

**THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND
AGENDA**

February 6, 2024

3:00 p.m. Special Work Session

Mike Moulds, Director, and Dan Mattson, Deputy Director, Public Works

Village of Kennedyville Discussion

Bill Mackey, Director, Planning, Housing, and Zoning

Proposed Land Use Ordinance Discussion

6:00 p.m. Call to Order / Pledge of Allegiance / Moment of Silence

Meeting Announcements - LEGISLATIVE DAY - Time Is Allotted At The End Of Each Meeting
For The Commissioners To Receive Comments From The Public

Public Notices

Alcoholic Beverage License Hearing

Shore Hospitality LLC DBA Flying Decoy Bar and Grill

Consent Items

#1 - Regular Session Minutes, January 30, 2024

#2 - Liquor Minutes, January 30, 2024

#3 - Closed Session Minutes, January 30, 2024

#4 - Republicans of Kent, Raffle Only, February 17, 2024

#5 - Mike Moulds, Director, Public Works - Environmental Operations Division

Public Landings Board Reappointment

Special Class C Licenses

Timothy Kern Memorial Fund, Beer Only, March 23, 2024

Legislative Session

Thomas N. Yeager, County Attorney

Legislative Session Protocol

Bill Mackey, Director, Planning, Housing, and Zoning

First Read - Code Home Rule Bill 2-2024 To Rescind and Replace the Land Use
Ordinance in its Entirety

Bill Mackey, Director, Planning, Housing, and Zoning

Third and Final Reading of Code Home Rule Bill No. 6-2023 Adaptive Reuse of
Existing Structures in AZD, Located on Parcels Under 20 Acres

County Attorney

Thomas N. Yeager, County Attorney

Public Hearing Protocol

Public Hearing

Jamie Williams, Director, Economic and Tourism Development
Code Home Rule Bill No. 1-2024 Property Tax Credit - Commerce Zones

Appointments

Stephanie Gosman, Kent Museum / Stories of the Chesapeake Heritage Area
Letter of Support

Departmental Appointments

Pete Landon, Director, Office of Emergency Services, and Barry Byers, Chair, Kent County
Police Accountability Board

2023 Police Accountability Board Annual Report

Rosemary Ramsey Granillo, Director Kent County Local Management Board
Findlay House Global "Beyond Your Mental" Contract

Rosemary Ramsey Granillo, Director, Kent County Local Management Board
Kent County Local Management Board Appointment Recommendations

Human Resources Director

Jim Miller, Director, Human Resources
Planning, Housing, and Zoning Associate Planner Vacancy

Jim Miller, Director, Human Resources
Public Works - Roads Division, MEO I Vacancy

Jim Miller, Director, Human Resource
Public Works - Water and Wastewater Division Utility Technician Vacancy

County Administrator

Ronald H. Fithian, President
Proposed Crab Pot Line Discussion

Public Comment/Media Review

Procedures For Public Comment

For Your Information

Kevin J. Shearon, P.E., LEED AP, Davis, Moore, Shearon & Associates, LLC
Open House Meeting, February 15, 2024 at 6:00 p.m., regarding a proposed new
convenience store/deli on the Lands of KNR, Inc., 10816 Worton Road, Worton, MD.

American Rescue Plan Act Funds

American Rescue Plan Act (ARPA) Funds Spend Plan

Contingency Fund

Contingency and Use of Fund Balance Report

Closed Session

Jim Miller, Director, Human Resources and Pete Landon, Director, Office of Emergency Services

Personnel

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305(b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals.

Jim Miller, Director, Human Resources

Personnel

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305(b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals.

Jim Miller, Director, Human Resources and Thomas N. Yeager, County Attorney

Personnel, Legal Advice, and Potential Litigation

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305 (b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals; (7) To consult with counsel to obtain legal advice; and (8) to consult with staff, consultants, or other individuals about pending or potential litigation.

Thomas N. Yeager, County Attorney

Personnel, Legal Advice, and Potential Litigation

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305 (b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals; (7) To consult with counsel to obtain legal advice; and (8) to consult with staff, consultants, or other individuals about pending or potential litigation.

(Meetings are conducted in Open Session unless otherwise indicated. All or part of County Commissioners' meetings can be held in closed session under the authority of the MD Open Meetings Law by vote of the Commissioners. Breaks are at the call of the President. Please note that times listed for specific items on the agenda are only estimates, and that the order of agenda items may change as time dictates or allows. Meetings are subject to audio and video recordings.)



**Mike Moulds, Director, and Dan Mattson, Deputy Director, Public
Works
2/6/2024
County Commissioners Meeting**

Item Summary:

Village of Kennedyville Discussion

ATTACHMENTS:

Description

Kennedyville W and WW Upgrades Cost update 2024 Presentation

Kennedyville Water and Wastewater Improvements Discussion 020624

Kennedyville Water System and Wastewater PS Study - Revised per Comments

Kennedyville Water System and Wastewater PS Study Briefing 022522

Village at Kennedyville 072820 Discussion Information

Village at Kennedyville Site Plan

**Kennedyville Existing Service Area Water and Sewer Improvements
McCrone 6/29/2020 Water System and Wastewater PS Study**

	6/30/2020	1/31/2024
ENR Index	11436	13515
Water System Improvements		1.18
Site Work	\$72,500	\$85,680
Water Treatment Plant Upgrades	\$475,000	\$561,352
Upgrade P.S. #3	\$110,500	\$130,588
Distribution System Upgrades	\$261,500	\$309,039
Labor	\$783,000	\$925,345
Electrical	\$278,900	\$329,602
Mobilization	<u>\$198,000</u>	<u>\$233,995</u>
Total Construction Cost	\$2,179,400	\$2,575,603
Contingency 25%	\$544,900	\$643,960
NonConstruction Costs		
Bonds, Legal, Administration	\$30,000	\$35,454
Engineering Design and {Permitting	\$245,200	\$289,776
Construction Management	\$163,500	\$193,223
Construction Inspection	<u>\$156,600</u>	<u>\$185,069</u>
Total Nonconstruction Costs	<u>\$595,300</u>	<u>\$703,522</u>
Total Water System Project Cost	\$3,319,600	\$3,923,084
Wastewater System Improvements		
<u>Pump Station #1</u>		
Site Work	\$57,100	\$67,480
Pump Station Components	\$216,000	\$255,268
Electrical	<u>\$40,000</u>	<u>\$47,272</u>
Total Construction Cost	\$313,100	\$370,020
<u>Pump Station #2</u>		
Site Work	\$62,100	\$73,389
Pump Station Components	\$82,500	\$97,498
Electrical	<u>\$87,000</u>	<u>\$102,816</u>
Total Construction Cost	\$231,600	\$273,704
Mobilization	\$54,000	\$63,817
Total Wastewater Improvements Construction	\$598,700	\$707,540
Contingency 25%	\$149,700	\$176,915
NonConstruction Costs		
Bonds, Legal, Administration	\$30,000	\$35,454
Land Acquisition	\$30,000	\$35,454
Engineering Design and {Permitting	\$67,400	\$79,653
Construction Management	\$45,000	\$53,181
Construction Inspection	<u>\$117,600</u>	<u>\$138,979</u>
Total Nonconstruction Costs	<u>\$290,000</u>	<u>\$342,720</u>
Total Wastewater System Project Cost	\$1,038,400	\$1,227,175

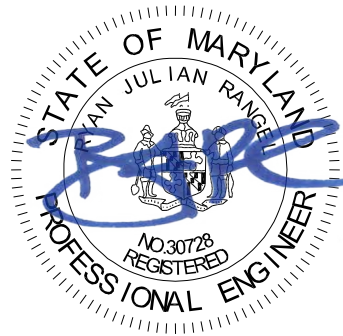
Kennedyville Existing Service Area Water and Sewer Improvements
McCrone 6/29/2020 Water System and Wastewater PS Study
Total Water and Wastewater Upgrades \$4,358,000 \$5,150,260

KENNEDYVILLE EXISTING SERVICE AREA WATER AND SEWER IMPROVEMENTS
Work Session February 6, 2024

- Village at Kennedyville Phase 2 (Parcel 5) Development potential 55 townhouse units or 43 single family homes and 6 commercial EDU's
- Kennedyville projected development potential: 345 EDU's
Note: does not include 3 EDU's now constructed and 10 EDU's associated with water treatment backwashing.
- Remaining Potential Development Estimates
Parcel 78 – 13 EDU's
Parcel 267 – 178 EDU's
Parcel 209 – 92 EDU's
- Existing water system can accommodate 59 additional residential EDU's. No commercial can be accommodated without increasing potable water storage capacity due to longer fire supply requirements for commercial buildings.
- Available existing water capacity does not address the customer demands for improved water quality by upgrades to the water treatment system to remove iron and reduce hardness.
- Wastewater treatment plant current flow is 16,945 gallons per day (gpd). Plant permit capacity is 60,000 gpd. 215 EDU's at 200 gpd/EDU or 172 EDU's at 250 gpd/EDU remain available. Current flow is estimated at 170 gpd/EDU
- Estimated updated 2024 cost of improvements based on Engineering News Record 20-City Construction Cost Index \$5,150,260.
- The County has \$145,162.50 available for improvements from the original developer.
- EDU Allocation Fee Capital Recovery @ 358 EDU's is \$14,386/EDU. Current Fee is \$16,200/EDU for water and sewer.

Kennedyville

Water System and Wastewater PS Study



I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30728, EXPIRATION DATE: 06-30-22

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- ◆ *Engineering*
- ◆ *Environmental Sciences*
- ◆ *Construction Services*
- ◆ *Land Planning & Surveying*

June 30, 2020

Executive Summary

Existing and future demands/flows for the Kennedyville water system and wastewater pump stations were determined and compared to available system capacity. Where system components were inadequate for future demand/flows, upgrades were determined and costs opinions generated.

The existing water demand is approximately 18,140 GPD. The projected future water demand from undeveloped parcels in the study area along with the remaining residential and commercial development in Kennedyville Village is 69,900 GPD. The future demand comes from 342 residential EDUs at 200 GPD/EDU and 6 commercial EDUs at 250 GPD/EDU.

The existing wastewater flow is approximately 16,945 GPD based on WWTP effluent records. The projected future wastewater flow from undeveloped parcels in the study area, the remaining commercial/residential development in Kennedyville Village, and additional backwash from an upgraded WTP is approximately 106,345 GPD based on 250 GPD per EDU, which accounts for I/I.

The existing water system is limited by storage. The existing water system can accommodate an additional 11,860 GPD of **residential** ADD, or approximately 59 **residential** EDUs at 200 GPD/EDU before storage needs to be upgraded. Commercial EDUs are specifically excluded because of the larger volume required for a fire flow even that cannot be provided by the existing storage tank. Once storage needs to be upgraded, it is recommended to upgrade the supply wells, the treatment equipment, the storage tank, and PS #3 all at once because space inside the existing WTP building will be needed for treatment and pumping equipment.

The recommended water system upgrades include:

- Two new 143 GPM raw water wells drilled into the Monmouth Aquifer and located at the WTP site.
- A duplex Greensand Filter (GSF) system consisting of two 48" diameter vessels and associated piping mounted on a skid and located in the existing WTP building.
- A 72,000-gallon glass-lined steel ground storage tank (GST) located in the northern corner of the existing WTP site. Associated with the are two domestic and two high service pumps that will transfer finished water from the GST to the existing elevated water storage tank (EWST).
- Upgraded electrical system to 480V/3-phase service and a 350 KW emergency generator to power the upgraded WTP when primary power is lost.
- Upgrade PS #3 with a 10-foot diameter wet well and 100 GPM pumps (similar to existing) to be able to accommodate the backwash water from the GSFs.

The recommended water system upgrades have a total project cost of approximately \$3.3M consisting of approximately \$2.2M of construction costs and \$1.1M of non-construction costs.

PS #1 has a remaining ADF capacity of 51,455 GPD, or approximately 206 EDUs at 250 GPD/EDU. PS #1 does not have capacity for the combined existing and future wastewater flow of 106,345 GPD.

PS #2 has a remaining ADF capacity of 28,480 GPD, or approximately 114 EDUs at 250 GPD/EDU. PS #2 does not have capacity for the combined existing and future wastewater flow of 66,770 GPD of ADF.

The recommended upgrades to PS #1 include:

- Acquire land adjacent to the existing pump station to construct a new pump station site with a larger wet well (6- to 12-ft in diameter), valve vault, 295 GPM pumps, and upgraded SCADA equipment. This will remove the wet well from the edge of Kennedyville Road.
- A 6-inch force main from PS #1 to the existing Kennedyville WWTP to keep velocities within the recommended range of 2 to 5 feet per second.

The upgrade of PS #1 will not require a larger generator or electrical service because the 6-inch force main will reduce friction headloss to less than existing conditions.

Please note that the projected existing plus future ADF to PS #1 is greater than the existing WWTP capacity and NDPES permit capacity of 60,000 GPD. Those components would need to be upgraded once ADF approached 60,000 GPD at the WWTP.

The recommended upgrades to PS #2 include:

- Acquire land adjacent to the existing pump station to construct a new pump station site with a larger wet well, valve vault, 185 GPM pumps, new generator, upgraded 240V/3 Phase electrical service, and upgraded SCADA equipment. This will remove the wet well from the shoulder of MD 213.

The existing 4-inch force main from PS #2 can be used at the upgraded PS #2 pumping rate.

The recommended upgrades to PS #1 and PS #2 have a total project cost of approximately \$1.04M consisting of approximately \$0.6M of construction costs and \$0.44M of non-construction costs.

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- Appendix A – Priority Funding Area Map, Sewer Service Map, Water Service Map, and Zoning Map with Study Area Delineated
- Appendix B – Raw Water Quality Analysis
- Appendix C – Hydraulic Model Map and Results
- Appendix D – Fire Flow Testing Results
- Appendix E – Site Plan From 1996 WTP As-Builts and Site Plan Showing Recommended Options
- Appendix F – Map of Aquia Aquifer, Lower Patapsco Aquifer, and Monmouth Aquifer
- Appendix G – Layouts of GSF and Membrane Filters in Existing Facility
- Appendix H – Drawdown Test Results
- Appendix I – PS #2 and PS #3 Service Areas
- Appendix J – Evaluation of the Existing Water Supply Wells Serving the Kennedyville, Md Water System by EDI
- Appendix K – Summaries of 2018 and 2019 MOR Data
- Appendix L – Manufacturer Information About GSF
- Appendix M – Cost Opinions

Glossary

ADD – Average Daily Demand
ADF – Average Daily Flow
CIP – Clean-In-Place
DI – Ductile Iron
DP&L – Delmarva Power and Light
EDI – Earth Data Incorporated
EDU – Equivalent Dwelling Unit
EPA – Environmental Protection Agency
EWST – Elevated Water Storage Tank
FM – Force Main
gal – Gallon
GAL/VF – Gallons per Vertical Foot
GAP – Groundwater Appropriations Permit
GPD – Gallons per Day
GPH – Gallons per Hour
GPM – Gallons per Minute
GSF – Greensand Plus Filter
GST – Ground Storage Tank
HP – Horsepower
HWA – High Water Alarm
KCDPW – Kent County Department of Public Works
KV – Kennedyville Village
kW – Kilowatt
LF – Linear Feet
LIDAR – Light Detection and Ranging
MDD – Maximum Daily Demand
MDE – Maryland Department of the Environment
MDSHA – Maryland State Highway Administration
MG – Million Gallons
mg/L – Milligram per Liter

MGD – Million Gallons per Day

MH – Manhole

MOR – Monthly Operating Reports

NFPA – National Fire Protection Association

NOAA – National Oceanic and Atmospheric Administration

NPDES – National Pollutant Discharge Elimination System

PER – Preliminary Engineering Report

PFA – Priority Funding Area

PHD – Peak Hourly Demand

PHF – Peak Hourly Flow

PLC – Programmable Logic Controller

ppm – Parts per Million

PS – Pump Station

PSI – Pounds per Square Inch

PVC – Polyvinyl Chloride

ROW – Right-of-Way

RTU – Remote Terminal Unit

SCADA – Supervisory Control and Data Acquisition

SF – Square Feet

VFD – Variable Frequency Drive

WTP – Water Treatment Plant

WWTP – Wastewater Treatment Plant

Introduction

The Kent County Department of Public Works (KCDPW) has contracted McCrone to evaluate the existing water infrastructure and wastewater pump stations for the Kennedyville, Maryland service area. The KCDPW has asked for an assessment of the existing water infrastructure and wastewater pump stations' capacity and its ability to provide water and wastewater services for potential future development within the study area defined in this report. McCrone has performed these tasks for the KCDPW and has documented them in this report. The report is divided into the following seven chapters to help organize the information gathered:

- **Chapter 1: Study Area**
- **Chapter 2: Existing Water/Wastewater Infrastructure and Connections**
- **Chapter 3: Existing and Future Water Demand and Wastewater Flows**
- **Chapter 4: Existing, Remaining, and Necessary Future Capacity of the Water System and Wastewater Pump Stations**
- **Chapter 5: Recommended Water System Upgrades and Alternatives Considered and Recommended Wastewater Collection System Upgrades**
- **Chapter 6: Cost Opinions of the Water System Upgrades**
- **Chapter 7: Conclusions**

Any discrepancies in this report should be reported to McCrone at the address or phone number provided on the cover of this report.

Chapter 1: Study Area

The study area for this report includes all the Kennedyville planned water and sewer service areas and the Kennedyville Priority Funding Area (PFA) – except for Parcel 286. The planned water and sewer service area and PFA that were considered in this study are according to online Kent County GIS maps (<https://www.kentcounty.com/maps/parcelviewer.html>). Maps of the water service area, the sewer service area, zoning, and the PFA with the study area delineated can be seen in Appendix A.

The study area includes all the existing and future water and sewer service areas. The future service areas are the remaining section of the Kennedyville Village development, approximately 45 acres of parcel 267, all of parcel 209, and approximately 3 acres of parcel 78.

The PFA – seen in Appendix A – includes all properties in the existing and future water and sewer service areas. However, the PFA also includes parcel 286, which is not included in the future water and sewer service areas. Parcel 286 is also an MDP comment area. Parcel 267 is another MDP comment area, but this parcel is in the existing and future water and sewer service areas.

The zoning map as shown in Appendix A also includes properties zoned employment center, village, and agricultural zoning district. However, the existing and future water and sewer service areas do not include parcel 286, which is zoned village.

To confirm which parcels should be included in the study area for this report, McCrone reviewed these maps with the County. It was decided to include 44.6 acres of parcel 267 (~85 acres total) even though those 44.6 acres are in the PFA comment area. The 44.6 acres are in planned water/sewer service areas. The other 40.4 acres of P. 267 are not included in the study area. It was also decided to exclude parcel 286 because it was developed as a single residential lot, is on well and septic, and is not in the future water or sewer service area.

Chapter 2: Existing Water/Wastewater Infrastructure and Connections

Introduction

Chapter 2 contains information on the existing water infrastructure and wastewater collection system within the study area. This chapter is meant to provide background information on the existing water infrastructure and the existing wastewater collection system. This chapter does not contain information on existing capacities and treatment abilities. Please refer to Chapter 4 for a discussion of the capacities and treatment abilities of the existing infrastructure.

Existing Water Infrastructure

The existing Kennedyville Water System infrastructure consists of two raw water wells, an iron removal water treatment plant (WTP), a 75,000 gallon EWST, and a distribution system made up of 2", 4", 6", and 8" pipe that serves approximately 108 users. See the water service map in Appendix A for a layout of the existing water system.

Supply

Two wells currently supply raw water to the Kennedyville WTP. Well #1 (Permit KE-920136) is located on the same property as the WTP, next to the elevated water storage tank (EWST) and well #2 (Permit KE-670132) is located next to the volunteer fire department, south of the railroad tracks. The approximate locations for the two wells are shown on the water service map in Appendix A. As indicated by the County and the monthly operating reports (MOR) for the WTP, the wells alternate pumping to the WTP and supply an equal amount of raw water to the WTP.

Well #1 can safely yield approximately 70 GPM and the well pump for well #1 has a design point of 70 GPM¹. The EDI report that was used to cite well #1's pump rate is included in Appendix J. Well #2 can safely yield 125 GPM¹ and the pumping rate for its well pump unknown,^{1,2} but based on looking at the run time data from the MORs the pumping rate appears to be equal to well pump #1 at 70 GPM. Well #1 is newer than well #2 and was installed during the construction of the existing WTP, circa 1995. Well #2 was installed as part of the original water infrastructure, circa 1967.¹

Both wells pump raw water out of the Monmouth Aquifer.^{1,3} However, this is contradicted by information in the Kennedyville WTP O&M Manual, which states that well #2 pumps out of the Aquia Aquifer. The County confirmed that the well next to well #2 does indeed pump out of the Monmouth Aquifer, not the Aquia Aquifer.

The two wells are allowed to pump a combined daily average of 51,800 gal on a yearly basis and a combined daily average of 83,000 gal for the month of maximum use.³ These limits are according to the GAP Permit No. KE1967G008 (06).

An analysis on the raw water quality sampled from both wells was performed on February 13, 2020 by Water Testing Laboratories of Maryland, Inc. The results of the analysis are shown in Appendix B. Please note that in the lab analysis data, well #1 is located at the volunteer fire department and well #2 is located on the WTP site. This is opposite of the well numbers previously established in the report. These were the numbers designated by the testing company. Throughout the text of this report, well #1 is at the WTP and well #2 is at the volunteer fire department.

The analysis revealed that the raw water quality was generally good. Iron was the only measured constituent outside of the Primary or Secondary Drinking Water limits set by the EPA. The concentration of iron in the raw water sampled from well #1 was 0.83 mg/L and the concentration of iron in the raw water sampled from well #2 was 0.88 mg/L. Iron is considered a secondary contaminant with the maximum contaminant level is 0.3 mg/L. pH was in 7.1-7.2 range, which is a good pH to oxidize iron with liquid chlorine. The oxidation of iron happens at a faster rate at this pH.

Treatment

The Kennedyville WTP is located at approximately 12000 Kennedyville Rd. Its location in Kennedyville is depicted in the water service map in Appendix A. The WTP was constructed around 1995 to 1996.⁴ The Kennedyville WTP is primarily an iron removal facility, consisting of, a sodium hypochlorite chemical feed system, a chlorine contact tank, an up-flow sand filter, a clear well, and distribution pumps. These pieces of equipment are housed in a pre-engineered metal building that is 30 feet long, 25 feet wide, and 20 feet high.⁴

There are multiple steps involved in the treatment process at the WTP as depicted in the flow diagram in Figure 1. First, raw water is pumped from the wells into the WTP. After the raw water enters the plant, liquid chlorine as sodium hypochlorite is injected into the raw water by a model 45MHP2 Stenner chemical feed pump for disinfection and to oxidize the soluble iron. Next, the water then flows to a 5'-6" x 4'-0" x 4'-0" chlorine contact tank for detention.⁴ Then, the water flows to a 5-foot diameter Andritz Hydrasand Filter, model H19-SBSS, for iron removal.⁵ The backwash water from the sand flow is discharged into a gravity sewer line that flows from the WTP to PS #3. The water then flows to a 12'-2" x 4'-0" x 4'-0" clear well⁴ and is finally pumped by Gould model 3656 distribution pumps to the existing EWST.⁵

According to the 2019 monthly operating reports (MORs), the average annual PH of the finished water leaving the plant is 7.7 and the average annual concentration of the iron in the finished water leaving the plant is 0.09 mg/L.

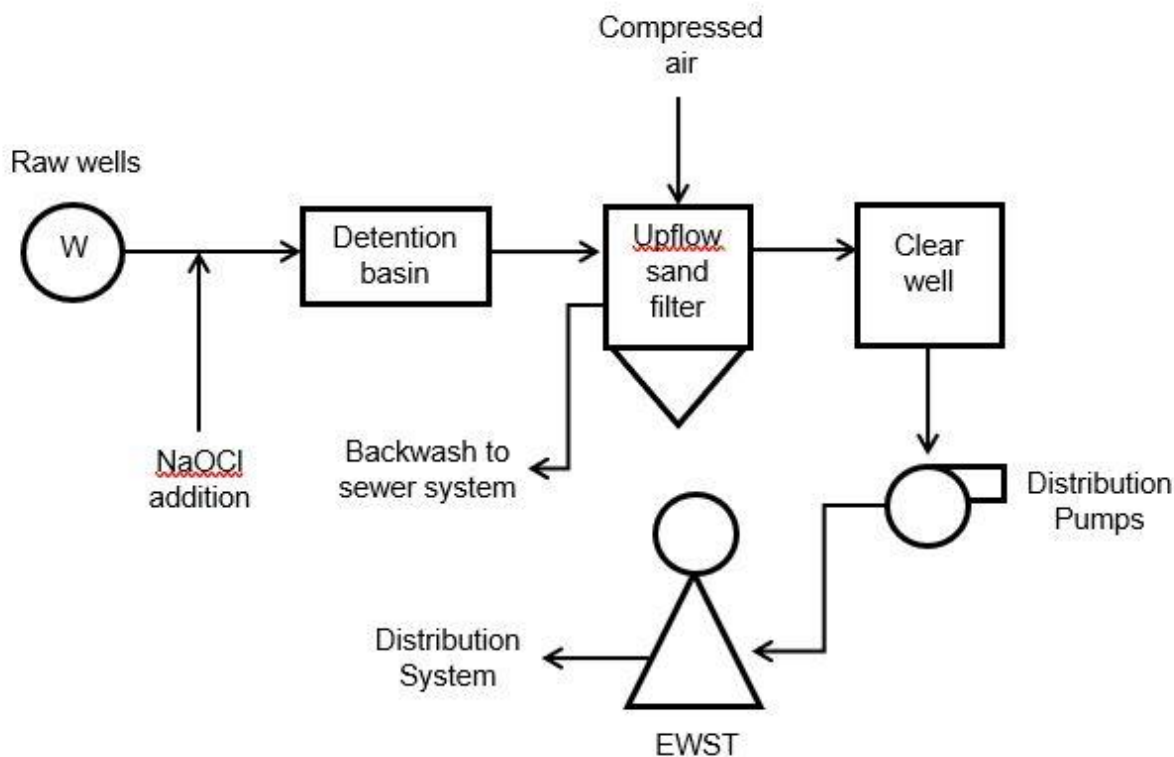


Figure 1: Flow Diagram of Kennedyville Water Treatment Process

According to as-builts for the existing WTP, the plant originally used gaseous chlorine instead of liquid chlorine and caustic and polymer was injected between the chlorine contact tank and sand filter. During a site visit to the plant, an operator confirmed that these are no longer used in the treatment process. Currently, liquid chlorine is injected in the same location that gaseous chlorine was injected because liquid chlorine is a safer alternative to gaseous chlorine. Caustic and polymer are no longer injected in the treatment process because the sand filter can achieve sufficient iron removal without these additives.

Storage

The storage for the distribution system is provided by a 75,000-gallon (GAL) EWST located on the same site as the WTP as shown on the water service map in Appendix A. The EWST tank is a single pedestal design with a spheroid shaped storage area. The tank was built by CB&I in 1996.

The name plate on the tank states it is 131'-4" from the base of the tank to the bottom of the reservoir. Head range of the tank was not available, but overflow is estimated at 151 feet above the base of the tank. Well pump on level is 149 feet and well pump on level is 146 feet per the information on the well pump control panel.

Distribution System

The majority of the water distribution was constructed in 1966-67.² The Kennedyville Village development was added on to the system circa 2006. According to the County, as of December 2019, there are 4 commercial and 104 residential connections to the system.

The pipes installed in the system prior to Kennedyville Village are mainly 6" diameter asbestos cement pipe.² There are a few sections of 2" diameter PVC pipe and one section 4" diameter PVC pipe installed prior to Kennedyville Village as well.² The layout and pipe sizes of the existing distribution system are shown in Appendix A.

The pipes installed in the Kennedyville Village development are of unknown diameter and unknown material. McCrone attempted to determine the diameter and material of these pipes but was unable to determine them. The available drawings for Kennedyville Village do not list the pipe diameter or material for the water main. Inquiries were made by McCrone to the County about the pipe diameter and material, but the County was unable to retrieve this information. For the purpose of this analysis, it was assumed that the water main in Kennedyville Village is 8" diameter PVC pipe, which is a typical water main installed for residential service areas. The approximate locations of the water mains are shown on the water service map in Appendix A.

Existing Wastewater Pumping Stations

Collection System

The Kennedyville wastewater collection system is comprised of 8-inch diameter PVC gravity sewer, 4,136 LF of 4-inch diameter PVC and DI FM, and three pump stations, PS #1, PS #2, and PS #3. See the Sewer Service Map in Appendix A for the approximate locations of PS #1, PS #2, and PS #3. Most of the collection system was constructed in 1976 and 1977². A small gravity extension was constructed on the south end of the collection system in the late 1990's². Additional gravity sewer was installed in the Kennedyville Village development around 2006.

PS #1 is located on Kennedyville Road towards the WWTP, as shown on the Sewer Service Map in Appendix A. This pump station receives flow from PS #2 and PS #3 as well as its own collection system. The pump station consists of a wet well with two submersible pumps, a generator, and control panel. The wet well is concrete, 6-foot diameter, 9.1 feet in depth with a hatch for retrieving the pumps. The invert into the wet well is at approximately elevation 29.00. The submersible pumps were upgraded with the 2006 WWTP upgrades to a 170 GPM design point. The electrical service to the pump station is 240V, 3-phase, 200-amp service. The generator at the pump station has a capacity of 50 kW. The pump run time data is recorded using a mission unit. According to 1976 Sewage Collection & Treatment System as-built drawings, the FM discharging from PS #1 to the WWTP consists of approximately 3200' of 4" DIP and 4" PVC pipe.

PS #2 is located on Augustine Herman Highway, as shown on the Sewer Service Map in Appendix A. The pump station consists of a wet well with two submersible pumps, a generator, and control panel. The concrete wet well is 5-foot diameter, 12.1 feet in depth, with a hatch for retrieving the pumps. The invert into the wet well is at approximately elevation 30.50. The submersible pumps were not upgraded with the 2006 WWTP and have a design capacity of approximately 80 GPM based on the original collection system construction drawings. The electrical service to the pump station is 240, single phase, 200-amp service. The generator at the pump station has a capacity

of 15 kW. The pump run time data is recorded using a Mission RTU unit. According to 1976 Sewage Collection & Treatment System as-built drawings, the FM discharging from PS #2 to MH #7 is approximately 675 LF of 4" PVC pipe. MH #7 is part of PS #1's collection system.

PS #3 is located on Kennedyville Road near the WTP, as shown on the Sewer Service Map in Appendix A. The pump station consists of a wet well with two submersible pumps, a generator, and control panel. The wet well is 5-foot diameter concrete wet well 20.25 feet in depth with a hatch for retrieving the pumps. The invert into the wet well is at approximately elevation 40.40. The submersible pumps were upgraded with the 2006 WWTP upgrades to 95 GPM. The electrical service to the pump station is 240/120V, single phase, 200-amp service. The generator at the pump station has a capacity of 15 kW. The pump run time data is recorded using a Mission RTU unit. According to 1976 Sewage Collection & Treatment System as-built drawings, the FM discharging from PS #3 to MH #18 is approximately 261 LF of 4" PVC pipe.

Chapter 3: Existing and Future Water Demands and Wastewater Flows

Introduction

Chapter 3 contains information on the existing and future water demands in the distribution system, peaking factors used in the water analysis, and existing and future sewer flows to PS #1, PS #2, and PS #3. The existing and future flows/demands were needed to determine the adequacy of existing water and sewer infrastructure to accommodate the future flows/demands.

Existing Water Demand

The existing water demands were determined after evaluating the 2018/2019 MORs, water consumption reports for commercial properties connected to the system, and the number of residential connections to distribution system. McCrone requested and received this information from the County.

The raw water and finished water demand from the 2018 and 2019 MORs can be seen in Table 1. The total finished water demand from 2018 was 6.501 MG and the total finished water demand from 2019 was 5.594 MG. The water consumption from the commercial properties connected to the system in 2018 and 2019 can be seen in

Table 2. The total water consumption from commercial properties in 2018 was 0.137 MG and the total water consumption from commercial properties in 2019 was 0.118 MG. The average consumption of each commercial property in this table was calculated by dividing the total water consumption of that property by the number of days in the billing cycle for the year. The number of existing residential connections to the distribution system is 104, as listed in Table 3.

Table 1: 2018/2019 Monthly Raw/Finished Water Demand from the Kennedyville WTP

Year	2018		2019	
Month	Total Monthly Raw Water Demand (MG)	Total Monthly Finished Water Demand (MG)	Total Monthly Raw Water Demand (MG)	Total Monthly Finished Water Demand (MG)
Jan	0.543	0.526	0.453	0.431
Feb	0.460	0.4423	0.384	0.325
Mar	0.530	0.501	0.413	0.392
Apr	0.656	0.649	0.468	0.438
May	0.821	0.790	0.497	0.455
June	0.727	0.688	0.533	0.494
July	0.551	0.521	0.559	0.514
Aug	0.483	0.458	0.534	0.494
Sept	0.468	0.449	0.565	0.529
Oct	0.537	0.520	0.569	0.530
Nov	0.545	0.513	0.528	0.499
Dec	0.467	0.444	0.517	0.493
TOTAL (MG)	6.788	6.501	6.020	5.594
ANNUAL AVERAGE DAY DEMAND (GPD)	18,598	17,810	16,493	15,326

Table 2: 2018 and 2019 Commercial Consumption

Year	2018		2019	
Commercial Property Address	Average Consumption (GPD)	Total Consumption (gal)	Average Consumption (GPD)	Total Consumption (gal)
12048 Kennedyville Rd	51	19,000	49	18,000
11994 Kennedyville Rd	65	23,950	66	24,250
11999 Augustine Herman Hwy	30	11,250	101	37,150
11986 Augustine Herman Hwy	223	82,550	104	38,300
Total Annual Commercial Consumption (MG)	0.137		0.118	

Table 3: Derivation of 2018 and 2019 Residential GPD/EDU

Year	2018	2019
Total Annual Finished Water Demand (MG)	6.501	5.594
Total Annual Commercial Consumption (MG)	0.137	0.118
Delta (Annual Residential Consumption) (MG)	6.364	5.476
Residential ADD (GPD)	17,436	15,004
Residential Connections (EDUs)	104	104
Residential GPD/EDU	168	144

Knowing the annual finished water demand and the annual water consumption from the commercial properties, the annual residential water consumption was able to be estimated, as shown in Table 3. The annual residential water consumption was then converted into average day demand (ADD) by dividing the annual residential water consumption by 365 days. The residential ADD for 2018 was 17,436 GPD and the residential ADD for 2019 was 15,004 GPD. Then, the GPD/EDU per existing residential connection was estimated using the ADD and the number of residential connections. The residential GPD/EDU for 2018 was estimated to be 168 and the residential GPD/EDU for 2019 was estimated to be 144, as listed in Table 3. To be conservative, McCrone used the larger of the two years and rounded up to the nearest number divisible by 10, so 170 GPD/EDU was used for existing residential connections in this study. This 170 GPD/EDU for existing residential connections in combination with 104 residential connections, gives an estimated residential demand of 17,680 GPD.

Knowing the average water consumption from each existing commercial property in the system and the EDUs assigned to that commercial property, the GPD/EDU for each commercial property in both 2018 and 2019 was able to be estimated, as shown in Table 4. To be conservative, for

each commercial GPD/EDU McCrone used the larger of the two years and rounded up to the nearest number divisible by 5, as listed in

Table 5. Using the conservative GPD/EDU for each commercial property and the number of EDUs per each commercial property, the existing demand of each commercial property was able to be estimated, as shown in

Table 5.

Table 4: 2018 and 2019 Commercial GPD/EDU

Year	2018		2019	
Commercial Property Address	EDUs	GPD/EDU	EDUs	GPD/EDU
12048 Kennedyville Rd	1	51	1	49
11994 Kennedyville Rd	1	65	1	66
11999 Augustine Herman Hwy	1	30	1	101
11986 Augustine Herman Hwy	2	111	2	52

Table 5: Summary of Existing Demands

Type	EDUs	GPD / EDU	ADD (GPD)	MDD (ADDx2.33), GPD	PHD (ADDx4.0), GPD	PHD (ADDx4.0), GPM
RESIDENTIAL	104	170	17,680	41,194	70,720	49.1
Commercial - 12048 Kennedyville Rd	1	55	55	128	220	0.2
Commercial - 11994 Kennedyville Rd	1	70	70	163	280	0.2
Commercial - 11999 Augustine Herman Hwy	1	105	105	245	420	0.3
Commercial - 11986 Augustine Herman Hwy	2	115	230	536	920	0.6
COMMERCIAL SUBTOTAL			460	1,072	1,840	1.3
TOTAL			18,140	42,266	72,560	50

A summary of the existing residential, commercial, and total demand is provided in

Table 5. The total existing ADD of the system was estimated to be 18,140 GPD, the total existing MDD of the system was estimated to be 42,266 GPD, and the total existing PHD of the system was estimated to be 72,560 GPD. See the *Max Day Demand Peaking Factor* sub section and *Peak Day Demand Peaking Factor* sub section in the *Future Water Demand* section for a detailed

explanation of how the max day demand peaking factor of 2.33 and the peak day demand peaking factor of 4.0 were determined.

Future Water Demand

The future water demand was projected for the system by: identifying undeveloped parcels in the study area and determining their potential development in EDUs based on zoning to determine the number of EDUs that could be developed in that parcel; adding the number of remaining lots in the Kennedyville Village development; and then multiplying the projected number of EDUs by a planning level GPD/EDU that is more than the GPD/EDU calculated from the County provided MOR data.

As mentioned in Chapter 1, the future water service areas will be the remaining section of the Kennedyville Village development, approximately 45 acres of parcel 267, all of parcel 209, and approximately 3 acres of parcel 78. The acreages of parcel 267 and parcel 78 within the study area boundary were estimated using the measure tool on the Kent County Web GIS application. Parcels 267, 209, and 78 are identified on the maps in Appendix A.

According to data provided by the County, the future development of Kennedyville Village will include 59 residential EDUs and 6 commercial EDUs. Per online Kent County GIS data (shown in Appendix A), parcel 267, parcel 209, and parcel 78 are all zoned Village. Per the Kent County Zoning Ordinance, a maximum of 4 EDUs/acre are allowed for properties zoned Village. Thus, knowing the zoning of these parcels, the number of EDUs/acre allowed by zoning, and the acreage of the parcel, the EDUs from future development of these parcels was estimated.

The future EDUs for parcel 267 are 178, the EDUs for parcel 209 is 92, and the EDUs for parcel 78 is 13. This information is summarized in Table 6.

Table 6: EDUs from Future Development of Parcels 267, 209, and 78

Parcel	Area (acres)	Zoning	EDUs/acre ¹	EDUs
267	44.6	Village	4	178
209	23.18	Village	4	92
78	3.31	Village	4	13

The GPD/EDU used for future residential areas was 200 GPD/EDU. This value was decided upon by taking the GPD/EDU determined for existing residential areas (170) and adding a factor of safety to be conservative. It should be noted that all parcels zoned village are considered residential areas so parcel 267, 209, and 78 are treated as residential areas in this study. The GPD/EDU for future commercial areas, part of the future Kennedyville Village development, was 250 GPD/EDU. This is the value that the County requested to use.

Max Day Demand Peaking Factor

The max day demand peaking factor of 2.33 was determined via analysis of the 2018 and 2019 MOR data received from the County. A summary of the MOR data is shown in Appendix K. The ratio used to determine the peaking factor is the day of maximum use for the entire year divided by the average day demand for the entire year. This peaking factor was calculated for both 2018 and 2019 and then compared.

In 2018, the day of maximum use for the entire year occurred on June 14th. However, the County reported that there were leaks in the distribution system that were repaired in 2018. To account for these leaks, and to accurately represent the demand in the system, the third highest day of maximum use in the entire year was used. The third highest day of maximum use in 2018 occurred on May 16th and was 49,000 gallons. As shown in Table 1 the average day demand for the year of 2018 was 17,810 GPD. Dividing the third highest day of maximum use in 2018 by the average day demand in 2018 resulted in peaking factor of approximately 2.8.

In 2019, the day of maximum use for the entire year occurred on May 20th and had a demand of 34,000 GPD. As shown in Table 1, the average day demand for the year of 2019 was 15,326 GPD. Dividing the day of maximum use in 2019 by the average day demand in 2019 resulted in peaking factor of approximately 2.2.

Instead of using 2.8 for the peaking factor, which is the larger value of the two (2) years and a similar approach to how the GPD/EDU for existing residential and commercial connections was decided upon, a max day peaking factor of 2.33 was used for this study. This value was used because it is expected that the peaking factor for the max day demand will decrease as more connections are made to the distribution system. A peaking factor of 2.33 is also more than the peaking factor calculated in 2019 so this adds some conservativeness to the peaking factor.

Additionally, a peaking factor of 2.33 for MDD will cover the 2.8 peak from 2018 when considering treatment capacity and equalization storage in the storage system. Treatment capacity was sized for MDD and equalization storage was sized for 20% of MDD. This is shown in the following equation, which shows how the peaking factor of 2.33 will cover the 2.8 peaking factor, should it happen again. Sizing of treatment capacity and equalization storage is covered in detail in Chapter 4.

$$2.8(ADD) = X(ADD) + 0.2X(ADD)$$

$$2.8 = X + 0.2X$$

$$2.8 = 1.2X$$

$$X = 2.33$$

Peak Hour Demand Peaking Factor

The peak hour demand (PHD) peaking factor of 4.0 was used for this study because this is a widely accepted value for peak hour demands. There was no available data that could be used to estimate this value.

After determining the GPD/EDU, the number of EDUs for future residential and commercial areas, and the peaking factors, the GPD/EDU was multiplied by the number of EDUs to estimate the future residential and commercial demand. The future residential, future commercial, and total future demands are summarized in Table 7. The total future ADD would be approximately 69,900 GPD, the total existing MDD of the system was estimated to be 162,867 GPD, and the total existing PHD of the system was estimated to be 279,600 GPD. This is if all future development were to occur.

Table 7: Summary of Future Demands

Parcel/Area	EDUs	GPD / EDU	ADD (GPD)	MDD (ADDx2.33), GPD	PHD (ADDx4.0), GPD	PHD (ADDx4.0), GPM
Kennedyville Village - Commercial Use	6	250	1,500	3,495	6,000	4.2
Kennedyville Village - Residential Use	59	200	11,800	27,494	47,200	32.8
267	178	200	35,600	82,948	142,400	98.9
209	92	200	18,400	42,872	73,600	51.1
78	13	200	2,600	6,058	10,400	7.2
FUTURE RESIDENTIAL SUBTOTAL			68,400	159,372	273,600	190
TOTAL			69,900	162,867	279,600	194

Total Existing and Future Demands

The total estimated ADD of existing and future development in the Kennedyville system would be approximately 88,040 GPD, the total MDD of existing and future development in the Kennedyville system would be approximately 205,133 GPD, and the total PHD of existing and future development in the Kennedyville system would be 352,160 GPD. This is shown in Table 8.

Table 8: Summary of Existing + Future Demands

Type of Demand	ADD (GPD)	MDD (ADDx2.33), GPD	PHD (ADDx4.0), GPD	PHD (ADDx4.0), GPM
Existing	18,140	42,266	72,560	50
Future	69,900	162,867	279,600	194
Existing + Future	88,040	205,133	352,160	245

Existing Wastewater Flows to PS #1, PS #2, and PS #3

Methods Used to Estimate Wastewater Flows

There were two methods that were investigated for determining the existing influent wastewater flows to PS #1, PS #2, and PS #3. The first method was using the average annual pump run time data captured by the Mission RTU units at each pump station and the average pumping rates determined from the drawdown tests to determine the existing wastewater flows to the pump stations. The pump run times from the Mission RTU units were not accurate enough to provide accurate wastewater flows. The older Mission RTU units (M100) check the pump on/off status once per minute, so they can provide a general idea if a pump is running too much or not enough, but do not have the resolution to accurately determine actual run time hours. The Mission units can underestimate or overestimate flows depending on when the one-minute check-ins happened

compared to when the pumping cycle starts. Thus, another method for estimating the wastewater flows to the pump stations was developed.

The second method used the average annual effluent flow of the Kennedyville WWTP based on MDE data, the number of service connections, and the service area of the pump stations to determine the existing wastewater flows to the pump stations.

For the first method, the average annual daily pump run time data for each pump station and the average pumping rates determined from the drawdown tests performed by McCrone are shown in Table 9. The drawdown test results are provided in Appendix H and the drawdown tests are covered in more detail in Chapter 4, in the *Wastewater Infrastructure* section.

The average annual flow out of the WWTP in 2019 was approximately 16,945 GPD and the average annual finished water demand in 2019 was approximately 15,326 GPD. Comparing Table 9 to the 2019 average annual flow out of the WWTP and the 2019 average annual finished water demand shows that both the estimated flow to PS #1 and PS #2 is greater than the flow out of the WWTP and the finished water demand out of the WTP. Additionally, the estimated ADF to PS #2 is greater than the estimated ADF to PS #1, however, PS #2 flows to PS #1.

Table 9: Existing ADF to Pump Stations Using Mission Run Time Data

	Average Annual Daily Run Time in 2019 (min)	Average Pumping Rate of Pumps (GPM)	Existing ADF to PS (GPD)
PS #1	132	203	26,805
PS #2	267	113	30,062
PS #3	55	110	6,110

These estimated ADFs are not accurate because the flows to PS #1 and PS #2 should not be greater than the flow out of the WTP and the flow out of the WWTP. McCrone contacted the vendor of the Mission RTU units to inquire about the accuracy of the pump run times captured by the units. McCrone was informed that the older Mission RTU units (M100) query pump run status every minute, but do not capture continuous pump status. In other words, the Mission unit checks in once per minute and assumes the pump is in that status until the next time it checks on the pump's status. McCrone attempted to get more accurate data, such as the hand recorded run time hours of the pump motors, but this was not available. Therefore, the pump run time data in conjunction with the average pump rate of the pumps was not an accurate method to estimate the existing flows to the pump stations and another method for estimating the flows to the pump stations was investigated.

The second method that was investigated for estimating the flows to the pump stations was using the 2019 average annual effluent flow at the WWTP in conjunction with the number of service connections to obtain the existing sewer GPD/EDU. The average annual flow out of the WWTP in 2019 according to MDE data was 16,945 GPD. McCrone assumed that the number of existing sewer service connections is the same as the number of existing water service connections at 106. This number of connections treats commercial connections as 2 residential connections due to their limited water usage (See Table 2 in Chapter 2). Dividing the 2019 average annual effluent flow from the WWTP by the number of existing sewer service connections results in a sewer GPD/EDU of approximately 160 GPD/EDU. This sewer GPD/EDU was multiplied by the number

of service connections in the pump station service area to estimate the existing flow to each pump station.

This second method proved to be more accurate than the first method and is discussed in more detail in the following sections.

Existing Wastewater Flows to PS #1

The number of existing service connections flowing to PS #1 is all the connections in the collection system and PS #1 pumps directly to the WWTP. Therefore, the flow out of PS #1 should be equal to the flow out of the WWTP. Thus, the existing ADF to PS #1 is approximately 16,945 GPD and the existing PHF (ADF x 4) is approximately 67,781 GPD or 47 GPM.

Existing Wastewater Flows to PS #2

The number of existing service connections that flow to PS #2 is 47 EDUs. The existing service area of PS #2 showing the 47 existing EDUs flowing to PS #2 is shown in Appendix I. 25 of the EDUs in the service area are from Kennedyville Village, 19 of the EDUs in the service area are from the original 1976 collection system construction, and 3 of the EDUs were connected after the original 1976 collection system was installed. Thus, the 47 EDUs in service area of PS #2 multiplied by the sewer GPD/EDU of 160 GPD/EDU results in an estimated ADF to PS #2 of 7,520 GPD or a PHF (ADF x 4) of 30,080 GPD or 21 GPM.

Existing Wastewater Flows to PS #3

The number of existing service connections that flow to PS #3 is roughly 34.5 EDUs. The existing service area of PS #3 is shown in Appendix I. 26 of the EDUs in the service area are from existing residential and commercial connections, 1 EDU is from the existing WTP, and approximately 7.5 EDUs are from the existing backwash flow from the WTP. The EDUs for the existing WTP backwash flow was determined from the average annual backwash from 2019 (~1,200 GPD) and the existing sewer GPD/EDU (160 GPD/EDU). Thus, the 34.5 existing EDUs in service area of PS #3 multiplied by the sewer GPD/EDU of 160 GPD/EDU results in an estimated ADF to PS #3 of 5,520 GPD or a PHF (ADF x 4) of 22,080 GPD or 15 GPM.

The existing wastewater flows and connections to each of the pump stations is summarized in Table 10. The existing connections to PS #1 are blank because it was assumed that the entire flow out of the WWTP flows into PS #1, so it was not necessary to estimate the number of connections to PS #1.

Table 10: Summary of Estimated Existing Wastewater Flows and PS Connections

	Existing Connections to PS (EDUs)	Existing ADF to PS (GPD)	Existing PHF to PS (GPD)	Existing PHF to PS (GPM)
PS #1	-	16,945	67,781	47
PS #2	47	7,520	30,080	21
PS #3	34.5	5,520	22,080	15

Future Wastewater Flows to PS #1, PS #2, and PS #3

The methodology used to estimate the future wastewater flows to PS #1, PS #2, and PS #3 is similar to the methodology used to estimate the existing wastewater flows to the pump stations. The future service areas of the pump stations were determined and the future EDUs in the service areas were multiplied by a planning level GPD/EDU of 250 GPD/EDU. The 250 GPD/EDU was used to account for (I/I). All future EDUs for the parcels and developments accounted for in the future water demand calculations were assumed to be the same number of EDUs for the future sewer flow calculations, so the derivation of the EDUs is not discussed in this section. For the derivation of the EDUs see the *Future Water Demands* section in this chapter.

Future Wastewater Flows to PS #1

Since both PS #2 and PS #3 flow to PS #1, the number of future EDUs flowing to PS #1 is all the future EDUs that would be connected to the collection system, so the future service area for PS #1 would be the same as the study boundary that is shown the Sewer Service Map that is shown in Appendix A. A total of 358 future EDUs is estimated for PS #1. The future EDUs that would flow to PS #1 are summarized in Table 11.

The future backwash EDUs are a rough estimate of what is expected to flow out of the WTP. Multiplying the total number of future EDUs (358) by the future sewer GPD/EDU (250 GPD/EDU) results in an estimated future ADF of 89,400 GPD. Converting the ADF to PHF by multiplying the ADF by a peaking factor of 4 results in a PHF of 357,600 GPD, or 248 GPM.

Table 11: Future EDUs and Wastewater Flowing to PS #1

	EDUs	ADF (GPM)	PHF (GPM)
Future Parcel 209	92	23,000	92,000
Future Parcel 267	178	44,500	178,000
Future Parcel 78	13	3,250	13,000
Future Kennedyville Village Residential	59	14,750	59,000
Future Kennedyville Village Commercial	6	1,500	6,000
Future Backwash	10	2,400	9,600
Total EDUs	358	89,400	357,600

Future Wastewater Flows to PS #2

The future EDUs to PS #2 are the future residential Kennedyville Village EDUs and the future EDUs from Parcel 267. The future service area for PS #2 that encompasses these EDUs is shown in Appendix I. The number of future residential Kennedyville Village EDUs is 59 and the number of future EDUs from Parcel 267 is 178. Thus, the total number of future EDUs flowing to PS #2 is 237. Multiplying the total number of future EDUs (237) by the future sewer GPD/EDU (250 GPD/EDU) results in an estimated future ADF of 59,250 GPD. Converting the ADF to PHF by multiplying the ADF by a peaking factor of 4 results in a PHF of 237,000 GPD or 165 GPM.

Future Wastewater Flows to PS #3

The future EDUs that would be flowing to PS #3 are the future commercial Kennedyville Village EDUs, the future EDUs from Parcel 209, and the future WTP backwash. The future service area for PS #3 that encompasses these EDUs is shown in Appendix I. The number of future commercial Kennedyville Village EDUs is 6, the number of future EDUs from Parcel 209 is 92, and the number of future backwash EDUs was estimated to be 10, as mentioned previously. Thus, the total number of EDUs flowing to PS #3 is 108. Multiplying the total number of future EDUs (108) by the future sewer GPD/EDU (250 GPD/EDU) results in an estimated future ADF of 26,900 GPD. Converting the ADF to PHF by multiplying the ADF by a peaking factor of 4 results in a PHF of 107,600 GPD or 75 GPM.

A summary of the future wastewater flows and connections to each of the pump stations is provided in Table 12.

Table 12: Summary of Future Wastewater Flows and Connections to Pump Stations

	Future Connections to PS (EDUs)	Future ADF to PS (GPD)	Future PHF to PS (GPD)	Future PHF to PS (GPM)
PS #1	358	89,400	357,600	248
PS #2	237	59,250	237,000	165
PS #3	108	26,900	107,600	75

Table 13 shows the future plus existing ADF and PHF that was estimated to flow to each pump station. This table encompasses all the flows that are expected to flow to each pump station.

Table 13: Existing Plus Future Wastewater Flows to Pump Stations

	Total Existing + Future ADF to PS (GPD)	Total Existing + Future PHF to PS (GPD)	Total Existing + Future PHF to PS (GPM)
PS #1	106,345	425,381	295
PS #2	66,770	267,080	185
PS #3	32,420	129,680	90

Chapter 4: Existing, Remaining, and Necessary Future Capacity of the Water System and Wastewater Pump Stations

Introduction

This chapter analyzes both existing water and sewer infrastructure and its ability to accept future demands/flows. The existing water infrastructure that is analyzed for capacity is supply, treatment equipment, storage, and the distribution system. The existing sewer infrastructure that is analyzed is PS #1, PS #2, and PS #3.

Water Infrastructure

The Kennedyville Water System's capacity is potentially limited by the capacity of the raw water supply, treatment equipment, storage, or distribution system. The capacity of each of these pieces of the water treatment system was determined in terms of average daily demand (ADD) and then compared to the estimated existing plus future ADD for Kennedyville to determine which item had the least amount of capacity. The amount of additional storage capacity required for the existing plus future demand was also calculated. The capacity of the distribution system was analyzed under peak hour demand conditions and max day demand conditions using a calibrated hydraulic model in WaterCAD software.

Existing Raw Water Supply Capacity

The existing capacity of the supply to the WTP is limited by the capacity of the wells, the capacity of the well pumps, and the permitted withdrawal in the groundwater appropriations permit (GAP).

Wells - The existing yield capacity of well #1 is 70 GPM and 125 GPM for well #2.¹

Well Pumps - The existing capacity of the well pump in well #1 is 70 GPM and the existing capacity of the well pump in well #2 is unknown. For this analysis, McCrone assumed that the existing capacity of the well pump in well #2 is equivalent to the capacity of the well pump in well #1 (70 GPM).

GAP - The existing GAP allows the pumps to withdraw a combined annual daily average of 51,800 gal and a combined daily average of 83,000 gal for the month of maximum use.

It is standard engineering practice to size wells and well pumps for MDD so the existing capacity of the wells and well pumps was converted into ADD for comparison purposes using the max day demand peaking factor of 2.33 (See Chapter 3 for discussion of peaking factors). The capacity of well #1 and the well pump in well #1 as ADD is 43,262 GPD. The capacity of the well #2 as ADD is 77,253 GPD and the well pump in well #2 as ADD is 43,262 GPD. The capacity of the GAP as ADD is 51,800 GPD.

The limiting component of the existing raw water supply is well #1, the well pump in well #1, and the well pump in well #2. Each of these components has an ADD capacity of 43,262 GPD. The existing ADD of the Kennedyville water system was estimated to be approximately 18,140 GPD (See Table 5 in Chapter 3). Therefore, the **remaining ADD capacity** of the existing raw water supply is **approximately 25,122 GPD**. The planning level GPD/EDU for future water EDUs is 200 GPD/EDU (see Chapter 3), the remaining number of additional EDUs that can be served by the existing raw water supply is approximately **126 EDUs**.

Existing Treatment Equipment Capacity

The existing capacity of the treatment equipment is limited by either the chemical feed pump, the chlorine contact tank capacity, the sand filter capacity, the clear well capacity, or the capacity of the distribution pumps. The total and remaining capacity of each piece of equipment is shown in Table 13 near the end of this section.

Chemical Feed Pumps - The capacity of the chemical feed pump is dependent on the time that the well pump is running per day because the chemical feed pump is only running when the well pump is running. Currently, the well pump runs about 236 minutes per day based on the annual average raw water demand of 16,493 GPD in 2019 and the well pump capacity of 70 GPM. The annual average amount of liquid chlorine used per day from the 2019 MOR is approximately 0.28 gal. This means that there is about 0.072 gal of liquid chlorine used per hour while the well pump is running. From the name plate of the chemical feed pump, the capacity of the chemical feed pump is 3 GPD, or 0.125 GPH. Thus, the maximum rate the well pump can pump to match the capacity of the chemical feed pump is approximately 121 GPM. Well pump rate is equal to MDD and MDD is 2.33 times ADD. **Thus, the existing chemical feed pump can support an ADD of 75,071 GPD.**

Chlorine Contact Tank - The capacity of the chlorine contact tank is dependent on the amount of chlorine contact time required. The amount of chlorine contact time required for this situation is at least 10 seconds. The oxidation of iron at a pH of 7.1-7.2 as shown in the raw water quality data happens rapidly. The rate in GPM that equates to a chlorine contact time of 10 seconds for a 568-gal tank is approximately 3,411 GPM. Converting this rate to ADD using an MDD peaking factor of 2.33, gives an **ADD of approximately 2.1 MGD.**

The chlorine contact time of the 568-gal chlorine contact tank when 70 GPM of flow from the well pump is flowing through the tank is approximately 8.12 minutes.

Sand Filter - The existing capacity of the sand filter is 90 GPM per a phone call with the manufacturer of the sand filter, Andritz. The sand filter must treat the rate pumped from the wells and the wells are sized to provide MDD. Thus, the existing capacity of the sand filter was converted to ADD by dividing by the MDD peaking factor of 2.33. **The existing ADD capacity of the sand filter is 55,622 GPD.**

Distribution Pumps - The existing capacity of the distribution pumps is 111 GPM.² The distribution pumps should pump at a MDD rate and can be converted to ADD capacity in the same way the well capacity was determined. **Thus, the ADD capacity of the distribution pumps is approximately 68,600 GPD.**

Remaining WTP Capacity - The existing ADD of the Kennedyville water system was estimated to be approximately 18,140 GPD (See Chapter 3). The limiting component of the WTP equipment is the sand filter, which has an ADD capacity of 55,622 GPD. **Therefore, the remaining ADD capacity of the existing WTP is 37,482 GPD.** Since the future residential GPD/EDU is 200 GPD/EDU, **the remaining number of additional EDUs that can be served by the existing treatment equipment is approximately 187 EDUs.**

Existing Storage Capacity

To convert the volume of the existing 75,000-gal EWST into ADD, a storage equation needed to be utilized. A typical storage equation containing required fire flow storage, emergency storage, and equalization storage was the starting point of the storage equation for this study. After conferring with the County, the storage equation was condensed to only include required fire flow storage and emergency storage. This condensed storage equation was used to convert the volume of the existing EWST to ADD.

The storage equation initially suggested by McCrone is one McCrone has used in other similar scenarios and jurisdictions (Anne Arundel County, Kent County Frederick County). The equation is as follows.

$$V = V_{FF} + V_{EM} + V_{EQ}$$

where V_{FF} = required fire flow storage

$$V_{EM} = \text{emergency storage} = 0.5(ADD)$$

$$V_{EQ} = \text{equalization storage} = 0.2(MDD) = 0.2 \times 2.33(ADD) = 0.466(ADD)$$

Required fire flow storage is needed in the case of fire flow events. The amount of fire flow storage required is dependent on the buildings that are served by the water system. The existing EWST was constructed circa 1996-1997 along with the WTP.⁴ This was before NFPA code was created and thus was not subject to its requirements. The 2018 NFPA 1 code states in paragraph 1.3.2.4 that current standards do not apply to structures that were built before the code was published. Since the code does not apply, a fire flow of 500 GPM for 2 hours was assumed. This was a typical fire flow requirement at the time of construction of the water system.

Emergency storage is needed for situations where the WTP is unable to produce finished water. The emergency storage will provide the system with half a day of ADD.

Equalization storage is needed when the demand of the distribution system is greater than can be provided by the WTP, which would be MDD. The equalization storage will provide the system with 20% of MDD.

This initial storage equation was sent to the County for review before this report was finalized. The County desired to combine one the three terms of the storage equation to avoid potential water quality issues. It was agreed by the County and McCrone to use the following equation where emergency and equalization storage comes from a single volume, the larger of the two terms from the initial storage equation.

$$V = V_{FF} + V_{EM}$$

where V_{FF} = required fire flow storage

$$V_{EM} = \text{emergency storage} = 0.5(ADD)$$

Since the required **existing** fire flow storage needed is for 500 GPM for 2 hours and the volume of the existing tank is 75,000 gal, solving for ADD, **the total ADD capacity of the EWST is 30,000 GPD.**

The existing ADD of the Kennedyville water system was estimated to be approximately 18,140 GPD. Therefore, the remaining ADD capacity of the existing EWST is 11,860 GPD. Since the future residential GPD/EDU is 200 GPD/EDU, the **remaining number of additional EDUs** that can be served by the existing storage is **approximately 59 residential EDUs**.

The existing EWST only has enough capacity for 59 **residential** EDUs, **not commercial** EDUs. The required fire flow for future residential buildings if they are sprinklered is 500 GPM for 1 hour and the required fire flow for future commercial buildings if they are sprinklered is 1,000 GPM for 1 hour. These fire flow requirements are discussed in detail in the sub section *Additional Storage Capacity Needed*. **Therefore, only additional future residential are covered by the fire flow storage in the volume of the existing EWST.**

Limiting Component of the Existing Water System and Remaining Capacity

The existing and remaining capacities of the components in supply, treatment equipment, and storage in terms of ADD and additional EDUs that could be served by that component are listed in Table 14. Table 14 lists the existing capacities in order from greatest to least. As shown in Table 14, **the limiting component of the water treatment process is the existing EWST**, which can support a total ADD of 30,000 GPD and has a **remaining capacity of 11,860, or 59 additional EDUs**.

Table 14: Total and Remaining Capacities of the Existing Water System Components

Water System Component	Total ADD Capacity (GPD)	Remaining ADD Capacity (GPD)	Additional EDUs That Could be Served
Chlorine Contact Tank	2,108,012	2,089,872	10,449
Well #2	77,253	59,113	296
Chemical Feed Pump	75,071	56,931	285
Distribution Pumps	68,601	50,461	252
Sand Filter	55,622	37,482	187
GAP	51,800	33,660	168
Well Pump in Well #1	43,262	25,122	126
Well #1	43,262	25,122	126
Well Pump in Well #2	43,262	25,122	126
EWST	30,000	11,860	59

Necessary Future Capacity

The existing plus future ADD is approximately 88,040 GPD, which is greater than the total ADD capacity of the wells, WTP, and EWST. Therefore, the supply to the WTP, the treatment equipment in the WTP, and storage all need to be upgraded in the future to accommodate all future development, but there is remaining capacity in the system now for some future development. The recommended future upgrades are covered in Chapter 5.

The limiting component of the water system is the existing storage, which is only able to serve an additional 59 **residential** EDUs before the capacity of the existing storage is reached. The next

limiting component in the water system is the existing raw water supply, which can serve an additional 126 EDUs before its capacity is reached. This means if the existing storage is upgraded before any other component of the water system, that there are 67 EDUs that could be served by the water system before the next component, the raw water supply, would need to be upgraded.

The future development that would most likely occur first is the remaining portion of Kennedyville Village. The total number of EDUs that would be connected to the system from only the future residential development of Kennedyville Village is 59 EDUs. **Only residential development can be accounted for because the existing fire flow storage can only provide for future residential EDUs, so the future commercial development from Kennedyville Village cannot be considered.** After connection of 59 future EDUs, the supply, storage, and WTP components are recommended to be upgraded because construction of those components is tied together due to space constraints.

Distribution System

The existing capacity of the distribution system and its ability to accept additional demand was analyzed through a hydraulic model in WaterCAD. The hydraulic model was run with peak hourly demands to ensure there is adequate residual system pressure (35 PSI) for the existing plus future demands. The model was also run under fire flow conditions with max day demands in the background to ensure there was enough fire flow available and 20 PSI of residual pressure available. These are typical requirements for current distribution systems.

Hydraulic Model Creation

During the analysis for the 2002 PER by McCrone, a hydraulic model of the existing Kennedyville distribution system containing the existing pipe sizes and materials was created using Cybernet Version 5.0. Cybernet Version 5.0 is an older version of WaterCAD. The current version of WaterCAD no longer supports the file type used in Cybernet Version 5.0 so the developer of WaterCAD, Bentley, was contacted to see if they could convert the old files to usable files. Bentley was able to convert the old files and McCrone was able to use this as the basis of the existing distribution system.

After the 2002 PER was written, part of the Kennedyville Village development was added to the distribution system so this was added onto the model from 2002. The pipe size and the material of the water mains in Kennedyville Village were not shown on the contract drawings for Kennedyville Village and the County was unable to provide McCrone with this information. Therefore, a pipe diameter of 8" and a pipe material of PVC were assumed for the water mains in Kennedyville Village. It was also not possible to get the elevations of the water mains in Kennedyville Village from the contract drawings because the datum used for those drawings was not a standard datum. To obtain approximate elevations for the water mains, McCrone used LIDAR data from NOAA. The elevations of the water mains in the rest of the system had to be corrected using the LIDAR data as well.

Model Calibration and Hydrant Flow Tests

After the existing distribution system was set up in the model, the model was calibrated using field run fire hydrant tests. McCrone performed fire hydrant testing throughout the distribution system on January 16, 2020 with the assistance of an operator. The first fire hydrant that was tested was

off what was assumed to be an 8" water main in the Kennedyville Village development on Redmill St. The second fire hydrant tested was off a 6" water main on MD Route 213 past PS #2 in the southwest direction. The third fire hydrant tested was off a 6" water main on MD Route 213 past the railroad crossing in the northeast direction. The fourth fire hydrant tested was off a 6" water main near the post office on Kennedyville Rd. The locations of these fire hydrants are shown on a map of the hydraulic model in Appendix C. The fire hydrants were opened separately and fully flowed after attaching a "Little Hose Monster" hydrant testing assembly. The flow data was recorded along with the elevated water storage tank level. The testing results are provided in Appendix D.

McCrone was able to calibrate the model accurately for all the tests performed. The model output flow versus the field test flow recorded is shown in Table 15. To be considered properly calibrated, the model results should be within 10% of the field results. As shown from Table 15, all the model results are within 10% of the field results. The most accurate model result is at FH test #2, with a flow 2.5% greater than the field test flow. The least accurate model result is at FH test #3, with a flow 9.1% less than the field test flow. Since all the model results are within 10% of the field results the model has been deemed calibrated.

Table 15: Hydraulic Model Calibration Data

	FH Test #1	FH Test #2	FH Test #3	FH Test #4
Model Output (gpm)	682	619	537	695
Field Test (gpm)	643	604	591	715
Accuracy	6.1%	2.5%	-9.1%	-2.8%

Addition of Future Demands and Piping

After the model was calibrated, the future demands for the residential and commercial part of Kennedyville Village, parcel 267, parcel 209, and parcel 78 were added to the model. See Chapter 3 for the future demands from these contributors. 8" PVC pipe was assumed for the future phase of the Kennedyville Village development. 8" PVC pipe was also used to create a loop for parcel 267, looping from MD 213 back to the future phase of Kennedyville Village. 8" PVC pipe was used to create a loop for parcel 209 as well, looping from the north end of MD 213, through parcel 209, and back to the EWST/WTP site. This can all be seen on the map of the water distribution system in Appendix C. Once the model was calibrated and all the existing and future demands were accounted for in the model, the model was run in a PHD scenario and a fire flow scenario.

PHD Scenario

The model settings for the PHD scenario were existing and future demands peaked by 4.0 with the EWST level set at the pump on level. According to the control panel in the WTP, the well pump on level is set at 146, which equates to an elevation of 204 because, according to the LIDAR contours, the base of the tank is about elevation 58. **The model output showed that all existing and future junctions were provided with a minimum pressure of 35 PSI under these conditions.**

The model output for the PHD scenario is provided in Appendix C. The junctions are sorted by ascending pressure so the junctions with the least amount of pressure can be seen. The junctions that have a pressure of (N/A) were junctions created for the FH tests and were used for calibrating the model only, they were “inactive” for the PHD model run. The junction with the least amount of pressure is Kennedyville Village - Future Residential, with a pressure of 55 PSI. There are numerous junctions that make up the future development of Kennedyville Village (KV), however, for simplicity and to be conservative, all the estimated future demand for KV was assigned to the junction with the highest elevation. Since the minimum pressure shown in the results is 55 PSI, the existing distribution system can provide the minimum system pressure of 35 PSI under PHD for both existing and future demands.

Fire Flow Scenario

The model settings for the fire flow scenario were max day demands in the background with the tank level set at the nearly empty, elevation 192.10. This elevation was determined from the 1996 WTP as-builts and the LIDAR contours. As previously noted, the base of the tank is roughly at elevation 58 according to the LIDAR contours. According to the 1996 WTP as-builts, the elevation of the base of the tank is 47.50 so there is a 10-foot difference between elevations listed on the as-builts and actual elevations. The as-builts list the tank empty level as elevation 181.6 so adding 10 feet to this gives a tank empty level of 191.6. Half a foot was added to the elevation to obtain a tank level of nearly empty because the model requires some amount of water in the tank before it will perform the calculations.

The fire flow analysis was run to see the availability of fire flow throughout the distribution system with all future demands accounted for. At junctions connected to a 6" or 8" water main, the model predicts that there is at least 1,000 GPM of available fire throughout the distribution system without dropping the system pressure to less than 20 PSI. This is shown through the fire flow model output in Appendix C. Appendix C lists the available fire flow in increasing order. The junction connected to a 6" or 8" water main with the least amount of available fire flow is junction J-10 with 1,112 GPM of available fire flow. This junction is highlighted in yellow the model results.

The fire flow output table also shows junctions that have a fire flow of (N/A) and junctions that have a fire flow less than 1,000 GPM. The junctions that have a fire flow of (N/A) were the junctions created for the FH tests and are were not “active” during the fire flow scenario model run. The junctions that have a fire flow less than 1,000 GPM are connected to 4" water lines and 2" water lines and are highlighted in red in the fire flow model results. Junction J-13 is connected to a 4" water line and junctions J-16, J-15, J-2, and J-12 are connected to 2" water lines. These lines should not be considered in the fire flow analysis because 2" and 4" water lines would not be used to provide fire flow.

As determined in *Existing Storage Capacity* section in this chapter and the *Additional Storage Capacity Needed* section in Chapter 5, the fire flow required for existing buildings is 500 GPM and the fire flow required for future commercial buildings is 1,000 GPM. Since the model output shows that there will be at least 1,000 GPM available for junctions off 6" and 8" water mains and pressures will be at least 20 PSI, there would be enough fire flow for existing and future buildings with the existing distribution system. This is provided that 8" water mains are used for future development.

The additional storage tank that was considered as an option to provide additional storage for future development was not considered in the hydraulic model analysis. The hydraulic model analysis with only the existing EWST demonstrated there is enough pressure in the system under PHD and fire flow scenarios, adding the additional storage tank to the model would only make pressures and fire flows for the distribution system better.

Wastewater Infrastructure

The Kennedyville wastewater infrastructure is potentially limited by the capacity of the pumps in PS #1, PS #2, and PS #3. A drawdown test was performed by McCrone to determine the pumping capacity in each pump station. The pumping capacity was converted to average daily flow (ADF) capacity. The remaining ADF capacity of the pump stations was determined by subtracting the existing wastewater flow into the pump station from the ADF capacity. The remaining ADF capacity was converted from GPM to EDUs to compare with the future EDUs that flow to each of the pump stations to determine if there is capacity for all future EDUs. The results of the analysis are summarized in Table 17 at the end of this subsection.

Drawdown Tests

McCrone performed drawdown testing at PS #1, PS #2, and PS #3 on January 16, 2020 to determine the existing pump capacity of the pumps at each pump station. The first pump station tested was PS #3, the second pump station was PS #2, and the third pump station tested was PS #1. The tests were conducted by making sure the pumps were off, measuring the initial water level in the wet well, running one of the pumps for a defined time interval, and measuring the water level after pumping for the defined time interval. After recording the data, the test was run again in the same manner but for the other pump in the wet well, if it was operational. If there was any influent wastewater to the pump station during the drawdown tests, the influent rate was estimated between tests by recording the water level in the pump station after pumping and recording the water level again after 2 or 3 minutes.

The results of the drawdown tests are shown in Appendix J. The results of the drawdown tests are summarized in Table 16. During testing, pump #2 at PS #3 was offline and was not able to be tested so the pumping rate for pump #2 at PS #3 was not able to be recorded. Overall, each pump station was pumping at a higher rate than the design point of the pumps. PS #1 was on average pumping 33 GPM more than its design point, at approximately 203 GPM. PS #2 was also on average pumping 33 GPM more than its design point, at approximately 113 GPM. PS #3 was on average pumping 25 GPM more than its design point, at approximately 110 GPM.

Table 16: Summary of Drawdown Test Results

	PS #1	PS #2	PS #3
Pump #1 Average Pumping Rate (GPM)	197	124	110
Pump #2 Average Pumping Rate (GPM)	208	102	-
Average Pumping Rate of Pump Station (GPM)	203	113	110
Pump Design Point of Pump Station (GPM)	170	80	95

PS #1 Total Existing Capacity and Remaining Capacity

The total existing capacity of PS #1 is dependent on the capacity of the pumps in the wet well. As determined by the drawdown tests, the average pumping rate of the pump station was 203 GPM. To be conservative when determining the total existing capacity of PS #1, the lowest average pumping rate from the two pumps was used and rounded down to the nearest multiple of 10, so the total existing capacity of PS #1 is 190 GPM. Since the pumps were sized for peak hour flow (PHF), this total existing capacity is in terms of PHF.

As determined in Chapter 3, the existing PHF to PS #1 in GPM is 47 GPM. Subtracting the existing PHF to PS #1 from the total existing capacity of PS #1 yields a remaining PHF capacity of 143 GPM. The PHF capacity is converted to ADF capacity by dividing by the PHF peaking factor of 4. **The remaining ADF capacity of PS #1 is 51,455 GPD.** Converting the remaining ADF capacity from 51,455 GPD to EDUs using the future GPD/EDU of 250 GPD/EDU discussed in Chapter 4 yields an approximate remaining capacity of 206 EDUs. **Therefore, PS #1 is currently able to serve approximately 206 additional EDUs before it needs to be upgraded.**

As discussed in Chapter 3, the number of future EDUs that would flow to PS #1 is 358 EDUs. Since the number of future EDUs is greater than the remaining number of EDUs that PS #1 can serve, PS #1 will need to be upgraded. The upgrade options for PS #1 are discussed in Chapter 5.

There are 65 future residential and commercial EDUs expected from the future development of Kennedyville Village. Since the remaining number of EDUs that PS #1 can serve is greater than the future EDUs expected from Kennedyville Village, PS #1 could serve the future development of Kennedyville Village without needing to be upgraded.

PS #2 Total Existing Capacity and Remaining Capacity

The total existing capacity of PS #2 is dependent on the capacity of the pumps in the wet well. As determined by the drawdown tests, the average pumping rate of the pump station was 113 GPM. To be conservative when determining the total existing capacity of PS #2, the lowest average pumping rate from the two pumps was used and rounded down to the nearest multiple of 10, so the total existing capacity of PS #2 is 100 GPM. Since the pumps were sized for PHF, this total existing capacity is in terms of PHF.

As determined in Chapter 3, the existing PHF to PS #2 in GPM is 21 GPM. Subtracting the existing PHF to PS #2 from the total existing PHF capacity of PS #2 yields a remaining PHF capacity of 79 GPM. The PHF capacity is converted to ADF capacity by dividing by the PHF peaking factor of 4. **The remaining ADF capacity of PS #2 is 28,480 GPD.** Converting the remaining ADF capacity from 28,480 GPD to EDUs using the future GPD/EDU of 250 GPD/EDU discussed in Chapter 4 yields a remaining capacity of 114 EDUs. **Therefore, PS #2 is currently able to serve approximately 114 additional EDUs before it needs to be upgraded.**

As discussed in Chapter 3, the number of future EDUs that would flow to PS #2 is 237 EDUs. Since the number of future EDUs is greater than the remaining number of EDUs that PS #2 can serve, PS #2 will also need to be upgraded. The upgrade options for PS #2 are discussed in Chapter 5.

There are 59 future EDUs expected from the future **residential** development of Kennedyville Village that would flow to PS #2. (The commercial EDUs flow to PS #3.) **Since the remaining number of additional EDUs that PS #2 can serve is greater than the future residential EDUs expected from Kennedyville Village, PS #2 could serve the future development of Kennedyville Village without needing to be upgraded.**

PS #3 Total Existing Capacity and Remaining Capacity

The total existing capacity of PS #3 is dependent on the capacity of the pumps in the wet well. As determined by the drawdown tests, the average pumping rate of the pump station was 110 GPM. To be conservative when determining the total existing capacity of PS #3, the lowest average pumping rate from the two pumps was used and rounded down to the nearest multiple of 10, so the total existing capacity of PS #3 is 110 GPM. Since the pumps were sized for PHF, this total existing capacity is in terms of PHF.

As determined in Chapter 3, the existing PHF to PS #3 in GPM is 15 GPM. Subtracting the existing PHF to PS #3 from the total existing capacity of PS #3 yields a remaining PHF capacity of 95 GPM. The PHF capacity is converted to ADF capacity by dividing by the PHF peaking factor of 4. **The remaining ADF capacity of PS #3 is 34,080 GPD.** Converting the remaining capacity from 34,080 GPD to EDUs using the future GPD/EDU of 250 GPD/EDU discussed in Chapter 4 yields a remaining capacity of 136 EDUs. **Therefore, PS #3 is currently able to serve approximately 136 additional EDUs before it needs to be upgraded.**

As discussed in Chapter 4, the number of future EDUs that would flow to PS #3 is 108 EDUs. Since the number of future EDUs is less than the remaining number of additional EDUs that PS #3 can serve, PS #3 will not need to be upgraded to serve future EDUs. **However, a future upgrade of PS #3 is recommended to incorporate the high inflow rate from filter backwash in the GSF option.** These upgrades are discussed in Chapter 5, in the *Treatment Equipment* section.

A summary of the of the total existing capacity of each pump station and the remaining capacity of each pump station is shown in Table 17.

Table 17: Summary of Existing PS Capacities and Remaining PS Capacities

	Total Existing PHF Capacity (GPM)	Remaining PHF Capacity (GPM)	Remaining ADF Capacity (GPD)	Remaining Capacity (EDUs)
PS #1	190	143	51,455	206
PS #2	100	79	28,480	114
PS #3	110	95	34,080	136

Chapter 5: Recommended Water System Upgrades and Alternatives Considered and Recommended Wastewater Collection System Upgrades

Introduction

As determined in Chapter 4, all major components of the water system do not have adequate remaining ADD capacity for existing plus future demands. The first component to run out of capacity will be the storage, then, the raw water supply, and last, the WTP equipment. Thus, all components of the water system will need to be upgraded. This chapter will cover the upgrades to these components that are recommended and the alternatives that were considered.

When considering the options to upgrade the water system, the WTP site was reviewed and it was revealed that a Delmarva Power right-of-way (ROW) goes through the south-eastern half of the site, as shown in Appendix E. McCrone reached out to Delmarva Power for general information on what is allowed in the ROW. The general information provided states that above or below grade structures are not allowed in the ROW as a default answer. Delmarva Power will review individual situations on a case-by-case basis for a \$1,500 application fee. Since McCrone only has planning level information at this time, the review is likely to be incomplete. Therefore, McCrone took the general approach in this study to try and stay out of the ROW if at all possible for the upgrades and alternatives that were investigated in this study.

The pump stations in the wastewater collection system that will need to be upgraded to serve all future EDUs are PS #1 and PS #2. PS #3 has enough capacity to serve future EDUs that will flow to it, but PS #3 would need to be upgraded to handle the filter backwash from the recommended greensand filters (GSF). The upgrade to PS #3 is discussed in the *Water System Upgrades* section of this chapter. The upgrades that would be needed for PS #1 and PS #2 are discussed in the *Wastewater Collection System Upgrades* section.

Water System Upgrades

Supply

There are two options that were considered for upgrading the raw water supply. The first option would be to drill wells in a different aquifer than the wells are currently drawing raw water from, the Monmouth aquifer. The second option would be to drill wells in the same aquifer that the wells are currently drawing water from.

Drilling wells in a different aquifer than the Monmouth was investigated because if there is raw water available that does not have any primary or secondary contaminants that exceed their maximum contaminant levels, then that raw water would not require any treatment. There are two aquifers in the area that were considered for this, the Aquia aquifer and the Lower Patapsco aquifer, because of their general use in the area and they generally have low levels of iron.

To analyze the feasibility of accessing the Aquia aquifer, McCrone reviewed a map of the Aquia aquifer from the State showing the extent of the Aquia aquifer in Maryland and Delaware. It was found that the Aquia aquifer is too shallow to access in this area and drilling into the Aquia aquifer was not pursued further. See Appendix F for the map of the Aquia aquifer that was reviewed.

To analyze the feasibility of accessing the Lower Patapsco aquifer, McCrone also reviewed a map of the Lower Patapsco aquifer from the State showing the extent of the Lower Patapsco aquifer

in Maryland and Delaware. The map revealed that it is roughly 700 feet to the top of the Lower Patapsco aquifer in Kennedyville. Comparatively, it is roughly only 170 feet to the existing wells in the Monmouth aquifer according to the map of the Monmouth aquifer from the state. Both maps are shown in Appendix F. The water quality of the raw water in the Lower Patapsco contains relatively low levels of iron but based on McCrone's work on other known Lower Patapsco wells in the Kent Island area, this raw water will still require iron removal. The iron levels in the existing Monmouth aquifer are already low, less than 1.0 ppm. Since the Lower Patapsco aquifer still has iron levels that will require treatment and drilling into the Lower Patapsco aquifer will be deeper than the existing Monmouth aquifer, it is not financially worthwhile.

Drilling into the Aquia aquifer is not possible in this area and the Lower Patapsco aquifer will not provide better quality raw water than the Monmouth aquifer and it is deeper, so the option of drilling into different aquifers was not considered further.

The option of drilling into the same aquifer that is providing water for the WTP currently, the Monmouth aquifer, was investigated for multiple reasons. The Monmouth aquifer has the capacity for larger wells to meet the future plus existing max day demand of 143 GPM. According to the raw water quality analysis in Appendix B, the two existing wells in the Monmouth aquifer have generally good raw water quality except for iron, which has levels less than 1 ppm. It is also possible to drill new wells into the Monmouth aquifer outside of the Delmarva Power ROW on the site of the existing WTP.

McCrone's recommendation for upgrading the raw water supply to the WTP is to drill new, higher yield wells in the Monmouth aquifer. This is McCrone's recommendation because the water quality in the Monmouth aquifer is adequate, the possibility to increase well yield is available in the Monmouth aquifer, and the well depths are relatively shallow which leads to lower a construction cost compared to deeper aquifers.

A new raw water well would require an MDE construction permit (plans and specifications signed by a professional engineer registered in Maryland), an administrative change to the Groundwater Appropriations Permit (GAP), a siting meeting with MDE water supply division and the County health department, a well construction permit obtained by the well driller, a geophysical log of the new well as it is drilled, drawdown testing of the new well to confirm adequate yield, testing of the well water in accordance with MDE's self-monitoring forms (pH, bacteria, VOCs, etc), and a Certificate of Potability (COP) issued by MDE based on laboratory testing of the new raw water well. Additionally, when the new well(s) is complete, the existing well will need to be abandoned in accordance with Code of Maryland (COMAR) regulations.

A general timeframe for design, permitting, and construction of a new raw potable water well is approximately 210 days. It's estimated to take 150 days to have the required siting meeting, coordinate with MDE's water supply division for GAP modification, prepare an MDE package for a construction permit, review by MDE, response to MDE's review comments, and final review/issuance of the construction permit by MDE. It is estimated to take 60 days for well construction, well development, raw water testing, and coordination with MDE to get a COP.

Treatment Equipment

There are four treatment options that were generally investigated for upgrading the iron removal equipment in the plant: greensand plus filters (GSFs), ion exchange membranes, biological iron filters, and membrane filters. After a general review of each of the four options, GSFs and membrane filters were examined further.

General Review of Treatment Equipment

Ion Exchange - Ion exchange units were the first treatment option that was generally examined. This option was the recommended option in the 2002 PER, so it was reevaluated. There are several drawbacks to using ion exchange membranes in this situation. Ion exchange membranes require brine to regenerate the membranes. To create the brine, sodium chloride or salt is combined with water. The amount of salt that would be needed per month at design demands is roughly 16,000 lbs or 420 cubic feet. The WTP building and the site are already tight on space so storing this much salt would be an issue. Additional drawbacks to ion exchange membranes are regenerating the membranes with brine will introduce sodium into the finished water, which may require the County to issue notices to customers, backwashing the ion exchange resin with chlorinated water degrades the resin media over time, and using ion exchange membranes for treatment is not something the County is familiar with so operating them would take getting used to. Due to these drawbacks and the viability of other technologies, ion exchange units were not pursued in more detail.

Biological Iron Filters - Biological iron filters were the second treatment option that was generally examined. This is a newer technology that does not require chemicals to oxidize iron, which is the main advantage of using this technology. Biological iron filters have been installed in Maryland before, as they are currently installed in the Annapolis potable WTP. McCrone reached out to a vendor to examine if they could be feasible for this application. McCrone received a general price of \$550,000 for a biological iron filter in this situation. This cost was not cost competitive versus the price of the membrane filters and the GSFs and this high capital cost cannot be covered by lower chemical costs due to the relatively low iron levels in the raw water. Therefore, biological iron filters were not considered further.

Membrane Filters - Membrane filters were the third treatment option that was generally examined. This option uses pumps to force raw water through a membrane with very small pore spaces that capture bacteria and solids in the raw water. There are multiple advantages of using membrane filters for this situation. The first advantage is that membrane filters typically have a small footprint and would be able to fit in the building. The second advantage is the iron waste captured by the filters will be discharged at a slow rate and will not overwhelm PS #3, unlike GSFs, where the backwash rate exceeds the pumping capacity of PS #3. The third advantage is the iron waste from the filtration process is already concentrated so less water is wasted compared to a GSF.

There are also disadvantages of using membrane filters for this situation. The first disadvantage is that the equipment is more complex with more instrumentation, valves, pumps, and monitoring equipment than more traditional technologies like GSFs. The second disadvantage is that they typically cost more than traditional treatment technologies, but they can make up for additional

cost if they save money on building footprint. The third disadvantage is there is typically more connected horsepower required for membrane filters compared to other technologies like GSFs, which leads to higher electrical costs. A fourth disadvantage is chemicals are needed to clean the membrane filters. It was decided during the initial general review that the advantages of membrane filters potentially outweighed the disadvantages, so this option was examined in further detail by reaching out to a vendor for pricing and general equipment information.

Greensand Filters - Greensand plus filters (GSFs) were the fourth treatment option that was generally examined. This treatment option became widely available in 2006 (after the 2002 PER) and uses traditional filtration mechanisms combined with greensand media catalyzing the oxidation of soluble iron for additional removal of soluble iron.

There are many advantages to using GSFs as a treatment option. One advantage is greensand plus media can accommodate a higher hydraulic loading rate (GPM/SF) than traditional sand filters. GSFs can accommodate a hydraulic loading rate in the range of 2 to 12 GPM/SF depending on water quality, while a traditional sand filter can only accommodate a hydraulic loading rate in the range of 2 to 5 GPM/SF. This difference in hydraulic loading rate results in GSFs having a smaller footprint than traditional sand filters. Another advantage is greensand plus media can run at higher differential pressures than regular greensand, which means the filter can run longer between backwashes and results in less backwash water being produced. A third advantage is greensand plus media does not require potassium permanganate to keep the media charged. All that is required to keep the greensand plus media charged is a 1.0 ppm free chlorine residual in the finished filter water. The existing WTP facility already uses liquid chlorine in its treatment process so this would already be accomplished.

The main disadvantages to using greensand plus filters as a treatment option is the filters generate a large backwash volume at a high rate. The problem with this is the high rate of backwash water could overwhelm PS #3 and since the concentration of iron in the backwash water is low, there will be waste of finished water, unless a backwash recycling system is used. This disadvantage does not outweigh the advantages of using GSFs as a treatment option so GSFs were investigated further by reaching out to a vendor for pricing and general equipment information.

Greensand Filters

The general flow process for GSFs is the raw water is pumped from the wells into the treatment plant, then liquid chlorine would be injected into the raw water, then the water would continue through the GSFs into the storage tanks (elevated or ground). As the filtered iron causes differential pressure to increase across the GSFs, they will be backwashed, and the backwash water will be discharged to an equalization basin, a backwash recovery tank, or directly to PS #3. When one GSF needs to be backwashed, both filters will be offline because one filter cannot accommodate the design flow rate of 143 GPM.

The GSF treatment option would provide two 4-foot diameter filters mounted on a skid with piping and valves. The GSF would require a slight increase in chlorine feed to make sure the filter effluent has 1 mg/L of free chlorine. This helps to make sure the coating on the media stays "charged" to help with iron oxidation and filtration. The GSF would use finished water from the

distribution system for backwash. Backwash can be triggered by elapsed time, differential pressure, or manually.

The GSF skid will fit inside the WTP facility after the chlorine contact tank, clear well, and distribution pumps are removed. A potential location for the GSFs in the WTP is shown in Appendix G.

Greensand Filter – Backwash Considerations

According to information received from the vendor, the GSF will be backwashed at a rate of 215 GPM for 10 minutes and generate a backwash volume of approximately 2,150 gal per filter. Currently, the pumps in PS #3 have a capacity of approximately 110 GPM based on results from the drawdown tests performed. Since the capacity of the pumps are less than the backwash rate, the pumps cannot currently handle that amount of backwash flow.

Three options for handling the GSF backwash water were reviewed. One was a backwash recovery and recycle system, one was a backwash equalization tank with discharge to PS #3, and one was direct discharge to an upgraded PS #3.

Backwash Recovery and Recycle System

The backwash and recycle system consists of a 5,000 gal above ground conical plastic storage tank in the WTP building along with pumps/automatic valves to send settled solids to PS #3 at a rate that would not overwhelm PS #3 and supernatant back through the filters. However, due to limited space in the WTP building, there was not room for the 5,000 gal above ground conical plastic storage tank.

Burying the backwash and recycle system tank on the WTP was considered. The plastic conical tank would be replaced by a concrete tank. The second option investigated was installing a 5,000 gal underground concrete tank on the site of the WTP. Settled iron solids at the bottom of the tank would be pumped to PS #3 at a rate the pump station could handle and separate pumps would recycle the supernatant back to the GSF. Upon looking into the 2012 *Recommended Standards for Water Works* (a.k.a., 10 States Standards), it was discovered that recycling backwash water from iron removal facilities "...should not be allowed except as approved by the reviewing authority." See 9.5.5 of 10 State Standards. Additionally, a buried tank outside would face resistance from MDE because the recycle system would not be "inside" and has the potential to introduce foreign contaminants back into the water treatment process. MDE requires new clarifiers used for sedimentation in drinking water applications to be inside. McCrone is aware there is a buried backwash recycle system at the Worton WTP, but that was designed and installed prior to MDE's adoption of the 10 States Standards as their guideline for reviewing potable water facilities.

In addition to the expected MDE resistance, the only available location on the WTP site for a buried recycle backwash tank is in the DP&L right-of-way (ROW). DP&L would have to approve a new structure in their ROW, which is not guaranteed, especially if the structure is above grade like the anticipated enclosure of the backwash recovery tank to meet expected MDE requirements.

Due to the expected MDE resistance and potential veto by DP&L, the buried backwash recycle system option was deemed not feasible.

Backwash Equalization Tank

A second option considered was a backwash equalization tank, with no recycle of supernatant back to the GSFs. By eliminating the supernatant recycle, the MDE issues with option 1 go away. The DP&L ROW issue remains, but the tank would be buried, and the above grade elements would be minimal, improving the likelihood of DP&L approval.

The backwash equalization tank would consist of a 5,000-gallon buried concrete tank and a pair of pumps that would pump solids to PS #3 at a rate of 10 to 15 GPM so as not to overwhelm it.

Upgrade PS #3

Upgrading PS #3 to accommodate the GSF backwash water option involves installing a larger diameter wet well to provide storage for the backwash water. The rate of backwash water into the pump station would be 215 GPM and the existing pumps in the wet well can conservatively pump 100 GPM. This gives a deficit of 115 GPM that the pumps would not be able to handle. Since the backwash water would only be pumped for 10 minutes, the new wet well would need to provide 1,150 gal of additional storage if new pumps were discharging at a rate of approximately 100 GPM.

The storage could be accounted for in 2 vertical feet of a 10-foot diameter wet well (587 GAL/VF). The new wet well should also be able to provide enough storage for one backwash with no pumps running as a precaution. 4.5 vertical feet in a 10-foot diameter wet well would be able to provide this additional storage so the new 10-foot diameter wet well should have a bottom elevation approximately 4.5 feet deeper than the existing wet well. To decrease the depth of the wet well, the new wet well could be located north of the existing wet well, down the existing slope. The size of the new wet well that would provide storage for backwash from the GSF would be 10 feet in diameter and approximately 18 feet deep. The existing wet well is over 20 feet inside depth per the collection system as-builts drawings.

As proposed, the upgrade of PS #3 would allow the reuse of the existing force main, the existing generator, and the existing electrical service. The pumps would pump the same as the existing pumps, so the existing force main would be adequate. The proposed pumps would have the same size motor as the existing pumps, so the existing generator and electrical service would be adequate.

The upgrade of PS #3 would involve some safety measures to make sure the system did not overflow from backwash, even if enough volume is provided. First is redundant level measurement (pressure transducer and floats). The second is monitoring of a flow meter. When a pump is called for a PLC, or other means, should look at the flow meter and make sure the pump is discharging. If the flow meter does not register flow, an alarm is called out via SCADA and the lag pump is called for. Lastly, a high-high level float (above the high-level float) would be interlocked with the backwash PLC programming and stop backwash if it is reached. Backwash would stay locked out until an operator was onsite to diagnose and resolve the high-level issue. The system could backwash again when the alarm is manually cleared.

Although this option proposes work in the DP&L ROW, the option replaces a pump station that is already in the DP&L ROW, all new components (the wet well and valve vault) would be mostly above grade, and the upgrade is for public need.

Recommended Option for Handling Backwash from the GSF

Upgrading PS #3 is the recommended option for handling backwash from the GSFs. Any MDE related approval issues associated with a backwash recovery and recycle system are eliminated. The amount of water potentially recycled is approximately 5,000 gallons every 5 days at design demands. That averages to 1,000 gallons per day, or 1.1% of design ADD.

The upgrade of PS #3 is preferred to a backwash equalization tank because both options essentially involve the same components. Each involve a structure and pumps. However, upgrading PS #3 would not create another set of pumps and another structure to maintain like the equalization tank would.

Therefore, upgrading PS #3 is recommended.

The general location of an upgraded 10-foot wet well is shown in Appendix E.

Membranes

The general flow process if membrane filters were used as the main treatment process would be the raw water pumped from the wells into the treatment plant, addition of liquid chlorine into the raw water, then the raw water and oxidized iron will flow through the membrane skid under pressure and to the storage tank (elevated or ground). Solids would accumulate in the membrane modules and all modules are backwashed/back pulsed once per hour. The vendor, Suez (formerly Zenon), proposed a total of 16 modules for the design flow rate of 143 GPM, which would generate approximately 200 gallons per hour of backwash when the facility was running which is estimated at 10 hours per day at design ADD, so approximately 2,000 gallons per day of backwash/back pulse water. The rate and volume of backwash is not enough to overwhelm PS #3 but is more backwash per day than the GSFs.

The membrane filtration system received from the vendor consists of two skid units containing 8 membrane modules, a 500-micron strainer on both skids, a clean-in-place (CIP) pump on one skid, a main control panel on one skid, a remote IO panel on the other skid, an off skid air compressor, a 1,000 gallon heated water tank for CIP processes, and various valves and instruments. Each skid unit can accommodate up to 75 GPM for a total of 150 GPM for the entire system. Two skids are needed so that the system can make average day demand rate of water even when one skid is offline for CIP cleanings that use citric acid for an all-day soaking of the membranes. The CIP cleanings would occur at least twice per year.

Each skid unit would be 120-inches long and 85-inches wide. Both skids will fit inside the WTP facility after the existing sand filter, clear well, chlorine contact tank, blower for the sand filter, and distribution pumps are removed. A potential location for the membrane filtration system in the existing WTP facility is shown in Appendix G.

After reviewing the storage options and determining the ground storage tank (GST) with domestic/high service pumps is preferable and more economical than another elevated water

storage tank (EWST), there was not room for the proposed membrane equipment and the pumping equipment. See the storage section for a discussion on GST versus EWST options.

Recommended Treatment Option

The recommended treatment option is linked to the recommended storage option. The recommended storage option requires pumps that need to be housed inside the WTP since there is nowhere to locate them elsewhere on the site. There is space within the existing WTP for the GSF equipment AND the pumping equipment, but that is not the case with the membrane treatment equipment. Membranes would require additional land be acquired and indoor space constructed. Therefore, greensand filters are the recommended treatment option.

There are other significant advantages to choosing GSFs over membranes. The GSFs will generate less backwash on a volumetric basis. The backwash rate is higher than membranes, but the volume is less over time compared to membranes. The capital cost of GSFs is less than membranes. The connected horsepower of GSFs is less than membranes. The estimated operating costs of GSFs is less than membranes. GSFs are a simpler and known technology to County operations staff for drinking water. The County has membrane plants for wastewater treatment, but not for drinking water treatment.

Therefore, greensand filters are the recommended treatment option.

Storage

Storage is the limiting component to the existing water system and determines when the entire system will need to be upgraded. The existing EWST has enough remaining capacity for 11,860 GPD of additional ADD, or 59 additional EDUs, before storage needs to be upgraded. The remaining capacity available assumes that all additional EDUs connected to the system are residential, not commercial. Residential fire flow is 500 GPM for 2 hours for the existing distribution system and any new residential development that is sprinklered requires a fire flow of 500 GPM for 1 hour but any new commercial development that is sprinklered requires a fire flow of 1,000 GPM for 2 hours. Thus, only future residential EDUs are covered by the fire flow storage in the existing EWST. To serve the future EDUs, 72,000 gal of additional storage is required.

Additional Storage Capacity Needed

The additional 72,000 gal of storage that would be needed for existing plus future demand was determined using the condensed storage equation covered in Chapter 4 with one difference: WTP production for 2 hours is subtracted from the required fire flow. This revises the condensed equation to the following.

$$V = V_{FF} + V_{EM}$$

where V_{FF} = required fire flow storage – WTP production for 2 hours

$$V_{EM} = \text{emergency storage} = 0.5(ADD)$$

The WTP production for 2 hours can be counted and subtracted from the required fire flow storage because one of the upgrades to the WTP will be an emergency generator for backup power. Equipped with a generator, the WTP will be able to produce finished water nearly all the time so the production from the WTP can be counted during a 2-hour fire event.

The required fire flow storage for future commercial buildings is 1,000 GPM for 2 hours per 2018 NFPA 1 code. This fire flow storage will cover fire flow needed for both residential and commercial buildings. The fire flow required for future residential buildings per section 18.4.5.1 is a minimum of 500 GPM for 1 hour if the buildings are sprinklered. Per County building code, all new buildings are required to be sprinklered. The fire flow required for future commercial buildings that are sprinklered is a minimum of 1,000 GPM for 2 hours per section 18.4.5.3. Using table 18.4.5.2.1, a 1,000 GPM fire flow will allow for sprinklered commercial buildings of type II or III construction of up to 38,000 SF. McCrone estimated the largest fire flow area of existing commercial buildings to be 22,000 SF. 38,000 SF is much larger than 22,000 SF so a fire flow of 1,000 GPM should be sufficient to provide fire flow for any future commercial building.

Inserting a required fire flow of 1,000 GPM for 2 hours, WTP production of 142 GPM for 2 hours, and an ADD of 88,040 GPD into the condensed storage equation gives a required storage volume of approximately 147,000 gal. Since the existing EWST has a volume of 75,000 gal, the additional storage required is 72,000 gal.

There were two storage upgrade options examined to provide the 72,000 gal of additional storage. One option is erecting a second 75,000-gallon elevated water storage tank (EWST) on the highest area of parcel 267. McCrone rounded 72,000 gallons to 75,000 gallons for this option because most EWSTs are only available in standard sizes.

The second option is installing a 72,000-gallon ground storage tank with a set of domestic pumps and a set of high service pumps.

Option 1: Additional 75,000-Gal EWST

The first option, erecting an additional EWST on parcel 267, would be the same size as the existing EWST at 75,000 gallons. The overflow of the additional tank would be the same as the overflow of the existing tank. It would be difficult to erect the new tank on the same site as the existing tank because there is limited space and there would be concern about the two foundations having overlapping loads. Therefore, the new tank would need be erected offsite. The best location to erect the new tank would be on parcel 267, southwest of Kennedyville Village, because this location would provide good pressure at two ends of the distribution system. There is a caveat related to this option. The caveat is the County would have to wait until that parcel develops and then, the County would need to acquire land from the developer for this to be a viable option.

Option 2: 72,000-Gal Ground Storage Tank

The second option for providing additional storage to the system installing a 72,000-gal ground storage tank with a set of domestic pumps and a set of high service pumps. The ground storage tank would be located on the same site as the existing EWST and a set of domestic pumps and a set of high service pumps would be in the existing WTP facility. See rough layout in Appendix G. See Figure 2 for a flow diagram of this option.

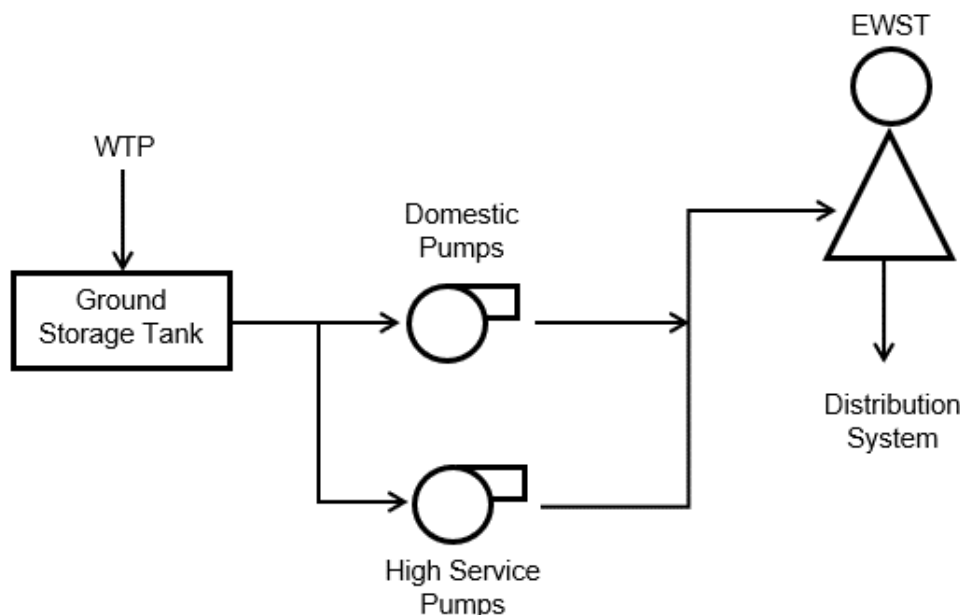


Figure 2: Flow Diagram of Underground Storage Tank with Pumps Option

The idea behind this option is to keep as much fire flow in the existing EWST as possible. Finished water from the WTP would be pumped by the treatment equipment to the new 72,000-gal ground storage tank. Then, either the domestic pumps or the high service pumps would pump the finished water from the ground storage tank to the existing EWST. The domestic pumps would be sized for PHD (245 GPM) and would be the primary pumps replenishing the water in the existing EWST when the water level reaches pump on. The high service pumps would be sized for MDD (143 GPM) plus the required fire flow of 1,000 GPM for a total flow of 1,143 GPM. These pumps would replenish the water in the existing EWST at the required fire flow rate because the existing EWST cannot provide 1,000 GPM for 2 hours. These pumps would turn on during a fire flow event.

The cost of the 72,000-gal ground storage tank was examined for three (3) different materials: precast concrete, painted steel, and glass lined steel. The costs of each of these materials for the tank is shown in Table 18. As seen in the table, the most expensive material for the tank is precast concrete and the least expensive material for the tank with is painted steel. However, a painted steel tank is only slightly cheaper than a glass lined steel tank and a painted steel tank would need to be repainted in the future, adding costs in the future. For this reason, the glass lined steel tank is the most cost-effective material when considering future costs, so glass lined steel is the material that is recommended for the tank.

Table 18: The Cost of Different Materials for 72,000-Gal Ground Storage Tank

Material	Cost
Precast Concrete	\$202,300
Glass Lined Steel	\$143,000
Painted Steel	\$115,000

The glass lined steel ground storage tank would be able to fit on the site of the existing WTP. This material had the smallest footprint of all the tank materials considered with a 22.38-foot diameter and a 25.78-foot sidewall height. These dimensions are only the dimensions of the tank and do not include the ring wall foundation so the overall footprint of the glass lined steel tank will be slightly larger than this. While the glass lined steel tank is the material with the smallest footprint, this option may require a variance from the building restriction line to fit on the site of the existing WTP. Obtaining the variance should not pose a problem, however, as it is reasonable to obtain. Also, construction would require an easement from the adjacent property owner to the northwest of the existing WTP site to deliver the tank to the site and erect the tank on the site. This easement is not limited to only the glass lined steel tank and would be needed for all the tank materials.

The high service pumps and the domestic pumps would be able to fit inside the existing WTP building after the existing sand filter, air compressor, clear well, chlorine contact tank, and distribution pumps are demolished. See the building layout in Appendix E for a potential location of the pumps.

Recommended Storage Option

The recommended storage option is the glass-lined ground storage tank with domestic and high service pumps. Cost is the primary factor for the selecting the ground storage tank over the elevated storage tank. Even with the pumps, the ground storage tank is over \$300,000 cheaper than the EWST option. Additionally, an EWST would need to be constructed on a separate property that the County currently has no control over.

The glass-lined storage tank is recommended over the other material tank options for overall cost and maintenance reasons. The pre-cast concrete tank option does not come in sizes that will fit on the existing WTP site, so that disadvantage removes it from the discussion. The difference in cost between the glass lined and painted steel tank is relatively minimal, and it is worth the additional cost for glass-lined to avoid painting of the interior and exterior of the tank in the future.

Therefore, a glass-lined GST with domestic and high service pumps is the recommended option for upgrading storage in the system.

Wastewater Collection System Upgrades

As discussed in Chapter 4, PS #1 and PS #2 would need to be upgraded to handle all future flows from future EDUs. The upgrade of PS #3 is discussed in the water treatment upgrade section.

The potential upgrade options for PS #1 are installing a new larger diameter wet well with the same depth as the existing wet well and installing new higher capacity pumps or installing a new deeper wet well with the same diameter as the existing wet well and installing new higher capacity pumps. The force main (FM) from PS #1 would also need to be upgraded to handle the higher flow rate from the new pumps.

The potential upgrade options for PS #2 are installing VFDs on new higher capacity pumps in the existing wet well; installing a larger diameter wet well with the same depth as the existing wet well and installing higher capacity pumps; installing a new deeper wet well with the same diameter as the existing wet well and installing new higher capacity pumps; or installing a new pump station with higher capacity pumps that is not in the shoulder of a state highway.

PS #1 Upgrades

There are two potential upgrades that could be done to PS #1 so the pump station can handle the flows from future EDUs (295 GPM PHF). The two potential upgrade options are: installing a larger diameter wet well with the same depth as the existing wet well and installing higher capacity pumps or installing a deeper wet well with the same diameter as the existing wet well and installing higher capacity pumps. Both options involve installing higher capacity pumps and acquisition of land for a new PS site.

The higher capacity pumps will need to have a capacity of 295 GPM to handle future flows compared to the existing pumps with a 170 GPM design pumping rate. The existing FM from PS #1 has a diameter of 4-inches. When the new 295 GPM flow from the new pumps travels through the existing 4-inch FM, the velocity of the wastewater would be approximately 7.5 ft/s. Standard engineering practice is to limit the velocity through a FM to be between 2 ft/s and 5 ft/s. Thus, the existing 4-inch FM should be upgraded when the higher flow rate pumps are installed. A new 6-inch FM would need to be installed to get the velocity of the wastewater between 2 ft/s and 5 ft/s at approximately 3.4 ft/s. The new 6-inch FM would need to be installed with either upgrade option discussed here.

The first upgrade option is installing a new larger diameter wet well with the same depth as the existing wet well and installing new higher capacity pumps. The existing wet well does not have enough operating volume for the upgraded 295 GPM pumps, so a larger diameter wet well with the same depth as the existing wet well would need to be installed. The diameter of the new wet well that would have adequate operating volume for the new 295 GPM pumps would be 12 feet. A 12-foot diameter, 9.1-foot deep wet well would also allow the HWA level to be moved to the invert in of the influent gravity pipe, which is in accordance with current engineering practice. Currently, the HWA level is above the invert in of the influent gravity.

The second upgrade option is installing a deeper wet well with the same diameter as the existing wet well (6-foot) and installing new higher capacity pumps. As previously mentioned, the existing wet well would not have enough operating volume for the new 295 GPM pumps so a deeper wet well with the same diameter as the existing wet well would need to be installed. The depth of the new wet well that would have adequate operating volume for the new 295 GPM pumps would be 12.6 feet. A 12.6-foot deep wet well with a diameter of 6 feet would also allow the HWA level to be moved to the invert in of the influent gravity pipe, which is in accordance with current engineering practice.

With either option, there is not adequate space within the existing land controlled by the County. Additional land will need to be acquired. An approximate area of 50 feet x 30 feet should be adequate for a new pump station site. This size is similar to the fenced in area of the Georgetown pump station recently constructed north of Galena. The 50-foot length of the site would be parallel to Kennedyville Road.

No electrical upgrade is needed for either option. The proposed pumps would have a horsepower less than the existing pumps because of decreased frictional headloss in the FM. The 6-inch force main would result in less headloss for the new flowrate than the existing pumps and FM. The static head would be roughly the same. The existing pumps have 17 HP pumps per the

original design specifications. The proposed pumps would have an estimated HP of 7.5 to 10 HP. Therefore, the electrical service would remain adequate and the existing generator that was upgraded in 2006 when the WWTP was upgraded could be reused.

There is minimal difference between the two options to upgrade PS #1, and therefore either is viable. The option with the smaller diameter wet well would result in a slightly smaller footprint, so that one would have a slight edge over the larger diameter wet well option, but again, either option is viable.

*****Please note that the WWTP has a rated discharge capacity of 60,000 GPD. If future flows were fully realized, the WWTP and NPDES discharge permit would need to be addressed.*****

PS #2 Upgrades

There are four potential upgrades that could be done to PS #2 so the pump station can handle the flows from future EDUs. The four potential upgrade options are: installing VFDs on new higher capacity pumps in the existing wet well; installing a larger diameter wet well with the same depth as the existing wet well and installing higher capacity pumps; installing a deeper wet well with the same diameter as the existing wet well and installing higher capacity pumps; or installing a new pump station with higher capacity pumps that is not in the shoulder of a state highway.

All four options will involve installing higher capacity pumps. The new higher capacity pumps will need to have a capacity of 185 GPM to handle future flows. The existing effluent FM from PS #2 has a diameter of 4-inches. When the new flow from the new pumps travels through the existing 4-inch FM the velocity of the wastewater would be approximately 4.7 ft/s. Standards engineering practice is to limit the velocity of wastewater through a FM to between 2 ft/s and 5 ft/s. Thus, the existing 4-inch FM would be able to accommodate the higher flow and would not need to be upgraded.

The first option involves installing VFDs on the new 185 GPM capacity pumps in the existing wet well. Currently, the existing wet well does not have enough operating volume to support the new 185 GPM capacity pumps. Installing VFDs on the new pumps will allow the pumps to operate without cutting on and off too many times even with a small operating volume.

The second option involves installing a new larger diameter wet well with the same depth as the existing wet well and installing new 185 GPM capacity pumps. The existing wet well would not have enough operating volume for the 185 GPM pumps with constant speed starters, so a larger diameter wet well with the same depth as the existing wet well would need to be installed. The diameter of the new wet well that would have adequate operating volume for the new 185 GPM pumps would be 10 feet. The 10-foot wet well would have the same pump on, pump off, and alarm levels as the existing wet well.

The third option is installing a deeper wet well with the same diameter as the existing wet well and installing 185 GPM capacity pumps. The existing wet well would not have enough operating volume for the constant speed 185 GPM pumps, so a deeper wet well with the same diameter as the existing wet well would need to be installed. The depth of the new wet well that would have adequate operating volume for the new 185 GPM pumps would be 14.35 feet.

The fourth option is installing a new pump station not in the shoulder of a state highway. This option would involve a new wet well, new electrical equipment, and new 185 GPM capacity pumps. The dimensions of the new pump station would be approximately 50 feet by 30 feet, like the fenced in area of the Georgetown pump station installed north of Galena. The land would need to be acquired from the private landowner. The 50-foot dimension would be parallel to MD 213.

For any option, the electrical service and generator will need to be upgraded. The increased discharge rate will result in 5HP motors compared to the existing 1.5 HP pumps. The existing generator and electrical service cannot accommodate this. A 60KW generator would be needed. While upgrading the electrical service, it would be recommended to convert the PS site to 3-phase power to 240V, 3-phase, like what PS #1 has now.

The recommended approach is to acquire land adjacent to the existing pump station and upgrade the entire pump station outside of the MDSHA ROW. The existing wet well in the shoulder of the road is a safety concern. Upgrading the pump station is recommended over installing VFDs due to the age and location of the station. The wet well needs to be removed from the shoulder of the road and the station is 44+ years old and is due for replacement. The recommended upgrade also includes a change to 3-phase power, new electrical service, new power/control equipment, and new Mission RTU equipment to provide closer to real-time information on station status.

Chapter 6: Cost Opinions of the Water System Upgrades

Cost opinions for the proposed water and wastewater upgrades are provided in Appendix M. Separate sewer and water estimates are provided as it is assumed these would be different projects. The upgrade of PS #3 is included in the water upgrades because it is necessitated when the WTP is upgraded.

The cost opinions include estimated operating costs for the WTP options. The estimated operating costs included electricity, chemicals, staffing, and tools/maintenance.

The cost opinions use a 25% contingency based on the planning level stage of this document.

The cost opinions estimate engineering fees for design, permitting, bidding, construction, and post construction services at 15% of construction costs, including contingency. Design/permitting/bidding are 60% of the 15% and construction/post-construction are estimated at 40% of the 15% estimate. Inspection is included as a separate line item from the engineering fees.

Please note that the cost for land acquisition in these estimates is highly variable. McCrone determined a current cost per acre of \$60,000 based on the County's purchase of the WTP site in 1993 when \$20,000 was paid for a little more than half an acre. Using a 2% inflation factor, the \$60,000 per acre was estimated. However, the current landowner is not required to sell the land, and the cost could be higher or lower, depending on the individual's specific circumstances.

A summary of the cost opinions is provided in Table 19.

Table 19: Summary of Costs

	OPTION 1 - GSF + UPGRADE OF PS #3 + GST + PUMPS	OPTION 2 - Membranes with GST + PUMPS	Pump Station Upgrades
	Cost (\$)	Cost (\$)	Cost (\$)
Construction	2,179,400	2,486,200	598,700
Non-Construction Project Cost + Contingency	1,140,200	1,279,830	439,700
Total Project Cost	3,319,600	3,766,030	1,038,400
Annual Operating Costs	77,503	87,903	Not Calculated
Total Present Worth	4,791,190	5,435,089	1,038,400

The County currently has \$145,162.50 from a Letter of Credit from Phase 1 of the Village at Kennedyville in addition to a Public Works agreement signed in 2013 with the developer of Phase 2 of the Village at Kennedyville for certain improvements to the water and wastewater system as follows:

- Installation of 1 supply well
- Installation of water filtration treatment system sized for existing and 90 EDU's of capacity including backwash equalization (pump station #3 upgrade).
- Upgrade of pump station #2
- Installation of a 50,000-gallon ground storage tank including pumps and appurtenances.

The current estimated total project cost of these improvements is \$3.06 million when considering a developer funded project and not a USDA-type funded project. The \$3.06 million total project cost is \$0.51 million for PS #2 upgrades and \$2.55 million for the water treatment plant upgrades.

Chapter 7: Conclusions

Water

The existing water system can support an additional 59 residential EDUs beyond existing demands before storage needs to be upgraded. The water system needs to be upgraded once these 59 residential EDUs (at 200 GPD/EDU) are connected to the system, or as system demand reaches an ADD of 30,000 GPD. Future additional ADD from future commercial areas in Kennedyville Village and residential demands from Kennedyville Village and undeveloped parcels in the study area is estimated at 69,900 GPD. Total future plus existing demand is estimated to be approximately 88,040 GPD.

When storage needs to be upgraded, it is recommended to construct all WTP upgrades including supply wells, treatment, electrical, and an upgrade of PS #3 to increase the production capability to approximately 88,040 GPD. All upgrades need to be done at once due to their construction being linked to the demolition of the existing water treatment equipment to make room for the new treatment and pumping equipment. The recommended upgrades are as follows:

- **Wells** – New 143 GPM wells in the Monmouth Aquifer. Both wells located at the WTP site.
- **Treatment** - A duplex set of 48" diameter Greensand Filters with finished water discharged to a GST.
- **Storage and Pumps** – A 72,000-gallon glass lined steel tank located at the WTP. Two domestic and two high service pumps would draw finished water from the GST and pump it to the existing 75,000 elevated water storage tank at the WTP site.
- **PS #3** – Upgrade PS #3 with a larger wet well to accommodate the backwash from the GSFs.
- **Electrical** – Provide an emergency generator for all WTP equipment so that the high service pumps can be counted on during a fire flow condition and so that finished water can always be produced during a fire flow condition. Upgrade service to the WTP to 480V/3-Phase.

The existing distribution system and elevated storage tank can provide adequate fire flow (1,000 GPM) and residual pressures during peak domestic demands and fire flow conditions to areas adjacent to 6-inch and 8-inch water mains as well. The existing storage tank does not have adequate volume to provide 1,000 GPM for 2 hours needed for future commercial development, but the supplemental ground storage tank addresses the storage deficit.

Looped 8-inch water mains into Kennedyville Village and undeveloped parcels in the study area can also be provided adequate fire flow and residual pressures during peak domestic and fire flow conditions.

Sewer

PS #1 has a remaining ADF capacity of 51,455 GPD, or approximately 206 EDUs at 250 GPD/EDU. PS #1 does not have capacity for the projected 358 future EDUs from the study area. Current pumping capacity is 190 GPM and needs to be upgraded to 295 GPM to accommodate all future and existing flows.

The recommended upgrades to PS #1 include:

- Acquire land adjacent to the existing pump station to construct a new pump station site with a larger wet well, valve vault, 295 GPM pumps, and upgraded SCADA equipment. This will remove the wet well from the edge of Kennedyville Road.
- A 6-inch force main from PS #1 to the existing Kennedyville WWTP to keep velocities within the recommended range of 2 to 5 feet per second.

The upgrade of PS #1 will not require a larger generator or electrical service because the 6-inch force main will reduce friction headloss to less than existing conditions and thus the new pumps will be smaller in HP than the existing pumps.

Please note that the projected existing plus future ADF to PS #1 is over 106,000 GPD. The existing WWTP has a treatment and NDPES capacity of 60,000 GPD. Those components would need to be upgraded once ADF approached 60,000 GPD at the WWTP.

PS #2 has a remaining ADF capacity of 28,480 GPD, or approximately 114 EDUs at 250 GPD/EDU. PS #2 does not have capacity for all 237 projected total future EDUs. Current pumping capacity is 100 GPM and needs to be upgraded to 185 GPM to accommodate all future and existing flows.

The recommended upgrades to PS #2 include:

- Acquire land adjacent to the existing pump station to construct a new pump station site with a larger wet well, valve vault, 185 GPM pumps, new generator, upgraded 240V/3 Phase electrical service, and upgraded SCADA equipment. This will remove the wet well from the shoulder of MD 213.

The existing 4-inch force main can be used at the new pumping rate from PS #2.

PS #3 has capacity for all future residential EDUs but does not have capacity for the projected backwash rate from the upgraded WTP. Upgrades to PS #3 occur when the WTP upgrade occurs.

Endnotes

¹ Source: Evaluation of the Existing Water Supply Wells Serving the Kennedyville, MD Water System
Prepared by Earth Data Incorporated in March 2005

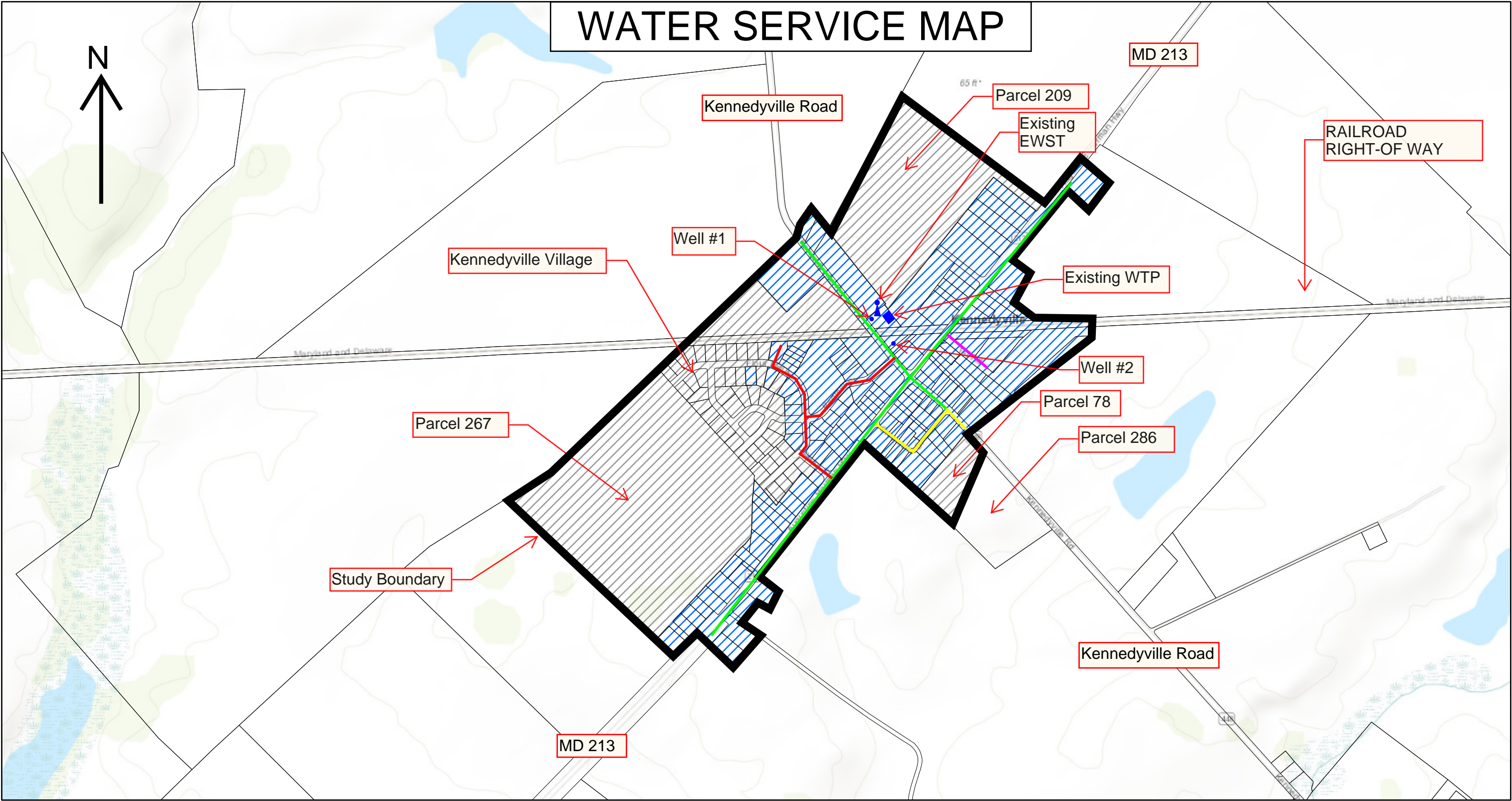
² Source: 2002 PER by McCrone

³ Source: GAP Expiring August 1, 2020; Permit No. KE1967G008 (06)

⁴ Source: June 1996 Contract II Water System Improvements As-Builts

⁵ Source: Kennedyville WTP O&M Manual

**APPENDIX A – PRIORITY FUNDING AREA MAP, SEWER SERVICE MAP, WATER
SERVICE MAP, AND ZONING MAP WITH STUDY AREA DELINEATED**

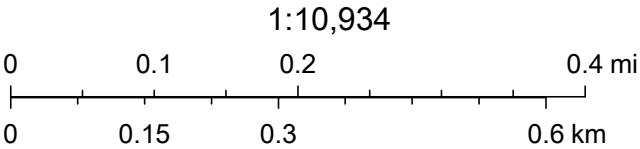


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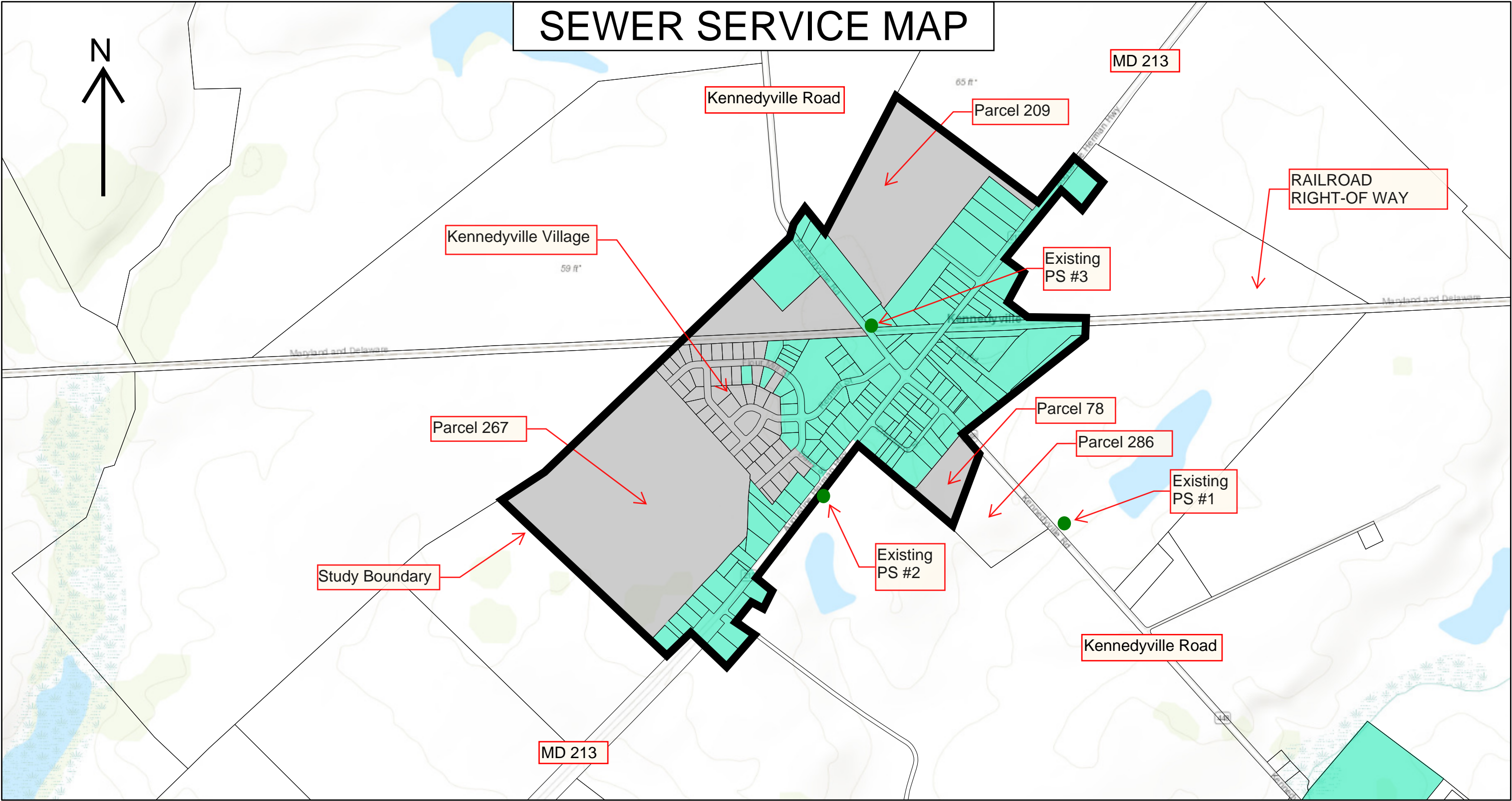
- Parcels 2017
- Water Service
- Existing Water Service
 - Planned Water Service

- Pipe Size Legend
- 2" Water Main
 - 4" Water Main
 - 6" Water Main
 - 8" Water Main (Assumed)

KENNEDYVILLE
WATER STUDY-
APPENDIX A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



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Parcels 2017

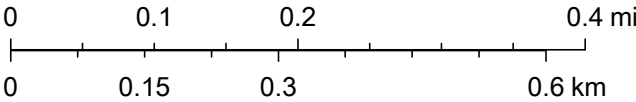
Sewer Service

Existing Sewer Service

Planned Sewer Service

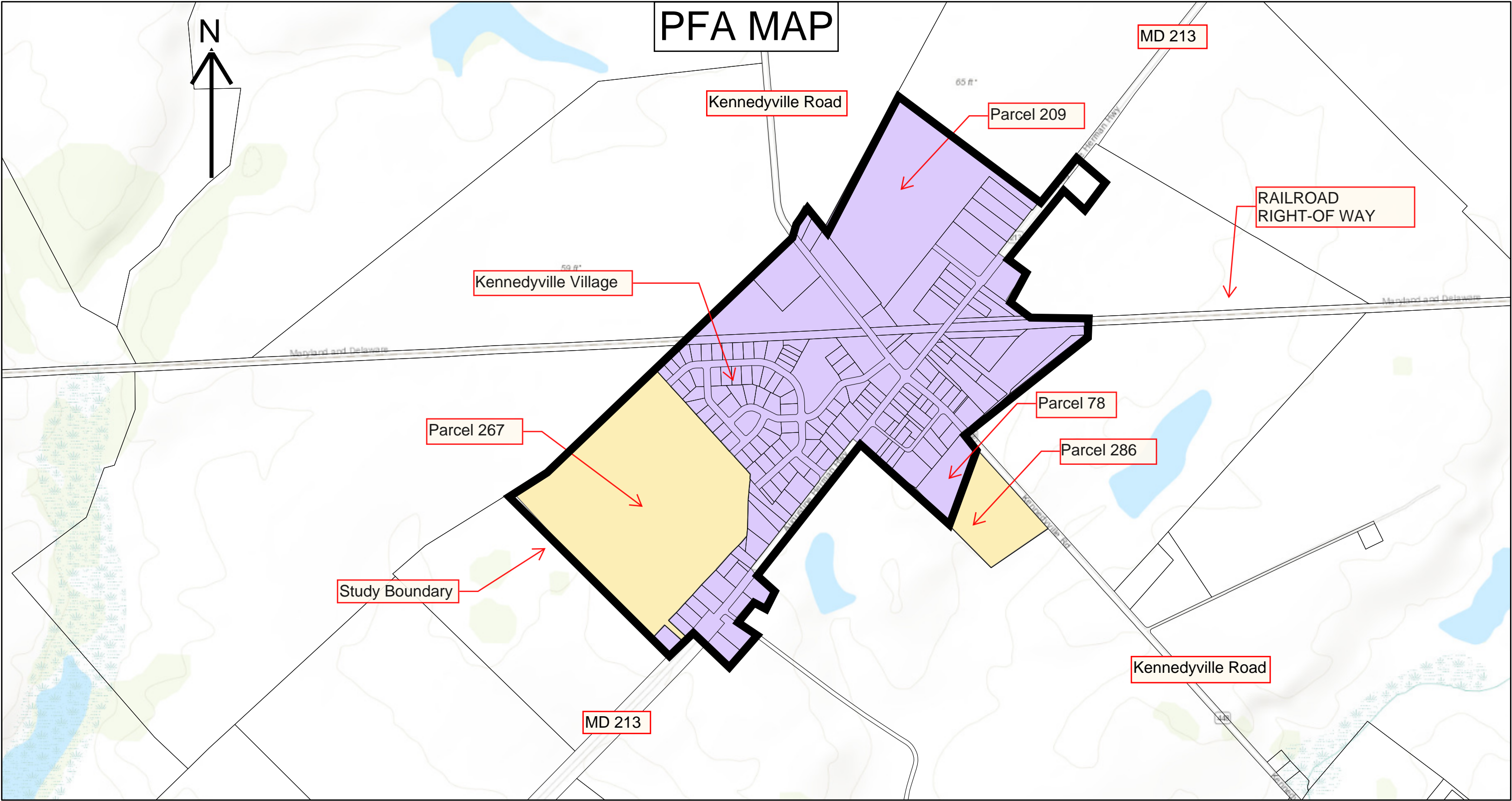
KENNEDYVILLE
WATER STUDY-
APPENDIX A

1:10,934






Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

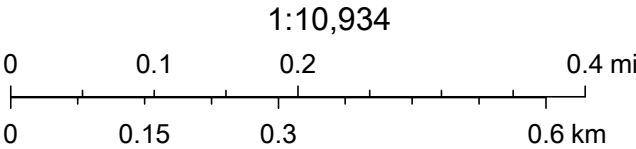
Kent County Parcel Viewer - ArcGIS Web Map



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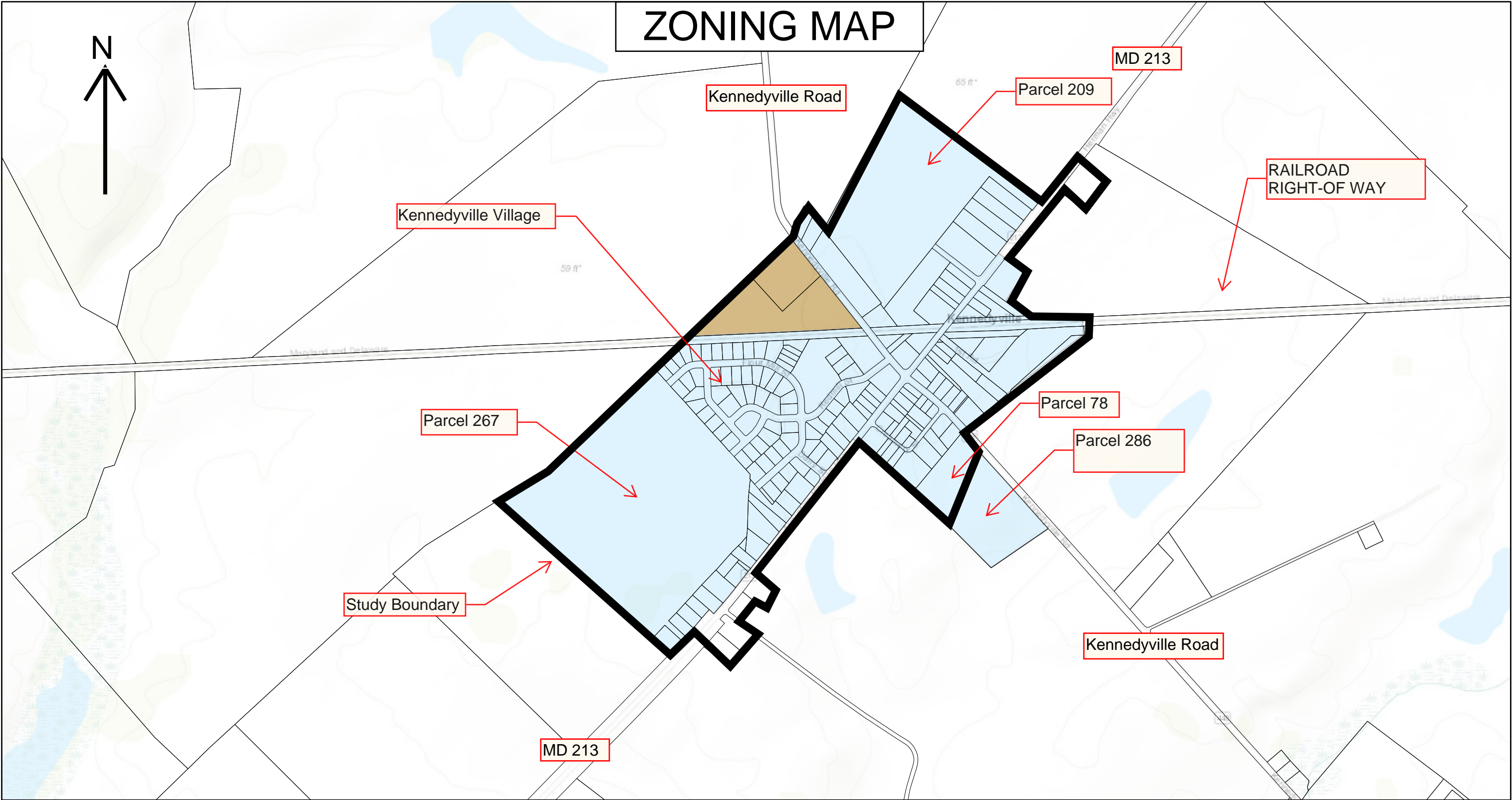
-  Parcels 2017
- Priority Funding Area**
-  Community with water and/or sewer
-  MDP Comment Area

KENNEDYVILLE WATER STUDY- APPENDIX A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

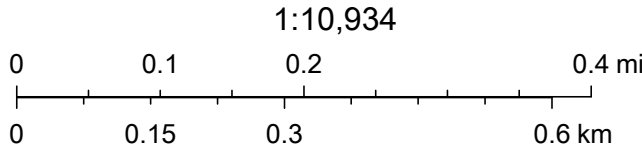
Kent County Parcel Viewer - ArcGIS Web Map



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- Parcels 2017
- Unincorporated Zoning
 - Agricultural Zoning District
 - Village
 - Employment Center

KENNEDYVILLE
WATER STUDY-
APPENDIX A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

APPENDIX B – RAW WATER QUALITY ANALYSIS

Chain of Custody Record **Water Testing Labs of Maryland, Inc.**
Chesapeake Labs, Inc.

1000 Butterworth Court, Thompson Creek Business Park; Stevensville, MD 21666
Phone: 410-643-7711 Fax: 410-643-5034 www.wtlmd.com

Page_1 of 1

CLIENT NAME: Town of Kennedyville						ANALYSIS REQUESTED								LAB ID NUMBER ↓		CONTAINER TYPE		PRESERVATION	
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:						CONTAINER:		P	P	P	A								
Call Kim Middleton to schedule for Thursday 2/06/20						PRESERV. :		7	7	7	2								
						# of	C O N T A I N E R S ↓	pH, Alkalinity, Turbidity, Color		Mn, Fe, Hardness (Ca & Mg)		TSS	TOC						
ATTENTION: Greg Swartz				CC:															
REQUESTED COMPLETION DATE: ASAP				PO#:															
PROJECT NAME/STATE:																			
Job #:																			
DATE	TIME	MATRIX CODE *	C O M P	G R A B	SAMPLE IDENTIFICATION														
2/06/20	11:50	DW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Kennedyville-RAW-Well #1		1	1	1	1									
2/06/20	12:05	DW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Kennedyville-RAW-Well #2		1	1	1	1									
			<input type="checkbox"/>	<input type="checkbox"/>															
SAMPLED BY: <i>Abdul Samir</i>						DATE/TIME: See Above		RELINQUISHED BY: <i>[Signature]</i>				DATE/TIME: 2-6-2020 15:35				FOR LAB USE ONLY Comments: LAB # In-house location:			
RECEIVED BY:						DATE/TIME:		RELINQUISHED BY:				DATE/TIME:							
RECEIVED BY:						DATE/TIME:		RELINQUISHED BY:				DATE/TIME:							
RECEIVED BY LAB: <i>[Signature]</i>						DATE/TIME: 2/6/20 1535		SAMPLE SHIPPED VIA: UPS FED-EX COURIER				CLIENT/OTHER FIELD SERVICES							
pH: Labeled Preserved						Ice: Yes or No		Temperature: 3.0 °C				Custody Seal: Intact Broken/Missing							

Please use Black Ink to complete form

Note: FOR LAB TESTING ONLY - Well #1 is located at the volunteer fire department and well #2 is located on the WTP site. - FOR ALL OTHER REFERENCES IN THE REPORT, WELL #1 IS AT THE WTP AND WELL #2 IS AT THE FIRE DEPARTMENT.

Water Testing Laboratories

of Maryland, Inc.

P.O. Box 712
Stevensville, MD 21666
410-643-7711

Kent Co. Department of Water & Wastewater
709 Morgnec Road Suite 201
Chestertown MD 21620

Reporting Date: 2/13/20
PWSID #: MD0140005
Sample ID#: AS20-0128
FINAL REPORT

Sample Address: Town of Kennedyville
Sample Source: Well #2
Sample Type: Raw water
Date / Time Collected: 2/6/20 1205
Sampler/Company: 0359AS A. Sabur, WTL of MD, Inc.

Analytical Result

Parameter	Result	Units	Reporting Limit	MCL	Analytical Method
pH	7.2	SU	0.1	6.5-8.5** (SMCL)	SM4500H ⁺ B
Alkalinity	180	mg/L	4	---	EPA310.1
Turbidity	0.9	NTU	0.5	10**** (MD Well Regs)	SM2130B
Color	ND	mg/L	1.0	15** (SMCL)	SM2120B
Iron	0.83	mg/L	0.10	0.30** (SMCL)	SM3111B
Manganese	ND	mg/L	0.0020	0.05** (SMCL)	SM3111B
Hardness	126	mg/L	1	---	SM2340B
Calcium	46	mg/L	1.0	---	SM3111B
Magnesium	2.7	mg/L	0.5	---	SM3111B
TSS	2	mg/L	1	---	SM2540D
TOC	ND	mg/L	1.0	---	SM22 5310B

Notes:

1. Maximum Contaminant Level (MCL) Type –
 - i. **EPA Primary Maximum Contaminant Level:** The highest level of contaminant that is allowed in drinking water. Primary MCL's are enforceable standards. Results that exceed the Primary MCL will be in **BOLD**.
 - ii. ****EPA (SMCL) Secondary Maximum Contaminant Level:** Non-enforceable guidelines regulating contaminants that cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste or odor) in drinking water.
 - iii. ****** MD Well Regulations** - See Code of Maryland Regulations (COMAR) 26.04.04.16E(5).
2. ND – Not Detected.
3. Sample received and examined within EPA's recommended holding time.
4. SM - Greenberg, Clesceri and Eaton, Standard Methods for the Examination of Water and Wastewater 21st ed.
5. TOC analyzed by Lab #208, all other analysis by Lab #214.

Reported by,

T. Davis

T. Davis, Customer Service Representative

13/18

Water Testing Laboratories

of Maryland, Inc.

P.O. Box 712
Stevensville, MD 21666
410-643-7711

Kent Co. Department of Water & Wastewater
709 Morgnec Road Suite 201
Chestertown MD 21620

Reporting Date: 2/13/20
PWSID #: MD0140005
Sample ID#: AS20-0127

FINAL REPORT

Sample Address: Town of Kennedyville
Sample Source: Well #1
Sample Type: Raw water
Date / Time Collected: 2/6/20 1150
Sampler/Company: 0359AS A. Sabur, WTL of MD, Inc.

Note: FOR LAB TESTING ONLY -
Well #1 is located at the volunteer fire
department and well #2 is located on
the WTP site. - FOR ALL OTHER
REFERENCES IN THE REPORT,
WELL #1 IS AT THE WTP AND WELL
#2 IS AT THE FIRE DEPARTMENT.

Analytical Result

Parameter	Result	Units	Reporting Limit	MCL	Analytical Method
pH	7.1	SU	0.1	6.5-8.5** (SMCL)	SM4500H ⁺ B
Alkalinity	188	mg/L	4	---	EPA310.1
Turbidity	2.0	NTU	0.5	10**** (MD Well Regs)	SM2130B
Color	ND	mg/L	1.0	15** (SMCL)	SM2120B
Iron	0.88	mg/L	0.10	0.30** (SMCL)	SM3111B
Manganese	ND	mg/L	0.0020	0.05** (SMCL)	SM3111B
Hardness	114	mg/L	1	---	SM2340B
Calcium	41	mg/L	1.0	---	SM3111B
Magnesium	2.7	mg/L	0.5	---	SM3111B
TSS	2	mg/L	1	---	SM2540D
TOC	ND	mg/L	1.0	---	SM22 5310B

Notes:

1. Maximum Contaminant Level (MCL) Type -

- EPA Primary Maximum Contaminant Level:** The highest level of contaminant that is allowed in drinking water. Primary MCL's are enforceable standards. Results that exceed the Primary MCL will be in **BOLD**.
- **EPA (SMCL) Secondary Maximum Contaminant Level:** Non-enforceable guidelines regulating contaminants that cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste or odor) in drinking water.
- **** MD Well Regulations** - See Code of Maryland Regulations (COMAR) 26.04.04.16E(5).

2. ND - Not Detected.

3. Sample received and examined within EPA's recommended holding time.

4. SM - Greenberg, Clesceri and Eaton, Standard Methods for the Examination of Water and Wastewater 21st ed.

5. TOC analyzed by Lab #208, all other analysis by Lab #214.

Reported by,

T. Davis

T. Davis, Customer Service Representative

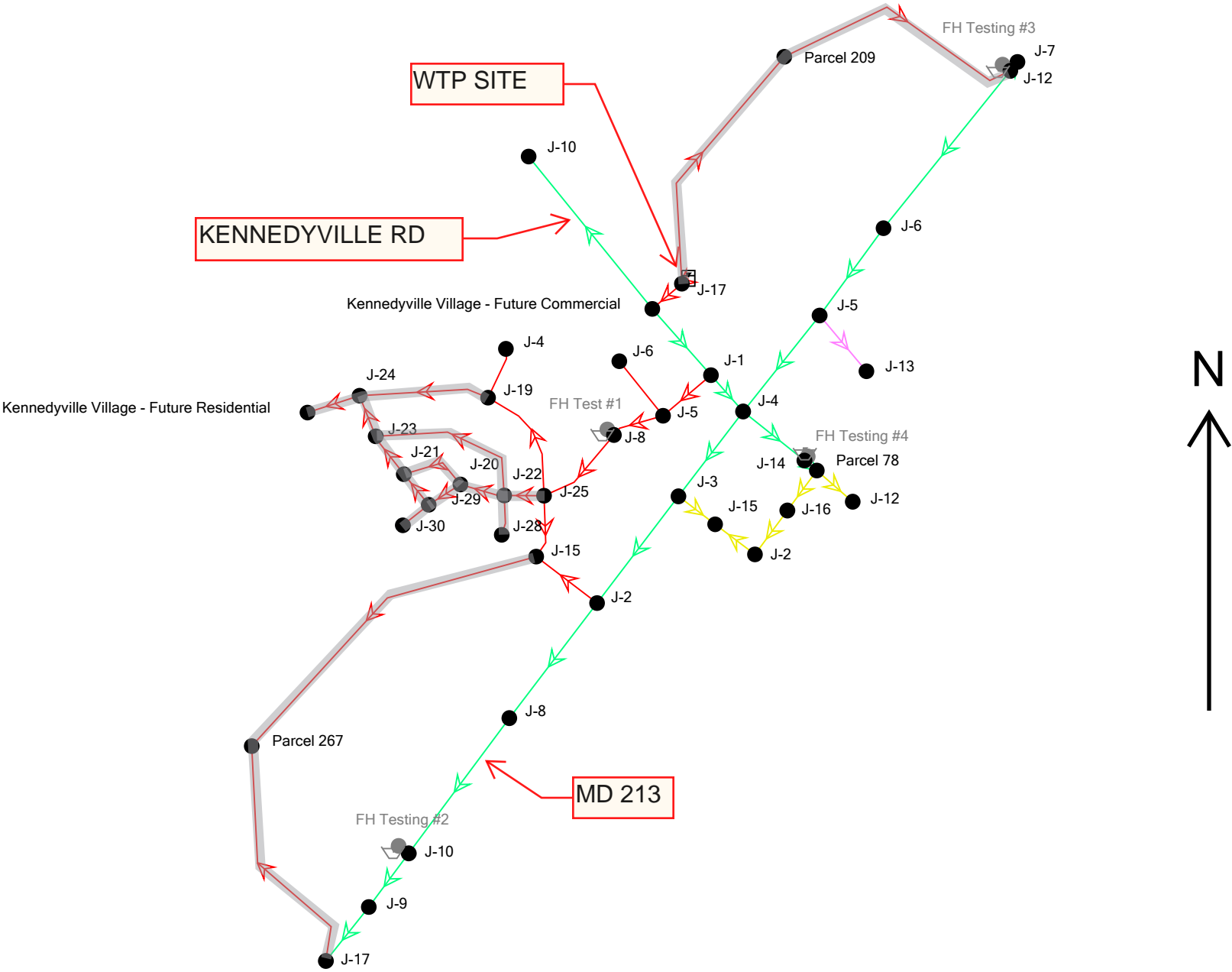
TS/JS

APPENDIX C – HYDRAULIC MODEL MAP AND RESULTS

Scenario: ADD (Existing + Future)

Color Coding Legend		
Pipe: Diameter (in)		
<div></div>	<=	2.0
<div></div>	<=	4.0
<div></div>	<=	6.0
<div></div>	<=	8.0
<div></div>		Other

Pipes Outlined
In Gray Are
Future Pipes



Not To Scale

HYDRAULIC MODELING PHD RESULTS

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
156	FH Test #1	60	<None>	<Collection: 0 items>	(N/A)	(N/A)	(N/A)
163	FH Testing #2	52.58	<None>	<Collection: 0 items>	(N/A)	(N/A)	(N/A)
170	FH Testing #3	77	<None>	<Collection: 0 items>	(N/A)	(N/A)	(N/A)
177	FH Testing #4	63	<None>	<Collection: 0 items>	(N/A)	(N/A)	(N/A)
262	Kennedyville Village - Future Residential	76	<None>	<Collection: 1 item>	33	202.79	55
111	J-7	76	Zone-1	<Collection: 1 item>	4	203.46	55
255	J-23	75	<None>	<Collection: 0 items>	0	202.8	55
171	J-12	75	<None>	<Collection: 0 items>	0	203.46	56
259	J-24	74	<None>	<Collection: 0 items>	0	202.8	56
248	J-21	73	<None>	<Collection: 0 items>	0	202.8	56
272	J-30	72	<None>	<Collection: 0 items>	0	202.8	57
108	J-4	72	Zone-1	<Collection: 1 item>	4	202.98	57
213	Parcel 267	70	<None>	<Collection: 1 item>	99	202.57	57
110	J-6	70	Zone-1	<Collection: 1 item>	4	203.16	58
117	J-13	69	Zone-1	<Collection: 1 item>	4	203.06	58
109	J-5	69	Zone-1	<Collection: 1 item>	4	203.06	58
139	J-1	68	<None>	<Collection: 0 items>	0	203	58
220	Parcel 209	68	<None>	<Collection: 1 item>	51	203.54	59
269	J-29	67	<None>	<Collection: 0 items>	0	202.8	59
119	J-15	67	Zone-1	<Collection: 1 item>	4	202.81	59
107	J-3	67	Zone-1	<Collection: 1 item>	4	202.87	59
164	J-10	66	<None>	<Collection: 0 items>	0	202.64	59
113	J-9	65	Zone-1	<Collection: 1 item>	4	202.61	60
151	J-5	65	<None>	<Collection: 0 items>	0	202.94	60
149	J-4	64	<None>	<Collection: 0 items>	0	202.8	60
245	J-20	64	<None>	<Collection: 0 items>	0	202.8	60
120	J-16	64	Zone-1	<Collection: 1 item>	2	202.85	60
114	J-10	63	Zone-1	<Collection: 1 item>	4	203.58	61
115	Kennedyville Village - Future Commercial	63	Zone-1	<Collection: 2 items>	6	203.58	61
118	J-17	62	Zone-1	<Collection: 1 item>	1	202.59	61
106	J-2	62	Zone-1	<Collection: 1 item>	1	202.81	61
178	J-14	61.5	<None>	<Collection: 0 items>	0	202.97	61
242	J-19	60.97	<None>	<Collection: 0 items>	0	202.8	61
105	Parcel 78	60	Zone-1	<Collection: 2 items>	11	202.97	62
112	J-8	59	Zone-1	<Collection: 1 item>	2	202.71	62
157	J-8	59	<None>	<Collection: 0 items>	0	202.89	62
267	J-28	58	<None>	<Collection: 0 items>	0	202.8	63
154	J-6	57	<None>	<Collection: 0 items>	0	202.94	63
252	J-22	56	<None>	<Collection: 0 items>	0	202.8	64

HYDRAULIC MODELING PHD RESULTS

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
216	J-17	56	<None>	<Collection: 0 items>	0	203.83	64
146	J-25	54	<None>	<Collection: 0 items>	0	202.8	64
116	J-12	54	Zone-1	<Collection: 1 item>	2	202.94	64
209	J-15	53.21	<None>	<Collection: 0 items>	0	202.77	65
142	J-2	50.5	<None>	<Collection: 0 items>	0	202.77	66

HYDRAULIC MODELING FIRE FLOW RESULTS

Label	Zone	Fire Flow Iterations	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (System Lower Limit) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)	Is Fire Flow Run Balanced?
FH Test #1	<None>	(N/A)	(N/A)	1,000	(N/A)	(N/A)	(N/A)	20	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH Testing #2	<None>	(N/A)	(N/A)	1,000	(N/A)	(N/A)	(N/A)	20	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH Testing #3	<None>	(N/A)	(N/A)	1,000	(N/A)	(N/A)	(N/A)	20	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH Testing #4	<None>	(N/A)	(N/A)	1,000	(N/A)	(N/A)	(N/A)	20	(N/A)	20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-12	Zone-1	3	FALSE	1,000	153	1,001	154	20	20	20	50	J-7	(N/A)	49	Kennedyville Village - Future Residential	TRUE
J-2	Zone-1	3	FALSE	1,000	194	1,001	195	20	20	20	36	J-15	(N/A)	36	J-15	TRUE
J-15	Zone-1	3	FALSE	1,000	215	1,002	218	20	20	20	33	J-2	(N/A)	33	J-2	TRUE
J-16	Zone-1	3	FALSE	1,000	215	1,001	217	20	20	20	33	J-2	(N/A)	33	J-2	TRUE
J-13	Zone-1	3	FALSE	1,000	618	1,002	620	20	20	20	47	J-5	(N/A)	46	Kennedyville Village - Future Residential	TRUE
J-10	Zone-1	3	TRUE	1,000	1,112	1,002	1,114	20	20	20	46	J-4	(N/A)	44	Kennedyville Village - Future Residential	TRUE
J-10	<None>	3	TRUE	1,000	1,173	1,000	1,173	20	20	20	27	Parcel 267	(N/A)	24	J-9	TRUE
J-9	Zone-1	3	TRUE	1,000	1,194	1,002	1,196	20	20	20	25	J-17	(N/A)	22	J-10	TRUE
Parcel 267	<None>	3	TRUE	1,000	1,256	1,058	1,314	20	20	20	25	J-10	(N/A)	25	J-17	TRUE
J-17	Zone-1	3	TRUE	1,000	1,260	1,001	1,261	20	20	20	21	J-9	(N/A)	21	J-9	TRUE
J-8	Zone-1	3	TRUE	1,000	1,295	1,001	1,297	20	20	20	24	J-9	(N/A)	22	J-10	TRUE
Parcel 78	Zone-1	3	TRUE	1,000	1,299	1,007	1,306	20	20	20	23	J-16	(N/A)	22	J-14	TRUE
Kennedyville Village - Future Residential	<None>	3	TRUE	1,000	1,340	1,019	1,359	20	20	20	24	J-24	(N/A)	24	J-24	TRUE
J-14	<None>	3	TRUE	1,000	1,347	1,000	1,347	20	20	20	32	Kennedyville Village - Future Residential	(N/A)	21	Parcel 78	TRUE
J-30	<None>	3	TRUE	1,000	1,415	1,000	1,415	20	20	20	22	Kennedyville Village - Future Residential	(N/A)	22	Kennedyville Village - Future Residential	TRUE
J-24	<None>	5	TRUE	1,000	1,420	1,000	1,420	20	21	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-23	<None>	20	TRUE	1,000	1,444	1,000	1,444	20	20	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-21	<None>	20	TRUE	1,000	1,456	1,000	1,456	20	20	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-29	<None>	5	TRUE	1,000	1,458	1,000	1,458	20	22	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-19	<None>	5	TRUE	1,000	1,460	1,000	1,460	20	25	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-4	<None>	5	TRUE	1,000	1,460	1,000	1,460	20	20	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-20	<None>	5	TRUE	1,000	1,460	1,000	1,460	20	24	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-22	<None>	6	TRUE	1,000	1,468	1,000	1,468	20	28	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE

Note: The junctions highlighted in red have available fire flows that are less than 1,000 GPM. These junctions should not be considered in the analysis because they are off of 2" and 4" water lines and would not be used to provide fire flow. The junction highlighted in yellow is the junction connected a 6" or 8" water main and has the least amount of available fire flow.

