	777 - 777 - 277 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 777 - 77	LEGEND
-	SYMBOL	DESCRIPTION
***************************************	108	EXISTING CONTOUR 2' INTERVAL
-	110	EXISTING CONTOUR 10' INTERVAL
		EXISTING SAN. SEWER LINE
-		EXISTING STORM DRAIN LINE
		EXISTING WATER LINE
		EXISTING UNDERGROUD ELECTRIC LIN
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		EXISTING FIBER OPTIC/CABLE LINE
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	orner X encountries X encountries	EXISTING FENCE
	— x —— x —	PROPOSED FENCE
	108	PROPOSED CONTOUR 2' INTERVAL
	110	PROPOSED CONTOUR 10' INTERVAL
	+ 107.30	PROPOSED SPOT ELEVATION
		PROPOSED CONCRETE WALK
		PROPOSED MACADAM PAVING
	£3 <b>**</b> ₹\$90	EXISTING TREE AND SHRUB
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	EXISTING TREELINE
	$\sim\sim$	PROPOSED TREELINE
		PROPOSED PUBLIC WATER
		PROPOSED PRIVATE WATER
	18 RCCP	PROPOSED STORMDRAIN
	** 5	PROPOSED PRIVATE SEWER
	<i>g</i> * 5	PROPOSED PUBLIC SEWER
		PROPOSED GRASS PAVERS
		SOILS DELINEATION
- 1		

SSF SUPER SILT FENCE

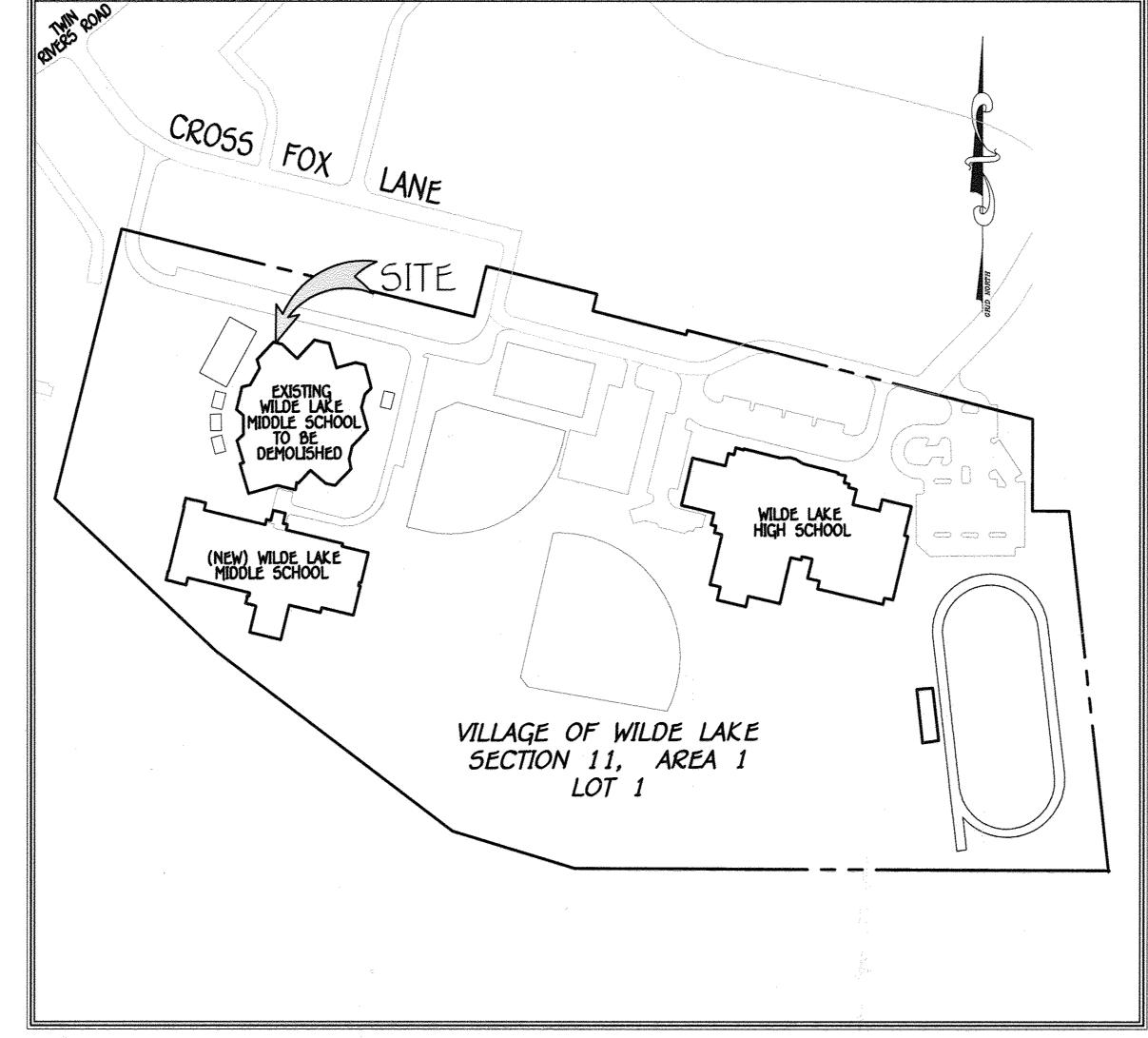
## SITE ANALYSIS DATA

- 1. AREA TABULATION:
- A, TOTAL PROJECT AREA: 52.30 AC± B. TOTAL AREA OF R/W DEDICATION: O AC. ±
- C. TOTAL AREA OF SITE: 52.30 AC. ±
- D. BUILDING COVERAGE: MIDDLE SCHOOL & HIGH SCHOOL 215,622 SF (9.46%)
- E. TOTAL AREA OF WETLANDS: N/A
- F. TOTAL AREA OF WETLANDS BUFFER: N/A G. TOTAL AREA OF FLOODPLAIN: N/A
- H. TOTAL AREA OF FLOODPLAIN BUFFERS: N/A
- 1. TOTAL AREA OF SLOPES 15%-25%; N/A J. TOTAL AREA OF SLOPES 25% AND GREATER: N/A
- K. THERE ARE NO ERODIBLE SOILS ON THIS SITE. L. LIMIT OF DISTURBANCE: 14.8 AC+
- M. PROPOSED USE OF SITE OR STRUCTURE: PUBLIC MIDDLE SCHOOL N. ZONED: NEWTOWN (NT) CREDITED OPEN SPACE (44.77 AC.)
- NON-CREDITED OPEN SPACE (7.529 AC.)
- 2. PARKING SPACE DATA:
- A. THE NUMBER OF PARKING SPACES IN ACCORDANCE WITH THE PUBLIC SCHOOL SYSTEM'S
- B. NUMBER OF SPACES PROPOSED UNDER THIS SITE PLAN = 100 (INCLUDING 5 HANDICAPPED SPACES & 6 LOW EMISSION & FUEL EFFICIENT VEHICLES SPACES) C. TOTAL NUMBER OF BUS STACKING SPACES PROVIDED = 15
- 3. BUILDING COVERAGE PERMITTED: 227,819 SF OR 5.23 AC = 10% OF GROSS TRACT AREA BUILDING COVERAGE PROPOSED: EXISTING HIGH SCHOOL PROPOSED MIDDLE SCHOOL = 106,221 SF EXISTING PORTABLE CLASSROOMS = 12,621 SF
  - TOTAL = 220,243 SF (10.02%)EXCLUDING PORTABLE CLASSROOMS BUILDING COVERAGE = 215,622 SF OR 4.95 AC. ± = 9.46% OF GROSS TRACT AREA
- 4. OPEN SPACE TABULATION:
- A. OPEN SPACE LAND USE (ENTIRE PARCEL): 52.30 AC+
- OPEN SPACE CREDITED: 44.77 AC± \* OPEN SPACE NON-CREDITED: 7.529 AC+ \*
- \* ACREAGES SHOWN ARE PERMITTED ACREAGES BASED UPON AMENDED FDP-FORTY FIVE-A-III CRITERIA

# SITE DEVELOPMENT PLAN WILDE LAKE MIDDLE 5CHOOL

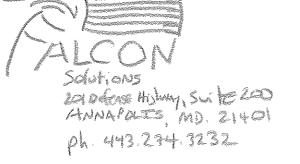
VILLAGE OF WILDE LAKE SECTION 11 AREA 1

TAX MAP No.: 29, GRID No.: 24, PARCEL No.: 280 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND



## LOCATION MAP

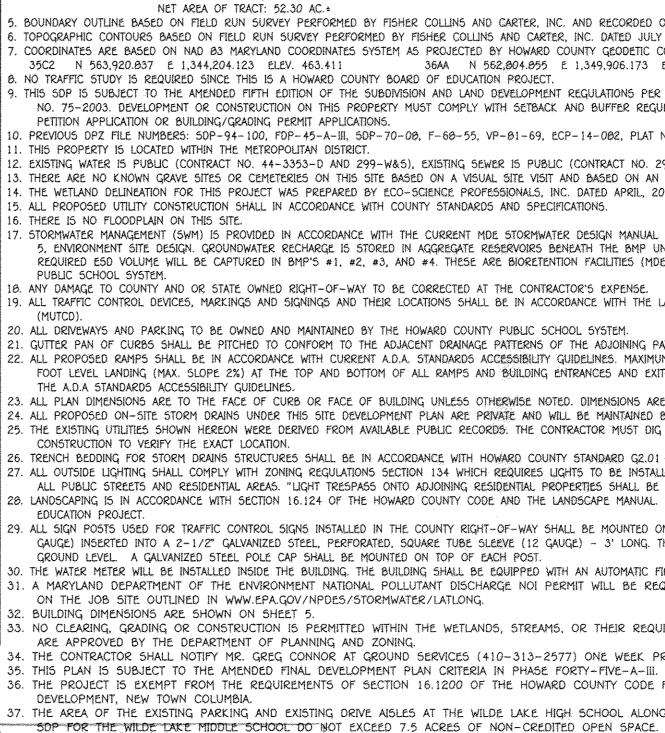
5CALE: 1" = 200"



<u>BENCHMARK INFORMATION</u> B.M.#1 - HOWARD COUNTY CONTROL STATION #35C2 - HORIZONTAL - NAD '63) (LOCATED IN THE ISLAND NEAR THE INTERSECTION OF CEDAR LANE & LITTLE PATUXENT PARKWAY. APPROX. 4.56' BEHIND THE CURB AND 10' NORTH OF METAL POST) E 1,344,204.123 ELEVATION = 463,411 - VERTICAL - (NAVO '00)

B.M.#2 - HOWARD COUNTY CONTROL STATION #36AA - HORIZONTAL - (NAD '03) (LOCATED ALONG LITTLE PATUXENT PARKWAY NEAR THE INTERSECTION OF BROKEN LAND PARKWAY. APPROX. 1.5' BEHIND THE CURB AND 2' OFF EDGE OF SIDEWALK) £ 1.349.906.173

ELEVATION = 359.173 - VERTICAL - (NAVD '88)



1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE WORKING DAYS PRIOR TO START OF WORK 3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 40 HOURS PRIOR TO ANY DIGGING AND EXCAVATION WORK 4. PROJECT BACKGROUND: SUBDIVISION NAME: VILLAGE OF WILDE LAKE, SECTION 11, AREA 1

TAX MAP 29, GRID 24. TAX MAP 35, GRID 6, PARCEL NO. 280 ZONING: THIS PROJECT IS ZONED NEWTOWN, OPEN SPACE CREDITED AND NON CREDITED PER THE COMPREHENSIVE ZONING PLAN DATED OCTOBER 06, 2013 AND FOP-45-A-III. ELECTION DISTRICT: FIFTH GROSS SITE AREA: 52.30 AC. ±

NUMBER OF BUILDABLE PARCELS: AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0 AC. +

AREA OF FLOODPLAIN: 0 AC. # AREA OF 25% OR GREATER SLOPES: 0 AC. \*

. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. AND RECORDED ON PLAT NO. 23161 23163 DATED OCTOBER, 2014. TOPOGRAPHIC CONTOURS BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED JULY 2013.

COORDINATES ARE BASED ON NAD 83 MARYLAND COORDINATES SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS. 36AA N 562,804.855 E 1,349,906.173 ELEV. 359.173

THIS SOP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER

. EXISTING WATER IS PUBLIC (CONTRACT NO. 44-3353-D AND 299-W&S), EXISTING SEWER IS PUBLIC (CONTRACT NO. 299-W&S).

3. THERE ARE NO KNOWN GRAVE SITES OR CEMETERIES ON THIS SITE BASED ON A VISUAL SITE VISIT AND BASED ON AN EXAMINATION OF THE HOWARD COUNTY CEMETERY INVENTORY MAP.

14. THE WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED APRIL, 2014.

16. THERE IS NO FLOODPLAIN ON THIS SITE. STORMWATER MANAGEMENT (SWM) IS PROVIDED IN ACCORDANCE WITH THE CURRENT MDE STORMWATER DESIGN MANUAL (REVISED MAY 2009), VOLUMES I AND II, CHAPTER 3, URBAN BMP DESIGN, AND CHAPTER 5, ENVIRONMENT SITE DESIGN. GROUNDWATER RECHARGE IS STORED IN AGGREGATE RESERVOIRS BENEATH THE BMP UNDERDRAINS. NON-ROOFTOP DISCONNECTION CREDIT IS USED WHERE PRACTICABLE. THE REQUIRED ESD VOLUME WILL BE CAPTURED IN BMP'S #1, #2, #3, AND #4. THESE ARE BIORETENTION FACILITIES (MDE F-6). BMP'S #1, #2, #3 AND #4 ARE OWNED AND MAINTAINED BY THE HOWARD COUNTY

B. ANY DAMAGE TO COUNTY AND OR STATE OWNED RIGHT-OF-WAY TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE. 19. ALL TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNINGS AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"

20. ALL DRIVEWAYS AND PARKING TO BE OWNED AND MAINTAINED BY THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM.

21. GUTTER PAN OF CURBS SHALL BE PITCHED TO CONFORM TO THE ADJACENT DRAINAGE PATTERNS OF THE ADJOINING PAVING FOR VEHICULAR USE.

22. ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A. STANDARDS ACCESSIBILITY GUIDELINES. MAXIMUM SIDEWALK CROSS SLOPE SHALL BE TWO PERCENT, PROVIDE A (5'X5') FIVE FOOT BY FIVE FOOT LEVEL LANDING (MAX. SLOPE 2%) AT THE TOP AND BOTTOM OF ALL RAMPS AND BUILDING ENTRANCES AND EXITS. HANDRAILS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE WITH SECTION 505 OF THE A.D.A STANDARDS ACCESSIBILITY GUIDELINES. 23. ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS UNLESS OTHERWISE NOTED.

24. ALL PROPOSED ON-SITE STORM DRAINS UNDER THIS SITE DEVELOPMENT PLAN ARE PRIVATE AND WILL BE MAINTAINED BY THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM. 25. THE EXISTING UTILITIES SHOWN HEREON WERE DERIVED FROM AVAILABLE PUBLIC RECORDS. THE CONTRACTOR MUST DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS AND CONNECTION POINTS PRIOR TO CONSTRUCTION TO VERIFY THE EXACT LOCATION.

26. TRENCH BEDDING FOR STORM DRAINS STRUCTURES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD G2.01 CLASS C BEDDING UNLESS OTHERWISE NOTED. 27. ALL OUTSIDE LIGHTING SHALL COMPLY WITH ZONING REGULATIONS SECTION 134 WHICH REQUIRES LIGHTS TO BE INSTALLED TO DIRECT/REFLECT LIGHT DOWNWARDS AND INWARDS ON THE SITE AND AWAY FROM ALL PUBLIC STREETS AND RESIDENTIAL AREAS. "LIGHT TRESPASS ONTO ADJOINING RESIDENTIAL PROPERTIES SHALL BE LIMITED 0.1 FOOT CANDLES."

26. LANDSCAPING IS IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. NO LANDSCAPE SURETY IS REQUIRED SINCE THIS IS A HOWARD COUNTY BOARD OF 29. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"). SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE THE

GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST. 30. THE WATER METER WILL BE INSTALLED INSIDE THE BUILDING. THE BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC FIRE PREVENTION SPRINKLER SYSTEM,

31. A MARYLAND DEPARTMENT OF THE ENVIRONMENT NATIONAL POLLUTANT DISCHARGE NOI PERMIT WILL BE REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS ON THE JOB SITE OUTLINED IN WWW.EPA.GOV/NPDES/STORMWATER/LATLONG. 32. BUILDING DIMENSIONS ARE SHOWN ON SHEET 5.

33. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS UNLESS THE ACTIVITIES ARE CONSIDERED NECESSARY OR WAIVERS ARE APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING. 34. THE CONTRACTOR SHALL NOTIFY MR. GREG CONNOR AT GROUND SERVICES (410-313-2577) ONE WEEK PRIOR TO FINE GRADING AND STABILIZATION OF ANY AREAS ON THE SCHOOL SITE.

36. THE PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE THE SITE IS PART OF A PLANNED UNIT DEVELOPMENT, NEW TOWN COLUMBIA. 37. THE AREA OF THE EXISTING PARKING AND EXISTING DRIVE AISLES AT THE WILDE LAKE HIGH SCHOOL ALONG WITH THE PROPOSED PARKING AND PROPOSED DRIVE AISLES SHOWN ON THIS

SDP FOR THE WILDE LAKE MIDDLE SCHOOL DO NOT EXCEED 7.5 ACRES OF NON-CREDITED OPEN SPACE. AS-BUSLITHECHNALIDEVELOPMENT PLAN PHASE FORTY-FIVE-A-III RECORD PLATS WERE RECORDED AS PLAT NUMBERS 23022 THRU 23025 ON OCTOBER 24, 2014 AMONG THE LAND RECORDS OF HOWARD COUNTY MARYLAND.

I HEREBY CERTIFY, BY MY SEAL THAT THE FACILITIES SHOWN ON THE SURROUNDING COMMUNITY. PLAN WERE CONTRACTED AS SHOWN ON THIS "AS BUILD" PLAN AND THAT THIS PLAN MEDIS THE APPROVED PLAN AND SPECIFICATIONS

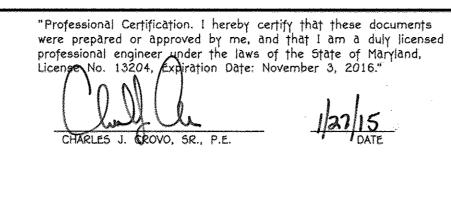
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PLAT NOS.

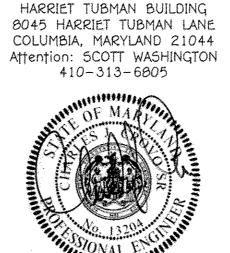


APPROVED PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014

FISHER. COLLINS & CARTER. INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS



1			PREPAREU FUR
ı			HOWARD COUNTY PUBLIC SCHOOL SYSTEM
1			HARRIET TUBMAN BUILDING
			8045 HARRIET TUBMAN LANE
ı	11/21/16	MENDE SHEET INDEX CHART & TITLE BLOCK TO REPLECT NEW SHEET NO'S.	COLUMBIA, MARYLAND 21044
	3/11/15	ADD TWO DRAWINGS TO THE SHEET INDEX AND REVISE THE TOTAL NUMBER OF SHEETS IN THE TITLE BLOCK	Attention: SCOTT WASHINGTON 410-313-6805
	DATE	DESCRIPTION	
		REVISION BLOCK	MIN'OF MARKET
	APPROVE	D: DEPARTMENT OF PLANNING AND ZONING	JAN STORY
	Min Director	Price A. Markay D. 2-11-15  - Department of Planning and Joning Date	
J.	Chief, Di	Vision of Land Development 100 Date	
	Chief, De	welopment Engineering Division \$ Date	THE TONAL ENGINEER



PREPARED FOR

NAME DENDIS A. DORSEY NO LIEUSE NO. 45261

Address Chart Parcel Number Street Address 10481 CROSS FOX LANE COLUMBIA, MD 21044 PARCEL SECTION/AREA

280 WILDE LAKE MIDDLE SCHOOL 11/1 FIFTH ELECTION DISTRICT BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS T 23161-23163 SCALE: AS SHOWN DATE: JANUARY 30, 2015 29,35 FIFTH ..15/F.90&91 WATER CODE

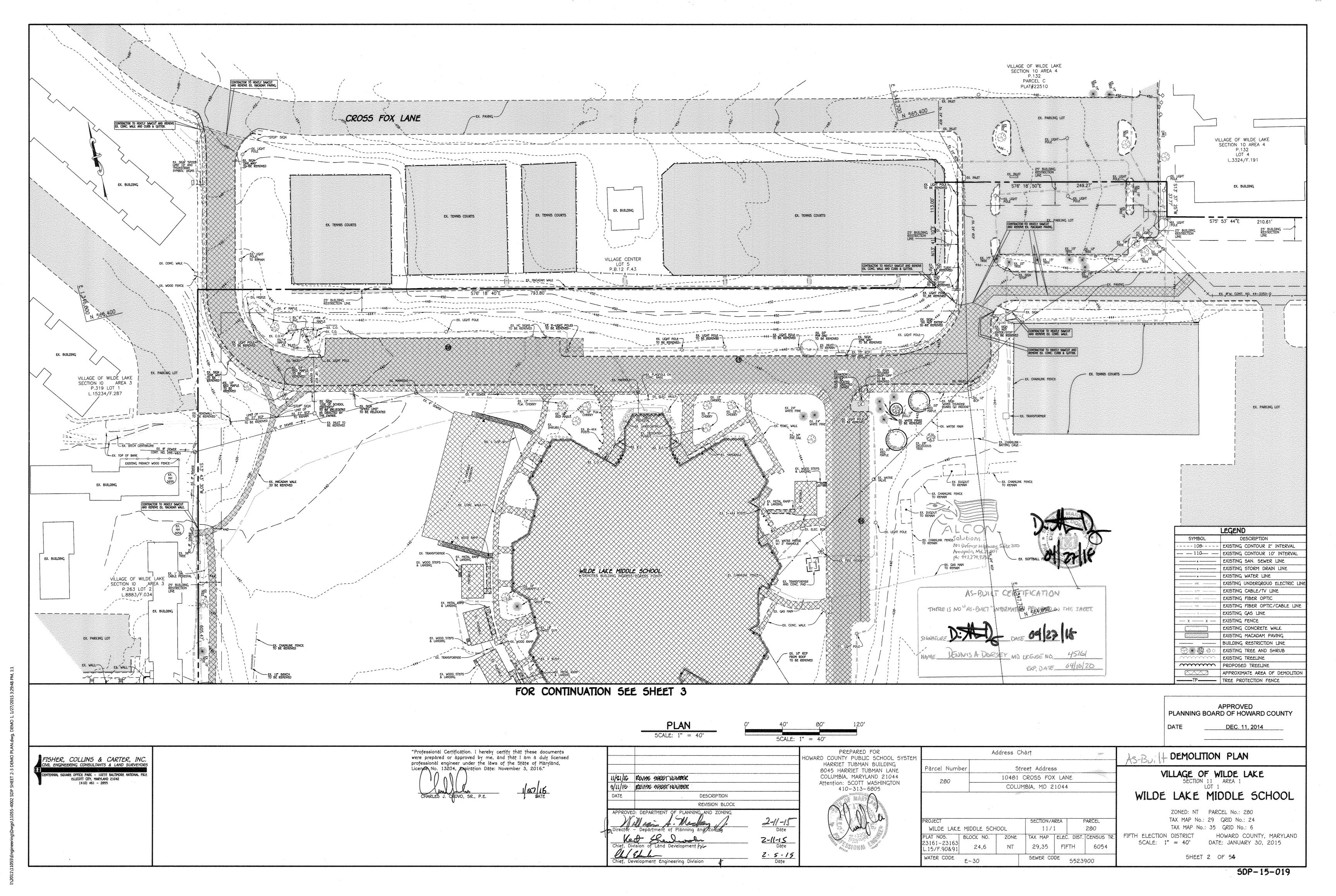
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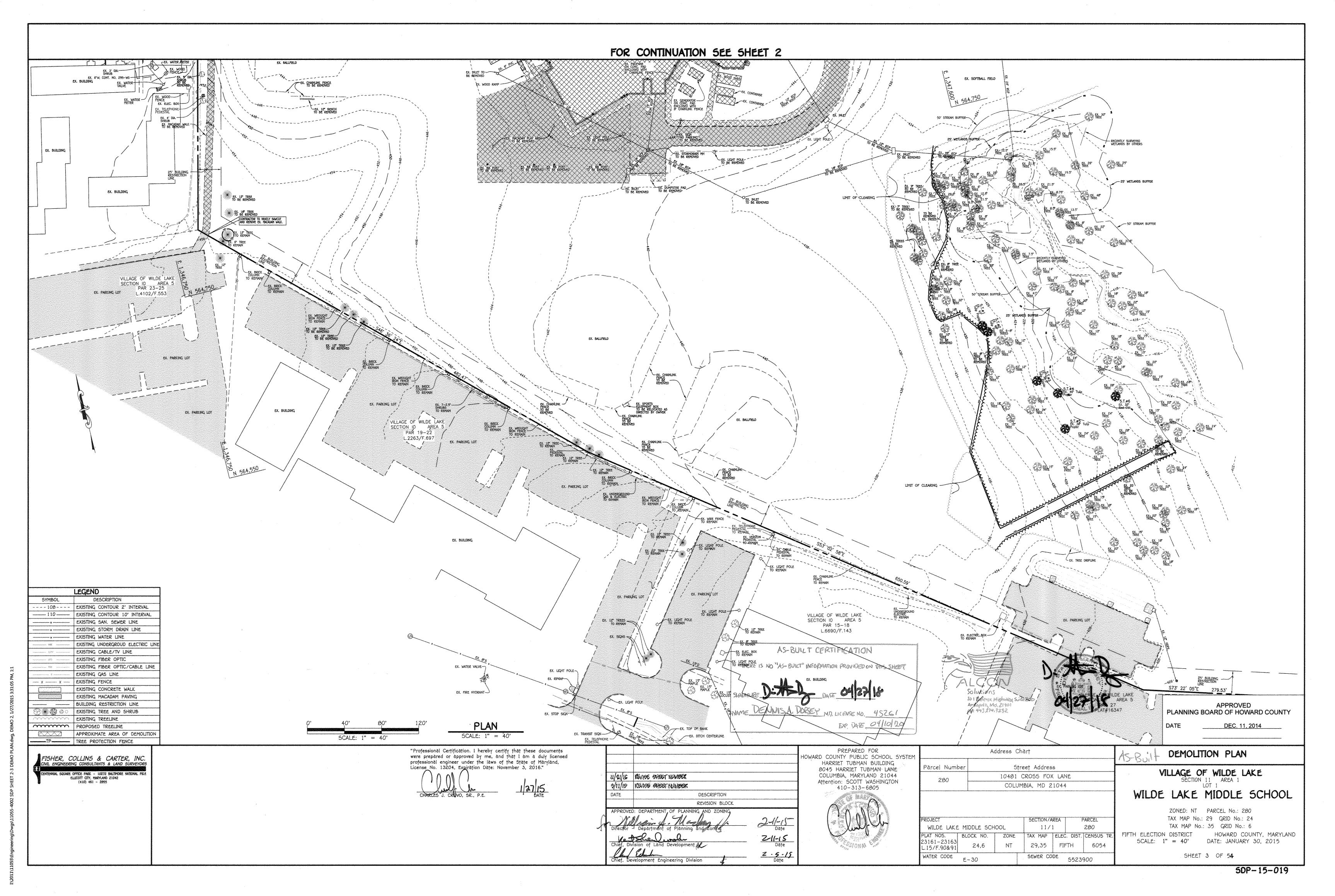
TITLE SHEET

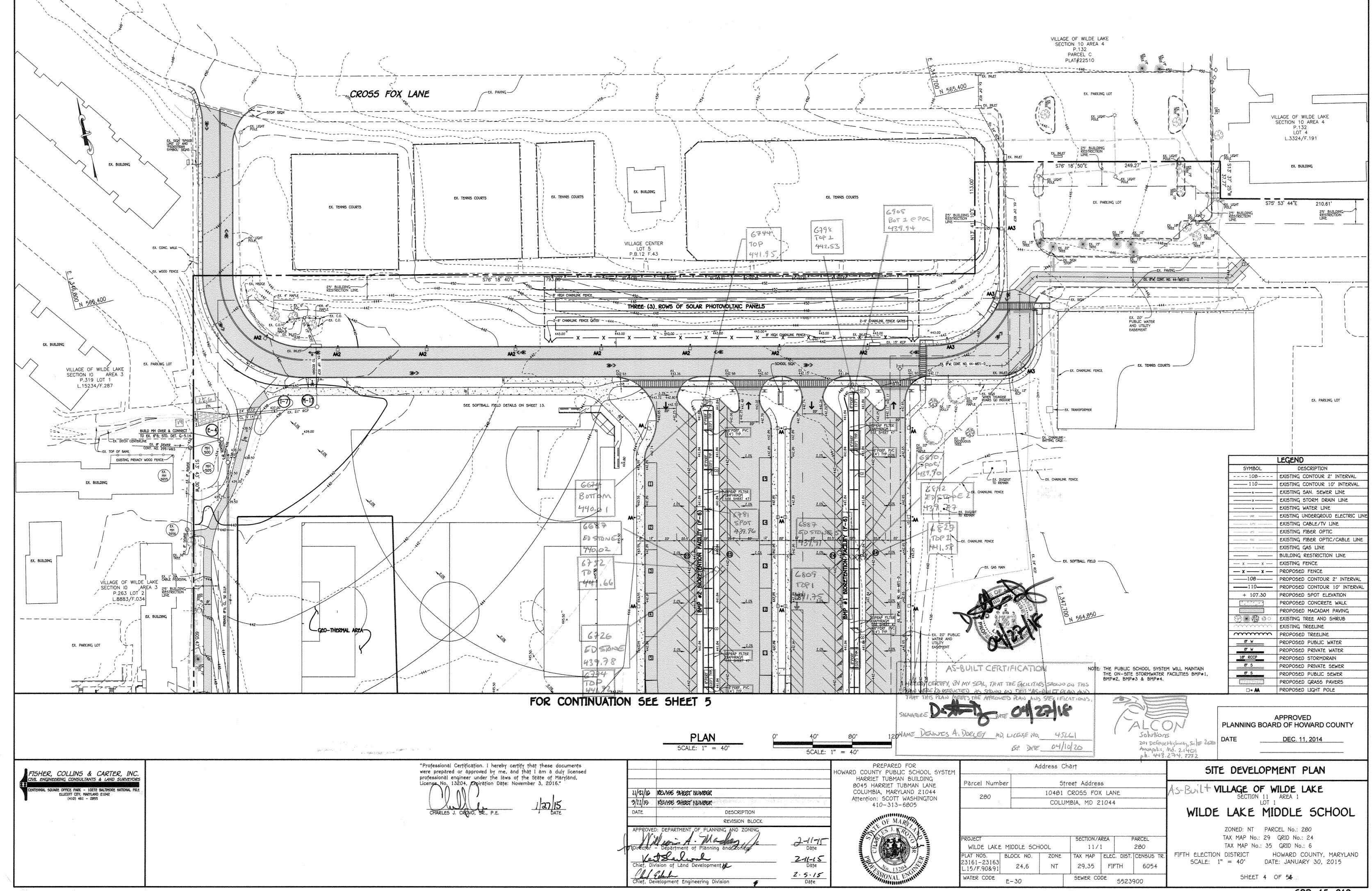
VILLAGE OF WILDE LAKE WILDE LAKE MIDDLE SCHOOL

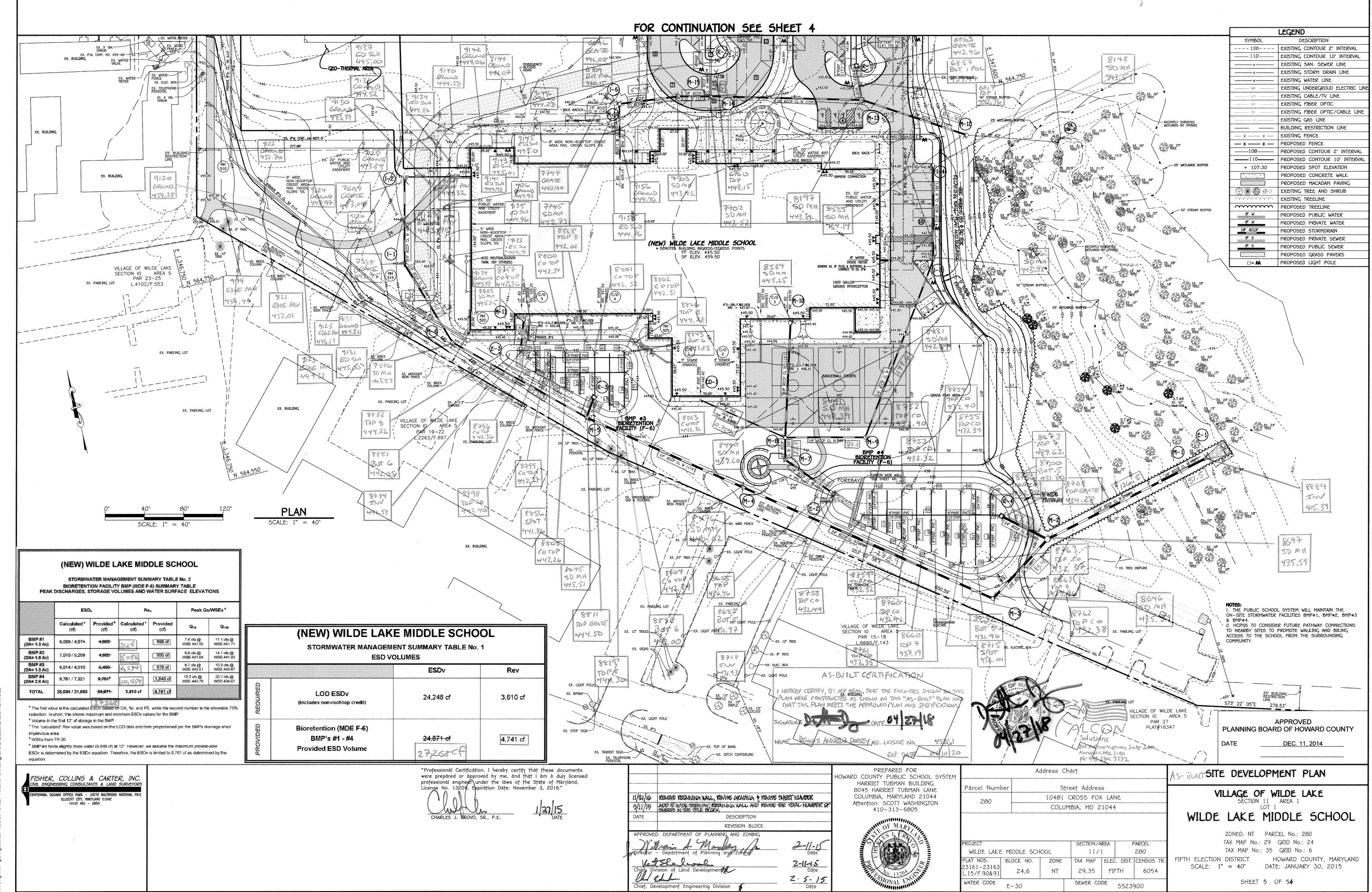
ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24 TAX MAP No.: 35 GRID No.: 6 HOWARD COUNTY, MARYLAND

