingly, a Natural Resources Inventory / Forest Stand Delineation Plan (NRI/FSD) was prepared and submitted and was ultimately approved for the property (420211540). The NRI/FSD documents that 4.12 acres of forest exists on the site along with areas of stream valley buffer.

In accordance with Chapter 22A, a Preliminary / Final Forest Conservation Plan (FCP) is being submitted for concurrent review with the amended Preliminary Plan. The FCP identifies areas of forest clearing, forest retention, and new forest planting on and off the site. The approved NRI/FSD and the proposed FCP demonstrate that the requirements of Chapter 22A are shown to be met.

all stormwater management, water quality plan, and floodplain requirements of Chapter 19 are satisfied;

Stormwater management for the project is to be addressed by utilizing Environmental Site Design (ESD) practices. A stormwater management concept plan has been approved by the Department of Permitting Services (SM #287192).

any burial site of which the applicant has actual notice or constructive notice or that is included in the Montgomery County Cemetery Inventory and located within the subdivision boundary is approved under Subsection 50-4.3.M;

There is no evidence of any burial site on the subject property. To the best of the applicant's knowledge and belief, no burial site has ever existed on the property.

CONCLUSION

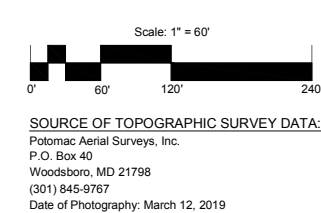
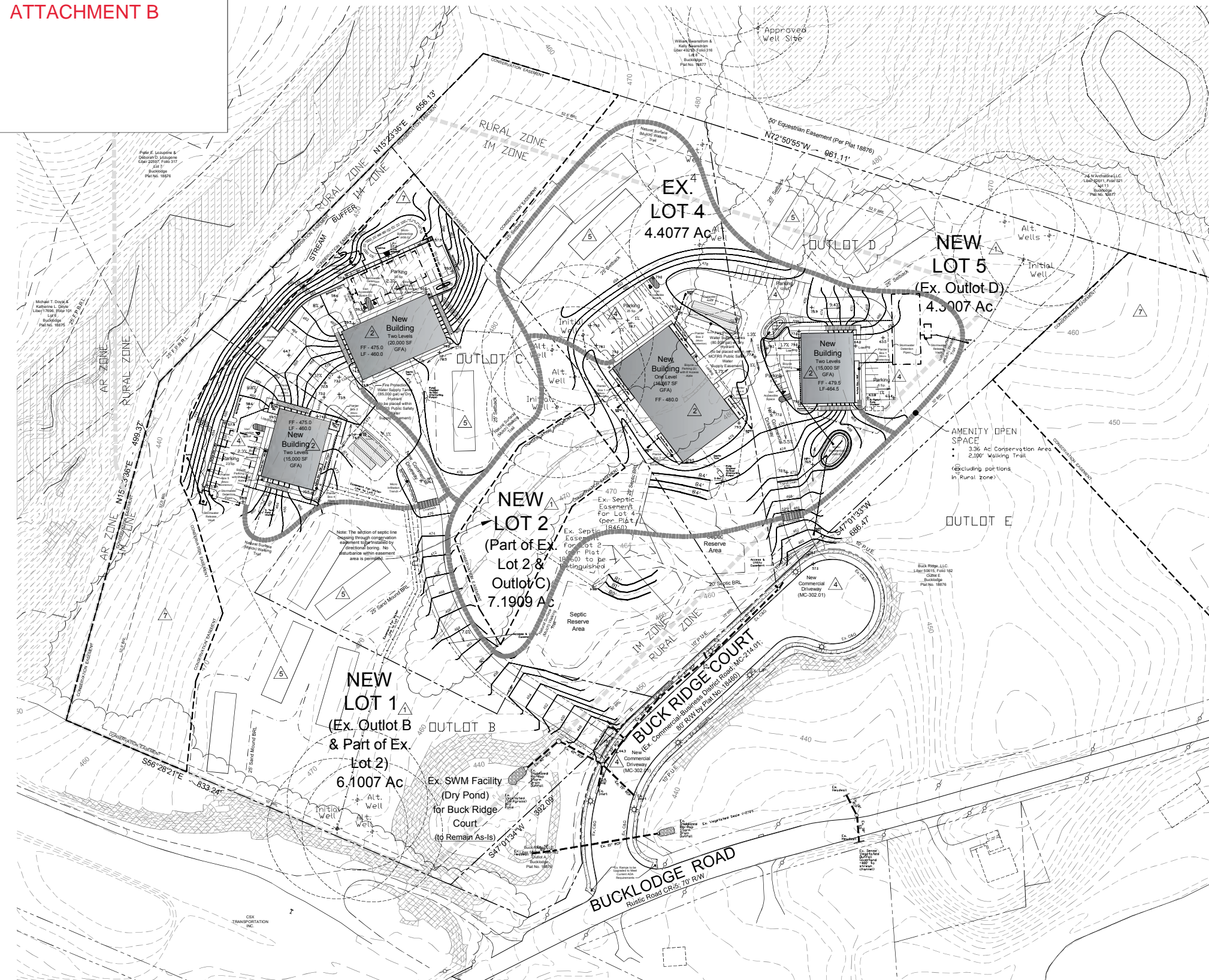
The Preliminary Plan application as presented is consistent with the requirements and recommendations of the Master Plan and is in compliance with all zoning and subdivision standards for development within the IM zone. Based upon the information provided, we respectfully request approval of this application.

Sincerely,

A handwritten signature in black ink, appearing to read 'David W. McKee', with a stylized, cursive script.

David W. McKee

ATTACHMENT B



Pre-Construction Meeting Required:
An on-site pre-construction meeting is required to be set up with the MNCPPC inspection staff before any demo, clearing, or grading occurs on-site. The owner or his designee who has signature authority, and the general contractor must attend the pre-construction meeting with the MNCPPC inspector. A copy of the approved Certified Preliminary Plan is required to be on-site at all times. To schedule an inspection with MNCPPC staff, please contact Josh Kaye at 301-495-4722.

Compliance with Section 59-6: General Development Requirements Proposed Use: Warehouse					
	Required	Lot 1	Lot 2	Lot 3	Lot 4
Parking Requirements: Sec. 6.2.4.B.	1.5 sp / 1,000 SF of GFA	23 spaces	30 spaces	25 spaces	23 spaces
Sec. 6.2.5.E. Size of Spaces (Perpendicular)	8.5'x18'L	9'x18'L	9'x18'L	9'x18'L	9'x18'L
No. of Accessible Spaces	1 per 25 Sp. incl. 1 van accessible	1 (1 van accessible)	2 (1 van accessible)	1 (van accessible)	1 (van accessible)
No. of Bicycle Parking Spaces	0.5 / 10,000 SF of GFA	1	1	1	1

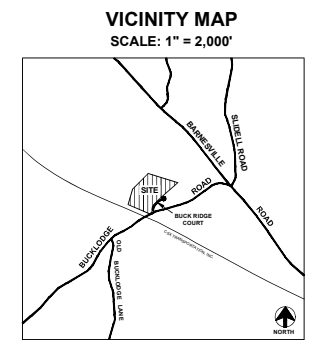
Professional Certification:
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed landscape architect registered to practice in the State of Maryland.
Signature: [Signature] Date: 10-04-2023 Exp. Date: 10-21-2024

Surveyor's Certificate:
I hereby certify that the boundary shown hereon is correct to my best knowledge and belief based upon existing records and visual observations.
Signature: [Signature] Date: 3/10/2023 Exp. Date: 4/3/2024

- NOTES:**
- TOTAL AREA OF PROPERTY (Area of Lots) - 22.00 AC
 - AREA IN IM (Moderate Industrial) ZONE = 18.0 AC (784,080 SF)
 - AREA IN RURAL ZONE - 4.0 AC
 - FLOOR AREA RATIO ALLOWED (FAR) IN IM ZONE - 1.5 (1,176,120 SF)
 - GROSS FLOOR AREA PROPOSED (GFA) - 15,520 SF (original approval) = 51,147 SF (new) = 66,667 SF
 - AREA PREVIOUSLY DEDICATED TO PUBLIC USE (Buck Ridge Court) - 2,308.0 AC
 - BUCK RIDGE COURT IS EXISTING AS A PUBLIC STREET AND IS MAINTAINED BY THE COUNTY.
 - NUMBER OF EXISTING LOTS - 2
 - NUMBER OF EXISTING OUTLOTS - 3
 - TOTAL NUMBER OF LOTS PROPOSED - 4 (including existing lots)
 - EXISTING SEWER & WATER SERVICE CATEGORIES: S-6, W-6
 - SITE TO BE SERVED BY ON-SITE WELLS & SEPTIC SYSTEMS.
 - OPEN SPACE REQUIRED IN THE IM ZONE - 10% or 1.8 AC

- LEGEND:**
- CANOPY COVERAGE
 - CONSERVATION EASEMENT
 - EXISTING BUILDING
 - EXISTING CATEGORY I CONSERVATION EASEMENT
 - INDEX CONTOUR (2' INTERVAL)
 - INTERMEDIATE CONTOUR
 - LIMITS-OF-DISTURBANCE
 - PROPERTY LINE (SUBJECT)
 - PROPERTY LINE
 - PROPOSED BUILDING
 - PROPOSED CONTOUR
 - SAND MOUND SEPTIC AREA
 - SEPTIC DRAINFIELD
 - SLOPES > 25%
 - SOILS SERIES DIVIDE
 - STREAM
 - STREAM BUFFER
 - STREETLIGHT (Ex.)
 - UTILITY POLE (Ex.)
 - WATER CONNECTION
 - WELL SITE
 - 100 YEAR FLOODPLAIN
 - 25' FPBRL
 - ZONING LINE
 - WALKING TRAIL (6-foot wide mulched path)
 - STORMWATER DETENTION

- LIST OF AMENDMENT ITEMS**
- The plan proposes to convert or consolidate recorded outlots B, C, and D to building lots for moderate industrial uses.
 - The plan proposes new buildings on new lots 1 and 5 and larger buildings on existing lots 2 and 4 for uses permitted in the IM zone.
 - The plan proposes to increase the overall gross floor area (GFA) approved for the site from 15,520 square feet to 66,667 square feet.
 - The plan proposes new access driveways and on-site parking areas for the proposed new buildings and uses.
 - The plan provides new on-site sewage disposal systems for the proposed new buildings on all lots.
 - A Forest Conservation Plan is being submitted as part of the plan amendment.
 - The plan proposes new on-site and off-site category one conservation easement areas for stream valley buffer protection, on-site forest retention, and forest planting.
 - A Fire Department Apparatus Access & Water Supply Plan is being submitted as part of the amendment.



Revisions

Rev. 03-30-23
Rev. 05-25-23
Rev. 09-25-23
Rev. 10-04-23

date: 05/02/2022 scale: 1" = 60'

Bearing & Associates, Inc.
Land Planning Consultants
10000 Old Columbia Road
Columbia, MD 21046
(301) 944-2446

B&A

**PRELIMINARY PLAN
BUCKLODGE TRACT
(Lots 2, 4 & Outlots B, C, D of Bucklodge)**
Montgomery County, Maryland

WSSC GRD 22BNW18
TAK MAP 04343
MNCPPC FILE NO. 1189003A
SHEET P2

Prepared for:
Buck Ridge, LLC.
14801 Clopper Road
Boys, MD 20841
(301) 972-4997

MONTGOMERY COUNTY HEALTH DEPARTMENT
 180 Maryland Avenue, Suite 424
 Rockville, Maryland 20850
 (301) 317-7474

MEMORANDUM

June 10, 1991

TO: Maryland - National Capital Park and Planning Commission

FROM: *Richard E. Church*

SUBJECT: status of Preliminary Plan #18001
 Buckridge
 2 lots, 244

This is to notify you that the status of the above named subdivision plan which was received in this office on February 13, 1991 is as follows:

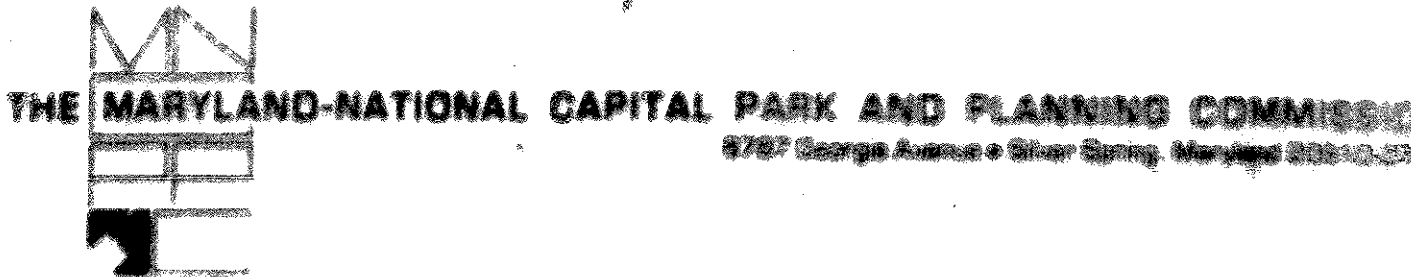
Approved with the following reservations.

1. Recorded plat to be a scale of 1" = 100' or a certified film positive of the record plat at that scale.
2. Septic system easements are to be reflected on the record plat as approved on this preliminary plan.
3. This approval is based on the decision of Montgomery County Planning Board meeting of April 26, 1991.
4. Approval is conditional to the terms of a consent agreement which is to be recorded in the land records of Montgomery County prior to record plat.

If you have any further questions, contact Boyd E. Church at 730-2000.

SHM:EMC:pa
 0002E

cc: Owner
 Surveyor
 Park & Planning



January 23, 1988

MEMORANDUM

TO: John Clark, Director
Office of Planning & Policy, MDCOM

Ray Trout, Chief
Traffic Planning Section, MDCOM

Michael Snyder, District Engineer
District 3, MDCMA

FROM: Ed Axler, Transportation Planner ²⁹
Transportation Planning Division

SUBJECT: Preliminary Plan No. 1-89212
Buck Lodge Tract
Poolesville Policy Area

The Transportation Local Area Review, dated January, 1988, for the subject preliminary plan was reviewed and found to be adequate and complete. The proposed development is for 13 single-family housing units and 25,000 square feet (sf) of either industrial, warehouse, or office use. In order to analyze the worst case situation, 1) 75% of 25,000 sf, or 18,750 sf, was assumed to be used as offices and 2) the remaining 6,250 sf, was assumed to be light industrial use in the AM peak period and warehouse use in the PM peak period. This will enable the applicant to be flexible and revise the non-residential land use mix for less intensive land use mixes to meet market demands. The site is located on the north side of Buck Lodge Road (MD 117) between Barnesville Road and the Chessie System Railroad tracks.

All intersections operate at level of Service (LOS) of "A" in the existing, background, and total traffic conditions as shown on page 23, Exhibit 1c, "Intersection Levels of Service Summary Table."

The Poolesville Policy Area is a Group I policy area in which intersections must operate at an LOS better than "D/E" or less than 1,450 critical lane vehicles. This is obviously not critical, as the worst critical lane volume is 626 at the intersection of Barnesville Road (MD 117) and Clarksburg Road (MD 121).

The adequacy of the geometric conditions and sight distance to accommodate 183 site-generated trips in the AM peak period and 218 trips in the PM peak period (as shown on page 17) is more important. Please check the following locations that appear to have inadequate sight distance:

- 1) Before and after the CSX Railroad Bridge over Buckledge Road (MD 117) for eastbound and westbound traffic.
- 2) For motorists traveling eastbound on Buckledge Road and approaching the intersection with Barnesville Road, there is a high bank on the south side of Buckledge Road.

Please note that 10% of the site trip distribution shown in Exhibit 6, "Trip Distribution", on page 10 was shifted from northbound on Barnesville Road to westbound on Buckledge Road. This is an engineering judgment that more people would travel west towards Poolesville along a designated State route (MD 117) than north where very little development has occurred. This is why the 5% for the northbound Barnesville Road traffic is lower and the 15% for the westbound traffic is higher along Buckledge Road when compared with the existing traffic volume.

Please review the Transportation Local Area Review for the issues discussed above and any other deficiencies that you might find to Bud Lien or myself within three weeks.

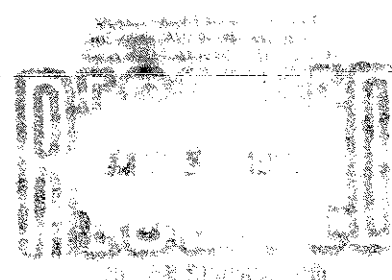
Thank you for your assistance.

EA:dr/b:bukiof.ca

Attachment

cc: Charles Lochr
Bud Lien
Sonny Lauer
Craig Hedberg
Francis Wiley

MONTGOMERY COUNTY HEALTH DEPARTMENT
100 Maryland Avenue, Suite 1260
Rockville, Maryland 20850
(301) 217-7470



M E M O R A N D U M

February 15, 1989

TO: *Martin P. Wasserman* Park and Planning Commission
FROM: Martin P. Wasserman, M.D., J.D.
Health Officer
SUBJECT: Status of Preliminary Plan #1-89032
Buck Lodge
Lots: 18

This is to notify you that the status of the above named subdivision plan which was received in this office on February 13, 1989 is as follows:

Approved for testing with the following reservations:

1. Stake out by survey sets of shallow and deep (2 1/2' x 15') test holes in each lot as indicated on the plan returned to the Surveyor.
2. The County Code requires that fees of \$45.00 per lot subdivision review, \$40.00 per lot water table check, and \$70.00 per lot percolation test be paid prior to test scheduling. An additional \$50.00 per lot fee is also charged for retesting.
3. All test holes shall be filled no later than 30 days after they're dug and in no cases later than 3 days after testing. During periods of open test pit excavations, owners will be responsible for posting and maintaining notices of danger.
4. Regulations effective February 18, 1979 require the determination of seasonal high water table between February 1 through April 15.

If you have any further questions, contact Robert Lloyd at 738-3060.

MPW:RL:brw
0062E

cc: Owner
Surveyor
Park and Planning


MEMORANDUM

February 28, 1989

TO: Ed Axler, Transportation Planner
Transportation Planning Division

FROM: John Clark, Director
Office of Planning and Project Development

SUBJECT: Preliminary Plan No. 1-89032
Buckledge Tract
Poolesville Policy Area



Our review of the Traffic Impact Study for the Buckledge Tract, Poolesville Policy Area has been completed in terms of Local Area Review. Our comments regarding the study are as follows.

The report provides adequate information to support the conclusions drawn and makes no unreasonable assumptions within the analysis. We agree with the conclusion that the proposed development will not result in a lowering of the current Level of Service A.