HYDRAULIC MODELING FIRE FLOW RESULTS

Label	Zone	Fire Flow Iterations	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (System Lower Limit) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)	Is Fire Flow Run Balanced?
J-28	<None>	5	TRUE	1,000	1,468	1,000	1,468	20	25	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-25	<None>	6	TRUE	1,000	1,501	1,000	1,501	20	30	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-6	Zone-1	3	TRUE	1,000	1,502	1,002	1,504	20	20	20	28	J-13	(N/A)	28	J-13	TRUE
J-3	Zone-1	3	TRUE	1,000	1,521	1,002	1,523	20	20	20	22	J-15	(N/A)	22	J-15	TRUE
J-15	<None>	8	TRUE	1,000	1,522	1,000	1,522	20	28	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-2	<None>	23	TRUE	1,000	1,538	1,000	1,538	20	27	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-5	Zone-1	3	TRUE	1,000	1,557	1,002	1,559	20	20	20	20	J-13	(N/A)	20	J-13	TRUE
J-8	<None>	6	TRUE	1000	1593	1000	1593	20	27	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-7	Zone-1	3	TRUE	1000	1656	1002	1658	20	20	20	36	J-6	(N/A)	25	J-12	TRUE
J-5	<None>	6	TRUE	1000	1661	1000	1661	20	24	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-6	<None>	5	TRUE	1000	1661	1000	1661	20	23	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-4	Zone-1	4	TRUE	1000	1729	1002	1731	20	20	20	23	J-15	(N/A)	22	Kennedyville Village - Future Residential	TRUE
J-1	<None>	6	TRUE	1000	1772	1000	1772	20	23	20	20	Kennedyville Village - Future Residential	(N/A)	20	Kennedyville Village - Future Residential	TRUE
J-12	<None>	3	TRUE	1000	1837	1000	1837	20	20	20	36	Parcel 209	(N/A)	20	J-7	TRUE
Parcel 209	<None>	5	TRUE	1000	2397	1030	2427	20	21	20	20	J-12	(N/A)	20	J-7	TRUE
Kennedyville Village - Future Commercial	Zone-1	6	TRUE	1000	2843	1003	2846	20	21	20	20	J-4	(N/A)	17	Kennedyville Village - Future Residential	TRUE
J-17	<None>	2	TRUE	1000	4000	1000	4000	20	45	20	36	Kennedyville Village - Future Residential	(N/A)	36	Kennedyville Village - Future Residential	TRUE

APPENDIX D – FIRE FLOW TESTING RESULTS

Kennedyville FH Testing Results

TEST DATE:	1/16/2020	
EQUIPMENT USED:	Little Hose Monster Kit	
PARTIES PRESENT:	Ryan & Tyler (McCrone), Chris (County)	
COMMENTS:	Static pressure moved during tests	
Hydrant Test/Location	FH Test #1 (Kennedyville Village)	FH Test #2 (MD Route 213 - SW Direction)
Date	1/16/2020	1/16/2020
Static Pressure Time	12:31 PM	12:47 PM
Static Pressure, psi	68-66	66-65
Residual Pressure Time	12:35 PM	12:50 PM
Residual Pressure, psi	42	34 +
Pitot Pressure, psi	17	15
Flow, GPM	643	604
Distance from FH to Water Main, ft	22	15
Distance from Ground to FH Discharge, ft	2	1
Water Main Diameter, in		
Tank Level	147.1	146.9
Hydrant Location/Number if Available	FH Test #3 (MD Route 213 - NE Direction)	FH Test #4 (By post office)
Date	1/16/2020	1/16/2020
Static Pressure Time	1:02 PM	1:24 PM
Static Pressure, psi	61	66 +
Residual Pressure Time	1:07 PM	1:27 PM
Residual Pressure, psi	36	49
Pitot Pressure, psi	12.5	21
Flow, GPM	591	715
Distance from FH to Water Main, ft	14	8
Distance from Ground to FH Discharge, ft	2.67	2
Water Main Diameter, in		
Tank Level	147.1	147.5

**APPENDIX E – SITE PLAN FROM 1996 WTP AS-BUILTS AND SITE PLAN SHOWING
RECOMMENDED OPTIONS**

GENERAL NOTES :

1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON SHEET 4.

PROPOSED 25' L x 8' W x 0.5' DEEP VEGETATED SWALE (BOTTOM 47.0', TOP 47.5')

PROPOSED 60,000 GALLON ELEVATED WATER STORAGE TANK BID ALTERNATE NO. 1

LIMIT OF BID ALTERNATE NO. 1

PROPOSED 6" HIGH CHAIN LINK FENCE
LIMIT OF CLEARING
EXISTING SOIL BORING (typ.)
PROP. 4" GATE VALVE W/ VALVE BOX
PROPOSED PRODUCTION WELL

PROP. 50' L x 4' W x 0.5' DEEP VEGETATED SWALE (BOTTOM 46.5', TOP 46.0')

AREA TO BE LANDSCAPED WITH 3"-4" WHITE PINES, 10' ON CENTERS AFTER COMPLETION OF CONSTRUCTION

LIMIT OF STAGING AREA

EXISTING DIRT LANE
EXISTING POWER POLE (typ.)
EX. 8" SEWER
EX. 2" WATER
EDGE OF PAVEMENT

CONNECT PROPOSED 8" WATER MAIN TO EXISTING 6" WATER MAIN WITH A 6"x6" TAPPING SLEEVE & VALVE

OVERHEAD POWER LINES (typ.)

Delmarva Power Right-Of-Way

PROPOSED WATER TREATMENT BUILDING (25' x 30') F.F. ELEV. = 48.75'

20 LF OF WATER LINE ENCASEMENT FOR CROSSING BELOW EXISTING 8" SEWER

PROPOSED 6" GATE VALVE

PROPOSED DOUBLE LEAF 16" WIDE ACCESS GATE

BORING AND JACKING RECEIVING PIT (10' x 10')

PROPOSED 15' WIDE GRAVEL ACCESS DRIVE

REMOVE EXISTING OLD HOUSE

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE WITH VALVE BOX

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

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PROPOSED 6" GATE VALVE

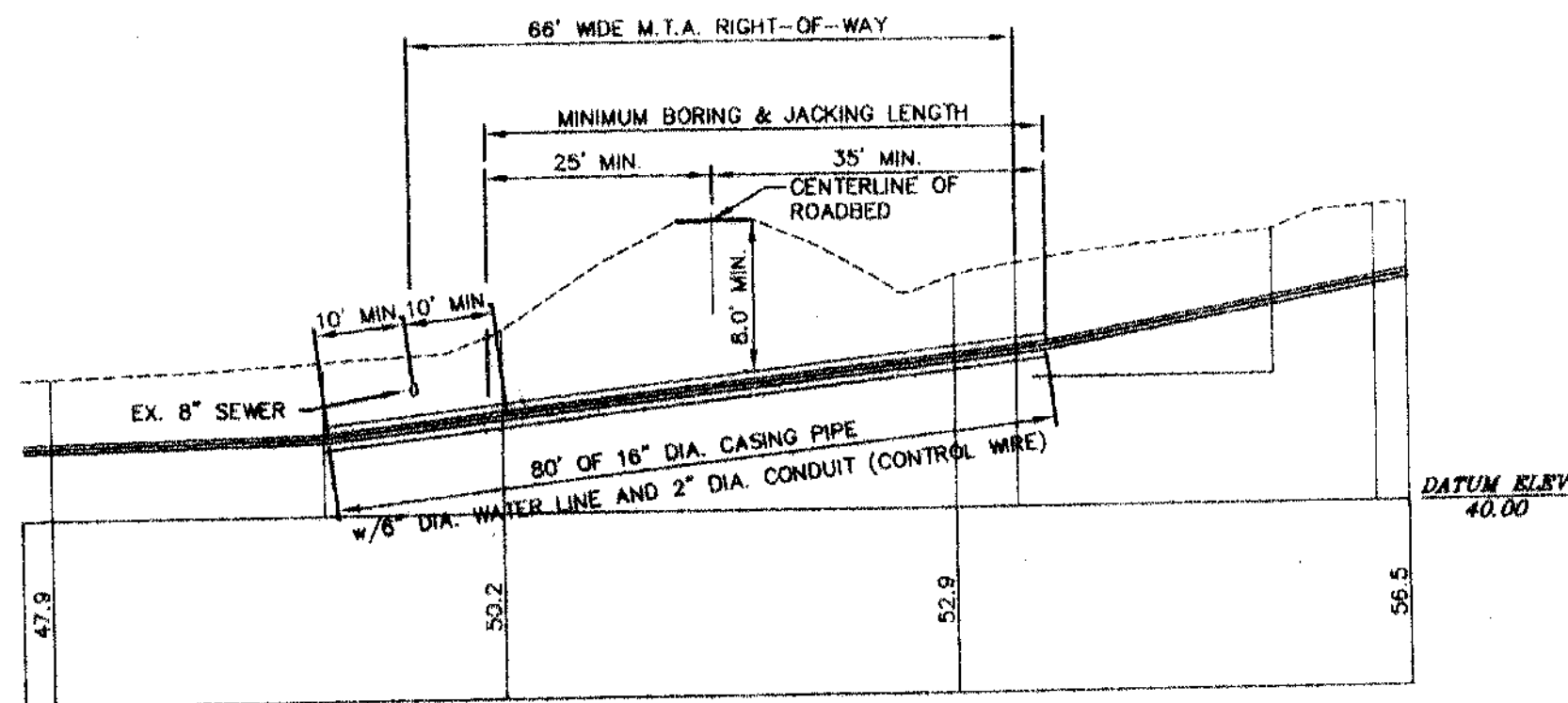
PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

PROPOSED 6" GATE VALVE

SITE PLAN



PROFILE - RAILROAD CROSSING

SCALE: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 10'

LAYOUT PLAN

CONSTRUCTION NOTES :

- INSTALL PROPOSED PRODUCTION WELL - SEE DETAIL SHEET 8.
- INSTALL 4" PVC WATER LINE FROM PRODUCTION WELL TO WATER TREATMENT FACILITY (3.5' MINIMUM COVER).
- INSTALL 6" PVC WATER SUPPLY LINE FROM EXISTING WELL (NEAR FIREHOUSE) TO WATER TREATMENT FACILITY (3.5' MIN. COVER).
- CONSTRUCT WATER TREATMENT FACILITY - SEE FLOOR PLAN, SHEET 5.
- INSTALL 4" PVC TANK BY-PASS LINE WITH A 4" GATE VALVE & VALVE BOX.
- INSTALL 8" PVC WATER DISTRIBUTION MAIN FROM WATER TREATMENT FACILITY AND CONNECT TO EXISTING 6" WATER MAIN ALONG THE WEST SIDE OF ROUTE 448.
- INSTALL 8" SDR-35 PVC SEWER LINE FROM WATER TREATMENT FACILITY EXTENDING TO EXISTING 8" SEWER MAIN AT 0.50% SLOPE. CONNECT TO 8" MAIN WITH A LATERAL CONNECTION.
- INSTALL 10' W x 25' L x 6" THICK REINFORCED CONCRETE APRON.
- INSTALL GRAVEL ROADWAY TO ELEVATIONS SHOWN - SEE DETAIL, SHEET 8.
- INSTALL 6" HIGH CHAIN LINK FENCE WITH A DOUBLE LEAF 16" WIDE ACCESS GATE AT LOCATIONS SHOWN.

BID ALTERNATE NO. 1 CONSTRUCTION NOTES :

- CONSTRUCT PROPOSED 60,000 GALLON ELEVATED WATER STORAGE TANK-- SEE DETAIL SHEET 2.
- INSTALL 4" GATE VALVE & VALVE BOX AFTER TANK BY-PASS LINE AND EXTEND 4" PVC SUPPLY TO ELEVATED WATER STORAGE TANK (TANK SUPPLY).
- INSTALL 8" GATE VALVE & VALVE BOX AFTER TANK BY-PASS LINE AND EXTEND 8" PVC SUPPLY TO ELEVATED WATER STORAGE TANK (TANK DISTRIBUTION).
- INSTALL 6' W x 19' L x 6" THICK REINFORCED CONCRETE PAD.

AS - BUILT
JUNE 1996

SITE PLAN GRADING PLAN WATER TREATMENT FACILITY

CONTRACT II

WATER SYSTEM IMPROVEMENTS
FOR
KENT COUNTY SANITARY DISTRICT
KENNEDYVILLE WATER SYSTEM
2nd. ELECTION DISTRICT
KENT COUNTY, MARYLAND

DRAWN M.A.R.
DESIGNED J.H.W.
CHECKED H.M.M.

DATE
MAY 1995

SCALE
AS SHOWN

JOB NO.
89145.40

SHEET
3 of 12

NO.	DATE	REVISIONS
1	12/6/94	SAND FILTER ADDED AND LAYOUT REVISED
2	5/23/95	WPI-MOT COMMENTS - RAILROAD CROSSING

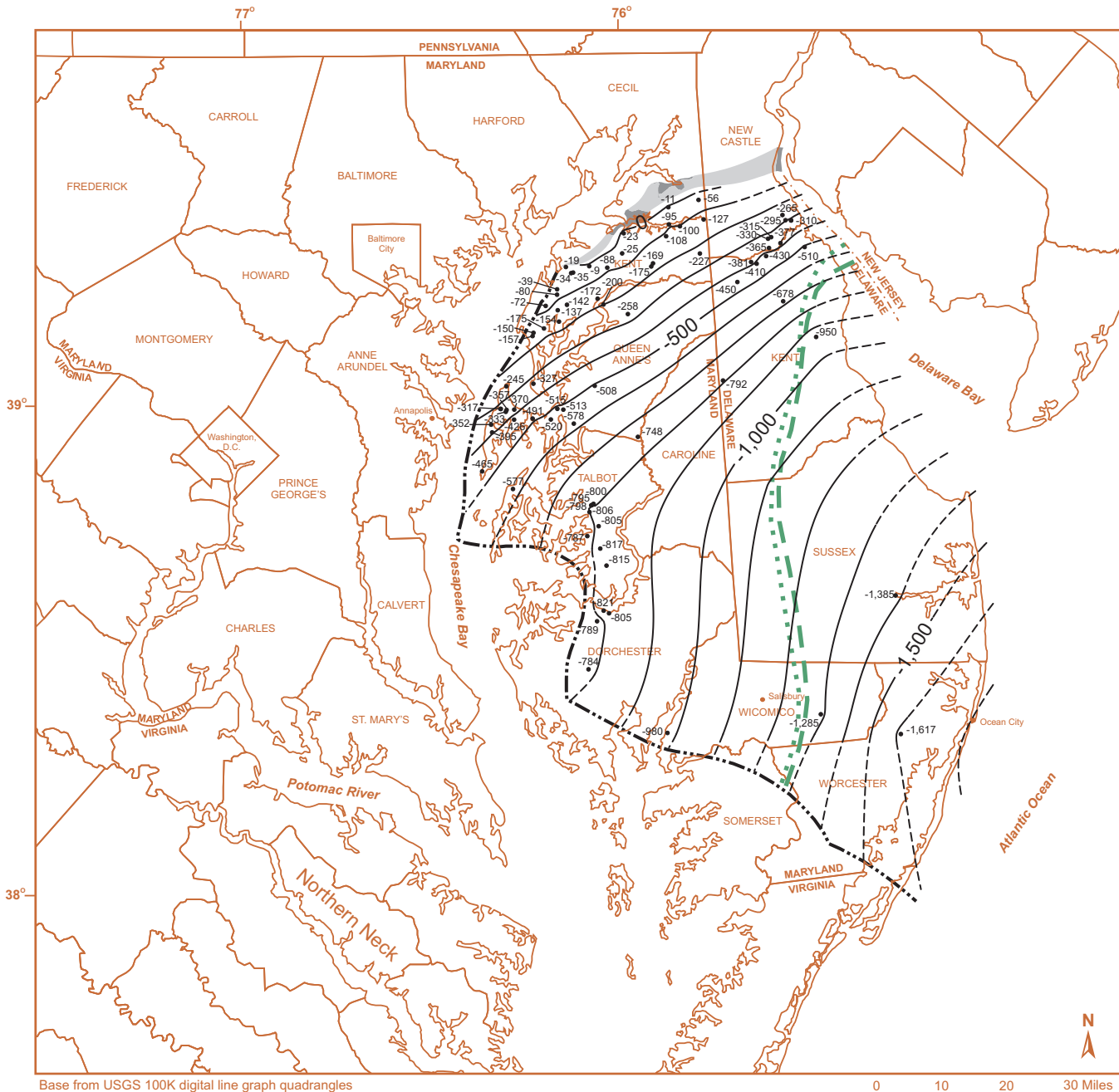
CONSULTING ENGINEERS AND SURVEYORS
Andrews, Miller & Assoc., Inc.
508 MARYLAND AVENUE • CAMBRIDGE, MD. 21613
PHONE 410-228-7117 • FAX 410-228-2755

1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON SHEET 4.

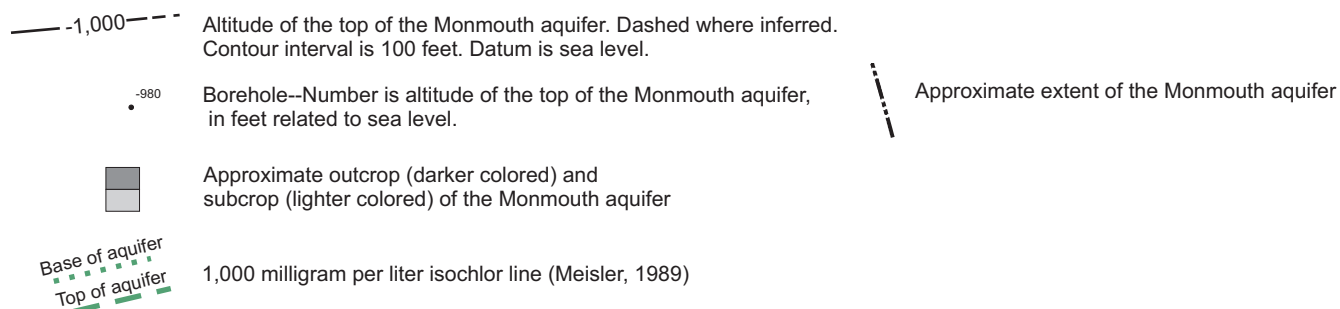


**APPENDIX F – MAP OF AQUIA AQUIFER, LOWER PATAPSCO AQUIFER, AND
MONMOUTH AQUIFER**

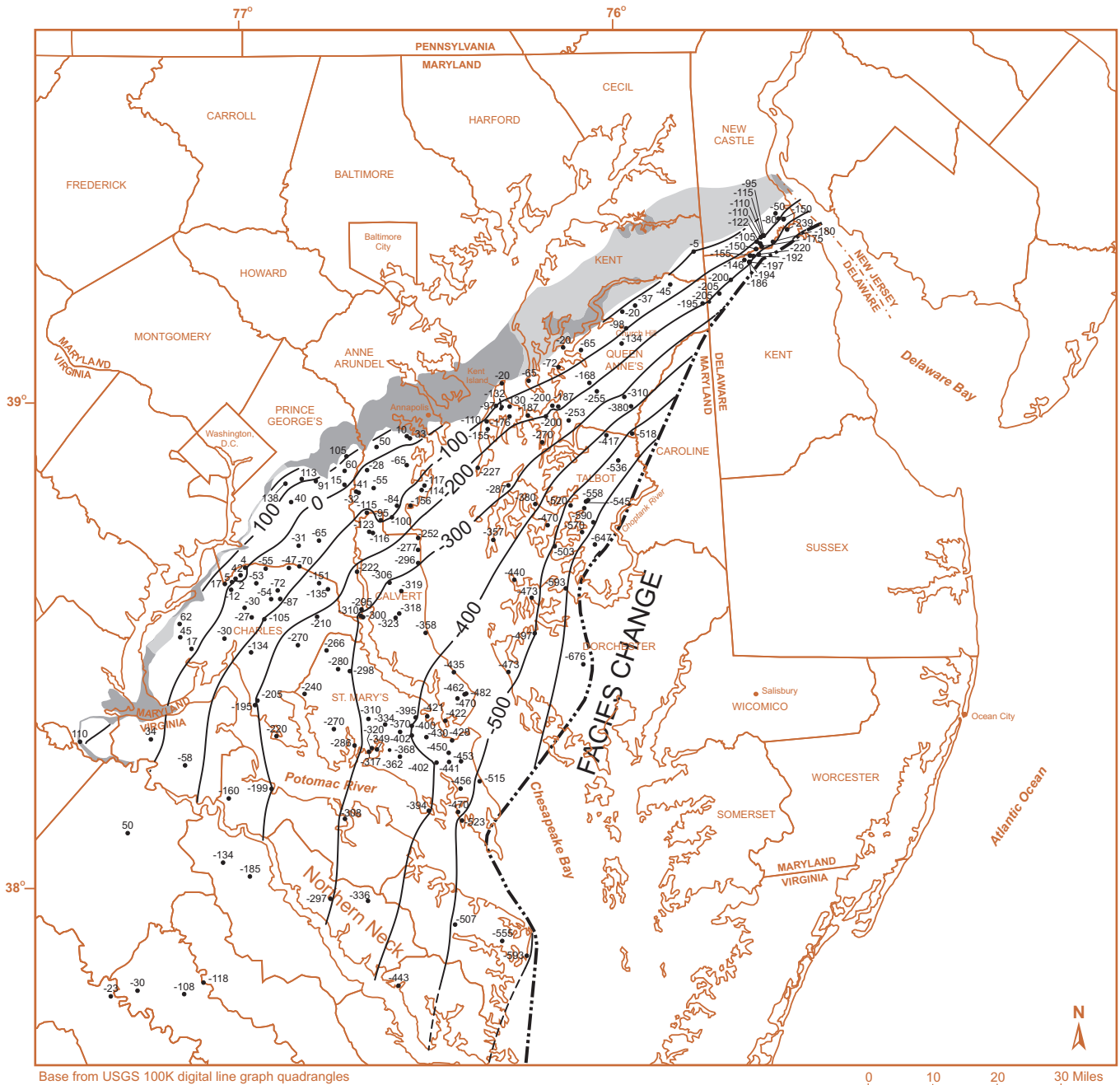
Altitude of the top of the Monmouth aquifer.



EXPLANATION



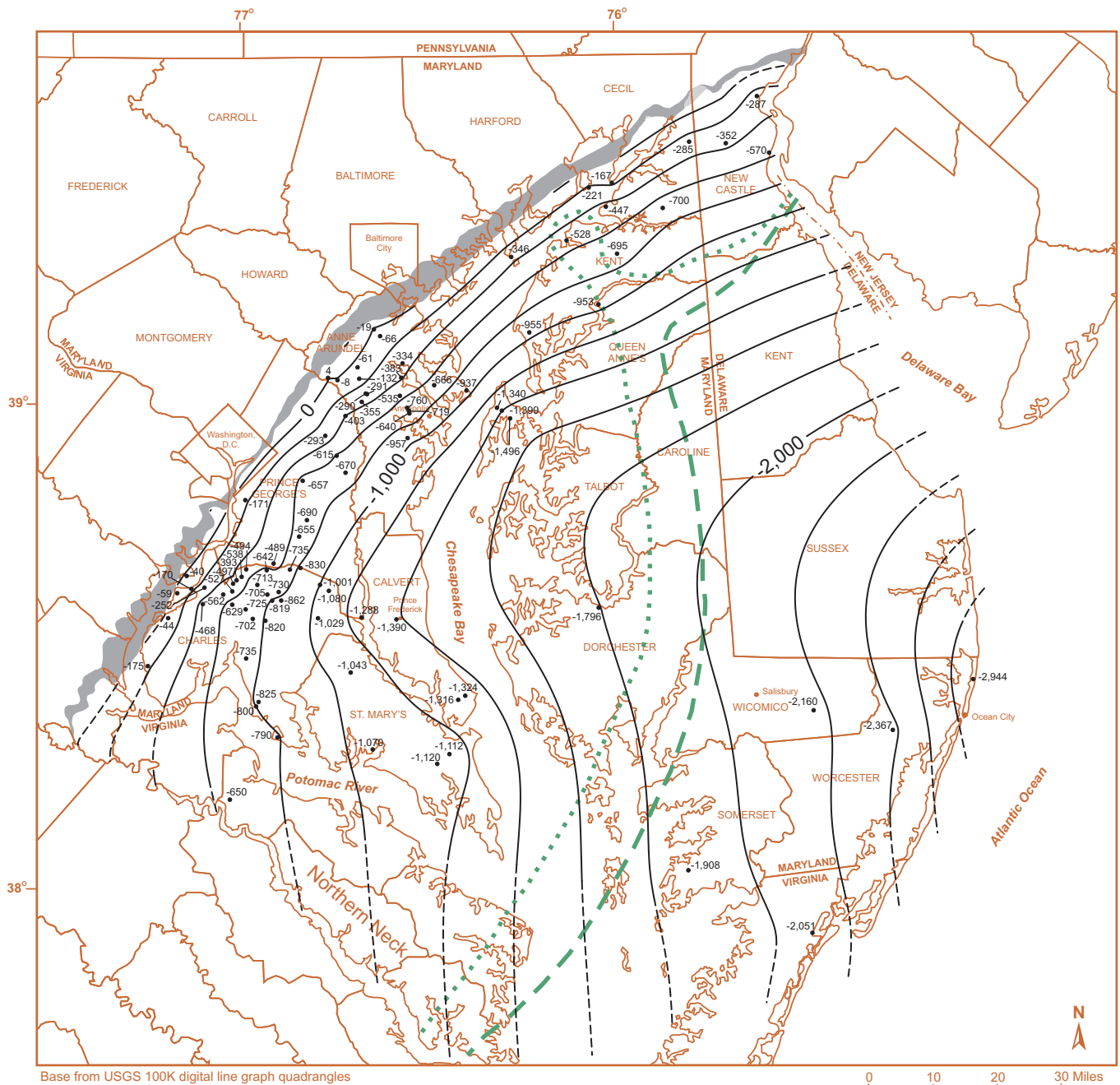
Altitude of the top of the Aquia aquifer.









EXPLANATION

- Altitude of the top of the Aquia aquifer. Dashed where inferred. Contour interval is 100 feet. Datum is sea level.
- Borehole--Number is altitude of the top of the Aquia aquifer, in feet related to sea level.
- Approximate outcrop (darker colored) and subcrop (lighter colored) of the Aquia aquifer
- Approximate extent of the Aquia aquifer

Altitude of the top of the Lower Patapsco aquifer system.



EXPLANATION

-  -2,000 --- Altitude of the top of the Lower Patapsco aquifer system. Dashed where inferred. Contour interval is 200 feet. Datum is sea level.
-  -650 Borehole--Number is altitude of the top of the Lower Patapsco aquifer system, in feet related to sea level.
-  Approximate outcrop (darker colored) and subcrop (lighter colored) of the Lower Patapsco aquifer system
-  Base of aquifer
-  Top of aquifer
-  1,000 milligram per liter isochlor line (Meisler, 1989)

APPENDIX G – LAYOUTS OF GSFS AND MEMBRANE FILTERS IN EXISTING FACILITY

SCALE: 1/2" = 1'-0"

4"	Ductile iron piping.	53.	3" Rectifier line from sand filter.
2	4" 125 lb. class, flanged, standard radius, ductile iron 90° elbow.	54.	Filter access ladder with safety railing.
3	2" 90° elbow.	65.	Air supply line from air compressor to sand filter with shut-off valve
4	2" piping.		(all piping shall be adequately anchored or supported).
5	2" x 2" x 2" tee.	66.	Floor sleeve.
6	2" gate valve	67.	Air compressor with intake filter, receiver tank and associated hardware.
7	Adjustable 2" rate of flow control valve.	68.	3'-0" x 2'-10" Horizontal slide window
8	Continuous backwash, upflow, sand filter	69.	O.R.P. Meter, see Electrical/Mechanical Plans.
9	Exhaust fan - see Electrical/Mechanical Plans.	70.	8" 125 lb. class, flanged, standard radius 90° elbow.
10	3/8" cpvc sample tap line extending (mounted overhead) from well	71.	8" Ductile iron piping.
	supply lines to sample tap manifold at utility sink.	72.	8" x 8" x 8" 125 lb. class, flanged reducing tee.
11.	Chlorine ejector/diffuser and close coupled corporation cock (Ejector No. 2)	73.	6" Butterfly valve.
12	1" cpvc supply line from Booster pump to Chlorine Ejector/Diffuser.	74.	8" Dresser style coupling.
13	1" gate valve.	75.	8" Butterfly valve.
14	Pressure gauge.	76.	6" Dresser style coupling, UNIFLANGE
15	Y - strainer for 1 1/4" line.	77.	6" water meter with 6" strainer.
16	Booster Pump.	78.	1-1/4" potable water supply line to booster pumps.
17.	3/8" poly tubing in 1" PVC conduit from solenoid valve to Ejector No. 2	79.	1" check valve.
18.	50 gallon fiberglass reinforced plastic acid tank with solution level indicator,	80.	90 Gallon capacity polyethylene containment tank with valved drain.
	1" acid meter, 1/2" diameter drain, mixer, side mount platform on containment	81.	3/4" Potable water supply line to utility sink and hot water heater.
	tank with metering pump.	82.	Hose bibb, frost-proof with integral vacuum breaker.
19.	Acid injection point with diffuser and closed coupled corporation cock.	83.	4" Gate valve with valve box.
20	3/8" poly tubing in 1" PVC conduit from acid metering pump to injection point	84.	8" Gate valve with valve box.
21	1 1/4" gate valve	85.	8" x 8" x 4" 125 lb. class, flanged reducing tee.
22	Chlorine ejector/diffuser and close coupled corporation cock (Ejector No. 1)	86.	1 1/2" x 3/4" reducer.
23	6" Ductile iron piping.	87.	Distribution pump with 1 1/2" discharge & 2" suction.
24	6" 125 lb. class, flanged, standard radius, ductile iron 90° elbow.	88.	1 1/2" Check valve.
25	1 1/2" tap for potable water supply line.	89.	1 1/2" Gate valve.
26	3'-0" x 2'-0" w x 2'-0" deep trench drain with 1-1/2" aluminum grating	90.	1 1/2" x 2" reducer.
	covering entire opening.	91.	Water softener tank
27	Electric meter, see Electrical/Mechanical Plans.	92.	30" dia. x 42" h fiberglass reinforced plastic concentrated Brine tank with
28	8" PVC pipe, see Mechanical Plan for sanitary sewer layout and details.		solution level indicator, hinged cover, 1/2" drain, miscellaneous associated
29	3/8" sample tap extending from elevated storage tank supply line to sample tap		equipment.
	manifold (tap shall be installed downstream chlorine injection & acid injection).	93.	2" automatically operated high lift automatic diaphragm valve.
30	6" pvc water main from existing production well, see site plan for continuation	94.	Sample cock.
31	Cleanout.	95.	Brine ejector.
32	42"x30" Louver over window, see Mechanical Plan.	96.	Brine valve.
33	Floor Sink, see Mechanical Plan.	97.	Automatic backwash controller valve
34	4" PVC pipe, see Mechanical Plan for sanitary sewer layout and details.	98.	Tank drain.
35	2" 6" x 6"-8" hollow core interior door with hardware.	99.	1 1/2" piping.
36	Electrical Controls, see Electrical/Mechanical Plans.	100.	1 1/2" 90° elbow.
37	Water closet.	101.	1 1/2" tee.
38.	4" 125 lb. class, flanged, ductile iron tee.	102.	2" Check valve.
39.	Toilet paper holder.	103.	2" 45° elbow.
40.	6" x 4" 125 lb. class, flanged, ductile iron reducer.	104.	2" Pressure reducing valve.
41.	10'-0" wide X 10'-0" high overhead door.	105.	Caustic soda injection point with diffuser and close coupled corporation cock
42.	Emergency eye wash and shower	106.	Polymer injection point with diffuser and close coupled corporation cock
43.	Paper towel holder.	107.	100 gallon fiberglass reinforced plastic caustic soda tank with solution level
44.	Bathroom sink with mixing faucet.		indicator, hinged cover, 1/2" diameter drain, mixer, wall mounted metering
45.	40 gallon hot water heater.		pump and associated equipment.
46.	36" w x 34 3/4" h sink base unit with sink assembly, mixing faucet, sink outlet	108.	50 gallon fiberglass reinforced plastic polymer tank with solution level
	& p-trap assembly and overflow (sink basin approx. 16" x 24").		indicator, hinged cover, 1/2" diameter drain, mixer, wall mounted metering
47.	3/8" sample tap extending from potable water supply line.		pump and associated equipment.
48.	3/8" raw water sample tap extending from Well No. 1 (well near Fire House).	109.	3/8" flexible poly tubing caustic soda pressure line inside a 1" sch. 40 PVC
49.	3/8" raw water sample tap extending from Well No. 2		conduit mounted overhead extending to injection point.
50.	3/8" sample tap extending from elevated storage tank supply line	110.	3/8" flexible poly tubing polymer pressure line inside a 1" sch. 40 PVC
	(tap shall be installed downstream chlorine injection & acid injection).		conduit mounted overhead extending to injection point.
51.	36" w x 36 3/4" h standing-height base unit with drawers	111.	Polyethylene containment tank with valved drain - 48" x 48" w x 20 1/2" h.
	(3 - 36"± long drawers and 2 - 18"± long drawers).	112.	pH Electrochemical analyzer with inline sensor
52.	Floor drain with P-trap.		(see section B-B for sensor location).
53.	3'-0" x 6'-8" insulated steel exterior door with frame and hardware.	113.	Turbidity meter with remote sensor (see item 116).
54.	Filter control panel AIR COMPRESSOR CONTROL LOCATED ON LEG OF FILTER.	114.	pH Electrochemical analyzer inline sensor.
55.	Wall mounted sample tap manifold (4 sample valves)	115.	Wall mounted hot and cold water mixing station with vacuum breaker and
56.	2" flow meter, with remote reading sensor.		hose reel with 35 feet of 3/8" rubber hose and push lock hose ends.
57.	3/8" potable water supply sample line extend to O.R.P. meter.	116.	Turbidity remote sensor (mounted on top of sand filter).
58.	Drain line from O.R.P. meter to floor sink.		Access ladder.
59.	4" x 2", 125 lb. class, flanged, ductile iron reducer.	117.	ON LEG
		118.	AUTO-CON PRESSURE SUPPLY TAP.

FLOOR PLAN - 2 GREENSAND FILTERS OPTION

**KENNEDYVILLE WATER
SYSTEM STUDY**

TOWN OF KENNEDYVILLE

SHEET NO.: **1**

FILE NO.: WTP Floor Plan

[illegible]

McCrone

- Engineering
- Environmental Sciences
- Construction Services
- Land Planning & Surveying

ANNAPOLIS ● CENTREVILLE ● DC/VER ● ELKTON ● SALISBURY

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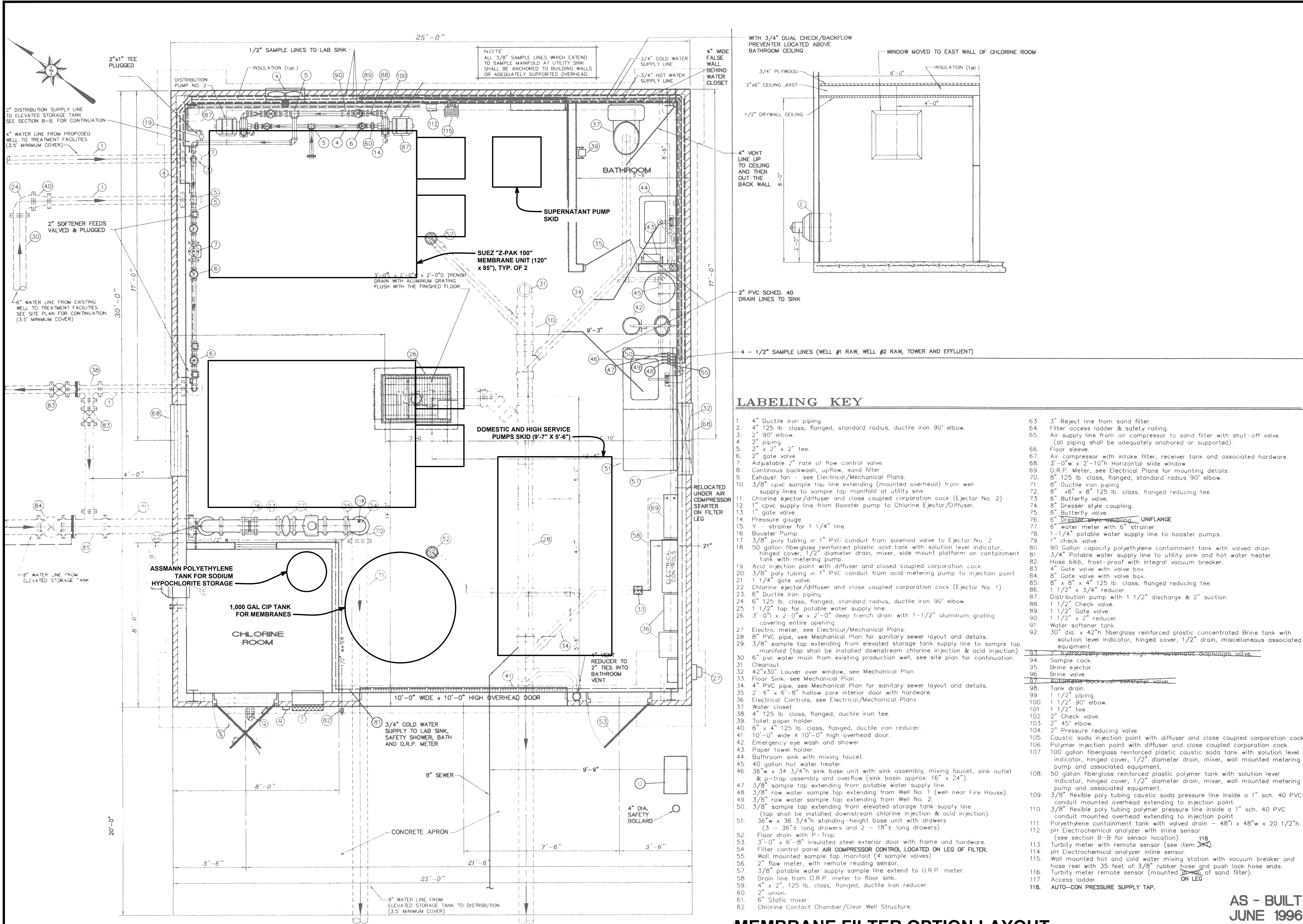
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DATE:	June 1, 2020
JOB NUMBER:	
SCALE:	AS SHOWN
DRAWN BY:	T.J.L
DESIGNED BY:	T.J.L
APPROVED BY:	R.J.R
FOLDER REFERENCE:	N/A

KENT COUNTY, MARYLAND

1190004 - Kent County Kennedville Water System Studv\02, Studv\15, Drawings\01, CAD\WTP Floor Plan.dwg.....Tab:2 ADEGE GREENSAND FILTERS

SEAL	DATE
------	------



LABELING KEY

- 1. 4" Ductile iron piping.
- 2. 4" 125 lb. class, flanged, standard radius, ductile iron 90° elbow.
- 3. 2" 90° elbow.
- 4. 2" piping.
- 5. 2" x 2" x 2" tee.
- 6. 2" gate valve.
- 7. Adjustable 2" rate of flow control valve.
- 8. Continuous backwash, upflow, sand filter.
- 9. Exhaust fan - see Electrical/Mechanical Plans.
- 10. 3/8" cpvc sample tap line extending (mounted overhead) from well supply lines to sample tap manifold at utility sink.
- 11. Chlorine ejector/diffuser and close coupled corporation cock (Ejector No. 2).
- 12. 1" cpvc supply line from Booster pump to Chlorine Ejector/Diffuser.
- 13. 1" gate valve.
- 14. Pressure gauge.
- 15. Y - strainer for 1 1/4" line.
- 16. Booster Pump.
- 17. 3/8" poly tubing in 1" PVC conduit from solenoid valve to Ejector No. 2.
- 18. 50 gallon fiberglass reinforced plastic acid tank with solution level indicator, hinged cover, 1/2" diameter drain, mixer, side mount platform on containment tank with metering pump.
- 19. Acid injection point with diffuser and close coupled corporation cock.
- 20. 3/8" poly tubing in 1" PVC conduit from acid metering pump to injection point.
- 21. 1 1/4" gate valve.
- 22. Chlorine ejector/diffuser and close coupled corporation cock (Ejector No. 1).
- 23. 6" Ductile iron piping.
- 24. 6" 125 lb. class, flanged, standard radius, ductile iron 90° elbow.
- 25. 1 1/2" top for potable water supply line.
- 26. 3'-0" x 2'-0" x 2'-0" deep trench drain with 1-1/2" aluminum grating covering entire opening.
- 27. Electric meter, see Electrical/Mechanical Plans.
- 28. 8" PVC pipe, see Mechanical Plan for sanitary sewer layout and details.
- 29. 3/8" sample tap extending from elevated storage tank supply line to sample tap manifold (tap shall be installed downstream chlorine injection & acid injection).
- 30. 6" pvc water main from existing production well, see site plan for continuation.
- 31. Cleanout.
- 32. 42"x30" Louver over window, see Mechanical Plan.
- 33. Floor Sink, see Mechanical Plan.
- 34. 4" PVC pipe, see Mechanical Plan for sanitary sewer layout and details.
- 35. 2' 6" x 6' 8" hollow core interior door with hardware.
- 36. Electrical Controls, see Electrical/Mechanical Plans.
- 37. Water closet.
- 38. 4" 125 lb. class, flanged, ductile iron tee.
- 39. Toilet paper holder.
- 40. 6" x 4" 125 lb. class, flanged, ductile iron reducer.
- 41. 10'-0" wide x 10'-0" high overhead door.
- 42. Emergency eye wash and shower.
- 43. Paper towel holder.
- 44. Bathroom sink with mixing faucet.
- 45. 40 gallon hot water heater.
- 46. 36" w x 34 3/4" h sink base unit with sink assembly, mixing faucet, sink outlet & p-trap assembly and overflow (sink basin approx. 16" x 24").
- 47. 3/8" sample tap extending from potable water supply line.
- 48. 3/8" raw water sample tap extending from Well No. 1 (well near Fire House).
- 49. 3/8" raw water sample tap extending from Well No. 2.
- 50. 3/8" sample tap extending from elevated storage tank supply line (tap shall be installed downstream chlorine injection & acid injection).
- 51. 36" w x 36 3/4" h standing-height base unit with drawers (3 - 36"± long drawers and 2 - 18"± long drawers).
- 52. Floor drain with P-Trap.
- 53. 3'-0" x 6'-8" insulated steel exterior door with frame and hardware.
- 54. Filter control panel AIR COMPRESSOR CONTROL LOCATED ON LEG OF FILTER.
- 55. Wall mounted sample tap manifold (4 sample valves).
- 56. 2" flow meter, with remote reading sensor.
- 57. 3/8" potable water supply sample line extend to O.R.P. meter.
- 58. Drain line from O.R.P. meter to floor sink.
- 59. 4" x 2", 125 lb. class, flanged, ductile iron reducer.
- 60. 2" union.
- 61. 6" Static mixer.
- 62. Chlorine Contact Chamber/Clear Well Structure.
- 63. 3" Reject line from sand filter.
- 64. Filter access ladder & safety railing.
- 65. Air supply line from air compressor to sand filter with shut-off valve (all piping shall be adequately anchored or supported).
- 66. Floor sleeve.
- 67. Air compressor with intake filter, receiver tank and associated hardware.
- 68. 3'-0" w x 2'-10" h Horizontal slide window.
- 69. O.R.P. Meter, see Electrical Plans for mounting details.
- 70. 8" 125 lb. class, flanged, standard radius 90° elbow.
- 71. 8" Ductile iron piping.
- 72. 8" x 8" x 8" 125 lb. class, flanged reducing tee.
- 73. 6" Butterfly valve.
- 74. 8" Dresser style coupling.
- 75. 8" Butterfly valve.
- 76. 6" Dresser style coupling, UNIFLANGE.
- 77. 6" water meter with 6" strainer.
- 78. 1-1/4" potable water supply line to booster pumps.
- 79. 1" check valve.
- 80. 90 Gallon capacity polyethylene containment tank with valved drain.
- 81. 3/4" Potable water supply line to utility sink and hot water heater.
- 82. Hose bibb, frost-proof with integral vacuum breaker.
- 83. 4" Gate valve with valve box.
- 84. 8" Gate valve with valve box.
- 85. 8" x 8" x 4" 125 lb. class, flanged reducing tee.
- 86. 1 1/2" x 3/4" reducer.
- 87. Distribution pump with 1 1/2" discharge & 2" suction.
- 88. 1 1/2" Check valve.
- 89. 1 1/2" Gate valve.
- 90. 1 1/2" x 2" reducer.
- 91. Water softener tank.
- 92. 30" dia. x 42" h fiberglass reinforced plastic concentrated Brine tank with solution level indicator, hinged cover, 1/2" drain, miscellaneous associated equipment.
- 93. 2" hydraulically operated high-NK automatic diaphragm valve.
- 94. Sample cock.
- 95. Brine ejector.
- 96. Brine valve.
- 97. Automatic backwash controller valve.
- 98. Tank drain.
- 99. 1 1/2" piping.
- 100. 1 1/2" 90° elbow.
- 101. 1 1/2" tee.
- 102. 2" Check valve.
- 103. 2" 45° elbow.
- 104. 2" Pressure reducing valve.
- 105. Caustic soda injection point with diffuser and close coupled corporation cock.
- 106. Polymer injection point with diffuser and close coupled corporation cock.
- 107. 100 gallon fiberglass reinforced plastic caustic soda tank with solution level indicator, hinged cover, 1/2" diameter drain, mixer, wall mounted metering pump and associated equipment.
- 108. 50 gallon fiberglass reinforced plastic polymer tank with solution level indicator, hinged cover, 1/2" diameter drain, mixer, wall mounted metering pump and associated equipment.
- 109. 3/8" flexible poly tubing caustic soda pressure line inside a 1" sch. 40 PVC conduit mounted overhead extending to injection point.
- 110. 3/8" flexible poly tubing polymer pressure line inside a 1" sch. 40 PVC conduit mounted overhead extending to injection point.
- 111. Polyethylene containment tank with valved drain - 48"l x 48" w x 20 1/2" h.
- 112. pH Electrochemical analyzer with inline sensor (see section B-B for sensor location).
- 113. Turbidity meter with remote sensor (see item 116).
- 114. pH Electrochemical analyzer inline sensor.
- 115. Wall mounted hot and cold water mixing station with vacuum breaker and hose reel with 35 feet of 3/8" rubber hose and push lock hose ends.
- 116. Turbidity meter remote sensor (mounted 1'± above sand filter).
- 117. Access ladder.
- 118. AUTO-CON PRESSURE SUPPLY TAP.

MEMBRANE FILTER OPTION LAYOUT

SCALE: 1/2" = 1'-0"

AS - BUILT
JUNE 1996

SEAL		DATE	
REVISIONS			
REV. #	DATE	DESCRIPTION	
FLOOR PLAN - MEMBRANE OPTION			
KENNEDYVILLE WATER SYSTEM STUDY			
TOWN OF KENNEDYVILLE			
KENT COUNTY, MARYLAND			
SHEET NO.: 2			
FILE NO.: WTP Floor Plan			

McCRONE

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APPENDIX H – DRAWDOWN TEST RESULTS

Drawdown Test	
---------------	--

PS Name: PS #3

114

Iteration 1:

1/16/20, 10:27 AM Record date and time test was conducted.

15 ft	Record the distance from top of wet well to water surface before test.
-------	--

Pump #1	Record which pump is being tested.
---------	------------------------------------

2 min	Record total time pump ran during test.
-------	---

16.5 ft	Record the distance from top of wet well to water surface after test.
---------	---

Notes: Pump #2 was down during this test. Drawdown rate equaled approx.
110 gpm. Slight dribble of wastewater coming in.

Iteration 2:

1/16/20, 10:31 AM Record date and time test was conducted.

16.5 ft	Record the distance from top of wet well to water surface before test.
---------	--

Pump #1	Record which pump is being tested.
---------	------------------------------------

2 min	Record total time pump ran during test.
-------	---

18 ft	Record the distance from top of wet well to water surface after test.
-------	---

Notes: Still slight dribble of wastewater coming in. Pump started spraying b/c
of low water level. Drawdown rate equaled approx. 110 gpm.

Iteration 3:

Record date and time test was conducted.

Record the distance from top of wet well to water surface before test.

Record which pump is being tested.

Record total time pump ran during test.

Record the distance from top of wet well to water surface after test.

Notes: _____

Drawdown Test

Diameter: 5 ft

PS Name: PS #2

Drawdown Test

Iteration 1:

1/16/20, 10:50 AM Record date and time test was conducted.

7.8 ft Record the distance from top of wet well to water surface before test.

Pump #2 Record which pump is being tested.

2 min Record total time pump ran during test.

9.1 ft Record the distance from top of wet well to water surface after test.

Notes: <u>Gravity inflow to PS. See fill cycle</u> <u>table.</u>	Fill Cycle	
	Start Level	9.1 ft
	End Level	8.85 ft
	Time	3 min

Iteration 2:

1/16/20, 10:56 AM Record date and time test was conducted.

8.85 ft Record the distance from top of wet well to water surface before test.

Pump #1 Record which pump is being tested.

2 min Record total time pump ran during test.

10.4 ft Record the distance from top of wet well to water surface after test.

Notes: <u>Gravity inflow to PS. See fill cycle</u> <u>table. Pumps don't seat well.</u>	Fill Cycle	
	Start Level	10.4 ft
	End Level	10.3 ft
	Time	2 min

Iteration 3:

1/16/20, 11:01 AM Record date and time test was conducted.

10.3 ft Record the distance from top of wet well to water surface before test.

Pump #2 Record which pump is being tested.

1 min, 40 sec Record total time pump ran during test.

11.3 ft Record the distance from top of wet well to water surface after test.

Notes: Was not able to pump for 2 full minutes b/c water level was too low

Drawdown Test	
---------------	--

PS Name: PS #1

113

Iteration 1:

1/16/20, 11:19 AM Record date and time test was conducted.

5.25 ft	Record the distance from top of wet well to water surface before test.
---------	--

Pump #1	Record which pump is being tested.
---------	------------------------------------

1 min	Record total time pump ran during test.
-------	---

6.1 ft	Record the distance from top of wet well to water surface after test.
--------	---

Notes: Gravity inflow to PS. See fill cycle table. Wet well close to overflow upon arrival.	Fill Cycle	
	Start Level	6.1 ft
	End Level	5.85 ft
	Time	3 min

Iteration 2:

1/16/20, 11:25 AM Record date and time test was conducted.

5.85 ft	Record the distance from top of wet well to water surface before test.
---------	--

Pump #2	Record which pump is being tested.
---------	------------------------------------

1 min	Record total time pump ran during test.
-------	---

6.75 ft	Record the distance from top of wet well to water surface after test.
---------	---

Notes: Tops of pumps visible after iteration 2 was finished

Iteration 3:

Record date and time test was conducted.

Record the distance from top of wet well to water surface before test.

Record which pump is being tested.

	Record total time pump ran during test.
--	---

Record the distance from top of wet well to water surface after test.

Notes: _____

PS #3 Drawdown Test Results

PS #3 Data	
diameter (ft)	5.00
surface area (ft ²)	19.63
conversion - 1 ft ³	7.48 gal

Pump #2 Drawdown - Iteration 1	
start level (ft)	15.00
end level (ft)	16.50
fall in level (ft)	1.50
volume of fall (ft ³)	29.45
volume of fall (gal)	220.32
duration (min)	2.00
net pump rate (gpm)	110.16
influent rate (gpm)	0.00
total pump rate (gpm)	110.16

Pump #2 Drawdown - Iteration 2	
start level (ft)	16.50
end level (ft)	18.00
fall in level (ft)	1.50
volume of fall (ft ³)	29.45
volume of fall (gal)	220.32
duration (min)	2.00
net pump rate (gpm)	110.16
influent rate (gpm)	0.00
total pump rate (gpm)	110.16

Pump #2 Drawdown	
avg. (gpm)	110.16
std. dev. (gpm)	0.00
discrepancy (%)	0.00%

PS #2 Drawdown Test Results

PS #2 Data	
diameter (ft)	5.00
surface area (ft ²)	19.63
conversion - 1 ft ³	7.48 gal

Pump #2 Drawdown - Iteration 1	
start level (ft)	7.80
end level (ft)	9.10
fall in level (ft)	1.30
volume of fall (ft ³)	25.53
volume of fall (gal)	190.94
duration (min)	2.00
net pump rate (gpm)	95.47
avg. influent rate (gpm)	9.79
total pump rate (gpm)	105.26

Pump #1 Drawdown - Iteration 2	
start level (ft)	8.85
end level (ft)	10.40
fall in level (ft)	1.55
volume of fall (ft ³)	30.43
volume of fall (gal)	227.66
duration (min)	2.00
net pump rate (gpm)	113.83
avg. influent rate (gpm)	9.79
total pump rate (gpm)	123.62

Pump #2 Drawdown - Iteration 3	
start level (ft)	10.30
end level (ft)	11.30
fall in level (ft)	1.00
volume of fall (ft ³)	19.63
volume of fall (gal)	146.88
duration (min)	1.67
net pump rate (gpm)	88.13
avg. influent rate (gpm)	9.79
total pump rate (gpm)	97.92

Pump #1 Drawdown	
total pump rate (gpm)	123.62
Pump #2 Drawdown	
total pump rate avg. (gpm)	101.59
std. dev. (gpm)	5.19
discrepancy (%)	5.11%
PS #2 Drawdown	
total pump rate avg. (gpm)	112.61
std. dev. (gpm)	13.24
discrepancy (%)	11.76%

Influent - Iteration 1	
start level (ft)	9.10
end level (ft)	8.85
rise in level (ft)	0.25
volume of rise (ft ³)	4.91
volume of rise (gal)	36.72
duration (min)	3.00
influent rate (gpm)	12.24

Influent - Iteration 2	
start level (ft)	10.40
end level (ft)	10.30
rise in level (ft)	0.10
volume of rise (ft ³)	1.96
volume of rise (gal)	14.69
duration (min)	2.00
influent rate (gpm)	7.34

Influent	
average (gpm)	9.79

PS #1 Drawdown Test Results

PS #1 Data	
diameter (ft)	6.00
surface area (ft ²)	28.27
conversion - 1 ft ³	7.48 gal

Pump #1 Drawdown - Iteration 1	
start level (ft)	5.25
end level (ft)	6.10
fall in level (ft)	0.85
volume of fall (ft ³)	24.03
volume of fall (gal)	179.78
duration (min)	1.00
net pump rate (gpm)	179.78
influent rate (gpm)	17.63
total pump rate (gpm)	197.41

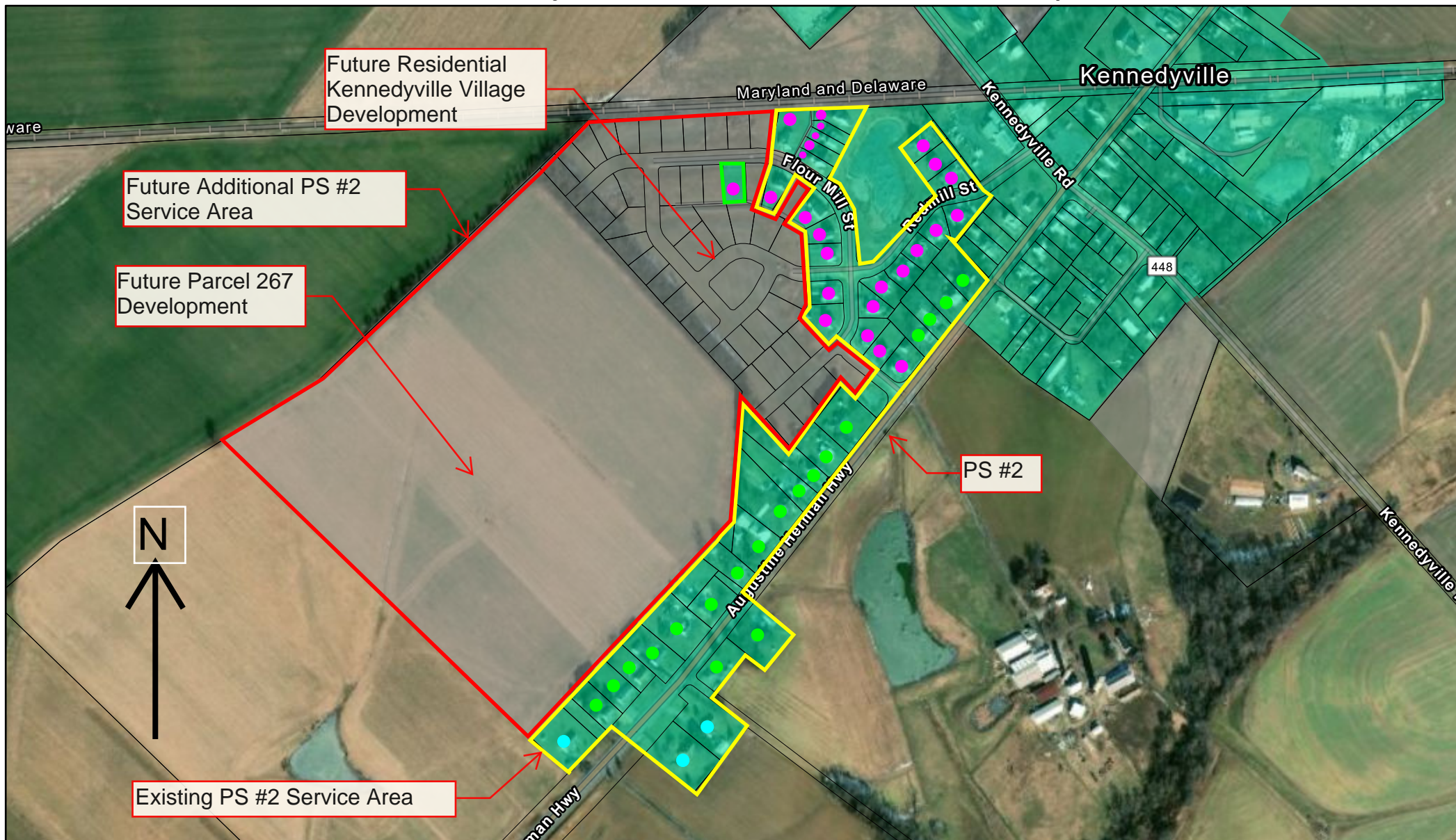
Influent - Iteration 1	
start level (ft)	6.10
end level (ft)	5.85
rise in level (ft)	0.25
volume of rise (ft ³)	7.07
volume of rise (gal)	52.88
duration (min)	3.00
influent rate (gpm)	17.63

Pump #2 Drawdown - Iteration 2	
start level (ft)	5.85
end level (ft)	6.75
fall in level (ft)	0.90
volume of fall (ft ³)	25.45
volume of fall (gal)	190.36
duration (min)	1.00
net pump rate (gpm)	190.36
influent rate (gpm)	17.63
total pump rate (gpm)	207.98

Pump #1 Drawdown	
total pump rate (gpm)	197.41
Pump #2 Drawdown	
total pump rate (gpm)	207.98
PS #1 Drawdown	
total pump rate avg. (gpm)	202.69
std. dev. (gpm)	7.48
discrepancy (%)	3.69%

APPENDIX I – PS #2 AND PS #3 SERVICE AREAS

Kent County Parcel Viewer - ArcGIS Web Map



5/22/2020, 10:49:59 AM

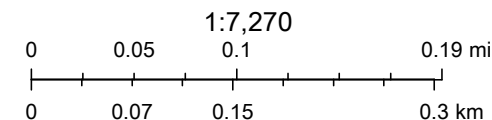
Parcels 2017

Sewer Service

Existing Sewer Service

Planned Sewer Service

- Kennedyville Village Connections
- Connections from 1976 Collection System Installation
- Connections after 1976 Collection System Installation

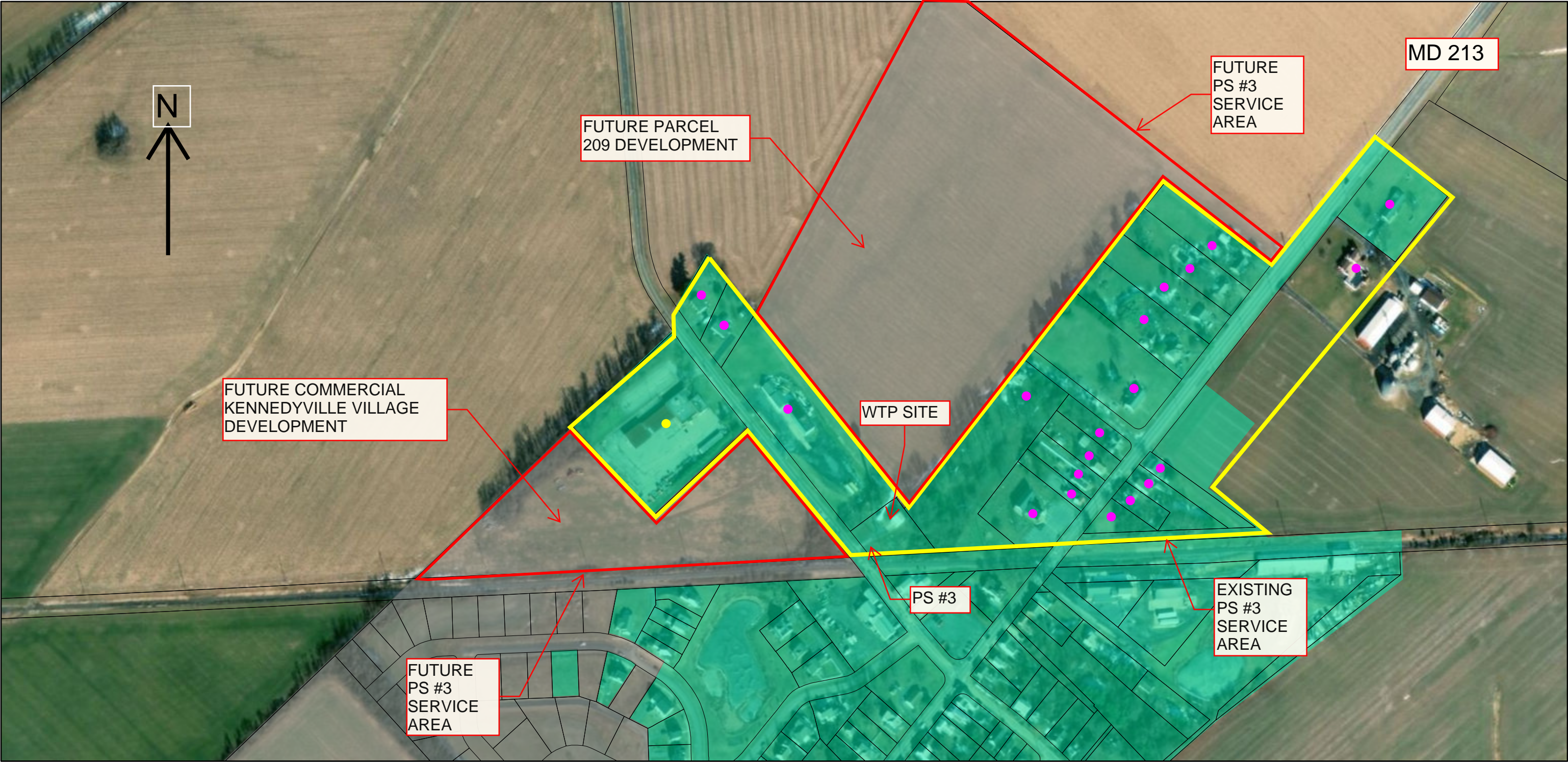


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Web AppBuilder for ArcGIS

USDA FSA | Esri Community Maps Contributors, VITA, BuildingFootprintUSA, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA |

Kent County Parcel Viewer - ArcGIS Web Map



5/22/2020, 5:02:31 PM

Parcels 2017

Sewer Service

Existing Sewer Service

Planned Sewer Service

Commercial Connections
Residential Connections

1:4,514
0 0.04 0.08 0.16 mi
0 0.05 0.1 0.2 km

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**APPENDIX J – EVALUATION OF THE EXISTING WATER SUPPLY WELLS SERVING THE
KENNEDYVILLE, MD WATER SYSTEM BY EDI**

**EVALUATION OF THE EXISTING
WATER SUPPLY WELLS SERVING THE
KENNEDYVILLE, MD WATER SYSTEM**

MARCH 2005

Prepared For:

**WRIGHT LAND DEVELOPMENT, LLC
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Prepared By:

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W.O. 3310

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- APPENDIX B- Well No. 2 Step-Rate Pumping Test Data
- APPENDIX C- Well No. 1 As-Built Well Information
- APPENDIX D- Well No. 1 As-Built Pump Information

1.0 INTRODUCTION

1.1 Background

In December 2004 Earth Data Incorporated (EDI) of Centreville, Maryland was hired by Wright Land Development, LLC (Wright) of Swarthmore, Pennsylvania, to provide hydrogeological and field support services to evaluate the condition of the two (2) existing water supply wells serving the Kennedyville, Water System located in Kennedyville, Kent County, Maryland. The purpose of the work was to (1) determine the present static water level and specific capacity of the wells; (2) evaluate the condition of the pumping equipment installed in the wells; (3) evaluate the available drawdown in each well and determine if the yield of the wells could be increased; and (4) determine the need for the wells to be redeveloped (if possible) and the need for the pumping equipment to be repaired and/or replaced.

The two wells that are the subject of this report are the exclusive source of water supply for the Kennedyville Water System. Accordingly, during the field work performed by Earth Data one well remained in service at all times. This objective was accomplished through close cooperation and coordination between Earth Data and representatives of the Kent County Department of Water & Wastewater Services.

The scope of services performed by Earth Data included the following items:

1. Obtained and reviewed available well and pump as-built and operational information on the existing wells and pumps.
2. Coordinated the timing of the project with representatives of the Kent County Department of Water & Wastewater Services so that one well would remain in service at all times during the field work.

3. Provided and installed test pumping equipment at each of the wells, including discharge hoses, orifice pipes and piezometers, gauges, fittings and other equipment and tools as needed.
4. Conducted step-rate pumping tests in each well.
5. Re-connected the pumps to the system discharge fittings and ran the pumps to verify proper operation.
6. Demobilized from the site.

This report provides a discussion of the results of the pumping tests and includes the following items:

1. A description of the field work performed.
2. Determination of selected well hydraulic parameters.
3. Results of the pumping tests.
4. Recommendations concerning the wells and pumps.

1.2 Site Location and Elevations

The two water supply wells that are the subject of this report are located near the intersection of Kennedyville Road and Highway 213 in Kennedyville, Kent County, Maryland. Well No. 1 is located at the site of the existing Kennedyville Water Treatment Plant. Well No. 2 is located immediately adjacent to the Kennedyville Fire Station. Based on the United States Geological Survey (USGS) Galena 7.5-minute quadrangle map the ground surface elevation at Well No. 1 is approximately +60 feet above mean sea level (msl) and the ground surface elevation at Well No. 2 is approximately +65 feet

msl. Unless specifically noted otherwise, all measurements reported in this text are from ground surface.

1.3 Existing Well Information

1.3.1 Well No. 1

Kennedyville Well No. 1 (Permit KE-920136) was constructed by A.C. Schultes of Maryland in September 1995. According to as-built information obtained from the Kent County Department of Water & Wastewater Services the well is drilled to a total depth of approximately 181 feet below land surface (bls). The well is completed in the Monmouth aquifer.

The well is constructed with 8-inch diameter steel well casing and stainless steel well screen. The casing is set to a depth of approximately 142 feet bls. The screened interval is reported to be 142 feet to 176 feet bls, with a 5 foot long sump below the screened section from 176 feet to 181 feet bls. The annular space adjacent to the 8-inch diameter well screen (0.030 slot size) is reported to include a Morie No. 1 gravel pack from 181 feet to 100 feet bls. The 8-inch diameter steel well casing is grouted in place from 100 feet bls to ground surface. The well is equipped with a ¾-inch diameter monitoring pipe extending from approximately 1 foot above ground surface to a depth of approximately 140 feet bls. The above-ground portion of the well is completed with an 8-inch diameter MAASS Midwest pitless unit.

Well No. 1 is equipped with a Goulds Model 55NLC submersible pump and 208 volt, 3 phase Franklin 10 horsepower motor. The design conditions of service for the pump are 70 gallons per minute (gpm) at 350 feet total dynamic head (TDH). The pump is set in the well on 133 feet of 4-inch diameter galvanized steel T & C pump column.

1.3.2 Well No. 2

According to published data Kennedyville Well No. 2 (Permit KE-670132) was constructed by Shore Well Drillers in April 1967. The well is reported to be drilled to a total depth of approximately 191 feet below land surface (bls). The well is completed in the Monmouth aquifer.

The well is constructed with 6-inch diameter steel well casing and 6-inch diameter well screen. The casing is set to a depth of approximately 164 feet bls. The screened interval is reported to be 164 feet to 184 feet bls, with a 7 foot long sump below the screened section from 184 feet to 191 feet bls. The above-ground portion of the well is completed with a 6-inch diameter pitless unit.

According to published data a pumping test was performed in the well following completion in 1967. The well was reportedly pumped at a rate of 90 gpm for a period of 24 hours. The pre-test static water level was reported to be 28 feet. The pumping level at the end of the 24-hour test was reported to be 95 feet.

Additional information concerning the pump and motor installed in Well No. 2 was not available for review as part of this project.

2.0 SUMMARY OF FIELD WORK

2.1 Well No. 1 Pumping Test

Earth Data performed the pumping test in Well No. 1 on February 9, 2005 utilizing the existing pumping equipment installed in the well. The internal spool piece was lifted out of the pitless unit and pump test discharge fittings were installed to facilitate pumping the well to waste above-ground. A step-rate pumping test was conducted in the well. Water pumped during the test was conveyed through a temporary discharge hose to a drainage ditch and holding pond located near the well. The purpose of the test was to document the performance characteristics of the submersible pump and determine selected well hydraulic parameters. Data from the step-rate pumping test in Well No. 1 can be found in Appendix A.

Prior to testing the static water level in Well No. 1 was measured at a depth of 12.21 feet. The pump had been turned off for approximately 10 hours prior to the start of the step-rate pumping test. Two steps were run as summarized in the following table:

Summary of Well No. 1 Step-Rate Pumping Test

Step Number	Test Duration (Minutes)	Pumping Rate (gpm)	Discharge Pressure (psi)	Maximum Drawdown (ft.)	Specific Capacity (gpm/ft.)
1	60	52.3	158	70.92	0.74
2	180	79.9	102	114.17	0.70

Upon completion of the pumping test the discharge fittings were removed and the internal spool piece was re-set in the pitless unit. The pump was then turned back into the system.

2.2 Well No. 2 Pumping Test

Earth Data performed the pumping test in Well No. 2 on February 10, 2005 utilizing the existing pumping equipment installed in the well. The internal spool piece was lifted out of the pitless unit and pump test discharge fittings were installed to facilitate pumping the well to waste above-ground. A step-rate pumping test was conducted in the well. Water pumped during the test was conveyed through a temporary discharge hose to a drainage ditch along the railroad tracks. The purpose of the test was to document the performance characteristics of the submersible pump and determine selected well hydraulic parameters. Data from the step-rate pumping test in Well No. 2 can be found in Appendix B.

Prior to testing the static water level in Well No. 2 was measured at a depth of 24.62 feet. The well pump had only been turned off a short time before the start of the step-rate pumping test. Therefore, the water level in the well was likely still recovering when the water level measurement was taken. Three steps were run as summarized in the following table:

Summary of Well No. 2 Step-Rate Pumping Test

Step Number	Test Duration (Minutes)	Pumping Rate (gpm)	Discharge Pressure (psi)	Maximum Drawdown (ft.)	Specific Capacity (gpm/ft.)
1	60	41.4	114	30.18	1.37
2	60	60.4	102	45.51	1.33
3	120	101.9	68	80	1.27

Upon completion of the pumping test the discharge fittings were removed and the internal spool piece was re-set in the pitless unit. The pump was then turned back into the system.

3.0 ANALYSIS OF PUMPING TEST DATA

Data from the pumping tests were analyzed by Earth Data utilizing standard methods in order to determine aquifer transmissivity (T) and well specific capacity. The well transmissivity and specific capacity results were then compared to published values for the Monmouth aquifer in the vicinity of Kennedyville. Results of the pumping test analysis were used to make a preliminary determination if it is practical to increase the capacity of the existing wells.

3.1 Aquifer Characteristics

Specific capacity is a measure of a well's yield with respect to drawdown. The specific capacity of a well is defined as the rate of discharge of water from a well per unit drawdown, often expressed in gpm/ft. Specific capacity is not a constant; it can change with discharge rate, changes in well efficiency, and the duration of pumping.

The transmissivity (T) of an aquifer is an indication of the capability of the entire thickness of the aquifer to transmit water. Transmissivity is defined as the rate of flow through a vertical section of the aquifer that is one foot in width and is the saturated thickness of the aquifer in height under a hydraulic gradient of one. Generally, transmissivity is expressed in terms of gallons per day per foot (gpd/ft) and is calculated using the following (Theis recovery method) equation:

$$T = \frac{264Q}{\Delta s'}$$

where Q = the pumping rate during the constant rate drawdown portion of the test, and $\Delta s'$ = the slope of a straight line portion (change in drawdown per log cycle) of the semi-logarithmic plot of either drawdown (or depth to water) vs. time for the pumped well, or residual-drawdown vs. the t/t' ratio.

If the aquifer generally conforms to assumptions used in the Theis non-equilibrium equation (1935) (e.g., uniform character and thickness, no recharge/leakage,

infinite aerial extent, distance of well to drawdown measurement is small, well fully penetrates the aquifer or appropriate time interval is analyzed), most of the points should fall on a straight line on the semi-logarithmic graph. Early time data of the test is likely to be affected by pumping rate adjustments and possibly partial penetration. Effects of partial penetration typically vary early during pumping and become constant with time.

If no aquifer boundary conditions or delayed yield phenomenon occur during a pumping test the most appropriate method of determining the transmissivity of the aquifer in which the well is screened is to analyze recovery data using a residual-drawdown plot.

Residual drawdown(s) is defined as the difference between the static water level and the water level at a given time after the pumping has ceased. Time/time' (t/t') is the ratio of two time intervals; time (t) is measured from the initiation of pumping to the instant a water-level measurement is taken and time' (t') is measured from the time pumping stops to the instant the same water level measurement is taken.

For this report transmissivity was determined from a semi-logarithmic plot of residual drawdown vs. t/t' in the pumped well.

3.2. Well Test Results

3.2.1 Well No. 1

For Well No. 1 a 4-hour step-rate pumping test (two steps) was performed followed by a 2-hour recovery period. The pre-test static water level in the well was measured at 12.21 feet below datum. For the first step the pumping rate was 52.3 gpm. The corresponding discharge pressure at the first pumping rate was 157 psi. The maximum observed drawdown in the well at the end of the first step (60 minutes of pumping) was 70.92 feet. The calculated specific capacity in Well No. 1 after 60 minutes of pumping is 0.74 gpm/ft.

After 60 minutes the pumping rate was increased. The pumping rate for the second step was 79.9 gpm. The corresponding discharge pressure during the second step was 105 psi. The maximum observed drawdown in the well at the end of the second step (180 minutes of pumping) was 114.17 feet. The calculated specific capacity in Well No. 1 at the end of the second step is 0.70 gpm/ft.

Upon completion of the second step (four hours total pumping time) the pump was turned off and recovery water level readings were collected. After two hours the water level in Well No. 1 had recovered to within 5.66 feet of the pre-test static water level.

3.2.2 Well No. 2

For Well No. 2 a 4-hour step-rate pumping test (three steps) was performed followed by a 2-hour recovery period. The pre-test static water level in the well was measured at 24.62 feet below datum. NOTE: The well pump had only been turned off a short time before the start of the pumping test. Therefore, the water level in the well was likely still recovering when the water level measurement was taken. For the first step the pumping rate was 41.4 gpm. The corresponding discharge pressure at the first pumping rate was approximately 115 psi. The maximum observed drawdown in the well at the end of the first step (60 minutes of pumping) was 30.18 feet. The calculated specific capacity in Well No. 2 after 60 minutes of pumping is 1.37 gpm/ft.

After 60 minutes the pumping rate was increased. The pumping rate for the second step was 60.4 gpm. The corresponding discharge pressure during the second step was approximately 102 psi. The maximum observed drawdown in the well at the end of the second step (60 minutes of pumping) was 45.51 feet. The calculated specific capacity in Well No. 2 at the end of the second step is 1.33 gpm/ft

At the end of the second step the pumping rate was increased. The pumping rate for the third step was 101.9 gpm. The corresponding discharge pressure during the third

step was approximately 69 psi. The maximum observed drawdown in the well at the end of the third step (120 minutes of pumping) was 80.0 feet. The calculated specific capacity in Well No. 2 at the end of the third step is 1.27 gpm/ft.

Upon completion of the third step (four hours total pumping time) the pump was turned off and recovery water level readings were collected. After two hours the water level in Well No. 2 had recovered to within 4.53 feet of the pre-test static water level.

The specific capacity and transmissivity values for Wells No. 1 and No. 2 were determined from the pumping tests as described in Section 3.1 above and are summarized in the following table:

Well No.	Average Specific Capacity (gpm/ft)	Transmissivity (gpd/ft.)
1	0.72	1,363
2	1.32	2,104

The semi-log plots of residual drawdown vs. t/t' used to calculate T values for Wells No. 1 and 2 can be found in Appendices A and B, respectively.

3.3 Well Efficiency

The efficiency of a well is a measure of the degree with which it can transmit water through its screen and gravel pack in relation to the ability of the aquifer to transmit water. Efficiency is determined by comparing the actual drawdown in a well to the theoretical drawdown if it were 100 percent efficient. The theoretical drawdown of a well is typically calculated at a distance equal to the inside diameter of the well screen utilizing the Theis non-equilibrium equation and the transmissivity value and storage coefficient as determined from the pumping tests and/or published data.

Using this analysis the theoretical drawdown in the two wells at Kennedyville was calculated and compared with the actual drawdown in each well. The maximum drawdown readings taken at the end of the last step were used for comparison purposes. The calculated efficiency of each well is therefore:

Well No.	Theoretical Drawdown (ft.)	Actual Drawdown (ft.)	Well Efficiency (%)
No. 1	88.3	114.17	77.3
No. 2	78.4	80.0	98.0

4.0 DISCUSSION OF RESULTS

4.1 Comparison of Test Results With Published Data

The previously published transmissivity value for the Monmouth aquifer in the vicinity of Kennedyville is reported to be approximately 2,244 gpd/ft. Based on the analysis of the pumping test data it appears that the calculated transmissivity at Well No. 1 (1,363 gpd/ft) is low. The calculated transmissivity at Well No. 2 (2,104 gpd/ft) compares favorably with published values for the Monmouth aquifer in the vicinity of Kennedyville.

4.2 Groundwater Appropriation Permit Considerations

The Kent County Department of Water & Wastewater Services presently operates the Kennedyville system wells under authority of State of Maryland groundwater appropriation permit (GAP) number KE67G008(05). The permit authorizes the withdrawal of an annual average of 21,000 gallons per day (gpd) and 33,000 gpd during the month of maximum use from two wells in the Monmouth aquifer. The existing permit expires in August 2007.

4.3 Available Drawdown

The top of the 8-inch diameter well screen in Well No. 1 is located at a depth of approximately 142 feet bls. Assuming a specific capacity of 0.7 gpm/ft., the projected drawdown in Well No. 1 at a pumping rate of 70 gpm is approximately 100 feet. The static water level in Well No. 1 is approximately 12.21 feet, resulting in a pumping level of approximately 112 feet bls. In order to maintain the minimum recommended pump submergence of 30 feet below the pumping level and keep the pump and motor above the top of the well screen the design pumping rate for Well No. 1 should not be increased above the current rate of 70 gpm.

The top of the 6-inch diameter well screen in Well No. 2 is located at a depth of approximately 164 feet bls. Assuming a specific capacity of 1.2 gpm/ft., the projected drawdown in Well No. 2 at a pumping rate of 125 gpm is approximately 100 feet. The static water level in Well No. 2 is approximately 24.62 feet, resulting in a pumping level of approximately 124 feet. In order to maintain the minimum recommended pump submergence below the projected pumping level and keep the pump and motor above the top of the well screen, the maximum recommended pumping rate for Well No. 2 is 125 gpm.

4.4 Pump Performance

Data points from the step-rate pumping test were plotted on the manufacturer's curve for the Goulds Model 55 NLC submersible pump installed in Well No.1 to compare the current performance of the pump with the design conditions and are summarized on the following table:

Pumping Rate (gpm)	Field Total Dynamic Head (ft.)	Pump Curve Total Dynamic Head (ft.)
52	446	425
80	362	350

The field data points all plot above the manufacturer's performance curve data points indicating that the pumping equipment in Well No. 1 is performing at or above the original design conditions of service.

Information concerning the pump and motor installed in Well No. 2 was not available for review as part of this project.

The present design of the water treatment plant has raw water from the wells entering a chlorine contact chamber inside the treatment plant, which in turn gravity feeds a sand filter. Once the water passes through the filter it is conveyed by gravity to an on-

site retention tank which acts as the gravity-fed supply source for the two finished water booster pumps that send water to the elevated storage tank at the site.

As such, the above-ground discharge head that the Kennedyville well pumps must operate against is the total of the elevation head between the well pitless units and the inlet to the chlorine contact chamber inside the treatment plant and the head loss in the raw water transmission piping between the wells and the treatment plant.

The elevation head from the treatment plant floor to the chlorine contact chamber inlet is approximately 18 feet. Determining the equivalent head in the transmission piping between the wells and the treatment plant is beyond the scope of Earth Data's involvement in this project. However, based on our on-site observations and experience gained in similar investigations it would appear that a maximum assumed above-ground well head pressure of 58 feet (25 psi) would be adequate to convey raw water from the wells to the chlorine contact chamber inlet.

During the recent pumping tests the above-ground discharge pressure at Well No. 1 was approximately 102 psi during Step 2 (79.9 gpm). Similarly, the above ground pressure at Well No. 2 during step No. 3 (101.9 gpm) was approximately 69 psi.

4.5 Operational Considerations

Information provided to EDI by Wright Land Development discusses the potential future addition of 90 EDUs to the Kennedyville system. The data utilizes a maximum future demand peaking factor of 2.5 times the annual average future demand. These additions result in a potential average future water supply demand of 49,500 gpd and a potential maximum water supply demand of 123,750 gpd.

Both Well No. 1 (70 gpm) and Well No. 2 (125 gpm) can satisfy the potential average future water supply demand in a reasonable daily run time. However, only Well

No. 2 upgraded to produce 125 gpm, will be able to meet the potential maximum future water supply demand as indicated in the following chart:

Well No.	Design Pumping Rate (gpm)	Total Daily Production (gpd)	Average Future Demand (gpd)	Percent Run Time	Peaking Factor	Max. Future Demand (gpd)	Percent Run Time
1	70	100,800	49,500	49.2	2.5	123,750	n/a
2	125	180,000	49,500	27.5	2.5	123,750	68.8

Previous pumping records for the year 2001 compiled by McCrone, Inc. reported an annual average raw water production of 17,484 gpd and 36,871 gpd during the month of maximum use to serve the 108 existing EDU's in Kennedyville. The potential future addition of 90 EDU's will increase the total number of EDU's to be served by the system to 198, slightly less than twice the number of EDU's presently being served.

Doubling the 2001 annual average and month of maximum use figures to account for the approximate increase in the proposed number of EDU's results in revised raw water production values of 34,968 gpd and 73,742 gpd, respectively. These values are less than those projected by WLD as indicated above and more in line with a peaking factor of 2.0 rather than 2.5. If a peaking factor of 2.0 is accurate and representative of actual usage at Kennedyville then both Well No. 1 and Well No. 2 would be able to meet the potential maximum future water supply demand of 99,000 gpd.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

1. The pumping tests in the existing water supply Wells No. 1 and No. 2 serving the Kennedyville Water System have been completed in general accordance with the proposed scope of work.
2. Well No. 1 (KE-920136) is constructed with 8-inch diameter steel well casing and stainless steel well screen. The reported screen interval is from 142 feet to 176 feet, and the total depth of the well is 181 feet.
3. Well No. 2 (KE-670132) is constructed with 6-inch diameter steel well casing and 6-inch diameter well screen. The reported screen interval is from 164 feet to 184 feet, and the total depth of the well is 191 feet.
4. The pumping equipment installed in Well No. 1 includes the following component items: 133 feet of 4-inch diameter galvanized T & C column pipe; Goulds Model 55NLC submersible well pump; and a 10 horsepower, 208 volt, 3 phase Franklin electric motor. The design conditions of service for Well No. 1 are 70 gpm at 350 feet TDH.
5. Information concerning the pumping equipment installed in Well No. 2 was not available for review as part of this project.
6. Based on the results of the step-rate pumping test, the specific capacity in Well No. 1 is calculated to be approximately 0.72 gpm/ft.
7. Based on the results of the step-rate pumping test, the specific capacity in Well No. 2 is calculated to be approximately 1.32 gpm/ft.

8. The Goulds Model 55NLC submersible pump installed in Well No. 1 is designed to deliver 70 gpm at a total dynamic head of approximately 350 feet. The pump is over-designed for this application. At the recommended pumping rate of 70 gpm the calculated TDH requirement for this application, based on an above-ground pressure of 25 psi, is approximately 172 feet.
9. The submersible pump installed in Well No. 2 is over-designed for this application. The maximum assumed well head discharge pressure is approximately 25 psi. During the recent pumping test the pump was producing approximately 69 psi at a pumping rate of approximately 101.9 gpm.
10. Based on the present static water level in the well, well specific capacity, and depth to the top of the well screen, the maximum recommended pumping rate for Well No. 1 is 70 gpm.
11. Based on the present static water level in the well, well specific capacity and the depth to the top of the well screen, the capacity of Well No. 2 may be able to be increased to a maximum rate of 125 gpm. However, the age, construction features and materials of construction of this well may be such that it is not practical or feasible to attempt to increase the pumping rate.
12. Both Well No. 1 (70 gpm) and Well No. 2 (125 gpm) can satisfy the potential average future supply demand of 49,500 gpd as defined by Wright Land Development. However, only Well No. 2, upgraded to produce 125 gpm, will be able to meet the potential maximum future water supply demand of 123,750 gpd.

5.2 Recommendations

In order to maintain or enhance the performance of Wells No. 1 and No. 2 Earth Data recommends the following actions:

Well No. 1:

1. Operate Well No. 1 at a maximum pumping capacity of 70 gpm.
2. Monitor and record the static water level, pumping water level, pumping rate and discharge pressure of the pump on a regular basis. This information can be used to determine the need for future well redevelopment and/or replacement.
3. Perform regular follow-up well and pump performance testing to document changes in the efficiency of the well and operational characteristics of the pumping equipment.

Well No. 2

4. Pull the pump from Well No. 2 and perform a downhole video survey in the well to document the as-built characteristics and condition of the well casing and screen.
5. Based on the result of the downhole video survey, if practical, redevelop the well to improve the efficiency and yield of the well.
6. Conduct a long-term constant rate pumping test in Well No. 2 at 125 gpm to verify the well hydraulic parameters at the increased pumping rate.
7. When the pump is set back in the well, install a minimum 1-inch diameter continuous poly tubing with the column pipe down to the top of the submersible pump to facilitate the collection of manual water level measurements with an electric well probe.

8. Monitor and record the static water level, pumping water level, pumping rate and discharge pressure of the pump on a regular basis. This information can be used to determine the need for future well redevelopment and/or replacement.
9. Perform regular follow-up well and pump performance testing to document changes in the efficiency of the well and operational characteristics of the pumping equipment.

APPENDIX A
WELL NO. 1 STEP-RATE PUMPING TEST DATA

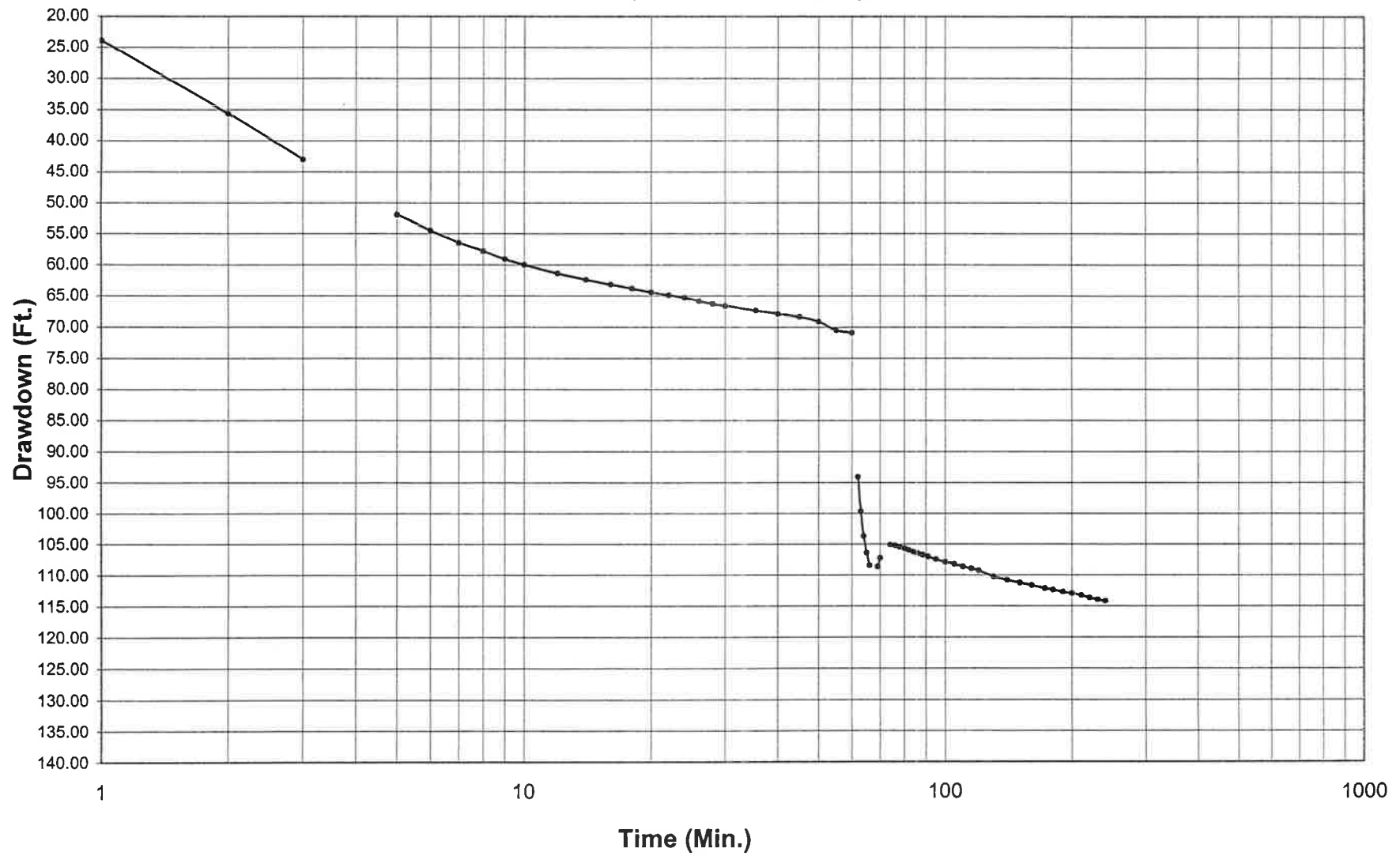
Kennedyville Water System
Well No. 1 Step-Rate Pumping Test
February 9, 2005

Elapsed Time (min.)	Depth to Water (ft.)	Pumping Rate (gpm)	Discharge Pressure (psi)	Drawdown (ft.)	Specific Capacity (gpm/ft)
0	12.21	0		0.00	#DIV/0!
1	36.10	52.3	180	23.89	2.19
2	47.90	52.3	172	35.69	1.47
3	55.23	52.3		43.02	1.22
4		52.3			#DIV/0!
5	64.12	52.3	163	51.91	1.01
6	66.73	52.3		54.52	0.96
7	68.66	52.3		56.45	0.93
8	70.02	52.3		57.81	0.90
9	71.29	52.3	162	59.08	0.89
10	72.19	52.3		59.98	0.87
12	73.57	52.3		61.36	0.85
14	74.58	52.3		62.37	0.84
16	75.38	52.3	159	63.17	0.83
18	76.01	52.3		63.80	0.82
20	76.61	52.3		64.40	0.81
22	77.08	52.3		64.87	0.81
24	77.47	52.3		65.26	0.80
26	78.01	52.3		65.80	0.79
28	78.44	52.3	158	66.23	0.79
30	78.78	52.3	158	66.57	0.79
35.5	79.57	52.3		67.36	0.78
40	80.07	52.3		67.86	0.77
45	80.57	52.3	157	68.36	0.77
50	81.32	52.3		69.11	0.76
55	82.73	52.3		70.52	0.74
60	83.13	52.3	157	70.92	0.74
61		89.3	100		#DIV/0!
62	106.30	89.3	94	94.09	0.95
63	111.85	89.3		99.64	0.90
64	115.87	89.3	91	103.66	0.86
65	118.65	89.3	88	106.44	0.84
66	120.67	89.3		108.46	0.82
67		89.3			#DIV/0!
68		79.9	104		#DIV/0!
69	120.85	79.9		108.64	0.74
70	119.43	79.9		107.22	0.75
72		79.9			#DIV/0!
74	117.33	79.9	105	105.12	0.76
76	117.48	79.9		105.27	0.76
78	117.71	79.9		105.50	0.76
80.25	117.94	79.9		105.73	0.76
82	118.20	79.9		105.99	0.75
84	118.48	79.9		106.27	0.75
86	118.70	79.9		106.49	0.75
88.25	118.93	79.9		106.72	0.75
91	119.24	79.9	105	107.03	0.75
95	119.64	79.9		107.43	0.74

Kennedyville Water System
Well No. 1 Step-Rate Pumping Test
February 9, 2005

Elapsed Time (min.)	Depth to Water (ft.)	Pumping Rate (gpm)	Discharge Pressure (psi)	Drawdown (ft.)	Specific Capacity (gpm/ft)
100	120.09	79.9		107.88	0.74
105	120.48	79.9		108.27	0.74
110	120.86	79.9		108.65	0.74
115.3	121.21	79.9		109.00	0.73
120	121.46	79.9	104	109.25	0.73
130	122.44	79.9		110.23	0.72
140	122.99	79.9		110.78	0.72
150	123.43	79.9		111.22	0.72
160	123.85	79.9	102	111.64	0.72
172	124.31	79.9	102	112.10	0.71
180	124.57	79.9		112.36	0.71
190	124.90	79.9		112.69	0.71
200	125.18	79.9		112.97	0.71
210	125.47	79.9	102	113.26	0.71
220	125.86	79.9		113.65	0.70
230	126.13	79.9		113.92	0.70
240	126.38	79.9	102	114.17	0.70

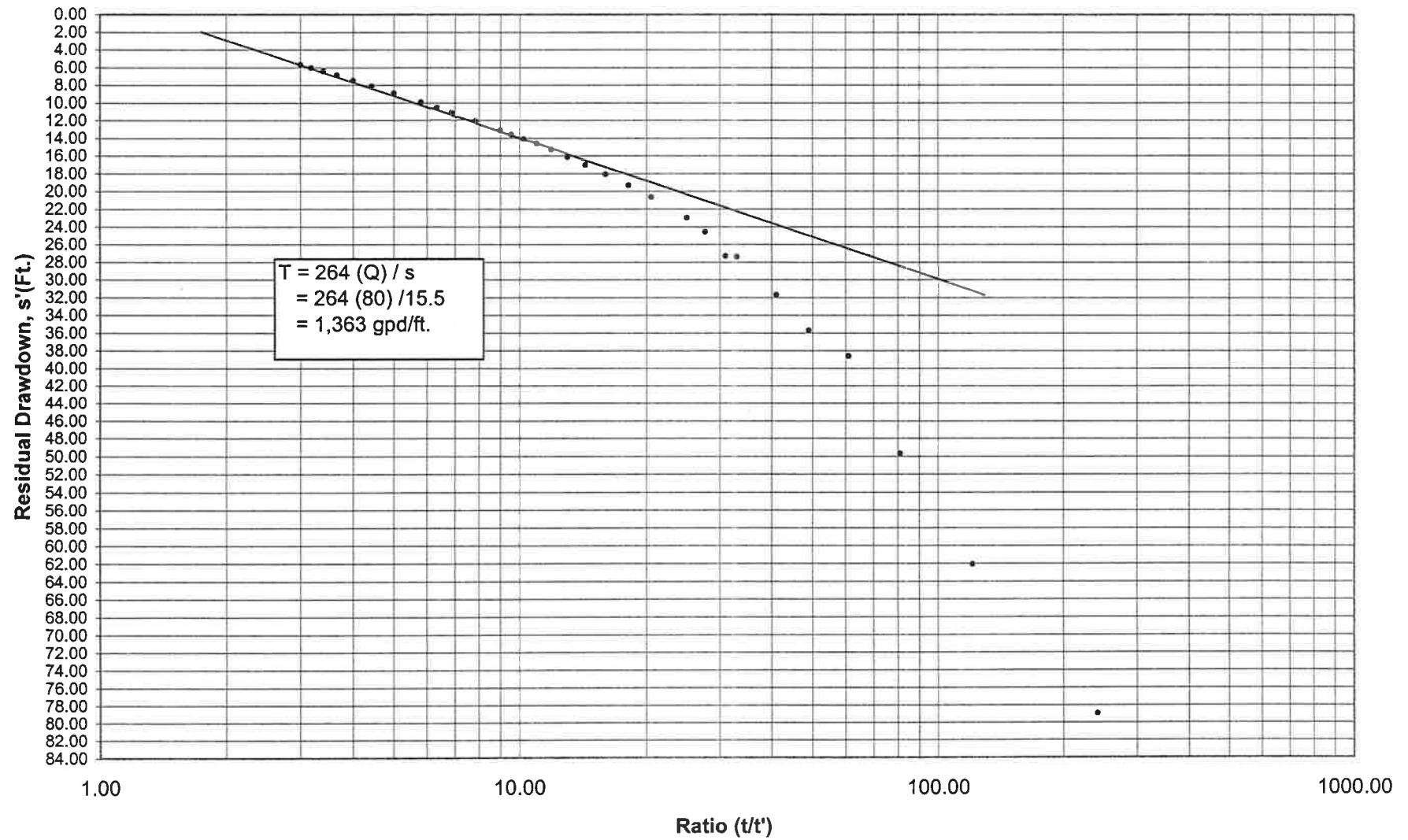
Kennedyville Water System Well No. 1
February 09, 2005 Pumping Test



Kennedyville Water System Well No. 1
February 9, 2005 Residual Drawdown

Time Since Pump Started (t)	Time Since Pump Stopped (t')	Ratio (t/t')	Depth to Water (ft.)	Residual Drawdown (s')
240	0		126.38	114.17
241	1	241.00	91.10	78.89
242	2	121.00	74.30	62.09
243	3	81.00	61.90	49.69
244	4	61.00	50.80	38.59
245	5	49.00	47.90	35.69
246	6	41.00	43.90	31.69
247.5	7.5	33.00	39.60	27.39
248	8	31.00	39.52	27.31
249	9	27.67	36.75	24.54
250	10	25.00	35.25	23.04
252.3	12.3	20.51	32.85	20.64
254	14	18.14	31.51	19.30
256	16	16.00	30.26	18.05
258	18	14.33	29.21	17.00
260	20	13.00	28.33	16.12
262	22	11.91	27.58	15.37
264	24	11.00	26.90	14.69
266	26	10.23	26.31	14.10
268	28	9.57	25.81	13.60
270	30	9.00	25.34	13.13
275	35	7.86	24.32	12.11
280.75	40.75	6.89	23.35	11.14
285	45	6.33	22.74	10.53
290	50	5.80	22.14	9.93
300	60	5.00	21.15	8.94
310	70	4.43	20.32	8.11
320	80	4.00	19.69	7.48
330	90	3.67	19.03	6.82
340	100	3.40	18.63	6.42
350	110	3.18	18.26	6.05
360	120	3.00	17.87	5.66

Kennedyville Water System Well No. 1
February 9, 2005 Residual Drawdown



PUMPING TEST DATA

Project: KENNEDYVILLE

This Well is WELL #1

W.O.: 3310

Please Circle

Description of
measuring point: T.O.C.
165' A.G.S.pumped well

or observation well

drawdown

or recovery

The Pumped Well is WELL #1

* STEP #1

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
2/9/05	10:05 Am		12.21							
		1	36.10	12	52.3		180			
		2	47.90				172			
		3	55.23							
		4	—			Y↑				
		5	64.12	12	52.3		163			
		6	66.73							
		7	68.66			Y↑				
		8	70.02							
		9	71.29	12	52.3		162			
		10	72.19							
		12	73.57							
		14	74.58							
		16	75.38	12	52.3		159			
		18	76.01							
		20	76.61							
		22	77.08							
		24	77.47							
		26	78.01				158			
		28	78.44							
		30	78.78				158			
		35.50	79.57							
		40	80.07	12	52.3					
		45	80.57			Y↑	157			
		50	81.32							
		55	82.73							
	11:05 Am	60	83.13	12	52.3		157			

PUMPING TEST DATA

Project: KENNEDYVILLE

This Well is #1

W.O.: 3310

Please Circle

Description of
measuring point: T.O.C.pumped well

or observation well

drawdown

or recovery

The Pumped Well is #1

STEP #2

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
2/9/05	11:05am	60	83.13							
	11:06	61	-	35	89.3		100			
		62	106.30			4+	94			
		63	111.85			4+				
		64	115.87				91			
		65	118.65			4+	88			
		66	120.67	35	89.3					
		67	-	28	79.9				NAWF BACK	
		68	-	28	79.9		109		DUE TO PUMP SETTING ~ 130	
		69	120.85						TOO MUCH DRAWDOWN	
		70	119.43							
		72	-							
		74	117.33	28	79.9		105			
		76	117.48							
		78	117.71							
		80.25	117.94							
		82	118.20							
		84	118.48							
		86	118.70							
		88.25	118.93							
		91.0	119.24	28	79.9		105			
		95	119.64							
		100	120.09							
		105	120.48						* AMPS 34.34.34	
		110	120.86							
		115.30	121.21							
	12:05pm	120	121.46	28	79.9	4+	104			
		130	122.44							
		140	122.99							
		150	123.43							
	12:45pm	160	123.85	28	79.9		102			

PUMPING TEST DATA

Project: Kennedyville

This Well is #1

W.O.: 3310

Please Circle

Description of measuring point: *TOC*

pumped well

or observation well

(drawdown

or recovery

Step #2 cont'd

The Pumped Well is #1

[illegible]

PUMPING TEST DATA

Project: Kennedyville

This Well is #1

W.O.: 3310

Please Circle

Description of measuring point: TOC

pumped well

or

observation well

drawdown

or

recovery

The Pumped Well is #1

SWL-12.21'

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
2/9/05	2:05pm	0	126.38							
		1	91.10							
		2	74.30							
		3	61.90							
		4	50.80							
		5	47.90							
		6	43.96							
		7.0	39.60							
		8	39.52							
		9	36.75							
		10	35.25							
		12.30	32.85							
		14	31.51							
		16	30.26							
		18	29.21							
		20	28.33							
		22	27.58							
		24	26.90							
		26	26.31							
		28	25.81							
		30	25.34							
		35	24.32							
		40.25	23.35							
		45	22.74							
		50	22.14							
	3:05pm	60	21.15						21.01e5567	
		70	20.32							
		80	19.69							
		90	19.03							
		100	18.63							
		110	18.26							
		120	17.87							

APPENDIX B
WELL NO. 2 STEP-RATE PUMPING TEST DATA

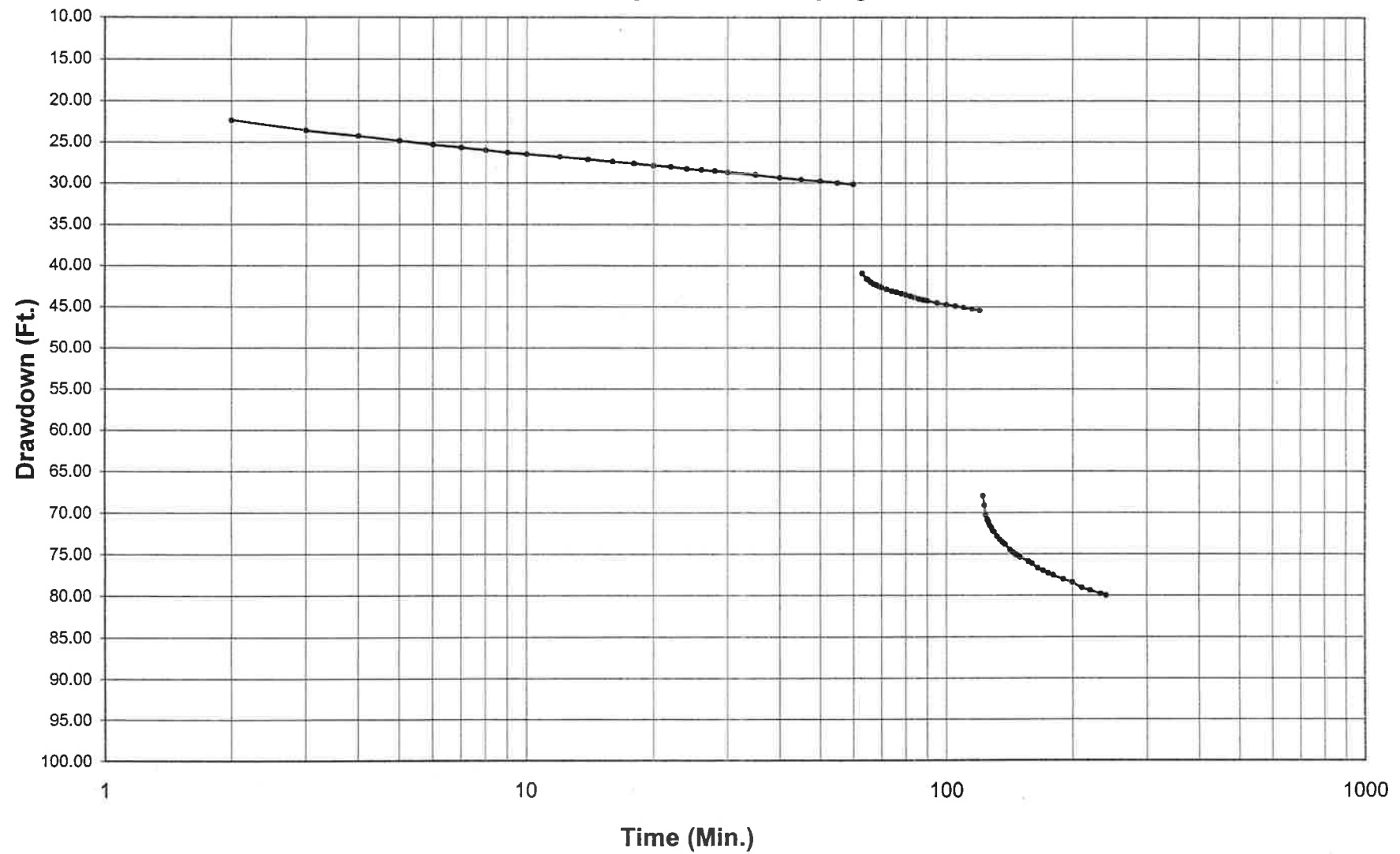
Kennedyville Water System
Well No. 2 Step-Rate Pumping Test
February 10, 2005

Elapsed Time (min.)	Depth to Water (ft.)	Pumping Rate (gpm)	Discharge Pressure (psi)	Drawdown (ft.)	Specific Capacity (gpm/ft)
0	24.62	0		0.00	#DIV/0!
1		41.4	120		#DIV/0!
2	46.98	41.4	118	22.36	1.85
3	48.22	41.4		23.60	1.75
4	48.90	41.4	117	24.28	1.71
5	49.48	41.4		24.86	1.67
6	49.96	41.4	117	25.34	1.63
7	50.30	41.4		25.68	1.61
8	50.65	41.4		26.03	1.59
9	50.90	41.4		26.28	1.58
10	51.11	41.4	116	26.49	1.56
12	51.47	41.4		26.85	1.54
14	51.80	41.4		27.18	1.52
16	52.07	41.4		27.45	1.51
18	52.31	41.4		27.69	1.50
20	52.51	41.4		27.89	1.48
22	52.72	41.4	115	28.10	1.47
24	52.94	41.4		28.32	1.46
26	53.06	41.4		28.44	1.46
28	53.20	41.4		28.58	1.45
30	53.33	41.4		28.71	1.44
35	53.66	41.4		29.04	1.43
40	53.97	41.4		29.35	1.41
45	54.22	41.4		29.60	1.40
50	54.41	41.4	114	29.79	1.39
55	54.62	41.4		30.00	1.38
60	54.80	41.4		30.18	1.37
61		60.4	90		#DIV/0!
62		60.4	105		#DIV/0!
63	65.58	60.4		40.96	1.47
64.5	66.24	60.4		41.62	1.45
65	66.34	60.4	103	41.72	1.45
66	66.66	60.4		42.04	1.44
67	66.86	60.4		42.24	1.43
68	66.98	60.4		42.36	1.43
69	67.17	60.4		42.55	1.42
70	67.30	60.4		42.68	1.42
72	67.52	60.4	102	42.90	1.41
74	67.76	60.4		43.14	1.40
76	67.90	60.4		43.28	1.40
78	68.05	60.4		43.43	1.39
80	68.21	60.4		43.59	1.39
82	68.36	60.4	102	43.74	1.38
84	68.51	60.4		43.89	1.38
86	68.69	60.4		44.07	1.37
88	68.81	60.4		44.19	1.37
90	68.91	60.4		44.29	1.36
95	69.17	60.4		44.55	1.36

Kennedyville Water System
Well No. 2 Step-Rate Pumping Test
February 10, 2005

Elapsed Time (min.)	Depth to Water (ft.)	Pumping Rate (gpm)	Discharge Pressure (psi)	Drawdown (ft.)	Specific Capacity (gpm/ft)
100	69.40	60.4		44.78	1.35
105	69.55	60.4	101	44.93	1.34
110	69.76	60.4		45.14	1.34
115	69.95	60.4		45.33	1.33
120	70.13	60.4		45.51	1.33
121		101.9			#DIV/0!
122	92.62	101.9	75	68.00	1.50
123	93.75	101.9		69.13	1.47
124	94.85	101.9	72	70.23	1.45
125	95.43	101.9		70.81	1.44
126	95.80	101.9		71.18	1.43
127	96.14	101.9		71.52	1.42
128	96.40	101.9	72	71.78	1.42
129	96.80	101.9		72.18	1.41
130	96.90	101.9		72.28	1.41
132	97.45	101.9		72.83	1.40
134	97.85	101.9		73.23	1.39
136	98.18	101.9		73.56	1.39
138	98.43	101.9		73.81	1.38
142	99.15	101.9	70	74.53	1.37
144	99.41	101.9		74.79	1.36
146	99.62	101.9		75.00	1.36
148	99.80	101.9		75.18	1.36
150	99.98	101.9		75.36	1.35
157	100.51	101.9		75.89	1.34
160	100.75	101.9	69	76.13	1.34
165	101.31	101.9		76.69	1.33
170	101.59	101.9		76.97	1.32
175	101.90	101.9		77.28	1.32
180	102.14	101.9	69	77.52	1.31
190	102.63	101.9		78.01	1.31
200	103.03	101.9	68	78.41	1.30
210	103.68	101.9		79.06	1.29
220	104.00	101.9		79.38	1.28
233	104.43	101.9	68	79.81	1.28
240	104.62	101.9		80.00	1.27

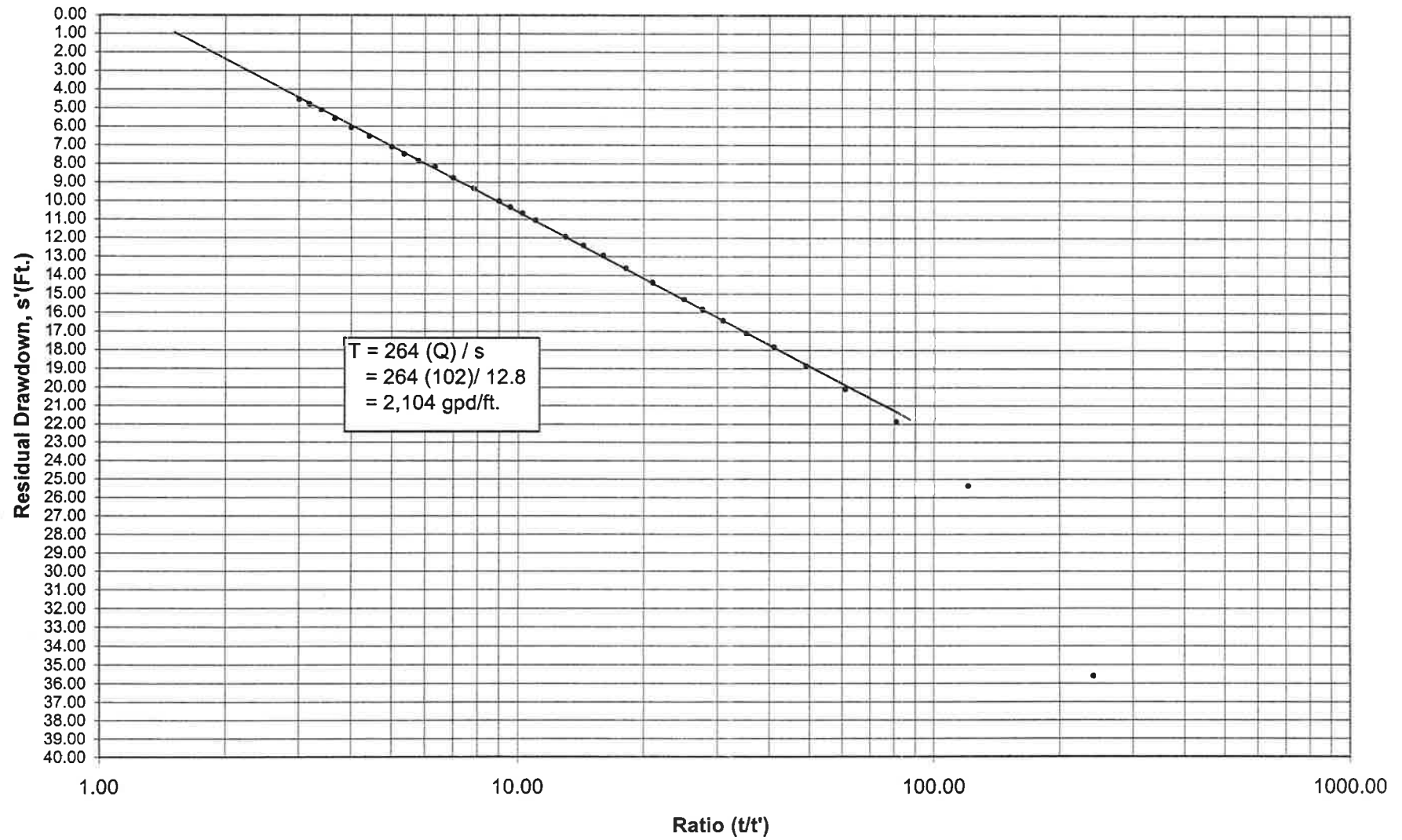
Kennedyville Water System Well No. 2
February 10, 2005 Pumping Test



Kennedyville Water System Well No. 2
February 10, 2005 Residual Drawdown

Time Since Pump Started (t)	Time Since Pump Stopped (t')	Ratio (t/t')	Depth to Water (ft.)	Residual Drawdown (s')
240	0		104.62	80.00
241	1	241.00	60.20	35.58
242	2	121.00	50.00	25.38
243	3	81.00	46.50	21.88
244	4	61.00	44.72	20.10
245	5	49.00	43.47	18.85
246	6	41.00	42.45	17.83
247	7	35.29	41.72	17.10
248	8	31.00	41.05	16.43
249	9	27.67	40.45	15.83
250	10	25.00	39.91	15.29
252	12	21.00	39.01	14.39
254	14	18.14	38.26	13.64
256	16	16.00	37.56	12.94
258	18	14.33	37.02	12.40
260	20	13.00	36.57	11.95
264	24	11.00	35.68	11.06
266	26	10.23	35.30	10.68
268	28	9.57	34.97	10.35
270	30	9.00	34.65	10.03
275	35	7.86	33.99	9.37
280	40	7.00	33.40	8.78
285	45	6.33	32.79	8.17
290	50	5.80	32.48	7.86
295	55	5.36	32.12	7.50
300	60	5.00	31.74	7.12
310	70	4.43	31.17	6.55
320	80	4.00	30.68	6.06
330	90	3.67	30.21	5.59
340	100	3.40	29.74	5.12
350	110	3.18	29.43	4.81
360	120	3.00	29.15	4.53

Kennedyville Water System Well No. 2
February 10, 2005 Residual Drawdown



PUMPING TEST DATA

This Well is #2

Project: KEMEDYVILLE

W.O.: 3310

Description of
measuring point: T.O.C

Please Circle

pumped well or observation well

drawdown or recovery

The Pumped Well is #2

* STEP 1 * 1.7 STKup. A.G.S.

42 OFFICE

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
2/10/05	10:50 AM	0	24.62						STEP 1*	
	10:51 AM	1		7.5	41.4		120			
		2	46.98				118			
		3	48.22							
		4	48.90				117			
		5	49.48							
		6	49.96				117		AMPS 222 122 B23	
		7	50.30							
		8	50.65							
		9	50.90							
		10	51.11	7.5	41.4		116			
		12	51.47							
		14	51.80							
		16	52.07							
		18	52.31							
		20	52.51							
		22	52.72				115			
		24	52.94	7.5	41.4					
		26	53.06							
		28	53.20							
		30	53.33							
		35	53.66							
		40	53.97						29.35 DD	
		45	54.22							
		50	54.41	7.5	41.4		114			
		55	54.62							
	11:50 PM	60	54.80							

PUMPING TEST DATA

This Well is #2

Project: KENNEDYVILLE

W.O.: 3310

Description of measuring point: T.O.C.

Please Circle

pumped well

or observation well

drawdown

or recovery

1.7' strip A.G.S

The Pumped Well is #2

* STEP 2 *

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
2/10/05	11:50	60	54.80			Y↑	90		4" X 2" ORIFICE	
	11:51	61	-			Y↓				
		62	-	16	60.4		105			
		63	65.58							
		64.5	66.24							
		65	66.34				103			
		66	66.66						424 AMPPS R25 B25	
		67	66.86							
		68	66.98	16	60.4					
		69	67.17							
		70	67.30							
		72	67.52				102			
		74	67.76							
		76	67.90							
		78	68.05							
		80	68.24							
		82	68.36				102			
		84	68.57	16	60.4	Y↑				
		86	68.69							
		88	68.81							
	12:20pm	90	68.91							
		95	69.17							
		100	69.40							
		105	69.55				101			
		110	69.76	16	60.4					
		115	69.95							
	12:50pm	120	70.13							

PUMPING TEST DATA

Project: KENNEDYVILLE

This Well is #2

W.O.: 3310

Please Circle

Description of
measuring point: T.O.C.

pumped well

or observation well

drawdown

or recovery

17' ST&P A.G.S.

The Pumped Well is #2

* STEP #3 *

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
2/10/05	12:50pm	120								
	12:51	121	-	45.5	101.9		75		* STEP 3 *	
		122	92.62						4" X 2" ORIFICE	
		123	93.75							
		124	94.85	45.5	101.9	↑	72		* VALVE CLOSE TO WIDE OPEN *	
		125	95.43							
		126	95.80							
		127	96.14						R30 ^{AMPS} 136 B31	
		128	96.40				72			
		129	96.80							
		130	96.90			↑				
		132	97.45	45.5	101.9					
		134	97.85							
		136	98.18							
		138	98.43							
		140								
		142	99.15	45.5	101.9		70			
		144	99.41							
		146	99.62							
		148	99.80							
		150	99.98							
		157	100.51							
		166	100.75	45.5	101.9	↑	69			
		165	101.31							
		170	101.59							
		175	101.90							
	1:50pm	180	102.14	45.5	101.9		69			
		190	102.63							
		200	103.03	45.5	101.9	↑	68			
		210	103.68							
	2:30pm	220	104.00							

PUMPING TEST DATA

This Well is #2

Project: Kennedyville

W.O.: 3310

Description of measuring point: T.O.C.

1.7' strip. A.G.S.

Please Circle

pumped well

or observation well

drawdown

or recovery

The Pumped Well is #2

[illegible]

PUMPING TEST DATA

This Well is #2Project: KEMEDYVILLE

Please Circle

W.O.: 3310Description of
measuring point: T.O.C.pumped well

or observation well

drawdown

or

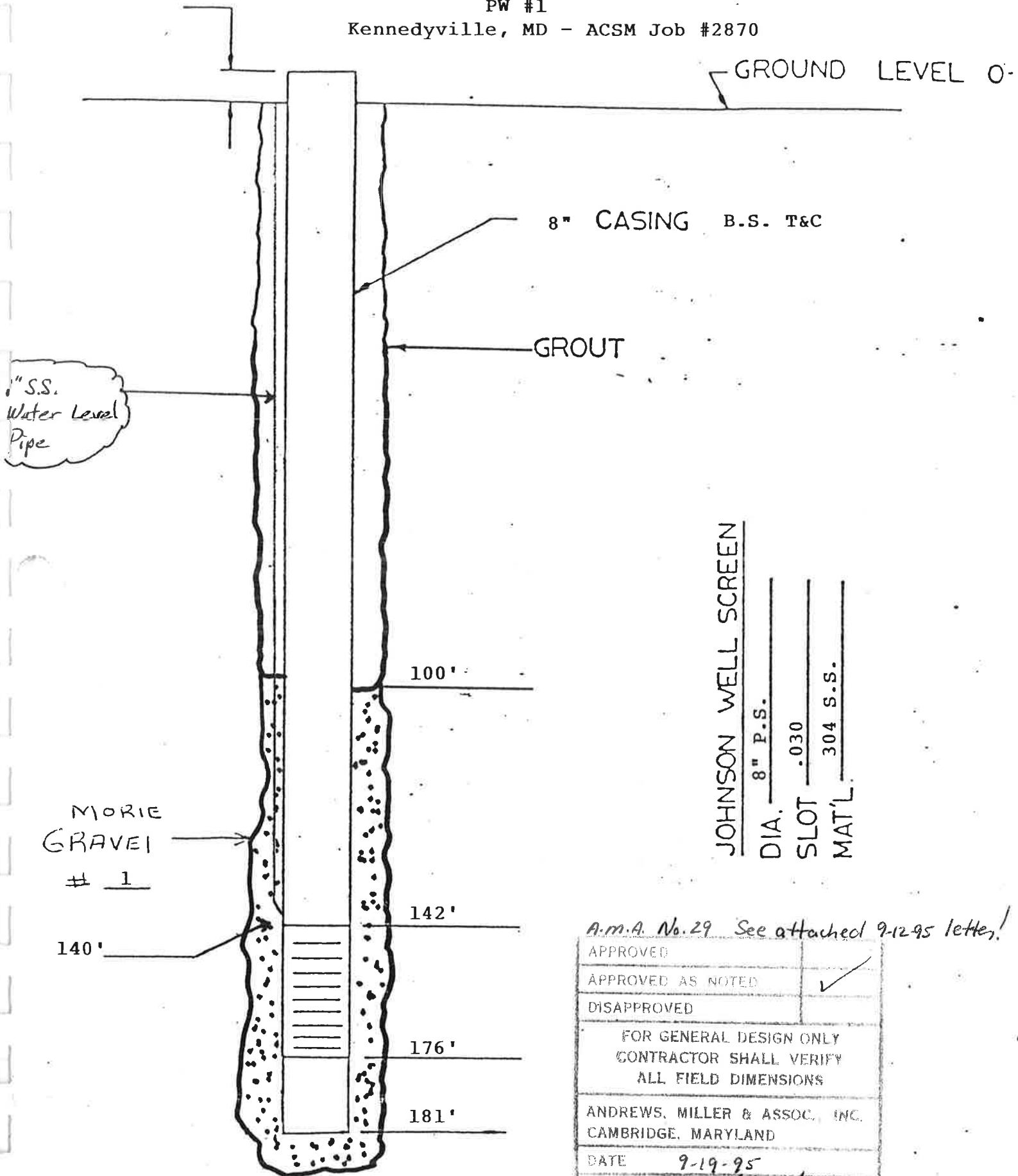
recovery1.7' STWUP A.G.S.The Pumped Well is #2* RECOVERY *SWL 24.62'PRIOR TO TEST

Date	Time		Depth to Water (ft)	Orifice Inches	Pumping Rate (gpm)	Val Adj Y-N	PSI	Water Clarity	Comments	In
	Watch	Elapsed								
<u>2/10/05</u>	<u>2:50pm</u>	<u>0</u>	<u>104.62</u>							
	<u>2:51pm</u>	<u>1</u>	<u>60.20</u>							
		<u>2</u>	<u>50.00</u>							
		<u>3</u>	<u>46.50</u>							
		<u>4</u>	<u>44.72</u>							
		<u>5</u>	<u>43.47</u>							
		<u>6</u>	<u>42.45</u>							
		<u>7</u>	<u>41.72</u>							
		<u>8</u>	<u>41.05</u>							
		<u>9</u>	<u>40.45</u>							
		<u>10</u>	<u>39.91</u>							
		<u>12</u>	<u>39.01</u>							
		<u>14</u>	<u>38.26</u>							
		<u>16</u>	<u>37.56</u>							
		<u>18</u>	<u>37.02</u>							
		<u>20</u>	<u>36.57</u>							
		<u>22</u>	<u>-</u>							
		<u>24</u>	<u>35.68</u>							
		<u>26</u>	<u>35.30</u>							
		<u>28</u>	<u>34.97</u>							
		<u>30</u>	<u>34.65</u>							
		<u>35</u>	<u>33.99</u>							
		<u>40</u>	<u>33.40</u>							
		<u>46</u>	<u>32.79</u>							
		<u>50</u>	<u>32.48</u>							
		<u>55</u>	<u>32.12</u>							
	<u>3:50pm</u>	<u>60</u>	<u>31.74</u>							
		<u>70</u>	<u>31.17</u>							
		<u>80</u>	<u>30.68</u>							
	<u>4:20pm</u>	<u>90</u>	<u>30.21</u>					<u>110</u>	<u>29.43</u>	
		<u>100.75</u>	<u>29.74</u>				<u>450pm</u>	<u>120</u>	<u>29.15</u>	

APPENDIX C
WELL NO. 1 AS-BUILT WELL INFORMATION

PROPOSED WELL DESIGN
KENT COUNTY SANITARY DISTRICT

PW #1
Kennedyville, MD - ACSM Job #2870



JOHNSON WELL SCREEN
DIA. 8" P.S.
SLOT .030
MAT'L 304 S.S.

A.M.A. No. 29 See attached 9-12-95 letter!

APPROVED	
APPROVED AS NOTED	✓
DISAPPROVED	
FOR GENERAL DESIGN ONLY CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS	
ANDREWS, MILLER & ASSOC., INC. CAMBRIDGE, MARYLAND	
DATE	9-19-95
BY	Michael J. Abbott

GAP # KE 1967 6008

A.C. SCHULTES OF MARYLAND, INC.

24-26 SOUTH RIVER ROAD

EDGEWATER, MARYLAND 21037

Water Well Contractors

CUSTOMER KENT COUNTY SANITARY DISTRICT JOB 2870
ADDRESS Kennedyville Road DATE 9/8/95
LOCATION Kennedyville, MD

GROUND		FEET FROM GROUND SURFACE 0 TO.....	WELL LOG
		0 - 1	Top Soil
TOTAL DEPTH - FT. ↑ ↓	← CASING →	1 - 14	Brown, Green, Tan Silty Clay
		14 - 36	Brown Coarse Sand
		36 - 39	Green Clay Streaks with Fine to
			Medium Sand
		39 - 69	Coarse Cement Sand with Large Gravels
		69 - 146	Green Silty Clay with Gravel
		146 - 176	Green Sand
		176 - 184	Green Silty Clay
		184 - 186	Streaks Green Sand
		186 - 200	Green and Black Silty Clay with Fine
			Sand
SCREEN ↓			

WELL NO. #1 Pilot	DIAMETER OF WELL	DEPT. OF WELL
HRS. PUMPED	SLOT SIZE	TYPE OF CASING
CAPACITY G.P.M.	DRILLING MACHINE NO. Gus Pech	LENGTH OF CASING
STATIC LEVEL	DRILLER B. Oliver	DISTANCE TO TOP OF SCREEN
PUMPING LEVEL	GRAVEL	TYPE SCREEN
SPECIFIC CAPACITY	BAGS OF CLAY	SIZE OF SCREEN
PUMPED WITH	DATE WELL COMPLETED	
DEPTH OF CLAY GROUT	DRILLER'S HELPER	
DEPTH GRAVEL PACKED		

PERMIT #KE-92-0136

Bobby Oliver
WELL DRILLER'S SIGNATURE

ELECTRIC	A. C. SCHULTES & SONS INC. Water Well Contractors Woodbury, New Jersey	LOG
COMPANY <u>KENT COUNTY SANITARY</u> <u>DISTRICT</u> WELL NO. <u>PW #1</u> XXXXX <u>Town of Kennedyville</u> STATE <u>Maryland</u>		RECORDED BY <u>Jim Schultes</u> DATE <u>9/8/95</u> WITNESSED BY <u>Bob Oliver</u> DATE <u>9/8/95</u>
TYPE OF LOG <u>Electric & Gamma</u> DATE <u>9/8/95</u> FOOTAGE <u>196</u> TOTAL DEPTH <u>200</u> I. D. DRILLER <u>6 3/4"</u> LOG MEAS. FROM <u>Ground</u> DRILLING MEAS. FROM <u>Ground</u> PERMANENT DATUM <u>Pitless</u> WEIGHT _____ VISCOSITY _____ pH _____ RESISTIVITY <u>50 OHMS/IN</u> POTENTIAL <u>50 MU/IN</u> ELECTRODE SPACING _____ SYMMETRICAL _____ NON-SYMMETRICAL _____ FLUID LEVEL _____ LGTH. MEAS. DEVICE-IN <u>10'</u> O. D. OF INSTRUMENT-IN <u>2"</u> TIME CONSTANT-SECONDS _____ LOGGING SP. - FT/MIN. <u>25</u> STATISTICAL VAR.-IN. _____ SENSITIVITY REF. _____ <u>GAMMA - 12.5</u>		WELL RECORD WELL SIZE <u>8"</u> DEPTH <u>176'</u> BOT. OF OUTER CASING <u>N/A</u> TOP OF SCREEN <u>142</u> BOT. OF SCREEN _____ SIZE OF SCREEN <u>8" P.S.</u> SLOT SIZE <u>.030</u> MATERIAL <u>304 S.S.</u> GRAVEL SIZE <u>Morie #1</u> DEPTH TO R-L NIPPLE _____ PUMPING TEST DATE _____ CAPACITY _____ STATIC LEVEL _____ DRAWDOWN _____ PUMPING LEVEL _____ SP. CAPACITY _____

REMARKS OR OTHER DATA

Permit #KE-95-0136

FOR USE WITH SUBMITTAL No. A-MA No. 5

APPROVED

APPROVED AS NOTED

DISAPPROVED

FOR GENERAL DESIGN ONLY
CONTRACTOR SHALL VERIFY
ALL FIELD DIMENSIONSANDREWS, MILLER & ASSOC., INC.
CAMBRIDGE, MARYLAND

DATE 1-5-96

BY

M. J. Schultes

6 x 21'
1 x 3'
129'

133'
134 feet of 4"
DROP PIPE

6/3 WIRE

8" WELL CASING

133'
134 FT

55NLC01064CTB

Installed On:

By: A.C. SCHULTES OF MARYLAND, INC.
24 South River Road
Edgewater, MD 21037
(410)841-6710

Goulds

Model # ~~1000~~
SUBMERSIBLE PUMP

Conditions of Service

146'
141 FT

70
80 gpm *

142 FT

350 T.D.B.

176 FT

181 FT

Customer KENT COUNTY

Bill # NEW

Location KENNEDYVILLE

Bill # 2870

* Assumed Max. Pumping Level = 130.0'
Max. Static Level = 25.0'
Min. Available D.D. = 105.0'

5" - 10" Texas Submersible Turbine Pumps

For 6" and larger wells

SPECIFICATIONS

Model	Operating Range GPM	Best Efficiency Range	Horsepower Range	Discharge Connections	Minimum Well Size
55NLC	40 - 100	55	5 - 20	3", 4"	6"
5CLC	60 - 180	110	5 - 30	3", 4"	6"
5CHC	75 - 207	150	5 - 50	3", 4"	6"
5TLC	80 - 250	190	5 - 40	3", 4"	6"
5THC	170 - 300	240	10 - 60	3", 4"	6"
6CEL	60 - 160	120	5 - 30	3", 4"	8"
6CLC	110 - 225	160	5 - 30	3", 4"	8"
6CHC	145 - 275	225	5 - 50	3", 4"	8"
6DLC	200 - 450	350	5 - 30	3", 4"	6"
6DHC	350 - 560	425	5 - 40	3", 4"	6"
7CLC	240 - 460	350	10 - 100	4", 5", 6"	8"
7CHC	325 - 575	475	15 - 100	4", 5", 6"	8"
7TLC	300 - 650	550	50 - 100	4", 5", 6"	8"
7THC	400 - 800	700	15 - 100	4", 5", 6"	8"
8JHC	350 - 825	600	20 - 100	4", 6"	10"
8DHC	900 - 1200	1000	25 - 150	4", 6"	10"
10JLC	700 - 1250	1000	30 - 150	4", 6", 8"	12"

FEATURES

Discharge Bowl: Several discharge sizes available for NPT.

Discharge Bearing: Extra long sealed top bronze bearing insures positive shaft alignment and stabilization for extended life.

Intermediate Bowl: Closed grained class 30 cast iron. Nonmetallic coatings on 7" and larger pumps for maximum efficiency and abrasion resistance.

Impellers: Designed for maximum efficiency with wide range hydraulic coverage.

Upthrust Collar: Designed for extra margin of safety against possible momentary upthrust occurring at start-up.

Intermediate Bowl Bearings: Reliable long life rubber bearings (optional bronze available).

Taperlocks: Accurately machined to insure positive locking of impeller to pump shaft.

Suction Inlet: Contoured for smooth flow entrance. Protected by an oversized stainless steel strainer to prevent entrance of damaging solids.

Suction Adapter: Class 40 cast iron for increased strength and positive motor alignment. Open area permits easy access to pump/motor coupling.

Pump and Motor Coupling: Large stainless steel coupling accurately matched for perfect alignment, balance and power transmission.

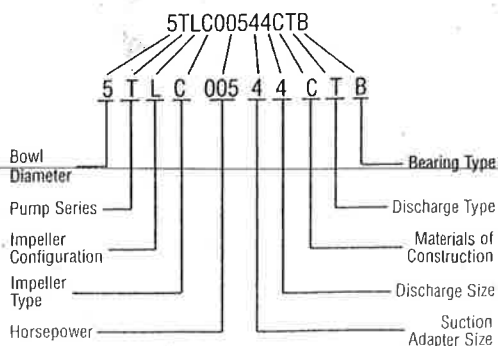
Pump Shaft: 100,000 PSI high tensile stainless steel provides strength and excellent corrosion resistance. Ground and polished for smooth bearing surface.

Powered for Continuous Operation: All ratings are within the working limits of the motor manufacturer. Pump can be operated continuously with no fear of damage to the motor.

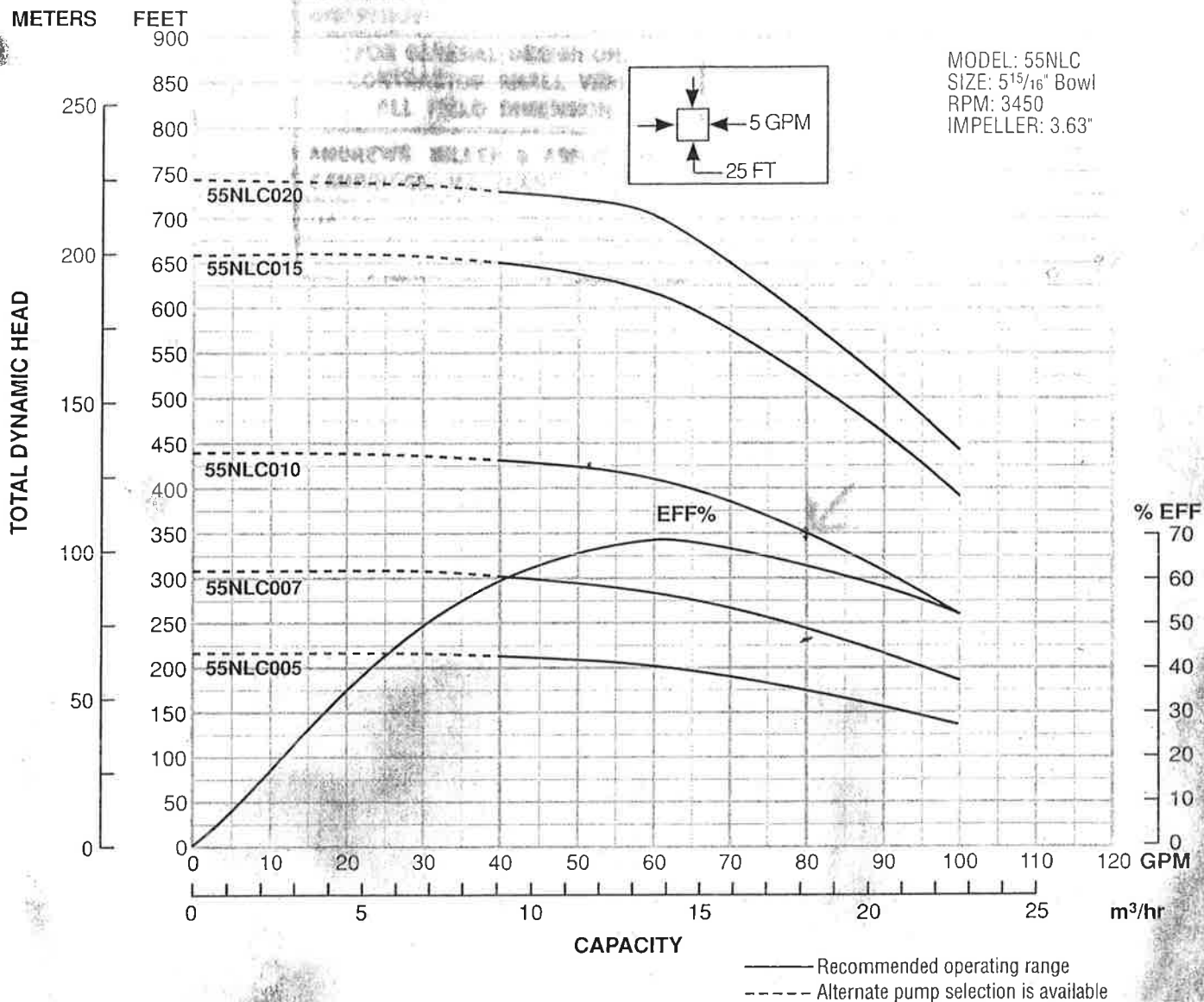
Franklin Electric Motor:

- Corrosion-resistant construction.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Anti-track self-healing resin system.
- Water lubrication.
- Filter check valve.
- Kingsbury-type thrust bearing.
- Pressure equalizing diaphragm.
- Sand fighter-slinger.
- Removable water-bloc lead connector.
- UL 778 recognized.

ORDER NUMBER CODE



Model 55NLC 55 GPM



DIMENSIONS AND WEIGHTS

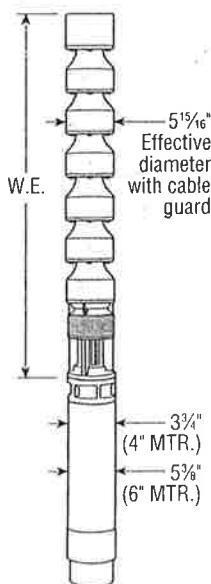
HP	Stages	W.E. Order Number	W.E. Length	W.E. Wt. (lbs.)
5	5	55NLC00544CTB	33 ³ / ₁₆	94
		55NLC00564CTB	34 ¹ / ₁₆	96
7 ¹ / ₂	7	55NLC00744CTB	42 ¹ / ₄	122
		55NLC00764CTB	43 ³ / ₁₆	124
10	10	55NLC01064CTB	56 ¹ / ₁₆	165
15	15	55NLC01564CTB	77 ¹ / ₄	234
20	17	55NLC02064CTB	86 ¹ / ₃₂	260

(All dimensions in inches and weights in lbs. Do not use for construction purposes.)

PLEASE NOTE:

- Order motors separately.
- For intermediate horsepower pumps consult factory.
- Solid line is recommended operating range. The dotted line (---) signifies an alternate pump selection is available.
- Please specify all options changes in W.E. order number.

4" NPT DISCHARGE CONNECTION



MATERIALS OF CONSTRUCTION

Part Name	Material
Shaft	ASTM A582 TYPE 416
Coupling	ASTM A582 S41600 CD
Suction Adapter	ASTM A48 CL 40
Discharge Bowl	ASTM A48 CL 30B
Bronze Bearings	ASTM B584
Discharge Bowl Bearing	ASTM B584
Taperlocks	ASTM A108 GR 101B
Bowl	ASTM A48 CL 30B
Upthrust Collar	ASTM A276 S41400
Impeller	ASTM B584
Fasteners	SAEJ429 GR 8
Cable Guard	ASTM A240 S 30400
Suction Strainer	ASTM A240 S 30400

APPENDIX E
WELL NO. 1 SYSTEM CURVE

Kennedyville Water System- Well No. 1

System Head Curve Calculations

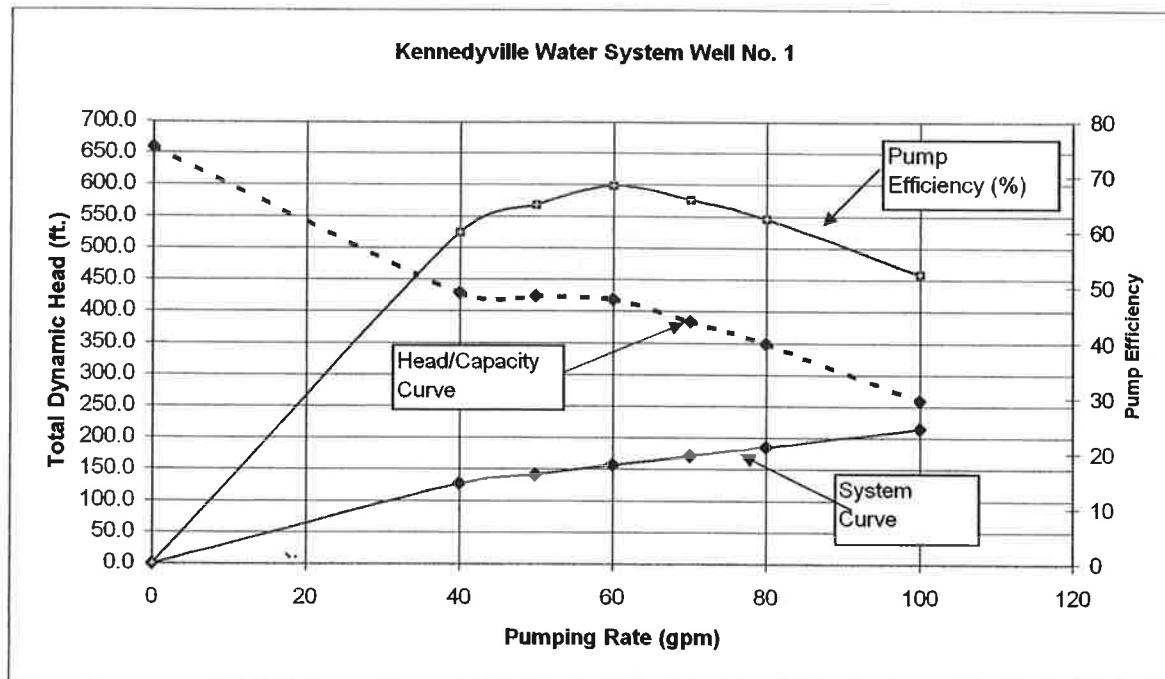
Pumping Rate (gpm)	Static Level (ft.)	Specific Cap. (gpm/ft)	Drawdown (ft.)	Column Friction (ft.)	*Above Ground (ft.)	Total Dynamic Head (ft.)
0	12.21	0.7	0	0	0	0.0
40	12.21	0.7	57.1	0.21	58	128.3
50	12.21	0.7	71.4	0.32	58	142.7
60	12.21	0.7	85.7	0.43	58	157.1
70	12.21	0.7	100.0	0.67	58	171.6
80	12.21	0.7	114.3	0.86	58	186.1
100	12.21	0.7	142.9	1.13	58	214.9

*Above ground discharge pressure assumed to be 25 psi and must be verified by others.

Goulds Pump Model 55NLC/10 Stage Performance Characteristics

(Design Conditions of Service: 70 gpm @ 350' TDH)

Pumping Rate (gpm)	Efficiency (%)	Total Dynamic Head (ft.)
0	0	660
40	60	430
50	65	425
60	68.5	420
70	66	385
80	62.5	350
100	52.5	260



APPENDIX K – SUMMARIES OF 2018 AND 2019 MOR DATA

Summary of 2018 MOR Data

Month	Total Monthly Raw Water Demand (MG)	Total Monthly Finished Water Demand (MG)	Total Monthly Wash Water (MG)
Jan	0.543	0.526	0.017
Feb	0.460	0.4423	0.0177
Mar	0.530	0.501	0.0292
Apr	0.656	0.649	0.007
May	0.821	0.790	0.031
June	0.727	0.688	0.039
July	0.551	0.521	0.03
Aug	0.483	0.458	0.026
Sept	0.468	0.449	0.019
Oct	0.537	0.520	0.017
Nov	0.545	0.513	0.032
Dec	0.467	0.444	0.023
TOTAL (MGD)	6.788	6.501	0.287
ANNUAL AVERAGE DAY DEMAND (GPD)	18,598	17,810	-

	Raw Water	Finished Water
Annual ADD (MGD)	0.019	0.018
Month of Maximum Use	May	May
ADD of Month of Maximum Use (MGD)	0.026	0.025
Ratio of ADD of Month of Max Use to Annual ADD	1.42	1.43
Day of maximum use*	May 16th, 2018	May 16th, 2018
Day of maximum use (MGD)*	0.064	0.060
Month of Minimum Use	Dec	Dec
Ratio of ADD of Day of max Use to Annual ADD*	2.6	2.8
ADD of Month of Minimum Use (MGD)	0.015	0.014
Ratio of ADD of Month of Min Use to Annual ADD	0.81	0.80

*The day of maximum use is really the third highest day of use in the year. The third highest day of use was used instead of the highest day of use and the second highest day of use to account for leaks in the system that were reported by the County.

