

AGENDA
Jefferson County Planning Commission
Tuesday, May 14, 2019 7:00 PM

Planning Commission meetings are held in the Old Charles Town Library Meeting Room located at 200 East Washington Street, at the side entrance on Samuel Street in the City of Charles Town.

All Citizens that desire to speak must sign-in prior to the Agenda Item being addressed.

1. Approval of Meeting Minutes: 4-09-2019.
2. Citizen Communications: If you wish to comment, please sign-in to speak for issues that are not on the agenda or items that are not open for public comment. Items not open for public comment will be so noted.
3. Request for postponement.
4. **Public Hearing:** Waiver request by R & D Investments, LLC. (File # 19-7-PCW). Applicant is requesting a waiver from Sections 24.113-24.115 of the Subdivision and Land Development Regulations to waive the Preliminary Plat because no infrastructure is proposed with this project. The property is designated as Tax District: Shepherdstown (09); Tax Map: 18; Parcel: 5; Zoned: Rural; Size: 43.57 acres.

There is no public comment for the following items.

5. **Discussion and Action:** For the Planning Commission to vote to approve or deny the Ancient Oaks Preliminary Plat Application (File # 17-20) as complete in accordance with Sections 24.113 and 24.114 of the Subdivision Regulations, for the purpose of scheduling a Public Hearing for this application. The Property is designated as Tax District: Middleway (07); Tax Map: 20; Parcel 8 Zoned: Rural; Size: 43.96 acres.
6. Report from Legal Counsel
7. Planner's Memo.
8. President's Report
9. Actionable Correspondence
10. Non-Actionable Correspondence

DRAFT
Meeting Minutes
Jefferson County Planning Commission
April 09, 2019

The Jefferson County Planning Commission met on April 09, 2019 with the following Commission members present: Donnie Fisher, President; Steve Stolipher, Vice President; Wade Louthan, Secretary; Ralph Lorenzetti, County Commission Liaison; Jack Hefestay, Mike Shepp, Ron Thomas, J Ware and Ray Bruning. Staff members present included Jennifer Brockman, County Planner; Jonathon Saunders, County Engineer; Alex Beaulieu, Zoning Administrator; Nathan Cochran, Assistant Prosecuting Attorney; and Rachael Burke, Planning Clerk.

J. Ware arrived at 7:08 PM.

Mr. Fisher called the meeting to order at 6:59 PM.

1. Approval of the March 12, 2019 Meeting Minutes. The meeting minutes were approved with no objections.
2. Citizen Communications. None.
3. Request for postponement. None.
4. Public Hearing: Waiver request by Jefferson County Parks & Recreation Commission (File #19-5-PCW). Applicant is requesting a waiver from Appendix B Sections 2.5, 10.4 & 10.5 of the Subdivision and Land Development Regulations to waive the required paved parking and to continue to utilize grass and gravel parking in the park for large events at the amphitheater. The property is designated as Tax District: Charles Town (02); Tax Map: 3; Parcel 12. Zoned: Rural; Size 136.6 acres.

Ms. Brockman provided an overview of her staff report, the new Master Plan for Sam Michael's Park, and the contents of the 2000 Site Plan.

Jennifer Myers, Director of Jefferson County Parks and Recreation, was invited to speak. Ms. Myers explained that in 2000, a Master Plan was approved for Sam Michaels' Park and that in 2006, a Concept Plan for the Community Center was completed which altered locations of a variety of recommendations of the 2000 Plan.

In December of 2018, the Parks and Recreation Board approved the new Master Plan for Sam Michael's Park. She stated that parking was a large discussion as part of this new plan and mentioned some of the events that have been held there previously: Fireworks, Arts & Crafts and others. She explained that these are the seasonal events and that this is not a daily parking concern. She stated that approximately 8,000 -10,000 people park for Fireworks, which is their largest event. The Boy Scouts, Reserve and Sheriff's Department assist with the event parking in these situations. She does not anticipate huge amounts of traffic for the amphitheater events, and estimates approximately 2500 at most. Jefferson County Parks and Recreation is asking to utilize the grass fields off of Job Corps Road for overflow, without having to pave. She estimated that events such as Movie Night usually accommodate 200 people at most. This event will also move to the amphitheater for summer. There are 3 events planned for the use of this new area at this time, but would like approval for 6-8 weeks this summer and fall.

Ms. Brockman pointed out that the construction of the amphitheater is the last thing that they can do under the existing Site Plan. Each time new construction has occurred at the park, the park staff has submitted documentation to Engineering to verify that the stormwater design

from the 2000 Site Plan is still accurate. The construction of the amphitheater is the last impervious that can occur under that site plan. A new overall Concept Plan based on the new Master Plan will be presented to the Planning Commission in the near future prior to any additional construction.

Mr. Saunders spoke to the staff considerations listed in the staff report. He stated that staff recommends limiting approval of the waiver from Memorial Day through Labor Day and suggested a documented parking plan, signage and how weather conditions affect the use of these parking spaces. It was also clarified that the firework parking is the only activity where the Park cannot use the paved lots, due to where the fireworks are set off.

Discussion between the Planning Commission and Jennifer Myers took place regarding pedestrian walking areas; the dog park; and other park plans. Ms. Myers also responded to the staff recommendations by requesting to extend the dates of use for grass parking for the amphitheater past Labor Day for a Bluegrass Festival planned for the fall season; not limiting the number of events to allow the amphitheater to be used for events, to promote people to stay local. She further stated that the Sheriff's Department has a parking plan and the front fields are not mowed. Mr. Mike Shepp asked if the end of October would work better. How many events per week would need overflow parking? Jennifer Myers said potentially 2-3 per week would be ideal. Mr. Saunders suggested a rotation of parking because there are 160 paved spaces and 2 gravel lots with a similar number of spaces total plus the grass parking. Ms. Myers pointed out that in order to adequately control access to the amphitheater for events, the parking preference is the grass.

Mr. Fisher opened the floor for public comment (3 minute reminder).

Mr. David Tabb spoke about his concerns with this facility, questioned whether the Planning Commission approved the new plan for the amphitheater, and why they would waive the required parking. He brought up the stormwater plan being maxed out and stated that he will bring these concerns up with DEP. He also stated that these uses were not intended in the deed.

Mr. Fisher closed the floor to Public Comment.

Ms. Brockman clarified there is an approved Site Plan for the Park and every time new construction occurs, a Redline Revision and a Building Permit is completed in-house. It was a 20-year plan and the amphitheater is the last thing to be constructed under this Site Plan. Staff reviews the original Site Plan and the Ordinance and Regulation requirements for every new project at the Park. The Amphitheater was approved under the last redline revision. The Parks and Recreation Commission is responsible for developing the Master Plan for the Park and are aware that a new Site Plan will be required before any additional structures can be constructed. Site Plans are reviewed typically by staff and do not require a Planning Commission meeting.

Mr. Steve Stolipher made a motion to approve the waiver as submitted, excluding number 1 (which outlined the number of events) and Mr. Hefestay seconded the motion, which carried unanimously.

5. Variance Request by Roderick Planes, LLC. for Aspen Greens Phase IIB (File # 19-1-PCV). Applicant is requesting a waiver from Section 8.2a(2) of the 1979 Subdivision Ordinance that

requires two entrances for a subdivision with more than 50 lots. The property is designated as Tax District: Charles Town (02); Tax Map: 4; Parcel: 19; Zoned: Rural; Size 110 acres.

Mr. Nathan Cochran recused himself because he worked on a case at the Supreme Court level regarding this subdivision.

Ms. Brockman provided an overview of her staff report referencing the diagram and where Phase IIB is located and staff recommendations regarding designing and bonding the connecting road as an option to meet the Ordinance requirements.

Mr. Fred Gates, with Gates Associated, presented the variance request. He reminded the Planning Commission that Aspen Greens is processing under the 1979 Subdivision Ordinance. He stated that the proposed Phase IIB will result in a total of 65 dwelling units that will be accessing the Flowing Springs entrance. This is 15 units over the maximum of 50 lots permitted by the Ordinance. He pointed out that the Phase II portion of the plat reflects internal loop roads required by staff at an earlier phase. He believes that the loop of Ladys Thumb Circle provides adequate emergency circulation within Phases IIA and IIB. The full loop of Quaking Aspen Way and Wintergreen Way, which will provide the two required access points. is proposed to with Phases IB and III. Mr. Gates explained the market has been cooling and the completion of the loop requires an expensive drainage crossing. He explained if there is an emergency vehicle situation the access off Flowing Springs Road is designed with have mountable curbs and there should not be any safety issues. Each section also has fire flow hydrants as well.

Mr. Morris Gladhill, developer, then spoke about construction efficiency versus economics. He explained they strip topsoil and do blasting on the entire phase at one time. If they were to grade this road, it would have to be re-done at a later point, thus costing more. They also explained that single family lots are not being purchased at the same rate as they were in the 2000's. By granting these additional lots, they will have more choices for potential buyers to have walk out basements, variety and options for purchase. As they have structured the various phases, they have emphasized the importance of the stormwater, and the proposed Phase IIB lots would remain efficient with their current practices. Last September was the last time the builder has purchased a lot in Aspen Greens.

The Planning Commission asked for clarity about the loop road. Ms. Brockman stated it does meet county grade standards. The applicants stated that the width allows for some room in case passing would need to occur. Mr. Mike Shepp asked how far back the wider boulevard entrance goes. Jonathan Saunders stated that it goes back 200 feet back. The current design is wider than required and there is no fencing or blockage for emergency vehicles.

Mr. Fisher opened the floor for public comment. No public comment was received.

Mr. Fisher closed the public hearing.

Mr. Stolipher moved to approve the variance as requested by the applicant, Wade Louthan seconded it and the motion carried.

- 6. Public Hearing:** Waiver request by Harry & Garnett Catrow (File #19-6-PCW). Applicant is requesting a waiver from Section 20.201A (2) of the Subdivision and Land Development Regulations which states that all lots, regardless of the zoning district, shall have motor vehicle access via a 50' access easement. Applicant is requesting that a new lot being

proposed from the Residue of the Catrow Minor Subdivision Lots 1, 2, & 3 (PB25/PG211) be permitted to have direct access to Sandpiper Lane, which is an existing private road within a 40' right of way previously approved to serve Mecklenberg Heights. The property is designated as Tax District: Shepherdstown (09); Tax Map: 7; Parcel: 32.15. Zoned: Residential Growth; Size: 21.998 acres.

Ms. Brockman explained request is for one new lot to have direct access to Sandpiper Lane, which would become part of the Mecklenburg Maintenance Association, which submitted a letter of support. This is the final lot allowed, before becoming a Major Subdivision.

Mr. Paul Raco presented the applicant's request. He explained the developer was originally approved for seven lots on this property and this is the last one with this frontage. He reviewed surrounding properties and the acceptance of this new lot by Mecklenburg Maintenance Association. He explained that while 50 feet is now required for new street right of ways, Sandpiper Lane is an existing road that is constructed and maintained within the 40-foot right-of-way without issue and that this will be the last lot to access Sandpiper Lane directly. He stated that this property is within Shepherdstown Preferred Growth Area and their Urban Growth Boundary and is slated for urban level growth.

Mr. Fisher opened the floor for public comment. No public comment was received.

Mr. Fisher closed the public hearing.

Mr. Hefestay made a motion to approve the waiver with staff recommendation that it applies to this one lot. Mr. Stolipher seconded the motion and it carried unanimously.

7. Update on Request for Qualifications (RFQ)

Steve Stolipher reported that the Committee had reviewed the edits that the Planning, Zoning and Engineering staff had made to the draft RFQ and was ok the final draft. Roger Goodwin has informed the Committee that that the Planning Commission needs to place this on the County Commission agenda to get permission to run the ad. The Planning Commission requested that staff to assist with placing it on the next County Commission meeting agenda.

8. Discussion of Potential Zoning Ordinance Amendments

Alex Beaulieu, Zoning Administrator and Mr. Cochran reported that Mr. Cochran recommends delaying the sign ordinance amendments, as they are under legal review. Mr. Cochran would like to review case law further first.

Ms. Beaulieu also reported that a citizen has requested a text amendment to Article 2 Definitions; Section 8.14 Rural Reception/Event Facility; and Appendix C to create a process to allow event facilities in new rural structures as well as existing structures. This request is to incorporate this proposal into the Planning Commission's work plan in accordance with Article 12 and provide some direction regarding this request. The Planning Commission agreed to have staff begin to work on this amendment.

Mr. Lorenzetti asked how Virginia can have so many wineries and Ms. Beaulieu stated she would look into this further. Ms. Brockman stated this may relate to Virginia's state law and Ms. Beaulieu stated that it may have to do with building code which is impacting the reuse of existing structures for these uses.

9. Discussion and Action of 3rd Quarterly Report for County Commission

Mr. Stolipher moved that they accept the 3rd Quarterly Report prepared by staff and Mr. Fisher seconded the motion. The motion carried unanimously to send to County Commission.

10. Reports from Legal Counsel

Nathan Cochran drafted the letter to Shepherdstown in response to their request and the Planning Commission took a moment to review the letter. Mr. Shepp made a motion to approve the letter as it is written. Mr. Fisher seconded the motion and it carried unanimously. Mr. Fisher will sign and staff will send on his behalf.

11. Planner's Memo:

Ms. Brockman reported back to the Planning Commission regarding the previous Morgan Grove Market Site. She reported that Mr. Joe Kent, the County's Land Development Inspector, stated the County is holding an early grading bond for \$102,000, posted by Peter Corum. This bond is still in place.

Ms. Brockman also briefly reviewed the pending Zoning Ordinance and Subdivision Regulation Text Amendments that are currently on hold while a consultant is being considered.

Ms. Brockman reported that she will not be in attendance at the May 14, 2019 Planning Commission as she will be attending the WVU's Fourth Annual Statewide Mountain State Land Use Academy. Alex Beaulieu and Jonathan Saunders will be at the meeting.

A reminder of the League of Women Voter's Open Meeting Training was also distributed.

12. President's Report. None.

13. Actionable Correspondence. None.

14. Non-Actionable Correspondence. None.

Mr. Fisher closed the meeting at 8:16 PM.

Staff Report
Jefferson County Planning Commission Meeting
May 14, 2019

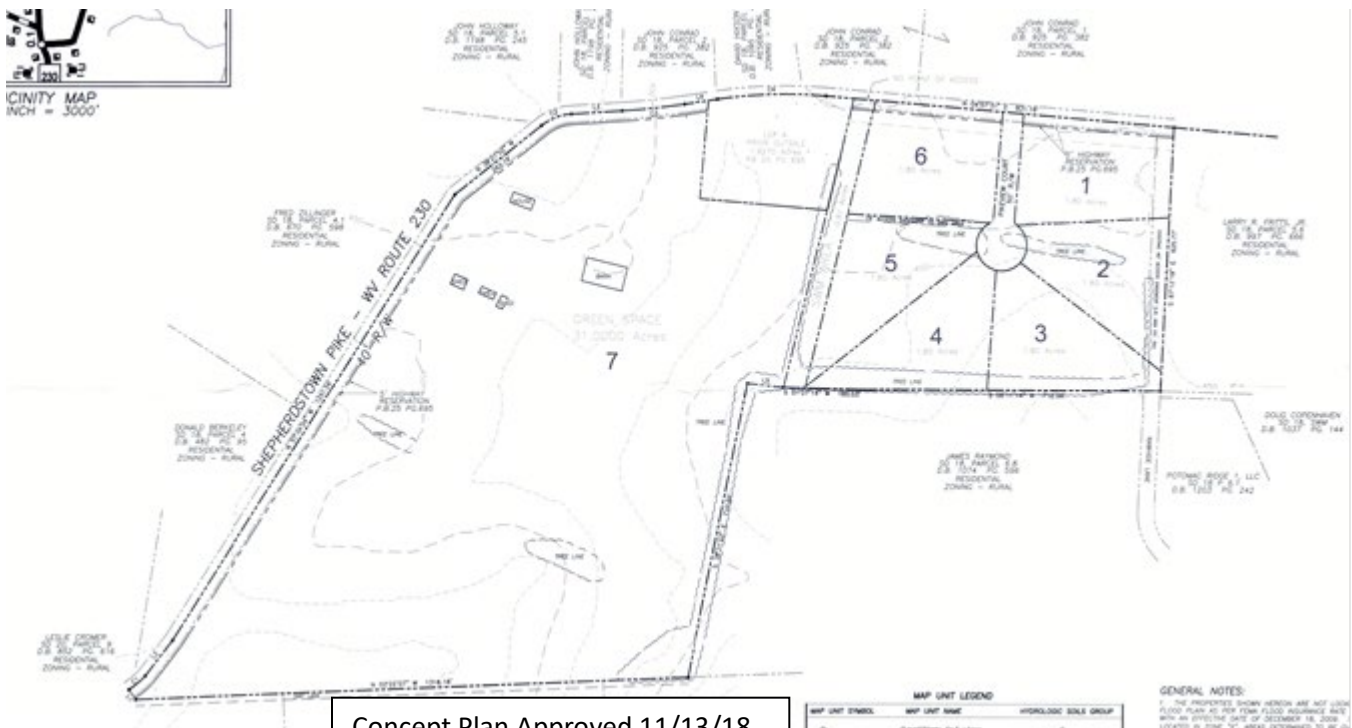
Background:

This property (Shepherdstown District (09), Parcel 5, Tax Map 18) is located east of Shepherdstown Pike (WV 230) just south of Rawhide Lane. Based on research in April 2018, it was determined that this property contained approximately 45.5 acres at that time and was the residue parcel to a larger 61.92-acre parent parcel (1988). It was therefore determined that the remaining 45.5 acres is able to be further subdivided as a cluster subdivision in accordance with Section 5.7D.2 of the Zoning Ordinance, provided that a minimum of 30.96 acres is retained as green space area. Under the Cluster provisions, it was determined that 12 Lots were permitted based on the original 61.92 acreage and that 2 Lots were subdivided in 1992 (PB 10, PG 81). This meant that the right to divide 10 additional lots remained.

Since that time, a 1.927-acre lot was divided of via a Minor Subdivision in August 2018 and a Concept Plan for a Cluster Subdivision including 6 residential lots and a 31-acre Greenspace Parcel (graphic below) was approved by the Planning Commission in November 2018. At the Concept Plan Workshop, public comment indicated that there is a possible slave cemetery on this farm and the applicant agreed to coordinate with the local Historic Landmarks Commission if the remnants of the cemetery are located.

At the same meeting, the Planning Commission approved a waiver to allow the Greenspace Parcel to have a separate entrance from the cluster and to advance to Final Plat for the purpose of dividing off the Greenspace Parcel with the understanding that the 6-lot Cluster itself would be required to process as a Major Subdivision. The Final Plat creating the Greenspace Parcel was approved in February 2019.

The next Phase is to divide the remaining 12.57-acre Residue into the Cluster Lots. The approved Concept Plan below calls for 6 residential lots accessed off Shepherdstown Pike (WV 230). The graphic on the next page reflects the current proposal which is to divide this Residue into 4 lots with access off Rawhide Lane.



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AREA TABULATION	
PARCEL 5	12.5716 ACRES
LOT 2	3.2518 ACRES
LOT 3	3.4044 ACRES
LOT 4	2.8815 ACRES
LOT 5	3.0328 ACRES
TOTAL	12.5716 ACRES



Proposed Revisions to Cluster Subdivision 5/14/19

The Request

This waiver request (19-7-PCW) is to be permitted to waive the Preliminary Plat requirements found in Sections 24.113 – 24.115 of the Subdivision Regulations, to allow this project to “Advance to Final Plat”.

The applicant proposes to reduce the number of lots in the Cluster from six (in the Concept Plan) to four and to eliminate the access road onto Shepherdstown Pike (WV 230). The new proposal includes having all four lots have a shared access point to Rawhide Lane. Because this proposal does not require the construction of a road, and will utilize on-site septic systems and wells, the only remaining improvement that would be required in a Preliminary Plat would be stormwater management, which would not be required if the Preliminary Plat requirement waiver is approved.

Waiver Requirements

Division 24.300 of the Jefferson County Subdivision and Land Development Regulations states that waivers from the minimum standards in these Regulations, as well as process and procedural waivers, may be granted by the Planning Commission only when the Planning Commission finds that granting a waiver will be consistent with all of the following criteria. The applicant has addressed how their revised plan for the 12.57-acre Residue meet these criteria in their application.

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- (1) That the design of the project will provide public benefit in the form of reduction in County maintenance costs, greater open space, parkland consistent with the County parks plan, or benefits of a similar nature;
- (2) That the waiver, if granted, will not adversely affect the public health, safety or welfare, or the rights of adjacent property owners or residents;
- (3) That the waiver, if granted, will be in keeping with the intent and purpose of these Regulations; and
- (4) That the waiver if granted will result in a project of better quality and/or character.

Staff Discussion

There were two primary aspects to consider when reviewing this waiver request: access and stormwater management.

a. Access

The Subdivision and Land Development Regulations include different provisions for access in Minor Subdivisions vs Major Subdivisions. Because this subdivision is utilizing the cluster provisions of the Zoning Ordinance, it is required it to process as a Major Subdivision. Generally Minor Subdivisions of five lots or less are required to have motor vehicle access via a 50' access easement, provided that the access easement serves no more than 5 lots to either a WV DOH road right-of-way or easement or a road in a major subdivision that meets County roadway design standards. For Major Subdivisions there are two different road standards for development of up to 12 lots and for developments with more than 12 lots.

The revised layout for Pikeview Manor shows the 4 lots with a shared 50' access easement to Rawhide Lane. A portion of the Rawhide Lane crosses the land owned by R&D Investments in a 40' easement, which was widened to 50' with the final plat that created the Greenspace Parcel. Rawhide Lane is a part of a previously approved Major Subdivision known as Mountain Vista Farm Subdivision. This subdivision is approved to be an 8-lot subdivision (plus a stormwater parcel) on a gravel road. Therefore, Rawhide Lane is a road in a Major Subdivision that meets County roadway design standards for subdivisions of up to 12 lots. Rawhide Lane is a private road owned by the Mountain Vista Homeowners' Association (HOA) which will need to approve allowing the 4 additional lots to access Rawhide Lane. Twelve lots are the maximum number of lots that can be served by a gravel County grade road. Any additional lots would require the road to be upgraded to a paved road. These 4 additional lots will meet the maximum permitted under the design approved with Mountain Vista Subdivision.

The greater benefit of this proposed layout is that it results in one less access point on Shepherdstown Road which neighbors testified during the Concept Plan Public Workshop was dangerous in this area.

b. Stormwater Management

The Stormwater Management (SWM) Ordinance "General Performance Criteria" in Karst terrain is intended to reduce impervious surface and preserve natural condition. As stated above, the developer is proposing to remove 2 lots and configure the remaining 4 lots in a way to not require an impervious roadway. Because the revised layout includes having the 4 lots utilize a shared access easement instead of constructing a road, the reduction in impervious surface would reduce the amount of stormwater management requirements to be provided from the original design.

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The SWM Ordinance requirements for water quality requires the capture of the first 1 inch of rainfall in 24 hr period. Since impervious surface is the main contributor of pollutants in runoff, it is the first priority. A 3-acre site for a single family house is typically 12% impervious. Therefore, such a site would create around 0.36 acre of impervious surface. To meet the water quality standard, the site will need to treat the first 1" of rainfall on that area which is around 1310 cubic feet. To treat this volume, there are provisions in the West Virginia Stormwater Management and Design Guidance Manual related to alternative design provisions such as conservation easements. The Manual states that conservation easements that are left in natural condition treat about 0.09 CF of runoff per 1 SF of conservation easement in A and B soils and in C and D soils, it is 0.06 CF/SF per the WVDEP Spreadsheet. Therefore, you would need 1/3 of an acre in conservation easement for A and B soils and 1/2 of an acre for C and D soils for each 3 ac site. That is assuming that the water will sheet flow into this area. A conservation easement is normally not used for quantity control.

c. Cemetery

As noted above, at the 11/13/18 Public Workshop, public comment was received regarding a possible slave cemetery on this property and state laws regarding disturbing cemeteries. The applicant was encouraged to work with the Jefferson County Historic Landmarks Commission to identify and preserve the possible slave cemetery. As more information about the cemetery may have been identified as part of the Phase I archaeological study/historic resources impact study required with a Preliminary Plat, staff recommends reiterating this requirement as a condition of approval if the Planning Commission is inclined to approve the waiver.

Staff Recommendation

Staff agrees that this waiver request can be found to be consistent with the criteria found in Division 24.300 of the Subdivision and Land Development and can therefore be supported with the following conditions:

1. Provided that the Mountain Vista HOA supports the addition of the four lots to access Rawhide Lane; and
2. Provided that the developer provides a permanent conservation easement on the final plat at the lowest point of each lot in the amount stated above; and
3. Provided that the developer agrees to work with the Jefferson County Historic Landmarks Commission to identify and preserve the possible slave cemetery.



Jefferson County, West Virginia
 Department of Engineering, Planning and Zoning
Office of Planning and Zoning
 116 E. Washington Street, 2nd Floor
 P.O. Box 716
 Charles Town, West Virginia 25414

File #: 19-7-PCW
 Mtg Date: 3/14/19
 Date Rec'd: 4/12/19
 Fees Paid: 100
 Staff Int: PBB
 List of Adjoiners:

Email: planningdepartment@jeffersoncountywv.org
zoning@jeffersoncountywv.org

Phone: (304) 728-3228
 Fax: (304) 728-8126

Planning Commission Waiver Request

Waivers must comply with Division 24.300 of the 2008 Subdivision Regulations, as amended.

Property Owner Information

Owner Name: R I D INVESTMENTS, LLC
 Business Name: _____
 Mailing Address: 605 BALTIMORE STREET, MARTINSBURG, WV 25401
 Phone Number: 304-676-5588 Email: _____

Applicant Contact Information

Applicant Name: _____ Same as owner:
 Business Name: _____
 Mailing Address: _____
 Phone Number: _____ Email: _____

Consultant Information

Name: MICHAEL ROBERTS
 Business Name: ROBERTS LAND SURVEYING
 Mailing Address: 2068 PALMER ROAD, HEDGESVILLE, WV 25427
 Phone Number: 304-671-5406 Email: miker.002395@frontier.com

Physical Property Details

Physical Address: 5388 SHEPHERDSTOWN ROAD Vacant Lot:
 Tax District: SHEPHERDSTOWN Map No: 18 Parcel No: 5
 Parcel Size: _____ Deed Book: _____ Page No: _____
 Zoning District: _____

On a separate sheet of paper sketch the shape and location of the lot. Show the location of the intended construction or land use and indicate building setbacks, size, and height. Identify existing easements, roads, buildings, structures, or land uses on the property. Sign and date the sketch.

Included Not applicable (include a vicinity map if a sketch is not applicable)

What Section of the Subdivision Regulations and year of the Regulations are you requesting to Waive?

SECTION 24, 113-15

RECEIVED

APR 12 2019

Briefly Describe the Nature of Your Waiver Request:

JEFFERSON COUNTY PLANNING,
 ZONING & ENGINEERING

PROCEED DIRECTLY TO FINAL PLAN SUBMISSION, WITHOUT ANY PRELIMINARY PLAN APPLICATION. LOT CONFIGURATION WILL CREATE 4 LOTS THAT ACCESS ALL EXISTING RIGHT OF WAY (PARKWAY LAKE). NO IMPROVEMENTS SUCH AS A NEW ENTRANCE, NEW SUBDIVISION ROAD OR STORMWATER FACILITY.

Explain how the design of the project will provide public benefit in the form of reduction in County maintenance costs, greater open space, parkland consistent with the County Parks Plan or benefits of a similar nature.

THE APPLICATION IS REQUESTING THE APPROVAL FOR YIELD FROM 6 LOTS TO 4, REDUCING PROPOSED IMPROVEMENTS MOA. 1

Explain how the waiver, if granted, will not adversely affect the public health, safety, or welfare or the rights of adjacent property owners or residents.

THIS APPLICATION WOULD ELIMINATE THE NEED FOR AN ADDITIONAL SUBDIVISION ENTRANCE ONTO W/ RT 230, THE OWNER MAINTAINS A NON-EXCLUSIVE EASEMENT OVER RAWHIDE LANE. EX HOA HAS BEEN CONSULTED REGARDING THE 4 ADDITIONAL LOTS ACCESSING RAWHIDE LANE.

Explain how the waiver, if granted, will be in keeping with the intent and purpose of this Ordinance.

THE LOTS REFERENCED IN THIS WAIVER REQUEST WILL MEET ALL FINAL PLOT REQUIREMENTS OF THE ORDINANCE, NO PRELIMINARY PLANS WILL BE SUBMITTED.