The site distance on Buckledge at the railroad bridge cannot be checked until the entrance to the development has been staked. This can be done at the site plan approval stage and need not impede the LAR analysis.

Other parts of Buckledge (RR 117) may also have site distance problems. The State is considering requiring the developer to fund improvements which would improve site distance on 117. Additionally, the RR 117/Barnesville/SH101 intersection may also need to be redesigned to correct geometric deficiencies which would present a serious problem in accommodating site generated traffic. We see a need for such improvements and would support the State in any efforts to get these improvements in place.

If you have any questions regarding our comments, please feel free to contact Mark Thompson of this office.

JCC:NT:5725U

cc: Ray Trout

MEMORANDUM

February 6, 1969

TO: Charles Loehr
Subdivision Review

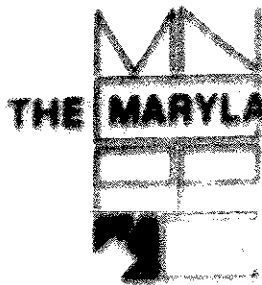
FROM: Gladys Kaplan *GLK*
NPC Staff

I have reviewed the following plans and found them not to involve any identified historic resource.

7-89002	Midwood Acres
1-89007	Monitor Place
1-89017	Northwood Village
1-89021	Burning Tree Manor
1-89022	Friendship
1-89024	Bradley Hills
1-89025	Goshen Estates
1-89026	Malone Property
1-89028	Fairhill South
1-89031	Spring Lake Farm
1-89032	Buckledge
1-89033	Cashell Estates
1-89035	Glen Echo Heights

0997E





THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

6787 George Avenue • Silver Spring, Maryland 20910-3701

February 21, 1989

MEMORANDUM

TO: Charles Loehr, Coordinator
Development Review Division

VIA: Bud Lien, Transportation Coordinator *Bl*
Transportation Planning Division

FROM: Ed Axler, Transportation Planner *EA*
Transportation Planning Division

SUBJECT: Preliminary Plan No. 1-89032
Bucklodge Tract
Poolesville Policy Area

The applicant's Transportation Local Area Review (traffic impact study) dated January, 1989, was reviewed for the subject preliminary plan.

Recommendations

The Transportation Planning Division recommends approval of this preliminary plan subject to the following conditions:

1. Coordinate with the Maryland State Highway Administration (MSHA) to improve the sight distances within the existing right-of-way at the following two locations:
 - before and after the Chesapeake System (CSX) Railroad Bridge over Bucklodge Road (MD 117) for eastbound and westbound traffic;
 - for motorists traveling eastbound on Bucklodge Road (MD 117) and approaching the intersection with Barnesville Road, there is a high bank on the south side of Bucklodge Road.
2. Limit the preliminary plan to a development of 13 single-family housing units and 85,000 square feet (sf) of non-residential land use (no more than 63,750 sf of office space and 21,250 sf of light industrial or warehouse use) such that the entire development will generate up to 195 site trips in the AM peak period and 227 trips in the PM peak period.

Staging Ceiling Conditions

The site is located on the north side of Buckledge Road (MD 117) between Barnesville Road and the CSX tracks in the Group I Poolesville Policy Area. As a Group I policy area, there is an established staging ceiling for housing units or jobs.

Local Area Transportation Review

With no staging ceilings in Group I policy areas, there are more stringent criteria for local area transportation review. All adjacent intersections must operate at better than a level of service of "D/E" or less than 1,450 critical lane vehicles. (Non-Group I policy areas must operate at better than the mid-range of level of service of "E" or 1,525 critical lane vehicles.)

The traffic impact study was prepared for the most intensive land use option anticipated (or the worst case situation) which would generate 195 site trips in the AM peak period and 127 site trips in the PM peak period. The worst case situation anticipated is 19 single-family housing units and 65,000 sf of non-residential land use. The non-residential land use assumed 754 or 63,750 sf of office use and 254 or 21,250 sf of light industrial/warehouse use. Since light industrial use generates more trips in the AM peak period than warehouse use, all 21,250 sf were assumed to be for light industrial use in calculating the site-generated trips in the AM peak period. Similarly, warehouse use generates more trips than light industrial use in the PM peak period, and the remaining 254 of the 65,000 sf was assumed to be utilized for warehouse land use for calculating the site-generated trips in the PM peak period.

In all the cases, the adjacent intersections operate at a level of service of "A" in the total traffic condition (with the site-generated traffic from this and traffic from unbuild but approved background developments). This is well within the range of being acceptable as the intersections operate at better than the maximum level of service of "D/E". Exhibit 1 shows the critical lane volumes and levels of service for the existing, background, and total traffic conditions.

Safety and Adequacy of Operating Conditions

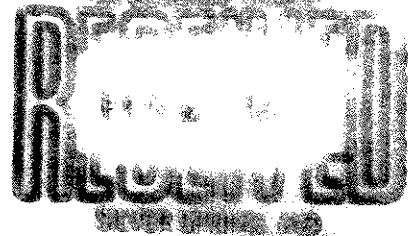
There were three locations initially identified where the adequacy of the sight distance might be a potential safety problem (shown on Exhibit 1):

1. before and after the CSX Railroad Bridge over Buckledge Road (MD 117) for eastbound and westbound traffic;
2. for motorists traveling eastbound on Buckledge Road (MD 117) and approaching the intersection with Barnesville Road, there is a high bank on the south side of Buckledge Road;

3. the northbound left-turn from Barnesville Road (MD 117) under the CSX Railroad bridge onto Clopper Road (MD 117 continued).

These locations were field checked by the MDOT. The first two locations were identified as areas where improvements could be made to enhance sight distance for the 183 site-generated trips in the AM-peak period and 215 trips in the PM peak period. The last location has adequate sight distance.

EA:kw/b:pp89-32.es



22
4-25

MONTGOMERY COUNTY HEALTH DEPARTMENT
100 Maryland Avenue, Suite #240
Rockville, Maryland 20850
(301) 217-7470

M E M O R A N D U M

March 20, 1991

TO: Maryland - National Capital Park and Planning Commission
FROM: *Boyd N. Church*, Director
SUBJECT: Status of Preliminary Plan # 9033
Backlog
/- 5 Lots & Outlet A

This is to notify you that the status of the above named subdivision plan which was received in this office on February 13, 1989 is as follows:

Approved with the following reservations.

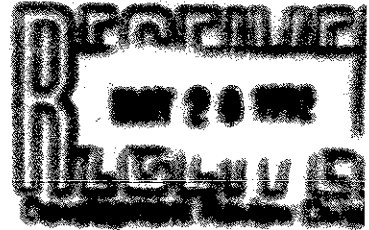
1. Record plat must be a scale of 1"=100' or a certified film positive of the record plat at that scale.
2. Septic system easements are to be reflected on the record plat as approved on this preliminary plan.
3. Approval is conditional to the terms of a consent agreement which is required to be recorded in the land records of Montgomery County prior to record plat.
4. Lots 1, 3, and 5 are approved for commercial warehouse use requiring no plumbing, water or onsite sewage disposal.

If you have any further questions, contact Boyd N. Church at 738-3060.

BNH:ENC:paj
0042E

cc: Owner
Surveyor

MONTGOMERY COUNTY HEALTH DEPARTMENT
100 Maryland Avenue, Suite #240
Rockville, Maryland 20850
(301) 317-7470



M E M O R A N D U M

May 15, 1992

TO: Maryland - National Capital Health and Planning Commission
FROM: Harold D. Gabel, M.D., Director
SUBJECT: Status of Preliminary Plan #1-89032
Suck Lodge
7 Lots. 6-12

This is to notify you that the status of the above named subdivision plan which was received in this office on February 12, 1989 is as follows:

Approved with the following reservations.

1. Record plat must be a scale of 1"=100' or a certified film positive of the record plat at that scale.
2. Septic system easements are to be reflected on the record plat as approved on this preliminary plan.
3. This approval does not constitute approval of the location of the AT&T right of way. Any excavation for septic systems around this right of way is at the owners risk.
4. A Water Appropriation and Use Permit issued by the Maryland Department of Natural Resources must be on file with the Well & Septic Section before the Health Department can approve the record plat for any subdivision of two or more lots.

If you have any further questions, contact Boyd N. Church at 738-3060.

HGG:EMC:pej
00620

cc: Owner
Surveyor
Park & Planning



Maryland Department of Transportation
State Highway Administration

Richard H. Trainer
Secretary
Michael S. Snyder
Administrator

Office of State Counsel
State Highway Administration
200 North E Street
Baltimore, Maryland 21201

February 23, 1989

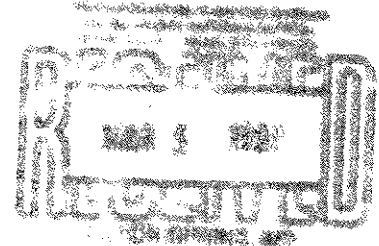
MEMORANDUM

TO: Creston J. Mills, Chief
Bureau of Engineering Access Permits

FROM: Michael Snyder
District Engineer

SUBJECT: Maryland Route 117
Montgomery County

RE: Preliminary Plan #1-19888
Buck Lodge Tract
Poolesville Policy Area



This is in response to receipt of a copy of the traffic impact study for the referenced preliminary plan.

My Traffic Engineering staff has reviewed the study and wishes to offer the following comments:

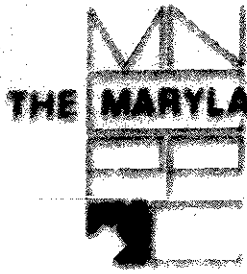
1. All intersections identified in this study will operate at acceptable levels of service under total traffic conditions.
2. Our only concerns are the geometrics of two intersections, Maryland Route 117 (Buck Lodge Road) at Sybil Road and Maryland Route 117 (Clapper Road) at its intersection with Maryland Route 121 (Clatsburg Road). These intersections should be improved to increase available sight distance within the SHA's right of way. It is requested that the developer generate 30 scale plans of these intersections for field review with my Traffic Engineering staff.

If further comment or discussion is necessary, please advise.

MS:MSJ:es

cc: Ed Allen, M-NEPPC ✓

My telephone number is (301) 222-7159



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

8787 George Avenue • Silver Spring, Maryland 20910-3788

February 7, 1989

MEMORANDUM

**TO: Charlie Lochr, Coordinator
Development Review Division**

**FROM: Mary Ann Rolland, Historic Preservation Planner
Urban Design Division**

SUBJECT: Review of Subdivision Plans

I have reviewed the following subdivision plans and found them not to involve any identified historic resources:

- 07-89004 Treble Trouble (In vicinity of Master Plan Site #24/16, Poplar Grove Baptist Church, but plan should have no impact.)
- 07-89007 Snider Estates
07-89008 Peterson Property (Across the road from Atlas Resource #28/16, the Cashell Tenant House, but plan should have no impact.)
- 07-89009 Coleville Gardens
01-89025 Cochen Estates
01-89026 Malone Property
01-89027 Morchin Property (Across from Atlas Resource #14/17, the Frederick Bright Farm, but plan should have no impact.)
- 01-89028 Fairhill South
01-89030 Brandenburg Property
01-89031 Spring Lake Farm
01-89032 Buckledge
01-89033 Cashell Estates
01-89034 Chevy Chase (In the vicinity of Master Plan Site #35/14-1, the Farm Woman's Cooperative, but plan should have no impact.)
- 01-89035 Glen Echo Heights
01-89036 Rucalhue
01-89037 Oraper Triangle
01-89042 Alta Vista (In vicinity of Atlas Resource #35/3, Alta Vista, but plan should have no impact.)



**Maryland Department of Transportation
State Highway Administration**

Richard M. Trainor
Secretary
Neil K. Kinnell
Assistant Secretary

February 14, 1982

Mr. Charles Loebr
Subdivision Coordinator
MNCPPC
8787 Georgia Avenue
Silver Spring, Maryland
20910-3760

Re: Montgomery County
MD 117
Buckledge Tract
1-88882

Dear Mr. Loebr:

Reference is made to the captioned preliminary plan which is located on the south side of MD 117, west of Buckledge Road.


This office reviewed the submitted plan and offer the following:

- dedication in accordance to the Montgomery County Master Plan of Highways, 40' from centerline of MD 117;
- a permit issued to the developer/builder by this office for access into the proposed development, this permit must be in accordance to the "Rules and Regulations" of this Administration;
- This permit is for the construction SMA Type "A" curb and gutter for the proposed street "A" and for a by-pass lane.
- proposed lots 12 & 13 and lots 10 & 11 are to have common driveways. A permit must be issued for these residential driveways by the District Utility Engineer.
- a condition of the permit will be that storm drainage plans and computations be submitted for review by the appropriate Bureau's within the SMA;
- the submittal of a traffic study, so it can be reviewed by the appropriate agencies within the SMA; and
- the reconstruction of the MD 117 Barnesville Interchange will be "tie to" the commercial zoning. The SMA traffic engineer and the Montgomery D.O.T. traffic engineer will review and advise accordingly.

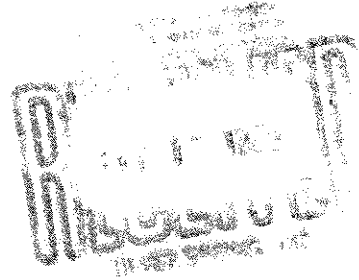
Mr. Charles Leeb
Page 3
February 14, 1958

If you have any questions, contact Frank Lamer (335-4364).

Very truly yours,


William J. Mills, Jr.
Chief Bureau of Engineering
Access Records

FL/ee





Montgomery County Government

Mr. Charles Lochr, Subdivision Coordinator
Development Review Division
Maryland-National Capital Park
& Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20907

MMB 2-9-85

RE: Preliminary Plan No. 1-88832
Buck Lodge Tract

Dear Mr. Lochr:

We return herewith one copy of the above referenced plan recommended for approval subject to:

1. Necessary slope and drainage easements. Slope easements are to be as determined by study or to the building restriction line.
2. Necessary dedication for future widening of Buck Lodge Road and Barnesville Road in accordance with the master plan.
3. Full width dedication and construction of all interior streets.
4. Stake driveway(s) (and new street(s)). Mark on a copy of preliminary plan how staked and also include preliminary plan number. Send plan to Subdivision Development Office.
5. Grade establishments for all new streets and/or pedestrian paths must be approved prior to approval of record plot.
6. "Additional road improvements may be required as a result of a review of a traffic study if such study is required by the Planning Board Staff."
7. Possible reworking of intersection of Maryland Route 117 and Barnesville Road.
8. Waiver from M-NCPEPC for overlength cul-de-sacs.
9. Wells and septic systems must be kept clear of slope and drainage easements.
10. Relocation of utilities along existing roads to accommodate required roadway improvements.
11. For I-1 area show Gross Floor Area and loading spaces.

Department of Transportation, Division of Transportation Engineering
Subdivision Development Section

Executive Office Building, 101 Manassas Square, Rockville, Maryland 20850-2000, 301/997-2000

MONTCOMERY COUNTY GOVERNMENT

DEPARTMENT OF TRANSPORTATION
SUBDIVISION DESIGN SECTION
101 MORRICE STREET
ROCKVILLE, MARYLAND 20850

Preliminary Plan No. 1-89032
Buck Lodge Tract
Page 2

MAR 20 1993

The developer is hereby notified that public improvement requirements as a prerequisite to Montgomery County Department of Transportation's approval of platting of this subdivision will include the following items, to be assured by a Public Improvements Agreement:

1. Street grading, paving, curbs and gutters, sidewalks, storm drainage and appurtenances along:
 - a. Proposed streets.
2. Permanent monuments and property line markers, as required by Section 50-24(e).
3. Enclosed storm drainage and/or engineered channel (in accordance with Montgomery County Department of Transportation's Storm Drain Design Criteria) within all storm drain easements.
4. Erosion and sediment control measures as required by Section 50-30(f) and on-site storm water management where applicable shall be provided by the Developer (at no cost to the County) at such locations deemed necessary by the Montgomery Soil Conservation District and will comply with their specifications. Erosion and sediment control measures are to be built prior to construction of streets, houses and/or site grading and are to remain in operation (including maintenance) as long as deemed necessary by the Montgomery County Department of Environmental Protection.
5. Developer shall insure final and proper completion and installation of all utility lines underground.
6. Developer shall provide street lights in accordance with specifications, requirements and standards prescribed by the Montgomery County Department of Transportation.

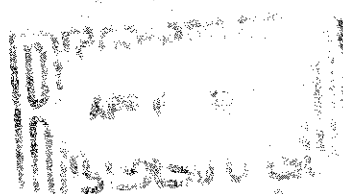
Sincerely,



For Robert C. Murrayman, Chief
Division of Transportation Engineering

RCM:DAB:abc:86330(12)
Enclosure(s)

cc: Kamber Engineering
Ward Family Limited Partnership



CONSENT AGREEMENT

Montgomery County, Maryland (hereinafter the "County"), by and through its lawful agent the Montgomery County Department of Health (hereinafter the "Department") and the Ward Family Limited Partnership (hereinafter the "Owner") do hereby consent and agree to the following stipulation of facts and resolution of issues regarding the approval of a record plat and the issuance of well and excreta disposal (septic) system permits necessary to construct two industrial buildings on a portion of the property located on Bucklodge Road, Boyds, Maryland (hereinafter the "Property").

A. STIPULATION OF FACTS

- 1. The Property is located at tax map coordinates DU43 and is currently identified as Parcel 100, it is further identified by the deed found at Liber 8464, Folio 654 recorded in the land records of the County; and
- 2. The Property currently contains 124.27 acres of land; and
- 3. Preliminary Plan #1-89032, which shows the Property with three different zoning categories, light industrial (I-1), rural (RR) and rural density transfer (RDT) residential zoning, to be served by on-site water supply (well) and excreta disposal systems, was submitted for consideration by the Department and other appropriate governmental authorities; and
- 4. Water table and percolation tests done by the Department as part of the review of Preliminary Plan #1-89032 was successful in defining two septic reserve areas capable of handling a maximum of 500 gallons of sewage each at peak daily flow; and

At this time (June 1991), the Department has approved the preliminary plan to create buildable lots 2 and 4 on the basis of the septic reserve areas defined; and

The portions of the Property not contained within the boundaries of lots 2 and 4 will be defined as outlots 1,3,5,A, and B; and

The structures currently proposed for construction on lots 2 and 4 will be identical 7,760 square foot buildings with 15% of the space devoted to general office space and 85% to warehouse uses as defined in Preliminary Plan #1-89032; and

- 8. The water supply for the buildings on the Property will come from wells to be drilled on the Property on lots 2 and 4 as defined in the preliminary plan referenced; and

MONTGOMERY COUNTY CIRCUIT COURT (Land Records) BAS 10050, p. 0105, MSA_CE63_10008. Date available 06/22/2005. Printed 07/07/2020.

