SHEET INDEX DESCRIPTION TLTLE SHEET SITE DEVELOPMENT PLAN, GRADING AND SEDIMENT CONTROL PLAN DETAIL SHEET C DEMOLITION PLAN 7-9 9HE DEVELOPMENT PLAN 2 GEOMETRY PLAN 15 SEAMENT AND EROSION CONTROL PLAN 16-18 SOILS AND DRAINAGE AREA MAP 1920 DETAIL SHEET AND FILTERRA RAN AND NOTES 22 SEGMENT EROSION CONTROL NOTES SEQUENCE OF CONTROLTION 23 SEGMENT AND EROSION CONTROL DETAILS 24 RETAINING WALL FLOW AND SPECIFICATIONS 25 RETAINING WALL ELEVATION AND DETAILS MITUNING WALL EUDIATION AND DETAILS 627 HANDICAP ACCESS RAN 18 SWM PLAN, PROFILES, NOTED AND DETAILS 19 SWM PROFILES AND NOTES 2 STORM DRAIN PROFILES WATER, SENER, STORM DRAIN PROFILES & SPRINTURE SCHEDULE 3 PHOTOMETRICS PLAN LANDSCAPILL BALL LOSSES WATER AND GEWER PROFILES

SITE DEVELOPMENT PLAN HAMMOND HIGH SCHOOL BUILDING ADDITIONS

6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

24. ON JULY Z, ZOZO, THE HOWARD COUNTY PLANNING BOARD VOTED TO APPROVE A PLAN MODIFICATION TO SOP-96-018 FOR VOTED TO APPROVE A PLAN MODIFICATION TO SOP-96-018 FOR BUILDING ADDITIONS AND RELATED SITE IMPROVEMENTS TO HAMMOND HIGH SCHOOL. THE BOARD ALSO APPROVED AN ADDINGTMENT TO THE CONTRAGE REQUIREMENT (PFR FDP.158-R AND IN ACCORDANCE NITH SECTION 125,0,6,4, OF THE ZONING REGULATIONS) FOR AN INCREASED LOT COVERAGE RELATED TO THIS PLAN MODIFICATION FROM AN EXISTING COVERAGE OF 14,5% TO ANEW COVERAGE OF 17,4%. THE DOARD DID NOT IMPOSE ANY CONDITIONS TO THIS APPROVAL BUT DID RECOMMEND THAT THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM COORDINATE A STUDY WITH THE DEPT OF PUBLIC WORKS ON THE NORTH SIDE OF GUILFORD ROAD. ON THE NORTH SIDE OF GUILFORD ROAD.



HOWARD COUNTY CONTROL STATIONS

1-2240003

2 - 2240012

3-2240002 4-2240001

32.5002 Ac. (1,420,021 6F.) NEW TOWN

HIGH SCHOOL ADDITION

262)

374 (INCLUDING 12 HANDICAP)

BUS STACKING SPACES PROVIDED NOTE: THIS PROPERTY IS INCLUDED IN FINAL DEVELOPMENT PLAN PHASE 158-A.

SHOW IMPROVED TO THE EXPOSITION AND REPLACEMENT OF C3, 555 S.F. OF THE BUILDING

LANE AND PARKING LOT AND ADD SWMF'S ALONG WITH THEIR LITTLITUS ON SHEETS 4-37,

THE ADDITION OF 41,4379, F. OF BUILDING AREA A NEW BUS DENVEWAY LOOP, REVIEW DROP-OFF

NO. OF HANDICAP PARKING SPACES REQUIRED IS BASED ON BARKING SPACES PROPOSED FROM 301 TO 400, NO, OF HANDICAP PARKING SPACES PROVIDED IS 12.

SITE ANALYSIS

AREA OF PARCEL

PROPOSED USE

PRESENT ZONING

NO. OF EX. PARKING SPACES TOTAL NO. OF PARKING SPACES

TOTAL SCHOOL BUILDING/LOT CONERAND: 235, 173 97. EXISTING TOTAL FLOOR SPACE: 197,023 SP. FLOOR SPACE TO BE DEMOLIATED: C3, 555 9F. (TO BE REPLACED)
PROPOSED ADDITIONAL FLOOR SPACE: 41,437 9F. (NOT INCLUDING DEMOUSATED SPACE) TOTAL FLOOR SPACE AFTER IMPROVEMENTS: 238, 400 9.F. (INCLUDES SECOND PLOOR)