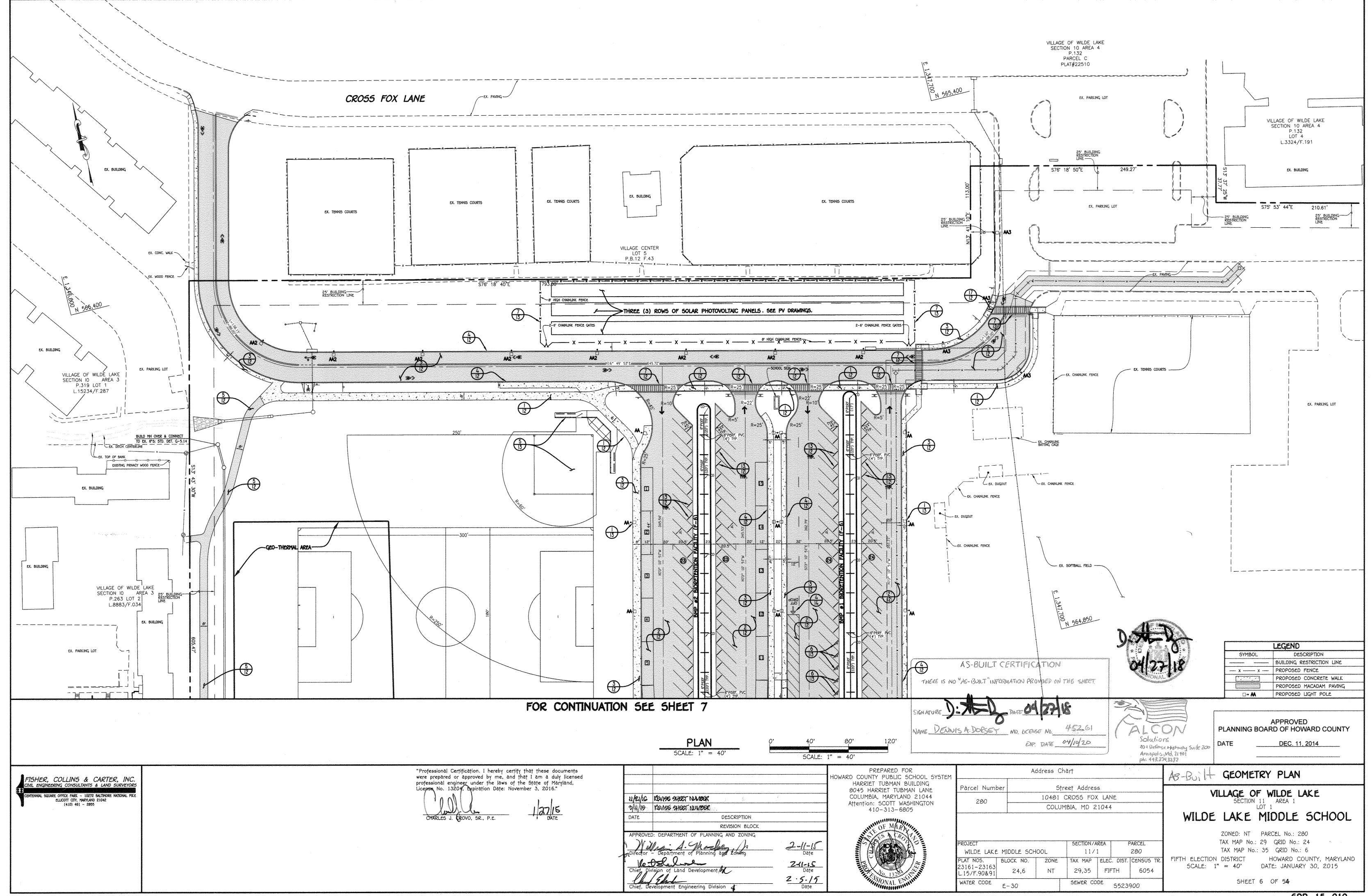
SHEET 1 OF 54



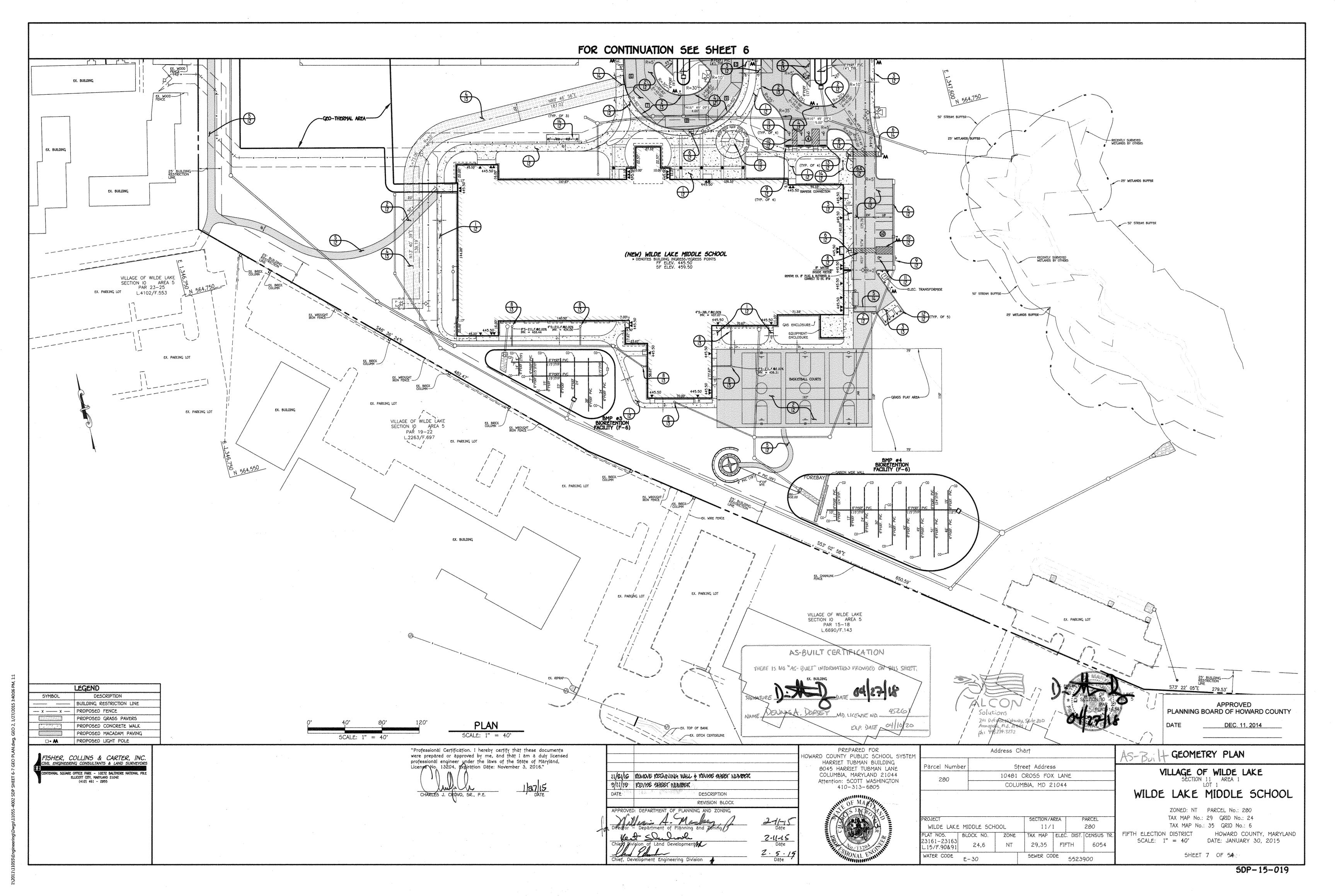


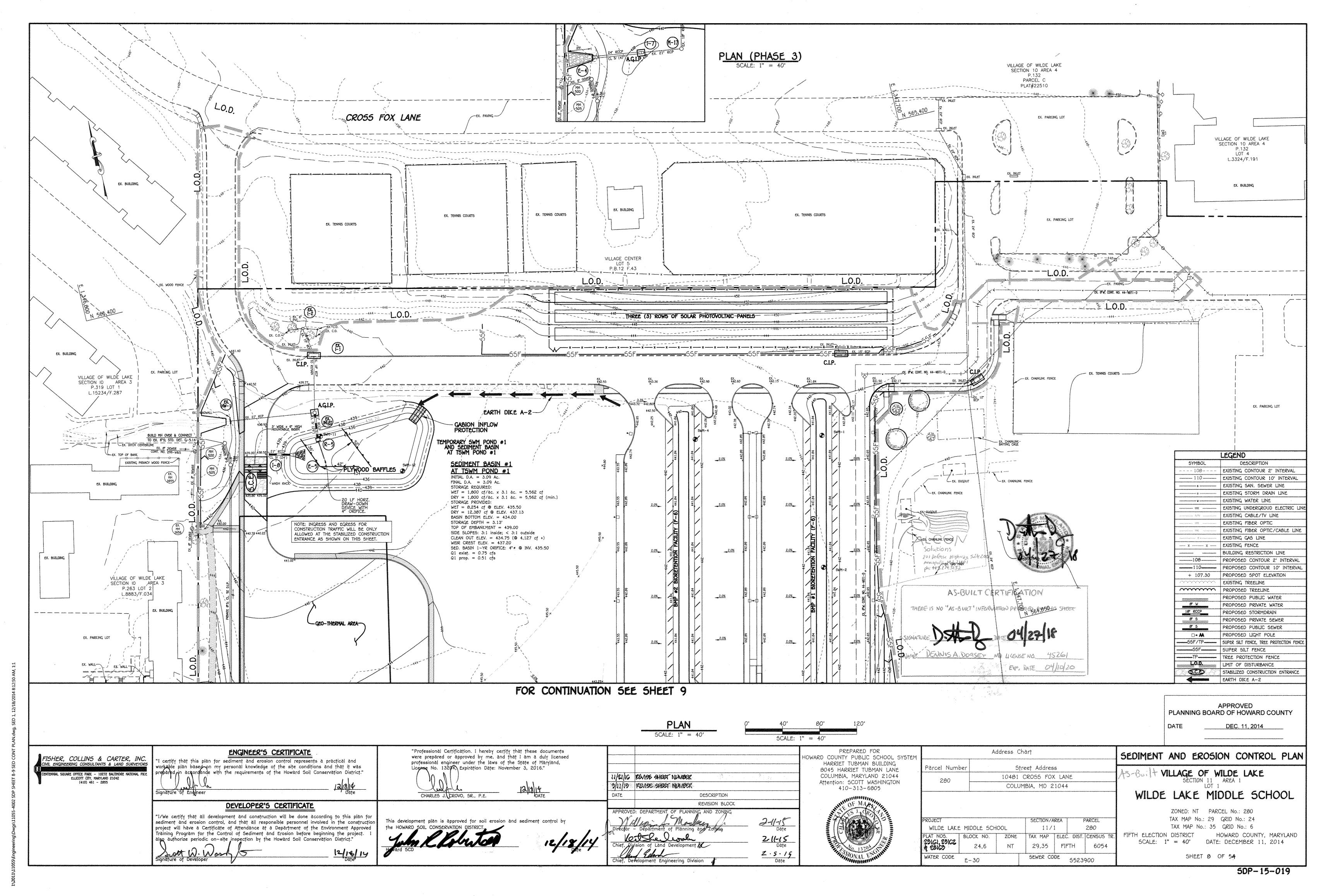


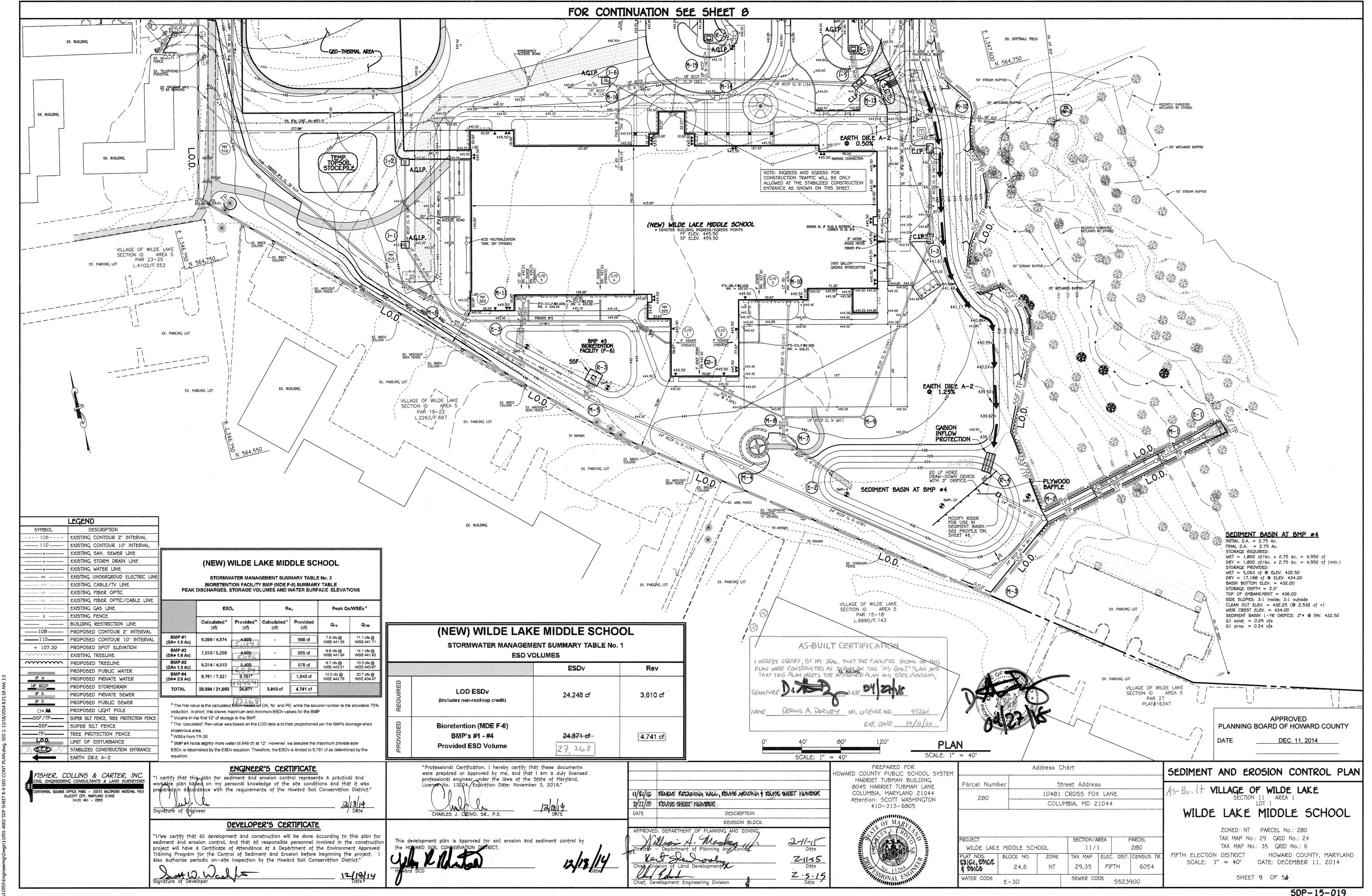


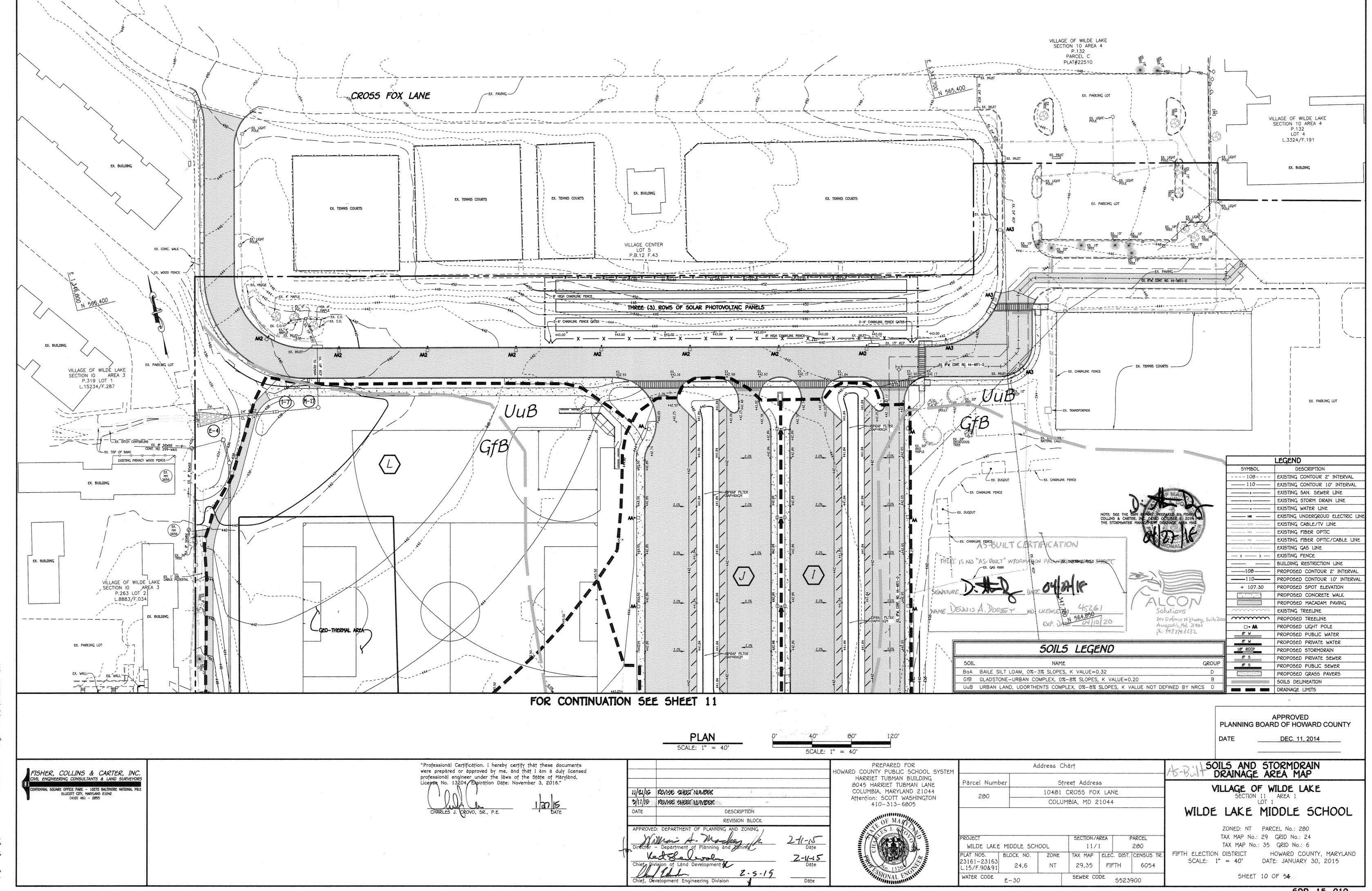


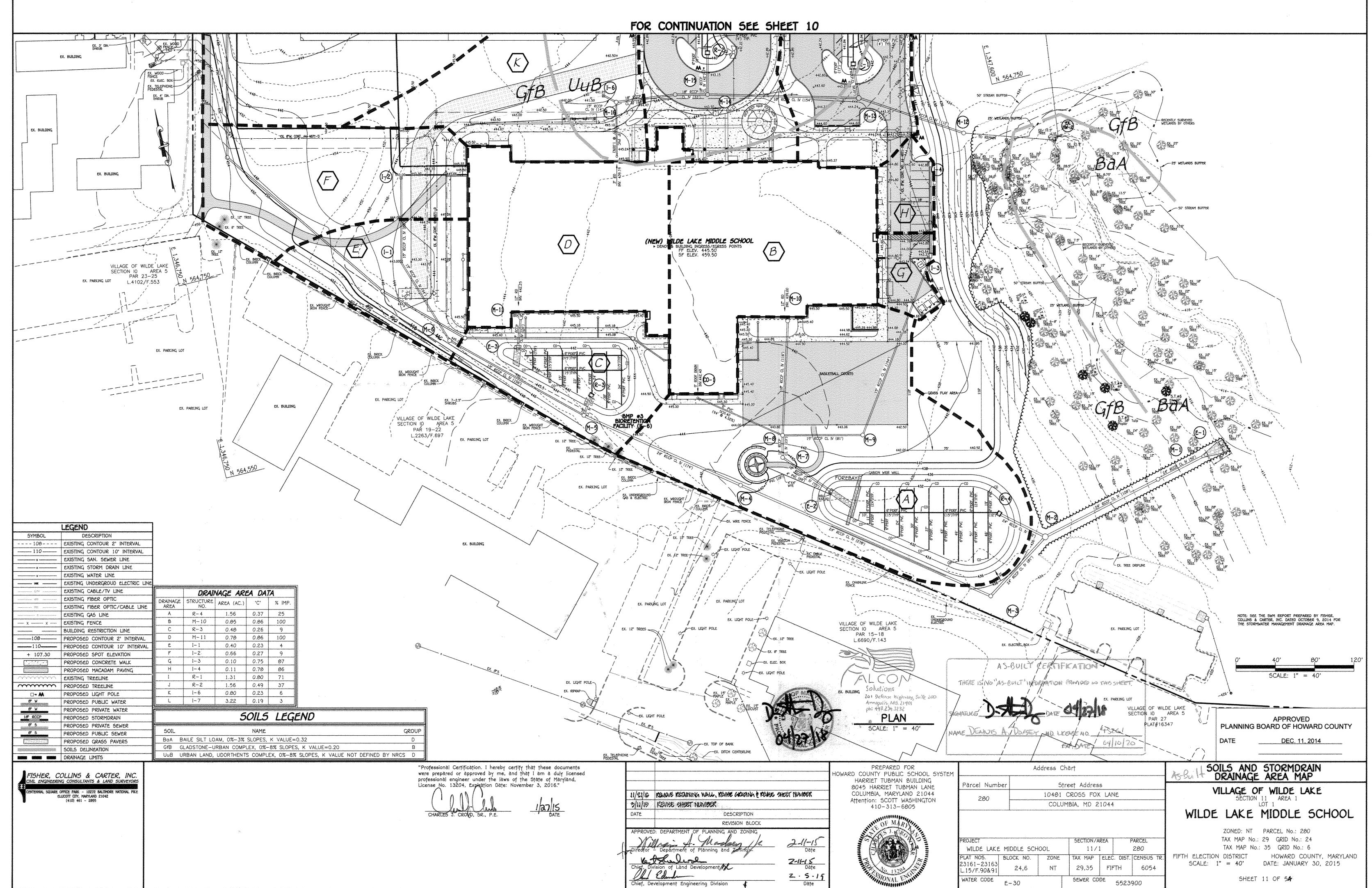
I\2011\11055\Engineering\Dwgs\11055-4002 SDP SHEET 6-7 GEO PLAN.dwg, GEO



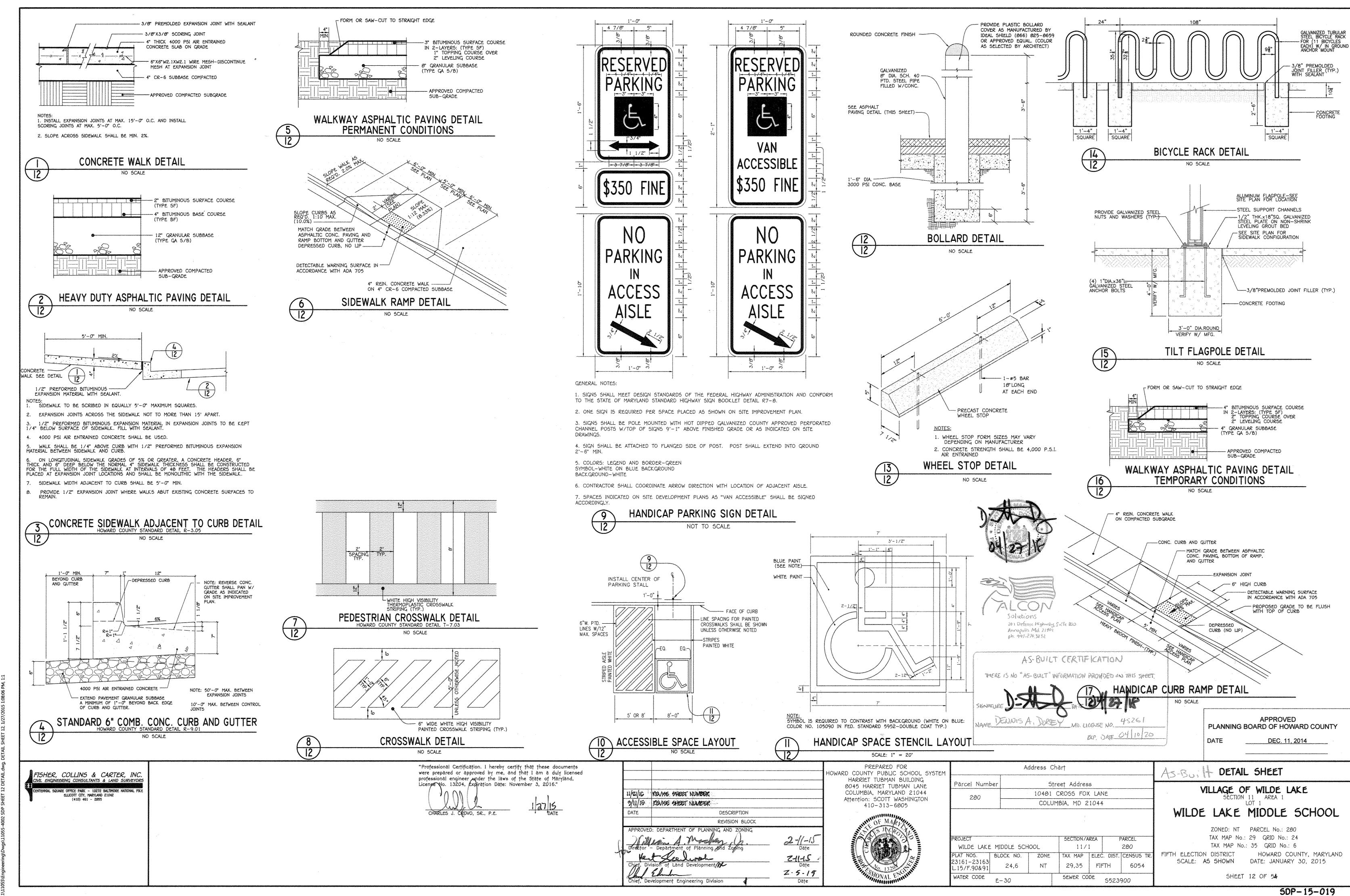


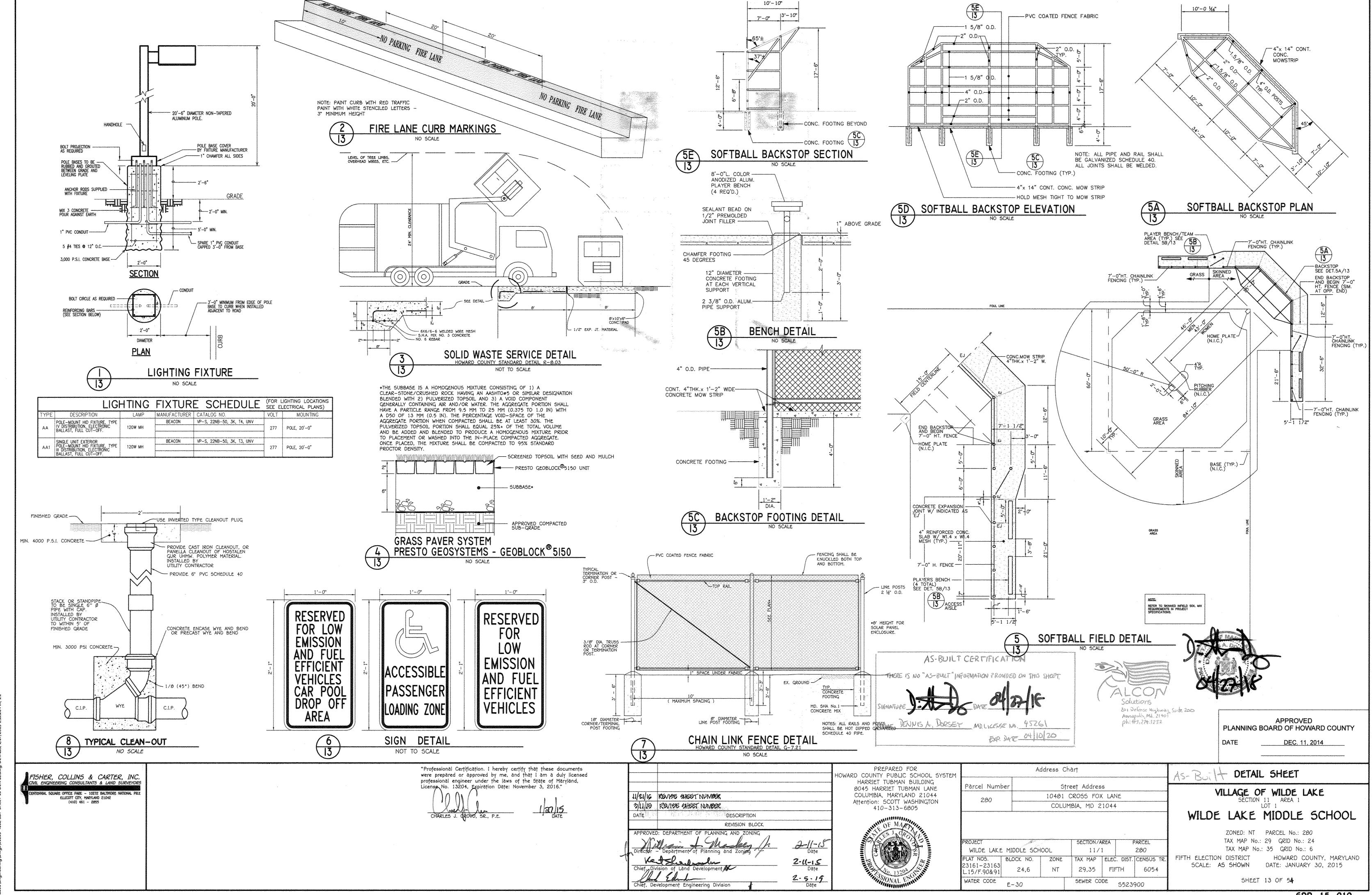


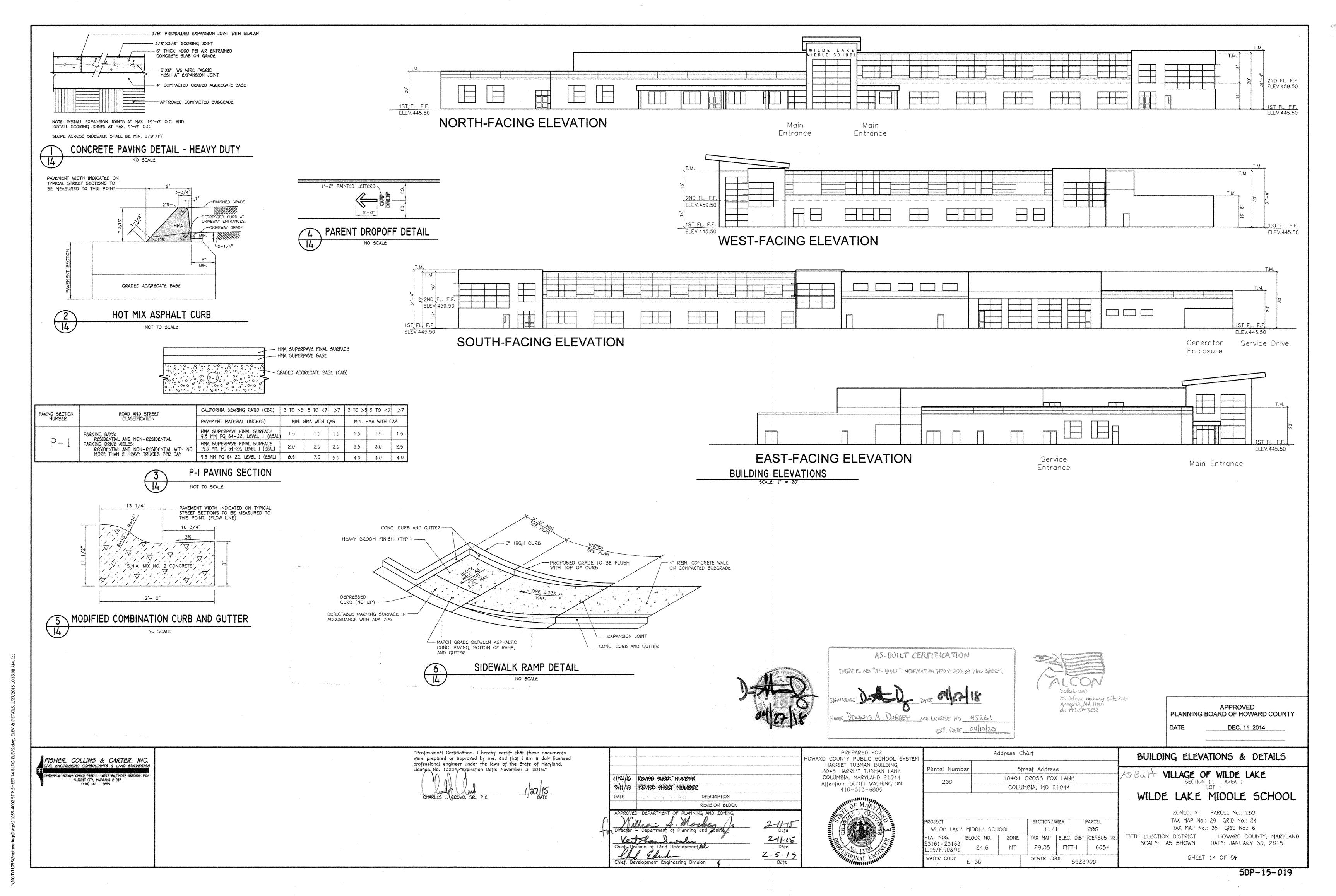




I\2011\11055\Engineering\Dwgs\11055-4002 SDP SHEET 10-11 SOILS DA MAP.dwg, D







#### Definition

The application of seed and mulch to establish vegetative cover.

<u>Purpose</u>

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading

#### A. Seeding

#### Specifications

- a. All seed must meet the requirements of the Maryland State Seed Law, All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
- b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
- c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
- d. Sod or seed must not be placed on soil which has been treated with soil sterilonts or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

#### 2. Application

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

1/4 inch of soil covering. Seedbed must be firm after planting.

- i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
- ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil
- b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least
- ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
- c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
- i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O3 (phosphorous), 200 pounds per acre; K<sub>2</sub>O (potassium), 200 pounds per acre.
- ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- iii. Mix seed and fertilizer on site and seed immediately and without interruption. iv. When hydroseeding do not incorporate seed into the soil.

#### B. Mulching

- 1. Mulch Materials (in order of preference)
- a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
- b. Wood Cellulose Fiber Mulch (WCFM) consisting of specialty prepared wood cellulose processed into a uniform fibrous physical state.
- i. WCFM is to be dyed green or contain a green dye in the package that will provide an
- appropriate color to facilitate visual inspection of the uniformly spread slurry. ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
- iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertifizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil
- without inhibiting the growth of the grass seedlings. iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
- v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5. ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

### 2. Application

- a. Apply mulch to all seeded areas immediately after seeding. b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
- c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water,

- a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
- i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
- ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly
- iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000

### **B-4-8 STANDARDS AND SPECIFICATIONS**

#### FOR STOCKPILE AREA

**Definition** 

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

#### <u>Purpose</u>

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

#### Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use

- 1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan,
- 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
- 4. Access the stockpile area from the upgrade side,
- 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge
- 7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

#### Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3

#### B.43

#### SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

- Install sediment control practices necessary to construct basin. Clear and grub to remove trees, vegetation. roots or other objectionable material from the areas where the embankment is to be placed. Do not clear the pool area until completion of the embankment; unless the pool area is to be used for borrow. Salvage topsoil
- 2. Excavate cut-off trench along centerline of proposed embankment a minimum depth of 4 feet and a bottom (min. 4 feet) wide enough to permit operation of excavation and compaction equipment. Construct side slopes 1:1 or flatter. Cut-off trench must be continuous and extend the entire length of embankment. Compaction requirements are the same as those for the embankment. Dewater the trench during the backfilling compaction operations, using an approved practice.
- 3. Construct embankment of clean soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Fill material for impervious core and cut-off trench must conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30 percent passing the #200 sieve. Use fill material containing sufficient moisture so that the soil can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Place fill material in six-inch to eight inch thick continuous lifts over the entire length of the fill. Obtain compaction by passing construction equipment or compactor over the fill, so that the entire surface of each layer of fill is traversed at least four times. Construct the embankment to an elevation a minimum of 10 percent higher than the design height to
- 4. Install principal spillway prior to, or concurrently with, fill placement. Do not excavate embankment for placement of spillway. All pipe connections, including anti-seep collars must be completely watertight, Install filter diaphragm when specified on plan. Barrel connection to riser must be welded all around when the pipe and riser are metal. Attach barrel stub to riser at the same percent (slope) of grade as the barrel. For concrete riser/barrel assembly, pour riser with barrel in place or set pre-cast riser and install projection collar for watertight connection. Place fill material around the pipe spillway in four (4) inch lifts and hand compact around the pipe to a depth of 1.5 times the pipe diameter (minimum). Securely install anti-vortex device and trash rack as shown on plan.
- 5. Install the emergency spillway in undisturbed natural ground. Construct spillway within a tolerance of
- 6. Stabilize embankment and associated disturbed areas within three (3) days of completion with seed and mulch. Monitor embankment and maintain erosion free during the life of the basin.
- 7. Install fencing and signage in accordance with the approved plan.
- 8. Remove sediment when accumulated material has reached 25 percent of the total storage depth. Restore basin to original design volume. Place removed sediments in a controlled area and stabilize. Do not deposit sediment downstream of the embankment, adjacent to a stream or floodplain.
- 9. When the contributing drainage area is stable, the basin can be removed in accordance with the approved sediment control plan.
- 10. A sediment basin designed, built, and certified as a stormwater management structure, may be converted when the contributory drainage area is stable. Properly dewater basin, modify outlet structure, perform additional grading, and provide required storage volume in accordance with approved stormwater

### G-2 STANDARD AND SPECIFICATIONS

### SEDIMENT BASINS Definition

A temporary pond formed by excavation and/or construction of an embankment and equipped with a drawdown device.

### Purpose

To intercept sediment-laden runoff and retain sediment in order to protect drainage ways, properties, and rightsof-way downstream of the sediment basin from sedimentation.