Summary of 2019 MOR Data

Month	Total Monthly Raw Water Demand (MG)	Total Monthly Finished Water Demand (MG)	Total Monthly Wash Water (MG)
Jan	0.453	0.431	0.022
Feb	0.384	0.325	0.059
Mar	0.413	0.392	0.021
Apr	0.468	0.438	0.03
May	0.497	0.455	0.042
June	0.533	0.494	0.039
July	0.559	0.514	0.045
Aug	0.534	0.494	0.040
Sept	0.565	0.529	0.036
Oct	0.569	0.530	0.039
Nov	0.528	0.499	0.029
Dec	0.517	0.493	0.024
TOTAL (MGD)	6.020	5.594	0.426
ANNUAL AVERAGE DAY DEMAND (GPD)	16,493	15,326	-

	Raw Water	Finished Water
Annual ADD (MGD)	0.016	0.015
Month of Maximum Use	Sept	Sept
ADD of Month of Maximum Use (MGD)	0.019	0.018
Ratio of ADD of Month of Max Use to Annual ADD	1.14	1.15
Day of maximum use	May 20th, 2019/October 16th, 2019	May 20th, 2019
Day of maximum use (MGD)	0.035	0.034
Ratio of ADD of Day of max Use to Annual ADD	2.1	2.2
Month of Minimum Use	Mar	Feb
ADD of Month of Minimum Use (MGD)	0.013	0.012
Ratio ADD of Month of Min Use to Annual ADD	0.81	0.76

APPENDIX L – INFORMATION ABOUT GSF

AD26L MANGANESE DIOXIDE MEDIA

For Arsenic, Iron, Manganese, and Sulfide Removal

MEDIA SPECIFICATIONS

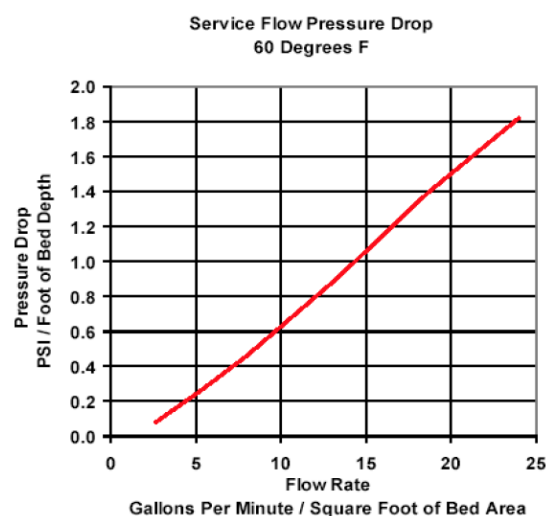
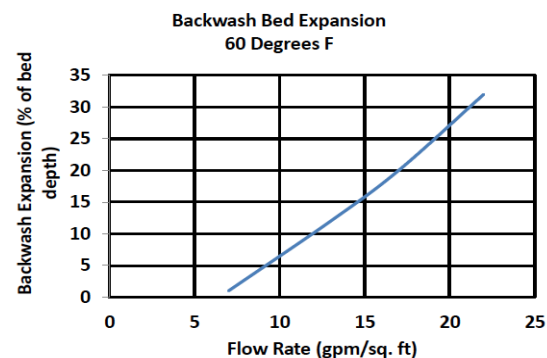
Removal Mechanisms	Rapid Oxidation Adsorption Autocatalytic Adsorption
Removal Efficiency	> 95%
H ₂ S Capacity	250 - 300 gr/ft ³
Size	20 x 40 mesh
Color	Black
Physical Form	Granular Particulate
Moisture Content	< 0.5%
Bulk Density	95 lbs/ft ³
MnO ₂ Content	15%
Certifications	NSF 61

OPERATING CONDITIONS

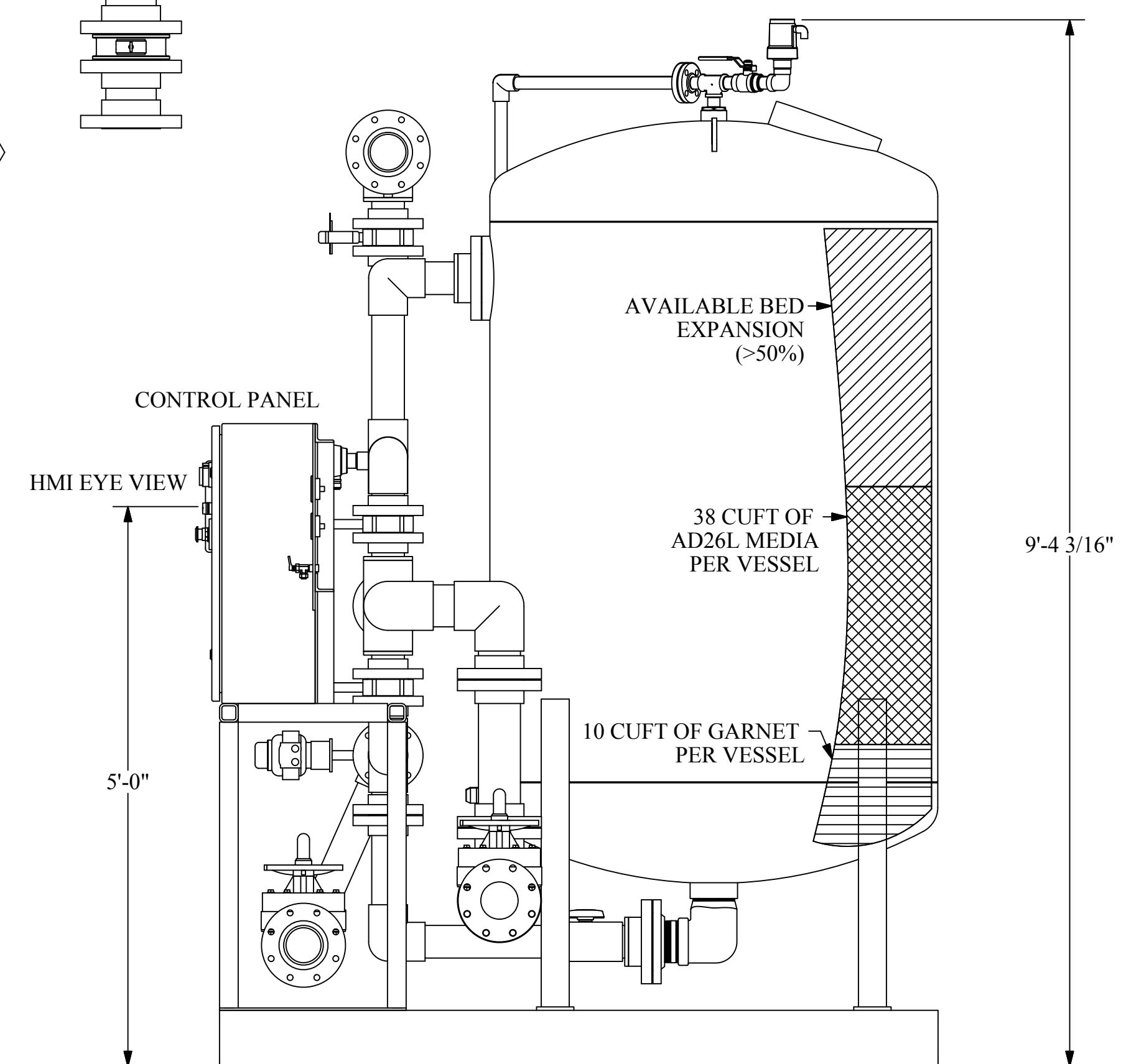
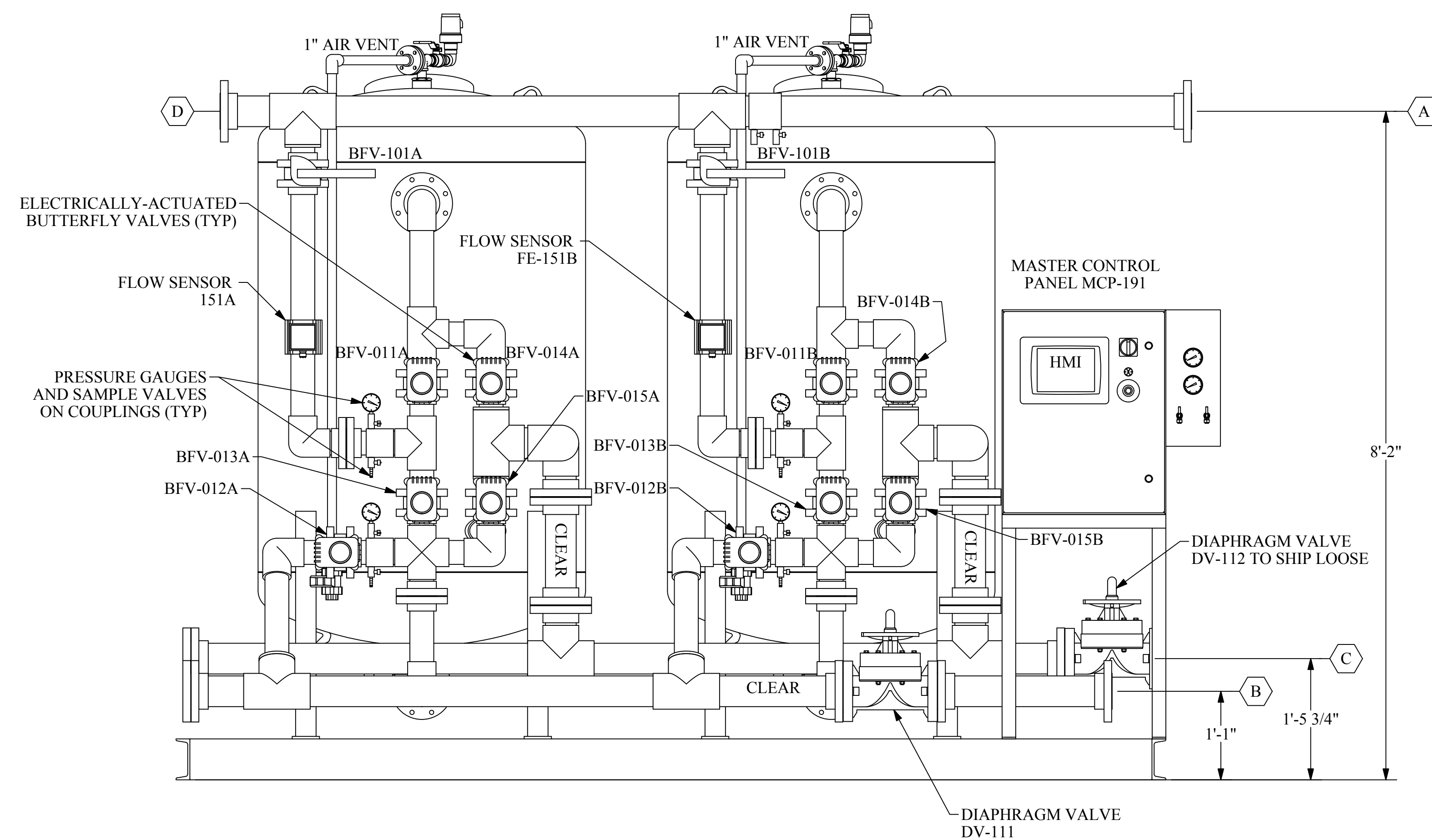
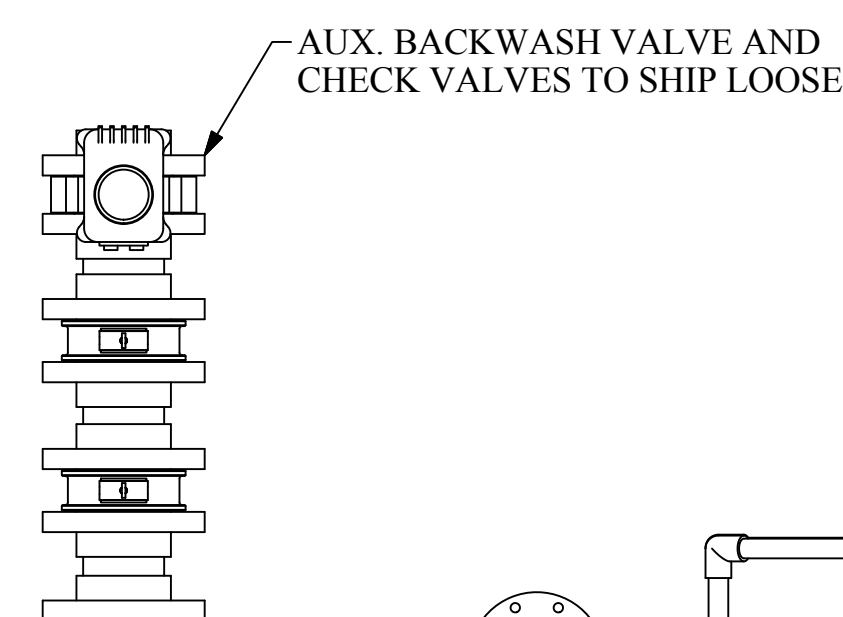
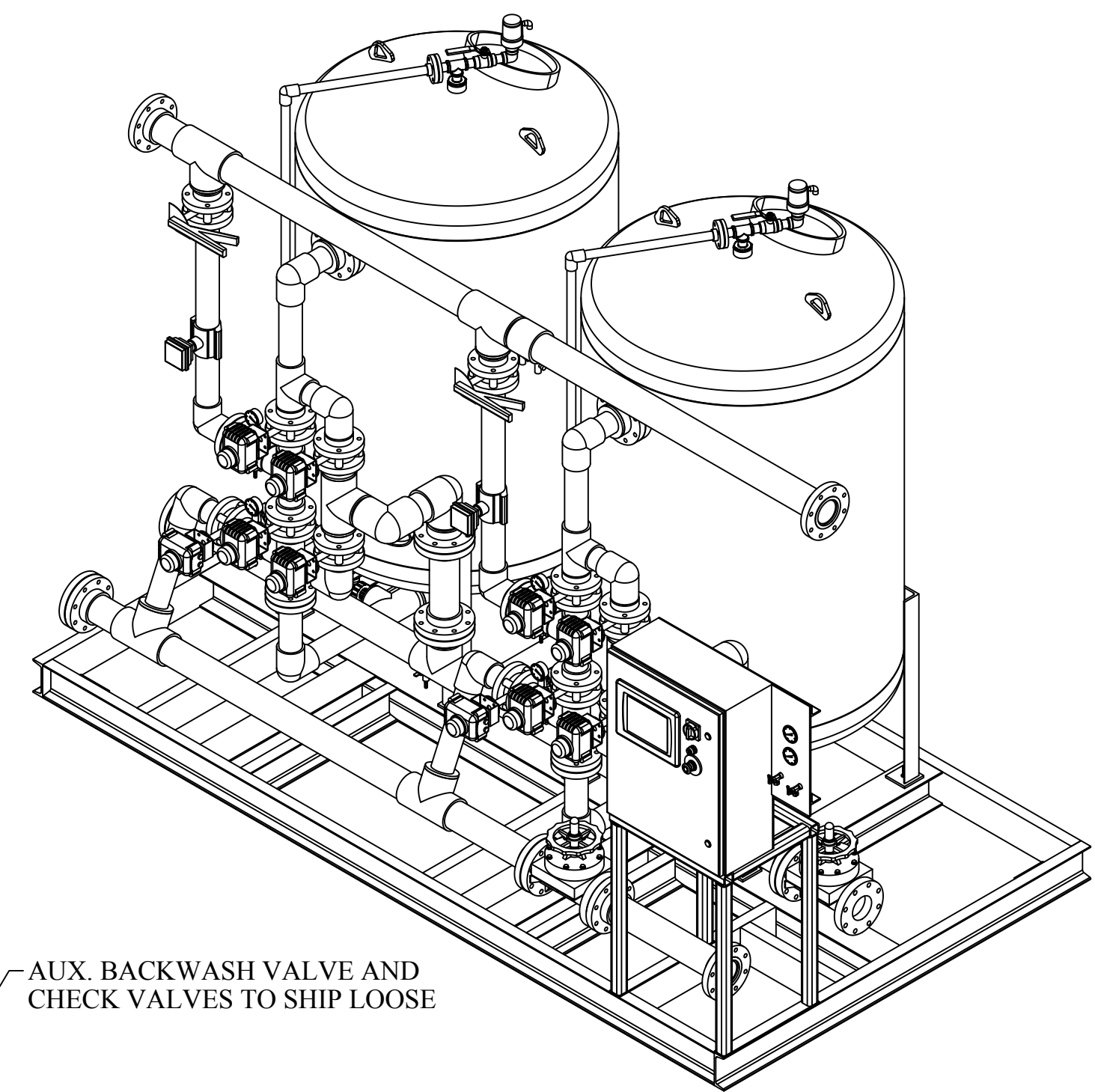
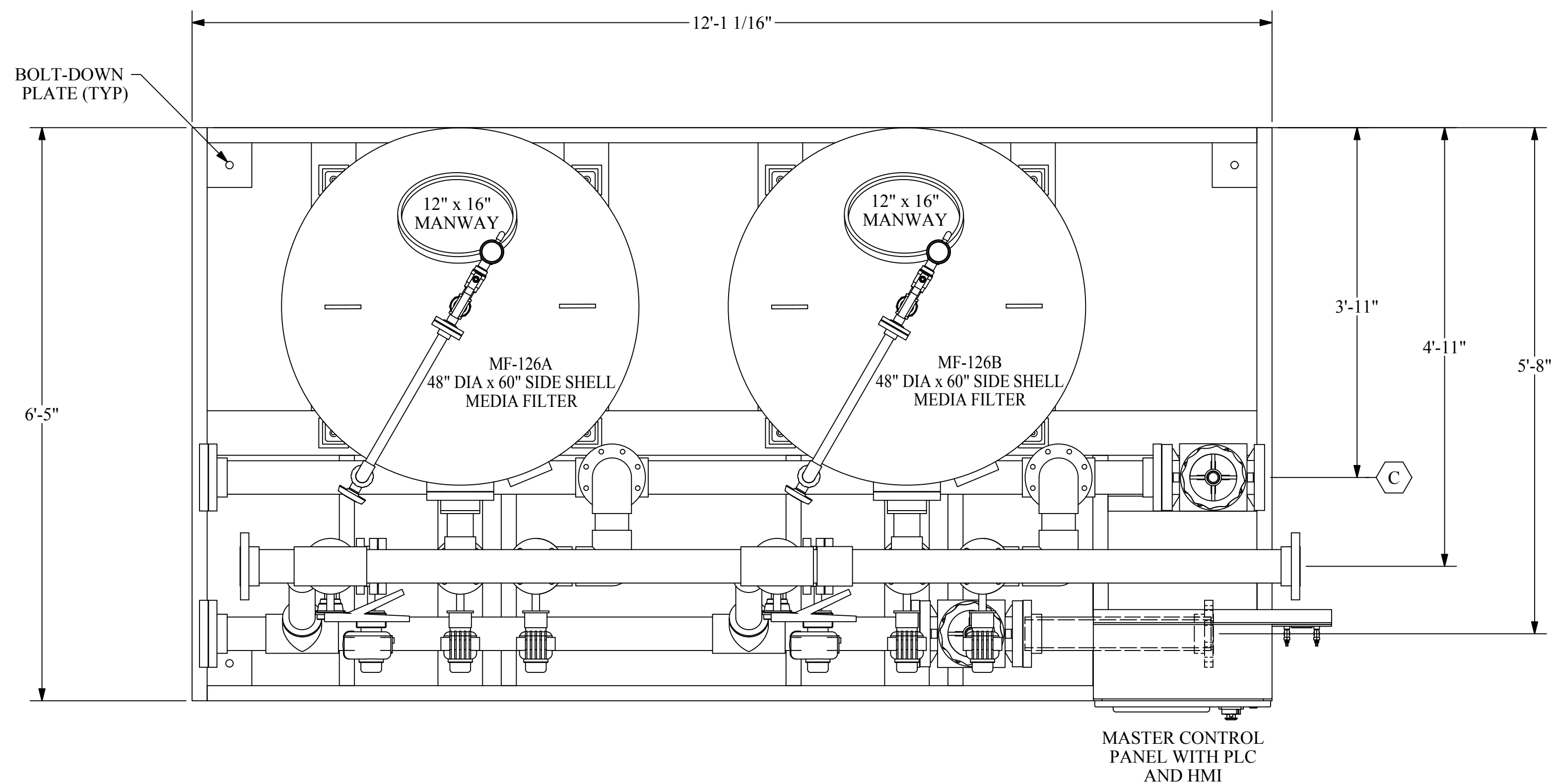
Treatment Goals	Iron: < 0.3 mg/L Manganese: < 0.05 mg/L Arsenic: < 0.010 mg/L
pH Range	6.5 - 9.0
Temperature	Groundwater ambient (55 - 75 F)
Service Flow Rate	8 - 12 gpm/ft ²
Contact Time	1.5 - 3 minutes at Fe < 5 mg/L
Bed Depth	30 - 36 inches
Bed Expansion	20 - 30% (on average)
Media Life	> 10 years (on average)
Pre-Oxidant	Hypochlorite Feed (12.5% average)
Oxidant Contact Time	15 - 30 Seconds
Backwash Flow Rate	18 - 20 gpm/ft ²
Backwash Frequency	1 - 3 times/weekly (site specific)
Pressure Drop	4 psig at 9 gpm/ft ²




Example of the AD26L Manganese Dioxide media



5/19/2020			
Preliminary System Sizing Calculations			
Kennedyville, MD			
Scenario 1	Scenario 2		
APU26	APU26	System Type	
AVH	AVH	Valve Harness Type	
AD26L	AD26L	Media	
143	143	Design Flow (gpm)	
88,000	88,000	System Demand (gal/day)	
43%	43%	Well Utilization	
48	48	Vessel Diameter (in)	
60	60	Vessel Side Shell Height (in)	
CS	CS	Vessel Material	
2	3	Number of Vessels (Lead Position)	
5.69	3.80	Filtration Rate - All Vessels in Service (gpm/sqft)	
11.4	5.7	Filtration Rate - One Vessel Offline (gpm/sqft)	
17	17	Backwash Design Rate for Media (gpm/sqft)	
215	215	Backwash Flow Rate (gpm)	
10	10	Total Time of Backwash + Fast Rinse (min)	
2,150	2,150	Backwash Waste per Vessel (gal)	
4,300	6,450	Total Backwash Waste of System (gal)	
0.88	0.88	Raw Iron Concentration (mg/L)	
0	0	Added Iron Concentration for Coagulation (mg/L, if used)	
0	0	Raw H2S Concentration (mg/L)	
0	0	Raw Manganese Concentration (mg/L)	
439,315	658,972	Estimated Throughput until Backwash (gal)	
5.0	7.5	Estimated Time (24hr Days) until Backwash based on Utilization	



FOR REFERENCE ONLY

REV #	DATE	REVISIONS	<p>This drawing is the exclusive property of AdEdge Water Technologies, LLC. Its acceptance constitutes an agreement that it shall be expressly used for subject project and shall be returned upon request. Information contained on, or derived from this drawing, is not to be communicated, disclosed, used or copied without prior authorization.</p> <div><p>2055 BOGGS ROAD DULUTH, GA 30096 P. 678-835-0052 F. 678-835-0057 www.adedgetechnologies.com</p></div>	TP	SERVICE CONNECTIONS	TYPE/MATERIAL	<p>Title: GENERAL ARRANGEMENT</p> <p>IRON & MAGANESE TREATMENT SYSTEM MODEL: APU26-4860CS-2-AVH</p>	Drawn by	Checked by	Approved by	Project	Date	Scale	
				A	SYSTEM RAW WATER INLET	4" FLANGE, SCH 80PVC							NTS	
				B	SYSTEM TREATED OUTLET	4" FLANGE, SCH 80PVC			<p>Customer GENERAL ARRANGEMENT</p>					
				C	SYSTEM BACKWASH OUTLET	4" FLANGE, SCH 80PVC								
				D	AUX. BACKWASH CONNECTION	4" FLANGE, SCH 80PVC								
				E	BACKWASH RECYCLE CONNNECTION	1.5" FLANGE, SCH 80PVC								
							Dwg. File			Rev. Date	Rev. No	Sheet 1 OF 1		

APPENDIX M – COST OPINIONS

OPTION 1 - GSF Plus PS #3 Upgrade for Backwash with Ground Storage Tank and Pumps

TOTAL PRESENT WORTH =	\$4,791,190
TOTAL PROJECT COST =	\$3,319,600

Description	Quantity	Units	Unit Cost	Item Cost	Notes
Site Work					
Permanent SWM / Temp SCE / Clearing+Grubbing	1	LS	\$25,000	\$ 25,000.00	
Paving/Sidewalks	1	LS	\$2,500	\$ 2,500.00	
Yard Piping	1	LS	\$35,000	\$ 35,000.00	backwash tank piping, to and from GST, piping from wells to the building
Fencing Around New Well	1	LS	\$10,000	\$ 10,000.00	
WTP Upgrades					
Well - Drill, Pump and Pump Setting	2	EA	\$ 136,000.00	\$ 272,000.00	
Greensand Filter - Duplex	1	LS	\$ 164,000.00	\$ 164,000.00	
Chemical Feed System and Storage	1	LS	\$ 6,500.00	\$ 6,500.00	chlorine dosing, chlorine tank, tubing, protective piping
Temporary Piping, tanks, and relocation of pumps	1	LS	\$ 5,000.00	\$ 5,000.00	500 gallon tank, temp piping for raw water to existing filter, from filter to temp tank, relocate existing distribution pumps
Interior Piping, Valves and Appurtenances	1	LS	\$ 25,000.00	\$ 25,000.00	
General Demolition and Removal	1	LS	\$ 2,500.00	\$ 2,500.00	landfill and transportation costs, labor is in labor cost
Upgrade PS #3					
10-Foot Diameter Wet Well	1	LS	\$ 30,000.00	\$ 30,000.00	10-foot diameter, 18 feet deep
Valve Vault	1	LS	\$ 7,500.00	\$ 7,500.00	
Replacement Pumps	2	EA	\$ 5,000.00	\$ 10,000.00	
Interior Mechanical Piping	1	LS	\$ 7,500.00	\$ 7,500.00	isolation valves, check valves, piping
4-inch FM to Connect to Ex. FM	1	LS	\$ 3,000.00	\$ 3,000.00	100 feet of 4-inch FM
Miscellaneous Metals	1	LS	\$ 7,500.00	\$ 7,500.00	Pump guide rails, hatches, pipe supports
Excavation/Backfill/Stone Base	1	LS	\$ 35,000.00	\$ 35,000.00	
Instrumentation	1	LS	\$ 10,000.00	\$ 10,000.00	flow meter, level transducer, floats
Distribution System Upgrades					
72,000 gal Glass Lined Ground Storage Tank	1	LS	\$ 143,000.00	\$ 143,000.00	includes foundation and slab
Tank Mixer	1	LS	\$ 10,000.00	\$ 10,000.00	grid bee mixer, or similar
Domestic and High Service Pump Skid	1	EA	\$ 101,000.00	\$ 101,000.00	duplex system for each domestic and high service pumps
Tank Instrumentation	1	LS	\$ 7,500.00	\$ 7,500.00	floats, level instrument
Labor					
Labor for Contractor's Crew for a Year	261	DAYS	\$ 3,000.00	\$ 783,000.00	
Electrical					
Generator	1	LS	\$ 75,000.00	\$ 75,000.00	350KW- 480V/3PH
Power/Controls/HVAC	1	LS	\$ 183,900.00	\$ 183,900.00	20% of other costs (not labor), new MCC, panels, electrical system
Electrical Service Upgrade	1	LS	\$ 20,000.00	\$ 20,000.00	upgrade to 480V/3PH
			SUBTOTAL	\$ 1,981,400.00	

SUBTOTAL (A)	\$1,981,400.00
Mobilization (10% of A)	\$198,000.00
CONSTRUCTION TOTAL (B)	\$2,179,400

Contingency (25% of B)	\$544,900.00
Bonds, Legal Council, Administration Costs	\$30,000.00
Engineering: Design/Permitting/Bidding	\$245,200.00
Engineering: Construction/Post-Construction	\$163,500.00
Inspection for 12-Month Construction Contract Duration	\$156,600.00
NON-CONSTRUCTION PROJECT COST (C)	\$1,140,200

TOTAL PROJECT COST (B + C)	\$3,319,600
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Assume 0.5% interest rate, t= 20 yrs

Estimated Annual Operational Costs	A	PW
Chemical Cost (Sodium Hydroxide)	\$1,603	\$30,445
Electrical Cost	\$15,900	\$301,900
Staffing	\$55,000	\$1,044,308
Equipment, Tools and Maintenance	\$5,000	\$94,937
TOTAL ANNUAL OPERATIONS	\$77,503	\$1,471,590

OPTION 2 - Membranes with Ground Storage Tank and Pumps

TOTAL PRESENT WORTH =	\$5,435,089
TOTAL PROJECT COST =	\$3,766,030

Description	Quantity	Units	Unit Cost	Item Cost	Notes
General					
Permanent SWM / Temp SCE / Clearing+Grubbing	1	LS	\$25,000	\$ 25,000.00	
Paving/Sidewalks	1	LS	\$2,500	\$ 2,500.00	
Yard Piping	1	LS	\$35,000	\$ 35,000.00	backwash tank piping, to and from GST, piping from wells to the building
Fencing Around New Well	1	LS	\$10,000	\$ 10,000.00	
WTP Upgrades					
Well - Drill, Pump and Pump Setting	2	LS	\$ 136,000.00	\$ 272,000.00	
Membrane Package System	1	LS	\$ 460,000.00	\$ 460,000.00	includes membranes, air compressors, control panel, 2 skids, CIP tank, CIP chemical feed pumps,
Chemical Feed System and Storage Tanks	1	LS	\$ 7,500.00	\$ 7,500.00	chlorine dosing, chlorine tank, tubing, protective piping
Interior Piping, Valves and Appurtenances	1	LS	\$ 30,000.00	\$ 30,000.00	
Additional Building Space for Pumps	150	SF	\$ 250.00	\$ 37,500.00	10 x 15 foot area for new pumps
General Demolition and Removal	1	LS	\$ 2,500.00	\$ 2,500.00	landfill and transportation costs, labor is in labor cost
Distribution System Upgrades					
72,000 gal Glass Lined Ground Storage Tank	1	LS	\$ 143,000.00	\$ 143,000.00	includes foundation and slab
Tank Mixer	1	LS	\$ 10,000.00	\$ 10,000.00	grid bee mixer, or similar
Domestic and High Service Pump Skid	1	LS	\$ 101,000.00	\$ 101,000.00	duplex system for each domestic and high service pumps
Tank Instrumentation	1	LS	\$ 7,500.00	\$ 7,500.00	floats, level instrument
Labor					
Labor for Contractor's Crew for 12 Months	261	DAYS	\$ 3,000.00	\$ 783,000.00	
Electrical					
Generator	1	LS	\$ 85,000.00	\$ 85,000.00	450KW- 480V/3PH
Power and Controls	1	LS	\$ 228,700.00	\$ 228,700.00	20% of other costs (not labor), new MCC, panels, electrical system
Electrical Service Upgrade	1	LS	\$ 20,000.00	\$ 20,000.00	upgrade to 480V/3PH
Subtotal				\$ 2,260,200.00	

SUBTOTAL (A)	\$2,260,200.00
Mobilization (10% of A)	\$226,000.00
CONSTRUCTION TOTAL (B)	\$2,486,200

Contingency (25% of B)	\$622,000.00
Bonds, Legal Council, Administration Costs	\$30,000.00
Land Acquisition for Additional Building Space - HIGHLY VARIABLE PRICE	\$5,000.00
Engineering: Design/Permitting/Bidding	\$279,738.00
Engineering: Construction/Post-Construction	\$186,492.00
Inspection for 12-month project	\$156,600.00
NON-CONSTRUCTION PROJECT COST (C)	\$1,279,830

COUNTY PAID \$20,000 FOR 0.567 ACRES IN 1993 FOR THE WTP SITE. AT 2% INTEREST, THAT IS APPROXIMATELY \$60,000 PER ACRE

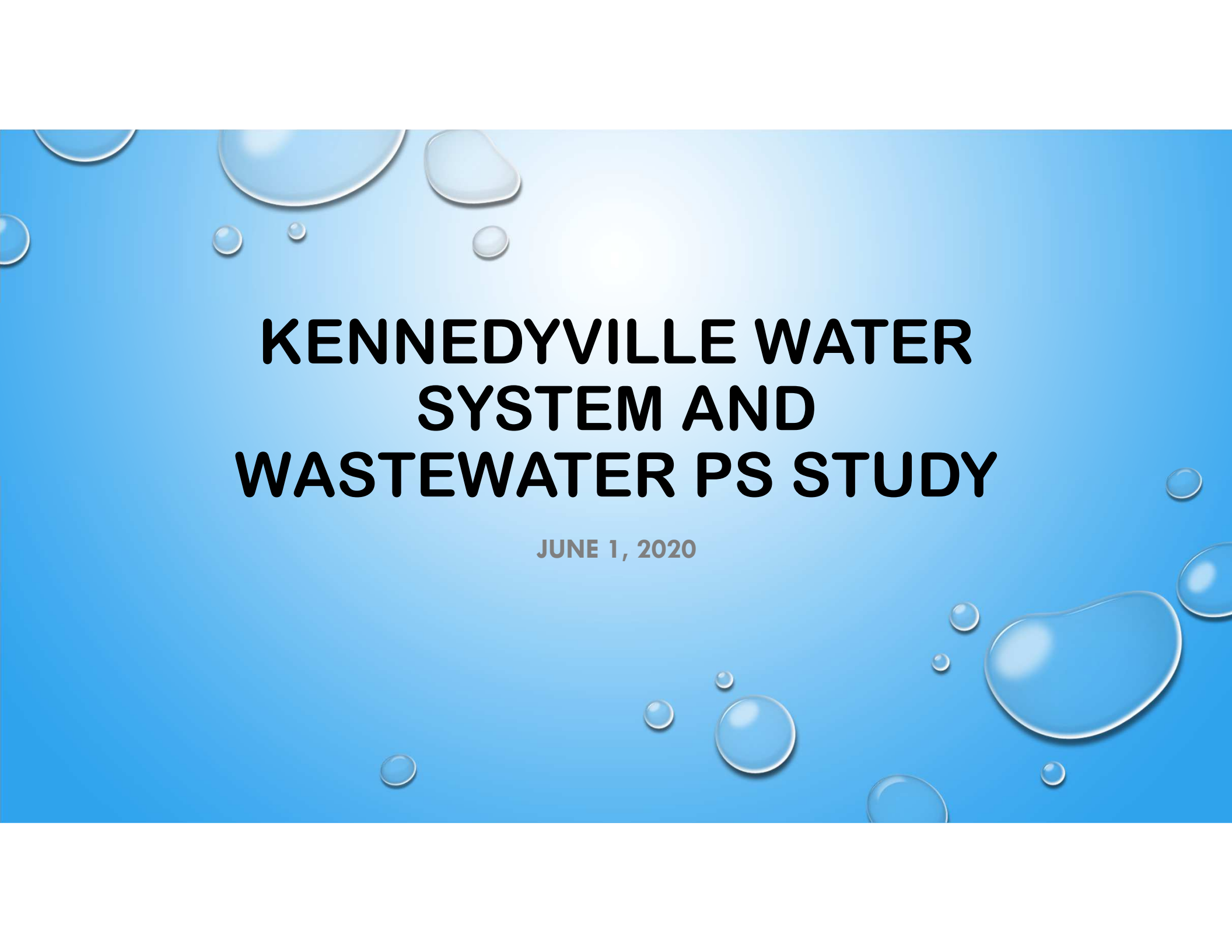
TOTAL PROJECT COST (B + C)	\$3,766,030
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Assume 0.5% interest rate, t= 20 yrs

Estimated Annual Operational Costs	A	PW
Chemical Cost (Sodium Hydroxide)	\$1,603	\$30,445
Clean In Place Chemicals	\$100	\$1,899
Staffing (10% more for more complex)	\$60,500	\$1,148,739
Electrical Cost	\$18,200	\$345,571
Equipment, Tools and Maintenance	\$7,500	\$142,406
TOTAL ANNUAL OPERATIONS	\$87,903	\$1,669,059

UPGRADES TO KENNEDYVILLE WASTEWATER PS #1 AND #2					
			TOTAL PROJECT COST = \$1,038,400		
Description	Quantity	Units	Unit Cost	Item Cost	Subtotal per PS
PS #1 Site Work					
Permanent SWM / Temp SCE / Clearing+Grubbing	1	LS	\$20,000	\$ 20,000.00	
Site Work to Create Access to Site from Road	1	LS	\$15,000	\$ 15,000.00	
Paving	1	LS	\$7,500	\$ 7,500.00	
Convert Wet Well to MH	1	LS	\$5,000	\$ 5,000.00	
Fencing Around New Site	160	LF	\$60	\$ 9,600.00	160 feet of fence for 50 x 30 area, includes gate
PS #1 Components					
Wet Well	1	LS	\$ 20,000.00	\$ 20,000.00	
Valve Vault	1	LS	\$ 7,500.00	\$ 7,500.00	
Pumps	2	EA	\$ 5,000.00	\$ 10,000.00	
Interior Mechanical Piping	1	LS	\$ 7,500.00	\$ 7,500.00	isolation valves, check valves, piping
6-inch FM	2900	LF	\$ 40.00	\$ 116,000.00	
Miscellaneous Metals	1	LS	\$ 10,000.00	\$ 10,000.00	Pump guide rails, hatches, pipe supports, pump hoist
Excavation/Backfill/Stone Base	1	LS	\$ 35,000.00	\$ 35,000.00	
Instrumentation	1	LS	\$ 10,000.00	\$ 10,000.00	flow meter, level transducer, floats
PS #1 - Electrical Work					
Power/Controls/HVAC/SCADA	1	LS	\$ 40,000.00	\$ 40,000.00	25% of other costs (not FM), new control panel, new Mission Unit, reuse existing generated, electrical service remains
				\$ 313,100.00	
PS #2 Site Work					
Permanent SWM / Temp SCE / Clearing+Grubbing	1	LS	\$20,000	\$ 20,000.00	
Site Work to Create Access to Site from State Road	1	LS	\$25,000	\$ 25,000.00	more than PS #1 b/c of MDSHA requirements
Paving	1	LS	\$7,500	\$ 7,500.00	inside fenced area
Fencing Around New Site	160	LF	\$60	\$ 9,600.00	fence around 50 x 30 area,includes gate
PS #2 Components					
Wet Well	1	LS	\$ 15,000.00	\$ 15,000.00	
Valve Vault	1	LS	\$ 7,500.00	\$ 7,500.00	
Pumps	2	EA	\$ 2,500.00	\$ 5,000.00	
Interior Mechanical Piping	1	LS	\$ 5,000.00	\$ 5,000.00	isolation valves, check valves, piping
Reconnect to existing FM	1	LS	\$ 5,000.00	\$ 5,000.00	
Miscellaneous Metals	1	LS	\$ 10,000.00	\$ 10,000.00	Pump guide rails, hatches, pipe supports, pump hoist
Excavation/Backfill/Stone Base	1	LS	\$ 25,000.00	\$ 25,000.00	
Instrumentation	1	LS	\$ 10,000.00	\$ 10,000.00	flow meter, level transducer, floats
PS #2 - Electrical Work					
Power/Controls/HVAC/SCADA	1	LS	\$ 47,000.00	\$ 47,000.00	25% of all other costs, new control panel, new Mission Unit, service work, generator work
60 KW Generator/ATS	1	LS	\$ 30,000.00	\$ 30,000.00	
Upgrade to 3-phase/240V service	1	LS	\$ 10,000.00	\$ 10,000.00	
				\$ 231,600.00	
			CONSTRUCTION TOTAL	\$ 544,700.00	
				SUBTOTAL (A)	\$544,700.00
				Mobilization (10% of A)	\$54,000.00
				CONSTRUCTION TOTAL (B)	\$598,700
				Contingency (25% of B)	\$149,700.00
				Bonds, Legal Council, Administration Costs	\$30,000.00
				LAND ACQUISITION FOR TWO PUMP STATIONS- HIGHLY VARIABLE	\$30,000.00
				Engineering: Design/Permitting/Bidding	\$67,400.00
				Engineering: Construction/Post-Construction	\$45,000.00
				Inspection for 9-Month Construction Contract Duration (196 WORK DAYS)	\$117,600.00
				NON-CONSTRUCTION PROJECT COST (C)	\$439,700
				TOTAL PROJECT COST (B + C)	\$1,038,400

COUNTY PAID \$20,000 FOR 0.567 ACRES IN 1993 FOR THE WTP SITE. AT 2% INTEREST, THAT IS APPROXIMATELY \$60,000 PER ACRE IN 2020 DOLLARS

The background is a solid blue color with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. They are concentrated more towards the top and bottom edges, with a few smaller ones in the center.

KENNEDYVILLE WATER SYSTEM AND WASTEWATER PS STUDY

JUNE 1, 2020

The background is a solid light blue color. It is decorated with several realistic water droplets of various sizes. Some droplets are in the top left corner, some in the top right, and a cluster of larger droplets is in the bottom right corner. The droplets have highlights and shadows, giving them a three-dimensional appearance.

Purpose:

The study is necessary to update existing conditions, costs and planned growth in the Kennedyville area for water and sewer service.

The study will provide information to make decisions for providing water and sewer service for current and future development and investment in infrastructure.

Background:

The previous study was prepared in June 2002 to determine improvements for serving the Kennedyville Priority Funding Area (PFA). Projections for future development were identified as follows:

Parcel	Size (Acres)	Type	Projected EDU's
5	32.47	Res	129
32	.82	Comm	2
67	.115	Res	1
73	20.5	Res	2
192	.534	Res	2
209	.695	Comm	2
Total			138

The Village at Kennedyville

Projected Flow 34,500 gpd



2002 Recommended Water/Wastewater Infrastructure Improvements

Based on Projected Development

Water

Evaluation of existing well capacity and replacement if needed

Additional Sand Filter Capacity

Additional Chlorine Contact Capacity

New 50,000 Gallon Elevated Storage Tank

Replacement of old 2 and 4 inch water mains with 6 inch pipe

New Development to install 8 inch pipe.

Wastewater

Upgrade of Pump Station #1, 2 and 3

Expansion of Wastewater Treatment Capacity to 60,000 gpd



- Due to leakage in the original wastewater lagoon system, the County under a consent order with MDE completed construction in 2006 of a new wastewater treatment facility with an increase in capacity from 30,000 to 60,000 gpd.
- The County funded construction and established an allocation fee to cover debt service for the additional capacity for new development.
- In 2005, the developer of Parcel 5, the Village at Kennedyville (90) EDU's) agreed to upgrade the water treatment plant in two phases. Phase 1 upgraded treatment for iron and hardness. Phase 2 included a 50,000 gallon ground storage tank, upgrade of pump station #2 and the replacement supply well.
- The developer and County agreed that the developer would design, permit and construct these improvements at their cost and pay a quarterly vacant lot fee for the 25 EDU's in Phase 1 in lieu paying the allocation fees.
- In 2008 Amendments to the PFA were made.
- In 2011, the developer ceased development after constructing 25 EDU's and the sale of two vacant lots. None of the Phase 1 improvements were constructed. The developer surrendered a Letter of Credit to the County in the amount of \$165,062.50.

- In 2013, a new developer for Phase 2 agreed to development of 59 residential and 6 commercial EDU's and completion of the improvements as follows:
 1. Prior to issuance of the 4th building permit to design, permit and install the replacement water supply well.
 2. After issuance of the 20th building permit design permit and install the water filter system, ground storage tank and upgrade of pump station #2.
- In 2018 three residential units in Phase 2 were completed.
- In the 18 years since the approval of the original development agreement the following has changed:
 1. More recent information is available on actual water and wastewater demand.
 2. Construction costs have increased.
 3. Existing infrastructure is reaching the end of it's service life.
 4. Additional land is available for development.
 5. New technology is available for making the improvements.
 6. Regulatory changes may have occurred that impact the design of the improvements.
- In 2019 the Commissioners approved a Water System and Wastewater Pump Station Study in order to address these issues.

2020 Existing Conditions – Water System

Customers – 108 Water Demand - 18,140 gallons per day

Well No. 1- 70 gpm (1997) Well No. 2- 125 gpm (1967)

Well Capacity 43,262 gpd 126 EDU's remaining

Water Treatment Capacity – 55,622 gallons per day (1996)

Limiting system - Filters 187 EDU's Remaining

Storage Volume – 75,000 gallons (1997)

Storage Capacity 30,000 gpd 59 EDU's remaining

Existing Conditions – Wastewater System

Wastewater Treatment Capacity – 60,000 gallons per day

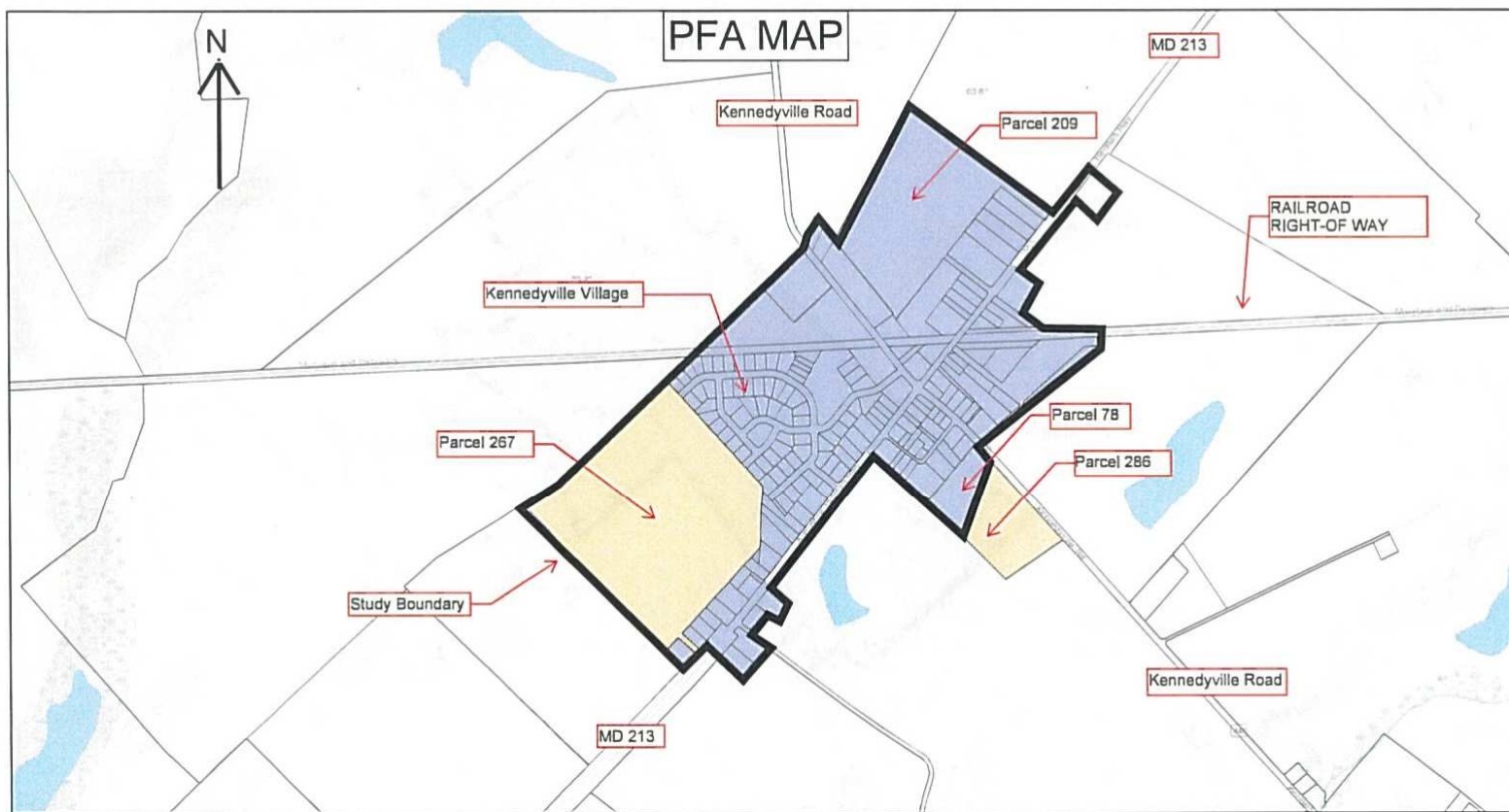
Customers - 108

Wastewater Demand - 16,945 gallons per day

215 EDU's remaining

Pump stations #1, 2 and 3 are in need of replacement and upgrades.

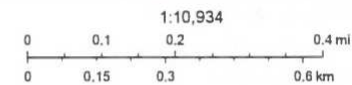
Kent County Parcel Viewer - ArcGIS Web Map



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- Parcels 2017
- Priority Funding Area
- Community with water and/or sewer
- MDP Comment Area

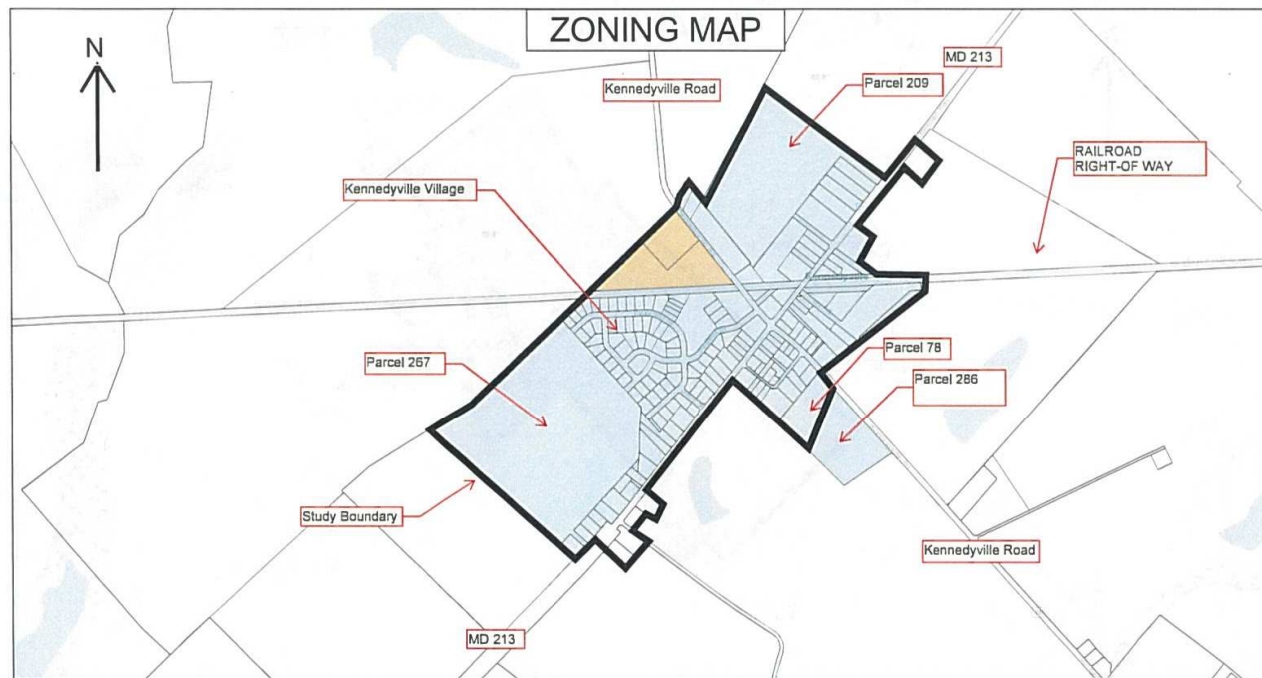
KENNEDYVILLE WATER STUDY- APPENDIX A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Web AppBuilder for ArcGIS
VITA, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

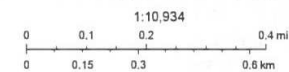
Kent County Parcel Viewer - ArcGIS Web Map



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- Parcels 2017
- Unincorporated Zoning
 - Agricultural Zoning District
 - Village
 - Employment Center

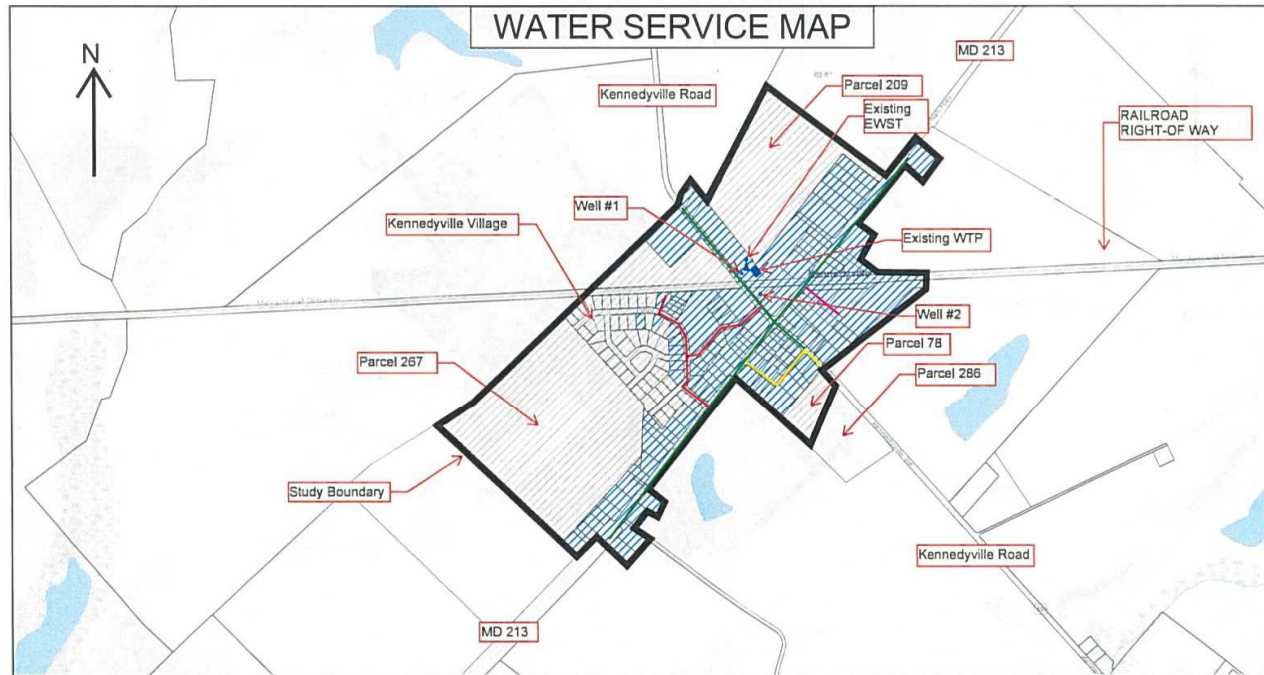
KENNEDYVILLE
WATER STUDY-
APPENDIX A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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Kent County Parcel Viewer - ArcGIS Web Map



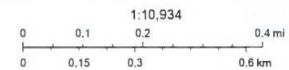
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Parcels 2017
Water Service
Existing Water Service
Planned Water Service

Pipe Size Legend

2" Water Main
4" Water Main
6" Water Main
8" Water Main (Assumed)

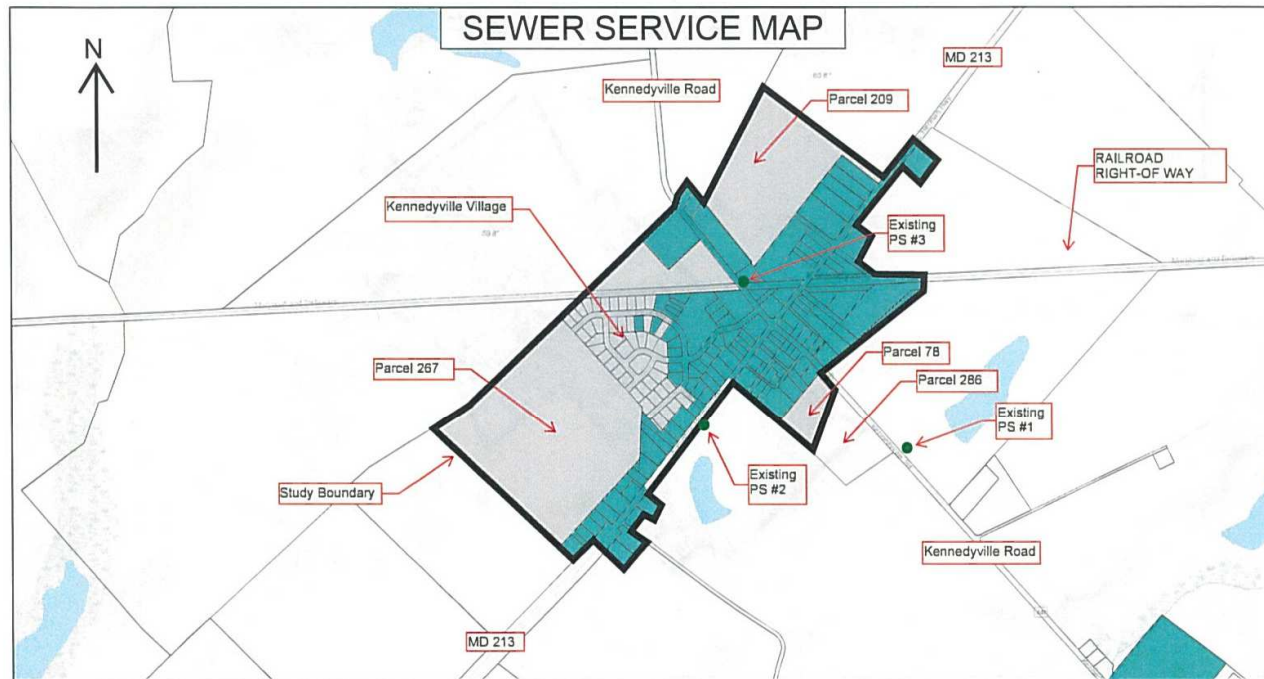
KENNEDYVILLE
WATER STUDY-
APPENDIX A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCO, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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Kent County Parcel Viewer - ArcGIS Web Map



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Parcels 2017

Sewer Service

Existing Sewer Service

Planned Sewer Service

KENNEDYVILLE
WATER STUDY-
APPENDIX A

1:10,934

0 0.1 0.2 0.4 mi
0 0.15 0.3 0.6 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Web AppBuilder for ArcGIS
VITA, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METINASA, EPA, USDA

Projected Development Demand

Parcel	Size (Acres)	Type	Projected EDU's
5	32.47	Res	56
5		Com	6
267	44.6	Res	178
209	23.18	Res	92
78	3.31	Res	13
Total			345

Remaining Village at Kennedyville

Existing Water Demand 18,140 gpd
Projected New Development 69,000 gpd
87,140 gpd say 90,000 gpd

Considerations:

Developer of Kennedyville 90 EDU's per agreement is responsible for:

- **Installation of 1 supply well**
- **Installation of water filtration treatment system sized for existing and 90 EDU's of capacity including backwash equalization (pump station #3 upgrade).**
- **Upgrade of pump station #2**
- **Installation of a 50,000 gallon ground storage tank including high service pumps and appurtenances.**

Future Development would involve:

- **Installation of an additional supply well**
- **Upsizing water filtration treatment system for 283 EDU's**
- **Upsizing ground storage tank to 72,000 gallons**
- **Improvements to pump station #1**

283 EDU's would generate \$4.58M in allocation fees at \$16,200/EDU.

Economy of scale to make sizing and improvements at the same time.



QUESTIONS

Village at Kennedyville PWA Discussion Commissioners 7/28/20 Meeting

90 EDU's Approved	Phase 1	25 EDU's	20 Built
	Phase 2	65 EDU's	3 Built

Vacant Lot fees collected for Phase 1
No vacant lot fees collected for Phase 2

No Allocation fees have been collected.

Fees waived to date	\$ 340,600
Potential fees remaining	\$1,085,400

County available funding for PWA required improvements: \$145,162.50.

Issues:

1. Potential for additional development
2. Interest in landowners to develop property.
3. County participation in expanding water/wastewater capacity for development.
4. Funding of water/wastewater improvements.
5. Providing sufficient security for assuring developer improvements are constructed.
6. Revising schedule for offsite improvements to be constructed.
7. Resolving access to public roads (dedication of Phase 1 streets).
8. Construction of Walking Trail prior to 5th building permit in Phase 2.
9. Revisions to Public Works Agreement.

Replacement well permitting and estimated timeline:

For further development of Phase 2 of the Village of Kennedyville a new raw water well would require an MDE construction permit (plans and specifications signed by a professional engineer registered in Maryland), an administrative change to the Groundwater Appropriations Permit (GAP), a siting meeting with MDE water supply division and the County Health Department, a well construction permit obtained by the well driller, a geophysical log of the new well as it is drilled, draw down testing of the new well to confirm adequate yield, testing of the well water in accordance with MDE's self-monitoring forms (pH, bacteria, VOCs, etc), and a Certificate of Potability (COP) issued by MDE based on laboratory testing of the new raw water well.

Additionally, when the new well(s) is complete, the existing well will need to be abandoned in accordance with Code of Maryland (COMAR) regulations. A general time frame for design, permitting, and construction of a new raw potable water well is approximately 210 days. It's estimated to take 150 days to have the required siting meeting, coordinate with MDE's water supply division for GAP modification, prepare an MDE package for a construction permit, review by MDE, response to MDE's review comments, and final review/issuance of the construction permit by MDE. It is estimated to take 60 days for well construction, well development, raw water testing, and coordination with MDE to get a COP.



Bill Mackey, Director, Planning, Housing, and Zoning
2/6/2024
County Commissioners Meeting

Item Summary:

Proposed Land Use Ordinance Discussion

ATTACHMENTS:

Description

PPT slide for CHRB re LUO 2024-02-06

LUO for Introduction 2024-02-06



Land Use Ordinance

- Implements 2018 Comp Plan
- Three years of public input
- Legislative process (Round 1)

First Step: Introduction



Land Use Ordinance

- Combines zoning districts
- Streamlines processes
- Condenses repetition

Second Step: Public Hearing



Land Use Ordinance

- CRU Task Force Discussions
- Planning Commission Edits
- Commissioners Introduction

Third Step: Adoption



Land Use Ordinance

- MXD and MXDCA Districts
- Restaurants with drive-thru
- Short-Term Vacation Rentals

*Round 2: Critical Area
Commission Review*



LAND USE ORDINANCE
FEBRUARY 6, 2024
LEGISLATIVE PROCESS
INTRODUCTION

PLANNING COMMISSION MEMBERS

Elizabeth H. Morris, Chair
Kim Kohl, Chair
F. Joseph Hickman, Chair
William S. Sutton, Vice Chair
Paul J. Ruge, Vice Chair
Bill Crowding
Doug Megargee
James E. Saunders
Paula Reeder
Ray Strong
Sean Jones
Tyler Brown

COMPREHENSIVE REZONING TASK FORCE MEMBERS

Cindy Genther
Bryan Greenwood
Pat Langenfelder
Al Nickerson
Buck Nickerson
Bill Norris
Jim Rich
Sam Shoge

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ARTICLE I. ENACTMENT

SECTION 1 GENERAL PROVISIONS**1.1 TITLE**

This Ordinance shall be known as the Land Use Ordinance for Kent County, Maryland. It provides a unified, comprehensive approach to *regulations* that affect land use including *Zoning, Subdivision, Forest Conservation, Floodplain Management, Sediment and Erosion Control, Stormwater Management*, and the Chesapeake Bay *Critical Area*.

1.2 PURPOSE AND INTENT

The purpose of this Ordinance is to implement the Kent County *Comprehensive Plan* and to promote the health, safety, general welfare, and prosperity of the present and future inhabitants of Kent County, by:

- (A) Giving effect to policies and proposals of the Kent County *Comprehensive Plan*.
- (B) Reducing financial burdens imposed on the community by preventing unwise land use that requires costly *infrastructure*, harms existing communities, or is in areas of natural hazards such as *floodplains, shoreline cliffs, steep slopes*, and areas subject to *erosion*.
- (C) Minimizing damage to public and private property.
- (D) Providing for the preservation and enhancement of the attractiveness of Kent County through good design and arrangement, and the provision of adequate *public utilities, open space, services, and facilities*.
- (E) Enhancing the County's employment base.
- (F) Protecting and preserving Kent County's agricultural industry and the prime agricultural *soils* essential to the conduct of this industry.
- (G) Providing efficiency in the process of *development*.
- (H) Protecting Kent County's significant *historic structures* and areas from destruction or encroachment.
- (I) Protecting the biological and environmental quality of Kent County, including *forest, water quality, habitat, and wetlands*.
- (J) Reducing the effects of land use on land *erosion* or stream *channel erosion*.
- (K) Dividing the territory of Kent County, Maryland into zoning districts; governing the use of the land and the intensity of such use, including *bulk* and height.
- (L) Implementing the *Floodplain Management* provisions to provide public awareness for *flooding* prevention, to protect individuals from unknowingly buying land and *structures* subject to *flood* hazard, and to encourage appropriate construction practices in order to prevent or minimize future *flood* damage.

ARTICLE I. ENACTMENT

SECTION 1. GENERAL PROVISIONS

- (M) Implementing the *Stormwater Management* provisions to reduce local *flooding*, to control *adverse impacts* associated with increased *stormwater*, and to improve or substantially maintain after *development* the predevelopment runoff characteristics of the *site*.

1.3 APPLICABILITY

- (A) The provisions of this Ordinance shall apply to the unincorporated territory of Kent County, Maryland.
- (B) Except as otherwise provided by this Ordinance, all land use that occurs within the unincorporated territory of Kent County, Maryland shall comply with the applicable terms and requirements of this Ordinance.
- (C) No *lot* shall be created which does not conform to the applicable requirements of this Ordinance, unless a variance is granted by the Board of Appeals.

1.4 COMPLIANCE WITH REGULATIONS

Hereafter, the following shall not take place unless in conformity with the *regulations* set forth in this Ordinance:

- (A) Change of a use of any land and *structures*, except that existing *structures* may be used for any permitted use, special exception, or *accessory use* allowed in the zoning district where they are located.
- (B) Construction, reconstruction, modification, extension, expansion, or relocation of *buildings* or *structures*.
- (C) Placement of fill, grading, and land *excavation*.
- (D) Land and forest *clearing*.
- (E) Dumping or storage of materials.
- (F) *Subdivisions* including lot line adjustments.

1.5 VALIDITY OF ORDINANCE

If any section, paragraph, subsection, clause, phrase, or provision of this Ordinance shall be judged invalid or held unconstitutional, the same shall not affect the validity of this Ordinance as a whole or any part of the provisions thereof, other than the part so decided to be invalid or unconstitutional.

1.6 REPEAL OF CONFLICTING ORDINANCES

The Kent County Land Use Ordinance adopted December 3, 2002, and all amendments are hereby replaced by this Ordinance and any amendments from time to time.

1.7 CONFLICT WITHIN ORDINANCE

In the event of any conflict between the limitations, requirements, or standards contained in different provisions of this Ordinance, the more restrictive provision shall apply, unless context would imply otherwise. In the case of any ambiguities or discrepancies within or between these provisions, such matters shall be explained and interpreted, if possible, in a manner which gives effect to each part and which avoids or minimizes conflicts among such parts, as may be possible.

1.8 CONFLICT WITH OTHER REGULATIONS

In the event that this regulation conflicts with other federal, State, or local *regulations*, the more restrictive regulation shall prevail, except for the Critical Area.

SECTION 2 ZONING MAP

2.1 MAP INCORPORATION INTO ZONING CODE

The boundaries of zoning districts as shown on the official zoning maps of Kent County are hereby made a part of this chapter. The official zoning maps, together with amendments thereto, shall be kept by the Planning Department in both digital and printed form. In the event of a conflict between the digital and printed versions, the digital version shall control. Copies of the Official Zoning Map shall be available for inspection in the Department of Planning and Zoning.

2.2 REVISION OF THE DISTRICT MAP

No later than March 31 of the year following adoption of this Ordinance, copies of the map shall be available to the public.

2.3 PERIODIC REVIEW

Following adoption of a new or revised Kent County Comprehensive Plan, the *Planning Commission* and County Commissioners shall review the land use *regulations* and zoning district map for consistency with the *Comprehensive Plan*, deficiencies or difficulties in administration, or any other reason the County Commissioners may determine. This Ordinance does not provide regulations for the Comprehensive Rezoning process. The Comprehensive Rezoning process may be set forth independently of this Ordinance by policy, practice, or if desired by adopted Resolution.

SECTION 3 AMENDMENTS**3.1 APPLICATION FOR ZONING MAP AMENDMENT**

1. The application for an amendment to the Zoning Map of this Land Use Ordinance shall, at a minimum, specify the map and parcels sought to be amended, the current and proposed zoning classification, and recite the reasons for the proposed amendment.
2. Applications for map amendments to change the zoning classification of a property may only be submitted by the property owner or owners of the subject property for which a zoning map amendment is being requested, or by the County Commissioners of Kent County. The Planning Commission may make a recommendation to the County Commissioners to request the initiation of an application.
3. Per Md. Code Ann., Land Use, § 4-204, an application for a zoning map amendment, other than an amendment proposed during a Comprehensive Rezoning process, must meet the requirements of the change or mistake rule. Applicants are advised to seek legal counsel.
4. Except in the case of a Countywide comprehensive rezoning, the County Commissioners may grant an amendment to change the zoning classification for a property based on a finding that there was either: (a) a substantial change in the character of the neighborhood where the property is located; or (b) a mistake in the existing zoning classification.
5. An application may not be filed for a reclassification of all or part of any land for which a reclassification has been denied by the legislative body on the merits in the 12 months before the date of the application, per Md. Code Ann., Land Use, § 4-204.

3.2 APPLICATION FOR ZONING TEXT AMENDMENT

1. The County Commissioners may amend, supplement, or change the regulations of this Ordinance. Any zoning text amendment may be initiated by resolution of the County Commissioners, motion of the *Planning Commission*, submittal by County staff, or petition of any person using forms specified by the Department.
2. The application for a zoning text amendment to this Ordinance will state the article, section, and paragraph sought to be amended. The application shall contain the text of the proposed amendment and shall recite the reasons for such proposed change.

3.3 AMENDMENT PROCESS

1. The Board of County Commissioners will submit its own proposals for amendments to the *Planning Commission* for review and recommendation, before taking any action on any of its own proposed zoning map or text amendments, revisions, supplements, or changes.
2. Applications for zoning map or text amendments initiated by members of the public, the Planning Commission, or staff will first be submitted to the Planning Commission for review and recommendation. The Planning Commission may choose not to forward its

ARTICLE I. ENACTMENT
SECTION 3. AMENDMENTS

own applications; all other applications will be forwarded to the County Commissioners and presented for introduction. The Board of County Commissioners may choose whether to introduce amendments at its discretion. Applications not introduced may be submitted again at any time. Failure to introduce amendments does not constitute denial.

3. The *Planning Commission* may hold a public hearing with a notice a newspaper having general circulation in Kent County on any proposed map or text amendment, revision, supplement, or change before submitting its recommendation to the County Commissioners. The *Planning Commission* may request any pertinent data and information, as it deems necessary.
4. For a zoning map amendment, the property shall also be conspicuously posted prior to the hearing. Published notices shall refer to places where the zoning map amendment may be examined.
5. When reviewing a zoning text amendment, the *Planning Commission* shall address:
 - (A) How the proposed zoning text amendment would serve the public interest in general; and
 - (B) The extent to which the proposed text amendment complies with or deviates from the Comprehensive Plan and the *Critical Area Law*.
6. When reviewing a zoning map amendment, the *Planning Commission* will also address the suitability of the property in question for the uses permitted in the proposed district.
7. The *Planning Commission* will not recommend the adoption of the amendment unless it finds that the adoption of the amendment is in the public interest, in that, it furthers the health, safety, and general welfare of the community, as well as the interests of an individual landowner.
8. Failure of the *Planning Commission* to report to the County Commissioners within 60 days following its first meeting after the proposal was referred will be deemed approval.
9. Before approving any proposed zoning map or text amendment, the Board of County Commissioners shall hold a public hearing. Notice of any public hearing shall be given prior to the date of the hearing and published in a newspaper having general circulation in Kent County. For a zoning map amendment, the property shall also be conspicuously posted prior to the hearing. The published notices shall refer to places where the plans, ordinances, or zoning map or text amendments may be examined.
10. The County Commissioners shall render a decision within a reasonable timeframe. An application may be deferred for additional research.
11. Petitions for zoning map or text amendments, revisions, supplements, or changes denied by the County Commissioners on their merits, or substantially similar petitions, shall not be allowed to be filed by an applicant for 12 months after the denial. The Board of County Commissioners itself may propose a similar petition of its own at any time.
12. Any persons aggrieved by any decision of the County Commissioners may within 30 days after such decision appeal to the Circuit Court of Kent County.

13. Amendments dealing with *Critical Area* Districts or *Critical Area* related items shall not be effective, until effective under Md. Code Ann., Natural Resources § 8-1809, as the same may be amended from time to time.

SECTION 4 BOARDS AND COMMISSIONS

It is the intent of this section to identify the duties of the Board of Appeals and *Planning Commission*. Each Board or Commission shall adopt rules of its business, such rules to be made available to the public upon request.

4.1 BOARD OF APPEALS

The Board of Appeals shall have the following powers:

1. Administrative Appeals - To hear and decide appeals of any decision or determination made by the Department or any County staff member in the enforcement and administration of this Ordinance, unless clearly specified otherwise in this Ordinance.
2. Special Exceptions - To hear and decide applications for special exceptions as set forth herein.
3. *Variances* - To authorize, upon application, *variances* related to *yard setbacks*, height, *bulk*, parking, signs, loading, *shoreline cliff*, *15% slope*, *pier length*, *impervious surface*, *stream protection corridor*, *forest conservation retention* provisions, *floodplain* requirements, *buffer* requirements, and any non-use-related provision of this Ordinance.
4. Other Powers - The Board may have additional powers as may be designated by the County Commissioners of Kent County.
5. Conditions - In the granting of *variances*, appeals, and special exceptions, the Board may limit the approval by such conditions as the case may require.
6. Right of Entry - The Board of Appeals is hereby authorized to enter upon open land in Kent County for the purpose of reviewing applications pending before the Board. Such entry is only to be in the form of a publicly noticed and ADA-accessible public meeting on the site.

4.2 PLANNING COMMISSION

The *Planning Commission* shall have the following powers:

1. *Comprehensive Plan* – To develop and approve a plan which shall be recommended to the legislative body for adoption. The plan is the principal document outlining County direction, policy, and action regarding land use. While other plans and ordinances provide more detailed information and policy, all plans and laws shall be consistent with and conform to the *Comprehensive Plan* in the manner as prescribed by Maryland State law, as set forth in Md. Code Ann., Land Use, §1-303.

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2. Recommendations to County Commissioners – To make recommendations to the County Commissioners on Land Use Ordinance text amendments, zoning map amendments, and courses of actions necessary to implement the *Comprehensive Plan*.
3. Recommendations to the Board of Appeals – To make recommendations to the Board of Appeals on *variances* and certain special exceptions as set forth in this Ordinance. The Commission shall address the extent to which the *variance* or special exception complies with or deviates from the *Comprehensive Plan*. The Commission may recommend conditions and limitations on the approval of *variances* and special exceptions.
4. *Subdivisions* – To review and approve *subdivisions* of land as set forth in this Ordinance and Md. Code Ann., Land Use, §5-105.
5. *Site plans* – To review and approve *site plans* as set forth in this Ordinance.
6. Other Powers – The *Planning Commission* may have additional powers as may be designated by the County Commissioners of Kent County.
7. Conditions – In the granting of *subdivisions* and *site plans*, the *Commission* may limit the approval by such conditions as the case may require.
8. Right of Entry – The *Planning Commission* is hereby authorized to enter upon open land in Kent County for the purpose of reviewing applications pending before the Commission. Such entry is only to be in the form of a publicly noticed and ADA-accessible public meeting on the site.

SECTION 5 NONCONFORMITIES

5.1 PURPOSE.

1. This article is intended to allow lawfully established nonconforming lots, uses and structures to continue, but to limit the number and extent of nonconforming uses and structures by prohibiting or restricting enlargement, reestablishment after abandonment, reconstruction or change in use.
2. Except as otherwise provided in this article, any nonconforming lot, structure or use may continue, provided it remains otherwise lawful.

5.2 CERTIFICATION OF NONCONFORMING STATUS

1. Authority; certification required for development

The Board of Appeals shall have the authority to certify that a lot, structure, or use is legally nonconforming. An application to the Department of Planning, Housing, and Zoning for certification of nonconforming status for a lot, structure or use:

- (A) May be submitted by a property owner at any time.
- (B) A public hearing will be required, and the process for notice will be utilized as set forth in Article IV, Section 1.6.

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2. Application

The application shall include, as applicable:

- (A) Documentation that the lot was legally created.
- (B) Documentation that the structure was legally constructed, including all structure dimensions and lot coverage.
- (C) Documentation that the use was legally established, continuously maintained and not abandoned since its establishment, including documentation of the area of land and structures devoted to the nonconforming use.

3. Burden of proof

- (A) The burden of establishing the legal nonconforming status shall be upon the owner of the land.
- (B) The casual, temporary, intermittent or illegal use of land is insufficient to establish the existence of a nonconforming use or structure.
- (C) The existence of a nonconforming use shall not be construed to establish a nonconforming use on the entire premises. The portion of the premises where legal nonconforming use exists must be defined.

4. Certificate of nonconformity

Upon finding that a legal nonconforming lot, structure, or use exists, the Board of Appeals shall issue a certificate of nonconformity. The certificate shall specify the nature and extent of the legal nonconformity, including the land and building area devoted to a nonconforming use, the extent of nonconforming lot coverage, the dimensions of nonconforming structures, and other dimensions as applicable.

5. Appeal

The Board of Appeal's determination may be appealed to the Circuit Court within 30 days of certificate issuance.

6. Register of certificates

The Department shall maintain a register of certificates issued for nonconforming lots, structures, and uses.

NONCONFORMING USES

5.3 LEGAL NONCONFORMING USES, DEFINED

1. Any use of a *lot* shall be considered a legal nonconforming use, if it:

- (A) Does not conform to one or more use *regulations* of this Ordinance;
- (B) Existed on the effective date of this Ordinance;

ARTICLE I. ENACTMENT
SECTION 5. NONCONFORMITIES

- (C) Has not been abandoned; and
 - (D) Either conformed to the *regulations* of or was considered to be a legal nonconforming use by the Land Use Ordinance in effect the day before the effective date of this Land Use Ordinance.
- 2. The existence of a legal nonconforming use shall be presumed valid, based on documents that indicate evidence of the use prior to the adoption of this Ordinance, submitted by the property owner, lessee, or other relevant party, unless specifically determined by the Department to be insufficient to validate the presence of the use.
 - 3. The intermittent or illegal use of a *lot* shall not be sufficient to establish the existence of a legal nonconforming use.
 - 4. The existence of a use on a part of a *lot* shall not be construed to establish a legal nonconforming use on any other part of such *lot*.

5.4 CONTINUANCE OF LEGAL NONCONFORMING USES

A legal nonconforming use shall be permitted to continue, subject to *regulations* of this Section.

5.5 ABANDONMENT OF LEGAL NONCONFORMING USES

For the purposes of this Ordinance, the discontinuance of a use for a period exceeding two years shall constitute abandonment of such use. Whether a nonconforming use has discontinued is a question of fact and shall be decided by the Board of Appeals utilizing the process in §5.2. A public hearing will be required, and the process for notice will be utilized as set forth in Article IV.

5.6 LEGAL NONCONFORMING USES IN THE CRITICAL AREA

Any legal nonconforming use within the *Critical Area* which existed on April 12, 1988, may continue without intensification or expansion unless such use has been abandoned for more than one year, or otherwise in accordance with Section 27.01.02.07 of the Code of Maryland *Regulations*.

5.7 ENLARGEMENT OF LEGAL NONCONFORMING USES

Except in the case of private schools or *houses of worship* that existed prior to April 12, 1988, no legal nonconforming use may be enlarged, increased, or extended so as to occupy any portion of a *lot* or *structure* where the legal nonconforming use did not exist on the effective date of this Ordinance or so as to occupy any portion of a *lot* or *structure* where the use was abandoned.

5.8 ORDINARY REPAIR AND MAINTENANCE

The normal maintenance and repair, or the replacement, installation, or relocation of nonbearing partitions, fixtures, wiring, or plumbing may be performed on any *structure* that is devoted in whole or in part to a legal nonconforming use. Life safety code updates and requirements for any improvements related to ADA accessibility, or any other required update, change, improvement,

or additional equipment that is required by any governmental agency or quasi-public agency will not be considered to affect the status of the use including any required expansions under such.

NONCONFORMING STRUCTURES

5.9 LEGAL NONCONFORMING STRUCTURES, DEFINED

1. Any *structure* shall be considered a legal nonconforming *structure* if it:
 - (A) Does not conform to one or more non-use *regulations* of this Ordinance;
 - (B) Existed on the effective date of this Ordinance;
 - (C) Is not a *sign*; and
 - (D) Either conformed to the *regulations* of or was considered to be a legal nonconforming *structure* by the Land Use Ordinance in effect the day before the effective date of this Land Use Ordinance.

5.10 CONTINUANCE OF LEGAL NONCONFORMING STRUCTURES

A legal nonconforming *structure* may continue to exist, subject to the *regulations* of this Section.

5.11 ORDINARY REPAIR AND MAINTENANCE OF LEGAL NONCONFORMING STRUCTURES

The normal maintenance and repair of a legal nonconforming *structure* may be performed, provided that any portion of the *structure* undergoing such maintenance or repair either (1) conforms to all non-use *regulations* of this Ordinance, or (2) does not increase its degree of structural nonconformity.

5.12 REPAIR OR RECONSTRUCTION OF LEGAL NONCONFORMING STRUCTURES AFTER CALAMITY

1. There shall be no repair or reconstruction of a damaged legal nonconforming *structure* unless all of the following conditions are met:
 - (A) The damage, destruction, or removal of the *structure* was not voluntarily caused by the property owner or property owner's agent;
 - (B) A permit is obtained prior to repair or reconstruction of the damaged or destroyed *structure*;
 - (C) Repair or reconstruction begins within two years after the calamity; and
 - (D) The repair or reconstruction does not result in an increase in the degree of nonconformity.

2. Nothing in this Ordinance shall be deemed to prevent the strengthening or restoring of a *structure* to a safe condition by order of a public official.

5.13 ALTERATIONS OR ENLARGEMENTS TO LEGAL NONCONFORMING STRUCTURES

No legal nonconforming *structure* may be altered or enlarged unless one or more of the following conditions are met:

1. The portion of the *structure* that is proposed to be altered or enlarged will, after the *alteration* or enlargement, comply with all standards and *regulations* in this Ordinance and will not increase the percent of *impervious surface* on the *lot* above that percent which is permitted by the Ordinance. If no regulatory maximum is established in the Ordinance, then this provision will not apply;
2. The legal nonconforming *structure* has been used as a private school without abandonment since April 12, 1988;
3. The legal nonconforming *structure* has been used as a *house of worship* without abandonment since April 12, 1988.
4. The legal nonconforming *structure* is a *dwelling* that existed as of April 12, 1988, and is located in the *modified buffer* and conforms to the standards set forth in this section.

5.14 EXPANSION OF EXISTING DWELLINGS IN THE MODIFIED BUFFER

Dwellings existing as of April 12, 1988, in the *modified buffer* may be enlarged, provided that:

1. All opportunities for expansion outside the minimum 100-foot *buffer* are exhausted; and
2. The enlargement is no closer to the *mean high water line* than the current dwelling; and
3. An area of *natural vegetation* equal to two times the footprint of the expansion shall be planted in the 100-foot *buffer*. If there is not enough area in the *buffer* to accommodate the required planting, the required planting shall occur on the same property.

5.15 RELOCATION OF NONCONFORMING STRUCTURES

No legal nonconforming *structure* shall be relocated in whole or in part to another *lot* or to another location on the same *lot* unless, after relocation, every portion of the *structure* conforms to all applicable *site development regulations*.

NONCONFORMING LOTS

5.16 NONCONFORMING LOTS, DEFINED

A *lot* which was legally created and properly recorded but which does not satisfy the minimum *lot area* and/or the minimum *lot width* applicable to the zoning district in which it is located shall be considered a nonconforming *lot*.

5.17 CONTINUANCE OF NONCONFORMING LOTS

1. Nonconforming *lots* may continue to exist, subject to the *regulations* of this Section.
2. Nonconforming *lots* may be occupied by any use permitted by the *regulations* for the district in which it is located.
3. Nonconforming *lots* may be developed with *structures* that comply with all *site development regulations* set forth by this Ordinance.
4. A variance for minimum lot area will not be required for any permitted use, allowable special exception, or permitted accessory use to be located on such a *lot*.

5.18 SUBDIVISION OF NONCONFORMING LOTS

A nonconforming *lot* may not be subdivided unless each resulting *lot* conforms to the minimum *lot area* and the minimum *lot width regulations* applicable to the zoning district in which it is located, unless a variance is granted by the Board of Appeals per this Ordinance.

NONCONFORMING SIGNS

5.19 NONCONFORMING SIGNS

Regulations concerning nonconforming signs may be found in Article V. Zoning, Section 3.16 of this Ordinance.

ARTICLE I. ENACTMENT
SECTION 5. NONCONFORMITIES

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ARTICLE II. DISTRICTS

ARTICLE II. DISTRICTS
SECTION 1. GENERAL PROVISIONS

SECTION 1 GENERAL PROVISIONS

1. ESTABLISHMENT OF ZONING DISTRICTS

In order to regulate and restrict the location and use of land and *structures* for trade, industry, residence, and for other purposes; to regulate and restrict the location, height, and size of *structures* hereafter erected or structurally altered; to regulate the size of *yards*, and other *open space*; and to regulate the *density* of population, these zoning districts are hereby established:

DISTRICT NAME	NOMINAL DENSITY	CRITICAL AREA
Agricultural (AZD)	1:30 units per acre	
Resource Conservation District (RCD)	1:20 units per acre	Critical Area
Rural Character (RC)	1:20 units per acre	
<i>Critical Area</i> Residential (CAR)	1:1 unit per acre	Critical Area
Community Residential (CR)	1:1 unit per acre	
Village (V)	8 units per acre	
Intense Village (IV)	12 units per acre	
Commercial (C)		
Commercial <i>Critical Area</i> (CCA)		Critical Area
Marine (M)	2 units per acre	Critical Area
Employment Center (EC)	1:20 units per acre* *intra-family transfer	
Employment Center Critical Area (ECCA)	1:20 units per acre* *intra-family transfer	Critical Area
Mixed Use Development (MXD)	12 dwelling units per acre for entire District	
Mixed Use Development Critical Area (MXDCA)	12 dwelling units per acre for entire District	Critical Area

2. CRITICAL AREA ZONING DISTRICTS GENERALLY

The 14 zoning districts in this Land Use Ordinance comprise two categories. The first category is the zoning districts for land located in the State of Maryland's Critical Area for the Chesapeake and Atlantic Coastal Bays. These are the RCD, CAR, CCA, M, ECCA, and MXDCA. State of Maryland Critical Area laws and regulations apply in these districts. The remaining districts are outside the Critical Area. Critical Area law and regulations do not apply; other laws and regulations such as Forest Conservation regulations apply. The Environmental Regulations are set forth in Article VI.

ARTICLE II. DISTRICTS
SECTION 1. GENERAL PROVISIONS

3. ESTABLISHMENT OF CRITICAL AREA LINE

The *Critical Area* Line shall be shown on the map designated as the “*Critical Area* Line Map of Kent County, Maryland” adopted by the County Commissioners. Such map delineates the *Critical Area* and shall be used to determine if such land is located within the *Critical Area*. For any land referenced to be within the *Critical Area* according to the “*Critical Area* Line Map of Kent County” one must follow the *Critical Area* requirements and *regulations* as follows:

- (A) If referenced on the “Zoning Map” as a *Critical Area* zoning district, then the established zoning district must be adhered by.
- (B) If according to the “*Critical Area* Line Map” the land is within the *Critical Area* then the requirements and *regulations* of the most similar *Critical Area* zoning district and the established *Critical Area* designation must be followed. This includes Title 27 of the Code of Maryland *Regulations* (COMAR).
- (C) This Section shall remain in effect while Kent County undertakes its Comprehensive Rezoning and Update process, which will result in a new comprehensive Land Use Ordinance and “Zoning Map.” The “*Critical Area* Line Map” will be incorporated into the “Zoning Map” and will no longer be a stand-alone map. Upon the adoption of the Comprehensive Land Use Ordinance and “Zoning Map,” this Section shall be abrogated and of no further force and effect. This Section may then be designated as “RESERVED.”

4. INTERPRETATION OF ZONING DISTRICT BOUNDARIES

Where uncertainties exist with respect to the district boundary, the following applies:

- (A) Where a boundary is given a position within a *street*, *alley*, or *easement*, the boundary shall be deemed to be the center of the *right of way* of the *street*, *alley*, or *easement*.
- (B) If the actual location of a *street*, *alley*, or *easement* varies from the location shown on the map, the actual location shall control.
- (C) Where a boundary is shown as being located a specific distance from a *street* or other physical feature, this distance shall control.
- (D) Where the district boundary approximately coincided with *lot lines*, the *lot line* shall be construed to be the district boundary unless otherwise indicated.
- (E) Where district boundaries do not coincide with *lot lines* and *streets*, and where no dimensions are shown, the location of the boundary shall be determined by use of the scale shown on the map.
- (F) Where a property is split by a zoning boundary including special districts, the rules of the zone shall apply to that portion of the land located in each district.

SECTION 2 AGRICULTURAL ZONING DISTRICT (AZD)**2.1 STATEMENT OF INTENT**

The purpose of the Agricultural Zoning District is to encourage the use of agricultural land for farming and other agricultural businesses and to limit the use of these lands for non-agricultural purposes. *Agriculture*, including animal husbandry on properties at least 20 acres or larger in size, is the preferred and primary use in the Agricultural Zoning District. In general, the District will consist of large contiguous areas predominantly devoted to *agriculture* or *forestry* and principally composed of Class I, II, and III *soils*. The District will contain some sensitive areas not well suited to *agriculture* to provide large contiguous areas. The sum of these areas consists of enough land to help maintain a derived-demand market for the necessary agricultural support services in the County. In addition, the District is to provide for *farm, home occupations, and cottage industries* that are compatible with *agriculture* as a means to further diversify the County's economy.



Figure 1: Diagram illustrating the desired, general character of the Agricultural Zoning District.

SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

2.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following. Detailed limitations and standards for these uses may be found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Agricultural Zoning District (AZD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Accessory <i>dwelling unit</i>					X
Accessory <i>farm buildings</i> , including barns, cribs, stables, sheds, tool rooms, shops, bins, tanks, and silos				X	
Accessory <i>farm dwellings</i>				X	
Accessory <i>off-street parking</i> and loading of non-commercial vehicles that have current licenses and are operable					X
Accessory <i>off-street parking</i> of one commercial vehicle					X
Accessory open or enclosed storage of <i>farm</i> materials, products, equipment, fertilizer or chemicals, or vehicles, located at least 200 feet from all property lines				X	
Accessory <i>roadside stand</i> for the sale of <i>farm</i> products				X	
Accessory residential storage <i>structures</i> with a ground <i>floor area</i> of more than 2,000 square feet or a height that exceeds the height of the primary residential structure on parcels less than 5 acres			A		
Accessory <i>structures</i> in a <i>front yard</i> of <i>through</i> or <i>corner lots</i>			A		
Adaptive reuse of existing structures in AZD, located on parcels under 20 acres			A		
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed			X		
Accessory sheds on properties less than 20 acres in area			A		
<i>Airports</i> , landing fields, helistops, or heliports			X		
<i>Agriculture</i>	X				
<i>Agritourism</i> on farms, defined in Article VII		X			
Animal husbandry, <i>aquaculture</i>		X			
Animal husbandry, farms, including horses		X			
Animal, husbandry, <i>animal feeding operations (AFO)</i>			X		
Animal husbandry, horses on non-farms			X		
Animal husbandry, limited livestock and fowl			X		

ARTICLE II. DISTRICTS
SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

Uses in Agricultural Zoning District (AZD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Animal husbandry, poultry houses (on farms only)	X				
Animal husbandry, poultry houses on parcels where the owner cannot handle the waste generated			X		
Animal husbandry, special – backyard chickens					X
Animal husbandry, special – small sheep or goats					X
Animal husbandry, <i>stable - private</i>	X				
Animal husbandry, <i>stable - commercial</i>	X				
Appurtenant signs					X
Assisted living facilities with five to eight beds			A		
Assisted living facilities with no more than four beds					X
<i>Camp, day or boarding</i> , private or commercial, but not recreational vehicle or migrant labor camps, for the purpose of conserving and enjoying the natural resources.	X				
Cemetery, including crematorium and mausoleum			X		
Circus or carnival, midways and amusement parks, maze fields and other temporary recreational uses, for a specified period	X				
Cottage industries, tradesmen and artisan shops			A		
<i>Country inns</i>			X		
<i>Country stores</i>			X		
<i>Day care groups</i>			A		
<i>Day care homes</i>					X
<i>Detached single family dwellings</i>	X				
<i>Dog kennels</i> , commercial					X
<i>Erosion and flood control structures</i>	X				
Exposition center or fairgrounds			B		
<i>Farm</i> brewery, as defined by the State of Maryland	X				
Farm employee housing			X		
Golf courses, public or private			X		
Greenhouses, wholesale or retail	X				
<i>Guest house</i> , one, but not including <i>mobile homes</i>				X	
<i>Home occupations</i> in main or accessory buildings					X
Hunting blinds, pits, or preserves	X				
Hunting trailer, one, temporary				X	
Livestock auction houses, located on farms in AZD			X		
Migrant labor camps			X		

ARTICLE II. DISTRICTS
SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

Uses in Agricultural Zoning District (AZD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
<i>Mobile homes</i> existing and in use as of January 16, 1996	X				
Multi-Family and Two-Family Dwellings, in AZD	X				
Parking of commercial vehicles on a farm				X	
<i>Personal wireless facility towers</i>			X		
<i>Personal wireless facilities</i> , collocated on existing towers	X				
<i>Private garages, swimming pools, game courts, and other customary outbuildings and structures</i>					X
Private schools			X		
Public and private <i>forests</i> , wildlife reservations and similar conservation projects	X				
Public and private parks and playgrounds for the purpose of conserving and enjoying natural resources.	X				
<i>Public landings</i>			B		
Public uses, <i>buildings</i> , and utilities			X		
Railroad <i>right of ways</i>	X				
<i>Retreats</i>			X		
Rifle and pistol ranges			B		
<i>Roadside stands</i>					X
<i>Rural inns</i>			X		
Sand and gravel pits, including <i>excavation</i> or extraction			X		
<i>Sanitary landfill</i> or rubblefill, public			X		
Satellite dish, private, with an antenna of 3 feet or less in diameter					X
Satellite dish, private, with an antenna exceeding 3 feet in diameter					X
<i>Sawmills</i> and mulching operations, temporary, for cutting timber and landscaping materials grown on the <i>premises</i>	X				
School buses, parked, limited to five				X	
School buses, parked, limited to two					X
Short-term vacation rentals (STVR)	X				
Solar energy systems, small					X
Solar energy systems, utility scale			X		
Storage of boats, campers, boat trailers, and camper trailers					X
<i>Structures</i> for the buying, processing, and/or sale of animal products, commercial, located at least 600 feet from all property lines			X		

ARTICLE II. DISTRICTS
SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

Uses in Agricultural Zoning District (AZD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
<i>Structures</i> for the buying, processing, and/or sale of non-animal farm products related to <i>agriculture</i> no more than 10,000 square feet in floor area	X				
<i>Structures</i> for the buying, processing, and/or sale of non-animal <i>farm</i> products related to <i>agriculture</i> , over 10,000 square feet in floor area but less than 50,000 square feet in area			B		
Temporary <i>MET Tower</i> of any height					X
Veterinary <i>hospitals</i> or <i>clinics</i> and animal shelters	X				
Waste management <i>structures</i> , where not otherwise stipulated in this Ordinance				X	
Wedding venues on farms with Board of Appeals approval			X		
<i>Wind energy systems, small</i>			X		
<i>Wind energy systems, small, accessory</i>				X	

SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

2.3 DENSITY, AREA, HEIGHT, WIDTH AND YARD REQUIREMENTS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Gross <i>density</i> (dwelling units/acre)	0.033 (1/30) ^{1, 6}
Minimum <i>lot</i> size	
- <i>On-site</i> individual septic system	¾ acre
- Community sewage system	½ acres
Maximum <i>lot</i> size	N/A
Minimum <i>lot</i> width	75 feet
Maximum percentage of property in <i>lots</i>	10% ²
Maximum <i>lots</i> fronting on existing public road	2 ³
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front (<i>primary</i> road)	100 feet
- Front (all other <i>roads</i>)	75 feet
- Side	15 feet
- Rear	30 feet
- Waterfront	100 feet
- <i>Accessory structures</i> on <i>farms</i> in the side and rear <i>yard</i>	25 feet
- <i>Accessory residential structures</i> in rear <i>yard</i>	
Side	10 feet
Rear	10 feet
Maximum <i>structure</i> height ⁴	
- Primary Residential or Agricultural <i>structure</i>	38 feet
- Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence height ⁵	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

FOOTNOTES

- 1 Accessory dwelling units do not count toward the density calculation in AZD.
- 2 10% RULE: Parcels 100 acres or larger do not count toward the maximum developed percentage of the property. Lot line adjustments to lots approved prior to August 19, 2003, are not subject to the 10% Rule.

SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

- 3 Parcels created before December 3, 2002, do not count toward the two permitted road front parcels. The Planning Commission may waive this requirement, if the proposal meets the waiver requirements in this Ordinance.
- 4 Height of structures may be further restricted by the Kent County *Airport* Safety Requirements as defined in this Ordinance. Except in an area defined as the Kent County Airport Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.
- 5 Fences do not need to meet the yard requirements.
- 6 Agricultural Easement Program – Nothing in this regulation shall limit the ability of a participant in the Agricultural Easement Program to convey real property impressed with an easement to his or her child provided the easement was recorded with the Kent County Clerk of Circuit Court prior to October 1, 2003.

ARTICLE II. DISTRICTS
SECTION 2. AGRICULTURAL ZONING DISTRICT (AZD)

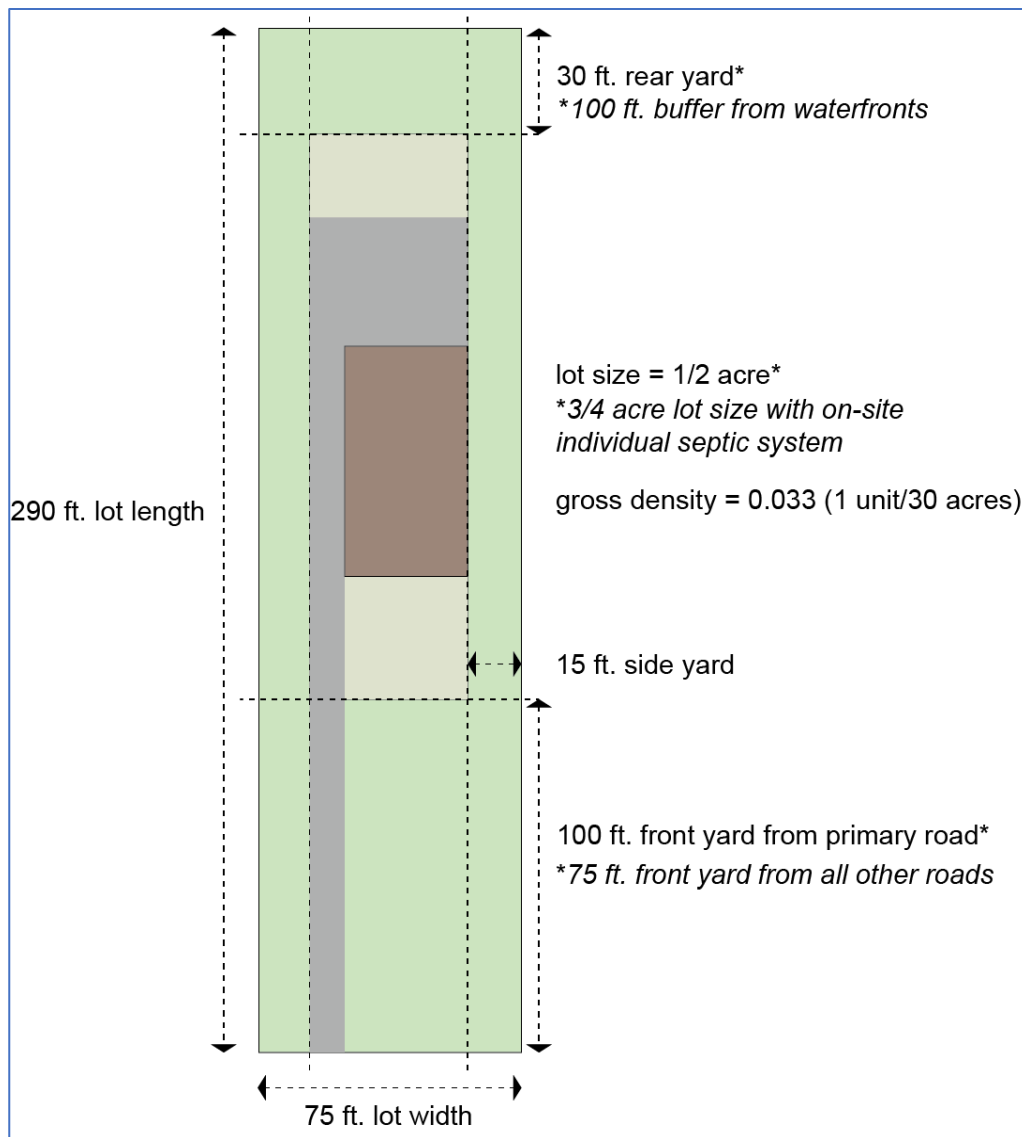


Figure 2: Regulatory diagram of a lot in the Agricultural Zoning District.

SECTION 3 RESOURCE CONSERVATION DISTRICT (RCD)

3.1 STATEMENT OF INTENT

1. This district is intended to:
 - (A) Conserve, protect, and enhance the overall ecological values of the *Critical Area*, its biological productivity, and its diversity;
 - (B) Provide adequate breeding, feeding, and wintering habitats for those wildlife populations that require the Chesapeake Bay, its tributaries, or coastal habitats to sustain populations of those species;
 - (C) Conserve the existing *developed woodlands* and *forests* for the water quality benefits that they provide; and
 - (D) Conserve the land and water resource base necessary to maintain and support such uses as *agriculture*, *forestry*, fisheries' activities, and *aquaculture*.
2. It includes areas characterized by *nature-dominated* environments (that is, *wetlands*, *forests*, abandoned fields) and resource-utilization activities (that is, *agriculture*, *forestry*, fisheries' activities, or *aquaculture*).
3. RCD is the Critical Area complementary district to the Agricultural Zoning District (AZD). Regulations are intended to mirror the AZD and provide for a Critical Area version of AZD.



Figure 3: Diagram illustrating the desired character of the Resource Conservation District.

SECTION 3. RESOURCE CONSERVATION DISTRICT (RCD)

3.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following. Detailed limitations and standards for these uses may be found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in the Resource Conservation District (RCD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Accessory <i>dwelling unit</i>					X
Accessory <i>farm buildings</i> , including barns, cribs, stables, sheds, tool rooms, shops, bins, tanks, and silos				X	
Accessory <i>farm dwellings</i>				X	
Accessory <i>off-street parking</i> and loading of non-commercial vehicles that have current licenses and are operable					X
Accessory <i>off-street parking</i> of one commercial vehicle					X
Accessory open or enclosed storage of <i>farm</i> materials, products, equipment, fertilizer or chemicals, or vehicles, located at least 200 feet from all property lines				X	
Accessory <i>roadside stand</i> for the sale of <i>farm</i> products				X	
Accessory residential storage <i>structures</i> with a ground <i>floor area</i> of more than 2,000 square feet or a height that exceeds the height of the primary residential structure on parcels less than 5 acres			A		
Accessory <i>structures</i> in the <i>front yard</i> requirement of waterfront parcels			A		
Accessory <i>structures</i> in <i>front yard</i> of a <i>through</i> or <i>corner lot</i>			A		
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed			X		
<i>Agriculture</i>	X				
<i>Agritourism</i> on farms, defined in Article VII			X		
Animal husbandry, <i>aquaculture</i>		X			
Animal husbandry, farms, including horses		X			
Animal husbandry, horses on non-farms			X		
Animal husbandry, poultry houses	X				
Animal husbandry, special – backyard chickens					X
Animal husbandry, special – small sheep or goats					X
Animal husbandry, <i>stable - private</i>	X				
Animal husbandry, <i>stable - commercial</i>	X				

ARTICLE II. DISTRICTS
SECTION 3. RESOURCE CONSERVATION DISTRICT (RCD)

Uses in the Resource Conservation District (RCD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Appurtenant signs					X
<i>Camp, day or boarding</i> , private or commercial, but not recreational vehicle or migrant labor camps, for the purpose of conserving and enjoying the natural resources	X				
<i>Campgrounds</i> existing and in use as of August 1, 1989	X				
<i>Conference center</i>			X		
Existing <i>Conference centers, resorts, retreats, hotels</i> , and motels existing and in use as of August 1, 1989	X				
Convalescent, group, or homes for the aged if located in <i>dwelling</i> s existing as of December 1, 1985	X				
<i>Country Inn</i>			X		
<i>Day care groups</i>			A		
<i>Day care homes</i>					X
Detached <i>single family dwelling</i> s	X				
Existing permitted <i>marinas</i>	X				
Exposition center or fairgrounds			B		
Farm employee housing			X		
Golf courses, public or private			X		
<i>Home occupations</i> in main or accessory <i>buildings</i>					X
Hunting blinds, pits, or preservers	X				
Hunting trailer, one, temporary				X	
<i>Mobile homes</i> existing and in use as of January 16, 1996	X				
<i>Personal wireless facility towers</i>			X		
<i>Personal wireless facilities</i> , collocated on existing towers	X				
<i>Private clubs</i>			B		
<i>Private garages, swimming pools</i> , game courts, and other customary outbuildings and structures					X
<i>Private piers, community piers</i> , and private shared <i>piers</i>					X
Public and private <i>forests</i> , wildlife reservations and similar conservation projects	X				
Public and private parks and playgrounds for the purpose of conserving and enjoying the natural resources.	X				
<i>Public landings</i>			B		
Public uses, <i>buildings</i> , and utilities			X		
Railroad <i>right of ways</i>	X				
<i>Resorts</i>			X		

ARTICLE II. DISTRICTS
SECTION 3. RESOURCE CONSERVATION DISTRICT (RCD)

Uses in the Resource Conservation District (RCD) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
<i>Retreats</i>			X		
<i>Roadside stands</i>					X
Sand and gravel pits, including <i>excavation</i> or extraction			X		
Satellite dish, private, with an antenna exceeding 3 feet in diameter					X
Satellite dish, private, with an antenna of 3 feet or less in diameter					X
School buses, parked, limited to two					X
Short-term vacation rentals (STVR)	X				
Solar energy systems, small					X
Solar energy systems, utility scale		X			
Storage of boats, campers, boat trailers, and camper trailers					X
Temporary <i>MET Tower</i> of any height					X
Tie-out pilings of private <i>piers</i> , <i>community piers</i> , and private shared <i>piers</i>			X		
Waste management <i>structures</i> , where not otherwise stipulated in this Ordinance				X	
Wedding venues on farms with Board of Appeals approval			X		
<i>Wind energy systems, small</i>			X		
<i>Wind energy systems, small, accessory</i>				X	

SECTION 3. RESOURCE CONSERVATION DISTRICT (RCD)

3.3 DENSITY, AREA, HEIGHT, WIDTH AND YARD REQUIREMENTS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Gross density (dwelling units/ac)	1 dwelling unit per 20 acres ¹
Minimum lot size	
- On-site individual septic system	¾ acre
- Community sewage system	½ acre
Minimum lot width	75 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	50 feet
- Side	15 feet
- Rear	30 feet
- Shoreline cliff	1.5 x cliff height + 20 feet
- Waterfront	Minimum 100-foot buffer
- Accessory structures on farms in the side and rear yard	25 feet
- Accessory residential structures in rear yard	
Side	10 feet
Rear	10 feet
Maximum structure height ²	
- Primary Residential or Agricultural structure	38 feet
- Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence height ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

1. Parcels of more than one acre improved by more than one dwelling unit, existing as of December 1, 1985, may be subdivided into parcels of land not less than one-half (½) acre each for each dwelling unit situated on the one-half (½) acre, or more, being subdivided. Accessory dwelling units that comply with Article III do not count toward the density calculation.
2. Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; standpipes; and flag poles.
3. Fences do not need to meet the yard requirements.

ARTICLE II. DISTRICTS
SECTION 3. RESOURCE CONSERVATION DISTRICT (RCD)

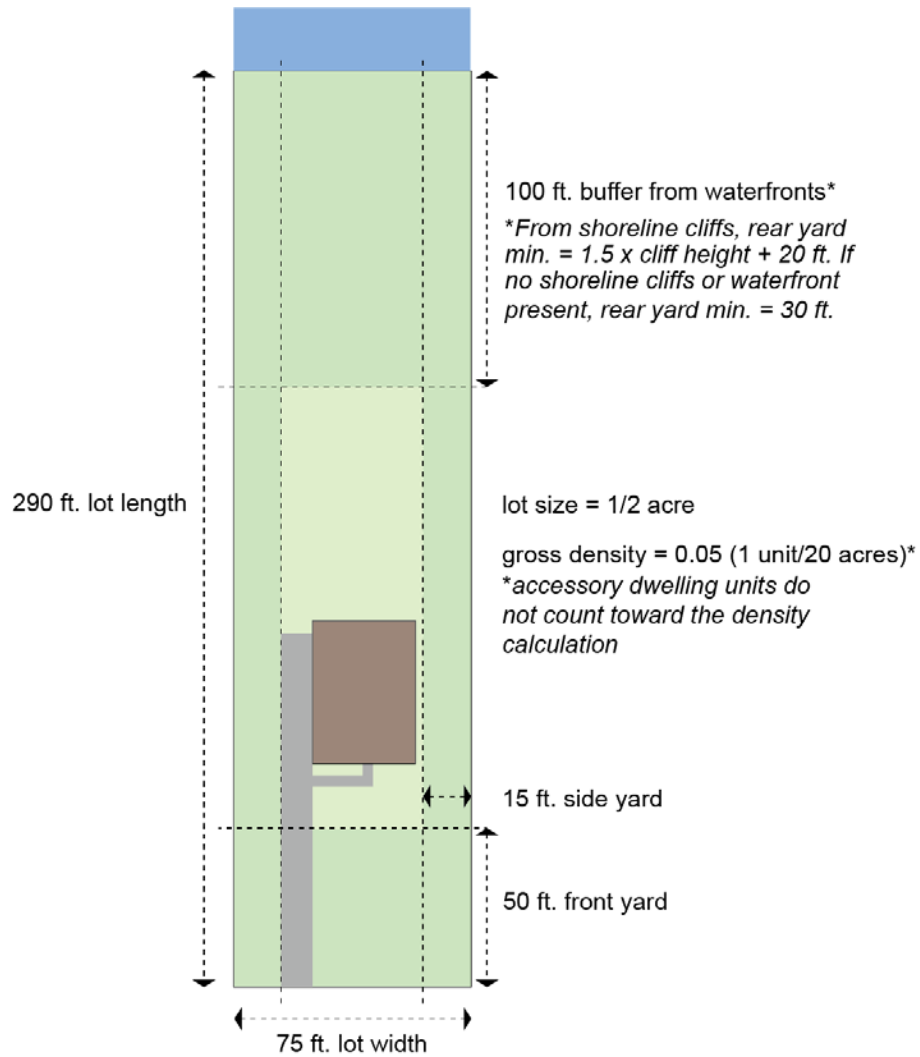


Figure 4: Regulatory diagram of a lot in the Resource Conservation District.

SECTION 4 RURAL CHARACTER DISTRICT (RC)**4.1 STATEMENT OF INTENT**

The purpose of this district is to provide for the local market demand for rural *lots*, including large estate *lots* on 20 acres or more, in a manner that maintains rural character and in a location that minimizes conflicts with *agriculture*. The District may function as a transition between the incorporated towns, villages, residential *developments*, and the Agricultural Zoning District. To maintain their rural character, *developments* will follow strict design standards for protecting significant rural features, preserving scenic views, and *historic structures* as well as designing with *topography* and sensitively locating new *buildings*. Recreational uses such as golf courses, racquet courts, and stables are appropriate in this district. Public water and sewer may not be extended into this district except to correct a public health emergency.



Figure 5: Diagram illustrating the desired character in the Rural Character District.

ARTICLE II. DISTRICTS
SECTION 4. RURAL CHARACTER DISTRICT (RC)

4.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following. Detailed limitations and standards for these uses may be found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Rural Character District (RC) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Accessory <i>dwelling unit</i>					X
Accessory <i>farm buildings</i> , including barns, cribs, stables, sheds, tool rooms, shops, bins, tanks, and silos				X	
Accessory <i>farm dwellings</i>				X	
Accessory <i>off-street parking</i> and loading of non-commercial vehicles that have current licenses and are operable					X
Accessory <i>off-street parking</i> of one commercial vehicle					X
Accessory open or enclosed storage of <i>farm</i> materials, products, equipment, fertilizer or chemicals, or vehicles				X	
Accessory residential storage <i>structures</i> with a ground <i>floor area</i> of more than 2,000 square feet or a height that exceeds the height of the primary residential structure on parcels less than 5 acres			A		
Accessory <i>structures</i> in a <i>front yard</i> of <i>through</i> or <i>corner lot</i>			A		
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed			X		
<i>Agriculture</i>	X				
Animal husbandry, <i>aquaculture</i>		X			
Animal husbandry, farms, including horses		X			
Animal husbandry, horses on non-farms			X		
Animal husbandry, special – backyard chickens					X
Animal husbandry, special – small sheep or goats					X
Animal husbandry – <i>stable private</i>	X				
Animal husbandry – <i>stable commercial</i>	X				
<i>Airports</i> , landing fields, helistops, or heliports			X		
Appurtenant signs					X
Assisted living facilities with five to eight beds			A		
Assisted living facilities with no more than four beds					X

ARTICLE II. DISTRICTS
SECTION 4. RURAL CHARACTER DISTRICT (RC)

Uses in Rural Character District (RC) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
<i>Camp, day or boarding</i> , private or commercial, but not recreational vehicle or migrant labor camps, for the purpose of conserving and enjoying the natural resources	X				
Cemetery, including crematorium and mausoleum			X		
<i>Conference center</i>			X		
Cottage industries, tradesmen, and artisan shops			A		
<i>Country inns</i>			X		
<i>Country stores</i>			X		
<i>Day care groups</i>			X		
<i>Day care homes</i>					X
Detached single family dwellings	X				
<i>Dog kennels</i> , commercial			X		
Exposition center or fairgrounds			X		
Golf courses, public or private			X		
Greenhouses, wholesale or retail	X				
<i>Guest house</i> , one, but not including <i>mobile homes</i>				X	
<i>Home occupations</i> in main or accessory buildings					X
Hunting blinds, pits, or preservers	X				
Hunting trailer, one, temporary				X	
<i>Mobile homes</i> existing and in use as of January 16, 1996	X				
<i>Outdoor Retreat</i>			X		
Parking of commercial vehicles on a farm				X	
<i>Personal wireless facility towers</i>			X		
<i>Personal wireless facilities</i> , collocated on existing towers	X				
<i>Private clubs</i>			X		
<i>Private garages</i> , swimming pools, game courts, and other customary outbuildings and structures					X
Private schools			X		
Public and private <i>forests</i> , wildlife reservations and similar conservation projects	X				
Public and private parks and playgrounds for the purpose of conserving and enjoying the natural resources.	X				
Public landings			X		
Public uses, <i>buildings</i> , and utilities			X		

ARTICLE II. DISTRICTS
SECTION 4. RURAL CHARACTER DISTRICT (RC)

Uses in Rural Character District (RC) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Permitted by right on farms only	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Raising of small animals, commercial, including birds, bees, fish, rabbits or other creatures, but not including <i>dog kennels</i>			X		
Recreational facilities, privately or commercially owned			X		
<i>Resorts</i>			X		
<i>Retreats</i>			X		
<i>Roadside stands</i>					X
<i>Rural inns</i>			X		
Satellite dish, private, with an antenna exceeding 3 feet in diameter					X
Satellite dish, private, with an antenna of 3 feet or less in diameter					X
School buses, parked, limited to five				X	
School buses, parked, limited to two					X
Short-term vacation rentals (STVR)	X				
Solar energy systems, small					X
Storage of boats, campers, boat trailers, and camper trailers					X
Temporary MET Tower of any height					X
<i>Wind energy systems, small</i>			X		
<i>Wind energy systems, small, accessory</i>				X	

ARTICLE II. DISTRICTS
SECTION 4. RURAL CHARACTER DISTRICT (RC)

4.3 DENSITY, AREA, HEIGHT, WIDTH AND YARD REQUIREMENTS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Number of <i>lots</i> (<i>dwelling units/acre</i>)	1 <i>dwelling unit</i> per 20 acres ¹
Minimum <i>lot</i> size	$\frac{3}{4}$ acre
Minimum <i>lot</i> width	75 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	50 feet
- Side	15 feet
- Rear	30 feet
- Waterfront	100 feet
- <i>Accessory structures</i> on <i>farms</i> in the side and <i>rear yard</i>	25 feet
- <i>Accessory residential structures</i> in <i>rear yard</i>	
Side	10 feet
Rear	10 feet
Maximum <i>structure</i> height ²	
- Primary Residential or Agricultural <i>structure</i>	38 feet
Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

- 1 Accessory dwelling units are not counted toward permitted density.
- 2 Height of structures may be further restricted by the Kent County *Airport* Safety Requirements as defined in SECTION 33.4 ZONING DISTRICT SPECIFIC DESIGN STANDARDS of this Ordinance. Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.
- 3 Fences do not need to meet the yard requirements.

ARTICLE II. DISTRICTS
SECTION 4. RURAL CHARACTER DISTRICT (RC)

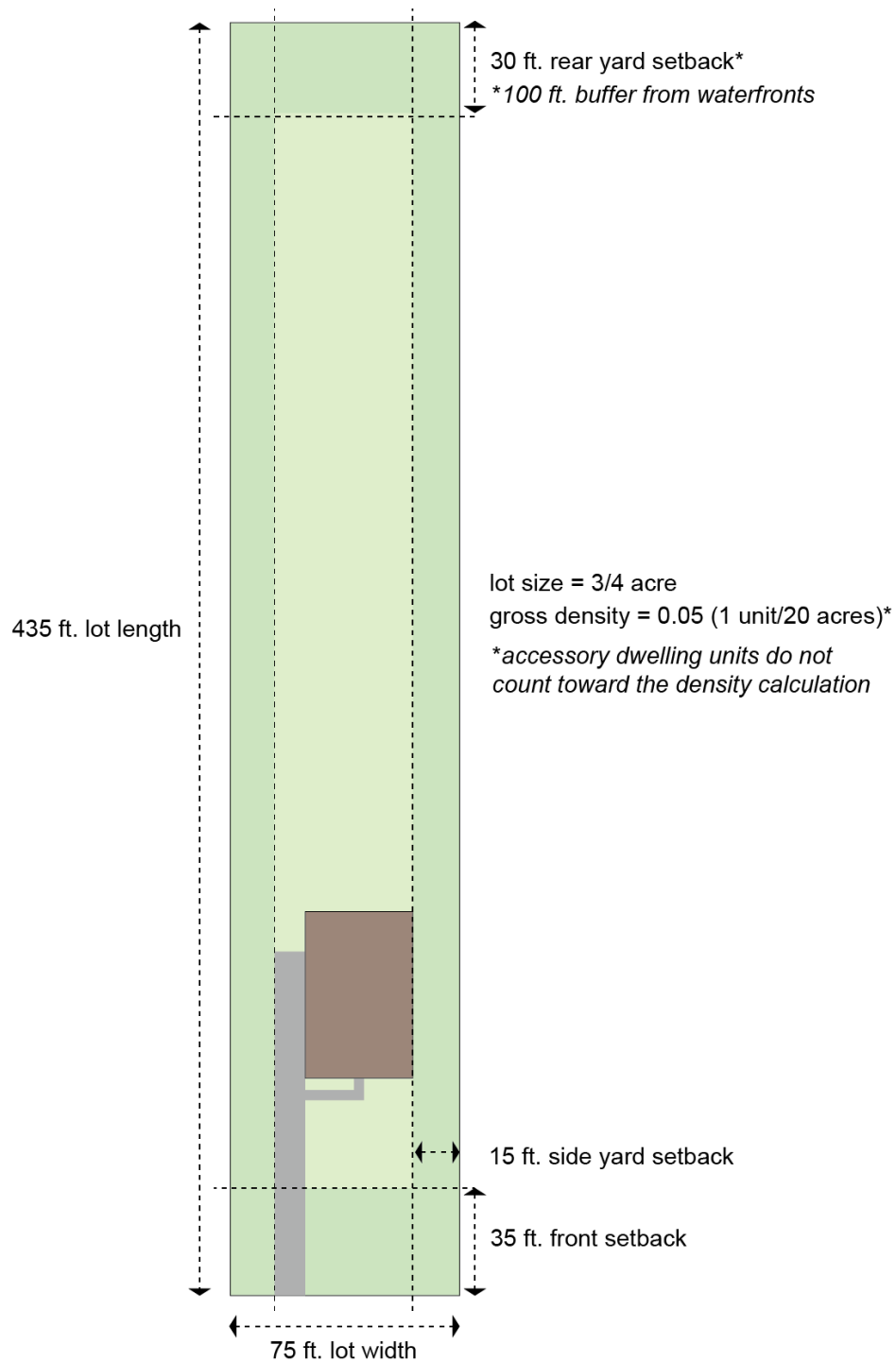


Figure 6: Regulatory diagram of a lot in the Rural Character District.

SECTION 5 CRITICAL AREA RESIDENTIAL (CAR)**5.1 STATEMENT OF INTENT**

This district is intended to allow low *density* residential *development* in areas where the impact on the natural environment is minimal. The purpose of this district is to maintain, or if possible to improve, the quality of runoff and groundwater entering the Chesapeake Bay and its tributaries and to maintain existing areas of natural habitats while allowing limited residential *development* that conforms to environmental standards and that reflects the scale and character of existing *development*. These areas must have one of the following characteristics:

- (A) Housing *density* ranges from one *dwelling unit* per five acres, up to four *dwelling units* per acre.
- (B) Areas not dominated by *agriculture, wetlands, forest, barren land, surface water* or space; or
- (C) Areas having public sewer or water, or both.
- (D) Areas meeting the conditions of an Intense *Development Area* but less than 20 acres in size.

The Critical Area Residential district is complementary to the Community Residential district (CR). Regulations are intended to mirror the CR and to provide for a Critical Area version of the CR.



Figure 7: Diagram illustrating the desired character in the Critical Area Residential District.

ARTICLE II. DISTRICTS
SECTION 5. CRITICAL AREA RESIDENTIAL (CAR)

5.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following. Detailed limitations and standards for these uses may be found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Critical Area Residential (CAR) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Special Exception	Accessory Uses
Accessory <i>dwelling unit</i>			X
Accessory <i>off-street parking</i> and loading of non-commercial vehicles that have current licenses and are operable			X
Accessory <i>off-street parking</i> of one commercial vehicle			X
Accessory residential storage <i>structures</i> with a ground <i>floor area</i> of more than 2,000 square feet or a height that exceeds the height of the primary residential structure on parcels less than 5 acres		A	
Accessory <i>structures</i> in the <i>front yard</i> requirement of waterfront parcels		A	
Accessory <i>structures</i> in a <i>front yards</i> of a <i>through</i> or <i>corner lot</i>		A	
<i>Agriculture</i>	X		
Animal husbandry, <i>aquaculture</i>		X	
Animal husbandry, farms, including horses		X	
Animal husbandry, horses on non-farms		X	
Animal husbandry, special – backyard chickens			X
Animal husbandry, special – small sheep or goats			X
Animal husbandry, <i>stable - private</i>	X		
Animal husbandry, <i>stable - commercial</i>	X		
<i>Airports</i> , landing fields, helistops, or heliports		X	
Appurtenant signs			X
Assisted living facilities with five to eight beds		A	
Assisted living facilities with no more than four beds			X
<i>Camp, day or boarding</i> , private or commercial, but not recreational vehicle or migrant labor camps, for the purpose of conserving and enjoying the natural resources	X		
Cemetery, including crematorium and mausoleum		X	
<i>Conference center</i>		X	
Cottage industries, tradesmen, and artisan shops		A	

ARTICLE II. DISTRICTS
SECTION 5. CRITICAL AREA RESIDENTIAL (CAR)

Uses in Critical Area Residential (CAR) Article III lists requirements for permitted uses and conditions related to special exceptions	Permitted by right	Special Exception	Accessory Uses
<i>Country inns</i>		X	
<i>Day care groups</i>		A	
<i>Day care homes</i>			X
Detached single family dwellings	X		
<i>Dog kennels, commercial</i>		B	
Golf courses, public or private		X	
Greenhouses, wholesale or retail	X		
<i>Home occupations in main or accessory buildings</i>			X
<i>Mobile homes</i> existing and in use as of January 16, 1996	X		
<i>Private clubs</i>		B	
<i>Private garages, swimming pools, game courts, and other customary outbuildings and structures</i>			X
<i>Private piers, community piers, and private shared piers</i>			X
Private schools		X	
Public and private <i>forests</i> , wildlife reservations and similar conservation projects	X		
Public and private parks and playgrounds for the purpose of conserving and enjoying the natural resources.	X		
<i>Public landings</i>		B	
Public uses, <i>buildings</i> , and utilities		X	
Recreational facilities, privately or commercially owned		X	
<i>Resorts</i>		X	
<i>Retreats</i>		X	
<i>Roadside stands</i>			X
Sand and gravel pits, including <i>excavation</i> or extraction		X	
Satellite dish, private, with an antenna exceeding 3 feet in diameter			X
Satellite dish, private, with an antenna of 3 feet or less in diameter			X
School buses, parked, limited to two			X
Short-term vacation rentals (STVR)	X		
Solar energy systems, small			X
Storage of boats, campers, boat trailers, and camper trailers			X
Temporary MET Tower of any height			X
Tie-out pilings of private <i>piers, community piers, and private shared piers</i>		X	
<i>Wind energy systems, small</i>		X	

ARTICLE II. DISTRICTS
SECTION 5. CRITICAL AREA RESIDENTIAL (CAR)

5.3 DENSITY, AREA, HEIGHT, WIDTH AND YARD REQUIREMENTS

STANDARDS FOR THE <i>SUBDIVISION OF LOTS</i>	
Gross <i>density (dwelling units/acre)</i>	1 <i>dwelling unit</i> per acre ¹
Minimum <i>lot size</i>	½ acre
Minimum <i>lot width</i>	75 feet
STANDARDS FOR <i>BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT</i>	
Minimum <i>yard</i>	
- Front	38 feet
- Side	10 feet
- Rear	30 feet
- Waterfront	Minimum 100-foot <i>buffer</i> or <i>modified buffer</i> ²
- <i>Shoreline cliff</i>	1.5 x <i>cliff height</i> + 20 feet
- <i>Accessory structures on farms</i> in the side and rear yard	25 feet
- <i>Accessory residential structures</i> in rear yard	
Side	5 feet
Rear	5 feet
Maximum <i>structure height</i> ³	
- Primary Residential or Agricultural <i>structure</i>	38 feet
Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ⁴	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

- 1 Accessory dwelling units are not included in density calculations.
- 2 Modifications for structures existing prior to April 12, 1988, may be permitted as per Article VI.
- 3 Except in an area defined as the Kent County *Airport Safety Area*, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; standpipes; and flag poles.
- 4 Fences do not need to meet yard requirements.

ARTICLE II. DISTRICTS
SECTION 5. CRITICAL AREA RESIDENTIAL (CAR)

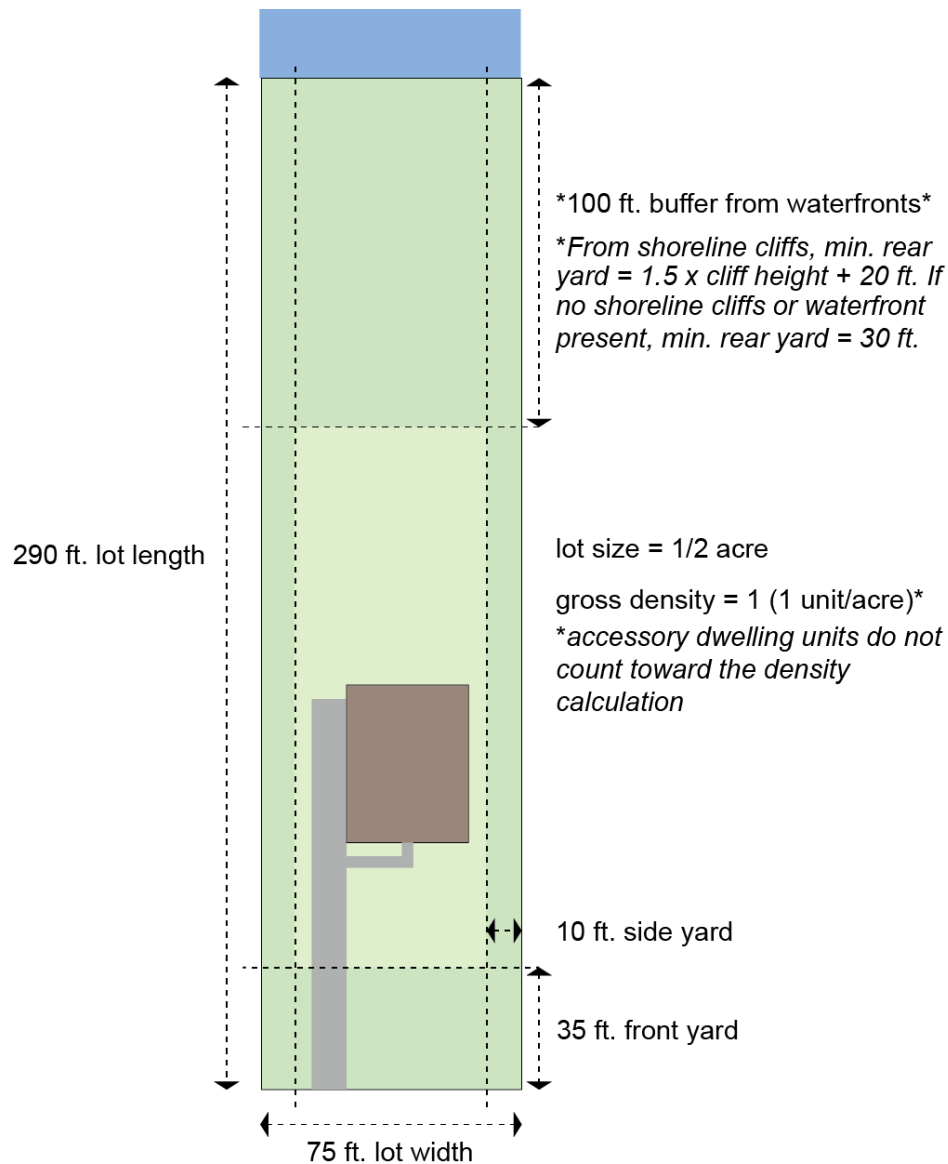


Figure 8: Regulatory diagram of a lot in the Critical Area Residential District.

SECTION 6 COMMUNITY RESIDENTIAL (CR)**6.1 STATEMENT OF INTENT**

The purpose of this district is to provide for single *family* residential *development* in areas of existing residential *development*, together with facilities and *accessory uses* normally compatible with residential surroundings, and at the same time to permit agricultural uses and to preserve *open spaces* and rural character. This district is located in areas near existing rural development, neighborhood developed areas, villages and incorporated towns. This district combines the former Community Residential (CR) district with the Rural Residential (RR) district, while retaining the higher density of CR at 1 unit per acre, as opposed to the lower density of RR at 1 unit per three acres. The permitted uses of both have been combined with all the uses being preserved.



Figure 9: Diagram illustrating the desired character of the Community Residential District.

ARTICLE II. DISTRICTS
SECTION 6. COMMUNITY RESIDENTIAL (CR)

6.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following. Detailed limitations and standards for these uses are found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Community Residential (CR) Article III lists requirements for permitted uses and conditions related to special exceptions. RR indicates uses that are from the original Rural Residential District.	Permitted by right	Special Exception	Accessory Use on farms only	Accessory Use on all properties
Accessory <i>dwelling unit</i>				X
Accessory <i>farm buildings</i> , including barns, cribs, stables, sheds, tool rooms, shops, bins, tanks, and silos			X	
Accessory <i>farm dwellings</i>			X	
Accessory <i>off-street parking</i> and loading of non-commercial vehicles that have current licenses and are operable				X
Accessory <i>off-street parking</i> of one commercial vehicle				X
Accessory open or enclosed storage of <i>farm</i> materials, products, equipment, fertilizer or chemicals, or vehicles			X	
Accessory residential storage <i>structures</i> with a ground <i>floor area</i> of more than 2,000 square feet or a height that exceeds the height of the primary residential structure on parcels less than 5 acres		A		
Accessory <i>structures</i> in a <i>front yard</i> of a <i>through</i> or <i>corner lot</i>		A		
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed		X		
<i>Agriculture</i>	X			
Animal husbandry, <i>aquaculture</i>		X		
Animal husbandry, farms, including horses		X		
Animal husbandry, horses on non-farms		X		
Animal husbandry, limited livestock and fowl		X		
Animal husbandry, special – backyard chickens				X
Animal husbandry, special – small sheep or goats				X
Animal husbandry, <i>stable private</i>	X			
Animal husbandry, <i>stable commercial</i>	X			
<i>Airports</i> , landing fields, helistops, or heliports		X		
Appurtenant signs				X
Assisted living facilities with five to eight beds		A		
Assisted living facilities with no more than four beds				X

ARTICLE II. DISTRICTS
SECTION 6. COMMUNITY RESIDENTIAL (CR)

Uses in Community Residential (CR) Article III lists requirements for permitted uses and conditions related to special exceptions. RR indicates uses that are from the original Rural Residential District.	Permitted by right	Special Exception	Accessory Use on farms only	Accessory Use on all properties
<i>Camp, day or boarding</i> , private or commercial, but not recreational vehicle or migrant labor camps, for the purpose of conserving and enjoying the natural resources	X			
Cemetery, including crematorium and mausoleum		X		
<i>Conference center</i>		X		
Cottage industries, tradesmen, and artisan shops		A		
<i>Country inns</i>		X		
<i>Country stores</i>		X		
<i>Day care groups</i>		A		
<i>Day care homes</i>				X
Detached <i>single family dwellings</i>	X			
<i>Dog kennels</i> , commercial		B		
Golf courses, public or private		X		
Greenhouses, wholesale or retail	X			
<i>Guest house</i> , one, but not including <i>mobile homes</i>			X	
<i>Home occupations</i> in main or accessory <i>buildings</i>				X
Houses of worship		X		
Hunting trailer, one, temporary			X	
Keeping of backyard chickens				X
<i>Mobile homes</i> existing and in use as of January 16, 1996	X			
<i>Outdoor Retreats</i>		B		
Parking of commercial vehicles on a farm			X	
<i>Private clubs</i>		B		
<i>Private garages, swimming pools, game courts, and other customary outbuildings and structures</i>				X
Private schools		X		
Public and private <i>forests</i> , wildlife reservations and similar conservation projects	X			
Public and private parks and playgrounds for the purpose of conserving and enjoying the natural resources.	X			
<i>Public landings</i>		B		
<i>Public utilities and structures</i>		X		
Recreational facilities, privately or commercially owned		X		
<i>Resorts</i>		X		
<i>Retreats</i>		X		

ARTICLE II. DISTRICTS
SECTION 6. COMMUNITY RESIDENTIAL (CR)

Uses in Community Residential (CR) Article III lists requirements for permitted uses and conditions related to special exceptions. RR indicates uses that are from the original Rural Residential District.	Permitted by right	Special Exception	Accessory Use on farms only	Accessory Use on all properties
<i>Roadside stands</i>				X
<i>Rural inns</i>		X		
Satellite dish, private, with an antenna exceeding 3 feet in diameter				X
Satellite dish, private, with an antenna of 3 feet or less in diameter				X
School buses, parked, limited to five			X	
School buses, parked, limited to two				X
Short-term vacation rentals (STVR)	X			
Solar energy systems, small				X
Storage of boats, campers, boat trailers, and camper trailers				X
Temporary <i>MET</i> Tower of any height				X
<i>Wind energy systems, small</i>		X		
<i>Wind energy systems, small, accessory</i>			X	

ARTICLE II. DISTRICTS
SECTION 6. COMMUNITY RESIDENTIAL (CR)

6.3 DENSITY, AREA, HEIGHT, WIDTH AND YARD REQUIREMENTS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Gross <i>density</i> (dwelling units/acre)	1 dwelling unit per acre ¹
Minimum <i>lot size</i>	½ acre
Minimum <i>lot width</i>	75 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	38 feet
- Side	10 feet
- Rear	30 feet
- Waterfront	100 feet
- Accessory structures on farms in the side and rear yard	25 feet
- Accessory residential structures in rear yard	
Side	5 feet
Rear	5 feet
Maximum <i>structure height</i> ²	
- Primary Residential or Agricultural structure	38 feet
Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

- 1 Accessory dwelling units are not included in density calculations.
- 2 Height of structures may be further restricted by of the Kent County *Airport* Safety Requirements as defined in this Ordinance. Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.
- 3 Fences do not need to meet yard requirements.

ARTICLE II. DISTRICTS
SECTION 6. COMMUNITY RESIDENTIAL (CR)

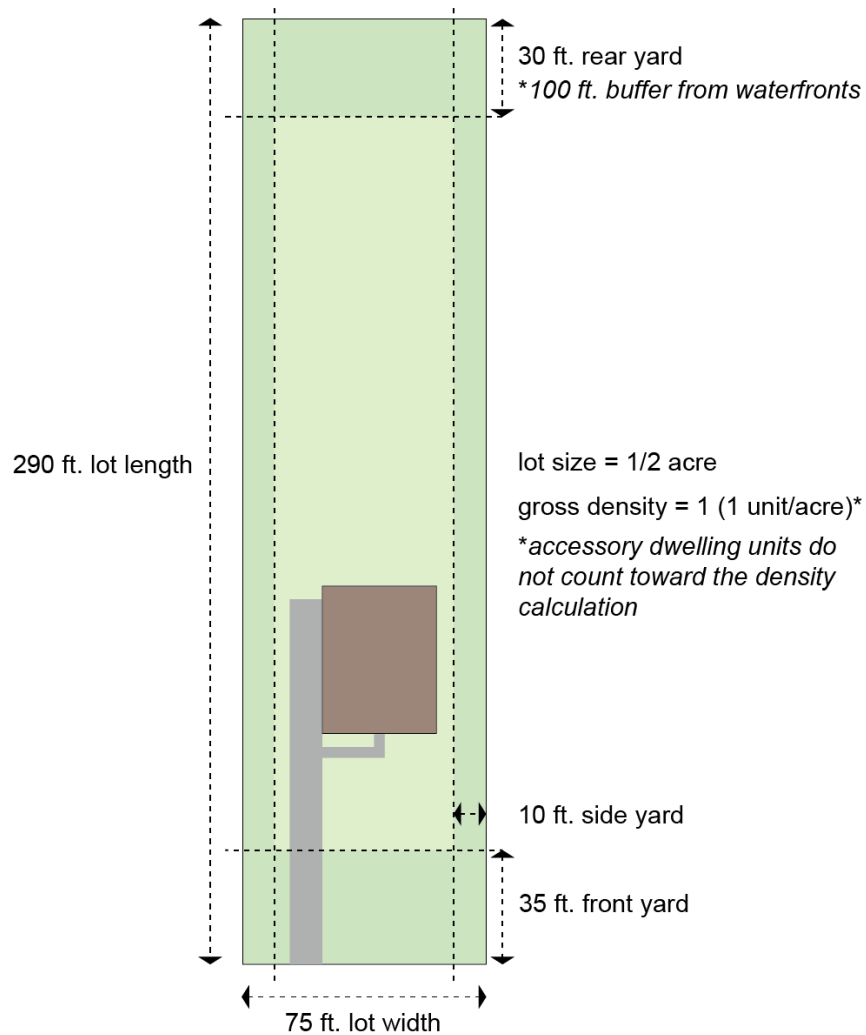


Figure 10: Regulatory diagram of a lot in the Community Residential District.

SECTION 7 VILLAGE DISTRICT (V)

7.1 STATEMENT OF INTENT

1. The purpose of this district is to provide for high quality residential, neighborhood business, and office *development*. In those areas served by public water and sewer, this zone will be characterized by a wide variety of housing types, densities, and uses. In those areas without *public utilities*, this zone will be largely single *family* and some business uses with the possibility of multi-*family* residential.
2. This district is created to:
 - (A) Encourage planned neighborhoods of residential *development* in existing towns and communities with access to *major thoroughfares*.
 - (B) Permit a variety of housing types including accessory dwelling units.
 - (C) Provide incentives for residential *development* by allowing variations in *lot* size, *density*, *frontage*, and *yard* requirements.
 - (D) Encourage compact *development* and promote economic development.
 - (E) Promote village-scale mixing of uses and the *development* of non-residential uses that complement and enhance the character, vitality, attractiveness, and walkability of the community as a place to live and work including expanding existing businesses.
 - (F) Encourage designs that allow for infill and create *development* that is compatible with the character of existing *buildings*.



Figure 11: Diagram illustrating the desired character of single-family housing developments in the Village District.

Figure 12: Diagram illustrating the desired character of multi-family housing developments in the Village District.

ARTICLE II. DISTRICTS
SECTION 7. VILLAGE DISTRICT (V)

7.2 PERMITTED USES AND STRUCTURES

A *building* or *structure* shall be used only for the following. Detailed limitations and standards for these uses are found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Village District (V) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Accessory <i>dwelling unit</i>			X
Accessory <i>off-street parking</i> of one commercial vehicle			X
Accessory <i>structures</i> in the <i>front yards</i> of <i>through</i> or <i>corner lots</i>		A	
Accessory vehicle parking			X
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed		X	
<i>Agriculture</i>	X		
Animal husbandry, special – backyard chickens			X
Animal husbandry special – small sheep or goats			X
Appurtenant signs			X
Assisted living facilities with no more than four beds			X
<i>Automobile service stations</i> , but not including repair		X	
Boat sales, boat and outboard motor repairs and boat storage	X		
Cemetery, including crematorium and mausoleum		X	
Convalescent, nursing, or <i>group homes</i> for the aged with five or more beds		X	
Curio shops, craft shops, antique stores, and similar uses	X		
Data processing centers	X		
<i>Day care groups</i>		A	
<i>Day care homes</i>			X
Detached <i>single family dwellings</i>	X		
Existing commercial or industrial uses and <i>structures</i> in the Village District	X		
Financial institutions	X		
Fire and rescue stations	X		
Funeral homes	X		
Home and business services such as grounds care, janitorial, exterminators, landscaping, and other repair and maintenance services, but not septic tank maintenance and excavation, subject to site plan review	X		
<i>Home occupations</i> in main or accessory <i>buildings</i>			X
Hospitals, Rehabilitation Facilities, or Other Similar		X	

ARTICLE II. DISTRICTS
SECTION 7. VILLAGE DISTRICT (V)

Uses in Village District (V) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Institutions for Human Care but not including Animal Hospitals			
Houses of worship	X		
Indoor movie theaters, playhouses, and dinner theaters	X		
Marine supply store including indoor outboard motor sale	X		
<i>Mobile home parks</i>		X	
<i>Mobile homes</i> existing and in use as of January 16, 1996	X		
<i>Multi-family dwellings</i>	X		
Neighborhood retail businesses	X		
Offices	X		
Outdoor recreation, miniature golf, but not golf courses		X	
<i>Personal service establishments</i>	X		
<i>Personal wireless facilities</i> , collocated on existing towers	X		
Printing and publishing		X	
<i>Private clubs</i>		B	
<i>Private garages, swimming pools, game courts, and other customary outbuildings and structures</i>			X
Private schools		X	
Public uses, <i>buildings</i> , and utilities	X		
Recreational uses indoor, commercial	X		
<i>Restaurants</i> without drive through facilities	X		
<i>Retreats</i>		X	
Rooming, boarding, and <i>lodging houses</i>	X		
<i>Rural inns</i>		X	
Satellite dish, private, with an antenna exceeding 3 feet in diameter			X
Satellite dish, private, with an antenna of 3 feet or less in diameter			X
School bus parking <i>lot</i>		X	
School buses, parked, limited to two			X
Self-storage	X		
Septic tank maintenance and excavation, subject to site plan review		X	
Short-term vacation rentals (STVR)	X		
Solar energy systems, small			X
Storage of boats, campers, boat trailers, and camper trailers			X
Temporary <i>MET Tower</i> of any height			X
Town houses	X		
<i>Two-family dwellings</i>	X		

ARTICLE II. DISTRICTS
SECTION 7. VILLAGE DISTRICT (V)

Uses in Village District (V)	Permitted by right	Special Exception	Accessory Use on all properties
Article III lists requirements for permitted uses and conditions related to special exceptions.			
Uses and <i>structures</i> which are customarily accessory and clearly incidental and subordinate to the permitted use			X
<i>Wind energy systems, small</i>		X	

**7.3 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS
FOR ALL NEW CONSTRUCTION AND ADDITIONS EXCEPT
FOR TWO-FAMILY, TOWNHOUSE, AND MULTI-FAMILY USES**

STANDARDS FOR THE SUBDIVISION OF LOTS	
Note – These standards have been divided into two sub-sections (see next sub-section)	
Gross <i>density</i> (dwelling units/acre)	4
Minimum <i>lot</i> size	9,500 square feet
Minimum <i>lot frontage</i>	50 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	20 feet
- Side	8 feet
- Rear	10 feet
- Accessory residential <i>structures</i> in rear yard	
Side	5 feet
Rear	5 feet
Maximum <i>structure</i> height ¹	
- Commercial	38 feet
- Primary Residential	38 feet
- Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ²	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

ARTICLE II. DISTRICTS
SECTION 7. VILLAGE DISTRICT (V)

FOOTNOTES

- 1 Height of structures may be further restricted by of the Kent County *Airport* Safety Requirements as defined in this Ordinance. Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.
- 2 Fences do not need to meet yard requirements.

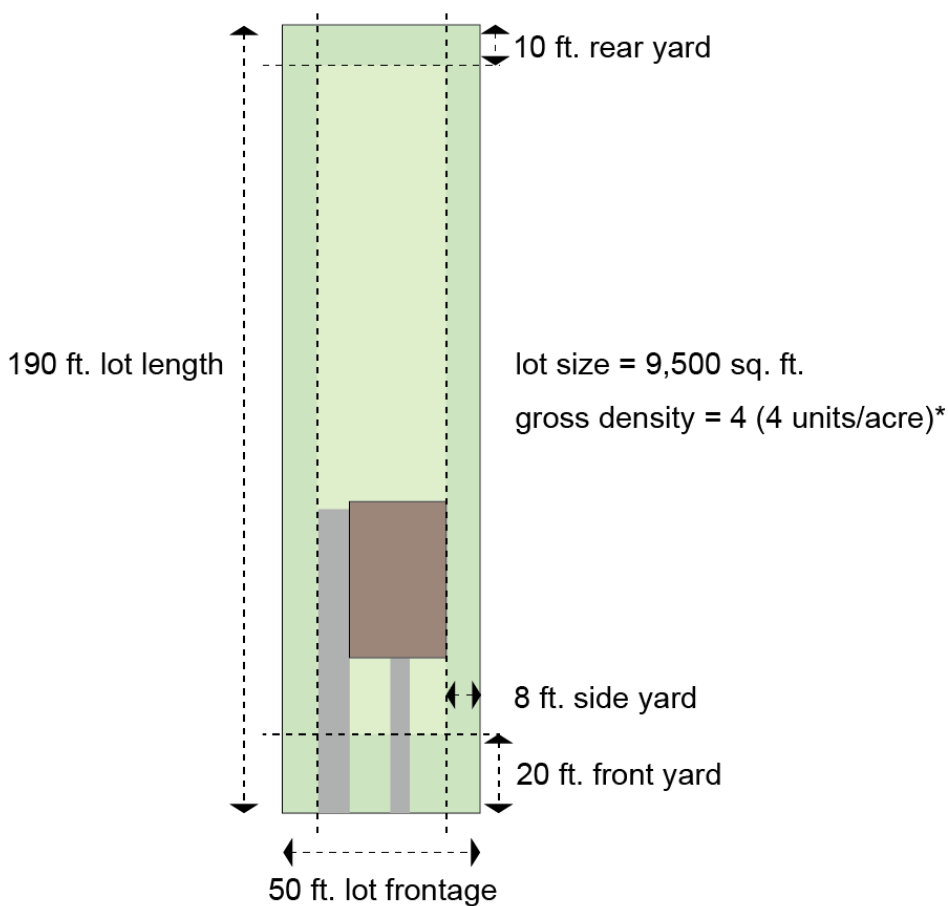


Figure 13: Regulatory diagram of a lot with single-family housing in the Village District.

ARTICLE II. DISTRICTS
SECTION 7. VILLAGE DISTRICT (V)

7.4 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS
FOR ALL NEW CONSTRUCTION AND FOR ANY ADDITIONS
TO TWO-FAMILY, TOWNHOUSE, AND MULTI-FAMILY USES

STANDARDS FOR THE SUBDIVISION OF LOTS	
Note – This is a new sub-section proposed to be added to the Land Use Ordinance, which would increase the permitted density in this zoning district from 4 units per acre to 8 units	
Gross density (dwelling units/acre)	8 dwelling units per acre
Minimum lot frontage	50 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	20 feet
- Side	12 feet; none in between connected units
- Rear	20 feet
- Accessory residential structures in rear yard	
Side	5 feet
Rear	5 feet
Maximum Primary structure height ¹	
- Two-Family	38 feet
- Townhouse	38 feet
- Multi-Family	42 feet
- Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ²	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet
Parking Location	Rear yard only

- 1 Height of structures may be further restricted by of the Kent County Airport Safety Requirements as defined in this Ordinance. Except in an area defined as the Kent County Airport Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.
- 2 Fences do not need to meet yard requirements.

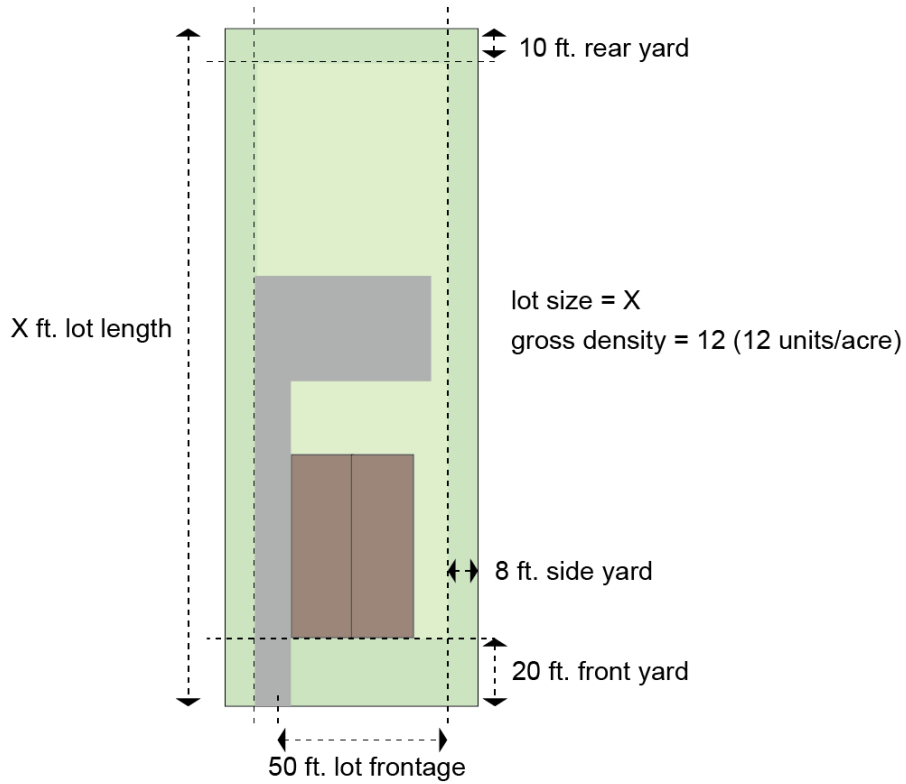


Figure 14: Regulatory diagram of a lot with multi-family housing in the Village District.

SECTION 8 INTENSE VILLAGE DISTRICT (IV)**8.1 STATEMENT OF INTENT**

The purpose of this district is to provide for a high-quality and well-designed mix of commercial, office, and residential areas with an emphasis on uses and intensities that make efficient use of public facilities and limit sprawling *development*. It is intended that residences, shops, and offices are in close proximity to each other, as is found in the traditional village pattern, and that the resulting mix of uses form lively, prosperous neighborhoods that serve as an attractive place to live, work, shop, and play. The district may act as a transition between town and the more rural areas of the County. *Buildings* in this district shall be oriented to the *street* and provision made for pedestrian access so that the character of the area is interpreted as pedestrian.

This district is intended to be used sparingly and in areas where high-density residential projects as well as more intense concentrations of commercial uses are desired. A new sub-section has been added to allow up to 12 units per acre for *two-family dwellings*, *townhouses*, and *multi-family dwelling* uses. New designations are appropriate in growth areas or near boundaries of municipalities as well as near the boundaries of existing *developments* in unincorporated areas.



Figure 15: Diagram illustrating the desired character of two-family housing development in the Intense Village District.

Figure 16: Diagram illustrating the desired character of multi-family housing developments in the Intense Village District.

ARTICLE II. DISTRICTS
SECTION 8. INTENSE VILLAGE DISTRICT (IV)

8.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following. Detailed limitations and standards for these uses are found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Intense Village District (IV) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
<i>Accessory dwelling unit</i>			X
Accessory employee housing			X
<i>Accessory off-street parking</i> of one commercial vehicle			X
<i>Accessory structures</i> in the <i>front yards</i> of <i>through</i> or <i>corner lots</i>		A	
Accessory vehicle parking			X
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed		X	
Animal husbandry, special – backyard chickens		X	
Appurtenant signs			X
Assisted living facilities with no more than four beds			X
<i>Automobile repair</i>		X	
<i>Automobile service stations</i>	X		
Car wash		X	
Cemetery, including crematorium and mausoleum			X
<i>Conference center</i>		X	
Convalescent, nursing, or <i>group homes</i> for the aged with 5 or more beds		X	
Cottage industries, tradesmen and artisan shops		A	
<i>Country inns</i>	X		
<i>Day care groups</i>		A	
<i>Day care homes</i>			X
Detached <i>single family dwellings</i>	X		
Financial institutions	X		
Fire and rescue stations	X		
Funeral homes	X		
Home and business services such as grounds care, janitorial, exterminators, landscaping, and other repair and maintenance services, but not septic tank maintenance and excavation, subject to site plan review	X		
<i>Home occupations</i> in main or accessory <i>buildings</i>			X
<i>Hospitals</i> , rehabilitation facilities, and similar institutions for human care		X	
<i>Hotels</i> and motels	X		

ARTICLE II. DISTRICTS
SECTION 8. INTENSE VILLAGE DISTRICT (IV)

Uses in Intense Village District (IV) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Houses of worship	X		
Indoor movie theaters, playhouses, and dinner theaters	X		
Laundromat	X		
<i>Multi-family dwellings</i>	X		
Neighborhood retail businesses	X		
Offices	X		
Outdoor entertainment		X	
Outdoor recreation, miniature golf, but not golf courses		X	
<i>Personal service establishments</i>	X		
<i>Personal wireless facilities</i> , collocated on existing towers	X		
Printing and publishing		X	
<i>Private clubs</i>		X	
<i>Private garages, swimming pools, game courts, and other customary outbuildings and structures</i>			X
Private schools		X	
Public uses, <i>buildings</i> , and utilities	X		
Pubs, taverns, and bars, including open air facilities		X	
Recreational uses, indoor, commercial	X		
<i>Resorts</i>		X	
<i>Restaurants</i> without drive through facilities	X		
Rooming, boarding, and <i>lodging houses</i>	X		
Satellite dish, private, with an antenna of 3 feet or less in diameter			X
Satellite dish, private, with an antenna exceeding 3 feet in diameter			X
School bus parking <i>lot</i>		X	
School buses, parked, limited to two			X
Self storage	X		
Septic tank maintenance and excavation	X		
Short-term vacation rentals (STVR)	X		
Solar energy systems, small			X
Storage of boats, campers, boat trailers, and camper trailers			X
Temporary <i>MET Tower</i> of any height			X
Town houses	X		
<i>Two-family dwellings</i>	X		
Uses and <i>structures</i> which are customarily accessory and clearly incidental and subordinate to the permitted use			X
<i>Wind energy systems, small</i>		X	

**8.3 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS
FOR ALL NEW CONSTRUCTION AND ANY ADDITIONS EXCEPT
FOR TWO-FAMILY, TOWNHOUSE, AND MULTI-FAMILY USES**

STANDARDS FOR THE SUBDIVISION OF LOTS	
Note – These standards have been divided into two sub-sections (see next sub-section)	
Gross density (dwelling units/acre)	8 dwelling units per acre
Minimum lot size	5,000 square feet
Minimum lot frontage	40 feet – or set during formal site plan review
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	20 feet – or set during formal site plan review
- Side	10 feet – or set during formal site plan review
- Rear	10 feet – or set during formal site plan review
- Accessory residential structures in rear yard	
Side	10 feet
Rear	10 feet
Maximum structure height ¹	
- Commercial	40 feet
- Primary Residential	40 feet
- Accessory Residential Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ²	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet

- 1 Height of structures may be further restricted by of the Kent County *Airport* Safety Requirements as defined in this Ordinance. Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.

- 2 Fences do not need to meet yard requirements.

ARTICLE II. DISTRICTS
SECTION 8. INTENSE VILLAGE DISTRICT (IV)

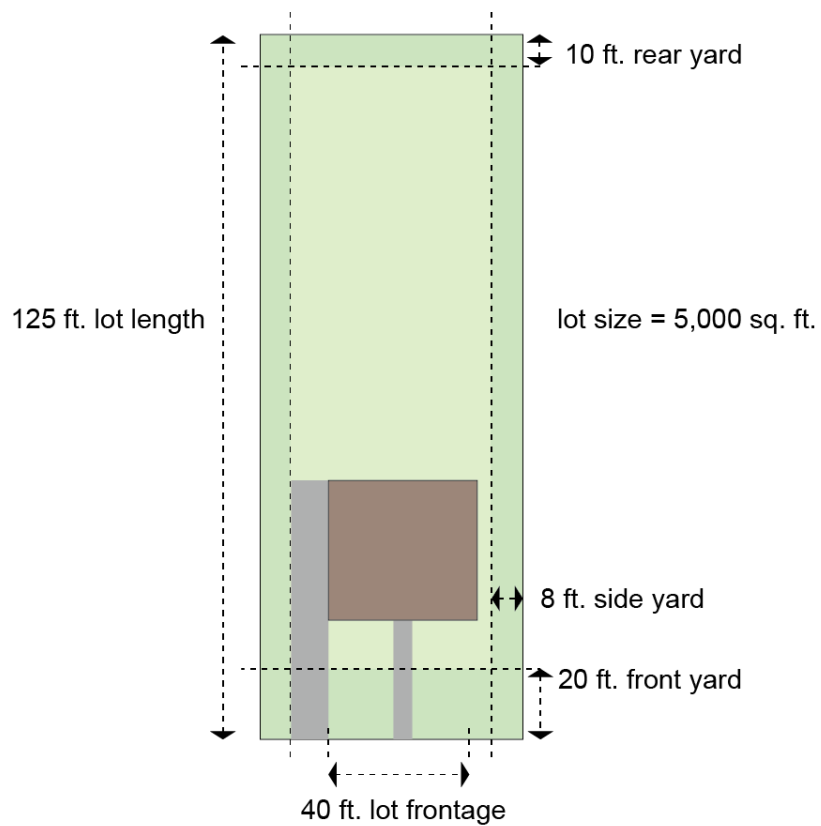


Figure 17: Regulatory diagram of a single-family housing lot in the Intense Village District.