GENERAL NOTES

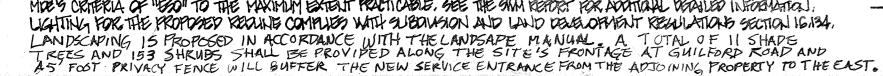
- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAY BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILTIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:

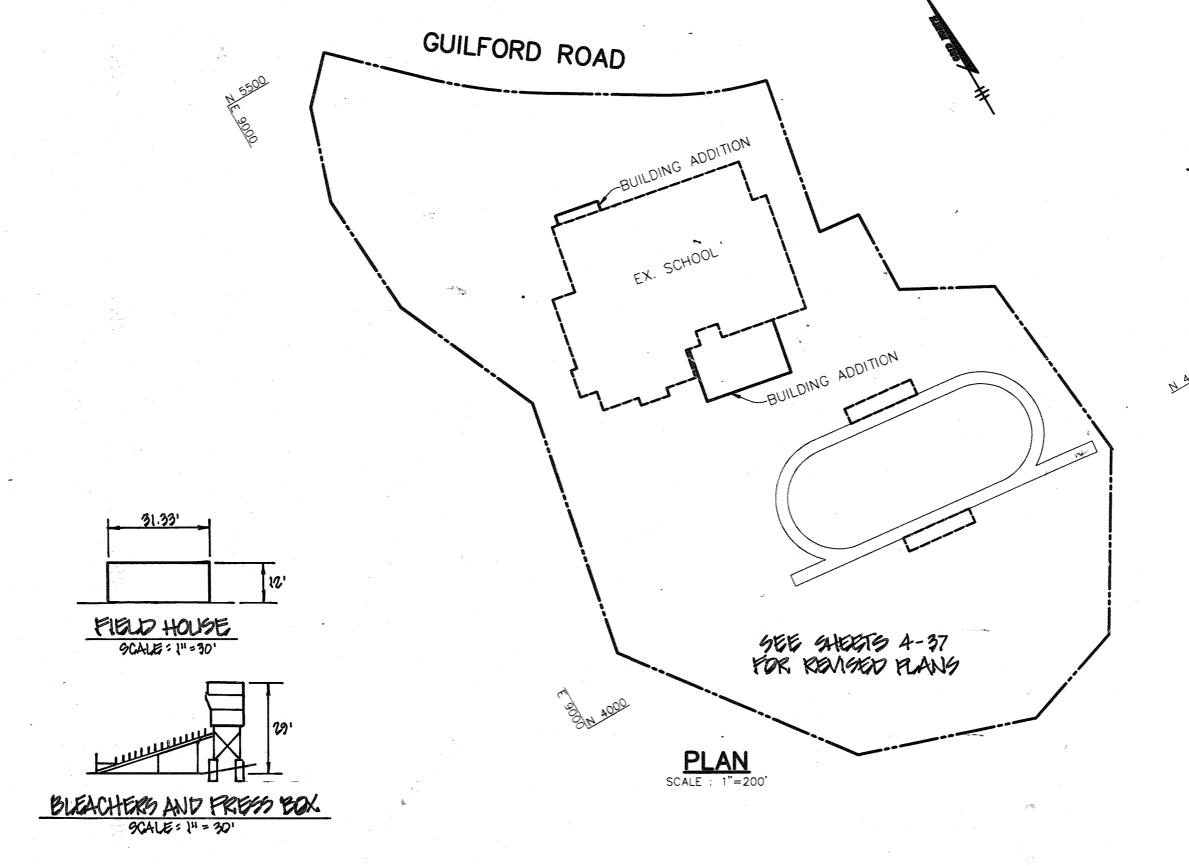
В	ELL ATLANTIC TELEPHON	E COMPANY		725-997
H	OWARD COUNTY BUREAU OF	F UTILITIES		313-490
A [*]	T&T CABLE LOCATION DI	VERSION		393-355.
B	ALTIMORE GAS & ELECTR	IC COMPANY		685-012
S.	TATE HIGHWAY ADMINISTI	RATION		531-553.
H(OWARD COUNTY	CONSTRUCTION	INSPECTION	313-188
D	IVISION (24 HOURS NOT	ICE PRIOR TO		
C	DMMENCEMENT OF WORK)			
Control of				