Explain how the waiver, if granted, will result in a project of better quality and/or character.

THIS WAIVER WOULD ALLOW FOR ONE LESS ENTRANCE ONTO W/ RT 230, A REQUEST FOR LOTS FROM 6 TO 4. THE PENALTY FOR THIS APPLICATION WOULD BE LESS THAN THE APPROVAL COSTS FOR.

By signing this application, I give permission to the Planning and Zoning Staff to conduct a site visit for the purpose of taking photos for the Planning Commission staff report. The information given is correct to the best of my knowledge.

 4/10/19
Property Owner/Applicant Signature Date

Property Owner/Applicant Signature Date

Notification Requirements

The subject parcel shall be posted with a minimum of one 28" x 22" placard at least 14 days prior to the public hearing. The placard(s) will be prepared by the Staff and posted by the applicant. Adjacent property owner name and address information shall be provided by the applicant so that notification letters can be mailed by Staff least 14 days prior to the public hearing.

Public Hearing Date

Date Placard Posted

Date Adjainers Mailed

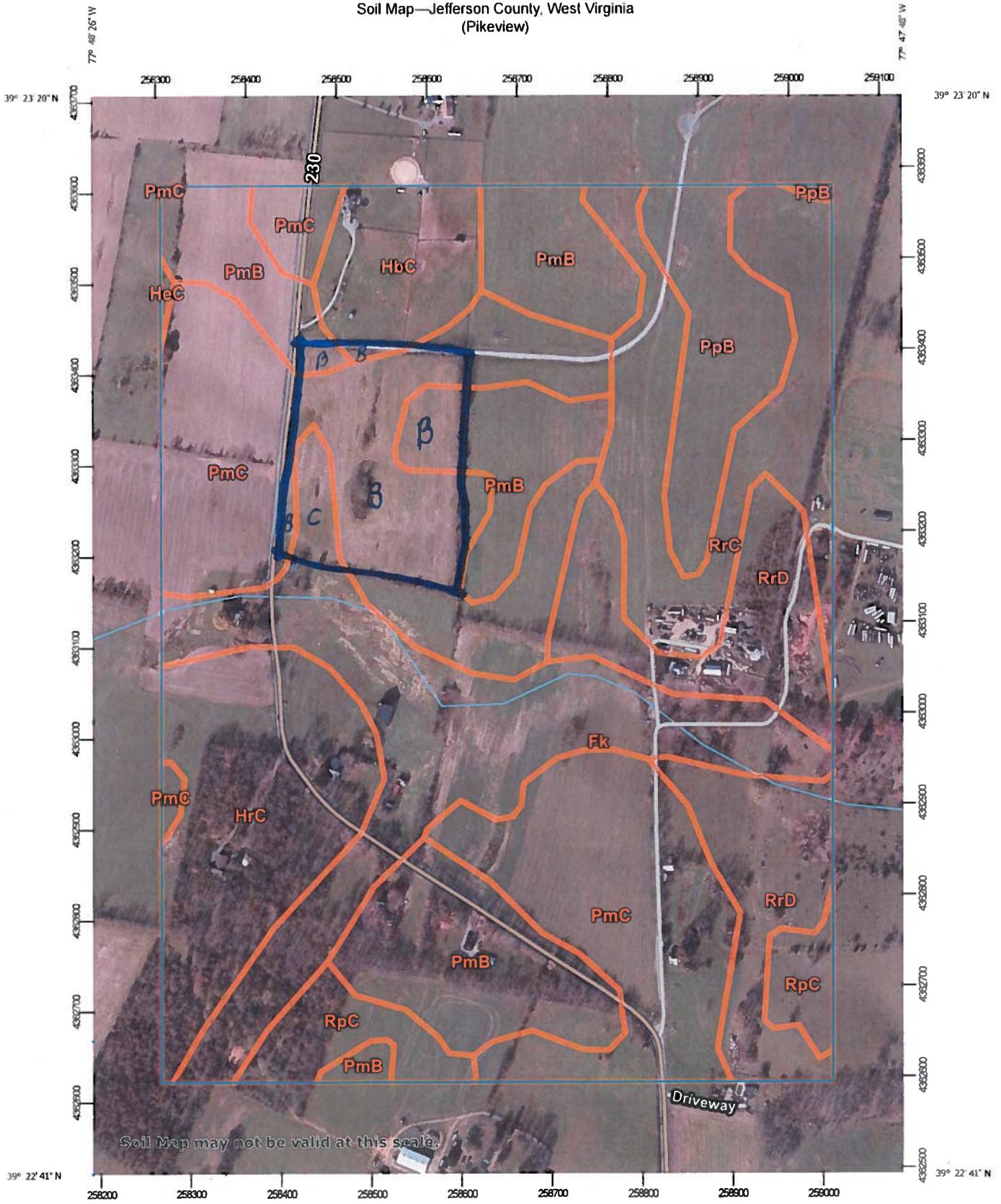
Planning Commission Determination

Approved

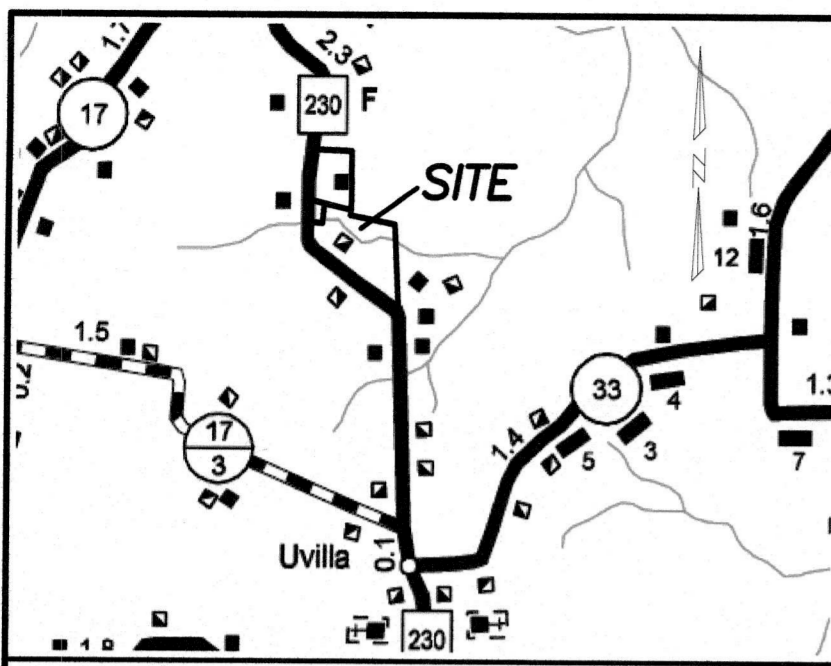
Denied

Date: ___/___/___

Soil Map—Jefferson County, West Virginia
(Pikeview)



Map Scale: 1:5,780 if printed on A portrait (8.5" x 11") sheet.
 0 50 100 200 300 Meters
 0 250 500 1000 1500 Feet
 Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



VICINITY MAP
1 INCH = 3000'

PLAT NORTH
REF: WV SPSC - WV NORTH ZONE - NAD 83

CURVE TABLE

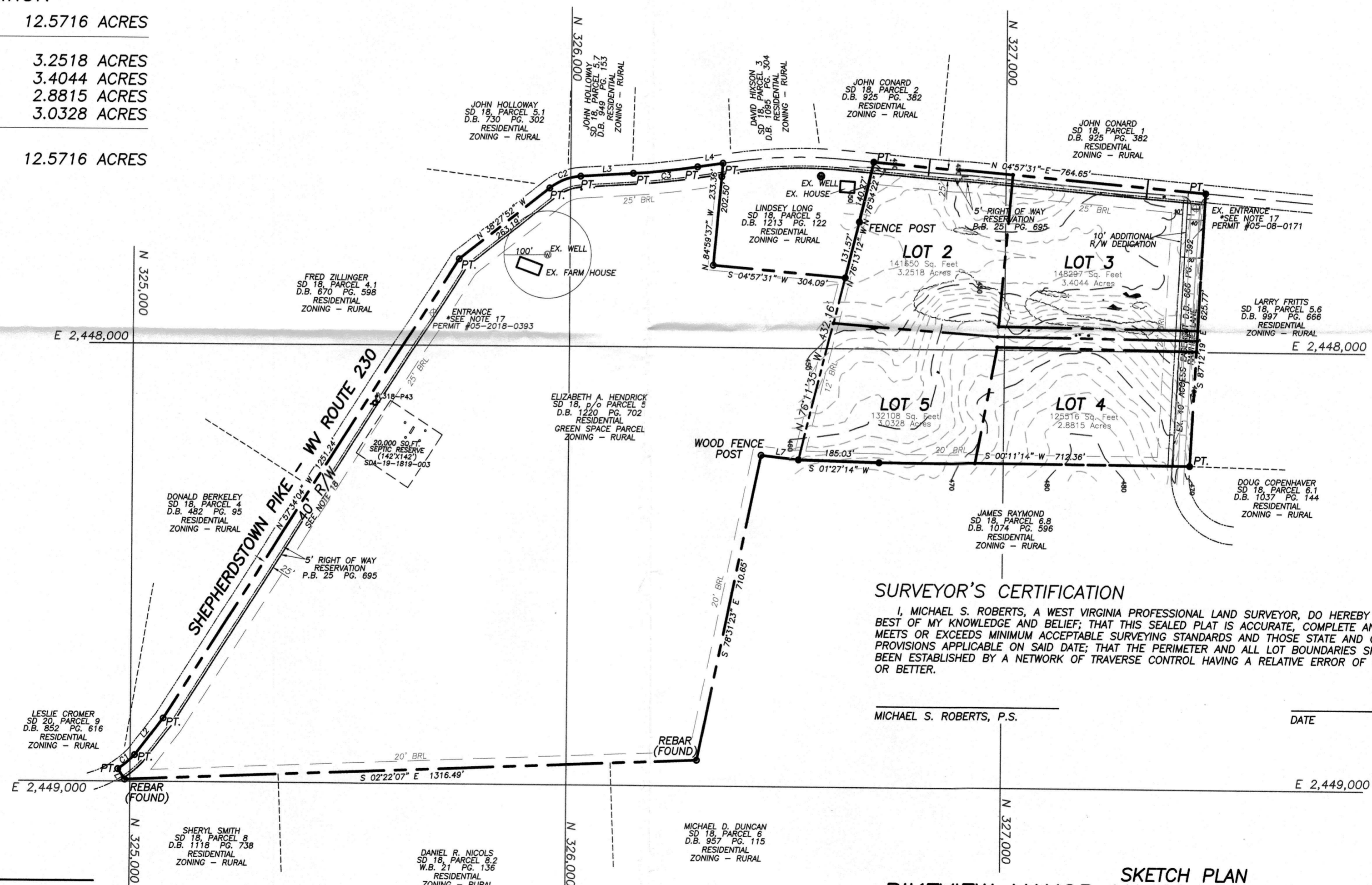
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	50.15'	232.61	12°21'07"	N 39°58'28" W	50.05'
C2	77.09'	126.96	34°47'18"	N 21°04'13" W	75.91'
C3	149.91'	1750.27	4°54'26"	N 06°07'43" W	149.86'
C4	258.78'	1095.00	13°32'27"	N 01°48'43" W	258.18'
C5	15.12'	15.00'	57°46'09"	N 56°09'25" W	14.49'
C6	80.14'	60.00'	76°31'41"	N 65°32'11" W	74.31'
C7	66.50'	60.00'	63°30'19"	S 44°26'49" W	63.15'
C8	63.34'	60.00'	60°29'22"	N 17°33'02" W	60.44'
C9	99.50'	60.00'	95°00'55"	N 84°41'50" E	88.48'
C10	15.12'	15.00'	57°46'11"	N 66°04'27" E	14.49'

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 55°57'15" W	28.63'
L2	N 52°30'14" W	106.32'
L3	N 03°40'30" W	120.78'
L4	N 08°34'57" W	58.58'
L5	N 08°34'57" W	21.83'
L6	N 04°57'31" E	66.50'
L7	S 06°20'24" W	86.03'
L8	S 26°13'12" E	3.73'

AREA TABULATION

PARCEL	ACRES
PARCEL 5	12.5716
LOT 2	3.2518
LOT 3	3.4044
LOT 4	2.8815
LOT 5	3.0328
TOTAL	12.5716



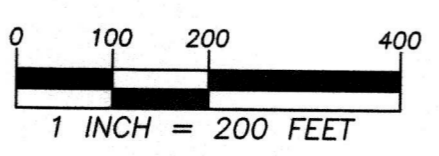
SURVEYOR'S CERTIFICATION

I, MICHAEL S. ROBERTS, A WEST VIRGINIA PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THIS SEALED PLAT IS ACCURATE, COMPLETE AND REASONABLY MEETS OR EXCEEDS MINIMUM ACCEPTABLE SURVEYING STANDARDS AND THOSE STATE AND OR COUNTY CODE PROVISIONS APPLICABLE ON SAID DATE; THAT THE PERIMETER AND ALL LOT BOUNDARIES SHOWN HEREON HAVE BEEN ESTABLISHED BY A NETWORK OF TRAVERSE CONTROL HAVING A RELATIVE ERROR OF CLOSURE OF 1:7,500 OR BETTER.

MICHAEL S. ROBERTS, P.S. _____ DATE _____

LEGEND

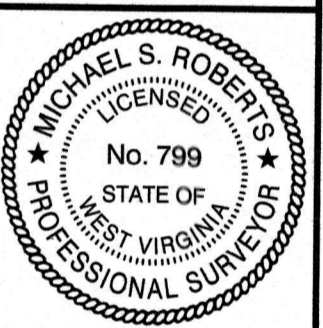
	UTILITY POLE
	PERC HOLE LOCATIONS
	SIX (6) FOOT TEST PIT
	OVERHEAD UTILITY
	EXISTING WELL
	ORIGINAL PROPERTY LINE
	NEW PROPERTY LINE
	ADJOINING PROPERTY LINE
	WV DOH R/W LINE
	EXISTING FENCE LINE
	5/8" CAPPED REBAR (SET)
	UNLESS OTHERWISE NOTED HIGHWAY ENTRANCE LOCATION



RECEIVED

APR 12 2019
JEFFERSON COUNTY PLANNING,
ZONING & ENGINEERING

SKETCH PLAN
PIKEVIEW MANOR MAJOR CLUSTER SUBDIVISION
RESIDUE (PHASE 3)
PROPERTY OF
R & D INVESTMENTS, LLC
605 BALTIMORE STREET, MARTINSBURG, WV 25401
PHONE: 304-676-5588
DEED BOOK 1202 PAGE 527
TAX MAP 18, PARCEL 5
SHEPHERDSTOWN DISTRICT ~ JEFFERSON COUNTY, WV

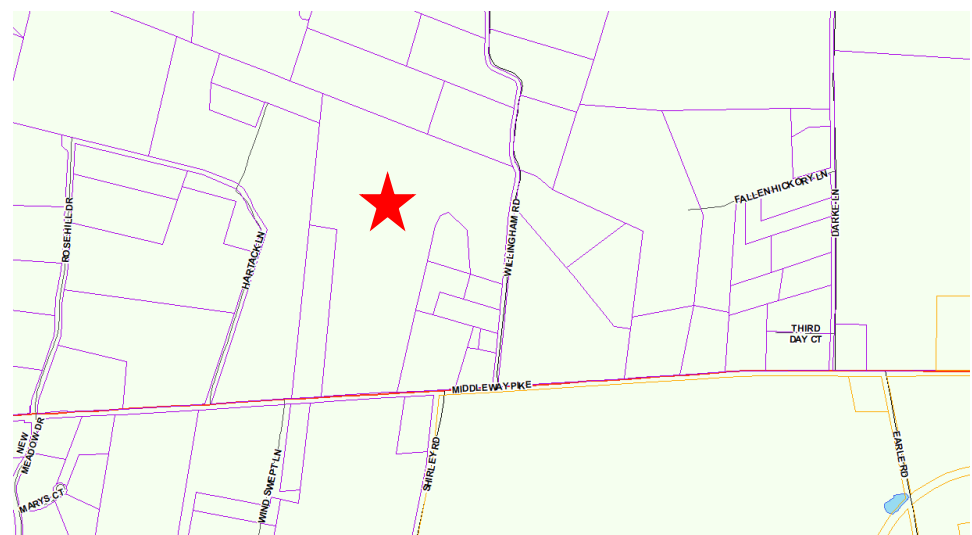


ROBERTS LAND SURVEYING
2068 PALMER ROAD - HEDGESVILLE, WV 25427
304.671.5406
miker002395@frontier.com

DATE: 04-12-19
DRAWN: MSR
CHECKED: MSR
SCALE: 1"=200'
DWG NO: 18-011
SHEET 1 OF 1

Staff Report
 Jefferson County Planning Commission Meeting
 May 14, 2019

Discussion and Action: For the Planning Commission to vote to approve or deny the Ancient Oaks Preliminary Plat (File # 17-20) as complete in accordance with Sections 24.113 and 24.114 of the Subdivision Regulations, for the purpose of scheduling a Public Hearing for this application.

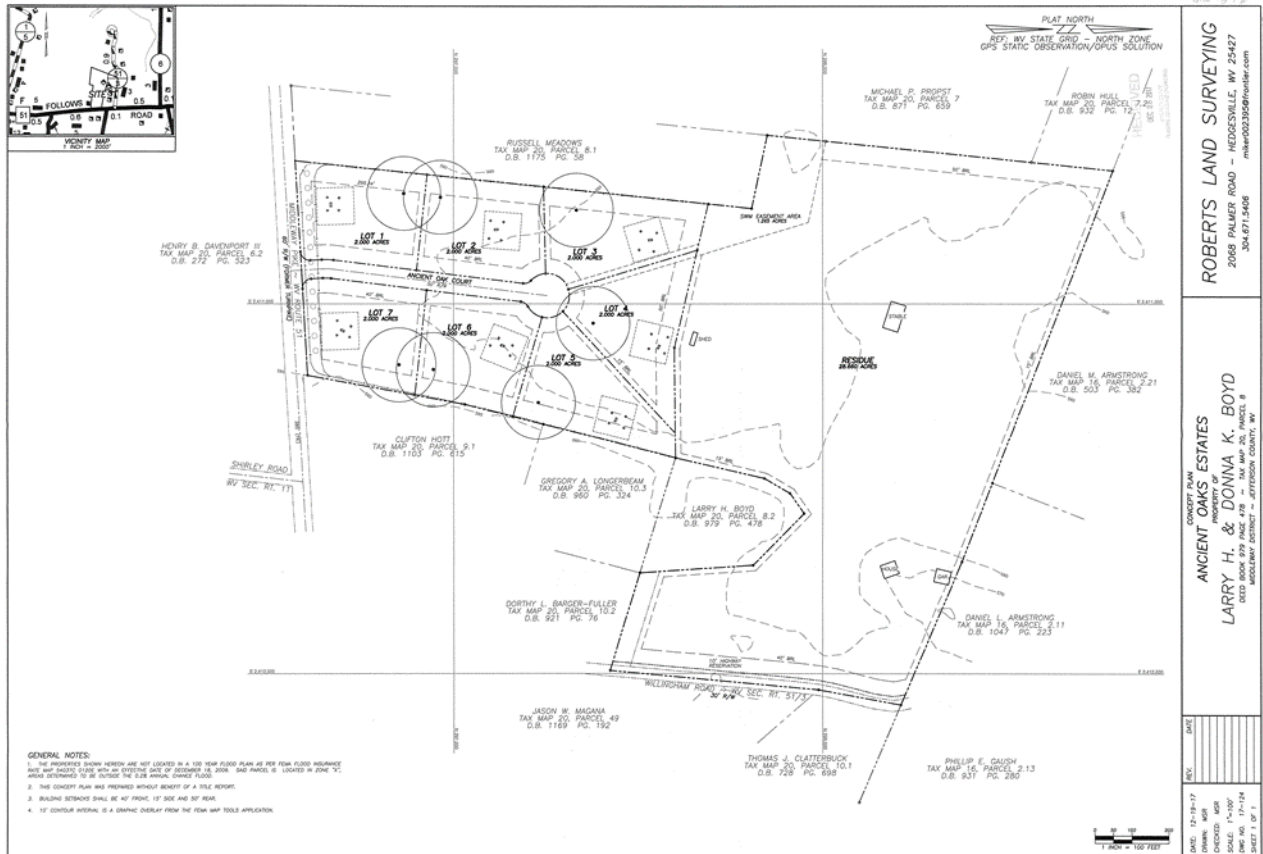
APPLICANT:	Roberts Land Surveying
OWNER/DEVELOPER:	Larry. H & Donna K. Boyd
SURVEYOR/ENGINEER:	Roberts Land Surveying
PROPERTY LOCATION:	North side of Middleway Pike, West of Willingham Drive
LEGAL DESCRIPTION:	Tax Dist.: Middleway (07) Tax Map: 20; Parcel 8; Size: 43.96-acre parcel
	
ZONING DISTRICT:	Rural
SURROUNDING PROPERTIES:	North: Rural East: Rural South: Rural West: Rural
LOT AREA:	43.96 Acres
PROPOSED ACTIVITY:	Lot Major Cluster Subdivision (Approved 2/13/18 PC Meeting)
APPROVALS:	PC Concept Plan Approval (8 Lot Cluster Subdivision): 02/13/2018 Preliminary Plat Submitted: 06/06/2018 Waiver for Separate Access for Greenspace: 3/12/2019 Preliminary Plat Approved by Staff: 04/16/2019

Introduction and Purpose

The applicant is proposing an 8 Lot Cluster Subdivision on the 43.63-acre property is located on WV 51 (Middleway Pike) west of Willingham Road. The property is zoned Rural and is developing under the Cluster Provisions of the Zoning Ordinance. On February 13, 2018, the Planning Commission approved the Ancient Oaks Cluster Development Concept Plan depicting seven (7) proposed clustered lots, 2 acres each, off a proposed cul de sac to be named Ancient Oaks Court, and a 28.66-acre greenspace (including 1.47 acres of stormwater management area). On March 12, 2019, the Planning Commission approved a

Staff Report
Jefferson County Planning Commission Meeting
May 14, 2019

waiver allowing the proposed greenspace, which is occupied by an existing single family home and related farms structures, to utilize a separate access from Willingham Road, with WV DOH approval.



Concept Plan/Waiver Approval

The Planning Commission held a Public Workshop for the Concept Plan for the proposed Ancient Oaks Cluster Major Subdivision on February 13, 2018. Input from outside agencies related to the proposed Concept Plan was presented by staff and no public comment was received. The Concept Plan was approved as presented.

At the Concept Plan Public Workshop, staff pointed out that a waiver would be required to allow the residue/greenspace lot to continue to access off of Willingham Road. The Planning Commission held the Public Hearing on this waiver request on March 12, 2019 and no public comment was received. The Planning Commission approved this waiver which is reflected on the Preliminary Plat presented tonight.

Summary of Request

The applicant has submitted the Preliminary Plat for Ancient Oaks Cluster Subdivision for review and approval. The Planning Commission is required to deem the application complete and schedule a Public Hearing within 45 days in accordance with the following requirements of the Subdivision Regulations.

Per Sec. 24.113 of the Subdivision Regulations, a Major Subdivision Preliminary Plat requires the Office of Planning to review the submission and determine whether it is sufficient (at least 70% of the required elements are addressed) within ten (10) days of the 45 day sufficiency and completeness review. Staff determined that the Preliminary Plat was deemed sufficient for review pending approval from the Health

Staff Report
Jefferson County Planning Commission Meeting
May 14, 2019

Department for well and septic; pending completion of a Phase 1 Archaeological Study and/or a Historic Resource impact study or a letter from SHPO stating such a study is not warranted; and pending a waiver to allow the residue to have a separate access on Willingham Road. This determination initiated the 45-day completeness review. All issues other than the SHPO comment have been addressed.

Engineering, Planning and Zoning Staff have now finalized the “completeness review” provided the SHPO comment is addressed. Per Section 24.113 of the Subdivision Regulations, staff has placed the Preliminary Plat and application on the next regularly scheduled Planning Commission agenda for a vote to accept or deny the application as complete. A copy of the page showing the lot layout is included in this packet. The complete file containing the Preliminary Plat and application will be at the Planning Commission meeting should any members wish to review it for completeness and confirm the staff’s review.

Per Sec. 24.113(I), if the application is found complete or essentially complete, the Planning Commission shall schedule a public hearing within 45 days in accordance with Section 24.114, *Major Subdivision Preliminary Plat - Public Hearing*. If the application is incomplete, the applicant shall be notified in writing stating the reasons for denial. A motion to deem the application to be complete should include a condition that the outstanding SHPO comment be addressed prior to the hearing.

Preliminary Plat Contents and Review

The Preliminary Plat submission requirements include the following (Section 24.113(B)) and the application has been deemed sufficient and complete by staff:

- Preliminary Plat
- Density Calculation and Site Resource Map
- General Location
- Preliminary Engineering Plans
- Preliminary Landscape Plans
- Transportation Impact Study (if required by WV DOH)
- Well and Septic Systems, if required
- Feasibility of Water and Sewer Systems (from relevant PSD)
- Special Engineering
- Historic Resource Preservation (Phase I Archaeological Study)
- Proposal Description
- Stormwater Management Plan and Narrative
- Identified Concerns from Concept Plan direction or proffers

The Subdivision Regulations require the review of the submitted application and plat and plans by the Department of Engineering, Planning and Zoning as well as the WVDOH and Jefferson County Board of Health (for wells and septic systems). The Department is required to determine whether the density, use, and plan meet the requirements of the Zoning Ordinance and any other zoning issues and/or variances that can be identified at the Preliminary Plat submission. Additionally, the Department is required to provide a written opinion as to whether the Preliminary Plat meets the site planning criteria specified in Articles 21 and 22 of the Subdivision Regulations and whether the Concept Plan was fulfilled.

The WVDOH approval/encroachment permit is required prior to final Preliminary Plat approval by the Planning Commission. The applicant has received WV DOH approval for both entrances which is noted on the Preliminary Plat. The Plat also reflects the Jefferson County Board of Health approval for the well and septic systems.

Staff Report
Jefferson County Planning Commission Meeting
May 14, 2019

Staff has finalized its completeness review and stamped the Preliminary Plat as approved by staff. This staff report serves as the “written opinion” that the Preliminary Plat conforms with the Zoning Ordinance requirements, generally meets the site planning criteria specified in Articles 21 and 22 of the Subdivision and Land Development Regulations.

Planning Commission Action Required

The Subdivision Regulations require that, after staff concludes the completeness review, staff shall place the preliminary plat on the next regularly scheduled Planning Commission agenda for a vote to accept or deny the application as complete. If the application is found complete or essentially complete, the Planning Commission shall schedule a public hearing within 45 days of that meeting. If the application is incomplete, the applicant shall be notified in writing stating the reasons for denial.

Section 24.113(H) further directs the Planning Commission review of Preliminary Plat and states that if the preliminary plat and application is incomplete, or the development cannot conform to the Zoning Ordinance, be serviced by public services or on-site utilities, or is otherwise impossible, the Planning Commission shall deny the same; otherwise, the Planning Commission shall find it complete and accept it. The Planning Commission may also accept the Preliminary Plat and application with the condition that the remaining items identified as necessary by these Regulations (such as the SHPO review and approval) be completed prior to final Preliminary Plat approval.