FILED
BETTIE A. SKELTON
CLERKS OFFICE
MONTGOMERY COUNTY

91 DEC 2 3 41 3

1-1
75c

SEARCHED
SERIALIZED
INDEXED
FILED
DEC 2 1991
FBI - MONTGOMERY

CONSENT AGREEMENT

- 9. Subject to conditions, the Department is willing to approve the record plat needed to subdivide the property and to grant the permit approvals necessary for the Owner to begin construction on lots 2 and 4.

B. RESOLUTION OF ISSUES

The Department will approve the record plat proceeding from preliminary plan #1-89032 and issue the permits necessary to construct the well and septic systems on Lots 2 and 4 when the following conditions have been met to the Department's satisfaction:

- 1. The Owner agrees to make proper application for the necessary well and excreta disposal system permits and to comply with all appropriate legal standards and permit issuance conditions in the installation and inspection of the systems to be constructed.
- 2. The Owner agrees that maximum peak sewage flow, using the Department's flow characteristics, cannot exceed 500 gallons per day on each of the buildable lots (2 and 4) to be created.
- 3. The Owner agrees that it will not be possible to further expand the buildings or intensify the uses on the Property in any manner which would cause peak sewage flows on either lot (2 and 4) to exceed 500 gpd and further agrees to submit any proposed changes to the buildings described in Preliminary Plan #1-89032 for the Department's review and potential approval.
- 4. The Owner agrees that the water table and percolation testing done on the industrial portion of the Property to date has been exhaustive and that there is no potential for further expansion of the on-site sewage disposal capacity for lots 2 and 4 or for outlots 1,3, and 5 under current regulations.
- 5. The Owner agrees and stipulates that this agreement is binding on current and future owners of the Property.
- 6. The Owner agrees to have this agreement recorded in the land records of the County as a covenant to the deed for the Property and to provide the Department with a copy of the recorded document, complete with liber and folio numbers stamped on it, prior to approval of the record plat for the Property.

LIBER

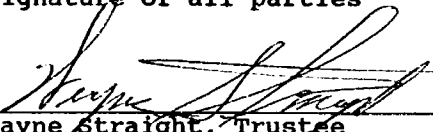
FOLIO

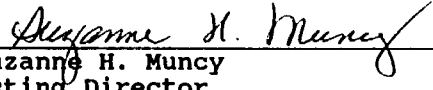
0010050 107

CONSENT AGREEMENT

- 7. All parties agree that this agreement will become null and void if and when the buildings on the industrial portion of the Property are connected to an approved public sewerage system acceptable to the Department.
- 8. The Owner agrees to give the Department access to the Property at reasonable times to determine that the conditions of this agreement are being complied with.
- 9. The Owner, for itself, its agents, legal representatives and assigns, releases and forever discharges Montgomery County, Maryland, its agencies and officers, agents and employees, from any and all claims it or they may now have or that might subsequently arise out of or connected with the approval of the record plat or the issuance of well or excreta disposal system permits for the Property. This release includes, but is not limited to, a release and covenant not to sue the aforementioned persons in any administrative forum, State or Federal court upon any claims arising out of or connected with the approval of the record plat or the issuance of well or excreta disposal system permits for the Property.

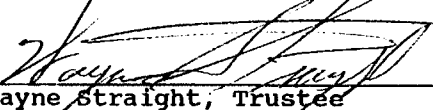
IN WITNESS WHEREOF, this consent agreement is executed upon signature of all parties


 Wayne Straight, Trustee
 Richard E. Ward II, 1979 Trust
 Partner
 Ward Family Limited Partnership


 Suzanne H. Muncy
 Acting Director
 Montgomery County Department
 of Health

Date: SEPT 10, 1991

Date: 10/13/91


 Wayne Straight, Trustee
 Carrie Lynn Ward, 1979 Trust
 Partner
 Ward Family Limited Partnership

Date: SEPT. 10, 1991

MONTGOMERY COUNTY CIRCUIT COURT (Land Records) BAS 10050 P. 0107, MSA CE63_10008. Date available 06/22/2005. Printed 07/07/2020.

MONTGOMERY COUNTY CIRCUIT COURT (Land Records) BAS 10050, p. 0108, M

LIBER FOL
0010050 108

CONSENT AGREEMENT

Richard E. Ward
Richard E. Ward
Partner
Ward Family Limited Partnership

Date: SEPT. 10, 1991

Approved as to form and legality
Office of the County Attorney

By: Sharon V. Burrell
Sharon V. Burrell

Date: July 30, 1991

SHM:RLS:my
LS058

~~11-1-917534~~

C. WAYNE SMITH
WARD CORPORATION
1300 PICCARD DR.
ROCKVILLE, M.D. 20850



DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Rabbiah Sabbakhan
Director

October 20, 2023

Mr. David McKee
Benning and Associates, Inc.
8933 Shady Grove Court
Gaithersburg, MD 20877

Re: **REVISED COMBINED STORMWATER
MANAGEMENT CONCEPT/SITE
DEVELOPMENT STORMWATER
MANAGEMENT PLAN** for
Bucklodge
Preliminary Plan #: 11989032A
SM File #: 287192 Revision 1
Tract Size/Zone: 24.8 Acres/IM
Total Concept Area: 24.8 Acres
Lots/Block: 1, 2, 4, 5
Watershed and Class: Little Seneca Creek/I
Redevelopment (Yes/No): No

Dear Mr. McKee:

Based on a review by the Department of Permitting Services Review Staff, the revision to stormwater management concept for the above-mentioned site is **conditionally acceptable**. The plan proposes to meet required stormwater management goals via the use of micro-bioretenion, micro-infiltration and a raingarden, providing full ESD to the MEP. Conditions 4 and 5 as listed below must be met prior to submission of the final design plans:

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. A detailed review of the stormwater management computations, including underground detention and capacity of the existing pond, will occur at the time of detailed plan review.
2. An engineered sediment control plan must be submitted for this project.
3. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.
4. Verification from CSX Railroad will be needed prior to submission of the final design plans acknowledging the increase in runoff from the site to the existing 54-inch storm drain system under the railroad tracks, designated as Study Point A, in accordance with line item 2.a. from DOT approval letter dated August 28, 2023. If on-site underground detention is proposed to attenuate the 10-year runoff rate, as shown on the concept, CSX must confirm acceptance in writing that this method of attenuation is acceptable for the design storm selected.



2425 Reedie Drive, 7th Floor, Wheaton, Maryland 20902 | 240-777-0311
www.montgomerycountymd.gov/permittingservices

5. Verification from the agency having jurisdiction of the receiving storm drain system at Study Point C, the existing 18" culvert under MD-117, must be provided as to what level of control will be required on-site for the proposed discharge from the site, in accordance with line item 2.c. from DOT approval letter dated August 28, 2023.
6. Underground detention systems must meet DPS Access Guidelines (WRTP-4). The diameter of the orifice needed to achieve the allowable release rate must have a minimum diameter of no less than 2-inches.
7. The applicant has demonstrated that the existing dry pond for Buck Ridge Court (DEP Asset #32701) has adequate capacity for the site runoff from the layout as approved under the current development program.
8. This approval supersedes the previous approval letter dated May 26, 2022.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is not required**.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Sherry Mitchell at 240-777-5206 or sherryl.mitchell@montgomerycountymd.gov.

Sincerely,



Mark Etheridge, Manager
Water Resources Section
Division of Land Development Services

cc: Neil Braunstein
SM File # 287192

LOT 1:
ESD: Required/Provided 2,253 cf / 2,340 cf
PE: Target/Achieved: 1.0"/1.0"
STRUCTURAL: N/A cf
WAIVED: N/A ac.

Mr. David McKee

October 20, 2023

Page 3 of 3

LOT 2:

ESD: Required/Provided 4,051 cf / 4,124 cf

PE: Target/Achieved: 1.0"/1.0"

STRUCTURAL: N/A cf

WAIVED: N/A ac.

LOT 4:

ESD: Required/Provided 2,649 cf / 2,668 cf

PE: Target/Achieved: 1.0"/1.0"

STRUCTURAL: N/A cf

WAIVED: N/A ac.

LOT 5:

ESD: Required/Provided 3,245 cf / 3,245 cf

PE: Target/Achieved: 1.0"/1.0"

STRUCTURAL: N/A cf

WAIVED: N/A ac.



OFFICE OF THE COUNTY EXECUTIVE

Marc Elrich
County Executive

Christopher R. Conklin
Director

October 27, 2023

Mr. Jeffrey Server, Planner Coordinator
Up-County Planning Division
The Maryland-National Capital
Park & Planning Commission
2425 Reedie Drive
Wheaton, MD 20902

RE: Preliminary Plan Amendment
No. 11989032A
Bucklodge Tract

Dear Mr. Server:

This letter replaces MCDOT's Preliminary Plan letter dated August 28, 2023.

We have completed our review of the revised preliminary plan uploaded to eplans on May 26, 2023. A previous version of the plans was reviewed by the Development Review Committee at its July 5, 2022, meeting. We recommend approval of the plans subject to the following comments:

Significant Comments

1. **Sight Distance:** A copy of the accepted Sight Distances Evaluation certification form is enclosed for your information and reference. The applicant is responsible to ensure sight distance during tree planting.
2. **Storm Drain Study:**
 - a. **Study Point A:** We defer to CSX for runoff from the site draining to an existing downstream storm drain system maintained by CSX.
 - b. **Study Point B and B1:** The storm drain analysis was reviewed and is acceptable to MCDOT. No improvements are needed to the downstream public storm drain system for this plan.
Study Point C: We defer to MDSHA for runoff from the site draining to an existing downstream storm drain system maintained by MDSHA.

Standard Comments

1. All Planning Board Opinions relating to this plan or any subsequent revision, project plans or site plans should be submitted to the Department of Permitting Services (DPS) in the package for record plats, storm drain, grading or paving plans, or application for access permit. Include this letter and all other correspondence from this department.
2. Upgrade pedestrian facilities at intersections along site frontage and at adjacent intersections to comply with current ADA standards. This includes reconstructing the ramps at Bucklodge Road (MD-117) and Buck Ridge Court to current standards.
3. Design all access points and alleys to be at-grade with the sidewalk, dropping down to street level between the sidewalk and roadway.
4. Driveways should comply to Montgomery County Standard MC-302.01.
5. Forest Conservation Easements are NOT ALLOWED to overlap any easement.
6. Stop sign locations, crosswalks and markings will be shown on the signing and marking plans and be reviewed and approved at the right-of-way permit stage.
7. The owner will be required to submit a recorded covenant for the operation and maintenance of any private storm drain systems, and/or open space areas prior to MCDPS approval of the record plat. The deed reference for this document is to be provided on the record plat.
8. Relocation of utilities along existing roads to accommodate the required roadway improvements shall be the responsibility of the applicant.
9. Trees in the County rights of way – spacing and species to be in accordance with the applicable MCDOT standards. Tree planning within the public right of way must be coordinated with DPS Right-of-Way Plan Review Section.
10. Erosion and sediment control measures as required by Chapter 19 and on-site stormwater management where applicable shall be provided by the Developer (at no cost to the County) at such locations deemed necessary by the Department of Permitting Services (DPS) and will comply with their specifications. Erosion and sediment control measures are to be built prior to construction of streets, houses and/or site grading and are to remain in operation (including maintenance) as long as deemed necessary by the DPS.
11. Posting of a right-of-way permit bond is a prerequisite to DPS approval of the record plat. The right-of-way permit will include, but not necessarily be limited to, the following improvements:
 - a. Enclosed storm drainage and/or engineered channel (in accordance with the MCDOT Storm Drain Design Criteria) within the County rights-of-way and all drainage easements.

Jeffrey Server
Preliminary Plan Amendment No. 11989032A
Bucklodge Tract
October 27, 2023
Page 3 of 3

- b. Permanent monuments and property line markers, as required by Section 50.4.3(G) of the Subdivision Regulations.

Thank you for the opportunity to review this preliminary plan. If you have any questions or comments regarding this letter, please contact me for this project at brenda.pardo@montgomerycountymd.gov or at (240) 777-7170.

Sincerely,

Brenda M. Pardo, Engineer III
Development Review Team
Office to Transportation Policy

[SharePoint\teams\DOT\Director's Office\Development Review\Brenda\Preliminary Plan\PP11989032A Bucklodge Tract\Letters\11989032A Bucklodge Tract-DOT Preliminary Plan 10.27.23](#)

Attachments: Approved Sight Distance Study

cc: Correspondence folder FY 2024

cc-e: David McKee	Benning & Associates, Inc.
Kwesi Woodroffe	MDSHA
Mark Etheridge	MCDPS SSPR
Mark Terry	MCDOT DTEO
Atiq Panjshiri	MCDPS RWPR
Sam Farhadi	MCDPS RWPR
Rebecca Torma	MCDOT OTP



MONTGOMERY COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
 DEPARTMENT OF PERMITTING SERVICES

SIGHT DISTANCE EVALUATION

Facility/Subdivision Name: **BUCKLODGE TRACT** Preliminary Plan Number: **1- 1989032A**

Street Name: **Buck Ridge Court** Master Plan Road Classification: **Business**

Posted Speed Limit: None mph

Street/Driveway #1 (**LOT 1 / LOT 2**)

Street/Driveway #2 (**LOT 4 / LOT 5**)

Sight Distance (feet) OK?
 Right 236'
 Left 370'

Sight Distance (feet) OK?
 Right 440'
 Left none driveway at end of road

Comments: Right sight distance is to edge of pavement of Bucklodge Road.

Comments: _____

GUIDELINES

Classification or Posted Speed (use higher value)	Required Sight Distance in Each Direction*	Sight distance is measured from an eye height of 3.5' at a point on the centerline of the driveway (or side street) 6' back from the face of curb or edge of traveled way of the intersecting roadway where a point 2.75' above the road surface is visible. (See attached drawing)
Tertiary - 25 mph	150'	
Secondary - 30	200'	
Business - 30	200'	
Primary - 35	250'	
Arterial - 40	325'	
(45)	400'	
Major - 50	475'	
(55)	550'	

*Source: AASHTO

ENGINEER/ SURVEYOR CERTIFICATE

I hereby certify that this information is accurate and was collected in accordance with these guidelines.

[Signature] 3/25/2023
 Signature Date



Montgomery County Review:

Approved
 Disapproved:

By: Brenda M. Pardo
 Date: 8/28/2023

#10854
 PLS/P.E. MD Reg. No.
EXPIRES 4/3/2024



DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Rabbiah Sabbakhan
Director

M E M O R A N D U M

July 12, 2023

TO: Jeffrey Server, Lead Reviewer
Development Review
Maryland National Capital Park and Planning Commission

FROM: Heidi Benham, Manager *HB*
Well and Septic Section
Department of Permitting Services

SUBJECT: Preliminary Plan: Bucklodge Tract
#11989032A

This is to notify you that the Well & Septic Section of MCDPS approved the administrative subdivision plan received in this office on June 20, 2023. Approved with the following reservations:

- The record plat must show the well locations and septic reserve areas as they are shown on this plan.
- The proposed water line easement to serve Lot 1 must be recorded prior to record plat approval.
- Forest conservation easements established subsequent to this approval must meet all minimum well and septic setback requirements:
 - 5 feet from septic areas
 - 10 feet from well sites

If you have any questions, please contact Heidi Benham at (240) 777-6318.

Cc: Dave McKee, Benning & Assoc



**Department of Permitting Services
Fire Department Access and Water Supply Comments**

DATE: 07-Jun-23
TO: David McKee
Benning and Associates
FROM: Marie LaBaw
RE: Bucklodge Tract
11989032A

PLAN APPROVED

1. Review based only upon information contained on the plan submitted **07-Jun-23** .Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.
2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.

***** Two on-site tanks with dry hydrants *****

Bucklodge Tract

MNCPPC File # 11989032A

This report accompanies a Fire Department Apparatus Access & Water Supply Plan for the subject property. The property is zoned for moderate industrial uses and warehouses are being planned for the site. The property is in an area which is not served by public water or sewer. An on-site source for water supply is proposed for fire protection.

There are 4 proposed buildings planned for the site. In accordance with NFPA 1142, the required water supply is determined by the following calculation -

$$WS_{\min} = VS_{\text{tot}} / \text{OHC (CC)} \times 1.5$$

WS_{\min} = minimum water supply in gallons

VS_{tot} = total volume of interior building space in cubic feet*

OHC = occupational hazard class number (4 for proposed warehouse-type use)

CC = construction class number (0.75 for Type II building construction)

*for the planned buildings, a 14-foot ceiling height and 1/12 roof pitch is to be used

Lot 1

Gross floor area of the building is 15,000 square feet on 2 levels. The calculated interior volume of the building has been determined to be 221,250 cubic feet.

$$WS_{\min} = 221,250 / 4 (0.75) \times 1.5 = 62,227 \text{ gal}$$

Lot 2

Gross floor area of the building is 20,000 square feet on 2 levels. The calculated interior volume of the building has been determined to be 294,263 cubic feet.

$$WS_{\min} = 294,263 / 4 (0.75) \times 1.5 = 82,761 \text{ gal}$$

Lot 4

Gross floor area of the building is 16,667 square feet on 1 level. The calculated interior volume of the building has been determined to be 268,870 cubic feet.

$$WS_{\min} = 268,870 / 4 (0.75) \times 1.5 = 75,620 \text{ gal}$$

Lot 5

Gross floor area of the building is 15,000 square feet on 2 levels. The calculated interior volume of the building has been determined to be 221,250 cubic feet.

$$WS_{\min} = 221,250 / 4 (0.75) \times 1.5 = 62,227 \text{ gal}$$

The buildings on lots 1 and 2 will share a water supply located within 100 feet of the fire department connection for each building. The capacity of the water supply is to be no less than 82,761 gallons. The plan proposes 3 parallel underground storage tanks which will provide a volume of 85,000 gallons.

The buildings on lots 4 and 5 will share a water supply located within 100 feet of the fire department connection for each building. The capacity of the water supply is to be no less than 75,620 gallons. The plan proposes 2 parallel underground storage tanks which will provide a volume of 80,000 gallons.