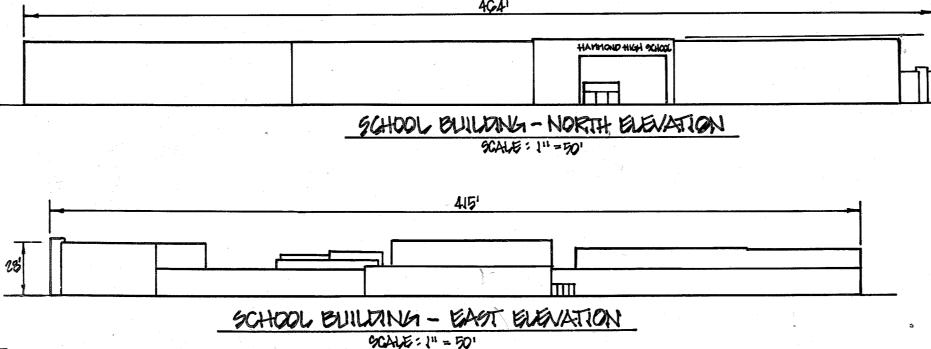
- THE CONTRACTOR TO NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST
- TOPO IS PROPOSED GRADING TAKEN FROM SDP-75-13 AND FIELD RUN TOPO BY RIEMER MUEGGE & ASSOCIATES PERFORMED JULY 1995 AND IS AT 2 FOOT INTERVALS.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED

48 HOURS PRIOR TO ANY EXCAVATION WORK.

- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS. RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE No.'s SDP-75-13 SDP-27-147- F-20-080
- A FEE-IN-LIEU OF QUANTITY STORMWATER MANAGEMENT WAS APPROVED BY THE DEVELOPMENT ENGINEERING DIVISION ON AUGUST 8, 1995. WATER QUALITY IS PROVIDED BY OVERLAND FLOW
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE CONTRACTOR'S
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- THE COORDINATES SHOWN HEREON ARE BASED ON AN ASSUMED GRID
- THERE IS NO 100 YEAR FLOODPLAIN WITHIN THE AREA OF DISTURBANCE.
- THERE ARE NO WETLANDS WITHIN AREA OF DISTURBANCE.
- THERE IS NO TRAFFIC STUDY REQUIRED FOR THIS GITE
- THE HOWARD COUNTY RANNING BOARD ON JULY 11, 2019 APPROVED AN AMENDMENT TO THE PINAL DEVELOPMENT RAN PHAGE 158-A. THE PURPOSE OF THIS AMENDMENT WAS TO REAVE THE CREATED AND NON-CREDITED OPEN SPACE LAND USE ACREAGES. THE FINAL DEVELOPMENT PLANS WERE RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND AS PLAY NO. 9 25150, 25151 & 25152. THIS PROJECT 19 EXEMPT FROM THE REQUIREMENTS OF SECTION 16, 1200 OF THE HOWARD CODE FOR FOREST
- CONSERVATION BECAUSE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND RECORDED AND SUBSTENTIALLY PRACLOPED BEFORE DECEMBER 31, 1992 PER SECTION IG.1202 (b)(1)(ii) OF THE COUNTY CODE.
- MINIMUM BUILDING SETBACK RESTRICTIONS FROM PROPERTY LINES AND THE PUBLIC RIGHT-OF-WAY LINES 10 BE IN ACCORDANCE WITH FOF-15BACKITERIA.
- SUM METHOD: THE SCHOOL SITE COUTAINS NO BLAKKONMENTAL IMPACTS DECAUSE THORE ARE NO WOTLANDS, PLOODELAINS FOREIGN AND ASSOCIATED BLAKERS. THE ESD "PE" WAS TOKEN FROM MIDE'S TABLE 53. THE "PE" IS WELLHED TO ACCOUNT FOR THE DIFFERENT HYDROLOGIC SOILS GROUPS. THE BIORSTENTION BMP DRAINLAGE AREAS WERE DIVIDED SO AS TO BE AS SMALL AS PRACTICABLE. HOWER, CIVEN THE PHYSICAL CONSTRAINTS OF THE SITE, AS WELL AS A GOAL OF MAINTAINING THE BOARD OF BUICATIONS SCHOOL PROCRAM, FOUR (4) FILTERRA DEVICES WITH SEDIMENTATION CHAMBERS AND TWO (2) ADDITIONAL SYSTEMS WERE DESIGNED AS "F-G" FACILITIES BECAUSE THE DRAINAGE AREAS EXCEEDED THE "ESO" MAXIMUM LIMIT, THIS WILL MOST MOST CRITERIA OF "ESO" TO THE MAXIMUM EXTENT PRACTICABLE, SEE THE SIM REPORT FOR ADOLTABLE INFORMATICAL