**8.4 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS
FOR ALL NEW CONSTRUCTION AND ADDITIONS TO TWO-
FAMILY, TOWNHOUSE, AND MULTI-FAMILY USES**

STANDARDS FOR THE SUBDIVISION OF LOTS	
Note – This is a new sub-section proposed to be added to the Land Use Ordinance, which would increase the permitted density in this zoning district from 8 units per acre to 12 units	
Gross <i>density (dwelling units/acre)</i>	12 <i>dwelling units</i> per acre
Minimum <i>lot size</i>	Duplex 4,000 square feet Townhouse 2,000 square feet
Minimum <i>lot frontage</i>	30 feet – or set during formal site plan review
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	20 feet – or set during formal site plan review
- Side	12 feet – or set during formal site plan review
- Rear	20 feet – or set during formal site plan review
- Accessory residential <i>structures in rear yard</i>	
Side	10 feet
Rear	10 feet
Maximum <i>structure height</i> ¹	
- Two-Family	40 feet
- Townhouse	40 feet
- Multi-Family	50 feet
- Accessory Structure (a special exception may be granted to exceed max)	Height of existing primary residential structure
- Fence ²	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Side and Rear	8 feet
Front	4 feet
Parking Location	<i>Rear yard only</i>

- 1 Height of structures may be further restricted by of the Kent County *Airport* Safety Requirements as defined in this Ordinance. Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.
- 2 Fences do not need to meet yard requirements.

ARTICLE II. DISTRICTS
SECTION 8. INTENSE VILLAGE DISTRICT (IV)

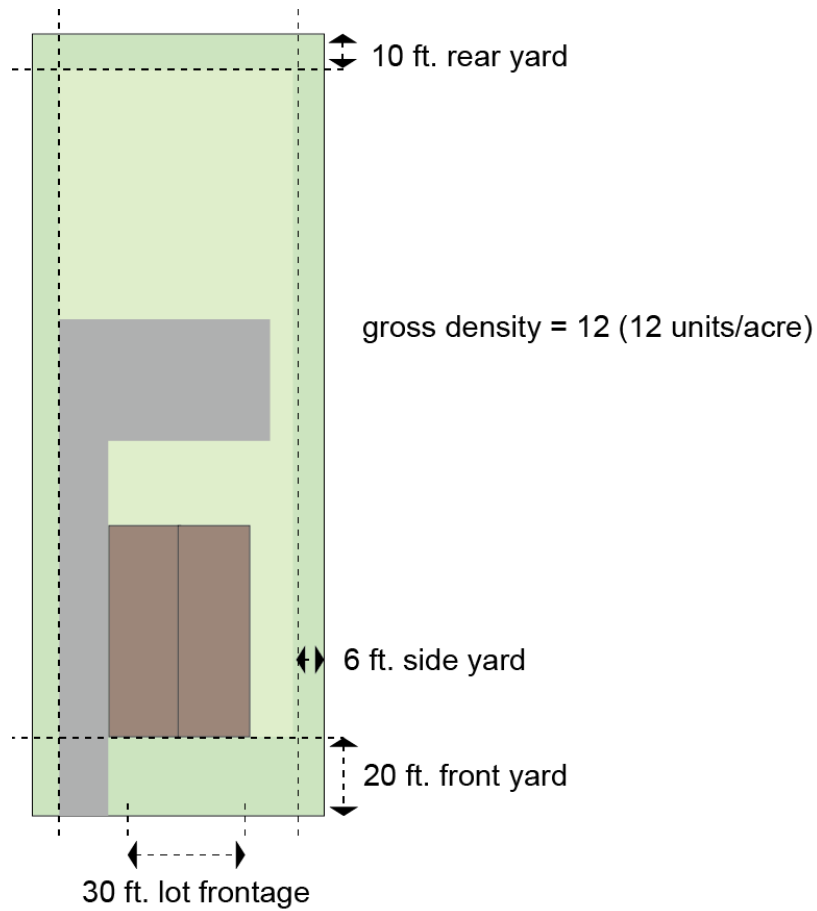


Figure 18: Regulatory diagram of a multi-family housing lot in the Intense Village District.

SECTION 9 COMMERCIAL DISTRICT**9.1 STATEMENT OF INTENT**

The purpose of this district is to provide appropriate locations for a broad range of commercial activities such as retail, wholesale, and contracting activities, which are primarily oriented to highway locations and which may include services and destination retail. Consequently, the district is located along major arterial highways or at the intersections of State and/or County highways. It is further intended that this District shall be for the purpose of limiting sprawl by providing *sites* with adequate *frontage* and depth to permit controlled access to public *streets*. Because these uses are subject to public view, which is of concern to the whole community, they should provide an appropriate appearance, controlled traffic movement, ample landscaping, and protect adjacent properties from the traffic and visual impacts associated with the commercial activity. Whenever possible, *frontage* of the district shall not exceed depth.

This district combines the former Commercial district and Crossroads Commercial (CC). The permitted uses have been combined. Uses allowed only within the US 301 Corridor are specified.



Figure 19: Diagram illustrating the desired character of the Commercial District.

ARTICLE II. DISTRICTS
SECTION 9. COMMERCIAL DISTRICT

9.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following, subject to *site plan* review for proposed new uses by the *Planning Commission* or where applicable the Planning Director. Detailed limitations and standards for these uses may be found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Commercial District	Permitted by right	Special Exception	Accessory Use on all properties
Article III lists requirements for permitted uses and conditions related to special exceptions. Uses from the Crossroads Commercial District only are marked as CC. Uses from the Commercial District only are marked as C. X indicates uses from both districts before combining.			
Accessory employee housing			X
Accessory truck parking			X
<i>Accessory uses</i> and <i>structures</i> normally associated with permitted uses and not otherwise listed			C
<i>Agriculture</i>	X		
Appurtenant signs			X
<i>Automobile repair</i>	CC		
Automobile sales, service, and rental	X		
<i>Automobile service stations</i>	CC		
Boat <i>building</i> and boat repair		X	
<i>Building</i> materials sales	C		
Car wash provided the wastewater is recycled	CC		
Circus or carnival, midways and amusement parks, maze fields and other temporary recreational uses, for a specified period	X		
Class D Alcohol Retail Business, as defined by the State of Maryland	CC		
Cottage industries, tradesmen, and artisan shops		A	
<i>Country inns</i>	CC		
Data processing centers	C		
Distribution centers and warehousing	C		
Financial institutions	X		
Financial institutions in the Route 301 Corridor with drive-in facilities		X	
Fire and rescue stations	CC		
Home and business services such as grounds care, cleaning, exterminators, landscaping, and other repair and maintenance services	CC		
<i>Hotels</i> and motels	X		
Machinery and equipment sales, service, and rental	C		
Manufacture, processing, fabrication, and assembly of products	C		

ARTICLE II. DISTRICTS
SECTION 9. COMMERCIAL DISTRICT

Uses in Commercial District	Permitted by right	Special Exception	Accessory Use on all properties
Article III lists requirements for permitted uses and conditions related to special exceptions. Uses from the Crossroads Commercial District only are marked as CC. Uses from the Commercial District only are marked as C. X indicates uses from both districts before combining.			
Manufacture, processing and assembling of food products		X	
<i>Microbrewery</i> , as defined by the State of Maryland	X		
Mini storage facilities	C		
Modular <i>building</i> sales	CC		
Offices – administrative, business, sales, and professional	X		
<i>Personal wireless facility towers</i>		X	
<i>Personal wireless facilities</i> , collocated on existing towers	X		
Public uses, <i>buildings</i> , and utilities	X		
Radio and television tower, commercial		X	
Recreational facilities, privately or commercially owned		X	
<i>Restaurants</i> without drive through facilities	X		
Retail businesses with less than 60,000 square feet of gross floor area	C		
Retail businesses with more than 60,000 square feet of gross floor area		X	
Retail businesses located in the Route 301 Corridor	X		
Retail businesses in the Route 301 Corridor with drive-in facilities		X	
Retail nurseries and greenhouses	CC		
Roadside stands	CC		
School bus parking <i>lot</i>		X	
School buses, parked, limited to two			X
Shopping Centers		X	
<i>Single family dwellings</i>		A	
Storage of office supplies or merchandise re to a permitted use			X
Solar energy systems, small			X
Solar energy systems, utility scale		X	
Temporary <i>MET Tower</i> of any height			X
Truck parking lot		X	
<i>Truck stops</i>		X	
<i>Truck terminals</i>		X	
Veterinary <i>hospitals</i> and offices	CC		
<i>Wind energy systems, small</i>		X	
<i>Wind energy systems, small</i> , accessory			X

ARTICLE II. DISTRICTS
SECTION 9. COMMERCIAL DISTRICT

9.3 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS

STANDARDS FOR THE <i>SUBDIVISION OF LOTS</i>	
Minimum <i>lot</i> size	NA
Minimum <i>frontage</i>	
- Public road	100 feet
STANDARDS FOR <i>BUILDING AND STRUCTURE</i> HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	50 feet
- Side and <i>Rear yard</i>	50 feet with <i>buffering</i> from adjoining AZD, RCD, RC, RR, CAR, V, IV
	30 feet from C, CCA, M, EC, ECCA, which may be reduced to 0 if emergency and maintenance vehicle access are acceptably addressed and if the adjoining property is a compatible use
- Waterfront	100 feet
Height ¹	
- Industrial <i>structures</i>	45 feet
- Industrial <i>structures</i> in 301 Corridor	60 feet
- Commercial <i>structure</i>	45 feet
- Residential <i>structure</i>	38 feet
- Fence ²	
- Security	8 feet
- Ornamental	
Front and <i>side yard</i>	4 feet
<i>Rear yard</i>	8 feet

1 Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; stand pipes; and flag poles.

2 Fences do not need to meet yard requirements.

ARTICLE II. DISTRICTS
SECTION 9. COMMERCIAL DISTRICT

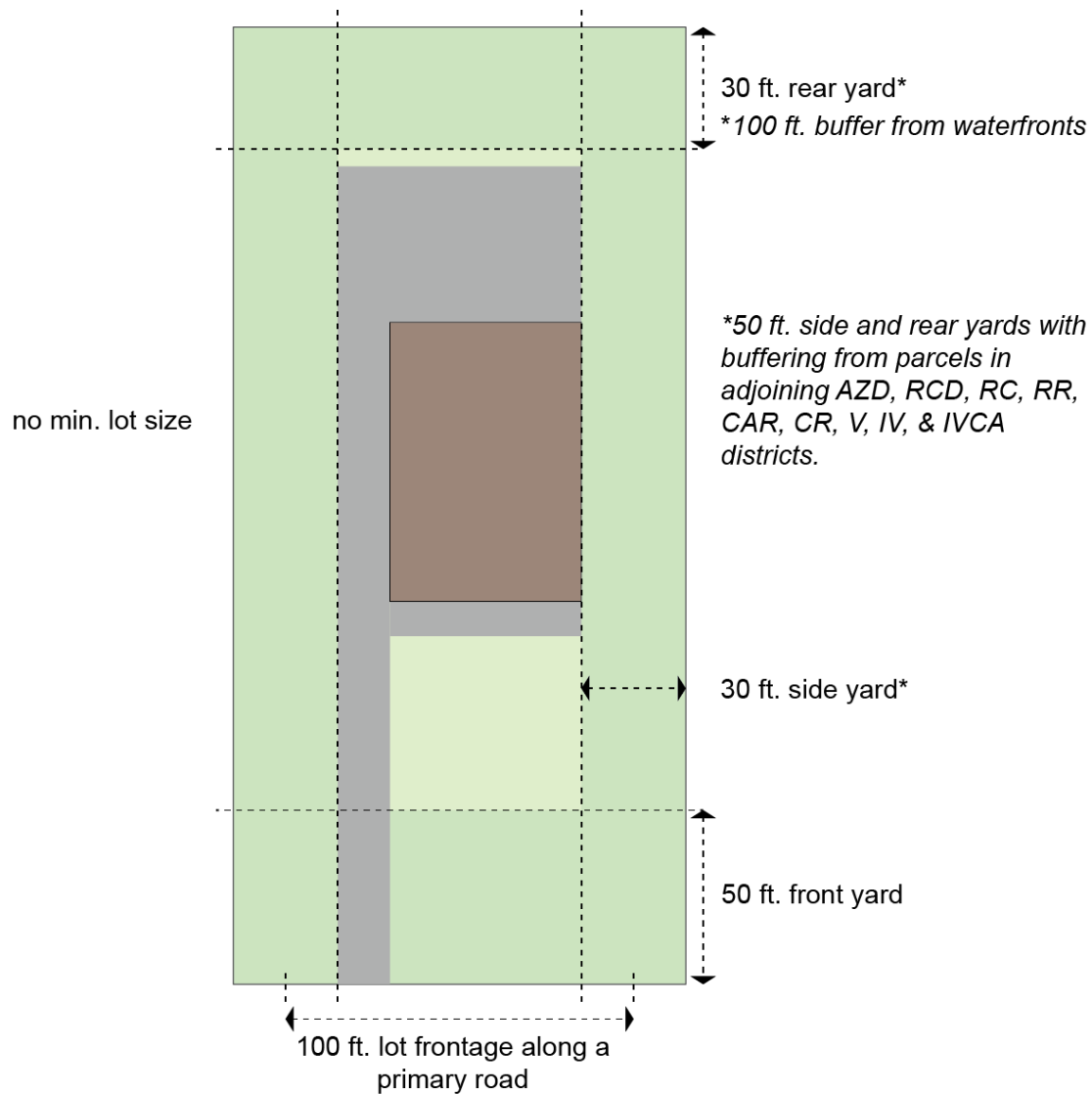


Figure 20: Regulatory diagram of a lot in the Commercial District.

SECTION 10 COMMERCIAL CRITICAL AREA (CCA)**10.1 STATEMENT OF INTENT**

The purpose of this district is to accommodate commercial and service activities that are not normally located in central business concentrations. These uses are primarily oriented to highway locations and include services and destination retail. Consequently, the district is located along major arterial highways. It is further intended that this District shall be for the purpose of limiting sprawling *development* by providing *sites* with adequate *frontage* and depth to permit controlled access to public *streets*. Because these uses are subject to public view, which is of concern to the whole community, they should provide an appropriate appearance, controlled traffic movement, ample landscaping, and protect adjacent properties from the traffic and visual impacts associated with the commercial activity. Whenever possible, *frontage* of the district shall not exceed depth.

The Commercial Critical Area (CCA) district is complementary to the Commercial (C) district. Regulations are intended to mirror the C district and provide a Critical Area version of C district.

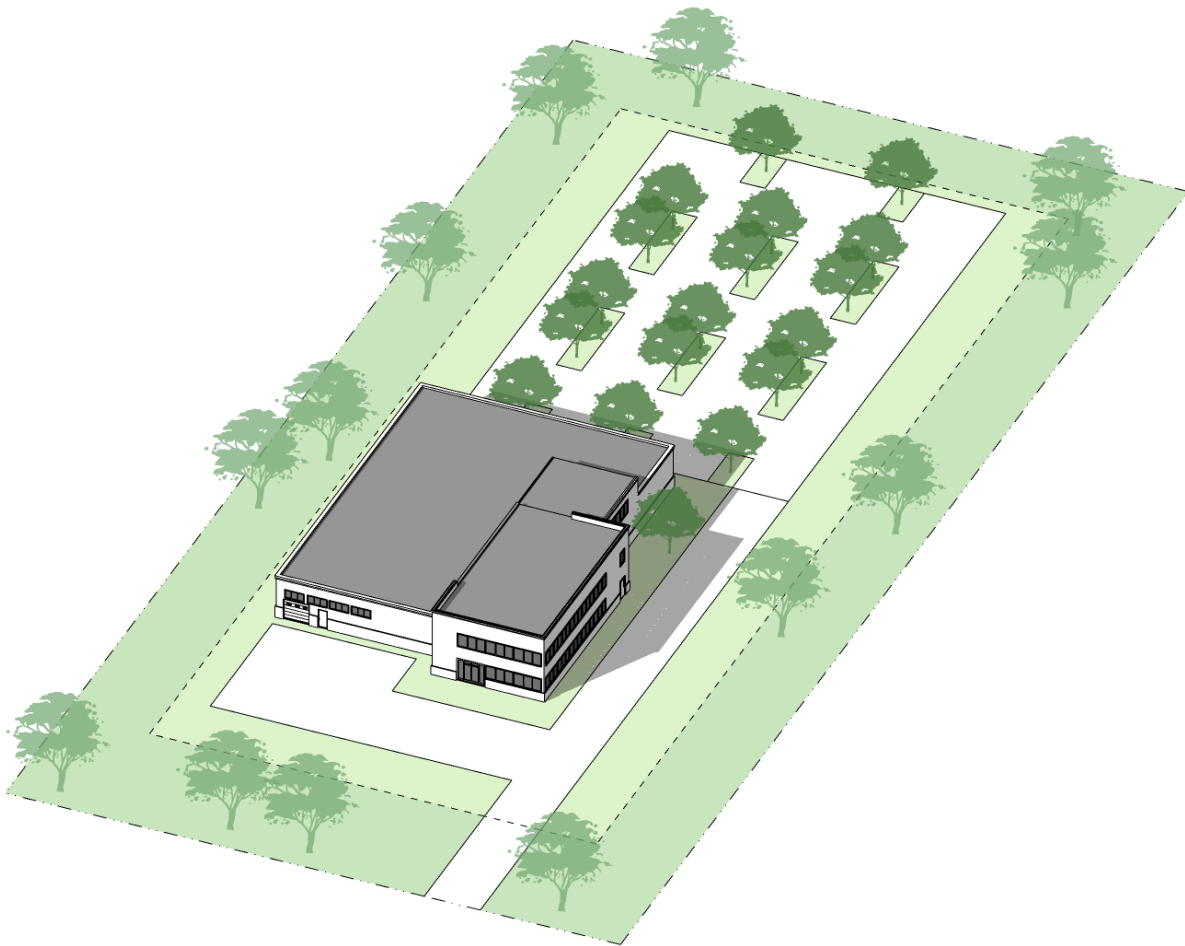


Figure 21: Diagram illustrating the desired character of the Commercial Critical Area District.

ARTICLE II. DISTRICTS
SECTION 10. COMMERCIAL CRITICAL AREA (CCA)

10.2 PERMITTED USES AND STRUCTURES

A *building* or land shall be used only for the following, subject to *site plan* review by the *Planning Commission*, or where applicable the Planning Director. Detailed limitations and standards for these uses are found in Article III. Administrative special exceptions are indicated by letter “A.” All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Commercial <i>Critical Area</i> (CCA) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Accessory employee housing			X
Accessory truck parking			X
<i>Accessory uses and structures</i> normally associated with permitted uses			X
<i>Agriculture</i>	X		
Appurtenant signs			X
Automobile sales, service, and rental	X		
Boat <i>building</i> and boat repair		X	
<i>Building</i> materials sales	X		
Circus or carnival, midways and amusement parks, maze fields and other temporary recreational uses, for a specified period	X		
Cottage industries, tradesmen and artisan shops		A	
Financial institutions	X		
Financial institutions in the Route 301 Corridor with drive-in facilities		X	
<i>Hotels</i> and motels	X		
Machinery and equipment sales, service, and rental	X		
Mini storage facilities	X		
Offices – administrative, business, sales, and professional	X		
<i>Personal wireless facility towers</i>		X	
<i>Personal wireless facilities</i> , collocated on existing towers	X		
Public uses, <i>buildings</i> , and utilities	X		
Recreational facilities, privately or commercially owned		X	
<i>Restaurants</i> without drive through facilities	X		
Retail businesses located in the Route 301 Corridor	X		
Retail businesses in the Route 301 Corridor with drive-in facilities		X	
<i>Single family dwellings</i>		A	
Solar energy systems, small			X
Solar energy systems, utility scale		X	
Temporary <i>MET Tower</i> of any height			X
<i>Truck stops</i>		X	
<i>Wind energy systems, small</i>		X	
<i>Wind energy systems, small, accessory</i>			X

10.3 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS

STANDARDS FOR THE <i>SUBDIVISION OF LOTS</i>	
Minimum <i>lot</i> size	NA
Minimum <i>frontage</i>	
- Public road	100 feet
STANDARDS FOR <i>BUILDING AND STRUCTURE</i> HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	50 feet
- Side and <i>Rear yard</i>	50 feet with <i>buffering</i> from adjoining AZD, RCD, RC, CAR, CR, V, IV
	30 feet from C, CCA, M, EC, ECCA, which may be reduced to 0 if emergency and maintenance vehicle access are acceptably addressed and if the adjoining property is a compatible use
- Waterfront	Minimum 100-foot <i>buffer</i> or <i>modified buffer</i> ¹
Height ²	
- Commercial <i>structure</i>	45 feet
- Residential <i>structure</i>	38 feet
- Fence ³	
- Security	8 feet
- Ornamental	
Front and Side	4 feet
Rear	8 feet

- 1 Modifications for structures existing prior to April 12, 1988, may be permitted per regulations set forth in Article VI.
- 2 Except in an area defined as the Kent County *Airport* Safety Area, the height limitations do not apply to: belfries; ornamental towers and spires; church spires; public monuments; commercial radio, personal wireless facility, and television towers less than 200 feet in height; stage towers or scenery lofts; tanks; conveyors; silos and corn dryers; elevator bulkheads; fire towers; water towers; standpipes; and flag poles.
- 3 Fences do not need to meet yard requirements.

ARTICLE II. DISTRICTS
SECTION 10. COMMERCIAL CRITICAL AREA (CCA)

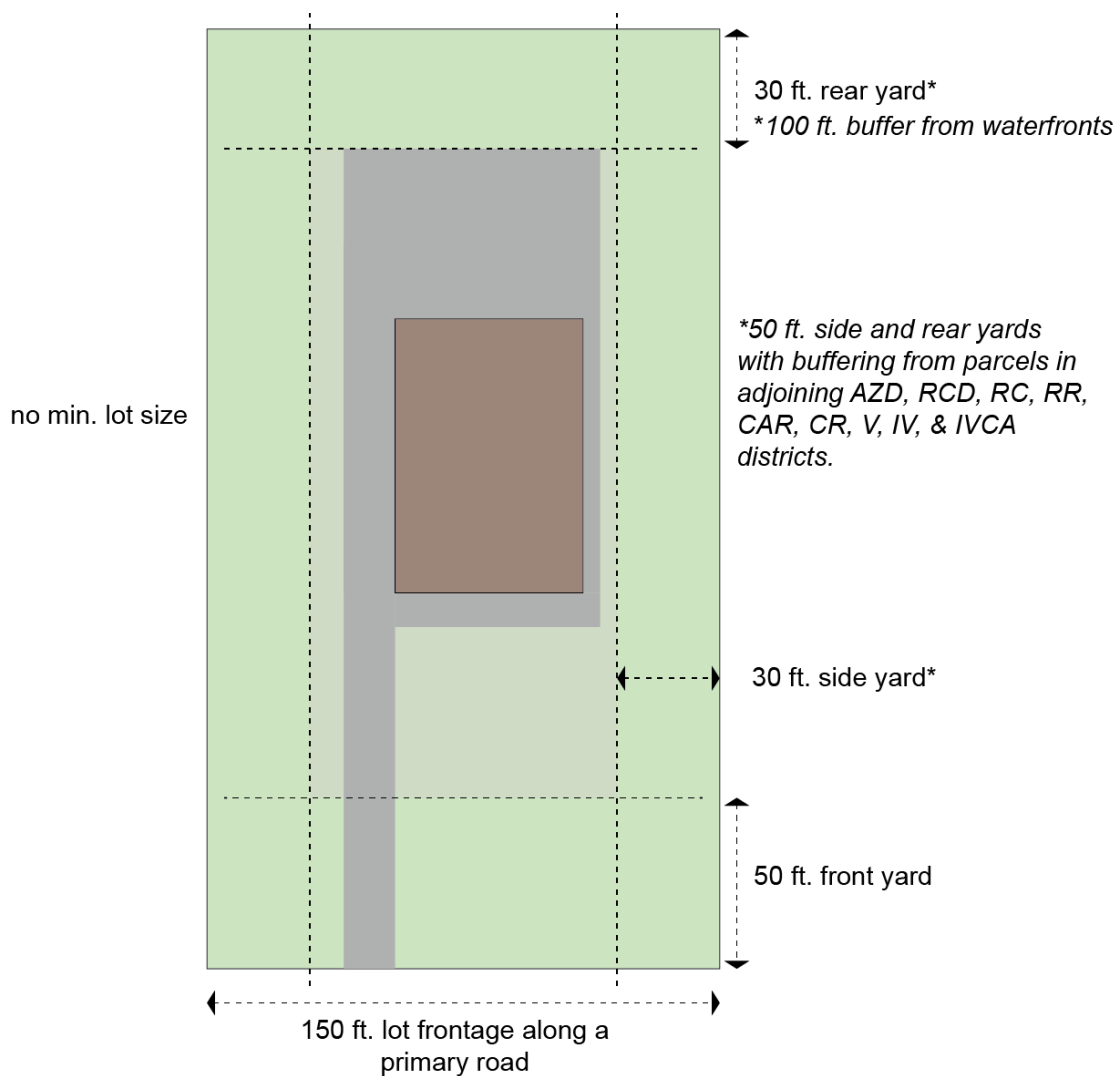


Figure 22: Regulatory diagram of a lot in the Commercial Critical Area District.

SECTION 11 MARINE DISTRICT (M)**11.1 STATEMENT OF INTENT**

The purpose of this district is to provide land for full-service *marinas*, including out-of-water boat storage, repair, and other services normally associated with *marinas*. Marine industrial uses, including boat *building*, are permitted in appropriate locations subject to applicable sanitation and pollution laws and ordinances. *Retrofitting of stormwater management* is encouraged and standards are provided to improve the quality of runoff that enters the Chesapeake Bay and its tributaries. It is important to note that not all existing marinas would need to be zoned Marine.

The Marine District is intended to: 1) improve the quality of runoff from developed areas that enters the Chesapeake Bay or its *tributary streams*; 2) accommodate additional mixed-use *development* provided that water quality is not impaired; 3) minimize the expansion of intensely developed areas into portions of the *Critical Area* designated as habitat protection areas and resource conservation areas; 4) conserve and enhance fish, wildlife, and *plant habitats* to the extent possible within intensely developed areas; and, 5) encourage the use of *retrofitting* measures to address existing *stormwater management* problems.

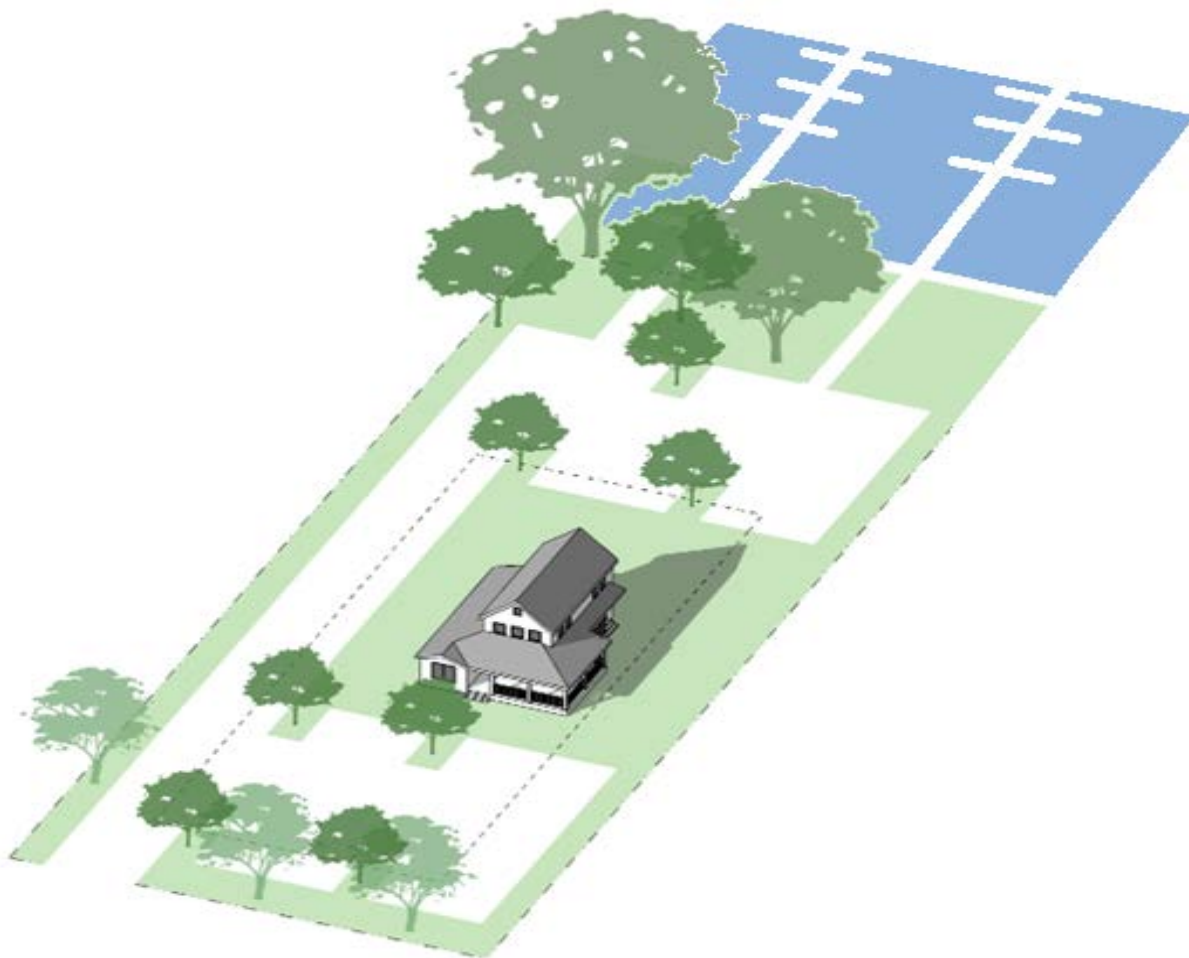


Figure 23: Diagram illustrating the desired character of the Marine District.

ARTICLE II. DISTRICTS
SECTION 11. MARINE DISTRICT (M)

11.2 PERMITTED USES AND STRUCTURES

A building or land shall be used only for the following, subject to *site plan* review by the *Planning Commission* or where applicable the Planning Director. Detailed limitations and standards for these uses are found in Article III. Administrative special exceptions are indicated by letter “A.” “B” indicates exceptions that require only Board of Appeals review. All other exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Marine District (M) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Accessory employee housing			X
Adaptive reuse of <i>historic structures</i> for uses not otherwise listed		A	
<i>Airports</i> , landing fields, helistops, or heliports		X	
Appurtenant signs			X
Bath houses, pump out <i>structures</i> , and other <i>accessory structures</i> normally associated with permitted uses			X
Boat building and boat repair, located at least 100 feet from any residential district	X		
Boat docks, <i>piers</i> and wharves	X		
Boat rental, sales, supplies, instruction, and other services customarily associated with a full-service marina	X		
Boat sales, boat and outboard motor repairs and boat storage	X		
Boat storage, out of water	X		
<i>Country inns</i>		X	
Dormitories for employees		B	
Dredge spoil <i>sites</i>		X	
Erosion and flood control structures	X		
Existing <i>conference centers, resorts, retreats, hotels, and motels</i>	X		
Fuel storage and sale for marine purposes only			X
<i>Marinas</i>	X		
Multi-level boat storage		X	
<i>Off-street parking</i> and loading, including the parking of commercial vehicles related to the operation of an <i>on-site</i> business			X
<i>Private clubs</i>		B	
<i>Private destination/residence clubs</i>	X		
<i>Public landings</i>	X		
<i>Public utility lines and accessory structures</i>	X		
Pubs, taverns, and bars, including open air facilities		X	
<i>Restaurants</i> without drive through facilities	X		

ARTICLE II. DISTRICTS
SECTION 11. MARINE DISTRICT (M)

Uses in Marine District (M) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Satellite dish with an antenna exceeding 3 feet in diameter			X
Satellite dish, private, with an antenna of 3 feet or less in diameter			X
Seafood processing		X	
Solar energy systems, small			X
Stores or shops for the conduct of retail sales			X
Temporary <i>MET Tower</i> of any height			X
<i>Wind energy systems, small, accessory</i>			X

ARTICLE II. DISTRICTS
SECTION 11. MARINE DISTRICT (M)

11.3 DENSITY, HEIGHT, WIDTH, BULK AND FENCE REQUIREMENTS

STANDARDS FOR THE <i>SUBDIVISION OF LOTS</i>	
Gross <i>density (lots/acre)</i>	2
Minimum <i>lot size</i>	½ acre
Minimum <i>frontage</i>	
- Road	100 feet
- Waterfront	100 feet
STANDARDS FOR <i>BUILDING AND STRUCTURE</i> HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	30 feet
- Side	
- Adjacent to CC, CCA, M	8 feet
- Adjacent to other districts	25 feet
- Rear	
- Adjacent to CC, CCA, M	10 feet
- Adjacent to other districts	25 feet
- Waterfront	Minimum 100-foot <i>buffer</i> or <i>modified buffer</i> ¹
- <i>Shoreline cliff</i>	1.5 x <i>cliff height</i> + 20 feet
- Minimum <i>pier</i>	
- <i>Side yard</i>	30 feet
- Accessory <i>Buildings</i>	
- Side	10 feet
- Rear	10 feet
Height	
- <i>Buildings</i>	38 feet
- Covered <i>pier</i> ²	38 feet
- Fence	
- Security	8 feet
- Ornamental	
- Front and Side	4 feet
- Rear	8 feet

1 Modifications for structures existing prior to April 12, 1988, may be permitted as per Article VI.

2 Height of covered piers shall be measured from Mean High Tide.

ARTICLE II. DISTRICTS
SECTION 11. MARINE DISTRICT (M)

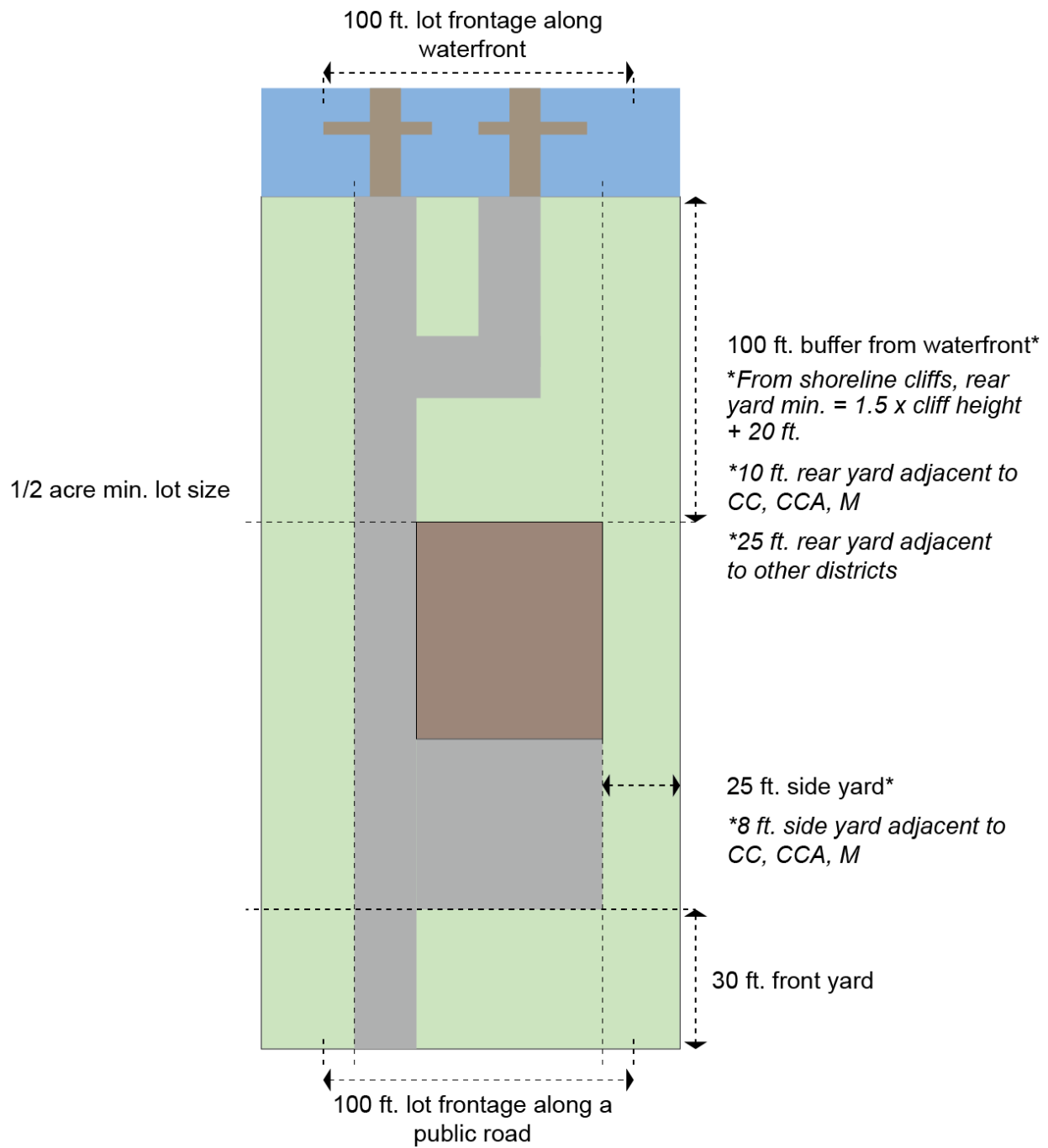


Figure 24: Regulatory diagram of a lot in the Marine District.

SECTION 12 EMPLOYMENT CENTER DISTRICT (EC)**12.1 STATEMENT OF INTENT**

Employment Center districts are intended to include a mix of light industrial, office, and other employment uses as well as commercial planned *developments* that are environmentally sound, sustainable, and compatible with adjacent uses. They are further defined as areas devoted to industrial, office, and employment uses which present an attractive appearance, provide for flexibility, and complement surrounding land use character by means of appropriate design of *buildings*, service areas, and landscape treatments.

It is intended that Employment Center districts be located in areas having one or more major highways, and/or access to rail, and complementary to surrounding *development*. Light industrial uses may include those uses which manufacture, process, store, package, or distribute goods and materials, and are, in general, dependent on raw materials that are refined elsewhere.

Employment Center districts in the Route 301 Corridor permit buildings with larger footprints and increased buildings heights, in order to provide for the desired economic development in the Route 301 growth area, as envisioned by the Kent County Comprehensive Plan.

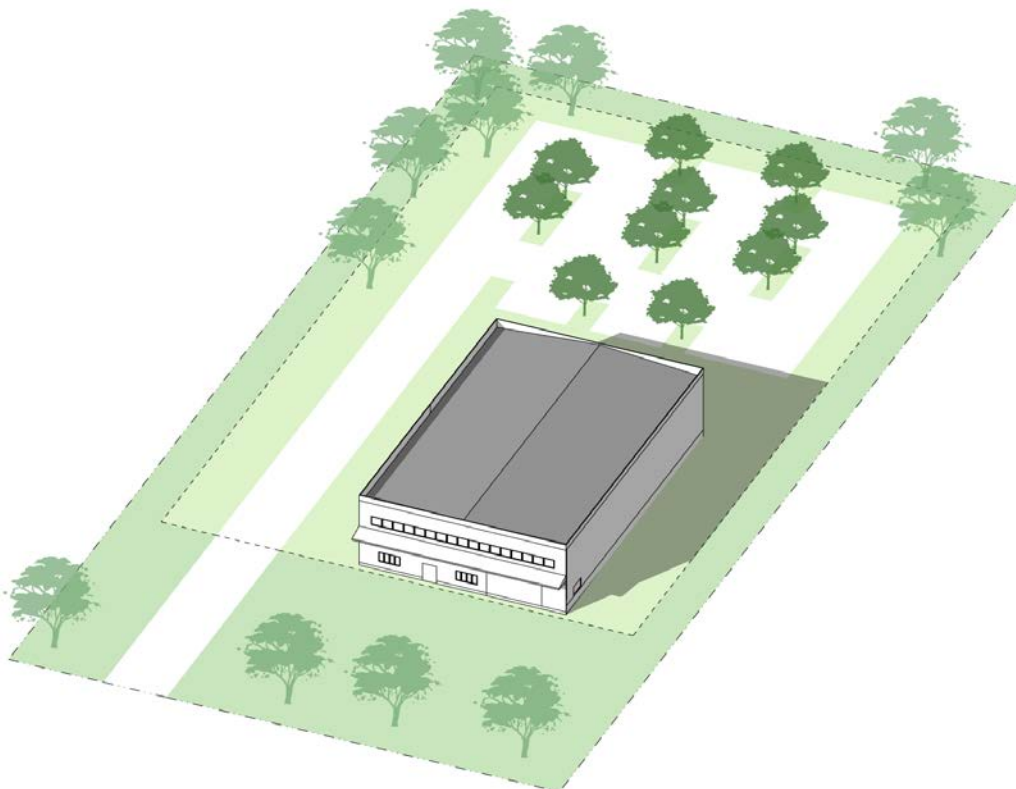


Figure 25: Diagram illustrating the desired character of the Employment Center District.

SECTION 12. EMPLOYMENT CENTER DISTRICT (EC)

12.2 PERMITTED USES AND STRUCTURES

For every commercial and industrial *structure* and use erected, reconstructed, altered, or enlarged after the effective date of this Ordinance, a *site plan* shall be filed. No *building* permit shall be issued until said *site plan* is approved by the *Planning Commission* or where applicable the Planning Director. Detailed limitations and standards for uses may be found in Article III. Special exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Employment Center District (EC)	Permitted by right	Special Exception	Accessory Use on all properties
Article III lists requirements for permitted uses and conditions related to special exceptions. "X" indicates uses that are permitted in both Employment Center district and Industrial district. "EC" indicates uses that are permitted only in the original Employment Center district. The "I" indicates uses permitted in the original Industrial district.			
Accessory employee housing			X
<i>Agriculture</i>	X		
<i>Airports</i> , landing fields, helistops, or heliports	X		
Animal shelters	I		
Blacksmith, welding and machine shops	X		
Boat building and boat repair	X		
Boat storage, out-of-water			X
Data processing centers	X		
<i>Day care groups</i>			X
Distribution centers and warehousing	X		
<i>Excavation, landscaping, or other contractor's yard</i>	X		
Manufacture of concrete and ceramics products, commercial sawmills, sewage treatment plants, recycling facilities, and lumberyards	EC		
Manufacture, processing, and distribution of hot mix asphalt	I		
Manufacture, processing, fabrication, and assembly of products	X		
Offices	EC		X
<i>Personal wireless facilities</i> , collocated on existing towers	X		
<i>Personal wireless facility towers</i>		X	
Production of biofuels (formerly in the Industrial zoning district only)		X	
Public uses, <i>buildings</i> , and utilities	X		
Public utility <i>buildings, structures</i> , water treatment plants, and transmission lines	X		
Radio and television tower, commercial		X	
<i>Restaurants</i> without drive through facilities			X
<i>Restaurants</i> with drive through facilities in the Route 301 Corridor	X		
Retail businesses with less than 60,000 square feet of gross floor area	X		
Retail businesses with more than 60,000 square feet of gross floor area		X	

ARTICLE II. DISTRICTS
SECTION 12. EMPLOYMENT CENTER DISTRICT (EC)

Uses in Employment Center District (EC)	Permitted by right	Special Exception	Accessory Use on all properties
Article III lists requirements for permitted uses and conditions related to special exceptions. "X" indicates uses that are permitted in both Employment Center district and Industrial district. "EC" indicates uses that are permitted only in the original Employment Center district. The "I" indicates uses permitted in the original Industrial district.			
Retail businesses in the Route 301 Corridor	X		
Retail businesses in the Route 301 Corridor with drive-in facilities		X	
Retail sales of products produced <i>on-site</i>			X
<i>Single family dwelling</i> , one per existing property	X		
Solar energy systems, small			X
Solar energy systems, utility scale	X		
Storage and office trailers, temporary during construction	X		
Temporary <i>MET Tower</i> of any height			X
<i>Truck terminal</i>	X		
Uses and <i>structures</i> which are customarily accessory and clearly incidental and subordinate to the permitted use			X
Vocational and trade schools	X		
<i>Wind energy systems, small</i>		X	
<i>Wind energy systems, small, accessory</i>			X

12.3 DENSITY, HEIGHT, WIDTH, BULK, AND FENCE REQUIREMENTS

STANDARDS FOR THE <i>SUBDIVISION OF LOTS</i>	
Gross <i>density (dwelling units/ acre)</i>	1 <i>dwelling units</i> per 20 acres ¹
Maximum residential <i>lot size</i>	2 acres
Minimum <i>lot frontage</i>	75 feet
STANDARDS FOR <i>BUILDING AND STRUCTURE</i> HEIGHT, WIDTH, AND PLACEMENT	
Minimum <i>yard</i>	
- Front	
- Existing <i>Primary road</i>	100 feet
- Other <i>roads</i>	As approved during subdivision review
- Side and Rear	
- Adjacent to ECCA	15 feet
- Adjacent to C, CCA, M, AZD, RCD	40 feet
- Adjacent to V, CR, CAR	100 feet
- Adjacent to public road	100 feet ²
Height	
- Industrial <i>structure</i>	45 feet
- Industrial <i>structure</i> in 301 Corridor	60 feet
- Residential <i>structure</i>	38 feet
- Towers, silos, etc.	150 feet ³
- Fence ⁴	
- Security	8 feet
- Ornamental	
Front and Side	4 feet
Rear	8 feet
Maximum <i>building footprint</i>	
- Distribution Center	
- Route 301 Corridor	NA
- Other locations	75,000 sq. ft.
- Other industrial <i>buildings</i>	
- Route 301 Corridor	NA
- Other locations	250,000 sq. ft.

- 1 Intrafamily transfers only
- 2 May be reduced or increased during site plan review
- 3 Except in the *Airport Safety Zone*
- 4 Fences do not need to meet the yard requirements.

ARTICLE II. DISTRICTS
SECTION 12. EMPLOYMENT CENTER DISTRICT (EC)

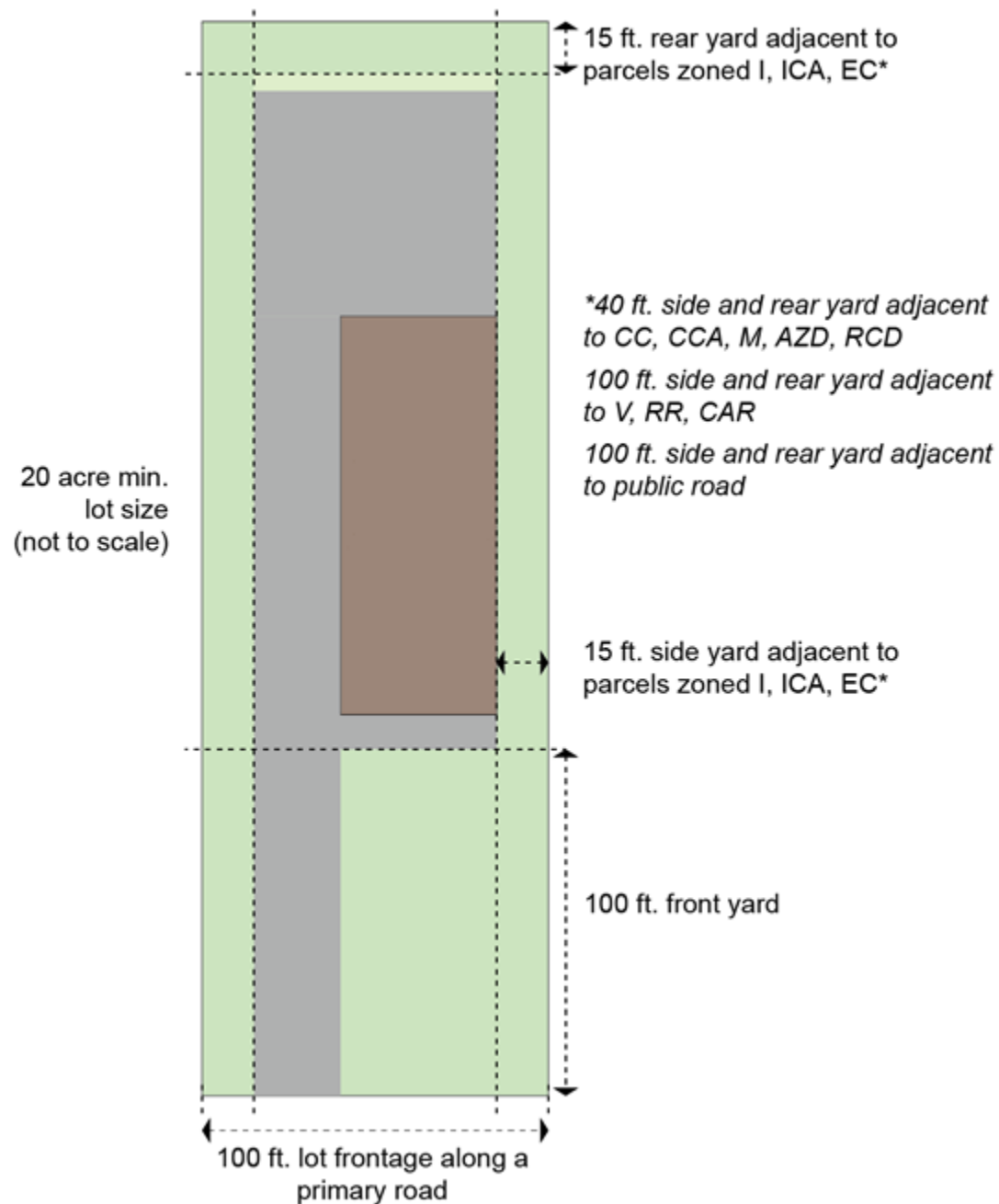


Figure 26. Regulatory graphic of a lot in the Employment Center District.

SECTION 13 EMPLOYMENT CENTER CRITICAL AREA (ECCA)**13.1 STATEMENT OF INTENT**

This district is intended to provide for a range of light industrial, office, and other employment uses which are environmentally sound, sustainable, and compatible with adjacent uses. Furthermore, the district is primarily limited to light manufacturing and support businesses. Light industries include those which manufacture, process, store, package or distribute goods and materials and are, in general, dependent on raw materials refined elsewhere. The ECCA District is intended to: 1) improve the quality of runoff from developed areas that enters the Chesapeake Bay or its *tributary streams*; 2) accommodate additional mixed-use *development* provided that water quality is not impaired; 3) minimize the expansion of intensely developed areas into portions of the *Critical Area* designated as habitat protection areas and resource conservation areas; 4) conserve and enhance fish, wildlife, and *plant habitats* to the extent possible within intensely developed areas; and 5) encourage the use of *retrofitting* measures to address existing *stormwater management* problems.

The ECCA zoning district is intended to be complementary to the Employment Center (EC) zoning district. Regulations are intended to mirror the EC and provide for a Critical Area version of EC.



Figure 27 Diagram illustrating the desired character of the ECCA District.

SECTION 13. EMPLOYMENT CENTER CRITICAL AREA (ECCA)

13.2 PERMITTED PRINCIPAL USES AND STRUCTURES

For every industrial *structure* and use erected, reconstructed, altered, or enlarged after the effective date of this Ordinance, a *site plan* shall be filed. No *building* permit shall be issued until said *site plan* is approved by the *Planning Commission*, or where applicable the Planning Director. Detailed limitations and standards for these uses may be found in Article III. Special exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Employment Center Critical Area (ECCA) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Accessory employee housing			X
<i>Agriculture</i>	X		
<i>Airports</i> , landing fields, helistops, or heliports	X		
Blacksmith, welding and machine shops	X		
Boat building and boat repair	X		
Boat storage, out of water			X
<i>Excavation, landscaping and other contractors' yard</i>	X		
<i>Day care groups</i>			X
Distribution centers and warehousing	X		
Manufacture of concrete and ceramics products, commercial sawmills, sewage treatment plants, recycling facilities, and lumberyards	X		
Manufacture, processing, fabrication, and assembly of products	X		
Offices			X
<i>Personal wireless facilities</i> , collocated on existing towers	X		
Public utility <i>buildings, structures</i> , water treatment plants, and transmission lines	X		
<i>Restaurants</i> without drive through facilities			X
Retail sales of products produced <i>on-site</i>			X
<i>Single family dwelling</i> , one per existing property	X		
Solar energy systems, small			X
Storage and office trailers, temporary during construction	X		
Temporary <i>MET Tower</i> of any height			X
Transmission towers	X		
Uses and <i>structures</i> which are customarily accessory and clearly incidental and subordinate to the permitted use			X
Vocational and trade schools	X		
<i>Wind energy systems, small</i>		X	
<i>Wind energy systems, small</i> , accessory			X

SECTION 13. EMPLOYMENT CENTER CRITICAL AREA (ECCA)

13.3 DENSITY, HEIGHT, WIDTH, BULK, AND FENCE REQUIREMENTS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Gross <i>density</i> (dwelling units/ acre)	1 dwelling units per 20 acres ¹
Maximum residential <i>lot</i> size	2 acre
Minimum <i>frontage</i>	75 feet
- Existing <i>Primary road</i>	100 feet ²
- Other <i>roads</i>	3
- Adjacent to EC	15 feet
- Adjacent to AZD, RCD, C, CCA, M	40 feet ⁴
- Adjacent to CAR, CR, V, IV	100 feet ⁴
- Adjacent to public road	100 feet ³
- Waterfront	Minimum 100 ft. <i>buffer</i> or <i>modified buffer</i> ⁵
- <i>Shoreline cliff</i>	1.5 x <i>cliff height</i> + 20 ft.
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Height	
- Industrial <i>structure</i>	45 feet
- Residential <i>structure</i>	38 feet
- Towers, silos, etc.	150 feet ⁶
- Security	8 feet
Front and Side	4 feet
Rear	8 feet
- Distribution Center	75,000 sq. ft.
- Other industrial <i>buildings</i>	250,000 sq. ft.

- 1 Intrafamily transfers only.
- 2 May be reduced or increased during site plan review.
- 3 As approved during subdivision review.
- 4 When a side or rear lot line coincides with a side or rear lot line of a property located in a non-employment center zone, the required yard shall be landscaped and screened and shall be unoccupied by buildings, structures, or parking area.
- 5 Buffers in designated areas may be modified according to the standards in Article VI.
- 6 Additional height restrictions may apply to properties in *Airport* Safety Zones.

100 ft. buffer from waterfronts*

*From shoreline cliffs, min.
 $\text{rear yard} = 1.5 \times \text{cliff height} + 20 \text{ ft.}$

*15 ft. side and rear yard adjacent to parcels zoned I, ICA, EC

100 ft. side and rear yard adjacent to V, RR, CAR

100 ft. side and rear yard adjacent to public road

40 ft. side yard adjacent to parcels zoned AZD, RCD, CC, C, CCA, & M*

100 ft. front yard

75 ft. lot frontage

02/06/2024 Land Use Ordinance for Kent County, Maryland

SECTION 14 MIXED-USE DEVELOPMENT (MXD)**14.1 STATEMENT OF INTENT**

1. The Mixed-Use Development District promotes the principles of Smart Growth and numerous policies of the Kent County Comprehensive Plan for growth areas, including the US Route 301 Corridor, by combining the uses permitted in the Commercial District, Employment Center District, and Intense Village District.
2. The purpose of this district is to facilitate a range of commercial, residential, and mixed-use development as envisioned by the Kent County Comprehensive Plan for growth areas, including the US Route 301 Corridor.
3. This district is intended to accommodate a high-quality and well-designed mix of uses which are environmentally sound, sustainable, and developed at intensities that limit sprawling development and make efficient use of land and public facilities.

[ILLUSTRATIVE GRAPHIC TO BE INSERTED]



Figure 29 Diagram illustrating the desired character of the MXD District.

14.2 DISTRICT MASTER PLAN AND MIXED-USE DEVELOPMENT STANDARDS

1. Any development within the district of any phase, development tract, or individual lot shall be planned to generally conform to a District Master Plan for the Mixed-Use Development District and shall be approved by the Planning Commission. This District Master Plan shall be prepared as conceptual diagrams encompassing the entire Mixed-Use District that illustrate the planning intent and generalized locations for the following: land uses and potential alternate land uses; connectivity to be provided by major thoroughfares, primary roads, and collector streets, including potential alternate locations for such streets, pedestrian and bicycle circulation network, and trails; and open space including parks, active recreational facilities, and natural features to be preserved.
2. To ensure flexibility by allowing for development within the district to respond to the changing market conditions, the District Master Plan is intended to evolve over time with potential updates or revisions as each phase or tract is developed. Updates or revisions to the Mixed-Use District Master Plan shall be approved by the Planning Commission.
3. The key elements to be illustrated in the District Master Plan include the following:
 - (A) Land Use Concept Plan showing generalized land use designations, including potential alternate land use designations, for all lands encompassing the entire district, which may evolve over time with updates and revisions.
 - (B) Connectivity Plan showing the street network, including potential alternate networks, of major thoroughfares, primary streets, and collector streets (whether public or private), pedestrian and bicycle circulation network, and a primary trail network, encompassing the entire district as well as connectivity to areas outside the district, which may evolve over time with updates and revisions.
 - (C) Open Space Plan showing generalized locations for lands to be designated as parks, open spaces, and natural features encompassing the entire district, which may evolve over time with potential updates or revisions. This includes parks, plazas, squares, greens, and linear greenway linkages (whether public or private with public access); active recreation facilities such as playgrounds, sport courts, indoor recreation uses, and playing fields; and natural features such as wooded areas, waterways, and wetlands, and which may include buffers, critical areas, conservation easements, forest conservation areas, and other environmental features.
4. Development of any phase, tract, or individual lot shall include a Land Use Concept Plan, Connectivity Plan, Open Space Plan, and Phasing Plan for the specific development in relation to adjacent and nearby portions of the Mixed-Use Development District that generally conforms to the District Master Plan as required herein. The Land Use Concept Plan, Connectivity Plan, Open Space Plan, and Phasing Plan should be prepared as conceptual diagrams that illustrate how the development of any phase, tract, or individual lot relates to the District Master Plan and the environs surrounding the district.

SECTION 14. MIXED-USE DEVELOPMENT (MXD)

5. Development of any phase, tract, or individual lot shall include a set of Mixed-Use Development Critical Area Standards compiled from applicable standards in Article IV, §§ 3.6 through 3.9. The Mixed-Use Development Critical Area Standards including any specific Design Guidelines and Standards shall be approved by the Planning Commission.
6. The Mixed-Use Development District shall be required to provide a minimum of fifteen percent (15%) open space. The open space provided, platted, and recorded in the Land Records of Kent County, Maryland from multiple phases or tracts whether or not they are under single ownership, control, or agreement between owners at time of development, and whether such phases or tracts are contiguous or non-contiguous to each other, can be combined to meet the minimum fifteen percent (15%) open space requirement for the combined area of such phases or tracts with the same Mixed Use Development District.
7. In the Mixed-Use Development District, the definition of land qualifying as open space includes the following: parks, plazas, squares, greens, and linear greenway linkages (whether public or private with public access), excluding parking areas and rights-of-way for automobile use; active recreational facilities such as playgrounds, sport courts, and playing fields; and natural features such as wooded areas, waterways, and wetlands, and which may include buffers, critical areas, conservation easements, forest conservation areas, and other environmental features.

ARTICLE II. DISTRICTS
SECTION 14. MIXED-USE DEVELOPMENT (MXD)

14.3 PERMITTED PRINCIPAL USES AND STRUCTURES

For every *structure* and use erected, reconstructed, altered, or enlarged after the effective date of this Ordinance, a *site plan* shall be filed. No *building* permit shall be issued until said *site plan* is approved by the *Planning Commission*, or where applicable the Planning Director. Detailed limitations and standards for these uses may be found in Article III. Special exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Mixed-Use Development (MXD) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Accessory dwelling unit			X
Accessory employee housing			X
Accessory off-street parking of one commercial vehicle			X
Accessory structures in the front yards of through or corner lots		X	
Accessory truck parking			X
Accessory vehicle parking			X
Adaptive reuse of historic structures for uses not otherwise listed		X	
Agriculture	X		
Agritourism on farms, defined in Article VII	X		
Airports, landing fields, helistops, or heliports	X		
Animal husbandry, special – backyard chickens			X
Animal shelters	X		
Appurtenant signs			X
Assisted living facilities with five to eight beds		X	
Assisted living facilities with no more than four beds			X
Automobile repair	X		
Automobile sales, service, and rental	X		
Automobile service stations	X		
Blacksmith, welding and machine shops	X		
Boat building and boat repair	X		
Boat sales, boat and outboard motor repairs and boat storage	X		
Building materials sales	X		
Car wash	X		
Cemetery, including crematorium and mausoleum			X
Circus or carnival, midways and amusement parks, maze fields and other temporary recreational uses, for a specified period	X		
Class D Alcohol Retail Business, as defined by the State of Maryland	X		

ARTICLE II. DISTRICTS
SECTION 14. MIXED-USE DEVELOPMENT (MXD)

Uses in Mixed-Use Development (MXD) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Conference center		X	
Convalescent, nursing, or group homes for the aged with five or more beds	X		
Cottage industries, tradesmen and artisan shops	X		
Country inns	X		
Data processing centers	X		
Day care groups	X		
Day care homes			X
Distribution centers and warehousing	X		
Excavation, landscaping, and other contractor's yard	X		
Financial institutions located within the Route 301 Corridor are permitted with drive-in facilities as special exceptions	X		
Fire and rescue stations	X		
Funeral homes	X		
Home and business services such as grounds care, cleaning, exterminators, landscaping, and other repair and maintenance services	X		
Home occupations in main or accessory dwellings			X
Hospitals, rehabilitation facilities, and similar institutions for human care	X		
Hotels and Motels	X		
Houses of worship	X		
Indoor movie theaters, playhouses, and dinner theaters	X		
Machinery and equipment sales, service, and rental	X		
Manufacture of concrete and ceramics products, commercial sawmills, sewage treatment plants, recycling facilities, and lumberyards	X		
Manufacture, processing, fabrication, and assembly of products including research and development companies	X		
Manufacture, processing, and distribution of hot mix asphalt	X		
Microbrewery, as defined by the State of Maryland	X		
Mixed-Use buildings	X		
Modular building sales	X		
Multi-family dwellings	X		
Offices	X		
Outdoor retreat		X	
Outdoor entertainment		X	
Outdoor recreation, miniature golf, but not golf courses	X		
Personal service establishments	X		

ARTICLE II. DISTRICTS
SECTION 14. MIXED-USE DEVELOPMENT (MXD)

Uses in Mixed-Use Development (MXD) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Personal wireless facilities, collocated on existing towers	X		
Personal wireless facility towers		X	
Printing and publishing	X		
Private clubs	X		
Private schools	X		
Production of biofuels		X	
Public uses, buildings, and utilities	X		
Pubs, taverns, and bars, including open air facilities	X		
Radio and television tower, commercial		X	
Recreation uses, indoor, privately or commercially owned	X		
Resorts		X	
Restaurants without drive through facilities	X		
Restaurants with drive through facilities in the Route 301 Corridor	X		
Retail businesses located within the Route 301 Corridor are permitted without size limits	X		
Retail businesses located within the Route 301 Corridor are permitted with drive-in facilities as special exceptions		X	
Retail nurseries and greenhouses	X		
Retail sales of products produced on-site			X
Retreats		X	
Rooming, boarding, and lodging houses	X		
Satellite dish, private, with an antenna of 3 feet or less in diameter			X
Satellite dish, private, with an antenna exceeding 3 feet in diameter			X
School bus parking lot	X		
School buses, limited to two, parked			X
Self-storage	X		
Single-family dwellings	X		
Solar energy systems, small			X
Solar energy systems, utility scale	X		
Storage and office trailers, temporary during construction	X		
Storage of boats, campers, boat trailers, and camper trailers			X
<i>Structures</i> for the buying, processing, and sale of non-animal <i>farm</i> products related to <i>agriculture</i> of no more than 10,000 square feet in floor area	X		
<i>Structures</i> for the buying, processing, or sale of non-animal <i>farm</i> products related to <i>agriculture</i> , over 10,000 square feet in floor area		X	

ARTICLE II. DISTRICTS
SECTION 14. MIXED-USE DEVELOPMENT (MXD)

Uses in Mixed-Use Development (MXD) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Temporary MET Tower of any height			X
Townhouses	X		
Truck stops	X		
Truck Terminals		X	
Two-family dwellings	X		
Uses and structures which are customarily accessory and clearly incidental and subordinate to the permitted use			X
Veterinary hospitals and offices without open kennels	X		
Vocational and trades schools, including training facilities	X		
Roadside stands			X
Wind energy systems, small		X	
Wind energy systems, small, accessory			X

14.4 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS FOR RESIDENTIAL USES, INCLUDING MIXED-USE BUILDINGS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Gross density (dwelling units/acre)	12 dwelling units per acre for the entire District; Net densities for each residential use may vary by individual development phase, tract, or lot
Minimum lot size ¹	
- Single-Family dwelling	6,000 square feet to 2,500 square feet
- Two-Family dwelling	3,500 square feet
- Townhouse	2,000 square feet
- All other uses	4,000 square feet
Minimum lot frontage ¹	
- Single-Family dwelling	60 feet
- Two-Family dwelling	35 feet (each dwelling)
- Townhouse	20 feet (each dwelling)
- All other uses	30 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	20 feet; 10 feet to front porch
- Side	10 feet; none in between attached units
- Rear	20 feet
- Accessory structures in side or rear yard	
- Side	5 feet
- Rear	5 feet
Maximum height ²	
- Single-Family dwelling	38 feet
- Two-Family dwelling	38 feet
- Town house	40 feet
- Multi-family and Mixed-use	55 feet
- All other uses	38 feet
- Fence ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Front yard	4 feet
Side and Rear yard	8 feet

1 As approved during subdivision review

2 Except in the Airport Safety Zone

3 Fences do not need to meet the yard requirements.

14.5 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS FOR NON-RESIDENTIAL USES

STANDARDS FOR THE SUBDIVISION OF LOTS	
Minimum lot size	N/A
Minimum lot frontage	40 feet
Minimum lot frontage industrial uses	75 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	20 feet
- Side and Rear	10 feet
- Front for Industrial uses	100 feet ¹
- Side and Rear for industrial uses	100 feet ¹
- Accessory structures in Side or Rear yard	
- Side	5 feet
- Rear	5 feet
Maximum height	
- Commercial structure	45 feet
- Industrial structure in Route 301 Corridor	60 feet
- Towers, silos, etc. ²	150 feet
- All other structures	38 feet
- Fence ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Front and side yard	4 feet
Rear yard	8 feet
Maximum building footprint	
- All structures	N/A

1 Or, as approved during site plan review by the Planning Commission

2 Except in the Airport Safety Zone

3 Fences do not need to meet the yard requirements.

Note: There is no regulatory diagram for the Mixed-Use Development District.

SECTION 15 MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)**15.1 STATEMENT OF INTENT**

1. The purpose of this district is to facilitate a range of commercial, residential, and mixed-use development as envisioned by the Kent County Comprehensive Plan for growth areas, including the US Route 301 Corridor, where growth areas are located in the Critical Area.
2. This district is intended to accommodate a high-quality and well-designed mix of uses which are environmentally sound, sustainable, and developed at intensities that limit sprawling development and make efficient use of land and public facilities.
3. It is further intended that this district shall be for the purpose of limiting sprawling development by providing sites with adequate frontage and depth to permit controlled access to public streets. Because these uses are subject to public view, they should provide an appropriate appearance, controlled traffic movement, ample landscaping, and protect adjacent properties from the traffic and visual impacts associated with the commercial activity. Whenever possible, frontage of the lots shall not exceed their depth.
4. Any development within the district of any phase, development tract, or individual lot shall be planned to generally conform to a District Master Plan for the Mixed-Use Development District and shall be approved by the Planning Commission. This District Master Plan shall be prepared as conceptual diagrams encompassing the entire Mixed-Use Development District and/or Mixed-Use Development Critical Area that illustrate the planning intent and generalized locations for the following: land uses and potential alternate land uses; connectivity to be provided by major thoroughfares, primary roads, and collector streets, including potential alternate locations for such streets, pedestrian and bicycle circulation network, and trails; and open space including parks, active recreational facilities, and natural features to be preserved.
5. To ensure flexibility by allowing for development in the district to respond to the changing market conditions, the District Master Plan is intended to evolve over time with potential updates or revisions as each phase or tract is developed. Any updates or revisions to the Mixed-Use District Master Plan shall be approved by the Planning Commission.
6. Development of any phase, tract, or individual lot shall include a Land Use Concept Plan, Connectivity Plan, Open Space Plan, and Phasing Plan for the specific development in relation to adjacent and nearby portions of the Mixed-Use Development District that generally conforms to the District Master Plan as required herein. The Land Use Concept Plan, Connectivity Plan, Open Space Plan, and Phasing Plan should be prepared as conceptual diagrams that illustrate how the development of any phase, tract, or individual lot relates to the District Master Plan and the environs surrounding the district.
7. Development of any phase, tract, or individual lot shall include a set of Mixed-Use Development Critical Area Standards compiled from applicable standards in Article IV, §§ 3.6 through 3.9. The Mixed-Use Development Critical Area Standards including any specific Design Guidelines and Standards shall be approved by the Planning Commission.

ARTICLE II. DISTRICTS
SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

[ILLUSTRATIVE GRAPHIC TO BE INSERTED]



Figure 30 Diagram illustrating the desired character of the MXDCA District.

SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

15.2 PERMITTED PRINCIPAL USES AND STRUCTURES

For every *structure* and use erected, reconstructed, altered, or enlarged after the effective date of this Ordinance, a *site plan* shall be filed. No *building* permit shall be issued until said *site plan* is approved by the *Planning Commission*, or where applicable the Planning Director. Detailed limitations and standards for these uses may be found in Article III. Special exceptions require Planning Commission and Board of Appeals reviews per Article IV.

Uses in Mixed-Use Development Critical Area (MXDCA) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Accessory dwelling unit			X
Accessory employee housing			X
Accessory off-street parking of one commercial vehicle			X
Accessory structures in the front yards of through or corner lots		X	
Accessory truck parking			X
Accessory vehicle parking			X
Adaptive reuse of historic structures for uses not otherwise listed		X	
Agriculture	X		
Agritourism on farms, defined in Article VII	X		
Airports, landing fields, helistops, or heliports	X		
Animal husbandry, special – backyard chickens			X
Animal shelters	X		
Appurtenant signs			X
Assisted living facilities with five to eight beds		X	
Assisted living facilities with no more than four beds			X
Automobile repair	X		
Automobile sales, service, and rental	X		
Automobile service stations	X		
Blacksmith, welding and machine shops	X		
Boat building and boat repair	X		
Boat sales, boat and outboard motor repairs and boat storage	X		
Building materials sales	X		
Car wash	X		
Cemetery, including crematorium and mausoleum			X
Circus or carnival, midways and amusement parks, maze fields and other temporary recreational uses, for a specified period	X		
Class D Alcohol Retail Business, as defined by the State of Maryland	X		

ARTICLE II. DISTRICTS

SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

Uses in Mixed-Use Development Critical Area (MXDCA) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Conference center		X	
Convalescent, nursing, or group homes for the aged with five or more beds	X		
Cottage industries, tradesmen and artisan shops	X		
Country inns	X		
Data processing centers	X		
Day care groups	X		
Day care homes			X
Distribution centers and warehousing	X		
Excavation, landscaping, and other contractor's yard	X		
Financial institutions located within the Route 301 Corridor are permitted with drive-in facilities as special exceptions	X		
Fire and rescue stations	X		
Funeral homes	X		
Home and business services such as grounds care, cleaning, exterminators, landscaping, and other repair and maintenance services	X		
Home occupations in main or accessory dwellings			X
Hospitals, rehabilitation facilities, and similar institutions for human care	X		
Hotels and Motels	X		
Houses of worship	X		
Indoor movie theaters, playhouses, and dinner theaters	X		
Machinery and equipment sales, service, and rental	X		
Manufacture, processing, fabrication, and assembly of products including research and development companies	X		
Microbrewery, as defined by the State of Maryland	X		
Mini storage facilities	X		
Mixed-Use buildings	X		
Modular building sales	X		
Multi-family dwellings	X		
Offices	X		
Outdoor retreat		X	
Outdoor entertainment		X	
Outdoor recreation, miniature golf, but not golf courses.	X		
Personal service establishments	X		
Personal wireless facilities, collocated on existing towers	X		
Personal wireless facility towers		X	

SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

Uses in Mixed-Use Development Critical Area (MXDCA) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Printing and publishing	X		
Private clubs	X		
Private schools	X		
Public uses, buildings, and utilities	X		
Pubs, taverns, and bars, including open air facilities	X		
Radio and television tower, commercial		X	
Recreation uses, indoor, privately or commercially owned	X		
Resorts	X		
Restaurants without drive through facilities	X		
Restaurants with drive through facilities in the Route 301 Corridor	X		
Retail businesses located within the Route 301 Corridor are permitted without size limits	X		
Retail businesses located within the Route 301 Corridor are permitted with drive-in facilities as special exceptions		X	
Retail nurseries and greenhouses	X		
Retail sales of products produced on-site			X
Retreats		X	
Rooming, boarding, and lodging houses	X		
Satellite dish, private, with an antenna of 3 feet or less in diameter			X
Satellite dish, private, with an antenna exceeding 3 feet in diameter			X
School bus parking lot	X		
School buses, limited to two, parked			X
Self-storage	X		
Single-family dwellings	X		
Solar energy systems, small			X
Solar energy systems, utility scale	X		
Storage and office trailers, temporary during construction	X		
Storage of boats, campers, boat trailers, and camper trailers			X
Structures for the buying, processing, and sale of non-animal <i>farm</i> products related to <i>agriculture</i> of no more than 10,000 square feet in floor area	X		
Structures for the buying, processing, or sale of non-animal <i>farm</i> products related to <i>agriculture</i> , over 10,000 square feet in floor area		X	
Temporary MET Tower of any height			X
Townhouses	X		
Truck stops	X		

ARTICLE II. DISTRICTS

SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

Uses in Mixed-Use Development Critical Area (MXDCA) Article III lists requirements for permitted uses and conditions related to special exceptions.	Permitted by right	Special Exception	Accessory Use on all properties
Truck Terminals		X	
Two-family dwellings	X		
Uses and structures which are customarily accessory and clearly incidental and subordinate to the permitted use			X
Veterinary hospitals and offices without open kennels	X		
Vocational and trades schools, including training facilities	X		
Roadside stands			X
Wind energy systems, small		X	
Wind energy systems, small, accessory			X

SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

15.3 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS FOR RESIDENTIAL USES, INCLUDING MIXED-USE BUILDINGS

STANDARDS FOR THE SUBDIVISION OF LOTS	
Gross density (dwelling units/acre)	12 dwelling units per acre for the entire District; Net densities for each residential use may vary by individual development phase, tract, or lot
Minimum lot size ¹	
- Single-Family dwelling	6,000 square feet to 2,500 square feet
- Two-Family dwelling	3,500 square feet
- Townhouse	2,000 square feet
- All other uses	4,000 square feet
Minimum lot frontage ¹	
- Single-Family dwelling	60 feet
- Two-Family dwelling	35 feet (each dwelling)
- Townhouse	20 feet (each dwelling)
- All other uses	30 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	20 feet; 10 feet to front porch
- Side	10 feet; none in between attached units
- Rear	20 feet
- Accessory structures in side or rear yard	
- Side	5 feet
- Rear	5 feet
Maximum height ²	
- Single-Family dwelling	38 feet
- Two-Family dwelling	38 feet
- Town house	40 feet
- Multi-family and Mixed-use	55 feet
- All other uses	38 feet
- Fence ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Front yard	4 feet
Side and Rear yard	8 feet

1 As approved during subdivision review

2 Except in the Airport Safety Zone

3 Fences do not need to meet the yard requirements.

SECTION 15. MIXED-USE DEVELOPMENT CRITICAL AREA (MXDCA)

15.4 DENSITY, AREA, HEIGHT, WIDTH, AND YARD REQUIREMENTS FOR NON-RESIDENTIAL USES

STANDARDS FOR THE SUBDIVISION OF LOTS	
Minimum lot size	N/A
Minimum lot frontage	40 feet
Minimum lot frontage industrial uses	75 feet
STANDARDS FOR BUILDING AND STRUCTURE HEIGHT, WIDTH, AND PLACEMENT	
Minimum yard	
- Front	20 feet
- Side and Rear	10 feet
- Front for Industrial uses	100 feet ¹
- Side and Rear for industrial uses	100 feet ¹
- Accessory structures in Side or Rear yard	
- Side	5 feet
- Rear	5 feet
Maximum height	
- Commercial structure	45 feet
- Industrial structure in Route 301 Corridor	60 feet
- Towers, silos, etc. ²	150 feet
- All other structures	38 feet
- Fence ³	
- Security	8 feet
- Agricultural	5 feet
- Ornamental	
Front and side yard	4 feet
Rear yard	8 feet
Maximum building footprint	
- All structures	N/A

1 Or, as approved during site plan review by the Planning Commission

2 Except in the Airport Safety Zone

3 Fences do not need to meet the yard requirements.

Note: There is no regulatory diagram for the Mixed-Use Development Critical Area District.

ARTICLE III. USES

SECTION 1 GENERAL PROVISIONS

1. For the purposes of this Land Use Ordinance, permitted uses are listed for the various zoning districts in the applicable matrices included for each zoning district in Article II.
2. Unless the contrary is clear from the context of the lists or other regulations of this Ordinance, uses not specifically listed in a zoning district matrix are prohibited. Uses listed are to be interpreted as inclusively as may be reasonable.
3. When listed uses are indicated in the applicable zoning district matrix as being permitted by right or as accessory uses permitted by right, then the conditions below are required for the use to operate.
4. When listed uses are indicated in the applicable zoning district matrix as being permitted by special exception, then the conditions below are required to be evaluated by the approving authority, which in some cases is the Board of Appeals and in other cases the Planning Director, or the Planning Director's designee. When required, the Planning Commission makes recommendations to the Board of Appeals on special exceptions. The list for each of these categories is found in Article IV under the Special Exceptions section.

SECTION 2 LAND USES AND ACCESSORY USES AND STRUCTURES

A *building* or land will be used only for the following purposes, when indicated as such on each district's table of permitted uses and structures, and subject to any listed conditions:

1. *Accessory dwelling unit*, one, in principal or *accessory structures*. *Accessory dwelling units do not count against the density of the zoning district*. Such use will be permitted as accessory uses in AZD, RCD, RC, CAR, CR, and V only when all of the following conditions are satisfied:
 - (A) The property owner resides on the *premises*.
 - (B) The *accessory dwelling unit* is subordinate to the principal *dwelling* in size and appearance.
 - (C) The *accessory dwelling unit* may not be subdivided or conveyed separately from the primary *dwelling unit*. The *accessory dwelling unit* may be rented.
 - (D) The appearance of the *structure* and property remains that of a *single-family dwelling*.
 - (E) If the entrance to the *accessory dwelling unit* is separate from that of the primary *dwelling*, the entrance to the *accessory dwelling unit* will be from the side or *rear yard*.
 - (F) One parking space is provided in the *rear yard* for the *accessory dwelling unit*.
 - (G) The *structure* meets all applicable Kent County Codes, including the *building code*, and Health Department *regulations*.

SECTION 2. LAND USES AND ACCESSORY USES AND STRUCTURES

Such use will be permitted as an accessory use in *RCD* only when all of the following additional conditions are satisfied:

- (H) The accessory *dwelling unit* is located within the primary *dwelling unit*, or its entire perimeter is within 100 feet of the primary *dwelling unit*.
 - (I) The accessory *dwelling unit* does not exceed 900 square feet in total enclosed area.
 - (J) The accessory *dwelling unit* is served by the same sewage disposal system as the primary *dwelling unit*.
 - (K) If the accessory *dwelling unit* is located within the primary *dwelling unit*, it will not increase the amount of *lot coverage* already attributed to the primary *dwelling unit* by more than 900 square feet.
2. Accessory employee housing. Such use will be permitted as an accessory use in the M, EC, ECCA, MXD, and MXDCA only when the accessory employee housing is used for *persons* permanently employed on the *premises*. Such use will be limited to two housing units.
 3. Accessory *farm buildings*, including barns, cribs, stables, sheds, tool rooms, shops, bins, tanks, and silos, but not animals will . No *buildings* are permitted in the *buffer or stream protection corridor*.
 4. Accessory *farm dwellings*. Such uses are limited to one dwelling on all *farms*, except that two dwellings will be permitted on *farms* with at least 50 tillable acres. In the *RCD*, the total number of dwellings will not exceed one *dwelling* per 20 acres. These *dwellings* will share a common entrance and will be occupied by permanent employees of the *farm* or immediate members of the *family* owning or operating the *farm*. All accessory *farm dwellings* will be landscaped and screened from adjacent properties. In the *RCD*, *RC*, and *CR*, accessory *farm dwellings* may not be *mobile homes*.
 5. Accessory open or enclosed storage of *farm* materials, products, equipment, fertilizer or chemicals, or vehicles. Such storage is in connection with the farming operation of the owner. All of the following uses will be located at least 200 feet from all property lines:
 - (A) Assembly of equipment, in a *totally enclosed building* not exceeding 10,000 square feet in size, and repair of all equipment normally used in *agriculture*.
 - (B) Storage of grain, flour, and feed blending and packaging, including milling, drying, and storing.
 - (C) Petroleum storage. Petroleum storage will not exceed 10,000 gallons and is subject to applicable safety codes, ordinances, and statutes.
 6. Accessory *off-street parking* and loading of non-commercial vehicles that have current licenses and are operable.
 7. Accessory *off-street parking* of one commercial vehicle. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:

SECTION 2. LAND USES AND ACCESSORY USES AND STRUCTURES

- (A) In the AZD, RCD, RC, CAR, and CR Districts, the vehicle is parked only in the *rear yard*.
 - (B) In the V and IV Districts, the vehicle is only parked in the *side* or *rear yard* of *dwelling*s.
 - (C) The vehicle is used by the occupant of the *dwelling*.
 - (D) The vehicle does not exceed 16,000 pounds manufacturer's gross vehicle weight.
 - (E) No major repair is conducted *on-site*.
 - (F) No engines may run when parked *on-site*. Electrical refrigeration units may run.
 - (G) Honey wagons, sanitation, garbage, or other trucks used to transport odorous, flammable, or hazardous materials are prohibited.
 - (H) The vehicle has a current license and is operable.
- 8. Accessory *roadside stand* for the sale of *farm* products.
 - 9. Accessory residential storage *structures* with a *floor area* of more than 2,000 square feet or a height that exceeds the height of the primary residential structure on parcels less than 5 acres. When special exception approval is required in the district matrix, this may be reviewed via an administrative special exception process.
 - 10. Accessory sheds on properties with only agricultural uses, which are less than 20 acres.
 - 11. *Accessory structures* in the *front yard* of *through* or *corner lots*. When special exception approval is required in the district matrix, this may be reviewed via an administrative special exception process.
 - 12. *Accessory structures* in the *front yard* requirement of waterfront parcels require a special exception, except for swimming pools, swimming pool equipment, and related structures which may be permitted without special exception. When special exception approval is required in the district matrix, this may be reviewed via an administrative special exception process.
 - 13. Accessory truck parking.
 - 14. *Accessory uses* and *structures* normally associated with permitted uses and not otherwise listed.
 - 15. Accessory vehicle parking. Such use will be limited to those vehicles used as a part of principal permitted uses or approved special exceptions provided the vehicles have current licenses and are operable. Parking areas will be approved during *site plan* review.
 - 16. Adaptive reuse of existing structures in AZD, located on parcels under 20 acres.
 - (A) The *site* will have access to a public road adequate for the traffic generated;
 - (B) The proposed use will not generate traffic of a type or amount inappropriate for access *roads* and the surrounding area;

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- (C) The use does not require road improvements detrimental to the character of the area;
 - (D) The number of *dwelling*s will not exceed the *density* permitted in the district in which the *structure* is located;
 - (E) The proposed use does not create an unacceptable impact by way of noise, odor, noxious materials or other nuisances; and
 - (F) Landscaping is in keeping with the character of the *building or location*.
 - (G) This may be reviewed via an administrative special exception process.
17. Adaptive reuse of *historic structures* for uses not otherwise permitted. Such uses are subject to the following conditions:
- (A) *Structures* will be listed in the Kent County Historic *Site* Survey or approved as a historically significant *structure* by the *Planning Commission*;
 - (B) It is shown that exterior changes to *site structures* will be minimized. Enlargements will be designed in keeping with the character of the *building*;
 - (C) Landscaping is in keeping with the character of the *building*;
 - (D) The *site* will have access to a public road adequate for traffic generated;
 - (E) The proposed use will not generate traffic of a type or amount inappropriate for all access *roads* and the surrounding area;
 - (F) The use does not require road improvements detrimental to the character of the area;
 - (G) The number of *dwelling*s will not exceed the *density* permitted in the district in which the *structure* is located;
 - (H) The proposed use does not create an unacceptable impact by way of noise, odor, noxious materials or other nuisances; and
 - (I) In RCD, adaptive reuse projects will be limited to non-commercial and non-industrial uses.
18. *Agriculture*. An *agriculture* use may include horticultural, hydroponics, general farming, orchards, groves, or nurseries for the growing or propagation of plants, *trees*, and shrubs. All farming activities related to animals are regulated as animal husbandry (see categories below), which are permitted individually as separate, specific uses within zoning districts.
19. *Agritourism* as defined in Article VII of this Ordinance. A site plan review will be required.
20. *Airports*, landing fields, helistops, or heliports. Such uses will be permitted as special exceptions only when all of the following conditions are satisfied:
- (A) Flight obstructions, such as towers, chimneys, other tall *structures*, or natural obstructions, do not fall within the approach zone to any proposed runway or landing strips of the landing field or *airport*; and

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- (B) The use complies with the recommendations of the Federal and State Aviation Authorities; and
 - (C) Runways are designed to minimize the approach and takeoff areas over residential areas; and
 - (D) Applications for special exceptions for private airstrips, heliports, and helistops will comply with the following:
 - i. The takeoff and landing flight path will be a minimum of 1,000 feet in any direction from any residence or public *building*; and
 - ii. The takeoff and landing path of the aircraft will have a minimum of 250 feet vertical clearance over surrounding property unless a navigation *easement* is reached with the affected property owners for a lesser clearance; and
 - iii. No business such as the sale or leasing of aircraft, maintenance, or flight instructions will be permitted; and
 - iv. The *applicant* will maintain a flight operation's log that will be open for inspection by representatives of the Department; and
 - v. Approvals will be for a period not to exceed 5 years.
21. Animal husbandry, *aquaculture*, including accessory processing and sales.
- Where permitted by special exception, the following conditions will be satisfied:
- (A) Open or uncovered storage of shells, bones, and refuse does not occur on *site*; and
 - (B) No curing or smoking occurs on *site*; and
 - (C) All *structures* for processing and all disposal areas for materials and byproducts of processing are a minimum of 600 feet from all property lines; and
 - (D) Seafood processing facilities and disposal areas are not in the *100-year floodplain*; and
 - (E) The operation has received a permit from the Maryland Department of Natural Resources (DNR); and
 - (F) Parking, processing and disposal areas are *screened* from adjacent properties and public *roads*; and
 - (G) Access *roads* are capable of handling the type of traffic generated by the operation.
22. Animal husbandry, farm, including horses – this use includes keeping, dairying, or raising for sale animals, fish, birds, horses, or reptiles on 20 acres or more. Such use is permitted only when all of the following conditions are satisfied:
- (A) Such use is only permitted on a farm of 20 acres or more.

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- (B) Such use will not include poultry houses or *animal feeding operations (AFO)*.
 - (C) Nutrient management plans per State of Maryland nutrient management laws are required for all animal husbandry uses; however, the Planning Director may set aside the requirement for a nutrient management plan for 4-H and FFA projects.
 - (D) A waste management plan may be required for building permit purposes. If so, the *applicant* will prepare a waste management plan that demonstrates that the facility will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and *waterways*.
23. Animal husbandry, limited livestock and fowl – this use does not include commercial *animal feeding operations (AFO)* or poultry houses. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) All *buildings* for the housing of animals are 200 feet from the property line.
 - (B) Waste management *structures* are 600 feet from the nearest property line.
 - (C) No part of the operation will be in the 100-year *floodplain*.
 - (D) Nutrient management plans per State of Maryland nutrient management laws are required for all animal husbandry uses; however, the Planning Director may set aside the requirement for a nutrient management plan for 4-H and FFA projects.
- When in the opinion of the Board of Appeals, *Planning Commission*, or Planning Director additional review is needed by an outside agency, the application and waste and nutrient management plan may be forwarded to the Maryland Department of the Environment or any other appropriate agency.
- (E) *Sediment* and *stormwater management plans* are approved by the appropriate agency and are implemented.
 - (F) The *applicant* will prepare a management plan that demonstrates that the facility will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and *waterways*.
 - (G) To assure continued compatibility with the surrounding area, the Board may place additional restrictions on any number of the following:
 - i. *Screening* and landscaping from adjacent properties and public *roads*
 - ii. Exterior displays, lighting, and signs
 - iii. The location of access routes to the *site*, both on and *off-site*
 - iv. The type of waste disposal, e.g. injection, disk, etc.
 - v. Monitoring wells and surface water testing where appropriate
 - vi. Manner and route of moving waste from one *site* to another

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- vii. Waste and nutrient management plans for properties receiving waste
24. Animal husbandry, *animal feeding operations (AFO)*. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) All *buildings*, corals, and waste management *structures* are 600 feet from the nearest property line.
 - (B) No part of the operation will be in the *100-year floodplain*.
 - (C) The operation is managed according to both a waste management plan and a nutrient management plan..
- When in the opinion of the Board of Appeals, *Planning Commission*, or Planning Director additional review is needed by an outside agency, the application, waste management plan, and nutrient management plan may be forwarded to the other appropriate agency, such as the United States Department of Agriculture (USDA) - National Resources Conservation Service (NCRS), or the Maryland Department of the Environment (MDE), or the Maryland Department of Agriculture (MDA).
- As part of the County's own review process, the County may approve an animal feeding operation (AFO) for zoning prior to the AFO receiving all required State agency approvals with the condition that required State approvals be obtained.
- Applicants may refer to AFO Size Categories chart for additional information, as published by Maryland Department of the Environment, Land and Materials Administration, Animal Feeding Operation Division (see mde.maryland.gov).
- (D) *Sediment and stormwater management plans* are approved by the appropriate agency and are implemented.
 - (E) To assure continued compatibility with the surrounding area, the Board may place additional restrictions on the following:
 - i. *Screening* and landscaping from adjacent properties and public *roads*
 - ii. Exterior displays, lighting, and signs
 - iii. The location of access routes to the *site*, both on and *off-site*
 - iv. The type of waste disposal, e.g. injection, disk etc.
 - v. Monitoring wells and surface water testing where appropriate
 - vi. Manner and route of moving waste from one *site* to another
 - vii. Waste and nutrient management plans for properties receiving waste
25. Animal husbandry, horses on non-farms – More than four horses and mules on a single property less than 20 acres in size. Such use will be permitted as special exception only, when all of the following conditions are satisfied:

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- (A) There will be no more than one horse or mule per acre of land. Only available pasture acreage will be used to compute the number of horses and/or mules allowed on a parcel.
- (B) No waste management facility or *structure* for the keeping of animals is in the *100-year floodplain*.
- (C) The feeding and watering of animals are conducted a minimum of 50 feet from any body of water, including *tributary streams* and *wetlands*.
- (D) A waste management plan may be required for building permit purposes. If so, the *applicant* will prepare a waste management plan that demonstrates that the facility will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and *waterways*.

When in the opinion of the Board of Appeals, *Planning Commission*, or the Planning Director, that additional review is needed by an outside agency, the application and accompanying waste and nutrient management plan may be forwarded to the Maryland Department of the Environment or any other appropriate agency.

26. Animal husbandry, poultry houses on farms only. Such uses are subject to the following conditions:

- (A) Poultry houses may only be located on farms that are 20 acres or more in area.
- (B) Poultry houses, waste management facilities, composters, and the area for the disposal of animals will be a minimum of 600 feet from all property lines.
- (C) No poultry house, waste management facility or composter will be in the *100-year floodplain*.
- (D) The operation is managed according to waste and nutrient management plans, approved by the Natural Resources Conservation Service, University of Maryland Extension Service, and the Kent County Health Department. Where the phosphorus index, developed by the University of Maryland, indicates that phosphorous is a problem or has the potential to become a problem, the plan will use phosphorus based nutrient management. When in the opinion of the Planning Director additional review is necessary from an outside agency, the Planning Director may forward the plan to the Maryland Department of the Environment or any other appropriate agency.

Land in Kent County owned by the owner/operator of the poultry house will be able to handle the manure and waste generated. The acreage requirements identified in the approved waste and nutrient management plan will be used to determine if an operation meets this requirement.

- (E) Manure storage sheds and composter appropriate to the size of the operation will be included and will be constructed prior to receiving the first flock of chickens.

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27. Animal husbandry - poultry houses on parcels where the owner cannot handle the waste generated by the poultry houses in AZD provided:
- (A) All buildings and waste management structures are 600 feet from the nearest property line.
 - (B) No part of the operation shall be in the 100-year floodplain.
 - (C) The operation is managed according to a waste and nutrient management plan approved by the Natural Resources Conservation Service, the University of Maryland Extension Service, and the Kent County Health Department. Where the phosphorus index, developed by the University of Maryland, indicates that phosphorus is a problem or is likely to become a problem, the plan shall use phosphorus based nutrient management. When in the opinion of the Board of Appeals, Planning Commission, or Planning Director additional review is needed by an outside agency, the application and waste and nutrient management plan may be forwarded to the Maryland Department of the Environment or any other appropriate agency.
 - (D) Sediment and stormwater management plans are approved by the appropriate agency and are implemented.
 - (E) The applicant shall prepare a management plan that demonstrates that the poultry houses will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and waterways.
 - (F) To assure continued compatibility with the surrounding area, the Board may place additional restrictions on the following:
 - i. Screening and landscaping from adjacent properties and public roads
 - ii. Exterior displays, lighting, and signs
 - iii. The location of access routes to the site, both on and off-site
 - iv. The type of waste disposal, e.g., injection, disk, etc.
 - v. Monitoring wells and surface water testing where appropriate
 - vi. Manner and route of moving waste from one site to another
 - vii. Waste and nutrient management plans for properties receiving waste
28. Animal husbandry, special – backyard chickens. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) Backyard chickens are defined as females of the species *Gallus gallus domesticus* kept for non-commercial purposes. The keeping of males of the species is not permitted.
 - (B) The maximum number of chickens, 4 months or older, permitted on any *lot* is determined by *lot* size:
 - i. No chickens are permitted on a *lot* of less than ¼ acre;

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- ii. No more than 5 chickens are permitted on a *lot* of ¼ acre to 1 acre;
 - iii. No more than 8 chickens are permitted on *lots* of more than 1 acre.
 - (C) The area for keeping backyard chickens will be enclosed in such a fashion that the chickens are confined and not able to leave the owner's property. Backyard chickens will be provided with a covered, predator-proof coop or cage that is well ventilated. Hens will have access to an outdoor enclosure that is adequately fenced to contain the birds on the property.
 - (D) *Structures* (coops) for the housing of backyard chickens will meet the permitting requirements of this Ordinance. For movable coops, the permit application will show the area in which the coop will be moved. A copy of the Maryland Poultry Registration Form will accompany the *building* permit application.
 - (E) Coops will be *setback* a minimum of 15 feet from any property line.
 - (F) Coops may be placed in *rear yards* only.
 - (G) Each coop will be kept clean and free of odors and materials that can attract vermin. Feed will be kept in secure containers so as not to attract vermin.
 - (H) Waste will be composted or removed from the property
 - (I) The outdoor slaughtering of chickens is not permitted
29. Animal husbandry, special – sheep or goats, kept for noncommercial purposes, will be:
- (A) The maximum number of sheep or goats permitted on any lot is determined by lot size:
 - i. No sheep or goats are permitted on a lot of less than two acres.
 - ii. A maximum of three small ruminants per acre of grazable area within the lot is permitted with a maximum of eight total.
 - (B) Outdoor enclosures will be adequately fenced to contain the animals on the property.
 - (C) Structures for the housing of animals should meet the permitting requirements of the Ordinance.
 - (D) Shelter should be setback a minimum of 40 feet from any property line, in rear yards only, and kept clean and free from odors and materials that can attract vermin.
 - (E) A waste management plan may be required for building permit purposes. If so, the *applicant* will prepare a waste management plan that demonstrates that the facility will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and *waterways*.

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When in the opinion of the Planning Director additional review is necessary from an outside agency, the Planning Director may forward the plan to the Maryland Department of the Environment or any other appropriate agency.

- (F) Feed will be kept in secure containers so as not to attract vermin.
- (G) Bedding and waste materials will be composted or removed from the property.
- (H) The outdoor slaughtering of sheep or goats is not permitted.
- (I) For sheep or goats brought into the State of Maryland, owners will be referred to the University of Maryland Extension.

30. Animal husbandry, *stable - private*. Such use is subject to the following conditions:

- (A) The *lot* will be two acres or more; and
- (B) Any *structure* for the keeping of animals will be located a minimum of 100 feet from any property line; and
- (C) There will be no more than one horse per acre of land. Only available pasture acreage will be used to compute the number of horses allowed on a parcel; and
- (D) A waste management plan may be required for building permit purposes. If so, the *applicant* will prepare a waste management plan that demonstrates that the facility will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and *waterways*.

When in the opinion of the Planning Director additional review is necessary from an outside agency, the Planning Director may forward the plan to the Maryland Department of the Environment or any other appropriate agency.

31. Animal husbandry, *stable - commercial*. Such use is subject to the following conditions:

- (A) The *lot* is 20 acres or more; and
- (B) Any *structure* for the keeping or feeding of animals and waste management *structures* will be a minimum of 400 feet from any property line; and
- (C) No waste management facility or *structure* for the keeping of animals is in the 100-year *floodplain*; and
- (D) The feeding and watering of animals are conducted a minimum of 100 feet from tidal water and *tributary streams*, both tidal and non-tidal, and 50 feet from *non-tidal wetlands*; and
- (E) Nutrient management plans per State of Maryland nutrient management laws are required for all animal husbandry uses; however, the Planning Director may set aside the requirement for a nutrient management plan for 4-H and FFA projects.

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- (F) A waste management plan may be required for building permit purposes. If so, the *applicant* will prepare a waste management plan that demonstrates that the facility will be operated in a safe and environmentally sound manner and will not create a hazard to the surrounding area and *waterways*.
32. *Animal shelters*. An *animal shelter* use is permitted only as defined by the County Code of Public Laws.
33. Appurtenant signs. Such uses will be in accordance with Article V.
34. Assisted living facilities with five to eight beds. When special exception approval is required, this may be reviewed via an administrative special exception process. Such use is permitted as a special exception only when all of the following criteria are satisfied:
- (A) The property owner resides on the *premises*; and
 - (B) The assisted living facility is subordinate and accessory to the principal *dwelling* in size and appearance and is in the same *structure* as the principal *dwelling unit*. Expansions will be designed in keeping with or to enhance the character of the other *buildings*; and
 - (C) The rooms for the use are not designed or constructed to be separate *dwelling units* and may not be sold as separate *dwelling units*; and
 - (D) The appearance of the *structure* and property remain that of a *single family dwelling* so that the average neighbor is unaware of the assisted living facility's existence; and
 - (E) The *structure* meets all applicable Kent County Codes, including the *building* code, and Health Department requirements; and
 - (F) The *applicant* has received approval from the appropriate State of Maryland agencies; and
 - (G) The facility does not create an unacceptable environmental impact by way of noise, odor, noxious materials, or other nuisances.
35. Assisted living facilities with no more than four beds. Such use is permitted as an accessory use only when all of the following criteria are satisfied:
- (A) The property owner resides on the *premises*.
 - (B) The assisted living facility or *group home* is subordinate and accessory to the principal *dwelling* in size and appearance and is in the same *structure* as the principal *dwelling unit*.
 - (C) The rooms for the use are not designed or constructed to be separate *dwelling units* and may not be sold as separate *dwelling units*.
 - (D) The appearance of the *structure* and property remain that of a *single family dwelling*.

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- (E) The *structure* meets all applicable Kent County Codes, including the *building code* and *Health Department requirements*.
36. *Automobile repair*. Such use is permitted as a special exception only when automobiles waiting for repair are stored in a *building* or in the *rear yard* and screened from adjacent properties.
37. *Automobile service stations*, not including auto repair. An *automobile service station* use is subject to *site plan* review. Such use is permitted as a special exception only when major repairs or bodywork are not conducted *onsite*.
38. Automobile sales, service, and rental.
39. Bath houses, pump out *structures*, and other *accessory structures* normally associated with permitted uses.
40. Blacksmith, welding and machine shops. For a blacksmith, welding and machine shop use, outdoor storage of materials is prohibited unless otherwise approved by the *Planning Commission* and subject to such conditions as may be determined by the *Planning Commission*
41. Boat *building* and boat repair. A boat building and boat repair use will be located at least 100 feet from any residential district.
42. Boat docks, piers and wharves. Boat docks, piers and wharves will not exceed 25% of the waterway, or the edge of the channel, whichever is less.
43. Boat rental, sales, supplies, instruction, and other services customarily associated with a full-service *marina*.
44. Boat sales, boat and outboard motor repairs and boat storage. Boat sales, boat and outboard motor repairs and boat storage uses will be permitted only when all of the following conditions are satisfied:
- (A) The property will front on two public *roads*;
- (B) All repairs are conducted inside a *building*;
- (C) The storage area and repair access area will be *screened* on all sides with wood fencing a minimum of 6 feet in height;
- (D) The repair shop *building* and the storage and repair access area will be set back at least 100 feet from adjacent properties that are zoned for residential use;
- (E) The open area for display of boats will be limited to 3,000 square feet in size; and
- (F) This use is subject to *site plan* review.
45. Boat storage, out-of-water boat storage. In the M District, this use does not include multi-level boat storage.
46. *Building* materials sales.

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47. *Camp, day or boarding*, private or commercial, but not *recreational vehicle* or migrant labor camps, for the purpose of conserving and enjoying natural resources.
48. *Campgrounds*. *Campgrounds* include only those *campgrounds* existing and in use as of August 1, 1989, in the Resource Conservation District. It is the intent of this section to provide for the continued existence and operation as well as the intensification or expansion of *campgrounds* existing and in use as of August 1, 1989, in the RCD. It is not the intent to permit the creation of new *campgrounds*, but rather to protect those enterprises that existed in the RCD on August 1, 1989. Any expansion or intensification of an existing *campground*, including the addition of *sites* or conversion of existing *sites* to allow for additional *recreational vehicles*, will require growth allocation.
49. Car wash. A car wash use will require that the waste water is recycled. Such use is permitted as a special exception only when the following conditions are satisfied:
 - (A) The car wash is designed to allow adequate traffic flow for cars to enter and exit the facility safely; and
 - (B) Single bay facilities with automated brushes and multiple bay self service facilities will provide a space for the parking of one car per bay to be used as a dry down area. Facilities using a conveyor or chain drag system for moving motor vehicles through the washing area will provide space at the *building* exit for three times the number of vehicles that can be accommodated at one time within the *structure*; and
 - (C) Vacuum facilities will comply with the *setbacks* for a primary *structure* in the applicable zoning district; and
 - (D) Appropriate permits are obtained from the State of Maryland.
50. Cemetery, including crematorium and mausoleum. Such use will be permitted only when all of the following conditions are satisfied:
 - (A) Burial *plots* will be 10 feet from all property lines. *Buildings* will comply with the *yard* requirements for the applicable zoning district.
 - (B) Mausoleums will be a minimum of 75 feet from a public road and 50 feet from the side and rear property lines.
 - (C) Crematoriums will be 200 feet from all property lines.
 - (D) In the IV District, such uses will be permitted only when accessory to a *house of worship* located on the same parcel.
51. Circus or carnival, midways and amusement parks, maze fields and other temporary recreational uses, for a specified period. The Planning Director may require a *site plan* and place conditions as may be appropriate to assure the compatibility of the temporary recreational use.
52. Class D Alcohol Retail Business, as defined by the State of Maryland.

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53. *Conference center*. Such use will be permitted as a special exception only when the following conditions have been satisfied:
- (A) In the IV District, the project will collectively consist of 15 acres but not more than 750 acres. In RCD, RR, RC, and CAR, the project will collectively consist of at least 50 acres but not more than 750 acres.
 - (B) The *conference center* will consist of 100 but not more than 225 guest rooms.
 - (C) At least 100 square feet of meeting space will be provided per guest room.
 - (D) Permanent theme parks, amusement parks, and/or stadiums are prohibited.
 - (E) Where applicable, the *applicant* has applied for growth allocation from the County. Special exception approval will not be valid without the granting of growth allocation.
 - (F) The Board will make specific findings on the availability of public and governmental services. Proposed improvements will be appropriate to the character of the area.
 - (G) Where they exist, *historic structures* will be incorporated into the overall project.
 - (H) Significant view corridors, both from the *site* and onto the *site* will be preserved in so much as possible.
 - (I) The height of all *structures* will not exceed 38 feet.
 - (J) The design of the *conference center* and *accessory uses* will reflect and complement the rural character of the area or neighborhood.
 - (K) The number of *dwelling units* will not exceed that which is permitted in the applicable zoning district. *Dwelling units* may be detached or attached.
 - (L) Continuous residential *lot development* aligned with golf course fairways will be prohibited within the *Critical Area* and discouraged elsewhere.
 - (M) Parking *lots* will be landscaped as required for commercial *developments*.
 - (N) Permitted *accessory uses*, subject to the approval of the Board of Appeals, including *restaurants*; recreational facilities such as tennis courts and *swimming pools*; spas; retail use provided the establishments are in the main *building* with the entrance to the retail use from the inside the *building*; stables but not an equestrian center; other recreation amenities but not including trap, skeet, clay birds, paint ball or other similar firearm activities; *piers*; and other *accessory uses* that are customarily associated with a *conference center*. The *applicant* will describe all proposed *accessory uses* in the application for a special exception. The Board of Appeals may deny or limit the size and extent of *accessory uses*.
 - (O) The number of *slips* on the accessory *pier* will not exceed 20% of the number of guest rooms and the use of the *slips* will be limited to use by those using the

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conference facilities. Accessory *piers* will meet all requirements applicable to *marinas* such as pump outs, restrooms, and showers.

- (P) All *structures* will comply with the minimum 100-foot *buffer* and will be 200 feet from all side and rear property lines, whichever is greater.
 - (Q) A golf course will meet all the requirements found in this Article III.
 - (R) In RCD, RC, RR, and CAR, at least 60% of the property will be in *open space*.
 - (S) The Board of Appeals may place additional restrictions on the following:
 - i. Additional *yard* requirements for all *structures*, including patios and places of public assembly
 - ii. Lighting
 - iii. Landscaping and *screening*
 - iv. Outdoor activities, outdoor music, and their hours of operation
 - v. Access
 - (T) Application for a *conference center* will include a sketch plan and renderings of all primary and each type of *accessory structure*.
54. Contractors' *yard* See *Excavation, landscaping, and other contractor's yard*.
55. Convalescent, group, or homes for the aged if located in *dwellings* existing as of December 1, 1985, in RCD, provided exterior changes are minimized and extension or enlargement of principle and *accessory structures* may not exceed 50% of the *gross floor area* of each individual *building*. Extensions or enlargements shall be approved by the Board of Appeals.
56. Convalescent, nursing, or *group homes* for the aged with five or more beds.
57. *Cottage industries, tradesmen and artisan shops*. Such uses will be permitted as an administrative special exception only when all of the following conditions are satisfied:
- (A) Except on *farms*, the *cottage industry* will be secondary to the use of the property for *dwelling* purposes and will be less than 60% of the living area, 2,000square feet, or in an existing *accessory structure*, whichever is greater. The square footage limitation includes outdoor storage areas but not required parking. Additional area may be granted via review by the Board of Appeals.
 - (B) On *farms*, the *cottage industry* will be secondary to the *farm*. The *cottage industry* is limited to 4,000 square feet in size or an existing *building*, whichever is greater. The square footage limitation includes outdoor assembly and storage areas but not required parking. Additional area may be granted via review by the Board of Appeals.
 - (C) The use is secondary in scope to the residential or agricultural use of the property.

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- (D) The *buildings* associated with the use are not visually intrusive or inappropriate to their setting. New *buildings* and expansions will be designed in keeping with or to enhance the character of the other *buildings*.
 - (E) The *cottage industry* does not create an unacceptable environmental impact by way of noise, odor, noxious materials, or other nuisances.
 - (F) The *cottage industry* does not generate traffic of a type or amount inappropriate for all access *roads* and the surrounding area. It does not require significant road improvements detrimental to the character of the area.
 - (G) Sureties required by the Department may be set aside by the Planning Director.
 - (H) The following uses will not be allowed:
 - i. Any activity that may reasonably be expected to result in excessive noise, smoke, dust, odors, heat, or glare beyond that which is common to the zoning district. The proposed use will conform to the maximum permissible sound levels in Article III for Employment Center uses;
 - ii. Use or manufacture of products or operations that are dangerous in terms of risk of fire, explosion, or hazardous emissions; and,
 - iii. Any other use deemed incompatible with a residential or agricultural area.
58. *Country inns.* A *country inn* use is subject to *site plan* review. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) Such *structures* have existed prior to August 1, 1989, except on properties with more than 25 acres in the Marine District.
 - (B) The number of rooming units provided on the *site* is limited to fifteen excluding resident management quarters.
 - (C) Boarding and dining facilities in AZD, RCD, RC, CR, CAR, IV, C, and M may be permitted only when attendant to rooming units and further provided that such facilities are limited to a maximum seating capacity of forty *persons*. Such dining facilities may be provided to patrons other than boarders. No dining facility will be permitted in RCD.
 - (D) The *site* has access to a public road. This access will be capable of supporting the passage of emergency vehicles. The Board may require improvements to existing access *roads*.
 - (E) There will be sufficient acreage for the proposed use and activities.
 - (F) Extension or enlargement of principal and *accessory structures* including the addition of new structures and new buildings are permitted, and they should maintain features and character that are consistent with the *structures* already located on the campus of the permitted use that existed as of August 1, 1989. Extensions or enlargements shall be approved by the Board of Appeals.

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- (G) Adequate landscaping will be provided to *screen* all parking areas from adjoining residential properties. Landscaping or *screening* proposed will be shown on a *site plan* as required by this Ordinance.
59. *Country stores.* *Country stores* will be located only along *primary* and *secondary roads*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The *structure* existed prior to August 1, 1989.
 - (B) Property on which the store is located will abut upon and have safe access to a *primary* or *secondary road* as shown on the *Major Thoroughfare Map*.
 - (C) Extension or enlargement of the principal and *accessory structures* does not exceed 50% of the gross *floor area* of each *building* above that which existed as of August 1, 1989. Extensions or enlargements shall be approved by the Board of Appeals.
60. Curio shops, craft shops, antique stores, and similar uses. Such uses will be consistent with the character of the town area. Such uses will be limited to a gross *floor area* of 1,500 square feet per individual building. *New construction* will require *site plan* review.
61. Data processing centers. Such uses are subject to *site plan* review.
62. Detached *single family dwellings* – see also *Single family dwellings* in this section.
63. *Day care groups.* When special exception approval is required, this may be reviewed via an administrative special exception process. Such uses will be permitted as a special exception only when all of the following conditions are satisfied:
- (A) Outdoor activity areas are fenced and *screened*.
 - (B) Two drop-off/pick-up parking spaces are provided.
 - (C) *Structured* play areas for active play or play *structures* are not in the *front yard* and are 10 feet from the side or rear property line.
 - (D) The *structure* retains its residential character, if located in a residential setting.
 - (E) *Day care groups* in the RCD will be permitted only in *dwellings* existing prior to December 1, 1985.
64. *Day care homes.* Such uses will be permitted as accessory uses only when all of the following conditions have been satisfied:
- (A) Outdoor play areas are fenced and *screened*.
 - (B) *Structured* areas for active play or play *structures* will not be in the *front yard* and will be a minimum of 10 feet from the side or rear property line.
 - (C) One drop off / pickup space is provided.
 - (D) Structural or decorative additions will be designed to be compatible with the residential character of the neighborhood, if located in a residential setting.

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65. Distribution centers and warehousing. Distribution and warehousing uses are permitted only when any single *building* footprint does not exceed 75,000 square feet in size. The restriction on *building* footprint does not apply to the EC, MXD, or MXDCA in the Route 301 corridor. In reviewing the *site plan*, the *Planning Commission*, or where applicable the Planning Director, will consider the following:
- (A) The impact of the proposed business or industry on existing or planned public facilities.
 - (B) The impact of the operation of the facility on the surrounding area.
 - (C) The health, safety, and welfare of employees and residents of the neighborhood.
 - (D) In so far as possible, all uses will be conducted entirely within a completely enclosed *structure* or be completely *screened*. Outdoor storage of materials and unfinished products is prohibited unless otherwise approved by the *Planning Commission* and subject to such conditions as may be determined by the *Planning Commission* during the *site plan* review process. Screening for requests that involve only outdoor storage may be approved by minor site plan.
66. *Dog kennels*, commercial. Such uses will be permitted by special exception or as an accessory use only when all of the following conditions are satisfied:
- (A) Any open dog pens, runs, cages, or kennels will be at least 200 feet from any side or rear *lot line*.
 - (B) The operation is managed according to waste and nutrient management plans approved by the Natural Resources Conservation Service, the University of Maryland Cooperative Extension Service, and the Kent County Health Department.
67. Dormitories for employees. Such uses will be permitted by special exception only when all of the following conditions are satisfied:
- (A) The *structure* meets the design standards for multi-*family* residential *development* as set forth in applicable regulations in Article V of this Ordinance.
 - (B) The *structure* is *screened*, if possible, from adjacent *roads*, *waterways*, and properties.
 - (C) The *applicant* proves that the *structure* is necessary to house employees.
 - (D) Residents are limited to employees of the *marina*.
 - (E) Dormitories are not in the minimum 100-foot *buffer*.
68. Dredge spoil *sites*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The *site* does not receive dredge spoils that exceed 100,000 cubic *yards* per existing parcel as of the date of the adoption of this ordinance unless used in conjunction with an approved surface mine *reclamation*. The disposition of

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dredge spoils used in conjunction with a surface mine *reclamation* will have all permits required by the State of Maryland and the application will demonstrate that measures are provided to protect the groundwater, stabilize pH, and to generally protect the environment of the area.

- (B) Material is limited to clean dredge spoil which is tested according to the *regulations* of the State of Maryland.
 - (C) Prime *farmland* is not used for a dredge spoil *site*.
69. *Excavation, landscaping, or other contractor's yard*. Such use includes outdoor storage of the contractor's equipment and equipment parts; temporary stockpiling of *soils*, sand, gravel, stone, recyclable brick, concrete, blacktop materials, pipes, iron, tires, and tanks. Such use will only be permitted when all of the following conditions are satisfied:
- (A) The *contractor's yard* permit area will be larger than two (2) acres and smaller than twenty (20) acres.
 - (B) The *contractor's yard* will not be visible year-round from an adjacent parcel of land or public road. The contractor may use natural *topography* and vegetation or may construct *berms* or plant vegetation to satisfy this requirement.
 - (C) Storage of tires and equipment will be limited to contractor's own *excavation yard* use.
 - (D) Temporary storage of pipe, iron, and tanks, which are not part of the contractor's equipment, will not exceed two years.
70. Existing commercial or industrial uses and *structures* in the Village District. It is the intent of this Section to provide for the continued existence and operation as well as the reasonable expansion of commercial and industrial uses which exist in the Village District, provided that such uses or *structures* do not constitute a nuisance or a source of significant environmental pollution. It is not the intent hereof to allow the creation of new commercial or industrial uses which are not permitted under this Section, but rather to protect those enterprises which existed in the Village District as of August 1, 1989. An expansion will require *site plan* review.
71. Existing permitted *marinas* in the Resource Conservation District – It is the intent of this section to provide for the continued existence and operation as well as the reasonable expansion of *marinas* in the RCD zoned areas of the County, provided that such uses do not constitute a nuisance or a source of significant environmental pollution. It is not the intent to allow the creation of new *marinas*, but rather to protect those enterprises which existed in the RCD on April 12, 1988. An expansion will require *site plan* review by the *Planning Commission* or where applicable the Planning Director. After *development* there will be a net improvement in water quality at or leaving the *site*. All *marinas* in the RCD will comply with all *regulations* in **Error! Reference source not found. Error! Reference source not found.** of this Ordinance.

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72. Existing *conference centers, resorts, retreats, hotels, and motels*, existing and in use as of August 1, 1989. It is the intent of this section to provide for the continued existence and operation as well as the expansion of *conference centers, resorts, retreats, hotels, and motels* existing and in use as of August 1, 1989. It is not the intent to permit the creation of new *conference centers, resorts, retreats, hotels, or motels*, but rather to protect those enterprises that existed in the Resource Conservation District on August 1, 1989. An expansion will require *site plan* review by the *Planning Commission* and will require a net improvement in water quality at or leaving the *site* and may require growth allocation.
73. Exposition center or fairgrounds. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The fair ground or exposition center does not result in the *development* of a major sports arena for football, baseball, drag racing, motor cross, auto racing, or other major sports activities.
 - (B) In the RCD, such uses will be temporary. The Planning Director may require a *site plan* and place conditions as may be appropriate to assure the compatibility of the temporary recreational use.
74. Farm brewery, as defined by the State of Maryland.
75. Financial institutions. Such uses are subject to *site plan* review.
76. Financial institutions located within the Route 301 Corridor are permitted with drive-in facilities as special exceptions.
77. Fire and rescue stations. Such uses are subject to *site plan* review.
78. Fuel storage and sales for marine purposes only.
79. Funeral homes. Such uses are subject to *site plan* review.
80. Golf courses, public or private. Such uses will be permitted as special exceptions only when all of the following conditions are satisfied:
- (A) The golf course is at least a regulation par 72, 18-hole golf course.
 - (B) The course is managed according to a water conservation plan that addresses water use, including irrigation, and the recapture and reuse of water sources. Irrigation will be the minimum necessary for the operation and maintenance of the course and associated facilities.
 - (C) The course is managed according to integrated pest management and nutrient management plans approved by the University of Maryland Extension Service and the Natural Resources Conservation Service.
 - (D) The *site* will have access to a public road that can handle the traffic generated by the operation and access of emergency vehicles. The Board of Appeals may require improvements to existing access *roads*. Should improvements be required, a bond, irrevocable letter of credit, or other surety will be posted running to the County Commissioners.

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- (E) The course, including the layout and routing of holes, will be designed to preserve and maintain to the extent possible natural *topography*, significant *trees* and landmarks, vegetation, and cover. *Wildlife corridors* will be preserved and enhanced whenever possible.
 - (F) *Buffers*, no-mow, and no-spray zones will be adjacent to existing or created *wetlands*, water bodies, and habitat areas. Native grasses and vegetation will be used within these zones.
 - (G) A 100-foot landscaped area from tees, greens, and fairways will be provided along adjacent property lines. Landscaping will be designed to complement other landscaping occurring naturally on the *site*. Whenever possible, existing vegetation will be incorporated into the *landscape plan*.
 - (H) The golf course and driving range will not include lighting. Lighting of the clubhouse, parking, and other areas will be the minimum necessary for the safety and security of the operation, its employees, and its customers. Lighting fixtures will not exceed 18 feet in height unless mounted on a *building* and will be designed to avoid glare onto adjacent properties and *roadways* and will not interfere with traffic or create a traffic hazard. Lighting will be shielded, color corrected, and dark-sky compliant.
 - (I) Parking *lots* will comply with the landscaping and *screening* standards per Article V of this Ordinance.
 - (J) Whenever possible, historic *buildings* should be restored and used as a part of the operation.
 - (K) To assure continued compatibility with the surrounding area, the Board may place additional restrictions on the following:
 - i. Proposed method of irrigation
 - ii. The location of the driving range, holes, cart ways, tees, fairways, roughs, water hazards, maintenance facilities, irrigation, and pumping station
 - iii. *Accessory uses* such as clubhouses, *restaurants*, bars, day care, pro shops, pools, tennis courts, comfort facilities, maintenance facilities, golf cart storage, driving range, sod *farm* for golf course, practice holes, practice putting green, and parking. In RCD the following *accessory uses* will require growth allocation: clubhouses, *restaurants*, bars, day care, pro shops, pools, tennis courts, comfort facilities, golf cart storage and parking.
81. Greenhouses, wholesale, or retail. In the RC, CAR, and CR Districts, *structures* will be located at least 200 feet from any property line and will be adequately landscaped.
82. *Guest house*, one, but not including *mobile homes*. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:
- (A) The house is used exclusively for non-paying guests; and

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- (B) No house will be used as a permanent residence nor be rented or sold separately from the principal *dwelling*.
83. Home and business services such as grounds care, cleaning, exterminators, landscaping, and other repair and maintenance services. Such uses are subject to site plan review. Such uses do not include septic tank maintenance and excavation.
84. *Home occupations* in main or accessory *buildings*.
- (A) Intent – The conduct of business in residential units may be permitted under the provisions of this section. It is the intent of this section to:
- i. Ensure the compatibility of *home occupations* with other uses permitted in the residential districts;
 - ii. Maintain and preserve the character of residential neighborhoods by regulating the operation of *home occupations*;
 - iii. Guarantee to all residents freedom from excessive noise, excessive traffic, nuisance, fire hazard, and other possible effects of commercial uses being conducted in residential areas; and,
 - iv. Promote the efficient use of public services and facilities by assuring these services are provided to the residential population for which they were planned and constructed, rather than to new commercial uses.
- (B) Conditions - Such *home occupations* in main or accessory *buildings* will be permitted as accessory uses only when all of the following conditions are satisfied:
- i. A *home occupation* will be incidental to the use of a *dwelling unit* for residential purposes and will be conducted only by members of the *family* residing in the *dwelling unit* plus no more than one non-resident assistant or employee.
 - ii. There will be no outdoor storage of materials or products on the *premises*.
 - iii. The *home occupation* will not cause any external effect associated with the *home occupation*, such as increased noise, excessive lighting, or offensive odor, which is incompatible with the characteristics of the residential zone. There will be no illegal discharge of any materials, fluids, or gases into the sewer system or any other manner of discharging such items in *violation* of any applicable government code.
 - iv. No traffic will be generated by such *home occupation* in greater volumes than would normally be expected in a residential neighborhood, and any need for parking generated by the conduct of such *home occupation* will be met off the *street* and other than in a required *front yard*.

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- (C) De Minimus impact uses. *Home occupations* with impacts no greater than those of expected and customary activities at any single-family home, for example, crafting, which are then offered for online sales only. In such cases, a use permit may be issued to document the *de minimus* impact use at the site.
85. *Hospitals*, rehabilitation facilities, and other similar institutions for human care. Such use does not include animal *hospitals*.
86. *Hotels* and motels. Such uses are subject to *site plan* review.
87. Houses of worship. *New construction* of such uses will require *site plan* review. *Houses of worship* will be permitted as special exception only when all of the following conditions are satisfied:
- (A) Outdoor public announcement systems and drive in facilities are prohibited.
- (B) The Board specifically approves *accessory uses*. In no case will an *accessory use* be of a type and scale that is normally found in commercial operations.
- (C) Parking areas will be *screened* and landscaped according to the standards found in Article V.
- (D) Any new day care use may be permitted as an accessory use without special exception approval for such uses proposed within existing buildings without additions. Projects that require additions or new buildings are a new special exception, and such projects will be reviewed as a new or amended application.
88. Hunting blinds, pits, or preserves but not including trailers and mobile homes.
89. Hunting trailer, one, temporary. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:
- (A) The trailer is installed continually but not longer than from September 1 to the following May 31.
- (B) The trailer is a minimum of 150 feet from all property lines and not in the *buffer* or *stream protection corridor*.
- (C) Such a trailer will be located around existing *buildings* and out of sight.
- (D) The trailer cannot be used for permanent living accommodations.
90. Indoor movie theaters, playhouses, and dinner theaters. Such uses are subject to *site plan* review.
91. Livestock auction houses on properties that exceed 20 acres in size with *site plan* review.
92. Machinery and equipment sales, service, and rental.
93. Manufacture, processing, fabrication, and assembly of products. These uses include, but are not limited to, scientific and precision instruments, photographic equipment, communications equipment, computation equipment, drugs, medicines, pharmaceuticals, household appliances, toys, sporting and athletic goods, glass products, electric lighting and wiring equipment, service industry machines, lithographic and

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printing processes, industrial controls, radio and TV receiving sets, watches and clocks, bags and containers, sanitary paper products, optical goods, electrical machinery, prefabricated and modular housing and components, dairy product feed and grain, baked and confectioners' goods, *farm* machinery, frozen food processing, packing plants, animal and seafood processing, fruit and vegetable processing, canning and storage. In the C District, no manufacture, processing, fabrication, and assembly of products use may be conducted except within the US Route 301 Corridor.

These uses in all locations may also include businesses and industries, including research and *development* companies, of a similar nature to those listed above, subject to review and approval by the Planning Director. In review of a proposed use, the Planning Director will consider the following:

- (A) The impact of the proposed business or industry on existing or planned public facilities; and
 - (B) The impact of the operation of the facility on the surrounding area; and
 - (C) The health, safety, and general welfare of employees and residents of the neighborhood.
94. The manufacture, processing, and assembling of food products in the C district, to include baked and confectioners' goods, frozen food processing, fruit and vegetable processing, canning and storage, or businesses of a similar nature, excluding animal and seafood processing, will be permitted as a special exception only when all of the following conditions are satisfied:
- (A) That in reviewing the *site plan* and determining the suitability of the proposed location, the *Planning Commission* will find all of the following:
 - i. Existing or planned public facilities are adequate to handle the usage generated by the business. The use does not require improvements to public facilities detrimental to the character of the area.
 - ii. The proposed use does not create an unacceptable impact on the surrounding area by way of noise, odor, noxious materials, or other nuisances. The *Planning Commission* may require a Certified *Engineer's* Report describing the proposed operation, all machines, processes, products and byproducts, stating the nature and expected levels of emissions or discharge to land, air, water or liquid, solid, or gaseous effluent and electrical impulses, vibrations and noise under normal business and the specifications or treatment methods and mechanisms to be used to control such emissions or discharge.
 - iii. The health, safety, and general welfare of employees and residents of the neighborhood will be protected.
 - (B) All uses will be conducted within a completely enclosed *structure*. Outdoor storage of materials and unfinished products is prohibited.

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- (C) The business does not exceed 10,000 square feet of *gross floor area*. This limitation does not apply to the properties located in the Route 301 Corridor.
95. Manufacture of concrete and ceramics products, commercial *sawmills*, sewage treatment plants, recycling facilities, and lumberyards. Such use will be located at least 400 feet from any residential district boundary. Outdoor storage of materials is prohibited unless otherwise permitted by the *Planning Commission* and subject to conditions as may be determined by the *Planning Commission* during *site plan* review.
96. Manufacture, processing, and distribution of hot mix asphalt (a.k.a. bituminous concrete or asphalt concrete). Such use will include the storage of raw materials *on-site*. *Such use will not include the refining of asphalt cement on the site*. Such use will not be located further than two miles from Route 301.
97. *Marinas*. Such uses are subject to *site plan* review.
98. Marine supply store including indoor outboard motor sales. Such uses are subject to *site plan* review.
99. *Microbrewery*, as defined by the State of Maryland.
100. Migrant labor camps.
101. Mini storage facilities.
102. Mixed-Use Buildings with site plan review in the MXD and MXDCA districts.
103. *Mobile homes* existing and in use as of January 16, 1996. *Mobile homes* existing and in use as of January 16, 1996, may be continued in use and may be replaced with another *mobile home*, provided the replacement *mobile home* complies with the Kent County Codes and all Health Department *regulations*. It is not the intent of this provision to allow additional, single-site *mobile homes* in the County, but rather to allow the continued use and improvement (including replacement) of *mobile homes* existing as of January 16, 1996. A *mobile home* that remains idle or unused for a continuous period of two years will not be used again except in conformity with these *regulations*. Mobile home parks may be permitted and must meet the requirements below.
104. *Mobile home parks*. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The property is served by public water and sewer.
 - (B) The overall *density* of the park does not exceed 10 *dwelling units* per acre.
 - (C) Each mobile home space will have a minimum area of 4,000 square feet with a minimum width of 40 feet.
 - (D) Each mobile home space will provide the following *yards*:
 - i. *Front yard* – 20 feet
 - ii. *Side yards* – 8 feet
 - iii. *Rear yard* – 10 feet

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- (E) The minimum area of the *mobile home park* including *roads* and *open space* will be 5 acres.
 - (F) The maximum area of the *mobile home park* including *roads* and *open space* will not exceed 25 acres.
 - (G) All utilities within the *mobile home park* will be underground.
 - (H) A minimum of 4,000 square feet or 100 square feet per unit of common recreation area, whichever is greater, will be provided.
 - (I) No individual *mobile home* space will have direct access onto a public or *private road* outside the *mobile home park*. Each *mobile home* space will have direct access to an internal road.
 - (J) Storage of unoccupied and/or damaged *mobile homes* is prohibited.
 - (K) The *mobile home park* will not be visible year round from adjacent properties and the public road.
 - (L) A minimum 20-foot vegetative *screen* is provided between the *mobile home park* and adjacent properties and the public road.
 - (M) The *mobile home park* has direct access onto a public road
 - (N) A single mobile home on a site is not eligible to be a mobile home park.
105. Modular *building* sales. Such use does not include the storage of modular *buildings*.
106. Multi-Family and Two-Family Dwellings in AZD. Such uses will be permitted only when all of the following conditions are satisfied:
- (A) The multi-family or two-family dwellings existed on the property prior to August 1, 1989;
 - (B) The sale or lease of at least 50% of the multi-family or two-family dwellings is restricted to an amount affordable to individuals or families earning no greater than 100% of the County median income as determined by the United States Census Bureau;
 - (C) The dwellings are served by public water and sewerage service;
 - (D) The minimum site area will be five (5) acres; and
 - (E) If subdivision approval is sought: (1) minimum lot size, setback and yard requirements, maximum height of structures, and off-street parking requirements will be determined by the Planning Commission; (2) open space will be provided as required in Article IV; (3) forest conservation requirements will be satisfied; and (4) site access standards will be met in so far as possible.
107. Multi-family dwellings. Such uses are subject to site plan review.
108. Multi-Family and Two-Family Dwellings in AZD. Such uses will be permitted only when all of the following conditions are satisfied:

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- (A) The multi-family or two-family dwellings existed on the property prior to August 1, 1989;
 - (B) The sale or lease of at least 50% of the multi-family or two-family dwellings is restricted to an amount affordable to individuals or families earning no greater than 100% of the County median income as determined by the United States Census Bureau;
 - (C) The dwellings are served by public water and sewerage service;
 - (D) The minimum site area will be five (5) acres; and
 - (E) If subdivision approval is sought: (1) minimum lot size, setback and yard requirements, maximum height of structures, and off-street parking requirements will be determined by the Planning Commission; (2) open space will be provided as required in Article IV; (3) forest conservation requirements will be satisfied; and (4) site access standards will be met in so far as possible.
109. Multi-level boat storage. Such use will be permitted as a special exception only when all of the following conditions are satisfied:
- (A) The use excludes dinghy storage.
 - (B) The *building* is enclosed on three sides.
 - (C) The open end of the *building* does not face the road.
 - (D) The *building* is 100 feet from all property lines.
 - (E) The *building* does not exceed 55 feet in height, 100 feet in length, and 6,000 square feet in ground floor area.
 - (F) Trailers are not stored on the *premises*.
 - (G) Appropriate sanitary and pump out facilities are available on *site*.
 - (H) Boat ramps, lifts, railways, or other facilities for access to the water are available on *site*. In no case will a boat cross a public road to access the water.
110. Neighborhood retail businesses in the Village and Intense Village districts. Neighborhood retail businesses are those businesses which supply household commodities on the *premises* such as groceries, meats, dairy products, baked goods, or other foods, drugs, notions, flowers or hardware. All retail sales will be conducted entirely within a *building*, except where otherwise approved by the *Planning Commission*. Other uses and *structures* which meet the criteria specified above may be approved by the Department. Neighborhood retail businesses will require a *site plan*. All neighborhood retail business *buildings* are limited to a footprint of 10,000 square feet.
111. *Off-street parking* and loading, including the parking of commercial vehicles related to the operation of an *on-site* business.
112. Offices. Such uses are subject to *site plan* review.
113. Outdoor entertainment.

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114. Outdoor recreation, miniature golf, but not golf courses.
115. Outdoor retreat in CR, RR, RC, MXD, and MXDCA, as a special exception, provided:
- (A) The project shall be located on a parcel of at least ten acres.
 - (B) The number of guest units provided on the site is limited to fifteen excluding resident management quarters. There shall be a maximum of twenty structures, including the guest units, on any permitted site.
 - (C) Dining services may be provided only to guests.
 - (D) The site has access to a public road. This access must be capable of supporting the passage of emergency vehicles. The Board may require improvements to existing access roads.
 - (E) There shall be sufficient acreage for the proposed use and activities.
 - (F) Adequate landscaping shall be provided to screen all parking areas from adjoining residential properties. Landscaping or screening proposed shall be shown on a site plan as required by this ordinance.
 - (G) The use and occupancy of the guest units is inherently transient and guest occupancy shall be limited to two weeks.
 - (H) All new accessory uses and outdoor retreat structures shall be setback a minimum of 100 feet from any adjacent property line.
 - (I) The Planning Commission and Board of Appeals shall place conditions or restrictions on events as may be appropriate to assure the compatibility of the use within a district or location.
 - (J) All structures shall meet all applicable Kent County codes, including the building code, and health department regulations.
116. Parking of commercial vehicles on a farm. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- a. The vehicles are related to the operation of the *farm* or three non-*farm* related vehicles.
 - b. The vehicles are parked around existing *buildings*. Non-*farm* related vehicles cannot be parked on *farms* without *buildings*.
 - c. The vehicles have current licenses and are operable.
117. *Personal* service establishments. For the purposes of this ordinance, such uses will mean those which perform services on the *premises* for *persons* residing in adjacent residential areas such as shoe repair, dry cleaners, tailors, *laundromats*, beauty parlors, barber shops, and the like. All *personal* service uses will be conducted entirely within a *building*. Other uses and *structures* which meet the criteria specified above may be approved by the Department. *Personal* service activities require *site plan* review.

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118. *Personal* wireless facilities, collocated on existing towers. Such uses will be collocated on existing towers, water towers, electrical transmission towers, fire towers, silos, grain dryers, or other *structures*. The height of the existing *structure* will not be above that permitted by this Ordinance.
119. *Personal wireless facility towers*, commercial radio, and television towers. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The *applicant* demonstrates that the alternatives of consolidating the facility on an existing tower *structure* or incorporating the facility on a *structure* or water tower have been fully exhausted.
 - (B) The *applicant* demonstrates a public need for the tower.
 - (C) As part of applications for *personal wireless facility towers* only, the *applicant* demonstrates a comprehensive approach to facilities with a goal of minimizing the number of *sites* required.
 - (D) The height of the tower, including antennas and appurtenances will not exceed 199 feet unless a *variance* is granted.
 - (E) All towers and their accessory *buildings* will comply with the *building setback* provisions of the applicable zoning district. In addition, the minimum from the ground base of any tower to any property line, road, or public recreational area will be the height of the tower including any antennas or other appurtenances. This *setback* is considered a “fall zone.” The Board of Appeals may reduce the fall zone by 50% of the required distance if it finds that a substantially better design will result from such a reduction. In making such a finding, the Board will consider both the visual and safety impacts of the proposed use.
 - (F) Monopoles or lattice towers will be the preferred tower *structure* in the County.
 - (G) The appearance of the tower *structure* will be minimized by the reasonable use of commercially available technology to reduce visual impact, with specific reference to size, color, and silhouette properties.
 - (H) Equipment shelters will be designed consistent with traditional Eastern Shore *architectural* styles and materials with a pitched roof of at least 10/12. The shelters will be camouflaged behind an effective year-round *buffer* of existing dense vegetation that exceeds the height of the proposed *buildings*. The *Planning Commission* may set aside the requirements for shelter design when it finds that the existing vegetation will provide adequate year-round *screening* of the *buildings*.
 - (I) The tower will be *sited* within or adjacent to mature dense *tree* growth and understory vegetation that provides an effective year-round visual *buffer* and should only be considered elsewhere on the property when technical or aesthetic reasons indicate there are no other preferable locations. Where

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necessary, the Board will require the installation of a vegetated *buffer* of sufficient height and depth to create an effective year-round visual *buffer*.

- (J) Towers will be lit only if required by the FAA. Lighting of equipment shelters and other facilities on *site* will be shielded from other properties.
- (K) Signs will be limited to identify the property owner, emergency contact, and to warn of danger.
- (L) As part of applications for *personal wireless facility towers* only, a tower will not be within a 5-mile radius of any existing towers used for *personal wireless facilities* unless the *applicant* demonstrates a public need due to capacity or other service limitations.
- (M) The tower will be used continuously. In the event the tower ceases to be used for a period of six months, the approval will terminate. The property owner will insure the tower removal within ninety days after the termination.
- (N) The facility will comply with all FCC and ANSI standards.
- (O) The *applicant* will demonstrate that a tower will not unreasonably interfere with the view of, or from, *sites* of significant public interest such as public parks, a national or state designated scenic byway, a *structure* listed in the Kent County Historic *Site's* survey, an historic district, or the Chesapeake Bay and its tributaries.
- (P) All applications for approval of a *tower* will include:
 - i. A description of the facility and proposed licensed carriers. A licensed carrier will be the *applicant*, the *co-applicant*, or have a binding agreement with the tower company.
 - ii. Coverage maps showing the area to be served by the proposed facility and the coverage available under existing facilities, approved facilities, and other appropriate *structures*.
 - iii. A master plan of the *applicant's* proposed communications network for the entire county.
 - iv. Siting elevations, existing photography, and a photo simulation from all directions.
 - v. Coverage, interference, and capacity analysis. The Director of Emergency Management may review the interference analysis.
 - vi. A copy of all reports required by or provided to the Federal Communications Commission including, but not limited, to the Environmental Assessment, NEPA Review, and SHPO Review.
 - vii. Computer modeling used in selecting the *site*.
 - viii. A narrative that explains how the *site* will not unreasonably interfere with the view of, or from, *sites* of significant public interest such as public

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parks, a national or State designated scenic byway, a *structure* listed in the Kent County Historic *Site's* survey, an historic district, or the Chesapeake Bay and its tributaries.

120. Printing and publishing. Such use will be permitted as a special exception only when the operation is in compliance with the *regulations* of the State of Maryland.
121. *Private clubs*. When located in the RCD, such uses will be limited to 15% *lot coverage*.
122. *Private destination/residence clubs* in the Marine zoning district only. Such uses are subject to the following conditions:
 - (A) The aggregate Marine zoned property will consist of four (4) or more acres.
 - (B) The facilities for such overnight accommodations will pay the appropriate County taxes, including taxes payable under Chapter 152 of the Code of Public Local Laws of Kent County.
 - (C) The facilities for overnight accommodations will use a reservation system.
 - (D) Permitted *accessory uses* may include clubhouse, *restaurants*, cafés or other dining facilities; bars, pubs or taverns; recreational facilities, such as tennis courts, *swimming pools*, and spas and other *accessory uses* that are customarily associated with a lodging facility. The permitted *accessory uses* will not include trap, skeet, clay birds, paint ball, or other similar firearm activities. The *applicant* will describe all proposed *accessory uses* in the application for *site plan*. Recreational facilities will be at least twenty-five (25) feet from the nearest property line.
 - (E) Where they exist, listed *historic structures* will be incorporated into the overall project.
 - (F) Significant view corridors, both from the *site* and onto the *site*, will be preserved as far as possible.
 - (G) The height of all *structures* will not exceed thirty-eight (38) feet.
 - (H) Parking *lots* will be landscaped as required for commercial *developments* per Article V of this Ordinance.
 - (I) The approval of such a facility for overnight accommodations will not impose restrictions that will preclude the use of the *marina* and property for commercial marine uses permitted in the Marine Zoning District, including boat *building*, storage, and repair; however, the continuation of these uses will not be required. The maintenance and continuation of boat *slips* will be required.
 - (J) The County may require connection to a public sewer system, if and when such system is available.
 - (K) *Campgrounds*, mobile homes, *recreational vehicle* and *manufactured home* parks will not be considered private destination or residence clubs.

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123. *Private garages, swimming pools, game courts, and other customary outbuildings and structures.* Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) On parcels less than five acres, accessory *structures* do not exceed 2,000 square feet or the height of the primary residential structure. Where an accessory *structure* is proposed to exceed 2,000 square feet or the height of the primary residential structure on a parcel of less than five acres, it may be permitted if granted an administrative special exception.
 - (B) Accessory sheds may be located in the rear yard of a waterfront property, no closer than five feet to any road, via an administrative special exception.
 - (C) Swimming pools, swimming pool equipment, and related structures may be located in the front yard of a waterfront property and may be permitted without submittal for an administrative special exception.
124. *Private piers, community piers, and private shared piers.* Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) The private *pier, community pier, or private shared pier* does not exceed 25% of the width of the *waterway*, the edge of the *channel*, or 150 feet in length, whichever is less.
 - (B) The private *pier, community pier, or private shared pier* is subject to the stipulations of Article VI of this Ordinance.
 - (C) *Regulations governing community piers* may be found in Article VI.
125. Private schools.
126. Production of biofuels. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The facility will be located within the US Route 301 Corridor.
 - (B) The *applicant* demonstrates a clear, identifiable market for the byproducts of the facility.
 - (C) The operation does not disturb the minimum 100-foot *buffer or stream protection corridor*.
 - (D) The operation does not adversely affect a non-tidal *wetland* directly or hydrologically.
 - (E) To assure continued compatibility with the surrounding area, the Board may place additional restrictions on the following:
 - i. *Screening* and landscaping from adjacent properties and public *roads*.
 - ii. Exterior displays, lighting, and signs.
 - iii. The location of access routes to the *site*, both onsite and *off-site*.

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127. Public and private *forests*, wildlife reservations, and similar conservation projects.
128. Public and private parks and playgrounds for the purpose of conserving and enjoying natural resources. For the purposes of this Ordinance, such uses will include both active and passive parks owned and operated by Kent County, the State of Maryland, or federal government, but will not include any commercial play fields for football, baseball, and any other major sports activities such as motocross or drag racing fields. These latter uses are prohibited throughout Kent County.
129. *Public landings*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) Adequate sanitary facilities exist.
 - (B) Service facilities are to the extent possible outside the 100-foot *buffer*.
 - (C) Permeable surfaces are used to the extent practicable, if no degradation of groundwater would result.
 - (D) Disturbance to *natural vegetation* is minimized.
 - (E) Areas for passive recreation, such as nature study, and for education, may be permitted in the *buffer* within the Resource Conservation Areas, if service facilities for these uses are outside the *buffer*.
130. Public uses, *buildings*, and *utilities*. Public *buildings* include but are not limited to schools, offices, parks, playgrounds, and *roads* funded, owned, and operated by local, State, or federal agencies. *Public utilities* are water, sewer, electric, gas, oil, and communication facilities owned and operated by the Kent County Department of Public Works or another public utility. *Public utilities* improvements located on sites and in the public rights-of-way include substations, poles, lines, transformers, underground pipes, meters, treatment facilities, pumping stations, and appurtenances but not overhead transmission towers. The following items require *site plan* review: schools, offices, playgrounds, treatment facilities, water towers, substations, and transformers; distribution/transmission improvements do not require special exceptions.
131. Public utility *buildings*, *structures*, water treatment plants, and transmission lines in Employment Center and ECCA. Such uses do not include *transportation facilities* and *utility transmission facilities*, except those necessary to serve permitted uses, or where regional or interstate facilities will cross tidal waters (*utility transmission facilities* do not include power plants); and such uses do not include permanent sludge handling, storage, and disposal facilities, other than those associated with wastewater treatment facilities. However, agricultural or horticultural use of sludge under appropriate approvals when applied by an approved method at approved application rates may be permitted in the *Critical Area*, except in the 100-foot *buffer*.
132. *Public utility lines and accessory structures* in Marine districts. Such uses will comply with the following conditions:
- (A) The *structures* are *screened* from the road and adjacent properties; and

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- (B) In so far as possible, *structures* are located to maintain significant views; and
 - (C) In so far as possible, *structures* are not visually intrusive to the neighborhood.
133. Pubs, taverns, and bars, including open air facilities. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The project is designed to minimize impact on neighboring properties, particularly residential properties either with *open space*, landscaping, or *structure* design.
 - (B) Measures are taken to limit any adverse effects of the use on *development* of the surrounding area due to noise, odor, traffic, lights, or any other reason.
 - (C) Loading areas, dumpsters, and other unsightly *site* elements will be *screened* from adjacent properties and the public view.
134. Radio and television towers, commercial. See *personal wireless facility towers*.
135. Railroad *right of ways*. Such use includes a strip of land with tracks and auxiliary facilities for track operations; but such use does not include passenger stations, freight terminals, switching and classification *yards*, repair shops, round houses, interlocking towers, and fueling, sanding, and watering stations. Such use will be permitted in the RCD only when such use existed as of April 12, 1988.
136. Recreational facilities, privately or commercially owned. Such uses do not include major sports arenas for football, baseball, drag racing, motocross, or other major sports activities. These latter uses are prohibited throughout Kent County.
137. Recreational uses, indoor, commercial. Such use includes game courts, *swimming pools*, and other like recreational facilities and is subject to *site plan* review.
138. *Resorts*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The parcel(s) on which the *resort* is proposed will be at least 250 acres.
 - (B) The *resort* will not exceed 750 acres.
 - (C) The *resort* has at least 40 but not more than 225 guest rooms.
 - (D) The project includes a regulation par 72, 18-hole golf course. The golf course will meet all the requirements found in this Ordinance.
 - (E) Permanent theme parks, amusement parks, and/or stadiums are prohibited.
 - (F) Where applicable, the *applicant* has applied for growth allocation from the County. Special exception approval will not be valid without the granting of growth allocation.
 - (G) The Board will make specific findings on the availability of public and governmental services.

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- (H) Where they exist, *historic structures* will be incorporated into the overall project.
- (I) Significant view corridors, both from the *site* and onto the *site* will be preserved in so much as possible.
- (J) The height of all *structures* will not exceed 38 feet.
- (K) The design of the *resort* and *accessory uses* will reflect and complement the rural character of the area.
- (L) The number of *dwelling units* will not exceed that which is permitted in the applicable zoning district. *Dwelling units* may be detached or attached.
- (M) Continuous residential *lot development* aligned with golf course fairways will be prohibited within the *Critical Area* and discouraged elsewhere.
- (N) Parking *lots* will be landscaped as required for commercial *developments* in Article V of this Ordinance.
- (O) Permitted *accessory uses* include *restaurants*, recreational facilities such as tennis courts and *swimming pools*; spas; retail use provided the establishments are in the main *building* with the entrance to the retail use from the inside the *building*; stables, equestrian center, other recreation amenities but not including trap, skeet, clay birds, paint ball or other similar firearm activities, *piers* and; other *accessory uses* that are customarily associated with a *resort*. The *applicant* will describe all proposed *accessory uses* in the application for a special exception. The Board of Appeals may deny or limit the size and extent of *accessory uses*.
- (P) The number of *slips* on the accessory *pier* is limited to 25% of the number of guest rooms and is limited to use by those using the *resort* facilities. Accessory *piers* will meet all requirements applicable to *marinas* such as pump outs, restrooms, and showers.
- (Q) All *structures* will comply with the minimum 100-foot *buffer* from mean high tide and 500 feet from all side and rear property lines whichever is greater.
- (R) In RCD, RC, RR, and CAR at least 60% of the property will be in *open space*. A golf course will be considered *open space*. However, additional *open space* beyond that provided by the golf course is required.
- (S) The Board of Appeals may place additional restrictions on the following:
 - i. Additional *yard* requirements for all *structures*, including patios, and places of public assembly
 - ii. Lighting
 - iii. Landscaping and *screening*
 - iv. Outdoor activities, outdoor music, and their hours of operation

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v. Access

- (T) Application for a *resort* will include a sketch plan and renderings of all primary and each type of *accessory structure*.
139. *Restaurants* without drive through facilities. Such uses are subject to *site plan* review.
140. *Restaurants* with drive through facilities in the Route 301 Corridor. Such uses are subject to special exception use approval by the Planning Commission and the Board of Appeals.
141. Retail businesses with less than 60,000 square feet of gross floor area. Such uses will be permitted only when all of the following conditions are satisfied:
- (A) All retail sales and/or storage will be conducted entirely within a *building* except where otherwise approved by the *Planning Commission* on a *site plan*.
 - (B) The *building* size does not exceed 60,000 square feet of gross floor area.
 - (C) In the M District, such uses will be accessory to a principal use and may include the sale of groceries, beverages, food, clothing, marine supplies, and similar products.
142. Retail businesses with more than 60,000 square feet of gross floor area. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The proposed *development* will not adversely affect existing commercial centers and businesses as demonstrated by an economic impact study.
 - (B) The traffic impact will not lower the level of service more than one level of service or in any case below Level of Service C as demonstrated by a traffic impact study.
 - (C) The proposed *development* will not adversely affect the environment as demonstrated by an environmental impact study.
 - (D) All retail sales and/or storage will be conducted entirely within a *building* except where otherwise approved by the *Planning Commission*
 - (E) The *Planning Commission* has reviewed the preliminary *site plan*.
 - (F) The Board of Appeals may place additional restrictions on the following:
 - i. Additional *yard* requirements for all *structures*.
 - ii. Lighting
 - iii. Landscaping and *screening*
 - iv. Access
 - (G) The application will include a preliminary plan and renderings of all primary and *accessory structures*.
143. Retail businesses located within the Route 301 Corridor are permitted without size limits.

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144. Retail businesses located within the Route 301 Corridor are permitted with drive-in facilities as special exceptions.
145. Retail nurseries and greenhouses.
146. Retail sales of products produced *on-site* in the EC, ECCA, MXD, and MXDCA.
147. *Retreats*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The project will collectively consist of at least 15 acres.
 - (B) In AZD, the *retreat* uses *buildings* that existed prior to August 1, 1989. *Buildings* are limited to a 50% expansion of the gross *floor area* of each individual *building* above that which existed as of August 1, 1989.
 - (C) The *retreat* has at least 10 but not more than 40 guest rooms.
 - (D) Permanent theme parks, amusement parks, and/or stadiums are prohibited.
 - (E) Where applicable, the *applicant* has applied for growth allocation. Special exception approval will not be valid without the granting of growth allocation.
 - (F) The Board will make specific findings on the availability of public and governmental services.
 - (G) Where they exist, *historic structures* will be incorporated into the overall project.
 - (H) Significant view corridors, both from the *site* and onto the *site* will be preserved in so much as possible.
 - (I) The height of all *structures* will not exceed 38 feet.
 - (J) The design of the *retreat* and *accessory uses* will reflect and complement the rural character of the area.
 - (K) One residential unit for use by an employee of the *retreat* may be provided.
 - (L) Permitted *accessory uses* include kitchen and dining facilities for guests only, recreational facilities such as tennis courts and *swimming pools*; spas; other recreation amenities but not including trap, skeet, clay birds, paint ball or other similar firearm activities, *piers*; and other *accessory uses* that are customarily associated with a *retreat*. The *applicant* will describe all proposed *accessory uses* in the application for a special exception. The Board of Appeals may deny or limit the size and extent of *accessory uses*.
 - (M) The number of *slips* on an accessory *pier* may not exceed 5.
 - (N) The *retreat* will be limited to 10 *buildings*. In AZD, the *retreat* is limited to existing *buildings*.
 - (O) All *structures* will comply with the minimum 100-foot *buffer*. Primary *buildings* will be 100 feet from all property lines or comply with the minimum 100-foot

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buffer, whichever is greater. *Accessory structures* may be 5 feet from the rear or side property line.

- (P) At least 60% of the property will be in *open space*.
 - (Q) Parking *lots* will be landscaped as required for commercial *developments* in Article V of this Ordinance.
 - (R) The Board of Appeals may place additional restrictions on the following:
 - i. Additional *yard* requirements for all *structures*, including patios and places of public assembly
 - ii. Lighting
 - iii. Landscaping and *screening*
 - iv. Outdoor activities and outdoor music and their hours of operation
 - v. Access
 - (S) The application for a *retreat* will include a sketch plan and renderings of all primary and each type of *accessory building* and *structure*.
148. Rifle and pistol ranges. Such uses will include trap and skeet shooting, sporting clays, or similar activities such as paint ball, and may include accessory snack bars and retail sales of shooting supplies and equipment, commercial or *private club*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) The surrounding area is predominately undeveloped.
 - (B) Such uses will be for the period of time as determined by the Board. However, outdoor night shooting is prohibited at rifle and pistol ranges.
 - (C) Proposed *accessory uses*, such as stores, snack bars, and *recreational vehicle* parking are included in the application and specifically approved by the Board.
149. *Roadside stands*. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) Such *roadside stands* offer for sale only locally grown fresh agricultural products in season.
 - (B) Such *roadside stands* are operated by the owner, lessee, or *tenant* of the *premises* upon which such stand is located.
 - (C) Adequate *off-street parking* will be provided.
 - (D) Such stands will be completely removed at the end of the local fresh produce season.
150. Rooming, boarding, and *lodging houses*.
151. *Rural inns*. Such uses will be permitted as special exceptions only when all of the following conditions are satisfied:

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- (A) The project will collectively consist of at least 20 acres.
- (B) In AZD, the *Rural Inn* uses *buildings* that existed prior to August 1, 1989. *Buildings* are limited to a 50% expansion of the gross *floor area* of each individual *building* above that which existed as of August 1, 1989.
- (C) The *Rural Inn* has at least 10 but not more than 25 guest rooms. Overnight lodging will not exceed 45 consecutive days.
- (D) Permanent theme parks, amusement parks, and/or stadiums are prohibited.
- (E) The Board will make specific findings on the availability of public and governmental services.
- (F) Where they exist, *historic structures* will be incorporated into the overall project.
- (G) Significant view corridors, both from the *site* and onto the *site* will be preserved in so much as possible.
- (H) The height of all *structures* will not exceed 38 feet.
- (I) The design of the *Rural Inn* and *accessory uses* will reflect and complement the rural character of the area.
- (J) Two residential units for use by employees of the *Rural Inn* may be provided.
- (K) Permitted *accessory uses* include kitchen and dining facilities. Dining facilities may be provided to patrons in addition to guests registered for overnight lodging provided seating will not exceed 40 seats over and above those seats needed to accommodate the maximum number of lodging guests based on two (2) individuals per room; recreational facilities such as tennis courts and *swimming pools*; other recreational amenities but not including trap, skeet, clay birds, paint ball or other similar firearm activities; and other *accessory uses* that are customarily associated with a *Rural Inn*. The *applicant* will describe all proposed *accessory uses* in the application for a special exception. The Board of Appeals may deny or limit the size and extent of accessory uses.
- (L) The *Rural Inn* may not exceed 15 *buildings*. In AZD, the *Rural Inn* is limited to existing *buildings*.
- (M) At least 60% of the property will be in *open space*.
- (N) Parking *lots* will be landscaped as required for commercial *developments* in Article V of this Ordinance.
- (O) All *building* associated with the principal uses of the *Rural Inn*, as well as the permitted *accessory uses* listed in paragraph (k) of this subsection, will be a minimum of 100 feet from all property lines.
- (P) The Board of Appeals may place additional restrictions on the following:

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- i. Additional *yard* requirements for all *structures*, including patios and places of public assembly
 - ii. Lighting
 - iii. Landscape and *screening*
 - iv. Outdoor activities and outdoor music and their hours of operation
 - v. Access
 - vi. Location and hours of operation of kitchen and dining facilities open to the public
- (Q) The application for a *Rural Inn* will include a sketch plan and renderings of all primary and each type of accessory *building* and *structure*.
152. Sand and gravel pits, *excavation*, or extraction. Such use does not include the removal of sod, and *excavation* for foundations, *swimming pools*, *soil* and water conservation practices, and those removals approved in connection with *farm* use, *street* construction, *subdivision* or planned residential *development*. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) Material is not brought from *off-site* for processing, mixing, or similar uses
 - (B) The *excavation* or extraction operation will be controlled to offer reasonable protection to surrounding properties and the neighborhood, particularly as regards to use of residential *streets* for access to the *site*.
 - (C) There are no known threatened or *endangered species*, areas of specific value, or rare assemblages of species or other vital habitat at the *site*.
 - (D) In RCD and CAR, *highly erodible soils* are not disturbed at the *site*.
 - (E) The operation will not disturb for future use prime agricultural lands or *forest* and *developed woodlands* of more than one acre.
 - (F) The operation will not *degrade* water quality.
 - (G) The operation does not disturb the minimum 100-foot *buffer* or *stream protection corridor*.
 - (H) The operation is under an approved operating and restoration plan from the State of Maryland.
 - (I) The operation does not adversely affect a *non-tidal wetland* directly or hydrologically.
 - (J) The location of the *excavation* or extraction with respect to property lines, the depth of *excavation*, and relation to the water table or *flood* criteria and the *slope* of the sides of the *excavation* will be controlled to prevent a continuing, unsightly, hazardous, or wasteful condition of the land.