#### Conditions Where Practice Applies

A sediment basin is required where sediment trap drainage areas are exceeded. Stormwater management ponds may be used as sediment basins provided they meet the requirements of this section and that the construction sequence addresses converting the sediment basin to the permanent stormwater management pond.

#### Conditions of Use

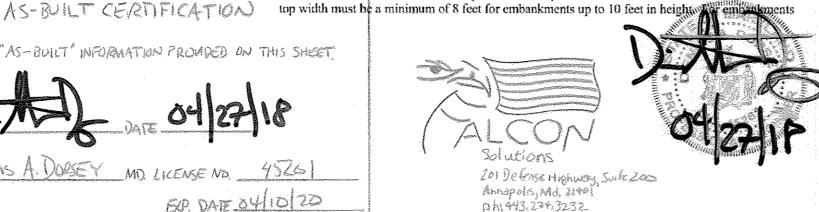
This standard applies to the installation of temporary sediment basins on sites where:

- 1. Failure of the structure would not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities;
- The drainage area does not exceed 100 acres;
- 3. The maximum embankment height does not exceed 15 feet measured from the natural ground to the embankment top along the centerline of embankment; and
- 4. The basin is to be removed within 36 months after the beginning of construction of the basin.

Where any of these criteria cannot be met, the structure must be designed in accordance with Environmental Article, Title 5, Subtitle 5, Annotated Code of Maryland or Natural Resource Conservation Service (NRCS) Maryland Conservation Practice Standard Code No. 378 for Ponds.

### Design Criteria

- 1. Local Requirements. In addition to the requirements herein, the design and construction must comply with local laws, ordinances, rules and regulations.
- 2. Stormwater Management. Where a sediment basin is to be used as a permanent pond, the total volume must be equal to or exceed the capacity requirements for the permanent pond or provisions must be made for additional grading when the facility is converted to a permanent structure.
- 3. Location. Locate the basin to obtain the maximum storage benefit from the terrain and for ease of cleanout. The basin should be located to avoid conflicts with utilities and construction activities. Where possible, locate so that storm drains may outfall or be diverted into the basin. Do not locate
- basin any closer than 20 feet from an existing building foundation. Basins should not be located in areas where the groundwater elevation is higher than the bottom of the basin. Basins in structural fill areas (e.g., proposed roadways and building foundations) are discouraged.
- 4. Storage Volume. Provide at least 3600 cubic feet of storage for each acre of drainage. The volume is measured from the bottom of the basin to the elevation of the principal spillway crest and is to be divided equally into "dry" storage (1800 ft<sup>3</sup>/acre) and "wet" storage (1800 ft<sup>3</sup>/acre). The dry storage will draw down to the wet pool elevation. The 3600 cubic feet of storage is approximately equal to 1 inch of runoff per acre of drainage area.
- 5. Clean Out. The clean out elevation is one-half the wet storage depth. Determine and state the elevation corresponding to the maximum allowable sediment level in the design data on the plans as a distance below the top of the riser.
- 6. Surface Area. The ratio of surface area (acres) to discharge (cubic feet/second) must be greater than or equal to 0.0035. The surface area is measured at the design high water elevation for the 10year frequency storm.
- 7. Inflow.
- a. Establish points of concentrated inflow and specify the type of inflow protection. See Section D Erosion Control
- b. Locate inflow points to maximize the flow distance to the outlet. Length to width ratio must be 2:1 or greater, where length is the distance between the inlet and outlet. Where a 2:1 effective length to width ratio between inflow and outflow cannot be obtained, baffles are required. See Detail G-2-4 Baffle Boards.
- c. Provide dikes/berms where necessary to ensure that runoff is directed to the protected inflow points of the basin. The top elevation of any dike or berm directing water to a sediment basin must be equal to, or higher than, the elevation of the basin embankment.
- d. Specify in the sequence of construction that the basin must be constructed prior to the water
- 8. <u>Drawings</u>. Contours for basin grading must be shown on the plan. A profile and cross-section of the spillway(s) and details for all appurtenances must be provided. Include bottom, wet storage, dry storage, and cleanout elevations; dimensions of outlet protection; and embankment width and
- 9. Cut-Off Trench. Provide for a cut-off trench along the centerline of the proposed embankment, a minimum depth of 4 feet and a bottom width (minimum 4 feet) wide enough to permit operation of excavation and compaction equipment. The cut-off trench must be excavated with side slopes 1:1 or flatter and be continuous for the entire length of proposed embankment.
- 10. Impervious Core. Provide an impervious core with a minimum top width of 4 feet along the centerline of the proposed embankment. Impervious core must be continuous throughout the embankment and must extend upwards with 1:1 side slopes the from the cut-off trench up to the 10year water surface elevation.
- 11. Embankment. Elevations of the top of earth fill at constructed and settled height of the embankment must be shown on the profile. The top of the dam embankment is to be level. The



between 10 feet and 15 feet in height, the minimum top width is 10 feet. The combined upstream and downstream side slopes of the embankment must have a combined total of five horizontal to one vertical (5:1) minimum with neither slope steeper than two horizontal to one vertical (2:1).

- 12. Hydrologic Analysis. Compute the runoff in accordance with NRCS TR-55 Urban Hydrology or the method outlined in Chapter 2 Estimating Runoff of the NRCS "Engineering Field Manual for Conservation Practices." Base runoff computations on "worst soil cover" conditions. Ensure that the combined capacities of the principal and emergency spillways are sufficient to pass the "routed" peak rate of runoff from the 10-year frequency storm. The start elevation for routing must correspond to the wet pool elevation (i.e. wet storage volume must not be included in the analysis).
- 13. <u>Draw-Down Device</u>. The dry storage volume is to be dewatered to the wet pool elevation over a 10 hour period. This can be done by constructing a perforated horizontal or vertical draw-down device with an orifice to control discharge. Use the chart or equations in Table G.10 to determine the appropriate orifice size. Design the pipe perforations so that the total area of the perforations is equal to or greater than 4 times the area of the control orifice. Alternate draw-down methods may be designed as allowed by the appropriate approval authority.
- 14. Outlet. Locate basin to discharge onto stable ground, stable channel, or into a storm drain system. Discharge to a buffer may be required. Provide an outlet that conveys the discharge in a non-erosive manner to a stable area. Protect against scour at the discharge end of the pipe spillway in accordance with the Section D-4 Outlet Protection.
- 15. <u>Drainage Easements</u>. Where discharge occurs at the property line, comply with local ordinances and drainage easement requirements. Show adequate notes and references concerning the
- 16. Emergency Spillway. An emergency spillway is required when the principal spillway is not designed to pass the 10-year frequency storm. The entire flow area of the emergency spillway must be in existing ground (not fill). The control section is to be trapezoidal with a minimum bottom width of eight feet and have a straight, level length of at least 25 feet. The outlet section should have sufficient slope such that the discharge capacity of the spillway is not restricted and allows the discharge to be released at a non-erosive velocity.

easements on the erosion and sediment control plan.

- a. The minimum capacity of the emergency spillway must pass the peak rate of runoff from the 10year frequency storm, less any reduction due to flow in the principal spillway. Determine the emergency spillway dimensions by using Figure G.3 Emergency Spillway Design and Table G.9
- b. The velocity of flow in the exit channel must not exceed 5 feet per second for vegetated channels. For channels with erosion protection other than vegetation, ensure velocities are within the non-erosive range for the type of protection used.
- c. Freeboard (elevation difference between the 10-year storm water surface in the emergency spillway and the top of the settled embankment) must be at least a minimum of one (1) foot. Where no emergency spillway is provided, design the freeboard to a minimum of two (2) feet.
- d. The principal spillway crest elevation must be a minimum of one (1) foot below the elevation of the control section of the emergency spillway.
- 17. Principal Spillway. Provide a principal spillway which consists of a vertical pipe or concrete box (riser) joined to a pipe (barrel) that extends through the embankment and discharges beyond the

#### downstream toe of the fill.

Riser and Barrel Assembly.

- a. The barrel must pass at least 10 percent of the 10-year, 24-hour frequency storm and be at least 10 inches in diameter. If the principal spillway is designed to pass the entire 10-year storm, then the barrel must have a minimum cross-sectional area of three (3) square feet.
- b. The design of the barrel should be based on Table G.7, Table G.8, or hydraulic calculations, For plastic pipe, Table G.7 can be used for corrugated lined pipe and Table G.8 for smooth lined pipe. Use manufacturer specification for loading.
- c. Pipe material must conform to NRCS Maryland Conservation Practice Standard Code No. 378 for Ponds.
- d. An anti-vortex device and trash rack are required for all risers. For corrugated metal pipe risers, meet the specifications in Detail G-2-3 Concentric Trash Rack and Anti-Vortex Device. For other types of risers, refer to NRCS Maryland Conservation Practice Standard Code No. 378 for
- e. The riser must include a base of sufficient weight to prevent flotation of the riser. Concrete riser bases must be at least twice the diameter of the riser, a minimum of 18 inches thick, and contain steel reinforcement as shown in Detail G-2-2 Corrugated Riser Base. The riser needs to be embedded 9 inch minimum into the base. Anti-flotation calculations must be provided for risers over 10 feet in height, based on the following:
- i. Analyze the riser for flotation, assuming all orifices and pipes are plugged. ii. Provide a factor of safety of 1.2 or greater. (Downward forces > 1.2 x upward forces.)
- f. Precast concrete structures must include details for a projection collar. If the riser contains multiple sections, provide a mechanical connection at each joint as shown on Detail G-2-8 Precast Riser Connector to prevent joint separation which may be caused by differential earth pressures in the embankment.
- g. To prevent piping along the barrel, include a filter diaphragm or anti-seep collars around the barrel. Anti-seep collars may not be acceptable on permanent structures. For filter diaphragm design refer to NRCS Part 628 Dams, National Engineering Handbook, Chapter 45. Anti-seep collars are to be designed according to Figures G.5 and G.6.
- a. Specify on the plan the type(s) of dewatering device(s) to be used in accordance with Section F - Dewatering.
- b. The location and disposal method(s) for sediment removed from a basin must be shown on the plans. Do not deposit the sediment downstream from the basin or adjacent to a drainage way or floodplain. Off-site disposal sites must be covered by an approved erosion and sediment
- c. Silt fence or other sediment control practices may be required during basin installation and
- d. Upon removal, the wet soil around the basin must also be removed to facilitate compaction.

### <u>Maintenance</u>

Sediment and debris must be removed and the basin restored to its original dimensions when sediment accumulates to the cleanout elevation (50% of the wet storage depth). Removed sediment must be deposited in an approved area in such a manner that it will not erode. The points of inflow and outflow as well as the interior of the basin must be cleared of any accumulated debris and kept free of erosion. The embankments must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Any trees, brush, or other woody vegetation growing on the embankment or near the principal spillway must be removed. The line, grade, and cross section must be maintained. Water tight connections must be maintained. If the dry storage volume does not drain within 10 hours, the geotextile around the draw-down device must be replaced.

### MIDDLE SCHOOL - SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (1 DAY)

2. NOTIFY MISS UTILITY (1-900-257-7777) 40 HOURS BEFORE STARTING WORK. NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1855) 24 HOURS BEFORE STARTING WORK, AND NOTIFY THE BALTIMORE GAS ELECTRIC CO.

### (410-291-5739) FIVE (5) WORKING DAYS PRIOR TO STARTING WORK. (1 WEEK)

3. INSTALL ALL PERIMETER CONTROLS: SCE WITH WASH RACK AT SERVICE DRIVE, PERIMETER SUPER SILT FENCE AND TREE

4. GRADE TEMPORARY SWM POND #1, INSTALL EARTH DIKE AND INSTALL STORM DRAINS AND STRUCTURE R-5. GRADE SEDIMENT BASIN @ BMP #4 AND INSTALL STORM DRAINS AND STRUCTURES R-4, M-2, M-1, E-1. (3 WEEKS)

5. GRADE ENTRANCE OF TEMPORARY PARKING LOT, INSTALL STORM DRAINS AND STRUCTURES I-8 AND E-5. PAVE AND INSTALL SIDEWALK CONNECTION. (3 WEEKS)

6. INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE) WITH WASH RACK FOR TEMPORARY PARKING LOT. (1 DAY) 7. BEGIN SITE GRADING; WITH APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR BEGIN GRADING SCHOOL PAD

INSTALL STORM DRAINS AND STRUCTURES I-1, M-6 AND M-5.

INSTALL STORM DRAINS AND STRUCTURES M-16, M-15, M-14, I-5, M-12 AND INLET PROTECTION. INSTALL WATER MAIN FROM STATION 0+00 TO STATION 8+59 TEE. INSTALL SEWER MAIN MANHOLES MH500, MH 505, MH 510, MH 515 AND MH 520. (3 WEEKS)

9. AS FINAL OR INTERMEDIATE GRADES ARE REACHED, INSTALL EARTH DIKE AND STABILIZE WITH EITHER TEMPORARY OR PERMANENT SEEDING AS APPROPRIATE. (3 WEEKS)

- 10. BEGIN CONSTRUCTION OF SCHOOL BUILDING, (18 MONTHS)
- 11. INSTALL RETAINING WALL. (1 WEEK)
- 12. INSTALL GEO-THERMAL WELL SYSTEMS. (2 MONTHS)

13. UPON COMPLETION OF GEO-THERMAL INSTALLATION INSTALL REMAINING PORTION OF TEMPORARY PARKING LOT PAVING, BITUMINOUS CURB AND MACADAM WALKWAYS. (1 WEEK)

### 14. CONCURRENTLY:

INSTALL WATER MAIN TO COMPLETE LOOP AND LATERALS. INSTALL SEWER MAIN AND MANHOLE MH 525 AND BUILDING CONNECTIONS. (2 WEEKS) INSTALL ELECTRICAL CONDUITS, GAS MAINS AND CABLE, (3 WEEKS)

- 15. INSTALL STORM DRAINS AND STRUCTURES I-1 TO I-2, M-2 TO M-5, E-2 TO I-4, M-7 TO M-10, E-3 TO M-11 AND EXCAVATE BMP #3 AREA TO ELEV. 442. DO NOT CONSTRUCT UNDERDRAINS OR INSTALL PLANT MATERIAL FOR BMP #3 AT THIS TIME. IMMEDIATELY PLACE INLET PROTECTION AT ALL NEW INLETS NOT DRAINING TO THE SEDIMENT BASINS. PLACE SUPER SILT FENCE AROUND RISER R-3 WHEN CONSTRUCTED. (2 WEEKS)
- 16. INSTALL CURB AND GUTTER AND BASE PAVING FOR SERVICE LANE. (2 WEEKS)
- 17. INSTALL SIDEWALKS, LIGHTING AND LANDSCAPING ALONG BOTH SIDES AND REAR OF SCHOOL. (3 WEEKS)
- 10. INSTALL TEMPORARY MACADAM WALKS FROM TEMPORARY PARKING LOT TO NEW SCHOOL AND FLAG POLE. (2 WEEKS)
- 19. COMPLETE SCHOOL CONSTRUCTION, (1 MONTH)

20. THOROUGHLY CLEAN (FLUSH) THE STORM DRAIN TO OR AROUND BMP'S #3 AND #4, (1 DAY)

21. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, CONVERT THE SEDIMENT BASIN @ BMP #4 AND BMP #3 INTO THE PERMANENT SWM FACILITIES (i.e. HAVING FULLY ESTABLISHED 3" GRASS OR PAVEMENT). THIS WORK INCLUDES, REMOVING SEDIMENT, RE-GRADING TO DESIGN ELEVATIONS, INSTALLING FOREBAYS, UNDERDRAINS, STONE AND PLANTING SOILS LAYERS AND MULCH. STABILIZE PONDS WITH PERMANENT SEEDING AND INSTALL POND LANDSCAPING.

#### PHASE TWO:

22. BEGIN REMOVAL OF EXISTING 5CHOOL BUILDING AND SIDEWALKS. (4 WEEKS)

TOGETHER IN COMMON BINS AND TRANSFERRED BY AN INDEPENDENT RECYCLER TO A MATERIALS RECOVERY FACILITY (MRF) FOR REMOTE SORTING AND WEIGHING OF ALL WASTE INCLUDING WASTE WHICH IS DIVERTED FROM LANDFILLS AND COMPLY WITH THE CONSTRUCTION WASTE MANAGEMENT GOALS FOR THIS PROJECT.

25. INSTALL STORM DRAIN AND INLETS R-1. R-2. REPLACE INLET I-5 WITH MANHOLE M-13 AND PARTIALLY EXCAVATE BMPS #1

27. REMOVE TEMPORARY PARKING LOT AREA ONLY AND REGRADE THE DISTURBED AREA. AT ENTRANCE PORTION, ONLY REMOVE THE

23. ALL CONSTRUCTION WASTE GENERATED FROM THE DEMOLITION OF THE EXISTING SCHOOL BUILDING SHALL BE COMBINED

24. GRADE BUS LOOP AND DROP-OFF LANE. INSTALL CURB AND GUTTER AND BASE PAVING. (2 WEEKS)

AND #2 AREAS TO ELEV. 440. DO NOT CONSTRUCT UNDERDRAINS OR INSTALL PLANT MATERIAL 8MPS #1 AND #2 AT THIS TIME. PLACE INLET PROTECTION ON RISERS R-1 AND R-2 WHEN CONSTRUCTED. (2 WEEKS)

26. INSTALL CONCRETE SIDEWALKS ALONG BUS LOOP, DROP OFF LANES AND ENTRANCE PLAZA. (2 WEEKS)

MACADAM PAVEMENT, LEAVE 5UB-BASE AS STABILIZED CONSTRUCTION ENTRANCE (SCE). (2 WEEKS) 28. REMOVE TEMPORARY SWM POND, STORM DRAINS FROM R-5 TO THE EXISTING INLET. REPLACE THE EXISTING INLET WITH A

STANDARD MANHOLE M-17. (2 DAYS) 29. INSTALL STORM DRAINS AND STRUCTURES 1-7 TO E-4. (3 DAYS)

30. INSTALL PLAY FIELDS AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDING AND MULCH AND SOD AS INDICATED ON PLANS. THE CONTRACTOR SHALL ALSO FINE GRADE ALL AREAS WITHIN THE LIMITS OF DISTURBANCE THAT WERE DISTURBED DURING THE BUILDING CONSTRUCTION AND STABILIZE WITH PERMANENT SEEDING AND MULCH. CONTRACTOR MUST ENSURE ALL GRAVEL USED FOR PARKING LOT AND WALKS IS COMPLETELY REMOVED AND TOPSOIL IS SCREENED AND PLACED ON THE FIELDS. CONTACT GROUNDS MAINTENANCE SUPERVISOR GREG CONNOR AT 410-313-2577 FOR INSPECTION ONE WEEK PRIOR TO FINE GRADING OF

31. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. (1 WEEK) 32. INSTALL SURFACE COURSE PAVING. (1 WEEK)

A DAILY BASIS, AND IMMEDIATELY AFTER A RAINFALL

33. THOROUGHLY CLEAN (FLUSH) THE REMAINING STORM DRAIN SYSTEMS. (1 DAY)

34. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, CONVERT THE SEDIMENT BASIN INTO THE PERMANENT SWM FACILITIES (BMP'S #1 AND BMP #2) (i.e. HAVING FULLY ESTABLISHED 3" GRASS OR PAVEMENT). THIS WORK INCLUDES, REMOVING SEDIMENT, RE-GRADING TO DESIGN ELEVATIONS, INSTALLING FOREBAYS, UNDERDRAINS, STONE AND PLANTING SOILS LAYERS AND yulch. Stabilize pond with permanent seeding and install pond landscaping. 35. FOLLOWING SUCCESSFUL STABILIZATION (I.E., FULLY-ESTABLISHED VEGETATION (3" GRASS OR PAVING) OF ALL DISTURBED

AREAS. OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT & EROSION CONTROL DEVICES AND THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING. (1 WEEK) EROSION AND SEDIMENT CONTROL NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON

## STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

A.) THREE (3) 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 8.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT

> APPROVED PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014

FISHER, COLLINS & CARTER, INC. IVIL ENGINEERING CONSULTANTS & LAND SURVEYOR: entennial square office park – 10272 Baltimore national Pii (410) 461 - 2855

#### ENGINEER'S CERTIFICATE certify that this plan for sediment and erosion control represents a practical and

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for

sediment and erosion control, and that all responsible personnel involved in the construction

project will have a Certificate of Attendance at a Department of the Environment Approved

vorkable plan based on my personal knowledge of the site conditions and that it was reparted in accordance with the requirements of the Howard Soil Conservation District."

Training Program for the Control of Sediment and Erosion before beginning the project. also authorize periodic on-site inspection by the Howard Soil Conservation District."

License No. 13204 Expiration Date: November 3, 2016."

"Professional Certification. I hereby certify that these documents

professional engineer under the laws of the State of Maryland.

were prepared or approved by me, and that I am a duly licensed

THERE IS NO "AS-BUILT" INFORMATION PROMDED ON THIS SHEET

erosion and sediment control by

EXP. DATE OY/10/20

DATE DESCRIPTION REVISION BLOCK 2-11-15 Date 2-11-15 2.5.19 Development Engineering Division

11/21/15 REVISE SHEET NUMBER

3/11/15 REVISE SHEET NUMBER

HOWARD COUNTY PUBLIC SCHOOL SYSTEM HARRIET TUBMAN BUILDING 8045 HARRIET TUBMAN LANE COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON 410-313-6805

PREPARED FOR

Parcel Numbe Street Address 10481 CROSS FOX LANE 280 COLUMBIA, MD 21044 PARCEL ECTION/AREA 280 WILDE LAKE MIDDLE SCHOOL 11/1 PLAT NOS. TAX MAP | ELEC. DIST. CENSUS BLOCK NO. १३१६१,१३१६१

29,35

SEWER CODE

FIFTH

5523900

Address Chart

24,6

E-30

WATER CODE

SEDIMENT AND EROSION CONTROL NOTES VILLAGE OF WILDE LAKE

## WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24 TAX MAP No.: 35 GRID No.: 6 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: DECEMBER 11, 2014

SHEET 15 OF 54

#### SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

The process of preparing the soils to sustain adequate vegetative stabilis

To provide a suitable soil medium for vegetative grow

Where vegetative stabilization is to be established

- - a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounte on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running
- parallel to the contour of the slope. Apply fertilizer and lime as prescribed on the plans.
- c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable

- a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil
- conditions required for permanent vegetative establishment are: i. Soil pH between 6.0 and 7.0
- ii. Soluble salts less than 500 parts per million (ppm).
- iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay)
- iv. Soil contains 1.5 percent minimum organic matter by weight.
- Soil contains sufficient pore space to permit adequate root penetration
- b. Application of amendments or topsoil is required if on-site soils do not meet the above
- c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

#### HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1055). 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS

OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO. 3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 7 DAYS AS TO ALL

OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 8-4-5), TEMPORARY SEEDING (SEC. 8-4-4) AND MULCHING (SEC. 8-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF

5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

6) SITE ANALYSIS: TOTAL AREA OF SITE

AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED TOTAL CUT

14.8 ACRES 5.6 ACRES 9.2 ACRES 25,000 CU.YDS. TOTAL FILL 25,000 CU.YDS. OFFSITE WASTE/BORROW AREA LOCATION N/A

7) ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 6) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY

52.3 ACRES

SEDIMENT CONTROL INSPECTOR. 9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE

INSPECTION AGENCY IS MADE. 10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER. 11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION. 12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PROCEEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE

## DUST CONTROL

<u>DEFINITION</u>
CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS

3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL

O PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND

CONDITIONS WHERE PRACTICE APPLIES
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT

DISTURBED AT A GIVEN TIME.

SPECIFICATIONS
TEMPORARY METHODS I. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT . VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.

I. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT. 4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT, SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW. BARRIERS - SOLID BOARD FENCES SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES

THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING. 6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMENENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR ARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE. 2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.

area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil

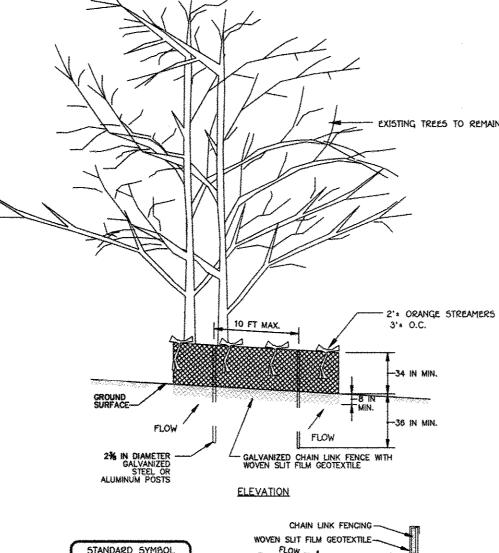
e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. b. The soil material is so shallow that the rooting zone is not deep enough to support plants or
- furnish continuing supplies of moisture and plant nutrients. c. The original soil to be vegetated contains material toxic to plant growth
- d. The soil is so scidic that treatment with limestone is not feasible
- 4. Areas having slopes steeper than 2:1 require special consideration and design 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria
- Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 11/2 inches in diamete
- b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
- c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

- a. Erosion and sediment control practices must be maintained when applying topsoil
- b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
- c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading

- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER FROM EXCAVATED AREAS THAT REMAINS 24 HOURS AFTER A 1-YEAR OR 2-YEAR STORM EVENT OR 40 HOURS AFTER A 10-YEAR STORM EVENT.





- 1. INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- 3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- 4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

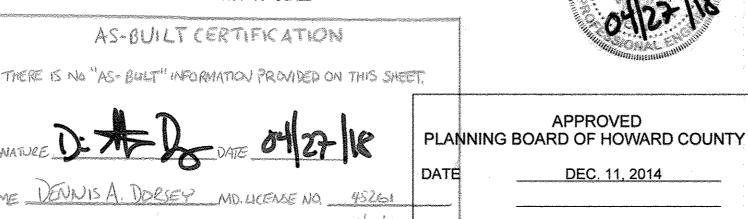
Solutions

201 Defense Highway, S

Annapalis, Md. 21401

ph: 113.274.3232

## SUPER SILT FENCE. TREE PROTECTION FENCE



DETAIL G-2-4

BAFFLE BOARDS

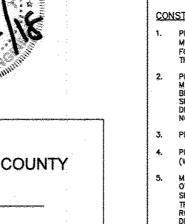
A THE RESERVE TO THE

ELEVATION / 2) OR 6 IN BELOW WEIR CRES

4 FT CENTER TO CENTER -

Le=Ls+Ls

11/21/16 KEVAE AHEET NUMBER



CONSTRUCTION SPECIFICATIONS

DETAIL E-3

SUPER SILT FENCE

ELEVATION

CHAIN LINK FENCING-

WOVEN SLIT FILM GEOTEXTILE-

FLOW \_\_\_

CONSTRUCTION SPECIFICATIONS

U.S. DEPARTMENT OF AGRICULTURE TURAL RESOURCES CONSERVATION SERVICE

DETAIL B-1 STABILIZED

CONSTRUCTION ENTRANCE

GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE

-EARTH FILE

-- PIPE (SEE NOTE 6)

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

-1 FT MIN. DEPTH

Parcel Number

CROSS SECTION

STANDARD SYMBO

GP

-TOP ELEVAT -TOP ELEVATION 18 IN INTO GROUND --TYPE A TYPE B ISOMETRIC VIEW 6 IN MIN. CONSTRUCTION SPECIFICATIONS WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE A 45 DEGREES TO THE MAIN FENCE AUGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE END OF THE SUPER SILT FENCE. SECTION FOR TYPE A AND B **SCE** 

STANDARD INLET

PROTECTION

DETAIL E-9-1

-----SSF-------

STANDARD INLET PROTECTION CONSTRUCTION SPECIFICATIONS USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH FLEVATION FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN, STRETCH & INCH GALVANIZED HARDWARE CLOTH THOTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST. TYPE B, USE 2½ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, URRELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINI CE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE ANI IN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.

BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH TH NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

CROSS SECTION

A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.

2:1 SLOPE OR FLATTER

SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER

4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.

STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.

MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WE SECTION B-4 VEGETATIVE STABLIZATION.

UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

Street Address

10481 CROSS FOX LANE

COLUMBIA, MD 21044

E. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED, BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.

DIKE TYPE

WATER MANAGEMENT ADMINISTRATION

o - DIKE HEIGHT 18 IN MIN. 30 IN MIN.

b - DIKE WIDTH 24 IN MIN. 36 IN MIN.

c - FLOW WIDTH 4 FT MIN. 6 FT MIN. d - FLOW DEPTH 12 IN MIN. 24 IN MIN.

PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONTINUOUS GRADE 0.5% MIN. TO 10% MAX. SLOPE

a<del>ntan ta</del>n

VVVVVVV

PLAN VIEW

FLOW CHANNEL STABILIZATION

CONSTRUCTION SPECIFICATIONS

. COMPACT FILL

DETAIL C-1

EARTH DIKE

PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCI MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTAINE BERM, AND specified dimensions. Immediately remove stone and/or sediment spilled, dropped, TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

INFLOW PROTECTION

ISOMETRIC VIEW

Provide nonwoven geotextile, as specified in section H-1 materials, under the bottom and along sides of all gabion baskets.

CONSTRUCT GABION INFLOW PROTECTION BY ARRANGING 9 X 3 X 1 FOOT GABION BASKETS TO FORM A TRAPEZOIDAL SECTION WITH A 3 FOOT BOTTOM WIDTH, 1 FOOT MINIMUM DEPTH, 3 FOOT SIDE WALLS, AND 2:1 OR FLATTER SIDE SLOPES. FILL GABION BASKETS WITH 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REDAR OR WEIR MESH.

MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

PROFILE ALONG CENTERLINE

. USE BASKETS MADE OF MINIMUM 11 GAUGE WIRE

. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.

. INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION SPECIFICATIONS

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE
WATER MANAGEMENT ADMINISTRATION NATURAL RESOURCES CONSERVATION SERVICE

DETAIL D-3-2 GABION

**PROFILE** 

PLAN VIEW

50 FT MIN.

USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE. PLACE CLEAN % TO 1% INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE PROTECTION MAXIMUM DRAINAGE AREA = 1/4 ACRE 6 FT MAX. SPACING OF 1/4 TO 1/4 STONE GEOGE OF GUTTER PAN

DETAIL E-9-2 AT-GRADE

INLET PROTECTION

PLAN / CUT AWAY VIEW

CROSS SECTION

- IN HARDWARE CLOTH

[ AGIP

MAXIMUM DRAINAGE AREA - 1 ACRE

- % TO 1% IN STONE

[고] CIP

OF 2 IN x 4 IN

SECTION A-A

SECTION A-A

SANCBAG OR
OTHER APPROVED
ANCHORING METH

-INLET GRATE

10 1% IN STONE

ONSTRUCTION SPECIFICATIONS USE NOMINAL 2 INCH x 4 INCH LUMBER

. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.

. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART). ATTACH A CONTINUOUS PIECE OF & INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE  $2\times4$  WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.

INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING

3. At non-sump locations, install a temporary sandbag or asphalt berm to prevent inlet

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

**DETAIL B-2 WASH RACK OPTION** 7-1-20-45-01-8700-10-45-4-10 MOUNTABLE BERN 6 FT M/N. WATER SUPPLY-ISOMETRIC VIEW - WASH RACK IN SCE

- MOUNTABLE BERM

ISOMETRIC VIEW- WASH RACK ALONG SCE CONSTRUCTION SPECIFICATIONS USE A WASH RACK DESIGNED AND CONSTRUCTED/MANUFACTURED FOR THE ANTICIPATED TRAFFIC LOADS. CONCRETE, STEEL, OR OTHER MATERIALS ARE ACCEPTABLE. PRE-FABRICATED UNITS SUCH A CATTLE GUARDS ARE ACCEPTABLE. USE MINIMUM DIMENSION OF 6 FEET  $\times$  10 FEET, GRIENT DIRECTION OF RIBS AS SHOWN ON THE DETAIL.

INSTALL PRIOR TO, ALONG SIDE OF, OR AS PART OF THE SCE. DIRECT WASH WATER TO AN APPROVED SEDIMENT TRAPPING DEVICE.

KEEP AREA UNDER WASH RACK FREE OF ACCUMULATED SEDMENT, IF DAMAGED, REPAIR OR REPLACE WASH RACK. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: DECEMBER 11, 2014 SHEET 16 OF 54

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204 Expiration Date: November 3, 2016."

THE POST FOR ERECTING THE TREE PROTECTION FENCE SHALL

BE MADE OF HOT ROLLED RAIL STEEL AND FORMED INTO A "T"

DIMENSIONS OF "T" POST SECTION, APPROXIMATELY 1 7/16" X

5/16" X 1/8" X 6' (SIX FEET) LONG, PAINTED GREEN OR

GALVANIZED STEEL "T" WITH 23-SQUARE INCH ANCHOR PLATE.

-SLATS - SHALL BE MADE OF NO.1 ASPEN OR SPRUCE MEASURING 3/8"

THICK, 1 1/2" WIDE, BOTH ENDS SHALL BE CUT SQUARE, THE SLATS

SHALL BE PAINTED WITH A GOOD QUALITY OF RED IRON OXIDE STAIN

-THE SLATS SHALL BE SPACED 2 1/4" APART PLUS OR MINUS 1/4

TREE PROTECTION FENCING SHALL CONSIST OF WOOD SLATS WOVEN TOGETHER WITH FIVE 2-WIRE STRANDS

OF 13 STEEL WIRE GAUGE GALVANIZED WIRE. NOT LESS THAN (2) THREE HUNDRED AND SIXTY (360) DEGREE

3/11/15 REVISE SHEET NUMBER DATE DESCRIPTION REVISION BLOCK 2-11-15 2-11-15 2.5-15

PLAN VIEWS

BAFFLE DETAIL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

CDX EXTERIOR GRADE
PLYWOOD OR EQUIVALENT

410-313-6805

SECTION/AREA PARCEL 280 WILDE LAKE MIDDLE SCHOOL 11/1 | ELEC. DIST. CENSUS BLOCK NO. TAX MAP જોડા, જોલ્ટ કુ જોલ્ડ FIFTH 6054 29,35 24,6 WATER CODE SEWER CODE E-30 5523900

FISHER, COLLINS & CARTER, INC IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS al square office park – 10272 Baltimore national P ELLICOTT CITY, HARYLAND 21042 (410) 461 - 2855

ENGINEER'S CERTIFICATE certify that this plan for sediment and erosion control represents a practical and

workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District." Signature of Engineer

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. also authorize periodic on-site inspection by the Howard Soil Conservation District."

TWISTS OF THE WIRE IN THE WEAVE BETWEEN THE SLATS.

CHARLES J. CROVO, SR., P.E.

TREE PROTECTION FENCE DETAIL

Chief, Development Engineering Division

COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON

PREPARED FOR

HARRIET TUBMAN BUILDING

8045 HARRIET TUBMAN LANE

IOWARD COUNTY PUBLIC SCHOOL SYSTEM

280

Address Chart

VILLAGE OF WILDE LAKE

TAX MAP No.: 35 GRID No.: 6

Chief, Development Engineering Division

SHEET 17 OF 54

..15/F.90&91

E-30

SEWER CODE

5523900

WATER CODE

Project Name		Wilde Lake Middle Sc Columbia, Maryland	31091								
				and the contract of the con-		#PANTOQUINEQUE AND QUESTION OF THE COLUMN		t et lieder für der der der der der der der der der de			
Jalum	MSI	Hammer Wt. 140 I	SAMPLER bs. Hole Diameter		E.	Entoman		M. Voelker			
		It Hammer Drop30i						N/A			
		4 Pipe Size 2.0				Date Comp					
<del>~~~~~~~~~~~</del>					·	- was comp	-Orbin	TUESCULY			
Elevation/	SYMBOLS SYMBOLS SAMPLE	Description	Boring and Sampling	Rec.	NM%	SPT Blows		SPT Blows/Foot			
Depth	CONDITIONS		Notes				N				
Transports consorting to	D STATE OF THE STA	Tannish-brown, dry to damp, stiff to medium stiff, micaceous SILT, little sand (ML) (Residual) to reddish-brown	6-inches Topsoil	merican merica		3-8-10	MATANEMAN AND AND AND AND AND AND AND AND AND A	10 30 5			
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## HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

STANDARD PENETRATION TEST CRIVING 2'O.D. SAMPLER I' WITH LADY HAMMER FALLING 30' COUNT MADE AT 6" INTERVALS.