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, license No. 25725, expiration date: 6-20-2323

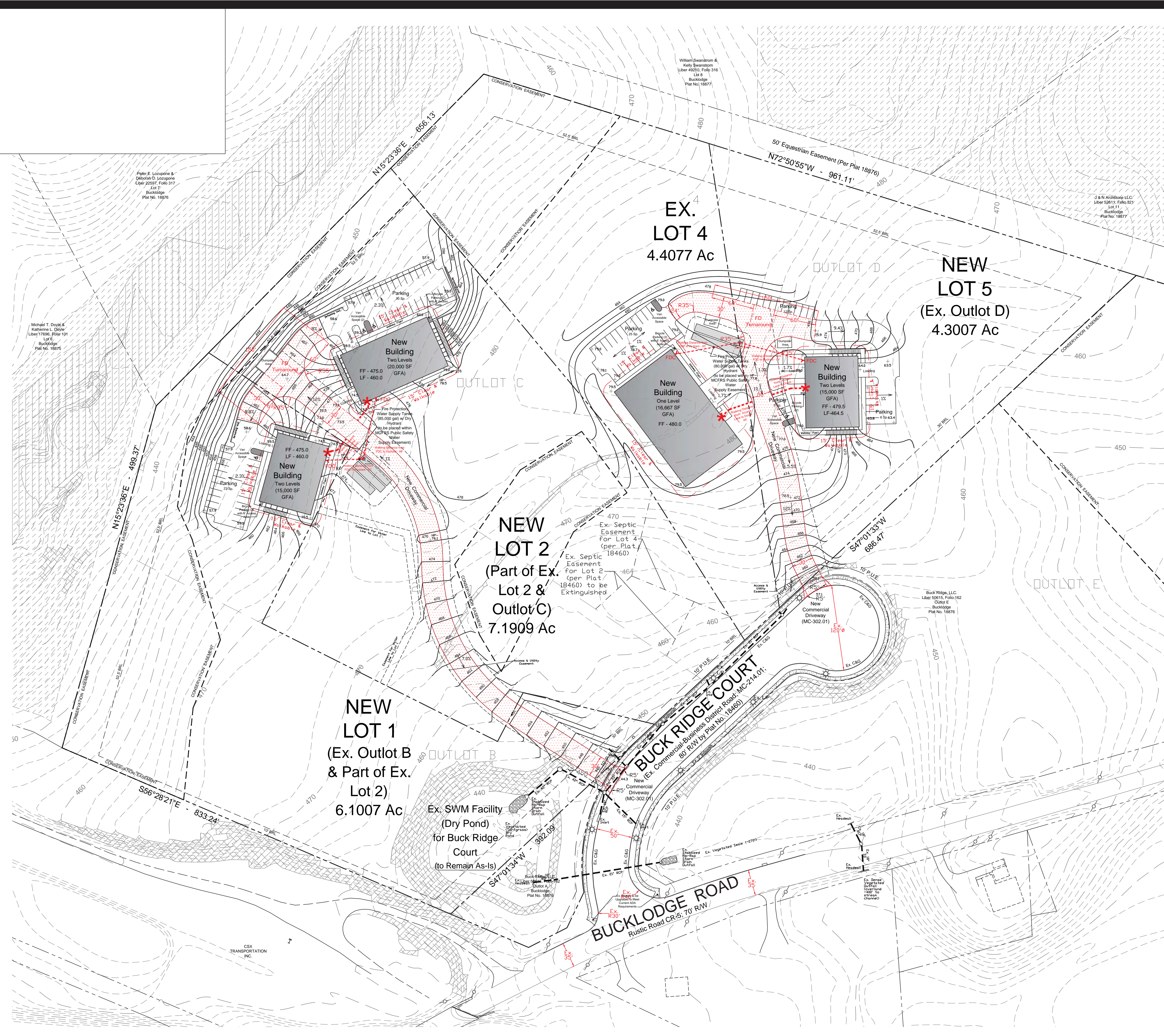


FIRE CODE ENFORCEMENT

Fire Department Access Review

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation

BY: SAC FM: 43 DATE: 6/7/2023



FIRE DEPARTMENT APPARATUS ACCESS & WATER SUPPLY NOTES:

1. The purpose of this plan is to address requirements of Executive Regulation 29-08AM (Fire Department Apparatus Access and Water Supply) as appropriate for the proposed subdivision.
2. A new public street is in place to serve the proposed new buildings. The street is built to Commercial-Business Road standards in accordance with County standard MC 214-01.
3. The project includes two shared driveways which include fire code compliant turnarounds as depicted on the plan.
4. This project is to be served by private wells and there is no public water supply within 1 mile of the site.
5. Cisterns for fire protection water supply are proposed to be installed on the site within a MCFRS Public Safety Water Supply Easement.

NOTE: FINAL APPROVAL, PERMIT, AND INSPECTIONS SHALL BE OBTAINED FROM MCDPS FIRE PROTECTION SYSTEM GROUP.

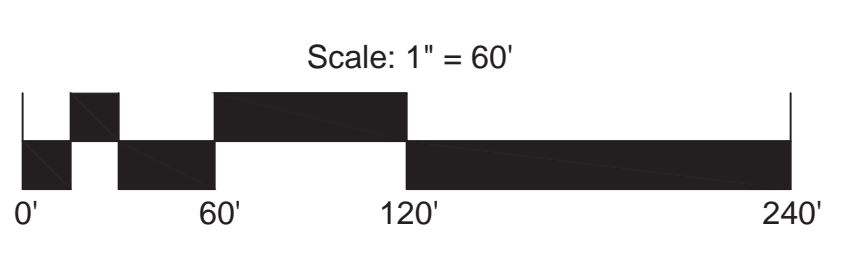
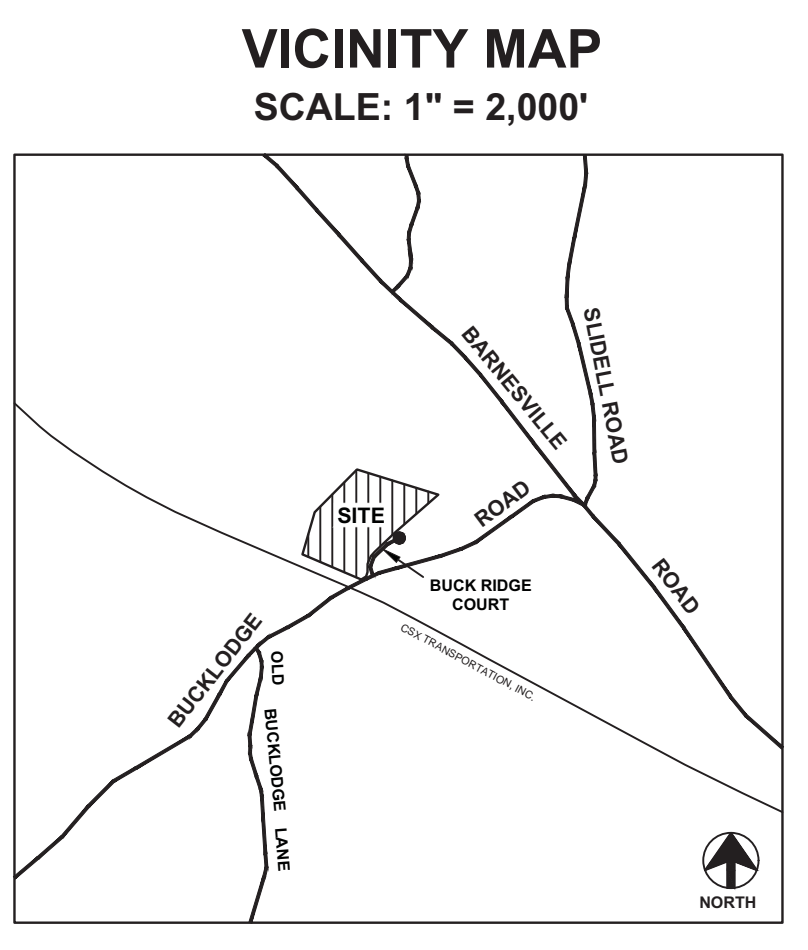
LEGEND:

CANOPY COVERAGE	
CONSERVATION EASEMENT	
EXISTING BUILDING	
EXISTING CATEGORY I CONSERVATION EASEMENT	
INDEX CONTOUR (2' INTERVAL)	
INTERMEDIATE CONTOUR	
LIMITS-OF-DISTURBANCE	
PROPERTY LINE (SUBJECT)	
PROPERTY LINE	
PROPOSED BUILDING	
PROPOSED CONTOUR	
SAND MOUND SEPTIC AREA	
SLOPES > 25%	
SOILS SERIES DIVIDE	
STREAM	
STREAM BUFFER	
STREETLIGHT (Ex.)	
UTILITY POLE (Ex.)	
WATER CONNECTION	
WELL SITE	
100 YEAR FLOODPLAIN	
25' FPBRL	
MAIN SIDE-HINGED DOOR	
FIRE DEPARTMENT ACCESS LANE	

LIST OF AMENDMENT ITEMS

1. The plan proposes to convert or consolidate recorded outlots B, C, and D to building lots for moderate industrial uses.
2. The plan proposes new buildings on new lots 1 and 5 and larger buildings on existing lots 2 and 4 for uses permitted in the IM zone.
3. The plan proposes to increase the overall gross floor area (GFA) approved for the site from 15,520 square feet to 66,667 square feet.
4. The plan proposes new access driveways and on-site parking areas for the proposed new buildings and uses.
5. The plan provides new on-site sewage disposal systems for the proposed new buildings on all lots.
6. A Forest Conservation Plan is being submitted as part of the plan amendment.
7. The plan proposes new on-site and off-site category one conservation easement areas for stream valley buffer protection, on-site forest retention, and forest planting.
8. A Fire Department Apparatus Access & Water Supply Plan is being submitted as part of the amendment.

FIRE CODE ENFORCEMENT
 Fire Department Access Review
 Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation.
 BY: S.M.C. PW: 43 DATE: 5/7/2023



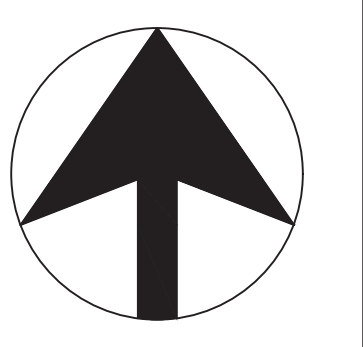
Scale: 1" = 60'
 SOURCE OF TOPOGRAPHIC SURVEY DATA:
 Potomac Aerial Surveys, Inc.
 P.O. Box 40
 Woodsboro, MD 21798
 (301) 845-9767
 Date of Photography: March 12, 2019

Professional Certification:
 I hereby certify that this Fire Department Apparatus Access Plan has been prepared in accordance with the requirements of Executive Regulation 29-08AM (Fire Department Apparatus Access and Water Supply) to the best of my knowledge.
 Signature: [Signature] Date: 06-01-2023



Revisions

Rev. 06-01-23



date: 05/02/2022
 scale: 1" = 60'

Bemling & Associates, Inc.
 8933 Shady Grove Court
 Gaithersburg, MD 20877
 (301) 944-0240



FIRE DEPARTMENT APPARATUS ACCESS & WATER SUPPLY PLAN
BUCKLODGE TRACT
(Lots 2, 4 & Outlots B, C, D of Bucklodge)
 Montgomery County, Maryland

WSSC GRID 228N116
 TAX MAP DUS43
 MNCPPC FILE NO. 1198032A
 SHEET: F041

Prepared for:
Buck Ridge, LLC.
 14801 Clopper Road
 Boyds, MD 20841
 (301) 972-4997

Server, Jeffrey

From: Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>
Sent: Wednesday, November 22, 2023 7:16 AM
To: David McKee
Cc: Server, Jeffrey; Jon Shiancoe; James Kramperth
Subject: RE: Follow-Up for Bucklodge Tract Preliminary Plan #11989032A

[EXTERNAL EMAIL] Exercise caution when opening attachments, clicking links, or responding.

David,

Please see comments below.

DRAINAGE & SWM REVIEW COMMENTS

1. The current analysis shows an increase in peak discharges to Study Point C, the 18” RCP pipe under Bucklodge Road, from existing to proposed conditions. Peak flow management will be provided to bring the peak discharges back to or below existing condition levels.
2. With the design of peak flow management at Study Point C, the downstream existing pond will not be impacted.
3. The analysis showed the 18” pipe (Study Point C) can only convey 10.8 cfs before overtopping. The proposed 10- and 25-year peak discharges are very large at 182.39 cfs and 259.60 cfs, respectively and will weir flow over the roadway. There is no record/information of this area being a flooding area? With peak flow management, the condition here will not be altered or impacted.

RECOMMENDATIONS

We recommend this project for Conditional Hydraulic Approval – subject to the design engineer addressing comment #1 and providing peak flow management to Study Point ‘C’. Include an electronic copy of all the hydraulic reports, plans, and computations in PDF format. For clarifications of any of the drainage review comments, contact the Consultant Hydraulic Reviewer, Mr. James Kramperth at 410-512-4533 or jkramperth@wbcm.com.

Thanks, Kwesi

Kwesi Woodroffe
Regional Engineer
District 3 Access Management
MDOT State Highway Administration

From: David McKee <dmckee@benninglandplan.com>
Sent: Thursday, November 16, 2023 10:28 AM
To: Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>
Cc: Server, Jeffrey <Jeffrey.Server@montgomeryplanning.org>; Jon Shiancoe <jshiancoe@jasedllc.com>; James Kramperth <jkramperth@wbcm.com>
Subject: Follow-Up for Bucklodge Tract Preliminary Plan #11989032A

Hello Kwesi,

We had a very productive phone call last week with the SHA reviewer, Jim Kramperth, who is copied here. I believe all concerns in your comments sent on 11/2 were resolved. A few updates were requested by Jim. I have attached the updated documents here. Please note the following with respect to the comments sent on 11/2:

1. The Downstream Storm Drain Plan shows an increase in peak discharges to Study Point C, the 18" RCP pipe under Bucklodge Road, from existing to proposed conditions. The e-mail from the engineer indicates that the peak flows will be managed back to existing conditions levels. Provide this design/analysis for review when completed.
 - o We've provided the current design/analysis information, along with a copy of the Montgomery County approved stormwater management concept plan. We will provide detailed design information for the peak flow management structure(s) during the forthcoming permitting stages of development.
2. Study Point C outfalls downstream to an existing pond. Who owns and maintains this Pond? The proposed discharges at Study Point C should not be increased from existing conditions so as not to affect this existing Pond.
 - o The existing pond is privately owned. Per our response to comment #1 above, we will be controlling the peak flows from the development site to pre-existing conditions, so the private pond is not adversely impacted by the upstream development.
3. The Study Report only shows the proposed peak discharges in a summary table. Include the existing discharges for comparison for all Study Points.
 - o A summary table for existing conditions has been added to the report which is attached herewith.
4. The Study Report shows the 18" pipe (Study Point C) can only convey 10.8 cfs before overtopping. The proposed 10- and 25-year peak discharges are very large at 182.39 cfs and 259.60 cfs, respectively. Is this a known flooding area?
 - o We've discussed the plan for this site with a local group and neighbors and flooding of Bucklodge Road was not mentioned. We are not aware of flooding of the roadway in this area. However, as discussed with Mr. Kramperth, any increase in flow from the proposed development is a small fraction and not measurable compared to the flow from the overall drainage. Furthermore, we propose to detain the 10-year storm volume to this pipe as noted earlier.
5. The SWM Plan shows another 18" culvert under Bucklodge Road just below the outfall of the 21" culvert under Buck Ridge Court. This is not shown on the Downstream Storm Drain Plan and not included in the analysis. Address the flows to this culvert in the report.
 - o This 18" culvert is now addressed within the attached report and summary of the results were also added to the analysis plan. However, it should be noted that the flow to this culvert will be coming from the existing stormwater management pond and an analysis of this pond has determined it will continue to function as designed with slow release of flow to the SHA culvert.
6. The plan shows an existing inlet on Bucklodge Road prior to the end of the curb and gutter. The photo shows this inlet outfalls under Bucklodge Road? Show its outlet pipe on the plans. Has this inlet been previously approved by MDOT SHA for spread and efficiency? Provide the analysis for the 10-year storm.
 - o The curb inlet in question is not affected in any manner by the development, thus no spread or efficiency analysis is necessary. This inlet captures flow from the existing pavement of Bucklodge Road only and discharges this flow to the other side of the road.

The Planning Board hearing will occur in a couple of weeks on 12/7. A letter or email indicating SHA's acceptance of the plans and information as presented would be greatly appreciated. Please let us know if there are any additional questions.

Thank you,
Dave

David W. McKee
Benning & Associates, Inc.
Land Planning Consultants
8933 Shady Grove Court
Gaithersburg, MD 20877

Phone: (301)948-0240

Web: www.benninglandplan.com

On Thu, Nov 2, 2023 at 2:06 PM Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov> wrote:

Hello David,

Please see comments below. Let me know if you have any questions.

DRAINAGE & SWM REVIEW COMMENTS

1. The Downstream Storm Drain Plan shows an increase in peak discharges to Study Point C, the 18" RCP pipe under Bucklodge Road, from existing to proposed conditions. The e-mail from the engineer indicates that the peak flows will be managed back to existing conditions levels. Provide this design/analysis for review when completed.
2. Study Point C outfalls downstream to an existing pond. Who owns and maintains this Pond? The proposed discharges at Study Point C should not be increased from existing conditions so as not to affect this existing Pond.
3. The Study Report only shows the proposed peak discharges in a summary table. Include the existing discharges for comparison for all Study Points.
4. The Study Report shows the 18" pipe (Study Point C) can only convey 10.8 cfs before overtopping. The proposed 10- and 25-year peak discharges are very large at 182.39 cfs and 259.60 cfs, respectively. Is this a known flooding area?
5. The SWM Plan shows another 18" culvert under Bucklodge Road just below the outfall of the 21" culvert under Buck Ridge Court. This is not shown on the Downstream Storm Drain Plan and not included in the analysis. Address the flows to this culvert in the report.
6. The plan shows an existing inlet on Bucklodge Road prior to the end of the curb and gutter. The photo shows this inlet outfalls under Bucklodge Road? Show its outlet pipe on the plans. Has this inlet been previously approved by MDOT SHA for spread and efficiency? Provide the analysis for the 10-year storm.

Thanks, Kwesi

Kwesi Woodroffe

Regional Engineer

District 3 Access Management

MDOT State Highway Administration

From: David McKee <dmckee@benninglandplan.com>
Sent: Wednesday, November 1, 2023 10:02 AM
To: Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>
Cc: Server, Jeffrey <Jeffrey.Server@montgomeryplanning.org>
Subject: Re: Bucklodge Tract Preliminary Plan #11989032A

Hello Kwesi,

Thank you for the email. I recommend you forward the DOT letter to your reviewer which was emailed on 10/27 as this is the current (final) letter from MCDOT. The letter is attached to this email. I have reattached the relevant materials (and additional items to be noted below) so everything for easier reference.