PLAN MODIFICATION APPROVED-HOWARD COUNTY PLANNING BOARD DATE: JULY 2, 2020 ADDRESS CHART STREET ADDRESS PLANING 8800 GUILFORD ROAD VILLAGE OF KINGS CONTRIVANCE 405 CENSUS TRAC **GTH** NT 6068.01 SEWER CODE - 5290000 WATER CODE

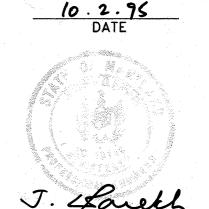
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION Sina Lumnanji CHIEF. DIVISION OF LAND DEVELOPMENT G/1/20 1 ADDED SHEET INDEX, NOTES, DEPAILS & REVISED SHEET HO. DATE NO. REVISION OWNER / DEVELOPER BOARD OF EDUCATION OF HOWARD COUNTY 10910 ROUTE 108 ELLICOTT CITY, MARYLAND 21042

NOTE: THE RURPOSE OF THIS PLAN MODIFICATION IS TO PROJECT HAMMOND HIGH SCHOOL **BUILDING ADDITIONS**

AREA TAX MAP 42 PARCEL 405 & ZONE NEW TOWN VILLAGE OF KINGS CONTRIVANCE, SECTION 2, AREA GTH ELECTION DISTRICT, HOWARD COUNTY, WARTLAND

TITLE SHEET

Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045 410-997-8900 FAX: 410-997-9282