			RECORD O	F SOIL EXPLORA					
roject Name		Wilde La	ke Middle Sc	hool		Eori	ng No.	S	WM-11
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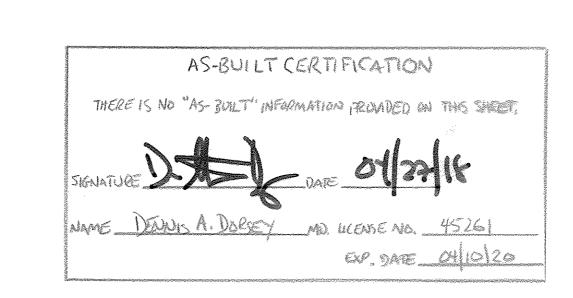
STANDARD PENETRATION TEST DRIVING 2" O.D. SAMPLER I' WITH INCH HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

## RECORD OF SOIL EXPLORATION

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## RECORD OF SOIL EXPLORATION

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Elevation!	SOL SYMBOLS/	Description		Boring and Sampling	T	111.00	AMT 81	T	SPT E				
Depth	SAMPLE CONDITIONS	Description		Notes	MEC.	NM%	SPT Blows	N	W. 14 Cal. 14	Cur	¥®		
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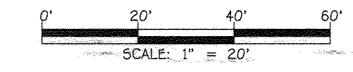




Solutions 201 Defense Highway, Suite 2000 Annapalis, Mi. 25901 phi 143.774.7232

APPROVED
PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ENTENNIAL SQUARE OFFICE PARK — 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 — 2055



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2016."

11/21/16 REVISE SHEET NUMBER 3/11/15 REVISE SHEET NUMBER DATE DESCRIPTION REVISION BLOCK Z-11-15 Date 2-5-15 Date

Chief, Development Engineering Division



PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM		Address Chart					
HARRIET TUBMAN BUILDING 8045 HARRIET TUBMAN LANE	Parcel Number	Street Address					
COLUMBIA, MARYLAND 21044	280	10401 CROSS FOX LANE					
Attention: SCOTT WASHINGTON 410-313-6805		COLUMBIA, MD 21044					

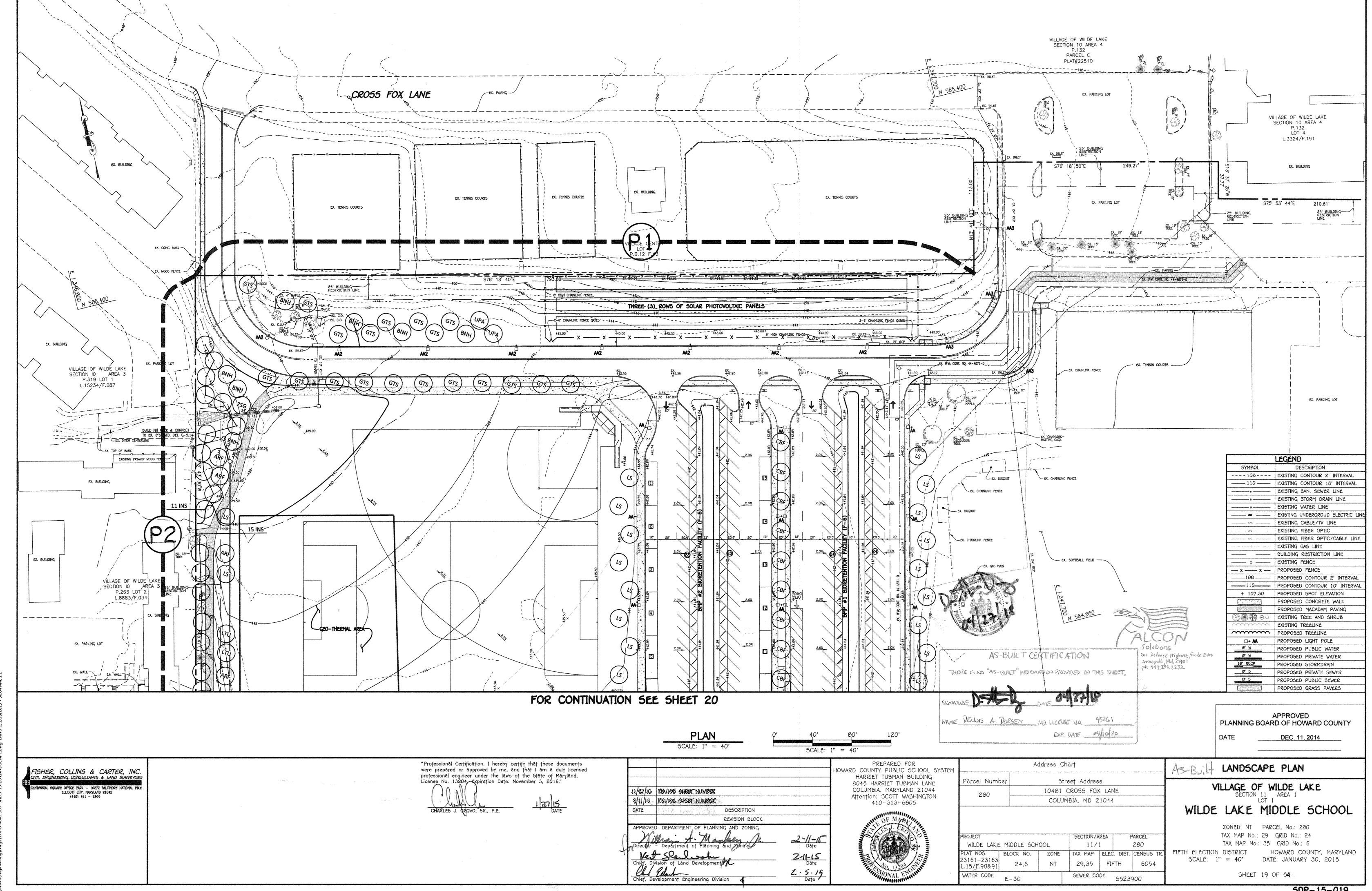
PROJECT		······································	SECTION/A	REA	F	PARCEL	<del> </del>
WILDE LAKE	MIDDLE SCH	00L	11/	1		280	
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC	. DIST.	CEN5U5	TR.
23161-23163 L.15/F.90&91	24,6	NT	29,35	FIF	TH	6054	<b>!</b>
WATER CODE	E-30		SEWER CO	DE	5523°	900	

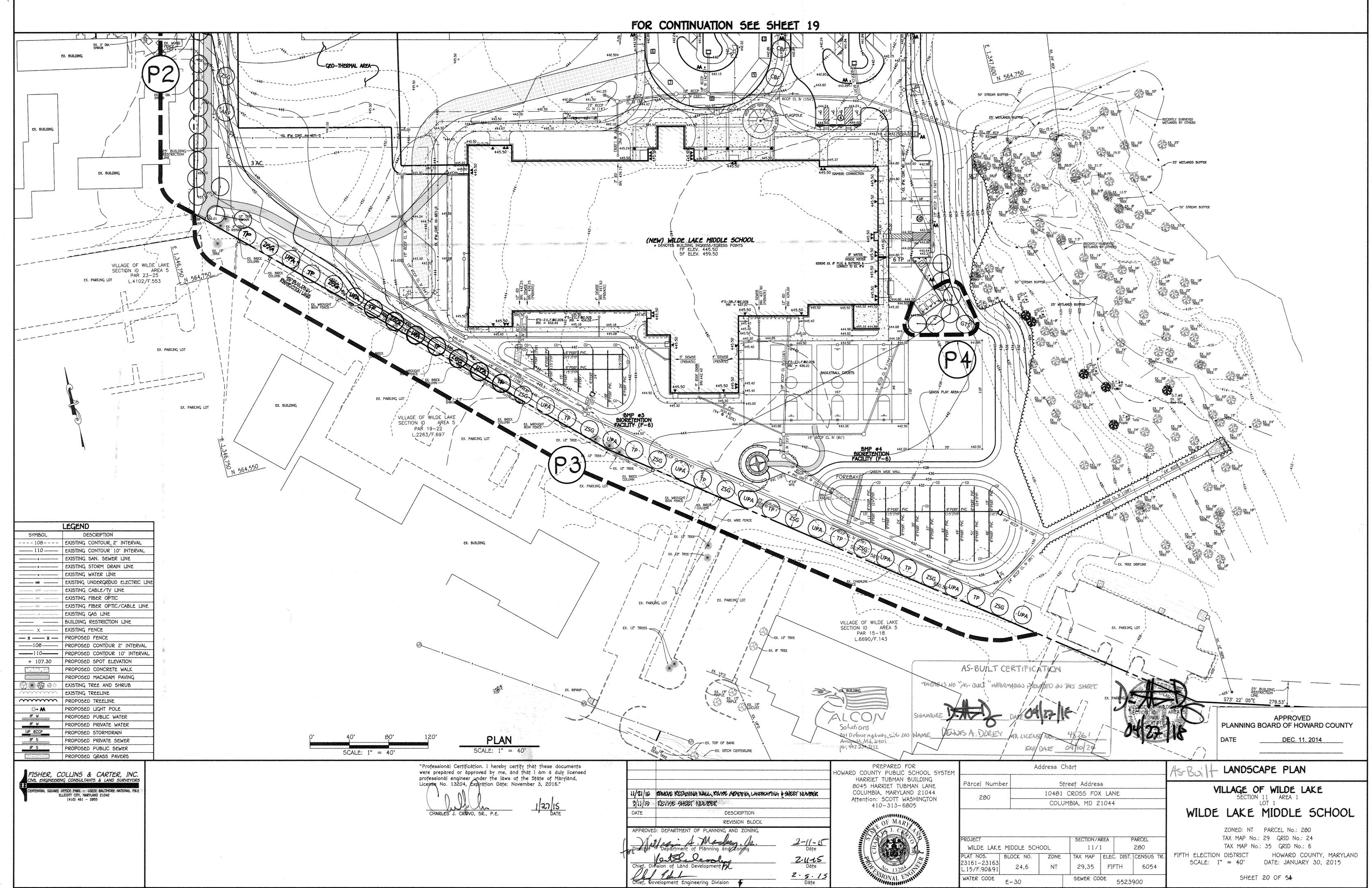
AS-BUILT BORING LOGS

VILLAGE OF WILDE LAKE
SECTION 11 AREA 1
LOT 1

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24 TAX MAP No.: 35 GRID No.: 6 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JANUARY 30, 2015

SHEET 18 OF 54





QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
TREES - D	ECIDUOL	JS SHADE			——————————————————————————————————————
5	ARF	Acer x freemanii 'Autumn Blaze'	3" - 3-1/2" cal.	B & B	Seedless
		Freeman Maple	<del></del>		···
7	BNH	Betula nigra 'Heritage'	10-12' ht. min.	B & B	Multistem/3 trunks min
		River Birch			
11	CBF	Carpinus betulus 'Fastigiata'	3" - 3-1/2" cal.	B & B	Matched
		Upright European Hornbeam			
20	GTS	Gleditsia triacanthos inermis 'Shademaster'	3" - 3-1/2" cal.	B & B	
		Thornless Honeylocust			
19	LS	Liquidambar styraciflua	2-1/2" - 3" cal.	B & B	
		American Sweetgum			
2	LTU	Liriodendron tulipifera	2-1/2" - 3" cal.	B & B	
		Tulip Poplar			
14	UPA	Ulmus parvifoilia 'Frontier'	2-1/2" - 3" cal.	B & B	
	**************************************	Chinese Elm			
14	ZSG	Zelkova serrata var. 'Greenvase'	2-1/2" - 3" cal.	В&В	
		Japanese Zelkova			
3	AC	Amelanchier canadensis	8'-10' Ht.	B & B	
		Shadblow Serviceberry			
TREES - EV	VERGREE	N_			
15	TP	Thuja x plicata 'Green Giant'	6'-8'Ht.	B & B	· ·
		Green Glant Arborvitae			
26	INS	Ilex x Nellie Stevens	6'-8'Ht.	B & B	

SCHEDULE A	PERIMETER LANDSO	CAPE EDGE (P-#)		
PERIMETER	Р1	Р2	РЗ	P/
CATEGORY	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.	Dumpster Screening
LANDSCAPE TYPE	Α	С	Α.	D
LINEAR FEET OF PERIMETER	795'	605'	957'	58'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES 2 SHADE TREES 3 EVERGREEN TREES	YES 6 EVERGREEN TREES	NO .
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	14  -	16 31	16 - -	1 6 -
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	14	14 29 -	17 3	6
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	_ ^~	2 SHADE TREES 3 EVERGREEN TREES	6 EVERGREEN TREES	_

"At the time of plant installation, all trees listed and approved on the Landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the road drawing plans".

"The Owner, tenants and/or their agents shall be responsible for maintenance of the required perimeter landscaping. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced".

### DEVELOPER'S / BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SCOTT WASHINGTON DIRECTOR OF SCHOOL PLANNING AND CONSTRUCTION

## PREPARED FOR 410-313-6805 DESCRIPTION REVISION BLOCK

HOWARD COUNTY PUBLIC SCHOOL SYSTEM HARRIET TUBMAN BUILDING 8045 HARRIET TUBMAN LANE COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON

TREE PLANTING DETAIL

1/2" RUBBER HOSE-

GALVANIZED WIRE

BURLAP WRAP -

DOUBLE STRAND OF 14 GAUGE-

2"x 2" HAROWOOD STAKE -

BURLAP AND ROPE CUT

FROM TOP OF TREE BALL-LEAVE 1/0 DEPTH OF ROOT BALL ABOVE FINISHED GRADE

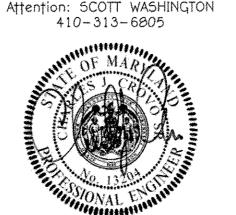
2"-3" EARTH SAUCER ----

FINISHED GRADE ---

COMPACTED SUBGRADE -

FIRM BEARING (MIN. 2'-6")

EXTEND STAKE TO



	Address Ch	ārţ	
Parcel Number	. Str	eet Address	-
280	10481	CROSS FOX LAN	VE
200	COLUM	181A, MD 21044	
PROJECT WILDE LAKE MIC	DOLE SCHOOL	SECTION/AREA 11/1	PARCEL 280

LANDSCAPE NOTES AND DETAILS VILLAGE OF WILDE LAKE

WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JANUARY 30, 2015

SHEET 21 OF 54

PLANTING NOTES: 1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF HOWARD COUNTY CODE AND LANDSCAPE MANUAL AND IS TO BE USED FOR PLANTING ONLY. LANDSCAPING SHALL BE PROVIDED AS SHOWN ON THIS PLAN SHEET. NO SURETY IS REQUIRED SINCE THIS IS A HOWARD COUNTY BOARD OF EDUCATION PROJECT.

2. CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK. ALL GENERAL NOTES FROM SHEET 1, SHALL APPLY.

3. FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK, EVEN WHERE PLANT LOCATIONS ARE DIMENSIONED. CONTACT CONSTRUCTION MANAGER IF ANY RELOCATION ARE REQUIRED.

4. PLANT QUANTITIES SHOWN ON PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL TAKE

5. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE A.A.N. SPECIFICATIONS, AND BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

6. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED OR MULCHED SHALL BE SEEDED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

7. ALL EXPOSED EARTH WITHIN THE LIMITS OF THE PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER PLANTING DETAILS.

8. THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF SOIL OR DRAINAGE

CONDITIONS ARE ENCOUNTERED WHICH MAY BE DETRIMENTAL TO THE GROWTH OF PLANTS.

9. NO SUBSTITUTION SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR HIS

10. REFER TO OTHER SITE DWGS. FOR ADDITIONAL SEEDING REQUIREMENTS.

Note: THERE IS NO LANDSCAPING SURETY FOR THE LANDSCAPE PLAN DUE TO IT BEING A HOWARD COUNTY PUBLIC SCHOOL SYSTEM PROJECT.

NOTE: TREE AND SHRUB TYPES ARE ONLY AN RECOMMENDATION, THESE MAY BE REVISED TO A COUNTY APPROVED EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL. "THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL."

PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED. SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

BID SHALL BE BASE ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS

ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.

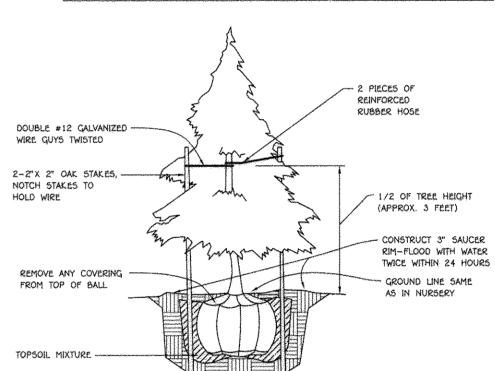
POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE).

PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED GOW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.

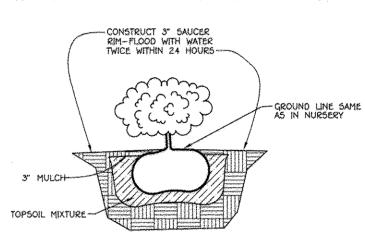
WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.

ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.

SCHEDULE B PARKING LOT INTERNAL LANDS	CAPING
NUMBER OF PARKING SPACES	108
NUMBER OF TREES REQUIRED (1/20 5P)	6
NUMBER OF TREES PROVIDED	
SHADE TREES	28
OTHER TREES (2:1 SUBSTITUTION)	Amilian Salar Amilian



## EVERGREEN PLANTING DETAIL



## SHRUB PLANTING DETAIL

APPROVED PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014



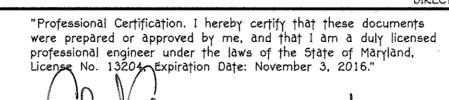
AS-BUILT CERTIFICATION

THERE IS NO "AS-BUILD" INFORMATION PROVIDED IN THIS SHEET.

69/10/20

EXP, DATE

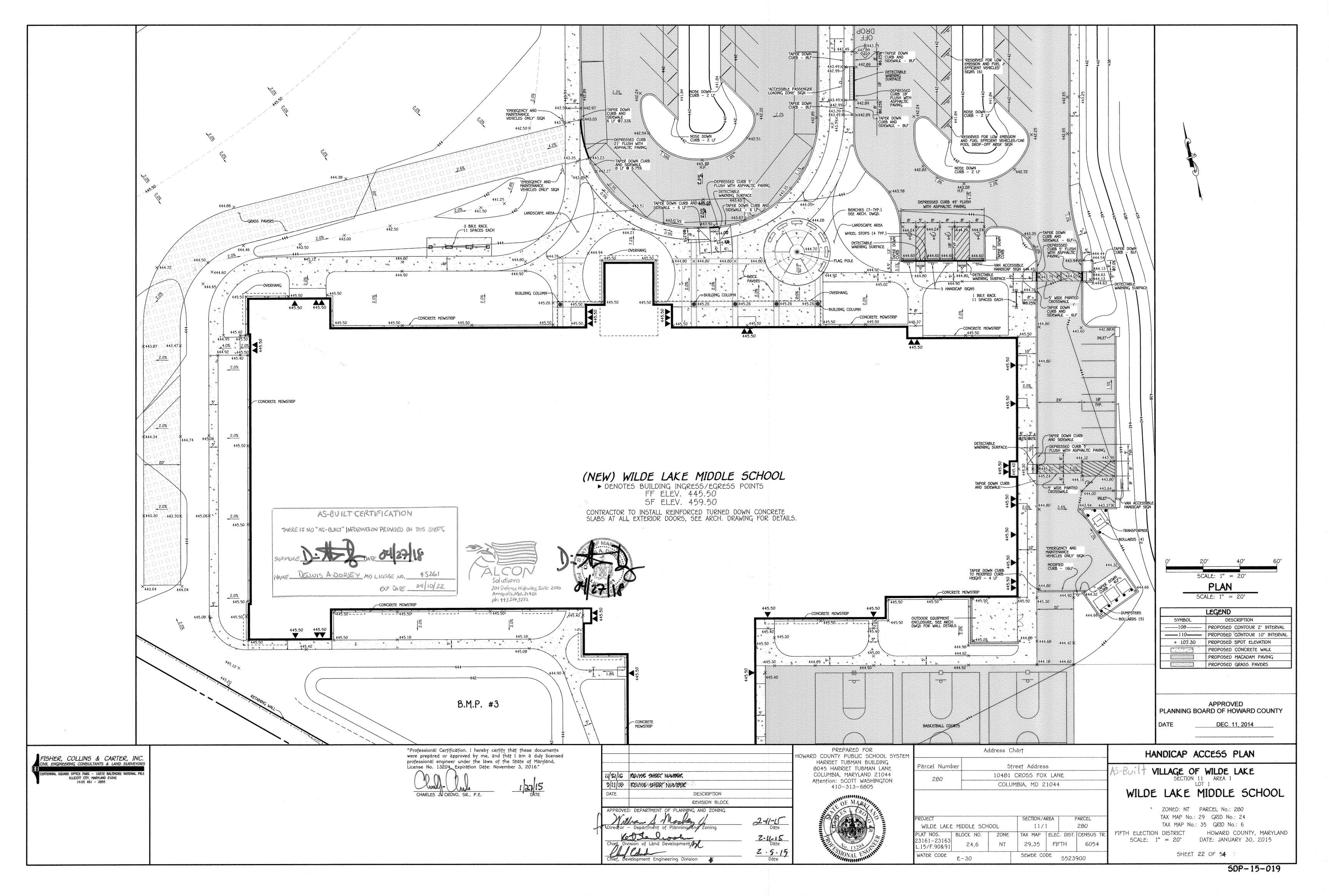
DEUNIS A. DORSEY MD. LICENSE NO.

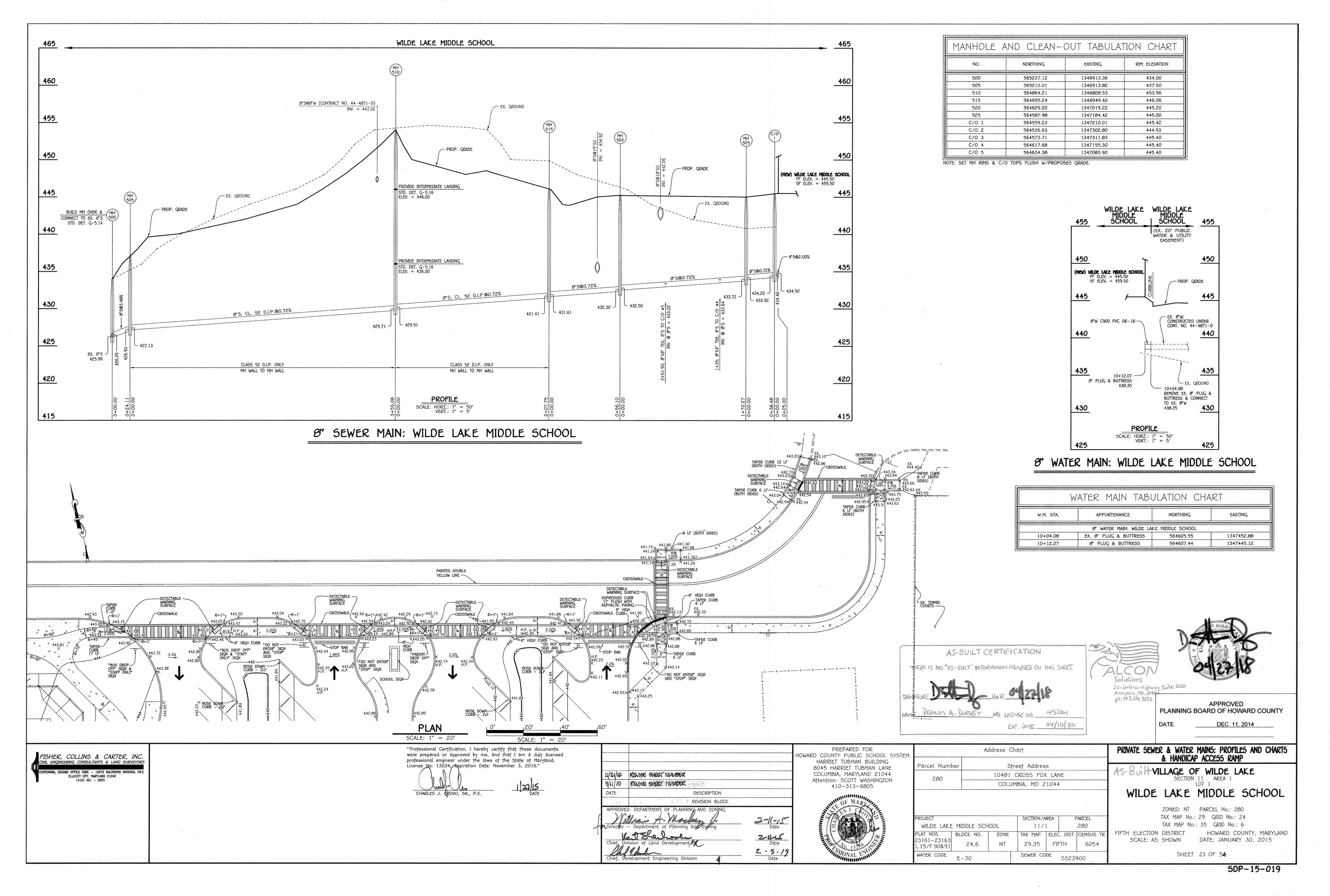


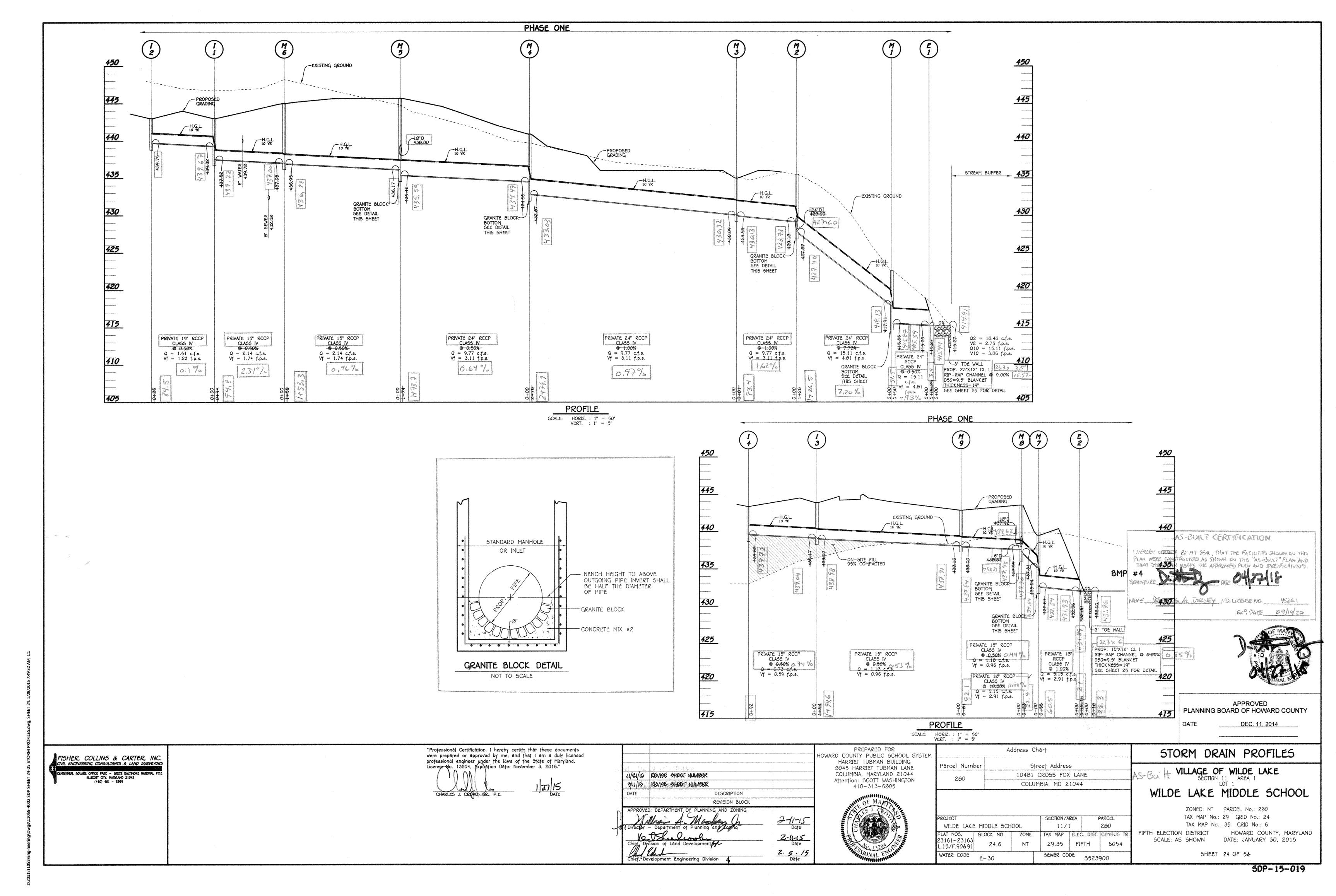
201 Defense Highway, Suit 200

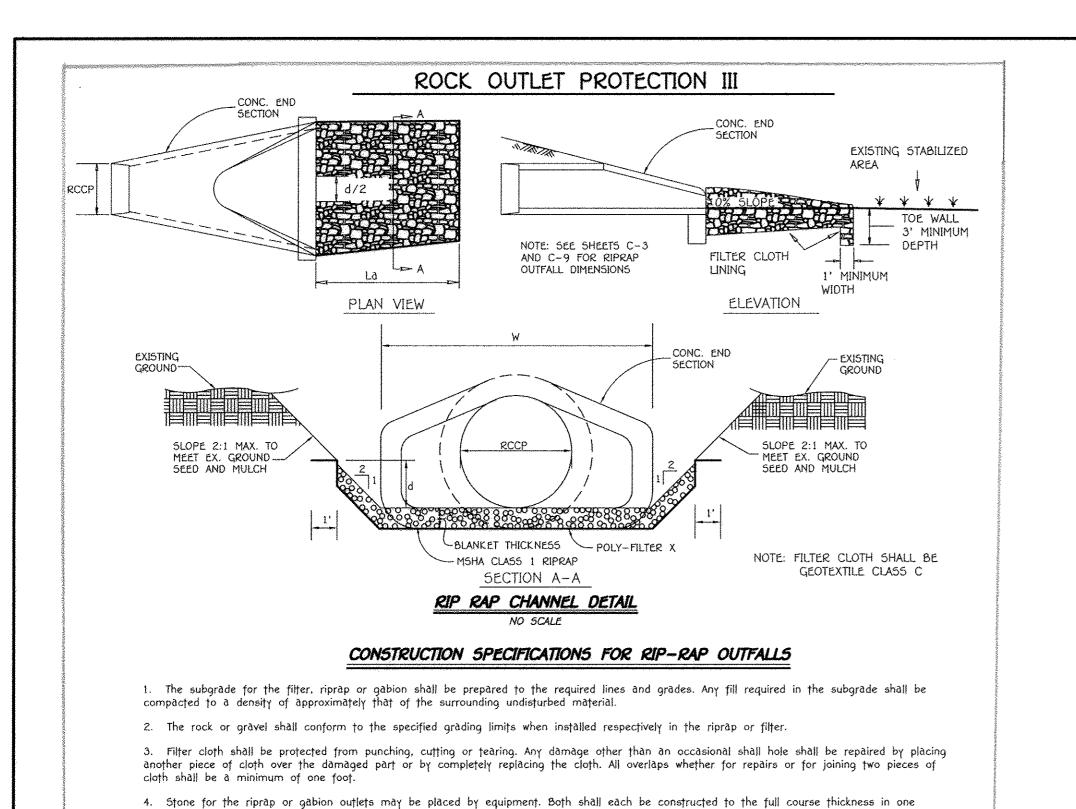
Annopolis, Md. 21401 ph: 141.774.3232

11/21/10 Range Landschang Chart & School Number 3/11/15 REVIGE SHEET NUMBER DATE







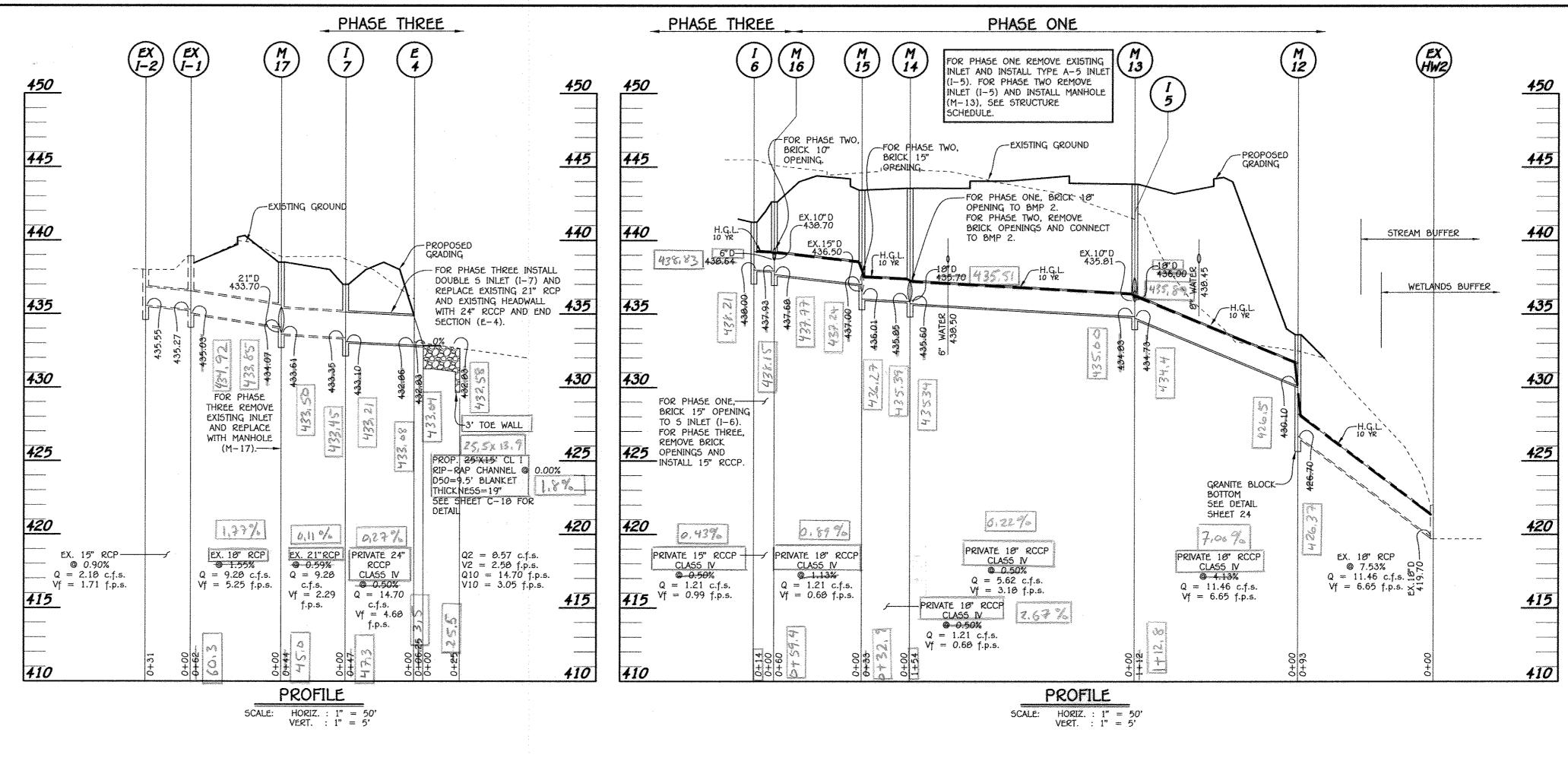


operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and

stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent

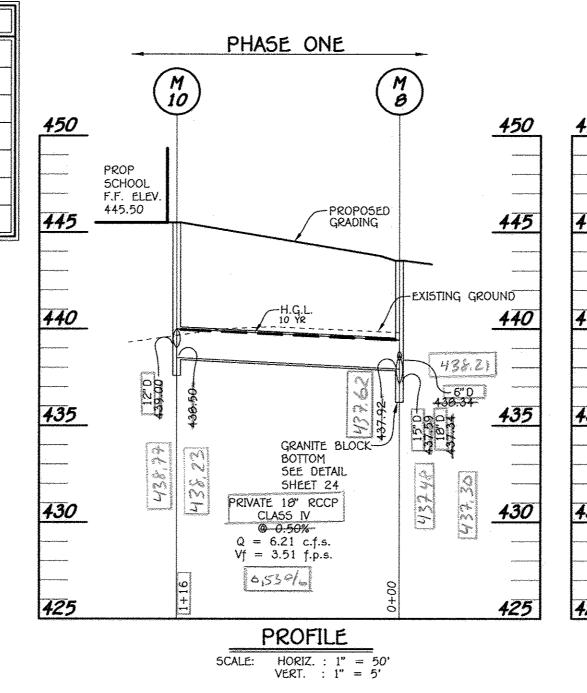
placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger

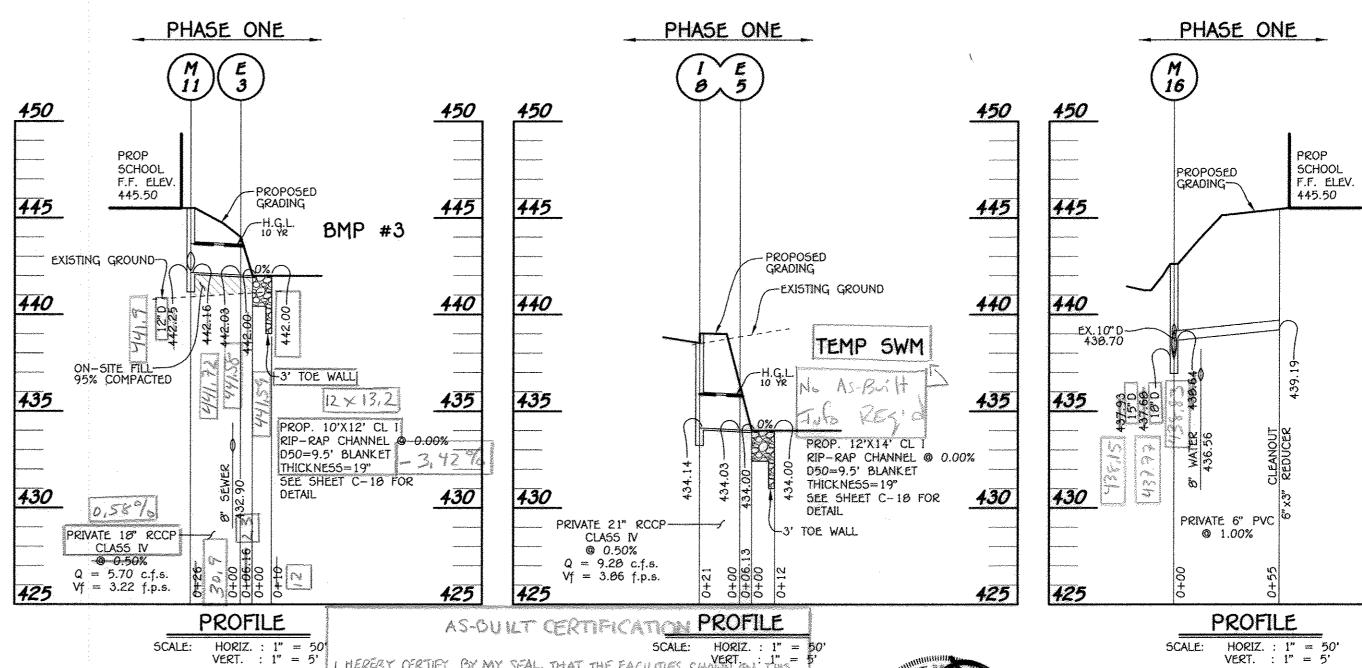
necessary to prevent damage to the permanent works.