Here are replies to the reviewer questions -

The Downstream Storm Drain Plan shows an increase in peak discharges to Study Point C, the 18" RCP pipe under Bucklodge Road, from existing to proposed conditions. The Study Report only shows the proposed peak discharges in a table. The e-mail from the engineer indicates that the peak flows will be managed back to existing conditions levels. Provide this design/analysis for review.

- [The design / analysis is provided on the attached plan SMCO001 \(provided earlier\). See structural design notes in upper right of this plan sheet and associated volume comps for Lots 4 and 5 which drain to Study Point C. This design has been made part of the approved stormwater concept plan for the project.](#)

The plans label the culvert under Bucklodge Road as an 18" RCP and 18" SD. The computations analyze this culvert as an 18" CMP. Coordinate the actual culvert type. A photo of the culvert at its upstream and downstream headwalls is recommended for verification.

- [This comment incorrectly identifies the 18" RCP / 18" SD shown on the plan as study point C. Study point C is further east of the plan and off-site and is not shown on the plan. The storm drain study shows and correctly identifies the structure at Study Point C as an 18" CMP. There are no headwalls.](#)

The plan shows an existing inlet on Bucklodge Road. Does this inlet outfall under Bucklodge Road? Show its outlet pipe on the plans. Has this inlet been previously approved by MDOT SHA for spread and efficiency? Provide the analysis.

- [A photo of this inlet is attached. The project does not drain to this inlet and there is no impact.](#)

The Study Report shows the 18" pipe can only convey 10.8 cfs before overtopping. The proposed 10- and 25-year peak discharges are very large at 182.39 cfs and 259.60 cfs, respectively. Is this a known flooding area?

- There is no indication of flooding. Photo attached showing conditions. Map attached showing FEMA 500-year floodplain limits.

Thank you,

Dave

David W. McKee

Benning & Associates, Inc.

Land Planning Consultants

8933 Shady Grove Court

Gaithersburg, MD 20877

Phone: (301)948-0240

Web: www.benninglandplan.com

On Wed, Nov 1, 2023 at 7:42 AM Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov> wrote:

Good morning, David.

I'm trying to catch up on this and get you what you need. I was out for most of October, but I was able to forward your 10/4 email to my reviewers. Comments on those materials are below.

I've seen several, more recent emails and I'm not sure what I should be sending to my reviewers now. Please advise if I should send the email from Brenda Pardo (10/27 at around 10:44AM) to my reviewer?

DRAINAGE & SWM REVIEW COMMENTS

- 1.The Downstream Storm Drain Plan shows an increase in peak discharges to Study Point C, the 18” RCP pipe under Bucklodge Road, from existing to proposed conditions. The Study Report only shows the proposed peak discharges in a table. The e-mail from the engineer indicates that the peak flows will be managed back to existing conditions levels. Provide this design/analysis for review.
- 2.The plans label the culvert under Bucklodge Road as an 18” RCP and 18” SD. The computations analyze this culvert as an 18” CMP. Coordinate the actual culvert type. A photo of the culvert at its upstream and downstream headwalls is recommended for verification.
- 3.The plan shows an existing inlet on Bucklodge Road. Dose this inlet outfall under Bucklodge Road? Show its outlet pipe on the plans. Has this inlet been previously approved by MDOT SHA for spread and efficiency? Provide the analysis.
- 4.The Study Report shows the 18” pipe can only covey 10.8 cfs before overtopping. The proposed 10- and 25-year peak discharges are very large at 182.39 cfs and 259.60 cfs, respectively. Is this a known flooding area?

Thanks, Kwesi

Kwesi Woodroffe

Regional Engineer

District 3 Access Management

MDOT State Highway Administration

From: David McKee <dmckee@benninglandplan.com>

Sent: Monday, October 23, 2023 11:00 AM

To: Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>; Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>

Cc: Server, Jeffrey <Jeffrey.Server@montgomeryplanning.org>

Subject: Fwd: Bucklodge Tract Preliminary Plan #11989032A

You don't often get email from dmckee@benninglandplan.com. [Learn why this is important](#)

Hello Kwesi,

I am circling back on below. We are preparing for a Planning Board hearing in the coming weeks and M-NCPPC is anxious for a response from SHA to include in their report to the Board.

I have added a new attachment from DPS (recent approval of the stormwater concept plan). As noted below, we are attenuating the 10-year storm event on-site. Condition #5 of the attached letter from Mark Etheridge requests acceptance of this proposal from your agency.

I have copied Jeff Server of M-NCPPC in this email. Please let us know when to expect a reply by SHA on what is proposed (formal letter and/or email acceptance) at your earliest convenience. Thanks in advance for your help on this matter.

Thank you,

Dave

David W. McKee

Benning & Associates, Inc.

Land Planning Consultants

8933 Shady Grove Court

Gaithersburg, MD 20877

Phone: (301)948-0240

Web: www.benninglandplan.com

----- Forwarded message -----

From: **David McKee** <dmckee@benninglandplan.com>
Date: Wed, Oct 4, 2023 at 4:39 PM
Subject: Bucklodge Tract Preliminary Plan #11989032A
To: Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>
Cc: Server, Jeffrey <Jeffrey.Server@montgomeryplanning.org>

Hello Kwesi,

I am reaching out to you to address a couple of items in the attached letter from MCDOT. Specifically, items 2.b.iii. and 2.c. of the letter. MCDOT has deferred to SHA on the two matters. MNCPPC is requesting that SHA provide correspondence addressing these matters prior to an upcoming Planning Board hearing to be held in early December.

You were copied on a separate email sent to MCDOT this afternoon.

- Regarding item 2.b.iii., our plan does not increase the flows to study point 'B' (see attached study). Therefore, we believe no upgrade of the existing 18" RCP is required for this application.
- Regarding item 2.c., our plan now proposes to detain the 10-year increase in stormwater volume to the existing 18" CMP located at study point 'C'. Therefore, we believe no upgrade to the pipe is required for this application.

Please provide a written comment letter / response for this application at your earliest convenience. Thank you for your attention to this matter.

Sincerely,

Dave McKee

David W. McKee

Benning & Associates, Inc.

Land Planning Consultants

8933 Shady Grove Court

Gaithersburg, MD 20877

Phone: (301)948-0240

Web: www.benninglandplan.com

Server, Jeffrey

From: Server, Jeffrey
Sent: Monday, August 8, 2022 10:31 AM
To: M Schoenbaum
Cc: Nelson, Katherine; David McKee; Dan Seamans; Elena Shuvalov; Maggie Bartlett; Soo Lee-Cho; Butler, Patrick; Pereira, Sandra; Beall, Mark; Brown, Brett
Subject: RE: Application 11989032A Bucklodge Tract in Boyds
Attachments: Use Table.pdf; Pre-October 2014 Use Table For I-1.pdf

Hi Miriam,

Thank you for the follow up after the most recent meeting. We have compiled some answers to the questions that you shared. Please see the response below in red, along with the associated attachments.

1. What land uses does IM zoning allow?
 - a. **Please see the attached Use Table for the IM Zone.**
2. If the application is approved, would the zoning allow a land use that was only parking (vs parking for a permanent building)? For example, like the property at 14801 Clopper Road, which is also zoned IM and is used for industrial parking and storage. There have been complaints from some community members about the appearance of this property.
 - a. **This use is considered a Contractor Storage Yard and would be permitted in the IM Zone per the Zoning Ordinance. This use would have been allowed under the previous I-1 Zone also. The previous I-1 zone was replaced by the current IM Zone and that goes for the uses also.**
3. What land uses were allowed under the previous approval and previous zoning? Ms. Lee-Cho said that the previous zoning was I-1. One BCA member remembers that the previous approval limited the allowable industrial land uses to a subset of the allowable uses under the previous zoning. The only documents visible in DAIC are for the 2022 application.
 - a. **Because the I-1 Zone was replaced with the IM Zone, the same uses would be allowed under both zones.**
4. By extension, if the previous approval limited the land uses to a subset of uses under the previous zoning, how would that apply to the current application with the current (auto-translated) IM zoning?
 - a. **According to what is on the cover page of DAIC for the original project, it states Industrial and Office Uses which is what is being proposed with this amended application.**
5. What are the possibilities for screening from the road, and for lighting that limits light pollution and light impact on neighboring properties?
 - a. **Screening will need to be done in accordance with Section 59.6.5. Lighting will need to be done in accordance with Section 59.6.4**
6. What are the possibilities for a road diet for Buck Ridge Court to reduce the unnecessarily large area of impervious asphalt?
 - a. **Buck Ridge Court is a publicly maintained road and is built to county road standards.**

Please let me know of any additional questions or if you need anything further. Thanks and talk soon.

Best regards,

Jeff



Jeffrey M. Server, ASLA, Assoc. AIA, LEED AP BD+C

Planner III, Upcounty Planning
Montgomery County Planning Department
2425 Reedie Drive, 13th floor, Wheaton, MD 20902

Jeffrey.Server@montgomeryplanning.org

o: **301.495.4513**



WE'VE MOVED!

THE NEW PARK AND PLANNING HEADQUARTERS IS NOW LOCATED AT
2425 REEDIE DRIVE, WHEATON, MD 20902

From: M Schoenbaum <mwschoenbaum@yahoo.com>

Sent: Tuesday, July 26, 2022 5:23 PM

To: Butler, Patrick <patrick.butler@montgomeryplanning.org>; Pereira, Sandra <sandra.pereira@montgomeryplanning.org>

Cc: Nelson, Katherine <katherine.nelson@montgomeryplanning.org>; David McKee <dmckee@benninglandplan.com>; Dan Seamans <danseamans123@gmail.com>; Elena Shuvalov <shuvalove@yahoo.com>; Maggie Bartlett <specialtimesphotography@ymail.com>; Server, Jeffrey <Jeffrey.Server@montgomeryplanning.org>; Soo Lee-Cho <sleecho@bregmanlaw.com>

Subject: Re: Application 11989032A Bucklodge Tract in Boyds

[EXTERNAL EMAIL] Exercise caution when opening attachments, clicking links, or responding.

Dear Ms. Pereira,

David McKee and Soo Lee-Cho made a helpful and informative presentation at the Boyds Civic Association meeting last week.

BCA members had the following questions for Planning Department staff, arising from the presentation:

1. What land uses does IM zoning allow?
2. If the application is approved, would the zoning allow a land use that was only parking (vs parking for a permanent building)? For example, like the property at 14801 Clopper Road, which is also zoned IM and is used for industrial parking and storage. There have been complaints from some community members about the appearance of this property.
3. What land uses were allowed under the previous approval and previous zoning? Ms. Lee-Cho said that the previous zoning was I-1. One BCA member remembers that the previous approval limited the allowable industrial land uses to a subset of the allowable uses under the previous zoning. The only documents visible in DAIC are for the 2022 application.
4. By extension, if the previous approval limited the land uses to a subset of uses under the previous zoning, how would that apply to the current application with the current (auto-translated) IM zoning?

5. What are the possibilities for screening from the road, and for lighting that limits light pollution and light impact on neighboring properties?

6. What are the possibilities for a road diet for Buck Ridge Court to reduce the unnecessarily large area of impervious asphalt?

Thank you very much!

Miriam Schoenbaum
Vice president, Boyds Civic Association
15004 Clopper Rd
Boyds MD 20841

On Wednesday, July 13, 2022 at 05:19:30 PM EDT, Pereira, Sandra <sandra.pereira@montgomeryplanning.org> wrote:

Ms. Schoenbaum,

The Planning Board agenda for July 21 has been confirmed, and unfortunately, we now have a conflict with the Boyds Civic Association meeting next week. The Public Hearing for the Miles Coppola preliminary plan application in Clarksburg, which BCA might be interested as well, is also scheduled for the evening of July 21.

We hope that the Applicant's Team is still available to attend and present their proposal for the Bucklodge Tract at the BCA meeting next week. If there are any follow-up questions or another meeting is necessary with Staff, please let us know and we can certainly accommodate it on a separate date.

Thank you,

Sandra



Sandra Pereira, RLA

Upcounty Planning Division Regulatory Supervisor

Montgomery County Planning Department

2425 Reddie Drive, Wheaton, MD 20902

sandra.pereira@montgomeryplanning.org

direct: 301-495-2186 | main: 301-495-4645



From: M Schoenbaum <mwschoenbaum@yahoo.com>
Sent: Wednesday, July 6, 2022 1:40 PM
To: Butler, Patrick <patrick.butler@montgomeryplanning.org>; Pereira, Sandra <sandra.pereira@montgomeryplanning.org>
Cc: Nelson, Katherine <katherine.nelson@montgomeryplanning.org>; David McKee <dmckee@benninglandplan.com>; Dan Seamans <danseamans123@gmail.com>; Elena Shuvalov <shuvalove@yahoo.com>; Maggie Bartlett <specialtimesphotography@ymail.com>; Server, Jeffrey <Jeffrey.Server@montgomeryplanning.org>
Subject: Re: Application 11989032A Bucklodge Tract in Boyds

[EXTERNAL EMAIL] Exercise caution when opening attachments, clicking links, or responding.

Thank you, that is great news! The meeting is on Thursday, July 21, at 7:30 pm, at 19821 White Ground Road in Boyds, on the second floor. At this point, I don't know of any specific questions or topics of concern, but community members may wish to ask questions or comment about multiple potential issues, including forest conservation, stormwater management, groundwater, septic, sight lines, traffic, and noise.

Miriam

Miriam Schoenbaum

Vice president, Boyds Civic Association

15004 Clopper Rd
Boyds MD 20841

On Friday, June 24, 2022 at 02:20:21 PM EDT, Pereira, Sandra <sandra.pereira@montgomeryplanning.org> wrote:

Ms. Schoenbaum,

Thank you for the follow-up. Just this week our Team received the Preliminary Plan Amendment Application no. 11989032A for Bucklodge Tract referenced below. Jeff Server (copied) is the lead reviewer on this application. We can most definitely coordinate with the Applicant's Team to attend the BCA's next quarterly meeting on July 21. We'll be available to explain our process and timelines. Please let us know any specific questions or topics of interest/concern that you might have so that we can have the appropriate staff joining us.

Thank you,

Sandra



Sandra Pereira, RLA

Upcounty Planning Division Regulatory Supervisor

Montgomery County Planning Department

2425 Reedie Drive, Wheaton, MD 20902

sandra.pereira@montgomeryplanning.org

direct: 301-495-2186 | main: 301-495-4645



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WE'VE MOVED!
THE NEW PARK AND PLANNING HEADQUARTERS IS NOW LOCATED AT
2425 REEDIE DRIVE, WHEATON, MD 20902

From: M Schoenbaum <mwschoenbaum@yahoo.com>
Sent: Tuesday, June 21, 2022 12:38 PM
To: Sorrento, Christina <christina.sorrento@montgomeryplanning.org>; Butler, Patrick <patrick.butler@montgomeryplanning.org>
Cc: Nelson, Katherine <katherine.nelson@montgomeryplanning.org>; David McKee <dmckee@benninglandplan.com>; Dan Seamans <danseamans123@gmail.com>; Elena Shuvalov <shuvalove@yahoo.com>; Maggie Bartlett <specialtimesphotography@ymail.com>; Pereira, Sandra <sandra.pereira@montgomeryplanning.org>
Subject: Re: Application 11989032A Bucklodge Tract in Boyds

[EXTERNAL EMAIL] Exercise caution when opening attachments, clicking links, or responding.

I am following up on this. It seems that a public hearing date has been set for October 13, 2022.

As you know, in June 2021, the Boyds Civic Association requested a timely meeting for this proposal to be presented and explained to our members. The development plans for this property have been of interest to BCA since before 1989.

BCA's next quarterly meeting will be on Thursday, July 21, at 7:30 pm.

Thank you,

Miriam Schoenbaum

Vice president, Boyds Civic Association

15004 Clopper Rd
Boyds MD 20841

On Friday, June 3, 2022 at 09:06:56 PM EDT, M Schoenbaum <mwschoenbaum@yahoo.com> wrote:

Dear Mr. Butler,

A sign went up today about the development application for Bucklodge (Preliminary Plan Number 11989032A) - see the attached photo.

So I am just following up to ask you to please keep the Boyds Civic Association notified and in the loop.

Thank you,

Miriam Schoenbaum

Vice president, Boyds Civic Association

15004 Clopper Rd
Boyds MD 20841

On Thursday, August 12, 2021 at 07:12:35 AM EDT, Butler, Patrick <patrick.butler@montgomeryplanning.org> wrote:

Hello Ms. Schoenbaum,

Yes, we will make sure to let you know when the application has been accepted as complete and distributed to the Upcounty Division for review.

Thank you,



Patrick Butler
Chief, Upcounty Planning Division

Montgomery County Planning Department
2425 Reedie Drive, 13th Floor, Wheaton, MD 20902
patrick.butler@montgomeryplanning.org
o: 301-495-4561 c: 240-772-6736



From: M Schoenbaum <mwschoenbaum@yahoo.com>
Sent: Wednesday, August 11, 2021 10:59 PM
To: Sorrento, Christina <christina.sorrento@montgomeryplanning.org>; Butler, Patrick <patrick.butler@montgomeryplanning.org>
Cc: Nelson, Katherine <katherine.nelson@montgomeryplanning.org>; David McKee <dmckee@benninglandplan.com>; Dan Seamans <danseamans123@gmail.com>; Elena Shuvalov <shuvalove@yahoo.com>; Maggie Bartlett <specialtimesphotography@ymail.com>
Subject: Re: Application 11989032A Bucklodge Tract in Boyds

[EXTERNAL EMAIL] Exercise caution when opening attachments, clicking links, or responding.

Dear Ms. Sorrento and Mr. Butler,

Mr. McKee very kindly informed me that the application will be a "major amendment" to the original Preliminary Plan application 119890320.

Could you please let me know when the application has been submitted and assigned a reviewer?

Thank you very much,

Miriam Schoenbaum

President, Boyds Civic Association
15004 Clopper Rd
Boyds MD 20841

On Thursday, August 5, 2021, 10:40:16 PM EDT, M Schoenbaum <mwschoenbaum@yahoo.com> wrote:

Dear Ms. Sorrento and Mr. Butler,

On behalf of the Boyds Civic Association (BCA), this is a request for the Planning Department to put the planned project on Buck Ridge Court in Boyds (preliminary plan 11989032A in DAIC) through the regular subdivision process instead of the minor subdivision process. This request is based on BCA's longstanding interest in plans for the property, dating back to the 1980s. Community members may wish to provide public input on multiple potential issues, including forest conservation, stormwater management, groundwater, sightlines, traffic, and noise.