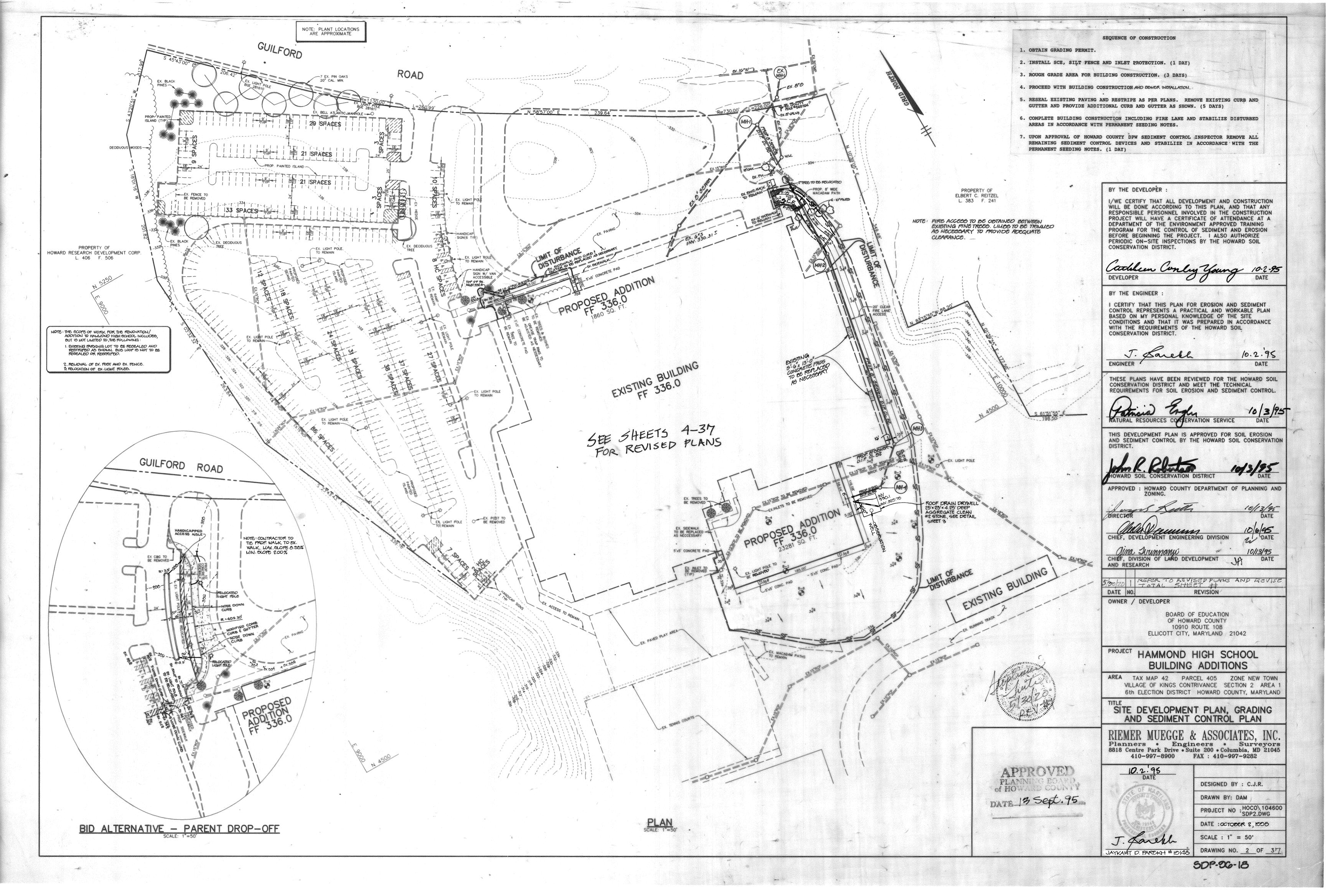


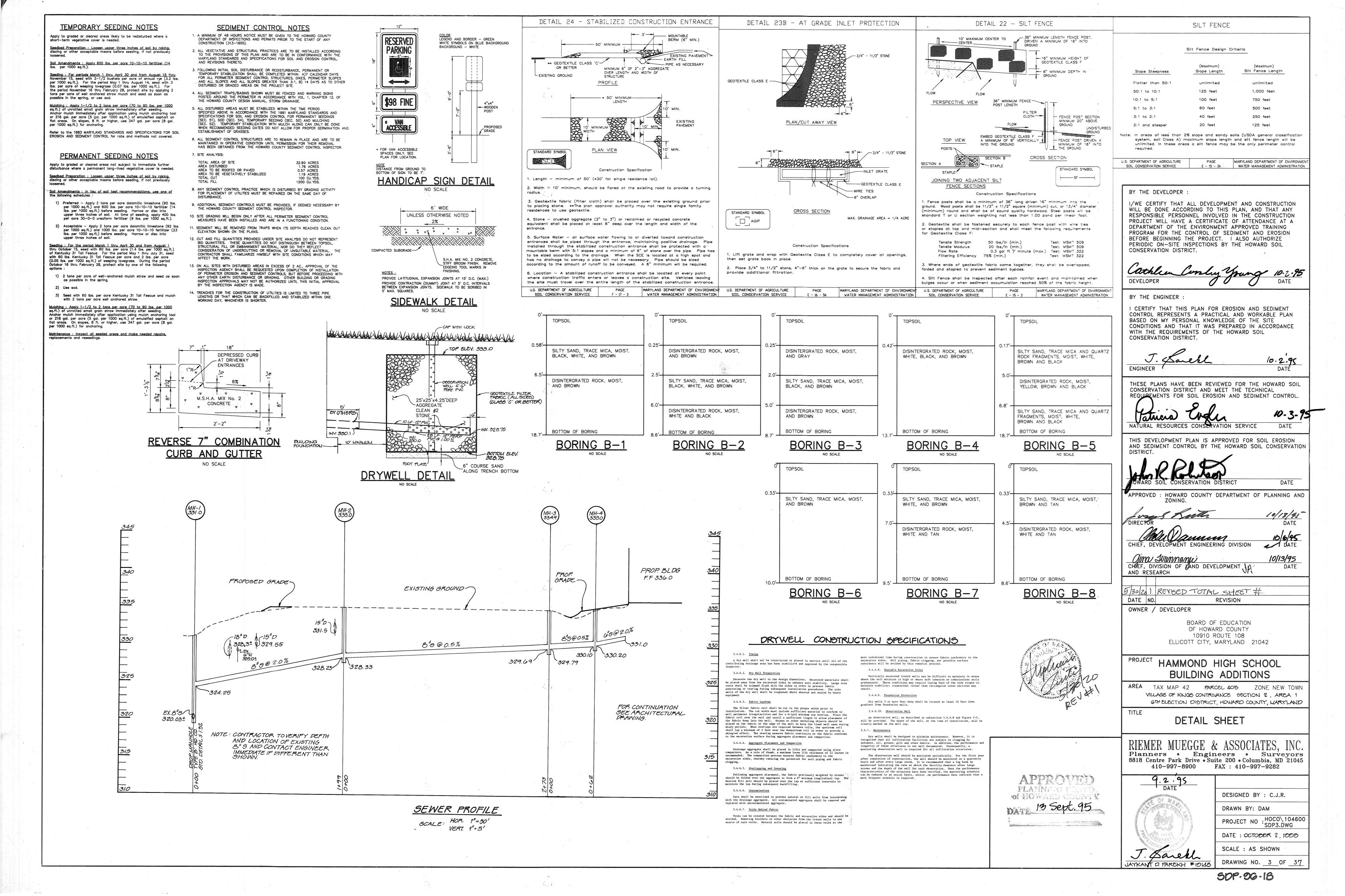
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