						STR	UCTU	IRE S	SCHEDU	ILE				
TRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION		INV.	IN		INV.C	XUT	CO	ORDIN	NATES	WIOTH	ТҮРЕ	REMARKS
1-1	PRIVATE	<del>443.00***</del>	437,67	439:32	(15")	439,22	437.52	- (15")	N 447	4.32	£ 5405.13	2.58'	5 INLET	D-4.22 & D-4.93
I-2	PRIVATE	4+3:00 ***					439.75	(15")	N 4498	3.75	E 5324.30	2.56*	5 INLET	D-4.22 & D-4.93
I-3	PRIVATE	<del>143.67</del>	439.04	439:17	(15")	433,58	439.07	(15")	N 4988	3.73	E 5555.79	2.58'	5 INLET	0-4.22 & 0-4.93
I-4	PRIVATE	443.36	·			439,72	439.63	(15")	N 501	5.35	£ 5467.73	2.5'	A-5	0 - 4.01
1-5	PRIVATE	(441/95	€435.81	(10")	434.83	(18")	434.73	(18")	N 4966	5.63	E 5381.25	2,5'	A-5	D - 4.01
I-6	PRIVATE	441.25***		****		438,21	436:00	(15")	N 4719	9.47	£ 5305.06	2.58'	5 INLET	D-4.22 & D-4.93
I-7	PRIVATE	4 <del>37.00</del> ***	433.45	433,35	(211)	433,23	433.10	~(24")	N 4500	2.46	E 4873.72	2.58'	DOUBLE 5 INLET	D-4.23 & D-4.93
I-8	PRIVATE	439.02	***************************************	***		415.87	434.14	(21")	N 4480	0.74	E 4910.04	2.5'	A-5	D - 4.01
M-1	PRIVATE	422.50	418,13	417.91	(24")	487.60	415.55	(24")	N 514	4.71	£ 5839.94	4'	STD. MANHOLE	G - 5.12
M-2	PRIVATE.	435,50 428	नेह <b>४२<del>१.</del>१</b> ८	(24")	428.00	(24) 4分割	4 <del>27.6</del> 7	(24")	N 5018	3.38	£ 5862.06	6'	STD. MANHOLE	G - 5.13
M-3	PRIVATE	435 50	430,32	430:09	(24")	450.17	429.99	(24")	N 4947	7.98	£ 5903.09	4'	STO. MANHOLE	G - 5.12
M-4	PRIVATE	440.70	434,49	434.55	(24")	433,0	432.67	(24")	N 4737	7.80	E 5721.78	4'	STD. MANHOLE	G - 5.12
M-5	PRIVATE	445.70	436.17	(15")	430.00	(184) 塚原	435.42	(24")	N 4600	5.16	£ 5607.88	4'	5TD. MANHOLE	G - 5.12
M-6	PRIVATE	445.00	432.00	437.05	(15")	W76.28	436.95	(15")	N 4497	7.83	E 5495.95	4'	STD. MANHOLE	G - 5.12
M-7	PRIVATE	4 <del>39.5</del> 0	。43年6年	435.04	(1 <b>0</b> °)	439.24	432.61	(18")	N 4786	5.82	E 5707.43	4'	STD. MANHOLE	G - 5.12
M-8	PRIVATE	443,53	437.59 (15	) <del>437.9</del> 2	(10])	4 <del>39.34</del> (6")	437.34	(18")	N 4793	3.30	£ 5606.01	4'	5TD. MANHOLE	G - 5.12
M-9	PRIVATE	<b>442.8</b> 5	437.51	438.10	(15)	Ц(П. 1910	436.00	(15")	N 487	1.17	E 5709.55	4'	STD, MANHOLE	G - 5.12
M-10	PRIVATE	445.50	4138,33	439:00	(12")	438,23	439:50	(18")	N 4831	1.90	£ 5577.04	4'	STD. MANHOLE	G - 5.12
M-11	PRIVATE	445:50	441.90	442.25	(12†)	441.72,	442.16	(18")	N 4674	1.27	£ 5525.37	4'	STD. MANHOLE	G - 5.12
M-12	PRIVATE	433. <del>6</del> 0	476,50	430.10	(18)	485.39	426.70	(18")	N 5058	3.23	E 5447.77	4'	STD. MANHOLE	G - 5.12
M-13	PRIVATE	443.04	4 <b>34.9</b> 8	(181)	436.00	(18)	434.73	(18")	N 4966	6.65	E 5302.96	4'	STD. MANHOLE	G - 5.12
M-14	PRIVATE	443.62 47	34 <b>43<del>5.7</del>0</b>	(18")	435.85	(181) 85.5	435.60	(18")	N 4820	0.88	E 5334.62	4'	STD. MANHOLE	G - 5.12
M-15	PRIVATE	443,43 473	24 <b>436.50</b>	(15")	437.00	(18)	436.01	(18")	N 4789	3.43	£ 5325.12	4'	STD. MANHOLE	G - 5.12
M-16	PRIVATE	442,62 1/8.	430.70(10*)	437.93	(151)	43 <del>0.6</del> 4(6")	437-69	(18")	N 4729	9.98	E 5314.93	4'	STD. MANHOLE	G - 5.12
M-17	PRIVATE.	430.50	. 483.70	(21")	434:07	([8])	433.61	(21")	N 4543	3.09	E 4882.21	4*	STD. MANHOLE	G - 5.12
R-1	PRIVATE	442.00***	436.49	436.50	(6")		436.40	(18")	N 4974	1.82	£ 5337.07	3*	MOD. K INLET	SEE SHEET 47
R-2	PRIVATE	442.00***	436.65	436,50	(6*)	nagajaka a mikar filoro a damandipi (para maging parlaming) (pargan)	436.40	(18")	N 4833	3.15	E 5294.25	3'	MOD. K INLET	SEE SHEET 47
R-3	PRIVATE	444.25***	437.51	430.50	(6*)	LISO, ME	438:40	(18")	N 4619	3.35	£ 5590.65	3'	MOD. K INLET	SEE SHEET 47
R-4	PRIVATE	434.25***	429.04	429.00	(6")	428,33	428.90	(24")	N 4980	7.35	£ 5825.73	3'	MOD. K INLET	SEE SHEET 47
R-5	PRIVATE	438.20***	7549	435.50	(4")	75m(*	434.00	(21")	N 4537	7.30	£ 4914.55	3'	MOD. K INLET	SEE SHEET 47
£-1	PRIVATE	417.30	Awards garden of National States and States of States and States of States and States of States	415.30	(24°)	415,44	415.27	(24")	N 5193	3.96	E 5031.32	24"	CONC. END SECTION	D - 5.51
£−2	PRIVATE	433.56	43,63	432.06	(18")	431.89	432:00	(18")	N 4820	).76	£ 5750.70	16"	CONC. END SECTION	0 - 5.51
£-3	PRIVATE	443.53	441.58	442.03	(181)	H41,59.	442.00	(18")	N 4661	1.80	E 5548.18	18"	CONC. END SECTION	0 - 5.51
E-4	PRIVATE	434.86				433,01	432.63	(24")	N 4454	1.38	£ 4864.49	24'	CONC. END SECTION	D - 5.51
E-5	PRIVATE	435.78		434.03	<del>,                                     </del>	7548	434.00	(21")	N 4400	3 60	£ 4915.73	21"	CONC. END SECTION	D - 5.51

1	PIPE SCHEDULE (PRIVATE)									
$= \parallel \parallel$	SIZE	CLA55	LENGTH							
	6"	PERF PVC	2004 L.F.							
	6"	PVC 5CH 40	/19 94 L.F.							
	15"	RCCP, CLASS IV	715 746 L.F.							
	18"	RCCP, CLASS IV	690 <b>678</b> L.F.							
	21"	RCCP, CLASS IV	45 47 LF.							
	24"	RCCP, CLASS IV	815 810 LF.							





5CALE: HORIZ. : 1" = 50 HERESY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOUNTED THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BULT" PLAN AND THAT THIS PLAN MEETS THE APPROVED PLAN AND SPECIFICATIONS. DAMAS A DARSEY \_MD. LICENSE NO\_ EXP, DATE <u>CY/10/18</u>

APPROVED PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014

F15HER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055

\*\*\* - DENOTES GRATE ELEVATION

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204 Expiration Date: November 3, 2016."

11/21/16 REVIOE SHEET NUMBER 9/11/16 REVISE SHEET NUMBER DESCRIPTION REVISION BLOCK 2-11-15 Chief, Development Engineering Division 2.5.19

HOWARD COUNTY PUBLIC SCHOOL SYSTEM HARRIET TUBMAN BUILDING 8045 HARRIET TUBMAN LANE COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON 410-313-6805

PREPARED FOR

VERT. : 1'' = 5

Address Chart Parcel Number Street Address 10481 CROSS FOX LANE COLUMBIA, MD 21044

PARCEL SECTION/AREA WILDE LAKE MIDDLE SCHOOL 280 11/1 LAT NOS. 23161-23163 29,35 FIFTH 6054 24,6 L.15/F.90&91 WATER CODE SEWER CODE E-30 5523900

STORM DRAIN PROFILES, DETAILS AND STRUCTURE SCHEDULE VILLAGE OF WILDE LAKE SECTION 11 AREA 1

WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24 TAX MAP No.: 35 GRID No.: 6 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JANUARY 30, 2015

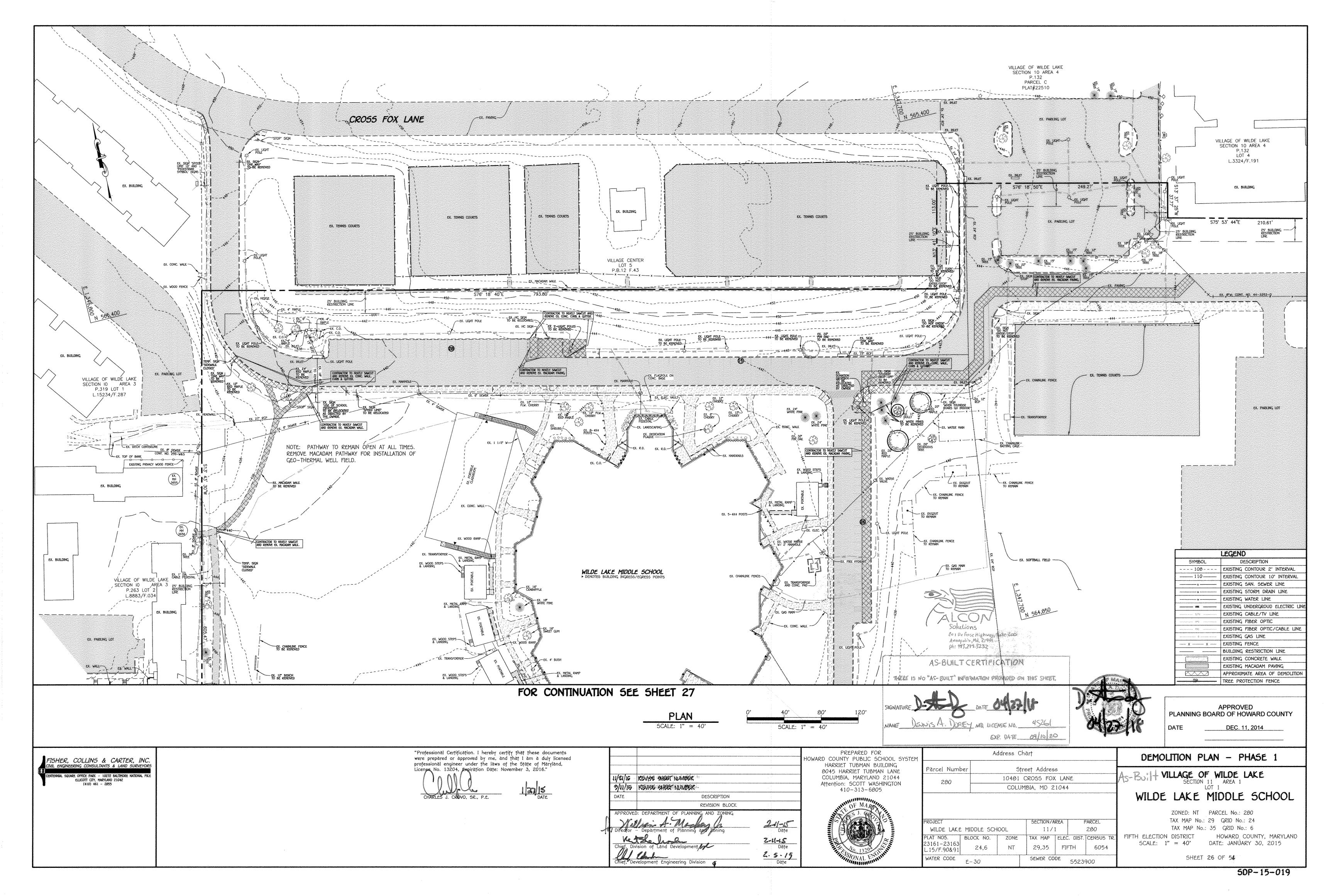
SHEET 25 OF 54

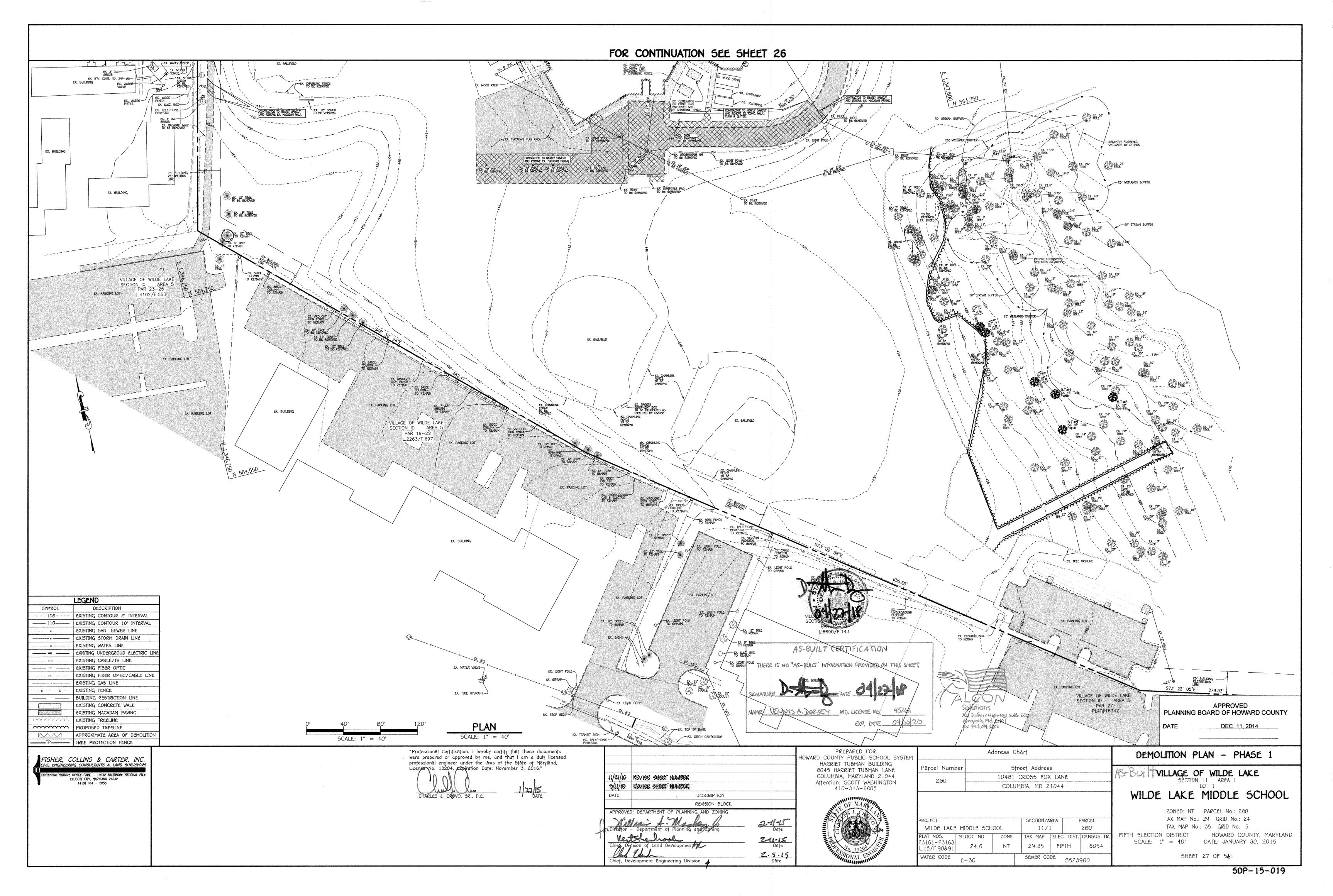
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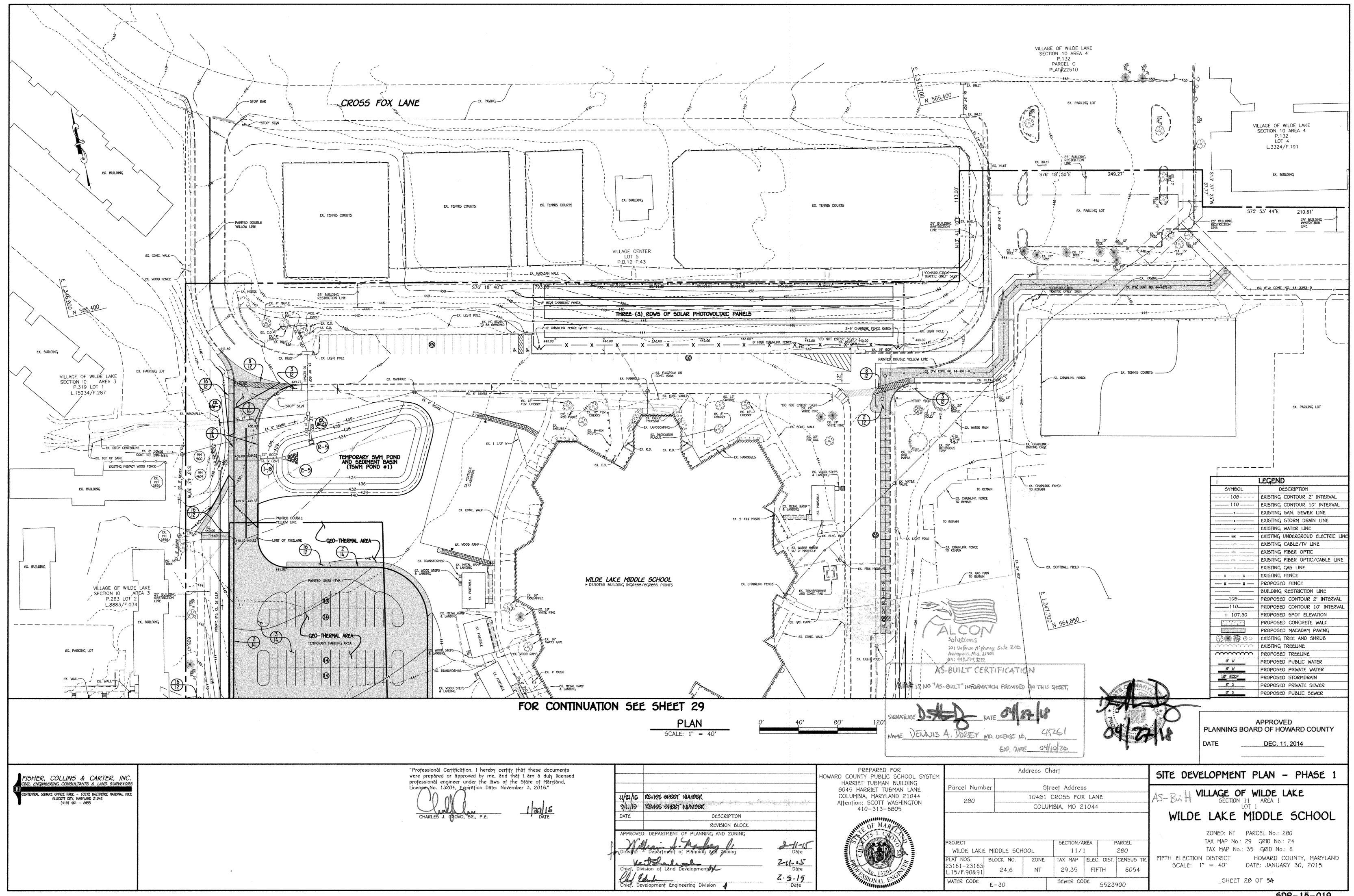
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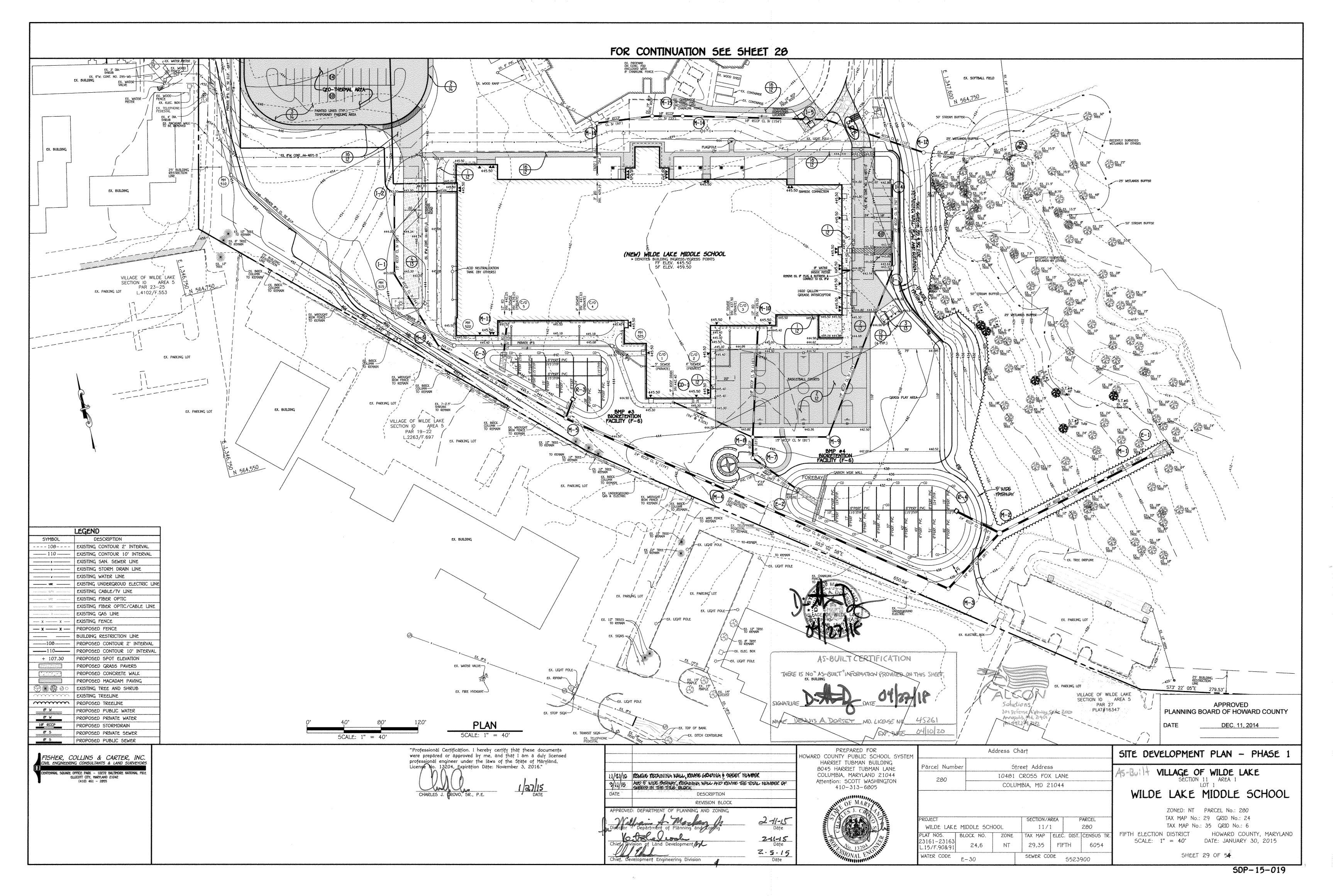
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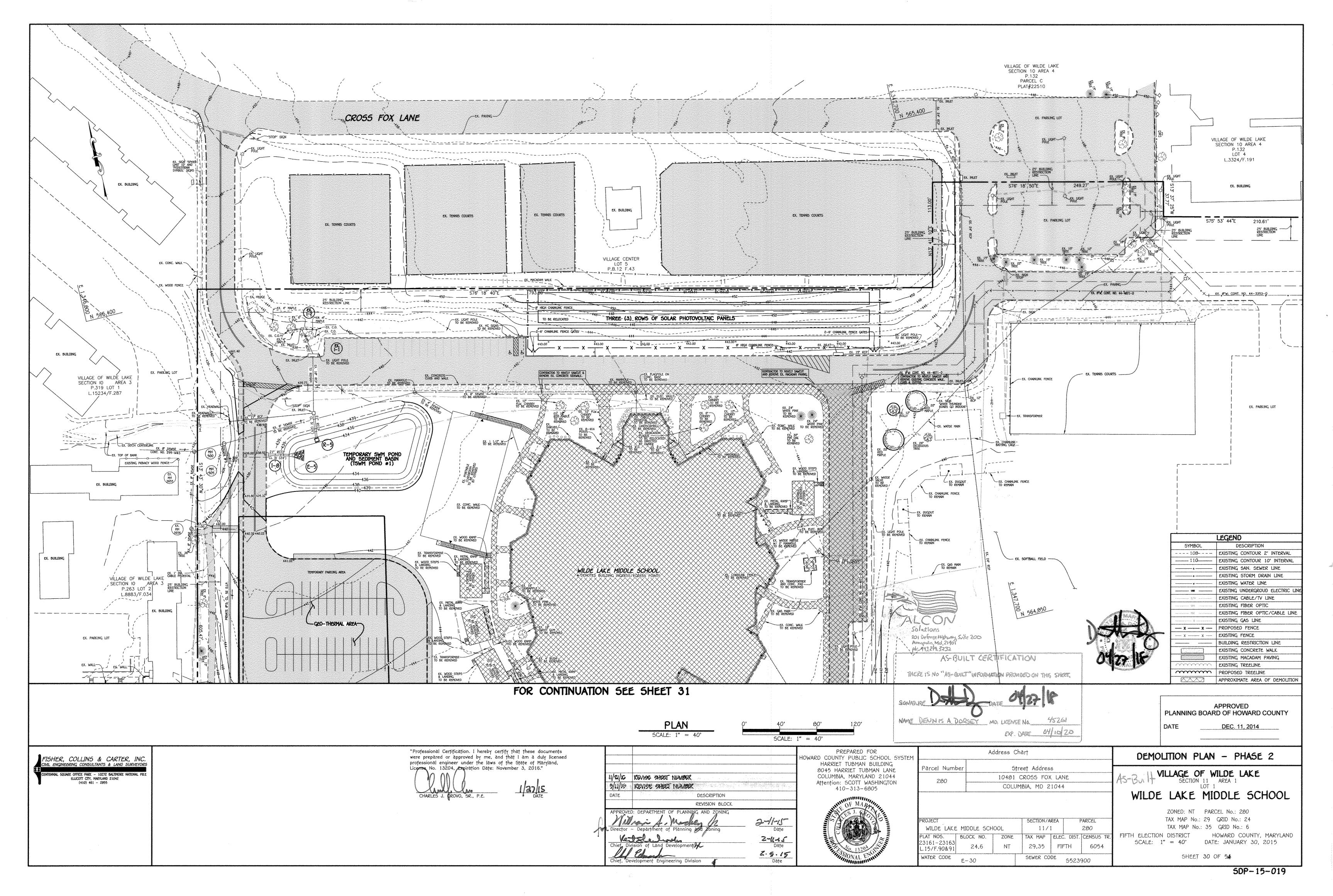
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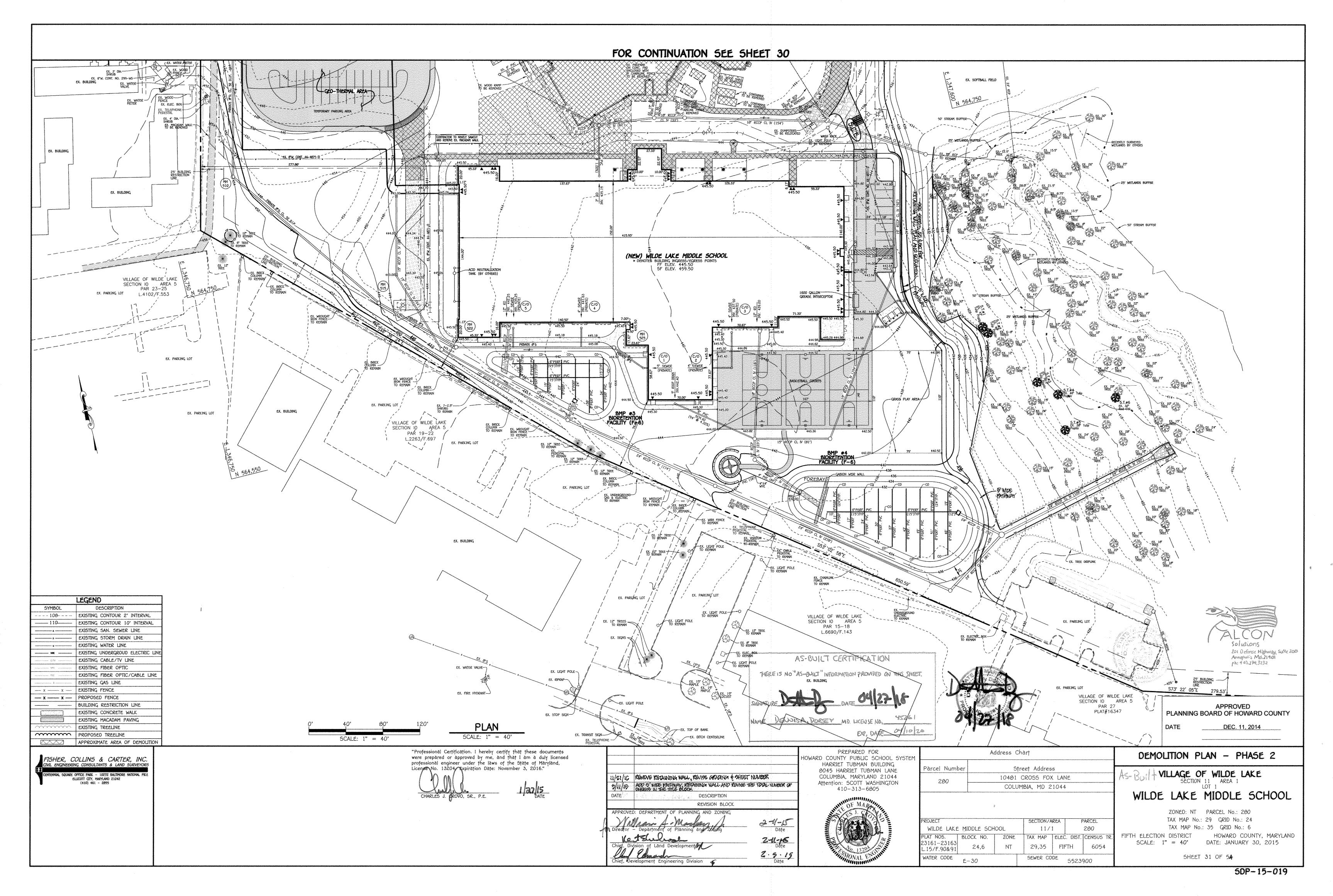