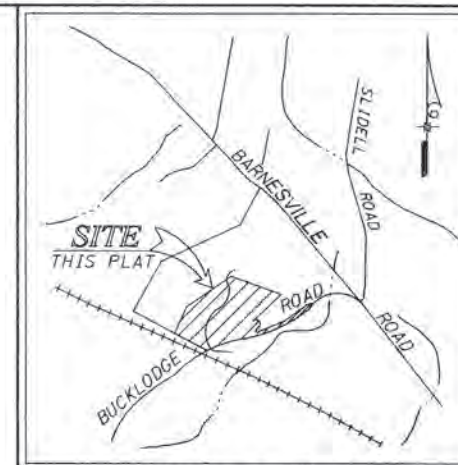
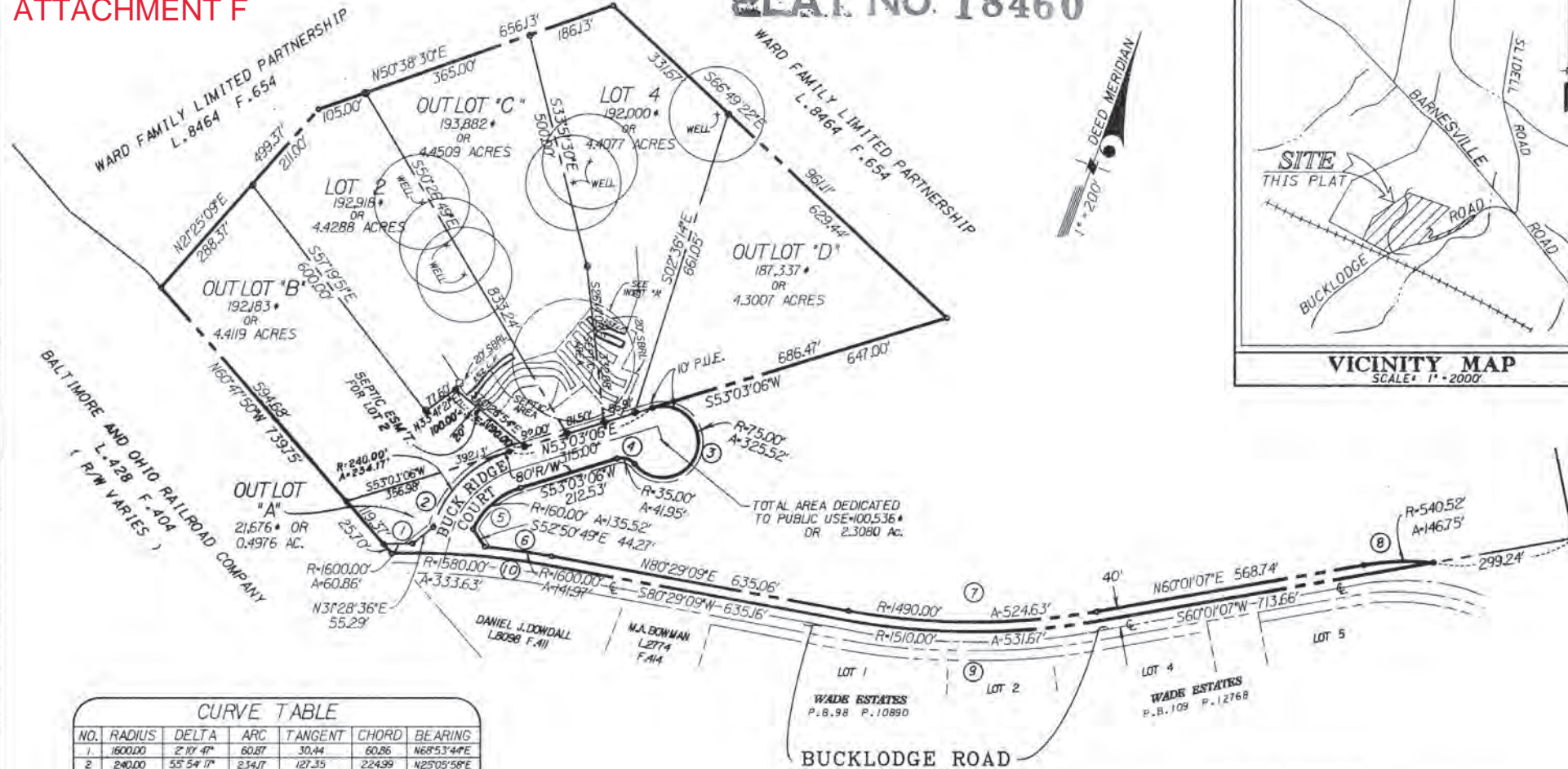
Thank you very much,

Miriam Schoenbaum

President, Boyds Civic Association
15004 Clopper Rd
Boyds MD 20841

ATTACHMENT F

PLAT NO. 18460



VICINITY MAP
SCALE: 1" = 200'

NO.	RADIUS	DELTA	ARC	TANGENT	CHORD	BEARING
1	1600.00	2° 17' 41"	60.87	30.44	60.86	N68°53'44"E
2	240.00	55° 54' 17"	234.17	127.35	224.99	N25°05'58"E
3	75.00	248° 40' 35"	325.52	109.79	123.86	S02°36'37"E
4	35.00	68° 40' 35"	41.95	23.91	39.48	S87°23'23"W
5	160.00	48° 31' 43"	135.52	72.42	131.50	S28°47'15"W
6	1600.00	5° 05' 02"	141.97	71.03	141.92	N77°56'38"E
7	1490.00	20° 10' 26"	524.63	265.06	521.92	N70°06'20"E
8	540.52	15° 33' 21"	146.75	73.83	146.30	N67°52'33"E
9	1510.00	20° 10' 26"	531.67	268.62	528.93	S70°06'20"W
10	1580.00	12° 05' 55"	333.63	167.44	333.02	S74°26'11"W

OWNER'S DEDICATION

WE, THE UNDERSIGNED, OWNERS OF THE PROPERTY DESCRIBED HEREON, HEREBY ADOPT THIS PLAN OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES, AND DEDICATE TO PUBLIC USE THE STREETS SHOWN HEREON.

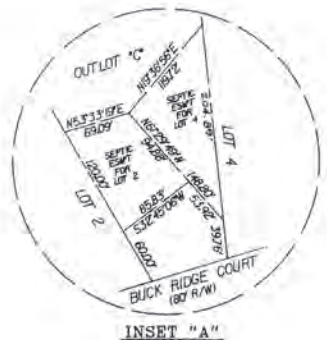
FURTHER, WE GRANT TO THE PARTIES NAMED IN A DOCUMENT TITLED 'DECLARATION OF TERMS AND PROVISIONS OF PUBLIC UTILITY EASEMENTS' AS RECORDED IN LIBER 3834 AT FOLIO 457 AMONG THE LAND RECORDS OF MONTGOMERY COUNTY, MARYLAND, THE PUBLIC UTILITY EASEMENTS BEING SHOWN HEREON AS '10' P.U.E.' AND SUBJECT TO ALL CURRENT AND APPLICABLE REGULATIONS OF ALL FEDERAL, STATE AND LOCAL GOVERNING AGENCIES.

FURTHER, WE GRANT TO THE WASHINGTON SUBURBAN SANITARY COMMISSION, THEIR SUCCESSORS AND ASSIGNS FOREVER EASEMENTS WITHIN THE '10' P.U.E.' AS SHOWN HEREON FOR THE CONSTRUCTION, RECONSTRUCTION, MAINTENANCE AND OPERATION OF SANITARY SEWERS, WATER MAINS AND APPURTENANCES.

FURTHER, WE ESTABLISH SLOPE EASEMENTS 25 FEET WIDE ALONG ALL THE STREETS AS REQUIRED BY MONTGOMERY COUNTY ORDINANCE NO. 4115. SAID SLOPE EASEMENTS SHALL BE EXTINGUISHED AFTER ALL REQUIRED PUBLIC IMPROVEMENTS ABUTTING SAID EASEMENTS HAVE BEEN LAWFULLY COMPLETED AND ACCEPTED FOR MAINTENANCE BY MONTGOMERY COUNTY, MARYLAND OR OTHER APPROPRIATE PUBLIC AGENCY.

WARD FAMILY LIMITED PARTNERSHIP
 DATE: 10/9/91
 Witness: [Signature]
 Richard E. Ward, President

- NOTES:
- 1) DEVELOPMENT SUBJECT TO THE CONDITIONS OF THE CONSENT AGREEMENT RECORDED AMONG THE LAND RECORDS OF MONTGOMERY COUNTY, MARYLAND IN LIBER 10050 AT FOLIO 105.
 - 2) SEPTIC BUILDING RESTRICTION LINES (S.B.R.L.) ARE SUBJECT TO CHANGE, WITH HEALTH DEPARTMENT APPROVAL.
 - 3) LOTS 2 & 4 APPROVED FOR 500 GALLONS PER DAY MAXIMUM OF WASTE WATER FLOW AS PER MONTGOMERY COUNTY HEALTH DEPARTMENT.



SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT, THAT IT IS A SUBDIVISION OF THE LAND CONVEYED BY FREDERICK L. HORMAN, JR. AND SAMUEL L. TISDALE, TRUSTEES OF THE BUCK LODGE SYNDICATE, ALSO KNOWN AS THE BUCK LODGE SYNDICATE, A JOINT VENTURE AND MARYLAND GENERAL PARTNERSHIP, TO WARD FAMILY LIMITED PARTNERSHIP, A MARYLAND LIMITED PARTNERSHIP, BY DEED DATED SEPTEMBER 12, 1988, AND RECORDED AMONG THE LAND RECORDS OF MONTGOMERY COUNTY, MARYLAND IN LIBER 8464 AT FOLIO 554; THAT IRON PIPES SHOWN THIS — WILL BE SET TO THE FINISHED GRADE WHERE INDICATED HEREON. THE TOTAL AREA INCLUDED IN THIS PLAT OF SUBDIVISION IS 1,080,532 SQUARE FEET OR 24.8056 ACRES OF LAND. THE TOTAL AREA DEDICATED TO PUBLIC USE BY THIS PLAT IS 100,536 SQUARE FEET OR 2.3080 ACRES OF LAND.

DATE: 10/7/91
 Marc S. Cheves
 MARC S. CHEVES, REGISTERED PROPERTY LINE SURVEYOR, MARYLAND LICENSE NO. 431 AS TO THE PROPERTY LINE ESTABLISHMENT SHOWN ON THIS PLAT

DATE: 10-7-91
 Jeffrey B. Retter
 JEFFREY B. RETTERER, P.E., REGISTERED PROFESSIONAL ENGINEER, STATE OF MARYLAND, LICENSE NO. 13716 AS TO THE ROAD AND STORM DRAINAGE

FILED
 APR 09 1992

BUCK LODGE
 LOTS 2 AND 4,
 OUTLOTS 'A', 'B', 'C', & 'D'
 11TH ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

NOTE: DEVELOPMENT SUBJECT TO AN AGREEMENT WITH THE MONTGOMERY COUNTY PLANNING BOARD, M.N.C.P. PC 2912051890320400178011042591A6R

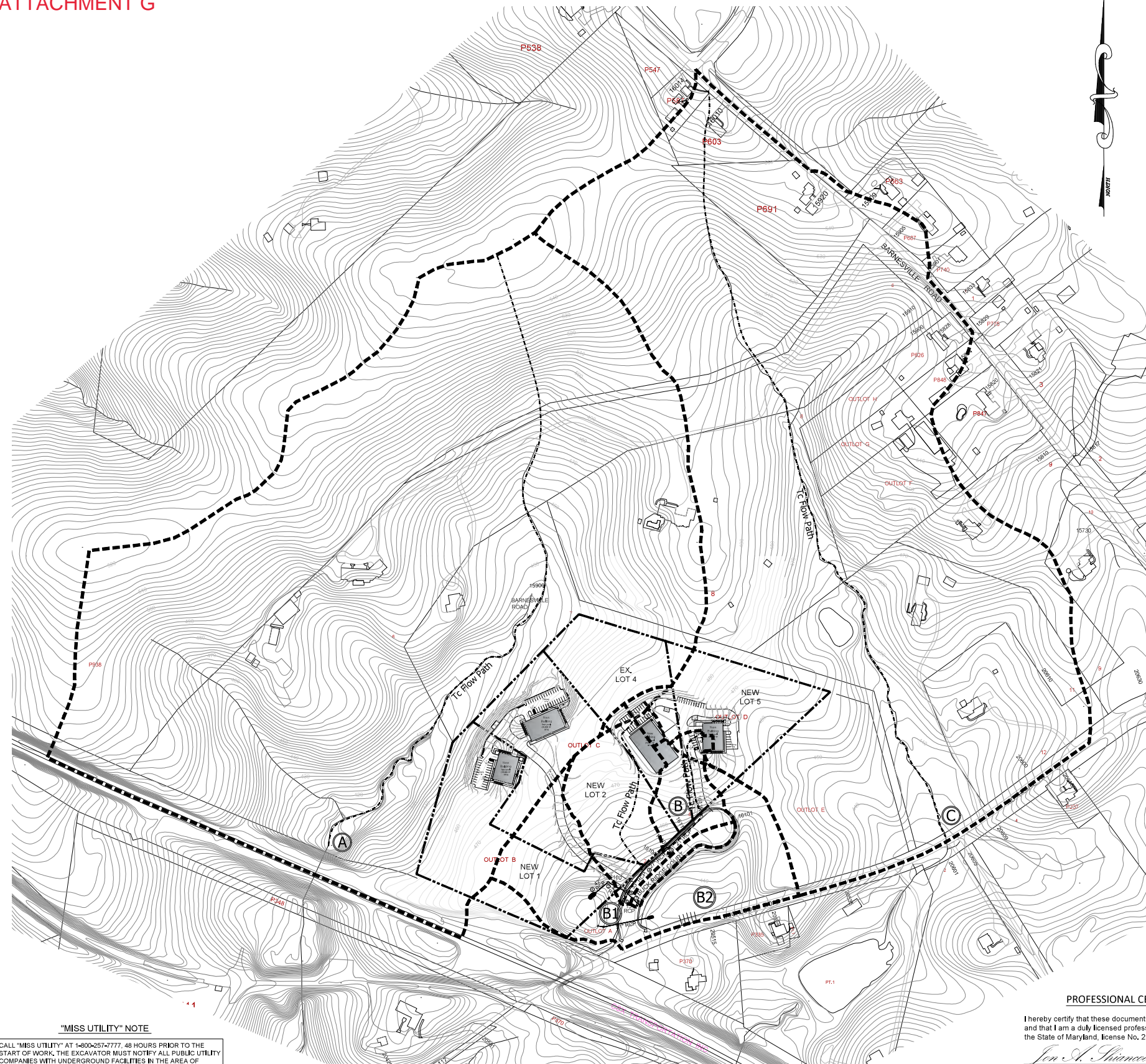
Maryland National Capital Park & Planning Commission Montgomery County Planning Board	Montgomery County Health Department Montgomery County, Maryland
Approved: SEPTEMBER 19, 1991	Approved: 3/19/92 Harold D. Seibel MD M.P.E. County Health Officer
[Signature] Chairman	Montgomery County, Maryland, Department Of Transportation
[Signature] Asst. Secretary Treasurer	Approved: FEBRUARY 13, 1992 [Signature] for Director
MNCP&PC File NO. 584-60	PIA No. 92-005

Scale: 1" = 200'	Recorded	GREENHORNE & O' MARA INC. ENGINEERS-ARCHITECTS-PLANNERS-SURVEYORS 15020 SHADY GROVE ROAD, SUITE 300 ROCKVILLE, MARYLAND 20850 (301) 738-3890
Plat Book	Plat No.	
Plat No.		

DATE: JULY, 1991
Comp. - Drafter RM - DLH File No.

MONTGOMERY COUNTY CIRCUIT COURT (Subdivision Plats, MO) Plat 18460, MSA_51249_024660, Date available 10/22/04/09, Printed 08/07/2011, Maryland State Archives

ATTACHMENT G



GENERAL NOTES:

1. The subject properties are located on tax map DU43 and WSSC sheet 228NW16.
2. The subject properties are within the Little Seneca Creek watershed.
3. The subject properties are within the IM zone.
4. Area of properties: 22.0 ac.
5. Topographic contours and planimetric data based on MNCPPC 2-foot aerial topography & GIS data.
6. Horizontal elevations per MD State Plane NAD83, and vertical datum per National Geodetic Vertical Datum NAVD 88.

DRAINAGE NOTES:

1. Study point (A) is located at an existing 54" RCP located under a CSX owned railroad line.
2. Study point (B) is located at an existing A-10 curb inlet along Buck Ridge Court.
3. Study point (B2) is located at an existing 18" RCP located under Bucklodge Road.
4. Study point (C) is located at an existing 18" CMP located under Bucklodge Road.

SD ANALYSIS NOTES:

1. The HW/D ratio for the existing 54" RCP culvert at study point (A) does not meet MCDOT criteria during 25-year ultimate zoning conditions. (HW/D = 3.2)
2. The existing A-10 curb inlet located at study point (B) meets MCDOT criteria during 10-year ultimate zoning conditions. (Spread does not cross the centerline and does not exceed 13 feet). Bypass flow is within a reasonable tolerance above 3.0 cfs.
2. The existing A-10 curb inlet located at study point (B) does not meet MCDOT criteria during 10-year ultimate zoning conditions. (Spread exceeds 13 feet, and bypass is above 3.0 cfs).

TOP RAIL ROAD TRACKS = 451.00
 100-YEAR WSE = 432.41
 25-YEAR WSE = 415.09
 10-YEAR WSE = 408.56



STUDY POINT A (PRE DEVELOPMENT)
 EXISTING 54" RCP CULVERT ELEVATION
 NO SCALE

TOP RAIL ROAD TRACKS = 451.00
 100-YEAR WSE = 433.65
 25-YEAR WSE = 415.73
 10-YEAR WSE = 408.96



STUDY POINT A (POST DEVELOPMENT)
 EXISTING 54" RCP CULVERT ELEVATION
 NO SCALE

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, license No. 25725, expiration date: 6-20-2025.