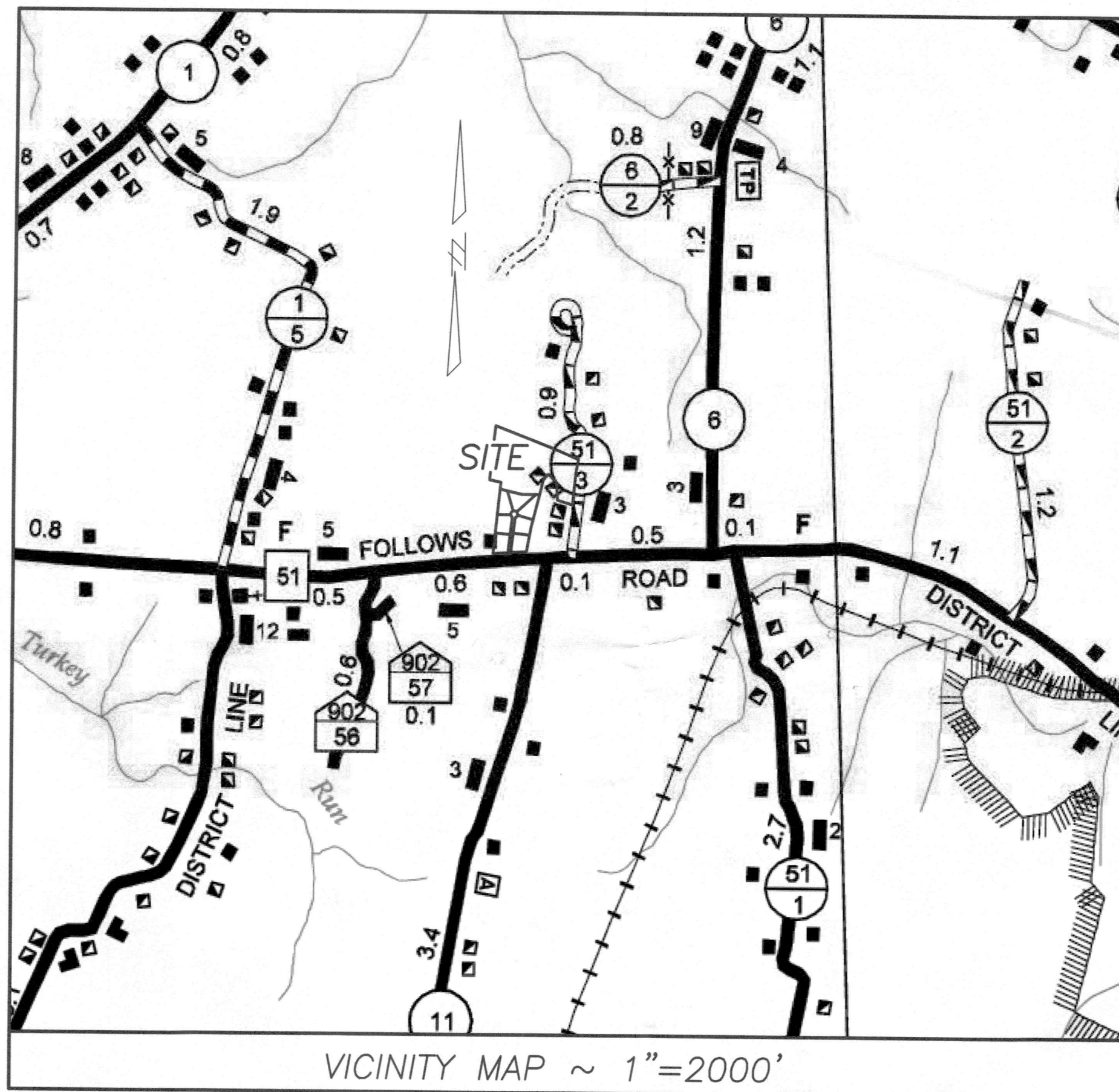
Upon deeming the application complete, the Planning Commission shall schedule a Public Hearing to receive public comments, concerns, and inputs on the proposed preliminary subdivision plat within 45 days. The Commission’s next regular meeting on June 11, 2019 will satisfy this requirement and the 21-day notice requirement can be met.

GENERAL NOTES

- BUILDING SETBACK LIMITS - MINIMUM FRONT SETBACK = 40'
MINIMUM REAR SETBACK = 50'
MINIMUM SIDE SETBACK = 15'
- THERE ARE NO EXISTING EASEMENTS.
- ALL PROPOSED EASEMENTS & RIGHT-OF-WAYS ARE AS SHOWN.
- THERE ARE NO FUTURE EASEMENTS & RIGHT-OF-WAYS.
- THERE ARE NO LANDS RESERVED FOR FOR PUBLIC OR SEMI-PUBLIC USE.
- BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED ON F.I.R.M. MAP 54037C0120E DATED DECEMBER 18, 2009. NO PORTION OF THIS PROPERTY IS IN THE 100 YEAR FLOODPLAIN. EXACT LOCATION CAN ONLY BE DETERMINED BY AN ELEVATION CERTIFICATE.
- COVENANTS SHALL BE REQUIRED FOR THE MAINTENANCE OF THE ROADS, STORM WATER FACILITIES AND COMMON AREAS AS PART OF THE FINAL PLAT SUBMISSION AND REVIEW OF THIS PROJECT.
- THE PUBLIC SERVICE DISTRICT MAY REQUIRE IN THE FUTURE EACH PROPERTY OWNER TO ABANDON EXISTING WELL AND SEPTIC SYSTEMS AND TO CONNECT TO A CENTRALIZED SYSTEM WHEN AND IF IT BECOMES AVAILABLE.
- A BLANKET EASEMENT IS GRANTED TO THE APPROPRIATE PUBLIC SERVICE DISTRICT IN ALL ROAD RIGHT-OF-WAYS FOR CONSTRUCTION AND MAINTENANCE OF WATER AND SANITARY SEWER LINES.
- NO STRUCTURES, FENCES OR LANDSCAPING SHALL BE LOCATED IN THE EASEMENTS.
- THERE ARE NO WETLANDS PRESENT ON THE SITE AS SHOWN ON THE NATIONAL WETLANDS INVENTORY MAP.
- WV DOT HIGHWAY ENTRANCE PERMIT NO. 05-2018-0446 AND 05-2018-0242.
- HEALTH DEPARTMENT PERMIT NO. SDA-19-1819-002.
- ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
- CUT & FILL ACTIVITY SHALL NOT ENCRUCH ON ADJACENT PROPERTY.
- PROJECT IS NOT LOCATED WITHIN 500' OF A STREAM.
- THE TOPOGRAPHICAL CONTOUR INTERVAL IS ONE (1) FOOT. MAPPING PROVIDED BY ROBERTS LAND SURVEYING, FEBRUARY 2018.
- ALL CURB RADII ARE 5' UNLESS OTHERWISE NOTES.
- STORM WATER MANAGEMENT IS BEING PROVIDED USING LOW IMPACT DEVELOPMENT.
- DENSITY IS BASED ON THE CLUSTER PROVISION OUTLINED IN SECTION 5.7(D) 2 OF THE JEFFERSON COUNTY ZONING ORDINANCE. ONE LOT MAY BE SUBDIVIDED FOR EVERY FIVE ACRES. MAXIMUM NUMBER OF LOTS ALLOWED SHALL BE COMPUTED USING THE ACREAGE ON RECORD AS OF OCTOBER 5, 1988. A MINIMUM OF 50% OF THE PROPERTY SHALL BE RETAINED AS GREEN SPACE AND SHALL CONTAIN NO FURTHER DEVELOPMENT RIGHTS UNLESS THE PROPERTY IS PLACED IN ANOTHER ZONE OR FURTHER SUBDIVISION IS ALLOWED BY ORDINANCE. THIS SUBDIVISION, TOGETHER WITH PAST SUBDIVISION OF THIS PROPERTY, HAS UTILIZED ALL DEVELOPMENT POTENTIAL OR LOTS TO WHICH THE 46.04 ACRE PARENT PARCEL IS ENTITLED UNDER THE TERMS OF THE JEFFERSON COUNTY SUBDIVISION REGULATIONS. NO ADDITIONAL LOTS WILL BE PERMITTED SUBSEQUENT TO THE APPROVAL OF THIS PLAT OF SUBDIVISION UNLESS OR UNTIL SUCH TIME AS THE PROPERTY MAY BE REZONED OR AMENDMENTS TO THE COUNTY DEVELOPMENT REGULATIONS MAY PERMIT ADDITIONAL SUBDIVISION. CONCEPT PLAN WAS APPROVED FEBRUARY 13, 2018 FOR 7 LOTS AND A RESIDUE.
- VERIFICATION FROM A WELL DRILLER THAT A PRESSURE-GROUTED WELL IS DRILLED AND IS PRODUCING WATER AT A QUANTITY APPROVED BY THE JEFFERSON COUNTY HEALTH DEPARTMENT AND/OR THE WEST VIRGINIA BUREAU OF HEALTH SHALL BE SUBMITTED TO THE PLANNING COMMISSION PRIOR TO THE ISSUANCE OF AN IMPROVEMENT LOCATION PERMIT. CERTIFICATION THAT THE WATER IS POTABLE MUST BE SUBMITTED TO THE PLANNING COMMISSION OFFICE WITHIN 6 MONTHS OF THE ISSUANCE OF AN IMPROVEMENT LOCATION PERMIT.
- NO OFFSITE BORROW SOURCE IS NEEDED.

Ancient Oaks Estate PRELIMINARY PLAT

MIDDLEWAY DISTRICT, JEFFERSON COUNTY, WEST VIRGINIA
Tax Map 20, Parcel 8
Deed Book 671 Page 716



SITE DATA

TAX MAP.....	20
TAX DISTRICT.....	MIDDLEWAY
ZONING.....	RURAL
FUNCTIONAL DESCRIPTION.....	RESIDENTIAL SUBDIVISION
PARCEL AREA.....	43.96 ACRES
EXISTING IMPERVIOUS AREA.....	sq.ft.
PROPOSED IMPERVIOUS AREA.....	sq.ft.
PERCENT IMPERVIOUS.....	%

SHEET INDEX:

SHEET 1	--COVER SHEET
SHEET 2	--EXISTING CONDITIONS/SOILS PLAN
SHEET 3	--PRELIMINARY PLAT
SHEET 4	--GRADING PLAN
SHEET 5	--ENTRANCE SIGHT DISTANCE PROFILE
SHEET 6	--ENTRANCE CONSTRUCTION DETAILS
SHEET 7	--SOIL EROSION & SEDIMENT CONTROL PLAN
SHEET 8	--SOIL EROSION & SEDIMENT CONTROL DETAILS
SHEET 9	--STORM WATER MANAGEMENT PLAN
SHEET 10	--STORM WATER MANAGEMENT DETAILS
SHEET 11	--LANDSCAPING PLAN & DETAILS

Ordinance	Section of Ordinance	Description of Waiver of Variance	Date Granted
SUBDIVISION	21.103.D	TO ALLOW GREENSPACE TO HAVE SEPARATE ENTRANCE	03/12/2019

SITE WORK MILESTONE INSPECTIONS:

The developer shall request County Engineer inspections minimum of 48 hours in advance (Call 304.264.1966). Inspections shall be requested but not limited to the Table on Milestones shown below:

No.	Description	Date Insp. Initiated
1.	Installation of Sediment & Erosion Control Devices.	
2.	Roadway and/or parking lot subgrade proof roll prior to placing stone base.	
3.	Roadway and/or parking lot stone base depth check prior to placing asphalt base.	
4.	Water system and Sanitary sewer system inspection and approval by public service district/utility prior to backfilling of trenches.	
5.	Final inspection including but not limited to: seeding & mulching, roadway & parking lot paving, sidewalks, storm drainage and storm water management systems, traffic control signs and pavement markings, landscaping, etc.	

The County Engineer may accept "third-party" inspection and certification reports in place of inspections performed by the Berkeley County Engineering Department, upon prior approval. Third-party inspections shall be submitted in the format specified by the County Engineer. No amount of bond or surety shall be released without documentation that bonded improvements have been inspected and approved.

**Jefferson County
CONSTRUCTION NOTES**

(Table 1.2-1)

- Erosion & Sediment Control Measures shall be in place and inspected prior to performing any significant earth disturbing activities and site grading.
- Earth Work shall be compacted to the percentages of maximum dry density in accordance with AASHTO T99C, as shown below:
 - a. Roadways.....98%
 - b. Parking Lots for heavy trucks.....98%
 - c. Parking Lots for passenger vehicles.....95%
 - d. Utility line trenches.....98%
 - e. Building Pads.....100%

The above compaction requirements shall be certified by a professional engineer or a soils technician under the direction of a professional engineer, and acceptable to the County Engineer.

- Changes and revisions to the construction plans and specifications shall not be made unless first submitted in writing and approved by the County Engineer and any other agencies, as deemed appropriate.
- Work zone temporary traffic control along a public road shall be in accordance with West Virginia division of Highway requirements and approval.
- Seventy-two (72) hours prior to excavation in public right-of-ways or in areas served by underground utilities, call MISS UTILITY 1-800-245-4848.

**Jefferson County
SITE WORK
MILESTONE INSPECTIONS**

The developer shall request County Engineer inspections minimum of 48 hours in advance (Call 304-728-3257). Inspections shall be requested according to the Table of Milestones shown below:

- Installation of Sediment & Erosion Control Devices prior to beginning site grading.
- Roadway and/or parking lot subgrade proof roll prior to placing stone base.
- Roadway and/or parking lot stone base depth check prior to placing asphalt or concrete pavement.
- Water system and Sanitary sewer system inspection and approval by the public service district/utility prior to backfilling of trenches.
- Final inspection including but not limited to: seeding & mulching, roadway & parking lot paving, sidewalks, storm drainage and storm water management systems, traffic control signs & pavement markings, landscaping, etc.

Note: the County Engineer may accept "third-party" inspection and certification reports in place of inspections performed by the Jefferson County Engineering Department, upon prior approval. Third party inspection reports shall be submitted in the format specified by the County Engineer.

MISS UTILITY NOTE: SEVENTY-TWO (72) HOURS PRIOR TO EXCAVATION IN PUBLIC RIGHTS-OF-WAY OR IN AREAS SERVED BY UNDERGROUND UTILITIES, CALL MISS UTILITY 1-800-245-4848.

OWNER/DEVELOPER CERTIFICATE:

THE OWNER/DEVELOPER, IN SIGNING THIS PLAT, AGREES TO ABIDE BY ALL CONDITIONS, TERMS AND SPECIFICATIONS PROVIDED HEREON.

Larry H. Boyd
LARRY H. & DONNA K. BOYD
303 WILLINGHAM ROAD
CHARLES TOWN, WV 25414
304.528.7009

JEFFERSON COUNTY, WEST VIRGINIA

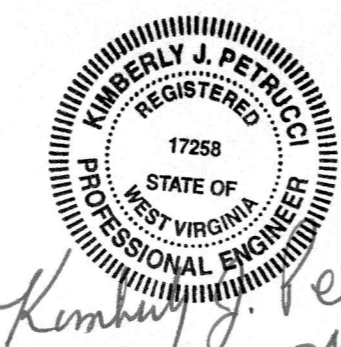
- PRELIMINARY PLAN APPROVAL
- SITE DEVELOPMENT PLAN APPROVAL

BY _____ DATE _____
COUNTY ENGINEER

BY _____ DATE _____
COUNTY PLANNER

ENGINEER'S CERTIFICATE:

I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF WEST VIRGINIA.



KIMBERLY J. PETRUCCI
LICENSE NO: 017258 EXPS. DECEMBER 31, 2019
59 COLLINS DRIVE
MARTINSBURG, WV 25403
240.527.7530

DATE: 03-15-18

DRAWN: MSR

CHECKED: MSR

SCALE: 1"=100'

DWG NO. 17-124

SHEET 1 OF 11

REV. _____ DATE _____

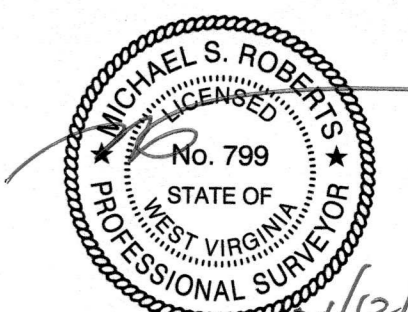
PER JCPZE 01/2019

PER JCPZE 03/2019

SURVEYOR'S CERTIFICATE:

I, MICHAEL S. ROBERTS, DO HEREBY CERTIFY THAT THE PROPERTY DELINEATED BY THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT IT REPRESENTS A SURVEY MADE IN THE FIELD WITH A RELATIVE ERROR OF CLOSURE EXCEEDING 1:7,500 AND THAT #5 REBAR WILL BE SET AS SHOWN.

MICHAEL S. ROBERTS
PROFESSIONAL SURVEYOR #799
2089 PALMER ROAD
HEDGESVILLE, WEST VIRGINIA 25427
304.671.5406



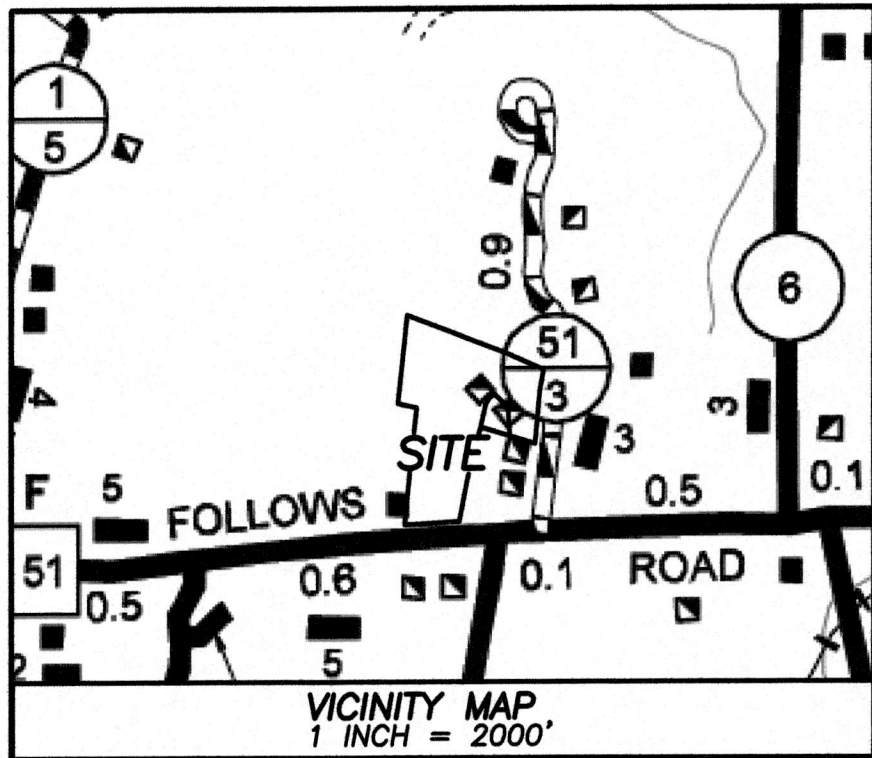
17-20

COVER SHEET
ANCIENT OAKS ESTATES
PROPERTY OF
LARRY H. & DONNA K. BOYD
DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8
MIDDLEWAY DISTRICT ~ JEFFERSON COUNTY, WV

ROBERTS LAND SURVEYING

2068 PALMER ROAD - HEDGESVILLE, WV 25427
304.671.5406 miker002395@frontier.com

Approved for:
By *Michael S. Roberts* 4/16/2019
County Engineer Date



SOIL NARRATIVE

FK--Funktstown silt loam.
Soil Properties and Qualities:
Hydrologic Soil Group: C
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 20 to 28 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 9.6 inches)

OaB--Oaklet silt loam, 3 to 8 percent slopes.
Soil Properties and Qualities:
Hydrologic Soil Group: C
Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.4 inches)

Tm1--Toms silt loam.
Soil Properties and Qualities:
Hydrologic Soil Group: B/D
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.50 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Moderate (about 8.8 inches)

VrB--Vertrees silt loam, 3 to 8 percent slopes, very rocky.
Soil Properties and Qualities:
Hydrologic Soil Group: C
Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

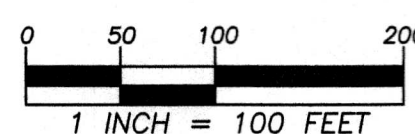
VrC--Vertrees silt loam, 8 to 15 percent slopes, very rocky.
Soil Properties and Qualities:
Hydrologic Soil Group: C
Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

VtB--Vertrees-Rock outcrop complex, 3 to 8 percent slopes.
Soil Properties and Qualities:
Hydrologic Soil Group: C
Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

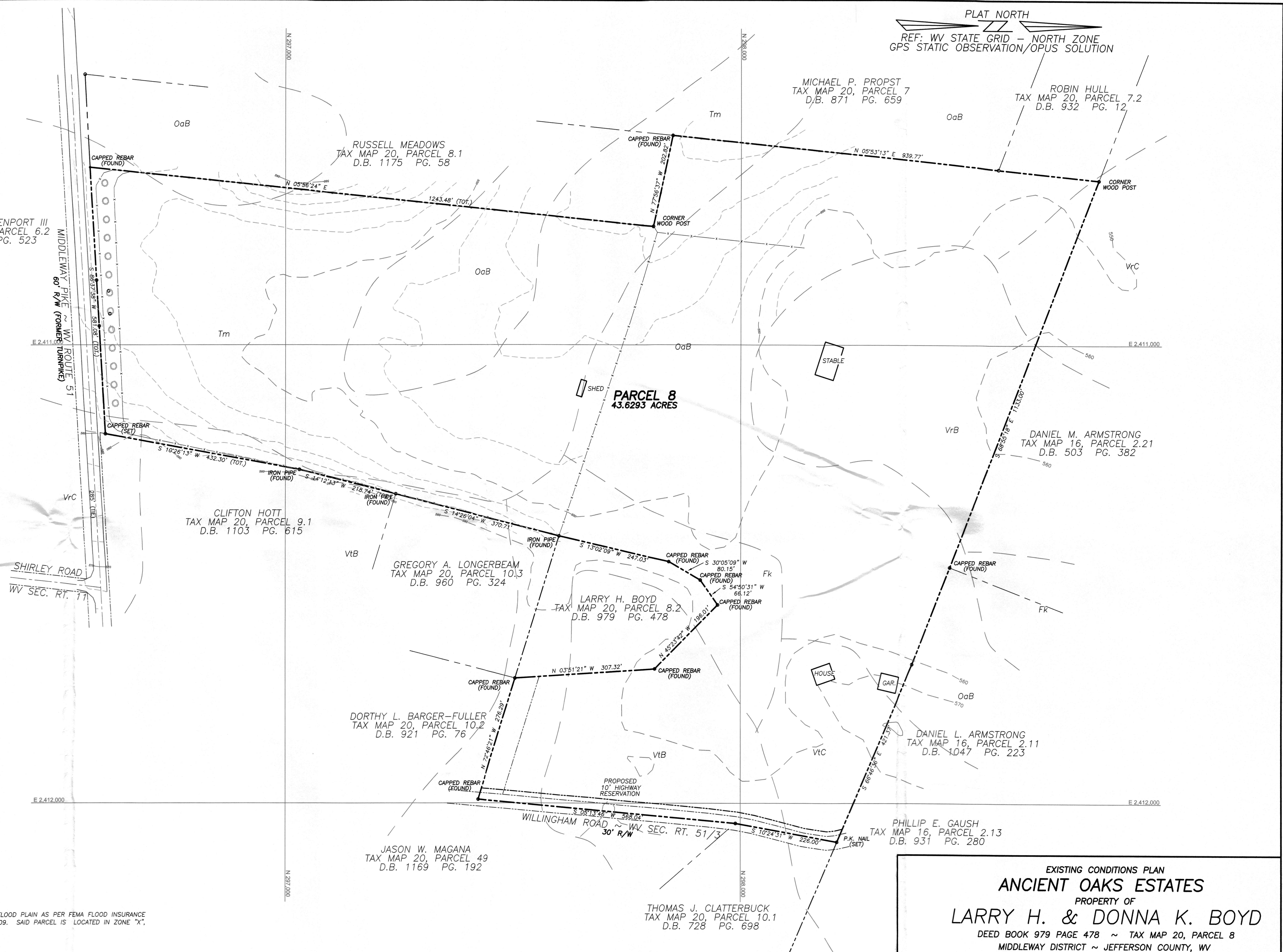
VtC--Vertrees-Rock outcrop complex, 8 to 15 percent slopes.
Soil Properties and Qualities:
Hydrologic Soil Group: C
Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

GENERAL NOTES:

1. THE PROPERTIES SHOWN HEREON ARE NOT LOCATED IN A 100 YEAR FLOOD PLAIN AS PER FEMA FLOOD INSURANCE RATE MAP 54037C 0120E WITH AN EFFECTIVE DATE OF DECEMBER 18, 2009. SAID PARCEL IS LOCATED IN ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.
2. THIS PLAN WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT.



PLAT NORTH
REF: WV STATE GRID - NORTH ZONE
GPS STATIC OBSERVATION/OPUS SOLUTION



EXISTING CONDITIONS PLAN
ANCIENT OAKS ESTATES
PROPERTY OF
LARRY H. & DONNA K. BOYD
DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8
MIDDLEWAY DISTRICT ~ JEFFERSON COUNTY, WV

DATE: 03-15-18	REV. PER JCPZE	DATE 01/2019
DRAWN: MSR		
CHECKED: MSR		
SCALE: 1"=100'		
DWG NO. 17-124		
SHEET 2 OF 11		

ROBERTS LAND SURVEYING
2068 PALMER ROAD - HEDGESVILLE, WV 25427
304.671.5406 miker002395@frontier.com

PLAT NORTH
 REF: WV STATE GRID - NORTH ZONE
 GPS STATIC OBSERVATION/OPUS SOLUTION

MICHAEL P. PROPST
 TAX MAP 20, PARCEL 7
 D.B. 871 PG. 659

ROBIN HULL
 TAX MAP 20, PARCEL 7.2
 D.B. 932 PG. 12

RUSSELL MEADOWS
 TAX MAP 20, PARCEL 8.1
 D.B. 1175 PG. 58

HENRY B. DAVENPORT III
 TAX MAP 20, PARCEL 6.2
 D.B. 272 PG. 523

- LEGEND
- INDICATES 5/8" CAPPED REBAR (SET) UNLESS LABELED OTHERWISE
 - INDICATES CONCRETE MONUMENT (SET)



STORM WATER MANAGEMENT EASEMENT

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	4.30	175.00	0126.01	S 0678.24° W	4.30
C2	23.55	25.00	5358.05	N 1193.26° W	22.69
C3	100.11	60.00	9535.50	S 0051.15° W	88.90
C4	188.48	60.00	15374.13	N 1193.26° W	116.74
C5	23.55	25.00	5358.05	S 3470.22° W	22.69
C6	3.13	125.00	0126.01	S 0678.24° W	3.13
C7	28.80	27.00	5651.41	S 5923.75° W	28.71
C8	158.17	48.00	18848.01	N 3050.55° W	95.72
C9	17.80	45.00	14113.44	S 4842.01° W	11.77
C10	78.87	48.00	3145.92	S 0319.45° E	68.92
C11	26.80	27.00	5651.41	N 2124.26° W	25.71
C12	3.40	135.00	0126.01	S 0678.24° W	3.40
C13	4.10	164.00	0126.01	S 0678.24° W	4.10

LINE TABLE

LINE BEARING	DISTANCE
L1 N 0701.25° E	317.17
L2 N 1628.45° W	537.09
L3 N 8470.58° W	18.92
L4 S 0052.02° W	283.07
L5 N 8470.58° W	21.99
L6 N 0559.23° E	274.05
L7 S 2640.52° E	231.03
L8 S 1719.05° W	50.00
L9 N 1640.50° E	231.03
L10 S 1628.45° E	300.71
L11 S 0701.25° W	317.17
L12 N 8470.58° W	11.00
L13 N 0701.25° E	523.11
L14 S 1640.50° E	317.17
L15 N 1628.45° W	3.55
L16 S 0701.25° W	523.11
L17 N 8470.58° W	11.00

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	49.27	25.00	9000.00	N 4137.98° E	35.36
C2	31.79	175.00	10234.77	N 0149.92° E	31.79
C3	23.55	25.00	5358.05	N 1957.98° W	22.69
C4	45.09	60.00	4259.54	N 2326.53° W	43.97
C5	80.87	60.00	7733.14	N 3439.91° E	74.88
C6	85.06	60.00	6207.27	S 7940.08° E	61.92
C7	60.91	60.00	5810.91	S 1537.74° E	58.33
C8	49.67	60.00	4725.54	S 3716.33° W	48.26
C9	23.55	25.00	5358.05	S 3470.22° W	22.69
C10	39.27	25.00	9000.00	S 4822.92° E	35.36
C11	22.68	125.00	10234.77	S 0149.92° W	22.68

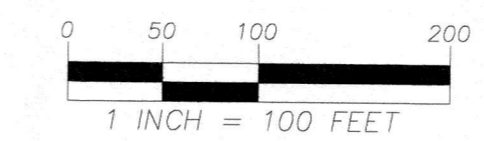
LINE TABLE

LINE BEARING	DISTANCE
L1 S 4450.91° W	68.14
L2 S 3095.09° W	80.15
L3 N 0392.93° W	31.51
L4 S 0322.22° E	31.51

AREA TABULATION:

ORIGINAL PARCEL	ACRES
PARCEL 49	43.6293
TOTAL	43.6293

SUBDIVISION PARCELS	ACRES
SUBDIVISION LOTS	12.1723
RIGHT OF WAY (ANCIENT OAKS COURT)	0.7587
SWM EASEMENT AREA (PORTION OF ROW)	0.2102
SWM EASEMENT AREA (PORTION OF LOTS)	1.8277
SWM EASEMENT AREA (PORTION OF RESIDUE)	1.4671
RESIDUE (GREEN SPACE PARCEL)	27.1933
TOTAL	43.6293



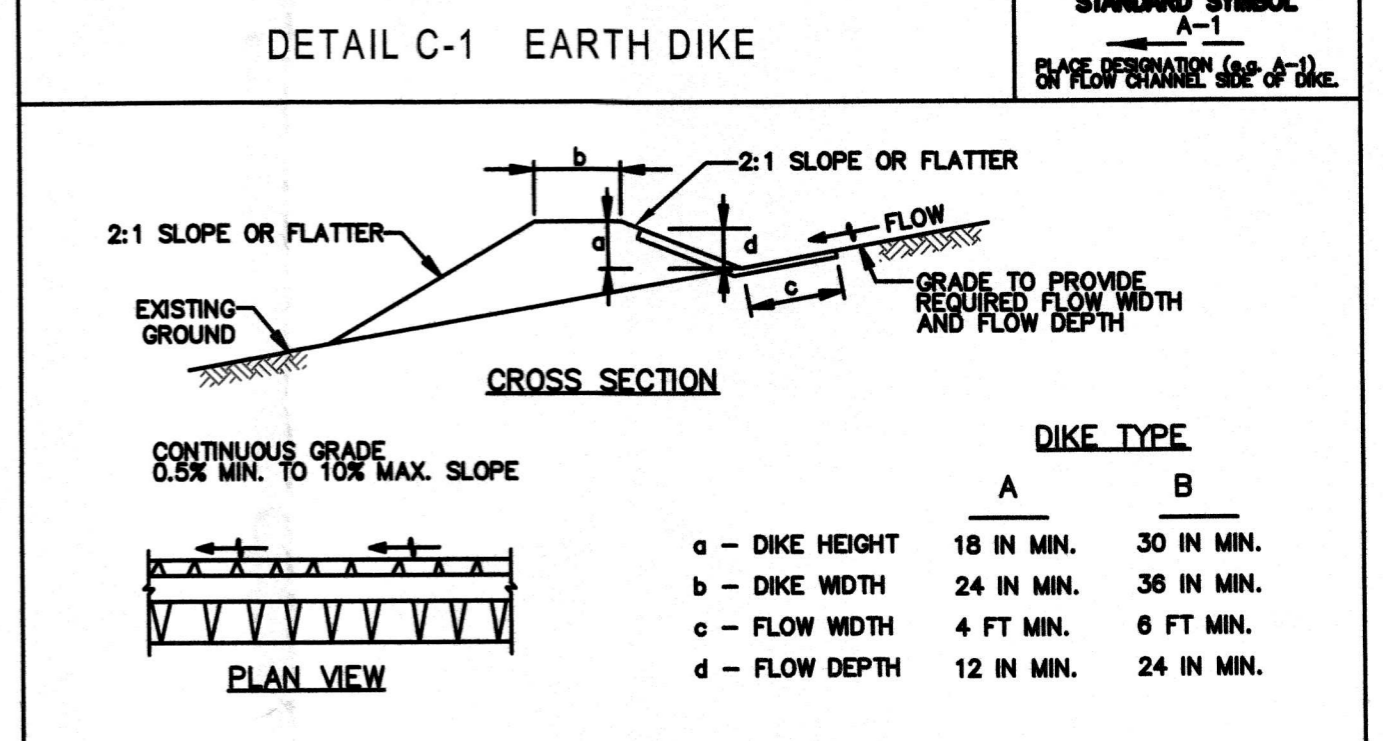
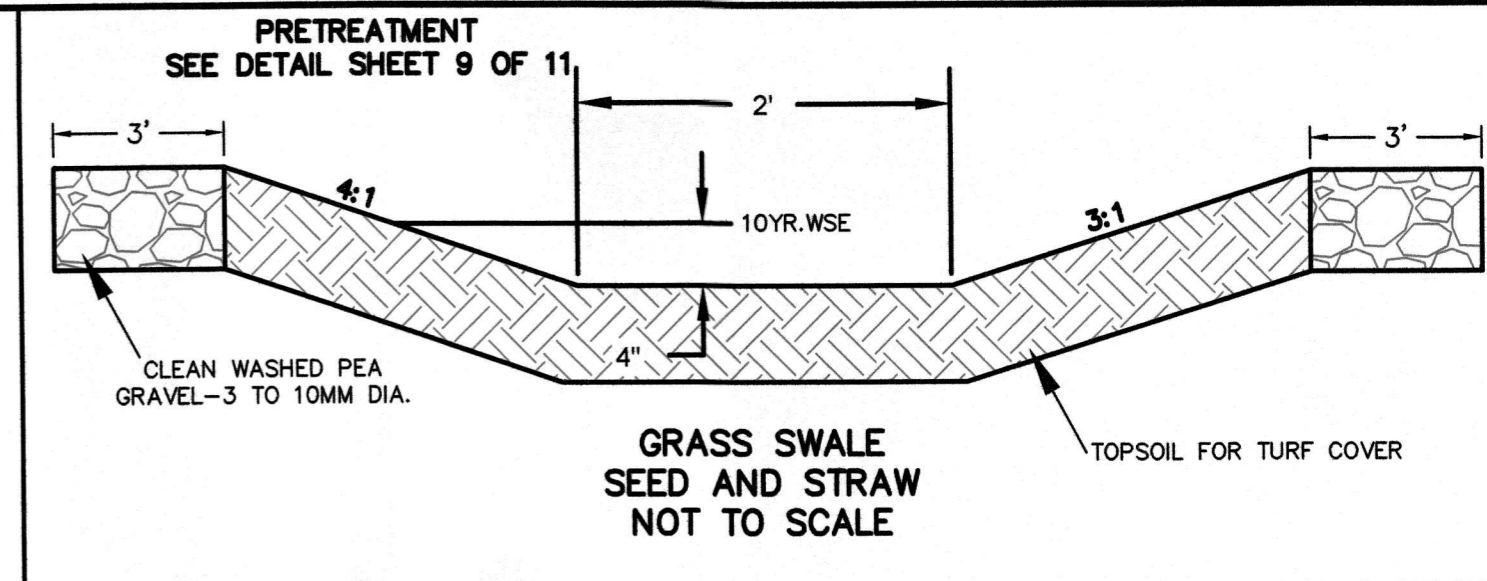
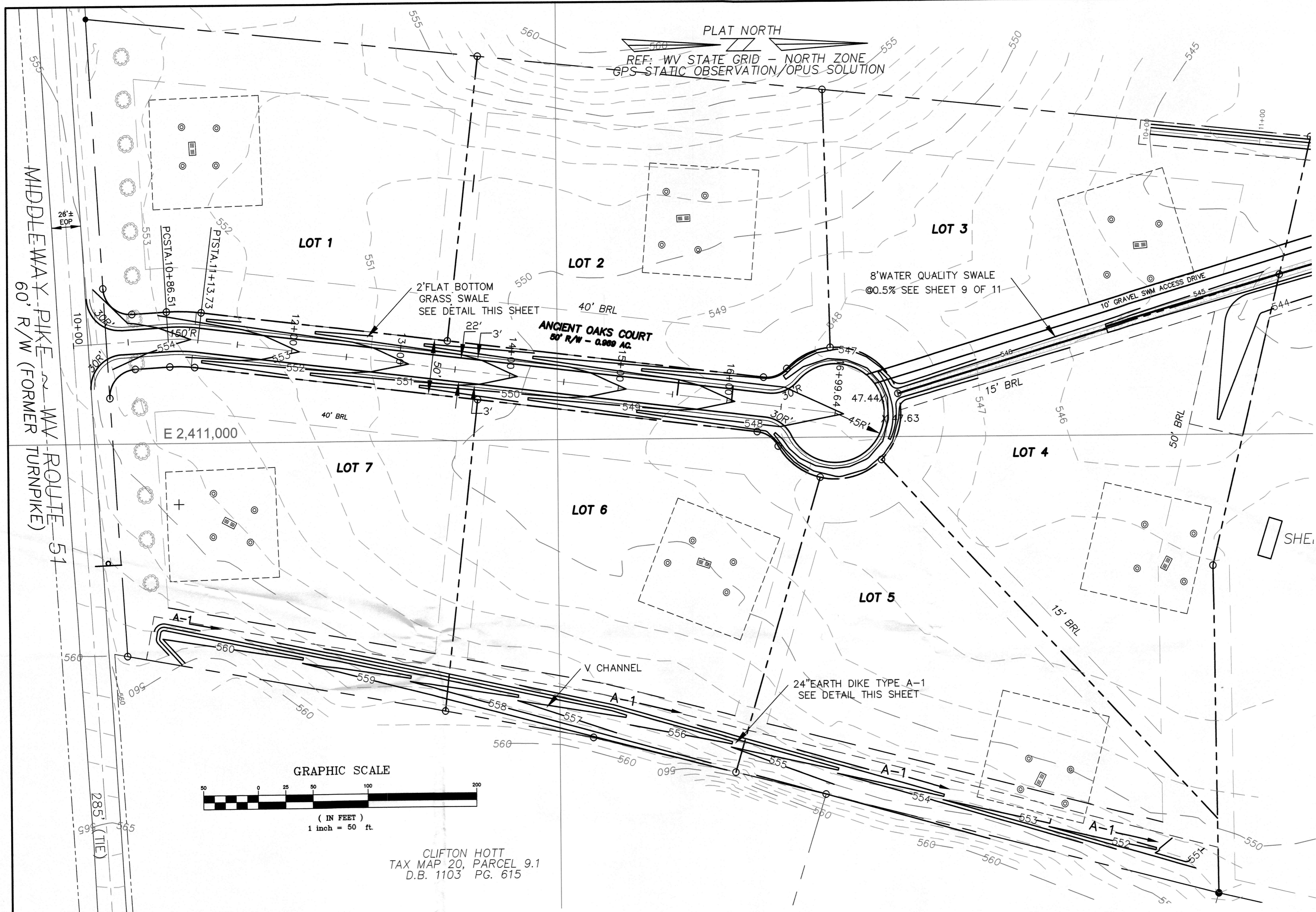
GENERAL NOTES:

- THE PROPERTIES SHOWN HEREON ARE NOT LOCATED IN A 100 YEAR FLOOD PLAIN AS PER FEMA FLOOD INSURANCE RATE MAP 54037C 0120E WITH AN EFFECTIVE DATE OF DECEMBER 18, 2009. SAID PARCEL IS LOCATED IN ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.
- THIS PLAT WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT.
- BUILDING SETBACKS SHALL BE 40' FRONT, 15' SIDE AND 50' REAR.
- ALL ADJOINING PARCELS ARE ZONED RURAL.

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DWG NO. 17-124		
SHEET 3 OF 11		

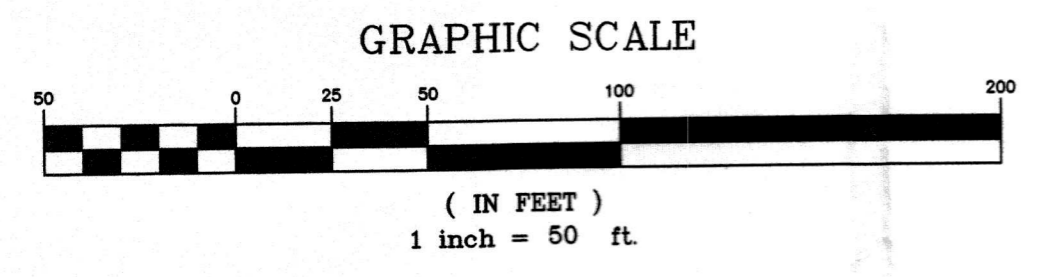
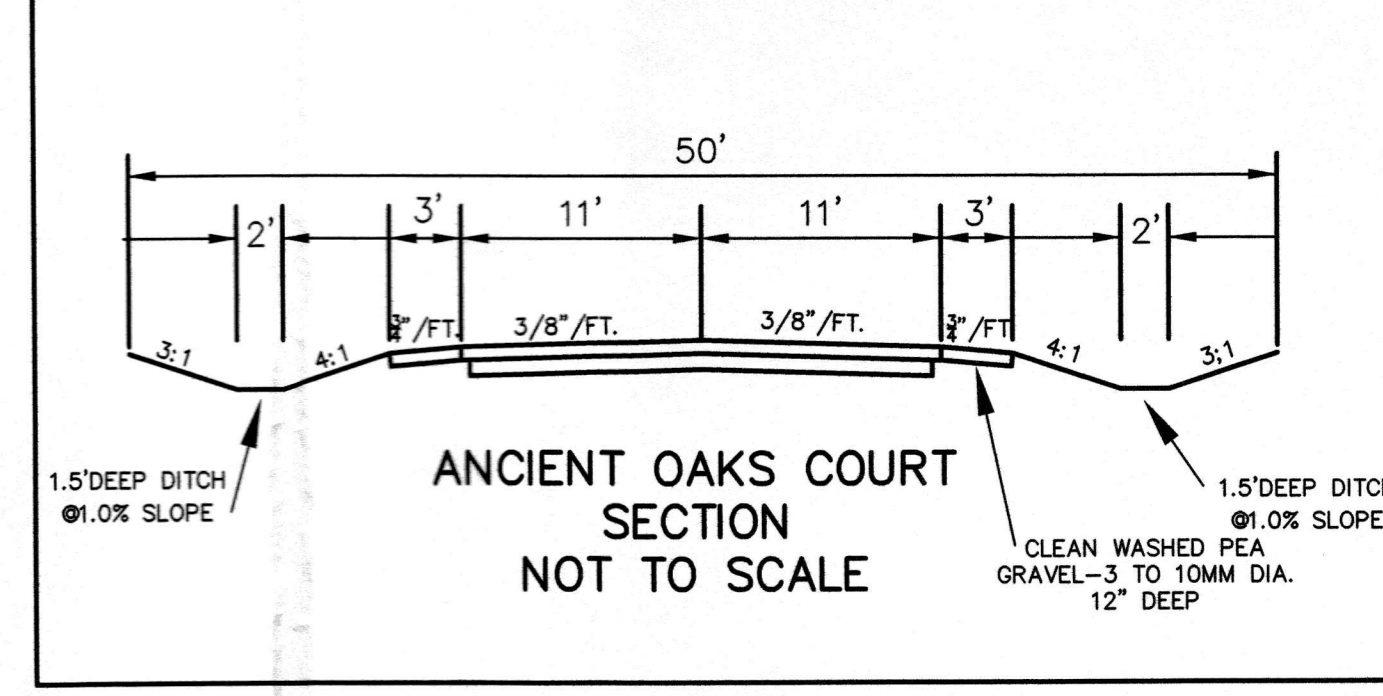
PRELIMINARY PLAT
 ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8
 MIDDLEWAY DISTRICT ~ JEFFERSON COUNTY, WV

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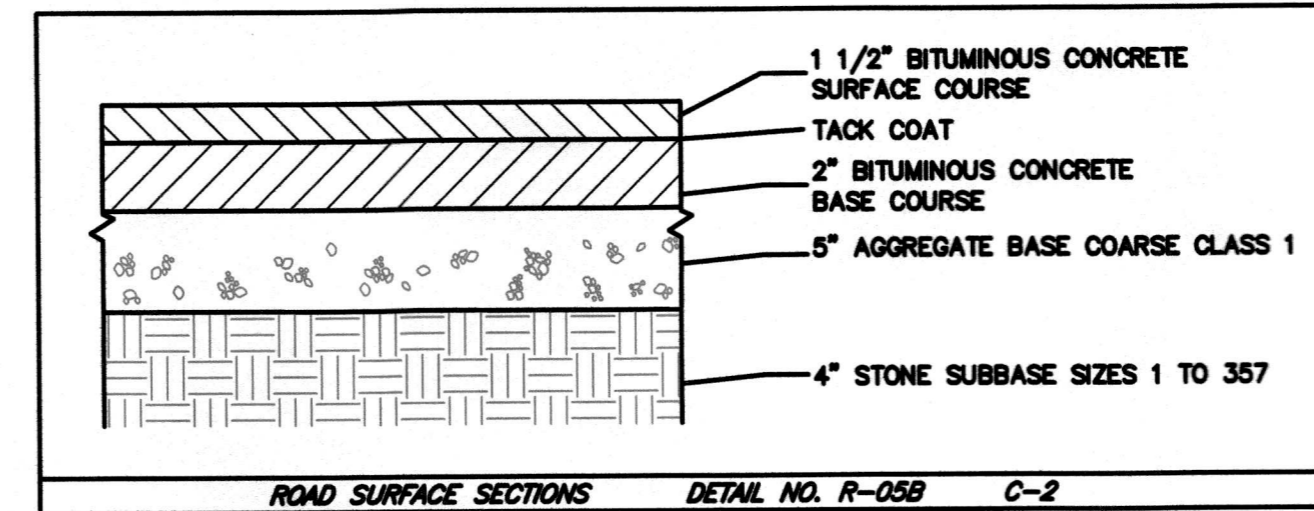
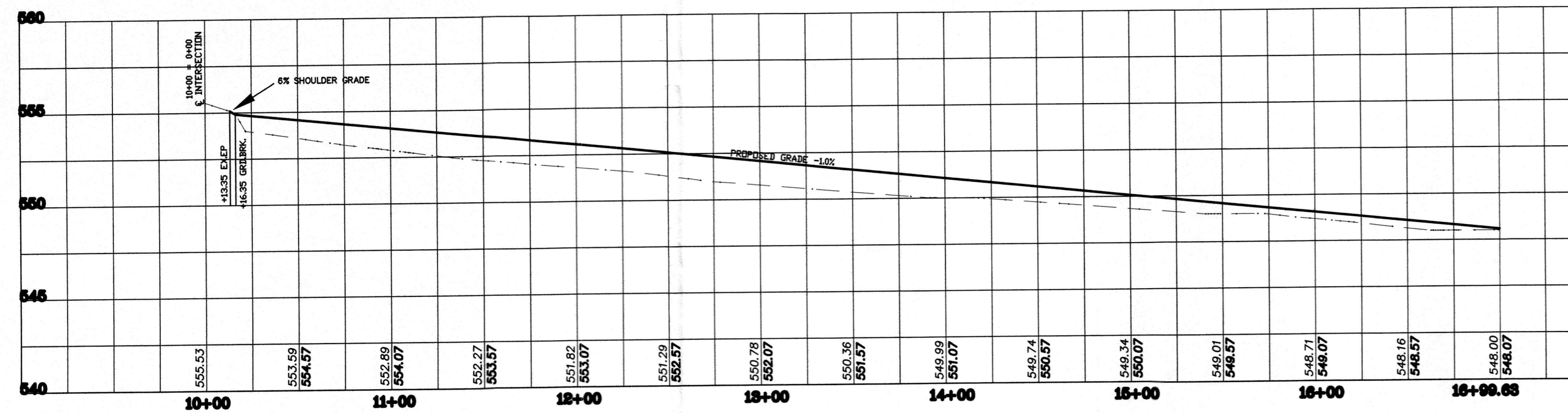


- FLOW CHANNEL STABILIZATION**
- A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)
 - A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
 - A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.
- CONSTRUCTION SPECIFICATIONS**
1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
 2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
 3. COMPACT FILL.
 4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
 5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
 6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
 7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
 8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



CLIFTON HOTT
 TAX MAP 20, PARCEL 9.1
 D.B. 1103 PG. 615



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SHEET 4 OF 11		

GRADING PLAN
ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8

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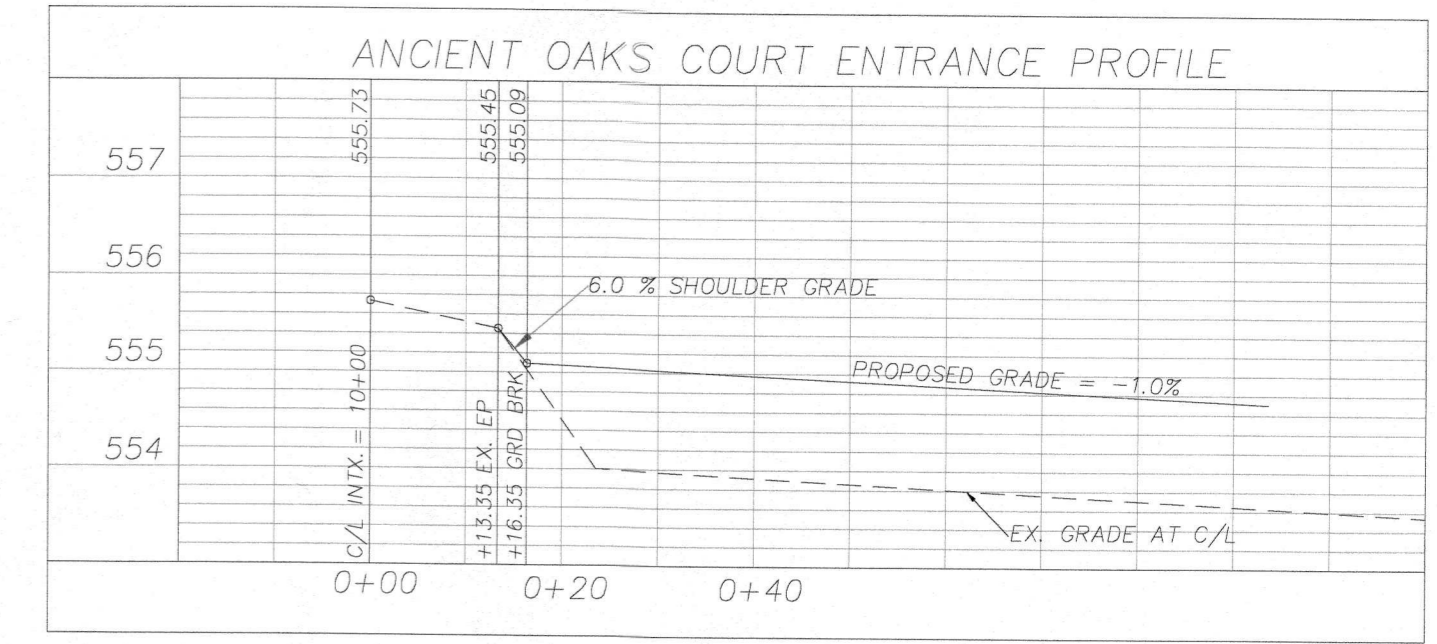
PLAT NORTH
 REF: WV STATE GRID - NORTH ZONE
 GPS STATIC OBSERVATION/OPUS SOLUTION

RUSSELL MEADOWS
 TAX MAP 20, PARCEL 8.1
 D.B. 1175 PG. 58

LOT 1
 2.000 ACRES

LOT 7
 2.000 ACRES

CLIFTON HOTT
 TAX MAP 20, PARCEL 9.1
 D.B. 1103 PG. 615



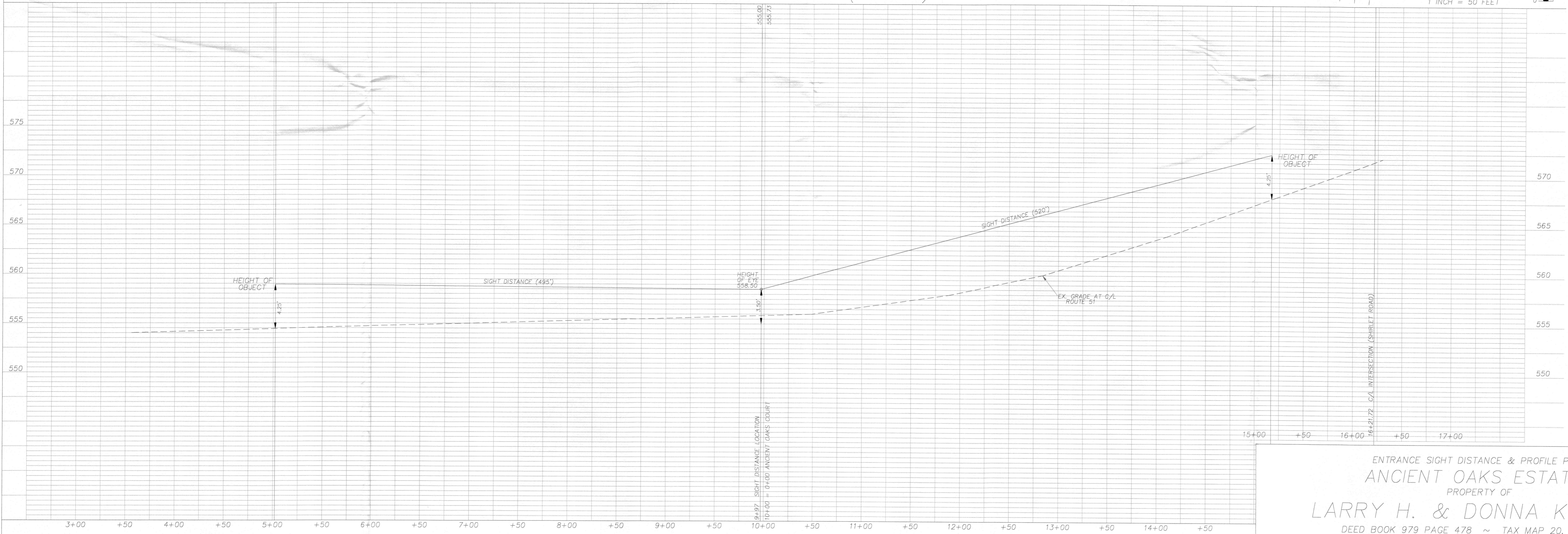
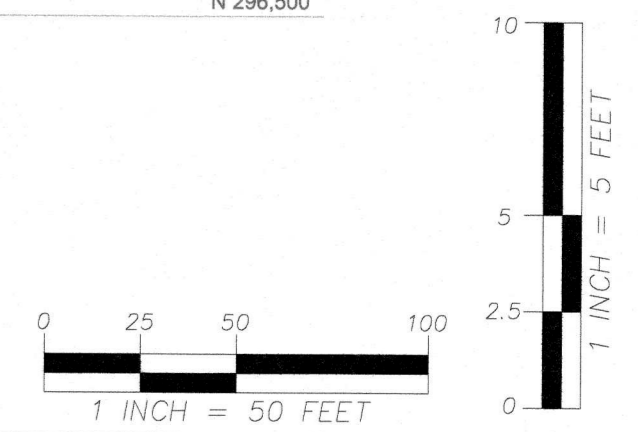
- LEGEND
- ⊞ STOP BAR - TYPE V THERMOPLASTIC
 - ⊞ STOP SIGN
 - ⊞ STREET SIGN

GENERAL NOTES:

1. ENTRANCE TIE IN SHALL BE SAW CUT AT THE WHITE TRAVEL "CART WAY" STRIPE. SAW CUT SHALL LENGTH SHALL INCLUDE STREET ENTRANCE AND ENTRANCE RADIUS.
2. ANCIENT OAK COURT SHALL BE STRIPED WITH A DOUBLE YELLOW LINE (4" MINIMUM STRIPE WIDTH), FROM STOP BAR ONTO THE SITE, A MINIMUM DISTANCE OF FORTY (40) FEET.