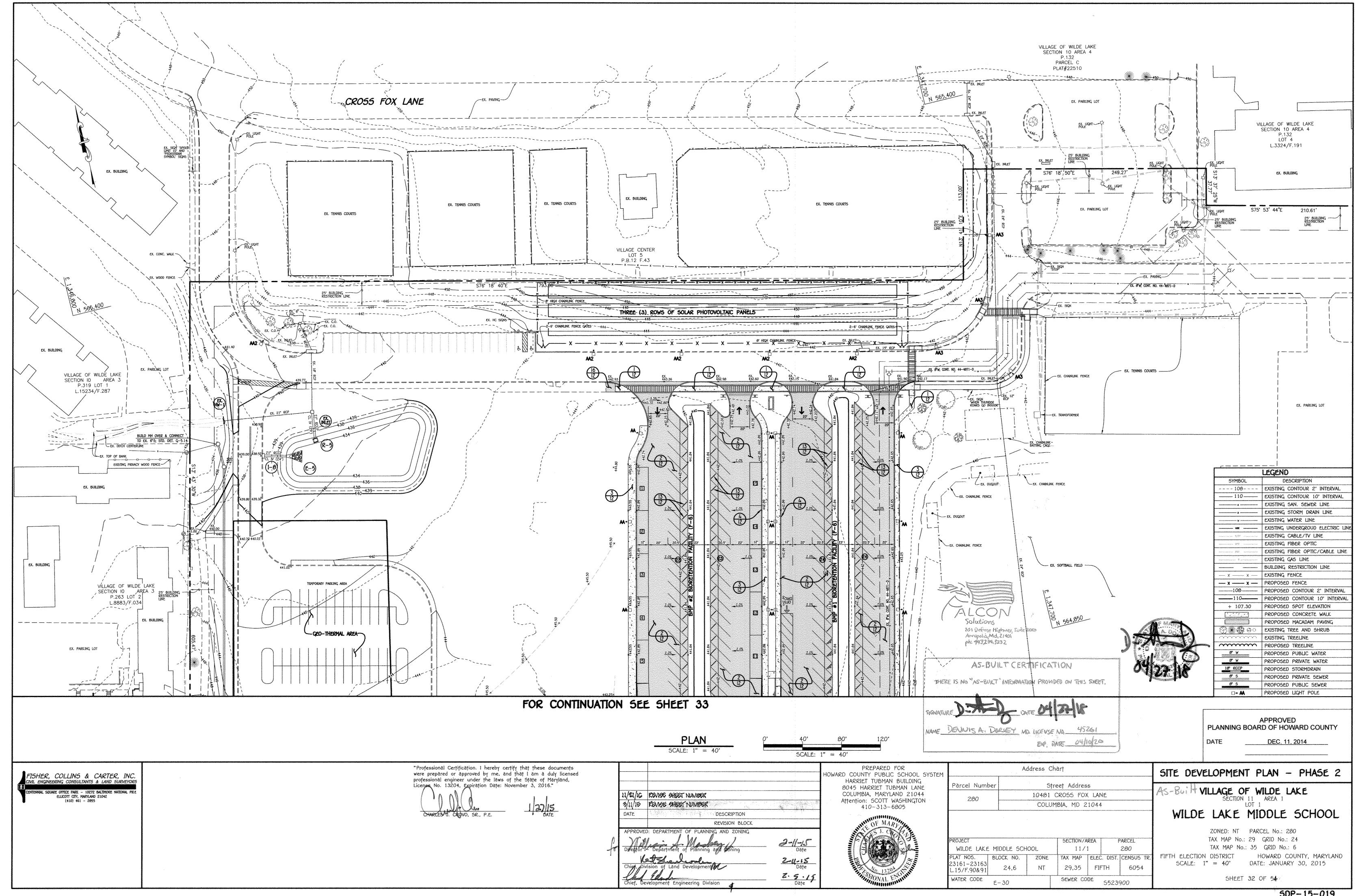


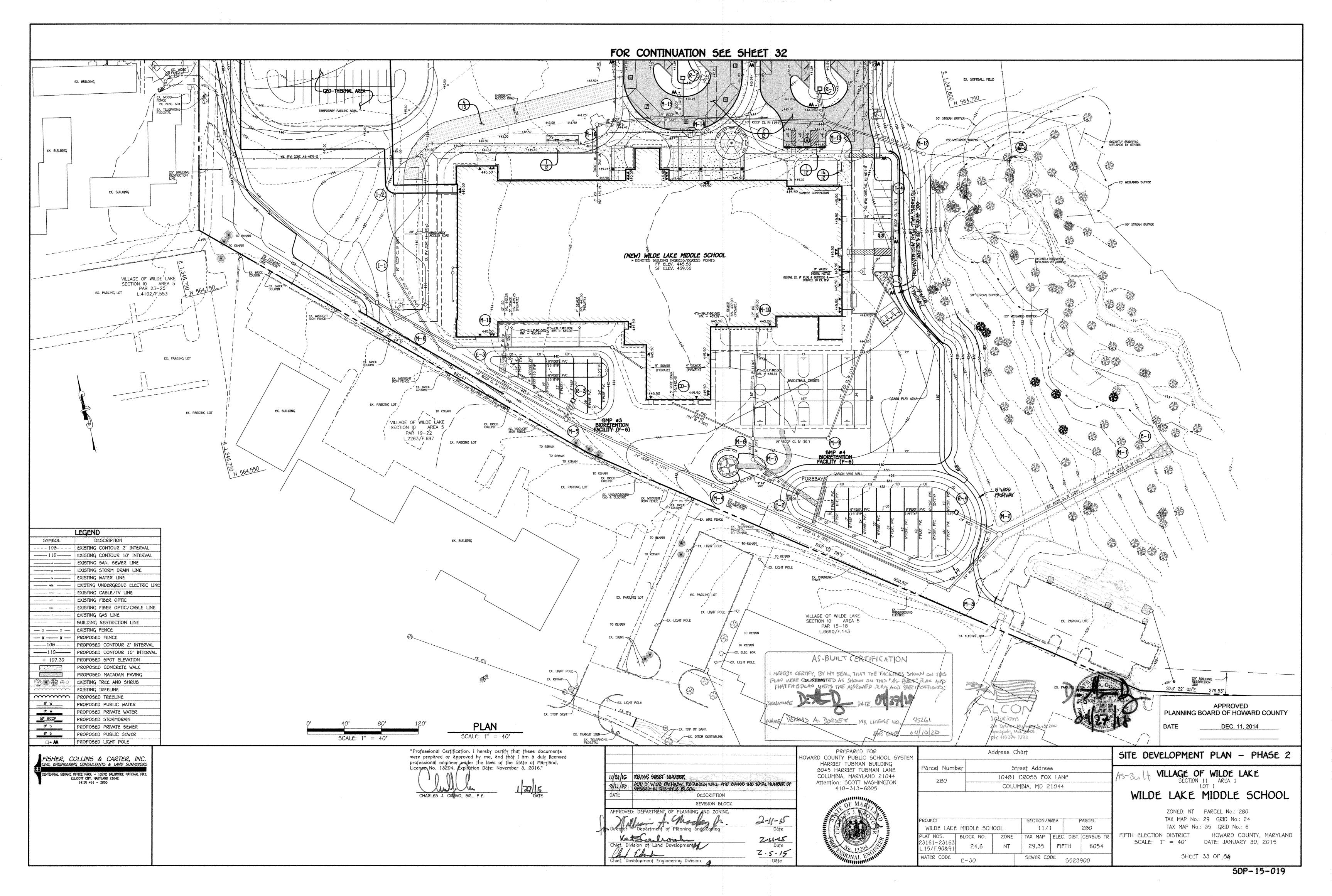


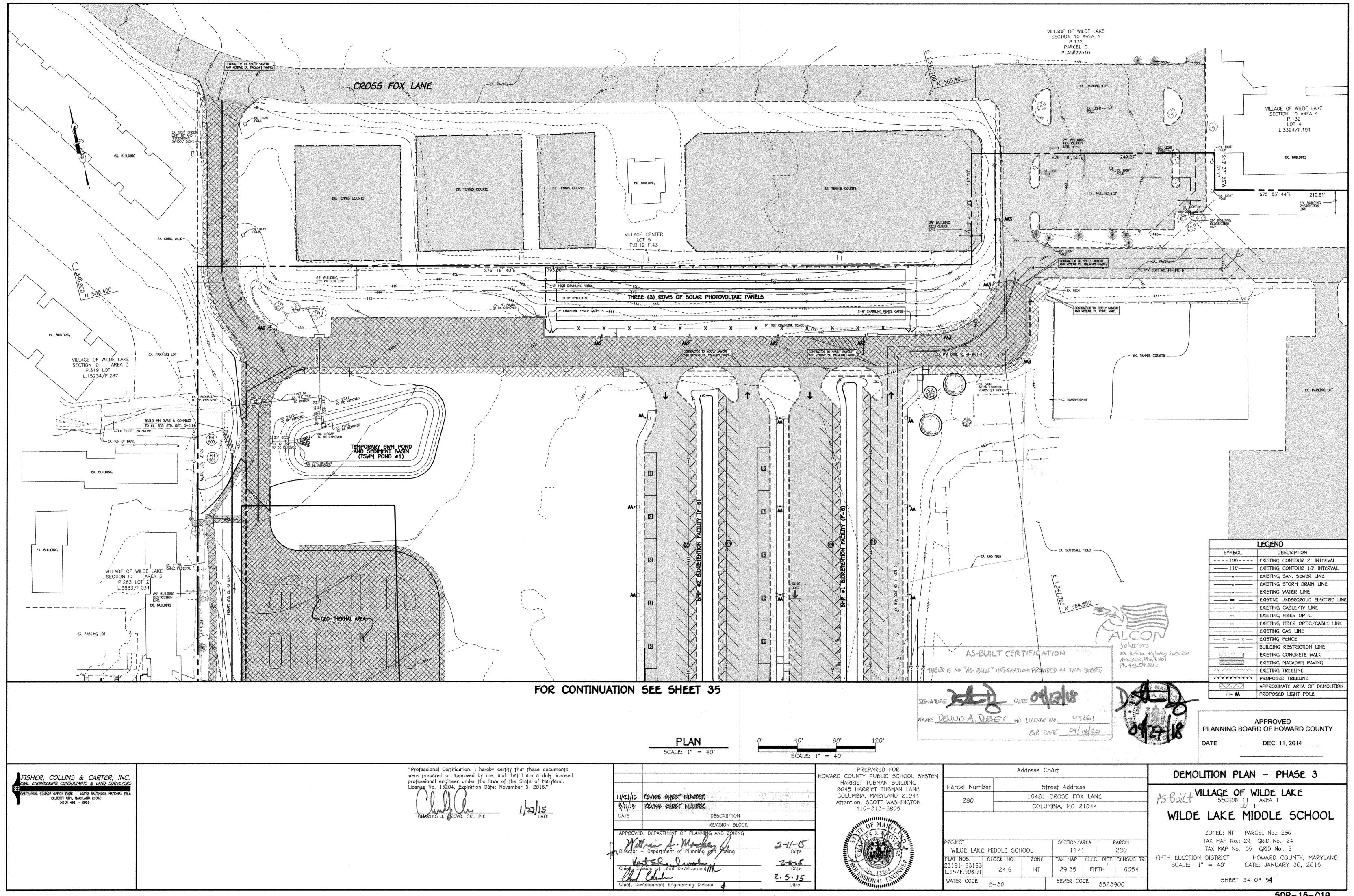


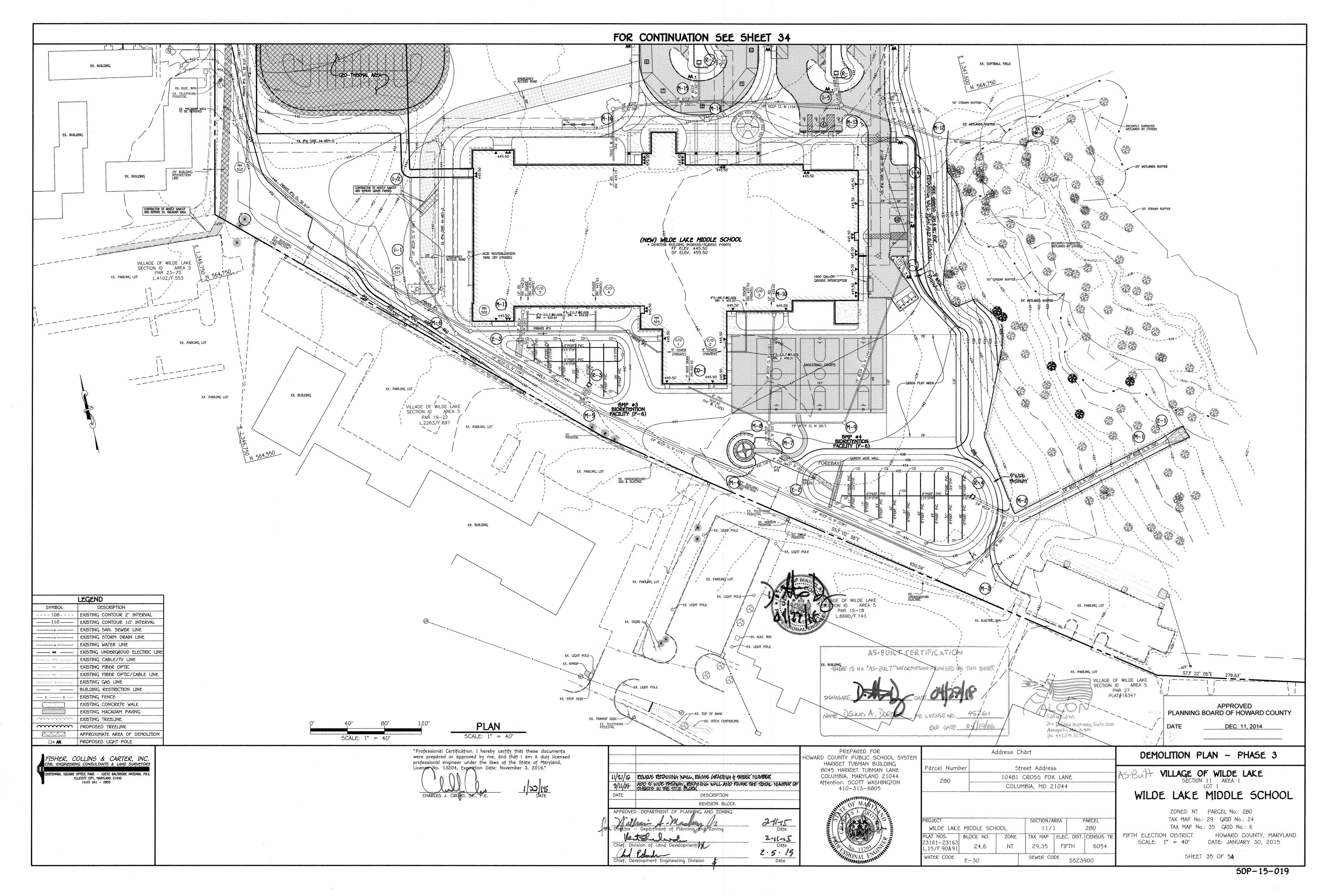


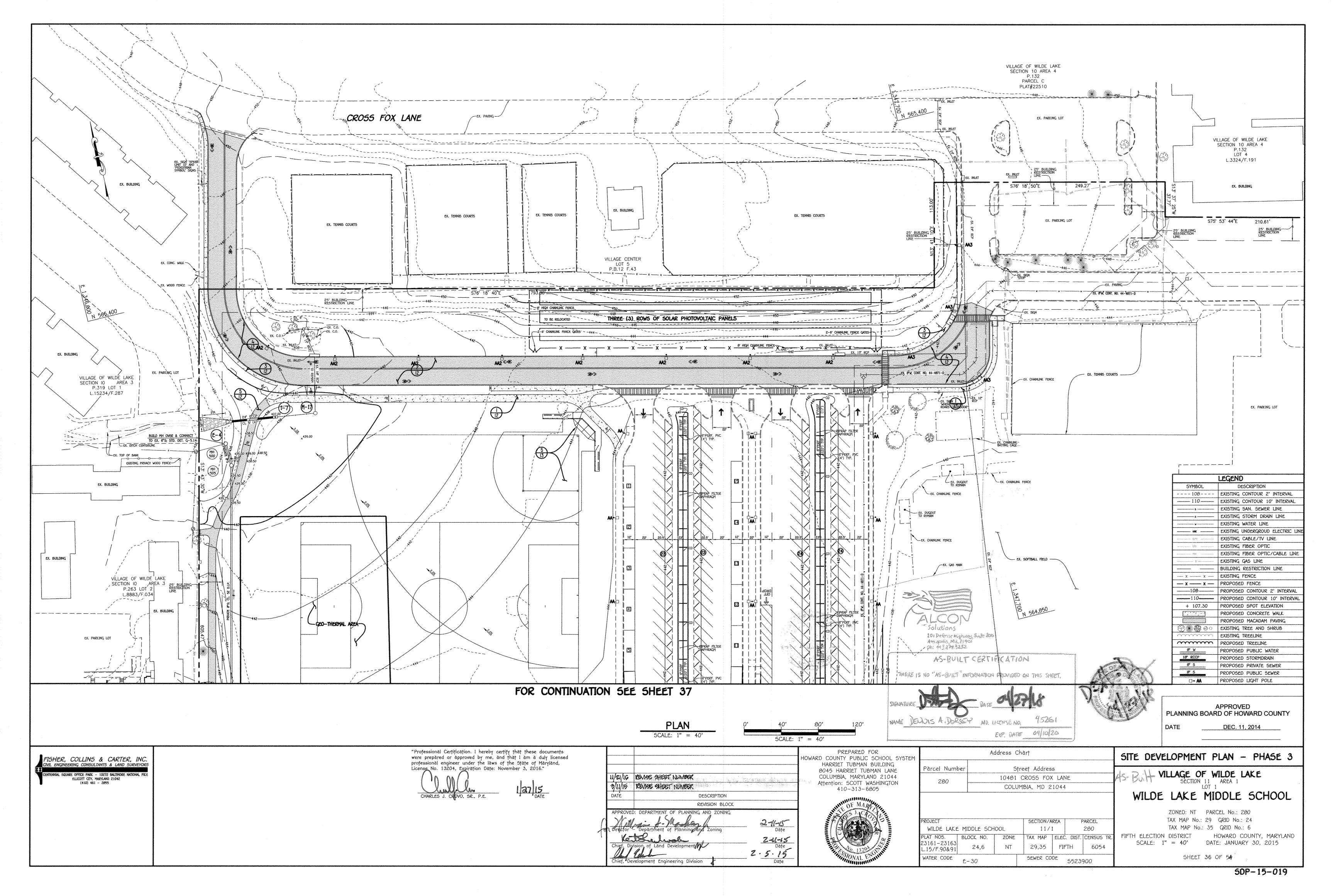


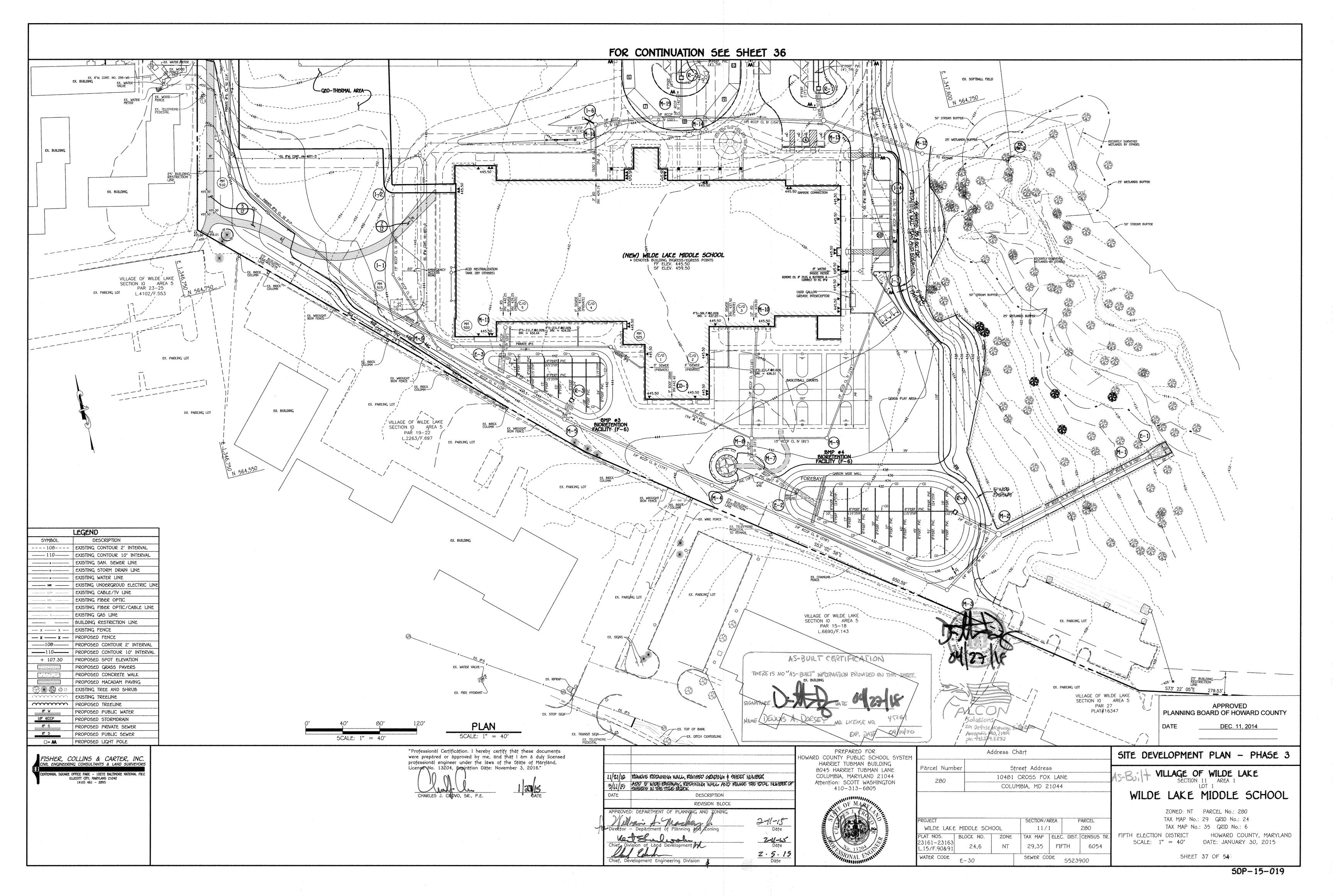


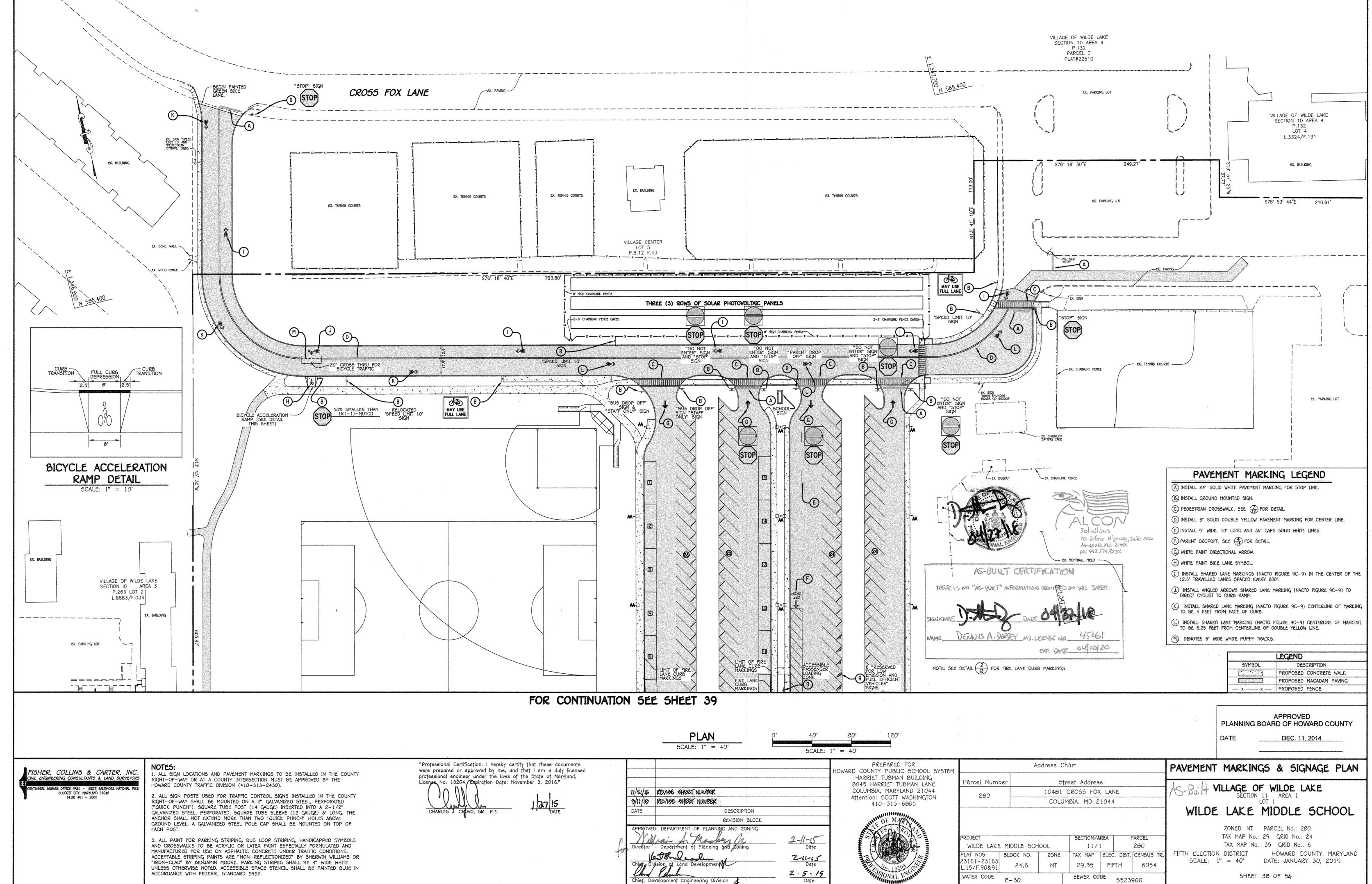


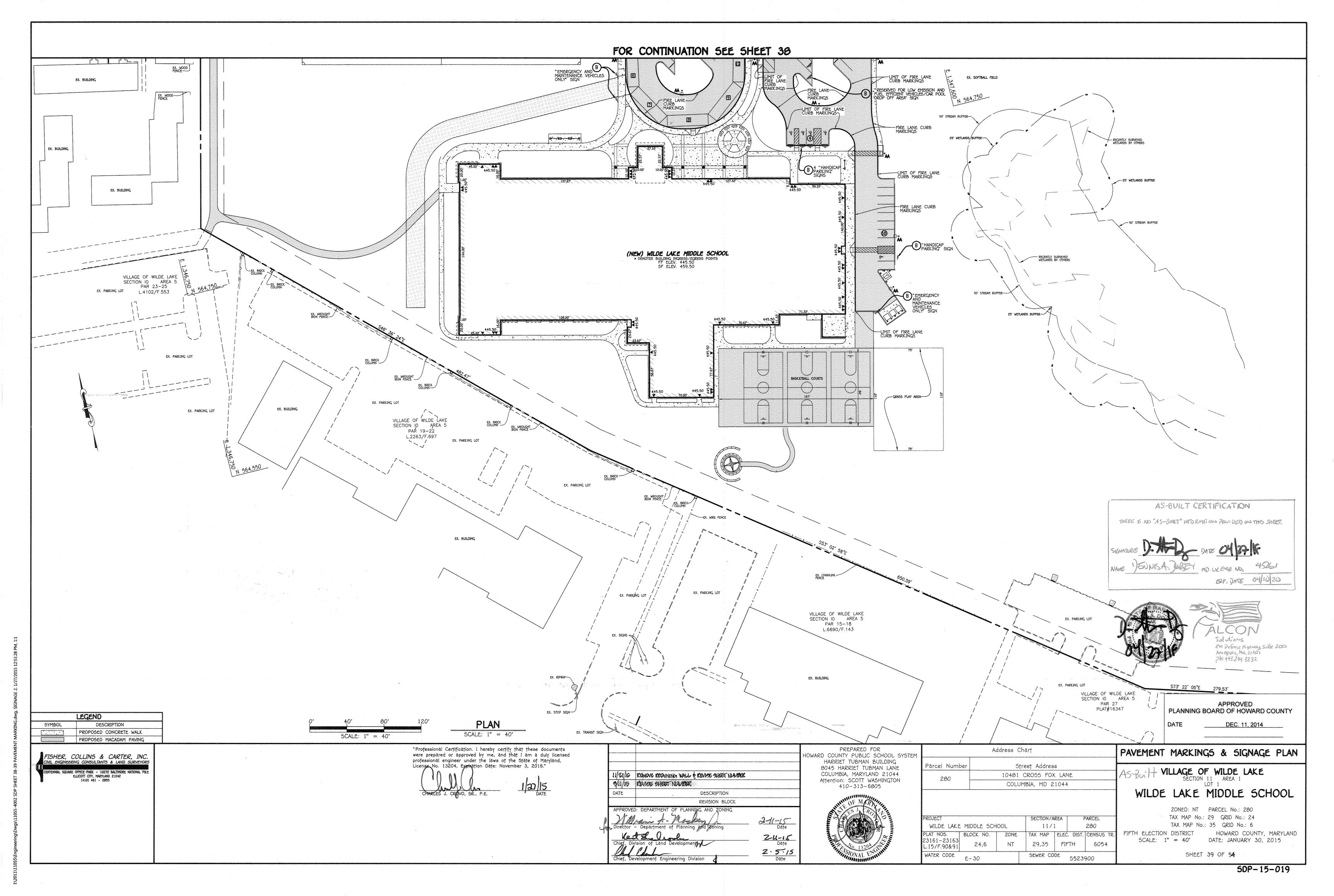


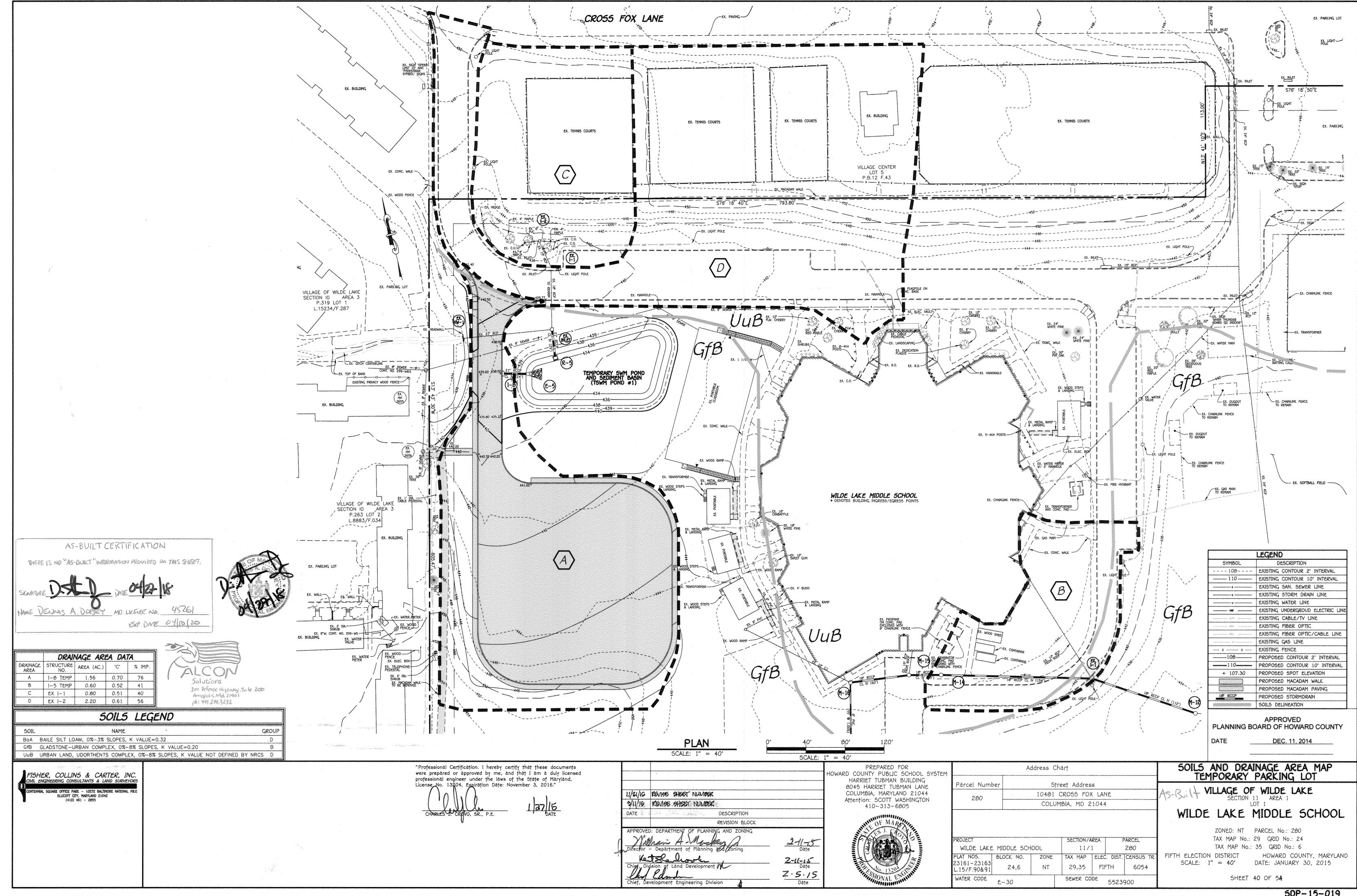












Chief, Development Engineering Division

2.5 - 15 Date

WATER CODE

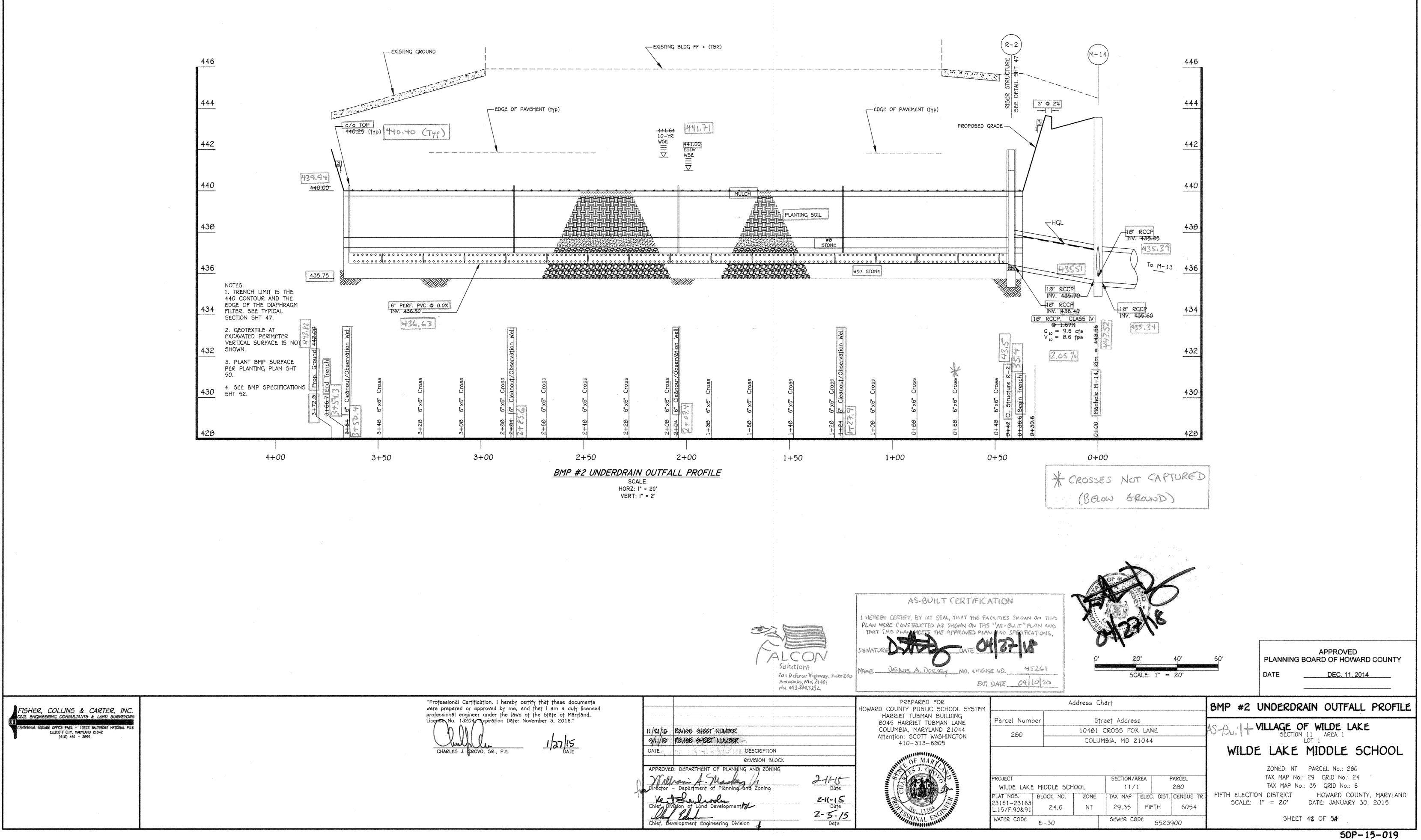
E-30

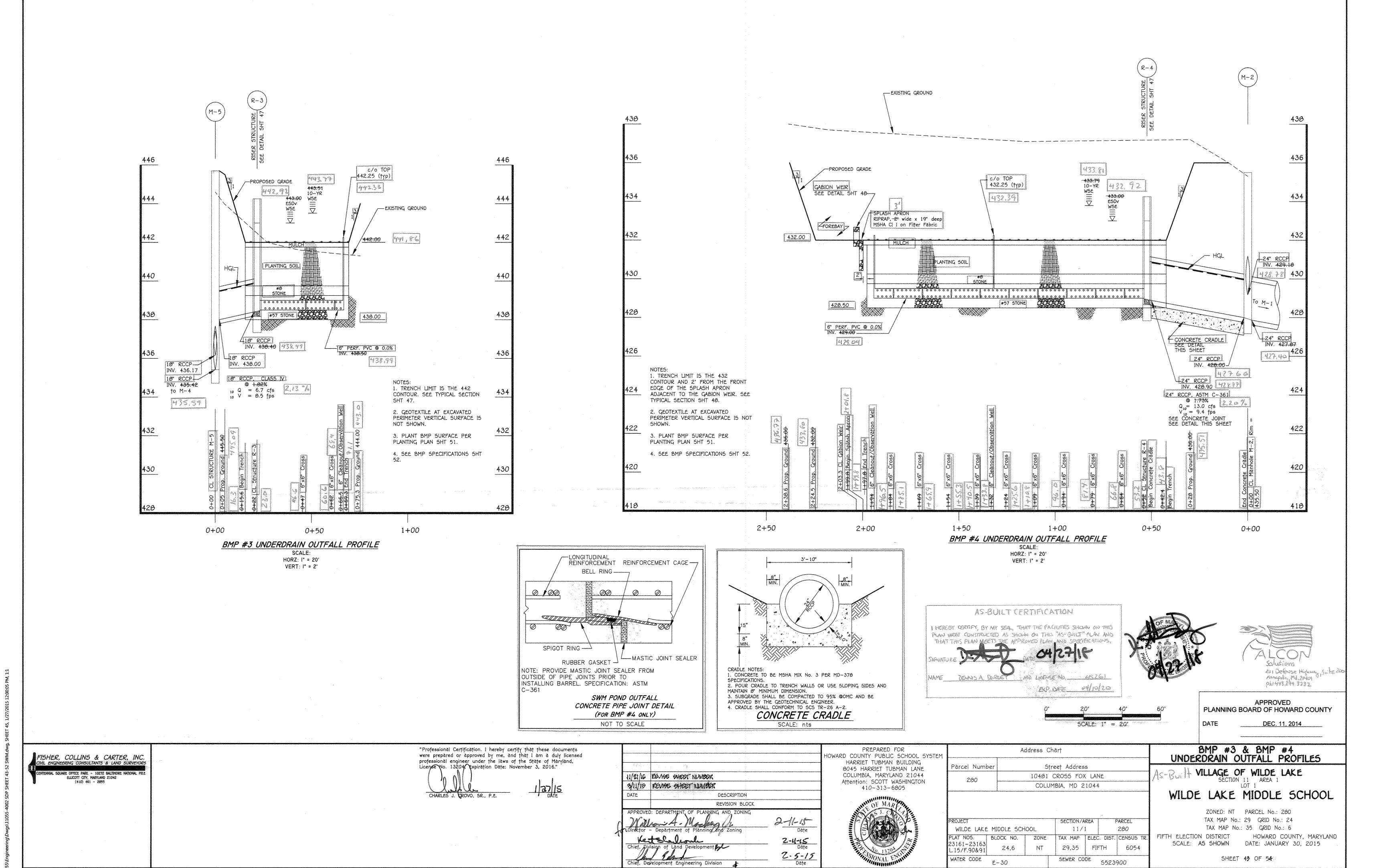
SEWER CODE

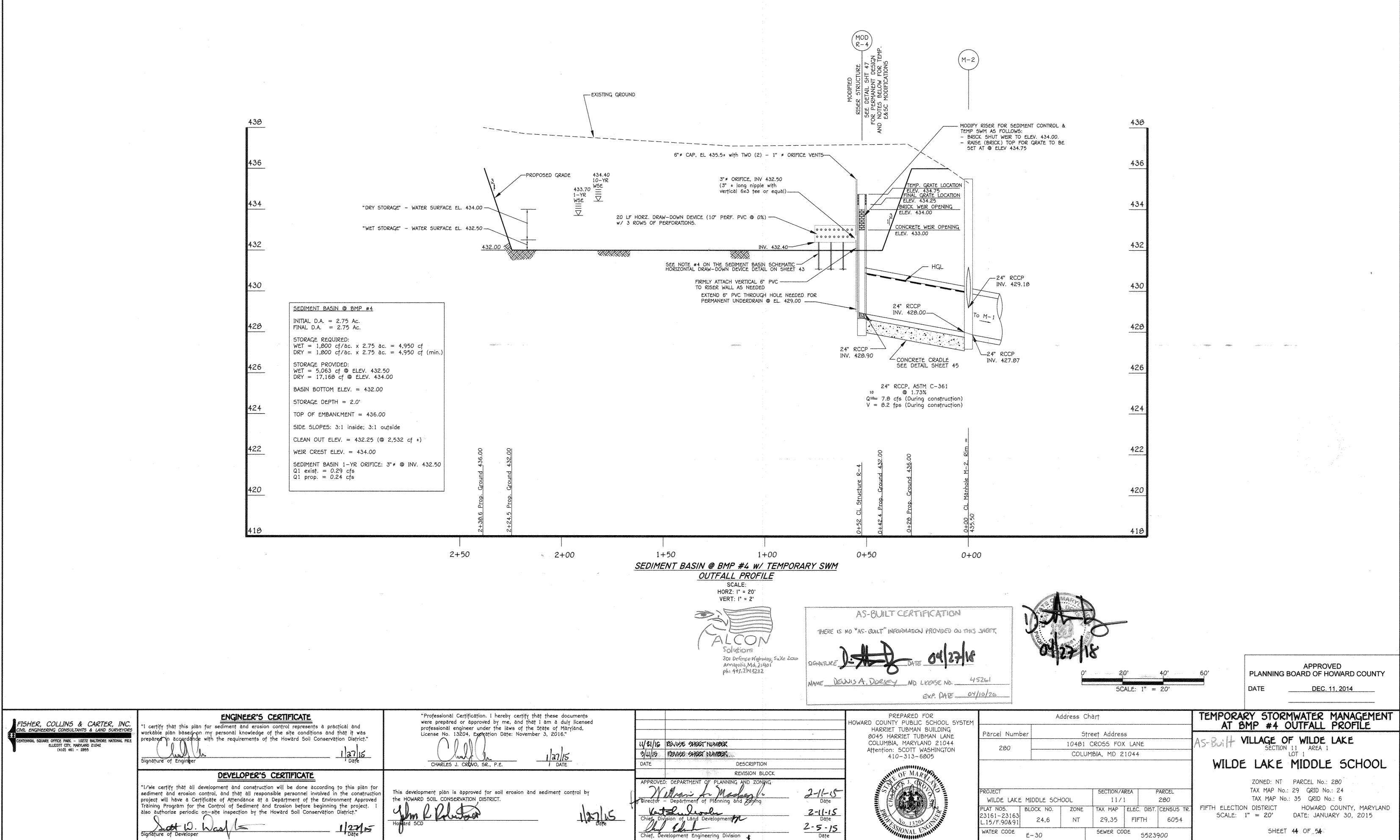
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5DP-15-019