Jon A. Shiancoe
 JON A. SHIANCOE
 MD PE#25725
 11-15-2023
 DATE:



VICINITY MAP
 PER GOOGLE MAPS

SOILS TABLE

SOIL	HYDROLOGIC GROUP	DESCRIPTION
8A	D	Belle silt loam, 0 to 3% slopes
9B	C	Linganore-Hyattstown channery silt loams, 3 to 8% slopes
9C	C	Linganore-Hyattstown channery silt loams, 8 to 15% slopes
16B	C	Brinklow-Blocktown channery silt loams, 3 to 8% slopes
16C	C	Brinklow-Blocktown channery silt loams, 8 to 15% slopes
16D	C	Brinklow-Blocktown channery silt loams, 15 to 25% slopes
17B	B	Ocoquan loam, 3 to 8% slopes
29B	D	Jackland silt loam, 3 to 8% slopes
109D	D	Hyattstown channery silt loam, 15 to 25% slopes, very rocky
116E	D	Blocktown channery silt loam, 25 to 45% slopes, very rocky

PRE DEVELOPMENT HYDROLOGY

STUDY POINT	AREA (ac)	IMP	GREEN	CN	Tc (hrs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
(A)	83.6	See Breakdown in Comps		76	0.368	205.26	293.78	467.54
(B2)	13.6	See Breakdown in Comps		75	0.230	39.34	56.61	-
(C)	70.6	See Breakdown in Comps		76	0.357	176.27	252.07	-

POST DEVELOPMENT HYDROLOGY

STUDY POINT	AREA (ac)	IMP	GREEN	CN	Tc (hrs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
(A)	83.6	See Breakdown in Comps		77	0.368	212.96	302.28	477.18
(B2)	13.6	See Breakdown in Comps		77	0.230	42.30	59.82	-
(C)	70.6	See Breakdown in Comps		77	0.357	182.69	259.60	-

PRE-DEVELOPMENT HYDROLOGY

STUDY POINT	AREA (ac)	IMP	GREEN	C	Tc (min)	I ₁₀ (in/hr)	Q ₁₀ (cfs)
(B)	1.69	See Breakdown in Comps		0.29	15.00	5.00	2.45
(B1)	3.32	See Breakdown in Comps		0.25	16.59	4.80	3.98

POST-DEVELOPMENT HYDROLOGY

STUDY POINT	AREA (ac)	IMP	GREEN	C	Tc (min)	I ₁₀ (in/hr)	Q ₁₀ (cfs)
(B)	1.86	See Breakdown in Comps		0.41	10.00	5.85	4.46
(B1)	3.81	See Breakdown in Comps		0.29	16.51	4.80	5.30

PRE/POST-DEVELOPMENT HYDROLOGY

STUDY POINT	AREA (ac)	IMP	GREEN	C	Tc (min)	I ₁₀ (in/hr)	Q ₁₀ (cfs)
Ex Str #7	0.50	See Breakdown in Comps		0.76	7.00	6.52	2.48

Utility locations shown herein are based on field observations and available records. Their locations are to be considered approximate and must be verified by the appropriate utility provider and located by test pitting prior to any construction.

"MISS UTILITY" NOTE
 CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK, THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.

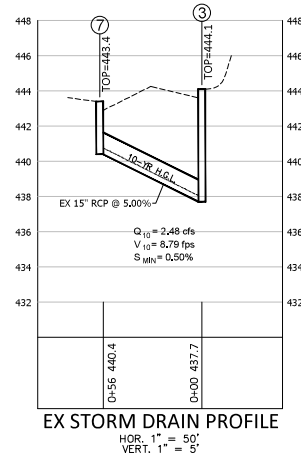
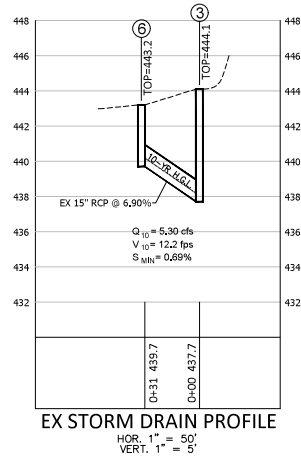
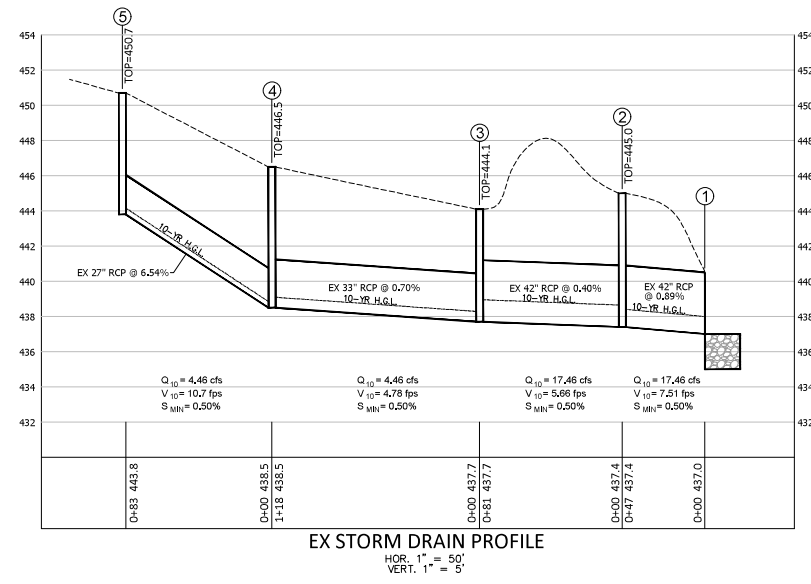
ENGINEERING **JAS** DESIGN
 LLC
 5105 MOUNT OAKS SANCTUARY DRIVE
 BOWIE, MD 20720
 PHONE (301) 262-1630 WWW.JASEDLIC.COM

DRAWN BY: JAS
 DATE: NOVEMBER 15, 2023
 SCALE: 1 inch = 200 feet
 SHEET NO.: 1 OF 2
 DWG FILE: 394-SD STUDY.DWG

RESUBDIVISION OF LOTS 2 & 4, OUTLOTS B, C & D
 BUCKLODGE
 ELECTION DISTRICT NO. 11
 MONTGOMERY COUNTY, MARYLAND

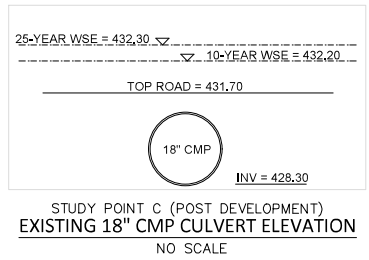
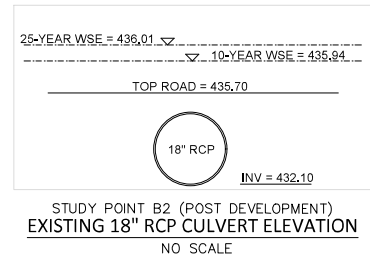
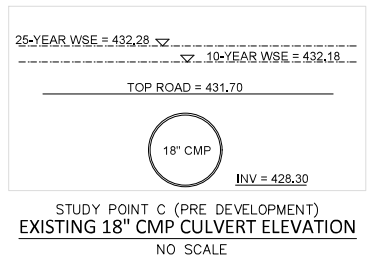
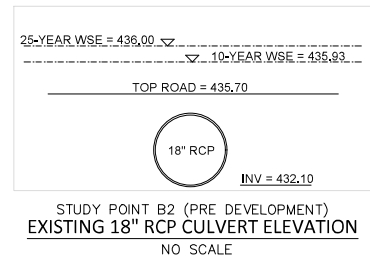
DOWNSTREAM STORM DRAIN ANALYSIS

NO.	DATE	REVISIONS
1	11-15-2023	UPDATED TO ADDRESS MDOTSHA COMMENTS



Pipe Computations

Pipe		Area (acres)		R-C	AR	LAR	Tc	I	Q10	Pipe Size	Pipe Type	Min Slope %	Act Slope %	V10	d18	Pipe Length
From	To	Incr Area	Total Area													
5	4	1.66	1.66	0.41	0.76	0.76	10.0	3.85	4.46	27	RCP	0.50	6.54	10.70	4.34	81
4	3	0.00	1.66	0.41	0.00	0.76	10.0	8.88	4.46	33	RCP	0.60	0.70	4.78	7.06	114
3	2	0.17	0.03	0.36	2.22	2.98	10.0	5.85	17.46	42	RCP	0.50	0.40	5.66	15.10	77
2	1	0.00	0.03	0.36	0.00	2.98	10.0	5.85	17.46	42	RCP	0.50	0.66	7.51	12.20	45
6	3	3.81	3.81	0.29	1.10	1.10	16.5	4.80	5.30	15	RCP	0.66	6.90	12.20	5.77	29
7	3	0.50	0.50	0.76	0.38	0.38	7.0	6.52	2.48	15	RCP	0.50	5.00	6.79	4.20	54



NO.	DATE	REVISIONS
1	11-15-2023	UPDATED TO ADDRESS MDOTSHA COMMENTS

DOWNSTREAM STORM DRAIN ANALYSIS

Re-Subdivision of Lots 2 & 4, Outlots B, C & D
BUCKLODGE

11th Election District
Montgomery County, Maryland

November 15, 2023

Updated to Address MDOT SHA Comments



By:

ENGINEERING **JAS** DESIGN
LLC

5105 Mount Oaks Sanctuary Drive – Bowie, MD 20720
Phone: 301-262-1630 Web: www.jasedllc.com

TABLE OF CONTENTS

I INTRODUCTION

II CRITERIA

III SUMMARY OF RESULTS

APPENDICES

Appendix A – TR-55 & Rational Method Computations

Appendix B – Ex SD Appurtenance Analyses

Appendix C – Soils Map

Appendix D – Zoning Map

I INTRODUCTION

The purpose of this downstream storm drain analysis is to examine the public storm drain systems & appurtenances affected by the proposed development. The appurtenances affected are an existing 54" RCP located under a CSX railroad line, (2) existing A-10 curb inlets located along Buck Ridge Court, an existing 18" RCP, and existing 18" CMP, both located under Bucklodge Road. The existing stormdrain pipes within Buck Ridge Court that lead to an existing SWM pond will be analyzed as well. Standard TR-55 methodology will be used to determine the 10 and 25-Year storm event values for the culverts, and MCDOT rational method will be used to determine the 10-year storm event values for the curb inlets and connecting stormdrain piping. Culvert modeling software will be used to determine the ultimate zoning headwater elevations for the culverts.

The subject properties total 22 acres and are within the IM zone. The properties consist of 5 previously recorded/subdivided lots & outlots approved during the 80's and are surrounded by rural and agricultural properties. The applicant wishes to convert the outlots into buildable lots and construct 4 new industrial structures.

II CRITERIA

The following design guides have been used in the development of this report:

1. Win TR-55 Small Watershed Hydrology
2. Carlson Hydrology Software
3. MCDOT - Drainage Design Criteria

III SUMMARY OF RESULTS

Pre-Development

Study Point	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)	Max 10-Year WSE	Max 25-Year WSE	Max 100-Year WSE
A	205.26	293.78	467.54	409.56	415.09	432.41
B	2.45	-	-	-	-	-
B1	3.98	-	-	-	-	-
B2	39.34	56.61	-	435.93	436.00	-
C	176.27	252.07	-	432.18	432.28	-

Post-Development

Study Point	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)	Max 10-Year WSE	Max 25-Year WSE	Max 100-Year WSE
A	212.96	302.28	477.18	409.96	415.73	433.65
B	4.46	-	-	-	-	-
B1	5.30	-	-	-	-	-
B2	42.30	59.82	-	435.94	436.01	-
C	182.69	259.60	-	432.20	432.30	-

Appendix A – TR-55 & Rational Method Computations

BUCKLODGE
 Study Point A (Pre-Development)
 Montgomery NOAA_C County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
D.A.	Open space; grass cover > 75%	(good) C	9.17	74
	Rural (5 Acre Lots)	B	1	64
	Rural (5 Acre Lots)	C	13.6	76
	Rural (5 Acre Lots)	D	.5	81
	Agricultural Reserve (25 Acre Lots)	B	1.6	65
	Agricultural Reserve (25 Acre Lots)	C	46.73	76
	Agricultural Reserve (25 Acre Lots)	D	11	82
Total Area / Weighted Curve Number			83.6	76
			====	==

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
D.A.							
SHEET	100	0.0150	0.150				0.186
SHALLOW	2500	0.0560	0.050				0.182
Time of Concentration							.368
							=====

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period		
	10-Yr (cfs)	25-Yr (cfs)	100-Yr (cfs)

SUBAREAS			
D.A.	205.26	293.78	467.54

Study Point B – Pre-Development 10-Year Calculation

Drainage Area = 1.69 ac.

Imp Area = 0.23 ac (C = 0.90)

Green Area = 1.46 ac (C = 0.19)

Weighted C = 0.29

$T_C = 15.00$ min

$I_{10} = 5.00$ in/hr

$Q_{10} = 2.45$ cfs

Study Point B1 – Pre-Development 10-Year Calculation

Drainage Area = 3.32 ac.

Imp Area = 0.17 ac (C = 0.90)

Green Area = 3.15 ac (C = 0.19)

Weighted C = 0.25

$L = 770'$, $S = 5.7\%$, $V = 7$ fps

$T_T = \frac{L - 100}{60V} = 1.59$ min

60V

$T_C = 16.59$ min

$I_{10} = 4.80$ in/hr

$Q_{10} = 3.98$ cfs

BUCKLODGE
 Study Point B2 (Pre-Development)
 Montgomery NOAA_C County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
D.A.	Open space; grass cover > 75%	(good) C	8.34	74
	Rural (5 Acre Lots)	C	5.26	76
Total Area / Weighted Curve Number			13.6	75
			====	==

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Mannings's Slope (ft/ft)	n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
D.A.							
SHEET	100	0.0300	0.150				0.141
SHALLOW	620	0.0500	0.050				0.048
SHALLOW	475	0.0250	0.025				0.041
Time of Concentration							.23
							=====

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period	
	10-Yr (cfs)	25-Yr (cfs)

SUBAREAS		
D.A.	39.34	56.61

BUCKLODGE
 Study Point C (Pre-Development)
 Montgomery NOAA_C County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
D.A.	Open space; grass cover > 75%	(good) C	4.15	74
	Rural (5 Acre Lots)	C	51.15	76
	Rural (5 Acre Lots)	D	6.6	81
	Agricultural Reserve (25 Acre Lots)	C	8	76
	Agricultural Reserve (25 Acre Lots)	D	.7	82
Total Area / Weighted Curve Number			70.6	76
			====	==

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
D.A.							
SHEET	100	0.0400	0.150				0.126
SHALLOW	2850	0.0450	0.050				0.231
Time of Concentration							.357
							=====

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period	
	10-Yr (cfs)	25-Yr (cfs)
SUBAREAS		
D.A.	176.27	252.07

BUCKLODGE
 Study Point A (Post-Development)
 Montgomery NOAA_C County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
D.A.	Open space; grass cover > 75%	(good) C	7.82	74
	Paved parking lots, roofs, driveways	C	1.35	98
	Rural (5 Acre Lots)	B	1	64
	Rural (5 Acre Lots)	C	13.6	76
	Rural (5 Acre Lots)	D	.5	81
	Agricultural Reserve (25 Acre Lots)	B	1.6	65
	Agricultural Reserve (25 Acre Lots)	C	46.73	76
	Agricultural Reserve (25 Acre Lots)	D	11	82
Total Area / Weighted Curve Number			83.6	77
			====	==

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
D.A.							
SHEET	100	0.0150	0.150				0.186
SHALLOW	2500	0.0560	0.050				0.182
Time of Concentration							.368
							=====

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period		
	10-Yr (cfs)	25-Yr (cfs)	100-Yr (cfs)

SUBAREAS			
D.A.	212.96	302.28	477.18

Study Point B – Post Development 10-Year Calculation

Drainage Area = 1.86 ac.

Imp Area = 0.57 ac (C = 0.90)

Green Area = 1.29 ac (C = 0.19)

Weighted C = 0.41

$T_C = 10.00$ min

$I_{10} = 5.85$ in/hr

$Q_{10} = 4.46$ cfs

Study Point B1 – Post Development 10-Year Calculation

Drainage Area = 3.81 ac.

Imp Area = 0.54 ac (C = 0.90)

Green Area = 3.27 ac (C = 0.19)

Weighted C = 0.29

$L = 733'$, $S = 4.9\%$, $V = 7$ fps

$T_T = \frac{L - 100}{60V} = 1.51$ min

$T_C = 16.51$ min

$I_{10} = 4.80$ in/hr

$Q_{10} = 5.30$ cfs

Ex Stormdrain Structure #7 – Pre/Post-Development 10-Year Calculation

Drainage Area = 0.50 ac.