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153. *Sanitary landfill* or rubble fill. Such use will be permitted as a special exception only when the use is owned or managed by Kent County in AZD and provides a 100-foot-deep vegetative *screen* along all property lines.
154. Satellite dish, private, with an antenna exceeding 3 feet in diameter. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:
- (A) No antenna will exceed an overall diameter of 12 feet or an overall height of 15 feet above *existing grade*.
 - (B) The antenna will be permanently ground-mounted. An antenna will not be installed on portable or moveable *structures*.
 - (C) The antenna will be totally *screened* along the non-receptive axis, and low-level ornamental landscaping will be installed along the reception window axis of the base of the antenna. *Screening* may consist of fencing or a variety of plant types. *Screening* may be set aside when the antenna is located 100 feet from all property lines, or the antenna is not visible or intrusive to the neighborhood.
 - (D) In, RC, CAR, and CR: The final installation should be blended carefully with the surrounding landscape.
155. Satellite dish, private, with an antenna of 3 feet or less in diameter. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:
- (A) Satellite dish use will not be installed on portable or movable *structures*.
 - (B) In the RCD, the satellite dish is located only in the *rear yard*.
156. *Sawmills*, temporary, for cutting timber grown on the *premises*.
157. School bus parking *lot*. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) No part of the school bus parking facility will be in the 100-year *floodplain*.
 - (B) Areas for school bus parking, fueling, or repair are a minimum of 100 feet from any residence.
 - (C) Areas for school bus parking are 100 feet from *wetlands*.
 - (D) Areas for school bus repair are enclosed in a *building*. Outdoor repair or storage of materials or products is prohibited.
 - (E) All buses will have current licenses and be operable.
 - (F) The Board determines that all access *roads* are capable of handling the traffic generated and that a safe route for school buses traveling to and from the facility is provided.
 - (G) Areas for parking and cartways are paved.
 - (H) The *site* is *screened* from adjacent properties and public *roads*.
 - (I) Adequate restroom facilities will be provided.

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158. School buses, limited to five on farms in AZD. Such uses will be permitted as accessory uses only when the buses are parked around existing *buildings* and the buses have current licenses and are operable.
159. School buses, limited to two, parked. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) The school buses are parked only in the *rear or side yard* of the *dwelling* or *dwellings* on the lot.
 - (B) The school buses are owned or operated by the occupants of the *dwelling* or *dwellings* on the lot.
 - (C) The school buses have current licenses and are operable.
 - (D) In the AZD, RCD, RC, CAR, CR, V, and IV Districts, the number of school buses parked per lot is limited to two.
 - (E) In the C District, the number of school buses parked per lot is limited to three.
160. Seafood processing. Such use includes wholesale and retail sales of seafood products. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) Open or uncovered storage of shells, bones, and refuse does not occur on *site*.
 - (B) No curing or smoking occurs on *site*.
 - (C) All *structures* for processing and all disposal areas for materials and byproducts of processing are a minimum of 300 feet from all property lines and 600 feet from residential district boundaries.
 - (D) Seafood processing facilities and disposal areas are not in the *100-year floodplain*.
 - (E) The operation is managed according to a management plan approved by the Natural Resources Conservation Service, University of Maryland Extension Service, and the Kent County Health Department.
 - (F) Parking, processing, and disposal areas are *screened* from adjacent properties and public *roads*.
 - (G) Access *roads* are capable of handling the type of traffic generated by the operation.
161. Self-storage. Self-storage uses will be permitted only when all of the following conditions are satisfied:
- (A) In the V District, no self-storage use may have more than 30 self-storage units in 1 *building*, and no self-storage unit may exceed 100 square feet of floor space; and
 - (B) In the V District, any property used for self-storage will front on 2 public *roads*; and

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- (C) The front façade of the center and any other façade visible from adjoining public roads will reflect the scale, materials and design features common to residential or *historic structures* in the County; and
 - (D) Self-storage uses are subject to *site plan* review.
162. Septic tank maintenance and excavation.
- (A) Buildings associated with the use are not visually Intrusive or inappropriate to the setting.
 - (B) New buildings and expansions shall be designed in keeping with or to enhance the character of other buildings on the property or adjacent to the property.
 - (C) All vehicles and equipment associated with the business must be kept within a building or screened from the view of public roads and adjacent properties.
All fences and landscaping must be approved by the Planning Commission as part of site plan review.
163. Short-term vacation rentals (STVR). Kent County hotel rental taxes will be paid for each unit, and the required monthly report will be filed by any establishment that provides sleeping accommodations for compensation for a period not exceeding four months.
164. *Single family dwellings*
- (A) Factory-constructed or prefabricated homes including manufactured, modular, and mobile homes, when provided with permanent foundations; permanent connections to utilities; required fire sprinklers; and reviewed, inspected, and approved as buildings utilizing all life-safety codes, and which meet all required zoning and environmental regulations in this Ordinance, will be treated in the same manner as a site-built building.
 - (B) When special exception approval is required, such single-family dwellings may be reviewed via an administrative special exception process.
165. *Single family dwelling*, one per existing property, in Employment Center and ECCA, subject to the *yard* requirements found in the Agricultural Zoning District, provided however, that bona fide *intrafamily transfers* may be permitted (thus exceeding the one *single family dwelling* per existing property requirement) under the following conditions:
- (A) The owner of the parcel or the proposed parcel will attest, in writing, to the bona fide *family* relationship and that the intent of the *subdivision/use* is not for ultimate transfer to a third party.
 - (B) Any deed for a *lot* that is created by a bona fide *intrafamily transfer* will contain the covenant stating that the *lot* is created subject to the provisions of this section and that the provisions of this section will control as long as the property continues to be zoned for industrial uses.
 - (C) A *lot* created by a bona fide *intrafamily transfer* may not be conveyed subsequently to any *person* other than a member of the owner's immediate

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family except under the following situations, as determined by the Kent County Planning Commission:

- i. The *lot* was created as a part of bona fide *intrafamily transfer* and not with the intent of subdividing the original parcel of land for purposes of ultimate transfer to a third party; and
 - ii. The owner of the transferred property dies; or
 - iii. A change of circumstances has occurred since the original transfer was made that is consistent with the intent of this ordinance.
 - (D) This subsection will not prevent the conveyance of such a *lot* to a third party as security for a mortgage or deed of trust, or subsequent conveyances resulting from a foreclosure.
 - (E) The maximum *lot* size will be two acres.
 - (F) Any deed or *subdivision* plat for a *lot* created by a bona fide *intrafamily transfer* will contain a statement that the adjacent property is zoned for industrial uses.
 - (G) The parcel is created for the construction of a primary residence only.
 - (H) This provision applies to those individuals owning industrial zoned land prior to July 7, 1994. Subsequent owners of industrial zoned land will be limited to one *single family dwelling*.
166. Solar energy systems, small. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) *Tree* removal will be minimized, and any removal will be mitigated in accordance with the *Critical Area Program* requirements, or, if no *Critical Area Program* is in place in that location, *tree* removal will be mitigated at a ratio of one *tree* planted for each *tree* removed or as required in Article VI, whichever is greater.
 - (B) All solar collection devices will register with the Office of Emergency Services and will submit a map noting the location of the solar collection devices and the panel disconnect.
 - (C) The total height of solar collection systems will comply with the height requirements of the zoning district in which they are located.
 - (D) The area of solar panel arrays may not exceed 5 acres. The area of the solar panel arrays shall be measured as the area within the solar panel arrays' security fence.
167. Solar energy systems, utility scale in the Employment Center zoning district. Such uses will be permitted by right, but only when all of the following conditions are satisfied:
- (A) A solar collection device or combination of devices are designed and located to avoid glare or reflection onto adjacent properties and adjacent *roadways* and will not interfere with traffic or create a safety hazard.

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- (B) *Screening*, capable of providing year-round *screening*, is provided per all the requirements in Article V.
- (C) Roof-mounted solar collection devices will not extend more than 15 feet from the top of the roof. The total height of the *building*, including the solar collection devices, will comply with the height *regulations*.
- (D) Solar collection devices not mounted on roofs will not exceed 45 feet in height.
- (E) All solar collection devices will register with the Kent County Office of Emergency Services and will submit a map noting the location of the solar collection devices and the panel disconnect.
- (F) All solar energy systems will meet the Countywide standards in Article V.

Solar energy systems, utility scale, in the AZD and RCD will be permitted as special exception only when all of the following conditions are satisfied:

- (A) The use takes place on a *farm*, as defined by this Ordinance.
- (B) A solar collection device or combination of devices are designed and located to avoid glare or reflection onto adjacent properties and adjacent *roadways* and will not interfere with traffic or create a safety hazard.
- (C) *Screening*, capable of providing year-round *screening*, is provided per all the requirements of Article V.
- (D) Roof-mounted solar collection devices will not extend more than 15 feet from the top of the roof. The total height of the *building*, including the solar collection devices, will comply with the height *regulations* established for each zoning district.
- (E) Solar collection devices not mounted on roofs will not exceed 38 feet in height.
- (F) The solar collection system will be incidental to the use of the *farm*.
- (G) Installation of the solar collection system will not adversely impact adjacent properties.
- (H) All *structures* associated with the solar collection system will be neither visually intrusive nor inappropriate to their setting.
- (I) All solar collection devices will register with the Office of Emergency Services and will submit a map noting the location of the solar collection devices and the panel disconnect.
- (J) Other than wire size, there will be no *alteration* of utility *infrastructure* to accommodate the system.
- (K) The area of solar panel arrays may not exceed 5 acres. The area of the solar panel arrays shall be measured as the area within the solar panel arrays' security fence. Adjacent properties will not aggregate solar collection panels to achieve an area exceeding 5 acres.

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- (L) In AZD, only the five-acre maximum area of solar panel arrays, as measured in Subsection K. above, is considered *development* and counted toward the maximum percentage of the property in *lots*.
- (M) *Tree* removal will be minimized, and any removal will be mitigated in accordance with the *Critical Area* Program and the Forest Conservation Act.
- (N) The *applicant* will demonstrate that a *utility scale solar energy system* will not unreasonably interfere with the view of, or from, *sites* of significant public interest such as public parks, a national or state designated scenic byway, a *structure* listed in the Kent County Historic *Site* Survey, an historic district, or the Chesapeake Bay and its tributaries.
- (O) All solar energy systems will meet the Countywide standards in Article V.

Solar energy systems, utility scale, in C, and CCA, will be permitted as special exception only when all of the following conditions are satisfied:

- (A) A solar collection device or combination of devices are designed and located to avoid glare or reflection onto adjacent properties and adjacent *roadways* and will not interfere with traffic or create a safety hazard.
 - (B) *Screening*, capable of providing year-round *screening*, is provided per all the requirements in Article V.
 - (C) Roof mounted solar collection devices will not extend more than 15 feet from the top of the roof. The total height of the *building*, including the solar collection devices, will comply with the height *regulations* established for each zoning district.
 - (D) Solar collection devices not mounted on roofs will not exceed 45 feet in height
 - (E) All solar collection devices will register with the Office of Emergency Services and will submit a map noting the location of the solar collection devices and the panel disconnect.
 - (F) The *applicant* will demonstrate that a *utility scale solar energy system* will not unreasonably interfere with the view of, or from, *sites* of significant public interest such as public parks, a national or state designated scenic byway, a *structure* listed in the Kent County Historic *Site* Survey, an historic district, or the Chesapeake Bay and its tributaries.
 - (G) All solar energy systems will meet the Countywide standards in Article V.
168. Storage and office trailers, temporary during construction.
169. Storage of boats, campers, boat trailers, and camper trailers. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:
- (A) The storage is located in the *rear yard*, except that:
 - i. In the RCD and CAR Districts, the storage may be located on the waterfront side of the principal use; and

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- ii. Storage of boats in the buffer is permitted only if water-dependent to the subject site; and
 - iii. In the RC and RR Districts, the storage may be located in the *side yard*.
 - (B) The vehicle or trailer is titled under the name of the property owner or occupant.
 - (C) The vehicle or trailer is operable and has current licenses.
170. Stores or shops for the conduct of retail sales in the Marine zoning district. Such use may include the sale of groceries, beverages, food, clothing, marine supplies, and similar shops and stores.
171. *Structures* for the buying, processing, and sale of animal products in AZD, commercial. Such use will be permitted as special exception only when all of the following conditions are satisfied:
- (A) *Structures, retention, and disposal* areas will be 600 feet from the nearest property line.
 - (B) The front of the *site* will be appropriately landscaped.
 - (C) All activities will be completely enclosed.
 - (D) The operation is managed according to a waste management plan approved by the Natural Resources Conservation Service, University of Maryland Extension Service, and the Kent County Health Department.
172. *Structures* for the buying, processing, and sale of non-animal *farm* products related to *agriculture* of no more than 10,000 square feet in floor area. Such use excludes any animal products but includes seed and fertilizer sales. The total square footage of the *buildings* occupied for such use will not exceed 10,000 square feet; the 10,000 square foot restriction applies only to those *structures* associated with the approved business and not to *structures* normally associated with permitted agricultural operations. *Structures* for the buying, processing, and sale of *farm* products are subject to *site plan* review by the *Planning Commission* or where applicable the Planning Director.
173. *Structures* for the buying, processing, or sale of non-animal *farm* products related to *agriculture*, over 10,000 square feet in floor area. Such uses may include the sale of fertilizer and seed but may not include animal products and may not exceed 50,000 square feet in floor area.
174. Temporary *MET Tower* of any height. Such use will be permitted as an accessory use only when all of the following conditions are satisfied:
- (A) The tower is erected for no more than 12 months.
 - (B) Any free-standing *structure* is located a minimum of three times its total height from a property line.
 - (C) Towers are not readily climbable from the ground up to 12 feet.

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175. Tie-out pilings of private *piers*, *community piers*, and private shared *piers*. Such uses will be installed at a distance not to exceed 25% of the width of the *waterway*, the edge of the *channel*, or 180 feet from the mean high-water mark, whichever is less, for the exclusive mooring use by tall ships as safe harbors from hurricanes and other severe weather-related threats. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) Private *piers*, *community piers*, and private shared *piers* in RCD and CAR are subject to the stipulations and *regulations* of Article VI of this Ordinance.
 - (B) No portion of a *pier* consisting of any combination of non-floating fixed platforms, and/or floating *structures*, with decking extending out over the water to provide pedestrian access, may exceed 25% of the width of the *waterway*, the edge of the *channel*, or 150 feet in length, whichever is less.
 - (C) Any tie-out pilings installed more than 150 feet from the mean high-water mark will be for the exclusive mooring use by tall ships and for no other use.
 - (D) The term “tall ships” means any large traditionally rigged sailing vessels, including schooners, which are federally documented with home ports located in Kent County, Maryland.
 - (E) The term “hurricanes and other severe weather-related threats” means weather events which are the subjects of a Tropical Storm Watch, Tropical Storm Warning, Hurricane Watch, or Hurricane Warning issued by the National Oceanic and Atmospheric Administration.
176. Townhouses. Such uses are subject to *site plan* review.
177. Transmission towers. Such uses include cellular towers. See *Personal Wireless* categories.
178. *Truck stops*. Such uses will be permitted as special exception only when all of the following conditions are satisfied:
- (A) No part of the truck parking facility will be in the *100-year floodplain*.
 - (B) Areas for truck parking, fueling, or repair are a minimum of 300 feet from any residential district.
 - (C) Areas for truck parking are 100 feet from *wetlands*.
 - (D) Areas for truck repair are enclosed in a *building*.
 - (E) The Board determines that all access *roads* are capable of handling the traffic generated and that a safe route for trucks traveling to and from the facility is provided.
 - (F) Areas for parking and cartways are paved.
 - (G) The *site* is *screened* from adjacent properties. The *front yard* and all areas adjacent to public *roads* will be extensively landscaped.
 - (H) Adequate restroom facilities, driver rooms, and telephones will be provided.

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179. *Truck terminals. Such uses are subject to the following conditions:*

- (A) *Truck terminals* are limited to 20 trucks, except that the limitation on the number of trucks does not apply to Employment Center districts in the Route 301 corridor; and
- (B) The parking and loading area of a *truck terminal* will be fenced, *screened*, and located at least 400 feet from any residential district boundary and 100 feet from all property lines.

Truck terminals will be permitted as a special exception only when all of the following conditions are satisfied:

- (A) No part of the truck parking facility will be in the *100-year floodplain*.
- (B) Areas for truck parking, fueling, or repair are a minimum of 100 feet from any residential district.
- (C) Areas for truck parking are at least 100 feet from *wetlands*.
- (D) Areas for truck repair are enclosed in a *building*.
- (E) The Board determines that all access *roads* are capable of handling the traffic generated and that a safe route for trucks traveling to and from the facility is provided.
- (F) Areas for parking and cartways are paved.
- (G) The *site* is *screened* from adjacent properties and public *roads*.
- (H) Adequate restroom facilities will be provided.

180. *Two-family dwellings.*

181. Uses and *structures* which are customarily accessory and clearly incidental and subordinate to the permitted uses in the EC, ECCA, MXD, MXDCA districts.

182. Veterinary *hospitals* or *clinics* and animal shelters, as defined by the County Code of Public Laws. Such uses will ensure that all open kennels will be at least 200 feet from all property lines, unless otherwise approved by the *Planning Commission* via a *site plan* review.

183. Veterinary *hospitals* and offices without open kennels.

184. Vocational and trade schools, including training facilities.

185. Waste management *structures* in AZD and RCD where not otherwise stipulated in this Ordinance. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:

- (A) Waste management *structures* will be a minimum of 600 feet from all property lines.
- (B) No waste management *structure* will be in the *100-year floodplain*.

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- (C) The operation is managed according to waste and nutrient management plans, approved by the Natural Resources Conservation Service, University of Maryland Extension Service, and the Kent County Health Department.
186. Wedding venues on farms with a special exception approved by the Board of Appeals.
187. *Wind energy systems, small, where the height of the wind energy system exceeds 80 feet and/or is located on a parcel less than 20 acres.* Such uses will be permitted as a special exception only when all of the following conditions are satisfied:
- (A) Within the AZD, RCD, RC, CAR and CR, the height of the wind energy systems exceeds 80 feet, or the wind energy systems are located on parcels less than 20 acres.
 - (B) If an alternative energy source can produce equal energy, then that should be used rather than a tall tower which impacts the landscape.
 - (C) If co-location with a *personal wireless facility* is proposed, then a need for a *personal wireless facility tower* will be documented and all appropriate studies submitted. In addition, the proposed tower will comply with all standards for both wind turbines and *personal wireless facilities*.
 - (D) The *applicant* will provide a report documenting that the wind energy system does not significantly impact migratory bird pathways.
 - (E) The wind energy system will not be located within the air path of a private or public airstrip.
 - (F) The height of the *structure* to the tip of the blade at its highest point does not exceed 120 feet.
 - (G) A small energy system will not have more than one wind turbine per parcel.
 - (H) Monopoles or lattice towers will be the preferred tower *structure* in the County.
 - (I) Guy wires are strictly prohibited.
 - (J) *Small wind energy systems* may not be located within the *buffer* or within a *stream protection corridor*.
 - (K) *Small wind energy systems* will not be artificially lit unless such lighting is required by the Federal Aviation Administration.
 - (L) *Small wind energy systems* will be galvanized steel, brushed aluminum finish, or a non-garish color or finish that conforms to the environment and *architecture* of the community, unless Federal Aviation Administration *regulations* require otherwise.
 - (M) All signs, including flags, streamers, and decorative items, both temporary and permanent, are prohibited on a *small wind energy system* except the manufacturer or installer's identification or appropriate warning signs or placards.

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- (N) Any free-standing *structure* is located a minimum of 1.5 times its total height from a property line.
- (O) Either towers are not readily climbable from the ground up to 12 feet or are fenced.
- (P) All access doors to towers and electrical equipment will be lockable.
- (Q) Appropriate warning signage is placed on the tower and electrical equipment.
- (R) The blade tip at its lowest point has a ground clearance of at least 25 feet.
- (S) Any *small wind energy system* that is not operable for a period of 12 consecutive months or more will be removed at the landowner's expense.
- (T) *Small wind energy systems* will be *sited* in a manner that does not result in significant *shadow flicker*.
- (U) *Small wind energy systems*, including wind turbine and tower, will comply with all applicable construction and electrical codes.
- (V) Audible sound due to wind turbine operations will not exceed 55 dB(A) except during short-term events such as utility outages and/or severe windstorms. The sound level will be measured at ground level at the property line.
- (W) Any *small wind energy system* found to be unsafe will be repaired by the property owner to meet these *regulations* and any applicable federal, State, and local safety standards or be physically removed within 90 days.
- (X) The *applicant* will demonstrate that a *small wind energy system* will not unreasonably interfere with the view of, or from, *sites* of significant public interest such as public parks, a national or state designated scenic byway, a *structure* listed in the Kent County Historic *Sites Survey*, an historic district, or the Chesapeake Bay and its tributaries.
- (Y) The following submittals are required for approval:
 - i. *Site plan*, at a standard scale, to adequately show: (1) Property lines and dimensions of subject property; (2) property lines and owner information for all abutting properties; (3) Locations of all existing *buildings*, *structures*, and underground and overhead utilities on the subject property; (4) locations of all existing *buildings* on abutting properties; (5) location of the proposed *small wind energy system* with distances to show required *setbacks*; (6) *certification* by a licensed professional *engineer* or property owner that the information shown on the *site plan* is accurate, and (7) a *shadow flicker* study documenting that the project will not result in significant *shadow flicker*.
 - ii. The *small wind energy system* manufacturer's specification sheet, including photograph, sound analysis and mounting recommendations.

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- iii. *Engineered* drawings showing the *small wind energy system structure*, including the tower, turbine, base and footings, and an *engineering* analysis showing compliance with the International *Building Code* certified by a licensed professional *engineer*. This analysis may be supplied by the manufacturer.
 - iv. Siting elevations, existing photography, and a photo simulation from all directions.
 - v. Any additional information as may be required by the Board of Appeals as appropriate to demonstrate compliance with the *regulations*.
 - vi. A narrative that explains how the *site* will not unreasonably interfere with the view or, or from, *sites* of significant public interest such as public parks, a national or state designated scenic byway, a *structure* listed in the Kent County Historic *Sites Survey*, an historic district, or the Chesapeake Bay and its tributaries.
188. *Wind energy systems, small, accessory*. Such uses will be permitted as accessory uses only when all of the following conditions are satisfied:
- (A) The height of the *structure* to the tip of the blade at its highest point does not exceed 80 feet.
 - (B) Any system is located a minimum of three times its total height from a property line.
 - (C) Towers are not readily climbable from the ground up to 12 feet.
 - (D) All access doors to towers and electrical equipment will be lockable.
 - (E) Appropriate warning signage is placed on the tower and electrical equipment.
 - (F) The blade tip at its lowest point had a ground clearance of at least 25 feet.
 - (G) Wind turbines and towers maintain a galvanized steel, brushed aluminum finish, or a non-garish color.
 - (H) Any small wind energy system that is not operational for a period of 12 consecutive months or more will be removed at the landowner's expense.
 - (I) In the C, CCA, M, EC, and ECCA Districts, such use is limited to one tower.

ARTICLE IV. PROCESSES

SECTION 1 GENERAL PROVISIONS

1.1 STATEMENT OF INTENT

These provisions are intended to provide general standards for all review and approval processes in this Land Use Ordinance, in order to streamline and standardize the process and public notice. A Section is provided for each process type; elements in common are addressed in this Section.

The Goals and Objectives below are specifically included as part of the review of subdivisions and site plans. The remaining processes have other standards delineated in their individual sections. Although not directly linked to all other formal reviews, these Goals and Objectives provide an overview of the spirit and intent of the Land Use Ordinance approach to *development* in general.

1.2 GOALS

1. These procedures are to protect the health, safety, convenience, and general welfare of the inhabitants of the County. Subdivision and *site plan* review regulates the *development* of *sites* and *structures* in a manner which considers the following concerns and, where necessary, requires modification of *development* proposals to eliminate or minimize potential problems and nuisances. The principal areas of concern are:
 - (A) The balancing of landowners' rights to use their land, with the corresponding rights of abutting and neighboring landowners to live without undue disturbances (noise, smoke, fumes, dust, odor, glare, *stormwater* runoff, etc.);
 - (B) The convenience and safety of vehicular and pedestrian movements within the *site*, and in relation to adjacent areas or *roads*;
 - (C) The adequacy of disposal methods and protection from pollution of surface or groundwater; and;
 - (D) The protection of historic, natural, and environmental features on the *site* under review and in adjacent areas.

1.3 OBJECTIVES

1. At each stage of the development review of subdivision plats and site plans, the *Planning Commission*, Planning Director, or the Planning Director's designee shall review the *applicant's* submitted *development* proposal and supporting documents, taking into consideration the reasonable fulfillment of the following objectives:

FOR SUBDIVISIONS

- (A) Conformance with the *Comprehensive Plan*.
- (B) Conformance with the provisions of all applicable rules and *regulations* of county, State, and federal agencies.
- (C) Convenience and safety of both vehicular and pedestrian movement within the *site* and in relation to adjoining ways and properties.

- (D) Reasonable demands placed on public services and *infrastructure*.
- (E) Adequacy of methods for sewage and refuse disposal, and the protection from pollution of both surface waters and groundwater. This includes minimizing *soil erosion* both during and after construction.
- (F) Minimizing the area over which existing vegetation is to be removed. Where *tree* removal is required, special attention shall be given to planting of replacement *trees*.
- (G) The *applicant's* efforts to integrate the proposed *development* into the existing landscape through design features such as vegetative *buffers*, *roadside* plantings, and the *retention of open space* and agricultural land.
- (H) The *building setbacks*, area, and location of parking, *architectural* compatibility, signage, and landscaping of the *development*, and how these features harmonize with the surrounding townscape and the natural landscape.

ADDITIONAL OBJECTIVES FOR SITE PLANS

- (I) Provisions for the off-*street* loading and unloading of vehicles incidental to the normal operation of the establishment, adequate lighting, and internal traffic control.
- (J) Protection of abutting properties and County amenities from any undue disturbance caused by excessive or unreasonable noise, smoke, fumes, dust, odors, glare, *stormwater* runoff, etc.
- (K) The applicant's efforts to design the development to complement and enhance the rural and historic nature of the County including incorporating into the project forms and materials that reflect the traditional construction patterns of neighboring communities.

1.4 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, ECCA, and MXDCA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not approve an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

1.5 TECHNICAL ADVISORY COMMITTEE (TAC)

1. Applications shall be filed with the Department on an official application form, together with the fee prescribed by County Commissioners, a narrative including a Citizen Participation Plan or “CCP” (please refer to the Department for a CPP brochure) and all supporting documents as required in the sections below for each specific process.
2. A pre-submission conference with the Department is recommended but not required.
3. The Department will schedule the project for the next, monthly meeting of the *Technical Advisory Committee* and circulate the completed application and all supporting documents to the various agency members of the *Technical Advisory Committee*.
4. The *Technical Advisory Committee* will review the proposal and submit formal comments to the *applicant*. The Department will provide a summary of the comments submitted.
5. *Plot Plans* regulated by Section 3 are not reviewed by the *Technical Advisory Committee*.
6. Waivers regulated by Section 6 are not reviewed by the *Technical Advisory Committee*.

1.6 PUBLIC NOTICE

This public notice section relates to approval processes described within this Article including subdivisions, site plans, special exceptions, variances, waivers, and permits. The zoning text amendment process for the Land Use Ordinance is in Article I and refers to this section. Waivers in Section 6 do not require public notice beyond that already given for subdivisions and site plans. Building permits in Section 7 do not require public notice. Minor processes require follow-up notice, while major processes, special exceptions, and variances require advance notice. The Land Use Ordinance does not regulate the comprehensive rezoning process.

For clarification, when this Ordinance refers to public hearings, these are required to be noticed in the newspaper as public hearings indicating the date, time, and place of the hearing, as opposed to public meetings for which a newspaper notice is not required.

1. MAILED NOTICE

- (A) For MINOR processes only (subdivision and site plan), the Department will send a notice by regular mail of the proposed project, after TAC review, to adjacent property owners using the address of record from the Maryland Department of Assessments and Taxation. Adjacent property owners have ten days from the date on the notice to comment on the project. No other notice is required.
- (B) For MAJOR subdivisions, MAJOR site plans, special exceptions, and variances, at least twenty (20) days before the initial meeting of the *Planning Commission* or the hearing by the Board of Appeals on variances special exceptions, and nonconformities, the Department will send written notice by regular mail to adjacent property owners, which briefly describes the proposal and uses the address of record with the Maryland Department of Assessments and Taxation.

- (C) For any three-part development review processes in Section 1.7 or any combination sub-set thereof, notice is only provided at the initial step, except for delays per § 5 below.
- 2. POSTING THE SUBJECT PROPERTY
 - (A) For MAJOR subdivisions, MAJOR site plans, special exceptions, and variances, the Department will post the subject property in a conspicuous manner with a sign within a reasonable timeframe of the mailing. Properties will only be posted one time.
 - (B) For any three-part development review processes in Section 1.7 or any combination sub-set thereof, notice is only provided at the initial step, except for delays per § 5 below.
 - (C) After issuance, building permits require a placard to be posted by the applicant.
- 3. NEWSPAPER ADVERTISEMENTS
 - (A) All hearings for special exceptions, *variances*, and nonconformities by the Board of Appeals shall be advertised in the newspaper of record in advance of the hearing.
 - (B) All hearings for administrative-type special exceptions and *variances* shall be advertised in the newspaper of record in advance of the hearing.
 - (C) Before granting final approval of a major subdivision on land designated as Tier III on the County Septic Tier Map, the *Planning Commission* shall hold a public hearing advertised in the newspaper of record in advance of the hearing.
 - (D) Review of proposed zoning text amendments by the *Planning Commission* may be advertised in the newspaper of record in advance of the hearing, at the discretion of the Department, depending on the substance of the matter. Housekeeping and non-substantive matters need not incur advertising costs.
- 4. DIGITAL NOTICE

The Department will post online all agendas, minutes, and packets in a timely fashion.
- 5. LONG DELAYS BETWEEN MEETINGS

In any case, where a proposal has not appeared before the *Planning Commission* or the Board of Appeals for six months, the Department will send another notice by regular mail regarding the proposed project to the adjacent property owners as specified above. No other re-notification is required including property posting or newspaper advertisements.

1.7 SUBDIVISION AND SITE PLAN PROCESSES

1. ADMINISTRATIVE REVIEW

For MINOR processes only, the Planning Director, or Planning Director's designee, has the authority to approve, approve with conditions, or disapprove projects. At the Director's

discretion, a minor project may be submitted to the *Planning Commission* for approval. The Planning Director, or Planning Director's designee, shall consider and prepare findings of fact concerning the reasonable fulfillment of the goals and objectives listed in §1.2 and 1.3. In the absence of a Planning Director, the *Planning Commission* shall approve, approve with conditions, or disapprove minor projects. Minor projects comprise only one step.

2. DECISIONS BY PLANNING COMMISSION

For all other subdivisions and site plan reviews, a MAJOR process is required. *Applicants* submit projects for review in three stages including *stormwater management* as follows.

(A) CONCEPT

- i. After determining that the application is substantially complete, the Department will place the project on the appropriate meeting of the *Planning Commission* for concept review. The concept review process will review at a conceptual level, the feasibility, design, conceptual *stormwater management*, and environmental characteristics of the proposal based on the standards set forth in this Land Use Ordinance, the *Comprehensive Plan*, with the understanding that additional technical *engineering*, design material, survey work, and preparation of other documents will be submitted for review at later steps in the review process.
- ii. The *Planning Commission* shall comment and provide guidance as to the feasibility, design, and environmental characteristics of the proposal based on the standards set forth in this Land Use Ordinance, the *Comprehensive Plan* and taking into consideration the reasonable fulfillment of the goals and objectives listed in §1.2 and 1.3 above.

(B) PRELIMINARY

- i. After determining the preliminary application is substantially complete, the Department will place the project on the appropriate meeting of the *Planning Commission* for preliminary review. The preliminary review process will review the project for compliance with the Land Use Ordinance, *Comprehensive Plan*, and its feasibility, environmental, and design characteristics based a specific proposal that complies with the requirements for a preliminary review. At this stage, the *applicant* shall demonstrate adequate provisions for water supply and sewage disposal, proposed methods for fire protection, preliminary *stormwater management*, and *Forest Conservation Plans*.
- ii. The *Planning Commission* may approve, approve with conditions, or disapprove the preliminary project taking into consideration and making findings concerning the reasonable fulfillment of the goals and objectives listed in §1.2 and 1.3 above. Conditional approval of the preliminary project shall include a complete list and clear explanation of all conditions.

Denial of the preliminary project shall include a listing of reasons for denial. If the *Planning Commission* determines that more information is required for a decision to be made on the proposal, the *Planning Commission* may defer its consideration of the project, until such information is furnished.

(C) FINAL

- i. After determining that the final project and supporting documents including all required estimates of sureties are substantially complete, the Department will place the project on the appropriate meeting of the *Planning Commission* for final review. The final review process will review the final project and supporting documents for compliance with all applicable *regulations* and shall include approved final plans, deed restrictions, *conservation easements*, irrevocable letters of credit or other sureties as acceptable to the County Commissioners of Kent County, and any other reports or studies as necessary. The *Planning Commission* attorney will review legal documents.
- ii. The *Planning Commission* shall take into consideration and make findings concerning the reasonable fulfillment of the goals and objectives listed in §1.2 and 1.3.

(D) COMBINATIONS

Where deemed appropriate by the Planning Commission, the final project may be combined with a preliminary project. In unusual cases where there is a minor impact on the community, with approval of the Planning Director, the concept, preliminary, and final projects may be combined.

(E) PLOT PLAN EXCEPTION

Single family dwellings, residential *accessory uses* and *accessory structures* associated with a *single family dwelling*, agricultural *buildings* on farms in AZD, and alterations and remodeling of these types of existing *structures*, and other projects are eligible for *Plot Plan* review. Such projects have minor impacts and require less information for review. *Plot plans* are reviewed and approved by the Planning Director or the Planning Director's designee without Public Notice. This process is handled as a building permit review and not a formal site plan.

1.8 FINAL SUBMISSIONS

1. The *applicant* shall submit to the Department, at least two mylars and three paper copies of the approved final subdivision drawings, or three paper copies of approved final site plan drawings for signatures and copies of any deed restrictions, covenants, or easements. If deemed necessary, the Planning Director may require additional paper copies of any documents.

2. One paper copy of the approved drawings shall remain on file in the Department. Other paper copies of the signed documents shall be distributed to the Kent County Health Department and other applicable agencies.
3. *Applicants* are responsible for recording approved subdivisions and easements in the Land Records with the Clerk of the Circuit Court and submitting proof to the Department following recordation. Lot line adjustments are subdivision documents; site plans are not recorded.

1.9 SPECIAL EXCEPTIONS AND VARIANCES

1. After receiving a substantially complete application for a special exception, administrative special exception, *variance*, or administrative *variance*, the Department will schedule the application for the next *Technical Advisory Committee*, and after a recommendation by the TAC that the project may proceed, an administrative hearing, or a review by the *Planning Commission*, and/or hearing before the Board of Appeals will be scheduled, as may be appropriate. Such applications are advertised as hearings of the Board of Appeals or as an administrative hearing, and information on the Planning Commission will be included in the mailed notices, if the Planning Commission will make recommendations.
2. For administrative processes, a signed decision will be provided to the applicant by the end of 30 days following the date of the meeting. Building permits on file or submitted after the hearing may be reviewed and processed; however, permits cannot be issued, at a minimum, until thirty (30) days after the date of the hearing when the decision is made, per the Appeals process in Section 1.15 below. In some cases, if a decision is not made at the public hearing, then the date for appeal purposes is the date of the signature on the decision.

1.10 DECISIONS BY BOARD OF APPEALS

1. Each case shall be decided, and a decision issued no later than 30 days after the hearing is concluded. The decision shall be in writing and be signed by the Board of Appeals per its bylaws. This decision shall be based on competent and substantial evidence and when applicable shall contain findings as to whether the applicant has overcome the presumption that development in the Critical Area does not conform to this Ordinance or Critical Area Law. With due regard of the person's experience, technical competence, and specialized knowledge, the written findings may be based on evidence introduced and testimony presented by the applicant, any government agency, or any other person deemed appropriate by the Board.
2. The Department will email a copy of the decision to the *applicant*.
3. The decision will be made part of the public record of the proceedings on file in the Department.

ARTICLE IV. PROCESSES
SECTION 1. GENERAL PROVISIONS

1.11 WAIVERS

The *Planning Commission*, or where applicable County staff, are authorized to approve waivers as a form of alternative compliance for specific aspects of a project, as set forth in Section 6 on waivers below. Waivers are not variances nor are they special exceptions. Waivers are set forth in their own section; they are not advertised, nor are they noticed. Waivers are a stand-alone process. Waivers are subject to appeal per §1.15 below.

1.12 LAPSE OF APPROVALS

The date of approval related to lapses is the date of the administrative action taken. This includes meeting dates of the Technical Advisory Committee, *Planning Commission*, or Board of Appeals, when these are the last formal step in an approval, or where a formal decision is signed, the date of the signed decision. In determining the date related to lapses, the latest date possible is used.

1. SUBDIVISIONS: SIX MONTHS

Signed plats shall be recorded by applicants within six months of approval, or they expire after six months, unless otherwise extended. All sureties shall be received, and proof of all required recordation submitted to the Department, prior to signing by the County.

2. SITE PLANS: TWO YEARS

After site plan projects have been approved, said approval will lapse after the expiration of two years, if no substantial action has taken place in accordance with the approved project for which said approval was granted. Completion of footings are considered to constitute such an action in the State of Maryland. Final site plan drawings shall be submitted for signature within the two-year timeframe. All sureties shall be received, and proof of all required recordation submitted to the Department, prior to signing by the County. If a project is not constructed and final inspection and/or certificate of occupancy obtained after two years, the site plan expires. In some circumstances, major code changes could require modifications to a site plan to be undertaken when life/safety issues are involved.

3. VARIANCES: ONE YEAR

After a *variance* has been granted, said approval will lapse after the expiration of one year if no substantial action has taken place in accordance with the approved plan for which such *variance* was granted, or if the decision does not specify a period longer than one year for good cause shown. Adopted decisions may grant longer periods, as appropriate.

4. SPECIAL EXCEPTIONS: TWO YEARS

Approval of a special exception granted under this Article shall be valid for two years after the date of approval and thereafter shall become null and void unless construction or use is substantially underway during said two-year period, or unless the Board of Appeals, or where applicable the Planning Director, approves an extension before the expiration of

said two-year period. When provided with sufficient evidence, the Board, or where applicable the Planning Director, may grant a special exception for a longer period.

SPECIAL EXCEPTION: RECONSIDERATION, ONE YEAR LIMIT

Whenever an application for a special exception has been denied by the Board, such application, or one substantially similar, shall not be reconsidered sooner than one year after the previous denial.

5. APPROVALS PRIOR TO LAND USE ORDINANCE ADOPTION: SIX MONTHS

Drawings approved prior to adoption of this Land Use Ordinance, which would no longer comply with newly adopted provisions due to changes in said provisions, shall be signed or recorded within six months after the date of adoption, or expire, unless otherwise extended.

6. WAIVERS

Waivers are granted as part of the approval in another process. Waiver approvals lapse when project approval lapses. For example, a waiver by the *Planning Commission* granted as part of a concept site plan, preliminary site plan, or final site plan would lapse in tandem with the lapse of said approved site plan; a stormwater waiver would lapse when the building permit by which it was administratively approved lapses.

7. BUILDING PERMITS

A building permit will be valid for six months from the date issued. Each request for an inspection extends the building permit for six additional months. A six-month extension may be granted at any time by the Planning Director, or the Planning Director's designee. An extension may be granted after expiration. More than one extension may be granted.

1.13 EXTENSIONS FOR SUBDIVISIONS AND SITE PLAN APPROVALS

1. Approved projects under appeal will be automatically extended for twelve months without a request from the *applicant*. Projects may receive more than one extension.
2. When the *applicant* can show that the project is in the process of obtaining permits from County, State, or federal agencies and that these permits have been pursued diligently, or other mitigating circumstances, the *Planning Commission* may grant a 12-month extension. A project may receive more than one extension. Extensions may be approved following expiration as may be needed at the discretion of the Planning Commission depending on the circumstances involved.

1.14 AMENDMENTS

1. MINOR: A project approved under this Ordinance or under any prior Ordinance, including any conditions or guarantees attached to its approval, may be amended in accordance with this section. If the Planning Director determines that the proposed amendment does not represent a significant change from the use or character of a project as originally

approved or in previously approved amendments, the Planning Director may approve the amendment after the amendment is reviewed by the *Technical Advisory Committee*.

2. MAJOR: If the Planning Director determines that the amendment represents a significant change from the use or character of the original project and any previously approved amendments, or that the amendment requires more detailed review, the amendment may be regarded as an original application and follow the procedures for the review of a new project.
3. PARTIAL: If the Planning Director determines that an amendment represents changes to only one portion or phase of a project, such as changes to a single building on a site plan with more than one building, then the revised portion or phase may be submitted and reviewed as either a major or minor amendment.
4. VARIANCES: The procedure for the amendment of an approved *variance* or a request for a change of conditions attached to an approval shall be the same as for a new application.
5. SPECIAL EXCEPTIONS: The procedure for amendment of an approved special exception use, including extension, enlargement, or expansion of principal and accessory structures and/or the addition of new structures and buildings, or a request for a change of conditions attached to an approval, will be the same for a new application.

1.15 APPEALS

1. Within thirty (30) days of any *Planning Commission* decision, any person aggrieved by a decision of the *Planning Commission* may file a notice of appeal with the Circuit Court.
2. Within thirty (30) days of any decision of the Board of Appeals, any person aggrieved by a decision of the Board of Appeals may file a notice of appeal with the Circuit Court.
3. Within thirty (30) days of any decision or determination by the Planning Director, Planning Director's designee, a member of the Department, or the *Technical Advisory Committee*, including stormwater management waivers, any person may appeal the decision to the Kent County Board of Appeals. Appeals are handled as a public meeting and noticed pursuant to the requirements above.

1.16 EMERGENCY PROVISIONS

Subject to any declaration by the County, State, or federal government of an emergency, or by the order of any Court of competent jurisdiction, or by written decision by County staff with good cause shown, any of these general provisions, deadlines, timelines, extensions, and any other requirements may be suspended or altered to provide for contingencies, as may be needed.

SECTION 2 SUBDIVISIONS

2.1 STATEMENT OF INTENT

Subdivision review has been established for the purpose of guiding and accomplishing the coordination and harmonious *development* of the unincorporated area of Kent County, in order to promote the health, safety, and welfare of the residents of the County. *Subdivision* review is required to ensure that new *development* complies with the *Comprehensive Plan*, Land Use Ordinance, and other various agency requirements.

1. Any owner who subdivides land into *lots*, blocks, *streets*, *alleys*, public ways, or public grounds shall prepare a plat of *subdivision* to be made in accordance with the *regulations* set forth herein and the laws of the State of Maryland and shall record a copy of the plat with the Kent County Clerk of Court.
2. A plat of *subdivision* shall not be recorded by the Clerk of Court until the plat is approved by the Kent County *Planning Commission* or, where applicable the Planning Director.
3. No parcel of land in a *subdivision* created after December 23, 1969, shall be transferred, sold, or offered for sale, nor will a *building* permit be issued for any *structure* thereon, until a plat of *subdivision* is recorded with the Kent County Clerk of Court.

2.2 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, ECCA, and MXDCA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not approve an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

2.3 YIELD CALCULATIONS FOR ORIGINAL TRACTS

All subdivision submittals shall include yield calculations based on the subsections below:

1. **LOT COUNT DETERMINATION.** All *lots*, parcels, tracts, *sites*, and other divisions of land recorded after December 23, 1969, from an original *lot*, *tract*, or parcel of land described in the Land Records of Kent County, will be counted in determining the number of *lots* in a *subdivision*. An original/remainder *lot* is also counted in determining the number of *lots*.
2. **NON-CRITICAL AREA DENSITY.** Outside the Chesapeake Bay *Critical Area*, all *lots*, parcels, *sites*, and other divisions of land recorded after August 1, 1989, from an original *lot*, *tract*,

or parcel of land described in the Land Records of Kent County, will be counted in determining the permitted *density* of a parcel of land.

3. **CRITICAL AREA DENSITY.** Within the Chesapeake Bay *Critical Area*, all *lots*, parcels, *sites*, and other divisions of land recorded after December 1, 1985, will be counted in determining the permitted *density* of a parcel of land.
4. **ORIGINAL PARCEL.** The original parcel is counted when determining *density* both within and outside the Chesapeake Bay *Critical Area*.

2.4 TYPES OF SUBDIVISIONS

1. LOT LINE ADJUSTMENTS (LLA)

Lot line adjustments between adjoining property owners and within single properties, which do not create additional *building lots* are reviewed and may be approved by the Planning Director, or Planning Director's designee, and are subject to the following:

- (A) Transfer of these *lots* is not counted in determining the number of *lots* in a *subdivision*.
- (B) Drawing requirements are at the discretion of the Planning Director but may not exceed those required for a minor *subdivision*.
- (C) Procedures shall be the same as that for a minor *subdivision* and minor project.
- (D) Lot Line Adjustments to property in the Agricultural Zoning District, which has not been the subject of a subdivision action that was approved after August 19, 2003, which created new lots, will not be subject to the restrictions of the 10% Rule as set forth under Article II, Section 2, § 2.3, "Maximum percentage of property in lots."

2. MINOR SUBDIVISIONS

Minor *subdivisions* contain seven or fewer *lots*, *sites*, parcels, tracts, or other divisions of land from the original lot, per §2.2, 1. **LOT COUNT DETERMINATION** (above). The Planning Director, or Planning Director's designee, may approve minor *subdivisions* following Technical Advisory Committee review. At the Director's discretion, a minor *subdivision* may be submitted to the *Planning Commission* for approval. In the absence of a Planning Director, the *Planning Commission* shall approve, approve with conditions, or disapprove minor *subdivisions*.

Note: *Private roads* are only allowed in minor subdivisions. A *private road* may serve no more than seven (7) parcels unless granted a waiver. *Private roads* shall comply with the Kent County Road Design and Construction Standards. Please see Subdivision Design Requirements section below.

3. MAJOR SUBDIVISIONS

Major *subdivisions* contain eight or more *lots*, parcels, *sites*, tracts, or other divisions of land. The *Technical Advisory Committee* reviews and the *Planning Commission* approves major *subdivisions* at three stages - Concept, Preliminary, and Final.

4. SPECIAL INSTRUCTIONS FOR RESUBDIVISIONS

When recording resubdivisions or combining *lots* in recorded *subdivisions*, letters rather than numbers should be used to indicate *lots* whose boundary and area have been affected. The numerical sequence shall remain intact to avoid confusion in the future.

2.5 SPECIAL CIRCUMSTANCES - INTRAFAMILY TRANSFERS IN THE CRITICAL AREA

1. A bona fide *intrafamily transfer* will be permitted only from parcels of land in the Resource Conservation District that:
 - (A) Were of record on March 1, 1986;
 - (B) Are seven (7) acres or more and less than sixty (60) acres in size.
2. Land shall be subdivided as indicated:
 - (A) A parcel that is seven (7) acres or more and less than twelve (12) acres in size may be subdivided into two *lots*;
 - (B) A parcel that is twelve (12) acres or more and less than sixty (60) acres in size may be subdivided into three *lots*. The *lots* may be created at different times.
3. As a condition of approval, the following will be required:
 - (A) The owner of the subdivided parcel attests to the bona fide *family* relationship and that the intent is not for ultimate transfer to a third party.
 - (B) Any deed for a *lot* that is created by a bona fide *intrafamily transfer* shall contain a covenant stating that the *lot* is created subject to the provisions of this section.
 - (C) A *lot* created by a bona fide *intrafamily transfer* shall not be conveyed subsequently to any *person* other than a member of the owner's immediate *family* except under procedures established herein.
 - (D) This subsection does not prevent the conveyance of the *lot* to a third party as security for a mortgage or a deed of trust, or subsequent conveyance resulting from a foreclosure.
4. Subsequent conveyance of *lots* to *persons* other than immediate *family* members:
 - (A) The *lot* was created as a part of a bona fide *intrafamily transfer* and not with the intent of subdividing the original parcel of land for purposes of ultimate transfer to a third party; and
 - (B) The owner of the transferred property dies; or

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- (C) A change in circumstances has occurred since the original transfer was made that is not inconsistent with the *Critical Area Law* and that warrants an exception, or other circumstances that are consistent with the *Critical Area Law* and the *Critical Area Law Criteria* to maintain land areas necessary to support the protective uses of *agriculture, forestry, open space*, and natural habitats in Resource Conservation Areas warrant an exception as determined and approved by the *Planning Commission*.

2.6 SUBMITTAL REQUIREMENTS

Minor and Major subdivisions have similar requirements. Please see chart below for submittals.

TYPE:	1. Narrative	2. Preview	3. Summary	4. Detailed	5. Concluding
MINOR/LLA	X	X	X		
MAJOR					
• Concept	X	X			
• Preliminary	X	X	X	X	
• Final	X	X	X	X	X

The following documents are required to be submitted along with an application for subdivision.

1. NARRATIVE ITEMS LIST

All applications shall contain a narrative. The *applicant* shall provide a narrative that addresses the following. The Planning Director may not require some elements of the narrative that are not applicable to the proposed *subdivision*.

- (A) Name and address of the landowner, the *developer* and/or representative, if different from the owner.
- (B) *Street* address, tax map, parcel number, and *subdivision* if any.
- (C) Zoning of the *site*.
- (D) Current and proposed use of the property.
- (E) An explanation of the viewshed, *open space*, and conservation analysis undertaken during the design of the *site plan*
- (F) How the proposed *development* complies with the *Comprehensive Plan* and the design and environmental standards of this Land Use Ordinance.
- (G) Proposed type of water and sewer service.
- (H) The proposed *development* schedule and phases of *development* for all proposed construction.
- (I) A statement of provisions for ultimate ownership and maintenance of all parts of the *development* including *streets, structures*, and *open space*.

- (J) *Critical Area* and/or non-*Critical Area density* calculations based on the original parcel and *subdivision* history of the original parcel dating back to December 23, 1969.
- (K) Proposed *lot* coverage for the *subdivision* and where applicable, *lot* coverage allotted to each *lot*.
- (L) Citizen Participation Plan (please refer to the Department for a CPP brochure) Citizen Participation meetings are held once, prior to initial project submittal.
- (M) Analysis of the cost of providing local government services to the proposed *subdivision*.

2. PREVIEW ITEMS LIST

- (A) Scale – 1 inch = 100 feet or greater detail. The Planning Director may authorize the use of a different or not require a scale drawing, if, in the Director's opinion, the information shown on the plat can be presented with equal clarity by the use of a different scale or drawing.
- (B) North arrow
- (C) Vicinity Map, with *site* location clearly marked.
- (D) Surveyor's signature and seal.
- (E) Title Block that includes:
 - i. *Subdivision* name
 - ii. Names of owners of record and where applicable, names of *developer*, *architect*, surveyor, planner, and/or *engineer*
 - iii. Location by *Street* Address, Election District, County and State
 - iv. Date of plan and all revisions
- (F) Names of adjoining property owners with Liber and Folio or name, recording reference, and *lot* numbers of adjoining recorded *subdivision*.
- (G) Property boundaries and boundary survey.
- (H) Where applicable, the *Critical Area* boundary and minimum 100-foot *buffer*; *Stream Protection Corridor*; Habitat Protection Area; *Forest Stand Delineation* and *Forest Conservation Plan*; 100-year *floodplain* boundary, *flood* elevation and the *Airport Safety Zone*.
- (I) Existing features, whether natural or manmade, that may influence the design of the project including but not limited to the following:
 - i. *Natural features* to be preserved in accordance with these *regulations*
 - ii. *Slopes* in excess of 15% separate from those in excess of 25%

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- iii. *Watercourses*, including both *perennial* and *intermittent streams*
- iv. *Forest, tree groves, and significant trees*
- v. Outstanding natural topographic features
- vi. Tidal, State, and private, and *non-tidal wetlands*
- vii. Scenic, cultural and/or historic areas
- viii. Existing *buildings, parking, and other impervious surfaces*
- (J) Proposed layout of *streets, lots* (including estimate dimensions and *lot area*), *stormwater management areas, forest conservation areas, and open space*.
- (K) A tabulation of the following:
 - i. Total acreage
 - ii. Acreage in *100-year floodplain*
 - iii. Acreage in *Critical Area*
 - iv. Acreage in recreation and *open space*
 - v. Acreage in *forest*
 - vi. Acreage in *lots and streets*
- (L) Location of any municipal or corporate limits, election district lines, or *Critical Area* boundaries close to or crossing the *tract*.

3. SUMMARY ITEMS LIST

- (A) Signature Blocks for Director of Planning, Kent County *Health Officer*, and where applicable, the Director of Water and Wastewater Services.

Note: Preliminary Plats DO NOT need to include Signature Blocks for the Director of Planning, Kent County Health Officer, and the Director of Water and Wastewater Services.
- (B) *Easements, covenants, right of ways, Public Drainage Association ditches, and stormwater management structures and devices and the purpose for which these easements, covenants, and rights-of way were established.*
- (C) Boundary of *subdivision* shown in heavy outline.
- (D) Distances of courses to hundredths of a foot.
- (E) Bearings accurate to one second.
- (F) Location, width, and names of existing or proposed *roads* within or abutting the *subdivision*.
- (G) Identification of *private roads*.

- (H) Curve data in tabular form, if applicable.
- (I) Area of each *lot* in acres and thousandths.
- (J) No distance marked “more or less” except mean high water.
- (K) Location and description of all monuments and markers as required.
- (L) Location of water and sewer, or septic reserve area and well, where applicable.
- (M) Where applicable, statement: “*Private roads* are not the responsibility of Kent County.”
- (N) Width of *waterway*, depth measurements, *channel*, adjacent *piers*, or landings, and 25% of the *waterway*, where applicable.
- (O) *Topography*, if required by the Planning Director.

4. DETAILED ITEMS LIST

- (A) *Topography* via field survey work or LiDAR (Light Detection and Ranging) and a boundary survey. The Planning Director, or the Planning Director’s designee, may not require submittal of field *topography*. When field topography is not required for submittal, then a written explanation shall accompany the plat.
- (B) Soil classifications mapped, if required for stormwater management review.
- (C) Sewer, water mains, culverts, fire hydrants, power transmission towers and the approximate location, pipe size, and direction of flow of each underground utility that exists in or is contiguous to the property.
- (D) The location, width, and name of each existing or proposed *street* or *alley* within or abutting the *subdivision*.
- (E) Layout of all existing and proposed *lots* including:
 - i. *Lot* numbers
 - ii. Scaled areas
 - iii. Scaled dimensions
- (F) Location, dimensions, and areas of property reserved for public or community use, where applicable
- (G) A tabulation of the following:
 - i. Total number of *lots*
 - ii. Acreage of each *lot*
 - iii. Acreage in 100-year *floodplain*
 - iv. Acreage in *Critical Area*

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- v. Acreage in recreation and *open space*
- vi. Acreage in *forest*
- vii. Acreage of existing and proposed *forest*
- viii. Total area of *roadways* and other lands to be dedicated.
- ix. Total acreage of *subdivision*
- (H) Conceptual and schematic plans for:
 - i. Water and sewer services
 - ii. The storm drainage system, including the overall *drainage area*.
 - iii. *Grading* and *sediment* control measures
 - iv. Landscaping
 - v. *Forest Conservation Plan*
- (I) Proof that the required utilities, i.e., electric and telephone, are available to the proposed *development*.
- (J) The method and type of sewer and water service.
- (K) Where applicable, the width of *waterway*, depth measurements, *channel*, adjacent *piers*, or landings, and 25% of the *waterway*.
- (L) Delineation of *development* staging, if any.

5. CONCLUDING ITEMS LIST

- (A) Signature Blocks for the Chairman of the Kent County *Planning Commission*, Director of Planning, *Health Officer*, Kent Soil & Water Conservation District Director, and where applicable, Director of Water and Wastewater Services.
- (B) Owner's *certification* and dedication.
- (C) Location and description of all monuments and markers as required by the Annotated Code of Maryland.
- (D) Final landscape, *forest conservation*, *stormwater management*, *sediment* control and other applicable improvement plans.
- (E) Deed restrictions and Public Works Agreements.
- (F) Signed Forest Conservation deeds, covenants, and easement for recordation.
- (G) Signed Stormwater Management easements and maintenance requirements.
- (H) All sureties required by Public Works, Health Department, and the Department.

2.7 SUBDIVISION DESIGN REQUIREMENTS

ZONING REGULATIONS

1. *Subdivisions* shall comply with requirements in Article V. *Zoning Regulations* that include General Provisions, Parking and Loading, Signage Provisions, and Standards for Utility-Scale Solar Energy Systems. Additional requirements are included in the sections below.

ENVIRONMENTAL REGULATIONS

2. *Subdivisions* shall comply with requirements in Article VI. *Environmental Regulations* that include General Provisions, Forest Interior Birds, Habitat Protection Areas, Shoreline and Cliff Areas, Water Dependent Uses, Critical Areas, Forest Conservation, Erosion and Sediment Control, Stormwater Management, and Floodplain Management. Additional requirements are included in the sections below.

LAYOUT

3. All reasonable efforts should be made to protect adjacent residential areas from nuisances that could occur in commercial, industrial, and marine subdivisions by providing adequate depth in parcels adjacent to residential zoning.
4. Proposed street layout, blocks, and parcels shall be suitable in area and dimension for the type of development anticipated.
5. The total area of lots shall be sufficient to provide adequate space for off-street parking, loading, landscaping, and other facilities.
6. Whenever possible, subdivisions shall be designed to minimize adverse impacts on nearby agricultural operations.
7. The lot arrangement, design, and orientation of subdivisions shall be such that lots will provide satisfactory building sites, properly related to topography, the character of surrounding development, and avoid facing the rear of properties to the existing roadways as much as possible.
8. Topography, tree cover, and natural drainage ways will be treated as fixed determinants of road and lot configuration rather than malleable elements that can be changed to follow a preferred development scheme.

OPEN SPACE

9. When required by the relevant zoning district(s), proposed open space inside subdivisions shall provide for connections to existing, planned, or platted open space on adjacent tracts, unless proposed connections of open space are found by the Planning Commission to be unnecessary for the coordination of development between the subdivision and such adjacent tract.
10. Whenever possible, in residential subdivisions where open space is required, the majority of lots designed for houses shall abut on undivided open space.

11. Open space, playgrounds, or other recreational areas shall be set aside at a rate of 1/10 acre per dwelling unit. Playground equipment is to be indicated on the plans. If the land is not of significant quality and size for the purpose of providing or developing parks and recreational facilities, the Planning Commission, or where applicable the Planning Director, may permit a developer to pay a fee equal to the assessed value of the area of the land required for open space and the value of the appropriate equipment, estimated by an independent third-party, in lieu of providing land and equipment for recreational purposes. Recreational land required within a subdivision will be located so as to be reasonably accessible from all lots in the subdivision in accordance with the following:
 - (A) *Steep slopes, streams, lakes, watercourses, and floodplains* may constitute up to 40% of the recreational land.
 - (B) At least 60% of the recreational land will be suitable for dry ground recreational use.
12. Only in CR, Major subdivisions will include 40% of the adjusted tract acreage in open space unless all of the parcels are 10 acres or more in size. The adjusted tract acreage will be determined by subtracting the acreage in slopes over 25%, tidal and non-tidal wetlands, required buffers, and stormwater management areas. The Planning Commission may set aside this requirement when the total amount of open space, including steep slopes, wetlands, buffers, and stormwater management areas exceeds 60% of the site. When all of the parcels in the subdivision exceed 10 acres in size, the developer shall pay a fee of for each lot in lieu of providing land for recreational purposes, as calculated in §11 above.

ROADWAYS

13. New public roads shall be provided with a minimum of 50 feet total right-of-way; planned roads designated as requiring additional right-of-way will be provided by the proposal.
14. Where a subdivision adjoins or embraces any part of a major thoroughfare as designated on the Kent County Major Thoroughfare Map, the layout of such subdivision will provide for the platting and dedication of such part of the major thoroughfare in the location and at the width indicated on the major thoroughfare plan, except that the subdivider will not be required to dedicate that part of such major thoroughfare in excess of eighty (80) feet in width of the subdivider's own property.
15. Where deemed desirable to the layout of the subdivision and adjoining area, the Planning Commission may require the platting and dedication of one or more collector streets or parts thereof, to serve the subdivision.
16. The Department will review and approve street names proposed by applicants. A street name may not be approved if it duplicates or is too similar to the name of another roadway in the County or in one of the five incorporated Towns.
17. Every lot will abut and have access to a public road or approved private road.
18. Lots adjoining major thoroughfares and railroad lines should be designed with extra depth and provision for an appropriate means of buffer or deeper building setbacks.

ARTICLE IV. PROCESSES
SECTION 2. SUBDIVISIONS

19. Where land in a subdivision adjoins a railroad line, the street layout shall make allowance for future grade separated railroad crossings at appropriate locations by providing extra street right of way widths for such crossings and by restricting intersecting streets at locations where they would cause interference with necessary approaches to such crossings.
20. Proposed streets in a subdivision shall provide for the continuation of existing, planned, or platted streets on adjacent tracts, unless such continuation will be prevented by topography or other physical feature or unless such extension is found by the Planning Commission to be unnecessary for the coordination of development between the subdivision and such adjacent tract.
21. Where the Planning Commission deems it desirable or necessary to provide access to adjacent tracts not presently subdivided, proposed streets in the subdivision shall be extended to the boundary lines with such tracts.
22. Private roads are permitted only in minor subdivisions and are subject to the following conditions:
 - (A) Each road will serve no more than seven parcels. In the event that an eighth parcel is created, the eighth parcel and all further divisions of land will front on a public road.
 - (B) The *subdivision* will provide a 50-foot *right-of-way* for each *private road*.
 - (C) The construction of all lanes and *private roads* will adhere to the requirements established by the Kent County Department of Public Works and *sediment control and stormwater management regulations*.
 - (D) The plat shall identify all *private roads* and shall state: "The road is private and not the responsibility of Kent County."
 - (E) The deed and contract of sale of all *lots* in the *subdivision* shall state: "The road is private and not the responsibility of Kent County."

SHORELINE AND CLIFF AREAS

23. Subdivisions shall meet the provisions set forth in Article VI, Section 4, related to conditions for new subdivisions and existing lots of three acres or greater.

SUBDIVISIONS IN VILLAGE AND INTENSE VILLAGE – ADDITIONAL REQUIREMENTS

24. New developments should be an extension of the overall village development pattern rather than stand in contrast to it.
25. New designs should consist of small, understandable neighborhood segments rather than a single, large suburban theme.
26. New developments should reflect the unordered, historical growth of the village and avoid the cookie-cutter sameness of many new residential subdivisions.

27. Any opportunities for a strong, central focus should be studied and developed. These central places are usually a key to establishing community identity.
28. The types of open space provided should be a reflection of how passive and active open spaces are now used in the village, whether they are adequate, and how they may be complemented.
29. Strong provisions should be made for walking as opposed to vehicular connections both within and outside of the new community.
30. Street widths and alignments should be carefully scaled to neighborhood size and be patterned after the character of existing residential streets.
31. The streetscape of new developments should be designed in detail to avoid repetitious setbacks, driveways, elevations, and landscaping; and,
32. When deemed necessary by the Planning Commission, or where applicable the Planning Director, unobstructed easements of at least 10 feet shall be provided to facilitate walkways to commercial facilities, community areas, schools, parks, playgrounds, or other public areas.
33. New developments should carefully study and reflect the physical diversity of the existing village in regard to the mixture of housing types; a mixture of housing styles; and a mixture of lot sizes and shapes.

AIRPORTS – *NOTE: NO AIRPORT SAFETY ZONE IS ADOPTED IN KENT COUNTY, MARYLAND.*

This section applies to properties that fall within the Kent County *Airport* Safety Zone as designated on the Kent County *Airport* Safety Zone Map. The Kent County *Airport* Safety Zone Map is incorporated into and made a part of this Ordinance. It is the purpose of this section to promote the public safety of the residents and visitors of Kent County by prohibiting to the extent possible, the creation or establishment of obstructions that are a hazard to air navigation.

1. No new ponds shall be constructed within 5,000 feet of the runway.
2. No new solid waste disposal sites will be permitted within 5,000 feet of any publicly licensed airport. New solid waste disposal sites will not be permitted within the limits of the airport safety zone if the FAA determines the site to be a hazard.
3. Developments which produce lights, illumination, or other visual hazards or which produce electronic interference with airport/airplane navigation signals are subject to the standards specified in the FAA procedure manual 7400-2C.
4. Except as otherwise provided in this Ordinance, no structure shall be erected, altered, or maintained and no tree or other vegetation will be allowed to grow in excess of the height limitations as designated on the Kent County Airport Safety Zone Map.

SECTION 3 SITE PLANS

3.1 STATEMENT OF INTENT

Site Development Plans are required to ensure *development* complies with the *Comprehensive Plan*, the Land Use Ordinance and various agency requirements, thereby promoting the health, safety, and general welfare of Kent County's residents.

3.2 PARCEL OF RECORD - ONE MAIN STRUCTURE

Every new structure or any structure that is relocated shall be on a parcel of record; in no case will there be more than one main structure on a single parcel in a primarily residential district, except for accessory dwelling units, or unless otherwise provided by this Land Use Ordinance.

3.3 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, ECCA, and MXDCA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not approve an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

3.4 TYPES OF SITE PLANS

1. PLOT PLAN – FOR PROJECTS EXEMPT FROM *TECHNICAL ADVISORY COMMITTEE* REVIEW
One single family dwelling, residential *accessory uses* and *accessory structures* associated with a *single-family dwelling*, agricultural *buildings* on farms, and alterations and remodeling of such existing *structures* may be eligible for a *Plot Plan* review process.

These projects have relatively minor impacts and thus require less information. *Plot plans* are reviewed and approved by the Planning Director or the Planning Director's designee.

The following minor, non-residential projects may also be eligible for *Plot Plan* review:

- (A) Changes to internal parking lot layouts involving only changes to painted lines.
- (B) Changes to landscaped areas that do not reduce credit amounts for plantings and if changes do not affect specific conditions placed by *Planning Commission*.
- (C) Freestanding signs – new, altered, and relocated, when only signs are involved.
- (D) Other minor projects where no other agency review will be needed or required.

In most cases, *Plot Plans* are not reviewed by the *Technical Advisory Committee* (TAC), and sealed drawings are not required; however, at the Planning Director's discretion, TAC review and sealed drawings may be required, depending on project scope and complexity.

Pursuant to State Law, projects eligible for *Plot Plan* review may not be exempted from *stormwater management* review, if Limits of Disturbance (LOD) exceed 5,000 square feet.

2. MINOR SITE PLAN – FOR PROJECTS EXEMPT FROM *STORMWATER MANAGEMENT*

The following uses and *developments* are eligible for *Minor Site Plan* review. These projects have less impact on the community, require less information, and may be allowed a modified review and approval process, which is exempt from *stormwater management*. The *Technical Advisory Committee* reviews these projects. The Planning Director, or Planning Director's designee, may approve *minor site plans*. At the Director's discretion, a *minor site plan* may be submitted to the *Planning Commission* for approval. In the absence of a Planning Director, the *Planning Commission* shall approve, approve with conditions, or disapprove *minor site plans*. *Minor site plan* eligibility includes:

- (A) Adaptive Reuse Projects with additions to *buildings* and/or changes to site layouts with a Limit of Disturbance (LOD) of less than 5,000 square feet.
- (B) Changes of use that do not include *building* additions or changes to site layout.
- (C) Changes in vehicular access points in an existing non-residential or multi-family *development* with a Limit of Disturbance (LOD) of less than 5,000 square feet.
- (D) A new Duplex on a single lot with a Limit of Disturbance (LOD) of less than 5,000 square feet.
- (E) A non-residential addition that increases the size of the existing *building* with a Limit of Disturbance (LOD) of less than 5,000 square feet.
- (F) A new non-residential *building* with a Limit of Disturbance (LOD) of less than 5,000 square feet.
- (G) Special exceptions with additions to *buildings* and/or changes to site layouts with Limits of Disturbance (LOD) of less than 5,000 square feet.

3. MAJOR SITE PLAN – FOR REVIEW BY ALL AGENCIES AND *STORMWATER MANAGEMENT*

Commercial and industrial *development*, *multi-family dwellings*, special exceptions, public facilities, and quasi-public facilities require *major site plan* review including *concept plan*, preliminary site plan, and final site plan. The *Technical Advisory Committee* reviews these projects. The *Planning Commission* reviews and approves *major site plans*. *Major site plans* include all projects that are not eligible for the *minor site plan* review process above.

3.5 SUBMITTAL REQUIREMENTS

MINOR AND MAJOR SITE PLANS

Minor and Major site plans have similar requirements. Please see chart below for submittals.

TYPE:	1. Narrative	2. Preview	3. Summary	4. Detailed	5. Concluding
MINOR	X	X	X		
MAJOR					
• Concept	X	X			
• Preliminary	X	X	X	X	
• Final	X	X	X	X	X
PLOT PLAN – see Section 6 below					

The following documents are required to be submitted along with an application for site plans.

1. NARRATIVE LIST ITEMS

All applications for site plans shall contain a narrative. The *applicant* shall provide a narrative that addresses the following. The Planning Director may not require elements of the narrative that are not applicable to the proposed project.

- (A) Name and address of the landowner, the *developer* and/or representative, if different from the owner.
- (B) *Street* address, tax map, parcel number, and *subdivision* if any.
- (C) Zoning of *site*.
- (D) Current and proposed use of the property.
- (E) An explanation of the viewshed, *open space*, and conservation analysis undertaken during the design of the *site plan*.
- (F) How the proposed *development* complies with the *Comprehensive Plan* and the design and environmental standards of this Ordinance.
- (G) Proposed type of water and sewer service.
- (H) Number of employees.
- (I) The proposed *development* schedule and phases of *development* for all proposed construction.
- (J) A statement of provisions for ultimate ownership and maintenance of all parts of the *development* including *streets*, *structures*, and *open space*.
- (K) *Critical Area density* calculations based on the original parcel.
- (L) For water dependent uses and facilities in the *Critical Area*, the narrative will include the documentation as required in Article VI, Section 2, §2.14.6.

- (M) For any site plan that includes proposed manufacturing or industrial uses:
 - i. The type of raw materials, waste products, and other by-products associated with the process.
 - ii. The identity of all chemicals and solids to be discharged into the sewage system.
 - iii. The type and amount of traffic expected to be generated by the operation.
 - iv. The proposed hours of operation.
 - v. The proposed *architectural* design (graphic or narrative) of all *structures*.
- (N) Citizen Participation Plan or “CCP” (please refer to the Department for a CPP brochure) Citizen Participation meetings are held once, prior to initial project submittal. Citizen Participation Plans are not required for *Plot Plans*.

2. PREVIEW LIST ITEMS

- (A) Scale – 1 inch = 100 feet or greater detail. The Planning Director may authorize the use of a different scale or not require a scale drawing, if, in the Director’s opinion, the information shown on the plat can be presented with equal clarity by the use of a different scale or drawing.
- (B) North arrow
- (C) Vicinity map, with *site* location clearly marked.
- (D) Title Block that includes:
 - i. Names of owners of record and where applicable, names of *developer*, *architect*, *surveyor*, *planner*, and/or *engineer*
 - ii. Location by *Street* Address, Election District, County and State
 - iii. Date of plan and all revisions
- (E) Names of adjoining property owners with Liber and Folio or name, recording reference, and *lot* numbers of adjoining recorded *subdivision*.
- (F) Property boundaries.
- (G) Where applicable, the *Critical Area* boundary and minimum 100-foot *buffer*; *Stream Protection Corridor*; Habitat Protection Area; *Forest Stand Delineation*; *100-year floodplain* boundary and *flood* elevation.
- (H) Existing features, whether natural or manmade, that may influence the design of the project including but not limited to the following:
 - i. *Natural features* to be preserved in accordance with these *regulations*
 - ii. *Slopes* in excess of 15% separate from those in excess of 25%

- iii. *Watercourses*, including both *perennial* and *intermittent streams*
- iv. *Forest, tree groves*, and significant *trees*
- v. Outstanding natural topographic features
- vi. Tidal, State, and private, and *non-tidal wetlands*
- vii. Scenic, cultural and/or historic areas
- viii. Existing *buildings*, parking, and other *impervious surfaces*
- (I) Proposed use, *street* layout, parking and loading areas, *building setback* lines, *building* location, if known, and recreation and *open space* areas.
- (J) Conceptual *stormwater management*.
- (K) *Optional*: Photographs of similar projects and/or previous work for reference.

3. SUMMARY LIST ITEMS

- (A) Signature Blocks for Director of Planning, Kent County *Health Officer*, and where applicable, the Director of Water and Wastewater Services.

Note: Preliminary Site Plans **DO NOT** need to include Signature Blocks for the Director of Planning, Kent County *Health Officer*, and the Director of Water and Wastewater Services.
- (B) *Easements*, covenants, *right of ways*, Public Drainage Association ditches, and *stormwater management structures* and devices and the purpose for which these *easements*, covenants and rights-of way were established
- (C) Existing and proposed *lot* coverage, existing *forest* and proposed *clearing* and *soils*.
- (D) The layout of all the proposal with the following:
 - i. Location, height and dimensions of *buildings* and *lots*
 - ii. The proposed use
 - iii. Proposed *setbacks*
 - iv. Proposed driveways, parking, and loading areas including the number of spaces
 - v. Areas reserved for public use, recreation, *open space*, utilities, other *easements*
 - vi. *Stormwater management* for Limits of Disturbance (LOD) that exceed 5,000 square feet
 - vii. Signs and lighting
- (E) A tabulation of the following:

- i. Total acreage
 - ii. Acreage in *100-year floodplain*
 - iii. Acreage in the *Critical Area*
 - iv. Acreage in recreation and *open space*
 - v. Acreage of *impervious surfaces*
 - vi. The total number of *dwelling units* or *building types*
 - vii. Total area of *buildings*
 - viii. The number and type of multi-*family* units for each *structure* and the total number of units with the subtotal of each type
 - ix. The total number of parking and *loading spaces*, the number of parking and *loading spaces* in each *off-street parking area*, and total of number of handicap parking spaces
 - x. Where applicable, maximum number of employees
- (F) Location of any municipal or corporate limits, election district line, or *Critical Area* boundary close to or crossing the *tract*.
 - (G) Proof that the required utilities, i.e., electric and telephone are available to the proposed *development*
 - (H) The method and type of sewer and water service.
 - (I) The current zoning classifications.
 - (J) Width of *waterway*, depth measurements, *channel*, adjacent *piers*, or landings, and 25% of the *waterway*
 - (K) Front, side, and rear elevations of all exterior walls, where applicable.
 - (L) Traffic Study may be required by the *Planning Commission* or Planning Director.

Note: Minor Site Plans shall include *stormwater management* for Limits of Disturbance (LOD) that exceed 5,000 square feet. These plans are divided into three phases for other site plans.

4. DETAILED LIST ITEMS

- (A) *Topography* via field survey work or LiDAR (Light Detection and Ranging) and a boundary survey. The Planning Director, or the Planning Director's designee, may not require submittal of field *topography*.
- (B) *Soil* classifications mapped
- (C) Sewer, water mains, culverts, fire hydrants, power transmission towers and the approximate location, pipe size, and direction of flow of each underground utility that exists in or is contiguous to the property.

- (D) Where applicable, approved septic and septic reserve areas and well locations
- (E) The location, width, and name of each existing improved or unimproved *street* or *alley* within 200 feet of the proposal.
- (F) Conceptual and schematic plans for:
 - i. Water and sewer services
 - ii. The storm drainage system, including the overall *drainage area*.
 - iii. *Grading* and *sediment* control measures
 - iv. Landscaping
- (G) Preliminary *stormwater management*.
- (H) Delineation of *development* staging, if any.

5. CONCLUDING LIST ITEMS

- (A) Signature Blocks for the Chairman of the Kent County *Planning Commission*, Director of Planning, *Health Officer*, Kent Soil & Water Conservation District Director, and where applicable, Director of Water and Wastewater Services.
- (B) Location and description of all monuments as may be required.
- (C) No distances marked “approximate” except mean high water.
- (D) The exact dimensional layout of the project including *buildings*, parking, *loading spaces*, driveways, use, all *easements*, etc.
- (E) Registered surveyor’s, *architect’s*, and/or *engineer’s* signature and seal.
- (F) All landscaping, lighting, and signage.
- (G) Renderings and elevations, if applicable, including signs.
- (H) Deed restrictions and Public Works Agreements.
- (I) Signed Forest Conservation deeds, covenants, and easement for recordation.
- (J) Signed Stormwater Management easements and maintenance requirements.
- (K) All sureties required by Public Works, Health Department, and the Department, such as bonds, irrevocable letters of credit, or other surety accepted by the County Commissioners of Kent County.

6. PLOT PLANS – LIMITED SUBMITTAL ITEMS

This information shall be presented in a clear and legible manner but does not have to be to scale. The Planning Director or the Director’s Designee may determine if any information is not needed.

- (A) Plat showing existing and proposed *topography*, location and dimensions of the *lot*, *lot* and block number, and name of *subdivision*, if any.
- (B) Road name(s), width of *right of way*, centerline, road widths, and *grades*.
- (C) *Front*, *side*, and *rear yard* widths, and *easements*.
- (D) *Sediment* control measures and limit of work.
- (E) Discharge and storm drainage measures including rights and *easements*.
- (F) *Stormwater management* plans and calculations for any Limit of Disturbance (LOD) that exceeds 5,000 square feet.
- (G) Legal restrictions (such as *easements*, existing covenants, zoning boundaries, etc.)
- (H) *Critical Area* boundary and acreage in the *Critical Area*.
- (I) Location of existing and proposed *structures*, *new construction*, driveways, other access, septic systems, and wells including the distance to all property lines.
- (J) Where applicable, areas of *afforestation* and/or *forest retention*.
- (K) Where applicable, the width of the *waterway*, location of the *channel*, riparian right lines, *tidal wetlands*, State, and private, and *non-tidal wetlands*.
- (L) Where applicable, existing and proposed *impervious surface* coverage, existing *forest* and proposed *clearing*, the minimum 100-foot *buffer*, *topography*, and *soils*.

3.6 GENERAL DESIGN STANDARDS – ALL ZONING DISTRICTS

The general design standards are re-organized into five categories: design guidelines for projects in all districts with additional guidelines for residential districts (AZD, RCD, RC, CAR, and CR), small-scale commercial and mixed-use districts (C, CCA, V, and IV), and large-scale commercial and industrial districts (M, EC, ECCA-IDA). These required design standards are **CUMULATIVE**. MXD and MXDCA proposals must draw from and combine applicable standards based on uses.

All projects proposed for *Plot Plan* or *Site Plan* review shall comply with the following standards.

SITE ACCESS

Site access shall be subject to the following regulations to help ensure vehicle and pedestrian safety and alleviate congestion:

1. **Safe Access.** The *applicant* will demonstrate that access to the project is adequate and the *roads* which will be impacted have the capacity to handle the traffic generated by the proposed project and will not endanger the safety of the general public.

2. **Planned Access.** Where a proposed road is designated on an approved County or State map, *site plans* for *development* adjacent to the designated *roadway* will include provisions for future access to the *roadway*.
3. **Consolidated Access.** All *site plans* will provide access for projects to a public or approved *private road*, and access will be consolidated whenever possible.
4. **Elevated Access.** Whenever possible, *roads* will be constructed above the elevation of the 100-year *floodplain*.
5. **Multimodal Access.** Pedestrian and bicycle links to adjacent *developments*, recreational facilities, and other public or semi-public uses will be provided whenever possible.
6. **ADA Access.** The design and construction of walkways and bicycle paths will be evaluated on the basis of safety, accessibility, and suitability, for use by motor-impaired individuals, and surface suitability in terms of anticipated use and maintenance requirements, per the 2010 ADA Standards for Accessible Design, as may be amended from time to time.
7. **Primary Access.** Where property abuts a primary, secondary, or collector road, access shall be by way of the secondary or collector road. Exceptions to this rule will be instances where the *Planning Commission*, or where applicable the Planning Director, determines that direct access onto the *primary road* would promote traffic safety.
8. **Shared Access.** Where one or more contiguous parcels abutting a *primary road* are under single ownership and any one of the parcels abuts a *secondary road* or collector road, access to all of the parcels of the parcels under single ownership shall be by way of the secondary or collector road. Exceptions to this rule shall be instances when the *Planning Commission*, or where applicable the Planning Director, determines that direct access onto the *primary road* would promote traffic safety.
9. **Limited Access.** Only one direct access approach onto a *primary road* from an individual parcel of record as of August 1, 1989, will be permitted unless the *Planning Commission*, or where applicable the Planning Director, finds one of the following:
 - (A) The *Planning Commission* may, with approval of the State Highway Administration or Kent County Public Works Department, approve additional access if the additional access is deemed to be significantly beneficial to the safety and operation of the highway; or, if allowing only one access approach would be a safety hazard or increase traffic congestion;
 - (B) The *Planning Commission* may approve access when the parcel is bisected by *steep slopes*, bodies of water, or other topographic features in a manner as to render some portion of the property inaccessible without additional road access.

LIGHTING

10. **Dark sky.** Lighting will be dark-sky compliant, emitting no light above the horizontal plane.
11. **Color-corrected.** Lighting will use bulbs with a CRI (Color Rendering Index) of 90 or above.

12. **Glare-free.** Lighting will be designed to avoid glare onto adjacent properties, *roadways*, and any *waterway*. Lighting will not interfere with traffic or create a safety hazard.
13. **Safety-oriented.** Lighting will be sufficient to provide for the safety and security of businesses, employees, and customers.
14. **Height Limit.** Lighting will be designed at the human scale and will not exceed 18 feet in height, unless mounted on a *building*. The *Planning Commission*, or where applicable the Planning Director, may set aside the height limitation.

ZONING REGULATIONS

15. *Site plans* shall comply with requirements in Article V. *Zoning Regulations* that include General Provisions, Parking and Loading, Signage Provisions, and Standards for Utility-Scale Solar Energy Systems. Additional requirements are included in the sections below.

ENVIRONMENTAL REGULATIONS

16. *Site plans* shall comply with requirements in Article VI. *Environmental Regulations* that include General Provisions, Forest Interior Birds, Habitat Protection Areas, Shoreline and Cliff Areas, Water Dependent Uses, Critical Areas, Forest Conservation, Erosion and Sediment Control, Stormwater Management, and Floodplain Management. Additional requirements are included in the sections below.

3.7 GENERAL DESIGN STANDARDS – RESIDENTIAL (AZD, RCD, RC, CAR, AND CR)

In addition to the All-Zoning Districts Design Standards set forth above, all projects proposed for *Plot Plan* or *Site Plan* in this review category review will also comply with the following additional standards.

1. **Purpose.** The purpose of these standards is to give a sense of the physical aspects of the County's environment to those contemplating new development in the community. Pertinent to this physical appearance is the design of the *site*, *buildings* and *structures*, plantings, *signs*, *street* hardware, and miscellaneous other objects observed by the public.

These standards are not intended to restrict imagination, innovation, or variety, but rather assist in focusing on design principles which can produce creative solutions that will develop a satisfactory visual appearance within the County, preserve taxable values, and promote the public health, safety, and welfare.
2. **For AZD and RCD Zoning Districts only.** *Agriculture* is the preferred use in these districts; agricultural operations in all districts are protected by the Kent County Right-to-Farm Law.
3. **Good Stewardship.** The reuse of existing *buildings* is encouraged.
4. **Conservation-based Design Principles.** The landscape shall be preserved in its natural state, in so far as possible, by minimizing *tree* and *soil* removal.

- (A) Any grade changes shall be in keeping with the general appearance of neighboring *development* areas.
 - (B) *Buildings* are encouraged to be located so as to maintain maximum natural *topography* and cover.
 - (C) *Topography*, *tree* cover, and natural drainage ways shall be treated as fixed determinants rather than malleable elements that can be changed to follow a preferred *development* scheme.
 - (D) Whenever possible, *development* shall be outside the *floodplain*.
 - (E) Internal *streets*, roadways, and lanes shall be designed and located in a manner so as to maintain and preserve natural *topography*, cover, significant landmarks, and trees; to minimize *cut* and *fill*; and to preserve and enhance views and vistas on and off the subject parcel.
 - (F) Proposed *development* shall be related harmoniously to the terrain and to the use, scale, and architecture of existing *buildings* in the vicinity that have functional or visual relationships to the proposed *buildings*.
- 5. **Preservation.** Whenever possible, adverse effects on historic, traditional, or significant uses and *structures* shall be minimized, whether these exist on the *site* or on adjacent properties.
 - 6. **Open Space.** All *open space* (landscaped and usable) shall be designed to add to the visual amenities of the area by maximizing its visibility to *persons* passing the *site* or overlooking it from nearby properties. *Open space* and naturally vegetative areas will be located, insofar as possible, so as to connect and expand existing greenways on adjacent *sites*.
 - 7. **Signs.** The color, size, height, lighting, and landscaping of appurtenant *signs* and *structures* shall be evaluated for compatibility with the local architectural motif and the maintenance of views and vistas of natural landscapes, recognized historic landmarks, parks, and landscaping.
 - 8. **Rural Design.** Whenever possible, proposed developments should incorporate design elements such as single loaded *streets*, reverse curves, terminal vistas of *open space*, and foreground meadows.
 - 9. **Public Utilities.** Where public water and sewer services are available, then connection to public water and sewer systems may be required by the *Planning Commission*.
 - 10. **Supplemental.** The *Planning Commission* or the Planning Director may require additional standards and requirements to those stated in this Article as are necessary for the protection of the environment and the health and safety of the residents of the County.

LANDSCAPING – STREET TREES

- 11. **Required.** *Street trees* shall be included in each *subdivision*. *Street trees* may be clustered, evenly spaced, or when *building* envelopes are within 20 feet of the public road *right of way*, as *front yard* landscape *trees*. The number of *trees* will be calculated as follows:

- (A) Small *trees* (*trees* less than 25 feet in height at maturity) – 1 per 25 linear feet of *lot* or *open space* along public or *private roads*
 - (B) Medium or large *trees* (25 feet or taller at maturity) – 1 per 40 linear feet of *lot* or *open space* along public or *private roads*.
12. **Standards.** At the time of planting, deciduous *trees* will have at least a 2-3-inch *caliper* at 6 inches above *grade*; coniferous *trees* will be at least 5 to 6 feet in height.
 13. **Exemption.** Where existing trees serve as *street trees*, the *Planning Commission*, or where applicable the Planning Director, may accept them as *street trees*.

3.8 GENERAL DESIGN STANDARDS – SMALL-SCALE COMMERCIAL AND MIXED-USE DESIGN STANDARDS (C, CCA, V AND IV)

In addition to the All-Zoning Districts Design Standards and Residential Design Standards set forth above, all projects proposed for *Plot Plan* or *Site Plan* in this review category review will also comply with the following additional standards.

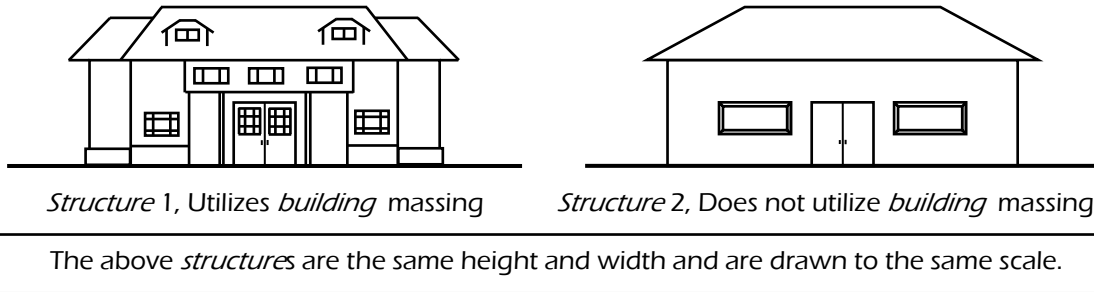
SITE DESIGN

1. **Purpose.** The purpose of imposing *regulations* governing *building* arrangement and *site* design is to help protect significant environmental and historic features, promote a sense of neighborhood and community identity and reduce the visual impact of high-density *development* on the surrounding area.
2. **Street Relationship.** Where existing *buildings* express a traditionally modest (pre-zoning) front *setback*, creating a characteristically close relationship with the *street* (as in village and town centers and along their approach *roads*), it is highly desirable to continue this pattern in order to retain the area's character. Therefore, the *setback* of *new construction* should harmonize with the average *setbacks* of existing *buildings*.
3. **Setback Variety.** Outside the areas of generally uniform *building setbacks* (where existing *structures* are at various distances from the *roadway*), front *setbacks* may vary to a greater degree, and principal *buildings* will generally be within 40 feet and no closer than 20 feet to the front line unless there are substantial counterbalancing considerations (such as irregular *topography*, *wetlands*, or the preservation of natural rural features, including pastures, crop land, meadows, or timber stands).
4. **Site Preservation.** Where significant *trees*, groves, *waterways*, historic, archeological, or prehistoric *sites* or unique habitats are within the property boundaries of a proposed project, the *Planning Commission*, or where applicable the Planning Director, may require that every possible means will be provided to preserve these features. In addition to identifying existing *natural features* per this Ordinance, an inventory of existing *on-site* historic and archeological features may be required.
5. **Building Variety.** Projects should reflect the unordered, historical growth of the village and avoid the cookie-cutter sameness of many new residential *subdivisions*.

6. **Pedestrian Emphasis.** Strong provisions should be made for walking as opposed to vehicular connections both within and outside of the new community.
7. **Streetscape Variety.** The *streetscape* of projects should be designed in detail to avoid repetitious *setbacks*, driveways, elevations, and landscaping.
8. **Design Diversity.** Projects should carefully study and reflect the physical diversity of the existing village in regard to the mixture of housing types; a mixture of housing styles; and a mixture of *lot* sizes and shapes.
9. **Supplemental.** The *Planning Commission* or the Planning Director may require additional standards and requirements to those stated in this Article as are necessary for the protection of the environment and the health and safety of the citizens of the County.

BUILDING DESIGN

10. **Sense of Place.** *Buildings* should be designed to enhance the community's sense of place by varying building massing and roof treatments, and by using building components and architectural design that emphasize the human scale. Commercial establishments are encouraged to limit the visual impression of height by the use of roof treatments and varying the plane of exterior walls. Projects should be an extension of the overall village *development* pattern rather than stand in contrast to it.
11. **Context Sensitive.** *New construction* throughout the village should be compatible with the surrounding properties, in terms of formal characteristics such as height, massing, roof shapes and window proportions. When *new construction* is surrounded by existing historic *buildings*, *building* height and exterior materials will be harmonious with those of adjacent properties.
12. **Human Scale.** *New buildings* should not create large, *bulky*, masses but should be scaled down into groupings of smaller attached *structures* and modules that reflect proportions similar to historic *buildings*. Methods used to create intervals that reflect and respect *historic structures* include but are not limited to the following:
 - (A) Façade modulation – stepping back or extending forward a portion of a façade.
 - (B) Repeating window patterns at established intervals.
 - (C) Providing a balcony or bay window at established intervals.
 - (D) Changing the roofline by alternating dormers, stepped roofs, gables, or other roof elements.
 - (E) Use of landscaping and *architectural* detailing at the ground level.



13. **Materials.** *Building* designs will be encouraged to utilize traditional materials (brick or wood) and contemporary interpretations of earlier styles.
14. **Identity-building.** The design of new *buildings*, *building* additions, *alterations*, and façade renovations should reflect the positive aspects of the existing design features of the County. *Buildings* should complement and improve the overall environment of the area
15. **Orientation and Scale.** The proposed *building* orientation will respect the orientation and scale of surrounding *buildings* and where deemed necessary by the *Planning Commission* serve as an orderly transition to a different scale.
16. **Rooftop Screening.** All rooftop equipment will be *screened* from public view by *screening* material of the same nature as the *building's* basic *building* materials.
17. **Multi-Family projects:**
 - (A) To avoid monotonous linear *development*, multi-*family development* will be in small clusters designed as neighborhood units. A cluster will not include more than 30 units.
 - (B) In multi-*family development*, the number of units in a row is to be limited to a maximum of eight.
 - (C) *Offsets* at party walls and/or front and rear facades or similar devices are required to visually reduce *building* mass and create individualized spaces (*courtyards*, seating areas, etc.) for all multi-*family* projects. Drawings of the *building* elevations will be required. The *Planning Commission*, or where applicable Planning Director, may set aside this requirement.

COMMERCIAL DESIGN

18. **Local Design.** Corporate or trademark architecture will not be permitted.
19. **Massing.** Varied building massing is encouraged to enhance the community's sense of place.
20. **Street Relationship.** Commercial *building* projects and *buildings* in *shopping centers* are encouraged to be arranged in varied clustered masses related closely to the road.
21. **Projections and Porches.** Arches, porches, arcades, overhangs, roofs, and varying façade *setbacks* are encouraged on *buildings* and *shopping centers*.

22. **Scale.** The scale within a *shopping center* will be consistent throughout the center. Where anchor or major tenants require larger *building* areas, the larger scale of these units will be broken down into comparable to the predominant unit in the *development*. The placement of anchor stores will consider the overall balance of the center.
23. **Fenestration.** Commercial establishments, offices, and financial institutions emphasize personal service as their primary products. These *structures* should reflect personal service by their architectural design which is at a human scale at entries and interior spaces. Building components such as windows, wooden doors, and decorative trim should emphasize the human scale in coordination with each other and the building scale.
24. **Articulation.** Each unit of *development*, and the total *development*, will create an environment of desirability and stability. Commercial establishments are encouraged to limit the visual impression of height by the use of roof treatments and varying the plane of exterior walls.
25. **Display Areas.** Whenever possible, display areas should be incorporated into the overall design of the *site*. Display areas will not be in the *front yard setback*.
26. **Auxiliary Facilities and Functions.** Loading docks, trash collection, and similar facilities and functions will be incorporated into the overall design of the *building* and landscaping so that the visual and acoustic impacts of these functions are fully contained and out of view from adjacent properties and public *streets*.

LANDSCAPE - GENERAL

27. **Total Requirement.** A minimum area of 15% of each new or redeveloped *site*, excluding *single family dwellings*, will be landscaped. Landscaping within the parking areas and *screening* may be counted toward this requirement. The *front yard* will be landscaped and maintained in a neat and attractive condition.
28. **Maintenance.** *Sites* will be permanently maintained in good condition with at least the same quality and quantity of landscaping as originally proposed.
29. **Professionals.** The *landscape plan* will be prepared by a registered professional *forester*, *landscape architect*, or other professional with equivalent experience and qualifications.
30. **Exemptions.** The *Planning Commission*, or where applicable the Planning Director, may reduce or set aside the landscape requirement when it is demonstrated that the spirit and intent of the requirement are accomplished through other means, or the nature of the change does not require additional landscaping.

LANDSCAPE – PERIMETER AND SCREENING

31. **Purpose.** *Yards*, fences, walls, or vegetative *screening* will be provided where needed to protect residential districts or public *streets* from undesirable views, lighting, noise, or other *off-site* influences. In particular, outdoor storage, extensive *off-street parking* areas,

and service areas for loading and unloading vehicles, and for storage and collection of refuse and garbage will be effectively *screened*.

32. **Screening** is required to protect adjoining properties and *roadways* from noise, glare, and uses which are visually incompatible with neighboring land uses. *Screening* is required:
- (A) On *sites* which involve loading or unloading (including the storage of vehicles and boats), trash, or disposal areas and where accessory *buildings* and *structures* are adjacent to residential properties.
 - (B) Where exterior storage areas are visible from *roadways*, sidewalks, or nearby residential properties.
 - (C) When noise not typically occurring in residential areas is expected to project onto nearby properties.
 - (D) To *screen* parking areas, but not approved display areas, from motorists, pedestrians, and adjoining residential properties.
 - (E) Where the commercial or industrial *site* abuts a residential district or a primary or *secondary road*.
 - (F) Where the *Planning Commission* determines that additional *screening* is necessary to protect properties in the area.
33. **Integration.** Landscaped *screens* will be designed to complement other landscaping occurring naturally on the *site*, planted previously, or approved as a part of a *site plan*. Whenever possible, existing vegetation and landform will be used to create *screens*.
34. **Duration.** The *screen* will be capable of providing year-round *screening*.
35. **Noise.** When noise is likely to be a factor, the *screen* will be of sufficient construction to be an effective noise *buffer*.
36. **Components.** *Screening* will consist of *trees* and plants, and may include masonry, or wooden fencing used with or without *berms*. *Screening* will consist of a functional and well-designed combination of the following:
- (A) Vegetative ground cover
 - (B) Coniferous and deciduous shrubs, specimens of which will reach and maintain a minimum height of five (5) feet of full vegetative growth and which measure a minimum of three (3) feet in height at the time of planting and are expected to attain a minimum height of five (5) feet within three (3) years.
 - (C) Coniferous and deciduous *trees*, species and sizes of which will be chosen to best accomplish an adequate *screen* (i.e., evergreens used for visual *screening*, deciduous *trees* for seasonal *screening*).
37. **Substitutions.** Natural *slopes* and existing vegetation may be substituted for some or all of the requirements above, provided that these features serve to *screen* the area from adjoining properties and *roadways*. The *Planning Commission*, or where applicable the

Planning Director, will determine the acceptability of using existing *slopes* and vegetation for this purpose. The *Planning Commission*, or where applicable the Planning Director, may set aside *screening* where it is physically impossible to accomplish.

38. **Maintenance.** *Screening* and fencing will be maintained in good condition and (with) in at least the same quality and quantity as initially approved.

3.9 GENERAL DESIGN STANDARDS – MAJOR-SCALE COMMERCIAL AND INDUSTRIAL DESIGN STANDARDS (M, EC, AND ECCA-IDA)

MARINE DESIGN STANDARDS

1. **General Standards.** Projects in the Marine district will comply with the Design Standards for All Zoning Districts and enumerated items 3-7 from the Residential Design Standards.
2. **Overall Landscape Requirement.** A minimum area of 10% of each new *development* will be landscaped. *Buffers* and *screening* count in the calculation of the landscaped area. This may be set aside by the *Planning Commission* or where applicable the Planning Director. All projects will meet the landscape requirements in the Design Standards above for Perimeters and Screening as well as the requirements set forth in Article V for Parking and Loading. All projects will comply with the General Landscape Requirements in the section above.
3. **Specific Design.** *Private Destination / Residence Clubs* will comply with the Mixed-Use Design Standards for Site Design and Building Design as well as Landscape requirements.

EMPLOYMENT CENTER AND ECCA-IDA DESIGN STANDARDS

In addition to the All-Zoning Districts Design Standards, Residential Design Standards, Small-Scale Commercial and Mixed-Use Design Standards set forth above, all projects proposed for *Site Plan* in this review category review will also comply with the following additional standards.

4. **Overall Landscape Requirement.** There is no minimum area of landscaping beyond the landscape requirements set forth in the Design Standards above for Perimeters and Screening, as well as the requirements set forth in Article V for Parking and Loading. All projects will comply with all landscape requirements in all Design Standards above.
5. **Curb Cut Limitations.** Projects in any Employment Center zoning district will not create or be a continuation of highway strip *development* with multiple access points or curb *cuts* within 3,000 feet of each other on a State or County Road, in so far as possible. The *Planning Commission* may waive this requirement, per the standards provided under the Waivers section below.
6. **Enclosed Structures.** In so far as possible, all uses will be conducted within a completely enclosed *structure* or be completely *screened*. Outdoor storage of materials and unfinished products is prohibited unless otherwise approved by the *Planning Commission* and subject to such conditions as may be determined by the *Planning Commission*. Finished or semi-finished products manufactured on the *premises* may be stored in the open if *screened* from the *street* and adjacent uses.

7. **Traffic Flow.** Principal vehicular access points will be designed to encourage smooth traffic flow with controlled turning movements and minimum hazards to vehicular or pedestrian traffic. Storage, turn lanes, or traffic dividers may be required by the *Planning Commission* where existing or anticipated heavy flows indicate need.
8. **Public Utilities.** Where public water and sewer are available, then connections to public water and sewer systems are mandatory.

PERFORMANCE STANDARDS FOR INDUSTRIAL AND MANUFACTURING USES

9. **General.** Designs for newly proposed uses will meet the following performance standards.
10. **Points of measurement** to determine compliance with performance standards will be the property *lot line* or zoning line nearest the source that is the subject of measurement.
11. **Noise.** All sources of noise (except those not under direct control of occupant of use, such as vehicles), will not create sound or impact noise levels in excess of the values specified below when measured at the points indicated. In addition, between 7:00 P.M. and 7:00 A.M., the permissible sound levels at a residential district boundary adjoining Employment Center Districts, will be reduced by five decibels in each octave band and in the overall band for impact noises.
 - (A) Noise will be measured by means of a sound level meter and octave band analyzer, calibrated in decibels (re 0.0002 microbar), and will be measured at the nearest *lot line* from which the noise level radiates. Impact noises will be measured by means of an impact noise analyzer. Impact noises are those whose *peak values* fluctuate more than six decibels from the steady values indicated on the sound level meter set at fast response.
 - (B) Decibel – A measurement of the intensity (volume) of a sound.
 - (C) Octave band – A prescribed interval of sound frequencies which classifies sound according to its pitch.
 - (D) Preferred frequency octave bands – A stigmatized series of octave bands prescribed by the American Standards Association in Sel. 6-1970 Preferred Frequencies for Acoustical Measurements.
 - (E) Sound level meter – An electronic instrument which includes a microphone, an amplifier, and an output meter which measures noise and sound pressure levels in a specified manner. It may be used with the octave band analyzer that permits measuring the sound pressure level in discrete octave bands.

MAXIMUM PERMITTED SOUND LEVELS (Decibels)		
Octave band, cycles/second	At residential boundaries	At other <i>lot lines</i>
31.5	64	72
63	64	74
125	60	70

MAXIMUM PERMITTED SOUND LEVELS (Decibels)		
Octave band, cycles/second	At residential boundaries	At other <i>lot lines</i>
250	54	65
500	48	59
1,000	42	55
2,000	38	51
4,000	34	47
8,000	30	44
Overall	80	90

- (F) **Vibration.** The product of displacement in inches times the frequency in cycles per second of earthborn vibrations from any activity will not exceed the values specified below when measured at the points indicated. Earthborn vibrations will be measured by means of a three-component recording system, capable of measuring vibration in three mutually perpendicular directions. The displacement will be the maximum instantaneous vector sum of the amplitude in the three directions.

MAXIMUM PERMITTED VIBRATIONS (INCHES PER SECOND)		
AREA OF MEASUREMENT		
Type of Vibrations	At Residential Boundaries	At other <i>Lot lines</i>
Continuous	0.003	0.015
Impulsive – 100/min or less	0.006	0.030
Less than 8 pulses per 24 hours	0.015	0.075

12. **Glare.** No direct or sky reflected glare, whether from *flood* lights or from high temperature processes such as combustion, welding or otherwise, is to be visible beyond the *lot line*, except for signs, parking *lot* lighting and other lighting permitted by this Ordinance or required by any other applicable regulation, ordinance, or law.
13. **Air pollution.** The rules and *regulations* of the State of Maryland will apply.
14. **Water pollution.** The rules and *regulations* of the State of Maryland will apply.
15. **Radioactivity.** There will be no radioactive emission which would be dangerous to the health and safety of *persons* on or beyond the *premises* where such radioactive material is used. Determination of existence of such danger and the handling of radioactive materials, the discharge of such materials into the atmosphere and streams or other water, and the disposal of radioactive wastes will be by reference to and in accordance with applicable current *regulations* of the governments of the United States and Maryland.
16. **Electrical interference.** There will be no electrical disturbance emanating from any *lot* that would adversely affect the operation of any equipment on any other *lot* or *premises*.
17. **Smoke and particulate matter limitations**

- (A) General limitations. In addition to the performance standard specified hereinafter, the emission of smoke or particulate matter in such manner or quantity as to be detrimental to or endanger the public health, safety, comfort, or welfare is hereby declared to be a public nuisance and will henceforth be unlawful.
 - (B) Particulate matter emission caused by the wind from open storage areas, *yards, roads, etc.*, within *lot lines* will be kept to a minimum by appropriate landscaping, paving, wetting, or other means.
 - (C) For the purposes of determining the *density* or equivalent opacity of smoke, the Ringelmann Chart as adopted and published by the United States Bureau of Mines in Circular No. 8333 (7718) will be employed.
 - (D) Permitted smoke emission. Within 1,000 feet of a residence or commercial zoning district boundary line, the emission of visible smoke from any vent, stack, chimney, or combustion process, darker than Ringelmann No.2 for a period or periods aggregating more than 4 minutes in any 60-minute period will not be permitted.
18. **Toxic matter limitations.** In any Employment Center District, toxic materials which are released will not exceed 10% of the maximum permissible airborne concentration allowed an industrial worker when measured at any point beyond the *lot line*, either at ground level or habitable elevation, whichever is more restrictive. When maximum permissible airborne concentrations of toxic materials allowed an industrial worker are not contained in the most recent list of Threshold Limit Values published by the American Conference of Governmental Industrial Hygienists, the *applicant* will satisfy the County *Health Officer* that proposed levels will be safe to the general population.
19. **Odorous matter limitations.** The release of odorous matter from any Employment Center District across residential or commercial district boundary lines will be so controlled that at ground level or at habitable elevations the concentration will not exceed the odor threshold lines. Further, the release of odorous matter across *lot lines* will not become a nuisance or source of discomfort to neighboring uses. As a guide in determining qualities of offensive odors, Table III (*Odor Thresholds*), Chapter 5, *Air Pollution Abatement Manual*, by Manufacturing Chemists Association, Inc., as amended, may be used.
20. **Certified *engineer's* report - first submittal.** The *applicant* for a *grading permit, sediment control permit, or building permit* for uses in an Employment Center District, or *applicants* for *variances* to the district will be required to submit proof that the uses proposed will not cause *violations* of Federal, State or County laws or *regulations*. For industrial uses which will produce emissions of pollutants to the waters or air of the County, this proof will include measurements of the ambient water and air quality as well as documentation in the form of figures that the additional planned and proposed industrial use will not cause the *violation* of either ambient or source standards outlined by the laws and *regulations* of the Federal, State, or County governments.

21. **Certified *engineer's* report - additional submittals required.** Each future occupant of an industrial character will submit to the County as a part of final *site development plan* approval, a certified *engineer's* report describing: the proposed operation, all machines, processes, products and by-products, stating the nature and expected levels of emission or discharge to land, air, water or liquid, solid, or gaseous effluent and electrical impulses, vibrations and noise under normal operations and the specifications or treatment methods and mechanisms to be used to control such emission or discharge.
22. **Expansion, modification, or enlargement.** Existing industrial uses will be permitted to continue and to expand, enlarge or modify provided that the industry continues to comply with the performance standards. Existing industrial uses that do not conform to the performance standards will be permitted to expand, modify, or enlarge provided the expansion, modification, or enlargement does not increase the degree of nonconformance and that the *applicant* submits a statement that identifies measures to bring the industry into compliance. When the *Planning Commission* finds that an existing industry is not making a good faith effort to comply with the performance standards, the *Planning Commission* may deny an application for expansion, modification, or enlargement and may initiate an enforcement action.

SECTION 4 SPECIAL EXCEPTIONS

4.1 STATEMENT OF INTENT

Special Exception uses are allowed and presumed to be compatible with other permitted uses in a zoning district; however, a review process is required to evaluate whether the particular use proposed at a particular location would have any adverse effects above and beyond those inherently associated with such a use irrespective of its location within the zoning district and to ensure that *development* complies with the *Comprehensive Plan*, the Land Use Ordinance and various agency requirements, thereby promoting the health, safety, and general welfare of Kent County's residents.

4.2 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, ECCA, and MXDCA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not approve an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

4.3 TYPES OF SPECIAL EXCEPTIONS.

1. Administrative Special Exceptions.

The Planning Director or the Planning Director's designee will have the right, but not the obligation, to hear and decide the following special exceptions when indicated as special exceptions in individual zoning districts:

- (A) Accessory residential structures with a footprint of more than 2,000 sf
- (B) Accessory sheds on properties less than 20 acres in size
- (C) Accessory structures in the front yard requirement of waterfront parcels
- (D) Accessory structures in a front yard of through or corner lots
- (E) Adaptive reuse of existing structures in AZD, located on parcels under 20 acres
- (F) Assisted living facilities with five to eight beds
- (G) Cottage industries, tradesmen, and artisan shops
- (H) Day care group

ARTICLE IV. PROCESSES
SECTION 4. SPECIAL EXCEPTIONS

- (I) Single family dwellings
- 2. Special Exceptions evaluated by the Boards of Appeal after *Planning Commission* review.
 - (A) Adaptive reuse of historic structures for uses not otherwise listed
 - (B) Agritourism on farms, as defined in Article VII
 - (C) *Aquaculture*
 - (D) *Airport*, landing field, heliport, or helistop, public or private
 - (E) Animal husbandry – all categories requiring special exception approval
 - (F) Attached retail businesses
 - (G) *Automobile repair*
 - (H) *Automobile service stations*
 - (I) Boat *building*, repairs, and sales
 - (J) Car wash
 - (K) Cemetery, including crematorium and mausoleum
 - (L) *Conference center*
 - (M) Convalescent, nursing, or *group homes* for the aged with five or more beds
 - (N) *Country inn*
 - (O) *Country stores*
 - (P) Dredge spoil *site*
 - (Q) *Excavation, landscaping, and other contractor's yard*
 - (R) Farm Employee Housing
 - (S) Golf courses, public or private
 - (T) *Hospitals*, rehabilitation facilities, or other similar institutions for human care
 - (U) Houses of worship
 - (V) The manufacture, processing, and assembling of food products to include baked and confectioners' goods, frozen food processing, fruit and vegetable processing, canning and storage, or businesses of a similar nature, excluding animal and seafood processing.
 - (W) Livestock auction houses, located on farms
 - (X) Migrant labor camps
 - (Y) *Mobile home parks*
 - (Z) Multi-level boat storage
 - (AA) Outdoor entertainment

ARTICLE IV. PROCESSES
SECTION 4. SPECIAL EXCEPTIONS

(BB)	Outdoor recreation, miniature golf, but not golf courses
(CC)	Outdoor Retreats
(DD)	<i>Personal wireless facility tower</i>
(EE)	Poultry houses on parcels where the owner cannot handle the waste generated
(FF)	Printing and publishing
(GG)	Private schools
(HH)	Production of biofuels
(II)	<i>Public uses, buildings, utilities and structures</i>
(JJ)	Pubs, taverns, and bars
(KK)	Radio and television tower, commercial
(LL)	Recreational facilities
(MM)	<i>Resorts</i>
(NN)	<i>Restaurants</i> with drive through facilities in the Route 301 Corridor
(OO)	Retail businesses
(PP)	<i>Retreats</i>
(QQ)	<i>Rural Inns</i>
(RR)	Sand and gravel pits
(SS)	<i>Sanitary landfill</i> or rubble fill
(TT)	School bus parking <i>lot</i>
(UU)	Seafood processing
(VV)	Septic tank maintenance and excavation
(WW)	<i>Shopping centers</i>
(XX)	<i>Solar energy systems, utility</i>
(YY)	<i>Solar energy systems, utility scale on farms</i>
(ZZ)	<i>Structures</i> for the buying, processing, and sale of animal products
(AAA)	Tie-out pilings of private <i>piers</i> , <i>community piers</i> , and private shared <i>piers</i> , installed at a distance not to exceed 25% of the width of the <i>waterway</i> , the edge of the <i>channel</i> , or 180 feet from the mean high-water mark, whichever is less, for the exclusive mooring use by tall ships as safe-harbors from hurricanes and other severe weather-related threats.
(BBB)	Truck parking <i>lot</i>
(CCC)	<i>Truck stops</i>

ARTICLE IV. PROCESSES
SECTION 4. SPECIAL EXCEPTIONS

- (DDD) *Truck terminals*
 - (EEE) Weddings on farms as commercial enterprises
 - (FFF) Wind energy systems, small
 - (GGG) Wind energy systems, small, with a height that exceeds 80 feet or on a *lot* less than 20 acres
3. Special Exceptions evaluated by the Board of Appeals only.
- (A) *Dog kennels, commercial*
 - (B) Dormitories for employees
 - (C) Exposition center or fairgrounds
 - (D) *Farm* employee housing
 - (E) *Private clubs*
 - (F) *Public landings*
 - (G) Rifle and pistol ranges
 - (H) *Structures* for the buying, processing, and sale of *farm* products in *structures* that exceed 10,000 square feet but are less than 50,000 square feet

4.4 CRITERIA FOR GRANTING SPECIAL EXCEPTIONS

A special exception may not be authorized, unless the Board of Appeals, or where applicable the Planning Director, finds that the establishment, maintenance, or operation of the special exception meets the standards set forth in this Section. The burden of proof is on the applicant to bring forth the evidence and the burden of persuasion on all questions of fact which are determined by the Board or where applicable the Planning Director.

Unless otherwise specified in this Section or as a condition of approval, the height, *yard*, *lot area*, design, environmental, parking, and *sign* requirements will be the same as other uses in the district in which the special exception is located.

The Board, or where applicable the Planning Director, shall make findings on the following where appropriate:

1. The nature of the proposed site, including its size and shape and the proposed size, shape, and arrangement of structures;
2. Traffic Patterns;
3. Nature of surrounding area;
4. Proximity of dwellings, houses of worship, schools, public structures, and other places of public gathering;

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5. The impact of the development or project on community facilities and services;
6. Preservation of cultural and historic landmarks, significant natural features and trees;
7. Probable effect of noise, vibration, smoke and particulate matter, toxic matter, odor, fire or explosion hazards, or glare upon surrounding properties;
8. The purpose and intent of this Ordinance as set forth in Article II;
9. Design, environmental, and other standards of this Ordinance as set forth in Article V;
10. The most appropriate use of land and structure;
11. Conservation of property values;
12. The proposed development's impact on water quality;
13. Impact on fish, wildlife and plant habitat;
14. Consistency with the Comprehensive Plan and Land Use Ordinance;
15. Consistency with the Critical Area Program; and
16. Compatibility with existing and planned land use as described in the Comprehensive Plan and the Land Use Ordinance.

4.5 CONDITIONS AND GUARANTEES FOR SPECIAL EXCEPTIONS

1. Prior to the granting of any special exception, the Board, or where applicable the Planning Director, may impose such conditions and restrictions upon the establishment, location, construction, maintenance, and operation thereof as deemed necessary to reduce or minimize any effect of such use upon other property in the neighborhood, and to secure compliance with the standards and requirements specified in this Ordinance.
2. Special Exception uses will be evaluated using the specific conditions in Article III Uses.
3. General conditions or restrictions may also include but are not limited to the following:
 - (A) Hours of operation
 - (B) Permitted expansion
 - (C) On-premises sales
 - (D) Exterior display, lighting, storage, signs, and other indicators or appearance of a business that may detract from the general character of the area
 - (E) Location of parking
 - (F) Increased *setbacks* and *screening*
 - (G) Landscaping
 - (H) The size and type of equipment
 - (I) The number of clients allowed on *premises* at one time or class size

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- (J) Accessory vehicles
 - (K) *Accessory uses*
 - (L) Letters of credit, bonds, or other surety, except relating to *Cottage industries, tradesmen, and artisan shops*, which may be set aside by the Planning Director
4. The Board of Appeals may hire expertise as may be needed to provide advice and assist in its decision-making. In its recommendation, the *Planning Commission* may recommend that additional expertise is warranted.
 5. The Board, or where applicable the Planning Director, may require such evidence and guarantees as it deems necessary as proof that the conditions imposed in connection with a special exception will be implemented. Failure to comply with such conditions or restrictions imposed will constitute a *violation* of this Land Use Ordinance and the Department may revoke permits issued under the special exception.
 6. Amendments to special exceptions are addressed in Article IV, Section 1.14. §5.

SECTION 5 VARIANCES

5.1 STATEMENT OF INTENT

The granting of *variances* will comply, as nearly as possible, in every respect to the spirit, intent, and purpose of this Land Use Ordinance; variances are granted to (a) relieve *unwarranted hardships* or other injustices arising out of the strict application of the provisions of this Land Use Ordinance and (b) for reasons of demonstrable practical difficulties, as distinguished from variations sought for purposes or reasons of convenience, profit, or caprice.

5.2 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, ECCA, and MXDCA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not approve an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

5.3 TYPES OF VARIANCES

1. Administrative Zoning *Variances*

The Planning Director, or Planning Director's designee, may authorize, upon application, *variances* from the *yard* (*front, side, or rear*), but not *buffer* in an amount that does not exceed 50% of the required *yard* for the applicable zoning district. Height, parking, sign, and loading requirements may be varied up to 50% of limits. At the Director's discretion, any *variance* of this nature may be submitted to the Board of Appeals for approval.

2. Administrative *Critical Area Variances*

The Planning Director, or Planning Director's designee, may authorize, upon application, *variances* from (1) the *buffer* requirements on parcels that existed on or before December 1, 1985, in order to repair, replace, or install septic systems for the applicable zoning district, and (2) developed woodland clearing limits on lots greater than one-half acre up to one acre. At the Director's discretion, any *variance* of this nature may be submitted to the Board of Appeals for approval.

3. Zoning and *Critical Area Variances*

The Kent County Board of Appeals may authorize, upon application, *variances* from the *yard* (*front, side, or rear*), height, *bulk*, parking, sign, loading, *shoreline cliff*, 15% *slope*,

pier length, impervious surface, stream protection corridor, forest conservation retention provisions, buffer requirements, and any non-use-related provision of this Ordinance.

4. *Floodplain Variances*

The Kent County Board of Appeals may authorize, upon application, *variances* from the *floodplain* provisions of this Land Use Ordinance. Such granting of a *variance* will comply, as nearly as possible, in every respect to the spirit, intent, and purpose of the *floodplain regulations* and sound *floodplain* management.

5. *Stormwater Management Variances*

The Kent County Board of Appeals may grant a written *variance* from the *stormwater* requirements found in this Land Use Ordinance. A written request for *variance* will be provided to the County and will state the specific *variances* sought and reasons for their granting. The County will evaluate the cumulative effects of other *developments* that are relinquished from the requirements of *stormwater management*.

5.4 CRITERIA FOR ZONING VARIANCES

1. In order to grant a *variance*, the following shall be found:

- (A) That the *variance* will not cause a substantial detriment to adjacent or neighboring property.
- (B) That the *variance* will not change the character of the neighborhood or district.
- (C) That the *variance* is consistent with the *Comprehensive Plan* and the general intent of this Land Use Ordinance.
- (D) That the practical difficulty or other injustice was caused by the following:
 - i. Some unusual characteristics of size or shape of the property;
 - ii. Extraordinary topographical or other condition of the property;
 - iii. The use or *development* of property immediately adjacent to the property, except that this criterion will not apply in the *Critical Area*.
- (E) That the practical difficulty or other injustice was not caused by the *applicants'* own actions.
- (F) In considering an application for a *variance*, the reasonable use of the entire parcel or *lot* for which the *variance* is requested will be considered.
- (G) The cause of a *variance* request may be considered, and if a *variance* request is the result of actions by the *applicant*, including whether commencement of *development* activity occurred before an application for a *variance* was filed.

5.5 CRITERIA FOR CRITICAL AREA VARIANCES

1. In order to grant a *variance*, the following shall be found:

- (A) The granting of a *variance* will be in harmony with the general spirit and intent of the *Critical Area* Law and the *regulations* adopted by Kent County;
- (B) That the granting of a *variance* will not adversely affect water quality or adversely impact fish, wildlife, or *plant habitat*.;
- (C) That the application for a *variance* will be made in writing with a copy provided to the *Critical Area* Commission;
- (D) That the strict application of the Land Use Ordinance would produce an *unwarranted hardship*;
- (E) Such hardship is not shared generally by other properties in the same zoning district and the same vicinity;
- (F) The authorization of such *variance* will not be a substantial detriment to adjacent property and that the character of the district will not be changed by the granting of the *variance*;
- (G) That a literal interpretation of this Land Use Ordinance deprives the *applicant* of rights commonly enjoyed by other properties in similar areas within the *Critical Area* of Kent County;
- (H) That the granting of a *variance* will not confer upon an *applicant* any special privilege that would be denied by this Ordinance to other lands or *structures*;
- (I) Due to special features of a *site*, or special conditions or circumstances peculiar to the *applicant's* land or *structure*, a literal enforcement of this Land Use Ordinance would result in *unwarranted hardship* to the *applicant*;
- (J) The Board of Appeals finds that the *applicant* has satisfied each one of the *variance* provisions;
- (K) Without the *variance*, the *applicant* would be deprived of a use of land or a *structure* permitted to others in accordance with the provisions of the *critical area* program.
- (L) In considering an application for a Critical Area *variance*, it is presumed that the specific *development* activity in the *Critical Area* that is subject to the application and for which a *variance* is required does not conform with the general purpose and intent of this Ordinance and the *Critical Area* Law.
- (M) The cause of a *variance* request may be considered, and if a *variance* request is the result of actions by the *applicant*, including whether commencement of *development* activity occurred before an application for a *variance* was filed.

5.6 CONDITIONS FOR ZONING AND CRITICAL AREA VARIANCES

1. In granting a *variance*, the Board may choose or not choose to limit the approval by such conditions as the case may require, including but not limited to, the imposition of the following specifications:

- (A) No outside signs or advertising *structures* except professional or directional signs.
- (B) Limitation of signs as to size, type, color, location, or illumination.
- (C) Amount, direction, and location of outdoor lighting.
- (D) Amount and location of off-street parking and loading spaces.
- (E) Cleaning or painting.
- (F) Gable roof or other type.
- (G) Construction and materials.
- (H) Connected or disconnected to other *buildings*.
- (I) Exits or entrances, doors, and windows.
- (J) Paving, shrubbery, landscaping, ornamental or *screening* fences, walls, or hedges.
- (K) Time of day or night for operating.
- (L) No structural changes.
- (M) Control or elimination of smoke, dust, gas, noise, or vibration caused by operations.
- (N) Requirements for termination of a use based on lapse of time or such other conditions as the Board may specify.

5.7 CRITERIA FOR FLOODPLAIN VARIANCES

1. In order to grant a *variance*, the Board shall find:
 - (A) There is a good and sufficient cause for granting the *variance*.
 - (B) That the failure to grant a *variance* would result in exceptional hardship (not economic) to the *applicant*.
 - (C) That the granting of the *variance* would not result in increased *flood* heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud, or victimization of the public.
 - (D) That any *variance* including the placement of *fill* which encroaches on the *floodway* will not result in any increase in the 100-year *flood* levels.
 - (E) That the *variance* is the minimum necessary, considering the *flood* hazard, to afford relief.
 - (F) That the Board has received comments from the Maryland Department of the Environment.
 - (G) That no new *buildings* will be constructed in the *floodway*.

- (H) That in the Coastal High Hazard Area, no *fill* for structural support is proposed.
- (I) For a functionally dependent use that there is sufficient proof that the *structure* cannot perform its intended function unless it is in close proximity to the water and may require wet *floodproofing* which allows the *structure* to *flood* without significant damage.
- (J) Reconstruction, rehabilitation, or restoration of *historic structures*, provided the *variance* is the minimum necessary and the *structure* will retain its listing on the Historic Register, Inventory, or Survey.

5.8 CONDITIONS FOR FLOODPLAIN VARIANCES

1. In granting a *variance*, the Board may choose or not choose to limit the approval by such conditions as the case may require, including but not limited to, the imposition of the following specifications:
 - (A) That a record of the *variance* and any conditions are recorded with the Kent County Clerk of Court.
 - (B) That a letter will be sent to the *applicant* which explains the increased risk of life and property as a result of the *variance* and that the cost of Federal *Flood* Insurance will be commensurate with the increased risk, with rates up to \$25 per \$100 of insurance coverage.
 - (C) The Board will maintain a record of all *variance* procedures which will be available for review by FEMA
 - (D) The Planning Director, or the Planning Director's designee, will notify, in writing, any *applicant* to whom a *variance* is granted to construct or substantially improve a *building* or *structure* with its lowest *flood* below the elevation required by these *regulations* that the *variance* is to the *floodplain* management requirements of these *regulations* only and that the cost of Federal *Flood* Insurance will be commensurate with the increased risk, with rates up to \$25 per \$100 of insurance coverage.

5.9 CRITERIA FOR STORMWATER VARIANCES

1. In order to grant a variance, the County shall find the following:
 - (A) Exceptional circumstances exist applicable to the *site* such that strict adherence to the provisions of this ordinance will result in unnecessary hardship and not fulfill the intent of the Land Use Ordinance.
 - (B) Implementation of *environmental site design (ESD)* to the *maximum extent practicable (MEP)* has been investigated thoroughly.

SECTION 6 WAIVERS

6.1 STATEMENT OF INTENT

1. Waivers are intended to provide an in-review approval process for specific provisions that are considered to be alternative compliance as opposed to variation requiring a variance. Waivers are not advertised as public hearings but can be included as part of a noticed public meeting, if applicable, and noted on the public agenda for review. Waivers may be granted by the *Planning Commission* during subdivision or site plan reviews, or where applicable by the County staff for stormwater management during the building permit review process. The building permit review process is neither advertised nor noticed.

Note: This process has been re-structured. Some waivers had previously been structured like variances that could be granted by the *Planning Commission*. The Board of Appeals is the appropriate body to grant variances. Since waivers relate to standards for the design of projects, waivers are re-structured as a design-based, alternative compliance process.

Note: Forest conservation retention alterations now require a variance to be granted by Board of Appeals. Forest conservation retention provisions are not a design-related issue.

6.2 TYPES OF WAIVERS AND CRITERIA– *PLANNING COMMISSION* WAIVERS

1. DATA PROCESSING CENTERS - ALTERNATE DESIGN

Upon the affirmative recommendation of the Planning Director, *applicants* may present for approval to the *Planning Commission* an alternate design solution to the general design standards in Section 3 above. *Applicants* will include a separate written narrative that explains how the proposed alternative design solution differs from requirements and the reasons for the changes proposed. The *Planning Commission* may require additional standards and requirements for the protection of the environment and the health and safety of the residents of the County.

2. CURB CUTS IN THE EMPLOYMENT CENTER DISTRICT

The *Planning Commission* may authorize *waivers* in EC and ECCA-IDA for multiple access points or curb cuts within 3,000 feet of each other on a State or County Road, within the boundaries of a single project and also among different highway strip *developments*.

3. SUBDIVISION/*PRIVATE ROADS*/ROAD FRONT *LOTS*/ DESIGNATED DESIGN STANDARDS

The *Planning Commission* may authorize *waivers* of the design aspects of *subdivisions*, *private roads*, road front *lots*, and certain designated design standard provisions of this Land Use Ordinance in order to provide for alternative compliance for design standards.

4. PARKING LOT DESIGN

The *Planning Commission* may approve alternate designs for shared parking, parking lot designs, and parking lot landscaping provisions found in Article V, Section 2.

5. CRITERIA FOR WAIVERS

The *Planning Commission* may approve a waiver requested under one of the categories above for alternative compliance, when the Planning Commission finds the following:

- (A) That the *waiver* is consistent with the *Comprehensive Plan*, and where applicable the adopted *Major Thoroughfare Map* for the County or similar instrument, and the general intent of this Ordinance.
- (B) That the *waiver* will not cause any known substantial detriment to adjacent or neighboring properties.
- (C) That the *waiver* will not create a safety hazard or increase traffic congestion.
- (D) The *waiver* is not sought for reasons of convenience, profit, or caprice.

In granting *waivers*, the *Planning Commission* may require such conditions as will, in its judgement, substantially secure the objectives of the provisions so waived.

6.3 TYPES OF WAIVERS AND CRITERIA - *STORMWATER MANAGEMENT* WAIVERS

- (A) The County may grant a *waiver* of the *stormwater management* requirements for individual *developments* based on a case-by-case review. A written *waiver* request will be submitted by the *applicant* containing descriptions, drawings and any other information that is necessary to evaluate the proposed *development* and demonstrate that *ESD* has been implemented to the *MEP*. A separate written request will be required in accordance with the provisions of this section if there are subsequent additions, extensions or modifications to a *development* receiving a *waiver*.
- (B) Except as provided in this Section, *waivers* of *stormwater* quantitative control may be granted only to those projects that can conclusively demonstrate that:
 - i. The project is within an area where a *watershed* management plan has been developed consistent with this Land Use Ordinance.
 - ii. If the project is not in an area where a *watershed* management plan has been developed consistent with this Land Use Ordinance, *waivers* may be granted to proposed *development* projects provided the *applicant* has demonstrated that *ESD* has been implemented to the *MEP*: (1) That have *direct discharges* to tidally influenced receiving waters; and (2) When the County determines that circumstances exist that prevent the reasonable implementation of quantity control practices.
- (C) Except as provided in this Section, if *watershed* management plans consistent with this Ordinance have not been developed, *stormwater management* quantitative control *waivers* may be granted to the following projects provided the *applicant* has demonstrated that *ESD* has been implemented to the *MEP*:
 - i. Projects that have *direct discharge* to tidally influenced receiving waters:

- ii. Infill *development* located in a *Priority Funding Area* where the economic feasibility of the project is tied to the planned *density*, and where implementation of the 2009 regulatory requirements would result in a loss of the planned *development density* provided that: (1) Public water and sewer and *stormwater* conveyance exist; (2) The quantitative *waiver* is only applied to the project for the impervious cover that previously existed on the *site*; (3) *ESD* to the *MEP* is used to meet the full water quality treatment requirements for the entire *development*; and (4) *ESD* to the *MEP* is used to provide full quantity control for all new *impervious surfaces*:
or
- (D) When the *approving agency* determines that circumstances exist that prevent the reasonable implementation of quantity control practices.
- (E) *Waivers* of *stormwater management* qualitative control may be granted only to those projects that can conclusively demonstrate that:
 - i. The project is an in-fill *development* where *ESD* has been implemented to the *MEP* and other *BMPs* are not feasible.
 - ii. The project is a *redevelopment* that satisfies the requirements of this Land Use Ordinance; or
 - iii. *Sites* where the County determines that circumstances exist that prevent the reasonable implementation of *ESD* to the *MEP*.
- (F) *Stormwater management* quantitative and qualitative control *waivers* may be granted for phased *development* projects if a system designed to meet the 2000 regulatory requirements and the Kent County *Stormwater Management* Ordinance for multiple phases has been constructed by May 4, 2010. If the 2009 regulatory requirements cannot be met for future phases constructed after May 4, 2010, all reasonable efforts to incorporate *ESD* in future phases will be demonstrated.
- (G) *Waivers* will only be granted when it has been demonstrated that *ESD* has been implemented to the *MEP* and will:
 - i. Be on a case-by-case basis;
 - ii. Consider the cumulative effects of the Kent County *waiver* policy.
 - iii. Reasonably assure the *development* will not adversely impact stream quality.
- (H) Kent County may develop quantitative *waiver* and *redevelopment* provisions for *stormwater management* that differ from the requirements of this Land Use Ordinance as a part of an overall *watershed* management plan. *Watershed* management plans developed for this purpose will, at a minimum:

- i. Include detailed hydrologic and hydraulic analyses to determine hydrographic timing;
- ii. Evaluate both quantity and quality management and opportunities for *ESD* implementation;
- iii. Include cumulative impact assessment of current and proposed *watershed development*;
- iv. Identify existing *flooding* and receiving stream *channel* conditions;
- v. Be conducted at a reasonable scale determined by the County;
- vi. Specify where *on-site* or *off-site* quantitative and qualitative *stormwater management* practices are to be implemented;
- vii. Be consistent with the General Performance Standards for *Stormwater Management* in Maryland found in the *Design Manual*; and
- viii. Be approved by the Maryland Department of the Environment

SECTION 7 PERMITS, FEES, AND ENFORCEMENT

7.1 STATEMENT OF INTENT

The purpose of this section is to set forth the procedures for permits, fees, code enforcement, and interpretations of this Land Use Ordinance. The powers and duties of the Department are specified herein insofar as the administration of this Land Use Ordinance is concerned.

7.2 GENERAL

1. The Department is hereby vested with the duty and authority to grant approvals and issue building permits. All approvals and permits will conform with the provisions of this Land Use Ordinance, and no approval of a permit will be granted for any structure, use, subdivision, grading, or other development or purpose that would constitute a violation of this Land Use Ordinance. Any approval or permit granted or issued in conflict with this Land Use Ordinance will be null and void.
2. Whenever in the course of administration and enforcement of this Land Use Ordinance, it is necessary to make any administrative decision, unless other standards are provided in the Land Use Ordinance, the decision will be consistent with the spirit and intent of this Land Use Ordinance.

7.3 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, ECCA, and MXDCA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not approve an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

7.4 PERMITS

1. No building or structure shall be erected, constructed, altered, moved, converted, extended, enlarged, or demolished until a building or demolition permit is obtained from the Department. The permit shall be valid for six months from the date issued. Six-month extensions may be granted by the Department, both before and after permit expiration. All buildings and structures will comply with the requirements of this Ordinance.
2. Change or alternation of the use of any *building*, *structure*, or land will not be permitted until a permit is obtained from the Department.

3. All applications for *building* and use permits will include a diagram showing the actual shape and size of the parcel, the location and size of the building or structure, and such information as may be required by the Department to assure compliance with and to provide enforcement of this Land Use Ordinance.
4. No *person* will do any *grading, clearing, stripping*, excavating, filling of land; *forest* harvesting; creating any borrow pits, spoil areas, quarries, material processing facilities, or other facilities, without first obtaining a permit from the Department except as otherwise listed as an *exemption* in this Land Use Ordinance.
5. A *grading* or *building* permit may *not* be issued for any parcel or *lot* unless a *stormwater management plan* has been approved by the County, which meets the requirements of this ordinance, the *Design Manual*, and the policies adopted by Kent County for *redevelopment*. Where appropriate, a *building* permit may not be issued without:
 - (A) Recorded *easements* for the *stormwater management* facility and *easements* to provide adequate access for inspection and maintenance from a public *right of way*.
 - (B) A recorded *stormwater management maintenance agreement*.
 - (C) A performance bond, an irrevocable letter of credit or other surety.
 - (D) Permission from adjacent property owners, as may be required.
6. The Planning Director may place any condition on a permit that is deemed necessary to assure compliance with and to provide enforcement of this Land Use Ordinance.
7. After approval of the permit, no changes of any kind will be made to the plans, permit, specification, or other document without written approval from the applicable County official with authority to review and approve applications for building permits.

7.5 FEES

1. The Kent County Board of County Commissioners may establish a schedule of fees and a collection procedure related to the submittal of applications and other matters pertaining to this Ordinance. Upon application, the County Commissioners may waive County fees.
2. No permits will be issued nor final actions taken related to *subdivisions, site plans*, special exceptions, *variances*, waivers, appeals, or other matters pertaining to this Ordinance, unless the applicable fee, if any, has been paid in full. Staff may begin an internal review at its discretion, prior to fees being paid, if a determination of payment is under review.
3. Building permit fees may be set aside by the Planning Director or the Planning Director's designee upon review and with the cause noted in writing in the file for the following:
 - (A) Building permit extensions if regulations have not changed since last review.
 - (B) Building permits for governmental agencies including local, State, and federal.
 - (C) Building permits for nonprofits and charities for *bona fide* charitable activities.

- (D) Building permits for grant projects where the County is a sponsor/participant.
- (E) Circumstances related to errors and omissions not on the part of the applicant.

7.6 ENFORCEMENT

1. It will be the duty of the Planning Director to enforce the provisions of this Ordinance and to refuse to issue any permit or approve any *minor site plan*, *minor subdivision*, special exception, *variance*, erosion and *sediment* control permit, *stormwater management* plan, or *forest conservation plan* that would violate the provisions of this Ordinance. It will be the duty of all officers and employees to assist the enforcing officer by reporting to the enforcing officer any seeming *violation* of this Ordinance.
2. The Planning Director or the Planning Director's designee is authorized and directed to institute any appropriate action to correct *violations* of this Ordinance.
3. It shall be unlawful to erect, construct, reconstruct, alter, repair, convert, *demolish* or maintain any *building* or *structure*; use any property, *building*, or *sign* in *violation* of any regulation in, or any provision of this Ordinance, or any amendment or supplement lawfully adopted by the County Commissioners; to fail to comply with an approved site plan for a property; to fail to comply with any requirement or condition imposed by the Board of Appeals or *Planning Commission*; or violate the provisions of the Critical Area, *floodplain*, *subdivision*, *sediment* control, *stormwater management*, or *forest conservation* provisions of this Ordinance. Any *person*, *firm*, corporation, or other legal entity violating a provision of this Ordinance, or amendments thereto, shall be deemed guilty of a *violation* and upon conviction shall be fined according to the preset fine adopted by the County Commissioners of Kent County. Each and every day during which such *violation* occurs or continues may be deemed a separate offense.
4. The Planning Director is authorized to treat any *violation* as a civil *violation*, in which event the Planning Director, or the Planning Director's designee, will deliver a citation to the *person* believed to have committed a civil *violation*. A copy of the citation will be retained by the Department and bear *certification* attesting to the truth of the matters set forth. The citation will contain:
 - (A) The name and address of the *person* charged;
 - (B) The nature of the *violation*;
 - (C) The place where and the time when the *violation* occurred;
 - (D) The amount of the fine assessed;
 - (E) The manner, location, and time in which the fine may be paid; and
 - (F) The *person's* right to elect to stand trial for the *violation*.
5. The preset fine will not be less than \$100.00 nor more than \$500.00 for zoning *violations*. The preset fine will not exceed \$5,000.00 for *violation* of the *floodplain* and *subdivision* provisions of this Ordinance, and \$1,000.00 plus \$0.30 a square foot for *forest*

conservation. Non-compliance fees for *violation* of the *forest conservation* provisions of this Ordinance will be deposited in the *forest conservation* fund and may be used by the County for purposes related to implementing the *forest conservation* objectives of this Ordinance. Every day the *violation* continues may be considered a separate offense.

6. Within the *Critical Area*, in addition to any other penalty applicable under state law, a person who violates a provision pertaining to the *Critical Area* is subject to a fine not to exceed \$10,000.00. In determining the amount of the penalty to be assessed, the following may be considered:
 - (A) The gravity of the *violation*;
 - (B) Any willfulness of negligence involved in the *violation*;
 - (C) The environmental impact of the *violation*.
7. Fines will not exceed \$5,000 for each *stormwater management violation* and nor exceed \$50,000 for numerous *onsite violations*. Each day that a *violation* continues will be considered a separate offense.
8. Penalties for *violations of erosion and sediment control*.
 - (A) Any *person* who violates any provision of the *erosion and sediment control* provisions of this Ordinance is guilty of a misdemeanor, and upon conviction in a Court of competent *jurisdiction* is subject to a fine not to exceed \$10,000 for each *violation* with costs imposed in the discretion of the Court. Each day upon which the *violation* occurs constitutes a separate offense.
 - (B) Any agency whose approval is required under this Ordinance, or any interested *person* may seek an injunction against any *person* who violates or threatens to violate any provision of this Ordinance.
 - (C) In addition to any other sanction under this Ordinance, a *person* who fails to install or to maintain *erosion and sediment controls* in accordance with an approved plan will be liable to Kent County or the State in a civil action, for damages in an amount equal to double the cost of installing or maintaining the controls.
 - (D) Any governing authority that recovers damages in accordance with this subsection will deposit them in a special fund, to be used solely for (1) correcting to the extent possible the failure to implement or maintain *erosion and sediment controls*, and (2) administration of the *sediment control* program.
9. The *person* who receives a citation may elect to stand trial for the offense by filing with the Department a notice of intent to stand trial. The notice to stand trial will be given at least 5 days before the date of payment as set forth in the citation. Upon receipt of the notice of intent to stand trial, the County Attorney will forward to the District Court of Kent County a copy of the citation and notice of intent to stand trial. On receipt of the same, the District Court will schedule the case for trial and notify the defendants of the

trial date. All fines, penalties, or forfeitures collected by the District Court for *violations* of this Ordinance will be remitted to Kent County.

10. If a *person* who receives a citation for *violations* fails to pay the fine by the date of the payment set forth on the citation and fails to file notice of intention to stand trial, formal notice of the *violation* will be sent to the owner's last known address. If the citation is not satisfied within 15 days from the date of notice, the *person* is liable for an additional fine not to exceed twice the original fine. If after 35 days the citation is not satisfied, the Department may request adjudication of the case through the District Court. The District Court will schedule the case for trial and summon the defendant to appear.
11. Adjudication of a *violation* under paragraphs 4 through 7 of this section is not a criminal conviction nor does it impose any civil disabilities ordinarily imposed by a criminal conviction.
12. In any proceeding before the District Court, the *violation* will be prosecuted in the same manner and to the same extent as set forth for municipal infractions under Md. Code Ann. Local Government §§6-108 through §§6-115. The County Commissioners may authorize either the County Attorney, the Attorney for the *Planning Commission*, or any other designated attorney to prosecute any *violation*.
13. If a *person* is found by the District Court to have committed a civil zoning *violation*, the *person* will be liable for the cost of the proceedings in the District Court. All zoning certificates and *building* permits will be revocable subject to the continued compliance with all requirements and conditions of this and other applicable laws and *regulations*.
14. The imposition of a fine or penalty for any *violation* of this Ordinance will not excuse the *violation* or permit it to continue, and all such *violations* will be corrected within a reasonable time.
15. The Planning Director, or the Planning Director's designee, may issue a stop work order against a *person* who violates a provision of this Ordinance, or any approval granted under this Ordinance.
16. The Planning Director, or the Planning Director's designee, may revoke an approved *Forest Conservation Plan* if the Planning Director finds that:
 - (A) A provision of the plan has been violated;
 - (B) Approval of the plan was obtained through fraud, misrepresentation, a false or misleading statement, or omission of a relevant or material fact; or
 - (C) A change in the *development* or in the condition of the *site* necessitates preparation of a new or amended plan.
17. Enforcement procedures for *violations* of the *sediment* control provisions of this Ordinance will be as follows:
 - (A) When the *inspection agency* or an inspector determines that a *violation* of the approved *erosion and sediment control plan* has occurred, the inspector will

notify the *on-site personnel* or the *permittee* in writing of the *violation*, describe the required corrective action and the time period in which to have the *violation* corrected.

- (B) If the *violation* persists after the date specified for corrective action in the notice of *violation*, the *inspection agency* will stop work on the *site*. The *inspection agency* will determine the extent to which work is stopped, which may include all work on the *site*, except that work necessary to correct the *violations*.
 - (C) If reasonable efforts to correct the *violation* are not undertaken by the *permittee*, the *inspection agency* will refer the *violation* for legal action.
 - (D) The Department may deny the issuance of any permits to an *applicant* when it determines that the *applicant* is not in compliance with the provisions of a *building* or *grading* permit or approved *erosion and sediment control plan*.
 - (E) Any step in the enforcement process may be taken at any time, depending upon the severity of the *violation*.
 - (F) If a *person* is working without a permit, the *inspection agency* will stop work on the *site* except activity necessary to provide *erosion and sediment control*.
 - (G) The Department may suspend or revoke any *grading* or *building* permits after providing written notification to the *permittee* based on any of the following reasons:
 - i. Any *violation(s)* of the terms or conditions of the approved *erosion and sediment control plan* or permit.
 - ii. Non-compliance with *violation* notices or stop work orders issued.
 - iii. Changes in *site* characteristics upon which plan approval and permit issuance was based.
 - iv. Any *violation(s)* of this Ordinance or any rules and *regulations* adopted under it.
 - (H) The Department will receive complaints and initiate enforcement procedures when *violations* are confirmed. Any complaint received will be acted upon, routinely within three (3) working days or as soon as is reasonably possible and the complainant will be notified of any action or proposed action routinely within seven (7) working days of receipt of the complaint.
18. Enforcement procedures for *violations* of the *stormwater management* provisions of this Ordinance consists of any one or a combination of the following actions:
- (A) When the *inspection agency* or an inspector determines that a *violation* of the approved *stormwater management plan* has occurred, the inspector will notify the *on-site personnel* or the *permittee* in writing of the *violation*, describe the

required corrective action and the time period in which to have the *violation* corrected.

- (B) A stop work order will be issued for the *site* by the County if the *violation* persists.
- (C) Bonds or securities will be withheld, or the case may be referred for legal action.
- (D) A civil action may be brought against any *person* in *violation* of the *stormwater* provisions of this Ordinance or the *Design Manual*.
- (E) Any step in the enforcement process may be taken at any time according to the severity of the *violation*.
- (F) Any *person* convicted of violating the provisions of this Ordinance will be guilty of a misdemeanor, and upon conviction thereof, will be subject to a fine of not more than \$5000 for each *violation* with costs imposed not to exceed \$50,000. Each day the *violation* continues will be a separate offense.
- (G) Kent County may institute injunctive, mandamus, or other appropriate action or proceedings of law to correct *violations*.
 - i. The Department may deny the issuance of any permits to an *applicant* when it determines that the *applicant* is not in compliance with the provisions of a *building* or *grading* permit or approved *erosion and sediment control plan*.
 - ii. Any step in the enforcement process may be taken at any time, depending upon the severity of the *violation*.
 - iii. If a *person* is working without a permit, the *inspection agency* will stop work on the *site* except activity necessary to provide *erosion and sediment control*.
 - iv. The County may suspend or revoke any *grading* or *building* permits after providing written notification to the *permittee* based on any of the following reasons: (1) Any *violation(s)* of the terms or conditions of the approved *erosion and sediment control plan* or permit; (2) Non-compliance with *violation* notices or stop work orders issued; (3) Changes in *site* characteristics upon which plan approval and permit issuance was based; or, (4) Any *violation(s)* of this Ordinance or any rules and *regulations* adopted under it.
 - v. The County will receive complaints and initiate enforcement procedures when *violations* are confirmed. Any complaint received will be acted upon routinely within three (3) working days or as soon as is reasonably possible and the complainant will be notified of any action or proposed action routinely within seven (7) working days of receipt of the complaint.

ARTICLE IV. PROCESSES

SECTION 7. PERMITS, FEES, AND ENFORCEMENT

19. In addition to the aforementioned provisions, the County may also seek an injunction to bring about the discontinuance of illegal uses, and/or the removal of illegal *buildings, structures, additions, alterations*, or structural changes, and/or the discontinuance of any illegal work or activity being done or may take any other action authorized by this Ordinance.
20. The Planning Director or the Planning Director's designee is hereby authorized to enter upon any open land in Kent County for the purpose of enforcing and implementing this Ordinance.

SECTION 8 HISTORIC PRESERVATION DOCUMENTATION

1. A *demolition* permit may not be issued for any parcel or *lot* unless a *historic structure* review has been completed in accordance with the following process:

- (A) TIER 1.

The Planning Director, or Planning Director's designee, will determine if the *structure* meets the definition of a *historic structure*, based on the public information readily available in the public record and any applicant statements.

- (B) TIER 2.

- i. If the *structure* is found to be more than seventy-five (75) years old or otherwise thought to be of historic significance, then the permit will require the following documentation:

1. The *applicant* will provide a basic floor plan that includes interior and exterior dimensions of the *structure(s)*; and
2. The Department will conduct a *site* inspection for the purpose of photographing the *historic structure(s)*, which may include the exterior and interior of the *structure(s)*.

The Chair of the Historic Preservation Commission, or the Chair's designee, may accompany staff on the *site* inspection.

- ii. Subject to the review of documentation, the Planning Director, or the Planning Director's designee, in consultation with the Chair of the Historic Preservation Commission, or the Chair's designee, will determine if Tier 3 review and documentation is required. The decision will be made by the Planning Director, or the Planning Director's designee, with the advice of the Chair, or the Chair's designee, within 30 days of the receipt of the required floor plan by the Department.

Note: This is intended to provide clarity for any appeal that may be filed. The appeal would be from a decision of the Planning Director instead of an appeal from a joint decision by a member of staff and a County board. Alternately, if preferred, a decision could be rendered by the HPC Board.

- (C) TIER 3.

- i. Pursuant to a determination of historic significance, Tier 3 review and documentation will be completed by staff within 45 days of the Tier 2 determination, which may result in completion of a Maryland Inventory of Historic Places form developed by the Maryland Historical Trust.
- ii. Tier 3 review and documentation will consist of the following:
 1. Photographs of exterior details, including but not limited to features such as chimneys, wall coverings, windows, and doors;

SECTION 8. HISTORIC PRESERVATION DOCUMENTATION

2. Photographs of any outbuildings;
3. Access to the interior will be granted in order to obtain detailed photographs of the interior spaces to capture any unique elements in the rooms that may help date the *structure*, including but not limited to woodwork, window surrounds, fireplaces, stairways, mantels, doors, and newel posts, and
4. Overall measurements of the *structure*.

Applicants will make any hazards known, and staff and/or Historic Preservation Commission board members will enter *structures* only with the subject property owner's written or verbal permission.

iii. The Historic Preservation Commission will review the documentation.

- (D) Failure to complete Tier 3 documentation within 45 days of the Tier 2 determination will not delay the issuing of a permit unless another agency with review authority has failed to approve the permit or an extension is granted by the property owner. Failure of the *applicant* to grant interior access within the review time will not result in the issuing of a permit.
- (E) **Emergency provisions.** These requirements may be set aside or modified by the Planning Director, or the Planning Director's designee, when a *structure* is deemed to be an imminent threat to health, safety, and welfare of the adjoining properties and *persons*.

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ARTICLE V. ZONING REGULATIONS

SECTION 1 GENERAL PROVISIONS

1.1 STATEMENT OF INTENT

The purpose of this section is to set forth zoning *regulations* to supplement the dimensional, use, and other zoning-type *regulations* appearing elsewhere in this Ordinance.

1.2 ACCESSORY STRUCTURES; PRIOR CONSTRUCTION

1. No *accessory structure* will be constructed more than six months prior to the construction of the main *structure*. No *accessory structure* will be used for more than six months unless the main *structure* is also being used or is under construction. Extensions may be granted by the Planning Director or Planning Director's designee for cause shown.
2. The Planning Director, or Planning Director's designee, may grant a one (1) year extension to allow *accessory structures*, which were legal, conforming *structures* and where the existence of the *structure* will not result in a nuisance to the neighborhood, to remain following the *demolition* of the main *structure*.

1.3 REDUCTION OF HEIGHT, BULK, AREA

No parcel area or lot dimension, if specifically required, will be reduced below the requirement of this Ordinance unless otherwise provided for by this Ordinance. The minimum *yards*, required parking, and mandatory *loading spaces* required by this Ordinance will not be encroached upon unless otherwise provided by this Ordinance. Setbacks may be varied as set forth in the districts.

1.4 MODIFICATION OF HEIGHT REGULATIONS

1. Except within an area defined as an *Airport Approach Zone* by the Federal Aviation Agency or in the Kent County *Airport Safety Area*, the height limitations of this Ordinance will not apply to:

Belfries	Ornamental towers and spires
Church spires	Public monuments
Conveyors	Silos and corn dryers
Elevator <i>bulkheads</i>	Stage towers or scenery lofts
Fire towers	Tanks
Flag poles	Water towers and stand pipes
<i>Personal wireless facility</i> , commercial	Wind energy systems, small, with a height not to
radio, and television towers less than	exceed 80 feet unless a special exception
200 feet in height	is granted

2. Except within an area defined as an *Airport Approach Zone* by the Federal Aviation Agency or the Kent County *Airport Safety Area*, public, semi-public or service *buildings*, *hospitals*, and institutions or schools, when permitted in a district, may be erected to a height not exceeding 60 feet and *houses of worship* may be erected to a height not exceeding 75 feet when the required *side* and *rear yards* are each increased by at least one foot for

each one foot of additional *building* height above the height *regulations* for the district in which the *building* is located.

1.5 YARDS AND OPEN SPACE GENERALLY

1. Whenever a *lot* abuts upon a public *alley*, one-half of the *alley* width may be considered as a portion of the required *yard*.
2. Every part of a required *yard* will be open to the sky, except as authorized by this Article, and except ordinary projections of sills, belt courses, window air conditioning units, chimneys, cornices, and ornamental features which may project to a distance not to exceed 24 inches into a required *yard* but not into a required *buffer*
3. More than one main *building* may be located upon a *lot* or *tract* in the following instances:
 - (A) Institutional *buildings*
 - (B) Public or semi-public *buildings*
 - (C) *Multi-family dwellings*
 - (D) Commercial or industrial *buildings*
 - (E) Homes for the aged, such as convalescent, nursing, or group homes
 - (F) Permitted agricultural and marine uses
4. The provisions of this exception will not be construed to allow the location or erection of any *building* or portion of a *building* outside of the *buildable area* of the *lot*.