HENRY B. DAVENPORT III
 TAX MAP 20, PARCEL 6.2
 D.B. 272 PG. 523

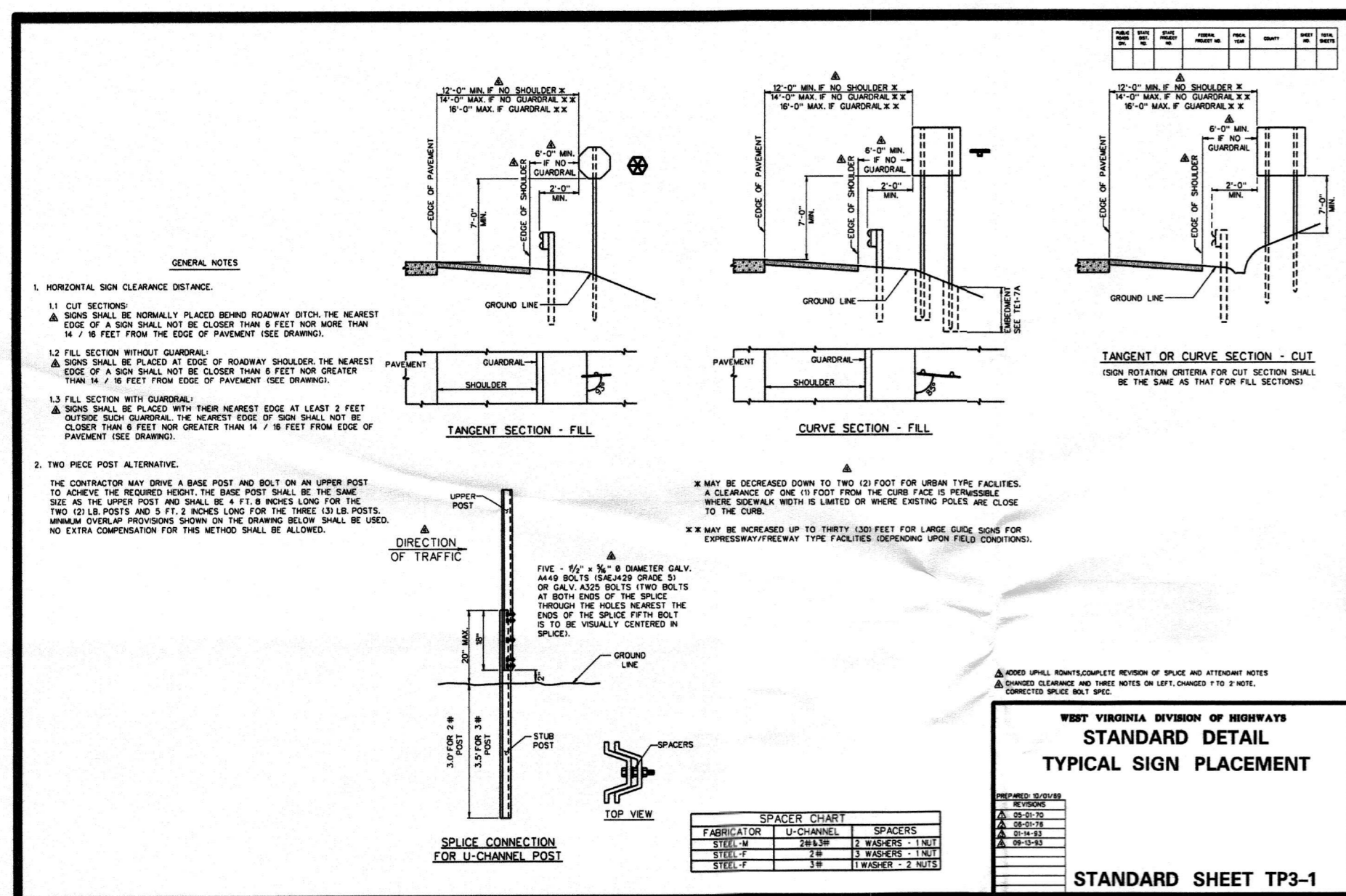
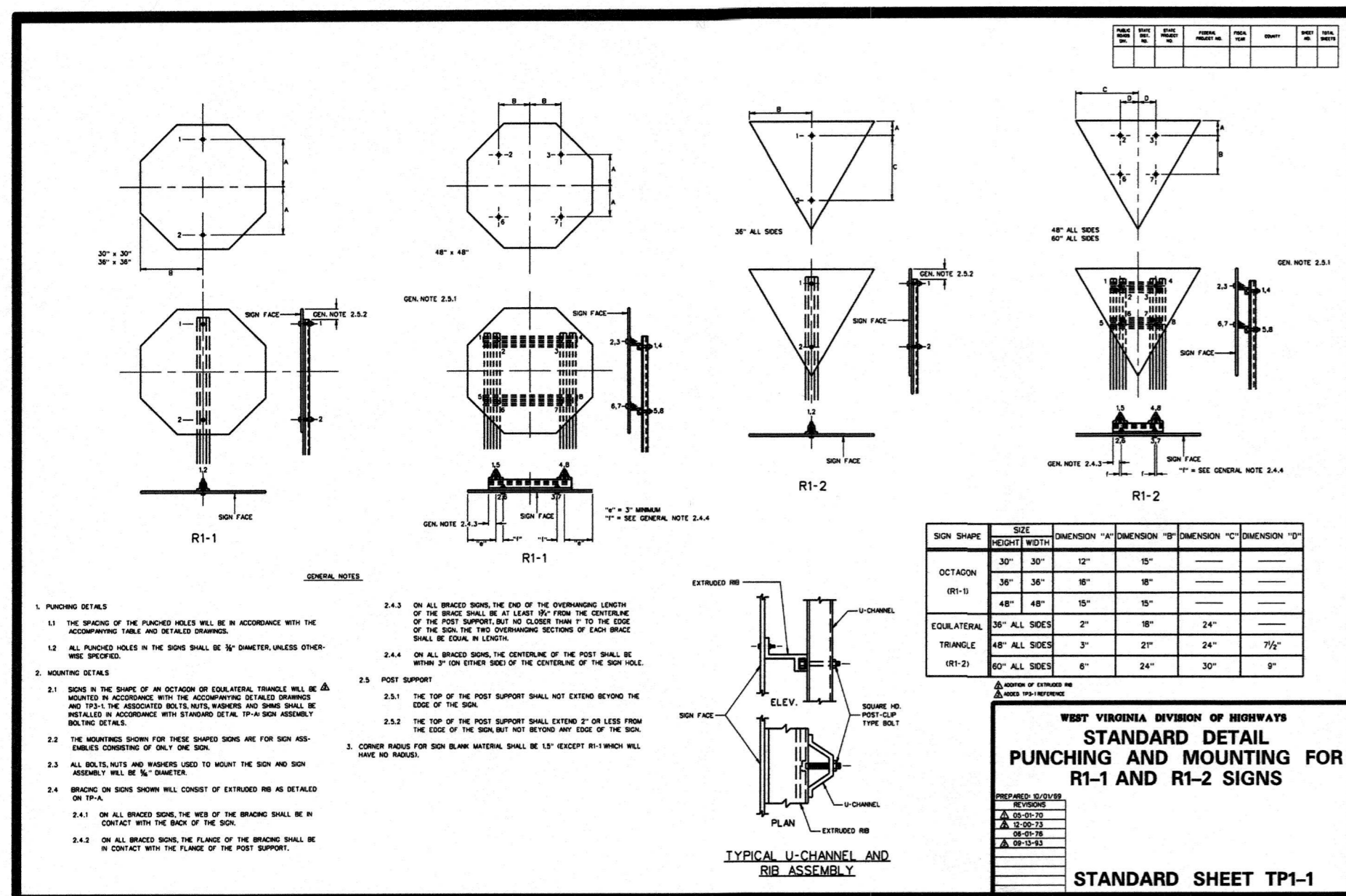
SIGHT DISTANCE PROFILE
 MIDDLEWAY PIKE - WV ROUTE 51
 55 MPH SPEED LIMIT (POSTED)



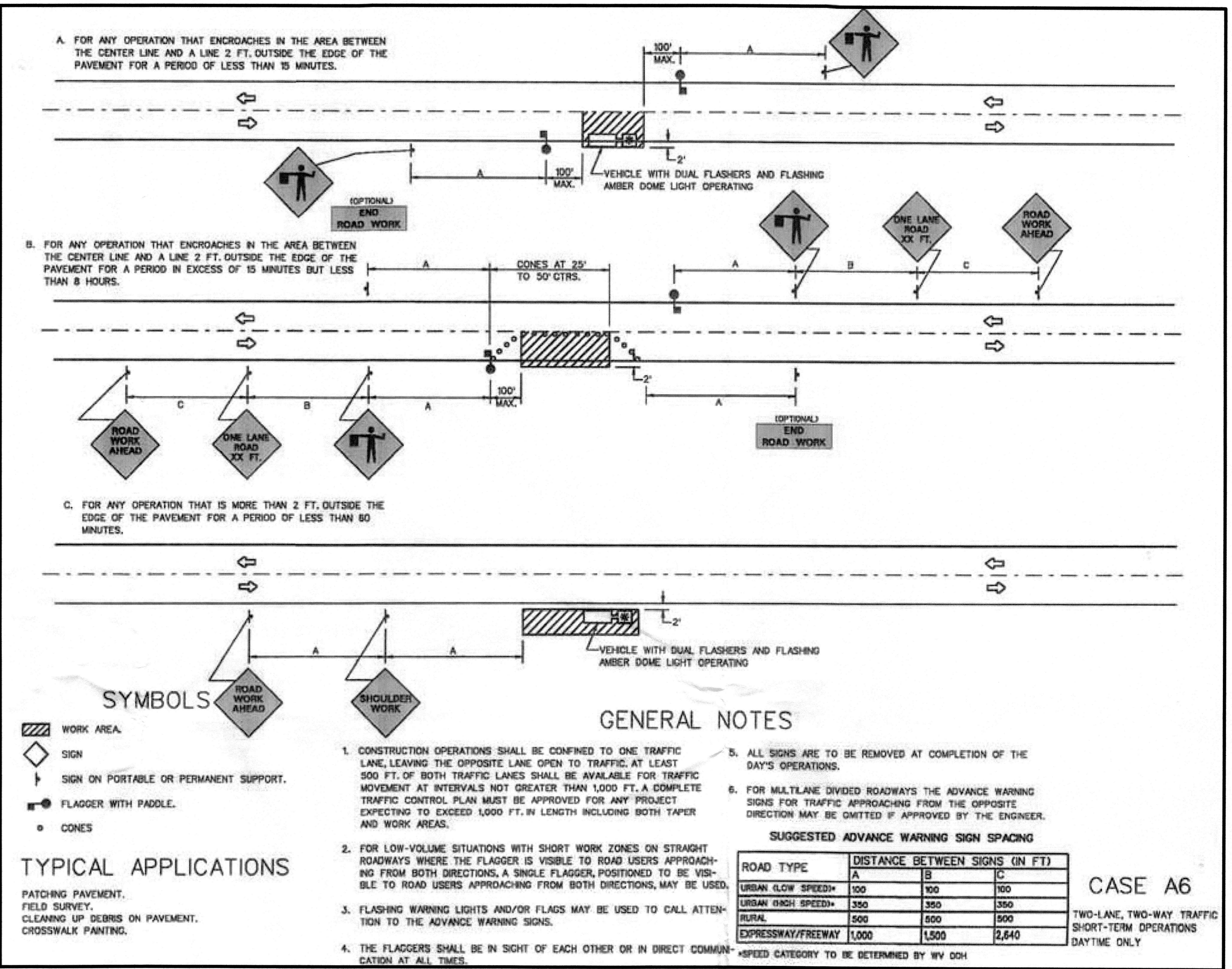
ENTRANCE SIGHT DISTANCE & PROFILE PLAN
 ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8
 MIDDLEWAY DISTRICT ~ JEFFERSON COUNTY, WV

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LEGEND
 STOP SIGN
 STREET SIGN



Sequence of Construction (Traffic Maintenance)

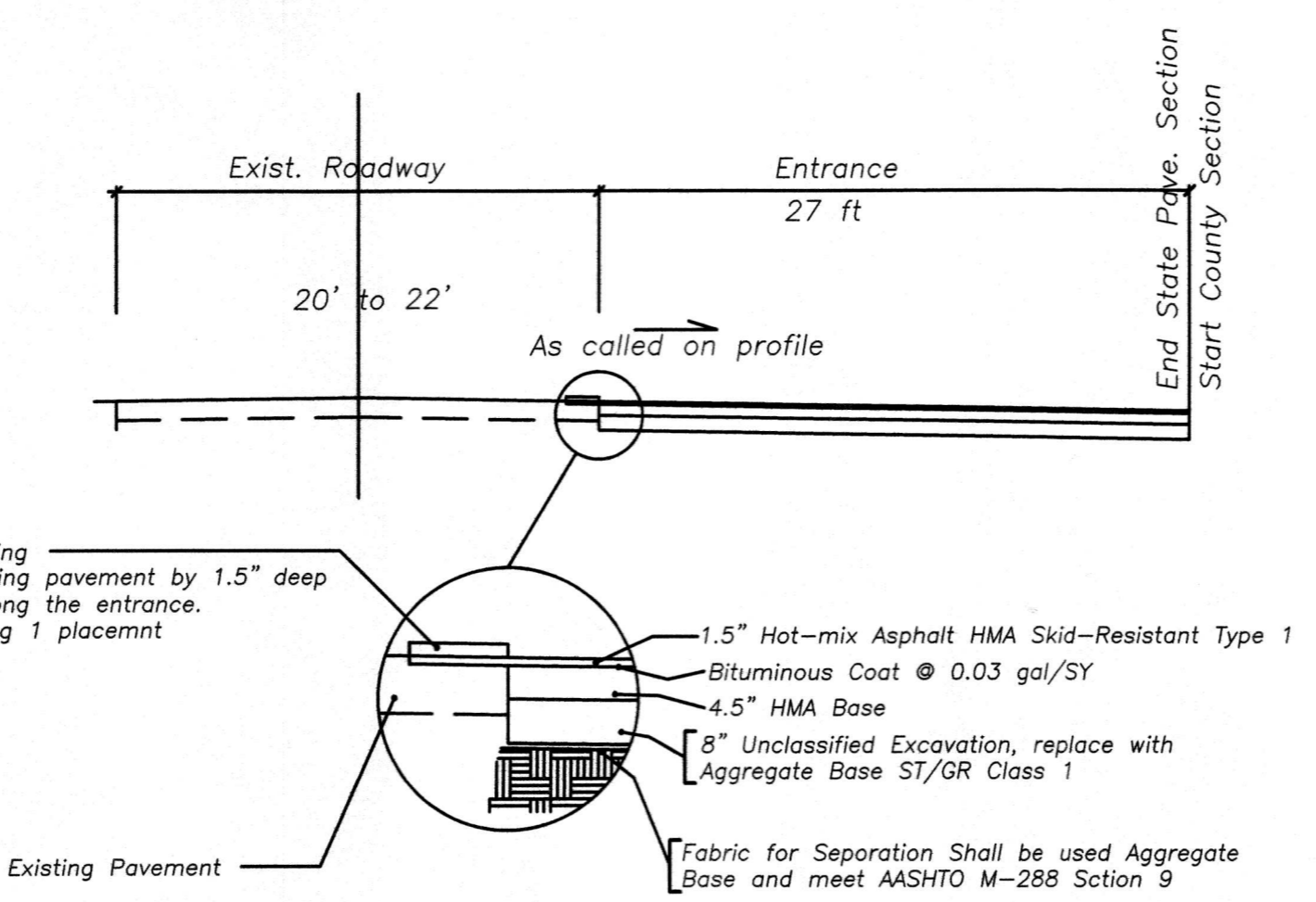
- Call Miss Utility
- Install traffic control devices as shown on plans and any sediment and erosion measures as shown on erosion control plans.
- Open all lanes to traffic at the end of each day.
- Complete work within the State Right of Way, including drainage, pavement, and as prescribed on the entrance permit.
- Remove temporary traffic control devices.
- Contractor shall be responsible for any damage to Utilities or other property outside the contract's scope of work.

MAINTENANCE OF TRAFFIC

Traffic Maintenance Notes:

- Maintenance of traffic and temporary marking and signage shall be accordance with current West Virginia Department of Transportation Division of Highways, Standards and Specifications - Roads & Bridges. In addition, the Manual of Temporary Traffic Control for Streets and Highways, 2006. At: www.transportation.wv.gov/highway/traffic/Documents/TemporaryTrafficControlManual2006.pdf
- a) No night time work is to be performed.
 - No lane closure during school drop-off or pickup times.
 - No lane closures permitted between the hours of 3:00 pm and 6:00 pm.
- Contractor is responsible for replacement or repair of right of way where temporary control devices were installed.
- All excavations shall be filled to maintain a safe slope when a lane closure is not in place.
- All intersections & driveways shall have access during construction times.
- All lanes on State Road will be open during non-working hours.
- WVDOH Drop-off Guide
 - Continuous Longitudinal Drop-off between open lanes of traffic, if drop-off is less than or equal to 2 inches then no channelization is needed, however, UNEVEN LANE signs are needed. If drop-off is greater than 2 inches then channelization is needed, or one lane is to be closed.
 - Continuous longitudinal drop-off between travel lane and paved shoulder, if drop-off is less than 2", channelization is not required. LOW SHOULDER signs shall be required until drop-off is brought even with pavement. If drop-off is greater than 2", channelization devices are required. SHOULDER DROP OFF signs are required until drop-off is brought even with pavement.
 - Continuous Longitudinal Drop-off at the edge of travel lane pavement, (IF THE EDGE OF PAVEMENT IS THE EDGE OF TRAVEL LANE, THEN 7.2 WILL APPLY). If drop-off is less than or equal to 3 inches then no channelization is required. SHOULDER DROP OFF signs are needed until the drop-off is brought even with pavement. If drop-off is greater than 3 inches then channelization is required. SHOULDER DROP OFF signs are needed as above.
 - Excavation greater than 3 inches on CLOSED travel lane or shoulder, then channelization devices are required and the excavated area shall be filled or covered as appropriate within 48 hrs. Where an excavation cannot be filled or covered within 48 hrs., use of a temporary barrier is required. Beyond shoulder but within 20' of a travel lane, channelization devices are required. Applicable unless the drop-off is behind concrete barriers or guardrail.

WVDOH PAVEMENT SECTION



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03-15-18	PER JCPZE	01/2019
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DWG NO. 17-124		
SHEET 6 OF 11		

PAVEMENT, SIGNAGE & TRAFFIC MAINTENANCE DETAILS
ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8
 MIDDLEWAY DISTRICT ~ JEFFERSON COUNTY, WV

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SEQUENCE OF CONSTRUCTION

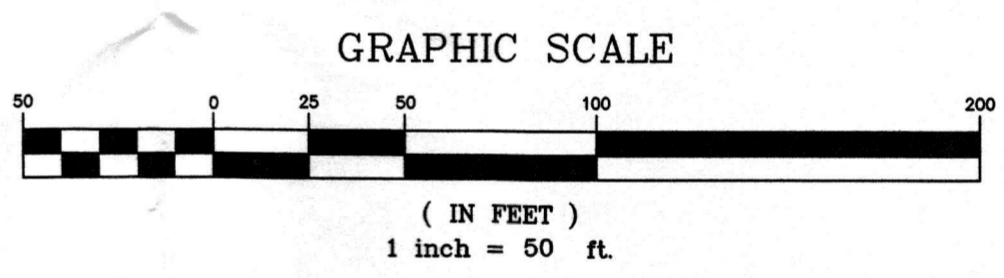
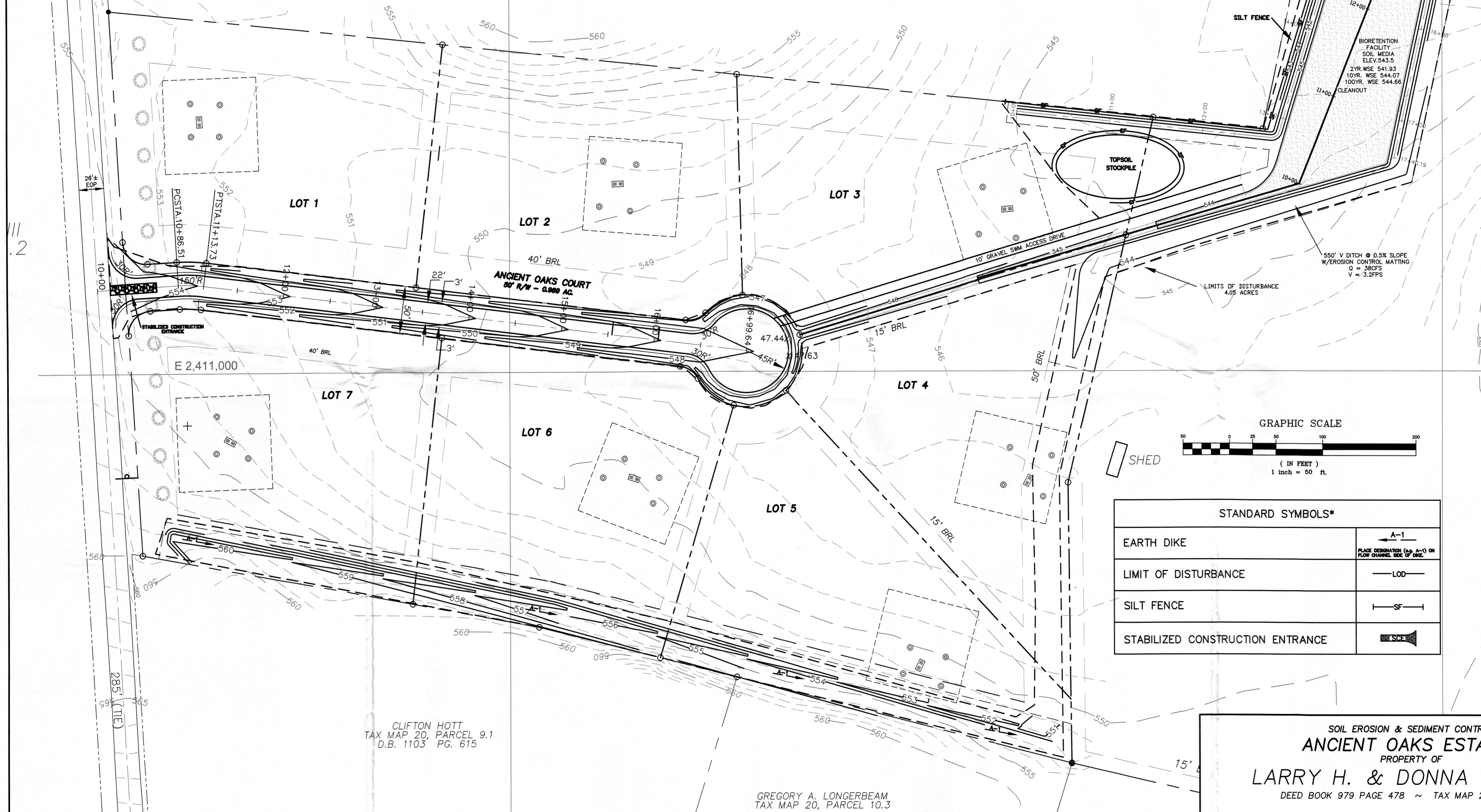
1. CONTACT THE SEDIMENT CONTROL INSPECTOR @ 304.263.7559 TWENTY-FOUR (24) HOURS PRIOR TO THE START OF CONSTRUCTION.
2. CONTACT THE JEFFERSON COUNTY ENGINEERING DEPARTMENT @ 304.728.3257 FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION.
3. PLACE SILT FENCE AROUND AREAS AS SHOWN ON THE PLANS.
4. STRIP TOPSOIL, STOCKPILE AT LOCATION SHOWN ON PLAN AND SEED AND MULCH USING TEMPORARY SEEDING MIXTURES.
5. BEGIN GRADING OPERATION, CONSTRUCT DIVERSION BERM AND CHANNEL.
6. WHEN GRADING REACHES SUBGRADE ELEVATION, BEGIN ROAD AND GRASSY SWALE CONSTRUCTION. STABILIZATION OR PROTECTION OF ALL DISTURBED AREAS SHALL OCCUR AT THE END OF EACH WORK DAY. ALL EXCAVATION OF TRENCHES SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
7. CONSTRUCT BIORETENTION FACILITY.
8. PREPARE SUBGRADE AND PAVE ROAD.
9. FINE GRADE AND STABILIZE ENTIRE SITE.
10. AFTER ENTIRE SITE HAS BEEN STABILIZED REMOVE SEDIMENT CONTROL DEVICES WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR.

PLAT NORTH
 REF: WV STATE GRID - NORTH ZONE
 GPS STATIC OBSERVATION/OPUS SOLUTION

RUSSELL MEADOWS
 TAX MAP 20, PARCEL 8.1
 D.B. 1175 PG. 58

N 298.000

11.2



STANDARD SYMBOLS*	
EARTH DIKE	A-1 PLACE DESIGNATION (as A-1) ON FLOW CHANNEL SIDE OF DIKE.
LIMIT OF DISTURBANCE	LOD
SILT FENCE	SF
STABILIZED CONSTRUCTION ENTRANCE	SC-E

CLIFTON HOTT
 TAX MAP 20, PARCEL 9.1
 D.B. 1103 PG. 615

GREGORY A. LONGERBEAM
 TAX MAP 20, PARCEL 10.3

SOIL EROSION & SEDIMENT CONTROL
ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8

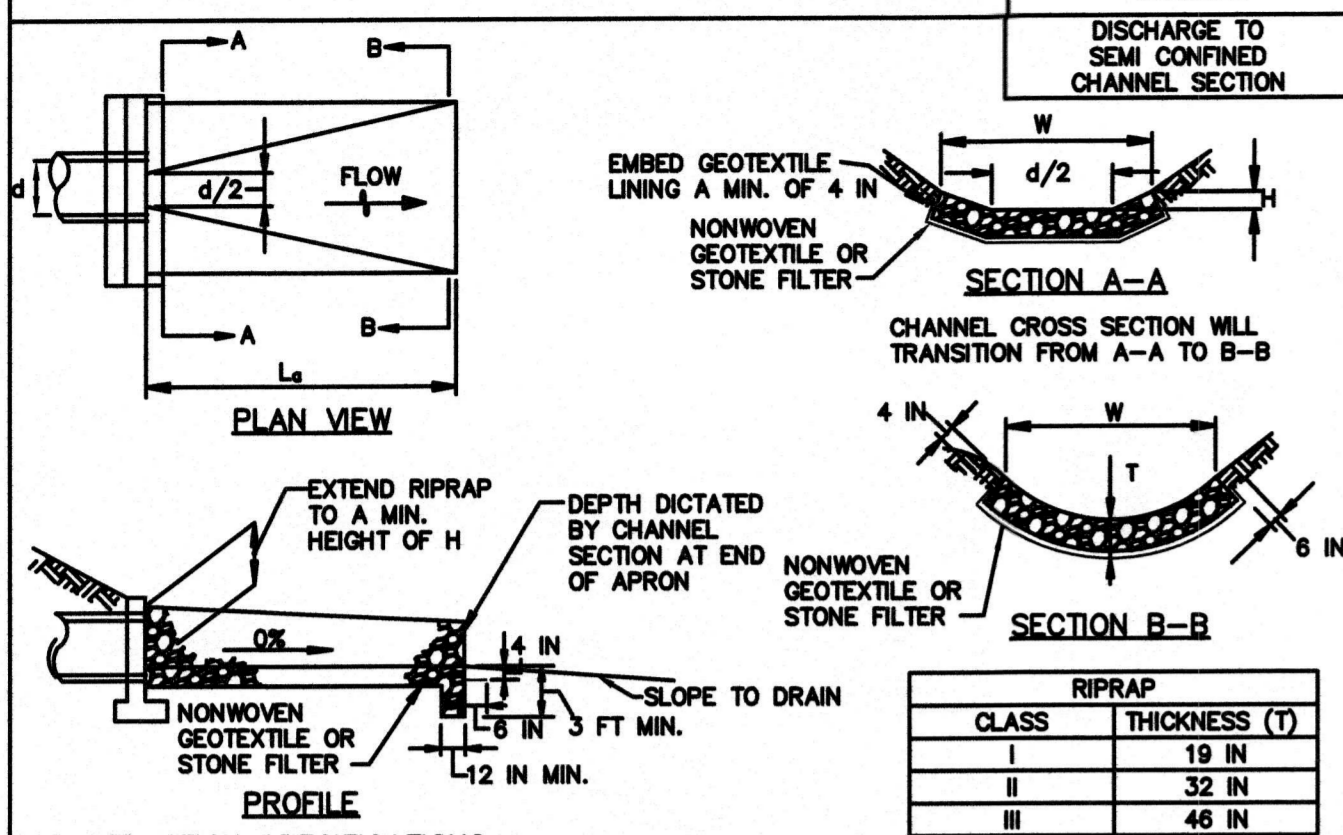
SHIRLEY ROAD
 WV SFC PT.