Imp Area = 0.40 ac (C = 0.90)

Green Area = 0.10 ac (C = 0.19)

Weighted C = 0.76

$T_C = 7.00$ min

$I_{10} = 6.52$ in/hr

$Q_{10} = 2.48$ cfs

BUCKLODGE
 Study Point B2 (Post-Development)
 Montgomery NOAA_C County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
D.A.	Open space; grass cover > 75%	(good) C	7.25	74
	Paved parking lots, roofs, driveways	C	1.09	98
	Rural (5 Acre Lots)	C	5.26	76
Total Area / Weighted Curve Number			13.6	77
			====	==

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
D.A.							
SHEET	100	0.0300	0.150				0.141
SHALLOW	620	0.0500	0.050				0.048
SHALLOW	475	0.0250	0.025				0.041
Time of Concentration							.23
							=====

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period	
	10-Yr (cfs)	25-Yr (cfs)

SUBAREAS		
D.A.	42.30	59.82

BUCKLODGE
 Study Point C (Post-Development)
 Montgomery NOAA_C County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
D.A.	Open space; grass cover > 75%	(good) C	3.14	74
	Paved parking lots, roofs, driveways	C	1.01	98
	Rural (5 Acre Lots)	C	51.15	76
	Rural (5 Acre Lots)	D	6.6	81
	Agricultural Reserve (25 Acre Lots)	C	8	76
	Agricultural Reserve (25 Acre Lots)	D	.7	82
Total Area / Weighted Curve Number			70.6	77
			====	==

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
D.A.							
SHEET	100	0.0400	0.150				0.126
SHALLOW	2850	0.0450	0.050				0.231
Time of Concentration							.357
							=====

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period	
	10-Yr (cfs)	25-Yr (cfs)
SUBAREAS		
D.A.	182.69	259.60

Appendix D – Ex SD Appurtenance Analyses

(Study Point A) Pre-Development 54" RCP Culvert Analysis - 10 Year Storm

Section
Shape: Circular
Material: Concrete
Diameter: 54.00 in
Manning's n: 0.0130
Number of Barrels: 1

Inlet
Inlet Type: Groove End Projecting
Ke: 0.20

Inverts
Inlet Invert Elevation: 401.20 ft
Outlet Invert Elevation: 398.30 ft
Length: 240.00 ft
Slope: 0.01208 ft/ft

Culvert Calculation
Discharge: 205.26 cfs
Headwater Elevation: 409.56 ft
Tailwater Elevation: 0.00 ft
Downstream Velocity: 15.50 ft/s
Downstream Flow Depth: 3.49 ft
Flow Control Type: Inlet Control, Submerged

(Study Point A) Pre-Development 54" RCP Culvert Analysis - 25 Year Storm

Section
Shape: Circular
Material: Concrete
Diameter: 54.00 in
Manning's n: 0.0130
Number of Barrels: 1

Inlet
Inlet Type: Groove End Projecting
Ke: 0.20

Inverts
Inlet Invert Elevation: 401.20 ft
Outlet Invert Elevation: 398.30 ft
Length: 240.00 ft
Slope: 0.01208 ft/ft

Culvert Calculation
Discharge: 293.78 cfs
Headwater Elevation: 415.09 ft
Tailwater Elevation: 0.00 ft
Downstream Velocity: 18.61 ft/s
Downstream Flow Depth: 4.38 ft
Flow Control Type: Inlet Control, Submerged

(Study Point A) Pre-Development 54" RCP Culvert Analysis - 100 Year Storm

Section

Shape: Circular
Material: Concrete
Diameter: 54.00 in
Manning's n: 0.0130
Number of Barrels: 1

Inlet

Inlet Type: Groove End Projecting
Ke: 0.20

Inverts

Inlet Invert Elevation: 401.20 ft
Outlet Invert Elevation: 398.30 ft
Length: 240.00 ft
Slope: 0.01208 ft/ft

Culvert Calculation

Discharge: 467.54 cfs
Headwater Elevation: 432.41 ft
Tailwater Elevation: 0.00 ft
Downstream Velocity: 29.41 ft/s
Downstream Flow Depth: 4.48 ft
Flow Control Type: Outlet Control

(Study Point B2) Pre-Development 18" RCP Culvert Analysis - 10 & 25 Year Storms

Section		
Shape:	Circular	
Material:	Concrete	
Diameter:	18.00	in
Manning's n:	0.0130	
Number of Barrels:	1	
Inlet		
Inlet Type:	Groove End w/ Headwall	
Ke:	0.20	
Inverts		
Inlet Invert Elevation:	432.10	ft
Outlet Invert Elevation:	428.00	ft
Length:	45.00	ft
Slope:	0.09111	ft/ft
Culvert Calculation		
Discharge:	16.54	cfs
Top of Road Elevation:	435.70	ft
Tailwater Elevation:	0.00	ft
Downstream Velocity:	18.16	ft/s
Downstream Flow Depth:	0.77	ft
Flow Control Type:	Inlet Control, Submerged	

The existing 18" culvert pushes 16.5 cfs under the road. The remaining 22.8 cfs overtops road as a weir.

$$Q_{WEIR} = W * d^{1.5} * C$$

W = 60 feet
C = 3.33
D₁₀ = 0.23 feet
Q₁₀ = 22.8 cfs
10-Year WSE = 435.93

The existing 18" culvert pushes 16.5 cfs under the road. The remaining 40.1 cfs overtops road as a weir.

$$Q_{WEIR} = W * d^{1.5} * C$$

W = 75 feet
C = 3.33
D₂₅ = 0.30 feet
Q₂₅ = 40.1 cfs
25-Year WSE = 436.00

(Study Point C) Pre-Development 18" CMP Culvert Analysis - 10 & 25 Year Storms

Section		
Shape:	Circular	
Material:	CMP/Aluminum	
Diameter:	18.00	in
Manning's n:	0.0250	
Number of Barrels:	1	
Inlet		
Inlet Type:	Projecting	
Ke:	0.90	
Inverts		
Inlet Invert Elevation:	428.30	ft
Outlet Invert Elevation:	428.00	ft
Length:	31.00	ft
Slope:	0.00967	ft/ft
Culvert Calculation		
Discharge:	10.82	cfs
Headwater Elevation:	431.70	ft
Tailwater Elevation:	0.00	ft
Downstream Velocity:	6.82	ft/s
Downstream Flow Depth:	1.26	ft
Flow Control Type:	Inlet Control, Submerged	

The existing 18" culvert pushes 10.8 cfs under the road. The remaining 165.5 cfs overtops road as a weir.

$$Q_{WEIR} = W * d^{1.5} * C$$

W = 148 feet
C = 3.33
D₁₀ = 0.48 feet
Q₁₀ = 165.5 cfs
10-Year WSE = 432.18

The existing 18" culvert pushes 10.8 cfs under the road. The remaining 241.3 cfs overtops road as a weir.

$$Q_{WEIR} = W * d^{1.5} * C$$

W = 162 feet
C = 3.33
D₂₅ = 0.58 feet
Q₂₅ = 241.3 cfs
25-Year WSE = 432.28

(Study Point A) Post Development 54" RCP Culvert Analysis - 10 Year Storm

Section
Shape: Circular
Material: Concrete
Diameter: 54.00 in
Manning's n: 0.0130
Number of Barrels: 1

Inlet
Inlet Type: Groove End Projecting
Ke: 0.20

Inverts
Inlet Invert Elevation: 401.20 ft
Outlet Invert Elevation: 398.30 ft
Length: 240.00 ft
Slope: 0.01208 ft/ft

Culvert Calculation
Discharge: 212.96 cfs
Headwater Elevation: 409.96 ft
Tailwater Elevation: 0.00 ft
Downstream Velocity: 15.53 ft/s
Downstream Flow Depth: 3.62 ft
Flow Control Type: Inlet Control, Submerged

(Study Point A) Post Development 54" RCP Culvert Analysis - 25 Year Storm

Section
Shape: Circular
Material: Concrete
Diameter: 54.00 in
Manning's n: 0.0130
Number of Barrels: 1

Inlet
Inlet Type: Groove End Projecting
Ke: 0.20

Inverts
Inlet Invert Elevation: 401.20 ft
Outlet Invert Elevation: 398.30 ft
Length: 240.00 ft
Slope: 0.01208 ft/ft

Culvert Calculation
Discharge: 302.28 cfs
Headwater Elevation: 415.73 ft
Tailwater Elevation: 0.00 ft
Downstream Velocity: 19.13 ft/s
Downstream Flow Depth: 4.39 ft
Flow Control Type: Inlet Control, Submerged

(Study Point A) Post Development 54" RCP Culvert Analysis - 100 Year Storm

Section		
Shape:	Circular	
Material:	Concrete	
Diameter:	54.00	in
Manning's n:	0.0130	
Number of Barrels:	1	
Inlet		
Inlet Type:	Groove End Projecting	
Ke:	0.20	
Inverts		
Inlet Invert Elevation:	401.20	ft
Outlet Invert Elevation:	398.30	ft
Length:	240.00	ft
Slope:	0.01208	ft/ft
Culvert Calculation		
Discharge:	477.18	cfs
Headwater Elevation:	433.65	ft
Tailwater Elevation:	0.00	ft
Downstream Velocity:	30.02	ft/s
Downstream Flow Depth:	4.48	ft
Flow Control Type:	Outlet Control	

(Study Point B2) Post-Development 18" RCP Culvert Analysis - 10 & 25 Year Storms

Section		
Shape:	Circular	
Material:	Concrete	
Diameter:	18.00	in
Manning's n:	0.0130	
Number of Barrels:	1	
Inlet		
Inlet Type:	Groove End w/ Headwall	
Ke:	0.20	
Inverts		
Inlet Invert Elevation:	432.10	ft
Outlet Invert Elevation:	428.00	ft
Length:	45.00	ft
Slope:	0.09111	ft/ft
Culvert Calculation		
Discharge:	16.54	cfs
Top of Road Elevation:	435.70	ft
Tailwater Elevation:	0.00	ft
Downstream Velocity:	18.16	ft/s
Downstream Flow Depth:	0.77	ft
Flow Control Type:	Inlet Control, Submerged	

The existing 18" culvert pushes 16.5 cfs under the road. The remaining 25.8 cfs overtops road as a weir.

$$Q_{WEIR} = W * d^{1.5} * C$$

W = 64 feet
C = 3.33
D₁₀ = 0.24 feet
Q₁₀ = 25.8 cfs
10-Year WSE = 435.94

The existing 18" culvert pushes 16.5 cfs under the road. The remaining 43.3 cfs overtops road as a weir.

$$Q_{WEIR} = W * d^{1.5} * C$$

W = 76 feet
C = 3.33
D₂₅ = 0.31 feet
Q₂₅ = 43.3 cfs
25-Year WSE = 436.01

(Study Point C) Post-Development 18" CMP Culvert Analysis - 10 & 25 Year Storms

Section
Shape: Circular
Material: CMP/Aluminum
Diameter: 18.00 in
Manning's n: 0.0250
Number of Barrels: 1

Inlet
Inlet Type: Projecting
Ke: 0.90

Inverts
Inlet Invert Elevation: 428.30 ft
Outlet Invert Elevation: 428.00 ft
Length: 31.00 ft
Slope: 0.00967 ft/ft

Culvert Calculation
Discharge: 10.82 cfs
Headwater Elevation: 431.70 ft
Tailwater Elevation: 0.00 ft
Downstream Velocity: 6.82 ft/s
Downstream Flow Depth: 1.26 ft
Flow Control Type: Inlet Control, Submerged

The existing 18" culvert pushes 10.8 cfs under the road. The remaining 171.9 cfs overtops road as a weir.

$Q_{WEIR} = W * d^{1.5} * C$
W = 150 feet
C = 3.33
D₁₀ = 0.50 feet
Q₁₀ = 176.6 cfs
10-Year WSE = 432.20

The existing 18" culvert pushes 10.8 cfs under the road. The remaining 248.8 cfs overtops road as a weir.

$Q_{WEIR} = W * d^{1.5} * C$
W = 165 feet
C = 3.33
D₂₅ = 0.60 feet
Q₂₅ = 255.4 cfs
25-Year WSE = 432.30

Study Point B – Post Development A-10 Curb Inlet Spread & Efficiency Calculations

Street Capacity (Spread)	
Q (flow) cfs	4.46
Sx (Cross Slope) ft/ft	0.020
S (Slope of Road) ft/ft	0.049
T (Spread) ft	9.15
d (depth of flow) ft	0.18
n (mannings)	0.015

Inlet Computations	
Lt (Curb Opening for 100% Capture) ft	59
Sx (Cross Slope) ft/ft	0.020
S (Gutter Slope) ft/ft	0.049
n	0.015
Q (flow) cfs	4.46

Inlet Efficiency Computation	
E (Efficiency of Inlet)	28%
L (Inlet Length) ft	10
Lt (Inlet Length for 100% Capture)	59
Bypass Flow (cfs)	3.19

Study Point B1 – Post Development A-10 Curb Inlet Spread & Efficiency Calculations

Street Capacity (Spread)	
Q (flow) cfs	8.49
Sx (Cross Slope) ft/ft	0.020
S (Slope of Road) ft/ft	0.017
T (Spread) ft	14.21
d (depth of flow) ft	0.28
n (mannings)	0.015

Inlet Computations	
Lt (Curb Opening for 100% Capture) ft	56
Sx (Cross Slope) ft/ft	0.020
S (Gutter Slope) ft/ft	0.017
n	0.015
Q (flow) cfs	8.49

Inlet Efficiency Computation	
E (Efficiency of Inlet)	30%
L (Inlet Length) ft	10
Lt (Inlet Length for 100% Capture)	56
Bypass Flow (cfs)	5.97

Study Point B1 – Theoretical A-20 Curb Inlet Spread & Efficiency Calculations (Post Development)

Street Capacity (Spread)	
Q (flow) cfs	8.49
Sx (Cross Slope) ft/ft	0.020
S (Slope of Road) ft/ft	0.017
T (Spread) ft	14.21
d (depth of flow) ft	0.28
n (mannings)	0.015

Inlet Computations	
Lt (Curb Opening for 100% Capture) ft	56
Sx (Cross Slope) ft/ft	0.020
S (Gutter Slope) ft/ft	0.017
n	0.015
Q (flow) cfs	8.49

Inlet Efficiency Computation	
E (Efficiency of Inlet)	55%
L (Inlet Length) ft	20
Lt (Inlet Length for 100% Capture)	56
Bypass Flow (cfs)	3.86

Study Point B – Theoretical A-20 Curb Inlet Spread & Efficiency Calculations (Post Development)

Street Capacity (Spread)	
Q (flow) cfs	4.46
Sx (Cross Slope) ft/ft	0.020
S (Slope of Road) ft/ft	0.049
T (Spread) ft	9.15
d (depth of flow) ft	0.18
n (mannings)	0.015

Inlet Computations	
Lt (Curb Opening for 100% Capture) ft	59
Sx (Cross Slope) ft/ft	0.020
S (Gutter Slope) ft/ft	0.049
n	0.015
Q (flow) cfs	4.46

Inlet Efficiency Computation	
E (Efficiency of Inlet)	52%
L (Inlet Length) ft	20
Lt (Inlet Length for 100% Capture)	59
Bypass Flow (cfs)	2.12

Study Point B1 – Theoretical A-20 Curb Inlet Spread & Efficiency Calculations (Post Development)

Street Capacity (Spread)	
Q (flow) cfs	7.42
Sx (Cross Slope) ft/ft	0.020
S (Slope of Road) ft/ft	0.017
T (Spread) ft	13.51
d (depth of flow) ft	0.27
n (mannings)	0.015

Inlet Computations	
Lt (Curb Opening for 100% Capture) ft	53
Sx (Cross Slope) ft/ft	0.020
S (Gutter Slope) ft/ft	0.017
n	0.015
Q (flow) cfs	7.42

Inlet Efficiency Computation	
E (Efficiency of Inlet)	57%
L (Inlet Length) ft	20
Lt (Inlet Length for 100% Capture)	53
Bypass Flow (cfs)	3.18

Pipe Computations

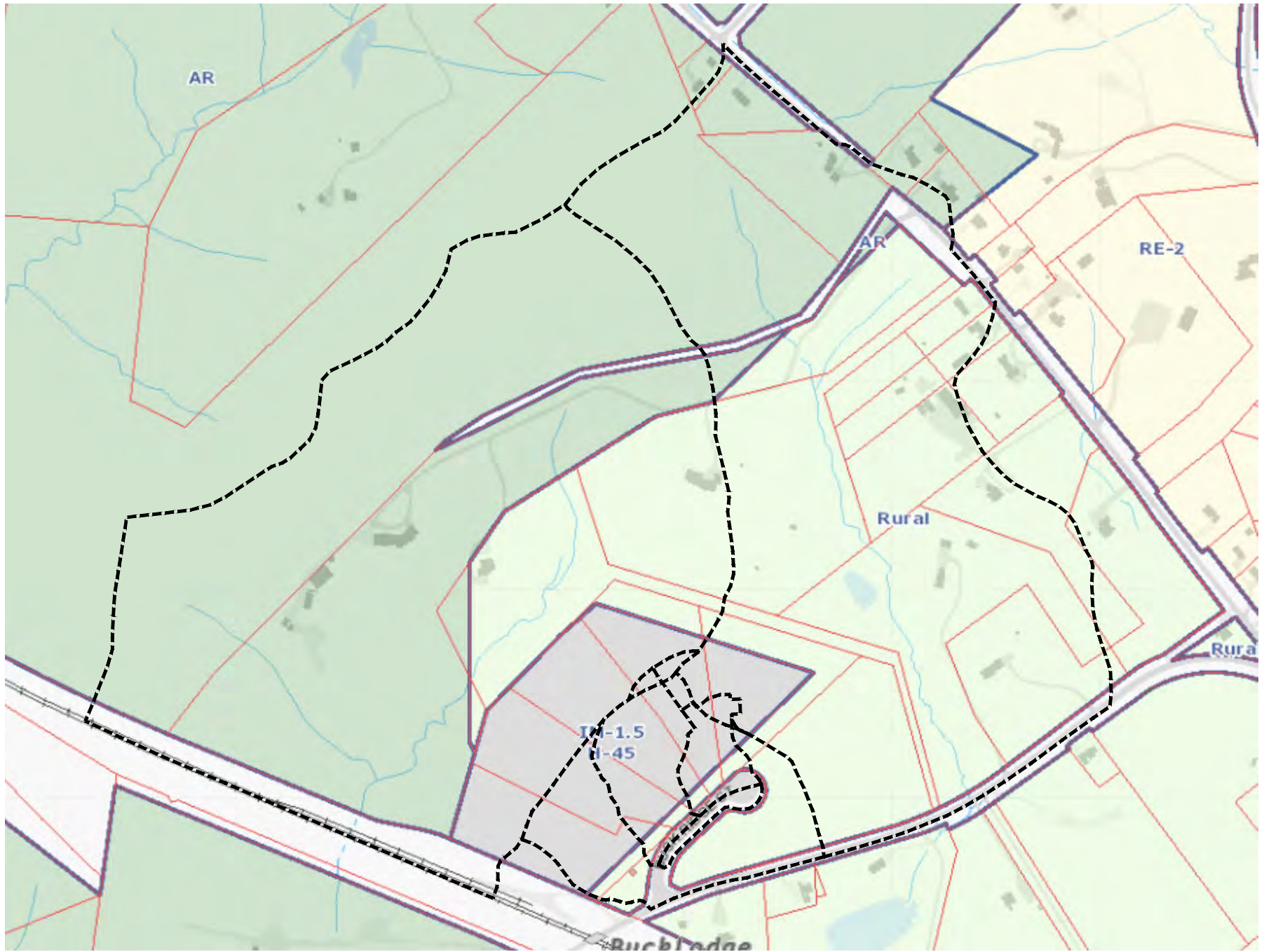
Pipe		Area (acres)					Tc	I	Q ₁₀	Pipe Size	Pipe	Min Slope	Act Slope	V ₁₀	d ₁₀	Pipe Length
From	To	Incr Area	Total Area	R=C	AR	ΣAR	Min	in/hr	cfs	inches	Type	%	%	fps	inches	feet
5	4	1.86	1.86	0.41	0.76	0.76	10.0	5.85	4.46	27	RCP	0.50	6.54	10.70	4.34	81
4	3	0.00	1.86	0.41	0.00	0.76	10.0	5.85	4.46	33	RCP	0.50	0.70	4.78	7.09	114
3	2	6.17	8.03	0.36	2.22	2.98	10.0	5.85	17.46	42	RCP	0.50	0.40	5.66	15.10	77
2	1	0.00	8.03	0.36	0.00	2.98	10.0	5.85	17.46	42	RCP	0.50	0.89	7.51	12.20	45
6	3	3.81	3.81	0.29	1.10	1.10	16.5	4.80	5.30	15	RCP	0.69	6.90	12.20	5.77	29
7	3	0.50	0.50	0.76	0.38	0.38	7.0	6.52	2.48	15	RCP	0.50	5.00	8.79	4.20	54

Appendix C – Soils Map



SOILS MAP
SCALE: 1" = 400'

Appendix D – Zoning Map



ZONING MAP

SCALE: 1" = 400'