1.6 FRONT YARDS

1. Where an official line has been established for the future widening or opening of a *street* or *major thoroughfare* upon which a *lot* abuts, then the depth of a *front* or *side yard* will be measured from such official line. Unless otherwise provided, the *right of way* of any arterial *street*, so designated on the *Major Thoroughfare* Map will be assumed to extend 40 feet on each side of the center line of the existing *right of way* for the purpose of measuring *front yards* required by this Ordinance.
2. On *through lots*, the required *front yard* will be provided on each *street*.
3. There will be a *front yard* of at least 15 feet on the side *street* of a *corner lot* in any district; provided, however, that the *buildable width* of a *lot* existing as of August 1, 1989, of this Ordinance will not be reduced to less than 28 feet.

1.7 REAR YARDS

Open or lattice-enclosed fire escapes, outside stairways, balconies opening upon fire towers, and the ordinary projections of chimneys and flues may project into the required *rear yard* for a distance of not more than five (5) feet, but only where the same are so placed as not to obstruct light and ventilation.

1.8 ACCESSORY BUILDINGS AND STRUCTURES

Except as herein provided, no accessory *building* will project beyond a required *yard* line along any *street*. *Farm* accessory *buildings* will be a minimum of twenty-five feet from the side and rear property lines.

1.9 OPEN SPACE

The boundaries of open space areas will be treated as property lines in determining required rear and side yard setbacks. At least 50% of the required open space will be contained as a single visually identifiable area exclusive of connecting corridors or pathways and in no case be less than 50 feet in width nor 5,000 square feet in area. In the *Critical Area*, land and water areas are retained in an essentially undeveloped state.

1.10 VISIBILITY TRIANGLES ADJACENT TO INTERSECTIONS

1. In order to promote a safe pedestrian and vehicular environment, a visibility triangle is established at each street intersection.
 - (A) The visibility triangle is defined by a triangle, two legs of which are measured from the intersection of the back of the curb line or pavement edge (if there is no curb) extended.
 - (B) The legs of the triangle are based on the posted speed limit of that street.
 - i. A street with a posted speed limit of greater than 30 miles per hour shall have a 100-foot leg.
 - ii. A street with a posted speed limit of up to and including 30 miles per hour shall have a 50-foot leg.
 - (C) The length of any leg shall be halved if the street has a control feature, such as a stop sign, yield sign, or traffic signal.
2. Within the visibility triangle, no obstruction is allowed that would significantly obstruct or impede vision through the visibility triangle between a height of two feet and ten feet above the grade of the curb or pavement edge (if there is no curb).
3. Examples of obstructions include:
 - (A) any fence, wall, shrub, berm, or sign taller than two feet;
 - (B) any evergreen tree;
 - (C) any deciduous tree with branches extending from the trunk between three feet and ten feet;
 - (D) any parking of vehicles; and,
 - (E) any other permanent or temporary structure or item determined by the County engineer to be a visual obstruction.

ARTICLE V. ZONING REGULATIONS

SECTION 1. GENERAL PROVISIONS

4. The following shall not be considered an obstruction:
 - (A) a building conforming to the setback requirements of this Ordinance;
 - (B) utility poles and street light poles; and,
 - (C) traffic control equipment including control boxes, traffic signs, and traffic signal poles.
5. For unique situations due to topography, street alignment, or other physical condition, the County engineer may require as part of site development plan approval, alternative dimensions to the triangle to ensure a safe clear area at street intersections.

SECTION 2 OFF-STREET PARKING AND LOADING**2.1 STATEMENT OF INTENT**

The purpose of this section is to set forth flexible standards for parking and loading and to ensure adequate parking for permitted uses.

2.2 PARKING REQUIRED

1. No *building, structure, or premises* will be erected, unless *off-street parking*, consistent with the provisions of this section, is provided. The number of parking spaces provided onsite for a project will be determined according to the flexible standards set forth in this section.
2. Accessible parking spaces are required to be provided on the shortest accessible route to the accessible entrance. Spaces will be provided to meet the current federal requirements as set forth in *2010 ADA Standards for Accessible Design*, as amended from time to time.

2.3 SHARED PARKING

1. The *Planning Commission* will use the use-based parking standards below as guidelines and may allow up to fifty percent (50%) fewer total number of required spaces where one or more of the following situations apply:
 - (A) Two or more uses share parking in such a way that the hours or days of peak use are different, and less total spaces will provide for all uses adequately.
 - (B) Clients of uses are such that a reduced number of spaces is appropriate, such as a neighborhood grocery, a business frequented by pedestrians, etc.
 - (C) The use is water dependent or water related to an extent that most of the activity would be from the water, such as a fish processing facility without a retail outlet. Parking for employees and visitors would still be required.
 - (D) Employees are residents of the *structure*, such as in a *home occupation*.
 - (E) Display areas approved by the *Planning Commission* will not be included in the tabulation of parking spaces.
2. The *applicant* and the *Planning Commission* may agree to a reduced number of parking spaces below the use-based ratios below with the agreement and condition that if more spaces are required in the future because of miscalculation, unanticipated growth, or other error, those spaces and associated maneuvering area will be provided by the *applicant*. The *Planning Commission* may require that additional *open space* be kept for this purpose. An agreement will be drafted to this effect. The *Planning Commission* may also limit the maximum number of parking spaces above the number required through *site plan* review to encourage innovative design and safe and efficient vehicular and pedestrian circulation.

ARTICLE V. ZONING REGULATIONS
SECTION 2. OFF-STREET PARKING AND LOADING

2.4 USE-BASED RATIOS

USE TYPE	PARKING SPACES
Assembly Halls	1 per 3 seats
Automobile Sales	1 per every 300 sq. ft gross <i>floor area</i> and 1 per each employee and 1 per service bay.
Banks	1 per 250 sq. ft. of gross <i>floor area</i>
Commercial Riding Academies, Stables	1 per 2 horse stalls
Community Centers, Civic Clubs, Museums	1 per 150 sq. ft. of gross <i>floor area</i>
<i>Convalescent Home</i>	1 per 5 patient beds.
<i>Country inns</i> , Tourist Homes, Courts, Motels, <i>Hotels</i>	1 per guest unit, plus 1 per employee
Data Processing Centers	1 per employee at maximum occupancy
Funeral Home, Mortuary	1 per 150 sq. ft. of gross <i>floor area</i>
Golf Course	5 per green and 50% of the requirement for <i>accessory uses</i> , if <i>on-site</i>
<i>Hospital</i>	1 per 2 patient beds
Houses of worship	1 per 5 seating spaces
Industrial uses, warehousing	1 per 2 employees in principal shift
Kennel	1 per 400 sq. ft of gross <i>floor area</i> but not less than 4
<i>Laundromat</i>	1 per 2 washer/dryer units
Lodging, Rooming, or <i>Boarding houses</i> , Bed & breakfast	1 per guest unit, plus 1 per employee
<i>Marinas</i> , multi-level boat storage <i>building</i> , <i>public landings</i>	1 per <i>slip</i> , plus 1 per every 2 full time employees
Office <i>Buildings</i>	1 per 400 sq. ft. of gross <i>floor area</i>
<i>Private clubs</i>	1 per 5 members
<i>Professional offices, clinics</i>	2 per professional <i>person</i>
Residential, Multi-family, <i>Townhouses</i>	1 per unit, plus 1 space for each bedroom in the <i>dwelling</i>
Residential, Single-Family and Duplex	1.50 per <i>dwelling unit</i>
<i>Restaurants</i> or establishments for on <i>premises</i> consumption of food, or beverages	1 per 150 sq. ft. of <i>floor area</i> , minimum of 3 spaces
Retail or wholesale stores	1 per 250 sq. ft. of gross <i>floor area</i>

ARTICLE V. ZONING REGULATIONS
SECTION 2. OFF-STREET PARKING AND LOADING

2.5 DIMENSIONAL STANDARDS

Parking space dimensions	
-Parallel parking	Width: 8 ft. min. Length: 22 ft. min.
-Other than parallel parking	Width: 9 ft. min. Length: 20 ft. min.
Parking aisle dimensions	
-One-way parallel parking	Width: 10 ft. min.
-Two-way parallel parking	Width: 16 ft. min.
-One-way other than parallel parking	Width: 15 ft. min.
-Two-way other than parallel parking	Width: 20 ft. min.

2.6 OFF-STREET LOADING

Any *building* or part thereof having a gross *floor area* of 5,000 square feet or more and which is to be occupied by manufacturing, storage, warehousing, wholesale or retail store, *hotel*, *restaurant*, industrial, funeral home, or other uses requiring the receipt or dispatch of materials by vehicles, will provide a minimum of one off-street *loading space* plus one additional space for each 20,000 square feet of gross *floor area* or major fraction thereof in excess of the first 20,000 square feet. Each *loading space* will be a minimum of 12 feet in width, 45 feet in length and with a clear height of not less than 14 feet.

2.7 BICYCLE PARKING

No new commercial, industrial, marine or multi-*family* residential use will be erected, unless bicycle parking at a rate of one bicycle parking space per 20 required auto parking spaces is provided. Bicycle parking spaces will be visible and convenient to cyclists. Bicycle parking requirements may be met by providing lockers or racks inside a *building*, adjacent to the *building*, in an accessory parking *lot*, or underneath an awning or marquee. A bicycle parking space will be a minimum of six feet long by one foot wide and if enclosed a minimum of four feet high.

2.8 PARKING LOT DESIGN

1. **Pedestrian orientation.** Parking lot design will reflect the fact that once people step out their cars, they become pedestrians. Parking lots will be designed not only to facilitate efficient vehicle circulation but to also permit smooth pedestrian circulation.
2. **Bicycle accommodation.** Provision for safe and efficient bicycle circulation and parking should be included in the overall design of the parking lot.
3. **Traffic flow.** Sites will be designed to prevent awkward or dangerous vehicular flow.

ARTICLE V. ZONING REGULATIONS
SECTION 2. OFF-STREET PARKING AND LOADING

4. **Location.** Parking *lots* will be located as much as possible to the rear of *buildings*. Parking *lots* may not be located in between the front property line and the primary *building* except (a) for public recreational facilities in which the parking *lot* is a minimum of 200 feet from the front property line and existing public *roads*, and (b) in the Marine district.
5. **Cross-access.** Whenever possible, parking *lot* design will provide for connections to adjacent parcels where uses are compatible.
6. **Building entrances.** Marked walkways, separated from vehicular traffic, will be provided at the entrances of establishments.
7. **Pedestrian Accommodations.**
 - (A) Sites will be designed to discourage pedestrians and vehicles from sharing the same pathways.
 - (B) Sidewalks at least eight feet wide will be provided along all sides of the parking *lot* that abuts a public *street*.
 - (C) Internal pedestrian walkways are distinguished from paved surfaces through the use of special pavers, bricks, scored concrete, or other materials that will clearly identify the pedestrian walkways.
 - (D) Sidewalks will be provided along the full length of any *building* abutting public parking areas.
8. **Large Lots.** Parking areas with 80 automotive spaces or more will provide:
 - (A) Walkways running parallel to the parking rows every four rows and walkways running perpendicular to the parking rows every 20 spaces.
 - (B) Continuous internal pedestrian walkway from the perimeter sidewalk to the principal customer entrance. The walkway will be at least eight feet in width and will feature landscaping and other pedestrian amenities.
 - (C) Weather protection features such as awnings extending a minimum of 30 feet from all customer entrances.

2.9 PARKING LOT LANDSCAPING

1. **Required.** At least 10% of parking areas where more than ten parking spaces are provided will be landscaped. Perimeter *screening* does not count toward parking area landscaping.
2. **Large Lots.** To avoid large expanses of paving in parking areas with 80 automobile parking spaces or more, the following provisions will apply:
 - (A) A row will not contain more than twelve 12 spaces without a landscaped *island* of at least the size of one parking space.
 - (B) The ends of parking rows will contain an *island* a minimum of six feet wide adequately landscaped with shade *trees*, ground cover, and shrubs.

ARTICLE V. ZONING REGULATIONS
SECTION 2. OFF-STREET PARKING AND LOADING

- (C) Double rows of parking will be separated by a minimum six-foot planting strip adequately landscaped with shade *trees* and shrubs.
3. **Screening.** Parking areas will be *screened* from the view of motorists, pedestrians, and adjoining residential properties with a vegetative *screen* or landscaped *berm*. The height of the *berm* will be approximately 3 feet. The width of the *berm* will be at least twice the height. The vegetative screen will have the potential of reaching a height of at least 3 feet within five years. The width of the landscaped area will be 4 feet or wider. Perimeter *screening* will not restrict sight distance needed for vehicular or pedestrian safety.
4. **Context.** Natural *slopes* and existing vegetation may be substituted for some or all of the requirements above, provided that these features serve to *screen* the parking area from motorists, pedestrians, and adjoining property owners. Perimeter *screening* may be waived per Article IV, Section 6, where it is physically impossible to accomplish.

2.10 DELIVERY TRUCKS AND TRASH COLLECTION VEHICLES

1. Loading and *unloading spaces* for delivery trucks will not block major pedestrian ways, the passage of other vehicles on the service drive or major pedestrian ways, or create blind spots when trucks are loading and unloading.
2. Trash boxes, containers for recycling and food composting, and dumpsters will be accessible to collection trucks when all vehicle parking spaces are filled.

2.11 WAIVERS

1. Alternate designs for shared parking, parking lot design, and parking lot landscaping may be approved via the waiver process set forth in Article IV, Section 6.

SECTION 3 SIGNS

3.1 STATEMENT OF INTENT

1. COMMUNITY CHARACTER

The purpose of this section is to establish minimum *regulations* for the design and display of signs. The *regulations* and standards provide sufficient identification of property while preserving the overall attractiveness of the County. The intent of the County enacting this section is to: (A) encourage the effective use of signs; (B) maintain and enhance the aesthetic environment of the County while avoiding visual clutter; (C) promote the use of signs to identify *buildings* and geographic areas; (D) improve pedestrian and vehicle traffic safety; and (E) promote the compatibility of signs with the surrounding land uses.

2. CONTENT-NEUTRAL REVIEW

For the purposes of regulating signs in Kent County, the message of any sign will not be considered in any review. All reviews are content-neutral. Throughout this section of the Land Use Ordinance, there are sign types and sign descriptions that are intended to clarify the potential utility of signs for applicants. As long as proposed signs on a property comply with the requirements related to the number of signs, sign area, height, illumination, time restrictions, location, relative placement, and obscenity, such signs may be permitted. Issues related to color, design, and materials are subject to review and may be regulated. Prohibited signs are not permitted. Political signs are regulated by the State of Maryland. No signs may be erected on any property, unless the property owner of record consents.

3.2 DEFINED TERMS WITHOUT GRAPHICS


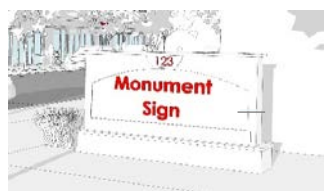

The following defined terms are used in this section:

1. **Sign:** Any letters, figures, design, symbol, trademark, logo, or illuminating device intended to attract attention to any place, subject, *person, firm, corporation*, public performance, article, machine, or merchandise, whatsoever, and visible out of doors for advertising purposes. This does not include an official court or public notice, nor the flag, emblem or insignia of a government, school, or religious group, when displayed for official purposes.
2. **Common Development:** A parcel or combination of parcels that are dependent upon one another for access, parking, and/or utilities and that share a common *development* plan.
3. **Electronic Message Center (EMC):** An electrically activated changeable copy *sign* having variable graphic capabilities and programmed by computer. EMCs provide the public with information such as federally required information for gas stations and public information regarding public events held on site by quasi-public/institutional uses and fire companies.
4. **Manually Changeable Copy:** Previously regulated as a separate sign subcategory, any sign may contain manually changeable copy. Sign area is regulated under the overall sign type.
5. **Portable or Temporary Sign:** Any *sign* that is not permanently attached to the ground or a *structure* including banners, sandwich board signs, yard signs, and signs on vehicles.



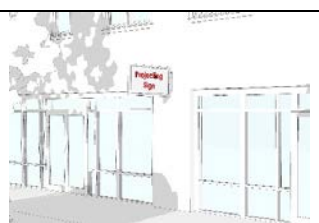
3.3 DEFINED TERMS WITH GRAPHICS

The example graphics below are illustrative only. They represent possibilities for the appearance of *sign* types that are allowed on private property within the County. Images are non-regulatory.




1. GROUND-MOUNTED SIGNS and MONUMENT-TYPE SIGNS

Sign Type	Definition	Example Graphic
Agricultural: Ground-Mounted Sign	A two-sided <i>sign</i> attached to poles, posts, or similar supports, which advertises products raised on the premises, agricultural industries, and agritourism. These signs are often placed near public roads or at the entrances to farm lanes and may be landscaped.	
Agricultural: Monument-Type Sign	A two-sided <i>sign</i> mounted on a permanent base, which is not attached or dependent on another <i>structure</i> , pole, post, or similar support. Such <i>signs</i> are often landscaped and may be coordinated with the architectural treatments of nearby <i>structures</i> .	
Subdivision: Monument-Type Sign	A one-sided monument <i>sign</i> that contains only one distinct sign area on the <i>sign</i> face for the purpose of identifying the entrance of a <i>subdivision</i> along a public road. They are often generously landscaped.	

2. BUILDING-MOUNTED SIGNS

Sign Type	Definition	Example Graphic
Window Sign	A permanent <i>sign</i> that is painted on or mounted to a window, or that is hung directly inside a window. Neon window signs are included in this category. Temporary paper signs in windows and temporary banner signs are not included in this category.	
Wall Sign	A flat, permanent <i>sign</i> that is attached and parallel to an exterior wall, and projects no more than 12 inches from the wall. It may be painted, made of individual letters, or a cabinet-type sign on a wall surface or erected and confined within the limits of the wall surface of a <i>building</i> or <i>structure</i> . The sign is located against the wall, and it displays only one <i>sign</i> surface.	
Projecting Sign	A <i>sign</i> that projects no more than 36 inches from and is supported by a wall of a <i>building</i> or <i>structure</i> . This includes a marquee <i>sign</i> . The sign is located against a wall, and it displays more than one <i>sign</i> surface. All surfaces are calculated for signage area, except when parallel faces are within 24 inches of each other.	

3. DETACHED SIGNS and INCIDENTAL SIGNS

Sign Type	Definition	Example Graphic
Freestanding Sign	A <i>sign</i> that is not attached to a <i>building</i> but rather a supporting <i>structure</i> attached to the ground. These <i>signs</i> may be ground-mounted or pole-mounted. They are often made of high-quality materials and well landscaped. <i>Signs</i> located on the All-American Road are encouraged to include relevant branding.	
Directional Sign	A <i>sign</i> that directs the public towards a <i>site</i> entrance and is visible from a public right-of-way, or any <i>sign</i> that provides traffic regulation on private property. These <i>signs</i> are private and for information only, and they cannot be enforced by local law enforcement.	
Address Sign - and - Building Sign	A <i>sign</i> that is located on a wall immediately adjacent to the entrance of a <i>building</i> or in a yard area. These <i>signs</i> are often used to identify a property address or to provide other information about an activity or use that occurs on the property for the general public.	

3.4 ILLUMINATION

1. No sign may be illuminated except when using external lighting, where the source of light is external to, and independent of, the sign structure, and illumination radiates toward the message area and away from the viewer. This includes goose neck, linear sign lights, and ground mounted spotlights. Interior illumination of signs is not permitted in any case.
2. The light from any illuminated *sign* will be so shaded, shielded, or directed that the light intensity or brightness will not be objectionable to surrounding areas.
3. No *sign* will have blinking, flashing, or fluttering lights, or any other illuminating device which has a changing light intensity, brightness, or color.
4. Beacon lights are not permitted.
5. No colored lights will be used at any location or in any manner so as to be confused with or construed as traffic control devices.
6. Neither the direct, nor the reflected light from primary light sources will create a traffic hazard to operators of motor vehicles on public thoroughfares.
7. No exposed reflective type bulbs, no strobe light, nor incandescent lamp which exceeds 15 watts will be used on the exterior surface of any *sign* so as to expose the face of the bulb, light, or lamp to any public *street* or adjacent property.
8. All new lighting for signs will be dark-sky compliant and use LED fixtures with automatic, light-sensitive shut-off technology that will turn off all sign lighting during daylight hours.

3.5 ELECTRONIC MESSAGE CENTER (EMC)

1. Electronic message centers is permitted as a component of permitted signage for gasoline stations, quasi-public/institutional uses, and fire companies. One *sign* of equal or less *sign* area and height, which is not an EMC, is permitted in lieu of the EMC, but not both *signs*.
2. No *sign* containing an electronic message center will be located within 125 feet of any signalized intersection as measured from the point where the existing right-of-way lines of the intersecting *streets* meet. In a case where a rounded or *cut* property corner exists, this measurement will be taken from the point of the intersection of the existing rights-of-way lines, as extended. The distance will be measured along the right-of-way line from the point of intersection. *(See graphic illustration.)*
3. Any electronic message center that is located within 300 feet of any residential use will be required to automatically turn off between the hours of 11:00 p.m. and 6:00 a.m. daily.
4. An electronic message sequence will be accomplished by means of fading or dissolving but will not scroll, travel, or flash. A transition sequence will be completed in no less than eleven (11) seconds.
5. No portion of any *sign* may change its message or background in a manner or by a method of display characterized by motion, other than fading or dissolving, or pictorial imagery or depicts action or a special effect to imitate movement, or the presentation of pictorials or graphics displayed in a progression of frames that give the illusion of motion or the illusion of moving objects, moving patterns or bands of light or expanding or contracting shapes.
6. Electronic message centers will be designed to freeze the display in one static position, display a full black *screen*, or turn off completely in the event of any malfunction.
7. Portable electronic message signs are prohibited. No electronic message center will be permitted to be included as part of any *sign* that will be erected for a limited timeframe.
8. Digital road signs, electronic traffic signs, and other variable message signs that provide real-time information to drivers, erected by governmental bodies and agencies including the State, County, and other local governments are not electronic message centers.



3.6. PERMITTED SIGNS									
Rural = AZD, RCD, and on any <i>bona fide</i> farm									
Residential = RC, CAR, and CR									
Business = C, CCA, EC, ECCA, M									
Village = V, IV Options are chosen by applicant; they are not based on sizes									
Special = Special exception uses when approved by the Board of Appeals and existing businesses in districts where they are no longer operating as permitted uses									
A. GROUND-MOUNTED and MONUMENT-TYPE SIGNS									
Agricultural: advertising products raised on the premises and ag industries only (prior 16 sq ft)	Number of Signs								
	Max Area (sq ft)								
	Max Height (ft)								
	Illumination								
Subdivision, rural: located at subdivision primary vehicle entrance only	1	32	8	Yes	X				
Subdivision, residential: located at subdivision primary vehicle entrance only	1	4	8	Yes	X				
Electronic Message Center (EMC) at gas stations, quasi-public/institutions, and fire companies	1	10	8	Yes		X			
	1	32	8	Yes	X				
B. BUILDING-MOUNTED SIGNS									
Window signs including neon signs but not temporary paper signs or banner signs	1	2	N/A	Yes		X		X	X
Small wall sign: PER ESTABLISHMENT: 5% of the area of the front façade and a max of ...	1	25	N/A	Yes				X	X
<u>OR</u> Projecting sign, small: PER ESTABLISHMENT, if no flat sign is erected (choose one)	1	5	N/A	Yes					
BUILDINGS WITH A GROSS FLOOR AREA LESS THAN 20,000 SQUARE FEET	1	25	N/A	Yes					
Medium wall sign: PER ESTABLISHMENT: 5% of the area of the front façade and a max of ...	1	10	N/A	Yes					
<u>OR</u> Projecting sign, medium: PER ESTABLISHMENT, if no flat sign is erected (choose one)									
BUILDINGS WITH A GROSS FLOOR AREA EQUAL TO OR GREATER THAN 20,000 SQUARE FEET	1	100	N/A	Yes					
Large wall sign: PER ESTABLISHMENT: 1.5 sq ft per linear foot of front façade with a max of ...	1	10	N/A	Yes					
(Signage colors to be approved by <i>Planning Commission</i> ; not eligible for bonus; see footnote †)									
<u>OR</u> Projecting sign, large: PER ESTABLISHMENT, if no flat sign is erected (choose one)	1	10	N/A	Yes					
C. DETACHED SIGNS and INCIDENTAL SIGNS									
Free-standing Pole sign <u>OR</u> Ground-mounted sign									
Business sign: for a stand-alone business or common development (e.g., <i>shopping center</i>)	1	25	25	Yes				X	X
Directory sign: identifying three or more establishments within a common development	1	65	8	Yes				X	
Waterfront sign: if directed at the water, for a stand-alone business or common development	1	20	20	Yes				X	
Incidental signs									
Address sign (formerly nameplate sign)	1	2	N/A	No			X	X	X
Building sign (formerly home occupation sign)	1	2	N/A	No			X	X	X
Directional signs (number not limited)	N/A	4	4	Yes			X	X	X
Flags of any Nation, State, County, or Municipality	3	28	N/A	Yes			X	X	X
Flag additional (formerly noted as non-commercial)	1	15	N/A	Yes				X	X
Portable or Temporary signs (including banners, sandwich boards, and yard signs)	1	6	8	No				X	X
Warning signs – danger, no trespassing, no hunting, and other warnings (number not limited)	N/A	2	6	No			X	X	X
TOTAL OVERALL SIGN AREA ALLOWANCE FOR ANY SINGLE BUILDING †									
1.5 square feet per linear foot of building frontage and no more than:									

†Buildings with a gross floor area equal to or greater than 20,000 square feet are exempt from the single-building maximum sign area limitation above.

3.7 CRITERIA FOR BONUS SIGN AREA

To encourage design excellence, the maximum *sign* areas in the Rural, Residential, Business, and Village categories may be increased by the percentages outlined below. A separate bonus is granted for compliance with each of these criteria and the area is cumulative, but the percentage is based on the original *sign* area. In no case will the overall *sign* area exceed 64 square feet.

1. Detached signs, both pole-mounted and monument-type, may be increased as follows:
 - (A) Twenty (20) percent when the *sign* is constructed of solid wood and uses colors approved by the *Planning Commission*.
 - (B) Ten (10) percent when a directory *sign* utilizes uniform coloring and lettering for all establishments listed in the directory with an exception for one major facility.
 - (C) Twenty (20) percent when the *sign* is installed in a landscaped planter having an area twice the area of the resultant *sign* and the entire area is approved by the *Planning Commission*.
 - (D) Fifteen (15) percent when the *sign* is not designed or used with illumination, only indirect lighting is permitted.
 - (E) Twenty (20) percent when the *sign* uses a pedestal or monument base and does not exceed 5 feet in height.
2. Wall signs may be increased as follows, if they project less than 12 inches from the wall:
 - (A) Ten (10) percent when all the lettering and background is uniform in style and color for signs in a *shopping center* or for any three consecutive separate establishments.
 - (B) Fifteen (15) percent if the *sign* is not designed or used with any illumination, only indirect lighting is permitted.
 - (C) Five (5) percent if the *sign* design compliments and utilizes the architectural details of the facade, particularly with respect to *historic structures*.
3. Temporary signs may be increased by the *Planning Commission* for project construction.

3.8 SIGN PERMIT REQUIRED GENERALLY

Except for the signs listed below, which may be erected without obtaining a permit, every *person* desiring to erect a *sign* will first obtain a *sign* permit along with all other permits required by law.

3.9 REGULATED SIGNS NOT REQUIRING A SIGN PERMIT

GROUND-MOUNTED and MONUMENT-TYPE SIGNS

1. In keeping with the content-neutral approach, new or replacement *sign* copy, including repainting and new cabinet faces will not require a *sign* permit, as long as the calculated *sign* area remains unchanged. Changes to electrical equipment will require an inspection.

BUILDING-MOUNTED SIGNS – THIS SUB-SECTION GRANTS ADDITIONAL SIGNS AND SIGN AREA

1. Temporary paper *signs* in windows that occupy less than 30 percent of each window area.
2. Painted logos, decals, or other informational symbols, such as credit card logos, directly inside of, or on the surface of, a window and/or door on the ground floor of a *building*, if the area of such informational *signs* is less than five (5) percent of the area of the window.
3. In keeping with the content-neutral approach, new or replacement *sign* copy, including repainting and new cabinet faces will not require a sign permit, as long as the calculated *sign* area remains unchanged. Changes to electrical equipment will require an inspection.

DETACHED and INCIDENTAL SIGNS

1. Address signs, building signs, flags, warning signs, and non-illuminated directional signs.
2. Portable or Temporary signs displayed for 60 days or less within any given calendar year.
3. In keeping with the content-neutral approach, new or replacement *sign* copy, including repainting and new cabinet faces do not require a *sign* permit, as long as the calculated *sign* area remains unchanged. Changes to electrical equipment will require an inspection.

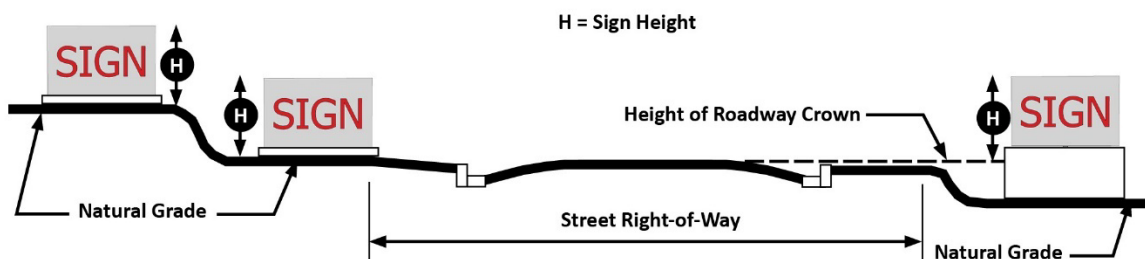
3.10 SIGNS EXEMPT FROM ANY REVIEW AND NOT SUBJECT TO THIS SECTION

The signs listed below may be erected without any review and are not subject to this sign section.

1. Federal, State, and County program-related interpretative signs for farmland preservation and archeological, cultural, and historic programs such as byways and All American Roads.
2. Public signs representing a public interest, erected by, or on the order of a public official.
3. Temporary public notices for public meetings and public hearings, erected by the County.
4. Traffic and information signs erected in the public rights-of-way by a governmental body.

3.11 HOW TO MEASURE SIGN DIMENSIONS

1. *Sign* Height Measurement



The height of a *sign* will be measured from the higher of (1) the natural *grade* immediately adjacent to or directly beneath the *sign* base, which will not be raised so as to create additional *sign* height, or (2) the height of the *roadway* crown of the adjacent *street* which the *sign* faces, to the highest point of the *sign structure*, including the bracket, supports, and any *sign* face surrounds. The above diagram illustrates *sign* height measurement.

2. Sign Area Measurement

- (A) For signs mounted on a freestanding background or projecting from a *building*, the entire area of the framework or background of the *sign* is calculated as the *sign* area, including any material or color forming the *sign* face or background used to differentiate the *sign* from the *sign structure* against which it is placed. *Sign* area does not include any supporting framework or bracing unless such framework or bracing is part of the message or *sign* face. (Diagram “A” below).
- (B) For signs consisting of freestanding letters or features attached to a wall or monument, the *sign* area is calculated as the total area of an imaginary rectangle that contains all letters or features of the *sign*. (Diagram “B” below).



A



B

- (C) **Other computations.** Only one side of a double-faced *sign* is included in the computation of *sign* area, when the two *sign* faces are placed back-to-back, so both are no more than 24 inches apart at their furthest distance. The area of a cylindrical sign is computed by multiplying one-half of the circumference by the height of the *sign*. Regular geometric shapes may be calculated using formulas.

3.12 SIGN LOCATION AND SAFETY

1. All ground-mounted *signs* will be setback no less than five feet from the right-of-way line.
2. All supports and wiring for building-mounted signs will be concealed from public view.
3. *Signs* will not be situated so they interfere with the movement or visibility for pedestrians, cyclists, or motorists, or so they obstruct views of traffic signals or other traffic devices.
4. *Signs* and their supporting *structures* will not interfere with public utility equipment or communication lines/equipment that are either above or below the *grade*.
5. At a minimum, *signs* shall not be located within the visibility triangle adjacent to the intersection of any *streets*. Wall *signs* and any other *signs* that are placed flat against a *building* wall are not subject to this requirement.

3.13 PROHIBITED SIGNS GENERALLY

Except as otherwise provided, the following *signs* are prohibited:

1. *Signs* including all billboards, outdoor advertising *structures*, poster panels, and *signs* of any type, which advertise products or services that are not available on the *premises*.
2. *Signs* that visually simulate an official traffic control device, warning *sign*, or regulatory *sign*, or which hide from view any traffic control device, signal, or public service *sign*.
3. *Signs* that interfere with road or highway visibility or obstruct or otherwise interfere with the safe and orderly movement of traffic or which otherwise pose a hazard to traffic.
4. *Signs* in the form of pennants, balloons, streamers, ribbons, spinners, strings of lights, air- or gas-filled figures, or other devices that are moved by wind, machine, or human activity.
5. *Signs* on public rights-of-way other than publicly owned or maintained signs and signs pertaining to railroad crossings.
6. *Signs* containing obscene statements, words, symbols, or graphic depictions that may be construed to offend public morals or decency.
7. *Signs* that emit or utilize, in any manner, any kind of sound that is produced by the *sign*.
8. *Signs* attached to a fire escape or that obstruct any fire escape, any means of egress, or ventilation, or will prevent free passage from one part of a roof to any other part.
9. *Signs*, other than approved Electronic Message Centers, that change color(s), flash, blink, oscillate, or intimate movement through lighting effect(s) or the use of video display of any kind, and in any way visible from the right-of-way or any other adjacent properties.
10. *Signs* painted or affixed on the roof of a *building* or supported by posts, poles, uprights, or braces extending from or attached to the roof of a *building* or projected above the roof of a *building* or above the parapet. Signs that extend above any eave line are prohibited.
11. *Signs* attached to a fence, wall, gazebo, antenna, other *sign*, *tree* or other vegetation, or to any public *structure* such as a utility pole or lamppost.

3.14 SIGN MAINTENANCE

All *signs* will be maintained in safe structural condition, in compliance with all applicable *building*, life safety, and electrical codes, and in conformance with this section at all times. Maintenance includes replacement of defective bulbs, parts, materials, painting, repainting, cleaning, and any other act required for maintenance of *signs*. If a *sign* is not adequately maintained or kept in good repair, the County may require its removal, utilizing the provisions in the section below.

3.15 REMOVAL OF UNSAFE, UNLAWFUL, OR ABANDONED SIGNS

1. Upon written notice by the County, the property owner of record where a *sign* is located will remove the *sign*, if it is unsafe, was unlawfully erected in *violation* of this section after August 1, 1989, or the permitted use related to the *sign* has been abandoned or vacated.

2. After 30 days from the date of the notice, the County may remove or cause to be removed at the expense of the property owner, any *sign* that is not in compliance with this section.
3. If any *sign* poses an immediate threat to public safety, it may be removed immediately.

3.16 LEGAL, NONCONFORMING SIGNS

1. A *sign* will be considered a legal, nonconforming *sign* if it:
 - (A) Does not conform to one or more of the *sign* regulations in this section; and,
 - (B) Existed on the effective date of this Land Use Ordinance; and either conformed to the *regulations* of, or was considered to be a legal, nonconforming *sign* by the Ordinance in effect on the day before the effective date of this Ordinance.
2. A prohibited *sign* existing on August 1, 1989, is considered a legal, nonconforming *sign*.
3. A legal, nonconforming *sign* may be retained in place, if the following conditions are met:
 - (A) The legal, nonconforming *sign* is not expanded, structurally altered, relocated, completely replaced, or removed except to bring the legal, nonconforming *sign* into some greater compliance with the *sign* regulations of this section; and
 - (B) The legal, nonconforming *sign* is maintained in good condition and repair.
4. A legal, nonconforming *sign* damaged or destroyed by Act of God or other circumstances beyond the control of the owner of the *sign* may be repaired, relocated, or replaced.
5. A question of the legal, nonconforming status of a *sign* is decided by the Board of Appeals in a public meeting with public notice given, per the requirements for notice in Article IV, Section 1.6.
6. With thirty (30) days of any decision or determination by any member of the Department on signs, any person may appeal the decision to the Kent County Board of Appeals.

3.17 RELOCATION OF LEGAL, NONCONFORMING SIGNS

A nonconforming *sign* may be relocated for road or sidewalk construction, purchases of right-of-way, or other utility or transportation projects initiated by the County or any other public agency.

SECTION 4 STANDARDS FOR UTILITY-SCALE SOLAR ENERGY SYSTEMS**4.1 SETBACKS TO ACCOMMODATE REQUIRED LANDSCAPE BUFFER**

1. 200 feet from any *lot* line.
2. 200 feet from any road/and or right-of way
3. 200 feet from any road/right-of-way within ½ mile of a town or village boundary that is the gateway into a town or village
4. 200 feet from any residential use or zoning district
5. Setbacks may be reduced to 100 feet for non-residential development with written consent from the property owners whose property is adjacent to the area in which the setback reduction is sought. The Planning Commission shall be the review agency to determine the application of this provision.
6. Setbacks shall be measured from the outermost edge of the perimeter fence that surrounds the solar panel structures and any substations. If another type of perimeter barrier were approved by the Planning Commission, the setbacks shall be from the outer edge of said barrier not the edge next to the solar arrays.

4.2 INSTALLATION AND MAINTENANCE STANDARDS

Solar arrays shall be constructed and maintained according to the following:

1. If solvents are required for cleaning of the solar modules, they must be biodegradable. Any unused solvents must be removed from the subject parcel.
2. All broken or waste solar modules shall be removed from the site subject parcel within 30 days of being taken out of service, including any leaching panels, and the subject parcel shall be maintained in good order.
3. All wiring not on the solar arrays shall be underground except when necessary to connect to the public utility.
4. Transmission wires to connect the project to the utility infrastructure shall not cross a roadway overhead.
5. Any required utility right of way shall be secured through an easement, lease, service agreement or other legally binding document.
6. The solar array shall be enclosed by a perimeter fence or other appropriate barrier. The fence or barrier shall:
 - (A) Secure the facility at all times to prevent unauthorized persons or vehicles from gaining access.
 - (B) All access gates will provide a sign that identifies the responsible parties or owners with current contact information.

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SECTION 4. STANDARDS FOR UTILITY-SCALE SOLAR ENERGY SYSTEMS

7. Noise generated by the facility shall be limited by the project design to 45 dBAs measured at the property line, to be indicated on the site plan by the engineer, except when a back-up generator is needed for maintenance. Construction on the site is exempt from this standard.
8. Solar arrays, including the electrical and mechanical components, shall conform to relevant and applicable local, State, and national codes.
9. To protect adjacent properties, and not interfere with roadways or create a safety hazard, evidence shall be provided that the solar panels are designed to avoid glare and/or reflection with anti-reflective coating or non-glare technology and, if necessary, have been evaluated with a solar glare hazard and analysis tool.
10. Non-array uses such as power storage are not permitted.

4.3 LANDSCAPE BUFFER FOR UTILITY-SCALE SOLAR ENERGY SYSTEMS

1. Any utility scale solar facility shall comply with the requirements of the Forest Conservation Act. Reforestation planting may be incorporated as landscaping.
2. The gross usable area for panels will exclude wetland areas that are regulated by the Maryland Department of the Environment or the U.S. Department of the Interior. Impacts associated with access or interior roads and utility crossings shall only be permitted if the applicant provides the necessary State or federal authorizations for any disturbances.
3. Existing topsoil shall not be removed from the site.
4. A vegetated buffer that is a minimum of 60 feet wide around the perimeter of the site area fronting on road or rights of way that are considered gateways to towns or villages and a minimum of 50 feet for all other applications. This buffer may be located within the setback and shall extend around the entire project with the exception of any boundaries contiguous to preserved, forested lands that are recorded on a plat.
5. Healthy existing vegetation within the designated buffer area may be used to satisfy the specific buffer standards.
6. Non-native plant material shall not total more than 10% of all plantings.
7. Where a phased construction plan is proposed, the landscape plan shall identify the phasing of the plantings applicable to each construction phase.
8. Not more than 25% of any single plant species should be included in the buffer to promote the growth of a natural landscape and avoid monotony and uniformity of the buffer. The vegetation shall be thickly planted and of such species that it will provide an opaque visual barrier that obscures the utility scale solar array from sight once the vegetation reaches maturity or within five years, whichever comes first. A mix of evergreen and deciduous trees, shrubs and beneficial habitat shall be included:
 - (A) A minimum of two staggered rows of evergreen trees that at installation shall be at least 6 feet in height, each planted no more than 10 feet apart. Evergreen

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tree species shall be a varied mixture of compatible types and achieve a height of eight feet in a minimum of 2 years.

- (B) In addition to the evergreen trees, native deciduous or shade trees with a minimum size at installation of 2-inch caliper shall be interspersed to enhance the evergreen screening along with understory trees with a minimum size of installation of 1-inch caliper or 6 feet in overall height or greater if required by the Planning Commission to address gateway areas.
- (C) Shrubs with a minimum size at installation of 24 inches in height or 30 inches in spread.
- (D) The buffer shall include a flowering ground cover for pollinators, warm season grasses and other beneficial habitat. The ground cover seed mixture shall include a minimum of 10 plant species with a minimum of 2 flowering seasons. Lawns outside the required buffer are discouraged; plantings for pollinators are encouraged in all planted areas.
- (E) The height of proposed planting may require alternatives based upon the site elevation and visibility from adjacent properties and roads and/or rights of ways. If necessary, an elevation or perspective illustration exhibit shall be provided with viewpoints from relevant locations around the site for the Planning Commission to consider.

4.4 LANDSCAPE BERM REQUIRED; CONDITIONS FOR EXEMPTION LISTED

A landscape berm shall be provided at a minimum of three (3) feet high to assist in screening. The design of the berm shall be such that the natural drainage patterns of the site will not be altered. The berm requirement may be waived in part or total subject to the following conditions:

1. A minimum of two staggered rows of evergreen trees that at installation are at least 8 feet in height and planted no more than 10 feet apart
2. Interspersed shade trees have a minimum size at installation of 2.5-inch caliper
3. Understory story trees with a minimum size at installation of 1.5-inch caliper or 6 feet in overall height
4. Shrubs with a minimum size at installation of 30 inches in height.
5. The landscaping plan is deemed to screen elevations of the site adequately within 2 years.

4.5 IRRIGATION REQUIRED

Irrigation shall be provided to assist in maintaining plant materials in a healthy condition for all newly created landscape buffer areas. Plants shall be watered in a manner adequate to ensure establishment and survival. The landscape plan shall include a watering schedule appropriate for the proposed plantings, which may include service by on-site irrigation or water truck, until the

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plant material is sufficiently established to survive on natural soil moisture. An irrigation system is subject to the following:

1. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto nontargeted areas such as adjacent properties, roadways, or structures.
2. All automatic irrigation systems shall be designed to minimize water usage and shall be manually shut off during water emergencies or water rationing periods.
3. An alternative form of irrigation for a particular site may be approved through the applicable review process upon determining that underground irrigation is not necessary or available for the type of plant material being proposed.

4.6 MAINTENANCE AGREEMENT REQUIRED

A maintenance agreement for the landscape plan shall be provided with a surety or other financial assurance to cover replacement of the plantings and irrigation systems. All plantings shall be maintained in a live, healthy condition for the duration of the solar array life and shall be replaced by the solar array operator as necessary with appropriately sized plant material as necessary to maintain all required buffering standards.

4.7 LANDSCAPE SURETY REQUIRED

The surety may be provided on a phased basis per the landscape phasing plan and shall be held by the County for a period of three years following planting, after which the County, upon satisfactory inspection of the landscape buffer may release 50% of the surety, and the remaining 50% may be released after an additional two years. The County then reserves the right to inspect and require replacement for the duration of the solar array.

4.8 PROJECT ENTRANCE REQUIREMENTS

Entrances to the project should be designed to ensure that neighboring properties, public rights-of ways and roads are not exposed to an unscreened view through the entranceway. The use of a wire mesh or chain-link gate or fence with vinyl interwoven strips is not acceptable.

4.9 COMPLIANCE WITH FEDERAL AND STATE REQUIREMENTS

The project shall comply with all applicable federal and State regulations, including by not limited to obtaining a Certificate of Public Convenience and Necessity from the Public Service Commission if required, and in the removal and disposal of the utility scale solar array and all of its components.

4.10 COMPLIANCE WITH ALL OTHER PUBLIC LAWS OF KENT COUNTY

The project shall comply with all other applicable regulations, as contained in the Public Laws of Kent County.

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4.11 PROJECT BONDING REQUIREMENTS

The Project shall comply with the bond-related requirements below:

1. A bond, surety letter, or other financial instrument for removal of all solar-related structures and non-vegetative improvements on the site and for the restoration of the site to its pre-project condition shall be submitted, to be based on bona fide written estimates prepared by third-party consultants;
2. The cost estimate shall address provisions for the safe removal and proper disposal of all components of the project, including any components containing hazardous or toxic materials including leachates;
3. An estimate for review by County shall be submitted;
4. Bond shall be maintained for the life of the project;
5. Bonding may be in coordination with other required bonding by the State of Maryland, PSC, PULJ, PPRP, etc.;
6. In the event that no other bonding is required, then a bond in favor of the County shall be required;
7. Said bonding shall include an escalator provision based on changes to the cost of restoration, which shall be evaluated and updated every five years;
8. Said bond shall be for 110% of the above estimate(s) and/or updated estimate(s) from five-year reviews;
9. Said bond shall be redeemable by the County upon a finding that the project has been abandoned, with or without notice from project operators, if project has, in fact, been abandoned by its operators; and
10. The Project will be considered to be abandoned, if there is no electric generation provided to the grid for a period of twelve (12) consecutive months.

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ARTICLE VI. ENVIRONMENTAL REGULATIONS

SECTION 1 GENERAL PROVISIONS

1.1 STATEMENT OF INTENT

The purpose of these standards is to provide for the proper stewardship of the County's natural resources. Specifically, it is the overall goal of the County to maintain the quality of the County's *ecosystem* in the face of continuing activity, growth, and change. In general, the regulations in Article VI are requirements set forth by the State of Maryland in the Maryland Code (State law) and regulations adopted by various State agencies in the Code of Maryland Regulations (COMAR). In some cases, there are formal processes by which exceptions may be granted, but in most cases these regulations are requirements, and the County is charged by the State with enforcing them.

1.2 MARYLAND CRITICAL AREA AND NON-CRITICAL AREA REGULATIONS

The 12 zoning districts in this Land Use Ordinance comprise two categories. The first category is the zoning districts for land located in the State of Maryland's Critical Area for the Chesapeake and Atlantic Coastal Bays. These are the RCD, CAR, CCA, M, and ECCA. State of Maryland Critical Area regulations apply in these zoning districts. The remaining districts are outside the Critical Area. Critical Area regulations do not apply; Forest Conservation regulations apply. Blue highlighted Sections apply only to Critical Area zoning districts. Green highlighted Sections apply only to non-Critical Area zoning districts. Sections with no highlighting apply to all zoning districts.

Article VI Environmental Regulations Applicability	AZD	RCD	RC	CAR	CR	V	IV	C	CCA	M	EC	ECCA
Section 1. General Provisions	X	X	X	X	X	X	X	X	X	X	X	X
Section 2. Critical Area Program		X		X					X	X		X
Section 3. Forest Conservation Act	X		X		X	X	X	X			X	
Section 4. Erosion & Sediment Control	X	X	X	X	X	X	X	X	X	X	X	X
Section 5. Stormwater Management	X	X	X	X	X	X	X	X	X	X	X	X
Section 6. Floodplain Management*	X	X	X	X	X	X	X	X	X	X	X	X

* For properties located in a floodplain

1.3 GENERAL ENVIRONMENTAL STANDARDS

These regulations apply to all properties in all zoning districts and for all processes in Article IV. Applicants are required to identify the subject matter listed below and address all relevant issues.

1. **Agriculture.** Whenever possible, agricultural operations will follow agricultural *best management practices*, and property owners are encouraged to develop and implement soil conservation and water quality plans, nutrient, and pest management plans.

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SECTION 1. GENERAL PROVISIONS

2. **Anadromous fish.**
 - (A) Concrete riprap or other artificial surfaces will not be installed on the bottom of natural streams unless it can be demonstrated that water quality and fishery habitat will be improved.
 - (B) Physical *alteration* of a stream, including but not limited to channelization, that interferes with the movement of fish will be prohibited.
 - (C) The construction or placement of dams or other structures that would interfere with or prevent the movement of spawning fish or larval forms in streams will be prohibited.
 - (D) Where practical, the removal of existing barriers is encouraged. Construction, repair, or maintenance activities associated with bridges or other stream crossings or with utilities and roads which require disturbance to the buffer or stream protection corridor, or which occur in stream will be prohibited between March 1 and May 15.
3. **Forest Interior Dwelling Birds.** New *development* will minimize impact on forest interior dwelling birds. Whenever possible, riparian forest will be expanded.
4. **Natural heritage areas** and locations considered for Areas of Critical State Concern will be preserved whenever possible. These areas are identified in Section 3.
5. **Non-tidal wetlands.** *Non-tidal wetlands* will be protected according to the *regulations* of the State of Maryland, Army Corps of *Engineers*, United States Fish and Wildlife Service, Environmental Protection Agency, and all other applicable State and Federal *Regulations*.
6. **Poorly drained and flood-prone property.** When possible, land subject to poor drainage or periodic flooding will not be developed for any use that might involve danger to health, life, or property or aggravate floods. If developed, the property owner will agree to make any improvements necessary to render the property safe for *development*.
7. **Threatened and endangered species** and *species in need of conservation* will be checked and noted by the *applicant* before any approvals are granted by the Planning Director, or Planning Director's designee, or *Planning Commission*. The Federal or State guidelines (whichever is stricter) for habitat protection will be followed during *development*. Plans will also include provisions for continuance of the habitat protection after *development*. This can include *conservation easements*, cooperative agreements, special provisions in *forest management plans*, and donation or sale to a third party.
8. **Tributary Streams.** New *development* or *redevelopment* will provide a **100-foot** naturally vegetated *stream protection corridor* along all *tributary streams* to protect such streams and the natural course and *riparian habitat* of these streams, habitat protection areas, or any other significant habitat identified by the Department. New *development activities*, including *structures*, parking areas, septic systems, and similar *impervious surfaces* will not be permitted in the *stream protection corridor*. Roads that cross the *stream protection corridor* will be minimized.

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SECTION 1. GENERAL PROVISIONS

The *Planning Commission* may modify the *stream protection corridor* when the following can be demonstrated that: (a) a reduced corridor achieves significant water quality and habitat improvements equal to the required corridor; (b) more than 50% of the corridor on the site is impervious or more than 75% of the corridor on the site is disturbed with stone, septic systems, decks, or other obvious human impacts; and, (c) the site will include all contiguous parcels under single ownership.

9. **Vegetation.** *Development* will minimize the removal of vegetation, protect remaining vegetation, replace removed vegetation onsite, and plant permeable areas, if practicable. *Native plants* are preferred and, in some cases, required by State law.
10. **Wildlife corridors** will be created whenever feasible. Fragmentation of natural habitat areas is prohibited in any residential zoning district, and fragmentation of natural habitat areas will be minimized in all other zoning districts. *Hedgerows* are desirable as buffers.

SECTION 2 CRITICAL AREA PROGRAM**2.1 PURPOSE AND GOALS**

1. The General Assembly enacted the Critical Area Act for the following purposes.
 - (A) To establish a resource protection program for the Chesapeake Bay and Atlantic Coastal Bays and their tributaries by fostering more sensitive development activity for certain shoreline areas so as to minimize impacts to water quality and natural habitats; and
 - (B) To implement a resource protection program on a cooperative basis between the State and affected local governments, with local governments establishing and implementing their programs in a consistent and uniform manner subject to State Criteria and oversight.
2. The goals of the Kent County Critical Area Program are to accomplish the following:
 - (A) Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or run off from surrounding lands;
 - (B) Conserve fish, wildlife, and plant habitat; and
 - (C) Establish land use policies for development in the Critical Area which accommodate growth as well as address the environmental impacts that the number, movement, and activities of people may have on the area.

2.2 IMPLEMENTATION

1. Notwithstanding any provision in this ordinance, or the lack of a provision in this ordinance, all of the requirements of Natural Resources Article 8-1801 through 8-1817 and COMAR Title 27 shall apply to, and be applied by, Kent County as minimum standards.
2. In the case of conflicting provisions, the more restrictive provision applies.

2.3 CRITICAL AREA DESIGNATIONS

1. The extent of the Critical Area shall include:
 - (A) All waters of and lands under the Chesapeake Bay and its tributaries to the head of tide, and all state and private wetlands designated under Title 16 of the Environment Article of the Annotated Code of Maryland; and
 - (B) All land and water areas within 1,000 feet beyond the landward boundaries of state or private wetlands and the heads of tides designated under Title 16 of the Environment Article of the Annotated Code of Maryland.
2. Within the designated Critical Area, all land is assigned one of the following land classifications, based on land uses and development in existence on December 1, 1985.

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SECTION 2. CRITICAL AREA PROGRAM

- (A) Resource Conservation Area (RCA).
- i. Resource Conservation Areas are those areas characterized by *nature-dominated* environments (that is, *wetlands, forest* and abandoned fields) and resource-utilization activities (that is, *agriculture, forestry, fisheries' activities or aquaculture*). As of December 1, 1985, these areas had at least one of the following features:
 1. *Density* was less than one *dwelling unit* per 5 acres; or
 2. Dominant land use was in *agriculture, wetland, forest, barren land, surface water, or open space*.
 - ii. Zoning districts within the Resource Conservation Area of the *Critical Area*
 1. Resource Conservation (RCD)
- (B) Limited Development Area (LDA).
- i. Limited *Development* Areas are those areas which are currently developed in low or moderate intensity uses. They also contain areas of plant and animal habitats, and the quality of runoff from these areas has not been substantially altered or impaired. As of December 1, 1985, these areas had at least one of the following features:
 1. Housing *density* ranging from one *dwelling unit* per 5 acres up to four *dwelling units* per acre;
 2. Areas not dominated by *agriculture, wetland, forest, barren land, surface water or open space*;
 3. Areas meeting the conditions of an intense *development* area but not concentrated in an area of at least 20 acres; or
 4. Areas having public sewer or public water or both.
 - ii. Zoning districts within the Limited Development Area:
 1. *Critical Area* Residential (CAR)
 2. Commercial *Critical Area* (CCA)
 3. Employment Center *Critical Area* (ECCA)
- (C) Intensely Developed Area (IDA).
- i. Intense *Development* Areas are those areas where residential, commercial, institutional and/or industrial *developed land* uses predominate and where relatively little natural habitat occurs. As of December 1, 1985, these areas had at least one of the following features:
 1. Housing density equal to or greater than four dwelling units per acre;

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2. Industrial, institutional, or commercial uses concentrated in the area;
or
3. Public sewer and water collection and distribution systems were currently serving the area and housing density was greater than three dwelling units per acre; and
4. These areas are concentrated in an area of at least 20 acres.
- ii. Zoning districts within the Intense *Development Area* of the *Critical Area*:
 1. Marine (M)
 2. Mixed Use District – Critical Area
- iii. Uses or parcels that have received growth allocation:
 1. *Conference centers, resorts, retreats, campgrounds*, and other uses that have received growth allocation.
 2. Commercial *Critical Area* parcels that have received growth allocation.

2.4 DEVELOPMENT STANDARDS

1. Lot Coverage in an LDA or RCA

Except as otherwise stated below, lot coverage shall not exceed 15% of a lot or parcel, or that portion of a lot or parcel that is designated LDA or RCA.

- (A) Additional lot coverage in the LDA or RCA is permitted if official documentation (plats, deed records) demonstrates that the lot existed on December 1, 1985. Lot coverage for such lots shall be limited as shown below.

Lot Size (square feet)	Maximum Lot Coverage
0 to 8,000	25% of parcel plus 500 square feet
8,001 to 21,780	31.25% of parcel
21,781 to 36,300	5,445 square feet
36,301 to 43,560	No increase over 15%

- (B) If an individual lot one acre or less in size is part of a subdivision approved after December 1, 1985, the total lot coverage for the entire subdivision may not exceed 15%, and the lot coverage of an individual lot may not exceed 25%.
- (C) Lots impacted by 2008 revisions to impervious surface limits. A lot or parcel not in compliance with the lot coverage requirements, but legally developed as of July 1, 2008, in accordance with the impervious surface requirements in effect at the time of construction, is legally nonconforming for purposes of lot coverage requirements.

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- (D) Properties granted growth allocation in accordance with the Kent County Growth Allocation Policy may be exempt from the 15% lot coverage requirement.
2. Steep Slopes
- (A) Development on slopes 15 percent or greater, as measured before development, shall be prohibited unless the project is the only effective way to maintain or improve the stability of the slope.
 - (B) Development on slopes 15 percent or greater that are over six feet vertically as measured before development shall require a variance from the Board of Appeals.
3. Clearing in an LDA or RCA
- (A) Forest clearing for lots created before December 1, 1985.
 - i. **Lots one-half acre or less.** Forest clearing on lots that are one-half acre or less in size and that were in existence on or before December 1, 1985, shall be limited to the minimum necessary to accommodate a house or other structure, initial septic system, driveway, and reasonable amount of yard or required parking, but the clearing may not exceed 6,534 square feet. Clearing above 6,534 square feet requires a variance.
 - ii. **Lots greater than one-half acre.** Forest clearing on lots that are greater than one-half acre in size that were in existence on or before December 1, 1985, shall be limited to the minimum necessary to accommodate a house or other structure, initial septic system, driveway, and reasonable amount of yard or required parking and may not exceed 20% of the forest, except that the Department of Planning, Housing, and Zoning may approve clearing up to 30% for the installation of a required septic system. Clearing above 30% requires a variance.
 - (B) Developed woodland clearing for lots created before December 1, 1985.
 - i. **Lots one-half acre or less.** Developed woodland clearing on lots that are one-half acre or less in size and that were in existence on or before December 1, 1985, shall be limited to the minimum necessary to accommodate a house or other structure, initial septic system, driveway, and reasonable amount of yard or required parking.
 - ii. **Lots greater than one-half acre up to one acre.** Developed woodland clearing on lots that are greater than one-half acre and up to one acre in size that were in existence on or before December 1, 1985, shall be limited to the minimum necessary to accommodate a house or other structure, initial septic system, driveway, and reasonable amount of yard or required parking, and may not exceed 30% without an administrative variance.

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- iii. **Lots greater than one acre.** Developed woodland clearing on lots that are greater than one acre in size that were in existence on or before December 1, 1985, shall be limited to the minimum necessary to accommodate a house or other structure, initial septic system, driveway, and reasonable amount of yard or required parking, and may not exceed 30% without a variance.
- (C) **Clearing for subdivisions created after December 1, 1985.** Clearing of subdivisions created after December 1, 1985, may not exceed 30% of the forest or developed woodland without a variance.
- 4. Clearing mitigation and afforestation.
 - (A) **Applicability.** This section applies to afforestation and mitigation for clearing of forest or developed woodland for development on all lots located in the LDA and RCA.
 - (B) **Forest mitigation for lots created before December 1, 1985.** Forest clearing on lots in the critical area that were in existence before December 1, 1985 is subject to forest mitigation as follows.
 - i. **Lots one-half acre or less.** Forest mitigation on lots that are one-half acre or less in size shall equal the area to be cleared.
 - ii. **Lots greater than one-half acre.** Forest mitigation on lots that are greater than one-half acre in size for clearing less than 20% shall equal the area to be cleared. Mitigation for clearing between 20% and 30% shall be calculated at a rate of 1.5 times the area to be cleared.
 - (C) **Developed woodland mitigation for lots created before December 1, 1985.** Developed woodland clearing on lots in the critical area that were in existence before December 1, 1985 is subject to developed woodland mitigation as follows.
 - i. **Lots one-half acre or less.** Developed woodland mitigation on lots one-half acre or less in size shall equal the area to be cleared.
 - ii. **Lots greater than one-half acre and up to one acre.** Developed woodland mitigation on lots that are greater than one-half acre and up to one acre in size shall equal the area to be cleared.
 - iii. **Lots greater than one acre.** Developed woodland mitigation greater than one acre in size with less than 30% clearing shall equal the area to be cleared.
 - (D) **Mitigation for subdivisions created after December 1, 1985.** Mitigation for subdivisions created after December 1, 1985 for clearing less than 20% shall equal the area to be cleared. Mitigation for clearing between 20% and 30% shall be calculated at a rate of 1.5 times the area to be cleared.

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- (E) **Mitigation for variances to clearing limitations.** Mitigation for variances to the required clearing limitations shall be calculated at a rate of three times the additional area to be cleared granted by the variance decision.
- (F) If an applicant is authorized to clear any percentage of forest or developed woodland, the remaining percentage shall be maintained through recorded, restrictive covenants or similar instruments approved by the County.
- (G) Replacement of trees shall be of a species similar to that which was removed or a species appropriate to the replanting site.
- (H) If the acreage of the *site* limits the application of *reforestation* requirements, *forest* may be created on other lands in the *Critical Area* including County lands or a fee in an amount determined by the Maryland Department of Natural Resources to be the equivalent to the value of the required *forest* may be paid to the County Commissioners of Kent County. These funds shall be placed in a dedicated fund used to ensure the restoration or establishment of an equivalent *forest* area in the *Critical Area* or riparian areas.
- (I) **Afforestation on a site with less than 20% forest or developed woodland.** For a site with less than 20% forest or developed woodland, afforestation shall occur to the extent required in the following table and be maintained through protective easements.

New subdivision or new development on a vacant lot	Afforestation equal to 20% of the site
Substantial alteration, new lot with an existing dwelling unit or the conversion of a land use on a parcel or lot to another land use	Afforestation based on total lot coverage, not to exceed 20% of the site
Addition or accessory structure	Afforestation based on net increase in lot coverage, not to exceed 20% of the site

- (J) **Reforestation and afforestation planting.** Reforestation and afforestation planting shall be established first within the 100-foot buffer, if feasible, and shall include a combination of native species of trees, shrubs, and ground cover approved by the Department of Planning, Housing, and Zoning, or, for land within the buffer, in accordance with COMAR, Title 27.
- (K) **Clearing in violation of the law.** Forests, woodlands, woody vegetation, or individual non-hazardous trees cleared without a grading permit or other required approval, or in excess of allowed clearing limits, shall be replanted at three times the area of the cleared forest, woodlands or woody vegetation, and for individual trees cleared, three times the number of individual trees cleared, or a fee in an amount determined by the Maryland Department of Natural

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Resources to be the equivalent to the value of the required *forest* may be paid to the County Commissioners of Kent County. These funds shall be placed in a dedicated fund used to ensure the restoration or establishment of an equivalent *forest* area in the *Critical Area* or riparian areas.

- (L) In addition, all proposed development shall meet the following standards applicable to forest or developed woodland clearing:
- i. Sediment, erosion and grading permits shall be issued before forest or developed woodland is cleared. Forest cleared prior to obtaining permits or that exceeds the maximum area allowed shall be replanted at three times the acreage of the cleared forest.
 - ii. Subject to the approval of the County, owners or developers shall provide surety suitable to ensure that any plantings that die within twenty-four (24) months of installation shall be replaced.

2.5 TIMBER HARVEST

1. Forest management plans shall be required for all timber harvest occurring within any one-year interval and which affect one or more acres in forest and developed woodlands in the Critical Area. The plans shall be prepared by a registered professional forester and be reviewed and approved by the Maryland Forest, Park and Wildlife Service through the District Forestry Boards and the project forester. Plans shall be filed with the Department of Planning and Zoning.
2. Plans shall include measures to protect surface and ground water quality and identify whether the activities will disturb or affect Habitat Protection Areas as set forth in the Land Use Ordinance or identified on the Habitat Protection Areas Map.
3. The plans shall include protective measures for Habitat Protection Areas and shall provide for the continuity of habitat. The plans shall address mitigation through forest management techniques which include scheduling size, timing, and intensity of harvest cuts, afforestation, and reforestation.
4. The cutting and clearing of trees within the minimum 100-foot buffer are permitted provided that:
 - i. Existing riparian forests of 300 x 300 feet or more and forest areas used by forest interior dwelling birds and other wildlife species shall be managed according to the guidelines developed by the Maryland Department of Natural Resources.
 - ii. When timber harvesting is being considered, a site survey for forest interior dwelling birds shall be done. The Planning Director may waive a site survey for forest interior dwelling birds provided the site is managed for all for all forest interior dwelling bird species. Cutting and building shall be restricted to safe times. The date range is from April 1 through August 31 for properties where specific species have not been identified.

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- iii. During timber harvest, corridors of existing forest or woodland vegetation shall be maintained to provide effective connections between wildlife habitat areas.
- iv. Commercial harvesting by selection or by clear-cutting of Loblolly Pine and Tulip Poplar may be permitted to within 50 feet of the landward edge of the mean high water line of tidal water and perennial tributary streams or the edge of the tidal wetlands provided that the cutting does not occur in the Habitat Protection Areas and that cutting is conducted pursuant to the requirements of the sediment control and non-tidal wetlands requirements of this Ordinance and in conformance with a buffer management plan prepared by a registered forester and approved by the Department of Natural Resources. The plan shall be required for all commercial harvests within the minimum 100-foot buffer regardless of the size of the area to be cut and shall contain the following minimum requirements:
 - 1. That disturbance to the stream banks and shorelines shall be avoided.
 - 2. That the area disturbed or cut shall be replanted, or allowed to regenerate in a manner that assures the availability of cover and breeding sites for wildlife, and reestablishes the wildlife corridor function of the buffer; and
 - 3. That the cutting does not involve the creation of logging roads and skid trails within the minimum 100-foot buffer.
- 5. Commercial harvesting of trees by any method may be permitted to the edge of intermittent streams if the cutting and removal is done in accordance with a Buffer Management Plan approved by the Department of Natural Resources Forester.

2.6 AGRICULTURE**1. Agriculture**

No new agricultural land shall be created by:

- (A) Draining, filling, or diking any palustrine wetlands that have a seasonally flooded or wetter water regime unless the impact is mitigated.
- (B) Clearing of forest or woodland on soils with a slope greater than 15% or on soils with a K Value greater than 0.35 and slope greater than 5%.
- (C) Clearing of existing natural vegetation within the buffer.
- (D) Clearing of forest if the clearing will affect water quality or habitat protection areas as designated in this Ordinance.

2.7 THE BUFFER

- 1. Purpose. The Buffer is a habitat protection area that shall be established and managed to achieve or enhance the following functions:
 - i. Remove or reduce the sediments, nutrients, and potentially harmful or toxic substances in runoff entering the Chesapeake Bay and its tributary streams;

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- ii. Minimize the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources;
- iii. Maintain an area of transitional habitat between aquatic and upland ecological communities;
- iv. Maintain the natural environment of streams;
- v. Protect riparian wildlife habitat; and
- vi. Maintain natural vegetation.

2. Applicability and Delineation

An applicant for a development activity or a change in land use shall apply all the required standards as described below. The Buffer shall be delineated in the field and shall be shown on all applications as follows:

- (A) A Buffer of at least 100 feet is delineated, and expanded as described in 2.7.2(C), based on existing field conditions landward from:
 - i. The mean high-water line of a tidal water;
 - ii. The edge of each bank of a tributary stream; and
 - iii. The upland boundary of a tidal wetland.
- (B) Applications for subdivision or site plan approval located on land located within the RCA shall include a minimum Buffer of at least 200 feet from tidal waters or tidal wetlands, and 100 feet from a tributary stream, excluding for subdivisions only, one parent parcel, where the buffer may be 100 feet wide.
 - i. The 200-foot Buffer may be reduced if strict application of the 200-foot Buffer would preclude the creation of a new lot either by subdivision at a density of one dwelling unit per 20 acres, or through an intrafamily transfer subdivision.
 - ii. The reduced Buffer shall be the minimum necessary to accommodate a dwelling and a sewage reserve area, as determined by the Planning Director, but no less than 100 feet.
- (C) The Buffer shall be expanded beyond 100 feet as described in 2.7.2(A) above, and beyond 200 feet as described in 2.7.2(B) above, to include and extend beyond contiguous sensitive areas, such as soils with slopes 15% or greater, hydric soils, or highly erodible soils.
 - i. The Buffer shall be expanded for slopes of 15% or greater (steep slopes) in accordance with the following. Also see "Buffer Expansion" as defined in Article VII.
 - 1. If a steep slope is contained completely within the Buffer, Buffer expansion is required only to provide a Buffer of at least 25 feet from the top of the slope.

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2. If a steep slope is partially within or contiguous to the Buffer, the Buffer shall be expanded four feet for every 1% of slope beyond the required Buffer, or 25 feet from the top of the slope, whichever is greater in extent, except as provided in Subsection 3 below.
3. The Planning Commission may approve a Buffer expansion limited to 25 feet from the top of the slope, even if greater expansion would be required based on the Subsection 2 above, if the Planning Commission determines that the slope has one or more of the following characteristics:
 - a. Steep slopes less than 6 feet vertically as measured before development, such as agricultural ditches;
 - b. Steep slopes that are isolated and less than 10,000 square feet in area, irrespective of property lines;
 - c. Steep slopes with width of less than 25 feet where the slope crosses the 100-foot Buffer boundary; or
 - d. Similar characteristics exist that result in a narrow and/or isolated area of steep slopes.
- ii. The following criteria shall be used to measure the expanded Buffer for highly erodible soils or hydric soils contiguous to the Buffer:
 1. For a nontidal wetland of special state concern, expand the Buffer to include the upland boundary of the wetland and its regulated 100-foot Buffer;
 2. For other nontidal wetlands, expand the Buffer to include the upland boundary of the nontidal wetland;
 3. For highly erodible soils or hydric soils with a slope of 5% or greater, expand the Buffer to the lesser of the landward edge or 300 feet, including the Buffer width required under Subsection 2(B) above.
- iii. If the Buffer is contiguous to hydric or highly erodible soils on a slope less than 15%, and the Buffer is on a lot created before January 1, 2010, development activity may be approved in the expanded Buffer if:
 1. The development activity is in the expanded portion of the Buffer, but not in the Buffer required under Subsection 2(B) above;
 2. The Buffer occupies at least 75% of the lot or parcel; and
 3. Mitigation occurs at a 2:1 ratio, based on the lot coverage of the proposed development activity that is in the expanded Buffer.
- (D) In Modified Buffer Areas, under certain conditions, Buffer setbacks may vary in accordance with provisions set forth in this Ordinance.
3. Maintaining the Buffer

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- (A) The Buffer shall be maintained in natural vegetation and managed to achieve or enhance the functions stated in Subsection 1 above.
- (B) New development activities, including structures, fences with footers, roads, parking areas and other impervious surfaces, mining and related facilities, or septic systems, are not permitted in the Buffer, except for those necessarily associated with water-dependent facilities or individual private piers.
- (C) Lot coverage in the Buffer may not exceed the minimum amount necessary for water-dependent facilities, regardless of the Critical Area classification or the size of the parcel or lot, except:
 - i. In Modified Buffer Areas;
 - ii. If a variance is granted in accordance with this Ordinance.
- (D) Cutting, clearing, and removal of existing vegetation, including understory trees, shrubs and ground cover within the Buffer is prohibited except as authorized by a Buffer Management Plan.
- (E) Existing areas of public access to the shoreline, such as footpaths, scenic drives, and other public recreational facilities, shall be maintained, with new facilities encouraged in the IDA.
- (F) Vegetation may be removed for one pathway to the shore or piers, subject to the approval of a Buffer Management Plan.
 - i. The pathways shall be:
 - 1. Direct and no longer than necessary;
 - 2. No wider than six feet; and
 - 3. Constructed to maintain as much canopy as possible.
 - ii. Pathway surfaces shall be:
 - 1. Grass or similar low vegetation, stabilized only with pervious wood chips or,
 - 2. Materials such as boards, asphalt, or gravel, provided that mitigation is provided, in accordance with a buffer management plan, that covers two times the area of the hard surfaced pathway.
 - iii. In areas of steep slopes, wooden stairways may be constructed as approved by the Planning Director.
- 7. Normal and customary maintenance of lawns located in the Buffer may continue until approval of a development activity requiring a buffer management plan.
- 4. Buffer establishment.
 - (A) The requirements of this regulation are applicable to:
 - i. A development or redevelopment activity that occurs on a lot or parcel that includes a Buffer to tidal waters, a tidal wetland, or a

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tributary stream if that development or redevelopment activity is located outside the Buffer; and

- ii. The approval of a subdivision that includes a Buffer to tidal waters, a tidal wetland, or a tributary stream.
- (B) If an applicant for a subdivision of a lot uses or leases the lot for an agricultural purpose, the applicant:
- i. Shall submit a Buffer Management Plan under Section G of this Part which must be approved prior to recordation of the subdivision plat.
 - ii. If authorized by the local jurisdiction, may delay implementation of the buffer management plan until the use of the lot is converted to a nonagricultural purpose.
- (C) The requirements of this regulation are not applicable to an in-kind replacement of a structure.
- (D) An applicant shall establish the Buffer in vegetation in accordance with the table below and Section E of this Part; and to provide a Buffer Management Plan under Section G of this Part for the following types of applications:
- i. A subdivision;
 - ii. Conversion from one land use to another land use on a lot or a parcel; or
 - iii. Development on a lot or a parcel created before January 1, 2010.
- (E) When the Buffer is not fully forested or is not fully established in existing, naturally occurring woody or wetland vegetation, an applicant shall establish the buffer to the extent required in the following table:

BUFFER ESTABLISHMENT REQUIREMENTS	
Development Category	Extent of buffer establishment required
New development on a vacant lot created prior to April 12, 1988	Establish the buffer based on total lot coverage outside the buffer
New development on vacant lot created after April 12, 1988	Fully establish the buffer
New subdivision or new lot	Fully establish the buffer
New lot with an existing dwelling unit	Establish the buffer based on total lot coverage outside the buffer
Conversion of a land use on a parcel or lot to another land use	Fully establish the buffer
Addition or accessory structure	Establish the buffer based on net increase in lot coverage outside the buffer
Substantial alteration (total footprint is increased by 50% or more)	Establish the buffer based on total lot coverage outside the buffer

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- (F) Any lot coverage removed from the Buffer may be deducted from the total cumulative amount of establishment required if:
- i. The lot coverage existed before the date of local program adoption or was allowed by local procedures; and
 - ii. The total area is stabilized.

5. Mitigation for impacts to the Buffer.

An applicant for a development activity that includes disturbance to the Buffer shall mitigate for impacts to the Buffer and shall provide a Buffer Management Plan in accordance with the standards set forth in this Part.

- (A) All authorized development activities shall be mitigated based on the ratios noted in the table below, in addition to the area of canopy coverage removed for an individual tree, developed woodland or forest:

BUFFER MITIGATION RATIOS		
Activity	Minimum Mitigation Ratio	
	<i>Permanent Disturbance</i>	<i>Temporary Disturbance</i>
Septic on a lot created before April 12, 1988, if located in existing grass or if clearing is not required	Not applicable	0
Septic system in a forest or developed woodland on a lot created before April 12, 1988, if clearing is required	1:1	Not applicable
Shore erosion control	1:1	1:1
Riparian water access	2:1	1:1
Development of a water-dependent facility or activity under COMAR 27.01.03	2:1	1:1
Variance	3:1	1:1
Violation	4:1	Not applicable

- (B) For the removal of a dead tree, the affected area shall be stabilized with native groundcover or other native vegetation as necessary.
- (C) The removal of a diseased, dying, invasive, or hazardous tree shall be mitigated with one tree of at least ¾-inch caliper for each tree removed or the affected area shall be stabilized in native woody vegetation if a tree cannot be replanted due to space constraints.
- (D) Any lot coverage removed from the Buffer may be deducted from the total cumulative amount of mitigation required if:

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- i. The lot coverage existed before the date of local program adoption or was allowed by local procedures; and
 - ii. The total area is stabilized.
 - (E) Planting for mitigation shall be planted onsite within the Buffer. If mitigation planting cannot be located within the Buffer, then plantings may be allowed in the following order of priority:
 - i. On-site and adjacent to the Buffer; and
 - ii. On-site elsewhere in the Critical Area.
 - (F) The installation or cultivation of new lawn or turf in the Buffer is prohibited.
 - (G) As applicable to a site, an applicant shall restore any area in the Buffer that is temporarily disturbed by a development activity to pre-disturbance conditions.
6. Buffer planting standards.
- An applicant that is required to plant the Buffer to meet establishment or mitigation requirements shall apply the following planting credits and standards:
- (A) If planting to meet a mitigation requirement, the following combination of plantings may be used:
 - i. If required to plant less than 1 acre, the entire requirement must be met using landscape stock as noted in the Planting Credits table below.
 - ii. If required to plant 1 acre or more, at least 50% of the planting requirement may be met in landscape stock per the table below and the remainder may be met in flexible stock per the Planting Credits table.
 - (B) If planting to meet an establishment requirement, the following combination of plantings may be used:
 - i. If required to plant less than $\frac{1}{4}$ acre, the entire requirement must be met using landscape stock per the Planting Credits table.
 - ii. If required to plant at least $\frac{1}{4}$ acre and up to 1 acre, at least 25% of the requirement must be met using landscape stock per the Planting Credits table and the remainder may be met in flexible stock per the Planting Credits table.
 - iii. If required to plant more than 1 acre, at least 10% of the requirement must be met using landscape stock per the table below and the remainder may be met in flexible stock per the Planting Credits table.
 - (C) Per COMAR 27.01.09.01-2, a variance to the planting and mitigation standards of this Ordinance is not permitted.
7. Planting credits.

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- (A) If required to plant using landscape stock, the following planting sizes and credit shall be used and shall be 100 percent guaranteed for at least 2 years after planting is completed:

LANDSCAPE STOCK CREDIT			
Vegetation Type	Minimum Size Eligible for Credit	Maximum Credit Allowed (Square Feet)	Maximum Percentage of Landscape Stock Credit
Canopy Tree	2-inch caliper	200	Not Applicable
Canopy Tree	¾-inch caliper	100	Not applicable
Understory Tree	¾-inch caliper	75	Not applicable
Large Shrub	3 feet high	50	30%
Small Shrub	18 inches high	25	20%
Herbaceous perennial	1 quart or based on the area covered by plugs or seed mix	2	10%
Planting Cluster A (For less than ½ acre of planting)	1 canopy tree; and 3 large shrubs or 6 small shrubs of size listed above	300	Not applicable
Planting Cluster B (For less than ½ acre of planting)	2 understory trees; and large shrubs or 6 small shrubs of size listed above	350	Not applicable

- (B) The County may authorize an applicant to increase the percentage of large shrubs, small shrubs, or herbaceous perennials if:
- The Buffer has existing canopy coverage of at least 50 percent; or
 - There are verified site constraints that preclude canopy plantings, including severely eroding slopes, saltwater intrusion, predominately sandy soils, or unconsolidated fill.
- (C) The following flexible planting stock may be used if authorized under other sections of this Part:

FLEXIBLE PLANTING STOCK			
Stock Size of Trees Only	Required # of Stems/Acre	Survivability Requirement	Minimum Financial Assurance Period After Planting
Bare-root seedlings or whip	700	50 percent	5 years

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FLEXIBLE PLANTING STOCK			
Stock Size of Trees Only	Required # of Stems/Acre	Survivability Requirement	Minimum Financial Assurance Period After Planting
½-inch to 1-inch container grown trees	450	75 percent	2 years
More than 1-inch container grown trees	350	90 percent	2 years

8. Required Submittal of Buffer Management Plans.

An applicant that is required to plant the Buffer to meet establishment or mitigation requirements shall submit a Buffer Management Plan in accordance with COMAR 27.01.09.01-3. The provisions of this Part do not apply to maintaining an existing grass lawn or an existing garden in the Buffer.

- (A) Any permit for a development activity that requires Buffer establishment or Buffer mitigation will not be issued until a Buffer Management Plan is approved by the Department of Planning, Housing, and Zoning.
- (B) An applicant may not obtain final approval of a subdivision application until the Buffer Management Plan has been reviewed and approved by the Department of Planning, Housing and Zoning pursuant to the provisions in Article IV.
- (C) The Department of Planning, Housing and Zoning may not approve a Buffer Management Plan unless:
 - i. The plan clearly indicates that all planting standards under Section 2.7.6 of this Part will be met; and
 - ii. Appropriate measures are in place for the long-term protection and maintenance of all Buffer areas.
- (D) For a Buffer Management Plan that is the result of an authorized disturbance to the Buffer, a permit authorizing final use and occupancy will not be issued until the applicant:
 - i. Completes the implementation of a Buffer Management Plan; or
 - ii. Provides financial assurance to cover the costs for:
 - 1. Materials and installation; and
 - 2. If the mitigation or establishment requirement is at least 5,000 square feet, long-term survivability requirements as set forth in COMAR 27.01.09.01-2.
- (E) Concurrent with recordation of a subdivision plat, an applicant shall record a protective easement for the Buffer.

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- (F) If an applicant fails to implement a Buffer Management Plan, that failure shall constitute a violation of this Ordinance. A permit for any development activity will not be issued for a property that has the violation.
- (G) An applicant of a subdivision or of a site plan for a multifamily, commercial, industrial, or institutional use shall post permanent signs prior to final recordation in accordance with COMAR 27.01.09.01-2.
- (H) Buffer management plans that include natural regeneration shall follow the provisions of COMAR 27.01.09.01-4.

9. Fee-in-lieu of Buffer mitigation.

A fee in-lieu for mitigation will be collected if the planting requirements of 2.7.5 of this Part cannot be fully met onsite, in accordance with the following standards:

- (A) Fee-in-lieu monies shall be collected and held in a special fund, which may not revert to the County's general fund;
- (B) Fee-in-lieu shall be assessed at \$1.50 per square foot of required Buffer mitigation;
- (C) A portion of fee-in-lieu money can be used for management and administrative costs; however, this cannot exceed 20% of the fees collected; and
- (D) Fee-in-lieu monies shall be used for the following projects:
 - i. To establish the Buffer on sites where planting is not a condition of development or redevelopment;
 - ii. For water quality and habitat enhancement projects as approved by the Critical Area Commission or by agreement between Kent County and the Critical Area Commission.

2.8 MODIFIED BUFFER AREA PROVISIONS

1. Applicability

- (A) Modified Buffer Areas (MBAs) are areas of the 100-foot Buffer that have been mapped by Kent County and approved by the Critical Area Commission.
- (B) The purpose of MBAs is to accommodate limited use of the Buffer under the provisions of this Section, while protecting water quality and wildlife habitat to the greatest extent possible.

2. Mapping Standards

The following standards shall apply for the mapping of new Modified Buffer Areas:

- (A) Only lots of record as of December 1, 1985, are eligible for mapping as Modified Buffer Areas (MBAs).

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- (B) The parcel or lot being considered for MBA status shall contain a Buffer that was significantly impacted by development at the time of program adoption and that prevents the Buffer from fulfilling its functions.
 - (C) Developed parcels or lots shall contain a Buffer intrusion by the principal structures (excluding utilities or septic systems).
 - (D) Undeveloped or vacant parcels or lots (i.e., infill) may be designated as a MBA if development within the Buffer cannot be avoided based on the size of the parcel or lot, area of the parcel or lot within the Buffer, or the surrounding pattern of development.
 - (E) If only part of a parcel or lot meets the criteria for designation as a Modified Buffer Area, then only portions of the parcel or lot shall be designated as a Modified Buffer Area. The portion of the parcel designated as a Modified Buffer Area will be subject to the Modified Buffer Area requirements. Portions of the property that are not designated as a Modified Buffer Area shall comply fully with the 100-foot Buffer restrictions.
 - (F) Any proposal by the County for designation of an area as a MBA shall include, at a minimum, a written evaluation and supporting reasons which demonstrate the degree to which the proposed MBA does not perform each of the following Buffer functions:
 - i. Provide for the removal or reduction of sediments, nutrients, and potentially harmful or toxic substances in runoff entering the Bay and its tributaries;
 - ii. Minimize the adverse effects of human activities on wetlands, shorelines, stream banks, and aquatic resources;
 - iii. Maintain an area of transitional habitat between aquatic and upland communities;
 - iv. Maintain the natural environment of streams; and
 - v. Protect riparian wildlife habitat.
3. Development standards in Modified Buffer Areas (MBA)
- The following development standards apply to all applications for development activity in a MBA:
- (A) New development or redevelopment activities, including structures, roads, parking areas and other lot coverage or septic systems are not permitted in the Buffer unless the applicant can demonstrate that there is no feasible alternative and the **Planning Director** finds that efforts have been made to minimize Buffer impacts.

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- (B) Development and redevelopment activities shall be located as far as possible from mean high tide, the landward edge of tidal wetlands, or the edge of tributary streams.
- (C) Variances to other local setback requirements have been considered before additional intrusion into the Buffer.
- (D) Convenience or expense are not factors to consider when evaluating the extent of allowable impacts to the Buffer.
- (E) Development may be located in the Buffer and shall meet the setback lines as described below. Structures on adjacent properties shall not be used to determine the setback line.
- (F) Development and redevelopment may not impact any Habitat Protection Area (HPA) other than the Buffer, including nontidal wetlands, other State or federal permits notwithstanding.
- (G) Modified Buffer Area designation shall not be used to facilitate the filling of tidal wetlands that are contiguous to the Buffer or to create additional buildable land for new development or redevelopment.
- (H) No natural vegetation may be removed in the Buffer except that required by the proposed construction.
- (I) Mitigation shall be provided as follows:
 - i. Natural forest vegetation of an area twice the extent of the footprint of the development activity within the 100-foot Buffer shall be planted on site in the Buffer or at another location, preferably on-site, approved by the Planning Director.
 - ii. Applicants who cannot fully comply with the planting requirement in (i) above, may use offsets to meet the mitigation requirement. Offsets include the removal of an equivalent area of existing impervious surfaces in the Buffer, the construction of Best Management Practices for stormwater, wetland creation or restoration, or other measures that improve water quality or habitat.
 - iii. Applicants who cannot comply with either the planting or offset requirements in (a) or (b) above shall pay a fee-in-lieu at a rate of \$1.50 per square foot.
 - iv. Any fees-in-lieu collected under these provisions shall be placed in an account that will assure their use only for projects within the Critical Area to enhance wildlife habitat, improve water quality, or otherwise promote the goals of the County's Critical Area Program.
 - v. Any required mitigation or offset areas shall be protected from future development through an easement, development agreement, plat notes or other instrument and recorded among the land records of the County.

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4. In the case of commercial, industrial, institutional, recreational, and multi-family residential development or redevelopment, the following additional standards apply:
- (A) New development shall not be located closer to the water (or edge of tidal wetlands) than the local setback for the zoning district or 50 feet, whichever is greater. The 50-foot setback shall be maintained for all subsequent development or redevelopment of the property.
 - (B) Redevelopment shall not be located closer to the water (or edge of tidal wetlands) than the local setback for the zoning district or 25 feet, whichever is greater.
 - i. Existing structures located within the setback may remain or a new structure may be constructed on the footprint of an existing structure or lot coverage.
 - ii. Opportunities to establish a 25-foot setback should be maximized.
 - (C) In addition to any required mitigation, a forested or landscaped buffer yard, 25 feet wide, shall be established on the project site between the development and the distance to the water. This buffer yard shall be densely planted with trees and shrubs in accordance with the Required Buffer Yard Planting table.
 - (D) In the case of redevelopment, the County may approve appropriate modifications to the width of the planted buffer yard on a case-by-case basis where existing structures or those rebuilt on an existing footprint limit the area available for planting.

REQUIRED BUFFER YARD PLANTING		
Area	Quantity and Stocking	Suggested Species
For every 100 linear feet of buffer yard	5 Trees and	White or Red Oak, Pin Oak, Willow Oak, Red Maple, American Holly, Eastern Red Cedar
	10 Understory Trees/Large Shrubs, and	Dogwood, Mountain Laurel, Bayberry, Shadbush, Winterberry
	30 Small Shrubs and	Pepperbush, Chokeberry, Strawberry Bush, Sweetspire
	40 Herbaceous Plants, Grasses, etc.	Wild Columbine, Butterflyweed, Common Milkweed, Asters

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5. In the case of single-family residential development or redevelopment, the following additional standards apply:
 - (A) New development and redevelopment shall not be located closer to the water (or the edge of tidal wetlands) than principal structures on adjacent properties or the local setback for the zoning district, whichever is greater. Except as described below, new development or redevelopment shall be located no less than 50 feet from the water (or the edge of tidal wetlands).
 - (B) Existing principal or accessory structures in the Buffer may be replaced in-kind in the same footprint. If a replacement structure is expanded, the development shall comply with the setback requirement.
 - (C) New accessory structures may be permitted in the Buffer in accordance with the following setback requirements:
 - i. New accessory structures may be located closer to the water or edge of tidal wetlands than the principal dwelling only if it has been determined by the Planning Director or the Director's designee that there are no other locations for the accessory structures.
 - ii. The area of the accessory structures within the Buffer shall be minimized and the cumulative total area of all new and existing accessory structures on the property shall not exceed 500 square feet within 50 feet of the water and 1,000 square feet total.
 - iii. In no case shall new accessory structures be located less than 25 feet from the water (or edge of tidal wetlands).

2.9 FOREST INTERIOR BIRDS

1. No outdoor construction activities are permitted during safe dates in areas with *forest interior dwelling bird* species identified by the State of Maryland. Areas are identified online by Maryland's Environmental Resources and Land Information Network (MERLIN). Safe dates are set forth in the chart and policy below.
2. A site survey for forest interior dwelling birds will be conducted prior to any development or agricultural expansion (1) on deciduous forest of at least 50 acres or, (2) 300-feet by 300-feet of riparian deciduous forest.
3. The Planning Director may set aside a site survey for forest interior dwelling birds provided the forest is managed for all forest interior dwelling bird species. In such cases, the date range for no construction is from April 1 through August 31 for properties where specific species have not been identified.
4. Existing riparian forest of 300-feet by 300-feet or more, and forest areas used by forest interior dwelling birds and other wildlife species will be managed according to the guidelines developed by the Maryland Department of Natural Resources and the Critical Area Commission. Whenever possible, riparian forest will be expanded.

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5. The safe dates or nesting times for breeding species of *forest interior dwelling birds* are listed below, when no outdoor construction is allowed.

Common Name	Safe Dates / Nesting times		
Creeper, brown	May 15	to	August 31
Hawk, broad-winged	June 5	to	August 31
Flycatcher, acadian	May 25	to	August 5
Hawk, red-shouldered	May 1	to	August 31
Ovenbird	May 20	to	August 5
Owl, barred	January 15	to	August 31
Parula, northern	June 1	to	August 31
Redstart, American	June 10	to	July 20
Tanager, scarlet	May 25	to	August 10
Veery	June 10	to	August 31
Vireo, red-eyed	June 1	to	July 31
Vireo, yellow-throated	May 25	to	August 15
Warbler, black-and-white	May 15	to	July 25
Warbler, black-throated green	June 10	to	August 5
Warbler, cerulean	May 25	to	August 5
Warbler, hooded	May 25	to	July 25
Warbler, Kentucky	May 25	to	July 15
Warbler, prothonotary	May 10	to	July 20
Warbler, Swainson's	April 20	to	August 31
Warbler, worm-eating	May 20	to	July 20
Waterthrush, Louisiana	May 1	to	July 10
Whip-poor-will	May 10	to	July 15
Woodpecker, hairy	April 1	to	August 31
Woodpecker, pileated	April 1	to	August 31
Wood Thrush	May 25	to	August 20

2.10 HABITAT PROTECTION AREAS

1. All Habitat Protection Areas, *buffers*, and protective zones will be protected by property owners during *development* and at all other times. All property owners and applicants for new *development* are required to identify species and areas as specified below and to protect them. Plans will address protection strategies.
2. The Habitat Protection Areas in Kent County include:

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- (A) Colonial water bird nesting sites, and historic waterfowl staging and concentrations areas in tidal water, tributary streams or tidal and non-tidal wetlands;
 - (B) Riparian *forest*, *forested* areas of 50 acres or more, and *forest* corridors connecting them;
 - (C) Anadromous fish spawning areas, threatened and endangered species, and Species in Need of Conservation with their habitat;
 - (D) *Non-tidal wetlands* and the minimum 100-foot *buffer*;
 - (E) Other areas which, because of their unique *wildlife habitat* types and plant communities, are of local significance. These are managed to protect the unique habitat or community.
 - i. Lloyd Creek Habitat for proposed State threatened species;
 - ii. Andover Branch
 - iii. Sandy Bottom - St. Paul's Lake
 - iv. Churn Creek (Still Pond Creek Headwaters)
 - v. Big Marsh
 - vi. Swantown Creek
 - vii. Jacobs Creek
 - viii. Upper Sassafras
 - ix. Sassafras Lake
 - x. Mill Creek (wooded swamp, 1118-555 on the Maryland Coordinated Grid System)
 - xi. Still Pond Creek (inland open fresh water, 1050-540 on the MCGS)
 - xii. East Langford Mill Pond (Shrub swamp, 1050-495 on the MCGS)
 - xiii. Langford Creek East Fork Head (inland shallow fresh marsh, 1055-499 on the MCGS)
 - xiv. N/W Fork Morgan Creek (inland shallow fresh marsh, 1077-536 on the MCGS)
 - xv. Tavern Creek
 - (F) Any other *Natural heritage areas*, as may be designated by the State of Maryland, and locations considered for Areas of Critical State Concern.
3. All roads, bridges and utilities that must cross a Habitat Protection Area will be located, designed, constructed, and maintained so as to provide maximum erosion protection and minimize negative impacts to wildlife, aquatic life and their habitats and maintain

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hydrologic processes and water quality. Roads, bridges, or utilities will not be located in any Habitat Protection Area unless no feasible alternative exists.

4. Natural heritage areas and locations considered for Areas of Critical State Concern will be preserved whenever possible in accordance with the recommendations of the Department of Natural Resources.
5. During and after *development* in forested areas, corridors of existing forest, or woodland vegetation will be maintained to provide effective connections between wildlife habitat areas.

2.11 THREATENED AND ENDANGERED SPECIES AND SPECIES IN NEED OF CONSERVATION

1. Any *development* shall include a statement on the type and location of any threatened or endangered species or species in need of conservation on the property, and any recommendation for maintaining and protecting that habitat from the Department of Natural Resources.
2. Threatened or endangered species and species in need of conservation shall be checked and noted by the developer before any approvals can be granted by the Planning Director or the *Planning Commission*.
3. The Federal or State guidelines (whichever is stricter) for habitat protection shall be followed during development. Plans shall include provisions for the continuance of the habitat protection after development. This can include conservation easements, cooperative agreements, special provisions in forest management and soil conservation plans, and donation to a third party.

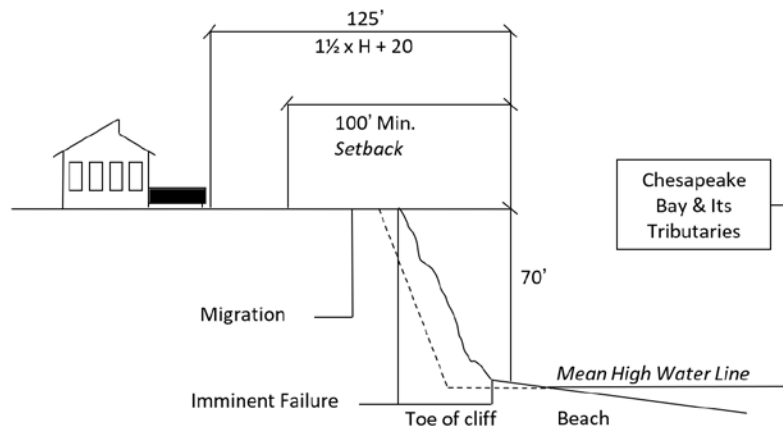
2.12 SHORELINE AND CLIFF AREAS

1. SPECIAL PURPOSE: The *shoreline cliff setback* is designed to allow *development* in a manner that will protect the property and the lives of residents and protect the scenic integrity of the shoreline.
2. NEW SUBDIVISIONS AND EXISTING LOTS OF THREE ACRES OR GREATER
 - (A) All *structures* will be a sufficient distance from the cliff to ensure protection of *structures* and to allow for natural *erosion* and/or cliff failure with enough *setback* to be able to employ the use of conventional *erosion* control measures.
 - (B) The minimum *setback* for a *shoreline cliff* is as follows:
 - i. For each foot of rise above the mean high-water line (MHW), a one and one-half foot setback from the toe of the cliff measured landward plus 20 feet to the house site is required.
 - ii. The elevation measured will be the highest point on the lot fronting the water or measured in a direct line from the house placement to the cliff and water for large lots (one acre or more) with extensive water frontage.

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- (C) When these conditions conflict with other *waterfront yard* requirements of this Ordinance, the stricter will apply.



2.13 SHORE EROSION PROTECTION WORKS

The purpose of this Section is to encourage the protection of rapidly eroding portions of the shoreline in the County by public and private landowners. When such measures can effectively and practically reduce or prevent shoreline *erosion*, the use of nonstructural shore protection measures will be encouraged to conserve and protect plant, fish, and *wildlife habitat*. The following criteria will be followed when selecting shore *erosion* protection practices:

1. Nonstructural practices will be used whenever possible.
2. Structural measures will be used only in areas where nonstructural practices are impractical or ineffective.
3. Where structural measures are required, the measure that best provides for the conservation of fish and *plant habitat* and which is practical and effective will be used.
4. If significant *alteration* of the characteristics of a shoreline occurs, the measure that best fits the change may be used for *sites* in that area.

2.14 WATER DEPENDENT FACILITIES

The following *regulations* will apply to *boathouses*, boat docks, *piers*, *marinas*, and wharves. Review by the Department of new water dependent facilities and changes to any existing facilities is required, using the standards at the end of this Section under REQUIRED REVIEW.

1. GENERAL REQUIREMENTS

- (A) Projections of docks, wharves, and *piers* into *waterways* beyond the *waterway line*, *lot lines*, or established *bulkhead* lines will be limited by applicable County

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ordinances, State laws, and applicable *regulations* of the United States Army Corps of *Engineers*.

- (B) Groins, levees, *bulkheads*, pilings, breakwaters, and other similar *structures* will be erected and maintained in accordance with applicable location and construction standards of the County, State, and the United States Army Corps of *Engineers*.
- (C) New water-dependent facilities will be located so as to prevent disturbance to sites of significance to wildlife such as historic aquatic staging and concentration areas for waterfowl, shellfish beds, finfish nursery areas, and submerged aquatic vegetation beds.

2. PRIVATE BOATHOUSES

- (A) *Boathouses* that extend *channel* ward of mean high tide (*boathouses* over water) are prohibited. *Boathouses* will not be permitted in areas where such would obstruct the view of those using the *waterway* so as to endanger navigation.
- (B) A boathouse may not be used as a dwelling, guest house, or servants' quarters.
- (C) No *boathouse* may be closer to the side property line than the required *side yard* width of the zoning district in which it is located.
- (D) No private *boathouse* will occur within 100 feet of any private *pier* or other *boathouse* on the same side of a body of water, except in the case where this would deny a property owner the right to a *boathouse*.
- (E) It will not be permitted for the owner or owners of a *boathouse* to receive compensation for use of their private *boathouse*.

3. PRIVATE DOCKS, PIERS, and WHARVES

- (A) It will not be permitted for the owner or owners of a private *pier* to receive compensation for use of their private *pier*.
- (B) No private *pier* will occur within 100 feet of any other private *pier* or *boathouse* on the same side of a body of water, except in the case where this would deny a property owner the right to a single *pier*.
- (C) A *pier* may not be closer to the side property line than the required *side yard* width of the district in which it is located. A *pier* will not be closer to the side line or its extension over water than the required *side yard* width of the zoning district in which it is located.
- (D) *Dwellings* and other non-water dependent facilities are prohibited on *piers*.
- (E) It will be permissible for adjacent property owners to construct a single shared *pier*. The right of ownership and access to such *pier* will be set forth in a property document that runs to the benefit of the owners of the *pier*, their heirs and assigns and will be executed by the owners and recorded with the

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Kent County Clerk of Court and a copy filed with the Department prior to such construction.

- (F) If a shared *pier* or a *community pier* is allowed, then no other *piers* will be permitted on the property of such owners. In the event such *piers* are removed or destroyed beyond use and not rebuilt or re-established within one year, then the agreement for such *piers* will become void. However, the one-year requirement can be extended if extenuating circumstances can be demonstrated to the County by the property owner.
- (G) A *community pier*, for the use of three or more property owners, will be permissible provided the *site plan* demonstrates that such *pier* does not adversely affect neighboring property owners or the public interest. The *site plan* will show all properties in the neighborhood, including the owners of the *community pier* and their access to such *pier*. The ownership and access will further be set forth in a proper document that runs to the benefit of owners of the *pier*, their heirs and assigns, and will be executed by all owners and recorded with the Kent County Clerk of Court and a copy filed with the Department. Sanitary facilities approved by the Kent County Health Department will be provided except where other acceptable facilities are available.
- (H) The following will apply to *community piers*, shared *slips*, and other related non-commercial boat docking and storage facilities:
 - i. New or expanded *community piers*, shared *slips*, *marinas* and other non-commercial boat-docking and storage facilities may be permitted in the minimum 100-foot *buffer* subject to the requirements of this Section; and
 - ii. Provided that:
 - 1. These facilities may not offer food, fuel, or other goods and services for sale and will provide adequate and clean sanitary facilities;
 - 2. The facilities are community-owned and established and operated for the benefit of the residents of a platted and recorded riparian *subdivision*;
 - 3. The facilities are associated with a residential *development* approved by Kent County for the *Critical Area* and consistent with all criteria and County *regulations* for the *Critical Area*;
 - 4. Disturbance to the *buffer* is the minimum necessary to provide a single point of access to the facilities;
 - 5. If *community piers*, *slips*, or moorings are provided as part of the new *development*, private *piers* in the *development* are not allowed; and
 - 6. Sanitary Facilities and pump-outs will be provided *on-site*, except where other acceptable facilities are available.

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- iii. Provided that adverse effects on water quality, fish, plant, and *wildlife habitat* are minimized; and
- iv. The number of *slips*, *piers*, or mooring buoys permitted at the facility will be the lesser of the options below:
 - 1. One *slip* for each 50 feet of shoreline in a *subdivision* in the Intensely Developed Areas (IDA) or Limited Development Areas (LDA).
 - 2. One *slip* for 300 feet of shoreline in a *subdivision* in Resource Conservation Areas (RCA).
 - 3. A *density* of *slips*, shared *slips*, or *piers*, to platted *lots* or *dwellings* in a *subdivision* in the *Critical Area* according to the following schedule:

Platted <i>Lots</i> or <i>Dwellings</i> in the <i>Critical Area</i>	<i>Slips</i>
5 to 15	One for each <i>lot</i>
16-40	15 or 75% whichever is greater
Over 40	30 or 50% whichever is less

4. PUBLIC BEACHES

- (A) Public beaches or other *public water-oriented recreation* areas including, but not limited to publicly owned boat launching and docking facilities and fishing *piers* may be permitted in the *buffer* provided:
 - i. Adequate sanitary facilities exist;
 - ii. Service facilities are to the extent possible, located outside the *buffer*;
 - iii. Permeable surfaces are used to the extent practicable, if no degradation of groundwater would result.
 - iv. Disturbance to *natural vegetation* is minimized; and
 - v. Areas for passive recreation, such as nature study, hunting and trapping, may be permitted in the *buffer* within Resource Conservation Areas (RCA), if service facilities for these uses are located outside of the *buffer*.
- (B) Water-dependent research facilities or activities operated by State, federal, or local agencies, or water-dependent educational institutions, may be permitted in the *buffer*.
- (C) Commercial water-dependent fisheries facilities including, but not limited to, *structures* for crab shedding, fish off-loading docks, shellfish culture operations, and shore-based facilities necessary for *aquaculture* operations and *fisheries activities*, may be permitted in the *buffer*.

5. COMMERCIAL MARINAS

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In this Land Use Ordinance, marinas are facilities operated as businesses and regulated as such.

- (A) New and existing *marinas* will meet the sanitary requirements of the Maryland Department of the Environment.
- (B) New marinas will establish a means of minimizing the discharge of bottom wash waters into tidal waters.
- (C) All new development and redevelopment will reduce pollutant loadings coming off the site by at least 10%. Pollutant loads will be calculated in the manner developed by the Metropolitan Washington Council of Governments using phosphorous as the keystone pollutant. All sites will comply with the stormwater management qualitative control measures found in Section 9 of this Article VI.
- (D) New and expanding marinas will provide pump-outs for boat holding tanks. Adequate signs will be posted to make boaters aware of the service available.
- (E) New marinas and expanding marinas will provide facilities for recycling or proper disposal of oil, anti-freeze, paint thinner, and other toxic or hazardous substances associated with the type of facility being developed.
- (F) Activities will not significantly alter existing water circulation patterns or salinity regimes.
- (G) The water body upon which these activities are proposed will have adequate flushing characteristics in the area.
- (H) Disturbances to wetlands, submerged aquatic plant beds, or other areas of important aquatic habitats will be minimized and mitigated.
- (I) Shellfish beds will not be disturbed or be made subject to discharge that will render them unsuitable for harvesting.
- (J) Dredging will be conducted in a manner, and using a method which causes the least disturbance to water quality and aquatic and terrestrial habitats in the area immediately surrounding the dredging operation or within the Critical Area, generally.
- (K) Dredged spoil will not be placed within the buffer or elsewhere in that portion of the Critical Area which has been designated as a Habitat Protection Area except as is necessary for:
 - i. Backfill for permitted shore erosion protection measures;
 - ii. Use in approved vegetated shore erosion projects;
 - iii. Placement on previously approved channel maintenance spoil disposal areas; and
 - iv. Beach nourishment.
- (L) Interference with the natural transport of sand will be minimized.

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6. REQUIRED REVIEW

- (A) The Department will review all applications for *water-dependent facilities* in order to determine that:
- i. The activities will not significantly alter existing water circulation patterns or salinity regimes;
 - ii. The water body upon which these activities are proposed will have adequate flushing characteristics in the area;
 - iii. Disturbances to *wetlands*, submerged aquatic plant beds, or other areas of important aquatic habitats will be minimized and mitigated;
 - iv. *Adverse impacts* to water quality that may occur as a result of these activities, such as non-point source runoff, sewerage discharge from land activities or vessels, or from boat cleaning and maintenance operations will be minimized;
 - v. Shellfish beds will not be disturbed or be made subject to discharge that will render them unsuitable for harvesting;
 - vi. Dredging will be conducted in a manner, and using a method, which causes the least disturbance to water quality and aquatic and terrestrial habitats in the area immediately surrounding the dredging operation or within the *Critical Area* generally;
 - vii. Dredged spoil will not be placed within the *buffer* or elsewhere in that portion of the *Critical Area* which has been designated as a Habitat Protection Area unless the Board of Appeals grants a special exception and only as is necessary for:
 1. Backfill for permitted shore *erosion* protection measures;
 2. Use in approved vegetated shore *erosion* projects;
 3. Placement on previously approved *channel* maintenance spoil disposal areas; and
 4. Beach nourishment.
 - viii. Interference with the natural transport of sand will be minimized;
 - ix. Information necessary for evaluating dredge spoil applications if not available locally, will be obtained from appropriate State and federal agencies.
- (B) The Department may also require signed and sealed drawings from a professional land surveyor or an engineer certifying that the requirements above have been satisfied. The Department may also engage third-party professionals to review the drawings to ensure compliance with the regulations

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in this Section, the Land Use Ordinance in general, and any applicable federal, State, or other laws, rules, and regulations. The costs for any third-party professionals will be paid by the applicant or property owner of record.

2.15 LOT CONSOLIDATION AND RECONFIGURATION

1. Applicability.

The provisions of this part apply to a consolidation or a reconfiguration of any nonconforming legal parcel or lot that predates adoption of the local program. These provisions do not apply to the reconfiguration or consolidation of parcels or lots which are conforming or meet all Critical Area requirements. Nonconforming parcels or lots include:

- (A) Those for which a Critical Area variance is sought or has been issued; and
- (B) Those located in the Resource Conservation Area and are less than 20 acres in size.

2. Procedure.

- (A) An applicant seeking a parcel or lot consolidation, or reconfiguration shall provide the required information in Section 3 below to the County.
- (B) The County may not approve a proposed parcel or lot consolidation or reconfiguration without making written findings in accordance with Section 4 below and COMAR 27.01.02.08.F.
- (C) The County shall issue a final written decision or order granting or denying an application for a consolidation or reconfiguration.
- (D) After a final written decision or order is issued, the County shall send a copy of the decision or order and a copy of any approved development plan to the Commission within 10 business days.
- (E) The County may not issue a building permit until the appeal time has expired.

3. Application.

An application for the consolidation or reconfiguration of any nonconforming legal parcel of land or recorded legally buildable lot shall contain at least the following information:

- (A) The date of recordation of each legal parcel of land or legally buildable lot to be consolidated or reconfigured;
- (B) A plan drawn to scale that shows all existing and proposed lot or parcel boundaries;
- (C) Information sufficient for the County to make the findings set forth in Section 4 below, and

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- (D) A table that lists the number of all legal parcels of land or recorded, legally buildable lots and the number of proposed lots or parcels or dwelling units to be derived.

4. Standards.

The Planning Director, or designee, shall review a proposed lot consolidation or reconfiguration and will make written findings that each one of the following standards has been met:

- (A) The proposed consolidation or reconfiguration will result in no greater number of lots, parcels, or dwelling units in the Critical Area than the existing configuration would allow;
- (B) In the Limited Development Area or Resource Conservation Area, the proposed lot consolidation or reconfiguration:
 - i. Will result in no greater lot coverage than the existing configuration would allow; and
 - ii. Will result in no greater impact to a steep slope than the existing configuration would allow, if that steep slope is located outside the buffer or expanded buffer.
- (C) The proposed consolidation or reconfiguration does not:
 - i. Create an additional riparian lot or parcel, waterfront lot, or any other lot or parcel deeded with water access; or
 - ii. Intensify or increase impacts associated with riparian access;
- (D) The proposed consolidation or reconfiguration does not create:
 - i. A lot or parcel or portion of a lot or parcel that will serve development activities outside the Critical Area; or
 - ii. A Resource Conservation Area lot or parcel that serves development activities in the Intensely Developed Area or Limited Development Area;
- (E) The proposed consolidation or reconfiguration identifies each Habitat Protection Area and if impacts to a Habitat Protection Area are proposed, the proposal demonstrates that:
 - i. No greater impact to a Habitat Protection Area would result than the impact that would have resulted from the existing lot configuration;
 - ii. Adverse impacts to a Habitat Protection Area are minimized; and
 - iii. Protective measures and restoration measures are included that provide for the least possible impact;
- (F) The proposed consolidation or reconfiguration provides:
 - i. Stormwater management for all proposed development activities; and

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- ii. Benefits to fish, wildlife, and plant habitat that are clearly identified.
- (G) The proposed consolidation or reconfiguration fully complies with the afforestation and reforestation requirements in COMAR 27.01.05 and 27.01.09, unless clearing is necessary to avoid a habitat protection area.

2.16 RENEWABLE ENERGY GENERATING SYSTEMS

1. Applicability.
 - (A) The requirements of this Part are applicable to all renewable energy generating systems located in the Critical Area.
 - (B) In accordance with COMAR 27.01.14.02, these provisions may not be construed to limit the authority of the Public Service Commission under Public Utilities Article §7-207, Annotated Code of Maryland.
2. Application requirements.
 - (A) An applicant for a utility scale solar energy system producing more than two megawatts of electricity, in a Resource Conservation Area, shall provide a site plan that addresses the requirements of COMAR 27.02.07 and includes the following:
 - i. Calculations of any required reservation of resource conservation area density development rights; and
 - ii. The identification and location of property restrictions including the boundary and area of a conservation easement, restrictive covenant, or other protective instrument.
3. General provisions.
 - (A) On or after April 1, 2021, the County may authorize:
 - i. A utility scale solar energy system within the Critical Area in accordance with this Section;
 - ii. A utility scale solar energy system producing more than two megawatts of electricity in the resource conservation area without growth allocation in accordance with Article VI, Section 2.16.4; and
 - iii. A small residential accessory solar energy generating system in the Buffer or in a Modified Buffer Area if:
 1. There is not an alternative location outside the Buffer;
 2. The lot is 1/4 acre or less in size and created before April 12, 1988; and
 3. Mitigation is required at a 1:1 ratio.

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- (B) In addition to meeting the requirements of this Section, Kent County may not authorize growth allocation to accommodate a utility scale solar energy system in the limited development area or the resource conservation area.
 - (C) Except for a regulated activity that is authorized by the Maryland Department of the Environment in accordance with COMAR 26.23.02, Kent County may not authorize utility scale solar energy system:
 - i. In a habitat protection area designated under COMAR 27.01.09; or
 - ii. On a steep slope or a highly erodible soil.
 - (D) In accordance with COMAR 27.01.14, a variance, modification, waiver, or other approval that alters the requirements of this Section may not be granted.
4. Criteria for a solar energy generating system.

The provisions of this section are applicable to a utility scale solar energy system in an intensely developed area, a limited development area, and a resource conservation area:

- (A) The area of a solar panel shall not count as lot coverage and:
 - i. For a utility scale solar energy system producing two megawatts or less of electricity, the solar panels shall be:
 - 1. Located over existing, legally developed lot coverage as described in Natural Resources Article, §8-1808.3, Annotated Code of Maryland; or
 - 2. Elevated above the ground and the area under the solar panels is maintained as an area of existing grass, established grass, or other natural vegetation, or as an agricultural use; and
 - ii. For a utility scale solar energy system producing more than two megawatts of electricity, the solar panels shall be:
 - 1. Located over existing, legally developed lot coverage; or
 - 2. Elevated above the ground and the area under the solar panel is maintained in accordance with the planting plan requirements of Section 6 below as:
 - a. Pollinator habitat;
 - b. Native vegetation other than pollinator habitat; or
 - c. An agricultural use.
- (B) The Buffer shall be measured and delineated in accordance with COMAR 27.01.09.01.E(3)-(7) and Article VI, Section 2.7 of this Ordinance and:
 - i. Unless there is no feasible alternative, access through the Buffer to the project area is prohibited;
 - ii. When there is no feasible alternative to access through the buffer, one point of access through the buffer to the project area may be authorized.

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Where a project includes noncontiguous parcels, the number of access points through the buffer shall be minimized;

- iii. Mitigation for disturbance to the Buffer is required at a 2.5:1 ratio; and
 - iv. A buffer management plan shall be provided in accordance with COMAR 27.01.09.01-3.
- (C) Except when a project area is in an IDA, clearing of forest and developed woodlands shall be minimized and not exceed the following:
- i. In a LDA, clearing of forest and developed woodlands is limited to 20 percent of the entirety of the forest and developed woodlands on the parcel or parcels on which the project area is located; and
 - ii. In a RCA, clearing of forest is limited to 10 acres or 20 percent of the entirety of the forest and developed woodlands on the parcel or parcels on which the project area is located, whichever is less.
- (D) In an IDA, LDA, and RCA, mitigation for cleared forest and developed woodlands shall be provided on at least an equal area basis.
- (E) For a utility scale solar energy system producing more than two megawatts of electricity, on-site or off-site planting shall be in accordance with the following:
- i. 15 percent of the total project area in a limited development area; and
 - ii. 20 percent of the total project area in a resource conservation area.
- (F) A planting plan shall be provided in accordance with Section 6 below.
- (G) Stormwater management shall be provided in accordance with Environment Article, §§4-201—4-215, Annotated Code of Maryland, and COMAR 26.17.02.
- (H) A decommissioning plan shall be required if one is not otherwise required as a result of obtaining a Certificate of Public Convenience and Necessity from the Public Service Commission.
5. Criteria for a utility scale solar energy system producing more than two megawatts of electricity in the resource conservation area.

These provisions apply to a utility scale solar energy system producing more than two megawatts of electricity in the RCA in addition to the requirements under Section 3 above:

- (A) Except for access allowed in accordance with Section 3 above and in accordance with the provisions in COMAR 27.01.06, forest clearing shall be restricted within 300 feet beyond the landward boundary of tidal waters or tidal wetlands, or the edge of each bank of a tributary stream.
- (B) In addition to any applicable local land recordation requirements, a Reservation of Resource Conservation Area Density Rights Agreement shall be

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recorded in the County land records that reserves RCA density rights associated with the project as follows:

- i. The number of density rights reserved is equal to:
 - 1. The permitted RCA density associated with the project area of each parcel as calculated under Natural Resources Article, §8- 1808.1(e), Annotated Code of Maryland, and COMAR 27.01.02.05C(4); and
 - 2. The number of density rights that are attributable to the project area, with a minimum of one density right reserved.
- (C) The Reservation of Resource Conservation Area Density Rights Agreement shall remain in effect until:
 - i. The decommissioning plan, as required in Section 4(H), has been implemented and completed; and
 - ii. The termination of the Reservation of Resource Conservation Area Density Rights Agreement is reflected in the land records.
- (D) The remaining land unencumbered by the utility scale solar energy generating system or lands not otherwise restricted by the Reservation of Resource Conservation Area Density Rights Agreement may be developed in accordance with Natural Resources Article, §8-1808.1, Annotated Code of Maryland, and COMAR 27.01.02.05C(4).
- (E) A lot, a parcel, or a portion of a lot or parcel is not eligible for a utility scale solar energy system producing more than two megawatts of electricity if the density rights associated with that lot, parcel, or portion of a lot or parcel have been:
 - i. Utilized for an intrafamily transfer;
 - ii. Transferred through a transfer of development rights program;
 - iii. Preserved or conserved through an easement; or
 - iv. Otherwise reserved in association with an area of land to be utilized for the solar energy generating system.
- 6. Planting plan requirements.
 - (A) The Department of Planning, Housing, and Zoning shall require a planting plan for:
 - i. The area to be vegetated under the solar panels; or
 - ii. Replanting required in Section C (4) and (5).
 - (B) The County may consider the constraints and opportunities presented by a project area and authorize planting or other mitigation to address the requirements of Sections C (4) and (5) from any of the following options:
 - i. Planting on-site in one of the following planting areas:

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1. The area within 300 feet beyond the landward boundary of tidal waters or tidal wetlands, or the edge of each bank of a tributary stream;
2. Contiguous to or within a designated forest interior dwelling bird habitat; or
3. A wildlife corridor; or
- ii. Based on a signed agreement with the Critical Area Commission:
 1. Planting off-site in accordance with the options specified in Section 6(B)i above;
 2. Create a wetland migration area, nonstructural shoreline erosion control project, or other nature-based practice that naturally adjusts to changing environmental conditions through the lifespan of the practice and is designed to address future sea level rise, precipitation-induced flooding, or other climate change impacts;
 3. Create, restore, or enhance a nontidal wetland that results in habitat and water quality benefits provided it is authorized by the Maryland Department of the Environment; or
 4. Other alternative mitigation options that include provisions for Commission review; or
- iii. Collect a fee in lieu in accordance with Section 7 below.
- (C) Any general landscape screening requirements for an energy generating system shall not be included as part of the mitigation planting required in Section C.
- (D) Long-term maintenance of the plantings through financial assurance measures shall be provided.
- (E) All planting shall be in accordance with this ordinance's reforestation and planting plan requirements, including protecting all planted areas through conservation easements, restrictive covenants, or other protective instruments.
7. Fee-in-lieu.

The County may elect to collect a fee-in-lieu based on the following standards:

 - (A) The fee shall be set at a \$1.50 per square foot of mitigation as required in Section 6.
 - (B) The fee shall cover the cost associated with administration, acquisition, planting, monitoring, and maintenance for the required mitigation or required planting requirements of Section C (4) and (5).
 - (C) The fee shall be held in a separate account independent of other Critical Area funds, which may not revert to the general fund.

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- (D) The fee shall not be used to meet other landscaping requirements; and
- (E) The County shall use the fees to accomplish:
 - i. Off-site plantings in accordance with the options provided in Section E (2) (a); or
 - ii. Other water quality and habitat enhancement projects provided in Section E (2) (b), and as described in a local Critical Area program approved by the Commission or in an agreement between the local jurisdiction and the Commission.

2.17 DEVELOPMENT RIGHTS THAT PREDATE THE CRITICAL AREA PROGRAM

1. Except as otherwise provided, the types of land described in the following subsection may be developed in accordance with the *density* requirements in effect prior to the adoption of the Kent County *Critical Area* Program.
2. A single *lot* or parcel of land that was legally of record on the date of the program approval will be permitted to be developed with a *single-family dwelling*, if a *dwelling* is not already placed there, notwithstanding that such *development* may be inconsistent with the *density* provisions of the approved programs:
 - (A) Any land on which *development* activity has progressed to the point of the pouring of foundation/ footings or the installation of structural members;
 - (B) Any legal parcel of land, not being part of a recorded or approved *subdivision*, that was recorded as of December 1, 1985, and land that was subdivided into recorded, legally buildable *lots*, where the *subdivision* received the County's final approval prior to December 1, 1985.
 - (C) Land that was subdivided into recorded, legally buildable *lots*, where the *subdivision* received the County's final approval after December 1, 1985, provided that either *development* of such land conforms to the *Critical Area* criteria in this Ordinance and the other necessary *regulations*, or the area of the land is counted by the County against the growth increment permitted under COMAR 27.01.02.06.
 - (D) Nothing in this section will be interpreted as altering any requirements for *development activities* as set forth in Articles II and V of this Ordinance for habitat protection areas and water-dependent facilities.
 - (E) Kent County encourages the consolidation or reconfiguration of these *lots* to bring these lands into conformance with the *critical area* program.

2.18 GROWTH ALLOCATION

Applications for Growth Allocation will be consistent with the County's Growth Allocation policy and the provisions found in COMAR.

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2.19 LOCAL DEVELOPMENT PROJECTS

Applications for Local Development Projects will be consistent with provisions found in COMAR.

2.20 CRITICAL AREA COMMISSION REVIEW AND COMMENT REQUIRED

1. As required by the State of Maryland, Kent County will send copies of applications for all *developments*, subdivisions, and *site plans*, wholly or partially within the Critical Area, as specified in COMAR 27.03.01.04 to the Critical Area Commission for review and comment. This includes all applicable projects located in the RCD, CAR, CCA, M, and ECCA-LDA zoning districts.
2. Until Kent County has received notice of receipt from the Critical Area Commission or the appropriate waiting period per the State of Maryland has expired, the County may not process an application that has been sent to the Critical Area Commission for notification.
3. Per the State of Maryland, any action by Kent County in violation of these State-required procedures shall be void.

SECTION 3 FOREST CONSERVATION ACT**3.1 STATEMENT OF INTENT**

The purpose of this Section is to conserve the *forests* of Kent County. *Forests* and individual *trees* greatly contribute to the quality of life in Kent County, the health of the natural *ecosystem*, and the health and welfare of the citizens of Kent County. The County's economic health depends heavily on its natural resources of which *forests* are a major component. It is not the intent of the law to place unreasonable restrictions on *development*. Rather it aims to maximize the benefits of *forest* in a cooperative effort with *development*, thereby limiting the loss of *forested* land in Kent County and improving the environment of both developed and undeveloped areas. In this Section, the County adopted standards that are more stringent than the State of Maryland.

3.2 APPLICABILITY

This Section applies in AZD, RC, CR, V, IV, C, and EC, to minor and *major site plans*, *subdivisions*, *public utilities* not otherwise exempt, and all *grading* permits for any disturbed area over 40,000 square feet excluding land in the Critical Area (§§8-1801–1817, Annotated Code of Maryland).

3.3 EXEMPTIONS

This Section also does not apply to the following:

1. Highway construction activities under Natural Resources Article, Section 5-103, Annotated Code of Maryland.
2. *Commercial logging and timber harvesting operations*, including harvesting conducted subject to the *Forest Conservation and Management Program* under Tax Property Article, Section 8-211, Annotated Code of Maryland, that are completed after July 1, 1991 on property which:
 - (A) Has not been the subject of application for a *grading* permit for *development* within five years after the logging or harvesting operation; and
 - (B) Is the subject of a *Declaration of Intent* as provided for in Section 8.3 of this Ordinance.
3. Agricultural activities, not resulting in a change in land use category, including agricultural support *buildings* and other related activities constructed using *best management practices* provided that no more than 40,000 square feet of *forest* is cleared within a one-year period. A *person clearing* 40,000 square feet or greater of *forest* within a one-year period may not receive an *exemption* unless the *person* files a *Declaration of Intent* which includes:
 - (A) A statement that the landowner or the landowner's agent will practice *agriculture* on that portion of the property for five years from the date of the declaration; and
 - (B) A sketch of the property which shows the area to be cleared.

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4. The *cutting* or *clearing* of a public utility *right of way* licensed under Public Utility Companies, §§7-207 and 7-208 or 7-205, Annotated Code of Maryland, or land for electric generating stations licensed under Public Utility Companies, §§7-207 and 7-208 or 7-205 Annotated Code of Maryland, provided:
 - (A) Certificates of public conveniences and necessity have been issued in accordance with Natural Resources Article §5-1603(f), Annotated Code of Maryland; and
 - (B) *Cutting* or *clearing* of the *forest* is conducted to minimize the loss of *forest*.
5. Routine maintenance or emergency repairs of the public utility *right of way* licensed under Public Utility Companies, §§7-207 and 7-208 or 7-205, Annotated Code of Maryland.
6. Routine maintenance or emergency repairs of public utility *right of way* not subject to Section 8.2 (4) of this Ordinance, provided:
 - (A) The *right of way* existed prior to January 5, 1993; or
 - (B) The *right of way's* initial construction was approved after January 5, 1993.
7. Non-coal surfacing mining regulated under Environment Article, Title 15, Subtitle 8, Annotated Code of Maryland.
8. An activity required for the purpose of constructing a *dwelling* intended for the use of the owner or a child of the owner, if the activity:
 - (A) Does not result in the *cutting, clearing, or grading* of more than 20,000 square feet of *forest*; and
 - (B) Is the subject of a *Declaration of Intent* filed in the Department which states that a transfer in ownership may result in the loss of the *exemption*.
9. A real estate transfer to provide a security, leasehold, or other legal or equitable interest, including a transfer of title, of a portion of a *lot* or parcel if:
 - (A) The transfer does not involve a change in land use, or new *development* or *redevelopment* with associated land disturbing activities.
 - (B) Both the grantor and grantee file a *Declaration of Intent*.
10. An activity on a property that has more than 50% of its acreage within the Chesapeake Bay *Critical Area*.
11. A residential construction activity conducted on an existing single *lot* of any size of record at the time of application, or a *linear project* not otherwise exempted under this section, if the activity:
 - (A) Does not result in the cumulative *cutting, clearing, or grading* of more than 20,000 square feet of *forest*; and

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- (B) Does not result in the *cutting, clearing, or grading* of a *forest* that is subject to the requirements of a previous *forest conservation plan* approved under this ordinance; and
 - (C) Is the subject of a *Declaration of Intent* filed in the Department which states that a transfer in ownership may result in the loss of the *exemption*.
12. An activity on a previously developed area covered by *impervious surface* and located in a *Priority Funding Area*.
 13. Maintenance or *retrofitting* of a *stormwater management structure* that may include *clearing* of vegetation or removal and trimming of *trees*, if the maintenance or *retrofitting* is within the original limits of disturbance for construction of the existing *structure*, or within any maintenance *easement* for access to the *structure*.
 14. A *stream restoration project* for which the *applicant* for a *grading* or *sediment control permit* has executed a binding maintenance agreement of at least five years with the affected property owner or owners.

3.4 FOREST CONSERVATION STANDARDS

1. In AZD, RC, CR, and C:
 - (A) A parcel with less than 20% of its *net tract area* in *forest cover* will be *afforested* to 20% of its *net tract area*.
 - (B) *Forest* on parcels with less than 20% of its *net tract area* in *forest* may be *cut* or cleared provided: the *afforestation* required to achieve the 20% *afforestation* level is determined prior to any *clearing* of *forest*; and the *afforestation* area consists of two (2) times the total surface area cleared and the area needed to achieve the 20% *afforestation* level before *clearing* occurred. For example, the *afforestation* area for a project with a *net tract area* of one hundred acres with ten (10) acres of existing *forest* of which five (5) acres are to be cleared is twenty (20) acres ten (10) acres to achieve the required *afforestation* level and ten (10) acres to replace the *forest* cleared.
 - (C) A parcel with more than 50% of its *net tract area* in *forest* may be *cut* or cleared provided *reforestation* occurs at a rate of one-quarter (1/4) acre planted for each acre removed above 50% of the *net tract area* or at a rate of two (2) acres planted for every acre removed below 50% of the *net tract area*. *Forest* retained over 50% of the *net tract area* is credited toward the required *reforestation*. For example, a project with a *net tract area* of one hundred (100) acres and an existing *forest* of sixty (60) acres that proposes to clear twenty (20) acres, the *reforestation* area is 22.5 acres.
2. In V, IV, and EC
 - (A) A parcel with less than 15% of its *net tract area* in *forest cover* will be *afforested* to 15% of its *net tract area*.

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- (B) *Forest* on parcels with less than 15% of its *net tract area* in *forest* may be *cut* or cleared provided: the *afforestation* required to achieve the 15% *afforestation* level is determined prior to any *clearing* of *forest*; and the *afforestation* area consists of two (2) times the total surface area cleared and the area needed to achieve the 15% *afforestation* level before *clearing* occurred. For example, the *afforestation* area for a project with a *net tract area* of one hundred acres with ten (10) acres of existing *forest* of which five (5) acres are to be cleared is fifteen (15) acres five (5) acres to achieve the required *afforestation* level and ten (10) acres to replace the *forest* cleared.
 - (C) A parcel with more than 15% of its *net tract area* in *forest* may be *cut* or cleared provided *reforestation* occurs at a rate of one-quarter (1/4) acre planted for each acre removed above 15% of the *net tract area* or at a rate of two (2) acres planted for every acre removed below 15% of the *net tract area*. *Forest* retained over 15% of the *net tract area* is credited toward the required *reforestation*. For example, a project with a *net tract area* of one hundred (100) acres and an existing *forest* of thirty (30) acres of which twenty (20) acres will be cleared, requires a *reforestation* area of 13.75 acres.
3. In all non-Critical Area zoning districts – AZD, RC, CR, V, IV, C, and EC:
- (A) The following *trees*, shrubs, plants, and specific areas are considered a priority for *retention* and protection and will be left in an undisturbed condition unless the *applicant* demonstrates, to the satisfaction of the Department, that reasonable efforts have been made to protect them and the plan cannot be reasonably altered.
 - i. *Trees*, shrubs, and plants in sensitive areas including the non-tidal 100-year *floodplain*, intermittent and *perennial stream protection corridors*, *steep slopes*, *non-tidal wetlands*, and critical habitats; and
 - ii. Contiguous *forest* that connects the largest undeveloped or most vegetated tracts of land within and adjacent to the *site*.
 - (B) The following *trees*, shrubs, plants, and specific areas are considered a priority for *retention* and protection and will be left in an undisturbed condition unless the *applicant* demonstrates, to the satisfaction of the *Planning Commission*, that the *applicant* qualifies for a *waiver* in accordance with Article IV.
 - i. *Trees*, shrubs, and plants that are determined to be rare, threatened, or endangered under:
 - 1. The Federal *Endangered Species* Act of 1973 in 16 U.S.C. §§1531—1544 and in 50 CFR 17;
 - 2. The Maryland Nongame and *Endangered Species* Conservation Act, Natural Resources Article, §§10-2A-01—10-2A-09, Annotated Code of Maryland; and
 - 3. COMAR 08.03.08

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- ii. *Trees* that are associated with an *historic structure* or *site*, or *trees* that have been designated by the state or county as a national, state, or county *champion tree*; and
- iii. Any *tree* having a diameter, measured at 4.5 feet above the ground, of:
 - 1. Thirty inches or more; or
 - 2. Seventy-five (75%) or more of the diameter, measured at 4.5 feet above the ground, of the current State *Champion tree* of that species as designated by the Department of Natural Resources.
- (C) The required *reforestation* or *afforestation* may be accomplished *on-site*, *off-site*, by contributing to a *forest bank* in the same *watershed* or by contributing to the Kent County *Reforestation Fund*. The preferred method of *afforestation* or *reforestation* is *on-site* or *forest banking*.
- (D) Whenever possible and appropriate, *afforestation* and *reforestation* will include native species.

3.5 ADDITIONAL STANDARDS FOR NON-TIDAL WETLANDS

A *regulated activity* is subject to the following requirements in AZD, RC, CR, V, IV, C, and EC:

- 1. For the purposes of delineation, permitting, and mitigation, areas determined to be *non-tidal wetlands* under COMAR 08.05.04 will be regulated under COMAR 08.05.04 or this ordinance, whichever is more stringent.
- 2. For the purposes of calculating *reforestation* mitigation under this Ordinance, a *forested non-tidal wetland* permitted to be *cut* or cleared and required to be mitigated under COMAR 08.05.04 will be shown on the *Forest Conservation Plan* and subtracted on an acre for acre basis from the total amount of *forest* to be *cut* or cleared as part of a *regulated activity*.
- 3. *Non-tidal wetlands* will be considered priority areas for *retention* and replacement.
- 4. *Forested non-tidal wetland* identification and delineation should be included at the earliest stage of planning to assist the *applicant* in avoidance and reduction of impacts to the *non-tidal wetlands* and to avoid delay in the approval process.

3.6 TYPES OF SUBMITTALS

- 1. *Declaration of Intent*
 - (A) A *person* seeking an *exemption* under this sub-section 7.3 will file a *Declaration of Intent* with the Department.
 - (B) A *Declaration of Intent* is effective for five years.
 - (C) The existence of a *Declaration of Intent* does not preclude:

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- i. An exempted activity on a property subject to a *Declaration of Intent* if the activity: (1) Does not conflict with the purpose of any existing *Declaration of Intent*, and (2) Complies with the applicable requirements for an exempted activity.
- ii. A *regulated activity* on the area covered by the *Declaration of Intent*. However, if the activity occurs within five years of the effective date of the *Declaration of Intent*: (1) There will be an immediate loss of *exemption*, or (2) There may be a non-compliance action take by the Department, as appropriate, under this Ordinance, or
- iii. A *regulated activity* on that area of the property not covered under the *Declaration of Intent* if the requirements of this Ordinance are satisfied.

2. TWO TYPES of *Forest Stand Delineations*(A) *Simplified Forest Stand Delineation*

- i. A simplified *Forest Stand Delineation* (SFSD) may be submitted when *forest cover* is not disturbed during a construction activity and the area is under a long-term protective agreement.
- ii. A simplified *Forest Stand Delineation* will be submitted at the time of concept *site plan* and concept *subdivision* review. A SFSD will be used to determine the most suitable and practical areas for conservation.
- iii. The delineation will be prepared by a registered surveyor, licensed *forester*, licensed landscape *architect*, or other qualified professional who meets the requirements of COMAR 08.19.06.01B. A simplified *Forest Stand Delineation* will meet the requirements found in this Section. The Planning Director may permit the *Forest Stand Delineation* to be combined with the *site* or *subdivision* plan.

(B) *Forest Stand Delineation*

- i. A *Forest Stand Delineation* (FSD) will be submitted at preliminary *site plan* or *subdivision* review, and before application for a *grading* or *sediment control permit* unless sub-section (A) above applies. A FSD will be submitted with the application for *minor site plan* or *minor subdivision* approval unless sub-section (A) above applies.
- ii. The delineation will be prepared by a licensed *forester*, licensed landscape *architect* or other qualified professional who meets the requirements of COMAR 08.19.06.01B and will meet the requirements for a *Forest Stand Delineation* found in this Section.
- iii. The delineation will be used to determine the most suitable and practical areas for *forest conservation*.
- iv. An approved *Forest Stand Delineation* may remain in effect for a period not longer than 5 years.

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3. TWO STAGES of *Forest Conservation Plans*

- (A) At the time of application for preliminary *subdivision* and *site plan* review, the *applicant* will submit a preliminary *Forest Conservation Plan*. The review of the *Forest Conservation Plan* will be concurrent with the review of the preliminary *subdivision* or *site plan*.
- (B) A final conservation plan will be submitted with:
 - i. Minor and final *subdivision* plan
 - ii. *Minor* and final *site plan*
 - iii. Application for a *grading* and *sediment control permit*
- (C) Both preliminary and final *Forest Conservation Plans* will be prepared by a licensed *forester*, licensed landscape *architect* or other qualified professional who meets the requirements of COMAR 08.19.06.01B. If *forest* is not going to be disturbed, a registered surveyor may prepare preliminary and final *Forest Conservation Plans*. Preliminary and final *Forest Conservation Plans* will meet the requirements of this Section.
- (D) The preliminary *Forest Conservation Plan* may be modified during the review process.
- (E) Where deemed appropriate by the Planning Director, the preliminary and final conservation plans may be incorporated into other plans and plats required by this Ordinance.
- (F) If existing *forest* on the *site* subject to a *Forest Conservation Plan* cannot be retained, the *applicant* will demonstrate to the satisfaction of the Department:
 - i. How techniques for *forest retention* have been exhausted;
 - ii. Why the priority *forests* and priority areas specified in the design standards of the zoning districts cannot be left in an undisturbed condition: (1) If priority *forests* and priority areas cannot be left undisturbed, how the sequence for *afforestation* or *reforestation* will be followed in compliance with Natural Resources Article, §5-1607, Annotated Code of Maryland; (2) Where on the *site* in priority areas, *afforestation* or *reforestation* will occur in compliance with Natural Resources Article, §5-1607, Annotated Code of Maryland; and (3) How the disturbance to the priority *forests* and priority areas specified in the design standards of the zoning districts qualifies for a *waiver*.
- (G) If the *applicant* proposes to make a payment into the local *forest conservation* fund instead of *afforestation* or *reforestation*, the *applicant* will demonstrate to the satisfaction of the Department that the requirements for *afforestation* or *reforestation on-site* or *off-site* cannot be reasonably accomplished

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3.7 SUBMITTAL REQUIREMENTS

1. SIMPLIFIED FOREST STAND DELINEATION

A simplified *Forest Stand Delineation* will include:

- (A) Topographic map delineating *intermittent* and *perennial streams* and *steep slopes* over twenty-five percent (25%).
- (B) *Soils* map delineating *soils* with structural limitations, such as, *hydric soils*, or *soils* with a *soil K Value* greater than 0.35 on *slopes* of fifteen percent (15%), or more.
- (C) Location of 100-year *non-tidal floodplains*.
- (D) Property boundaries
- (E) Map showing existing *forest cover* verified by field inspection.
- (F) Other information that the Department determines is necessary to implement *forest conservation*.

2. FOREST STAND DELINEATION

A *Forest Stand Delineation* will include the following:

- (A) Stand summary sheets that include a summary of the data collected at individual sampling *sites* including the following:
 - i. Dominant species and *forest* association
 - ii. *Site* class of dominant *tree*
 - iii. Total number of *tree* species
 - iv. Number of *trees* per acre
 - v. Common *understory* species
 - vi. Forest structure rating
- (B) A Forest Stand Delineation Map
 - i. North arrow
 - ii. Property boundaries
 - iii. Perennial and intermittent streams and their required stream protection corridors
 - iv. Topography
 - v. *Soils*, highlighting *hydric* and *soils* with a *K Value* over 0.35 on *slopes* of fifteen percent (15%) or more.
 - vi. Current *forest* and *unforested* areas, including species, location, size of *trees* and showing dominant and co-dominant *forest* types

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- vii. *Forest* stand locations
- viii. *Tree* lines extending *off-site*
- ix. Steep slopes
- x. Field sampling points
- xi. Prime agricultural *soils*
- xii. Critical habitats
- xiii. Adjacent land uses
- xiv. Cultural features
- xv. Historic *sites*
- xvi. Non-tidal 100-year floodplain
- xvii. Non-tidal wetlands
- xviii. Vicinity Map at a scale of 1:2000 which indicates major *roads*, land uses, and *forest cover* within one square mile of the *site*.

- (C) A written summary of *forest* stand conditions
 - i. Stand Condition: (1) Stand *structure* (dominant species and understory species); (2) *Forest structure*; (3) *Retention* potential; (4) Comments on evidence of past management
 - ii. Environmental Features: (1) *Non-tidal floodplains*; (2) *Hydric soils*; (3) *Non-tidal wetlands*; (4) *Stream protection corridors*; (5) Critical habitats; (6) *Steep slopes* and *soils* with a *K Value* which exceeds 0.35 on *slopes* of fifteen percent (15%) or more; (7) Cultural features; (8) Historic *sites*; (9) Adjacent land uses; (10) Specimen *trees* and *champion trees*
- (D) Other information may be required if the Department determines it is necessary to implement this Ordinance.

3. PRELIMINARY FOREST CONSERVATION PLAN

A preliminary *Forest Conservation Plan* will include the following:

- (A) The approved Forest Stand Delineation
- (B) A table listing:
 - i. Net tract area
 - ii. Area of forest conservation required
 - iii. Area of *forest conservation*, both on- and *off-site* provided by the *developer*
 - iv. Afforestation and reforestation plan
 - 1. Plat, drawn at the same scale as the preliminary plan which indicates:

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2. Areas designated for *forest retention*
 3. Areas designated for *reforestation*
 4. Areas designated for *afforestation*
 5. Limits of disturbance
 6. Stockpile areas
 - v. Construction schedule, showing the sequence of *forest conservation*
 - vi. Five-year maintenance agreement
 - vii. A narrative on how the requirements for *forest conservation* have been addressed
 - viii. Forest Conservation Worksheet
 - (C) Other information the Department determines is necessary to implement *forest conservation*.
4. FINAL FOREST CONSERVATION PLAN.
- A final *Forest Conservation Plan* will include the following:
- (A) The approved Forest Stand Delineation
 - (B) A Forest Conservation Worksheet. A worksheet and instructions for its completion may be found in the Forest Conservation Technical Manual.
 - (C) A Forest Conservation Map which clearly indicates the following:
 - i. *Forest retention* areas (with priority rating)
 - ii. Reforestation areas
 - iii. Afforestation areas
 - iv. Protective devices, including specifications
 - v. Limits of disturbance
 - vi. Stockpile areas
 - (D) Construction Schedule, including the sequence of *reforestation* areas, *afforestation* areas, maintenance and protective measures to be employed at the *site*.
 - (E) *Forest Protection Plan* that addresses:
 - i. Pre-construction activities including stress reduction and temporary and permanent protective devices.
 - ii. Future protection measures
 - (F) *Reforestation and Afforestation Plans*, which include:

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- i. Narrative evaluation of sequential analysis of *reforestation* and *afforestation* methods.
 - ii. Planting plan which includes: (1) Summary of *site* assessment and preparation; (2) Target species for *reforestation*; (3) Plant materials table including plant material source, species, number of plants, size of plants. Methods found in the *Forest Conservation Technical Manual* will be used to determine species *selection* and *site* stocking.
- (G) Incorporate a binding 5-year maintenance agreement as specified in COMAR 08.19.05.01 which includes:
 - i. Watering, and
 - ii. A reinforcement planting provision if survival rates fall below required standards, as provided in the Forest Conservation Technical Manual, and
 - iii. Name and contact information for company or individual responsible for tree care.
- (H) Long term binding protective agreement, that:
 - i. Provides protection for areas of *forest conservation*, including areas of *afforestation*, *reforestation*, and *retention*, and
 - ii. Limits uses in areas of *forest conservation* to those uses designated and consistent with *forest conservation* including recreational activities and *forest management* practices used to preserve *forest*.
 - iii. A narrative on how the general provisions of *forest conservation* found in this Ordinance have been addressed.
- (I) Table listing:
 - i. Net tract area
 - ii. Area of forest conservation required
 - iii. Area of *forest conservation* provided both on and *off-site*
- (J) Other information that the Department determines is necessary to implement *forest conservation*.

3.8 FOREST CONSERVATION FUND

1. A *forest conservation* fund is established that meets the requirements of Natural Resources Article, §5-1610(h-1), Annotated Code of Maryland.
2. When the Department determines that the requirements for *reforestation* or *afforestation on-site* or *off-site* cannot be reasonably accomplished and credits generated by a *forest mitigation bank* in the same County or *watershed* are not available, the *applicant* will contribute money into the *forest conservation* fund.

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- (A) For a project inside a *Priority Funding Area*, at a rate of 40.0 cents per square foot of the area of required planting with the amount adjusted by the Department of Natural Resources based on the previous year's inflation rate; and
 - (B) For a project outside a *Priority Funding Area*, at a rate of 50.0 cents per square foot of the area of required planting with the amount adjusted to be 20% higher than the rate set under item 2 (A) of this sub-section.
3. The money will be paid prior to final approval.
 4. Money deposited in the local *forest conservation* fund:
 - (A) May be spent on the costs directly related to *reforestation* and *afforestation*, including *site* identification, acquisition, preparation, and maintenance of existing *forests* and achieving urban *canopy* goals.
 - (B) Will be deposited in a separate *forest conservation* fund; and
 - (C) May not revert to the general fund
 5. The County will accomplish the *reforestation* or *afforestation* for the equivalent number of acres, or *forest* land acquisition for which the money is deposited within two years or three *growing seasons*, whichever is the greater time period after receipt of the money.
 6. *Reforestation*, *afforestation*, *forest easement* purchase, or *forest* land acquisition paid for by this fund will occur in Kent County or its municipalities and in the same *watershed* in which the project is located.
 7. If the *reforestation*, *afforestation*, *forest easement* purchase, or *forest* land acquisition cannot be reasonably accomplished in the same *watershed* in which the project is located, the *reforestation*, *afforestation*, *forest easement* purchase, or *forest* land acquisition will occur within the same county or *watershed* in the state in which the project is located.

3.9 FOREST PROTECTIVE DEVICES

1. Before *cutting*, *clearing*, *grading*, or construction begins on a *site*, the *applicant* will demonstrate to the Department that protective devices have been established.
2. Protective device standards are found in the *Forest Conservation Technical Manual*.

3.10 BONDS

1. A *person* required to conduct *afforestation* or *reforestation* will furnish financial security in the form of a bond, an irrevocable letter of credit, or other security approved by the County Commissioners of Kent County. The surety will:
 - (A) Assure that the *afforestation*, *reforestation*, and the associated *maintenance agreement* are conducted and maintained in accordance with the approved *Forest Conservation Plan*.

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- (B) Be in an amount that is 125% of the estimated cost of *reforestation* or *afforestation* as determined by the Department.
 - (C) Be in a form and content approved by the Department.
2. After two *growing seasons*, an *applicant* may request reduction of the amount of the bond or other financial security by submitting a written request to the Department with a justification for reducing the bond or other financial surety amount, including estimated or actual costs to ensure *afforestation* or *reforestation* requirements are met.
- (A) The Department will determine whether a lesser amount is sufficient to cover the cost of *afforestation* or *reforestation*, taking into account such factors as the number of acres, proposed method of *afforestation* or *reforestation*, cost of planting materials, and maintenance costs.
 - (B) If after four *growing seasons* the plantings associated with the *afforestation* or *reforestation* meet or exceed the standards of the Kent County *Forest Conservation Technical Manual*, the amount of the bond, letter of credit, surety bond, or other security will be returned or released.

3.11 STATE FUNDS

- 1. A local agency or *persons* using state funds making application to conduct a *regulated activity* will submit the *subdivision*, construction, *grading*, or *sediment control* plan to the Department who will notify the Department of Natural Resources within fifteen (15) days of receipt of the plan or project.
- 2. Within fifteen (15) days of receipt of notice from the Department, the Department of Natural Resources will:
 - (A) Determine whether the project has impact on significant *forest* resources; and
 - (B) Notify the Department whether the project is subject to the State Program.
- 3. If the Department of Natural Resources determines that the project is subject to the State program:
 - (A) The time limit for approval of the *Forest Stand Delineation* and preliminary and final *Forest Conservation Plan* will begin when the Department of Natural Resources receives the necessary documents from the Department;
 - (B) The Department may not approve a *subdivision* or *site plan* or issue the *grading* or *sediment control permit* until the Maryland Department of Natural Resources notifies the county that the standards and requirements of the State program have been satisfied.
- 4. If the Department of Natural Resources determines the project need not be reviewed under the state program, the time limit for approval of the *Forest Stand Delineation* and *Forest Conservation Plan* under the Kent County Plan begins when the Department receives notice from the Department of Natural Resources.

3.12 FOREST MITIGATION BANKS

1. Payment by credits from a *forest mitigation bank*
 - (A) When the Department determines that the requirements for *reforestation* or *afforestation on-site* or *off-site* cannot be reasonably accomplished, the *applicant* may contribute credits from a *forest mitigation bank*. A credit is required for each tenth of an acre of an area of required planting.
 - (B) The credits will be debited from an approved *forest mitigation bank* prior to final approval.
2. Establishing *forest mitigation banks*
 - (A) A *person* may create a *forest mitigation bank* from which *applicants* may purchase credits to meet the *afforestation* and *reforestation* requirements of this ordinance.
 - (B) The *forest mitigation bank* will:
 - i. *Afforest* or *reforest* an area of land in accordance with a *Forest Mitigation Bank Agreement*;
 - ii. Be protected by an *easement*, deed restrictions, or covenants which require the land in the bank to remain *forested* in perpetuity and are enforceable by the Department and the Department of Natural Resources;
 - iii. Limit the use of the land in the bank to those activities which are not inconsistent with *forest conservation* such as recreational activities, *forest management* under a *forest conservation* and management program under Tax Property Article, §8-211, Annotated Code of Maryland, or activities specified in a *forest management* plan prepared by a licensed *forester* and approved by the Department;
 - iv. Use native plant materials for *afforestation* or *reforestation* unless inappropriate; and
 - v. Cause *trees* to be planted which: (1) Establish or enhance *forested buffers* adjacent to *intermittent* and *perennial streams* and coastal bays to widths of at least 50 feet; (2) Establish or increase existing *forested* corridors, which, where practical, should be a minimum of 300 feet in width to facilitate wildlife movement, to connect existing *forests* within or adjacent to the *site*; (3) Establish or enhance *forest buffers* adjacent to *critical habitats* where appropriate; (4) Establish or enhance *forested* areas in 100-year *floodplains*; (5) Stabilize *slopes* of 25 percent or greater; (6) Stabilize *slopes* of 15 percent or greater with a *soil k value* greater than 0.35 including the *slopes* of ravines or other natural depressions; (7) Establish *buffers* adjacent to areas of differing land use where appropriate, or adjacent to highways or utility rights-of-way; or (8) Establish *forest* areas

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adjacent to existing *forests* to increase the overall area of contiguous *forest cover*, when appropriate.

- (C) A *person* proposing to create a *forest mitigation bank* will submit to the Department:
- i. A completed application on a form approved by the Department which has been signed by an authorized individual;
 - ii. *Forest mitigation bank plan* which contains a: (1) Vicinity map of the proposed mitigation bank *site*; (2) Simplified *forest stand delineation* that meets the requirements for such delineations in this Section; (3) Detailed *afforestation or reforestation* plan, which will include a timetable and description of the *site* and *soil* preparation needed, species, size, and spacing to be utilized, prepared by a licensed Maryland *forester*, a licensed landscape *architect*, or a qualified professional who meets the requirements stated in COMAR 08.19.06.01a; and (4) Proposed 2-year maintenance agreement that includes: (4a) Watering plans; (4b) Fertilizing plans; (4c) Control of competing vegetation; (4d) Protection from disease pest, and mechanical injury; (4e) Replanting provisions when survival fall below acceptable levels; (4f) Name of company or individual responsible for *tree* care
 - iii. Copy of the deed to the property;
 - iv. Survey or other legally sufficient description of the bank *site* for inclusion in the deeds of *easement*, deed restrictions, or covenants;
 - v. Title report or other assurance that: (1) The property is not encumbered by any covenants or other types of restrictions which would impair the property's use as a *forest mitigation bank*; and (2) There is legally sufficient access to the *forest mitigation bank site* which can be used by the Department and its assignees to inspect the *forest mitigation bank*; and
 - vi. Description of the system to be used by the *person* owning and operating the *forest mitigation bank* to identify and keep track of which portions of the bank have been debited to meet an *applicant's* offsite *afforestation or reforestation* requirements.
- (D) The owner of an approved *forest mitigation bank* will enter into an agreement with the Department which contains: i. The approved *reforestation or afforestation* plan; ii. The approved system for marking and tracking which portions of the bank have been debited; and iii. An acknowledgment that the bank may not debit any portion of the *afforested or reforested* land until two (2) years of successful growth has been achieved unless the banker has posted a bond or alternate form of security.

SECTION 4 EROSION & SEDIMENT CONTROL**4.1 STATEMENT OF INTENT**

1. The purpose of this Ordinance is to protect, maintain, and enhance the public health, safety, and general welfare by establishing minimum requirements and procedures to control the *adverse impacts* associated with land disturbances. The goal is to minimize *soil erosion* and prevent *off-site sedimentation* by using *soil erosion and sediment control* practices designed in accordance with the Code of Maryland *Regulations* (COMAR) 26.17.01, the 2011 Maryland *Standards and Specifications* and the *Stormwater Management* Act of 2007. Implementing this Ordinance will help reduce the negative impacts of land *development* on water resources, maintain the chemical, physical, and biological integrity of streams, and minimize damage to public and private property.
2. The provisions of this Ordinance pursuant to Title 4, Environment Article, Subtitle 1, Annotated Code of Maryland will apply to all land *grading* occurring within Kent County. The application of this Ordinance and the provisions expressed herein will be the minimum *erosion and sediment control* requirements and will not be deemed a limitation or repeal of any other powers granted by State Statute.
3. No *person* will disturb land without implementing *soil erosion and sediment controls* in accordance with the requirements of this Ordinance and the *Standards and Specifications* except as provided within this Section.

4.2 APPLICABILITY

1. A permit will be obtained for any *grading, clearing, stripping*, excavating, filling of land, or *forest* harvesting. A permit will also be obtained for the creation of borrow pits, spoil areas, quarries, material processing facilities, or any other facilities.
2. A permit will not be required for the following, subject to compliance with the requirements of the Department of the Environment, relating to *sediment* control plans approved by the Kent *Soil* and Water Conservation District:
 - (A) Outside the Chesapeake Bay *Critical Area*, *agricultural land management* operating according to *best management practices* in Maryland.
 - (B) In the Chesapeake Bay *Critical Area*, *agricultural land management* operating according to an approved *soil* and water conservation plan approved by the Kent *Soil* and Water Conservation District. Landowners who have signed up as conservation district cooperators but do not have a conservation plan developed for them by the District will be exempt from the requirements of this Section, if *best management practices* are used.
 - (C) *Clearing or grading* of land, provided that:
 - i. The aggregate of area(s) affected or bared at any one time does not exceed five thousand (5,000) square feet; and

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- ii. The *grading* does not involve a quantity of materials in excess of one hundred (100) cubic yards.
- (D) State and federal projects that are reviewed and enforced by the Maryland Department of the Environment.

4.3 PROCEDURES

A person making an application for a *Sediment Control Permit* will submit to the Department the following:

1. Application
2. One original and five copies of the *erosion and sediment control plan*, including specifications and timing schedules.
3. Fee
4. A bond, if required under this Section.