DATE	REV.	DATE
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DETAIL D-4-1-A ROCK OUTLET PROTECTION I

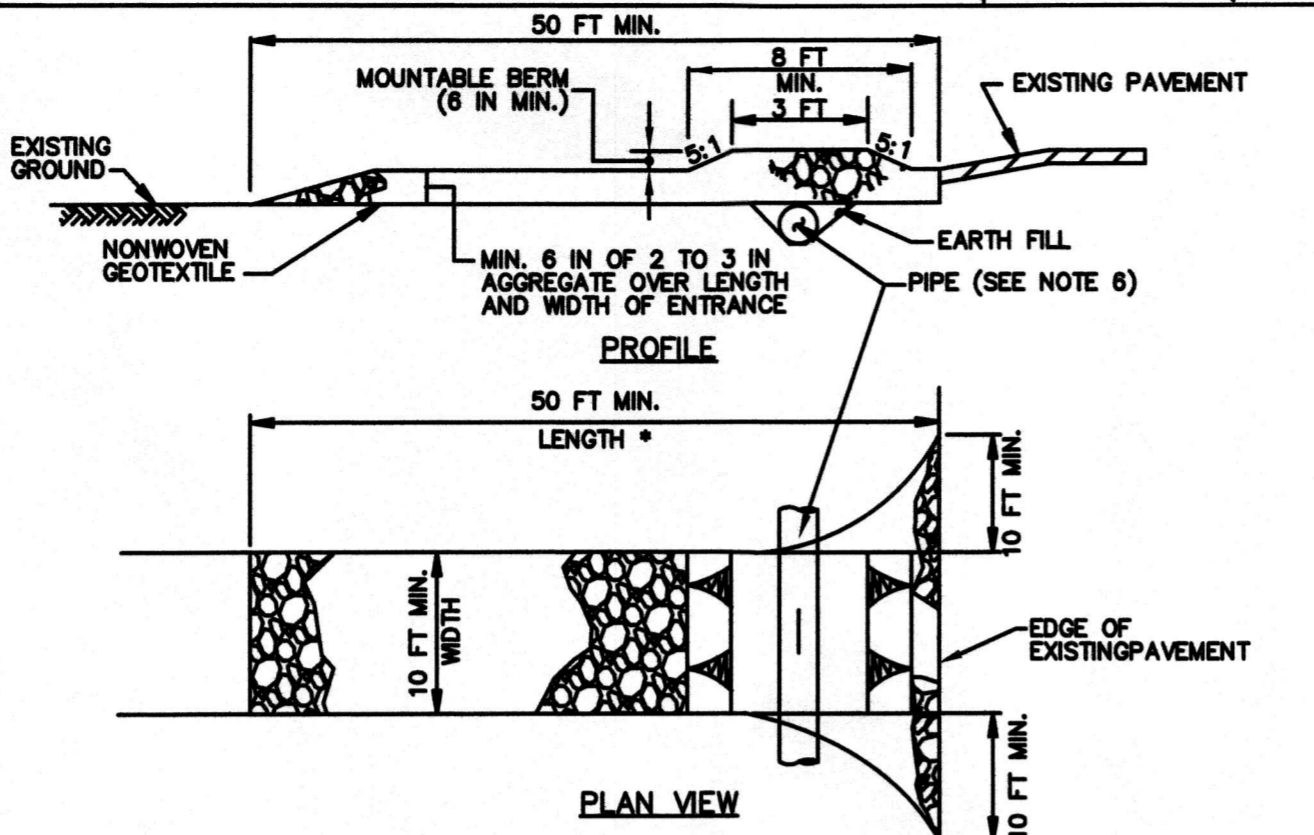


CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

- CONSTRUCTION SPECIFICATIONS**
- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
 - USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
 - PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/4 TO 1 1/2 INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
 - EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
 - CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
 - WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
 - CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
 - MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLOGGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

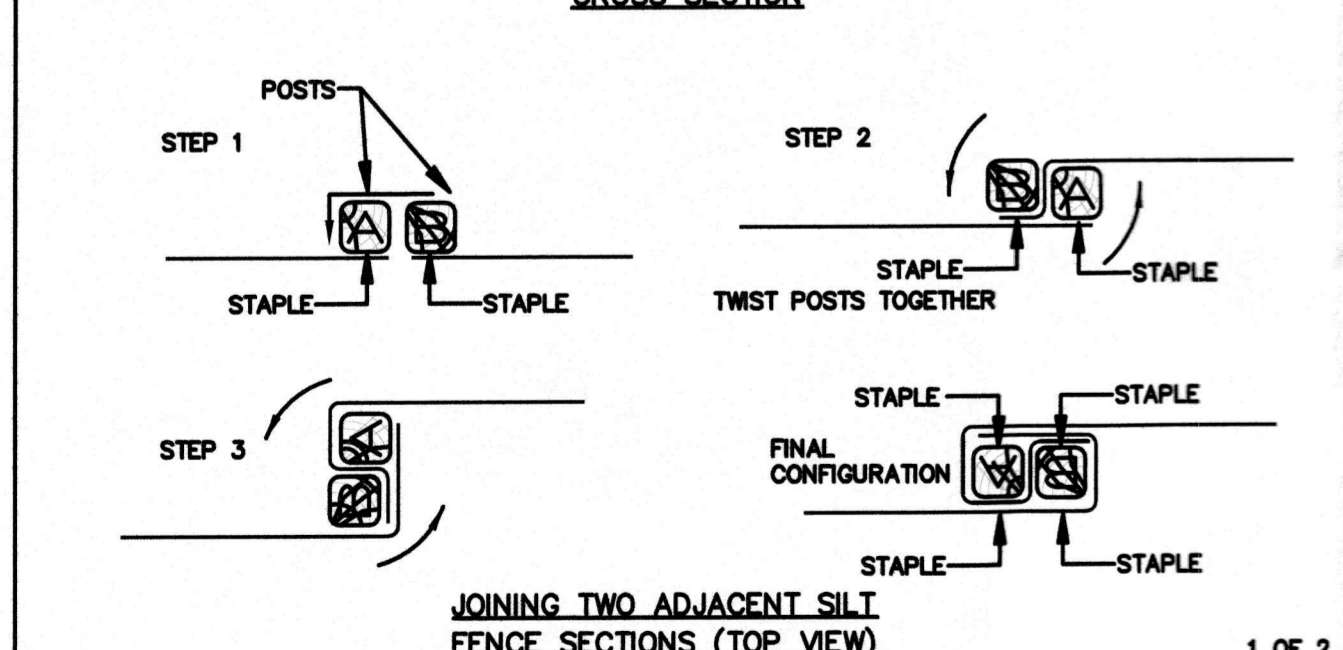
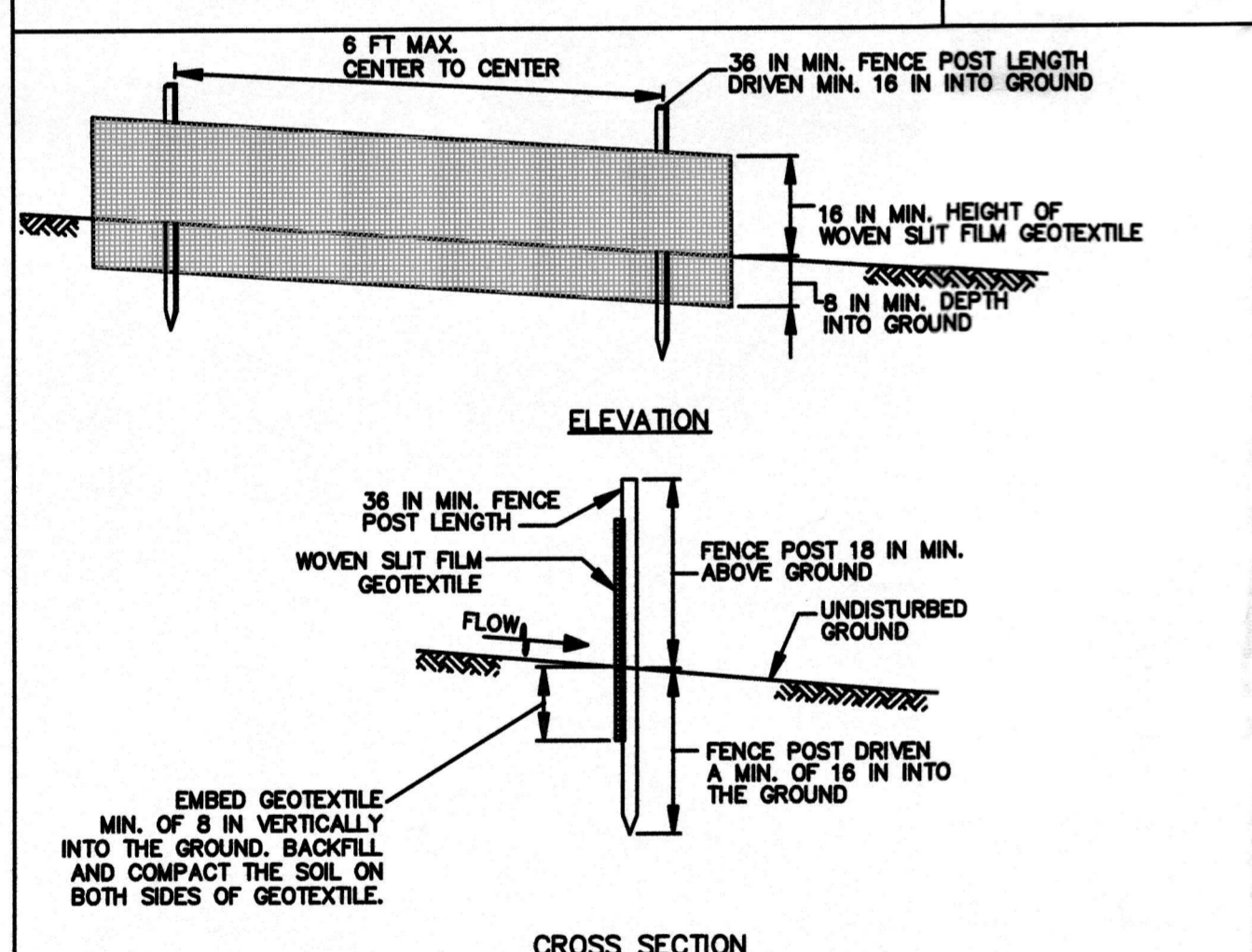
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



- CONSTRUCTION SPECIFICATIONS**
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 - PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
 - PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
 - PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
 - MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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DETAIL E-1 SILT FENCE



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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DETAIL E-1 SILT FENCE

- CONSTRUCTION SPECIFICATIONS**
- USE WOOD POSTS 1 1/2 x 1 1/2 x 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 - USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
 - USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Erosion & Sediment Control Notes

- Any area of exposed soil where no construction activity is anticipated for a period of longer than three weeks or has stopped for three weeks shall be temporarily stabilized.
- Following initial soil disturbance or re-disturbance, permanent stabilization shall be completed within:
 Seven calendar days after completion of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1); and
 Seven calendar days after reaching final grade for all other disturbed or graded areas.
 These provisions do not apply to those areas which are shown on the plan for material storage or for those areas on which actual construction activities are currently being performed.
- Stabilization will be considered adequate when the following conditions are met:
 - Water courses, stream banks and drainage easements shall be 100% stabilized and free from erosion and deposition.
 - Slopes steeper than 10% shall have at least 98% stable ground cover, as determined by the County Engineer.
 - All other areas shall have at least 85% stable ground cover, as determined by the County Engineer.
 - Grass vegetation shall have reached a minimum of 3 inches height or have been mowed back to a minimum of 2 inches of height.
- For all projects adjacent to or within 500 feet of a continuously flowing stream, no grading, excavating, removal or destruction of topsoil, trees or other vegetative cover, or construction activity shall result in point or non-point loading of suspended matter such that turbidity standards spelled out in the Water Resources Board legislative rules are violated. Said standards state that turbidity shall not exceed 10 NTU's over background turbidity when the background is 50 NTU's or less; or have more than a 10 percent increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTU's.
- An off-site borrow pit is not proposed for this project.
- Maintenance shall be performed as necessary to ensure that all erosion and sediment control measures are performing as designed. The Jefferson County Engineer may require modifications to an approved plan, required additional sediment and erosion control measures, or cause new plans to be submitted as a result of field inspection revealing the approved plans do not provide adequate protection.
- All residential and commercial/industrial building lots shall have a stabilized construction entrance installed prior to beginning construction on the lot.
- The developer/applciant is responsible for ensuring that all clearing, grading, drainage, construction and development is conducted in accordance with the erosion and sediment control plan.

PERMANENT SEEDING & SOD NOTES

- SCOPE: PLANTING PERMANENT, LONG-LIVED VEGETATIVE COVER ON GRADED OR CLEARED AREAS.
- STANDARD: PERMANENT SEEDING SHALL CONFORM TO ALL REQUIREMENTS OF THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," SECTION 20.0, PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE.

SPECIFICATIONS

- SOIL AMENDMENTS:
 - FOR SITES OF 5 ACRES OR UNDER, APPLY 90 LBS./AC. (2.0 LBS. ACTUAL NITROGEN/1000 SQ.FT.) AND 175 LBS./AC. (4 LBS. ACTUAL P205 AND K20/1000 SQ.FT.). A SLOW RELEASE UREAFORM FERTILIZER (46-0-0) MAY BE APPLIED TO AREAS RECEIVING LOW MAINTENANCE TO PROVIDE NITROGEN OVER A LONGER PERIOD OF TIME. FOR THIS TREATMENT, APPLY 150 LBS./AC. (3.5 LBS./1000 SQ.FT.) OF A UREAFORM FERTILIZER IN ADDITION TO THE ABOVE FERTILIZER APPLICATION AT TIME OF SEEDING.
 - LIME SHALL BE APPLIED AT A RATE OF 2 TONS/AC. (100 LBS./1000 SQ.FT.)
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3-5 INCHES OF SOIL.
 - SITES HAVING A DISTURBED AREA OVER 5 ACRES SHALL HAVE SOIL TESTS PERFORMED DETERMINE RATE.
- SEEDBED PREPARATION:
 - SOIL SHALL BE LOOSENESED TO A DEPTH OF 3-5 INCHES BY RAKING, DISKING, OR OTHER ACCEPTABLE MEANS PRIOR TO SEEDING.
- SEEDING:
 - USE THE MIXTURE SPECIFIED ON THE PERMANENT SEEDING SUMMARY.
 - APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER, OR HYDROSEEDER (SEEDING DEPTH SHOULD BE 1/4 ON CLAYEY SOILS AND 1/2 ON SANDY SOILS, WHEN USING OTHER THAN HYDROSEEDER METHOD OF APPLICATION. NOTE: IF HYDROSEEDING IS USED AND THE SEED AND FERTILIZER IS MIXED, THEY WILL BE MIXED ON SITE AND THE SEEDING SHALL BE IMMEDIATE WITHOUT INTERRUPTION.
- MULCHING
 - MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. MULCH MATERIALS AND APPLICATIONS SHALL CONFORM TO THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," SECTION 20.0, PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE.

PERMANENT STABILIZATION WITH SOD/TURFGRASS

- ALL SPECIFICATIONS, SITE PREPARATION, INSTALLATION AND MAINTENANCE OF SOD/TURFGRASS FOR PERMANENT, LONG-LIVED VEGETATIVE COVER SHALL CONFORM TO SECTION G-20-10 & 11 OF THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE AND THE STATE SOIL CONSERVATION COMMITTEE.

TEMPORARY SEEDING NOTES

GENERAL

- SCOPE: PLANTING SHORT-TERM VEGETATION TO STABILIZED, CLEARED OR GRADED AREAS SUBJECT TO EROSION FOR A PERIOD OF 14 DAYS OR MORE.
- STANDARDS: TEMPORARY SEEDING SHALL CONFORM TO ALL REQUIREMENTS OF THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," SECTION 20.0, PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE.
- EROSION & SEDIMENT CONTROL: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED 7 DAYS. ALL INTERIOR CONTROLS MUST BE STABILIZED IN 14 DAYS.

SPECIFICATIONS

- SITE PREPARATION:
 - PRIOR TO SEEDING INSTALL ALL REQUIRED EROSION AND SEDIMENT CONTROL MEASURES.
 - FINAL GRADING NOT REQUIRED FOR TEMPORARY SEEDING.
- SOIL AMENDMENTS:
 - FERTILIZER SHALL BE APPLIED AT THE RATE OF 600 LBS./AC. (15 LBS./1000 SQ.FT.) USING 10-10-10 OR EQUIVALENT.
 - LIME SHALL BE APPLIED AT A RATE OF 2 TONS/AC. (100 LBS./1000 SQ.FT.)
- SEEDBED PREPARATION
 - SOIL SHALL BE LOOSENESED TO A DEPTH OF 3-5 INCHES BY RAKING, DISKING, OR OTHER ACCEPTABLE MEANS PRIOR TO SEEDING.
- SEEDING:
 - USE THE MIXTURE SPECIFIED ON THE TEMPORARY SEEDING SUMMARY.
 - APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER DRILL, CULTIPACKER, OR HYDROSEEDER.
- MULCHING:
 - MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. MULCH MATERIALS AND APPLICATIONS SHALL CONFORM TO THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," SECTION 20.0, PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE, AND THE STATE CONSERVATION COMMITTEE.

TEMPORARY SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 6b) FROM TABLE 26				FERTILIZER RATE (10-10-10)	LIME RATE
No.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	
1	BARLEY	2.5 BU (12.2 LBS.)	3/1 - 4/30 BY 10/15	1-2 IN.	600 LBS./AC. (15 LBS./1000 S.F.) 2-TONS/AC. (100LBS./1000 SF)

PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 6b) FROM TABLE 25				FERTILIZER RATE (10-20-20)			LIME RATE
No.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20
3	TALL FENCE(85%) PERENNIAL REYGRASS(10%) KENTUCKY BLUEGRASS(5%)	125 LBS. 15 LBS. 10 LBS.	3/1-5/15 6/15-10/15		90 LBS./AC 21LBS./1000SF	175 LBS./AC 4.0LBS./1000SF	175 LBS./AC 4.0LBS./1000SF
							2 TONS/AC. 100LBS./1000SF

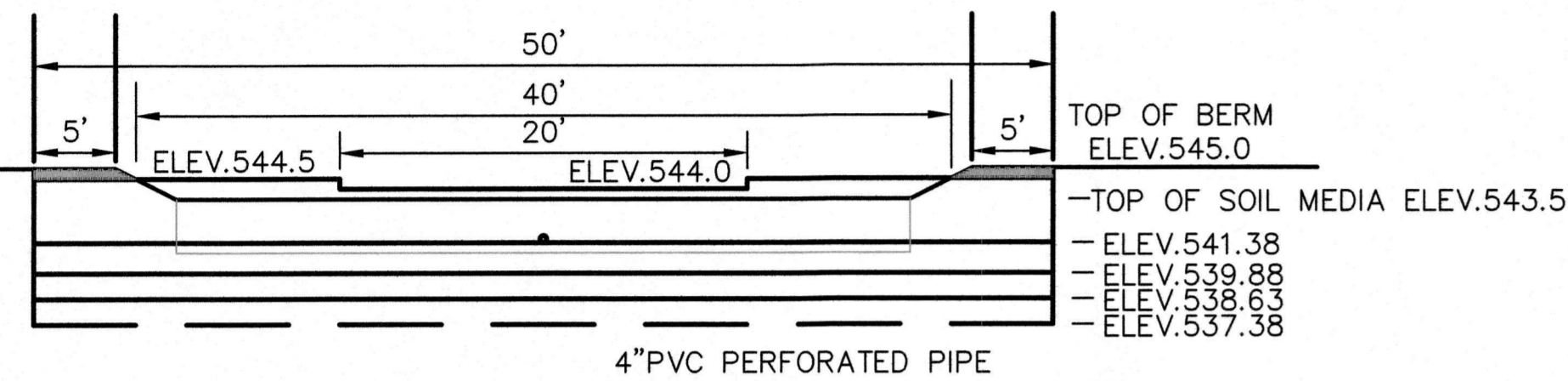
SOIL EROSION & SEDIMENT CONTROL DETAILS
ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8

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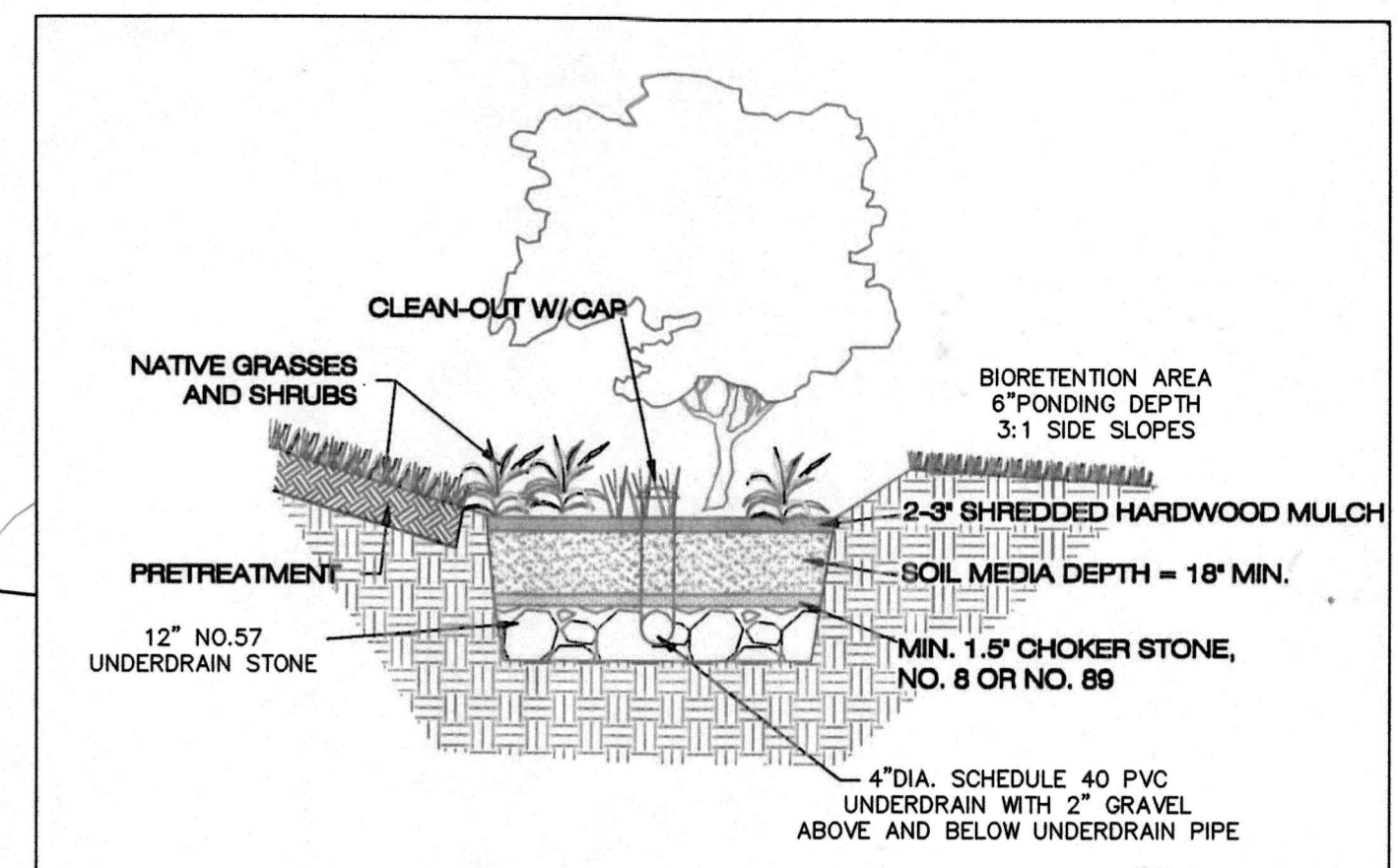
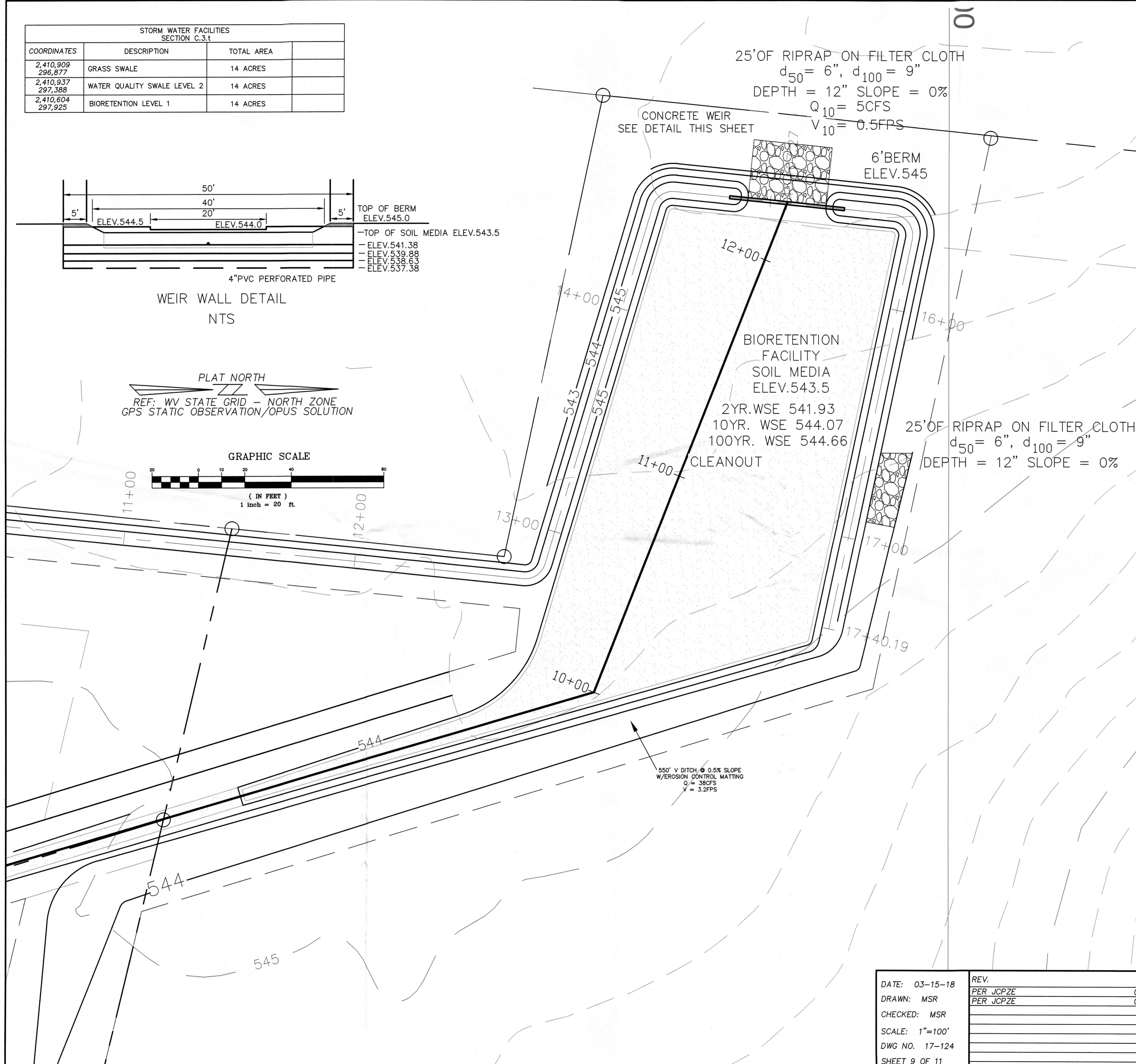
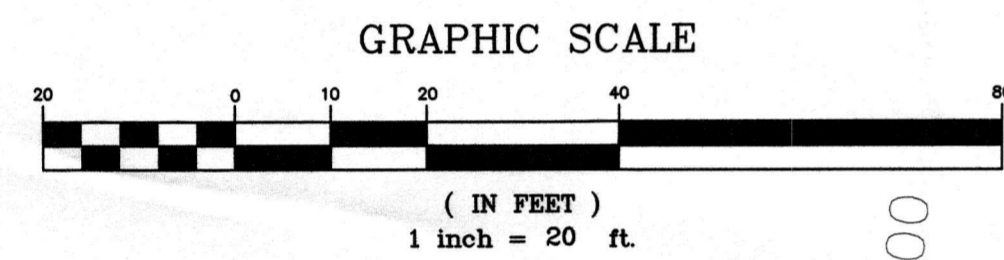
DATE: 03-15-18	REV.	DATE
DRAWN: MSR	PER JCPZE	01/2019
CHECKED: MSR		
SCALE: 1"=100'		
DWG NO. 17-124		
SHEET 8 OF 11		

STORM WATER FACILITIES SECTION C.3.t		
COORDINATES	DESCRIPTION	TOTAL AREA
2,410,909 296,877	GRASS SWALE	14 ACRES
2,410,937 297,388	WATER QUALITY SWALE LEVEL 2	14 ACRES
2,410,604 297,925	BIORETENTION LEVEL 1	14 ACRES