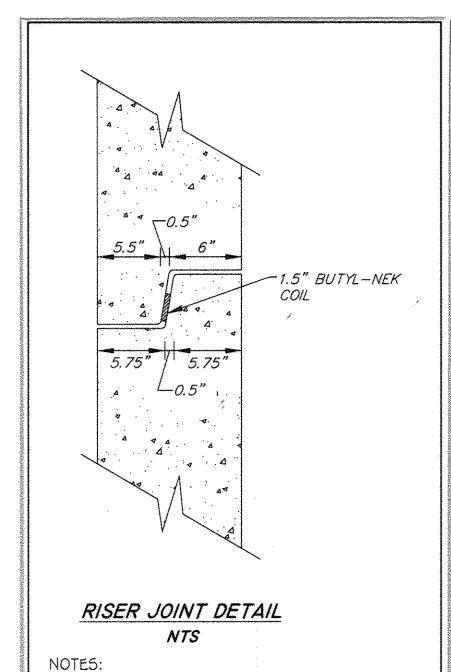
SHEET 41 OF 54





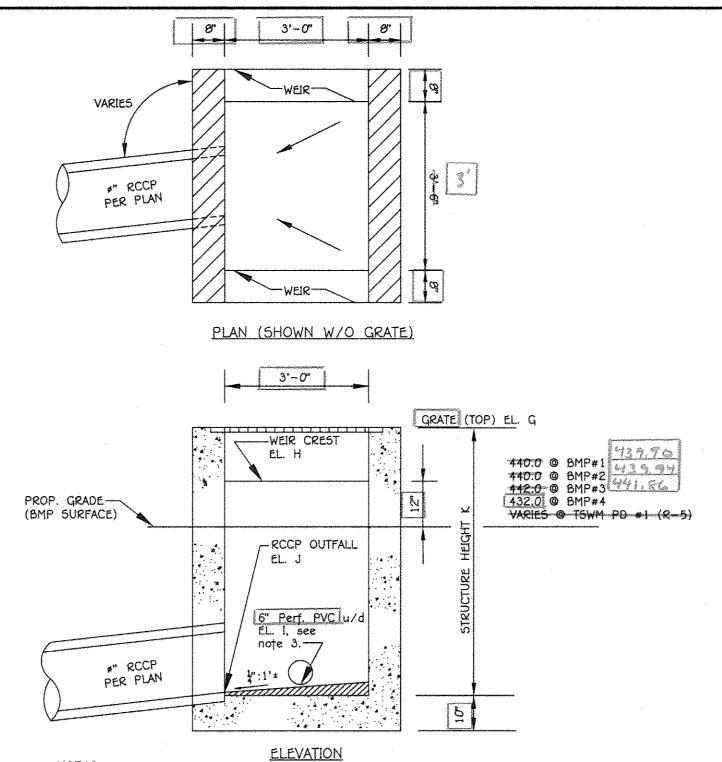


I\2011\11055\Engineering\Dwgs\11055-4002 SDP SHEET 43-52 SWM.dwg, SHEET 46, 1/27/2



1. Riser joints shall join evenly and be watertight. Parge joints after installation.

2. The referenced joint and joint sealant material is used by Frederick Precast, Inc. Similar joints may be used with shop drawing approval by the engineer.



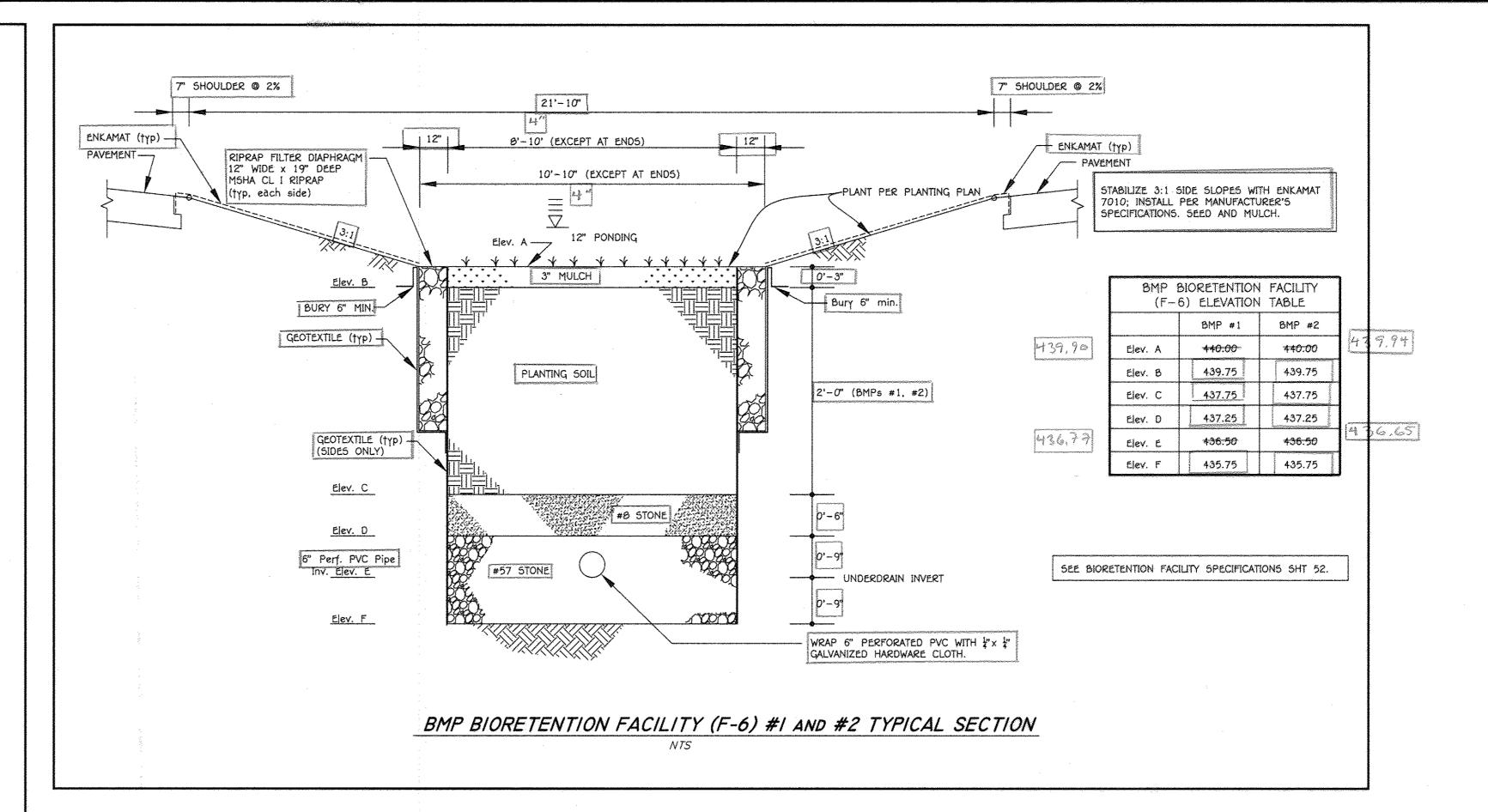
1 SEE MSHA STD DETAIL MD-378.11 FOR DETAILS NOT SHOWN ABOVE.

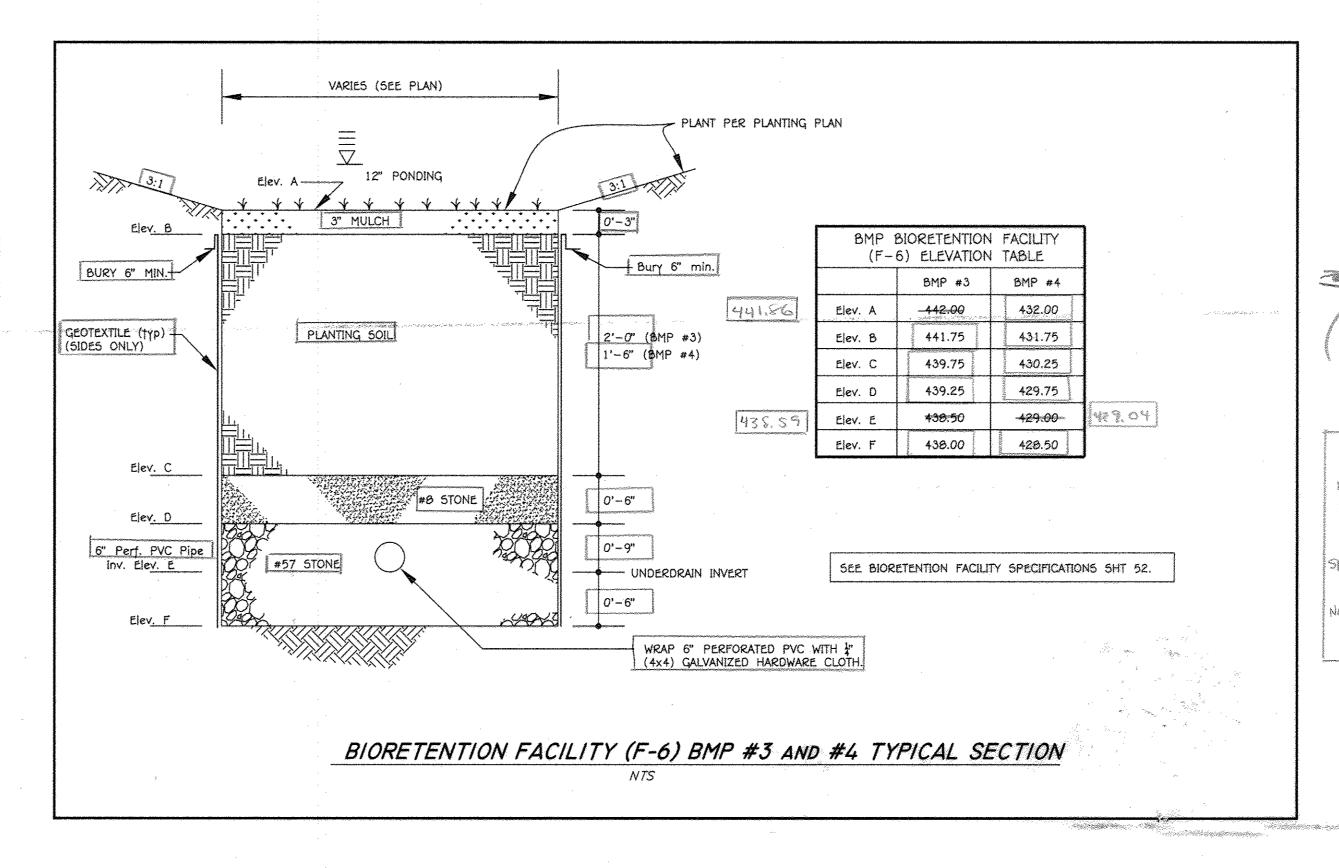
2. USE DOUBLE OPENING WITH NO CONCRETE GUTTER APPROACHES.

3. PVC UNDERDRAIN MAY ENTER INLET AT AN ANGLE TO MAINTAIN IN CENTER OF BMP. SEE SITE DEVELOPMENT PLAN FOR UNDERDRAIN ENTRANCE WALL LOCATION. 4. SLOPE RISER INVERT 1:1' TOWARD RCCP OUTFALL.

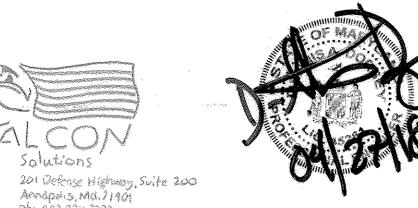
R-1, R-2, R-3, R-4 AND R-5 ELEVATION TABLE					
	R-1 (BMP#1)	Particular September 1	R-3 (BMP #3) R-4 (BMP #4) R-5 (T5WM POND #1)		
ELEV. G	<b>442.00</b>	142.00 4412.0	8 444.25 434.25 Top of Grate		
ELEV. H	441.00 441	441.00 45 441.00 441.6	7 443.00 473.65 433.00 432.79 437.20 Weir Crest		
ELEV. I	436.50	436.50 436.6	435.50 438.59 429.00 429, 44 ORINGE R-1 THRU R-4		
ELEV. J	136.36 436.40	436.40	438.40 438.49 428.90 428.77 434.00 RCCP Invert Out		
ELEV. K	5'-10"	5'-10"	6'-1' 6'-0" 5'-7'5'-6" 4'-5" Structure		

151-1919 | 51-84 MODIFIED K-INLET TYPICAL SECTION FOR STRUCTURES R-I, R-2, R-3, R-4 & R-5 NTS





PREPARED FOR



Phi 443,274,3282 AS-BUILT SERTIFICATION

I HEREBY CERTIFY, BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THE "AS- BUILD" PLAN AND ETS THE APPROVED PLAN AND SPECIFICATIONS, DEWYS A DORSEY MD. LICENSENO, 45261 EXP, DATE 04/10/20

APPROVED

PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 13204, Expiration Date: November 3, 2016."

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11/21/16		
Sirilia	REVIGE GHEET NUMBER	
DATE	DESCRIPTION	
	REVISION BLOCK	
<b>)</b> ///	DEPARTMENT OF PLANNING AND ZONING  - Department of Planning and Zoning	2-11-15 Date
Chief, Di	Asion of Land Development	2-11-15 Date 2 · 5 · 15
Chief De	velopment Engineering Division	Date

	HOWARD COUNTY PUBLIC SCHOOL S HARRIET TUBMAN BUILDING 8045 HARRIET TUBMAN LANE COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON 410-313-6805
2-11-15 Date 2-11-15 Date 2 · 5 · 15	OF MAR

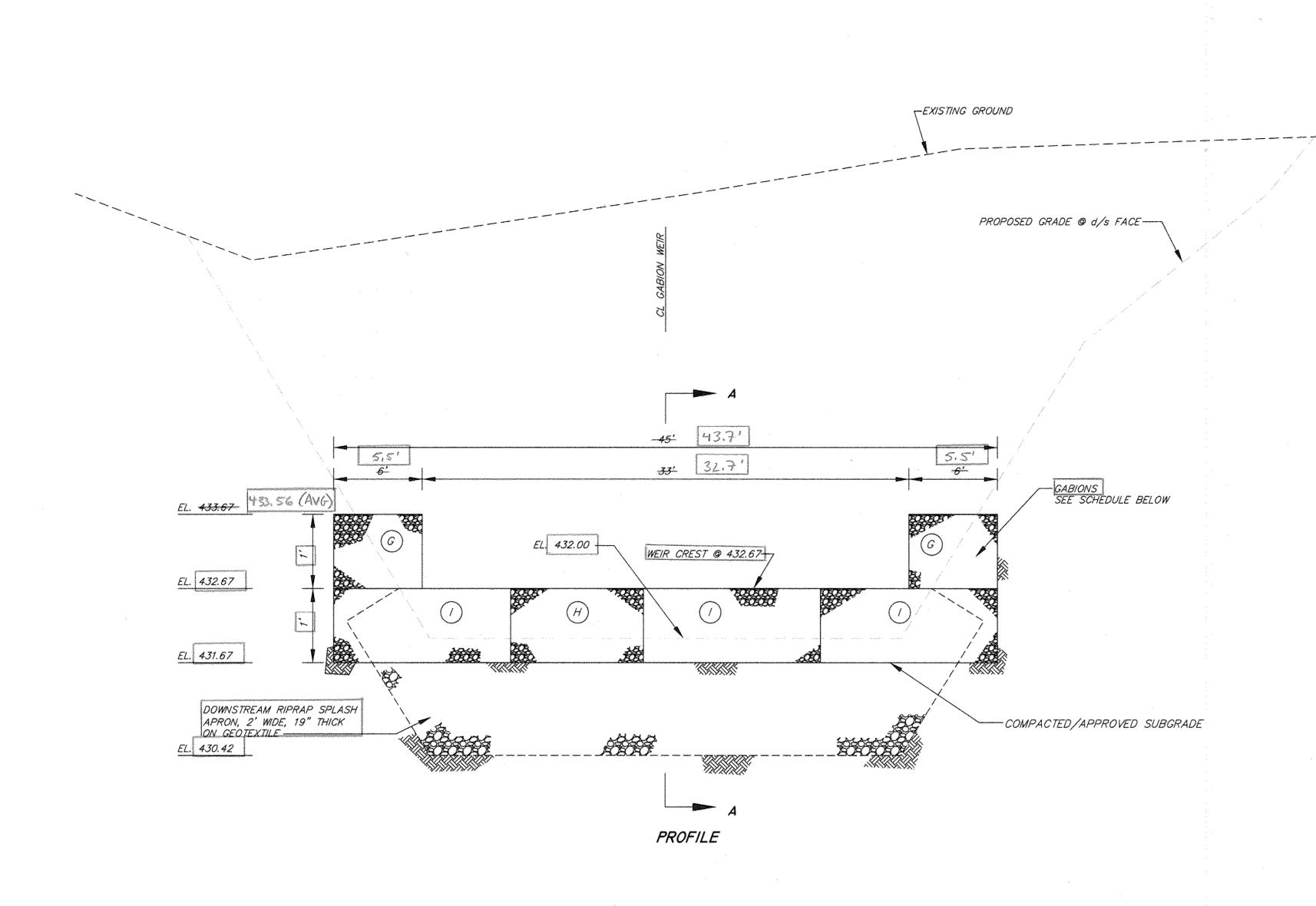
4	Address Chart					AS-BUT STORMWATER MANAGEMENT BMP DETAILS			
	Parcel Numb	Parcel Number Street Address							
	280	280 10481 CROSS FOX LANE					VILLAGE OF WILDE LAKE SECTION 11 AREA 1		
	COLUMBIA, MD 2			BIA, MD 2	21044		LOT 1		
						WILDE LAKE MIDDLE SCHOO			
							ZONED: NT PARCEL No.: 280		
	PROJECT SECTION/AREA PARCEL				REA !	PARCEL	TAX MAP No.: 29 GRID No.: 24		
	WILDE LAKE	MIDDLE SCH	100L	11/	1	280	TAX MAP No.: 35 GRID No.: 6		
	PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.	FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYL		
	23161-23163 L.15/F.90&91	24,6	N. Think	29,35	FIFTH	6054	SCALE: AS SHOWN DATE: JANUARY 30, 2015		

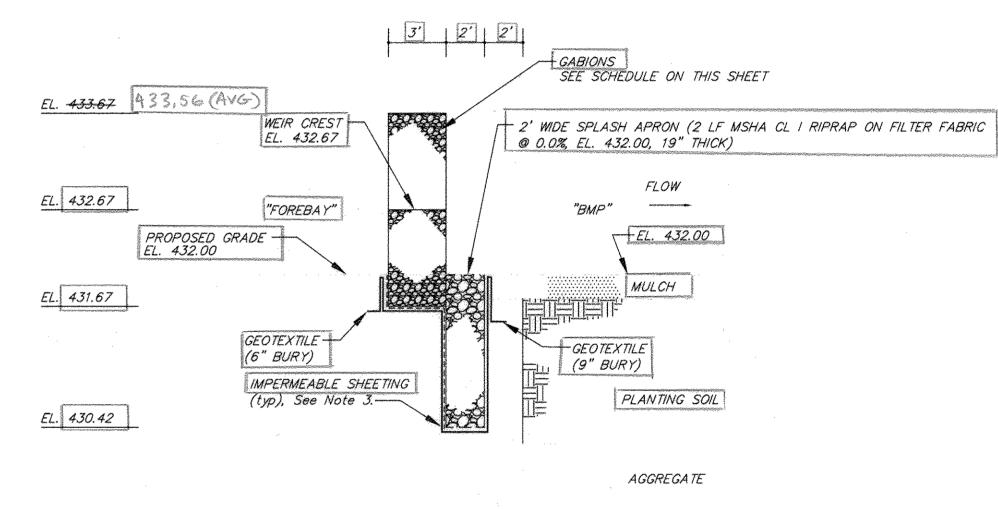
WATER CODE

SEWER CODE 5523900

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24 TAX MAP No.: 35 GRID No.: 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET 45 OF 54





SECTION A-A

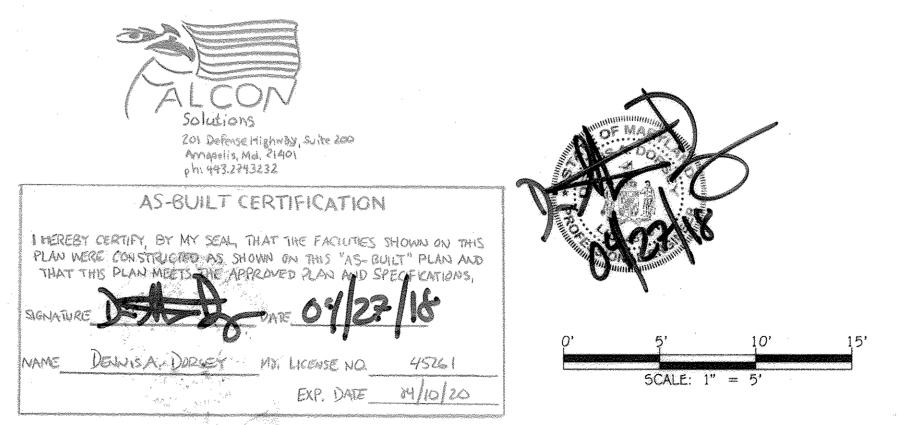
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# GABION/FOREBAY WEIR OUTFALL NOTES

- 1. Gabions shall be manufactured by Maccaferri Gabions Inc. or approved equal. The installation shall follow the manufacturer's specifications and installation guidelines.
- 2. The gabion baskets shall be PVC coated and filled with clean 4" 7" stone. Gabion stone shall be carefully placed as to create a tight interlocking stone wall with minimal voids.
- 3. One sheet of 8 mil or greater vinyl/plastic sheeting, MIRAFI MCF-1212, or equal shall be placed on the buried upstream (forebay side) face of the gabion baskets next to the filter fabric. Use 2 ft overlap where applicable.
- 4. Geotextile fabric (Mirafi 600x or approved equal) shall be placed against all buried gabions (including the buried top of gabions) including the impermeable layer on the upstream buried face.
- 5. Gabions shall be carefully placed with no damaged wire. Earth foundation shall be firm. Fill soil around gabions shall be <u>well-compacted</u> (95%).
- 6. Gabions shall be fastened together with lacing or rings per manufacturer's recommendations/specifications. Rings shall be per ASTM A975-97 section 6.3. Spacing shall not exceed 6". See Maccaferri's gabion installation guide.
- 7. Minimum Gabion embedment into side slope is a 1'-0" bury at top of upper gabion.
- 8. If additional gabions are needed to meet the minimum embedment into the side slopes, gabions can be "nested".

BMP #4 FOREBAY GABION WEIR SCHEDULE (Gabion Basket Quantities)					
MANUFACTURER'S LETTER CODE/DIMENSIONS	QUANTITY				
G 6'x3'x1'	2				
H 9'x3'x1'	. 1				
/ 12'x3'x1'	3				

BMP #4 FOREBAY GABION WEIR DETAIL SCALE: HORZ: I" = 5' VERT: /" = /'



The state of the s APPROVED PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014

-EXISTING GROUND



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2016."

11/21/16 REVISE SHEET NUMBER 9/11/16 REVISE SHEET NUMBER
DATE REVISION BLOCK Vedelalief Division of Land Development M 2-11-15 Date 2.5.15 Chief, Development Engineering Division

8045 HARRIET TUBMAN LANE COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON 410-313-6805

PREPARED FOR

HARRIET TUBMAN BUILDING

HOWARD COUNTY PUBLIC SCHOOL SYSTEM Parcel Number Street Address 10481 CROSS FOX LANE COLUMBIA, MD 21044 PROJECT SECTION/AREA PARCEL WILDE LAKE MIDDLE SCHOOL 11/1 PLAT NOS. | BLOCK NO. TAX MAP | ELEC. DIST. CENSUS TR 23161-23163 29,35 FIFTH L.15/F.90&91 WATER CODE E-30 SEWER CODE 5523900

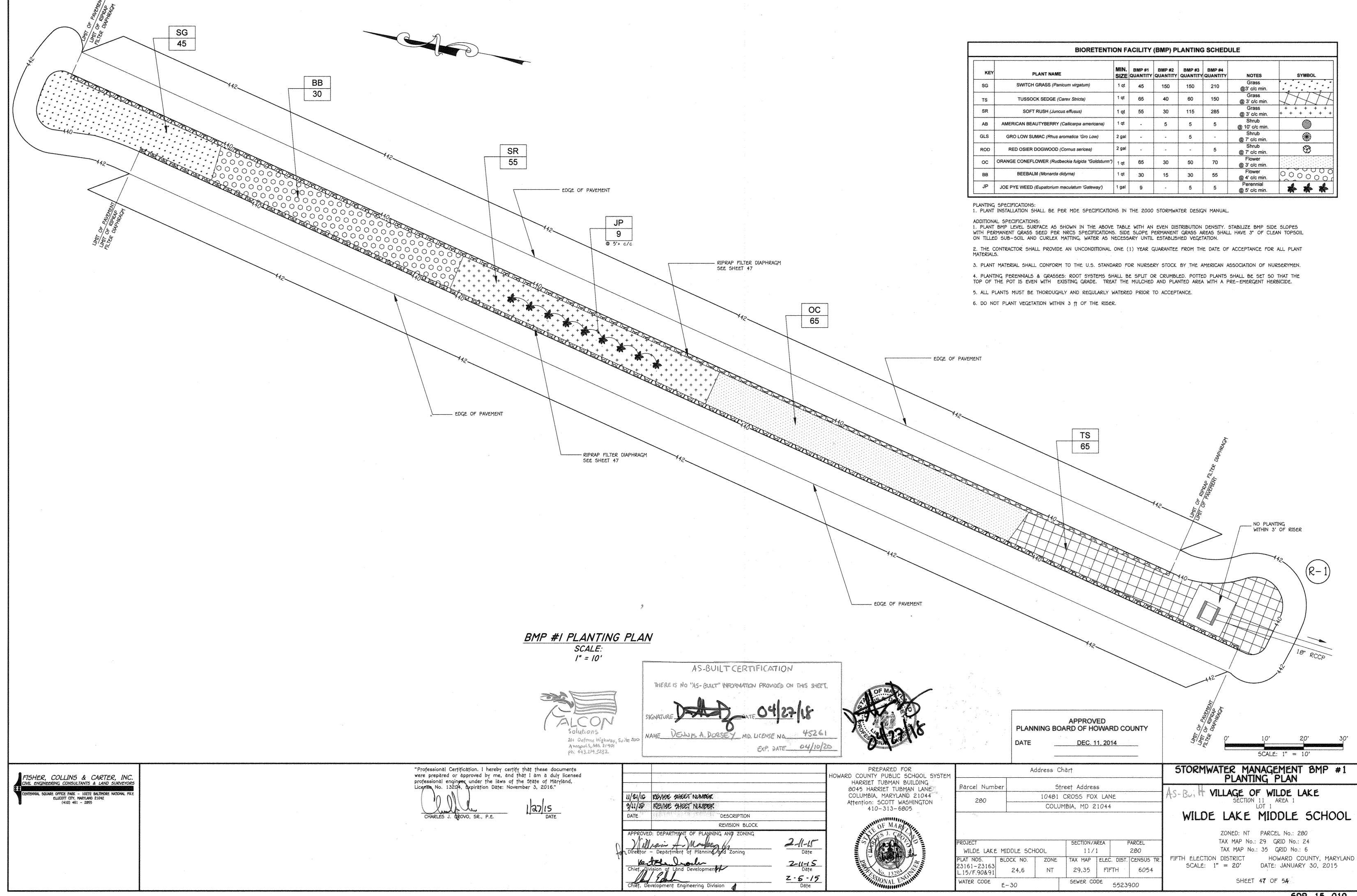
Address Chart

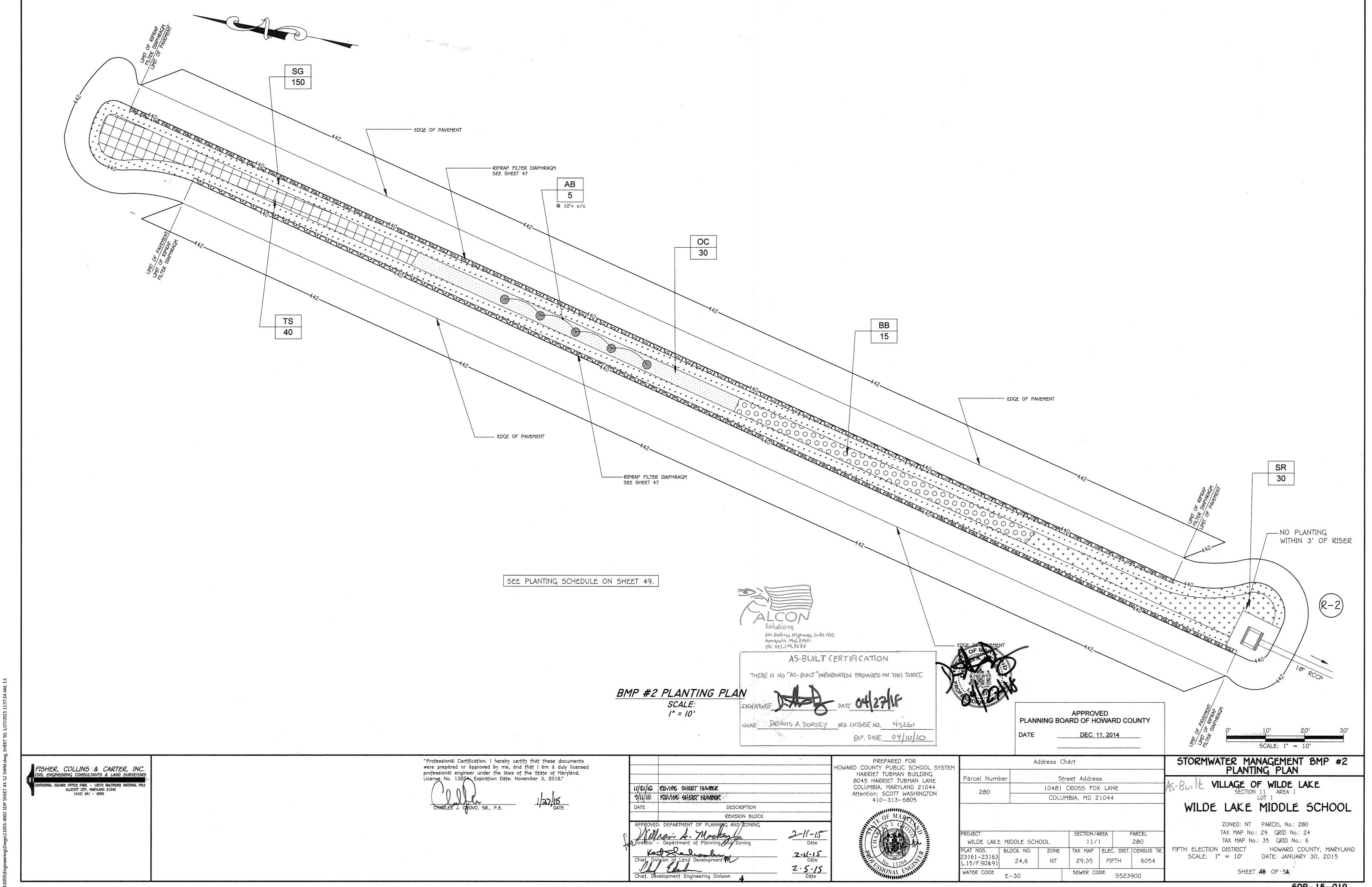
STORMWATER MANAGEMENT BMP #4
FOREBAY DETAIL VILLAGE OF WILDE LAKE

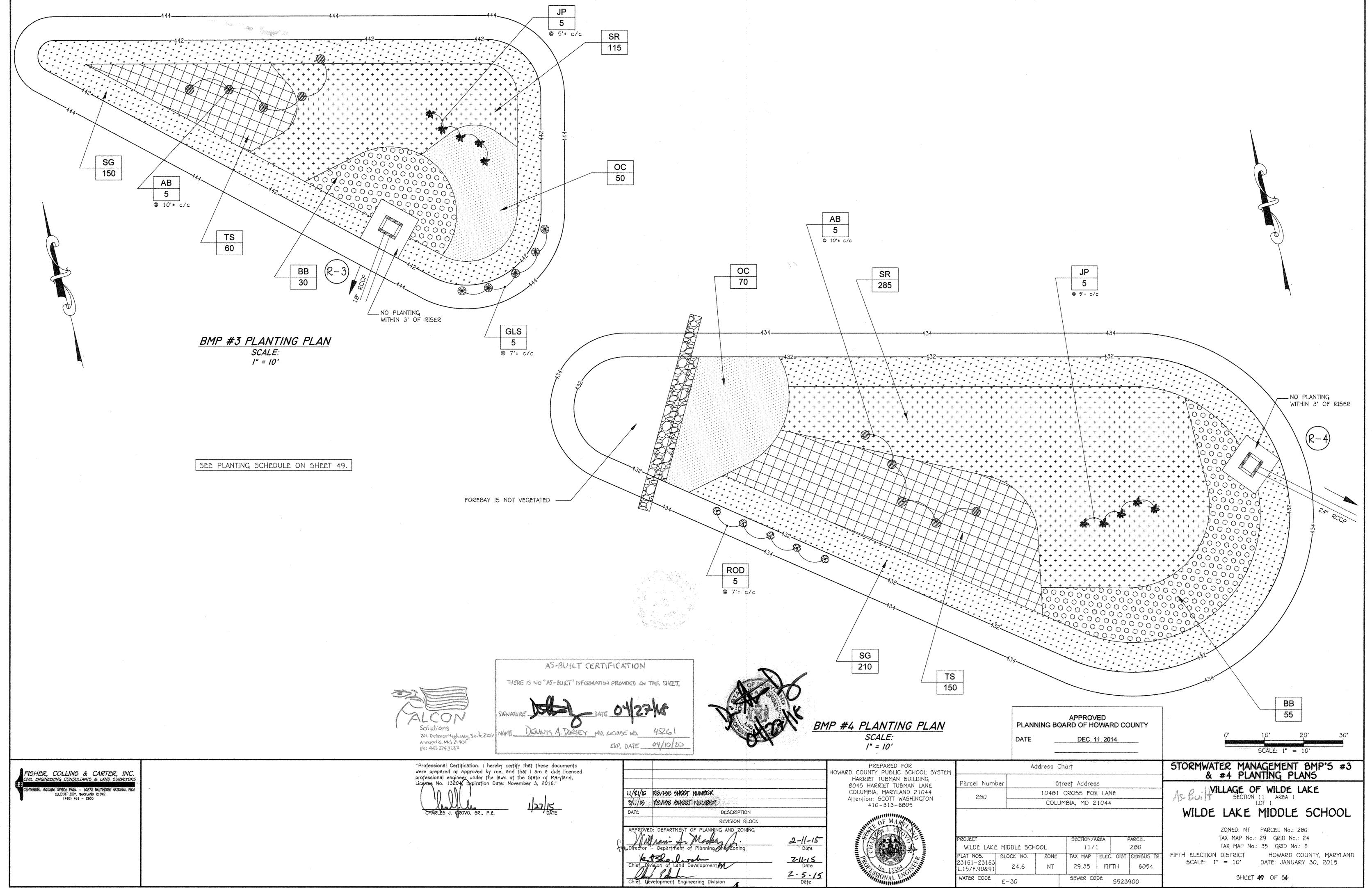
WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24 TAX MAP No.: 35 GRID No.: 6 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 5' DATE: JANUARY 30, 2015

SHEET 46 OF 54







I:\2011\11055\Engineering\Dwgs\11055-4002 SDP SHEET 43-52 SWM.dwg, SHEET

THE BIORETENTION BMP MATERIALS ARE AS FOLLOWS:

PLANTING SOIL: PER PLANTING SOIL SPECIFICATIONS OUTLINED IN MDE'S 2000 SWM MANUAL, APPENDIX B.4. DO NOT MECHANICALLY COMPACT PLANTING SOIL, BUT CAN E "WATERED" TO FACILITATE SETTLING.