4.4 GENERAL REQUIREMENTS

1. Permits issued under this Section do not relieve the owner of responsibility for securing required permits for work to be done which is regulated by any other applicable code, act, or County ordinance. This Section will not preclude the inclusion in other permits of more stringent *regulations* or requirements concerning *sediment* control.
2. Standard *sediment* control plans and provisions may be approved for *single family dwellings* and other minor projects. A plan will be approved prior to the issuance of a *grading* or *building* permit.
3. The Kent *Soil* and Water Conservation District may prepare *sediment* control plans for agricultural projects such as barns, chicken houses, dairy operations or other agricultural *buildings*.
4. A copy of the current approved plan will be kept at the construction *site*.
5. Prior to the issuance of a *grading* permit, copies of the plan will be referred by the Department to the Kent *Soil* and Water Conservation District for approval. Where applicable, the Maryland Department of the Environment may also review any plans that may require a water resources permit. Where deemed necessary, the Maryland Department of the Environment may also serve Kent County and the Kent *Soil* and Water Conservation District as a technical authority in *erosion and sediment control*. The *Soil* and Water Conservation District will notify the Department of its recommendations and/or approval.
6. Major modifications of the approved *grading* plans will be submitted to the Department and reprocessed in the same manner as the original plan. Field modifications of a minor nature may be authorized by the Department provided that written authorization is given

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to the *applicant* performing work pursuant to this Section, with copies forwarded in a timely manner to the Kent *Soil* and Water Conservation District.

7. The permit and inspection fee will be paid to the Department and will be determined by the Department after consultation with the Kent *Soil* and Water Conservation District. The fee for a permit authorizing additional work will be the difference between the fee paid for the original permit and the fee required for the entire *sediment* control project.
8. If the land area for which the *grading* is proposed lies within the *floodway* of any stream or *watercourse*, the Department will deny a *sediment control permit*, unless such *grading* is authorized or permitted by the Maryland Department of the Environment in accordance with its rules and *regulations*.
9. In granting any permit pursuant to this Section, the Department may impose conditions that may be reasonably necessary to prevent the creation of a nuisance or unreasonable hazard to *persons* or to public or private property. Such conditions include but are not limited to:
 - (A) Improvement of any existing *grading* to meet the standards required under this Section for new *grading* and for *sediment* control.
 - (B) Designation of *easements* for drainage facilities and for the maintenance of *slopes*, *erosion* control facilities, and storm water management *structures* or devices.
 - (C) Adequate control of dust by watering or other control methods acceptable to the Department and in conformance with applicable air pollution ordinances.
10. The Department will have the right to deny issuance of a *grading* permit when the proposed *grading* would cause hazards adverse to the public safety and welfare.
11. For steep banks along the shorelines that are actively eroding and ten feet in height or more, the Department may elect not to issue a permit for the construction of a *dwelling* or any other substantial *building*.
12. *Sediment control permits* expire after three years unless construction of the project has begun.
13. Approved erosion and sediment control plans remain valid for three (3) years from the date of approval, except surface mines (e.g., sand and gravel pits) and landfill plans, which remain valid for five (5) years from the date of approval.
14. Following initial disturbance or re-disturbance, permanent or temporary *stabilization* on areas not under active *grading* will be completed within:
 - (A) Three calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter *slopes*, and all *slopes* greater than three horizontal to one vertical (3:1).
 - (B) Seven days as to other disturbed or *graded* areas on the project *site*.

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15. The *permittee* will fully perform and complete all of the work required to be done pursuant to the *grading* within the time limit specified in the *grading* permit. If an *applicant* is unable to complete the work in the specified time, the *applicant* will submit a written request for an extension to the Department that explains the need for the requested extension.
16. All permits issued for sand, gravel, or clay pits and rock quarries or any other mining or material processing operations involving *excavation* and/or stockpiling of *soil*, rock, or other materials will lapse one year after termination of active, productive (i.e. actually removing material whether at a profit or not and whether stockpiled or sold) and continuous operations as determined by the Department. Said permits will be reviewed by the Department for compliance in accordance with the approved *grading* plan.
17. Neither the issuance of a permit under the provisions of this Section nor the compliance with the provisions hereto or with any condition imposed by the Department will relieve any *person* from any responsibility for damage to *persons* and/or property.
18. During *grading* control operations the *permittee* will be responsible for the prevention of damage to any *public utilities* or services within the limits of *grading* and along any routes of travel of equipment. No *person* will *grade* on land so close to property lines as to endanger any adjoining public *street*, sidewalk, *alley*, or any other public or private property without supporting and protecting such property from settling, cracking, or other damage. *Grading* can occur on adjacent property if *grading* rights are secured from the property owner. Storm drains will terminate in an *acceptable outfall*. Kent County, Maryland will not be responsible for any drainage damage to downstream properties for failure of any work to be done pursuant to this Section.
19. No *soil*, miscellaneous debris, or other spilled or dumped material is to be deposited in *floodplains*, *watercourses*, public *streets*, highways, sidewalks, or other public thoroughfares during transit or operation.
20. The owner of any property on which *grading* or other work has been done under the provisions of this Section will maintain and/or promptly repair or restore all *graded* surfaces, *erosion* control measures, vegetative covers and/or other protective measures if disturbed or destroyed during the course of operations. Repair and restoration will be in conformance with the approved plans until permanent measures are accepted by the Department.

4.5 STEEP SLOPE REQUIREMENTS

1. *Development* may occur within steep *slope* areas provided that a minimum of 30% of the *lot* or parcel upon which the principal *structure* is to be situated is less than 10% *grade* and is contiguous to a road meeting Kent County design standards. The extent of *cutting* and filling that will be permitted on any *lot* will be based on the *soil* conditions at the *site* and as determined by the Department upon recommendation of the Kent *Soil* and Water Conservation District. Construction on piling and/or supports will be permitted.

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2. All *roads* and *streets* will be placed as close to the contour as possible, to minimize *cutting* and *filling*.
3. The construction of all *structures* will be preceded by the installation of storm drainage system(s) and *stabilization* measures.
4. In the case of a single *lot development* within such areas where no central storm drainage system exists, runoff from driveways, roofs, and other improved surfaces will be diverted and carried to an acceptable outlet by one or a combination of the following methods: filtration beds, subsurface dry wells, storm drainage systems and/or underground conduit systems or other adequate or protected outlets.

4.6 VEGETATIVE REQUIREMENTS

Vegetative *erosion and sediment control* measures will include, but not be limited to, the following:

1. Following initial *soil* disturbance or re-disturbance, permanent or temporary *stabilization* on areas not under active *grading* will be completed within:
 - (A) Three calendar days as to the surface of all perimeter dykes, swales, ditches, perimeter *slopes*, and all *slopes* greater than three to one (3:1).
 - (B) Seven days as to all other disturbed or *graded* areas on the project *site*.
2. All projects must comply with the provisions set forth in the *2011 Maryland Standards and Specifications for Erosion and Sediment Control*, and as may be amended.

https://mde.maryland.gov/programs/water/stormwatermanagementprogram/pages/es_c_standards.aspx

4.7 REVIEW AND APPROVAL OF EROSION AND SEDIMENT CONTROL PLANS

1. A *person* may not *grade* land without an *erosion and sediment control plan* approved by the *Kent Soil and Water Conservation District*.
2. The *Kent Soil and Water Conservation District* will review *erosion and sediment control plans* to determine compliance with this Ordinance and the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* prior to approval. In approving the plan, the *approving agency* may impose such conditions that may be deemed necessary to ensure compliance with the provisions of this Ordinance, COMAR 26.17.01, the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control*, and the preservation of public health and safety.
3. At a minimum, a *concept plan* will include the mapping of natural resources and sensitive areas including *highly erodible soils* and *slopes* greater than 15% as well as information required under *Stormwater Management*. These areas are to remain undisturbed, or an explanation will be included with either the concept or *site development plan* describing enhanced protection strategies for these areas during construction.

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4. A *site development plan* submittal will include all *concept plan* information and indicate how proposed *erosion and sediment control* practices will be integrated with proposed *stormwater management* practices. The latter is to be done through a narrative and an overlay plan showing both *Environmental Site Design (ESD)* and *erosion and sediment control* practices. An initial sequence of construction and proposed project phasing to achieve the *grading unit* restriction should be submitted at this time.
5. An *applicant* will submit a *final erosion and sediment control plan* to the *approving agency* for review and approval. The plan will include all of the information required by the concept and *site development plans* as well as any information in Section 8.8 not already submitted.
6. A *final erosion and sediment control plan* will not be considered approved without the inclusion of the signature and date of signature of the *approving agency* on the plan.
7. Approved plans remain valid for three (3) years from the date of approval unless extended or renewed by the *approving agency*, except surface mines (e.g., sand and gravel pits) and landfill plans, which remain valid for five (5) years from the date of approval.

4.8 CONTENTS OF EROSION AND SEDIMENT CONTROL PLANS

1. An *applicant* is responsible for submitting *erosion and sediment control plans* that meet the requirements of the *approving agency*, this Section, *Stormwater Management*, and the *Standards and Specifications*. The plans will include sufficient information to evaluate the environmental characteristics of the affected areas, the potential impacts of the proposed *grading* on water resources, and the effectiveness and acceptability of measures proposed to minimize *soil erosion* and *off-site sedimentation*.
2. At a minimum, *applicants* will submit the following information:
 - (A) A letter of transmittal and/or application;
 - (B) Name, address, and telephone number of:
 - i. The owner of the property where the *grading* is proposed;
 - ii. The *developer*; and
 - iii. The *applicant*;
 - (C) A vicinity map indicating north arrow, scale, *site* location, and other information necessary to easily locate the property;
 - (D) *Drainage area* map(s) at a 1" = 200' minimum scale showing existing, interim, and proposed *topography*, proposed improvements, standard symbols for proposed *sediment* control features, and pertinent drainage information including provisions to protect downstream areas from *erosion* for a minimum of 200 feet downstream or to the next conveyance system;
 - (E) The location of natural resources, *wetlands*, *floodplains*, *highly erodible soils*, *slopes* 15% and steeper, and any other sensitive areas;

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- (F) A general description of the predominant *soil* types on the *site*, as described by the appropriate *soil* survey information available through the local *soil* conservation district or the USDA Natural Resources *Soil* Conservation Service;
- (G) Proposed *stormwater management* practices;
- (H) *Erosion and sediment control plans* including:
 - i. The existing *topography* and improvements as well as proposed *topography* and improvements at a scale between 1" = 10' and 1" = 50' with 2-foot contours or another approved contour interval. For projects with more than minor *grading*, interim contours may also be required;
 - ii. Scale, project and sheet title, and north arrow on each plan sheet;
 - iii. The limit of disturbance (LOD) including: (1) Limit of *grading* (*grading units*, if applicable); and (2) Initial, interim, and final phases;
 - iv. The proposed *grading* and earth disturbance including: (1) Total disturbed area; (2) Volume of *cut* and fill quantities; and (3) Volume of borrow and spoil quantities;
 - v. Storm drainage features, including: (1) Existing and proposed bridges, storm drains, culverts, outfalls, etc.; (2) Velocities and peak flow rates at outfalls for the two-year and ten-year frequency storm events; and (3) *Site* conditions around points of all surface water discharge from the *site*;
 - vi. *Erosion and sediment control* practices to minimize *on-site erosion* and prevent *off-site sedimentation* including: (1) The salvage and reuse of *topsoil*; (2) Phased construction and implementation of *grading unit*(s) to minimize disturbances, both in extent and duration; (3) Location and type of all proposed *sediment control* practices; (4) Design details and data for all *erosion and sediment control* practices; and (5) Specifications for temporary and permanent *stabilization* measures including, at a minimum: (5a) The "Standard *Stabilization Note*" on the plan stating: (5a-1) "Following initial *soil* disturbance or re-disturbance, permanent or temporary *stabilization* will be completed within: (5a-2) Three calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter *slopes*, and all *slopes* steeper than 3 horizontal to 1 vertical (3:1); and (5a-3) Seven calendar days as to all other disturbed or *graded* areas on the project *site* not under active *grading*." (5b) Details for areas requiring accelerated *stabilization*; and (5c) Maintenance requirements as defined in the *Standards and Specifications*;
 - vii. A *sequence* of construction describing the relationship between the implementation and maintenance of controls, including permanent and temporary *stabilization*, and the various stages or phases of earth disturbance and construction. Any changes or revisions to the sequence of construction will be approved by the *approving agency* prior to proceeding

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with construction. The sequence of construction, at a minimum, will include the following: (1) Request for a pre-construction meeting with the appropriate enforcement authority; (2) *Clearing* and grubbing as necessary for the installation of perimeter controls; (3) Construction and *stabilization* of perimeter controls; (4) Remaining *clearing* and grubbing within installed perimeter controls; (5) Road *grading*; (6) *Grading* for the remainder of the *site*; (7) Utility installation and connections to existing *structures*; (8) Construction of *buildings, roads*, and other construction; (9) Final *grading, landscaping, and stabilization*; (10) Installation of *stormwater management* measures; (11) Approval of the appropriate enforcement authority prior to removal of *sediment* controls; and (12) Removal of controls and *stabilization* of areas that are disturbed by removal of *sediment* controls.

- viii. A statement requiring the owner/*developer* or representative to contact the *inspection agency* or its agent at the following stages of the project or in accordance with the approved *erosion and sediment control plan, grading* permit, or *building* permit: (1) Prior to the start of earth disturbance; (2) Upon completion of the installation of perimeter *erosion and sediment controls*, but before proceeding with any other earth disturbance or *grading*; (3) Prior to the start of another phase of construction or opening of another *grading unit*; and (4) Prior to the removal of *sediment* control practices;
 - ix. *Certification* by the owner/*developer* that any *clearing, grading, construction, or development* will be done pursuant to the approved *erosion and sediment control plan*. The *certification* will also require that the *responsible personnel* involved in the construction project have a Certificate of Training at an MDE approved training program for the control of *erosion and sediment* prior to beginning the project. The Certificate of Training for *Responsible Personnel* may be waived by the *approving agency* on any project involving four or fewer residential *lots*. Additionally, the owner/*developer* will allow right of entry for periodic *on-site* evaluation by the *approving agency, Department, the inspection agency, and/or MDE*; and
 - x. *Certification* by a professional *engineer, land surveyor, landscape architect, architect, or forester* (for *forest* harvest operations only) registered in the State that the plans have been designed in accordance with *erosion and sediment control laws, regulations, and standards*, if required by the *approving agency* or the Maryland Water Management Administration.
- (I) Any additional information or data deemed appropriate by the *approving agency*.
3. All plans will conform to the following terms and conditions:

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- (A) The *development* will be fitted to the *topography* and *soils* so as to create the least *erosion* potential.
- (B) *Natural vegetation* will be retained and protected wherever possible.
- (C) Only the smallest practical area will be exposed for the shortest practical period of time.
- (D) *Erosion* control practices (such as interceptor ditches, *berms*, terraces, contour ripping, *soil erosion* checks and *sediment* basins) will be installed to minimize *soil* and water losses.
- (E) Temporary vegetation and/or mulching will be used to protect *critical areas* exposed during the time of *development*.
- (F) During and after *development*, provisions will be made to effectively accommodate the increased runoff caused by changeable *soil* and surface conditions and not cause siltation, destruction, or deterioration of the receiving stream.
- (G) Permanent vegetation and *structures* will be installed in the *development* as soon as the season permits.

4.9 SECURITIES

1. A *grading* permit will not be issued for *grading* involving the movement of more than 1,000 cubic *yards* of *soils* unless the *permittee* will post with the Department a performance bond, letter of credit or other surety. The bond, irrevocable letter of credit or other surety will be in a form approved by the County Attorney and in an amount not less than the total estimated cost of the *erosion* control and *stabilization* of the *site*. Said estimated cost will be that which is approved by the Department or in consultation with the Kent *Soil* and Water Conservation District after reviewing the cost estimates proposed by the *applicant's* acceptable *engineer*, *land surveyor*, or *architect* and submitted with the *grading* permit application.
2. The bond, irrevocable letter of credit or other surety will include the following provisions:
 - (A) The *applicant* will comply with all of the provisions of this Ordinance and all other applicable laws and ordinances.
 - (B) The *applicant* will comply with all of the terms and conditions of the *grading* permit.
 - (C) Any extension of completion time under this Section will not release the *applicant* or surety on the bond, irrevocable letter of credit, or other surety.
 - (D) Upon default, the *applicant* and surety will continue to be *firmly* bound under a continuing obligation for payment of one of the following at the election of the surety:

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- i. All costs and expenses necessary to complete the work in accordance with the approved plans and specifications (or any approved modification thereof).
 - ii. All necessary costs and expenses or liabilities which may be incurred to stabilize in accordance with a *stabilization* plan for *erosion* control presented by the surety and approved by Kent County.
 - iii. Payment of the full amount of the bond to Kent County to perform the work necessary. If the cost for restoration of the *site* to meet the minimum requirements of this Section (with particular emphases on stability, safety, drainage, and *erosion* control) exceeds the amount of the bond, the *permittee* will continue to be *firmly* bound under a continuing obligation for payment of all excess cost and expenses incurred by the county.
3. The bond, irrevocable letter of credit or other surety will remain in full force and effect until the completion of the work to the specifications required. If all work of the permit is not completed within the time specified therein, or as otherwise provided for in this Section or violates any other term or condition, payment in full to Kent County may be ordered. The funds so received will be used by the County to defray the cost of restoration of the *site*. Upon approval of a certificate of completion, the bond, irrevocable letter of credit or other surety will be released.

4.10 HAZARDOUS CONDITIONS

1. If the Department determines that an *excavation*, *embankment*, or a *fill* endangers or adversely affects the safety or stability of any public or private property, as determined from the guidelines of this Ordinance, the Planning Director, or the Planning Director's designee, will promptly notify in writing the owner (or other *persons* in control) of the property upon which the condition exists.
2. If the correction is not commenced in accordance with the provisions of the Ordinance within the period of time specified in the notice, the owners (or other *persons* in control) will be subject to the penalties set forth in this Land Use Ordinance.

4.11 INSPECTIONS

1. All work will be inspected by the Department according to the following schedule.
 - (A) *Clearing* and grubbing for those areas necessary for installation of perimeter controls.
 - (B) Completion of perimeter controls.
 - (C) Remaining *clearing* and grubbing.
 - (D) Road *grading*
 - (E) *Grading* for remainder of the *site*.

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- (F) Utility and storm drain installation.
 - (G) Final *grading*, landscaping, or *stabilization*.
 - (H) Removal of controls and maintenance.
 - (I) At other times determined by the Department.
 - (J) Every two weeks, for compliance with approved *sediment* control plans.
2. It will be a condition of every *grading* or *building* permit that the *inspection agency* has the right to enter the property periodically to inspect for compliance with the approved *erosion and sediment control plan* and this Ordinance.
3. Inspection Procedure. Work approved will not proceed until the Department inspects the *site* and approves the work previously completed or notifies the *permittee* otherwise. Upon notification from the *permittee*, the Department will inspect the *site* and notify the *permittee* of its approval or rejection within forty-eight (48) hours (exclusive of Saturdays, Sundays, and Holidays). If the inspector does not make an inspection within the specified time period, work may proceed without presumption of approval at the risk of the *permittee*. The Department will have the right to waive inspections except final inspection as necessary.
4. Inspection Reports.
- (A) Written reports: Structural *erosion and sediment control* measures will include, but not be limited to, those described and depicted in the booklet entitled “*Standards and Specifications for Soil Erosion Control*” as approved by the Maryland Department of the Environment. This booklet, as currently amended, is readily available at offices of the Department, 400 High Street, Chestertown, Maryland; Kent Soil and Water Conservation District, Chestertown, Maryland; Natural Resources Conservation Service, Chestertown, Maryland; and the Maryland Department of the Environment.
 - (B) Written inspection reports will be completed by the inspector for all inspections. The reports will include, at minimum: (1) Date and location of *site* inspection; (2) Degree of plan implementation; (3) Deficiencies of plan or practice; (4) Enforcement action taken, if any; (5) A time frame for corrective measures
5. When required by the Department, inspections and testing will be performed under the direction of an *engineer*, *land surveyor* or *architect* who will certify all inspection reports and tests results. Such reports will include *certification* by an *engineer* for the adequacy of:
- (A) Cleared areas and benched or keyed surfaces prepared to receive fills.
 - (B) Removal of unsuitable materials.
 - (C) Construction of *erosion* control or drainage devices, buttress fills, under-drains, retaining walls, and other *grading* appurtenances.

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- (D) The degree of *compaction* where tests are performed.
- 6. All certified inspection reports and certified test results will be periodically submitted to the Department, during the performance of the work.
- 7. Final Reports. The Department will maintain permanent files on their respective inspections. Upon completion of permitted work, the Department will require the following for these files and will also require copies for the *Kent Soil* and Water Conservation District.
 - (A) An as-built original plan by a *land surveyor* or *engineer* and showing all improvements and final *grades* with red line *alterations* allowed.
 - (B) *Certification* by the owner that all *grading*, drainage, *erosion* control measures, and facilities and vegetative measures have been completed in conformance with the approved plans and specifications.
 - (C) A report summarizing the inspection reports, field and laboratory tests and locations of tests.
- 8. Final Inspection Request. The *permittee* or the *permittee's* agent will notify the Department when the *grading* operation is ready for final inspection. Final approval will be given in a timely manner when all work (including installation of all drainage *structures* and *erosion* protective devices) has been completed as well as the required vegetative *stabilization* and the required reports have been submitted.
- 9. The Department may also require signed and sealed drawings from a professional land surveyor or engineer, certifying that the requirements above have been satisfied. The Department may also engage third-party professionals to review the drawings to ensure compliance with the regulations in this Section, the Land Use Ordinance in general, and any applicable federal, State, or other laws, rules, and regulations. The costs for any third-party professionals will be paid by the applicant or property owner of record.

SECTION 5 STORMWATER MANAGEMENT**5.1 STATEMENT OF INTENT**

The purpose of this ordinance is to protect, maintain and enhance the public health, safety and general welfare by establishing minimum requirements and procedures to control the *adverse impacts* associated with increased *stormwater* runoff. The goal is to manage *stormwater* by using *environmental site design (ESD)* to the *maximum extent practicable (MEP)* to maintain after *development* as nearly as possible, the *predevelopment* runoff characteristics, and to reduce stream *channel erosion*, pollution, siltation, and *sedimentation*, and local *flooding*, and use appropriate structural *best management practices (BMP)* only when necessary. This will restore, enhance, and maintain the chemical, physical, and biological integrity of streams, minimize damage to public and private property and reduce the impacts of land *development*.

5.2 AUTHORITY; EXPLANATION OF PROVISIONS

The provisions of this ordinance pursuant to the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland, 2009-replacement volume, are adopted under the Code of Public Local Laws of Kent County and will apply to all *development* or *redevelopment* occurring within the unincorporated area of Kent County. The application of this ordinance and the provisions expressed herein will be the minimum *stormwater management* requirements and will not be deemed a limitation or repeal of any other powers granted by state statute. The County will be responsible for the coordination and enforcement of the provisions of this Ordinance. Any *development* that has not received final approval for *erosion and sediment control* and *stormwater management plans* by May 4, 2010, will comply with the 2010 revised Ordinance, unless the *development* or *redevelopment* is granted an administrative *waiver* under this Section.

5.3 INCORPORATION BY REFERENCE

1. The 2000 Maryland *Stormwater Design Manual*, Volumes I & II (Maryland Department of the Environment, April 2000 and as may be amended), will be incorporated by reference and will serve as the official guide for *stormwater management* principles, methods, and practices.
2. The USDA Natural Resources Conservation Service Maryland Conservation Practice Standard Pond Code 378 (January 2000 and as may be amended) will be incorporated by reference.

5.4 GRANDFATHERING

1. **DEFINITIONS APPLICABLE TO THE GRANDFATHERING.** For the purpose of determining the grandfathering of *development stormwater management plans* as set forth in this Section certain words are hereby defined.
 - (A) **Administrative Waiver:** A decision by Kent County pursuant to this Ordinance to allow the construction of a *development* to be governed by the *stormwater*

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management ordinance in effect as of May 4, 2009. An administrative *waiver* is distinct from a *waiver* granted pursuant to Article IV Processes.

- (B) Approval: A documented action by Kent County following a review to determine and acknowledge the sufficiency of submitted material to met the requirements of a specified stage in a local *development* review process. Approval does not mean acknowledgment by Kent County that material has been received for review.
 - (C) Final Project Approval: Approval of the *final stormwater management plan* and *erosion and sediment control plan* required to construct a project's *stormwater management* facilities. Final approval also includes securing the bonding or financing for final *development* plans if required as a prerequisite for approval.
 - (D) Preliminary Project Approval: Approval of the preliminary *development* plan that includes at a minimum:
 - i. The number of planned *dwelling units* or *lots*
 - ii. The proposed project *density*
 - iii. The proposed size and location of all land uses for the project
 - iv. A plan that identifies: (1) The proposed drainage patterns; (2) The location of all points of discharge from the *site*; and (3) The type, location, and size of all *stormwater management* measures based on *site-specific stormwater management* requirement computations.
 - v. Any other information required by Kent County including but not limited to: (1) The proposed alignment, location and construction type and standard for all *roads*, access ways, and areas of vehicular traffic; (2) A demonstration that the methods by which the *development* will be supplied with water and wastewater services are adequate; and (3) The size, type, and general location of all proposed wastewater and water system *infrastructure*.
2. ADMINISTRATIVE WAIVERS. Kent County may grant an administrative *waiver* to a *development* that received a preliminary project approval prior to May 4, 2010. Administrative *waivers* expire according to this Section and may be extended. Kent County may impose such conditions upon the approval of an administrative *waiver* deemed necessary to secure compliance with the spirit and intent of this Ordinance.
 3. EXPIRATION OF ADMINISTRATIVE WAIVERS. Except as provided for in this Section, an administrative *waiver* will expire on May 4, 2013, if the *development* does not receive final project approval prior to May 4, 2013, or May 4, 2017, if the *development* receives final approval prior to May 4, 2013. All construction authorized pursuant to an administrative *waiver* will be completed by May 4, 2017, unless otherwise extended. Administrative *waivers* which receive an extension will expire according to the requirements of this Section.

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4. EXTENSION OF ADMINISTRATIVE WAIVERS

- (A) In order to grant an extension to an administrative *waiver*, Kent County will find the following: (1) the project received preliminary project approval prior to May 4, 2010; and (2) the project was subject to a *Development* Rights and Responsibilities Agreement, a Tax Increment Financing Approval, or an annexation agreement.
- (B) Administrative *waivers* which receive an extension will expire with the expiration of the *Developers* Rights and Responsibilities Agreement, the Tax Increment Financing approval or the Annexation agreement.

5.5 SCOPE

No *person* will develop any land for residential, commercial, industrial, or institutional uses or redevelop land without having provided for appropriate *stormwater management* measures that control or manage runoff from such *developments*, except as provided in this section. *Stormwater management* measures will be designed consistent with the *Design Manual* and constructed according to an approved plan for new *development* or polices stated in Section 9.7 below for *redevelopment*.

5.6 EXEMPTIONS

The following *development activities* are exempt from the provisions of this Section and the requirements of providing *stormwater management*:

- 1. Normally accepted *agricultural land management* activities and *BMPs*, (i.e. *waterways*, ponds, etc.)
- 2. Additions or modifications to existing single *family* detached residential *structures* provided that these additions or modifications do not disturb over 5,000 square feet of land.
- 3. *Developments* that do not disturb over 5,000 square feet of land.
- 4. Land *development activities* that the Maryland Department of the Environment determines will be regulated under specific state laws, which provide for managing *stormwater* runoff.

5.7 REDEVELOPMENT

This Section applies to any construction, *alteration*, or improvement performed on *sites* where existing land use is commercial, industrial, institutional, or multi-*family* residential and existing *site* impervious area exceeds forty (40) percent.

- 1. *Stormwater management plans* are required by Kent County for all *redevelopment*, unless otherwise specified by *watershed* management plans developed according to this Ordinance. *Stormwater management* measures will be consistent with the *Design Manual*.

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2. All *redevelopment* designs will:
 - (A) Reduce *impervious surface* area within the limit of disturbance (LOD) by at least 50% according to the *Design Manual*;
 - (B) Implement *ESD* to *MEP* to provide water quality treatment for at least 50% of the existing *impervious surface* area within the limit of disturbance; or
 - (C) Use a combination of 9.7 2a and 2b of this Ordinance for at least 50% of the existing *site* impervious area.
3. Alternative *stormwater management* measures may be used to meet the requirements of this Section, if the *applicant* satisfactorily demonstrates to the County that impervious area reduction has been maximized and *ESD* has been implemented to the *MEP*. Alternative *stormwater management* measures include, but are not limited to:
 - (A) An *on-site* structural *BMP*;
 - (B) An *off-site BMP* to provide water quality treatment for an area equal to or greater than 50% of the existing impervious area; or
 - (C) A combination of impervious area reduction, environmental *site* design implementation, and an *on-site* or *off-site* structural Best Management Practice for an area equal to or greater than 50% of the existing *site impervious surface* area within the limit of disturbance.
4. Kent County may develop separate policies for providing water quality treatment for *redevelopment* projects if the requirements of this sub-section cannot be met. Any separate *redevelopment* policy will be reviewed and approved by the Maryland Department of the Environment and may include but not be limited to:
 - (A) A combination of *ESD* and an *on-site* or *offsite* structural *BMP*;
 - (B) *Retrofitting* including existing *BMP* upgrades, filtering practices and *offsite ESD* implementation;
 - (C) Stream restoration in the same 12-digit *watershed* as the proposed *development* and an area restored equivalent to the area required for treatment.
 - (D) Pollution trading with another entity.
 - (E) Payment of a fee in lieu; or
 - (F) A partial *waiver* of the treatment requirements if *ESD* is not practicable.
5. The determination of alternatives available may be made by Kent County at the appropriate stage in the *development* review process. Kent County will consider the prioritization of alternatives in this Section, after it has been determined that it is not practicable to meet the 2009 regulatory requirements using *ESD*. In deciding the alternatives that may be required, Kent County may consider factors including but not limited to the following:

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- (A) Whether the project is in an area targeted for *development* incentives such as a *Priority Funding Area*;
 - (B) Whether the project is necessary to accommodate growth consistent with the *Comprehensive Plan*; or
 - (C) Whether bonding or other financing mechanisms have been secured based on an approved *development* plan.
6. *Stormwater management* will be addressed according to the new *development* requirements in the *Design Manual* for any net increase in impervious areas.

5.8 STORMWATER MINIMUM CONTROL STANDARDS

Stormwater management will be accomplished for all new *development* according to the minimum requirements established in this Section and the *Design Manual* as follows:

1. All *planning techniques*, nonstructural practices, and design methods specified in the *Design Manual* will be used to implement *ESD* to the *MEP*. The use of *environmental site design planning techniques* and treatment practices will be exhausted before any structural *BMP* is implemented. *Stormwater management plans* for *development* projects subject to this Ordinance will be designed using *ESD* sizing criteria, *recharge volume*, *water quality volume*, and *channel protection storage volume* criteria according to the *Design Manual*. The *MEP* standard is met when *channel* stability is maintained, *predevelopment* groundwater recharge is replicated, nonpoint source pollution is minimized, and structural *stormwater management* practices are used only if determined to be absolutely necessary.
2. Control of the 10-year frequency storm event is required according to the *Design Manual* if the County determines that additional *stormwater management* is necessary because historical *flooding* problems exist and downstream *floodplain development* and conveyance system design cannot be controlled.
3. Kent County may require more than the minimum control requirements specified in this Ordinance if hydrologic or topographic conditions warrant or if *flooding*, stream *channel erosion*, or water quality problems exist downstream from a proposed project.
4. Alternate minimum control requirements may be adopted subject to approval by the Maryland Department of the Environment. The Maryland Department of the Environment will require a demonstration that alternative requirements will implement *ESD* to the *MEP* and control *flood* damages, accelerated stream *erosion*, water quality and *sedimentation*. Comprehensive *watershed* studies may also be required.
5. *Stormwater management* and *development* plans where applicable, will be consistent with adopted and approved *watershed* management plans or *flood* management plans as approved by the Maryland Department of the Environment in accordance with the *Flood Hazard Management Act* of 1976.

5.9 STORMWATER MANAGEMENT MEASURES

The ESD *planning techniques* and practices and structural *stormwater management* measures established in this Ordinance and the *Design Manual* will be used, either alone or in combination in a *stormwater management plan*. The *applicant* will demonstrate that ESD has been implemented to the MEP before the use of a structural Best Management Plan is considered in developing the *stormwater management plan*.

1. ENVIRONMENTAL SITE DESIGN TECHNIQUES AND PRACTICES

- (A) The following *planning techniques* will be applied according to the *Design Manual* to satisfy the applicable minimum control requirements established in SECTION 5.8:
 - i. Preserving and protecting natural resources
 - ii. Conserving natural drainage patterns
 - iii. Minimizing impervious areas
 - iv. Reducing runoff volume
 - v. Using ESD practices to maintain 100% of the annual *predevelopment* groundwater *recharge volume*.
- (B) The following ESD practices will be designed according to the *Design Manual* to satisfy the applicable minimum control requirements established in SECTION 5.8.
 - i. Disconnection of rooftop runoff
 - ii. Disconnection of non-rooftop runoff
 - iii. Sheet flow to conservation areas
 - iv. Rainwater harvesting, including rain barrels, rainwater tanks, and cisterns.
 - v. Submerged gravel *wetlands*
 - vi. Landscape *infiltration*
 - vii. *Infiltration berms*
 - viii. Dry wells
 - ix. Micro-bioretenion
 - x. Rain gardens
 - xi. Swales
 - xii. Enhanced Filters
 - xiii. Any practice approved by the Maryland Department of Environment

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- (C) The use of *ESD planning techniques* and treatment practices specified in this Section will not conflict with existing State law or local ordinances, *regulations*, or policies. The County will modify ordinances and codes to eliminate any impediments to implementing *ESD* to the *MEP* according to the *Design Manual*.
2. STRUCTURAL STORMWATER MANAGEMENT MEASURES
- (A) The following structural *stormwater management* practices will be designed according to the *Design Manual* to satisfy the applicable minimum control requirements established SECTION 5.8:
 - i. *Stormwater management ponds*
 - ii. *Stormwater management wetlands*
 - iii. *Stormwater management infiltration*
 - iv. *Stormwater management filtering systems*
 - v. *Stormwater management open channel systems*
 - (B) When selecting structural *stormwater management* practices, the *applicant* will consider the performance criteria specified in the *Design Manual* with regard to general feasibility, conveyance, *pretreatment*, treatment and geometry, environment and landscaping, and maintenance.
 - (C) Structural *stormwater management* practices will be selected to accommodate the unique hydrologic or geologic regions of the State.
3. ALTERNATIVE PRACTICES AND MEASURES. Alternative *ESD planning techniques* and treatment practices and structural *stormwater* measures may be used for new *development* runoff control if the practices and measures meet the performance criteria in the *Design Manual* and all subsequent revisions and are approved by the Maryland Department of Environment. Practices used for *redevelopment* projects will be approved by the County.
4. RECORDATION OF PRACTICES AND MEASURES. *ESD* techniques and treatment practices and structural *stormwater management* measures used to satisfy the minimum requirements in SECTION 5.8 will be recorded in the land records of Kent County and remain unaltered by subsequent property owners. Prior approval from the County will be obtained before any *stormwater management* practice is altered.
5. MODIFICATION. For purposes of modifying the minimum control requirements or design criteria, the *applicant* will submit an analysis to the County of the impacts of *stormwater* flows downstream in the *watershed*. The analysis will include hydrologic and hydraulic calculations necessary to determine the impact of hydrographic timing modifications of the proposed *development* upon a dam, highway, *structure*, or natural point of restricted stream flow. The point of investigation will be established with the concurrence of the County downstream of the first downstream tributary whose *drainage area* equals or exceeds the contributing area to the project or *stormwater management* facility.

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5.10 SPECIFIC DESIGN CRITERIA

The basic design criteria, methodologies, and construction specifications, subject to the approval of Kent County and the Maryland Department of Environment will be those of the *Design Manual*.

5.11 STORMWATER MANAGEMENT PLANS - REVIEW AND APPROVAL

1. For any proposed *development* a phased *stormwater management plan* will be submitted to the County for review and approval. Unless otherwise determined by the County, plans will be submitted for the concept, *site* design, and final *stormwater management* construction. When deemed appropriate by the County due to minor cumulative impacts of the *development* and when the *applicant* has demonstrated that *ESD* standards have been met to the *MEP*, the *site* design and final *stormwater management* construction may be combined. *Site plans*, *subdivisions*, and *building* permits with a total proposed *lot* coverage of 15% and total land disturbance less than 20,000 square feet may combine all review phases when the *applicant* has demonstrated that *ESD* standards have been met to the *MEP* using the Standard Plan. *Sites Plans* and *building* permits that meet the criteria outlined on the Standard *Stormwater Plan* may utilize the Standard *Stormwater Management Plan*.
2. Conceptual *stormwater management plans* should be submitted with conceptual *site* or *subdivision* plans and will include sufficient information for an initial assessment of the proposed project and proposed *stormwater*. The concept review process will review at a conceptual level, the feasibility, design and environmental characteristics of the proposal with a goal to ensure that significant natural areas are protected and to determine if *stormwater management* can be provided according the *Stormwater Management Measures* identified in SECTION 5.9.
3. Following conceptual approval and where applicable in conjunction with the preliminary *site* or *subdivision* plan, the *applicant* will submit a *site development plan*. The *site development plan* will include detailed designs for *stormwater management* and *erosion and sediment control*. The *site development plan* process will review the plan to ensure that all options for implementing *ESD* have been exhausted and comments received during conceptual review have been incorporated into the *site development plan*.
4. Following *site development plan* approval and where applicable in conjunction with the final *site* or *subdivision* plan and the *sediment* and *erosion* control plan, the *applicant* will submit a *final stormwater management plan*. The *final stormwater management plan* will include *stormwater* construction drawings accompanied by a report that includes sufficient information to evaluate the effectiveness of the proposed runoff control design. The final *stormwater* plan process will review the plan and supporting documents for compliance with all applicable *regulations* and to ensure that when structural practices are used, all reasonable options for implementing *ESD* have been exhausted.
5. The County will perform a comprehensive review of the *stormwater management plans* for each phase of the *site* design. Coordinated comments will be provided for each plan phase that reflects input from all appropriate agencies including but not limited to the

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Kent Soil and Water Conservation District, the Department of Planning, Housing, and Zoning, and the Department of Public Works. All comments will be addressed and reflected in the next phase of project design.

6. The *stormwater management plan* will not be considered approved without the inclusion of the signature and date of the signature of the Kent County designee for approval of *stormwater management plans*.

5.12 CONTENTS OF STORMWATER MANAGEMENT PLANS

1. *CONCEPT PLAN*. A concept *stormwater management plan* will include:
 - (A) Scale of 1 inch = 100 feet or greater detail
 - (B) Vicinity map with *site* location clearly marked
 - (C) North arrow
 - (D) Existing *natural features*, water and other sensitive resources
 - (E) *Topography*
 - (F) Natural drainage patterns
 - (G) Anticipated location of all proposed impervious areas, *buildings*, *roadways*, parking, sidewalks, utilities, and other *site* improvements
 - (H) Location of the proposed limit of disturbance, erodible *soils*, *steep slopes*, and areas to be protected during construction
 - (I) Preliminary estimates of *stormwater management* requirements, the *selection* and location of *ESD* practices to be used, and the location of all points of discharge from the *site*
 - (J) A narrative that supports the concept design and describes how *ESD* will be implemented to the *MEP*
 - (K) Any other information required by the County
2. *SITE DEVELOPMENT PLAN*. A *site development plan* will include:
 - (A) Scale of 1 inch = 100 feet or greater detail
 - (B) Vicinity map with *site* location clearly marked
 - (C) North arrow
 - (D) All the information provided in the concept *stormwater management plan*
 - (E) Final layout
 - (F) Exact impervious area locations and acreages
 - (G) Proposed *topography*
 - (H) Delineated *drainage areas* at all points of discharge from the *site*

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- (I) *Stormwater* volume computations for *ESD* and quantity control
 - (J) Preliminary *erosion and sediment control plan* that contains the construction sequence, any phasing necessary to limit earth disturbances and impacts to natural resources and an overlay showing the types and locations of *ESD* and *erosion and sediment control* practices to be used
 - (K) A narrative that supports the *site development* design, describes how *ESD* will be used to meet the minimum control requirements, and justifies any proposed structural *stormwater management* measures
 - (L) Any other information required by the County
3. FINAL *STORMWATER PLAN*. A final *stormwater* plan will be of sufficient detail to permit all *stormwater management* approvals and permits to be issued and will include:
- (A) *Final erosion and sediment control plans* submitted according to COMAR 26.17.01.05
 - (B) Include construction drawings
 - (C) A report that includes sufficient information to evaluate the effectiveness of the proposed runoff and control design. The report will include but is not limited to the following:
 - i. Geotechnical investigations including *soil* maps, borings, *site* specific recommendations, and any additional information necessary for the final *stormwater management* design
 - ii. *Drainage area* maps depicting *predevelopment* and post *development* runoff flow path segmentation and land use
 - iii. Hydrologic computations of the applicable *ESD* and unified sizing criteria according to the *Design Manual* for all points of discharge from the *site*
 - iv. Hydraulic and structural computations for all *ESD* practices and structural *stormwater management* measures to be used
 - v. Narrative that supports the final *stormwater management* design
 - vi. Any other information required by the County
 - (D) Construction drawings that include but are not limited to the following:
 - i. Vicinity Map
 - ii. North arrow
 - iii. Existing and proposed *topography*
 - iv. Proposed *drainage areas* including areas necessary to determine downstream analysis for proposed *stormwater management* facilities
 - v. Proposed improvements including the location of *buildings* and other *structures*, *impervious surfaces*, storm drainage facilities, and all *grading*

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- vi. Location of existing and proposed *structures* and utilities
 - vii. Existing and proposed *easements* and rights-of-ways
 - viii. Delineation of 100-year *floodplains* and onsite *tidal* and *non-tidal wetlands*, where applicable
 - ix. Structural and construction details including representative cross-sections for all components of the proposed drainage system or systems and *stormwater management* facilities
 - x. All necessary construction specifications
 - xi. h) Sequence of construction
 - xii. Data for total *site* area, disturbed area, new impervious areas, and total impervious areas
 - xiii. Table showing the *ESD* and unified sizing criteria volumes required in the *Design Manual*
 - xiv. Table of materials to be used for *stormwater management* facility planting
 - xv. All *soil* boring logs and locations
 - xvi. Inspection and maintenance schedule
 - xvii. Owner's *certification* that all *stormwater management* construction will be done according to the approved *stormwater management plan*.
 - xviii. As-built *certification* signature block to be executed after project completion
 - xix. Any other information required by the County
- (E) When the *stormwater management plan* involves direction of some or all runoff off the *site*, it is the responsibility of the *applicant* to obtain from the adjacent property owners any *easements* or other necessary property interests concerning flowage of water. Approval of a *stormwater management plan* does not create or affect any right to direct runoff onto adjacent property without the property owner's permission.

5.13 PREPARATION OF STORMWATER MANAGEMENT PLANS

1. *Stormwater management plans* will be prepared by a professional *engineer*, professional *land surveyor*, or landscape *architect* licensed in the State of Maryland.
2. If a *stormwater BMP* requires either a dam safety permit from the Maryland Department of the Environment or small pond approval by the Kent *Soil* and Water Conservation District, the *stormwater management plan* will be prepared by a professional *engineer* licensed in Maryland.

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5.14 PERMITS

A *grading* or *building* permit may not be issued for any parcel or *lot* unless final *erosion and sediment control* and *stormwater management plan* has been approved County as meeting all the requirements of this Ordinance and the *Design Manual*. Where appropriate, a *building* permit may not be issued without:

1. Recorded *easements* for the *stormwater management* facility and *easements* to provide adequate access for inspection and maintenance from a public *right of way*.
2. A recorded *stormwater management maintenance agreement* as described in SECTION 5.22.
3. A performance bond, an irrevocable letter of credit or other surety; as described in this Ordinance.
4. Permission from adjacent property owners, as may be required.

5.15 PERMIT AND REVIEW FEES

1. The County Commissioners will establish a schedule of fees and collection procedure for *stormwater management* review and permits. Permits fees will be based on the relative complexity of the project and may cover the cost of plan review, administration and management of the permit process, and inspection of all projects subject to this Ordinance.
2. No permits will be issued, nor action taken on amendments or other matters pertaining to this Ordinance, until the fee has been paid in full.

5.16 SUSPENSION AND REVOCATION

Any *grading* or *building* permit issued by Kent County may be suspended or revoked after written notice is given to the *permittee* for any of the following reasons:

1. Any *violation(s)* of the conditions of the *stormwater management plan* approval.
2. Changes in *site* runoff characteristics upon which an approval or *waiver* was granted.
3. Construction is not in accordance with the approved plans.
4. Non-compliance with correction notice(s) or stop-work order(s) issued for the construction of the *stormwater management* practice.
5. An immediate danger exists in a downstream area in the opinion of the County.

5.17 CONDITIONS FOR APPROVAL

In granting the plan approval, the County may impose such conditions thereto as may be deemed necessary to ensure compliance with the provisions of this Ordinance and the preservation of the public health and safety.

5.18 PERFORMANCE BONDS

The *developer* is required to obtain a surety, irrevocable letter of credit, or other means of security acceptable to Kent County and payable to the County Commissioners of Kent County, prior to the issuance of any *building* and/or *grading* permit for construction of a *development* requiring *stormwater management*. The amount of the security will not be less than 125% of the total estimated construction cost of all *stormwater management* facilities and practices. The security so required in this Section will include provisions relative to forfeiture for failure to complete work specified in the approved *stormwater management plan*, compliance with all the provisions of this Section and other applicable laws and *regulations*, and any time limitations. The security will not be fully released without a final inspection of the completed work by Kent County, submission of “as-built” plans, and *certification* of completion by the County, that all *stormwater management* facilities and practices as being in compliance with the approved plan and the provisions of this Section. A provision may be made for partial release of the amount of the bond pro-rata upon completion and acceptance of the various stages of *development* as specifically delineated, described, and scheduled on the required plans and specifications. The provision for partial release of the surety will be specified by Kent County in writing prior to *stormwater management plan* approval. The *developer* will notify the County upon completion of each stage that is ready for inspection.

5.19 INSPECTIONS

1. INSPECTION SCHEDULE AND REPORTS

- (A) The owner/*developer* will notify the County at least 48 hours before beginning any work in conjunction with *site development*, the *stormwater management plan* and completion of construction.
- (B) Regular inspections will be made and documented for each *ESD* planning technique and practice at the stages of construction specified in the *Design Manual* by Kent County, its authorized representative, or a certified *engineer* license in the State of Maryland. At a minimum, all *ESD* and other nonstructural practices will be inspected upon completion of final *grading*, the establishment of permanent *stabilization*, and before issuance of use and occupancy approval.
- (C) Written reports will be prepared for every inspection and will include:
 - i. The date and location of the inspection
 - ii. Whether construction was in compliance with the approved *stormwater management plan*
 - iii. Any variations from the approved construction specifications
 - iv. Any *violations* that exist

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- (D) The owner/*developer* and *on-site personnel* will be notified in writing when *violations* are observed. Written notification will describe the nature of the *violation* and the required corrective action.
- (E) Work will not proceed until the work previously complete is approved by the appropriate inspector and the inspector furnishes the *developer* with the results of the inspection reports. The inspector should provide copies of the inspection report to the *developer* as soon as possible after completion of each required inspection.

2. INSPECTION REQUIREMENTS DURING CONSTRUCTION

At a minimum, regular inspections will be made and documented at the following specific stages of construction:

- (A) Ponds:
 - i. Upon completion of *excavation* to sub-foundation and when required, installation of structural supports or reinforcement for *structures* including but not limited to: (1) Core trenches for structural embankments; (2) Inlet and outlet *structures*, anti-seep collars or diaphragms, and watertight connectors; (3) Trenches for enclosed storm drainage facilities
 - ii. During placement of structural fill, concrete, and installation of piping and catch basins
 - iii. During backfill of foundations and trenches
 - iv. During embankment construction
 - v. On completion of final *grading*, establishment of permanent *stabilization*
- (B) *Wetlands* - At all stages specified for pond construction, during and after *wetlands* reservoir planting, and during the second *growing season* to verify a vegetation survival rate of at least 50%.
- (C) *Infiltration* trenches:
 - i. During *excavation* to subgrade
 - ii. During placement and backfill of under drain systems and observation wells
 - iii. During placement of geotextiles and all filter media
 - iv. During construction of appurtenant conveyance systems such as *diversion structures*, pre-filters and filters, inlets, outlets, and flow distribution *structures*
 - v. Upon completion of final *grading* and establishment of permanent *stabilization*
- (D) *Infiltration* basins - At all stages specified for pond construction, during placement of and backfill of under drainage system.

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- (E) Filtering Systems:
 - i. During *excavation* to *subgrade*
 - ii. During placement and backfill of under drain systems
 - iii. During placement of geotextiles and all filter media
 - iv. During construction of appurtenant conveyance systems such as *diversion structures*, pre-filters, and filters, inlets, outlets, and flow distribution *structures*
 - v. Upon completion of final *grading* and establishment of permanent *stabilization*
- (F) Open Channel Systems:
 - i. During *excavation* to *subgrade*
 - ii. During placement and backfill of under drain systems for dry swales
 - iii. During installation of diaphragms, check dams, or weirs
 - iv. Upon completion of final *grading* and establishment of permanent *stabilization*
- (G) *Environmental Site Design Practices* – At the stage of construction specified in the *Design Manual* for each *ESD* planning technique and practice and at a minimum upon completion of final *grading*, the establishment of permanent *stabilization* and before issuance of use and occupancy approval.

5.20 AS-BUILT PLANS

Once construction is complete, “as-built” plan *certification* will be submitted by a professional *engineer* or professional *land surveyor* licensed in the State of Maryland to ensure that *ESD* techniques, treatment practices, and structural *stormwater management* practices and conveyance systems comply with the specifications contained in the approved plan. The “as-built” plan will compare the approved plan with what was constructed. As-built plans shall certify that all constructed elements conform to the dimensions, intent, and function of the approved plan, denoting any deviations in constructed elements and/or existing conditions of the property. At a minimum, “as-built” *certification* will include a set of drawings comparing the approved plan with what was constructed. Other information will be submitted as required by the County.

The Department may also engage third-party professionals to review said drawings to ensure compliance with the regulations in this Section, the Land Use Ordinance in general, and any applicable federal, State, or other laws, rules, and regulations. The costs for any third-party professionals will be paid by the applicant or property owner of record of the subject property.

5.21 NOTICE TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT

Within 45 days of construction, the County will submit a notice of construction completion to the Maryland Department of the Environment on a form supplied by the Maryland Department of

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the Environment for each structural *stormwater management* practice. The type, number, total *drainage area*, and total impervious area treated by all ESD techniques and practices will be reported to the Maryland Department of the Environment. A notice of construction completion will be sent to the Kent *Soil* and Water Conservation District when *BMPs* requiring District approval are constructed.

5.22 MAINTENANCE

1. Maintenance Inspection

- (A) The County will ensure that preventive maintenance is performed by inspecting all *ESD* treatment systems and structural *stormwater management* measures. Inspections will occur during the first year of operation and then at least once every three years thereafter. A *maintenance agreement* between the property owner and Kent County will be executed for privately owned *ESD* treatment practices and structural *stormwater management* measures as described in this Section.
- (B) Inspection reports will be maintained by the County for all *ESD* treatment systems and structural *stormwater management* measures. Inspection reports will include the following:
 - i. Date of inspections and names of inspectors
 - ii. An assessment of the quality of the *stormwater management system* related to *ESD* treatment practice efficiency and the control of runoff to the *MEP*
 - iii. The condition of: (1) vegetation or filter media; (2) fences or other safety devices; (3) spillways, valves, or other control *structures*; (4) *slopes*, embankments, and safety benches; (5) reservoir or treatment areas; (6) inlet and outlet *channels* or *structures*; (7) underground drainage; (8) *sediment* and debris accumulation in storage or forebay areas; (9) any nonstructural practice to the extent possible; (10) any other item that could affect the proper function of the *stormwater management system*
 - iv. Description of needed maintenance
- (C) After notification is provided to the owner of the inspection results, the owner will have 30 days, or other time frame to which the County, and the owner mutually agree to correct the deficiencies. The County will then conduct an inspection to ensure completion of the repairs.
- (D) Failure to complete the repairs or repairs found to be improperly completed will be considered *violations* and subject to the provisions of this Ordinance.
- (E) If, after an inspection by the County, the condition of a *stormwater management* facility presents an immediate danger to the public health or safety, because of an unsafe condition or improper construction, or poor

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maintenance, the County, will take such action as may be necessary to protect the public and make the facility safe. Any cost incurred by the County will be assessed against the owner(s).

2. Maintenance Agreement

- (A) Prior to the issuance of any *building* permit for which *stormwater management* is required, the County will require the *applicant* or owner to execute an inspection and *maintenance agreement* binding on all subsequent owners of land served by the private *stormwater management* facility. Such agreement will provide for access to the facility at reasonable times for regular inspection by the County, and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any provisions established.
- (B) The agreement will be recorded by the *applicant* and/or owner with the Kent County Clerk of Court. A copy of the recorded agreement will be returned to the Department.
- (C) The agreement will also provide that if, after notice by the County, to correct a *violation* requiring maintenance work, satisfactory corrections are not made by the owner(s) within a reasonable period of time (thirty (30) days maximum), the County, may perform all necessary work to place the facility in proper working condition. The owner(s) of the facility will be assessed the cost of the work and any penalties, and there will be a lien on the property, which may be placed on the tax bill and collected as ordinary taxes by Kent County.

3. Maintenance Responsibility

- (A) The owner of the property on which work has been done pursuant to this Ordinance for private *stormwater management* facilities, or any other *person* or agent in control of such property, will maintain in good condition and promptly repair and restore all *ESD* practices, state *grade* surfaces, walls, drains, dams and *structures*, vegetation, *erosion and sediment control* measures, and other protective devices in perpetuity. Such repairs or restoration and maintenance will be in accordance with previously approved or newly submitted plans.
- (B) A maintenance schedule will be developed for the life of any *stormwater management* facility or system of *ESD* practices and will state the maintenance to be completed, the time period for completion and who will perform the maintenance. This maintenance schedule will be on the *stormwater management plan*.

SECTION 6 FLOODPLAIN MANAGEMENT**6.1 STATEMENT OF INTENT**

The purpose of the *floodplain* management Section is to provide a unified, comprehensive approach to *floodplain* management which addresses the natural *floodplain* functions and encourages the use of appropriate construction practices that prevent or minimize *flood* damage. In combination with the *floodplain* design standards found in Article II of this Ordinance, these *regulations* address the requirements of the Federal and State programs concerned with *floodplain* management; namely: the National *Flood* Insurance Program (44 CFR 59-79), the Maryland *Waterway* Construction Permit Program for *Non-tidal Floodplains*, the Maryland Tidal and *Non-tidal Wetlands* Permit Programs, the U.S. Army Corps of *Engineers'* Section 10 and 404 Permit Programs, and the Maryland Coastal Zone Management Program.

6.2 ESTABLISHMENT OF FLOODPLAIN DISTRICT

1. Identification of *flood* zones. The regulatory *floodplain* will be those areas of Kent County, Maryland, which are subject to the *1-percent annual chance (100-year) flood* as delineated on the most recent revision of the community's *Flood Insurance Rate Maps (FIRMs)* and *Flood Insurance Study (FIS)* for Kent County, Maryland and incorporated areas dated June 9, 2014 prepared by the Federal Emergency Management Agency (FEMA). Areas along non-tidal streams that do not have FEMA delineations as described above are subject to regulation by this Ordinance and the State.
2. The *Flood Insurance Rate Maps (FIRMs)* and *Flood Insurance Studies (FIS)*, and all notations, dimensions, references, and symbols thereon, will be considered a part of this Ordinance and will be filed as a part of this Ordinance with the Department. Copies of the *FIRMs* and *FIS* will be available for inspection in the Department.
3. The *floodplain* will be comprised of the following *subdivisions*:
 - (A) *Non-tidal floodplains*: These consist of the *floodway* and *floodway fringe*. *Non-tidal floodplains* may have detailed *engineering* study data, profiles, and water surface elevations or may have approximate delineations only. For *development* in *Special Flood Hazard Areas* of non-tidal waters of the State with *Base Flood Elevations (BFE)* but no designated *floodways*, the cumulative effect of all past and projected *development* will not increase the BFE by more than 1 foot.
 - (B) *Tidal floodplains*: Those areas subject to coastal or tidal *flooding* by the *1-percent annual chance (100-year) flood*. These areas are *flooded* due to high tides, hurricanes, tropical storms and steady on-shore winds.
 - (C) *Coastal high hazard areas*: Those areas subject to coastal or tidal *flooding* with the addition of high velocity water and wind action. These areas are designated as V-Zones on the *Flood Insurance Rate Maps*.

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- (D) Shallow *Flood Zones* (Zone AO): Those areas of shallow *flooding*, with *flood* depths of 1 to 3 feet (usually areas of ponding or sheet flow on sloping terrain), with or without BFEs of designated *flood* depths.
4. *Floodplain Zone Determination.*
- (A) The Planning Director or Planning Director's designee will determine the *floodplain* zone in which the *development* activity is proposed using the *FIRMs* and *FIS* if applicable. Without prior approval from FEMA, the community will use no other data to enforce *floodplain* management *regulations*. Where map boundaries and elevations disagree, elevations prevail, with approval from FEMA through the issuance of a Letter of Map Change or Amendment.
 - (B) The Planning Director of the Planning Director's designee will submit to FEMA, or require *applicants* to submit to FEMA, data and information necessary to maintain *FIRMs*, including hydrologic and hydraulic *engineering* analyses prepared by or for Kent County, within six months after such data and information becomes available if the analyses indicate changes in *Base Flood Elevations* or boundaries.
5. *Approximate Floodplain Determination.* For *development* proposed in the approximate *floodplain* (no water surface elevations or *floodway* data provided), the *applicant* will use the best available information to determine the elevation of the *1-percent annual chance (100-year) flood* and the extent of the *floodway*, and will delineate these on the *site plan* submitted for approval. For new *subdivisions*, the *applicant* will have the *1-percent annual chance (100-year) flood* elevations certified by a registered professional *engineer* based on hydrologic and hydraulic analyses which include a *floodway* analysis.
6. *Unmapped Streams.* In cases in which *development* is proposed in the vicinity of unmapped streams which have no delineated *1-percent annual chance (100-year) floodplain*, a 100-foot *flood* protection *setback* from the banks of the stream will be used. State permits may be required and *applicants* are advised to seek a determination from the State.

6.3 DEVELOPMENT REGULATIONS

1. **General.** In order to prevent excessive *flood* damage, to determine whether proposed activities will be reasonably safe from *flooding*, to implement construction methods and practices which minimize *flood* damage, and to allow for the protection of the natural and beneficial *floodplain* functions, all *development*, *new construction*, and *substantial improvements* to existing *structures* in all *floodplain* zones will comply with the requirements of this Section and those found in Article II. In the event that a *structure* is in more than one (1) zone, the more stringent provision will apply to the entire *structure*.
2. **Watercourses.** In all *floodplain* zones, any *development* which proposes to alter a *watercourse* will obtain a *variance*. All conditions for encroachment in the *floodway* will

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be met and *adverse impacts* to aquatic resources will be minimized. Adjacent communities and property owners, the U.S. Army Corps of *Engineers*, FEMA, and MDE will be notified by the *applicant* prior to any modification of a *watercourse*. Any activity falling within the 100-year non-tidal *floodplain* may require a *waterway* construction permit from the Maryland Department of the Environment.

3. ***Non-tidal and Tidal Floodplains*** (Zones A, AE, and A1-30)

- (A) General *development* will not occur in the *floodplain* where alternative locations exist. Before a permit is issued, the *applicant* will demonstrate that new *structures* cannot be located out of the *floodplain* and that encroachments onto the *floodplain* are minimized
- (B) Elevation Requirements, Residential *Structures*.
 - i. *Basements* are prohibited. Enclosures below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will be constructed with water equalizing vents to meet the specification found in SECTION 6.4.
 - ii. The elevation of the *lowest floor* of all new or substantially improved *structures*, including *manufactured homes*, will be elevated to or above the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*). In *non-tidal floodplains*, horizontal expansions which increase the footprint and that are less than substantial will also have the *lowest floor* elevated to or above the *Flood Protection Elevation*. A registered surveyor or professional *engineer* will certify elevation of the *lowest floor* on the *Elevation Certificate* after the *lowest floor* is in place. An elevation certificate should be submitted at the time of finished construction prior to any certificate of occupancy being issued.
 - iii. Improvements in tidal *floodplains* which are less than substantial will be constructed to minimize damage during *flooding* or will be elevated to the greatest extent possible.
- (C) Elevation Requirements, Non-residential *Structures*.
 - i. All new or substantially improved non-residential *structures* will either be elevated as required for residential *structures* or will be *floodproofed*. *Basements* are prohibited. Enclosures below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will be constructed with water equalizing vents to meet the specification found in SECTION 6.4.
 - ii. Horizontal expansions in the *non-tidal floodplain* which increase the footprint and that are less than substantial will also have the *lowest floor* elevated to or above the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance / 100-year flood*).

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- iii. In *non-tidal floodplains*, *basements* and *floodproofing* are prohibited.
- iv. *Floodproofing* designs will insure that areas below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) are watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- v. When the *floodproofing* option is chosen, a *Floodproofing Certificate* will be completed by a registered professional *engineer* or *architect*. If a *Floodproofing Certificate* is not provided, then an *Elevation Certificate* will be completed by a registered *surveyor* or professional *engineer*.

(D) Fill

- i. An *applicant* will demonstrate that the *fill* will not affect the *flood* storage capacity or increase *flooding* onto neighboring properties.
- ii. In the event that *structures* on adjacent properties are known or determined to be subject to *flooding* under current conditions, the Planning Director or the Planning Director's designee may require submission of hydrologic and hydraulic analysis of the effects of the proposed *fill*. All *fill* will meet the standards set forth in this Ordinance.

(E) Subdivisions

- i. *Non-tidal floodplains*. To avoid *flood* damage and to protect the natural and beneficial *floodplain* functions, new *flood-prone building sites* will not be permitted in *non-tidal floodplains*. Each new *lot* will have a suitable *building site* outside the *floodplain*. Whenever possible, *development* should be located outside the *floodplain*. An access road, constructed above the elevation of the *1-percent annual chance (100-year) floodplain* will be provided.
- ii. The *applicant* will submit a plan which demonstrates that all *building sites* located outside of the 100- year *floodplain*, and that the *floodplain* areas are protected in their natural state.
- iii. *Tidal floodplains*. New *subdivisions* in *tidal floodplains* will be designed to develop land outside the *floodplain* whenever possible. An access road constructed above the elevation of the *1-percent annual chance (100-year) flood* will be provided whenever possible.
- iv. *Subdivision* proposals and *development* proposals will minimize *flood* damage and have adequate drainage paths provided to reduce exposure to *flood* hazards and to guide *floodwaters* around and away from proposed *structures*.

4. **Floodway**

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- (A) *Floodways* will be preserved to carry the discharge of the *1-percent annual chance (100-year) flood*. *Floodways* present increased risks to human life and property because of their relatively faster and deeper flowing waters. In a regulatory *floodway*, any encroachment is prohibited which would cause any increase in the *base flood* level unless hydrologic and hydraulic analyses prove that the proposed encroachment would not increase *flood* levels during the *base flood* discharge.
- (B) *Fill* will not be permitted.
- (C) New *structures* will not be permitted.
- (D) New *development* will not be permitted where alternatives exist elsewhere or if any increase in the water surface elevations of the *1-percent annual chance (100-year) flood* will occur.
- (E) *Development* in the *floodway* which may result in any increase in water surface elevations or change to the *floodway* will be submitted to FEMA for a conditional letter of map revision. Hydrologic and hydraulic analysis on existing *floodway* models and performed in accordance with standard *engineering* practices and certified by a registered professional *engineer* will be submitted. Failure to receive this conditional letter of map revision will be grounds for denial of a permit.
- (F) Alternative analysis requirement. An alternative analysis will be submitted to the Department before a permit will be issued. The alternative analysis will demonstrate that:
 - i. No reasonable alternative exists outside the *floodway*.
 - ii. Encroachment in the *floodway* is the minimum necessary.
 - iii. The *development* will withstand the *1-percent annual chance (100-year) flood* without significant damage.
 - iv. The *development* will not increase downstream or upstream *flood*ing or *erosion*.
- (G) Existing *structures*. Existing *structures* in the *floodway* will be substantially improved only by *variance* and if they can be brought into conformance with this Ordinance without increasing the footprint. Minor additions (less than substantial) will be elevated to the *Flood Protection Elevation* (three feet above the *flood* elevation) on pilings or columns. In the event of *substantial damage* or replacement, the *applicant* will submit an alternative analysis to determine if the *structure* can be relocated to a less hazardous *site*. Where replacement *structures* cannot be relocated, they will be limited to the footprint of the previous *structure* and will comply with the elevation requirements of this Ordinance. Permits for incremental improvements and additions will be tracked by the Department, and if cumulative improvements constitute

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substantial improvement, no further permits may be issued unless the *structure* conforms to the provisions of this Ordinance.

- (H) Maintenance of natural *channel*. The natural *watercourse* will be maintained for protection of aquatic resources. A *variance* is required for *alteration* of *watercourses*. Any *variance* issued will assure that the conditions for encroachment in the *floodway* are met, *adverse impacts* to aquatic resources are minimized, and the public good outweighs the *adverse impacts*. The provisions of SECTION 6.3.2 pertaining to altering a *watercourse* will be met.
- (I) Obstructions. *Structures* or *fill* which may impede, retard, or change the direction of the flow of *floodwaters*, or any materials that may be carried downstream to cause damage will not be placed in the *floodway*. Fences, except two wire fences, will not be placed in the *floodway*.
- (J) Construction of *roads*, bridges, culverts, dams and in-stream ponds. Construction of *roads*, bridges, culverts, dams and in-stream ponds in non-tidal waters of the State will not be approved unless they comply with this Section and the *applicant* has received a permit from MDE.

5. **Coastal high hazard areas** (V-Zones and Coastal A Zones)

- (A) New *development* will not be permitted in the Coastal High Hazard Area where the action of wind and waves, in addition to tidal *flooding*, is a factor unless the *applicant* demonstrates that:
 - i. No reasonable alternative exists outside the Coastal High Hazard Area;
 - ii. The encroachment into the Coastal High Hazard Area is the minimum necessary;
 - iii. The *development* will withstand the 100-year wind and water loads without damage;
 - iv. The *development* will not create an additional hazard to existing *structures*; and
 - v. Any natural dune system will not be disturbed.
- (B) New and substantially improved *structures*.
 - i. All new or substantially improved *structures* will be elevated on adequately anchored pilings or columns to resist *flotation*, collapse, and lateral movement due to the effects of the one-hundred-year water loads and wind loads acting simultaneously on all *building* components. Water loading values will be those associated with the *base flood*, and wind loading values will be those required by local *building* standards. The bottom of the lowest horizontal structural member supporting the *lowest floor* will be elevated to three feet above the *Base Flood Elevation*. A registered professional *engineer* or *architect* will certify that *building* designs, elevations and anchoring have been designed to withstand the

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water and wind loads. The use of slabs or other at *grade* foundation systems will be prohibited.

- ii. The space below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will be free of obstruction or may be enclosed with open wood lattice, insert *screening* or *breakaway walls*.
 - iii. *Breakaway walls* will be designed to collapse under a wind and water load less than would occur during the *1-percent annual chance (100-year) flood*, and have a design safe loading resistance of not less than ten pounds and no more than twenty pounds (20) per square foot. Glass walls will not be considered *breakaway walls*. Enclosed areas below the *Flood Protection Elevation* will be used solely for the parking of vehicles, limited storage, and *building* access. If such areas are enclosed, a *Declaration of Land Restrictions* will be signed. Electrical, mechanical, and plumbing system components will not be mounted on or penetrate through walls that are designed to break away under *flood* loads.
- (C) *Manufactured homes and recreational vehicles.* *Manufactured homes* will not be permitted in the Coastal High Hazard Area. *Recreational vehicles* will meet the requirements of SECTION 6.55
- (D) *Fill and excavation.* *Fill* will not be used for the structural support of *buildings*. *Excavation* under existing *structures* or *excavation* within any enclosed space will be prohibited. Minor *grading*, and the placement of minor quantities of fill, will be permitted for landscaping and for drainage purposes under and around *buildings* and for support of parking slabs, pool decks, patios, and walkways.
- (E) Location of *structures*. *New construction* within the reach of mean high tide is prohibited. *Alteration* of the dune system is prohibited.
- (F) Existing *structures*. Existing *structures* will not be substantially improved or expanded vertically or horizontally unless the entire foundation system is certified by a professional *engineer* or *architect* as capable of supporting the existing *building* and the proposed improvement during the *1-percent annual chance (100-year) flood* as specified in SECTION 6.3.56.55. Permits for incremental improvements will be tracked, and when cumulative improvements constitute *substantial improvement*, the entire *building* will comply with SECTION 6.3.56.55.
- (G) Decks and patios. In addition to the requirements of the *building* code or the residential code, decks and patios will be located, designed, and constructed in compliance with the following:
- i. A deck that is structurally attached to a *building* or *structure* will have the bottom of the lowest horizontal structural member at or above the *Flood*

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Protection Elevation and any supporting members that extend below the design *flood* elevation will comply with the foundation requirements that apply to the *building* or *structure*, which will be designed to accommodate any increased loads resulting from the attached deck.

- ii. A deck or patio that is located below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*). will be structurally independent from *structures* and their foundation systems and will be designed and constructed either to remain intact and in place during *base flood* conditions or to break apart into small pieces that will not cause structural damage to adjacent elevated *structures*.
 - iii. A deck or patio that has a vertical thickness of more than 12 inches or that is constructed with more than the minimum amount of fill that is necessary for *site* drainage will not be approved unless an analysis demonstrates no harmful *diversion* of *floodwaters* or wave run-up and wave reflection that would increase damage to adjacent elevated *structures*.
 - iv. A deck or patio that has a vertical thickness of 12 inches or less and that is at natural *grade* or on fill material that is similar to and compatible with local *soils* and is the minimum amount necessary for *site* drainage may be approved without requiring analysis of the impact on *diversion* of *floodwaters* or wave run-up and wave reflection.
- 6. **Areas of shallow flooding** (Zone AO). In areas of shallow *flood*ing (Zone AO), have the *lowest floor* (including *basement*) elevated at least as high above the *highest adjacent grade* as the depth number specified in feet on the *FIRM* plus three (3) feet, or at least four (4) feet if a depth number is not specified; and:
 - (A) Have enclosures below the *lowest floor*, if any, that comply with the requirements of Section 10.4; or
 - (B) If proposed to be elevated on fill, meet the limitations on fill in Section 10.3.3.d
- 7. **Critical and Essential Facilities.** *Critical and essential facilities* will:
 - (A) Not be located in *coastal high hazard areas* (V Zones), *Coastal A Zones* or *floodways*.
 - (B) If located in *flood* hazard areas other than *coastal high hazard areas*, *Coastal A Zones* and *floodways*, be elevated to the higher of the elevation required by these *regulations* plus one (1) foot, the elevation required by the *building* code, or the elevation of the 0.2 percent chance (500-year) *flood*.

6.4 DESIGN STANDARDS

1. **Placement of *Buildings* and *Materials*** – In general, *buildings* and *accessory structures* should be located entirely out of the *floodplain*, out of the *flood* protection *setback*, or on land that is least susceptible to *flooding*. All *structures* permitted in the *floodplain* will be oriented so as to offer the least resistance to the flow of *floodwaters*. Materials which are buoyant, flammable, explosive, hazardous to health, or which at times of *flooding* may be injurious to human, animal, or plant life, will not be stored below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*).
2. **Enclosures below *Lowest Floor*** – *Buildings* which have been elevated and have fully enclosed areas below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*), as well as garages and *accessory structures* which are not elevated will be constructed with water equalizing vents which meet or exceed the following standards:
 - (A) A minimum of two (2) openings on different walls having a total net area of not less than one square (1) inch for every square foot of enclosed area subject to *flooding* or an *engineered* opening certified by a licensed professional;
 - (B) The bottom of all openings will be no higher than one foot above *grade*; and
 - (C) Openings may be equipped with *screens*, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of *floodwaters* to equalize hydrostatic forces on the walls.
 - (D) Fully enclosed areas below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will be used solely for parking of vehicles, access to the *building*, or limited storage. If such areas are enclosed, a *Declaration of Land Restriction* will be signed by the *applicant*.
 - (E) In *coastal high hazard areas*, enclosures below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will comply with the provisions of SECTION 6.3 and 6.35.
3. ***Manufactured Homes* and *Manufactured Home Parks*** – New *manufactured homes* and *manufactured home* parks will be prohibited in the Coastal High Hazard Area and in the *floodway*. In other *floodplain* zones, all new, replacement, or substantially improved *manufactured homes*, whether in a *manufactured home* park or not, will comply with SECTION 6.3.
 - (A) Methods of anchoring will include the use of over the top and frame ties to ground anchors. Pilings or columns will be used to maintain the storage capacity of the *floodplain*. Concrete block support pilings will be reinforced by placing reinforcing bars inside and extending them into the footing, filling the hollows with cement, and using mortar to cement the blocks together. FEMA Publication 85, “Protecting *Manufactured Homes* from *Floods* and Other Hazards,” should be consulted for specific recommendations.

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- (B) *Manufactured homes* repaired or replaced due to substantial *flooding* or other causes will be considered new *structures* and will fully comply with SECTION 6.3.
 - (C) Owners of *manufactured home* parks or *subdivisions* that are partially or fully within the *floodplain* will file an evacuation plan with the Director of Emergency Management. New *manufactured home* parks will provide an access road elevated to the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*).
4. **Anchoring** – All *structures* will be *firmly* anchored in accordance with acceptable *engineering* practices to prevent *flotation*, collapse, and lateral movement during *flooding*. All air ducts, large pipes and storage tanks located below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will be *firmly* anchored to resist *flotation*.
5. **Utilities**
- (A) Electric. Distribution panel boxes will be installed at least two (2) feet above the *Flood Protection Elevation*. All outlets and electrical installations, such as heat pumps, air conditioners, water heaters, furnaces, generators, and distribution systems will be installed at or above the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*).
 - i. Plumbing. Toilets, sinks, showers, water heaters, pressure tanks, furnaces, and other permanent plumbing installations will be installed at or above the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*).
 - ii. Gas and liquid storage. Meters and appliances will be installed at or above the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*): (1) Underground tanks in *flood* hazard areas will be anchored to prevent *flotation*, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the *base flood*. (2) Above-ground tanks in *flood* hazard areas will be anchored to a supporting *structure* and elevated to or above the *Base Flood Elevation*, or will be anchored or otherwise designed and constructed to prevent *flotation*, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the *base flood*. (3) In *flood* hazard areas, tank inlets, fill openings, outlets and vents will be:
 - (3a) At or above the *Base Flood Elevation* or fitted with covers designed to prevent the inflow of *floodwater* or outflow of the contents of the tanks during conditions of the *base flood*; and
 - (3b) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the *base flood*.

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- (B) Water supply and sanitary facilities. Water supply distribution and sanitary disposal collection systems will be designed to minimize or eliminate the *infiltration* and to avoid impairment or contamination of *floodwaters* into the systems or discharges from the systems into *floodwaters* and will be located and constructed so as to minimize or eliminate *flood* damage. *On-site* sewage disposal systems will meet these same standards.
- (C) Other service facilities. In addition to utilities noted in this Section, all other service facilities will be designed and/or located to prevent water entry or accumulation.

6.5 ACCESSORY STRUCTURES

1. Where feasible, *accessory structures* and garages will be located out of the *floodplain* or elevated to or above the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*). When these measures are not feasible the following will apply:
 - (A) The floor of the *structure* will be at or above *grade*;
 - (B) The *structures* will be located, oriented, and constructed so as to minimize *flood* damage;
 - (C) The *structure* will be *firmly* anchored to prevent *flotation*; and
 - (D) The structure will be constructed with *flood* damage-resistant materials below the *Base Flood Elevation*.
2. *Accessory structures* or detached garages, that do not exceed six hundred (600) square feet in size, and used solely for the parking of vehicles and limited storage may be constructed below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) under the conditions of SECTION 6.8. No machinery, electric devices, or appliances will be located below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*). All interior walls, ceilings and floors located below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will remain unfinished. A *Declaration of Land Restriction* will be signed by the property owner and recorded with the Kent County Clerk of Court. A copy of the recorded document will be attached to the *building* permit.
3. An *accessory structure* or garage larger than six hundred (600) square feet in size will be elevated to the proper *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) floodplain*).
4. Attached Garages
 - (A) Attached garages, used solely for the parking of vehicles, storage or *building* access and no more than six hundred (600) square feet in size, are exempt from the elevation requirement but will be elevated to the greatest extent possible.

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Attached garages will meet the venting requirements found in this Section. All interior walls, ceilings, and floors below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*) will be unfinished.

- (B) No machinery, electrical devices, or appliances will be located below the *Flood Protection Elevation* (three feet above the elevation of the *1-percent annual chance (100-year) flood*). A *Declaration of Land Restriction* will be signed by the property owner and recorded with the Kent County Clerk of Court. A copy of the recorded document will be attached to the *building* permit.

5. *Recreational Vehicles*

- (A) *Recreational vehicles* located within the *floodplain* may be exempt from the elevation and anchoring requirements provided they are:
 - i. Located on the *site* less than one-hundred eighty (180) consecutive days per year;
 - ii. Fully licensed and ready for highway use; and
 - iii. Properly permitted.
- (B) A *recreational vehicle* is ready for highway use if it is on its wheels and jacking system, is attached to the *site* only by quick disconnect type utilities and securing devices, and has no permanently attached additions. If it cannot meet all of these criteria, the *recreational vehicle* will be considered a *manufactured home* and is subject to the elevation and construction standards of this Ordinance.

6. *Fill*

- (A) *Fill* will not be placed in the *floodway*. *Fill* will not be used for structural support in the Coastal High Hazard Area.
- (B) *Fill* will consist of *soil* and rock materials only. Dredge material will be used as *fill* only upon *certification* of suitability by a registered professional geotechnical *engineer*. Landfills, rubble fills, dumps, and sanitary fills will not be permitted in the *floodplain*.
- (C) *Fill* used to support *structures* will be compacted to 95% of the maximum *density* obtainable by the Standard Proctor Test (ASTM Standard D-698), and its suitability to support *structures* certified by a registered professional *engineer*. *Fill slopes* will be no greater than two horizontal to one vertical. Flatter *slopes* may be required where velocities may result in *erosion*.
- (D) The use of *fill* will not increase *flooding* onto or interfere with drainage from neighboring properties.
- (E) In the event that *structures* on adjacent properties are known or determined to be subject to *flooding* under current conditions, the Planning Director or the

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Planning Director's designee may require submission of hydrologic and hydraulic analysis of the affects of the proposed *fill*. All *fill* will meet the standards set forth in this Ordinance.

6.6 PERMITS

1. No *development* will occur without first obtaining a permit form the Department. This permit will not be valid until all applicable federal or state permits are obtained.
2. Application for a permit will contain, at a minimum, the following information.
 - (A) Name, address, and phone number of the *applicant*
 - (B) Name, address, and phone number of the property owner, if different from that of the *applicant*
 - (C) Name, address, and phone number of the contractor
 - (D) Legal description of the *site*
 - (E) Proposed use of the *site*
 - (F) Type, dimensions, and estimated cost of the improvement
 - (G) *Site* characteristics and improvements
 - (H) *Site plan* drawn to scale which shows:
 - i. Dimensions of the *site*
 - ii. Size and location of existing and proposed *structures* or *alterations*
 - iii. *Setbacks*
 - iv. Elevation contours in mean sea level (NAVD)
 - v. Delineation of the *1-percent annual chance (100-year) flood* boundary.
 - vi. Proposed elevation of the *lowest floor* and method of elevation, if applicable.
 - (I) A signed agreement stating that the *applicant* will supply an *Elevation Certificate*.
 - (J) For additions or improvements, market value or assessed value of *structures* before improvement.
 - (K) *Declaration of Land Restriction* where applicable.
3. General permits will be granted only after determining that the proposed *development* will be in compliance with this Ordinance.
4. After approval of a permit, no changes of any kind will be made to the application, permit, plans, specifications, or other documents submitted with the application without the written approval of the applicable county official. A copy of the permit will be displayed at the construction *site*.

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5. During construction, the *building* inspector will inspect the *site* to determine that work is in compliance with the permit. Any work not in compliance with the permit will be corrected before any additional work is undertaken.
6. A record of all *floodplain* permits will be maintained and be available upon request by the Federal Emergency Management Agency or its authorized agent during periodic assessments of the County's participation in the National *Flood* Insurance Program. All documents needed to support permit action, such as *Elevation Certificates*, map amendments or revisions, or *variance* actions will be available for review during these assessments.

6.7 DAM SAFETY

The condition design criteria, hazard class and danger reach of the dam will be considered when reviewing *development* downstream of existing or proposed dams. *Development* within the dam break *flood* wave will be denied unless the dam meets the standards for a high hazard dam.

6.8 CONDITIONAL PERMITS

A conditional permit may be issued for garages and *accessory structures* less than six hundred (600) square feet in size, provided:

1. The *structure* is incidental to the primary *structure*.
2. It is used solely for limited storage and parking of vehicles.
3. The floor of the *structure* is constructed at or above *grade*.
4. The *structure* is located, oriented, and constructed so as to minimize *flood* damage.
5. The *structure* is *firmly* anchored to prevent *flotation*.
6. The *structure* meets the requirements of this Section.
7. A *Declaration of Land Restriction* is recorded with the Kent County Clerk of Court. A copy of the recorded document will be attached to the *building* permit.

6.9 ENFORCEMENT

1. It will be the duty of the Planning Director of the Planning Director's designee to perform the function of the *Floodplain Administrator* and to enforce the provisions of this Ordinance and to refuse to issue any permit or approve any *development* that would violate the provisions of this Ordinance. It will be the duty of all officers and employees of Kent County to assist in the enforcement of this Ordinance by reporting seeming *violations*.
2. The Planning Director of the Planning Director's designee is authorized and directed to institute any appropriate action to correct *violations* of this Ordinance.
3. Any *violation* of Section 10 will be subject to the fines and penalties established in this Ordinance.

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4. The Federal Insurance *Administrator* and the State of Maryland will be notified immediately in writing of any *structure* or property in *violation* of this Section.
5. The Department may require signed and sealed drawings from a professional licensed surveyor or an engineer, certifying that the requirements above have been satisfied. The Department may also engage third-party professionals to review the drawings to ensure compliance with the regulations in this Section, the Land Use Ordinance in general, and any applicable federal, State, or other laws, rules, and regulations. The costs for any third-party professionals will be paid by the applicant or property owner of record.

6.10 LIABILITY

1. The degree of *flood* protection provided by this chapter is considered reasonable for regulatory purposes and is based on *engineering* experience and scientific methods of study. *Floods* of greater magnitude may occur or *flood* heights may be increased by man-made or natural causes. This Section does not imply that *flooding* will not occur outside of delineated *floodplain* zones, nor that the permitted *development* and land uses within the *floodplain* will be free of *flooding* and associated *flood* damage. This Section does not create liability on the part of the County, any officer, or employee thereof for any damage which may result from reliance on this Section.
2. The degree of the *flood* protection required by these *regulations* is considered reasonable for regulatory purposes and is based on scientific and *engineering* considerations. Larger *floods* can and will occur, and *flood* heights may be increased by man-made or natural causes. These *regulations* do not imply that land outside of the *Special Flood Hazard Areas* or uses that are permitted within such areas will be free from *flooding* or *flood* damage.

ARTICLE VII. DEFINITIONS

SECTION 1 GENERAL RULES OF CONSTRUCTION

The following general rules of construction will apply to the *regulations* of this Ordinance.

1. The singular number includes the plural and the plural the singular, unless the context clearly indicates the contrary.
2. Words used in the present tense include the past and future tense, and the future the present.
3. The word “will” is always mandatory. The word “may” is permissive.
4. The word “*building*” or “*structure*” includes any part thereof, and the word “*structure*” includes the word “*building*.”
5. Words and terms not defined herein will be interpreted in accordance with their normal dictionary meaning and customary usage.
6. The word “Commission” refers to the Kent County *Planning Commission*, a seven-member board appointed the County Commissioners.
7. The word “Board” refers to the Board of Appeals, a three-member board appointed by the County Commissioners.

SECTION 2 DEFINITIONS

For the purpose of this ordinance, certain terms and words are hereby defined.

Acceptable Outfall: The tidewater or that point as determined by the Kent County *Soil and Water Conservation District* where *stormwater* can be released to a *channel* without causing scouring, *erosion*, or resulting *sedimentation* to the receiving *channel* or its *floodplain*. (Where necessary, the outlet will include structural and vegetative measures to assure non-erosive velocities.)

Accessory Structure: A detached *structure* on the same parcel as the principal *structure* or use and which is customarily incidental and subordinate to the principal *structure* or use, for example, a shed or detached garage.

Accessory Use: One which: (a) is subordinate to and serves a principal *structure* or principal use; (b) is on the same *lot* as the principal *structure* or use served except as otherwise expressly authorized by provisions of this Ordinance; and (c) is customarily incidental to the principal use or *structure*.

Adverse Impact: For purposes of *stormwater management*, any deleterious effect on waters or *wetlands* including their quality, quantity, surface area, species, species composition, aesthetics or usefulness for human or natural causes which is or may potentially be harmful or injurious to health, welfare, safety, or property, to biological productivity, diversity, or stability or which unreasonably interferes with the enjoyment of life or property, including outdoor recreation.

Afforestation: The establishment of a *forest* on an area from which it has always or very long been absent, or the planting of open areas which are not presently in *forest cover*.

Agricultural Easement: A non-possessory interest in land which restricts the conversion of use of the land, preventing nonagricultural uses.

Agricultural Land Management: Those methods and procedures used in the cultivation of land in order to further crops or livestock production and conservation of related *soil* and water resources. Logging and timber removal operations will not be considered a part of this definition.

Agriculture: Farming activities including plowing, tillage, cropping, installation of *best management practices*, seeding, cultivating, and harvesting for production of food and fiber products (except *commercial logging and timber harvesting operations*), sod production, orchards, nurseries, land in government set aside programs, and other products cultivated as part of a recognized commercial enterprise, but not including *animal husbandry*.

Agritourism: Activities conducted on a farm and offered to the public or to invited groups for the purpose of education, recreation, or active involvement in the farm operation. These activities will be related to agriculture or natural resources and incidental to the primary operation on the site. The term will include hayrides; corn mazes; seasonal petting farms; pumpkin patches; “pick your own” or “cut your own” produce; classes related to agricultural products or skills; harvest festivals; field trips; farm tours; farm museums; picnic and party facilities offered in conjunction with any agritourism activity; food services, including farm to table meals; fishing; hunting; wildlife study; guest farms; and activities or events related to agriculture or natural resources, agricultural products, or agricultural skills.

Animal husbandry: Farming activities permitted as separate uses in specific zoning districts.

Airport: A permanent installation or facility from which aircraft may take off or land, discharge or receive cargo or passengers, be repaired, take on fuel, or be stored, including hangers, terminals, or accessory activities.

Alley: A narrow public thoroughfare not exceeding 16 feet in width, which provides only a secondary means of access to abutting properties and is not intended for general traffic circulation.

Alteration: Any construction or renovation to an existing *structure* other than repair or addition.

Anadromous Fish: Fish that travel upstream from their primary habitat in the ocean to fresh waters in order to spawn.

Anadromous Fish Spawning Areas: Those streams that are tributary to the Chesapeake Bay where spawning of anadromous species of fish (e.g., rockfish, yellow perch, white perch, and river herring) occurs or has occurred. The streams are designated by the Maryland Department of Natural Resources.

Animal Feeding Operations (AFO): Any tract of land or structure, pen, or corral where cattle, horses, sheep, goats, and/or swine are maintained in close quarters for the purposes of fattening such livestock for final shipment to market. This includes any enterprise used for the production, growing, or holding of agricultural animals regardless of species or number that does not control through ownership sufficient land to allow environmentally safe treatment and disposal of the waste produced by those animals.

Apartment: A part of a building containing cooking and housekeeping facilities, consisting of a room or suite of rooms intended, designed, and used as a residence for an individual or single family.

Apartment House: Same as Dwelling, Multi-Family Dwelling.

Applicant: For erosion and sediment control and stormwater management proposes: Any person, firm, or government agency who executes the necessary forms to procure official approval of a project or a permit to carry out construction of a project.

Approved Forest Management Plan: For the purposes of forest conservation outside of the Chesapeake Bay Critical Area, an approved forest management plan is a document, approved by the Department of Natural Resources Forester assigned to Kent County, that operates as a protective agreement for forest conservation as described in Natural Resources Article, Section 5-1607(e)- (f), Annotated Code of Maryland.

Approving Agency: For erosion and sediment control and stormwater management purposes: The entity responsible for the review and approval of erosion and sediment control plans and stormwater management plans.

Aquaculture: (1) The farming or culturing of finfish, shellfish, other aquatic plants or animals, or both, in lakes, streams, inlets, estuaries, and other natural or artificial water bodies or impoundments; (2) Activities include the hatching, cultivating, planting, feeding, raising, and harvesting of aquatic plants and animals and the maintenance and construction of the necessary equipment, buildings, and growing areas; (3) Cultivation methods include, but are not limited to seed or larvae development and grow out facilities, fish pens, shellfish rafts, racks, and long lines, seaweed floats and the culture of clams and oysters on tidelands and subtidal areas. For the purpose of this definition, related activities such as wholesale and retail sales, processing, and product storage are not considered aquacultural practices.

Aquifer: A porous water bearing geologic formation generally restricted to materials yielding an appreciable supply of water.

Architect: A professional with training in architecture and licensed by the State of Maryland.

Area, Gross: The total area of the site subject to no exclusions.

Automobile Repair: Any building, structure, or area used for major automobile repair, body work, or servicing including the accessory sale of fuels, oils, or parts.

Automobile Service Station: Any building, structure, or use of land for the retail sale of automobile fuels, oils, and accessories and where repair service, if any, is incidental.

Barren land: Unmanaged land having sparse vegetation.

Base Flood: The 1-percent annual chance (100-year) *flood* event as indicated in the *Flood Insurance Study*, as amended; the elevation of which is used for regulatory purposes in this Ordinance.

Base Flood Elevation: The water surface elevation of the *base flood* in relation to the datum specified on the community's *Flood Insurance Rate Map*. In areas of shallow *flooding*, the *Base Flood Elevation* is the highest adjacent natural *grade* elevation plus the depth number specified in feet on the *Flood Insurance Rate Map*, or at least four (4) feet if the depth number is not specified.

Basement: An enclosed area which is below *grade* on four sides.

Bench terrace: A relatively flat area (i.e., less than 2% *grade*) constructed on sloping land to planned dimensions and *grades*. *Bench terraces* are applied along the contour with the length and width controlled by the natural terrain and the required *erosion* limitations.

Berm: A mound of *soil*, either natural or manmade, used to obstruct views, noise, direct runoff, or control *soil* loss.

Best Management Practices (BMP): Conservation practices or systems of practices and management measures that control *soil* loss and reduce water quality degradation caused by nutrients, animal waste, toxins, and *sediment*. Agricultural *BMPs* include, but are not limited to, strip cropping, terracing, contour *stripping*, grass *waterways*, animal waste *structures*, ponds, minimal tillage, grass and naturally vegetated filter strips and proper nutrient application measures. For *stormwater management* purposes: A structural device or non-structural practice designed to temporarily store or treat *stormwater* runoff in order to mitigate *flooding*, reduce pollution, and provide other amenities.

Boarding House: Same as *rooming house*

Boathouse: A *building* constructed for the purposes of storing a boat and boat gear.

Breakaway Wall: A wall that is not part of the structural support of a *building* and is intended to collapse under specific lateral loading forces without causing damage to the supporting foundation system of the *building*.

Buffer: Within the Chesapeake Bay *Critical Area*, an existing, naturally vegetated area or an area established in vegetation and managed to protect aquatic environments, *wetlands*, shoreline, and terrestrial environments from man-made disturbances. The buffer includes an area of at least 100 feet, even if that area was previously disturbed by human activity and is immediately landward from mean high water of tidal waters, the edge of each bank of a tributary stream, or the landward boundary of a tidal wetland. The purpose of the *buffer* is to: (1) Provide for the removal or reduction of *sediments*, nutrients, and potentially harmful or toxic substances in runoff entering the Bay and its tributaries; (2) Minimize the adverse effects of human activities on *wetlands*, shorelines, stream banks, tidal waters and aquatic resources; (3) Maintain an area of *transitional habitat* between aquatic and upland communities; (4) Maintain the natural environment or streams; and (5) Protect riparian *wildlife habitat*. (6) The *buffer* will be expanded for *slopes* of 15% or

more, *hydric soils*, or *highly erodible soils* whose *development* or disturbance may impact streams, *wetlands*, or aquatic environments.

Buffer Management Plan: means a narrative, graphic description, or plan of the Buffer that is necessary when an applicant proposes a development activity that will: (1) affect a portion of the Buffer; (2) alter Buffer vegetation; or (3) Require the establishment of a portion of the Buffer in vegetation. Buffer Management Plan includes a major Buffer Management Plan, a minor Buffer Management Plan, or a Simplified Buffer Management Plan as described in this ordinance.

Buffer Yard: means an area at least 25 feet wide, located between development activity and tidal waters, tidal wetlands, or a tributary stream, planted with vegetation consisting of native canopy trees, understory trees, shrubs, and perennial herbaceous plants that is used in Modified Buffer Areas to provide water quality and habitat benefits. This area is to be managed and maintained in a manner that optimizes these benefits.

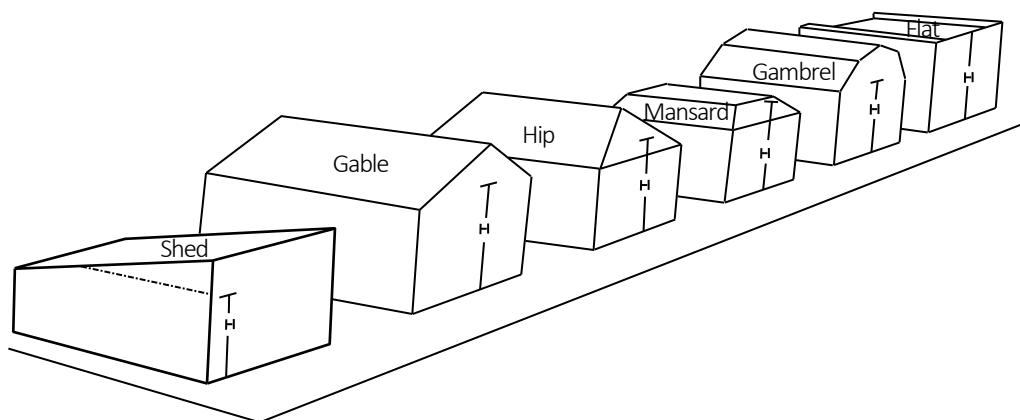
Buildable Area: The area of that part of the *lot* not included within the *yards*, *open space*, or environmental areas herein required.

Buildable Width: The width of the *lot* not included within the *yards*, *open space*, or environmental areas herein required.

Building: Any *structure* having a roof supported by columns or walls for the housing or enclosure of *persons* or property.

Building, Totally Enclosed: Any *building* having no outside openings other than ordinary doors, windows, and ventilators.

Building, Height of: The vertical distance from the average elevation of finished ground surface around the *building* to the highest point of the coping of a flat roof, or to the deck line of the highest point of coping or parapet of a mansard roof, or to the mean height level between the eaves and ridge for gable, hip, shed, and gambrel roofs. When the highest wall of a *building* with a shed roof is within 30 feet of a *street*, the height of such *building* will be measured to the highest point of coping or parapet.



Building Line: A line within a *lot*, so designated on a plat of *subdivision*, between which line and the *street line* of any abutting *street*, no *building* or *structure* may be erected.

Bulk: A term used in this Ordinance to describe the size and shape of a *building* or *structure* and its relationship to other *buildings*, to the *lot area* for a *building*, and to *open spaces* and *yards*.

Caliper: The diameter of a *tree* measured at six inches above *grade*.

Camp, Boarding: As for *day camp*, except that uses and *structures* for the lodging of guests will be permitted in locations appropriate for extensive outdoor recreation.

Camp, Day: A *lot*, *tract*, or parcel of land operated as a resource utilization enterprise in which seasonal facilities, boating, fishing, swimming, outdoor sports, and activities incidental and relating to the foregoing but not including miniature golf, golf courses, golf driving ranges, mechanical amusement devices, or permanent *structures* for the housing of guests.

Campground: Any area or *tract* of land owned by a single entity to which accommodations for temporary and not year-round occupancy are located or may be placed including cabins, tents, *recreational vehicles*, and campers, and which is used for recreational purposes and retains an open air or natural character.

Canopy: A detachable, roof-like cover supported from the ground, or deck, or walls, of a *building* for the protection from the sun.

Canopy tree: means a tree that, when mature, reaches a height of at least 35 feet.

Certificate of Occupancy or Use: A permit to legally occupy or use a *building* for the intended purpose.

Certification: A signed, written statement that specific conditions, inspections, or tests (when required) have been performed and that such comply with the applicable requirements of this Ordinance.

Champion of the State: In terms of *forest conservation*, a *tree* that appears in the State Forest Conservation Manual list of State *Champion trees*.

Champion Tree: The largest *tree* of its species within the United States, the State, County, or a municipality.

Channel: That part of the *waterway* where the largest class vessel that could use such *waterway* is required to navigate because of shallowness of water on both sides of such part, or as delineated on an approved plan or navigational chart.

Channel Protection Storage Volume: The volume used to design structural management practices to control stream *channel erosion*. Methods for calculating the *channel protection storage volume* are specified in the 2000 Maryland *Stormwater Design Manual*, Volumes I and II, and as amended.

Clear-cutting: The removal of the entire stand of *trees* in one *cutting* with *tree* reproduction obtained by natural seeding from adjacent stands or from *trees* that were *cut*, from advance regeneration or stump spouts, or from planting of seeds or *seedlings* by man.

Clearing: The removal of *trees* and/or brush from the land but which will not include the ordinary mowing of grass.

Cliff Height: The distance measured from mean high tide to the top of the bank.

Clinic -A *building* or a portion thereof designed for and used by two or more physicians, surgeons, dentists, psychiatrists, physiotherapists, or practitioners in related specialties, or a combination of *persons* in these professions, but not including lodging of patients overnight.

Club, Private: *Buildings* and facilities owned or operated by a corporation, association, *person*, or *persons* for social, educational, or recreational purposes, but not primarily to render service which is normally carried on as a business.

Cluster Development: Within the *Critical Area*, a residential *development* in which *dwelling units* are concentrated in a selected area or selected areas of the *development tract* so as to provide a natural habitat or other *open space* uses on the remainder.

Coastal high hazard areas: Those areas subject to coastal or tidal *flooding* with the addition of high velocity water and wind action. These areas are designated as a V-Zone on the *Flood Insurance Rate Map*.

Coastal A Zone: An area within a *special flood hazard area*, landward of a coastal high hazard area (V Zone) or landward of a shoreline without a mapped coastal high hazard area, in which the principal source(s) of *flooding* are astronomical tides and storm surges, and in which, during *base flood* conditions, the potential exists for breaking waves with heights greater than or equal to 1.5 feet. The inland limit of the *Coastal A Zone* may be delineated on *FIRMs* as the *Limit of Moderate Wave Action (LiMWA)*.

Collector Street: A *street* which is intended to collect traffic from *minor streets* within a neighborhood or a portion thereof and to distribute such traffic to *major thoroughfares*, in addition to providing access to properties abutting thereon.

Colonial Water Birds: Herons, egrets, terns, and glossy ibis. For the purpose of nesting, these birds congregate (i.e., colonize) in relatively few areas, at which time, the regional populations of these species are highly susceptible to local disturbances.

Commercial Logging and Timber Harvesting Operations: The *cutting* and removing of *tree* stems from a *site* for commercial purposes; leaving the root mass intact, includes all commercial operations done by companies and private individuals for economic gain.

Community Piers: Boat docking facilities associated with *subdivisions* and similar residential areas, and with condominiums, *apartments*, and other *multi-family dwelling units*. Private *piers* are excluded from this definition.

Compaction: Desiccation (drying up) of a *soil* or rock *fill* by mechanical or other procedures.

Concept Plan: For *stormwater management* purposes: The first of three plan approvals that includes information necessary to allow an initial evaluation of a proposed project.

Conference Center: A year-round facility with staff, equipment, and support services dedicated to providing an environment that will support and facilitate meetings. A minimum of 100 square feet of meeting space is provided per guest room. Dedicated meeting rooms are separate from living and leisure areas.

Conservation Easement: A non-possessory interest in land which restricts the manner in which the land may be developed in an effort to reserve natural resources for future use.

Consolidation: In the Critical Area, a combination of any legal parcels of land or recorded, legally buildable lots into fewer parcels or lots. "Consolidation" includes any term used by a local jurisdiction for a development application that proposes to combine legal parcels of land or recorded, legally buildable lots into fewer parcels or lots than the number that existed before the application, such as a subdivision, lot line abandonment, boundary line adjustment, re-platting request, or lot line adjustment.

Convalescent Home: A *building* where regular nursing care is provided for more than one *person* that is not a member of a *family* who resides on the *premises*.

Cottage Industry: Family type businesses which employ less than ten people and manufacture and/or provide services with low-impact to the surrounding area and residents (e.g. low traffic volume, no heavy, noisy or environmentally disruptive machinery to perform tasks, little or no outdoor storage). Often home-based industries utilize telecommunications networks. *Cottage industries* include, but are not limited to plumbers, electricians, carpenters, and other tradesmen.

Country Inn: An existing *building* where, for compensation and only by prearrangement for definite periods, lodging and meals are provided. Such uses are limited to fifteen rooming units excluding resident manager quarters.

Country Stores: A retail store or shop which sells general merchandise and food serving the local area.

Courtyard: An *open space* that may or may not have direct *street* access and around which is arranged a single *building* or group of related *buildings*.

Cover Crop: The establishment of a vegetative cover to protect *soils* from *erosion* and to restrict pollutants from entering the *waterways*. *Cover crops* can be dense, planted crops of grasses or legumes, or crop residues such as corn, wheat, or soybean stubble which maximize *infiltration* and prevent runoff from reaching erosive velocities.

Critical Area: All lands and waters defined in Md. Code Ann., Natural Resources, §8-1807. These include: (1) All waters of and lands under the Chesapeake Bay and its tributaries to the head of tide and all state and private *wetlands* designated under Title 16 of the Environmental Article, Annotated Code of Maryland. (2) All lands and water areas within 1,000 feet beyond the landward boundaries of state or private *wetlands* and the heads of tides designated under Title 16 of the Environmental Article, Annotated Code of Maryland. (3) Modification to these areas through inclusions or exclusions proposed by local *jurisdictions* and approved by the Commission as specified in Md. Code Ann., Natural Resources § 8-1807.

Critical and Essential Facilities: Buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow or earthquakes. [Note: See Maryland Building Performance Standards, Section 1602 and Table 1604.5.] *Critical and essential facilities* typically include hospitals, fire stations, police stations, storage of critical records, facilities that handle or store hazardous materials, and similar facilities.

Critical Habitat Area: A critical habitat for an *endangered species* and its surrounding protection area. A *critical habitat area* will (1) Be likely to contribute to the long-term survival of the species; (2) Be likely to be occupied by the species for the foreseeable future; and (3) Constitute habitat of the species that is considered critical under Md. Code Ann., Natural Resources, §4-2a-04 and 10-2a-06.

Critical Habitat for Endangered Species: a habitat occupied by an *endangered species* as determined or listed under Md. Code Ann., Natural Resources, §4-2a-04 and 10-2a-04.

Crosswalk: A public way intended for pedestrian use and excluding motor vehicles, which cuts across a block in order to furnish improved access to adjacent streets or properties.

Cut: See “excavation”

Day Care Group: A licensed home or agency that regularly provides supervision for nine or more non-related children.

Day Care Home: The provision of supplemental parental care and supervision for eight or fewer non-related children.

Declaration of Intent: (1) A signed and notarized statement by a landowner or the landowner’s agent certifying that the activity on the landowner’s property: (1a) Is for certain activities exempted under this Ordinance or Md. Code Ann., Natural Resources, §5-103 and §§5-16-1 through 5-1612; (1b) Does not circumvent the requirements of this Ordinance or Md. Code Ann., Natural Resources, §5-103 and §§5-16-1 through 5-1612; and (1c) Does not conflict with the purposes of any other *Declaration of Intent*. (2) The document required under this Ordinance.

Declaration of Land Restriction (Non-conversion Agreement): A form signed by the owner to agree not to convert or modify in any manner that is inconsistent with the terms of the permit and these regulations certain enclosures below the lowest floor of elevated buildings and certain accessory structures. The form requires the owner to record it on the property deed to inform future owners of the restrictions.

Department: The Kent County Department of Planning, Housing, and Zoning, unless otherwise specified.

Demolition/demolish: means the act of pulling down, destroying, removing, or razing a building or structure or commencing the work of total or substantial destruction with the intent of completing the same. For the purposes of *Historic structure* review, the term “demolition” will not include routine maintenance, interior renovations, removal, or construction of porches, decks, windows, or other types of renovations for which approval is generally not required.

Density: The permitted number of *dwelling units* per acre of land to be developed.

Design Manual: The 2000 Maryland *Stormwater Design Manual*, Volumes I and II, and as amended, that serves as the official guide for *stormwater management* principles, methods, and practices.

Detention Structure: A permanent *structure* for the temporary storage of runoff that is designed so as not to create a permanent pool of water.

Developed Land: For *stormwater management* purposes: To change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or *alteration*.

Developed Woodland: An area of trees or trees and understory vegetation that is interspersed with residential, commercial, industrial or recreational development.

Developer: A person, partnership, or corporation engaging in organizing the construction of more than one *dwelling unit* or engaging in organizing the construction of one *dwelling unit* for occupancy by persons other than the owner, or any type of commercial or industrial *development* or subdividing of land.

Development: Any construction, reconstruction, modification, extension, or expansion of *buildings* or *structures*; placement of *manufactured homes*; mining; dredging; placement of *fill*; *grading*; paving; dumping; storage of equipment or materials; land *excavation*; land *clearing*; land improvement; *subdivision* of land; or any combination thereof.

Development Activities: The construction or substantial *alteration* of residential, commercial, industrial, institutional, or *transportation facilities* or *structures*.

Development Project Completion: For the purposes of *afforestation*, *reforestation*, or payment into a *forest conservation* fund; (1) The release of the *development* bond, if any; (2) Acceptance of the project's *streets*, utilities and public services by the county; or (3) Designation by the County that a: (3a) *Development* project has been completed, or (3b) Particular stage of a staged *development* has been completed.

Direct Discharge: The concentrated release of *stormwater* to tidal waters or vegetated *tidal wetlands* from new *development* or *redevelopment* projects in the Chesapeake Bay *Critical Area*.

Disturbance: An alteration or change to the land. It includes any amount of clearing, grading, or construction activity. Disturbance does not include gardening or maintenance of an existing grass lawn.

Disturbance, Permanent: In the *Critical Area*, a material, enduring change in the topography, landscape, or structure that occurs as part of development activity. Permanent disturbance includes: 1) construction or installation of any material that will result in lot coverage; 2) construction of a deck; 3) grading if the area is not restored to its previous vegetative condition immediately after completion of the development activity; 4) clearing of a tree, forest, or developed woodland; and 5) septic system installation, except

on a lot created before April 12, 1988, in which the septic system is located in existing grass or clearing is not required.

Disturbance, Temporary: In Critical Area, a short-term change in the landscape that occurs as part of a development or redevelopment activity. Temporary disturbance does not include activity performed in violation of this Ordinance, but does include: 1) Storage of materials that are necessary for the completion of the development or redevelopment activity; 2) construction of a road or other pathway that is necessary for access to the site of the development or redevelopment activity, if the road or pathway is removed immediately after completion of the development or redevelopment activity and the area is restored to its previous vegetative condition; 3) Grading of a development site, if the area is restored to its previous vegetative condition immediately after completion of the development or redevelopment activity; and 4) installing a septic system on a lot created before April 12, 1988, if the septic system is located in existing grass or clearing is not required. Temporary disturbance does not include a septic system in a forest or developed woodland on a lot created before local program approval, if clearing is required.

Diversion: A *channel* or ditch and a ridge constructed across a *slope* so as to intercept and divert surface runoff.

Documented Breeding Bird Areas: Forested areas where the occurrence of interior *dwelling* birds, during the breeding season, has been demonstrated as a result of *on-site* surveys using standard biological survey techniques.

Dog Kennel, Commercial: The keeping of any dog or dogs, regardless of number, for breeding, sale, boarding, or treatment purposes, except in an animal *hospital* or pet shop as permitted by these *regulations*. The keeping of five or more dogs, six months or older, for any purpose.

Drainage Area: That area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridge line.

Drainageway: See “*watercourse and/or drainageway*”

Dwelling: A *building* or portion thereof, designed and used primarily for residential occupancy, but not including trailers, mobile homes, *hotels*, motels, motor lodges, boarding and *lodging houses*, tourist courts, or tourist homes.

Dwelling Unit: A room or group of rooms occupied or intended to be occupied as separate living quarters by a single *family*. Within the *Critical Area*: A single unit providing complete, independent living facilities for at least one *person*, including permanent provisions for sanitation, cooking, eating, sleeping, and other activities routinely associated with daily life. *Dwelling unit* includes living quarters for domestic staff or other employees or *tenants*, an in-law or accessory *apartment*, a *guest house*, or a caretaker residence.

Dwelling, Multi-Family: A *building* designed for and occupied exclusively by three or more families living independently of each other.

Dwelling, Single Family: A *building* designed for and occupied exclusively by one *family*.

Dwelling, Two-Family: A building designed for and occupied exclusively by two families living independently of each other.

Easement: A grant or reservation by a property owner of the right to use an identifiable piece of land or right for a specified purpose or purposes. For *stormwater management* purposes: A grant or reservation by a property owner of the right to use an identifiable piece of land or right for a specified purpose or purposes, and which will be included in the conveyance of land affected by such *easement*.

Ecosystem: A more or less self-contained biological community together with the physical environment in which the community's organisms occur.

Elevation Certificate: A FEMA form on which surveyed elevations and other data pertinent to a property and a building are identified and which shall be completed by a licensed professional land surveyor or a licensed professional engineer, as specified by the Floodplain Administrator. When used to document the height above grade of buildings in special flood hazard areas for which base flood elevation data are not available, the Elevation Certificate shall be completed in accordance with the instructions issued by FEMA. Note: FEMA Form 086-0-33 and instructions are available online.

<https://www.fema.gov/media-library/assets/documents/160>

Embankment or Fill: A deposit of *soil*, rock, or other materials placed by man.

Endangered Species: Any species of fish, wildlife, or plants which have been designated as such by regulation by the Secretary of the Department of Natural Resources. Designation occurs when the continued existence of these species as viable components of the State's resources is determined to be in jeopardy. This includes any species determined to be an "endangered species" pursuant to the Federal *Endangered Species Act*.

Engineer: A person with professional, technical, or practical training, ability, and experience in *engineering* and licensed in the State of Maryland to practice *engineering*.

Environmental Site Design (ESD): Using small-scale *stormwater management* practices, nonstructural techniques, and *site planning* to mimic natural hydrologic runoff characteristics and minimize the impact of land *development* on water resources. Methods for designing ESD practices are specified in the *Design Manual*.

Erosion: The process by which the ground surface is worn away by the action of wind or water.

Erosion and Sediment Control: A system of structural and vegetative measures that minimizes *soil erosion* and *off-site sedimentation*.

Erosion and Sediment Control Plan: An *erosion and sediment control* strategy or plan designed to minimize *erosion* and prevent *off-site sedimentation*.

Excavation, landscaping, or other Contractor's Yard: Any land and/or *buildings* used primarily for the storage of equipment, vehicles, machinery, new or used *building* materials, paint, pipe, or electrical components used by the owners or occupants of the *premises* in the conduct of any *building* trades, *building* craft, or *excavation* / construction trade (This definition has been revised to include a wide range of contractors including landscapers).

Excavation or Cut: Any act by which the ground surface is *cut* into, dug, quarried, uncovered, removed, displaced, or relocated and will include the conditions resulting therefrom.

Excess Stormwater Runoff: In the *Critical Area*, all increases in *stormwater* resulting from: (1) An increase in the imperviousness of the *site*, including all additions to *buildings*, *roads*, and parking *lots*; (2) Changes in permeability caused by *compaction* during construction or modifications in contours, including the filling or drainage of small depression areas; (3) *Alteration* of *drainageways* or *regrading* of *slopes*; (4) Destruction of *forest*; or (5) Installation of collection systems to intercept *street* flows or to replace swales or other *drainageways*.

Exemption: For *stormwater management* purposes: Those land *development activities* that are not subject to the *stormwater management* requirements contained in this Ordinance. For *erosion and sediment control* purposes: Those land *development activities* that are not subject to the *erosion and sediment control* requirements contained in this Ordinance.

Existing Grade: The vertical location of the existing ground surface prior to excavating or filling.

Extended Detention: A *stormwater* design feature that provides gradual release of a volume of water in order to increase settling of pollutants and protect downstream *channels* from frequent storm events. Methods for designing *extended detention BMPs* are specified in the *Design Manual*.

Extreme Flood Volume: The storage volume required to control those infrequent but large storm events in which overbank flows reach or exceed the boundaries of the *100-year floodplain*.

Family: An individual or individuals living together by joint agreement and occupying a single housekeeping unit with a single primary culinary facility on a non-profit, cost-sharing basis. Domestic servants employed and living on the *premises* will be considered as part of the *family*.

Farm: A parcel of land not less than 20 acres in size used for *agriculture* including *animal husbandry*, and as defined in this Ordinance.

Final Erosion and Sediment Control Plan: The last of three plan approvals that includes the information necessary to allow all approvals and permits relating to *erosion and sediment control* to be issued by the *Approving Agency*.

Final Stormwater Management Plan: The last of three plan approvals that includes the information necessary to allow all approvals and permits relating to *stormwater management* to be issued by the *approving agency*.

Financial Assurance: A performance bond, letter of credit, cash deposit, insurance policy, or other instrument of security acceptable to the County.

Finished Grade: The final *grade* or elevation of the ground surface conforming to the proposed design.

Fisheries Activities: Commercial water dependent fisheries facilities including *structures* for the packing, processing, canning, or freezing of finfish, crustaceans, mollusks, and amphibians

and reptiles and also including related activities such as wholesale and retail sales, product storage facilities, crab shedding, offloading docks, shellfish culture operations, and shore-based facilities necessary for *aquaculture* operations.

Flood: General and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters, or rapid unusual accumulation of runoff from any source.

Flood Insurance Rate Map (FIRM): Map which depicts the minimum *Special Flood Hazard Area* to be regulated by this Ordinance.

Flood Insurance Study (FIS): The official report in which the Federal Emergency Management Agency has provided *flood* profiles, *floodway* information, and the water surface elevations.

Flood Protection Elevation (FPE): The elevation of the *base flood* plus three feet *freeboard*.

Floodplain: (1) A relatively flat or low area adjoining a river, stream, *watercourse*, or *drainageway* which is subject to partial or complete inundation; (2) An area subject to the unusual and rapid accumulation or runoff of surface waters from source; or (3) Land typically adjacent to a body of water with ground surface elevations that are inundated by the *base flood*.

Floodproofing: Any combination of structural and non-structural changes which reduce or eliminate *flood* damage to improved property.

Floodproofing Certificate: Form supplied by FEMA to certify that a *building* has been designed and constructed to be structurally dry *floodproofed* to the *Flood Protection Elevation*.

Floodway: The *channel* and adjacent land area required to discharge the waters of the 100-year *flood* of a *watercourse* without increasing the water surface elevations more than a specified height.

Floodway Fringe: That portion of the *floodplain* outside of the *floodway*.

Floor Area, Commercial: For Commercial, business, and industrial *buildings* or *buildings* containing mixed uses; the sum of the gross horizontal area of the several floors of a *building* measured from the exterior faces of the exterior walls separating two *buildings* but not including: (1a) Attic space providing headroom of less than seven feet; (1b) *Basement* space not used for retailing; (1c) Uncovered steps or fire escapes; (1d) Accessory water towers or cooling towers; and (1e) Accessory off-street *loading spaces*.

Floor Area, Residential: For Residential *buildings*: the sum of the gross horizontal areas of the several floors of a *dwelling*, exclusive of garages, *basement*, and open porches, measured from the exterior faces of the exterior walls.

Flow Attenuation: Prolonging the flow time of runoff to reduce the peak discharge.

Forest: A biological community dominated by *trees* and other woody plants covering a land area of 10,000 square feet or greater, includes (1) areas that have at least 100 live *trees* per acre with at least 50 percent of those *trees* having a 2-inch or greater diameter at 4.5 feet above the ground and larger; and (2) areas that have been *cut* but not cleared.

Forest Conservancy District Board: The forestry board created for each State Forest Conservancy District under Md. Code Ann., Natural Resources, §§5-601 through 5-610.

Forest Conservation: The retention of existing forest or the creation of new forest.

Forest Conservation and Management Agreement: An agreement as stated in the Md. Code Ann., Tax: Property, § 8-211.

Forest Conservation Plan: A plan approved pursuant to the requirements of this Ordinance and the *Forest Conservation Technical Manual*.

Forest Conservation Technical Manual: The technical manual incorporated by reference, used to establish standards of performance required in preparing *Forest Stand Delineations* and *Forest Conservation Plans*. See the link below for an online copy of the technical manual <https://mdstatedocs.slr.info/digital/collection/mdgov/id/11130/>

Forest Cover: The area of a site meeting the definition of forest.

Forest Interior Dwelling Birds: Species of birds which require relatively large, forested tracts in order to breed successfully (for example, various species of flycatchers, warblers, vireos, and woodpeckers).

Forest Management: The protection, manipulation, and utilization of the forest to provide multiple benefits, such as timber harvest, water transpiration, wildlife habitat, etc.

Forest Management Plan: A plan establishing best conservation and management practices for a landowner in assessment of the resource values of forested property.

Forest Mitigation Bank: an area of land which has been intentionally afforested or reforested for the express purpose of providing credits for reforestation requirements.

Forest Mitigation Bank Agreement: an agreement entered into by an individual owning a forest mitigation bank and the county which commits the banker to certain procedures and requirements when creating and operating the forest mitigation bank.

Forest Mitigation Bank Plan: a plan submitted for approval of a forest mitigation bank to the county by an individual proposing to establish a forest mitigation bank.

Forest Practice: The alteration of the forest either through tree removal or replacement in order to improve the timber, wildlife, recreational, or water quality values.

Forest Stand Delineation: The methodology for evaluating the existing vegetation on a site proposed for development, as provided in the *Forest Conservation Technical Manual*.

Fowl: birds which are hunted or kept for food, including Galliformes (such as turkeys, chickens, partridges, and quail) and waterfowl of the order Anseriformes (such as ducks, geese, and swans). See also *Livestock* and *Poultry*.

Freeboard: An increment of elevation added to the *Base Flood Elevation* to provide a factor of safety for uncertainties in calculations, wave actions, subsidence, or other unpredictable effects.

Frontage, Lot: The distance for which the front boundary line of the *lot* and the *street line* are coincident.

Frontage, Street: All of the property on one side of a *street* between two intersecting *streets* (crossing or terminating), measured along the line of the *street*, or if the *street* is dead-ended, then all of the property abutting on one side between an intersecting *street* and the dead-end of the *street*.

Fully established: The Buffer contains as much diverse, native vegetation as necessary to support a firm and stable riparian habitat capable of self-sustaining growth and regeneration.

Garage, Private: A garage used for storage purposes only.

Grade: *Grade* elevations will be determined by averaging the elevations of the finished ground at all corners and/or principal points in the perimeter wall of the *building*.

Grading/grade: Any act by which *soil* is disturbed, including but not limited to, *clearing, stripping, stockpiling, excavating, grubbing, scarified, filling, removing root mat or topsoil, or any combination thereof.*

Grading Unit: The maximum contiguous area allowed to be *graded* at a given time. For the purposes of *erosion and sediment control*, a *grading unit* is the maximum contiguous area allowed to be *graded* at a given time and can be established on a *site-specific* basis.

Grain Dryer, Commercial: A facility for drying grain, in which the grain that is dried is primarily supplied by sources other than the owner and/or operator of the facility.

Group Home: A place, home, or institution which is licensed to provide boarding, shelter, and *personal* services to not more than eight *persons*, regardless of age, who have a need for supervision or assisted community living based on emotional, mental, physical, familial, or social differences. (Examples of such *persons* include but will not be limited to the mentally or physically handicapped, alcoholics, elderly, drug-dependent, and juveniles under the *jurisdiction* of the courts, the Department of Social Services, or the Juvenile Services Administration). *Group homes* do not include public or private schools organized and operated under Maryland laws, *persons* related by blood or marriage within the third degree to the custodial *person*, or to houses of worship, other religious or other public institutions for caring for such *persons* within the *building* while parents or other custodial *persons* are attending services, activities, or meetings.

Growing Season: The period of consecutive frost-free days as stated in the current *soil* survey for Kent County published by the National Cooperative *Soil* Survey Program, 16 U.S.C. Section 590 (a): (f).

Guest House: Living quarters within a detached accessory *building* located on the same *premises* as the main *dwelling*. Such quarters not rented or otherwise used as a separate *dwelling* and having no separate utility or kitchen.

Habitat Protection Area: In the Critical Area, the Buffer, nontidal wetlands, habitats of species in need of conservation, habitat of threatened and endangered species, plant habitats,

wildlife habitats, and anadromous fish propagation waters, as defined in COMAR 27.01.09 and COMAR 26.24.01.02B.

Habitat Protection Plan: A document showing and describing how the purposes and requirements of habitat protection areas will be accomplished.

Hazardous tree: In the Critical Area, a tree with a structural defect, such as a crack, canker, weak branch union, decay, dead wood, root damage, or root disease, that decreases the structural integrity of the tree and which, because of its location, is likely to fall and cause personal injury or property damage, including acceleration of soil erosion; or based on its location in the landscape, a healthy tree that, with continued normal growth, will damage an existing permanent structure or significantly increase the likelihood of soil erosion. A hazardous tree does not include a tree for which the likelihood of personal injury, property damage, or soil erosion can reasonably be eliminated or significantly diminished with routine and proper arboricultural practices, such as regular watering, application of fertilizer or mulch, and pruning; or by relocation of property that is likely to be damaged.

Health Officer: The *Health Officer* of Kent County.

Highly Erodible Soils: Those *soils* with a *slope* greater than 15%; or those *soils* with a *K Value* greater than 0.35 and with *slopes* greater than 5%.

Highest Adjacent Grade: The highest natural elevation of the ground surface, prior to construction, next to the proposed foundation of a *structure*.

Historic Structures: Any *structure*, including but not limited to residential, agricultural, civic and commercial *buildings*, which is equal to or greater than seventy-five years of age, or otherwise deemed to be of historical significance by meeting one or more of the following aspects of Kent County, Maryland or United States History: (1) Association with historic events or activities; (2) Association with *persons* who are important to the community or to specific *developments* of history; (3) Embodiment of distinctive characteristics of a type, period, method of construction, or the work of a master; or (4) Potential to provide important information about history or prehistory. (5) For *floodplain* purposes: Any *structure* that is: (5a) Individually listed in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (5b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; or (5c) Individually listed on the Maryland Register of Historic Places.

Historic Waterfowl Staging and Concentration Area: An area of open water and adjacent marshes where *waterfowl* gather during migration and throughout the winter season. These areas are “historic” in the sense that their location is common knowledge and because these areas have been used regularly during recent times.

Home Occupation: An occupation or business activity which results in a product or service and is conducted in whole or in part in a *dwelling unit* or *accessory structure* and is clearly secondary and subordinate to the residential use of the property.

Hospital: A *building* or group of *buildings* having room facilities for overnight patients, used for providing services for the inpatient medical or surgical care of sick or injured *persons*, and which may include related facilities, central service facilities, and staff offices; provided however, that such related facilities will be incidental and subordinate to the main use and will be an integral part of the *hospital* operation.

Hotel: A *building* in which lodging or boarding are provided for more than 15 *persons*, primarily transient, or with more than ten guest rooms, offered to the public for compensation. Ingress and egress to and from all rooms is made through an inside lobby or office supervised by a *person* in charge at all hours. As such, it is open to the public, in contrast to a boarding, rooming, or *lodging house* or an *apartment house* which are herein separately defined. A *hotel* may include *restaurants*, taverns, clubrooms, public banquet halls, ballrooms, and meeting rooms.

House of Worship: A *building* wherein *persons* regularly assemble for religious worship, and those accessory activities as are customarily associated therein, which *building* and activities are maintained and controlled by a religious body organized to sustain public worship but not to render a service which is customarily carried on as a business.

Hedgerow: A row or rows of bushes, shrubs, or *trees* forming a hedge.

Hydric Soils: *Soils* that are wet frequently enough to periodically produce anaerobic conditions, thereby influencing the species composition or growth, or both, of plants on these *soils*.

Hydrophytic Vegetation: Those plants cited in “Vascular Plant Species Occurring in Maryland Wetlands” (Dawson, F. et al., 1985) which are described as growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content (plants typically found in wet areas).

Impervious Surface: A surface that has been compacted or covered with a layer of material so that it is highly resistant to *infiltration* by water. For *stormwater management* purposes: Any surface that does not allow *stormwater* to infiltrate into the ground.

In-kind replacement: In the Critical Area, the removal of a structure and the construction of another structure that is smaller than or identical to the original structure in use, footprint area, width, and length.

Infiltration: The passage or movement of water into the *soil* surface.

Inspection Agency: The Maryland Water Management Administration or, if enforcement authority has been delegated, Kent County.

Intermittent Stream: A stream in which surface water is absent during a part of the year as shown on the most recent 7.5-minute topographic quadrangle published by the United States Geologic Survey as confirmed by field verification.

Intrafamily Transfer: A transfer to a member of the owner's immediate *family* of a portion of the owner's property for the purpose of establishing a residence for that *family* member.

Intrafamily Transfers, Immediate Family Member: A father, mother, son, daughter, grandfather, grandmother, grandson, or granddaughter.

Island: In *street* or parking design, a raised area, usually curbed, placed to guide traffic and separate lanes or used for landscaping, signage, or lighting.

Junk: Dilapidated automobiles, trucks, tractors, and other such vehicles and parts thereof, dilapidated wagons, trailers, and other kinds of vehicles and parts thereof, scrap *building* material, scrap contractor's equipment, tanks, caskets, appliances, cans, barrels, boxes, drums, piping, bottles, glass, old iron, machinery, rags, paper, excelsior, hair, mattresses, beds or bedding, or any other kind of scrap or waste material which is stored, kept, handled, or displayed.

Jurisdiction: Territory of a county or municipal corporation within which its powers may be exercised.

K Value: The *soil* erodibility factor in the Universal *Soil* Loss Equation. It is a quantitative value that is experimentally determined.

Land Surveyor: A person who is licensed as a *land surveyor* in the State of Maryland.

Land-based aquaculture: In the *Critical Area*, the raising of fish or shellfish in any natural or man-made, enclosed, or impounded, water body.

Landforms: Features of the earth's surface created by natural causes.

Landscape Plan: A plan showing the dimensions and details for *reforesting* an area at least 35 feet wide and covering 2,500 square feet or greater in size or landscaping, using native or indigenous plants when appropriate, and where applicable, and is made a part of an approved *Forest Conservation Plan*.

Large shrub: A shrub that, when mature, reaches a height of at least six feet.

Laundromat: A business that provides washing, drying, and/or ironing machines or dry-cleaning machines for hire to be used by customers on the *premises*.

Legally developed: All physical improvements to a property that existed before Critical Area Commission approval of a local Program, or were properly permitted in accordance with the provisions of the local Program in effect at the time of construction.

Linear Project: a project which is elongated with nearly parallel sides and is used to transport a utility product or public service not otherwise contained in an application for *subdivision*, such as electricity, gas, water, sewer, communications, trains, and vehicles. It may traverse fee simple properties through defined boundaries or established *easement* rights

Limit of Moderate Wave Action (LiMWA): Inland limit of the area affected by waves greater than 1.5 feet during the *base flood*. *Base flood* conditions between the VE Zone and the LiMWA will be similar to, but less severe than those in the VE Zone.

Load-Bearing Fill: Any facility, earthwork, or *fill* placed in a controlled manner to support structural foundations or vehicular traffic, the instability of which would constitute a public hazard or nuisance.

Livestock: domesticated animals that are kept for purposes including meat, leather, wool, or labor, which may include but not be limited to cattle, swine, sheep, horses, mules, or goats. Large ruminants include cattle; small ruminants include sheep and goats; equines include horses and mules. See also *Fowl* and *Poultry*.

Loading Space: An off-street space or berth within or adjacent to the main *building* for the standing, loading, or unloading of vehicles.

Lodging house: Same as *rooming house*.

Lot: A parcel of land whose boundaries have been established by some legal instrument such as a recorded deed or plat and which is recognized as a separate legal entity for the purposes of transferring title.

Lot, Corner: A *lot* abutting upon two or more *streets* at their intersection.

Lot, Depth: The average horizontal distance between the front and rear *lot lines*.

Lot, Interior: A *lot* other than a *corner lot*.

Lot, Through (Double Frontage): A *lot* having a *frontage* of two approximately parallel *streets* or places.

Lot Area: The total horizontal area within the *lot lines* of the *lot*.

Lot Coverage: In the Critical Area, the percentage of a total lot or parcel that is: 1) occupied by a structure, accessory structure, parking area, driveway, walkway, or roadway; or 2) covered with gravel, stone, shell, impermeable decking, a paver, permeable pavement, or other any manmade material. Lot coverage includes the ground area covered or occupied by a stairway or impermeable deck. Lot coverage does not include: 1) a fence or wall that is less than one foot in width that has not been constructed with a footer; 2) a walkway in the Buffer or expanded Buffer, including a stairway, that provides direct access to a community or private pier; or 3) a wood mulch pathway; or 4) a deck with gaps to allow water to pass freely

Lot Line: The boundary line of a *lot*.

Lot Width: The horizontal distance between the side *lot lines* measured at the front *building setback* line.

Lowest Floor: In the application of the *floodplain regulations*, the *lowest floor* of the lowest enclosed area, including a *basement*. An unfinished enclosure constructed of *flood* resistant materials used solely for parking of vehicles, storage, or *building* access in an area other than a *basement*, and which is not the *lowest floor*, as long as it is supplied with water equalizing vents.

MET Tower: A temporary tower erected for the purpose of performing a wind study to determine the optimal location for a wind energy system.

Maintenance Agreement or Guarantee: 1) Any security which may be required and accepted by Kent County to ensure that necessary improvements will function as required for a specified period of time. 2) The short-term management agreement associated with *afforestation, reforestation, or landscaping*. 3) The long-term management agreement for *private roads and stormwater management facilities*. *Major Thoroughfare:* A street or highway so designated on the Kent County *Major Thoroughfare Map*.

Manufactured Home: A transportable *structure* that is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. A mobile home is separately defined below.

Marina: A location for docking or mooring boats and providing services for compensation to boats and the occupants thereof. *Marina* does not include a community *pier* or other noncommercial boat docking and storage facility.

Maximum Extent Practicable (MEP): Designing *stormwater management systems* so that all reasonable opportunities for using *ESD planning techniques* and treatment practices are exhausted and only where absolutely necessary, a structural *BMP* is implemented.

Mean High Water Line: The average annual level of high tides at a given location.

Microbrewery: A facility in which beer is brewed for distribution and consumption, and which possesses the appropriate license from the State of Maryland, including tasting rooms on the *premises* for the consumption of *on-site* produced beer.

Minor Street: A *street* other than a *major thoroughfare* or *collector street* and intended primarily for providing access to abutting properties.

Mitigation: An action taken to compensate for adverse impacts to the environment resulting from a development activity or a change in land use or intensity.

Mobile Home: A *structure*, transportable in one or more sections, which when erected on *site* is 320 square feet or more and is built on a permanent chassis and is designed to be used as a *dwelling* with or without a permanent foundation when connected to the required utilities and includes plumbing, heating, air conditioning, and electrical systems contained in it. This term will apply to any *structure* which meets all the requirements of this definition except the size requirement and with respect to which the manufacturer voluntarily files a *certification* required by the Secretary of HUD and complies with the standards established under the federal act.

Mobile Home Development: Any *lot, parcel, or tract*, together with required *open space*, used, designed, maintained, or held out to accommodate *mobile homes*, whether by rental or ownership and all *buildings and structures* intended as *accessory uses*. A *mobile home development* does not include automobile or *mobile home sales lots* on which unoccupied *mobile homes* are parked for inspection and sale. A *mobile home development* provides for the permanent or long-term location of *mobile homes* to be occupied as residences.

Mobile Home Park: A *mobile home development* which is divided into individual *sites* and solely operated exclusively as a rental project.

Mobile Home Subdivision: A mobile home development which is subdivided into individual lots.

Modified Buffer: An area of 100 feet measured horizontally from mean high tide, the edge of *tidal wetlands*, or *tributary streams* and located within a *Modified Buffer Area*. This *modified buffer* will include a 25-foot area of existing naturally vegetated area, or an area established in vegetation and managed to protect aquatic environments, *wetlands*, shoreline, and terrestrial environments from man-made disturbances. *Sites* with a *non-functioning buffer* will be required to have a *modified buffer*.

Modified Buffer Area: An area of land where a pattern of residential, industrial, commercial, or recreational development existed in the first 100 feet of the buffer on December 1, 1985, and that, as part of a local program approved by the Critical Area Commission, is shown on a map maintained by the County and is subject to modified development provisions.

Motel, Tourist Home, or Motor Lodge: A building in which lodging, or boarding and lodging, are provided and offered to the public for compensation. As such, it is open to the public in contradistinction to a boarding or *lodging house*, or a *multi-family dwelling*; same as a *hotel* except that the *buildings* are usually designed to serve tourists traveling by automobile, ingress and egress to rooms need not be through a lobby or office and parking is usually adjacent to the rooms.

Native Plants: Species indigenous to the physiographic area in Maryland where the planting is proposed, including improved cultivars of those species.

Natural Features: Components and processes present in or produced by nature, including, but not limited to, *soil* types, geology, *slopes*, vegetation, surface water, drainage patterns, *aquifers*, recharge areas, climate, *floodplains*, aquatic life, and wildlife.

Natural Ground Surfaces: The ground surface in its original state before *grading*, *stripping*, *excavation*, or filling.

Natural Heritage Area: Any community of plants or animals which are considered to be among the best Statewide examples of their kind and are designated by regulation by the Department of Natural Resources.

Natural Parks: Areas of natural habitat that provide opportunities for those recreational activities that are compatible with the maintenance of natural conditions.

Natural Regeneration: The natural establishment of *trees* and other vegetation with at least 400 woody, free-to-grow *seedlings* per acre, which are capable of reaching a height of at least twenty feet at maturity.

Natural Vegetation: Those plant communities that develop in the absence of human activities.

Nature-dominated: A condition where *landforms* or biological communities, or both, have developed by natural processes in the absence of human intervention.

Net Tract Area: For *forest conservation*: (1) Except in agricultural (AZD) and resource (RCD) areas, the total area of a *site*, including both *forested* and *non-forested* areas, to nearest 1/10 acre, reduced by the area where *forest clearing* is restricted by another local ordinance or program. (2) In agricultural (AZD) and resource (RCD) areas, the part of the total *tract*

for which land use will be changed or will no longer be used for primarily agricultural activities, reduced by the area where *forest clearing* is restricted by another local ordinance or program. (3) For a *linear project*, the area of a right-of-way width, new access roads, and storage, or the limits of disturbance as shown on an application for *sediment* and *erosion* control approval or in a capital improvements program project description.

New Construction: In terms of *floodplain* management, *structures*, including additions and improvements, and the placement of *manufactured homes*, for which the *start of construction* (herein defined) commenced on or after April 25, 1975, the initial effective date of the Kent County *Flood Insurance Rate Map*, including any subsequent improvements, *alterations*, modifications, and additions to such *structures*.

NAVD: In terms of *floodplain*: the North American Vertical Datum of 1988 elevation reference points set by the National Geodetic Survey based on mean sea level.

Nonconformities: (1) *Nonconforming Lots*: A validly recorded *lot* which at the time it was recorded fully complied with all applicable laws and ordinances but which does not fully comply with the *lot* requirements of this Ordinance concerning minimum *density*, area, or dimension. (2) *Nonconforming Structures*: A *structure* or *building*, not including signs, which lawfully existed on the effective date of this Ordinance but which does not comply with one or more of the *development* standards for the district in which it is located. (3) A use or activity that was lawful prior to the effective date of this Ordinance but fails to comply with the present requirements of the Ordinance.

Non-Functioning Buffer: A *buffer* will be considered non-functioning if: (1) More than 50% of the *buffer on-site* is impervious, or (2) More than 75% of the *buffer* on the *site* is disturbed either with stone, decks, septic systems, or other obvious human impacts. The *site* will include all contiguous parcels under single ownership. (3) The *site* is located within a *Modified Buffer Area*. (4) Contiguous *buffers* of *natural vegetation* of 100 feet of shoreline are considered functioning *buffers*.

Non-Point Source Pollution: Pollution generated by diffuse land use activities rather than from an identifiable or discrete facility. It is conveyed to *waterways* through natural processes, such as rainfall, storm runoff, or groundwater seepage rather than by deliberate discharge. *Non-point source pollution* is not generally corrected by “end-of-pipe” treatment, but rather, by changes in land management practices.

Non-Renewable Resources: Resources that are not naturally regenerated or renewed.

Non-tidal Floodplains: These *floodplains* consist of the *floodway* and *floodway fringe*. *Non-tidal floodplains* may have detailed *engineering* study data, profiles, and water surface elevations, or may have approximate delineations only.

Non-tidal wetlands: (1) Within the *Critical Area*, those lands, excluding *tidal wetlands* regulated under Md. Code Ann., Natural Resources, Title 9, where the water table is usually at or near the surface, or lands where the *soil* or substrate is covered by shallow water at some time during the *growing season*, and which are usually characterized by one or both of the following: (1a) At least periodically, the lands support predominately *hydrophytic*

vegetation; and (1b) The substrate is predominately undrained *hydric soils*. (2) Excluded from these *regulations* are *farm* ponds and other man-made bodies of water whose purpose is to impound water for *agriculture*, water supply, recreation, or *waterfowl* habitat purposes. (3) Outside the *Critical Area*, as defined by the State of Maryland, Army Corps of *Engineers*, Environmental Protection Agency, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, and any other applicable State or Federal Agency.

Nursing Home: Same as *Convalescent Home*.

Office of Sediment Control: The Kent County Department of Planning and Zoning for inspection purposes and the Kent Soil and Water Conservation District for plans review purposes.

Offsets: *Structures* or actions that compensate for undesirable impacts.

Off-site: Outside of the limits of the area encompassed by the *development* or *tract*.

Off-site Stormwater Management: The design and construction of a facility necessary to control *stormwater* from more than one *development*.

On-site: Within the limits of the area encompassed by a *development* or *tract*, including an area classified as a 100-year *floodplain*.

On-site Stormwater Management: The design and construction of systems necessary to control *stormwater* within an immediate *development*.

One Percent Annual Chance (100-Year) Floodplain: An area along or adjacent to a stream or body of water that is capable of storing or conveying *floodwaters* during the 100-year frequency *flood* as shown on the *Flood Insurance Rate Map* and *Flood Insurance Study*.

One Percent Annual Chance (100-Year) Flood: The *base flood*, having one chance in hundred (one percent chance) of being equaled or exceeded in any year.

Open Space: Those areas suitable for common recreational use or which provide visual relief to developed areas, exclusive of *flood control channel right of ways*, areas devoted to parking, vehicular traffic, or private land, and any other area which does not significantly lend itself to the overall benefit of either the particular *development* or surrounding environment.

Outdoor Retreat: A lot, tract, or parcel of land containing up to fifteen guest units, designed for and utilized for periodic, transient occupancy and not as a permanent residence, and which may contain outdoor recreational accommodations, dining facilities for guests, and bathroom accommodations for guests.

Overbank Flood Protection Volume: The volume controlled by structural practices to prevent an increase in the frequency of out-of-bank *flooding* generated by *development*. Methods for calculating the *overbank flood protection volume* are specified in the *Design Manual*.

Overburden: In the *Critical Area*, the strata or material in its natural state, before its removal by *surface mining*, overlying a mineral deposit, or in between mineral deposits.

Palustrine: All *non-tidal wetlands* dominated by *trees*, shrubs, persistent emergent plants, or emergent mosses or lichens and all such *wetlands* that occur in tidal areas where the salinity due to ocean derived salts is below one-half part per 1,000 parts of water.

Parking, off-street: An all-weather surface area not in a *street* or *alley* and having an area of not less than 200 square feet, exclusive of driveways, permanently reserved for the temporary storage of one vehicle and connected with a *street* or *alley* by a paved driveway which affords ingress and egress for an automobile without requiring another automobile to be moved.

Perennial Stream: A stream containing surface water throughout an average rainfall year, as shown on the most recent 7.5-minute topographic quadrangle published by the United States Geologic Survey, as confirmed by field verification.

Permanent Construction: Any *structure* occupying a *site* for more than 180 days per year.

Permittee: Any *persons* to whom a permit is issued pursuant to this Ordinance.

Person: Includes, in addition to any other meaning it may have under this chapter, an individual, a corporation, a partnership, the federal government, a county, a municipal corporation, or any other political *subdivision* of the State, an agency, or any other similar entity whatsoever.

Personal Wireless Facility: Facility for the provision of *personal* wireless services, as defined by the Telecommunications Act but not including public and commercial radio and television facilities.

Personal Wireless Facility Tower: A tower, including guyed towers, lattice towers, and monopoles, for the purpose of supporting *personal wireless facilities*.

Physiographic Features: The *soils*, *topography*, land *slope* and aspect, and local climate that influence the form and species composition of plant communities.

Pier: A *structure* built over the water and supported by pillars, piles, or floats, and used as a landing place, including tie-out pilings.

Pier Length: The straight-line distance between the mean high water mark and the outermost piling.

Planning Commission: The Kent County *Planning Commission*.

Planning Techniques: For *stormwater management* purposes: A combination of strategies employed early in the project design to reduce the impact from *development* and to incorporate *natural features* into a *stormwater management plan*.

Plant Habitat: A community of plants commonly identifiable by the composition of its vegetation and its physiographic characteristics.

Plot Plan: A *site plan* prepared for review of *single-family dwellings*, *accessory uses*, and *structures*, which may include new *single-family dwellings*, additions and *alterations* to *single family dwellings*, and agricultural *structures*. These projects have minor impact, require less information, and may be reviewed and approved by the Planning Director or

the Planning Director's designee. Other minor, non-residential projects may be eligible for review by this type of site plan.

Port: A facility or area established or designated by the State or local *jurisdictions* for purposes of water-borne commerce.

Poultry: domesticated fowl to include but not be limited to chickens, ducks, geese, turkeys, and pigeons or doves. See also *Fowl* and *Livestock*. *Premises*: A *lot*, together with all the *buildings* and *structures* thereon.

Primary Road: *Primary roads* are identified on the Kent County *Road Classification System* map in the Kent County Comprehensive Plan (See the adopted Kent County Comprehensive Plan: <https://www.kentcounty.com/planning/complan>).

Priority Funding Area: An area designated as a *Priority Funding Area* under State Finance and Md. Code Ann., Procurement, §5-7B-02.

Private Destination/Residence Club: Tourist accommodations in one or more *buildings* owned, co-owned, or operated by a corporation, association, *person*, or *persons*, and serving as the temporary abode of *persons* having a residence elsewhere and offering both pre- and post-arrival concierge service. The use and occupancy of the units circulates among individuals on a periodically recurring basis and is inherently transient.

Private Harvesting: The cutting and removal of *trees* for *personal* use.

Private Road: A way for vehicular traffic maintained by private property owners using it.

Professional Offices: Offices for doctors, dentists, attorneys, engineers, land surveyors, counselors, and similar uses as determined by the *Department*.

Project Approvals: The approval of *development*, other than *development* by a State or local government agency, in the Chesapeake Bay *Critical Area* by the appropriate local approval authority. The term includes approval of *subdivision* plats and *site plans*; inclusion of areas within floating zones; issuance of *variances*, special exceptions, and conditional use permits; and issuance of zoning permits. The term does not include *building* permits.

Protected Lands: A Maryland Agricultural Land Preservation Foundation (MALPF) district or any other *agricultural* or *conservation easement*, both public and private.

Public Landing: Areas adjacent to the waters of Kent County and owned by the Kent County Commissioners for use by the public for water related activities, subject to rules and *regulations* as may be promulgated by the Kent County Commissioners.

Public Utilities: Uses or *structures* for the public provision, transmission, and distribution of electricity (but not power generation); fuel transmission and distribution (but not manufacture or storage) of gas; potable water treatment and distribution; sewerage collection and treatment; telephone and internet service facilities (not including stations or terminals). This does not include *public utility lines* and *accessory structures*.

Public Utility Lines and Accessory structures: Underground gas mains and pipes and underground and overhead electrical and communications wires, cables, pipes, conduits, and their

supporting poles, towers, repeaters, boosters, anodes, regulating and measuring devices, and the minor *buildings* or *structures* in which they may be housed, but not including major *buildings*, *yards*, stations, or substations for transforming, boosting, switching, or pumping purposes, where such facilities are constructed on the ground.

Public Water-Oriented Recreation: Shore-dependent recreation facilities or activities provided by public agencies which are available to the general public.

Recharge Volume: That portion of the *water quality volume* used to maintain ground water recharge rates at *development sites*. Methods for calculating the *recharge volume* are specified in the *Design Manual*.

Reclamation: The reasonable rehabilitation of disturbed land for useful purposes, and the protection of natural resources of adjacent areas, including water bodies.

Reconfiguration: In the Critical Area, a change of the arrangement of the existing lot or parcel lines of any legal parcel of land or recorded, legally buildable lots. Reconfiguration includes any term used by a local jurisdiction for a development application that proposes to change the arrangement of the existing lot or parcel lines of any legal parcel of land or recorded, legally buildable lot that existed before the application, such as a subdivision, lot line adjustment, boundary line adjustment, re-platting request, or a revision of acreage to increase density.

Recreational Vehicle: A vehicular, portable device, not more than 45 feet in length, built on a chassis designed to be self-propelled or permanently towable by a light duty truck, and used as a temporary *dwelling* for travel or recreational purposes.

Redevelopment: For *stormwater management* purposes: Any construction, *alteration*, or improvement on *sites* where existing land use is commercial, industrial, institutional, or multi-family residential and existing *site* impervious area exceeds forty (40) percent. For *Critical Area* purposes: The process of developing land, which is or has been developed. For purposes of implementing specific provisions of this ordinance, redevelopment (as opposed to new development) means a development activity that takes place on property with pre-development imperviousness (in IDA) or lot coverage (in LDA and RCA) of 15 percent or greater.

Reforestation: The establishment of a *forest* through artificial reproduction or *natural regeneration* and including for *forest conservation* purposes: (1) The creation of a biological community dominated by *trees* and other woody plants containing at least one hundred live *trees* per acre with at least 50 percent of those *trees* having the potential of obtaining a two-inch or greater diameter measured at 4.5 feet above the ground within seven years. (2) Establishment of a *forest* according to the *Forest Conservation Technical Manual*. (3) Landscaping of areas under an approved *landscape plan* establishing a *forest* at least 35 feet wide and covering an area of 2,500 square feet or more. (4) For a *linear project* involving overhead transmission lines, it may consist of a biological community dominated by *trees* and woody shrubs with no minimum height or diameter criteria.

Regulated Activity: For application of *forest conservation* outside of the *Critical Area*, any of the following activities when that activity occurs on a unit of land which is 40,000 square feet or greater: (1) *Subdivision*; (2) *Grading*; (3) An activity that requires a *sediment control permit*; or (4) Project plan of a State or local agency.

Regulated Grading: Any *grading* performed with the approval of, and in accordance with, criteria established by this Ordinance.

Regulations: The whole body of *regulations*, text, charts, diagrams, notations, and references contained in or referred to in this Ordinance.

Renewable Resource: A resource that can renew or replace itself and, therefore, with proper management, can be harvested indefinitely.

Resort: A self-contained facility that serves as a primary attraction for visitors which provides recreational and/ or therapeutic facilities. A *resort* may also include meeting facilities.

Resource Banking: The restoration, creation, enhancement, and in certain defined circumstances, preservation of a natural resource such as *wetlands* or *forest* for the express purpose of compensating for the loss of the natural resource.

Responsible Personnel: Any foreman, superintendent, or project *engineer* who is in charge of on-site *clearing* and *grading* operations or the implementation and maintenance of an *erosion and sediment control plan*.

Restaurant: An establishment that serves food and beverages primarily to customers seated at tables or counters in a *building* or designated outdoor seating areas and may include drive through service, when such service is listed as being permitted in a zoning district. This includes cafes, tearooms, and snack bars.

Retail businesses, including *shopping centers*, are businesses which supply, on the premises, household goods, new automotive parts, agricultural supplies and commodities, sporting goods, and the like including department, outlet, and discount stores.

Retention: In *forest conservation*, the deliberate holding and protection of existing *trees*, shrubs, or plants on the *site* according to established standards as provided in the Kent County *Forest Conservation Technical Manual*.

Retention Structure: A permanent *structure* that provides for the storage of runoff by means of a permanent pool of water.

Retreat: A small meeting facility in a private, natural area, free from distractions thus allowing meeting participants to focus on the goals and objectives of the meeting.

Retrofitting: The implementation of *ESD* practices, the construction of structural *BMPs*, or the modification of an existing structural *BMP* in a previously developed area to improve water quality over current conditions.

Right-of-way: A strip of land occupied or intended to be occupied by a *street*, *crosswalk*, railroad, road, electrical transmission line, gas pipeline, water main, sanitary or storm sewer main, shade *trees*, or for another special purpose.

Riparian Habitat: A habitat that is strongly influenced by water and which occurs adjacent to streams, shorelines, and *wetlands*.

Roads: Collector, Primary, and Secondary: As shown on the County's *Road Classification System* map in the Kent County Comprehensive Plan or Town's *Major Thoroughfare* Map (See Comprehensive Plan <https://www.kentcounty.com/planning/compplan>).

Roadside Stand: A *structure* designed or used for the display or sale of local agricultural products.

Roadway: That portion of a *street* or highway available for and intended for use by motor vehicle traffic.

Rooming House: A *building* where, for compensation and by prearrangement for definite periods, lodging, meals, or lodging and meals are provided for three or more *persons* but containing no more than five guest rooms or *rental units that* intended for rental to transients on a day to day or week to week basis, but are not intended for use or used as a permanent *dwelling*, and where individual units do not include kitchen facilities.

Route 301 Corridor: One of two growth areas in Kent County identified by the Comprehensive Plan, which includes land adjacent to and one mile east and one mile west of the nine - mile -long section of U.S. Route 301, as it passes from north to south Through Kent County, Maryland, and adding those properties that are zoned Employment Center and Industrial, which are located along MD 299 in Massey.

Rural Inn: A facility with 10 to 25 guest rooms that are not for use as permanent residences, with on-site management for the purpose of providing overnight lodging to the general public for transient stays of 45 consecutive days or less for compensation and only by prearrangement, and at which limited dining facilities may also be offered for guests and the general public.

Sanitary Landfill: A land disposal *site* employing an *engineering* method of disposing of solid waste on land in a manner that minimizes environmental hazards by spreading the solid waste to the smallest practical volume and applying and compacting cover at the end of each operating day or more often if required.

Sawmill: A facility where logs or partially processed cants (logs slabbed on one or more sides) are sawn, split, shaved, stripped, chipped, or otherwise processed to produce wood products (but not paper or paper products) not including the processing of timber for use on the same *lot* by the owner or resident of that *lot*.

Screen: A *structure* or planting consisting of fencing, *berms*, and/or deciduous or coniferous *trees* or shrubs providing a continuous view obstruction within a *site* or property.

Seasonally Flooded Water Regime: A condition where surface water is present for extended periods, especially early in the *growing season*, and when surface water is absent, the water table is often near the land surface.

Secondary Road: *Secondary roads* are identified on the Kent County *Road Classification System* map in the Kent County Comprehensive Plan (see the adopted Kent County

Comprehensive Plan: <https://www.kentcounty.com/planning/compplan>). Or *roads* so designated by an incorporated Town.

Sediment: Soils or other surficial materials transported or deposited by the action of wind, water, or artificial means.

Sediment Control Officer: Kent County Planning Director or the Director's designee or the District Manager of the Kent Soil and Water Conservation District (KSWCD).

Sediment Control Permit: The authorization of an activity regulated under a *sediment* control plan as provided in the Md. Code Ann., Environment, Title 4.

Seedlings: An unbranched woody plant, less than 24 inches in height and having a diameter of less than ½ inch measured at two inches above the root collar.

Selection: In the *Critical Area*, the removal of single, scattered, mature *trees* or other *trees* from uneven-aged stands by frequent and periodic *cutting* operations.

Selective Clearing: The careful and planned removal of *trees*, shrubs, and plants using specific standards and protection measures under an approved *Forest Conservation Plan*.

Servants' Quarters: Living quarters within a portion of the main *building* or in an accessory *building* on the same *lot* with the main *building* used for servants employed on the *premises*, such quarters having no kitchen facilities or separate utility meters, and not rented or otherwise used as a separated *dwelling*.

Setback: The distance between the *street right of way* and the line of a *building* or any projection thereof.

Sewage Sludge: The accumulated semi-liquid or dried solid residue that is deposited from sewage or septage in a wastewater treatment plant, as defined in the COMAR *regulations*.

Sewage Sludge Land Application: The deposition of *sewage sludge* on the surface or the injection or incorporation of such material into the root zone or *soil* profile.

Shadow Flicker: The moving shadow created by the sun shining on rotating blades of the wind turbine.

Shopping Center: An integrated *development* of four or more commercial, retail, or service establishments, either connected or freestanding sharing common parking facilities and common access.

Shoreline Cliff: A steep face of 10 feet or higher with a *slope* in excess of 60 degrees either vegetated or non-vegetated which borders the Chesapeake Bay, the Chester River, the Sassafras River, or any open water tributary within Kent County.

Sign: See Article V for all sign-related definitions.

Significantly Eroding Areas: Areas that erode 2 feet or more per year.

Site: Any *tract*, *lot*, or parcel of land or combination of tracts, *lots*, or parcels of land which are under one ownership, or are contiguous and in diverse ownership where *development* is to be performed as a part of a unit, *subdivision*, or project.

Site Development Plan: For *erosion and sediment control* and *stormwater management* purposes: The second of three plan approvals that include the information necessary to allow a detailed evaluation of a proposed project.

Site Plan: A drawing illustrating a proposed *development* and prepared in accordance with the specifications of Article IV.

Site Plan, Major: A *site plan* which is reviewed and decided upon by the Kent County *Planning Commission*. This includes all *site plans* required by this Ordinance that do not meet the criteria for *plot plans* or *minor site plans*.