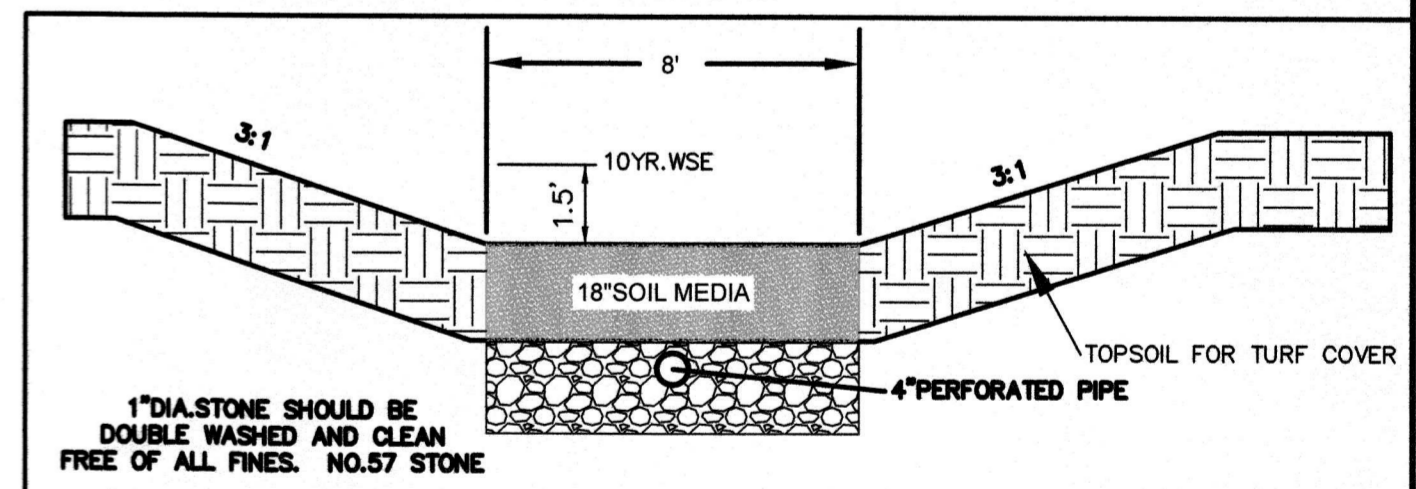
WEIR WALL DETAIL
NTS

PLAT NORTH
REF: WV STATE GRID - NORTH ZONE
GPS STATIC OBSERVATION/OPUS SOLUTION



DETAIL FOR LEVEL 1 BIORETENTION DESIGN
NOT TO SCALE

- BR-7.2. BIORETENTION INSTALLATION:
PER CHAPTER 4.2.3 OF THE WEST VIRGINIA STORM WATER MANAGEMENT & DESIGN GUIDANCE MANUAL.
- CONSTRUCTION OF THE BIORETENTION BASIN AREA MAY ONLY BEGIN AFTER THE ENTIRE ODA HAS BEEN STABILIZED WITH VEGETATION. IT MAY BE NECESSARY TO BLOCK CERTAIN CURB OR OTHER INLETS WHILE THE BIORETENTION AREA IS BEING CONSTRUCTED. THE PROPOSED SITE SHOULD BE CHECKED FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION.
 - THE DESIGNER AND THE INSTALLER SHOULD HAVE A PRE-CONSTRUCTION MEETING, CHECKING THE BOUNDARIES OF THE ODA AND ACTUAL INLET ELEVATIONS TO ENSURE THEY CONFORM TO ORIGINAL DESIGN. SINCE OTHER CONTRACTORS MAY BE RESPONSIBLE FOR CONSTRUCTING PORTIONS OF THE SITE, IT IS QUITE COMMON TO FIND SUBTLE DIFFERENCES IN SITE GRADING, DRAINAGE AND PAVING ELEVATIONS THAT CAN PRODUCE HYDRAULICALLY IMPORTANT DIFFERENCES FOR THE PROPOSED BIORETENTION AREA. THE DESIGNER SHOULD CLEARLY COMMUNICATE, IN WRITING, ANY PROJECT CHANGES DETERMINED DURING THE PRE-CONSTRUCTION MEETING TO THE INSTALLER AND THE PLAN REVIEW/INSPECTION AUTHORITY.
 - TEMPORARY APPROVED EROSION AND SEDIMENT CONTROLS ARE NEEDED DURING CONSTRUCTION OF THE BIORETENTION AREA TO DIVERT STORM WATER AWAY FROM THE BIORETENTION AREA UNTIL IT IS COMPLETED. SPECIAL PROTECTION MEASURES SUCH AS EROSION CONTROL FABRICS MAY BE PROCESS, IN CASES WHERE THE BIORETENTION IS CO-LOCATED WITH EROSION AND SEDIMENT CONTROL PRACTICES (E.G. SEDIMENT TRAPS), THE CONDITIONS NOTED IN SECTION BR-7.1. OF THE WEST VIRGINIA STORM WATER MANAGEMENT & DESIGN GUIDANCE MANUAL MUST BE FOLLOWED.
 - ANY PRE-TREATMENT CELLS SHOULD BE EXCAVATED FIRST AND THEN SEALED TO TRAP SEDIMENTS.
 - EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATED THE BIORETENTION AREA TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE BIORETENTION AREA. CONTRACTORS SHOULD USE A CELL CONSTRUCTION APPROACH IN LARGER BIORETENTION BASINS, WHEREBY THE BASIN IS SPLIT INTO 500 TO 1,000 SQ. FT. TEMPORARY CELLS WITH A 10-15 FOOT EARTH BRIDGE IN BETWEEN, SO THAT CELLS CAN BE EXCAVATED FROM THE SIDE.
 - IT MAY BE NECESSARY TO RIP THE BOTTOM SOILS TO A DEPTH OF 6 TO 12 INCHES TO PROMOTE GREATER INFILTRATION.
 - IF USING A FILTER FABRIC, PLACE THE FABRIC ON THE SIDES OF THE BIORETENTION AREA WITH A 6 INCH OVERLAP ON THE SIDES. IF AN UNDERDRAIN STONE STORAGE LAYER WILL BE USED, PLACE APPROPRIATE DEPTH OF NO. 57 STONE ON THE BOTTOM. INSTALL THE PERFORATED UNDERDRAIN PIPE, PACK NO. 57 STONE TO 3 INCHES ABOVE THE UNDERDRAIN PIPE. ON TOP OF THE NO. 57 STONE, ADD 2 INCHES OF CHOKER STONE (NO. 8 OR NO. 89 STONE) THEN 2 TO 4 INCHES OF CONSTRUCTION SAND AS A FILTER BETWEEN THE UNDERDRAIN AND THE SOIL MEDIA LAYER. IF NO STONE STORAGE LAYER IS USED, START WITH 6 INCHES OF NO. 57 STONE ON THE BOTTOM, AND PROCEED WITH THE LAYERING AS DESCRIBED ABOVE.
 - DELIVER THE SOIL MEDIA FROM AN APPROVED VENDOR, AND STORE IT ON THE ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING. APPLY THE MEDIA IN 12 INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE BIORETENTION AREA IS ACHIEVED, WAIT A FEW DAYS TO CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA, AS NEEDED, TO ACHIEVE THE DESIRED ELEVATION.
 - PREPARE PLANTING HOLES FOR ANY TREES AND SHRUBS, INSTALL THE VEGETATION, AND WATER ACCORDINGLY. INSTALL ANY TEMPORARY IRRIGATION.
 - PLACE THE SURFACE COVER IN BOTH CELLS (MULCH, RIVER STONE OR TURF), DEPENDING ON THE DESIGN. IF COIR OR JUTE MATTING WILL BE USED IN LIEU OF MULCH, THE MATTING WILL NEED TO BE INSTALLED PRIOR TO PLANTING (STEP 9), AND HOLES OR SLITS WILL HAVE TO BE CUT IN THE MATTING TO INSTALL THE PLANTS.
 - INSTALL THE PLANT MATERIALS AS SHOWN IN THE LANDSCAPING PLAN, AND WATER THEM DURING WEEKS OF NO RAIN FOR THE FIRST TWO MONTHS.
 - IF CURB CUTS ARE BLOCKED DURING BIORETENTION INSTALLATION, UNBLOCK THESE AFTER THE DRAINAGE AREA AND SIDE SLOPE HAVE GOOD VEGETATIVE COVER. IT IS RECOMMENDED THAT UNBLOCKING CURB CUTS AND INLETS TAKE PLACE AFTER TWO TO THREE STORM EVENTS IF THE DRAINAGE AREA INCLUDED NEWLY INSTALLED ASPHALT, SINCE NEW ASPHALT TENDS TO PRODUCE A LOT OF FINES AND GRIT DURING THE FIRST SEVERAL MONTHS.
 - CONDUCT THE FINAL CONSTRUCTION INSPECTION (SEE APPENDIX A OF THE WEST VIRGINIA STORM WATER MANAGEMENT & DESIGN GUIDANCE MANUAL). THEN LOG THE GPS COORDINATES FOR EACH BIORETENTION FACILITY AND SUBMIT THEM FOR ENTRY INTO THE LOCAL MAINTENANCE TRACKING DATABASE.



WATER QUALITY SWALE
@ 0.5% SLOPE
NOT TO SCALE

STORM WATER MANAGEMENT PLAN
ANCIENT OAKS ESTATES
PROPERTY OF
LARRY H. & DONNA K. BOYD
DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8

ROBERTS LAND SURVEYING
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DWG NO. 17-124		
SHEET 9 OF 11		

GS-7.2. GRASS SWALE INSTALLATION
 Step 1. Grade the Grass Swale to the final dimensions shown on the plan. Excavators or backhoes should work from the sides to grade and excavate the swale to the appropriate design dimensions. Excavating equipment should have scoops with adequate reach so they do not have to sit inside the footprint of the open channel area. The final grading should rake or scarify the bottom as needed for seed preparation.
 Step 2. Seed (or Hydro-seed) the bottom and banks of the open channel, and peg in erosion control fabric or blanket where needed. After initial planting a biodegradable erosion control fabric should be used, conforming to WVDEP.
 Step 3. Conduct the final construction inspection and develop a punch list for facility acceptance.

Table GS-7. Suggested Maintenance Activities and Schedule for Grass Swales

Maintenance Activity	Frequency
Mow grass channels and dry swales during the growing season to maintain grass heights in the 4" to 6" range.	As needed
Ensure that the CDA is clear of debris. Reseed undercut and eroded areas as needed at swale inflow and outflow structures. Inspect upstream and downstream of check dams for evidence of undercutting or erosion, and remove trash or blockages at weepholes.	Quarterly
Reseed as needed during fall seeding season to maintain 90% turf cover. Remove any accumulated sand or sediment deposits behind check dams. Examine channel bottom for evidence of erosion, braiding, excessive ponding or dead grass. Check inflow points for clogging and remove any sediment. Inspect side slopes and grass filter strips for evidence of any rill or gully erosion and repair.	Annual inspection

Annual inspections are used to trigger maintenance operations such as sediment removal, spot revegetation and inlet stabilization. Example maintenance inspection checklists for disconnection can be found in Appendix A of the Manual.

Table BR-9. Recommended Maintenance Tasks for Bioretention Practices

Maintenance Tasks	Frequency
<ul style="list-style-type: none"> For the first 6 months following construction, the practice and CDA should be inspected at least twice after storm events that exceed 1/2 in. of rainfall. Conduct any needed repairs or stabilization. Inspectors should look for bare or eroding areas in the CDS or around the Bioretention area, and make sure they are immediately stabilized with grass cover. One-time spot fertilization may be needed for initial plantings. Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall. Remove and replace dead plants. Up to 10% of the plant stock may die off in the first year, so construction contracts should include a care and replacement warranty to ensure that vegetation is properly established and survives during the first growing season following construction. 	Upon establishment
<ul style="list-style-type: none"> Mowing of grass filter strips and Bioretention with turf cover Check curb cuts and inlets for accumulated grit, leaves, and debris that may block inflow 	At least 4 times a year
<ul style="list-style-type: none"> Spot weeding, trash removal, and mulch raking 	Twice during growing season
<ul style="list-style-type: none"> Add reinforcement planting to maintain desired vegetation density Remove invasive plants using recommended control methods Remove any dead or diseased plants Stabilize the CDA to prevent erosion 	As needed
<ul style="list-style-type: none"> Conduct a maintenance inspection Supplement mulch in voided areas to maintain a 3 inch layer Prune trees and shrubs Remove sediment in pre-treatment cells and inflow paths 	Annually
<ul style="list-style-type: none"> Remove sediment in pre-treatment cells and inflow points Remove and replace the mulch layer 	Once every 2 to 3 years

Table GS-5. Recommended Vegetation and Maximum Flow Velocities for Grass Swales.

Vegetation Type	Slope (%)	Maximum Velocity (ft/s)	
		Erosion resistant soil	Highly Erodible Soil ¹
Bermuda Grass	0-5	6	4.5
	5-10	5	4
	>10	4	3
Kentucky Bluegrass Reed Canary Grass Tall Fescue Grass Mixture	0-5	5	4
	5-10	4	3
	>10	3	2.5
Red Fescue Ryegrass	0-5	5	4

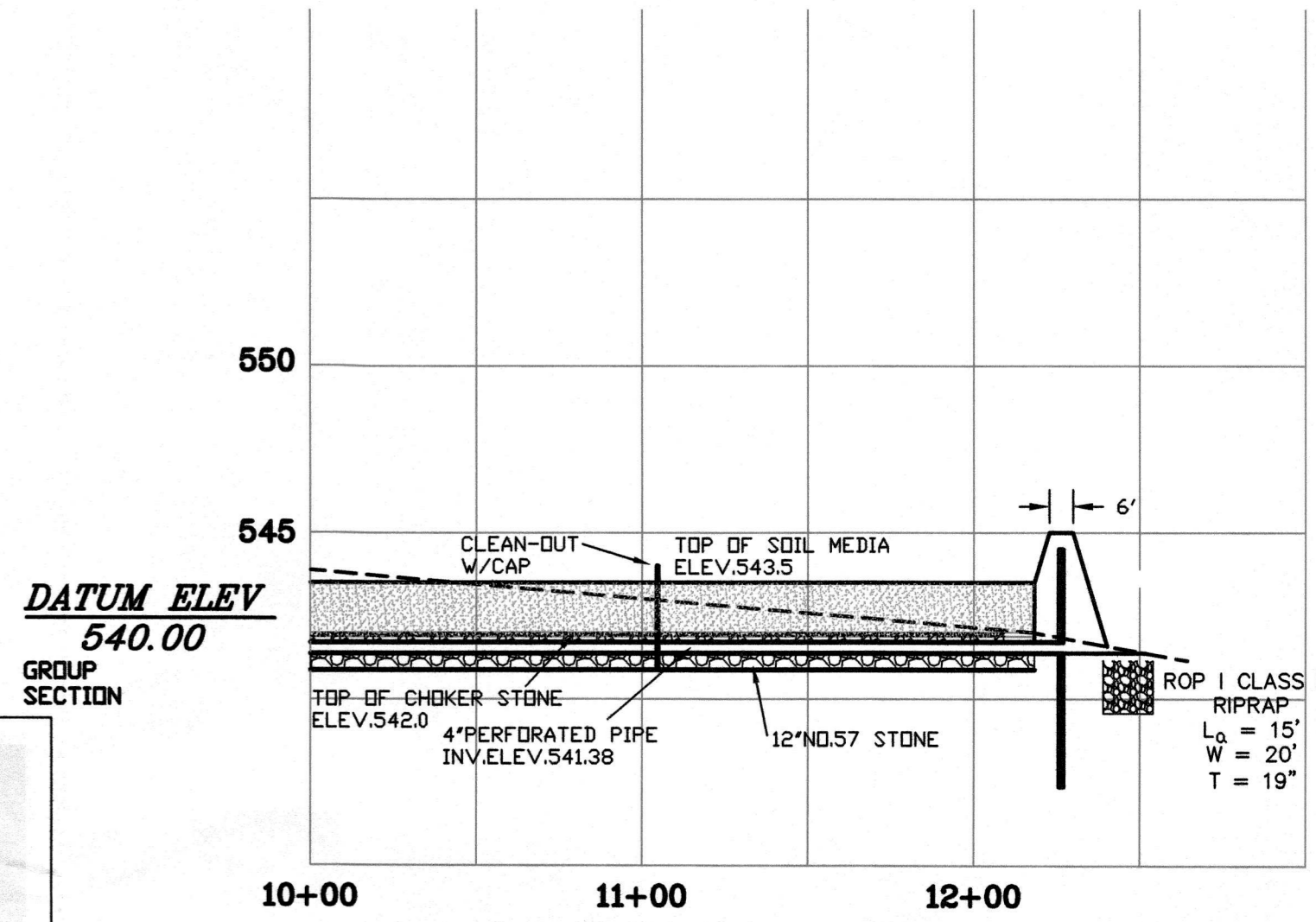
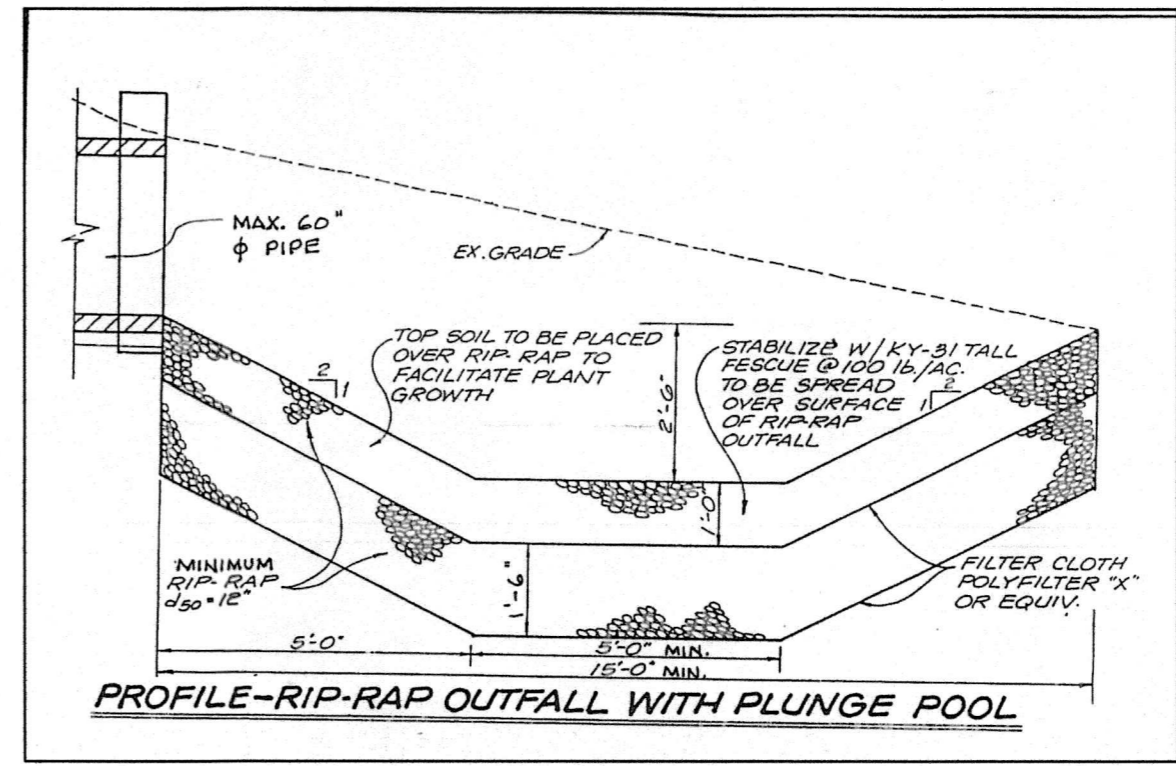
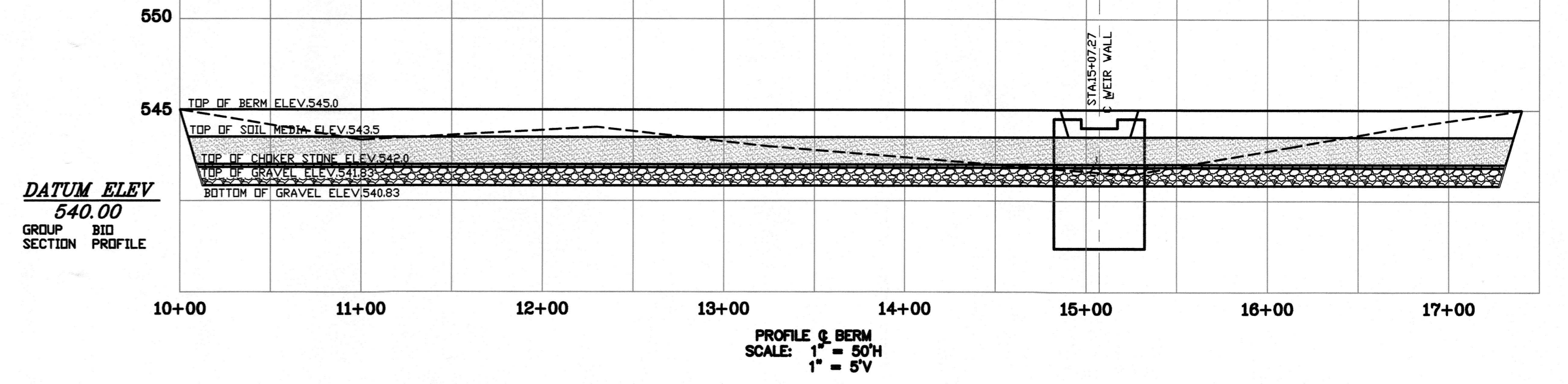
¹An erodibility factor (K) greater than 0.35 would indicate a highly erodible soil. Erodibility (K-factor) can be obtained from local NRCS offices.
 Source: WVDEP (2006)

Table BR-5. Soil Media Criteria and Testing for Bioretention

Soil Media Criterion	Description	Standard(s)
General Composition	Soil media must have the proper proportions sand, fines, and organic matter to promote plant growth, drain at the proper rate, and filter pollutants	70% to 88% sand; 8% to 26% top soil, and 3% to 5% organic matter (aged compost)
Sand	Locally-approved pulverized glass may be substituted if the local authority undertakes testing to verify compliance with the specification and also lack of heavy metals	Sieve No. 4 No. 8 No. 16 No. 30 No. 100
Top Soil	Loamy sand or Sandy Loam	USDA Textural Triangle
Organic Matter	Well aged clean-compost	Appendix D
P-Index or Phosphorus (P) content	Soil media with high P levels will export P through the media and potentially to downstream conveyances or receiving waters	P content = 7 to 23 mg/kg

Table BR-7. Bioretention Material Specifications

Material	Specification	Notes
Cation Exchange Capacity (CEC)	The CEC is determined by the amount of humus or organic matter. Higher CEC will promote pollutant removal	CEC > 10 milliequivalents per 100 grams
Infiltration Rate	This refers to the infiltration rate of the soil media, and not the underlying soil. A minimum rate is required to allow the soil media to properly drain	Minimum Infiltration Rate = 1 - 2 inches/hour (most soil media will have much higher rates)
Soil Media Depth	The depth of soil media for various applications	Soil media depths for Level 1 and Level 2 design are specified in Table BR-1. If trees are included in the bioretention planting plan, tree planting holes in the filter bed must be at least 4 feet deep to provide enough soil volume for the root structure of mature trees. In addition, higher proportions of topsoil (30%) and aged compost (20%) should be added to these planting holes compared to the rest of the soil media. Turf, perennials or shrubs should be used instead of trees to landscape shallower filter beds.
Filter Media	• 70%-88% sand • 8%-26% top soil • 3%-5% organic matter in the form of leaf compost • Supplied by qualified vendor • Refer to Table BR-5 for specific media material composition	Minimum depth of 24 in.; 36 in. recommended (18 in. if an infiltration sump is used) The volume of filter media used should be based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Between 7 and 21 mg/kg of P in the soil media.	Qualified vendors should test media in batches.
Mulch Layer	Use aged, shredded hardwood bark mulch	Layer 2 to 3 in. layer on the surface of the filter bed.
Alternative Surface Cover	Use river stone or pea gravel, and just matting or turf cover	Layer 2 to 3 in. layer to suppress weed growth.
Top Soil For Turf Cover	Loamy sand or sandy loam texture, with less than 5% clay content, pH corrected to between 6 and 7, and an organic matter content of at least 2%.	3 inches filled to surface layer.
Filter Fabric (optional)	Woven monofilament fabric or non-woven geotextile as per AASHTO M-288 (do not use silt fence)	Apply dry to the side slopes and, optionally, in a 2 ft. wide strip directly above the underdrain pipes.
Choking Layer	Layer of choker stone (typically No.8 or No.89 washed gravel), which is laid over the underdrain stone at a depth of 1 in. of choker stone for every 1 ft. of overlying soil media. An alternative is needle-punched, non-woven geotextile with the flow rate of > 110 gal/min./sq. ft. (ONLY if stone choking layer cannot fit into the practice)	



WEST VIRGINIA STORMWATER MANAGEMENT & DESIGN GUIDANCE MANUAL

4.2.3 BIORETENTION

4.2.3 BIORETENTION

STORM WATER MANAGEMENT DETAILS
ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8

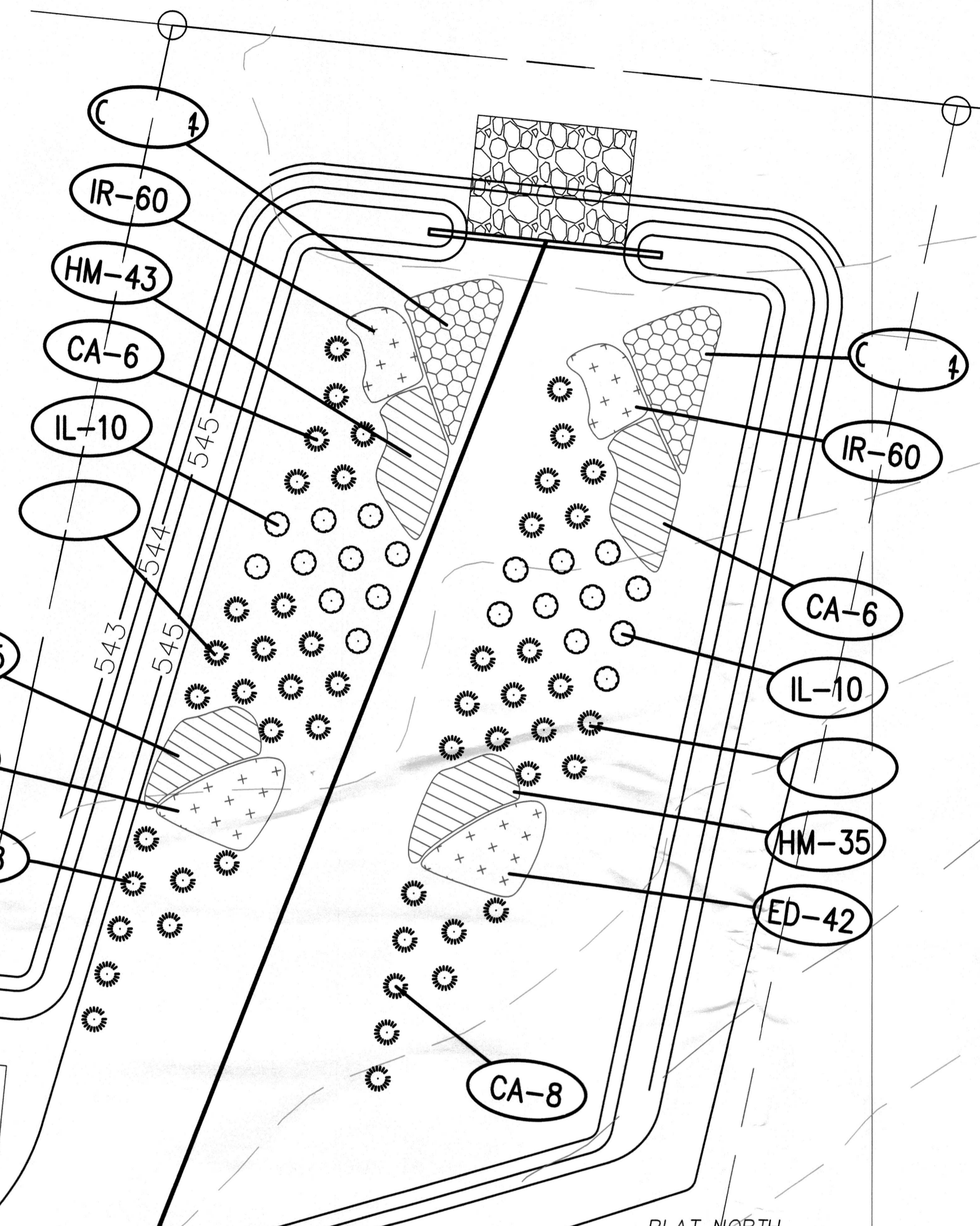
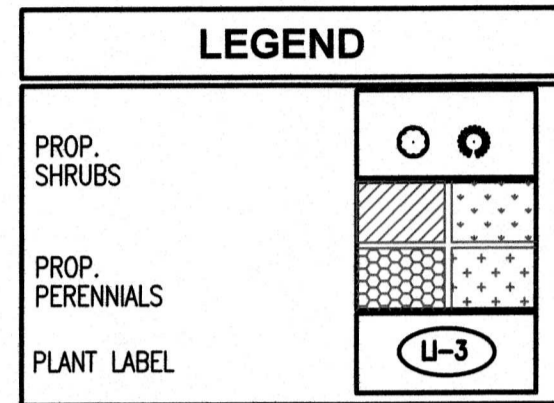
ROBERTS LAND SURVEYING
 2068 PALMER ROAD - HEDGESVILLE, WV 25427
 304.671.5406 miker002395@frontier.com