PVC UNDERDRAIN PIPE OUTSIDE BMP: SCHEDULE 40. SOLID PIPE WITH MINIMUM SLOPE of 0.5% OR AS PER PLAN.

PVC UNDERDRAIN IN BMP: SCHEDULE 40 AND PERFORATED WITH 3/8" HOLES. WRAP UNDERDRAIN WITH GALVANIZED 1/4" HARDWARE CLOTH (WELDED WIRE MESH). PROVIDE 4 - 3/4" # HOLES EVENLY SPACED AROUND THE 6" UNDERDRAIN PIPE CIRCUMFERENCE, SPACE PERFORATIONS ALONG PIPE AT 4" ON CENTER, ADJACENT SETS OF PERFORATIONS SHALL BE STAGGERED AT 45°. PERFORATIONS MUST TOTAL 1.30 sq. inch MIN. PER LF OF 6" PIPE.

STONE AGGREGATE: MSHA SPECIFICATIONS AS SHOWN ON TYPICAL SECTION; AGGREGATE MUST WASHED, AND BE FREE OF FINES, SAND, DIRT & DEBRIS.

GEOTEXTILE: PER MDE 5WM MANUAL, OR MIRAFI 140N. MULCH: SHREDDED, WELL-AGED (6-12 MONTHS) HARDWOOD MULCH; NO WOOD CHIPS OR PINE MULCH.

. THE CONTRACTOR SHALL UNDER NO CIRCUMSTANCES ALLOW SURFACE DRAINAGE INTO THE MICRO-BIORETENTION BMPS UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., PAVED, OR HAVE WELL-ESTABLISHED VEGETATION.

. BOARDS SHALL NOT BE LEFT IN PLACE DURING THE CONSTRUCTION OF THE BIORETENTION BMP.

S. GEOTEXTILE (FILTER FABRIC) SHALL BE PLACED AGAINST EXCAVATED VERTICAL SURFACES. SCARIFY EARTH PRIOR TO GEOTEXTILE PLACEMENT. INSTALL GEOTEXTILE PER MANUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS AND USE A 2 FT MINIMUM OVERLAP AND NOTCH ENDS WITH A 6" MINIMUM BURY OR EQUIVALENT ANCHORING METHOD.

S. THE CONTRACTOR SHALL PROVIDE TO THE OWNER INDEPENDENT CERTIFICATION THAT THE PLANTING SOILS AND OTHER BIORETENTION MATERIALS MEET THE SPECIFICATIONS.

THE BIORETENTION FACILITIES SHALL BE VEGETATED (TOP LEVEL SURFACE ONLY) IN ACCORDANCE WITH THE PLANTING PLAN AND THE BMP M-6 SPECIFICATIONS IN MDE'S CURRENT STORMWATER MANAGEMENT DESIGN MANUAL.

8. FOR UNDERDRAINS, USE PERFORATED PVC PIPE INSIDE THE BIORETENTION FACILITIES AND WRAP PERFORATED PIPE WITH 1/2" x 1/2" HARDWARE CLOTH TO PREVENT AGGREGATE FROM ENTERING THE PERFORATIONS.

INSTALL CLEANOUTS (SOLID PVC PIPE) AS SHOWN. THE CLEANOUT TOP SHALL EXTEND 3" ABOVE TOP OF MULCH.

10. THE LIMIT OF THE TYPICAL SECTION (i.e., PLANTING SOIL, AGGREGATE, ETC.) IS THE ENTIRE LEVEL SURFACE OF THE BIORETENTION FACILITY EXCLUDING FOREBAY AREA AND GABION WEIR, F PROPOSED.

DPERATION AND MAINTENANCE SCHEDULE FOR BIORETENTION BMPs #1 - #4

THE BIORETENTION FACILITIES SHALL BE INSPECTED AT LEAST TWICE PER YEAR (ONCE EACH IN THE SPRING AND FALL) AND AFTER HEAVY STORMS. THE OWNER IS RESPONSIBLE FOR MAINTAINING A DETAILED LOG OF THE MAINTENANCE INSPECTION FINDINGS AND A HISTORY OF THE COMPLETED WORK. THE LOG SHALL BE MADE AVAILABLE TO HOWARD COUNTY DPZ AND/OR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UPON REQUEST.

MICRO-BIORETENTION FACILITY COMPONENTS TO BE INSPECTED AND MAINTAINED INCLUDE THE ITEMS AS FOLLOWS:

1. PLANT MATERIAL: PLANTS SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION. REMOVE AND REPLACE DEAD OR DYING VEGETATION CONSIDERED BEYOND TREATMENT (SEE NOTE BELOW). MAINTENANCE ALSO INCLUDES PRUNING, AND REPLACEMENT OF DEFICIENT STAKES AND WIRE.

2.MULCH LAYER: SHALL BE REPLACED ONCE EVERY SPRING DUE TO THE HEAVY METALS GENERATED FROM THE PARKING LOT. THE OWNER SHALL PROPERLY DISPOSE OF THE OLD MULCH SO AS NOT TO CAUSE STORMWATER CONTAMINATION ELSEWHERE. WASHED OUT AREAS SHALL BE REPAIRED AS NECESSARY.

3.50IL LAYER: SHOULD STORMWATER POND FOR MORE THE 40 HOURS, THE TOP 6 INCHES (MINIMUM) OF THE SOIL LAYER SHALL BE REPLACED. THE OLD SOILS SHALL BE PROPERLY DISPOSED.

4. SPILLWAY OUTFALL, INTERIOR SLOPES: ERODED AREAS SHALL BE REPAIRED (FILLED IN AND SEEDED) AS NEEDED. BARE AREAS SHALL BE TREATED AND RE-SEEDED.

5.INLET: REPAIR CRACKS, DAMAGED CONCRETE, ETC. AS NECESSARY.

6. REMOVE AND PROPERLY DISPOSE ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.

1. IF SPECIFIC PLANTS ARE NOT SURVIVING; THE PLANT TYPE SHOULD CHANGED TO BETTER SUITED SPECIES.

2.PLANT WATERING MAY BE NEEDED DURING PROLONGED DRY PERIODS.

GENERAL STORMWATER MANAGEMENT NOTES

. STORMWATER MANAGEMENT HAS BEEN PROVIDED WITH FOUR (4) BIORETENTION FACILITIES. PLEASE REFER TO THE SWM REPORT PREPARED BY FISHER, COLLINS, & CARTER, INC. DATED AUGUST 15, 2014.

2. ALL CONSTRUCTION SHALL MEET THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS, SMALL EARTHEN DAM SPECIFICATION MD-378, AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S CURRENT STORMWATER DESIGN MANUAL, OR AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONSULT THE ENGINEER SHOULD THERE BE ANY DISCREPANCIES. SEE MICRO-BIORETENTION FACILITY SPECIFICATIONS ON THIS SHEET.

3. THE UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR SHALL TEST PIT ALL KNOWN EXISTING UTILITIES TO VERIFY, SIZE, SHAPE, LOCATION, AND TYPE PRIOR TO PERFORMING CONSTRUCTION. ANY UTILITY DAMAGED DUE TO CONSTRUCTION MUST BE REPAIRED IMMEDIATELY.

4. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. IF THE CONTRACTOR MAKES FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER. THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.

5. CONTRACTOR SHALL NOTIFY MISS UTILITY 1-800-257-7777 AND THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES & PERMITS THREE (3) WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

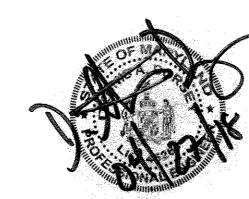
6. FISHER, COLLINS & CARTER, INC. IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS PROJECT. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH CODE/SPECIFICATION REQUIREMENTS.

7. THE BMPS MAY BE GRADED, HOWEVER, THE PLANTING SOIL IN THE BMPS SHALL NOT BE INSTALLED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., THICK GRASS COVER, OR PAVED).

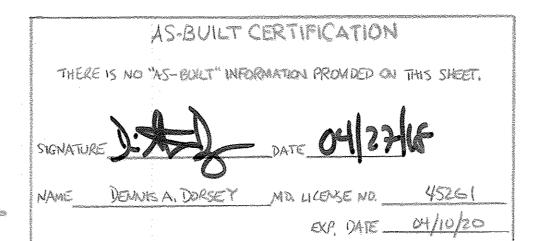
B. THE STORMWATER MANAGEMENT BIORETENTION BMPS FOR THIS PROJECT WILL BE PRIVATELY OWNED AND MAINTAINED.

noot W. Worl 5

9. THE BMPs SHALL BE AT LEAST 10 FT FROM THE SCHOOL BUILDING (TEMPORARY BUILDINGS EXCLUDED) AS MEASURED FROM THE 1 ft DEPTH WATER SURFACE ELEVATION TO THE BUILDING.







OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT PONDS

I. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning

2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be moved as needed.

3. Debris and litter shall be removed during regular moving operations and as

4. Visible signs of erosion in the pond embankment as well as the rip-rap or gabion outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE MAINTENANCE

Structural components of the pond such as the dam, the riser, and the pipes shall be repaired immediately upon the detection of any damage. The components shall be inspected during routine maintenance operations.

2. Sediment shall be removed from the micro-pool and forebay when either one is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

Pond MD-378: N.R.C.S. - JANUARY 2000 CONSTRUCTION SPECIFIC ATIONS FOR SMALL EARTHEN DAMS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment. Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated

on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpilled in a suitable location for use on the embankment and other designated

Material — The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than

squeezed out.

6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment. Placement — Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment. Compaction — The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be

The minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench — The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core —The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed

in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe. Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day un-confined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm—cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

All pipes shall be circular in cross section.

Reinforced Concrete Pipe — All of the following criteria shall apply for reinforced concrete pipe:

 Materials — Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361. 2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its out-side diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream, Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser. 4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Plastic Pipe — The following criteria shall apply for plastic pipe:

1. Materials — PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements of AASHTO M294 Type S. 2. Joints and connections to anti-seep collars shall be completely watertight.

Bedding —The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "Structure Backfill". 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

<u>Concrete</u>

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3. Rock Riprop

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311. Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water During Construction All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, in-stall, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or

maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained be-low the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the ac-companying drawings.

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

**APPROVED** PLANNING BOARD OF HOWARD COUNTY DEC. 11, 2014

FISHER, COLLINS & CARTER, INC. TVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

ENGINEER'S CERTIFICATE certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was

prepared in accordance with the requirements of the Howard Soil Conservation District." ignature of Engineer

DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. Iso authorize periodic on-site inspection by the Howard Soil Conservation District."

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed

1 23/15

professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2016." CHARLES J. CRIDVO, SR., P.E.

This development plan is approved for soil erosion and sediment control by

DESCRIPTION REVISION BLOCK 2-11-15 Z-11-15

hief. Development Engineering Division

11/C1/16 KRADE SHEET NUMBER

3/11/15 REVISE SHEET NUMBER

HARRIET TUBMAN BUILDING 8045 HARRIET TUBMAN LANE COLUMBIA, MARYLAND 21044 Attention: SCOTT WASHINGTON 410-313-6805

PREPARED FOR

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

ircel Numl	per	Street Address							
280		10481 CROSS FOX LANE							
200		COLUMBIA, MD 21044							
JECT	Olyman Mark Angle (Carly glandy), glandydd y cynhafyr fan dyr far di yr fael y di y chwy Cally a chwy di y chw			SECTION/A	ŔĔĂ	F	ARCEL		
VILDE LAKE	MIDDLE 5CH		11/1 280			280			
T NO5.	BLOCK NO.	ZONE		TAX MAP	ELEC	. DIST.	CENSUS T	R	
61-23163 5/F.90&91	72 A C	NT		29,35	FI		6054		
TER CODE E-30			SEWER CODE 5523900						

Address Chart

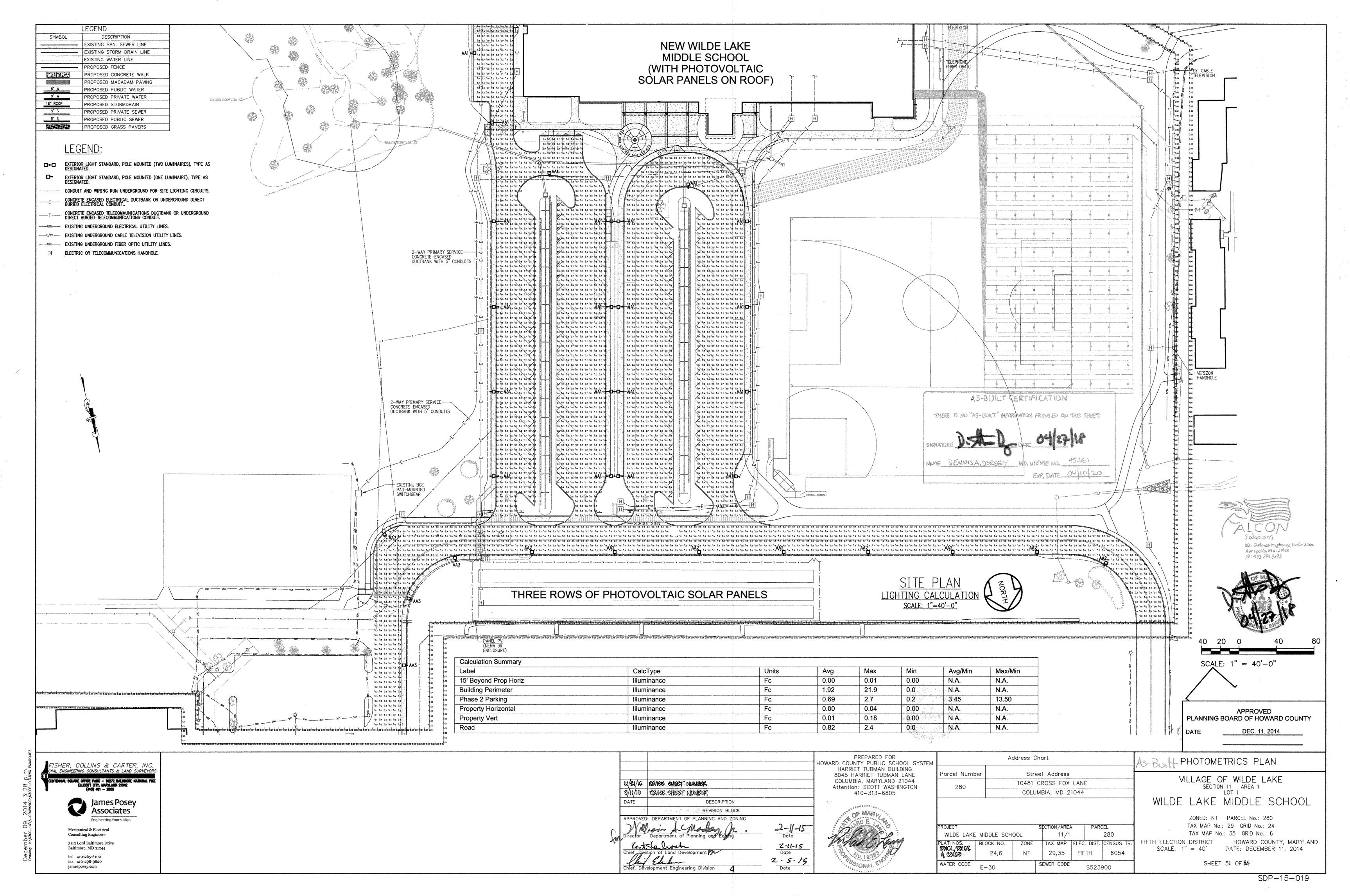
VILLAGE OF WILDE LAKE SECTION 11 WILDE LAKE MIDDLE SCHOOL ZONED: NT PARCEL No.: 280 TAX MAP No.: 29 GRID No.: 24

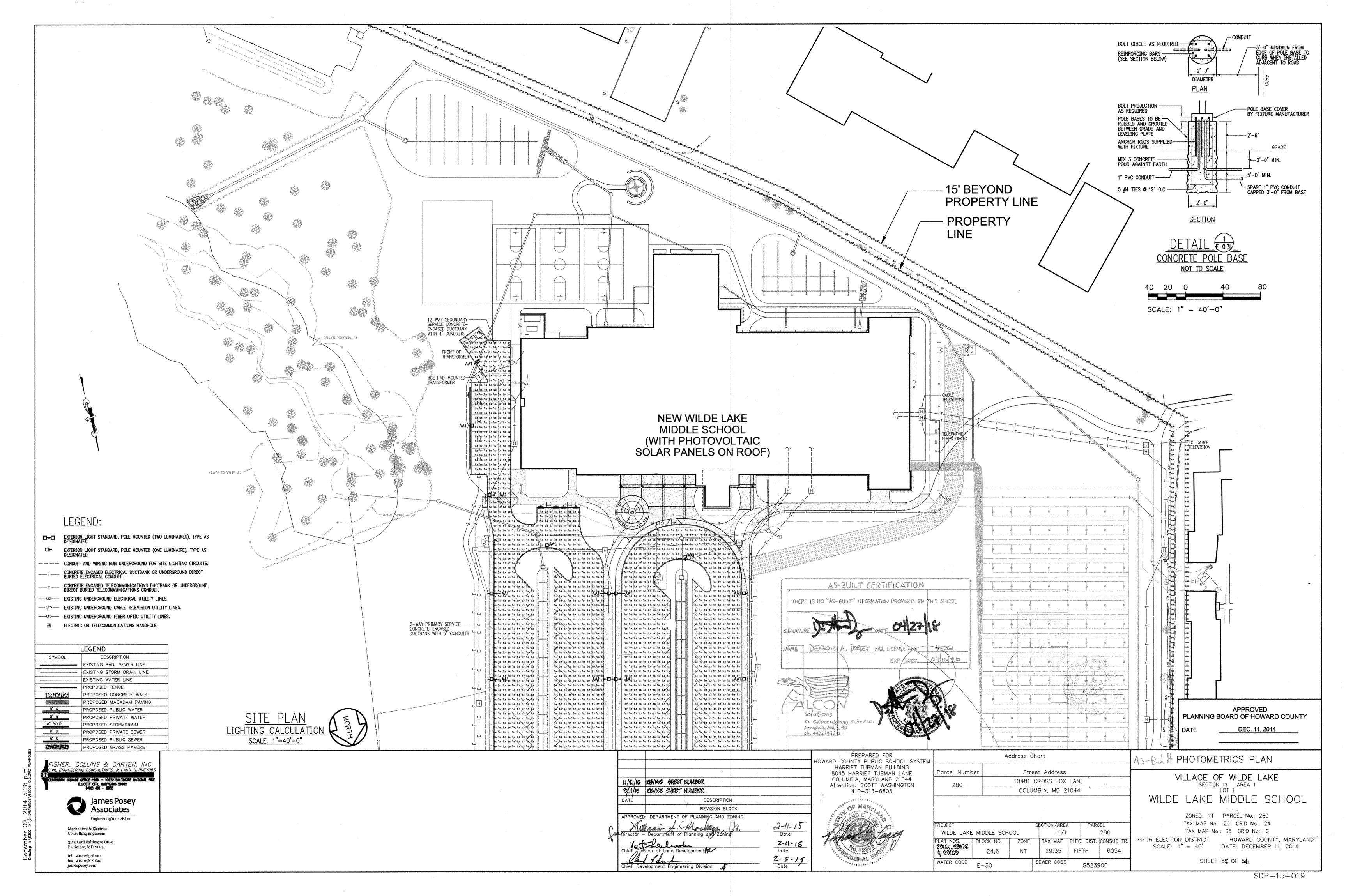
TAX MAP No.: 35 GRID No.: 6 HOWARD COUNTY, MARYLAND FIFTH ELECTION DISTRICT SCALE: AS SHOWN DATE: JANUARY 30, 2015

STORMWATER MANAGEMENT

SPECIFICATIONS & NOTES

SHEET 50 OF 54





**TYPICAL WALL SECTION** 

N.T.S.

STA. 1+00

# GENERAL NOTES:

- No trees shall be planted within 10 feet of the top of the retaining wall.
- Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
- The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
- 4. The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
- Walls shall not be constructed on uncertified fill materials.
- 6. Walls shall not be constructed within a Howard Co. right-of-way or easement.

# SPECIFICATIONS MODULAR CONCRETE BI

# MODULAR CONCRETE BLOCK RETAINING WALL

# PART 1: GENERAL 1.01 DESCRIPTION

- A. WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A MODULAR RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS.
- B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT DRAINAGE FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.
- C. WORK INCLUDES FURNISHING AND INSTALLING GEOGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS

#### 1.02 DELIVERY, STORAGE AND HANDLING

- A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.
   B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM
- DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.

#### PART 2: PRODUCTS

### 2.01 MODULAR CONCRETE RETAINING WALL UNITS

A. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:

FACE COLOR - COLOR SHALL BE SELECTED BY ARCHITECT.
FACE FINISH - SCULPTURED ROCK FACE IN ANGULAR
TRI-PLANER OR FLAT CONFIGURATION. OTHER FACE
FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN
APPROVAL OF OWNER.

BOND CONFIGURATION - RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS.

EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET UNDER DIFFUSED LIGHTING.

- B. MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372 STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.
- C. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE

COMPRESSIVE STRENGTH = 3000 PSI MINIMUM; ABSORPTION = 8% MAXIMUM (6% IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES;

DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE, ±1/16"

UNIT HEIGHT - TOP AND BOTTOM PLANES; UNIT SIZE - 8" (H) X 18" (W) X 12 (D) MINIMUM;

UNIT WEIGHT - 75 LBS/UNIT MINIMUM FOR STANDARD WEIGHT AGGREGATES;

INTER-UNIT SHEAR STRENGTH - 1000 PLF MINIMUM AT 2 PSI NORMAL PRESSURE; AT 2 PSI NORMAL FORCE. GEOGRID/UNIT PEAK CONNECTION STRENGTH - 1000 PLF

D. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING CONSTRUCTABILITY REQUIREMENTS:

VERTICAL SETBACK = 1/8"± PER COURSE (NEAR VERTICAL)
OR 1"+ PER COURSE PER THE DESIGN; ALIGNMENT AND
GRID POSITIONING MECHANISM - FIBERGLASS PINS, TWO
PER UNIT MINIMUM;

MAXIMUM HORIZONTAL GAP BETWEEN ERECTED UNITS SHALL BE - 1/2 INCH.

# 2.02 SHEAR CONNECTORS

A. SHEAR CONNECTORS SHALL BE 1/2 INCH DIAMETER
THERMOSET ISOPTHALIC POLYESTER RESIN-PROTRUDED
FIBERGLASS REINFORCEMENT RODS OR EQUIVALENT TO
PROVIDE CONNECTION BETWEEN VERTICALLY AND

CONNECTORS BETWEEN VERTICAL ADJACENT UNITS SHALL BE APPLICABLE OVER A DESIGN TEMPERATURE OF 10 DEGREES F TO +100 DEGREES F. B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE GEOGRID IN THE PROPER DESIGN POSITION DURING GRID PRE-TENSIONING AND BACKFILLING.

HORIZONTALLY ADJACENT UNITS. STRENGTH OF SHEAR

### 2.03 BASE LEVELING PAD MATERIAL

A. MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED STONE BASE AS SHOWN ON THE CONSTRUCTION DRAWINGS

#### 2.04 UNIT DRAINAGE FILL

A. UNIT DRAINAGE FILL SHALL CONSIST OF #57CRUSHED STONE

#### 2.05 REINFORCED BACKFILL

A. REINFORCED BACKFILL SHALL TYPE SM, BE FREE OF DEBRIS AND MEET THE FOLLOWING GRADATION TESTED IN ACCORDANCE WITH ASTM D-422 AND MEET OTHER PROPERTIES SHOWN ON THE PLAN:

SIEVE SIZE	PERCENT PA		
2 INCH	100-75		
3/4 INCH	100-75		
NO. 40	0-60		
NO. 200	0-35		

PLASTICITY INDEX (PI) <10 AND LIQUID LIMIT <35 PER ASTM

B. MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS FOR BACKFILL (HIGH PLASTIC CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS.

#### 2.06 GEOGRID SOIL REINFORCEMENT

A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEOGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE MANUFACTURED FROM HIGH TENACITY POLYESTER YARN.

### 2.07 DRAINAGE PIPE

A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM

A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES

## PART 3 EXECUTION

3.01 EXCAVATION

# SHOWN ON THE CONSTRUCTION DRAWINGS. OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE EXCAVATION PRIOR TO PLACEMENT

# OF LEVELING MATERIAL OR FILL SOILS. 3.02 BASE LEVELING PAD

- A. LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS, TO A MINIMUM THICKNESS OF 6 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE
- B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.

# 3.03 MODULAR UNIT INSTALLATION

- A. FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED.
- B. PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- C. INSTALL SHEAR/CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.
- D. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL, FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.

E. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED THREE COURSES.

## 3.04 STRUCTURAL GEOGRID INSTALLATION

- A. GEOGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT.
- B. GEOGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DESIGN DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- C. THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNITS. PLACE THE NEXT COURSE OF MODULAR CONCRETE UNITS OVER THE GEOGRID. THE GEOGRID SHALL BE PULLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEOGRID.
- D. GEOGRID REINFORCEMENTS SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTHS AND PLACED SIDE-BY-SIDE TO PROVIDE 100% COVERAGE AT EACH LEVEL SPLICED CONNECTIONS BETWEEN SHORTER PIECES OF GEOGRID OR GAPS BETWEEN ADJACENT PIECES OF GEOGRID ARE NOT PERMITTED.

### 3.05 REINFORCED BACKFILL PLACEMENT

- A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEOGRID AND INSTALLATION DAMAGE.
- B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND COMPACTION IS USED, OR 8 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED, LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.
- C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE + 3% TO 3% OF OPTIMUM.
- D. ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.
- E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEOGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TRACKED VEHICLE TURNING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM
- DISPLACING THE FILL AND DAMAGING THE GEOGRID.

  F. RUBBER TIRED EQUIPMENT MAY PASS OVER GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH.
- G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE

# 3.06 CAP INSTALLATION

WALL CONSTRUCTION SITE.

A. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER.

# 3.07 FIELD QUALITY CONTROL

- A. THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES, TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES DURING CONSTRUCTION.
- B. AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.

AS-BUILT CERTIFICATION

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

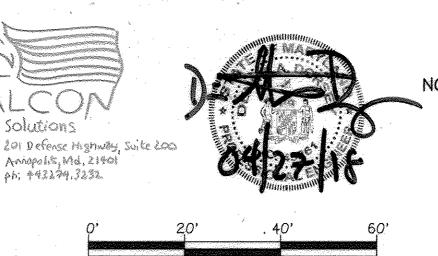
SIGNATURE

DATE

DEDUCE A. DOESEY MD. LIKENSE NO. 4561

EXP. DATE

OH/10/20



: THE PURPOSE OF THIS PLAN IS TO ADD A 5 FOOT WIDE MACADAM PATHWAY, RETAINING WALL AND DETAILS.

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE DEC. 11, 2014



HCEA PROJECT #: 14311-/

STA. 0+00-

THIS SHEET)

NOTE: F.G. ELEVATION AT THE WALL DENOTES THE FINISHED GRADE ELEVATION ADJACENT TO THE 5'

MACADAM PATHWAY (SEE TYPICAL WALL SECTION ON



WALL LOCATION PLAN

1" = 20'

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14434, Expiration Date: May 13, 2015."

RETAINING WALL

MWAM 3/11/15
Richard W. Sturtevant, P.E. DATE

. 7 ,

STA. 2+00

minima

DATE DESCRIPTION

REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning

Chief, Division of Land Development 11

Chief, Development Engineering Division

Date

3-16-15

Chief, Development Engineering Division

Date

STA. 3+01

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
HARRIET TUBMAN BUILDING
8045 HARRIET TUBMAN LANE
COLUMBIA, MARYLAND 21044
Aftention: SCOTT WASHINGTON
410-313-6805

Parcel Number Street Address

10481 CROSS FOX LANE

COLUMBIA, MD 21044

PROJECT SECTION/AREA PARCEL
WILDE LAKE MIDDLE SCHOOL 11/1 280

PLAT NOS. BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS TR.
23161-23163

..15/F.90&91

WATER CODE

29,35

SEWER CODE

FIFTH

5523900

6054

Address Chart

RETAINING WALL PLAN AND DETAILS

"REVISED SITE DEVELOPMENT PLAN"
VILLAGE OF WILDE LAKE

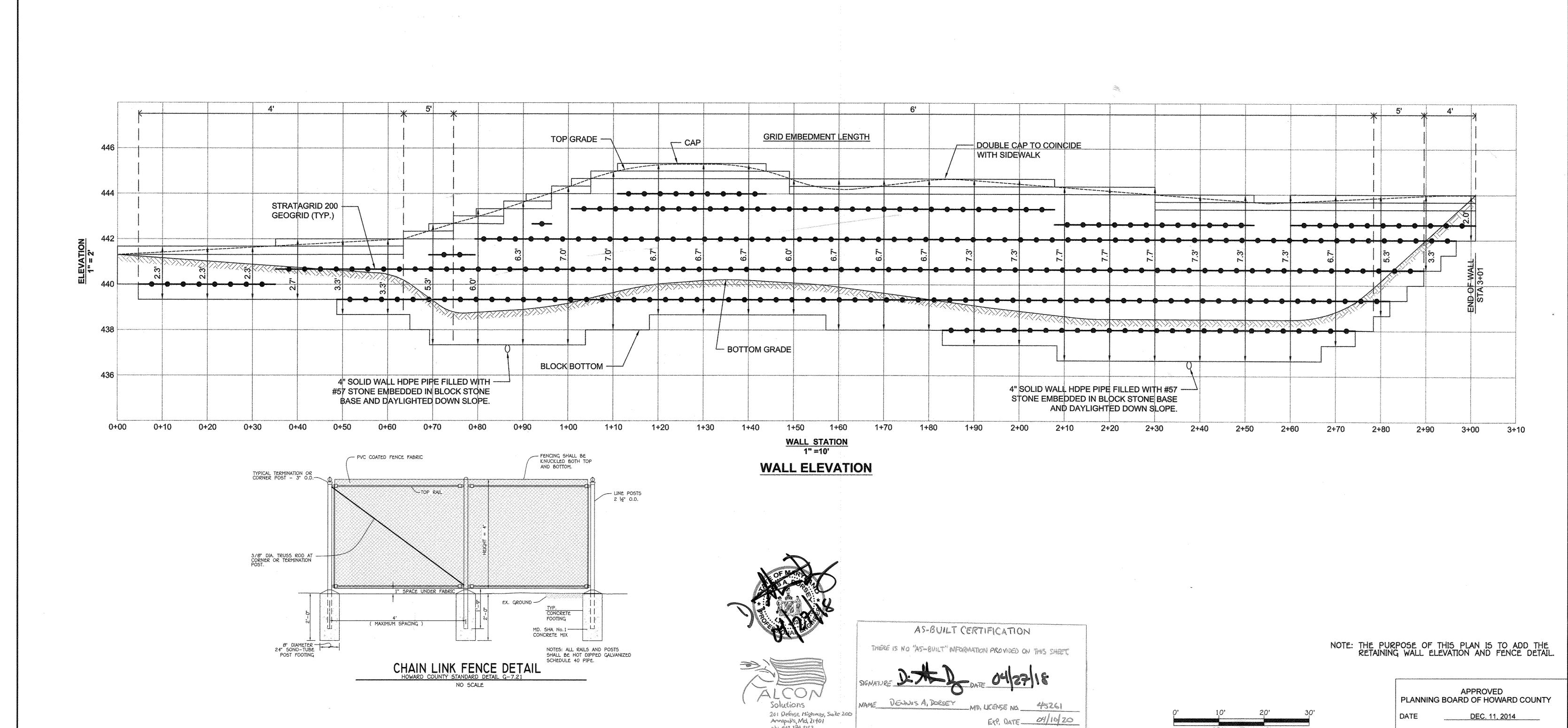
WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280
TAX MAP No.: 29 GRID No.: 24

TAX MAP No.: 35 GRID No.: 6

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 20' DATE: JANUARY 30, 2015

SHEET 53 OF 54



Annapalis, Md, 21901 ph: 443,274,3252

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning

Chief, Division of Land Development

Chief, Development Engineering Division

DESCRIPTION

REVISION BLOCK

3/13/15 Date

3-17-15

3.116.15

Date

11/21/16 REVISE SHEET NUMBER

DATE

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland,

License No. 14434, Expiration Date: May 13, 2015."

**ENGINEERING ASSOCIATES** 

10975 Guilford Road, Suite A Annapolis Junction, Maryland

(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

HCEA PROJECT #:14311-A

50P-15-019

RETAINING WALL ELEVATION AND FENCE DETAIL

"REVISED SITE DEVELOPMENT PLAN"

VILLAGE OF WILDE LAKE

SECTION 11 AREA 1 LOT 1

WILDE LAKE MIDDLE SCHOOL

ZONED: NT PARCEL No.: 280

TAX MAP No.: 29 GRID No.: 24

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 20' DATE: JANUARY 30, 2015

SHEET 54 OF 54

TAX MAP No.: 35 GRID No.: 6

SCALE: 1" = 10'

Street Address

10481 CROSS FOX LANE

COLUMBIA, MD 21044

SECTION/AREA

11/1

29,35

SEWER CODE

TAX MAP | ELEC. DIST. CENSUS T

FIFTH

5523900

PARCEL

280

6054

Address Chart

Parcel Number

23161-23163

..15/F.90&91

WATER CODE

WILDE LAKE MIDDLE SCHOOL

PLAT NOS. | BLOCK NO. | ZONE

PREPARED FOR

HOWARD COUNTY PUBLIC SCHOOL SYSTEM HARRIET TUBMAN BUILDING

8045 HARRIET TUBMAN LANE

COLUMBIA, MARYLAND 21044

Attention: SCOTT WASHINGTON 410-313-6805