Site Plan, Minor: A *site plan* which is reviewed and decided upon by the Planning Director, or the Planning Director's designee, after review by the Technical Advisory Committee.

Slip: That area of the *waterway* contained within the tie-out pilings, a bulkhead, or a *pier*, whether covered or not.

Slope: The inclined exposed surface of fill, *excavation*, or natural terrain.

Small shrub: A shrub that, when mature, reaches a height of up to six feet.

Soil: All earth material of whatever origin that overlies bedrock, and including, but not limited to, the decomposed zone of bedrock which can be readily excavated by mechanical equipment.

Soil Conservation and Water Quality Plans: In the *Critical Area*, land use plans for *farms*, which show *farmers* how to make the best possible use of their *soil* and water resources while protecting and conserving those resources for the future. It is a document containing a map and related plans that indicate: (1) How the landowner plans to treat a *farm* unit; (2) Which *best management practices* the landowner plans to install to treat undesirable conditions; and (3) The schedule for applying those *best management practices*.

Solar Energy System, utility scale: Any device or combination of devices or elements which rely upon direct sunlight as an energy source, including but not limited to any substance or device which collects sunlight for generating energy primarily for use *off-site*. Energy generated may be used to serve on *site* power needs.

Solar Energy System, small: Any device or combination of devices or elements which rely upon direct sunlight as an energy source, including but not limited to any substance or device which collects sunlight for generating energy for use on *site*. The energy output may also be delivered to a power grid to offset the cost of energy on *site* only, as well as allowing for aggregate metering as defined by the State of Maryland.

Special Flood Hazard Area (SFHA): The land in the *floodplain* subject to a one percent or greater chance of *flooding* in any given year. *Special Flood Hazard Areas* are designated by the Federal Emergency Management Agency in *Flood Insurance Studies* and on *Flood Insurance Rate Maps* as Zones A, AE, AH, AO, A1-30, and A99, and Zones VE and V1-30. The term includes areas shown on other *flood* maps that are identified in Article VI.

Species in Need of Conservation: Those fish, plants, and wildlife whose continued existence as part of the State's resources are in question and which may be designated by regulation

by the Secretary of Natural Resources as in need of conservation pursuant to the requirements of Md. Code Ann., Natural Resources, §10-2A-06, among others.

Stabilization: The protection of exposed *soils* from *erosion* by the application of seed and mulch, seed and matting, sod, other vegetative measures, and/or structural means.

Stable, Private: An accessory *building*, not related to the ordinary operation of a *farm*, for the housing of not more than four horses or mules owned by a *person* or *persons* living on the *premises* and which horses or mules are not for hire or sale.

Stable Commercial: Any stable for the housing of horses or mules, operated for remuneration, hire, sale, or stabling, or any stable not related to the ordinary operation of a *farm*, with the capacity for more than four horses or mules, whether or not such stable is operated for remuneration, hire, sale, or stabling.

Standards and Specification: The “2011 Maryland *Standards and Specification from Soil Erosion and Sediment Control*” or any subsequent revisions.

Start of Construction: For *floodplain* management, the date of issue of the *building* permit for any *development*, including *new construction* and *substantial improvements*, provided that the actual start of the construction or improvement was within 180 days of permit issuance. The actual *start of construction* is the placement of slab or footings, piles, columns, or actual placement of a *manufactured home*. For *substantial improvement*, the *start of construction* is the first *alteration* of any structural part of the *building*.

Steep Slopes: *Slopes* of 15% or greater incline.

Stormwater: Water that originates from a precipitation event.

Stormwater Management: (1) For quantitative control, a system of vegetative and structural measures that control the increased volume and the rate of surface runoff caused by man-made changes to the land; and (2) For qualitative control, a system of vegetative, structural, and other measures that reduce or eliminate pollutants that might otherwise be carried by surface runoff.

Stormwater Management Plan: A set of drawings or other documents submitted by a *person* as a prerequisite to obtain *stormwater management* approval, which contains all of the information and specifications pertaining to *stormwater management*.

Stormwater Management System: Natural areas, *ESD* practices, *stormwater management* measures, and any other *structure* through which *stormwater* flows, infiltrates, or discharges from a *site*.

Stream Protection Corridor: A 100-foot naturally vegetated area or an area established in vegetation and managed to protect aquatic environments, *wetlands*, shoreline, and terrestrial environments from man-made disturbances. The *stream protection corridor* will be 100 feet and will be measured horizontally from the top of each normal bank of a *perennial* or *intermittent stream*.

Stream Restoration Project: an activity that: (1) Is designed to stabilize stream banks or enhance stream function or habitat located within an existing stream, *waterway*, or *floodplain*; (2)

Avoids and minimizes impacts to *forests* and provides for replanting *on-site* an equivalent number of *trees* to the number removed by the project; (3) May be performed under a separate storm sewer system permit, a *watershed* implementation plan growth offset, or another plan administered by the State or County to achieve or maintain water quality standards; and (4) Is not performed to satisfy *stormwater management*, *wetlands* mitigation, or any other regulatory requirement associated with proposed *development* activity.

Street: A public or private thoroughfare which affords the principal means of access to abutting property.

Street Line: A dividing line separating a *lot*, *tract*, or parcel of land and a contiguous *street*.

Story: That portion of a *building*, other than a *basement*, including between the surface of any floor and the surface of the floor next above it; or if no floor next above it exists, then the space between such floors and the ceiling next above it.

Stripping: Any activity which removes the vegetative surface cover, including *tree* removal, *clearing*, grubbing, and storage or removal of topsoil.

Structural Alteration: Any change in the supporting members of a *building*, footings, bearing walls or partitions, columns, beams, girders, or any substantial change in the roof or exterior walls, excepting such repair as may be required for the safety of the *building*.

Structural Rock Fills: Fills constructed predominately of rock materials for the purpose of supporting *structures*.

Structure: Anything constructed or erected, the use of which requires a more or less permanent location on the ground or attached to something having a permanent location on the ground, including but not limited to *mobile homes*, *swimming pools*, fences with footers or a foundation, gas and liquid storage tanks, backstops for tennis courts, sheds, barns, and pergolas, excluding slabs, driveways, and walkways outside the Critical Area.

Subdivider: Any *person*, individual, *firm*, partnership, association, corporation, estate, trust, or any other group or combination, acting as a unit, dividing or proposing to divide land so as to constitute a *subdivision* as defined below and including any agent of the *subdivider*.

Subdivision: The division of a *lot*, *tract*, or parcel of land into two or more *lots*, parcels, *sites*, or other divisions of land. It includes *resubdivision* and when appropriate to the context, will refer to the process of subdividing or the land subdivided. *Subdivisions* will be classified into one of the following: (1) Major *Subdivision*: Any *subdivision* containing eight or more *lots*, parcels, *sites*, or other divisions of land. (2) Minor *Subdivision*: Any *subdivision* containing seven or fewer *lots*, parcels, *sites*, or other divisions of land. (3) Adjustment of *Lot lines*: Adjustment of *lot lines* between adjoining property owners.

Substantial alteration: In the Critical Area, any repair, reconstruction, or improvement of a principal structure, with a proposed total footprint that is at least 50 percent greater than that of the structure that is the subject of the application.

Substantial Damage: Damage of any origin sustained by a *structure* whereby the cost of restoring the *structure* to its before damage condition would equal or exceed 50% of the market value of the *structure* before the damage occurred.

Substantial Improvement: Any repair, reconstruction, or improvement of a *structure*, the cost of which equals or exceeds 50% of the market value of the *structure* (without any land value included) either before the improvement or repair is started; or if the *structure* has incurred *substantial damage* and been restored, before the damage occurred. *Substantial improvement* occurs when the first *alteration* of any wall, ceiling, floor, or other structural part of the *building* commences. The minimum repairs needed to correct previously identified *violations* of local health, safety, or sanitary codes, and *alterations* to *historic structures* which do not preclude their continued designation as *historic structures* are not considered *substantial improvements*. In *floodway* and *coastal high hazard areas*, permits will be tracked by property locations to determine if the cumulative value of improvements constitute *substantial improvement* of a *structure*.

Surface Mining: (1a) The breaking of the surface *soil* in order to extract or remove minerals. (1b) Any activity or process constituting all or part of a process for the extraction or removal of minerals from their original location; (1c) The extraction of sand, gravel, rock, stone, earth, or *fill* from borrow pits for highway construction purposes or other public facilities. (2) For the purpose of this Ordinance, *surface mining* includes: (2a) Operations engaged in processing minerals at the *site of excavation*; (2b) Removal of *overburden* and mining of limited amounts of any mineral when done for the purpose of prospecting and to the extent necessary to determine the location, quantity, or quality of any natural deposit; and (2c) Mining operations, if the affected land exceeds one acre or more in area.

Swimming Pool: Any portable pool or permanent *structure* containing a body of water 42 inches or more in depth and 250 square feet or more of water surface area, intended for recreational purposes, including a wading pool but not including an ornamental reflecting pool or fishpond or any other type of pool, located and designed so as not to create a hazard or be used for swimming or wading.

Technical Advisory Committee (TAC): A committee organized to review and comment on *subdivision* and other *development* proposals. TAC consists of the following types of agencies and their designated representatives: Planning and Zoning, Public Works, Environmental Health, State Highway Administration, State Forester, , and representatives of other agencies and utilities concerned with *development* or *subdivision* review.

Tenant: An occupant of land or *premises* who occupies, uses, and enjoys real property for a fixed time, usually through a lease arrangement with the property owners.

Tenant House: A *farm dwelling*, other than the main *farmhouse*, for occupancy by a *person* or *family* associated with the agricultural endeavors on the *farm* or by a member of the property owner's immediate *family*.

Threatened species: Those fish, plants, and wildlife species that appear likely within the foreseeable future to become endangered, and which have been designated as such by

regulation by the Secretary of Natural Resources. This includes any species determined to be a “threatened species” pursuant to the Federal Endangered Species Act.

Thinning: A *forest practice* used to accelerate the growth of quality *trees* in the shortest interval of time.

Tidal Wetland: Defined as State and private *wetlands* by the State of Maryland in Md. Code Ann., Natural Resources, Title 9.

Timber Harvesting: a *tree-cutting* operation affecting 1 or more acres of *forest* or *developed woodland* within a 1-year interval that disturbs 5,000 square feet or more of *forest floor*. It does not include grubbing and *clearing* of root mass.

Topography: The existing configuration of the earth’s surface including the relative relief, elevation, and position of land features.

Townhouse: A *single family dwelling* forming one of a group or series of three or more attached *single-family dwellings* separated from one another by party walls without doors, windows, or other provisions for human visibility.

Tract: Property or unit of land subject to an application for a *grading* or *sediment control permit*, *subdivision* approval, project plan approval, or areas subject to this Ordinance.

Transitional Habitat: A plant community whose species are adapted to the diverse and varying environmental conditions that occur along the boundary that separates aquatic and terrestrial areas.

Transportation Facilities: Anything that is built, installed, or established to provide a means of transport from one place to another.

Tree: A large, branched woody plant having one or several self-supporting stems or trunks that reach a height of at least twenty feet at maturity, and for which the height at planting is measured from the surface of the ground immediately surrounding the tree to the highest tip of the highest branch of the tree.

Tributary Streams: Those *perennial* and *intermittent streams* that are so noted on the most recent U.S. Geological Survey 7.5-minute topographic quadrangle maps, or on more detailed maps or studies used at the discretion of Kent County.

Truck Stop: An independent facility catering predominantly to tractor trailers and other large highway vehicles in which highway services such as fuel, food, repair, and similar items are provided.

Truck Terminal: A facility where truck transport goods are transferred, or stored pending transfer, and which may include truck dispatching, parking, and servicing. The terminal cannot be used for permanent or long-term storage of goods.

Understory: The layer of forest vegetation typically located underneath the forest canopy.

Understory tree: A tree that, when mature, reaches a height of 12 to 35 feet.

Unwarranted Hardship: Within the *Critical Area*, without a *variance*, an *applicant* would be denied reasonable and significant use of the entire parcel or *lot* for which the *variance* is requested.

Utility Transmission Facilities: Fixed *structures* that convey or distribute resources, waste, or both, including, but not limited to electrical lines, water conduits, and sewer lines.

Variance: The grant of relief from a term or terms of this Ordinance. For *stormwater management* purposes: The modification of the minimum *stormwater management* requirements for specific circumstances such that strict adherence to the requirements would result in unnecessary hardship and not fulfill the intent of this Ordinance.

Violation: For *floodplain* purposes: Any construction or *development* in a *Special Flood Hazard Area* that is being performed without an issued permit. The failure of a *building, structure*, or other *development* for which a permit is issued to be fully compliant with these *regulations* and the conditions of the issued permit. A *building, structure*, or other *development* without the required design *certifications*, the *Elevation Certificate*, or other evidence of compliance required is presumed to be a *violation* until such time as the required documentation is provided.

Waiver: For *Stormwater Management* Purposes: The relinquishment from *stormwater management* requirements by Kent County for a specific *development* on a case-by-case review basis: (1) “Qualitative *stormwater management waiver*” includes *water quality volume* and *recharge volume* design parameters. (2) “Quantitative *stormwater management waiver*” includes *channel protection storage volume*, *overbank flood protection volume*, and *extreme flood volume* design parameter.

Wash Plant: A facility where sand and gravel are washed during processing.

Water-based Aquaculture: In the *Critical Area*, the raising of fish and shellfish in any natural, open, free-flowing water body.

Water Quality Volume: The volume of water needed to capture and treat the runoff from 90% of the average annual runoff volume at a *development site*. Methods for calculating the *water quality volume* are specified in the *Design Manual*.

Water Use Industry: An industry that requires location near the shoreline because it utilizes surface waters for cooling or other internal purposes.

Watercourse and/or Drainageway: Any natural or artificial *watercourse* (including, but not limited to streams, rivers, creeks, ditches, *channels*, canals, conduits, culverts, drains, *waterways*, gullies, ravines, or washes) in which waters flow in a definite direction or course, either continuously or intermittently; and including any area adjacent thereto which is subject to inundation by reason of overflow or *floodwaters*.

Water-Dependent Facilities: Those *structures* or works associated with industrial, maritime, recreational, educational, or *fisheries activities* that require location at or near the shoreline within the *buffer*. An activity is water dependent if it cannot exist outside the *buffer* and is dependent on the water by reason on the intrinsic nature of its operation. These activities include, but are not limited to, ports, the intake and outfall *structures* of

power plants, water use industries, *marinas* and other boat docking *structures*, fuel pump or other fuel-dispensing equipment on a pier, a sanitary sewage pump or other wastewater removal equipment on a pier, and an office on a pier for managing marina operations, such as monitoring vessel traffic, registering vessels, providing docking services, and housing electrical or emergency equipment related to marina operations; public beaches and other *public water-oriented recreation areas*, *fisheries activities*, and any other *water-dependent facility or activity that supports water quality restoration in the Chesapeake Bay or its watersheds*.

Waterfowl: Birds which frequent and often swim in water, nest, and raise their young near water, and derive at least part of their food from aquatic plants and animals.

Watershed: The total *drainage area* contributing runoff to a single point. For *forest conservation* purposes all land lying within an area described as a sub-basin in water quality *regulations* adopted by the Department of the Environment under COMAR 26.08.02.08.

Waterway: Any body of water, including any creek, canal, river, lake, or bay.

Waterway Line: A line marking the normal division between land and a *waterway* as established by the *Department*.

Waterway, Width Measurement: The measurement is made at the shoreline location of the *pier* and the narrowest width of the *waterway* from that point including consideration of data and information available from State of Maryland and Army Corps of Engineers.

Wetlands: See “*tidal wetlands*” and “*non-tidal wetlands*”.

Wetland migration area: An area that will likely be suitable for future wetland establishment in response to a change in sea level.

Whip: An unbranched woody plant greater than twenty-four inches in height and having a diameter of less than one inch measured at two inches above the root collar.

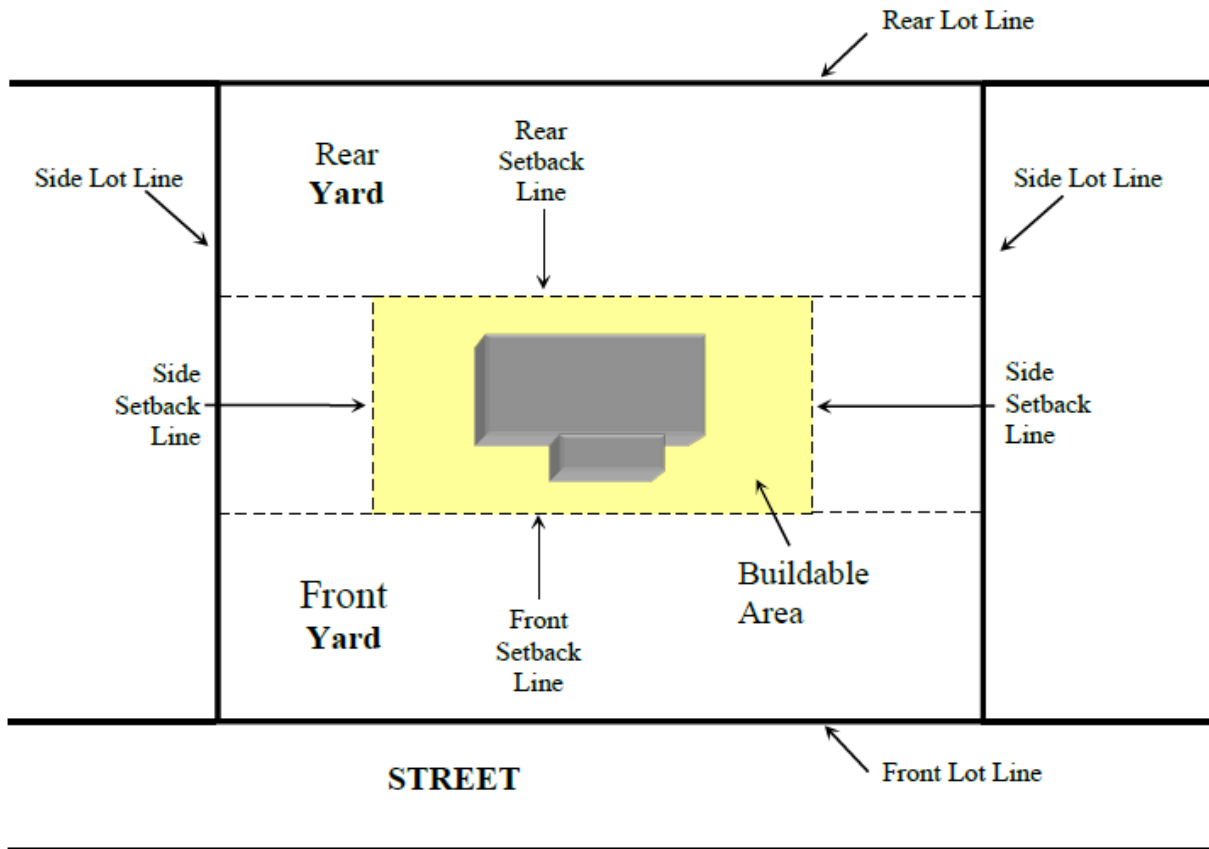
Wildlife Corridor: A strip of land having vegetation that provides habitat and a safe passageway for wildlife.

Wildlife Habitat: Those plant communities and *physiographic features* that provide food, water, cover, nesting, foraging, and feeding conditions necessary to maintain populations of animals.

Wind Energy System, small: A wind turbine mounted on a free-standing wind tower or *building* for the purpose of generating energy for use on *site* and not for sale and includes windmills that are used for pumping water or other purposes. However, the energy output may be delivered to a power grid to offset the cost of energy on *site*.

Yacht Club: A *yacht club* for the purposes of this Ordinance is considered to be a *marina*.

Yard: An *open space* other than a court, on a *lot*, and unoccupied and unobstructed from the ground upward, except as otherwise provided in this Ordinance.



Yard, Front: A yard extending across the front of a lot between the side lot lines and being the minimum horizontal distance between the street line and the required front yard line. (See diagram above.)

On corner lots, the front yard will be considered as one of the following: (a) the yard parallel to the street upon which the lot has its least dimension, or (b) the yard that abuts the primary access to the primary residential building, or (c) the yard parallel to the address street, as determined by the Department, except for waterfront lots.

For waterfront properties, the front yard is that part of the yard extending across a lot between the side lot lines and being the minimum horizontal distance from the water and the main building. The front yard is determined by the location of the main building. In the absence of a building, the front yard is considered to be the 100-foot buffer.

Yard, Rear: A yard extending across the rear of the lot between the side lot lines and measured between the rear lot line and the required rear yard setback.

Yard, Side: A yard extending from the front yard to the rear yard and being the minimum horizontal distance between the side lot line and the required side yard setback.



Alcoholic Beverage License Hearing 2/6/2024 County Commissioners Meeting

Item Summary:

Shore Hospitality LLC DBA Flying Decoy Bar and Grill

ATTACHMENTS:

Description

02.27.24 Shore Hospitality LLC DBA Flying Decoy Bar and Grill, Public Hearing Notice



Board of License Commissioners

Ronald H. Fithian, President | Albert H. Nickerson, Member | John F. Price, Member
Shelley L. Heller, County Administrator | Thomas N. Yeager, County Attorney

NOTICE

Application has been made by Christopher J. Golder, Member, representing Shore Hospitality LLC for a Class B, Beer, Wine, and Liquor License with Caterer's Privilege (CP) and Corkage Privilege (CKP) on the premises known as:

Flying Decoy Bar and Grill
21270 Rock Hall Road
Rock Hall, MD 21661

which shall authorize the holder thereof to keep for sale and to sell Beer, Wine, and Liquor at the place therein described, for on-premises consumption, or elsewhere. A hearing on the application will be held in the County Commissioners' Hearing Room, R. Clayton Mitchell, Jr. Government Center, 400 High Street, Chestertown, MD on February 27, 2024, at 10:00 a.m. at which time any exceptions to the application will be heard.

By order of:

THE BOARD OF LICENSE COMMISSIONERS
FOR KENT COUNTY, MARYLAND

A handwritten signature in blue ink, reading "Sondra M. Blackiston".

Sondra M. Blackiston
Clerk/KATE Manager

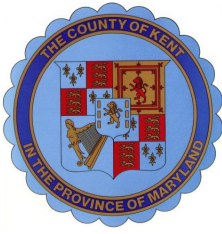
PUBLISH KCN 02/08/24, 02/15/24



**#1 - Regular Session Minutes, January 30, 2024
2/6/2024
County Commissioners Meeting**

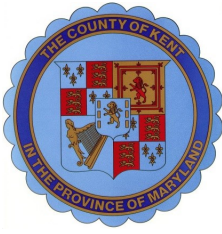
ATTACHMENTS:

Description



#2 - Liquor Minutes, January 30, 2024
2/6/2024
County Commissioners Meeting

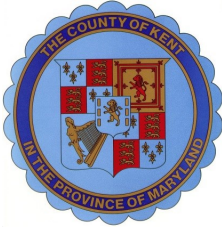
ATTACHMENTS:
Description



**#3 - Closed Session Minutes, January 30, 2024
2/6/2024
County Commissioners Meeting**

ATTACHMENTS:

Description

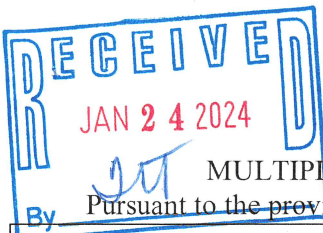


**#4 - Republicans of Kent, Raffle Only, February 17, 2024
2/6/2024
County Commissioners Meeting**

ATTACHMENTS:

Description

Republicans of Kent , Raffle Only, February 17, 2024



Permit#

4-2024

MULTIPLE GAMING DEVICE AND RAFFLE PERMIT APPLICATION

Pursuant to the provisions of the Annotated Code of Maryland, Criminal Law §§ 13-1701 to 13-1706.

Name of Organization: REPUBLICANS OF KENTAddress of Organization: PO BOX 1045, CHESTERTOWN, MD 21620Telephone: () N/A

Is the organization formed or located in Kent County?

☒ Yes

No

Does the organization serve the residents of Kent County?

☒ Yes

No

Is this organization tax exempt under the provisions of the Internal Revenue Code?

Yes

No

Tax Exempt Number: 80-0331391

Person responsible for complying with permit regulations and requirements:

Name: DAWN JACOBSAddress: PO BOX 109, ROCK HALL, MD 21661E-Mail: gopofkent@gmail.comTelephone: (410) 924-4442Type of permit sought: ☒ Raffle Only () Combined gaming devices used in a single fund-raising eventLocation address of fund-raising affair: CHESTER RIVER YACHT & COUNTRY CLUB7738 QUAKER NOCK RDCHESTERTOWN, MD 21620

Are these premises owned, leased, or regularly occupied by the organization named above?

Yes

☒ NoDate(s) of fund-raising: 2/17/24Date and Time of Drawing: 2/17/24 Begin at: 6:00 PM End at: 10:00 PM

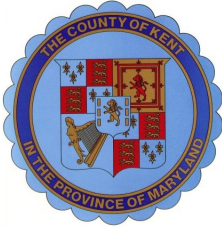
If you are seeking a permit authorizing only a raffle that is not conducted in combination with other gaming activity, please sign below.

If, however, you are seeking to conduct a fund-raiser using more than one gaming activity in a single event, please complete the following page.

Signature of person completing this application: Dawn E. Jacobs

Please Select One:

☒ Pick Up☐ Mail Permit (will be mailed to person responsible)



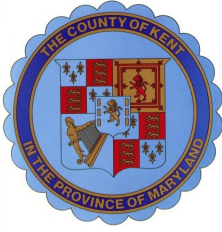
**#5 - Mike Moulds, Director, Public Works - Environmental Operations
Division
2/6/2024
County Commissioners Meeting**

Item Summary:

Per Chapter 68 (Boats and Boating) of the Public Laws of Kent County, the Public Landings and Facilities Board consists of five members appointed by the Kent County Commissioners for a term of five years or until their successors are appointed and have their position. A member of the Board of County Commissioners of Kent County shall be an ex officio member of the Board.

ATTACHMENTS:

Description



**Timothy Kern Memorial Fund, Beer Only, March 23, 2024
2/6/2024
County Commissioners Meeting**

ATTACHMENTS:

Description

2024 PD-1 Timothy Kern Memorial Fund, Beer Only, March 23, 2024, Application

2024 PD-1

APPLICATION FOR A SPECIAL CLASS "C" (PER DIEM) LICENSE

Application is made by the undersigned under the provisions of Sections 4-1202, 4-1208, 4-1209, 24-503, 24-1301, 24-1307 and 24-1308 of the Alcoholic Beverages Article, for a Special Class C (Per Diem) License.

Check One: ☒ Beer ☐ Beer and Wine ☐ Beer, Wine, and Liquor

We submit and certify to the following information and statements as required.

1. The club, society or association on behalf of which the license is desired:

Timothy Kern Memorial Fund

Address 860 Washington Ave., Chestertown, MD 21620

Type of Function Clay Shoot

Location of Function 13003 Turners Creek Rd, Kennedyville, MD 21645

2. This function is operated exclusively for a religious, fraternal, civic, veterans', or charitable organization, association, club, or society; or hospital supporting organization.

3. The applicants are citizens of the United States, not less than twenty-one years of age, and have never been convicted of a felony.

4. The applicants have not had a license for the sale of alcoholic beverages revoked.

5. Have the applicants ever been adjudged guilty of violating the laws for the prevention of gambling in the State of Maryland and/or adjudged guilty of violating the laws governing the sale of alcoholic beverages in the State of Maryland or the United States? ____ Yes or ☒ No

6. The applicants will, if granted a license, conform to all laws and regulations relating to the business with respect to which such license is desired.

7. The applicants submit herewith a statement duly executed and acknowledged by the owner of the premises in which the business is to be conducted, assenting to the granting of the license applied for, authorizing the Comptroller, his duly authorized deputies, inspectors and clerks, the Board of License Commissioners (if any) for the aforesaid County, its duly authorized agents and employees, and any peace officer of said county, to inspect and search, without warrant, the premises upon which the business is to be conducted, and any and all parts of the premises where said business is to be conducted, at any and all hours.

8. The license for which this application is made is to be for the following day(s) March 23, 2024. Begin at: 12pm End at: 5pm and the applicant tenders herewith the sum of (\$5.00 Per Diem) (\$5.00) in payment for the license.

Please Select One:

☒ Pick Up amy 706 816 9712

☐ Mail Permit (will be mailed to above address)

9. Applicants

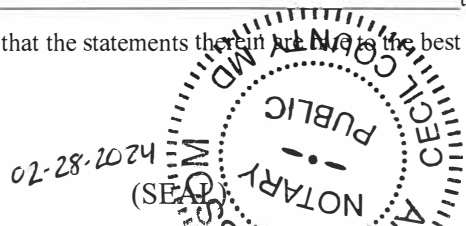
(1) LORI KERN 27298 Morgnet Rd. Chestertown Md 21620
Name Residence
32 years member 410 708 5945 Lori Kern
Length of Residence in Kent Co. Committee Title Phone No. (Signature of Applicant)

STATE OF MARYLAND

This certifies, that on the 30th day of January, 20 24, before the subscriber, a Notary of the State of Maryland, personally appeared Lori Kern the applicant(s) named in the foregoing application and made oath in the due form of law that the statements therein are true to the best of (his, their) knowledge and belief.

WITNESS my hand and official seal.

Anna T Sisson



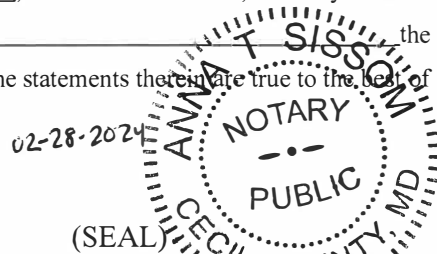
(2) Amy Crow Queen Anne's
Name Residence
N/A member 706-866-9717 Amy Crow
Length of Residence in Kent Co. Committee Title Phone No. (Signature of Applicant)

STATE OF MARYLAND

This certifies, that on the 30th day of January, 20 24, before the subscriber, a Notary of the State of Maryland, personally appeared Amy Crow the applicant(s) named in the foregoing application and made oath in the due form of law that the statements therein are true to the best of (his, their) knowledge and belief.

WITNESS my hand and official seal.

Anna T Sisson



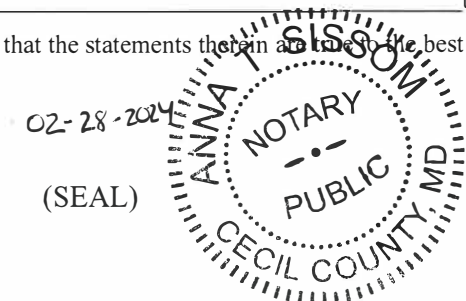
(3) MERYL A KERN QUEEN ANN'S
Name Residence
N/A Member 443-480-3866 Meryl Kern
Length of Residence in Kent Co. Committee Title Phone No. (Signature of Applicant)

STATE OF MARYLAND

This certifies, that on the 30th day of January, 20 24, before the subscriber, a Notary of the State of Maryland, personally appeared Meryl Kern the applicant(s) named in the foregoing application and made oath in the due form of law that the statements therein are true to the best of (his, their) knowledge and belief.

WITNESS my hand and official seal.

Anna T Sisson



STATEMENT OF OWNER OF PREMISES REQUIRED IN CONNECTION WITH
ALCOHOLIC BEVERAGES LAWS OF MARYLAND

(I, WE) HEREBY CERTIFY, That (I am, we are) the owner(s) of the property named in the a foregoing application made to the aforesaid licensing authority for said county under the Alcoholic Beverages Laws of Maryland and assent to the granting of the license applied for, and hereby authorize the State Comptroller, his duly authorized deputies, inspectors and clerks, the Board of License Commissioners (if any) of said county, its duly authorized agents and employees, and any peace officer of such county, to inspect and search, without warrant, the premises upon which the business is to be conducted, and any and all parts of the building in which said business is to be conducted, at any and all hours.

George B Hopkins Signature (s)

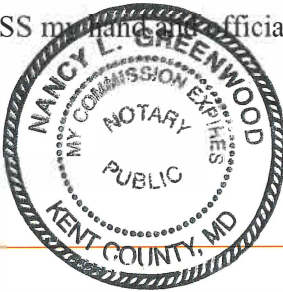
George B Hopkins Print Name

STATE OF MARYLAND, Kent County:

THIS CERTIFIES, that on the 25th day of January, 20 24,
before the subscriber, a Notary of the State of Maryland, personally appeared _____
George B Hopkins and acknowledged the execution of the foregoing
statement to be a true act.

WITNESS my hand and official seal.

(SEAL.)



Nancy L Greenwood
My Commission expires
3/21/2025

The Board of License Commissioners of Kent County

P. THOMAS MASON
PRESIDENT
CHESTERTOWN, MD

RONALD H. FITHIAN
MEMBER
ROCK HALL, MD

ROBERT N. JACOB, JR.
MEMBER
WORTON, MD

R. Clayton Mitchell, Jr.
Kent County Government Center
400 High Street
Chestertown, Maryland 21620
TELEPHONE 410-778-7435

www.kentcounty.com/alcoholic-beverage

SHELLEY L. HELLER
COUNTY ADMINISTRATOR

THOMAS N. YEAGER
COUNTY ATTORNEY

BRANDON MCFAYDEN
INSPECTOR

SPECIAL CLASS "C" (PER DIEM) LICENSE AFFIDAVIT

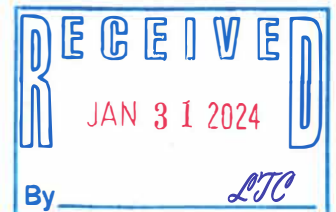
In applying for this Special Class "C" (Per Diem) License it is important that you realize the responsibility that goes with the issuance of the license. All persons or groups using this license as authorized under Sections 4-1202, 4-1208, 4-1209, 24-503, 24-1301, 24-1307, and 24-1308 of the Alcoholic Beverages Article of the Annotated Code of Maryland are covered by all the laws regarding the sale and consumption of alcoholic beverages. Special care should be taken to be sure the following edicts are adhered to:

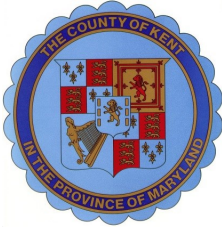
1. All persons must be 21 years of age or older to sell, purchase, or consume an alcoholic beverage.
2. All sales and the consumption of alcohol must stop promptly at 2:00 a.m.
3. No intoxicated person shall be served any alcoholic beverages.
4. No unnecessary noise or disturbance that could be a nuisance to the community shall occur.
5. The person(s) responsible for the function must see that order and decorum are kept at all times.
6. The application must be completed by three committee members; one member must be a Kent County resident.
7. License must be prominently displayed at the location where alcohol is being served. Failure to comply with the laws of the State of Maryland may make the responsible person(s) subject to a fine.

This license may be issued to a religious, fraternal, civic, veterans', or charitable organization, association, club, or society; or hospital supporting organization. This license shall not be transferred or reassigned.

Cost of a Special Class "C" Per Diem License: **Beer \$5.00, Beer and Wine \$15.00, and Beer, Wine, and Liquor \$25.00.** Make checks payable to: **The County Commissioners of Kent County**, along with the completed application.

Name of organization, club, etc. Timothy Kern Memorial Fund
Address 860 ~~Washington~~ Washington Ave Chestertown, MD 21620
Name Andrew Kern Phone # 410 778 9008
(Please Print)
Andrew Kern Date 1-29-24
(Signature)





Thomas N. Yeager, County Attorney
2/6/2024
County Commissioners Meeting

Item Summary:

Legislative Session Protocol

ATTACHMENTS:

Description



Bill Mackey, Director, Planning, Housing, and Zoning
2/6/2024
County Commissioners Meeting

Item Summary:

AN ACT to rescind and replace in its entirety Chapter 222, "Zoning," of the Public Local Laws of Kent County, Maryland, renaming said Chapter 222 as "Unified Development Ordinance," also known as the Kent County Land Use Ordinance (referred to herein as the "2024 Ordinance"), in order to implement the recommendations of the Kent County Planning Commission on proposed revisions to the Ordinance, which are based on the Kent County Planning Commission's three-year review as part of the Comprehensive Rezoning and Update process; and including non-codified provisions to address scrivener's errors and readability; certain adopted maps; and required Critical Area Commission review and approval, per Md. Code Ann., Natural Resources § 8-1809, as the same may be amended from time to time.

On August 1, 2023, the Board of County Commissioners transmitted a copy of a proposed DRAFT Land Use Ordinance for review and recommendation by the Agriculture Advisory Commission and the Kent County Planning Commission.

The Planning Commission reviewed the document at its September, October, November, and December meetings. The Agriculture Advisory Commission reviewed the document at its September and October meetings and provided input to the Planning Commission for its November and December meetings.

At its meeting on January 4, 2024, the Planning Commission favorably recommended to the County Commissioners the *Planning Commission Final Version of the Land Use Ordinance*, dated January 4, 2024, for its consideration and scheduling of public hearings as part of the legislative process.

On January 30, 2024, the Board of County Commissioners received the *Planning Commission Final Version* and instructed staff to prepare a BOCC version for introduction by the County Commissioners. The version to be introduced includes newly adopted language in Code Home Rule Bill 5-2023 Outdoor Retreats in RC, RR, and CR; additional definitions to meet the Critical Area program requirements set by the State; and the addition of a Mixed-Use Development District and a Mixed-Use Development Critical Area District.

This item is presented for introduction by the County Commissioners.

Staff recommends approval, in order to schedule the public hearing.

ATTACHMENTS:

Description

Proposed CHRB 2-2024 re Rescind and Replace LUO

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

**February 6, 2024
Legislative Session Day**

**Legislative Session Day
February 6, 2024**

**CODE HOME RULE
BILL NO. 2-2024**

INTRODUCED BY: Ronald H. Fithian, President of the Board of County Commissioners for Kent County, Maryland.

AN ACT to rescind and replace in its entirety Chapter 222, “Zoning,” of the Public Local Laws of Kent County, Maryland, renaming said Chapter 222 as “Unified Development Ordinance,” also known as the Kent County Land Use Ordinance (referred to herein as the “2024 Ordinance”), in order to implement the recommendations of the Kent County Planning Commission on proposed revisions to the Ordinance, which are based on the Kent County Planning Commission’s three-year review as part of the Comprehensive Rezoning and Update process; and including non-codified provisions to address scrivener’s errors and readability; certain adopted maps; and required Critical Area Commission review and approval, per Md. Code Ann., Natural Resources § 8-1809, as the same may be amended from time to time.

**THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND**

Ronald H. Fithian, President

INTRODUCED, read first time, February 6, 2024, ordered posted and public hearing scheduled Month X, 2024, at a.m. / p.m. in the County Commissioners Hearing Room, R. Clayton Mitchell, Jr., Kent County Government Center, 400 High Street, Chestertown, Maryland.

By order of:

Sondra M. Blackiston, Clerk

PUBLIC HEARING

HAVING been posted and notice of time and place of hearing and copies having been made available to the public and the press, a public hearing was held on Month X, 2024. Reported favorably [with] [without] amendments; read a second time and ordered to be considered on Month X, 2024, a legislative session day.

**A BILL ENTITLED CHRB 2-2024
TO RESCIND AND REPLACE THE LAND USE ORDINANCE IN ITS ENTIRETY**

SECTION 1.

NOW, THEREFORE, BE IT ENACTED by the County Commissioners of Kent County, Maryland, that the 2024 Ordinance, substantially in the form attached hereto as Exhibit A, is adopted as the official Unified Development Ordinance for Kent County, Maryland, and shall be codified as Chapter 222, Unified Development Ordinance, of the Public Local Laws of Kent County, Maryland.

SECTION 2.

BE IT FURTHER ENACTED by the County Commissioners of Kent County, Maryland, that the Director of the Department of Planning, Housing, and Zoning may correct obvious errors, capitalization, spelling, grammar, section and sub-section headings, and similar matters and may publish the 2024 Ordinance by adding or amending covers, title pages, a table of contents, a table of graphics, non-binding matrices as appendices, work flow charts, and other graphics and citizen aids to improve document readability.

SECTION 3.

BE IT FURTHER ENACTED by the County Commissioners of Kent County that this Act shall not include any changes to the Zoning Map, as such changes are being considered separately; property with zoning designations that no longer appear in the 2024 Ordinance shall be governed by the provisions in the 2003 Land Use Ordinance, as amended, until such time as the official Zoning Map is amended.

SECTION 4.

BE IT FURTHER ENACTED by the County Commissioners of Kent County that this Act shall not sunset the provisions adopted under Article III, Section 6. Establishment of Critical Area Line, §§ 1 -2, of the 2003 Land Use Ordinance, as amended, and in particular, as amended on February 16, 2021.

SECTION 5.

BE IT FURTHER ENACTED by the County Commissioners of Kent County that this Act shall not affect the Buffer Modified Area Maps, which shall remain in full force and effect; Buffer Modified Area Maps may be amended by separate Act, pursuant to provisions in the Ordinance for such amendments.

SECTION 6.

BE IT FURTHER ENACTED by the County Commissioners of Kent County that this Act shall not affect the Flood Insurance Rate Maps promulgated by FEMA; such will hereby be considered as stand-

alone federal maps and not adopted as part of this Act; and, the County shall rely on the most recent FEMA promulgated maps for provisions and references to such maps in the 2024 Ordinance.

SECTION 7.

BE IT FURTHER ENACTED by the County Commissioners of Kent County that this Act shall be adopted on the _____ day of _____, 2024; however, the provisions of this Act shall take effect on the _____ day of _____, 2024, contingent upon review and approval of the Critical Area Commission for the Chesapeake & Atlantic Coastal Bays pursuant to the Md. Code Ann., Natural Resources § 8-1809, as the same may be amended from time to time.

Read Third Time _____

PASSED this _____ day of _____, 2024.

Failed of Passage _____

By order of:

Sondra M. Blackiston, Clerk

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

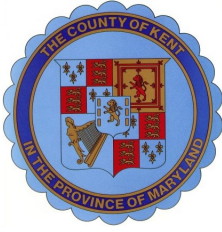
(SEAL)

Ronald H. Fithian, President

Albert H. Nickerson, Member

John F. Price, Member

ORDERED a fair summary thereof or the entire bill shall be published in at least one newspaper of general circulation in the County, not less than three times at weekly intervals within a four-week period.



Bill Mackey, Director, Planning, Housing, and Zoning
2/6/2024
County Commissioners Meeting

Item Summary:

AN ACT to amend Chapter 222, Zoning, of the Code of Public Local Laws of Kent County, Maryland, also known as the Kent County Land Use Ordinance, in order to add a new land use and to permit said new use in a single district as a special exception: (1) by adding “2.5 Adaptive reuse of existing structures in AZD, located on parcels under 20 acres” to Article V. District Regulations, Section 1. Agricultural Zoning District, §1.3 Special Exceptions; (2) by adding said new land use as “6. Adaptive reuse of existing structures in AZD, located on parcels under 20 acres” to Article VII. Special Exceptions, Section 6. Procedures, un-numbered second paragraph regarding those special exceptions that may be approved by the Planning Director; (3) by adding six specific conditions, indicated as A through F, for said new land use in “3.5 Adaptive reuse of existing structures in AZD, located on parcels under 20 acres” to Article VII. Special Exceptions, Section 7. Special Exceptions; and (4) by including one non-codified provision.

On September 6, 2023, the Kent County Agriculture Advisory Commission reviewed the proposed zoning text amendment in concept and made recommendations to the County Commissioners. A letter from the Agriculture Advisory Commission is attached.

On November 2, 2023, the Kent County Planning Commission held a public hearing, reviewed the proposed applicant-initiated zoning text amendment, and made recommendations to the County Commissioners. A letter from the Planning Commission is attached.

On December 19, 2023, the County Commissioners voted to introduce CHRB 6-2023, in order to schedule the public hearing.

On January 23, 2024, the County Commissioners held a public hearing. The applicant, who is a property owner and a business owner, spoke in support of the legislation. The Director of Economic Tourism and Development also spoke in favor of the legislation to support local business opportunities in the County. The record remained open until Friday, January 26; there were no other comments received.

This item is presented for adoption by the County Commissioners.

ATTACHMENTS:

Description

02.06.24 Code Home Rule Bill No. 6-2023 Adaptive Reuse of Existing Structures in AZD, Located on
Parcels Under 20 Acres

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

December 19, 2023
Legislative Session Day

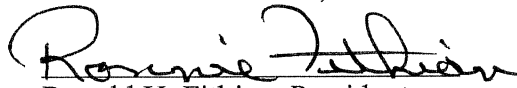
Legislative Session Day
December 19, 2023

CODE HOME RULE
BILL NO. 6-2023

INTRODUCED BY: Ronald H. Fithian, President of the Board of County Commissioners for Kent County, Maryland.

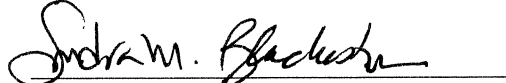
AN ACT to amend Chapter 222, Zoning, of the Code of Public Local Laws of Kent County, Maryland, also known as the Kent County Land Use Ordinance, in order to add a new land use and to permit said new use in a single district as a special exception: (1) by adding “2.5 Adaptive reuse of existing structures in AZD, located on parcels under 20 acres” to Article V. District Regulations, Section 1. Agricultural Zoning District, §1.3 Special Exceptions; (2) by adding said new land use as “6. Adaptive reuse of existing structures in AZD, located on parcels under 20 acres” to Article VII. Special Exceptions, Section 6. Procedures, un-numbered second paragraph regarding those special exceptions that may be approved by the Planning Director; (3) by adding six specific conditions, indicated as A through F, for said new land use in “3.5 Adaptive reuse of existing structures in AZD, located on parcels under 20 acres” to Article VII. Special Exceptions, Section 7. Special Exceptions; and (4) by including one non-codified provision.

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND


Ronald H. Fithian, President

INTRODUCED, read the first time, December 19, 2023, ordered posted and public hearing scheduled on January 23, 2024, at 10:00 a.m. in the County Commissioners Hearing Room, R. Clayton Mitchell, Jr., Kent County Government Center, 400 High Street, Chestertown, Maryland.

By order of:


Sondra M. Blackiston, Clerk

PUBLIC HEARING

HAVING been posted and notice of the time and place of the hearing and copies having been made available to the public and the press, a public hearing was held on January 23, 2024. Reported favorably without amendments; read the second time and ordered to be considered on February 6, 2024, a legislative session day.

BILL NO. 6-2023

CAPITALS & BOLD INDICATES MATTER ADDED TO EXISTING LAW.

Strike through indicates matter deleted from existing law.

**A BILL ENTITLED CHR 6-2023 ADAPTIVE REUSE OF EXISTING
STRUCTURES IN AZD, LOCATED ON PARCELS UNDER 20 ACRES**

**NOW, THEREFORE, BE IT ENACTED BY THE COUNTY COMMISSIONERS OF
KENT COUNTY, MARYLAND THAT THE KENT COUNTY LAND USE ORDINANCE IS
HEREBY AMENDED AS FOLLOWS:**

SECTION 1.

**ARTICLE V.
DISTRICT REGULATIONS**

SECTION 1. AGRICULTURAL ZONING DISTRICT (AZD)

...

1.3 Special Exceptions

...

1. Accessory storage structures with a floor area of more than 1,200 square feet or a height that exceeds 17 feet on parcels less than 5 acres

2. Accessory structures in the front yard of through lots

**2.5 ADAPTIVE REUSE OF EXISTING STRUCTURES IN AZD, LOCATED ON
PARCELS UNDER 20 ACRES**

3. Adaptive reuse of historic structures

...

SECTION 2.

**ARTICLE VII.
SPECIAL EXCEPTIONS**

SECTION 6 PROCEDURES

The application for a special exception shall include a site plan together with such data and information as may be required for a determination of the nature of the proposed use and its effect on the Comprehensive Plan, the neighborhood, and surrounding properties.

The Planning Director may hear and decide the following special exceptions:

1. Accessory storage structures

2. Accessory structures in the front yard requirement of waterfront parcels

3. Accessory structures in the front yard of a through lot or corner lot

4. Assisted living facilities with five to eight beds

5. Day care group

**6. ADAPTIVE REUSE OF EXISTING STRUCTURES IN AZD, LOCATED ON
PARCELS UNDER 20 ACRES**

...

SECTION 3.

ARTICLE VII. SPECIAL EXCEPTIONS

SECTION 7. SPECIAL EXCEPTIONS

...

1. Accessory storage structures with a floor area of more than 1,200 square feet or a height that exceeds 17 feet on parcels less than 5 acres in AZD, RCD, RC, RR, CAR, and CR.
2. Accessory structures in the front yard of through or corner lots in AZD, RCD, RC, RR, CAR, CR, V, IV, and IVCA.
3. Accessory structures in the front yard requirement of waterfront parcels in RCD and CAR.

3.5 ADAPTIVE REUSE OF EXISTING STRUCTURES IN AZD, LOCATED ON PARCELS UNDER 20 ACRES:

- A. THE SITE WILL HAVE ACCESS TO A PUBLIC ROAD ADEQUATE FOR THE TRAFFIC GENERATED;**
- B. THE PROPOSED USE WILL NOT GENERATE TRAFFIC OF A TYPE OR AMOUNT INAPPROPRIATE FOR ACCESS ROADS AND THE SURROUNDING AREA;**
- C. THE USE DOES NOT REQUIRE ROAD IMPROVEMENTS DETRIMENTAL TO THE CHARACTER OF THE AREA;**
- D. THE PROPOSED USE DOES NOT CREATE AN UNACCEPTABLE IMPACT BY WAY OF NOISE, ODOR, NOXIOUS MATERIALS OR OTHER NUISANCES; AND**
- E. LANDSCAPING IS IN KEEPING WITH THE CHARACTER OF THE BUILDING OR LOCATION.**
- F. THIS MAY BE REVIEWED VIA AN ADMINISTRATIVE SPECIAL EXCEPTION PROCESS.**

4. Adaptive reuse of historic structures in AZD, RCD, RC, RR, CR, V, IV, IVCA, and M provided:

...

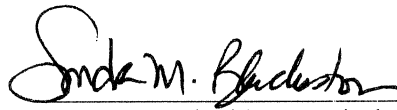
SECTION 4. BE IT FURTHER ENACTED by the County Commissioners of Kent County that this Act shall take effect on the 16th day of February, 2024.

Read Third Time February 6, 2024

PASSED this 6th day of February, 2024.

Failed of Passage _____

By order of:



Sondra M. Blackiston, Clerk

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

(SEAL)

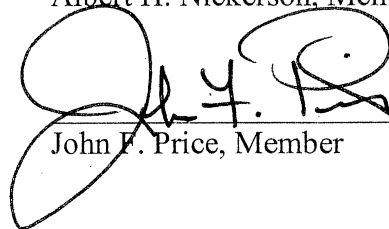




Ronald H. Fithian, President



Albert H. Nickerson, Member



John F. Price, Member

ORDERED a fair summary thereof or the entire bill shall be published in at least one newspaper of general circulation in the County, not less than three times at weekly intervals within a four-week period.



Thomas N. Yeager, County Attorney
2/6/2024
County Commissioners Meeting

Item Summary:

Public Hearing Protocol

ATTACHMENTS:

Description

02.06.24 Procedures for Testifying, Public Hearing, CHR Bill No. 1-2024 Property Tax Credit Commerce Zones

BOARD OF COUNTY COMMISSIONERS OF KENT COUNTY PROCEDURES FOR TESTIFYING

It is our desire that everyone who wishes to contribute to this democratic process is given a fair and uninterrupted opportunity to be heard. To ensure equal opportunity for individual input for the topic under discussion, certain rules must be followed by all persons who are to testify.

The rules to govern our hearings are few but are intended to guide our proceedings. The hope is that each person testifying will be self-governed, thereby contributing to fairness for all.

The Chair will remind anyone who testifies when he/she has violated the rules of the proceeding.

- Rule 1.** Please sign the “testimony log” if you desire to speak during the hearing(s).
- Rule 2.** All speakers must identify themselves and use the area designated for purposes of testifying and will use the microphone.
- Rule 3.** Each person testifying will have three minutes for his/her remarks.
- Rule 4.** The Chair will maintain order via voice commands.
- Rule 5.** Stick to the issues at hand.

Written comments will be accepted until the close of business Friday, February 9, 2024, by the following methods:

By email:

kentcounty@kentgov.org

By letter:

The County Commissioners of Kent County
400 High Street
Chestertown, MD 21620



Jamie Williams, Director, Economic and Tourism Development
2/6/2024
County Commissioners Meeting

Item Summary:

Code Home Rule Bill No. 1-2024, Property Tax Credit - Commerce Zones

ATTACHMENTS:

Description

02.06.24 Public Hearing Testimony Log CHR 1-2024

CHR Bill No. 1-2024 Property Tax Credit Commerce Zones Public Hearing Notice

CHR Bill No. 1-2024 Property Tax Credit Commerce Zones DRAFT Legislation

TESTIMONY LOG

PUBLIC HEARING

February 6, 2024

CHR 1-2024

Property Tax Credit – Commerce Zones

PLEASE SIGN IF YOU WISH TO SPEAK:

NAME (Please Print)

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The County Commissioners of Kent County
Ronald H. Fithian, President | Albert H. Nickerson, Member | John F. Price, Member
Shelley L. Heller, County Administrator | Thomas N. Yeager, County Attorney

January 23, 2024
Legislative Session Day

Legislative Session Day
January 23, 2024

CODE HOME RULE
BILL NO. 1-2024

INTRODUCED BY: Ronald H. Fithian, President of the Board of County Commissioners for Kent County, Maryland.

AN ACT to amend Chapter 152 Taxation, Article VIII Property Tax Credit – Commerce Zones, of the Code of Public Local Laws of Kent County, Maryland, for the purpose of defining tax credits under this Article as non-transferable, by adding (E) A tax credit granted under this article on real property owned by a business entity is non-transferable and shall end on the date the property is transferred to any subsequent property owner. In the taxable year in which the transfer occurs, the business entity shall be given a credit prorated based on the number of months the business entity owned the property, to Article VIII Property Tax Credit: Commerce Zones §152-35. Computation AND EXPIRATION tax credit.

A hearing will be held on February 6, 2024, at 6:00 p.m. in the Commissioners' Hearing Room, R. Clayton Mitchell, Jr., Kent County Government Center, 400 High Street, Chestertown, Maryland. The agenda for the meeting will be published online 24 hours in advance of the meeting at www.kentcounty.com/commissioners/meeting-agenda. Citizens are encouraged to participate in the public hearing process. If you require communication assistance, please contact the County Commissioners' Office at (410) 778-4600 and press 4 or visit Maryland Relay at www.mdrelay.org no later than noon on Friday, February 2, 2024.

A complete copy of the proposed legislative bill is available in the Commissioners' Office, 400 High Street, Chestertown, MD, Monday through Friday, 8:30 a.m. to 4:30 p.m., and on the County's website at www.kentcounty.com/commissioners/draft-legislation.

By order of:

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

A handwritten signature in blue ink, reading "Sondra M. Blackiston".

Sondra M. Blackiston
Clerk

PUBLISH: KCN 1/25/2024

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

**January 23, 2024
Legislative Session Day**

**Legislative Session Day
January 23, 2024**

**CODE HOME RULE
BILL No. 1-2024**

INTRODUCED BY: Ronald H. Fithian, President of the Board of County Commissioners for Kent County, Maryland.

AN ACT to amend Chapter 152 Taxation of the Code of Public Laws of Kent County, Maryland. The purpose of this amendment is to define tax credits under this Article as non-transferable Article VIII Property Tax Credit – Commerce Zones.

THE COUNTY COMMISSIONERS OF KENT COUNTY

Ronald H. Fithian, President

INTRODUCED, read first time, January 23, 2024, ordered ~~posted~~ and public hearing scheduled on February 6, 2024, at 6:00 p.m., in the County Commissioners Hearing Room, R. Clayton Mitchell, Jr., Kent County Government Center, 400 High Street, Chestertown, Maryland.

By Order of:

Sondra M. Blackiston, Clerk

PUBLIC HEARING

HAVING been ~~posted~~ and notice of time and place of hearing and copies having been made available to the public and the press, a public hearing was held on February 06, 2024. Reported favorably [with] [without] amendments; ~~read~~ the second time and ordered to be considered on March 5, 2024, a legislative session day.

A BILL ENTITLED CHR 1-2024 PROPERTY TAX CREDIT - COMMERCE ZONES

SECTION 1. NOW, THEREFORE, BE IT ENACTED BY THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND that Chapter 152, Article VIII, is hereby amended §152-35 as follows:

ARTICLE VIII

Property Tax Credit: Commerce Zones

§ 152-33. Definitions; program.

A. Definitions. In this article the following words have the meanings indicated:

COMMERCE ZONE - A priority funding area in Kent County designated by the County Commissioners of Kent County as a commerce zone and adopted by resolution.

NEW, IMPROVED, OR EXPANDED PREMISES - Commercial or industrial real property, including a building or part of a building that has not been previously occupied, where a business entity locates to conduct business.

B. Program. The County Commissioners of Kent County may grant, by law, a property tax credit under this section against the County property tax imposed on or after July 1, 2015, on real property owned by a business entity that meets the requirements specified under this article.

§ 152-34. Qualifications for tax credit.

To qualify for a property tax credit under this section, a business entity shall obtain new, improved, or expanded premises in a commerce zone by:

- A. Purchasing newly constructed premises;
- B. Constructing new premises;
- C. Causing new premises to be constructed; or
- D. Improving existing premises for occupation by the business entity.

§ 152-35. Computation **AND EXPIRATION** of tax credit.

If a business entity meets the definitions and requirements under §§ 153-33 and 153-34 of this article, the property tax credit granted under this section shall equal a percentage of the amount of County property tax imposed on the assessment of the new, improved, or expanded premises, as follows:

- A. Fifty percent for each of the first five taxable years;

- B. Twenty-five percent in taxable years six and seven;
- C. Fifteen percent in taxable years eight through 10; ~~and~~
- D. Zero percent for each taxable year thereafter- ; **AND**
- E. **A TAX CREDIT GRANTED UNDER THIS ARTICLE ON REAL PROPERTY OWNED BY A BUSINESS ENTITY IS NON-TRANSFERABLE AND SHALL END ON THE DATE THE PROPERTY IS TRANSFERRED TO ANY SUBSEQUENT PROPERTY OWNER. IN THE TAXABLE YEAR IN WHICH THE TRANSFER OCCURS, THE BUSINESS ENTITY SHALL BE GIVEN A CREDIT PRORATED BASED ON THE NUMBER OF MONTHS THE BUSINESS ENTITY OWNED THE PROPERTY.**

SECTION 2. **BE IT FURTHER ENACTED** by the County Commissioners of Kent County that this Act shall take effect on the _____ day of _____, 2024.

Read Third Time _____.

PASSED this _____ day of _____, 2024.

Failed to Pass _____.

By order of:

Sondra M. Blackiston, Clerk

THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

(SEAL)

Ronald H. Fithian, President

Albert H. Nickerson, Member

John F. Price, Member

ORDERED a fair summary thereof or the entire bill shall be published in at least one newspaper of general circulation in the County, not less than three times at weekly intervals within a four-week period.



**Stephanie Gosman, Kent Museum / Stories of the Chesapeake Heritage
Area
2/6/2024
County Commissioners Meeting**

Item Summary:

Letter of Support

ATTACHMENTS:

Description

02.06.24 Stories of the Chesapeake Heritage Area – Letter of Support



The County Commissioners of Kent County
Ronald H. Fithian, President | Albert H. Nickerson, Member | John F. Price, Member
Shelley L. Heller, County Administrator | Thomas N. Yeager, County Attorney

February 6, 2024

Stories of the Chesapeake Heritage Area
P.O. Box 727
Chestertown, Maryland 21620

Re: Discover Turner's Creek Event - Letter of Support

To Whom it May Concern:

We, the County Commissioners for Kent County, Maryland, support Kent Museum and their sponsorship of the "Discover Turner's Creek" event to be held on May 18, 2024. We fully support the efforts of the Kent Museum as they seek funds from Stories of the Chesapeake Heritage Area for the "Discover Turner's Creek" event.

Sincerely,
THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

A blue ink signature of Ronald H. Fithian, written in a cursive style.

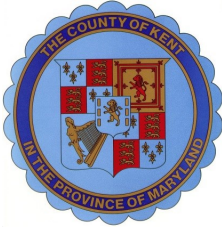
Ronald H. Fithian, President

A blue ink signature of Albert H. Nickerson, written in a cursive style.

Albert H. Nickerson, Member

A blue ink signature of John F. Price, written in a cursive style.

John F. Price, Member



**Pete Landon, Director, Office of Emergency Services, and Barry Byers,
Chair, Kent County Police Accountability Board
2/6/2024
County Commissioners Meeting**

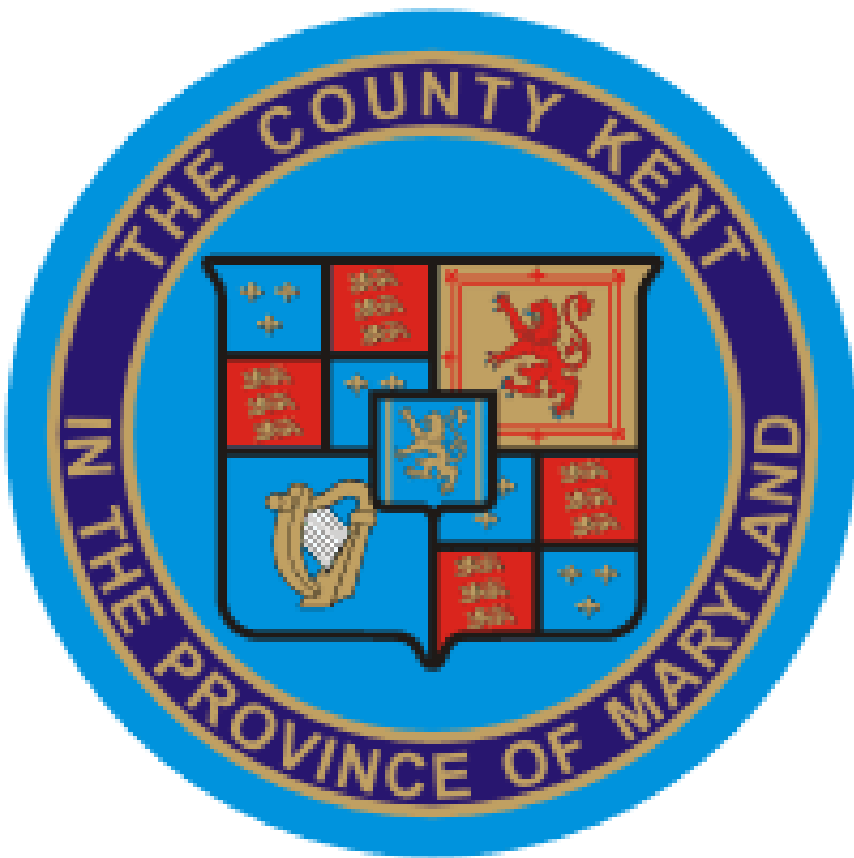
Item Summary:

2023 Police Accountability Board Annual Report

ATTACHMENTS:

Description

PAB 2023 Annual Report



**KENT COUNTY POLICE
ACCOUNTABILITY BOARD**

2023 Annual Report

Kent County Police Accountability Board - 2023 Annual Report

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Kent County Police Accountability Board - 2023 Annual Report
Letter from the Chair

Kent County Police Accountability Board

Bsry Byers
Chairperson

Lamonte Cooke
Member

Bishop Leon Frison
Member



Nancy Grahamer
Member

Joan Horsey
Member

Johnnie A. Jones, III, Esq.
Member

December 31, 2023

Ron Fithian, President
County Commissioners for Kent County
400 High Street Chestertown, Maryland 21620

Dear President Fithian,

In accordance with Maryland Police Accountability Act of 2021 and Resolution 2022-11 of the Kent County Public Laws, I hereby submit the 2023 Annual Report of the Kent County Police Accountability Board (PAB). I would be remiss if I did not recognize the members of the Kent County Police Accountability Board including the members of the Administrative Charging Committee for their dedication, professionalism, and service to our community as volunteers. In accordance with the law, we have been discharging our duties since July 1, 2022. Since our conception, time, the PAB has held public meetings, completed requisite trainings, Committee meetings, and in 2023 held two quarterly meetings with each of the County's three law enforcement agencies: Kent County Sheriff's Office, Chestertown Police Department and Rock Hall Police Department to comply with the law, fulfill our PAB duties and responsibilities as laid out by law and direction set forth in Kent County Resolution pertaining to police accountability. We have been able to partner with and collaborate with Kent County law enforcement departments to increase accountability, transparency, and hopefully engage the residents of Kent County as our partners in police accountability pursuant to need.

I would also like to thank Director Pete Landon from the Kent County Office of Emergency Services, and our Police Accountability Board Administrative Specialist Valerie Jones for their partnership and work behind the scenes to ensure the Kent County PAB fulfills its mission. Finally, I need to thank the Kent County government staff members and former consultant who worked on getting the PAB up and running since its inception, particularly Kent County Administrator Shelley Heller who helped to guide the Board at the very beginning.

Again, I appreciate the opportunity to serve Kent County, and I will ensure that the Kent County PAB will continue to uphold its mission under the law, collaborate with Kent County law enforcement agencies, and our community members on police accountability and transparency in 2024.

Respectfully,

A handwritten signature in blue ink, appearing to read "B. Byers".

Barry Byers, Chair

104 VICKERS DRIVE, UNIT D • CHESTERTOWN, MD 21620
Valerie Jones, Administrative Specialist
Telephone: (410) 778-7496
Email: accountability@kentgov.org

Kent County Police Accountability Board - 2023 Annual Report

History and Purpose

The Police Accountability Board (PAB) is made up of seven residents from Kent County, all appointed by the County Commissioners. To the extent practicable, they shall represent the seven [7] voting districts of the county.

To qualify, members must be a resident for at least one [1] year, be registered to vote in the county, not be active law enforcement officers, and have no prior felony convictions.

The Police Accountability Board shall:

- Hold quarterly meetings (or more frequently if deemed necessary) with heads of law enforcement agencies in the County and otherwise work with law enforcement agencies and the County government to improve matters of policing;
- Adopt rules of procedure, which may be amended from time to time, as a majority of the PAB may deem necessary and appropriate.
- Receive complaints of police misconduct filed by members of the public against a police officer who is employed within the county and forward that complaint to that officer's agency within 3 days of receipt.
- Review the outcomes of disciplinary matters considered by the Administrative Charging Committee.
- Submit an annual report (by Dec. 31st) to the County Commissioners that identifies any trends in the disciplinary process of police officers in Kent County, and makes recommendations on changes to policy that would improve police accountability.

Members are chosen and appointed by the Kent County Commissioners for four [4] year terms and may serve a second term – consecutive or not.

Kent County Police Accountability Board - 2023 Annual Report
Kent County Legal Requirements

RESOLUTION 2022-11

COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

**COMPLIANCE WITH SUNDRY REQUIREMENTS OF THE MARYLAND POLICE ACCOUNTABILITY
ACTS OF 2021 AS WELL AS SUBSEQUENT LEGISLATION**

**A RESOLUTION TO INTRODUCE PROVISIONS MANDATED BY THE STATE FOR THE ALTERATION
OF CERTAIN LAW ENFORCEMENT DISCIPLINARY PROCEDURES AND THE CREATION OF
REQUISITE BOARDS AND COMMITTEES**

FOR THE PURPOSE OF acknowledgment and adherence to state requirements regarding aspects of Chapters 59, 60, 62, and 132 Laws of Maryland 2021, collectively known as the “Maryland Police Accountability Act of 2021”, and associated bills that followed. This collection of legislation, in which the General Assembly repealed the Law Enforcement Officers Bill of Rights and instituted a new disciplinary process for all Law Enforcement Agencies within the state, affects numerous facets of policing including the obligation that each Maryland county create a new countywide police accountability board and an administrative charging committee, and that each Law Enforcement Agency create a new trial board process – features which become effective July 1, 2022.

RECITALS

WHEREAS, the Maryland General Assembly has instituted the requirement that all counties create a new Police Accountability Board (PAB) in order to:

1. Receive Complaints of Police Misconduct filed by members of the public.
 1. Ensure that the following is included in the Complaint:
 1. The name of the Police Officer accused of misconduct.
 2. Description of the facts on which the Complaint is based
- iii. Contact information of the complainant or a person filing on behalf of the complainant.
1. Forward the Complaint to the appropriate Law Enforcement Agency within 3 days after receipt.

Kent County Police Accountability Board - 2023 Annual Report
Kent County Legal Requirements (Continued)

2. Appoint two (2) Civilian members to the Administrative Charging Committee and one (1) Civilian to any pertinent Trial Boards.
3. Quarterly:
 1. Hold meetings with the heads of Law Enforcement Agencies and the County Government to improve matters of policing.
 2. Review outcomes of disciplinary matters considered by the Administrative Charging Committee.
4. Annually:
 1. Submit a report to the county no later than December 31st that,
 1. Identifies any trends in the disciplinary process of police officers in the county.
 2. Makes recommendations on changes to policy that would improve police accountability in the county.

WHEREAS, the Act specifies that the creation of the Police Accountability Board falls to the local governing body; therefore, the County Commissioners of Kent County (the “County”) shall:

- Establish the membership for a Police Accountability Board with the following stipulations:
 - To the extent practicable, the membership shall reflect the racial, gender, and cultural diversity of the county.
 - Active Police Officers are disallowed.
- Establish the budget and staff for a Police Accountability Board and appoint a Chair who has relevant experience to the position.
- Establish the procedures for record keeping.

WHEREAS, the Act instructs that each county shall have one Administrative Charging Committee (ACC), to serve all local Law Enforcement Agencies within its confines (including municipalities), in order to:

1. Review the findings of a Law Enforcement Agency’s completed investigation of a complaint made by a member of the public against a police officer, including relevant body camera footage - if applicable, and circumscribed to matters covered in the complaint. [Note that the Act requires ALL Law Enforcement Agencies to deploy body-worn cameras by July 1, 2025].
 1. In executing these duties, the Administrative Charging Committee may request information or action from the investigating agency including requiring additional investigation and the issuance of subpoenas.
 2. The ACC may record, in writing, any failure of supervision that caused or contributed to a police officer’s misconduct.
2. Decide if that police officer should be administratively charged.

Kent County Police Accountability Board - 2023 Annual Report
Kent County Legal Requirements (Continued)

1. If Charged, recommend discipline in accordance with the Law Enforcement Agency's disciplinary matrix [as developed by the Maryland Police Training and Standards Commission].
2. If NOT Charged, the ACC may make a determination as to whether:
 1. The allegations are Unfounded, OR
 2. The officer is Exonerated.
3. Authorize a police officer called to appear before the Administrative Charging Committee to be accompanied by a representative.
4. Issue a written opinion that describes in detail its findings, determinations, and recommendations and forward that written opinion to the Chief of the Law Enforcement Agency, the Police Officer, and the Complainant.
5. Members of the ACC shall meet once per month OR as needed.
6. Members Shall maintain Confidentiality relating to matters being considered until FINAL Disposition of the matter.

WHEREAS, the Act stipulates that the Administrative Charging Committee comprise the following five (5) member composition:

- The Chair of the Police Accountability Board (or another member of the PAB designated by the Chair).
- Two (2) civilian members selected by the PAB.
- Two (2) civilian members selected by the Chief Executive Officer of the county [The County Commissioners of Kent County].

WHEREAS, the Act decrees that serving as a member of the Administrative Charging Committee requires training on matters relating to police procedures from the Maryland Police Training and Standards Commission (MPTSC) as a prerequisite to appointment; consequently, no entrant may be seated until this training is completed to the satisfaction of the MPTSC.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNTY COMMISSIONERS OF KENT COUNTY, THAT: there shall be a Kent County Police Accountability Board and a Kent County Administrative Charging Committee to serve all Kent County, Chestertown, and Rock Hall Law Enforcement Agencies, adhering to the above Recitals and with the following provisos:

1. The membership of the Kent County Police Accountability Board shall be as follows:
 1. The PAB shall consist of seven (7) members and shall be appointed by the County Commissioners of Kent County
 1. Each member shall have been a resident of Kent County for a minimum of one (1) uninterrupted year immediately prior to application for membership.

Kent County Police Accountability Board - 2023 Annual Report
Kent County Legal Requirements (Continued)

2. A good faith effort is to be made to attain members residing in each of the county's seven (7) election districts.
- iii. At least one member should reside within the jurisdiction of each municipality in the county with its own police department [i.e., Chestertown and Rock Hall].
1. Members serve a four (4) year term.
 1. Upon the expiration of a term, members continue to serve until a successor is appointed.
 2. Members may be reappointed for one (1) additional term (successive or not).
- iii. Members may resign at any time by providing written notice to the County.
1. The County Commissioners of Kent County retain the authority to remove any member by majority vote, by its own initiative or the recommendation resulting from the majority vote of the PAB itself.
1. To the extent practicable, the Chairperson of the Kent County Police Accountability Board shall:
 1. Be a former sworn law enforcement officer who retired in good standing with at least a decade of service.
 2. Have experience serving in a supervisory position within law enforcement and/or have extensive knowledge of policing, police practices, disciplinary issues, and the criminal justice system.
- iii. Have been a resident of Kent County for two (2) years immediately prior to appointment to the PAB.
1. Qualifications for all PAB members:
 1. Members Shall have a criminal background check prior to appointment; thenceforth, they shall be bound by the Kent County Code of Ethics [Chapter 29, Code of Public Laws].
 1. Prior felony convictions result in automatic ineligibility.
 2. Members convicted of a felony while serving a term must report the conviction to the County Commissioners of Kent County and resign.
 3. Convictions of the following misdemeanors result in automatic ineligibility:
 1. Perjury
 2. Violent Crime
 3. Any other misdemeanor carrying a maximum sentence in excess of one (1) year.
 4. Members Shall be registered voters of Kent County.

Kent County Police Accountability Board - 2023 Annual Report
Kent County Legal Requirements (Continued)

2. Members Shall maintain Confidentiality relating to matters being considered until FINAL Disposition of the matter.
2. The County recognizes that the ACC cannot perform its mandate without the MPTSC instituting and providing both the requisite training and the new disciplinary matrix.
 1. Hence, the first order of business to be conducted upon the inaugural assembly of the new Kent County Police Accountability Board Shall be the selection of three (3) members for the Kent County Administrative Charging Committee.
 1. The Chair of the PAB is to designate themselves or another member of the PAB to the Charging Committee.
 2. The full PAB will select two (2) other members for the ACC.
 2. The County Commissioners of Kent County shall subsequently appoint the remaining two (2) members of the ACC forthwith.
 3. Training for the five (5) ACC members will then be provided when the MPTSC makes it available.
- III. Proper public notice and necessary transparency of all meetings of the Police Accountability Board as well as the Administrative Charging Committee shall comply with the Maryland Open Meetings Act.
 1. All Meetings of the PAB and ACC are to be open meetings.
 2. If a meeting is to be closed, it must be in accordance with the Maryland Open Meetings

ADOPTED: June 28, 2022

Kent County Police Accountability Board - 2023 Annual Report
Police Accountability Board Membership

[Police Accountability Board](#)

(Term 4 years)

Barry Byers, Chair, 12/31/2026	Joan Horsey, 12/31/2026
Johnnie Jones, 12/31/2026	Leon Frison, 04/18/2027
Kay Pritzlaff, 03/14/2027	LaMonte Cooke, 04/18/2027
Nancy Grahamer, 12/31/2026	

Date indicates expiration of term.

Kent County Police Accountability Board - 2023 Annual Report
PAB Meetings Procedural Rules

KENT COUNTY POLICE ACCOUNTABILITY BOARD
RULES OF PROCEDURE

SECTION 1. Board Meetings.

1.01. Commencement and Voting

- (a) The Commission shall meet at the call of the Chairman or a majority of its members.
- (b) A quorum consists of at least a majority of its authorized members.
- (c) An affirmative vote of at least a majority of its authorized members shall be necessary for any action of the Commission.

1.02. Except as otherwise provided in these Rules, the Commission shall meet in open session and maintain minutes of its meetings.

1.03. The Commission shall meet in closed session whenever it is considering a Complaint until a final determination is made regarding disposition of the Complaint.

SECTION 2. Confidentiality.

2.01. General Rules.

- (a) Except as set forth in paragraph 2.02, following the filing of Complaint the proceedings, meetings and activities of the Commission in connection with the Complaint shall be conducted in a strict confidence.
- (b) Except as set forth in paragraph 2.02, the Commission, its agents or employees, the Complainant, and the Respondent may not disclose any information relating to the Complaint, including the identity of the Complainant and the Respondent.

2.02. Exceptions.

- (a) Confidentiality does not apply to referral or release of information to a prosecuting authority.

Kent County Police Accountability Board - 2023 Annual Report

PAB Meeting Minutes

February 22, 2023

February 22, 2023

A meeting of the Kent County Police Accountability Board was called to order at 3:30 p.m. with the following present: Barry Byers, Chairperson, and members: Johnnie Jones, Nancy Grahamer, Joan Torsey, Thomas Davis, Shelly Schofield.

Shelley L. Heller, County Administrator, and Charles Mills, Accountability Officer, were also present.

STAFF REPORTS

Charles Mills discussed confidentiality statements and collected them from members present at the meeting.

INTRODUCTIONS

Chair Barry Byers started with introducing himself and all members present did the same.

RULES AND PROCEDURES

Chair Barry Byers discussed Chairing the Board, rules, and procedures for meetings.

GENERAL DISCUSSION

Meeting scheduling was discussed.

Board member nametags were discussed.

CLOSED SESSION

The meeting went into closed session to discuss personnel issues.

MOTIONS

Immediately following the closed session, there was a motion made, seconded, and unanimously passed by all members present to appoint Shelly Schofield to the Administrative Charging Committee moving her from the Police Accountability Board.

There was another motion made, seconded, and unanimously passed by all members present to appoint Thomas Davis to the Administrative Charging Committee moving him from the Police Accountability Board.

PUBLIC COMMENTS

There were no public comments.

Police Accountability Board
Open Meeting Minutes February 22, 2023
Page 2 of 2

GOOD OF THE ORDER DISCUSSION

Chair Barry Byers discussed "ride-alongs" for Police Accountability members.

Chair Barry Byers discussed local police directives for filing complaints with local law enforcement departments. There was concern for outdated procedures that needed to be consistent with the Maryland Police Accountability Act of 2021. Accountability Officer Mills stated that he would ensure copies of local law enforcement department complaint policies and procedures would be provided to Board members.


There was further discussion of virtual meetings in the future.

Chair Byers and Accountability Officer Mills discussed the next planned meeting of the Kent County Police Accountability Board to be held on March 13, 2023, at 1 p.m. in the County Commissioners of Kent County hearing room.

MOTION TO ADJOURN

There was a motion made, seconded and unanimously passed by all members present to adjourn the February 22, 2023, Kent County Police Accountability Board open meeting at 4:27 p.m.

Respectfully submitted.


Walter F. "Pete" Landon
Director

Approved:

Barry Byers, Chairperson
Kent County Police Accountability Board

Kent County Police Accountability Board - 2023 Annual Report

PAB Meeting Minutes

August 2, 2023

August 2, 2023

A meeting of the Kent County Police Accountability Board and Administrative Charging Committee was called to order at 3:00p.m. with the following present: Barry Byers, Chair, and members: Lamonte Cooke, Pastor Leon Frison, Nancy Grahamer, Joan Horsey, Johnnie Jones, Kay Pinder Pritzlaff, Thomas Davis, Gary Di Vito, Severn Miller, and Shelly Schofield.

Shelley L. Heller, County Administrator, Sheriff Dennis Hickman, Chief Ron Dixon, Chief Bill Dempsey, and Pete Landon, Director of OES were also present.

CALL TO ORDER

Chair Barry Byers reminded members of confidentiality regarding Police Accountability Board and Administrative Charging Committee issues. Chair Barry Byers started with introducing himself, all members present, and guests did the same.

RULES AND PROCEDURES

Chair Barry Byers discussed Chairing the Board, rules, and procedures for meetings.

STAFF REPORT

Pete Landon discussed the Police Accountability Board and Administrative Charging Committee being moved under OES for logistics and liaison with County Commissioners of Kent County.

The Accountability Officer Consultant and Administrative Support positions were discussed and are in various posting, recruiting, interviewing and hiring processes by Kent County HR.

Pete Landon discussed the 2024 Police Accountability grant that was applied for and funding received by the County Commissioners of Kent County.

GENERAL DISCUSSION

Meeting scheduling was discussed.

OLD BUSINESS

Police Complaint processes were discussed and there was a motion made, seconded and passed to have all Kent County law enforcement departments (Kent County Sheriff, Chestertown Police department, Rock Hall police department) consolidate complaint forms, procedures and digital accessibility.

Police "ride-alongs" were discussed with Chair Barry Byers suggesting that all Police Accountability Board and Administrative Charging Committee members who were not former officers consider riding along with the law enforcement departments in Kent County.

Business Cards and laptop computers for members and member table name cards were discussed.

Police Accountability Board

Police Accountability Board
Open Meeting Minutes August 2, 2023
Page 2 of 2

NEW BUSINESS

Pete Landon discussed his conversation with the MPTSC regarding Administrative Charging Committee member training informing members that Kent County training status was acceptable at this time and that there is no scheduled training scheduled in the future. The MPTSC was made aware that Kent County preferred regional training instead of travel to MPTSC in Sykesville.

Trial Boards were discussed including the composition, and funding of the same. All members were requested to forward possible interested Judge's to recommend to the County Commissioners of Kent County.

PUBLIC COMMENTS

There were no public comments.

GOOD OF THE ORDER DISCUSSION

Chair Byers discussed the next planned combined meeting of the Kent County Police Accountability Board and Administrative Charging Committee to be held on September 6, 2023, at 3 p.m. in the County Commissioners of Kent County hearing room.

MOTION TO ADJOURN

There was a motion made, seconded, and unanimously passed by all members present to adjourn the August 2, 2023, Kent County Police Accountability Board meeting at 4:47p.m.

Respectfully submitted,


Walter F. "Pete" Landon
Director

Approved:


Barry Byers, Chairperson
Kent County Police Accountability Board

Kent County Police Accountability Board - 2023 Annual Report

PAB Meeting Minutes

September 6, 2023

September 6, 2023

A meeting of the Kent County Police Accountability Board and Administrative Charging Committee was called to order at 3:00p.m. with the following present: Barry Byers, Chair, and members: Lamonte Cooke, Pastor Leon Frison, Nancy Grahamer, Joan Horsey, Johnnie Jones, Kay Pinder Pritzlaff, Gary Di Vito, Severn Miller, and Shelly Schofield.

Pete Landon, Director of OES was also present.

CALL TO ORDER

Chair Barry Byers reminded members of confidentiality regarding Police Accountability Board and Administrative Charging Committee issues.

RULES AND PROCEDURES

Chair Barry Byers discussed Chairing the Board, rules, and procedures for meetings.

STAFF REPORT

Pete Landon discussed the appointment of Valerie Jones, Administrative Specialist that will be very shortly. Pete advised that Valerie will be staffing future meetings.

GENERAL DISCUSSION

Meeting scheduling was discussed.

OLD BUSINESS

Police Complaint processes were discussed consolidation of all Kent County law enforcement departments complaint forms, procedures, and digital accessibility. A consolidated form will be presented to the PAB for adoption at the October meeting.

Police "ride-alongs" were discussed with Chair Barry Byers requesting that all Police Accountability Board and Administrative Charging Committee members who participate in ride-alongs report the same. The time duration for each scheduled ride alongs be limited to 2 hours.

Board members received table nameplates. Business cards will not be issued to members.

Trial Boards were discussed including the composition, and funding of the same. All members were requested to forward possible interested Judge's to recommend to the County Commissioners of Kent County via Pete Landon. Members were also requested to consider civilian appointments to the Trial Boards. Trial Board members must receive training to sit on a trial board.

Police Accountability Board
Open Meeting Minutes September 6, 2023
Page 2 of 2

NEW BUSINESS

Chair Barry Byers discussed the meeting schedule for the PAB. Barry Byers recommended both the PAB and ACC meet quarterly.

Motion made and seconded for the PAB and ACC to meet every three months (quarterly). The motion was passed unanimously.

The next meeting will be in December but Pete Landon stated that he will hold the room available.

PUBLIC COMMENTS

There were no public comments.

GOOD OF THE ORDER DISCUSSION

Chair Byers discussed the next planned combined meeting of the Kent County Police Accountability Board and Administrative Charging Committee to be held on Wednesday, December 6, 2023, at 3 p.m. in the County Commissioners of Kent County hearing room.

MOTION TO ADJOURN

There was a motion made, seconded, and unanimously passed by all members present to adjourn the September 6, 2023, Kent County Police Accountability Board meeting at 3:27p.m.

Respectfully submitted,


Walter A. "Pete" Landon
Director

Approved:



Barry Byers, Chairperson
Kent County Police Accountability Board

Kent County Police Accountability Board - 2023 Annual Report

PAB Meeting Minutes

November 1, 2023

November 1, 2023

A meeting of the Kent County Police Accountability Board was called to order at 3:00p.m. with the following present: Barry Byers Chair, and members: Lamonte Cooke, Pastor Leon Frison, Nancy Grahmer, Joan Horsey, Johnnie Jones, Kay Pinder Pritzlaff.

Pete Landon, Director of OES and Valerie Jones, Administrative Assistant were also present.

CALL TO ORDER

Chair Barry Byers called the meeting to order. Pete Landon introduced Valerie Jones. The September 6, minutes were read. A motion was made, seconded, and unanimously passed to approve the minutes.

RULES AND PROCEDURES

STAFF REPORT

The Accountability Officer Consultant position was discussed, and is in various posting, recruiting, interviewing, and hiring processes by Kent County HR.

GENERAL DISCUSSION

Meeting scheduling was discussed PAB quarterly meetings have been confirmed.

OLD BUSINESS

No old business was discussed.

NEW BUSINESS

1. Police "ride-alongs" were discussed with Chair Barry Byers confirming interest of all PAB members. Barry has reached out to Dennis Hickman regarding ride-alongs and requested each session be an hour in duration. Barry reiterated the process of each member contacting the KCSO directly and scheduling their ride-along.
2. The final draft of the Kent County Consolidated Complaint against Police Personnel Report was discussed. Johnnie Jones expressed concern about the need for complaints to be filed anonymously. Pete Landon voiced there may be an issue with proper investigation of complaint without proper identity of all persons involved. Barry moved forward with the motion to approve the form. The was seconded, and unanimously passed by all members present.

PUBLIC COMMENTS

There were no public comments.

GOOD OF THE ORDER DISCUSSION

Barry suggested a December 6, 2023, meeting of both the ACC and PAB. Valerie to send meeting requests and reminders.

Open Meeting Minutes November 1, 2023
Page 2 of 2

MOTION TO ADJOURN

There was a motion made, seconded, and unanimously passed by all members present to adjourn the November 1, 2023, Kent County Police Accountability Board meeting at 3:32pm.

Respectfully submitted.


Valerie H. Jones
Administrative Assistant

Approved:


Barry Byers, Chairperson
Kent County Police Accountability Board

Kent County Police Accountability Board - 2023 Annual Report

PAB Meeting Minutes

December 6, 2023

December 6, 2023

A meeting of the Kent County Police Accountability Board was called to order at 3:00p.m. with the following present; Barry Byers, Chair, Valerie H. Jones (PAB Admin), Thomas Davis, Bill Dempsey (Chief of Police Rock Hall), Gary Di Vito, Pastor Leon Frison, Kay Pritzlaff Ronald Dixon (Chief of Police Chestertown), Nancy Grahmer, Joan Horsey, Severn E. S. Miller Dennis Hickman, (Sheriff Kent County), Johnnie A. Jones III, Esq., Valerie Jones (Administrative Assistant) and Pete Landon (Director Kent County OES).

CALL TO ORDER

Chair Barry Byers called the meeting to order. The November 1, minutes were read. A motion was made, seconded, and unanimously passed to approve the minutes.

RULES AND PROCEDURES

STAFF REPORT

The Accountability Officer Consultant position was discussed, and is in the hiring processes by Kent County HR.

GENERAL DISCUSSION

The next meeting will be both a PAB and ACC meeting on January 3. Quarterly meetings will follow.

OLD BUSINESS

1. Police ride-alongs were discussed. Barry reiterated the process of each member contacting the law enforcement agencies directly and scheduling their ride-along. Pete Landon reminded the board of the need for all information regarding ride-alongs to be forwarded to Val Jones, for record retention.
2. Sheriff Hickman (Kent County), Bill Dempsey (Chief of Police Rock Hall), and Ronald Dixon (Chief of Police Chestertown) confirmed the implementation of the new PAB Complaint form.

NEW BUSINESS

1. Pete Landon asked the board and law enforcement representatives to think about how transparency can be further improved with the community and to present those ideas to the board. Nancy Grahmer mentioned the positive results of the "National Night Out" campaign, that was stopped during covid.
2. Gary Divito mentioned his discussion with a member of the Queen Anne's County ACC regarding the rules and resolutions they have implemented and suggested Kent County do the same. Pete Landon mentioned Kent County ACC already has rules and resolutions that are currently available to view on the PAB webpage. The ACC may discuss if changes are needed to Kent County resolutions with the caveat, the Kent County Commissioners would need to approve any changes.

PUBLIC COMMENTS

1. Johnnie Jones expressed his thanks for the support law enforcement provided on Halloween, especially in the community of Coventry Farms.
2. Nancy Grahmer shared her ride-along experience with the board. She was very happy with her experience and very complimentary of D/S Griffiths knowledge and professionalism.

GOOD OF THE ORDER DISCUSSION

MOTION TO ADJOURN

A was motion made, seconded, and unanimously passed by all members present to adjourn the December 6, 2023, Kent County Police Accountability Board meeting at 3:32pm.

Respectfully submitted.



Valerie H. Jones
Administrative Assistant

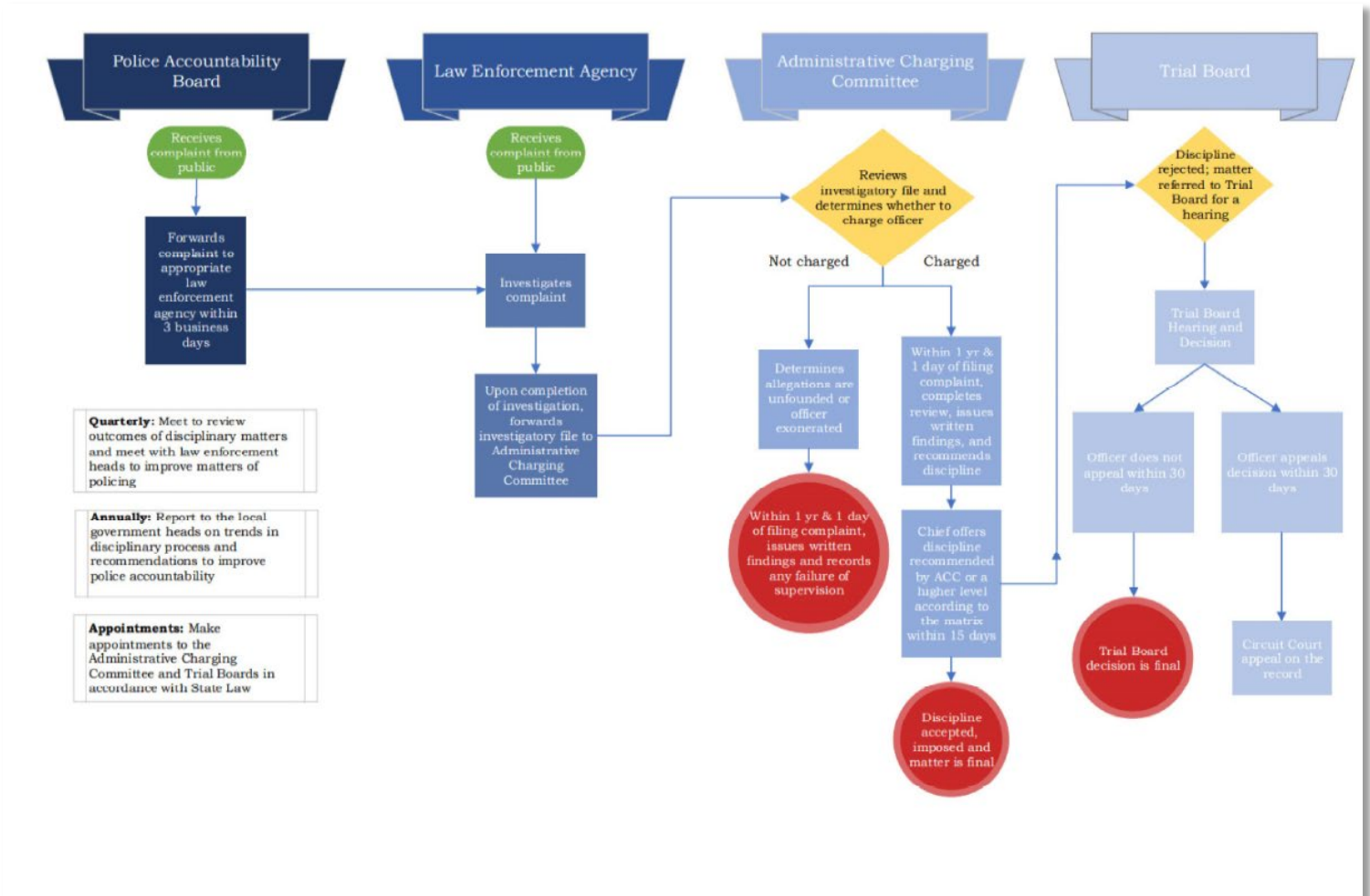
Approved:



Barry Byers, Chairperson
Kent County Police Accountability Board

Kent County Police Accountability Board - 2023 Annual Report

PAB Process Flowchart



Kent County Police Accountability Board - 2023 Annual Report
Administrative Charging Committee Membership

Administrative Charging Committee

(Term 4 years)

Barry Byers, 12/31/2026	Severn E.S. Miller, 5/8/2027
Thomas Davis, 12/31/2026	
Shelly Schofield, 12/31/2026	
Gary Di Vito, 5/8/2027	

Date indicates expiration of term.

Kent County Police Accountability Board - 2023 Annual Report

ACC Overview

The Administrative Charging Committee (ACC) reviews the findings of a Law Enforcement Agency's completed investigation, or any complaint made by a member of the public against a police officer, including relevant body camera footage - if applicable, and circumscribed to matters covered in the complaint.

The ACC will decide if that police officer should be administratively charged.

1. If charged, recommend discipline in accordance with the Law Enforcement Agency's disciplinary matrix [as developed by the Maryland Police Training and Standards Commission].
2. If NOT Charged, the ACC may make a determination as to whether:
 1. The allegations are Unfounded, OR
 2. The officer is Exonerated.
3. Authorize a police officer called to appear before the Administrative Charging Committee to be accompanied by a representative.
4. Issue a written opinion that describes in detail its findings, determinations, and recommendations and forward that written opinion to the Chief of the Law Enforcement Agency, the Police Officer, and the Complainant.
5. Members of the ACC shall meet once per month OR as needed.
6. Members Shall maintain Confidentiality relating to matters being considered until FINAL Disposition of the matter.

There have been no reviews of completed law enforcement investigations or complaints required or performed by the public by the Administrative Charging Committee of the Kent County Police Accountability in 2022 or 2023.

Kent County Police Accountability Board - 2023 Annual Report

Trial Boards

The Trial Board adjudicates matters for which a police officer or deputy is subject to discipline. The Trial Board meets when the decision of the Police Chief or Sheriff is appealed by an officer.

As required by law, the Trial Board includes 3 members - an active or retired administrative law judge, or a retired district or circuit court judge, appointed by the County Executive; a civilian who is not a member of an administrative charging committee, appointed by the Police Accountability Board; and a police officer of equal rank to the accused officer, appointed by the Chief of Police that employs the officer subject to the complaint. A separate Trial Board will be convened for each incident and only when requested by the officer.

There have been no Trial Boards in Kent County convened by the Kent County Police Accountability Trial Board in 2022 or 2023.

Kent County Police Accountability Board - 2023 Annual Report

Training and Professional Development

Maryland Open Meetings Act

Maryland's Open Meetings Act is a statute that requires many State and local public bodies to hold their meetings in public, to give the public adequate notice of those meetings, and to allow the public to inspect meetings minutes. The Act permits public bodies to discuss some topics confidentially. The Act's goals are to increase the public's faith in government, ensure the accountability of government to the public, and enhance the public's ability to participate effectively in our democracy. (Taken from the Maryland Office of the Attorney General)

Kent County PAB and the Open Meetings Act

Maryland Open Meetings Act compliance as well training is mandatory because the PAB is designated as a public entity. The PAB is subject to the OMA and must designate at least one employee, officer, or member to receive training on the OMA requirements to help ensure compliance with the law. Administrative Specialist Valerie Jones participated in the training and is the Board's OMA representative. Additional PAB members will be encouraged to attend OMA training in 2024.

Community Outreach Activities

In 2023, Chair Barry Byers encouraged PAB as well as ACC members to register for law enforcement ride-alongs with the Kent County Sheriff's Office, Chestertown Police Department and Rock Hall Police Department. To date, several members have gotten exposure to policing in Kent County while being able to discuss the PAB mission, goals and objectives while being able to experience patrol, calls for service, policies and procedures utilized and followed by patrolling law enforcement officers.





In 2024, PAB as well as ACC members will likely have the opportunity to observe and participate in scenario-based police judgmental training provided by the Kent County Sheriff's Office.

Kent County Police Accountability Board - 2023 Annual Report

Complaint Process

Establishment of the Kent County Consolidated Complaint Against Police Personnel

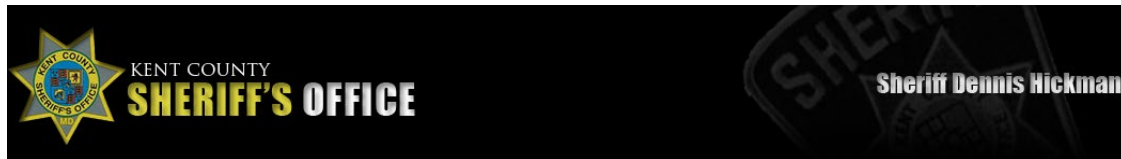
The PAB worked with Kent County Sheriff Dennis Hickman, Chestertown Police Chief Ron Dixon and Rock Hall Police Chief Bill Dempsey to create a county-wide consolidated and consistent manner for citizens to lodge a complaint against any law enforcement department member on the PAB, KCSO, CPD and RHPD webpages. The consolidated form is web-based, fillable and automated to ensure ease as well as convenience for a Complainant to direct their concerns to the PAB or appropriate police department. Additionally, citizens may call the Kent County Police Accountability Hotline on (410)778-7496 regarding police officer complaints.

EMPLOYEE NAME		RANK (If known)	DEPARTMENT	ID NUMBER (If known)
1. INSTRUCTIONS: If you have a complaint against any Kent County Sheriff's Office, Chestertown Police Department, Rock Hall Police Department employee or against any Kent County law enforcement department itself, you may report your complaint by completing this form, emailing, mailing or delivering it in person to any of the below Kent County law enforcement departments or the Kent County Police Accountability Board:				
 Kent County Sheriff's Office 104 Vickers Drive, Unit B Chestertown, MD 21620 (410)778-2279 <input type="checkbox"/> sheriff@kentgov.org		 Chestertown Police Dept 601 High Street Chestertown, MD 21620 (410)778-1800 <input type="checkbox"/> dixon@chestertownpolice.com	 Rock Hall Police Dept. 558 1/2 North Main St. Rock Hall, MD 21661 (410)639-7222 <input type="checkbox"/> bdempsey@rockhallmd.gov	 Kent County Police Accountability Board 104 Vickers Drive, Unit D Chestertown, MD 21620 (410)778-7496 <input type="checkbox"/> accountabilityofficer@kentgov.org
If you would prefer, you may call the Police Accountability Board directly on (410) 778-7496 and ask to speak with the Accountability Officer directly about your complaint. The information you provide will help investigate your complaint. The appropriate law enforcement agency or the Police Accountability Board may contact you for additional information and eventually will respond to you with the results of the investigation of your complaint.				
2. YOUR NAME		3. YOUR HOME ADDRESS		4. YOUR CELL PHONE NUMBER
5. YOUR RESIDENCE TELEPHONE		6. YOUR WORK ADDRESS		7. YOUR WORK TELEPHONE
8. WITNESS' NAME		9. WITNESS' ADDRESS		10. WITNESS' TELEPHONE
11. WITNESS' NAME		12. WITNESS' ADDRESS		13. WITNESS' TELEPHONE
14. DATE OF INCIDENT		15. TIME OF INCIDENT		16. LOCATION OF INCIDENT
17. DESCRIPTION OF INCIDENT (attach additional sheets if necessary)				
18. REPORT RECEIVED BY		19. DATE		20. TIME
21. METHOD OF RECEIPT <input type="checkbox"/> Telephone <input type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Personal Delivery				
22. ASSIGNED TO DATE				Investigation Case Number

KCPAB Form #001 Revised September 2023

There have been no police officer complaints received digitally, via telephone, mailed or received in person by the PAB to date in 2022 and/or 2023.

Kent County Police Accountability Board - 2023 Annual Report
Law Enforcement Departments



104 Vickers Drive, Unit B, Chestertown, MD 21620

Phone: 410-778-2279 Fax: 410-778-7488 Mobile: 410-708-0607

Contacts:

<https://sheriff.kentcounty.com/contact.html>

Policies:

<https://sheriff.kentcounty.com/publicinformation.html>



Police Chief Ron Dixon

601 High Street, Chestertown, MD 21620

Phone: 410-778-1800 Fax: 410-778-1828

Contacts:

cpd@chestertownpolice.com

Policies:

<https://townofchestertown.com/chestertown-police-department/>



Police Chief Bill Dempsey

5585 Main Street, P.O. Box 367

Rock Hall, MD 21661

Phone: 410-639-7222 Fax: 410-639-2455

E-mail: Rockhallpd@Rockhallmd.com

Kent County Police Accountability Board - 2023 Annual Report

Police Disciplinary Process Activities in Kent County

The Kent Sheriff's Office, Chestertown Police Department and Rock Hall Police Department were asked to provide disciplinary trends including but not limited to the below reporting parameters for calendar years 2022* and 2023:

Police Complaint Specifics

- Total number of complaints received or department generated.
- Total number of complaints Investigated.
- Total number of investigations resulting in charges.
- Total number of complaints, investigations and charges resulting in trial boards.

Police Complaint Type Received

- Harassment
- Excess Force
- Discrimination
- Failure to Intervene
- Failure to Identify [criminals, witnesses]
- Improper Language or Conduct
- Retaliation
- Criminal Activity

2022*: Kent County Sheriff and Rock Hall Police Department reported no disciplinary matters however:

Chestertown Police Department

- Total number of police misconduct complaints: 3
- Type of police misconduct complaints: Failure to obey an order, allowing a prisoner to escape and alleged unbecoming conduct.
- Total Number of police misconduct complaints investigated: 3
- Total Number of police misconduct complaints resulting in administrative charges: 2
- Total Number of police misconduct complaints resulting in criminal charges: 0
- Total Number of police misconduct complaints resulting in Trial Board: 0

*The Kent County Police Accountability Board was not operationally functioning in 2022.

Kent County Police Accountability Board - 2023 Annual Report
Police Disciplinary Process Activities in Kent County (Continued)

2023**: Rock Hall Police Department reported no disciplinary matters however:

Kent County Sheriff

- Total number of police misconduct complaints: 1
- Type of police misconduct complaint: Violation of criminal statute
- Total number of police misconduct complaints investigated: Investigated by outside agency.
- Total number of police misconduct complaints resulting in administrative charges: Deputy suspended and later resigned.
- Total number of police misconduct complaints resulting in criminal charges: Pending further action by the Office of the State's Attorney for Kent County.
- Total number of police misconduct complaints resulting in Trial Board: Deputy resigned.

Chestertown Police Department

- Total number of police misconduct complaints: 1 Internal
- Type of police misconduct complaints: Leaving prisoner unattended
- Total number of police misconduct complaints investigated: 1
- Total number of police misconduct complaints resulting in personnel counseling: 1
- Total number of police misconduct complaints resulting in criminal charges: 0
- Total number of police misconduct complaints resulting in Trial Board: 0

**The Kent County Police Accountability Board was not operationally functioning for a portion of 2023.

2022 and 2023 Police Disciplinary Trends in Kent County***

- Total number of police misconduct complaints: 5
- Total number of police misconduct complaints investigated: 5
- Total number of police misconduct complaints resulting in administrative charges/counseling: 4 (1 sworn personnel suspended and resigned).
- Total number of police misconduct complaints resulting in criminal charges: 0 (1 pending possible further action by the Office of the State's Attorney for Kent County)
- Total number of police misconduct complaints resulting in Trial Board: 0

Percentage of police conduct complaints resulting in investigation and charges: 80%

Percentage of police conduct complaints that were unfounded after investigation: 20%

Kent County Police Accountability Board - 2023 Annual Report

2022 and 2023 Police Disciplinary Trends in Kent County (Continued)

Percentage of police conduct complaint investigations, charges that resulted in Trial Board: 0%

Percentage of police conduct complaints and/or investigations that involved the PAB or ACC: 0%

***The Kent County Police Accountability Board was not operationally functioning in 2022 and for a portion of 2023.

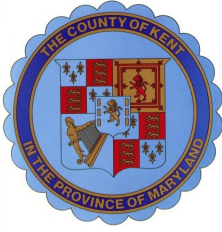
Recommendations to Improve Police Accountability in Kent County

The Kent County Police Accountability Board since its inception, and in collaboration with the Kent County Sheriff's Office, Chestertown Police Department as well as the Rock Hall Police Department, has collectively believed that improving policing accountability and transparency involves measures such as:

- Consolidate and create a county-wide complaint process for all law enforcement.
- Implementing body cameras procurement, training, and assignment to all personnel.
- Continued interaction between police and independent oversight boards.
- PAB and ACC coordination with law enforcement related to complaint/investigation reviews in the event of complaints involving the public.
- Regular personnel complaint and discipline audits.
- Future community engagement initiatives.
- Enhancing officer training on de-escalation and cultural sensitivity can contribute to better outcomes.

While most, if not all, of the above measures have already been experienced, it is important to remember that the Kent County Police Accountability Board consistently reinforces the belief that Kent County Police Accountability Board remains seven residents from Kent County, representing the seven [7] voting districts of the county. The PAB will hold quarterly meetings (or more frequently if deemed necessary) with heads of law enforcement agencies in the County and otherwise work with law enforcement agencies and the County government to improve matters of policing. Additionally, the PAB will continue to receive complaints of police misconduct lodged by our citizens, against any police officer who is employed within the county and forward that complaint to that officer's agency within 3 days of receipt. The PAB will review the outcomes of any disciplinary matters considered by the Administrative Charging Committee and will submit this annual report to the County Commissioners that identifies any trends in the disciplinary process of police officers in Kent County.

Finally, the Kent County Police Accountability Board will continually make recommendations on changes to policy that will improve police accountability and transparency in Kent County.



**Rosemary Ramsey Granillo, Director Kent County Local Management
Board
2/6/2024
County Commissioners Meeting**

Item Summary:

Findlay House Global "Beyond Your Mental" Contract

ATTACHMENTS:

Description

02.06.24 Contract By and Between the County and Findlay House Global, LLC Mentoring Program Be On Your Mental Attachment A

CONTRACT

THIS CONTRACT, made this 6th day of February 2024, by and between the County Commissioners of Kent County, a body corporate and politic of the State of Maryland, hereinafter referred to as the COUNTY, and Findlay House Global, LLC, hereinafter referred to as the CONTRACTOR;

WITNESSETH, That for and in consideration of the mutual covenants and promises between the parties hereto, it is fully agreed that:

1. The CONTRACTOR will furnish all labor, materials, equipment, and transportation necessary for the Youth-Led Peer Mentoring Program "Be On Your Mental", in accordance with the specifications in ATTACHMENT A.
2. ATTACHMENTS are:
 - a. Attachment A: Scope of Work
 - b. Attachment B: General Terms and Conditions
3. LIABILITY INSURANCE. CONTRACTOR shall furnish to the COUNTY, before beginning any work hereunder, a Certificate of Insurance certifying that the Contractor carries comprehensive, general liability insurance coverage through a policy which protects the County, and names the County as an Additional Insured in aggregate liability coverage of not less than Two Million (\$2,000,000.00) Dollars.
4. WORKER'S COMPENSATION INSURANCE. CONTRACTOR shall furnish to the County Commissioners, before beginning work, a Certificate of Workmen's Compensation Insurance covering all employees of said Contract in amounts statutorily required.
5. COMPLETION OF WORK. The CONTRACTOR shall commence the work covered by this Contract by January 2, 2024 and shall complete the same by June 30th, 2024 unless the period for completion is extended as provided for in the general conditions.
6. CONTRACT SUM. The COUNTY shall pay the CONTRACTOR for the performance of said work, subject to additions or deletions provided herein a total maximum fee, not to exceed Fifty-Nine Thousand Nine Hundred and Eighty-Nine dollars \$59,989 in conformity with the bid schedule.
7. COMPENSATION. The COUNTY agrees to pay the CONTRACTOR \$10,988 per month for the months of January 2024 – May 2024 upon receipt of a monthly invoice; and make payment on a final invoice of \$5,050 upon receipt of the final Y.O.U.R. Kent County Academy Report deliverable.

The amount due for services will be rendered as stipulated under this MOU within (30) days of submission of an approved monthly invoice.

Compensation will be at the full amount as indicated above: unless the COUNTY makes any increases or reductions (i.e. changes) to the overall program budget; and/or the COUNTY discovers that all or a portion of the payment otherwise due is subject to withholding.

8. CONFIDENTIALITY. In the case where data is collected from programs or agencies, the information and records related to the services performed under this CONTRACT shall be confidential and shall not be disclosed by the CONTRACTOR without the express consent of the program participants or, if a minor, the minor's parents or guardian, except where the information and records are being examined in conjunction with the administration of the program and/or services provided for under this CONTRACT; or as may be required under State or federal law.

9. DURATION of OBLIGATION. This Contract extends for 6 months, from January 2nd 2024 through June 30th 2024.

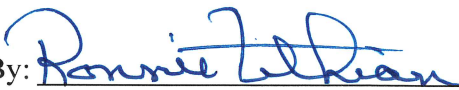
10. NON-ASSIGNMENT. Neither this Contract nor any of the rights, interests or obligations under the Contract shall be assigned, in whole or in part, by operation of law or otherwise by either party without the prior written consent of the other party.

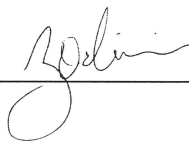
IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in duplicate, on the date first above written.

WITNESS/ATTEST

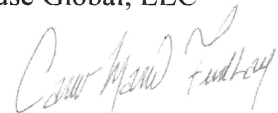
THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND


2/6/24

By: 
Ronald H. Fithian, President
Kent County Commissioners



Findlay House Global, LLC

By: 
Cara-Marie Findlay

Principal

83-2986244
Employer Identification Number

ATTACHMENT A

Summary:

The Kent County Local Management Board (KCLMB) has selected Findlay House Global, LLC to launch a multi-year youth-led peer mentoring program, sponsored by Kent County Local Management Board (KCLMB), and facilitated by Findlay House Global's Y.O.U.R. Development™ Youth Leadership Academy Program.

In FY2023 Findlay House Global contracted with KCLMB to lead a youth-led program design process. Using F.H.G.'s Y.O.U.R. Kent County Youth Leadership Academy (during the 2022 - 2023 school year), the nominated FHG project team took 35 Kent County High School youth participants through steps one (1) and two (2) of the 4-step human-centered design process— (1) research (2) ideation (3) testing (4) implementation.

The “Beyond Your Mental” program ideation is the final youth-designed community project that blossomed out of that 15-session, learn-by-doing academy.

This phase will take incumbent BYM student leaders and new (“interested”) student leaders through step three (3) of the human-centered design process: testing.

Together, student leaders, community stakeholders, and the FHG project team will evaluate the feasibility, duration, cost, adverse affects, barriers, limitations, and opportunities of the BYM program. Piloting the program will give the insights needed to improve upon and optimize program design prior to full-scale implementation (step 4 of the human-centered design process) in the 2024- 2025 school year.

Objectives

The focus will be to seamlessly integrate and onboard a new BYM Program Coordinator and the BYM mentors, refine the existing program design, recruit a diverse cohort of BYM Mentors and mentees, foster springboard mentor-mentee relationships, and further shape the program for the 2024-2025 academic year.

With this end goal in mind, the following objectives will guide our program implementation:

Program Immersion:

Onboard and immerse new BYM Mentors, and the new BYM Program Coordinator, into the peer mentorship program principles, providing them with the essential tools and insights necessary to champion the growth and well-being of our students.

Cultivate Excellence:

Facilitate comprehensive training sessions for both staff and mentors, emphasizing not only the technical aspects of the program but also the human-centric approach that defines the Findlay

House Global experience.

Embrace Diversity:

Launch an elaborate and inclusive recruitment drive to attract mentees and mentors from varied backgrounds, ensuring representation and fostering an environment of diversity and inclusion that encourages participation from underrepresented communities.

Intentional Mentor-Mentee Pairing:

Thoughtfully pair mentors and mentees, prioritizing connection, understanding, and shared aspirations. Strive for mentor-mentee relationships that extend beyond the academic, nurturing personal and emotional growth.

Soft Program Launch:

Pilot the mentor-mentee sessions of the BYM peer mentorship program over the course of two (2) to four (4) session meetings as is feasible and the current school year schedule allows. Establish robust communication channels and a support system for continuous success with full-scale implementation.

Program Modifications Designed for Impact:

Elevate the existing program design through a meticulous examination of the soft launch successes and challenges, integrating feedback from community stakeholders, and modifying the program to address emerging needs and challenges.

ROLES, RESPONSIBILITIES & RESOURCES.

To further the relationship between the Parties, in order to achieve Parties' mutual desire to achieve a youth-led peer mentoring program, each party agrees to the following roles and responsibilities, and provides the following resources.

More specifically, KCLMB will:

- Provide FHG technical assistance as necessary to finalize deliverables and budgets, in order for FHG to fulfill all requirements for grant award execution
- Formally execute and issue a grant award of \$59,989 (fifty-nine thousand nine hundred and eighty-nine dollars) for the activities covered by FHG's proposal for testing the Beyond Your Mental program.

FHG will:

- Facilitate the described activities and approaches as described in their proposal.
- Collaborate with local community partners including KCLMB, KCHS, and others (e.g. Kent Family YMCA and Minary's Dream Alliance) to ensure optimal execution of the program.
- Provide the necessary resources for optimal and effective program execution including, but not limited workbook and equipment

- Deliver a final report by July 15th, 2024 - dependent on timely completion and approval of key phase activities.

Parties agree to uphold their roles and responsibilities in a committed, good-faith manner; and agree to provide the resources above at a minimum. The Parties may agree to additional resources as set forth in future amendments.

Budget and Payment

Findlay House Global, LLC. will provide the consulting services for provision of Community Engagement and Outreach Services in accordance with the KCLMB RFP and submitted Technical Proposal. The estimated cost associated with the completion of this project is a sum not to exceed **\$59,989** (fifty nine thousand nine hundred and eighty-nine dollars).

Payment Schedule

For the months of January 2024 - May 2024, KCLMB would receive a monthly invoice of \$10,988, with a final invoice of \$5,050 in June upon submission of the final program revision report.

Budget

Project and Personnel	Est. # of Hours	Hourly Rate	Total
Youth-Led Program Facilitation: 4 Person team	726.5	\$52.58	\$37,472
Project Materials and Supplies		Computation	
Marketing		Ads and Flyers	\$500
Food		8 sessions @15 ppl 1 session @25 ppl 4 sessions @30 ppl	\$1,987.50
Program Pack		30 packs @ \$30/ea	\$900
Mentor Mental Wellness Excursion		\$85pp x 25 ppl	\$2,125
BYM Academy T-Shirts		\$21.75/student x 40 students/volunteers	\$870
Program Incentives		15 pp @ \$25	\$375
Print Production		2,631 color copies @ .49 / page	\$1,289
Office Supplies		\$50/mo x 6 months	\$300
YMCA youth memberships		35 students @\$29/mo x 6 months	\$6,090
Collaborative/Co-Working Space at YMCA			\$1,000

FY2024 Contract KCLMB &Findlay House Global,LLC.

Travel			
Airfare		3 rountrips @\$192/person x 3 team members	\$1,800
Hotel & Transportation		3 (4 night, 5 day trips); 2 rooms at \$130/night	\$3,840
Per Diem		3 (5 day-trips @ \$40/day) x 3 team members	\$1,440
TOTAL			\$59,989



GENERAL TERMS & CONDITIONS OF CONTRACT BETWEEN COUNTY & CONTRACTOR

1. ACCOUNTING SYSTEM AND AUDIT, ACCURATE INFORMATION

The Contractor certifies that all information the Contractor has provided or will provide to the County is true and correct and can be relied upon by the County in awarding, modifying, making payments, or taking any other action with respect to this contract including resolving claims and disputes. False or misleading information constitutes grounds for the County to terminate this contract for cause and to pursue any other appropriate remedy. The Contractor certifies that the Contractor's accounting system conforms to generally accepted accounting principles, is sufficient to comply with the contract's budgetary and financial obligations, and is sufficiently able to produce reliable financial information.

The County may examine the Contractor's and any first-tier subcontractor's records to determine and verify compliance with the contract and to resolve or decide any claim or dispute arisen under this contract. The Contractor and any first-tier subcontractor must grant the County access to these records at all reasonable times during the contract term and for three (3) years after final payment (or for such longer period as may be required pursuant to any federal, state, or other loan or grant condition). If the contract is supported to any extent with federal or state funds, the appropriate federal or state authorities may also examine these records. The Contractor must include the preceding language of this paragraph in all first-tier subcontracts.

2. AMERICANS WITH DISABILITIES ACT

The Contractor agrees to comply with the nondiscrimination requirements of Titles II and III, and other provisions, of the Americans with Disabilities Act of 1990, Pub. Law 101-336, as amended, currently found at 42 U.S.C., § 12101, et seq.

3. APPLICABLE LAWS

This contract must be construed in accordance with the applicable laws, rules, and regulations of the State of Maryland (without regard to its conflicts of laws principles) and of Kent County. All Kent County laws, rules, and regulations are incorporated by reference into, and made a part of, this contract. In the case of any inconsistency between this contract and such laws, rules, and regulations, the laws, rules, and regulations shall govern. The Contractor must, without additional cost to the County, pay any necessary fees and charges, obtain any necessary licenses and permits, and comply with applicable federal, state and local laws, codes and regulations. For purposes of litigation involving this contract, except for Contract Disputes discussed in paragraph 8 below, exclusive venue and jurisdiction must be in the Maryland State courts located in Kent County, Maryland.

4. ASSIGNMENTS AND SUBCONTRACTS

The Contractor may not assign or transfer this contract, any interest herein or any claim hereunder, except as expressly authorized in writing by County's County Administrator, or as otherwise specifically provided for in the contract. Unless performance is separately and expressly waived in writing by the County Administrator, an assignment does not release the Contractor from responsibility for performance of this contract. Unless otherwise provided in the contract, the Contractor may not contract with any other party for

furnishing any of the materials or services herein contracted for without the written approval of the County Administrator.

5. CHANGES

The County Administrator may unilaterally change the work, materials and services to be performed, in accordance with County law, rule, or regulation. The change must be in writing and within the general scope of the contract. The contract will be modified to reflect any time or money adjustment the Contractor is entitled to receive. Any claim concerning an adjustment in time or money due to a change must be given in writing to the County Administrator, or the designated Contract Administrator, within thirty (30) days from the date that the change was ordered, or the claim will be waived. Any failure to agree upon a time or money adjustment must be resolved under the "Disputes" clause (Section 8) of this contract. The Contractor must proceed with the prosecution of the work as changed, even if there is an unresolved claim. No charge for any extra work, time or material will be allowed, except as provided in this section.

6. CONTRACT ADMINISTRATION

A. The Contract Administrator, subject to paragraph B below, is the Department Representative designated by the County Administrator. The Contract Administrator is authorized to:

- 1) Serve as liaison between the County and Contractor;
- 2) Give direction to the Contractor to ensure satisfactory and complete performance;
- 3) Monitor and inspect the Contractor's performance to ensure acceptable timeliness and quality of service;
- 4) Serve as records custodian for this contract;
- 5) Accept or reject the Contractor's performance or service;
- 6) Furnish timely written notice of the Contractor's performance failures, if applicable, to the County Administrator;
- 7) Prepare required documents and reports;
- 8) Approve or reject invoices for payment;
- 9) Recommend contract modifications or terminations to the County Administrator; and
- 10) Issue Notice to Proceed.

B. The Contract Administrator is NOT authorized to make determinations (as opposed to recommendations) that alter, modify, terminate, or cancel the contract, effect a procurement, interpret ambiguities in contract language, or waive the County's contractual rights.

7. COST & PRICING DATA

The Contractor guarantees that any cost and/or pricing data provided to the County will be accurate and complete. The Contractor grants the County access to all books, records, documents, and other supporting data in order to permit adequate evaluation of the Contractor's proposed price(s). The Contractor also agrees that the price to the County, including profit or fee, may, at the option of the County, be reduced to the extent that the price was based on inaccurate, incomplete, or non-current data supplied by the Contractor.

8. DISPUTES DURING CONTRACT PERFORMANCE

Any dispute by Contractor arising during the performance of the contract, which dispute is not disposed of by mutual agreement, must be decided as provided hereunder. Pending final resolution of a dispute, the Contractor must proceed diligently with contract performance. Subject to the discretion of the County Administrator, the head of the County department, office, or agency ("Department Head") of the Contract Administrator is the designee of the County Administrator, for the purpose of dispute resolution. If the Contract Administrator is the Department Head, then the dispute shall be managed by the County Administrator. The Department Head may, with the Contractor's consent, delegate this responsibility to another person (other than the Contract Administrator). The Contractor waives any dispute or claim not made in writing and received by the Department Head within thirty (30) days of the occurrence giving rise to the dispute or claim. A dispute must be in writing, for specific relief, and any requested relief must be fully supported by affidavit and all relevant calculations, including cost and pricing information, records, and other information. The Contractor may, at the County's option, be made a party to any related dispute involving another Contractor.

9. DOCUMENTS, MATERIALS AND DATA

All documents, materials or data developed as a result of this contract are the County's property, unless specifically provided for in the contract. The County has the right to use and reproduce any documents, materials, and data, including confidential information, used in the performance of, or developed as a result of, this contract. The County may use this information for its own purposes, including reporting to state and federal agencies. The Contractor warrants that it has title to or right of use of all documents, materials or data used or developed in connection with this contract. The Contractor must keep confidential all documents, materials, and data prepared or developed by the Contractor or supplied by the County.

10. DURATION OF OBLIGATION

The Contractor agrees that all of the Contractor's obligations and warranties which, directly or indirectly, are intended by their nature or by implication to survive performance of the contract shall so survive the completion of performance, termination for cause, or the termination for convenience of the contract.

11. ENTIRE AGREEMENT

There are no promises, terms, conditions, or obligations other than those contained within the contract, including any terms, conditions, documents or exhibits thereto, and in these General Terms and Conditions. This contract supersedes all communications, representations, or agreements, either verbal or written, between the parties hereto, with the exception of express warranties given to induce the County to enter into the contract.

12. ETHICS REQUIREMENTS/ POLITICAL CONTRIBUTIONS

The Contractor must comply with the ethics provisions contained in Chapter 29 – Ethics of the Code of Public Local Laws of Kent County.

13. GUARANTEE

- A. Contractor guarantees for one (1) year from acceptance, or for such other period of time as may have been expressly stated in the contract or the County's written solicitation, all goods, services, and construction offered, including those used in the course of providing the goods, services, and/or

products) carry a guarantee against any and all defects for such period. The Contractor must correct any and all defects in material and/or workmanship which may appear during the guarantee period, or any defects that occur within one (1) year of acceptance even if discovered more than one (1) year after acceptance, by repairing (or replacing with new items or new materials, if necessary) any such defect at no cost to the County and to the County's satisfaction;

- B. Should a manufacturer's or service provider's warranty or guarantee exceed the requirements stated above, that guarantee or warranty will be the primary one used in the case of defect. Copies of manufacturer's or service provider's warranties must be provided upon request;
- C. All warranties and guarantees must be in effect from the date of acceptance by the County of the goods or services;
- D. The Contractor guarantees that all work shall be accomplished in a workmanlike manner, and the Contractor must observe and comply with all federal, state, County and local laws, ordinances, and regulations in providing the goods and performing the services listed;
- E. Goods and materials provided under this contract must be of first quality, latest model, and of current manufacture, and must not be of such age or so deteriorated as to impair their usefulness or safety. Items that are used, rebuilt, or demonstrator models are unacceptable, unless specifically requested by the County in the contract documents; and
- F. All goods shall be merchantable and fit for the particular purpose, ordered or purchased, and as the Contractor so represents and warrants.

14. HAZARDOUS AND TOXIC SUBSTANCES

Manufacturers and distributors are required by federal "Hazard Communication" provisions of 29 CFR 1910.1200, and the Maryland "Access to Information About Hazardous and Toxic Substances" Law, to label each hazardous material or chemical container, and to provide Material Safety Data Sheets to the purchaser. The Contractor must comply with these laws and must provide the County with copies of all relevant documents, including Material Safety Data Sheets, prior to performance of services or contemporaneous with delivery of goods.

15. IMMIGRATION REFORM AND CONTROL ACT

The Contractor warrants that both the Contractor and any subcontractor do not and shall not hire, recruit, or refer for a fee, for employment under this contract or any subcontract, an alien while knowing the alien is an unauthorized alien, or any individual without complying with the requirements of the federal Immigration and Nationality laws, including but not limited to any verification and record keeping requirements. The Contractor further assures the County that, in accordance with those laws, it does not and will not discriminate against an individual with respect to hiring, or recruitment or referral for a fee, of the individual for employment or the discharging of the individual from employment because of such individual's national origin or, in the case of a citizen or intending citizen, because of such individual's citizenship status.

16. PROVISIONS

Notwithstanding any provisions to the contrary within any contract terms or conditions supplied by the Contractor, the County's General Terms and Conditions supersede the Contractor's terms and conditions in the event of any inconsistency, unless specifically waived or amended by the County.

In the case of any conflicts or ambiguities determined among the contract documents, such matters shall be resolved in favor of the following priorities:

- A. Any term or condition specifically provided for within a signed agreement or exhibit to a contract, other than terms and conditions provided by the Contractor;
- B. Terms and Conditions specified by the County in any Request For Proposal, Request For Qualifications, Invitation For Bid, or any other solicitation document, specifying with particularity the County's General Terms and Conditions; and
- C. These General Terms and Conditions.

The lack of a specific provision in any of the documents referred to in items 16.A. and 16.B. above shall not operate to create an ambiguity with these General Terms and Conditions.

17. INDEMNIFICATION

The Contractor is responsible for any loss, personal injury, death and any other damage (including incidental and consequential) that may be done or suffered by reason of the Contractor's negligence or failure to perform any contractual obligations. The Contractor must indemnify and save the County harmless from any loss, cost, damage, and other expenses, including attorney's fees and litigation expenses, suffered or incurred due to the Contractor's negligence or failure to perform any of its contractual obligations. If requested by the County, the Contractor must defend the County in any action or suit brought against the County arising out of the Contractor's negligence, errors, acts or omissions under this contract. The negligence of any agent, subcontractor or employee of the Contractor is deemed to be the negligence of the Contractor. For the purposes of this paragraph, County includes its elected officials, employees, agents, boards, and agencies. Any incidental and consequential damages shall be limited to the amount of insurance required by the contractor hereunder.

18. INDEPENDENT CONTRACTOR

If the Contractor is an independent contractor, the Contractor and the Contractor's employees or agents are not agents or employees of the County. Neither these General Terms and Conditions nor the contract are intended to create any partnership, joint venture, agency or other relationship between the County and the Contractor.

19. INFRINGEMENT

The Contractor represents and warrants that there is no copyright or patent infringement with respect to any goods or materials furnished pursuant to the contract. The Contractor shall indemnify and hold harmless the County with respect to cost, expense, damages, and liability arising from or on account of any claim for infringement.

20. INSPECTIONS

The County has the right to monitor, inspect and evaluate or test all supplies, goods, or services called for by the contract at all reasonable places (including the Contractor's place of business) and times (including the period of preparation or manufacture).

21. INSURANCE

Prior to execution of the contract, the Contractor must obtain, at its own cost and expense, and must keep in force and effect during the term of this contract (including all extensions) the insurance specified in the Attachment B - 5 of 7

contract. This must include any applicable table or attachment with an insurance company licensed or qualified to do business in the State of Maryland and with an A. M. Best rating of not less than A-. The Contractor must submit a certificate of insurance prior to award of this contract and prior to any contract modification extending the term of the contract, as evidence of compliance with this provision. The County must be named as an additional insured on all liability policies. Forty-five (45) days written notice to the County of cancellation or material change in any of the policies is required. In no event may the insurance coverage be less than that shown on the applicable table, attachment, or contract provision for required insurance. Subject to applicable law, the County Administrator may waive or modify the requirements of this section 21 in whole or in part.

22. NON-CONVICTION OF BRIBERY

The Contractor hereby declares and affirms that, to its best knowledge, none of its officers, directors, members, partners, or employees directly involved in obtaining contracts has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the federal government.

23. NONDISCRIMINATION IN EMPLOYMENT

The Contractor shall not discriminate in employment, or in the treatment of employees, or discriminate in any manner on the basis of race, color, gender, age, religion, creed, national origin, ancestry, marital status, disability, political affiliation, or lawful sexual orientation and shall follow and obey all applicable State, Federal, and County laws and regulations regarding employment discrimination. The Contractor must bind its subcontractors to the provisions of this section.

24. PAYMENTS

This contract is subject to a non-appropriations clause as provided herein. No payment may be made or is due under this contract unless funds for the payment have been appropriated and encumbered by the County. Under no circumstances will the County pay the Contractor for legal fees. The Contractor must not proceed to perform any work or provide goods, services, or construction prior to receiving written confirmation that the County has appropriated and encumbered funds for the work. If the Contractor fails to obtain this verification from the County prior to performing work, the County has no obligation to pay the Contractor for the work.

If this contract provides for an additional contract term, or for work in any period beyond the end of the County's fiscal year in which the contract is executed, continuation of this contract beyond the end of that fiscal year is contingent upon the subsequent appropriation of funds and encumbrance of those appropriated funds for payments under this contract. If funds are not appropriated and encumbered to support continued performance in a subsequent fiscal period, this contract terminates without further notice from, or cost to, the County. The Contractor acknowledges that the County Commissioners have no obligation to appropriate funds for this contract in subsequent fiscal years. Furthermore, the County has no obligation to encumber funds to this contract in subsequent fiscal years. Accordingly, for each subsequent contract term, the Contractor must take appropriate action to verify that such funds have been appropriated and encumbered. See Annotated Code of Maryland, Article 31, section 3.

25. PERSONAL PROPERTY

All furniture, office equipment, operator equipment, vehicles and other similar types of personal property specified in the contract and purchased with funds provided under the contract become the property of the County upon the termination or expiration of this contract, unless expressly stated otherwise.

26. TERMINATION FOR CAUSE

The County may terminate the contract in whole or in part, and from time to time, whenever the County determines that the Contractor is:

- A. Defaulting in performance or is not complying with any provision of this contract;
- B. Failing to make satisfactory progress in the prosecution of the contract; or
- C. Endangering the performance of this contract.

Prior to a termination for cause, the County will send the Contractor written notice specifying the cause. The notice will give the Contractor ten (10) days from the date the notice is issued to cure the default or make progress satisfactory to the County in curing the default, unless a different time is given in the notice. If the County determines that default contributes to the curtailment of an essential service or poses an immediate threat to life, health, or property, the County may terminate the contract immediately upon issuing oral or written notice to the Contractor without any prior notice or opportunity to cure. In addition to any other remedies provided by law or the contract, the Contractor must compensate the County for additional costs incurred by the County to obtain substitute performance. A termination for cause shall be considered a termination for convenience as of the date the Contractor was advised of the termination for cause, if there was, in fact, no cause.

27. TERMINATION FOR CONVENIENCE

This contract may be terminated by the County, in whole or in part, upon written notice to the Contractor, when the County determines termination to be in the County's best interest. The termination is effective ten (10) days after the notice is issued, unless a different time is given in the notice. The County is liable only for payment for acceptable performance prior to the effective date of the termination, and for costs reasonably incurred as of the date of termination, including costs or items acquired by such costs that cannot be economically retained by the Contractor for other or future use of the Contractor.

28. TIME

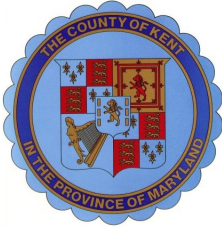
Time is of the essence in the performance by Contractor of the contract and of all ancillary matters arising therefrom.

29. TITLE

All goods delivered or provided to the County or otherwise pursuant to the contract, and the title thereto, shall be free of any security interest, lien, contract restriction, or other form of encumbrance. Title shall pass to the County at the place of delivery to the County, subject to the County's right to inspect and accept or reject the goods.

30. WORK UNDER THE CONTRACT

Work may not commence under this contract until all conditions for commencement are met, including execution of the contract by both parties, compliance with insurance requirements, and issuance of any required Notice to Proceed.



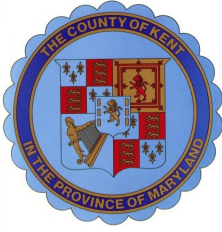
**Rosemary Ramsey Granillo, Director, Kent County Local Management
Board
2/6/2024
County Commissioners Meeting**

Item Summary:

Kent County Local Management Board Appointment Recommendations

ATTACHMENTS:

Description



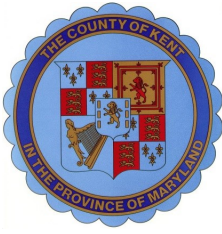
Jim Miller, Director, Human Resources
2/6/2024
County Commissioners Meeting

Item Summary:

Planning, Housing, and Zoning Associate Planner Vacancy

ATTACHMENTS:

Description



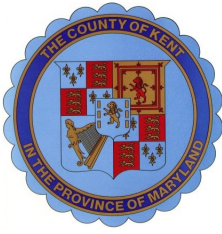
Jim Miller, Director, Human Resources
2/6/2024
County Commissioners Meeting

Item Summary:

Public Works - Roads Division, MEO I Vacancy

ATTACHMENTS:

Description



Jim Miller, Director, Human Resource
2/6/2024
County Commissioners Meeting

Item Summary:

Public Works - Water and Wastewater Division Utility Technician Vacancy

ATTACHMENTS:

Description



Ronald H. Fithian, President
2/6/2024
County Commissioners Meeting

Item Summary:

Proposed Crab Pot Line Discussion

ATTACHMENTS:

Description

02.06.24 Mike Luisi, Maryland Department of Natural Resources, Opposition of Proposed Crab Pot Line Adjustment in Rock Hall, Maryland



The County Commissioners of Kent County
Ronald H. Fithian, President | Albert H. Nickerson, Member | John F. Price, Member
Shelley L. Heller, County Administrator | Thomas N. Yeager, County Attorney

February 6, 2024

Mike Luisi
Maryland Department of Natural Resources
580 Taylor Avenue
Annapolis, Maryland 21401

Re: Opposition of Proposed Crab Pot Line Adjustment in Rock Hall, Maryland


To Mr. Luisi:

It has been brought to our attention that the Maryland Department of Natural Resources is considering moving a Crab Pot Regulatory Line off Rock Hall. It is our position that moving this line inward will create confusion for our commercial crabbers. This Rock Hall location was established over fifty years ago and the longitude and latitude coordinates in place are broadly identified by local crab potters. It appears that the proposed change does not benefit the community stakeholders or the resource. Therefore, We, the County Commissioners of Kent County, Maryland respectfully requests the line remain untouched.

Sincerely,
THE COUNTY COMMISSIONERS
OF KENT COUNTY, MARYLAND

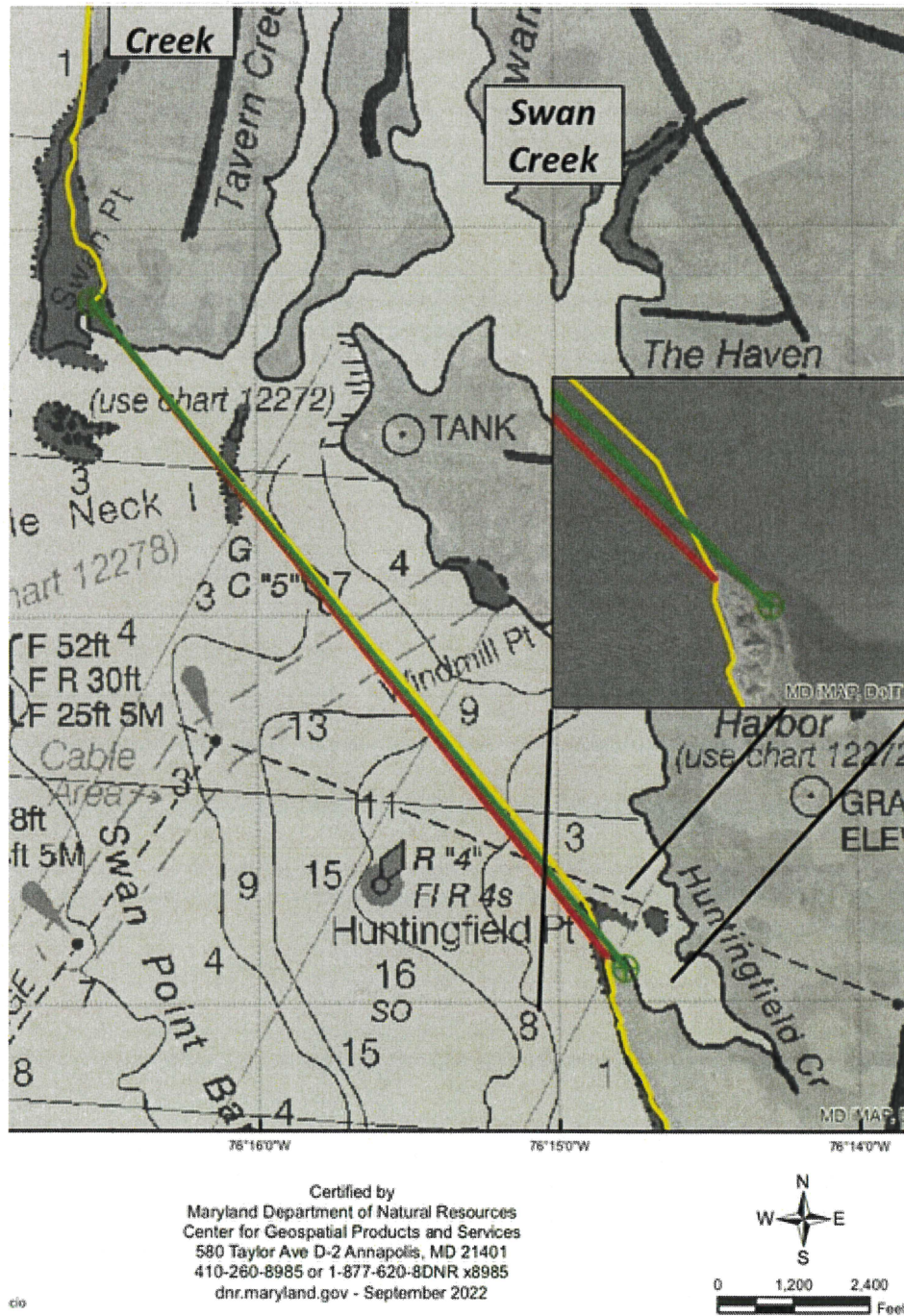

Ronald H. Fithian, President

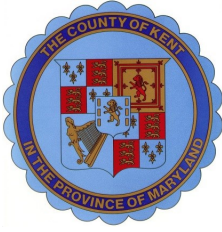

Albert H. Nickerson, Member


John F. Price, Member

Enclosure: Exhibit A Copy of Rock Hall Map dated September 2022

Copy of a Rock Hall Map





Procedures For Public Comment 2/6/2024 County Commissioners Meeting

ATTACHMENTS:

Description

02.06.24 Public Comments Sign In Sheet

Press and Public Comments

**PUBLIC COMMENTS
SIGN IN SHEET
February 6, 2024**

NAME (please print)	ADDRESS	TOPIC
Robert Newberry		Chesapeake Bay / rules / industry challenges

Press and Public Comments

Time is allotted at the beginning and end of each meeting for the Commissioners to receive comments from the public. Anyone interested in speaking must sign up on the provided The Public Comment sign-up sheet is located on the table inside the meeting room.

The President of the Board will call the names of the listed individuals when it is time to speak. When making comments, individuals are asked to speak slowly, clearly, and concisely. Precede all comments with your name and address and speak only on the subject under discussion.

Comments in writing are welcomed and should be given to the staff after your presentation. Any person making personal, impertinent, or slanderous remarks, or whose speech or actions become disruptive, will be asked to leave the meeting.

Interested parties may address the Commissioners in writing at any time about any matter pertaining to County business. Written statements can be hand-delivered or mailed to:

The County Commissioners of Kent County, Maryland
400 High Street
Chestertown, MD 21620



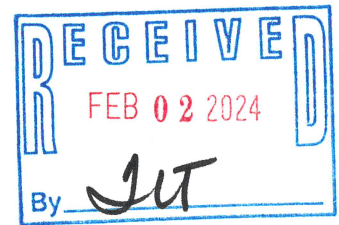
**Kevin J. Shearon, P.E., LEED AP, Davis, Moore, Shearon & Associates,
LLC
2/6/2024
County Commissioners Meeting**

Item Summary:

ATTACHMENTS:

Description

02.06.24 DMS Associates, LLC



Davis, Moore, Shearon & Associates, LLC

January 31, 2024

COUNTY COMMISSIONERS OF KENT CO MD
400 HIGH ST
CHESTERTOWN, MD 21620

**RE: PROPOSED NEW CONVENIENCE STORE / DELI ON THE LANDS OF KNR,
INC., 10816 WORTON, ROAD, WORTON, MARYLAND
KENT COUNTY TAX MAP 28, PARCEL 167
DMS & ASSOCIATES JOB #2022049**

To Whom It May Concern:

This letter is to inform you of an informational open house meeting that will be held on Thursday, February 15, 2024, at the Kent County Community Center located at 11041 Worton Road, Worton, Maryland between 6:00 pm and 6:30 pm. The purpose of this open house is to allow residents in the area of the project the opportunity to review the plans and ask questions of the developer prior to the project proceeding to the Kent County Planning Commission for review.

KNR, Inc. is proposing to redevelop their property located at 10816 Worton Road, Worton, Maryland into a small convenience store / deli with associated parking. The overall property is identified as Tax Map 28 Parcel 167 and is zoned Village (V). It is currently improved with a dilapidated building that will be razed and a new 2,500-sf store constructed.

If you should have any questions please feel free to contact me at (443)262-9130.

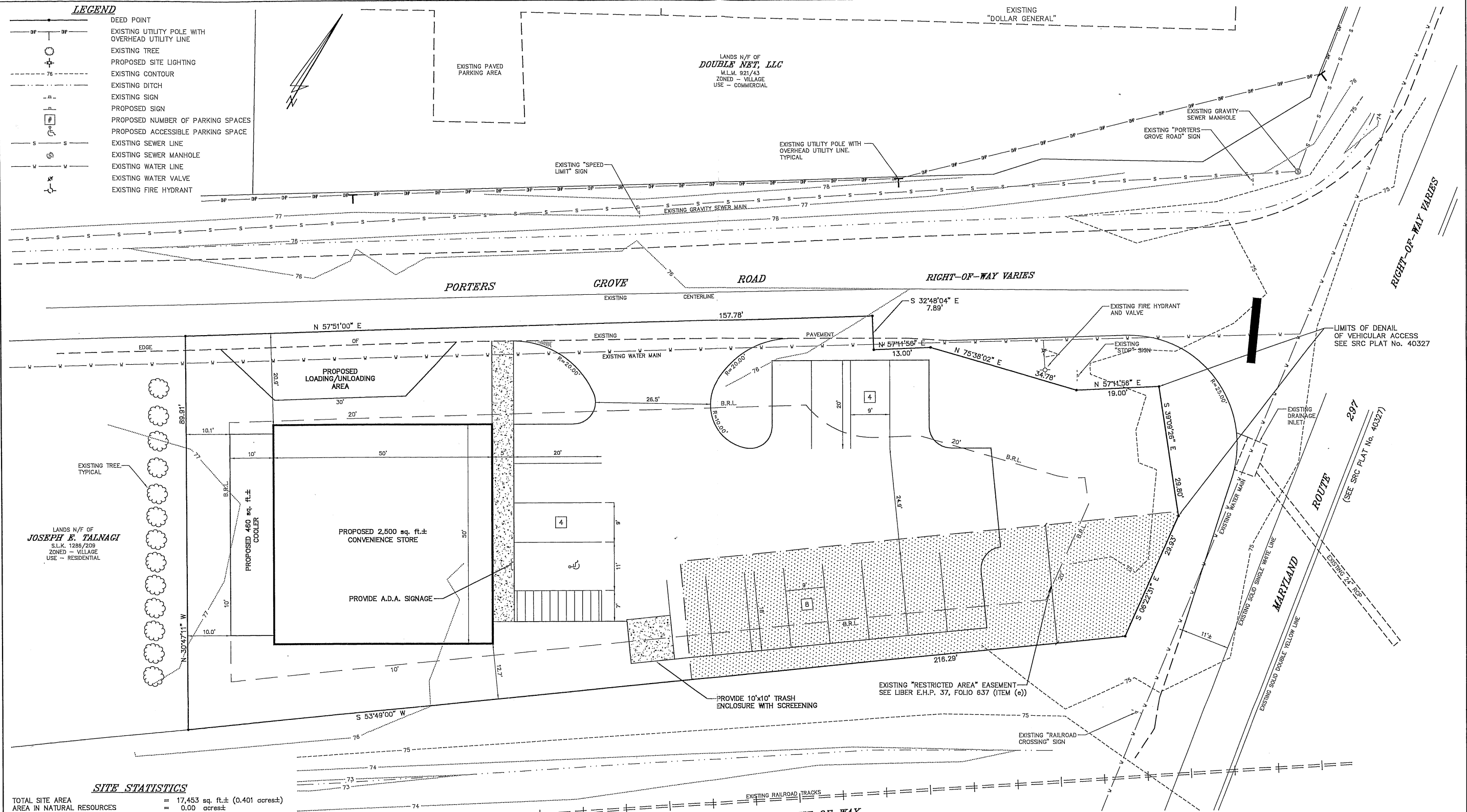
Sincerely,

DMS & Associates, LLC

A handwritten signature in blue ink, appearing to read "Kevin J. Shearon", written over a horizontal line.

Kevin J. Shearon, P.E., LEED AP

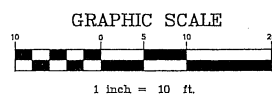
Enclosure



SITE STATISTICS

TOTAL SITE AREA	=	17,453 sq. ft. ± (0.401 acres) ±
AREA IN NATURAL RESOURCES	=	0.00 acres ±
AREA IN FLOODPLAIN	=	0.00 acres ±
FLOOR AREA (EXISTING) (15.5%)	=	0,000 sq. ft. ± (0.000 acres) ±
FLOOR AREA (TO BE REMOVED)	=	0,000 sq. ft. ± (0.000 acres) ±
FLOOR AREA (PROPOSED)	=	2,960 sq. ft. ± (0.068 acres) ±
FLOOR AREA (TOTAL) (17.0%)	=	2,960 sq. ft. ± (0.068 acres) ±
IMPERVIOUS AREA (EXISTING) (46.0%)	=	8,035 sq. ft. ± (0.184 acres) ±
IMPERVIOUS AREA (TO BE REMOVED)	=	7,446 sq. ft. ± (0.171 acres) ±
IMPERVIOUS AREA (PROPOSED)	=	10,494 sq. ft. ± (0.241 acres) ±
IMPERVIOUS AREA (TOTAL) (63.5%)	=	11,083 sq. ft. ± (0.254 acres) ±
LANDSCAPE AREA (EXISTING) (54.0%)	=	9,418 sq. ft. ± (0.216 acres) ±
LANDSCAPE AREA (PROVIDED) (36.5%)	=	6,370 sq. ft. ± (0.146 acres) ±

PARKING REQUIREMENTS
RETAIL or WHOLESALE STORE:
1 space/200 sq. ft. FLOOR AREA X 2,960 sq. ft. = 15 SPACES
PARKING SPACES (REQUIRED) = 15 SPACES (1 ACCESSIBLE)
PARKING SPACES (PROVIDED) = 16 SPACES (1 ACCESSIBLE)



KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

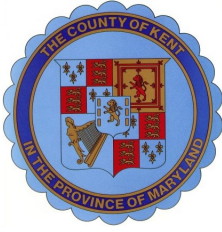
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A duly licensed PROFESSIONAL ENGINEER in the State of Maryland, License No. 200249.
DATE: NOVEMBER 29, 2023
SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION

CONCEPTUAL SITE PLAN
ON THE LANDS OF
KNR, INC.
IN THE VILLAGE OF WORTON
TAX MAP - 28, GRID - 1B, PARCEL - 167
THIRD ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR: SUNNY DATTA

DATE	SCALE
OCTOBER '23	1" = 10'
JOB No.	DRAWN BY
2022049	WJM
FOLDER Ref.	DESIGNED BY
28-2022049	KJS
SHEET No.	
C-2	
CADD FILE	
22049-C2	



American Rescue Plan Act (ARPA) Funds Spend Plan 2/6/2024 County Commissioners Meeting

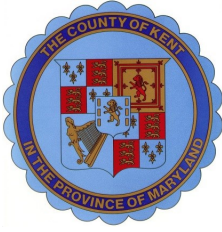
ATTACHMENTS:

Description

1-30-2024 ARPA Fund Commissioner Report

**AMERICAN RESCUE PLAN ACT FUND
AS OF COMMISSIONER MEETING MINUTES DATED
1/30/2024**

Project	Department	Project Estimate	Date Approved	Amount Approved	Date Completed
Feed the Elderly Year 1	Local Management Board	112,800	08/31/21	112,800	9/30/2022
Feed the Elderly Year 2 and 3	Local Management Board	204,115	03/08/22	204,115	
Clariflocculator Replacement Project	Water & Wastewater Fund	275,000	08/31/21	275,000	6/28/2022
Clariflocculator Replacement Project Change Order #1		2,817	01/11/22	2,817	6/28/2022
Clariflocculator Replacement Project Change Order #2		90,642	01/11/22	90,642	11/23/2022
AV System	Information Technology	71,254	10/26/21	71,254	5/17/2023
IT Software	Information Technology	27,095	10/26/21	27,095	8/10/2022
Neighborhood & Infrastructure Grants	Information Technology	258,402	12/14/21	258,402	
A/V Equipment in EOC	Emergency Operation Center	14,087	02/01/22	14,087	
SCADA Pump Station Monitoring	Water & Wastewater Fund	110,065	02/08/22	110,065	
Millington/RT301 Wastewater Treatment Feasibility Study	Water & Wastewater Fund	57,500	02/08/22	57,500	
Millington/RT301 Wastewater Conveyance System Capacity Study		9,500	09/27/22	9,500	
Tolchester Wastewater-Design Services Influent Screen	Water & Wastewater Fund	52,910	02/08/22	52,910	
Tolchester Wastewater - Bid Services and Const. Management		35,735	09/27/22	35,735	
Tolchester Wastewater Influent Screen Construction		600,914	04/25/23	600,914	
Worton WWTP Influent Lagoon Engineer Design & Bid Services	Water & Wastewater Fund	33,076	03/22/22	33,076	
Worton WWTP Influent Lagoon Engineer Const. Management		43,736	03/08/23	43,736	
Worton WWTP Lagoon Sludge Removal Contract		1,400,725	12/13/22	1,400,725	
Worton WWTP Lagoon Sludge Removal Contract Change Order #1		30,000	06/13/23	30,000	
Worton WWTP Lagoon Sludge Removal Contract Change Order #2		(486,784)	08/08/23	(486,784)	
Kennedyville Pump Station #2 Relocation Design	Water & Wastewater Fund	52,338	09/27/22	52,338	
Kennedyville Pump Station #2 Relocation Const. Management		<i>Deferred</i>			
Kennedyville Pump Station #2 Construction		<i>Deferred</i>			
Worton/Kennedyville GIS Water and Sewer Facilities Mapping	Water & Wastewater Fund	75,770	09/27/22	75,770	
Worton Vehicle Storage Building & site prep/lighting/heat	Water & Wastewater Fund	40,000	10/25/22	40,000	
Worton WWTP Solids Press Replacement Design	Water & Wastewater Fund	64,940	11/28/23	64,940	
Worton WWTP Solids Press Replacement Construction Management		20,000.00			
Worton WWTP Solids Press Replacement		250,000.00			
Total Amount of Funds Committed		<u>\$ 3,446,637</u>		<u>\$ 3,176,637</u>	
Amount of ARPA Funds		3,766,777		3,766,777	
Balance of ARPA Funds Remaining		<u>\$ 320,140</u>		<u>\$ 590,140</u>	



Contingency and Use of Fund Balance Report

2/6/2024

County Commissioners Meeting

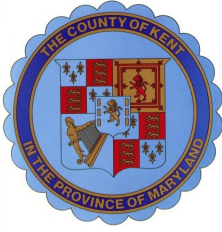
ATTACHMENTS:

Description

1-30-2024 Commissioner Report Contingency

**FY24 CONTINGENCY & USE OF FUND BALANCE
AS OF COMMISSIONERS MEETING MINUTES DATED
January 30, 2024**

[illegible]



**Jim Miller, Director, Human Resources and Pete Landon, Director,
Office of Emergency Services**

2/6/2024

County Commissioners Meeting

Item Summary:

Personnel

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305(b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals.

ATTACHMENTS:

Description



Jim Miller, Director, Human Resources
2/6/2024
County Commissioners Meeting

Item Summary:

Personnel

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305(b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals.

ATTACHMENTS:

Description



**Jim Miller, Director, Human Resources and Thomas N. Yeager, County
Attorney
2/6/2024
County Commissioners Meeting**

Item Summary:

Personnel, Legal Advice, and Potential Litigation

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305 (b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals; (7) To consult with counsel to obtain legal advice; and (8) to consult with staff, consultants, or other individuals about pending or potential litigation.

ATTACHMENTS:

Description



Thomas N. Yeager, County Attorney
2/6/2024
County Commissioners Meeting

Item Summary:

Personnel, Legal Advice, and Potential Litigation

The meeting was closed under the Annotated Code of Maryland, General Provisions Article § 3-305 (b) (1) To discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom this public body has jurisdiction; or any other personnel matter that affects one or more specific individuals; (7) To consult with counsel to obtain legal advice; and (8) to consult with staff, consultants, or other individuals about pending or potential litigation.

ATTACHMENTS:

Description