DATE:	REV.	DATE
03-15-18	PER JCPZE	01/2019
DRAWN: MSR		
CHECKED: MSR		
SCALE: 1"=100'		
DWG NO. 17-124		
SHEET 10 OF 11		

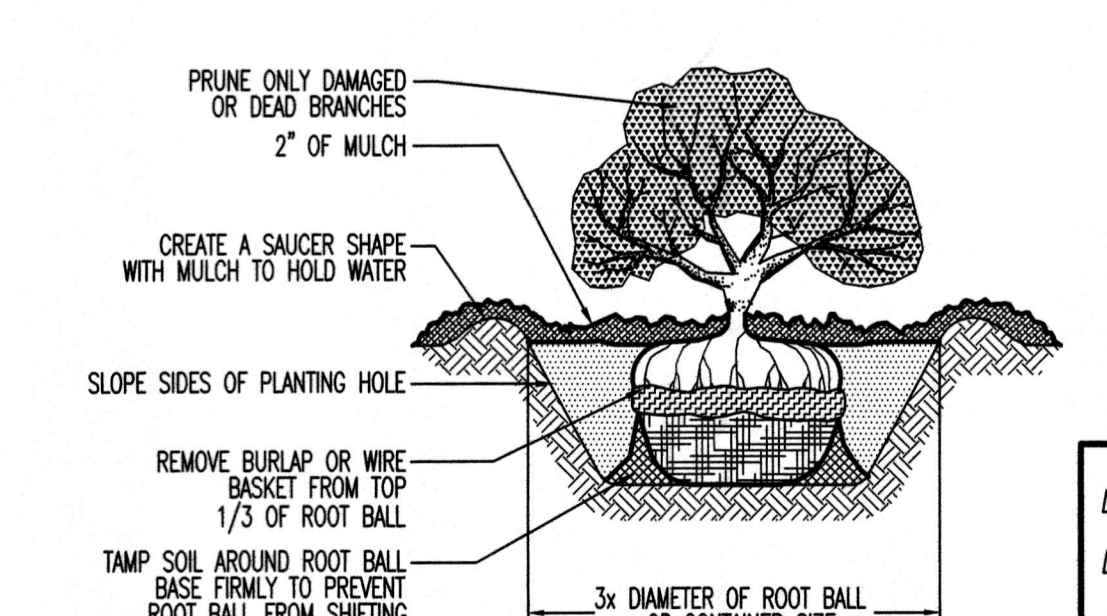
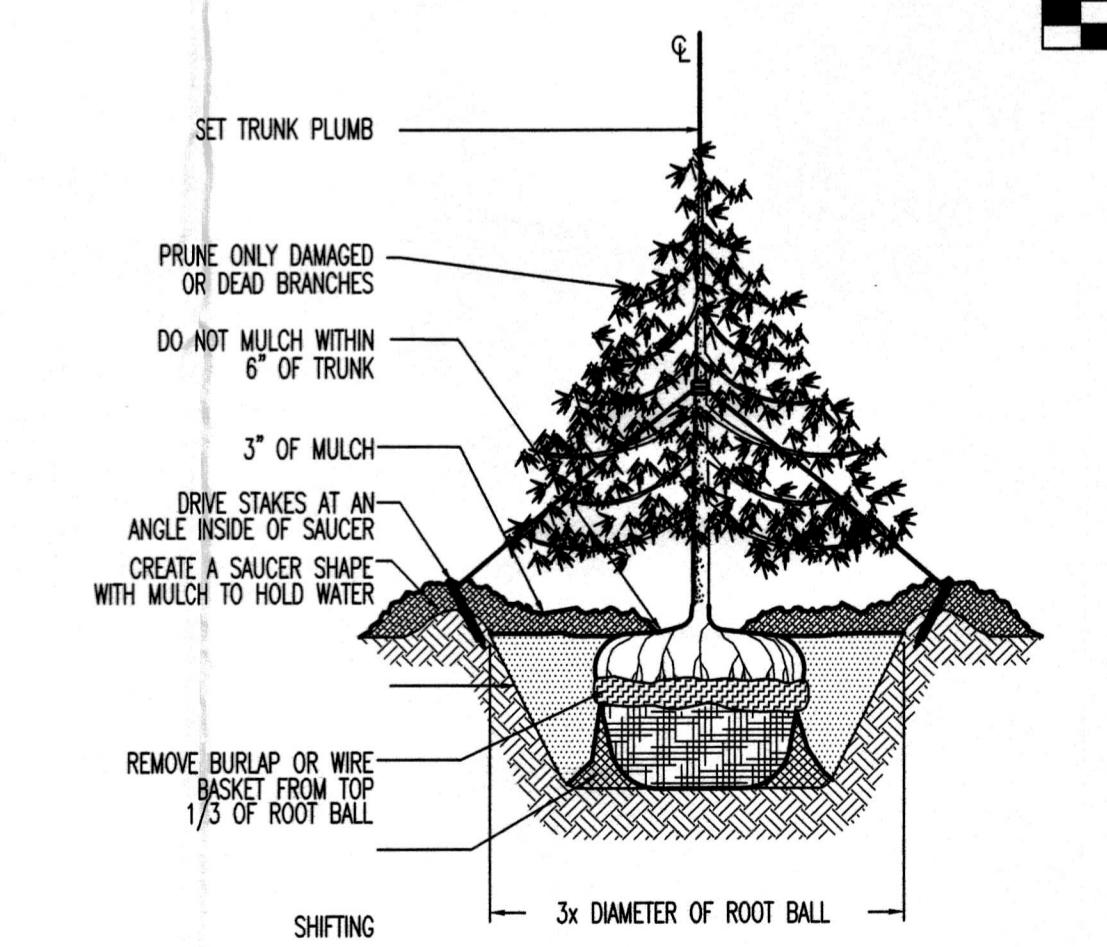
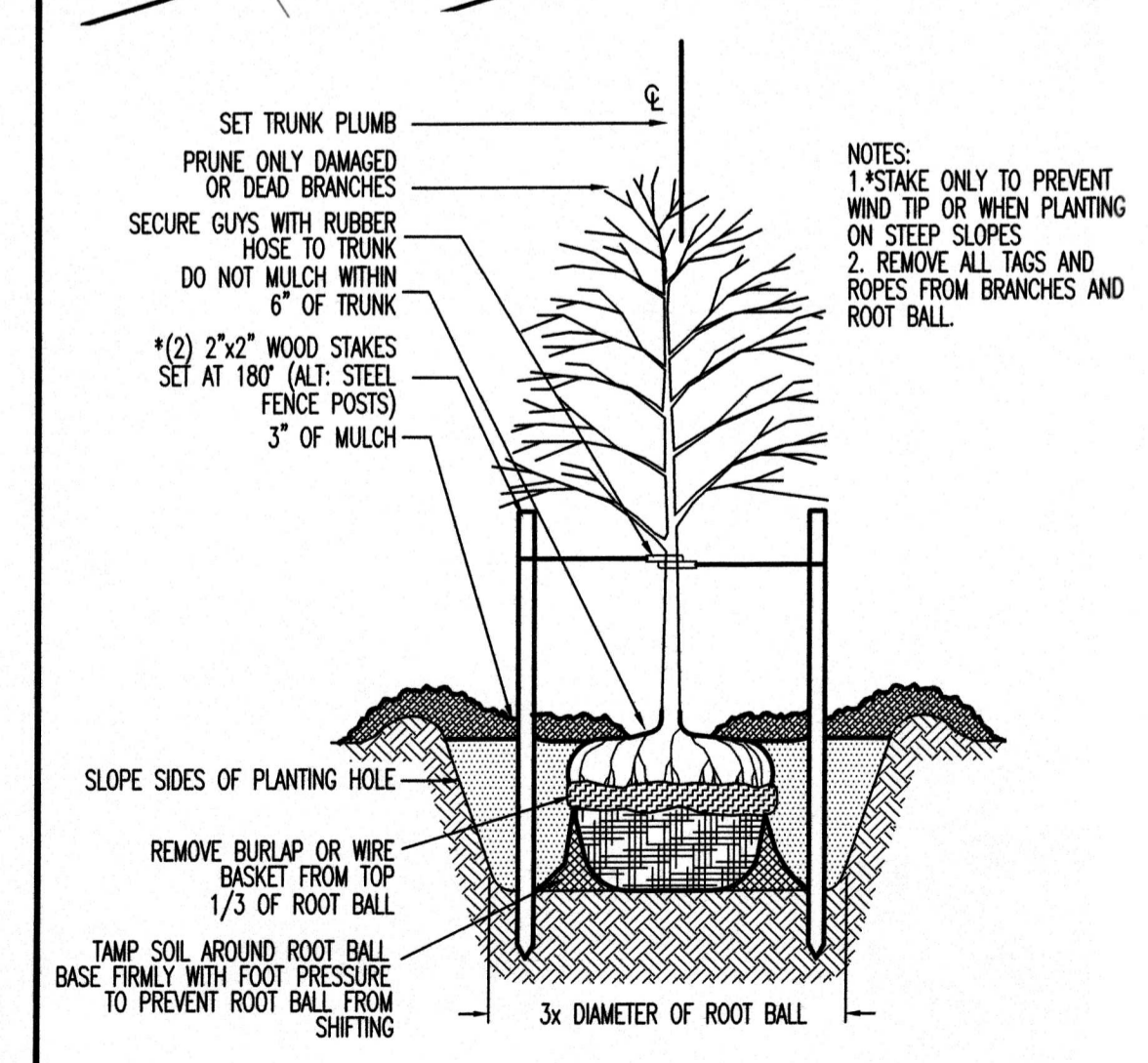
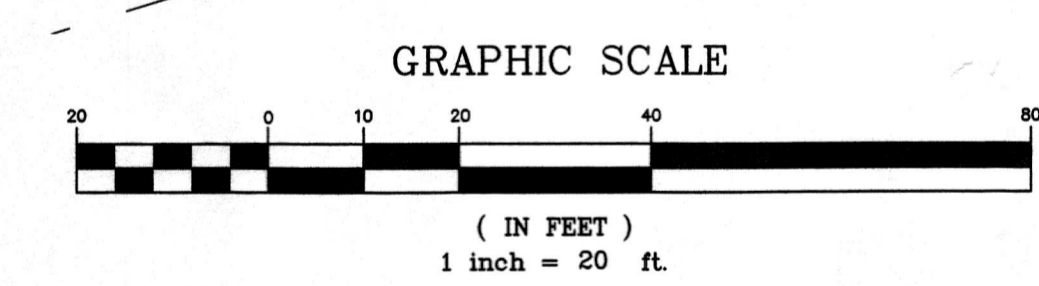
BIORETENTION PLANT LIST

SHRUBS					
SYMBOL	BOTANICAL	COMMON NAME	SIZE	SPACING	QUANTITY
CA	CLETHRA ALNIFOLIA	SWEET PEPPER BUSH	24"-36" HT.	10' O.C.	12
IL	ILEX LAEVIGATA	SMOOTH WINTERBERRY	24"-36" HT.	10' O.C.	20
IV	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	24"-36" HT.	10' O.C.	22

PERENNIALS					
SYMBOL	BOTANICAL	COMMON NAME	SIZE	SPACING	QUANTITY
CP	CALTHA PALUSTRIS	MARSH MARIGOLD	1 GAL. CONT.	18" O.C.	408
ED	EUPATORIUM DUBIUM	JOE PYE WEED	1 GAL. CONT.	36" O.C.	84
HM	HIBISCUS MOSCHEUTOS	SWAMP ROSE MALLOW	1 GAL. CONT.	36" O.C.	86
IR	IRIS VIRGINICA	VIRGINIA IRIS	1 GAL. CONT.	24" O.C.	120



PLAT NORTH
 REF: WV STATE GRID - NORTH ZONE
 GPS STATIC OBSERVATION/OPUS SOLUTION



SCOPE OF WORK
 THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE ALL LANDSCAPE WORK AS SHOWN ON THE PLANS AND SPECIFICATIONS.

NOTE: IF THE CONTRACTOR BIDS ACCORDING TO THE PLANT LIST, HE/SHE SHOULD THOROUGHLY CHECK THE PLANT LIST QUANTITIES WITH THE SYMBOLS DRAWN ON THE PLAN. TOP BE SURE THERE ARE NO DISCREPANCIES. IF THERE IS A DISCREPANCY BETWEEN THE DRAWING AND THE LIST ON THE PLANS, THE DRAWING TAKES PRECEDENCE.

STANDARDS
 A. ALL PLANT MATERIAL WILL CONFORM TO THE CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA).
 B. PLANT MATERIAL MUST BE SELECTED FROM NURSERIES THAT HAVE BEEN INSPECTED AND CERTIFIED BY STATE PLANT INSPECTORS.
 C. COLLECTED MATERIAL MAY BE USED ONLY WHEN APPROVED BY OWNER'S REPRESENTATIVE.
 D. NOMENCLATURE WILL BE IN ACCORDANCE WITH HORTUS II BY L.H. BAILEY.

SUBSTITUTIONS: PRE-BID
 IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO MAKE EVERY REASONABLE EFFORT TO FIND THE MATERIAL SPECIFIED BY THE ARCHITECT. THE LANDSCAPE CONTRACTOR MAY OFFER SUBSTITUTIONS TO THE LANDSCAPE ARCHITECT FOR HIS/HER CONSIDERATION. THE LANDSCAPE CONTRACTOR WILL NOTIFY THE LANDSCAPE ARCHITECT IF THERE ARE KNOWN DISEASES OR INSECT RESISTANT SPECIES THAT CAN BE SUBSTITUTED FOR A SELECTED PEST-PRONE PLANT. THE CONTRACTOR SHALL SUBMIT A BIDE BID AS PER PLAN PLUS PRICE CLARIFICATIONS FOR ALL RECOMMENDED SUBSTITUTIONS.

SUBSTITUTIONS: POST-BID
 IT IS THE INTENT TO ELIMINATE POST-BID SUBSTITUTIONS. HOWEVER, IN THE EVENT THAT THE CONTRACT MATERIAL HAS BECOME UNAVAILABLE, AN APPROPRIATE SUBSTITUTION MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE.

UTILITIES AND UNDERGROUND FEATURES
 THE LANDSCAPE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AND/OR THE GENERAL CONTRACTOR IN ADVANCE OF CONSTRUCTION TO LOCATE UTILITIES.

A. IF THERE IS A CONFLICT WITH THE UTILITIES AND THE PLANTING, THE LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR RELOCATING PLANTS PRIOR TO THE PLANTING PROCESS. ANY COST DUE TO RELOCATING AFTER PLANTING SHALL BE BORNE BY THE OWNER.

DRAINAGE
 IF PLANTS ARE TO BE INSTALLED IN AREAS THAT SHOW OBVIOUS POOR DRAINAGE, AND THE PLANTS ARE INAPPROPRIATE FOR THAT CONDITION, THE LANDSCAPE CONTRACTOR SHALL BE RELOCATED, THE CONTRACT SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE CORRECTION AT A NEGOTIATED COST, OR THE PLANT SELECTION MODIFIED BY THE LANDSCAPE ARCHITECT TO ACCOMMODATE THE POOR DRAINAGE SITUATION.

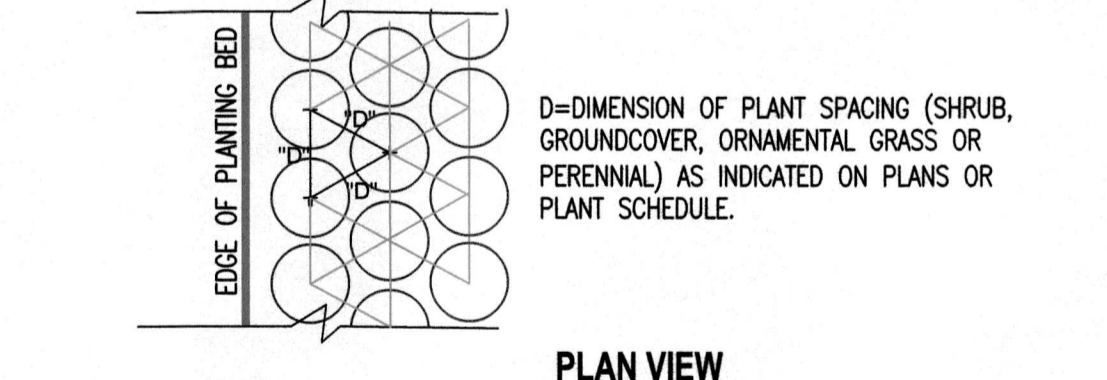
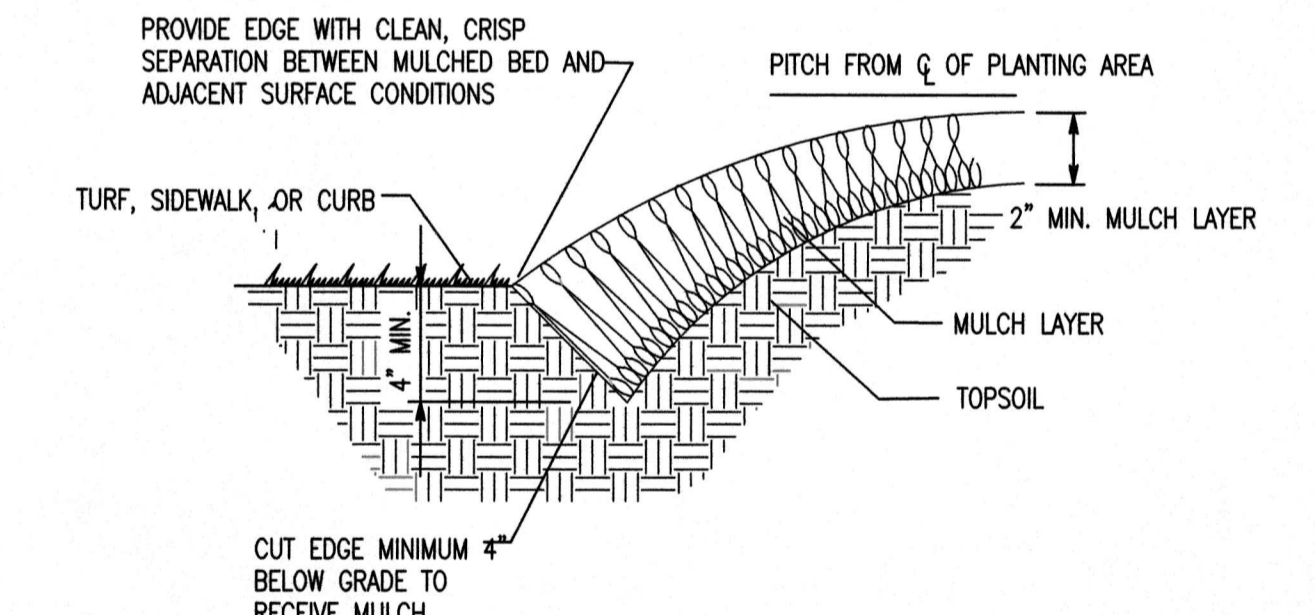
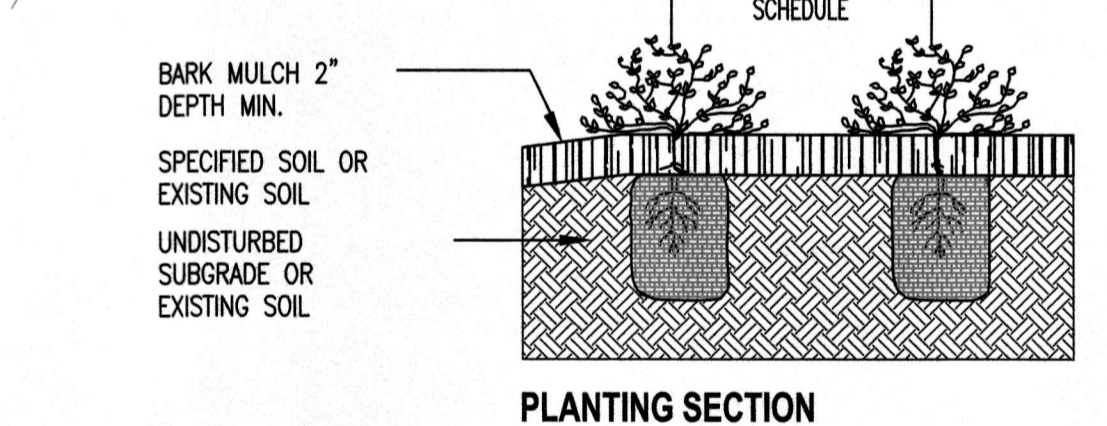
WARRANTY
 A. THE STANDARD WARRANTY IS FOR A ONE (1) YEAR PERIOD, EXCLUDING BULBS, SOD AND ANNUALS, COMMENCING ON THE DATE OF INITIAL ACCEPTANCE. ALL PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD.
 B. BALLED AND BURLAPPED (B&B)
 1. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH FIRM ROOT BALLS FREE OF NOXIOUS WEEDS. THERE SHOULD BE NO EXCESS SOIL ON TOP OF THE ROOT BALL OR AROUND THE TRUNK.
 2. BALL SIZE SHALL BE IN ACCORDANCE WITH AREA STANDARDS.
 3. CALIPER AND HEIGHT MEASUREMENTS: IN SIZE GRADING B&B SINGLE-TRUNK TREES, CALIPER SHALL TAKE PRECEDENCE OVER HEIGHT. CALIPER OF THE TRUNK SHALL BE TAKEN 6" ABOVE THE GROUND LEVEL (UP TO INCLUDING 4" CALIPER SIZE) AND 12" ABOVE THE GROUND LEVEL OF LARGER TREES. FOR MULTIPLE-TRUNK TREES, HEIGHT MEASUREMENT SHALL TAKE PRECEDENCE OVER CALIPER.
 C. CONTAINER-GROWN STOCK
 1. THE SIZE OF CONTAINER-GROWN SHRUBS IS MEASURED BY HEIGHT AND WIDTH OF PLANT. CONTAINER-GROWN TREES ARE MEASURED BY THE SAME STANDARDS LISTED IN B.3 ABOVE. THE ROOT SYSTEM OF CONTAINER-GROWN PLANTS SHALL BE WELL-DEVELOPED AND WELL-DISTRIBUTED THROUGHOUT THE CONTAINER.
 2. ALL CONTAINER-GROWN TREES AND SHRUBS THAT HAVE CIRCLING AND Matted ROOTS SHALL BE TREATED IN THE FOLLOWING MANNER PRIOR TO PLANTING: USING A KNIFE OR SHARP BLADE, MAKE 4-5 CUTS, 1" DEEP, THE LENGTH OF THE ROOT BALL, TO CUT ALL CIRCLING ROOTS. SEE PLANTING PROCEDURES FOR ALL CONTAINER-GROWN TREES & SHRUBS IN THIS SECTION.
 3. ALL CONTAINER-GROWN PLANTS SHOULD BE GROUPED AND WATERED DAILY UNTIL THEY ARE PLANTED IN THE LANDSCAPE. THE SOIL SHALL BE KEPT MOIST WITH THE EQUIVALENT OF ONE INCH OF RAINFALL PER WEEK.

A. PRUNING SHALL BE DONE BEFORE PLANTING OR DURING THE PLANTING OPERATION. PRUNING DETAIL FOR TREES IN THIS SECTION.
 ALL PLANT MATERIAL IN TRANSIT SHALL BE COVERED TO KEEP MATERIAL FROM DRYING OUT. THE COVERING SHALL COMPLY WITH STATE AND LOCAL LAWS PERTAINING TO THE TRANSPORT OF MATERIALS.
 C. TREES SHALL BE PLACED IN AN UPRIGHT POSITION WITH THE ROOTBALL COVERED BY MULCH AND KEPT MOIST. TREES AND SHRUBS SHOULD NOT BE LEFT ON SITE UNPLANTED FOR MORE THAN 24 HOURS WITHOUT ADEQUATE WATER TO INSURE ROOTS SURVIVAL.

INSPECTION
 A. PLANTS MAY BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE AT THE PLACE OF GROWTH OR HOLDING YARD FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AS TO QUALITY, SIZE AND VARIETY.
 B. PLANTS DAMAGED IN HANDLING OR TRANSPORTATION CAN BE REJECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
 C. STATE NURSERY INSPECTION CERTIFICATES SHALL BE FURNISHED TO THE LANDSCAPE ARCHITECT UPON REQUEST.

PLANTING PROCEDURES FOR ALL CONTAINER-GROWN TREES & SHRUBS
 A. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER.
 B. FOR UNTREATED PLASTIC CONTAINER GROWN PLANTS WITH CIRCLING ROOTS, USE A SHARP KNIFE TO MAKE 1" CUTS THE LENGTH OF THE ROOTBALL.
 C. PLANT SHRUB TO TREE A MINIMUM OF 1/8 OF THE HEIGHT OF THE ROOTBALL ABOVE EXISTING GRADE.
 D. APPLY A 2 TO 3" THICK LAYER OF APPROVED MULCH. KEEP MULCH 6" AWAY FROM THE TRUNK OF ALL TREES AND SHRUBS.
 E. PLANTS GROWN IN ROOT CONTAINMENT BAGS MUST HAVE THE BAGS REMOVED DURING THE PLANTING OPERATION. NO ADDITIONAL SLASHING OF THE ROOTBALL IS NECESSARY.

- MAINTENANCE OF LANDSCAPING NOTES:**
- ALL LANDSCAPED AREA SHALL BE MAINTAINED IN GOOD CONDITION BY OWNER.
 - REASONABLE PROVISIONS SHALL BE MADE FOR PROTECTION FROM VEHICLES, PEDESTRIANS, OR SHOPPING CARTS.
 - DEAD OR DYING VEGETATION SHALL BE REPLACED AT DIRECTION OF ADMINISTRATOR.
 - SHRUBS SHALL BE REPLACED AT A SIZE CONSISTENT WITH THAT OF EXPECTED FOR SPECIES AND TIME SINCE INSTALLATION.
 - TREES SHALL BE REPLACED AT A SIZE OF 0.5" CALIPER ABOVE 2" FOR EVERY YEAR SINCE INSTALLATION UP TO 5" CALIPER.



GROUNDCOVER, ORNAMENTAL GRASS OR PERENNIAL PLANTING DETAIL

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DWG NO. 17-124		
SHEET 11 OF 11		

LANDSCAPING NOTES & DETAILS
ANCIENT OAKS ESTATES
 PROPERTY OF
LARRY H. & DONNA K. BOYD
 DEED BOOK 979 PAGE 478 ~ TAX MAP 20, PARCEL 8

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Planner's Memorandum Planning Commission Meeting May 14, 2019

- 1) **Status of Sam Michaels Park Master Plan/Concept Plan**
- 2) **Status of RFQ for Consultant to Assist with Ordinance Updates**
- 3) **Zoning Ordinance Text Amendments**
 - a) Revise Article 10 "Provisions for Signs" to incorporate procedures for various signs
 - b) WV45 Gateway Design Standards (ZTA17-02) requested by Corp of Shepherdstown
 - c) Revise Section 5.7D.2 "Clustering" to address issues with current requirements
 - d) Revise and coordinate Section 4.11 "Landscaping, Screening and Buffer Yard Requirements" and Appendices A and B which are in conflict in some areas
 - e) Revise Article 11 "Off-Street Parking Standards" to address more diverse land uses
- 4) **Subdivision Regulation Text Amendments**
 - a) Incorporation of Improvement Location Permit Ordinance into Subdivision and Land Development Regulations
 - b) Subdivision and Land Development Regulations Amendments (STA18-01) – reorganization and update to current processes
- 5) **Upcoming PC meetings**
 - a) Next Regular Meeting: **June 11, 2019**