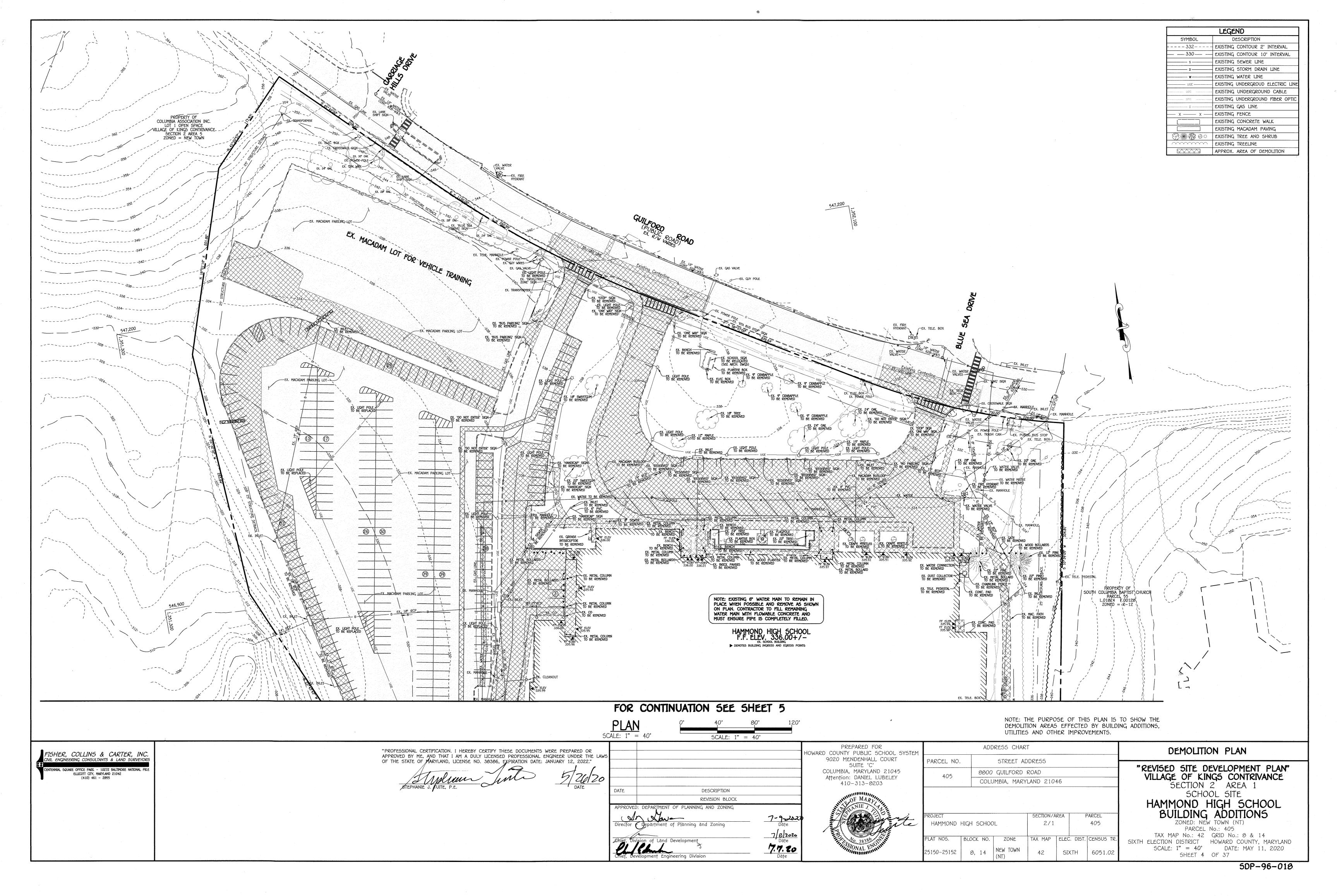
DESIGNED BY : C.J.R. DRAWN BY: DAM PROJECT NO : HOCO\10460 DATE : OCTOBER 2, 1995 SCALE : AS SHOWN

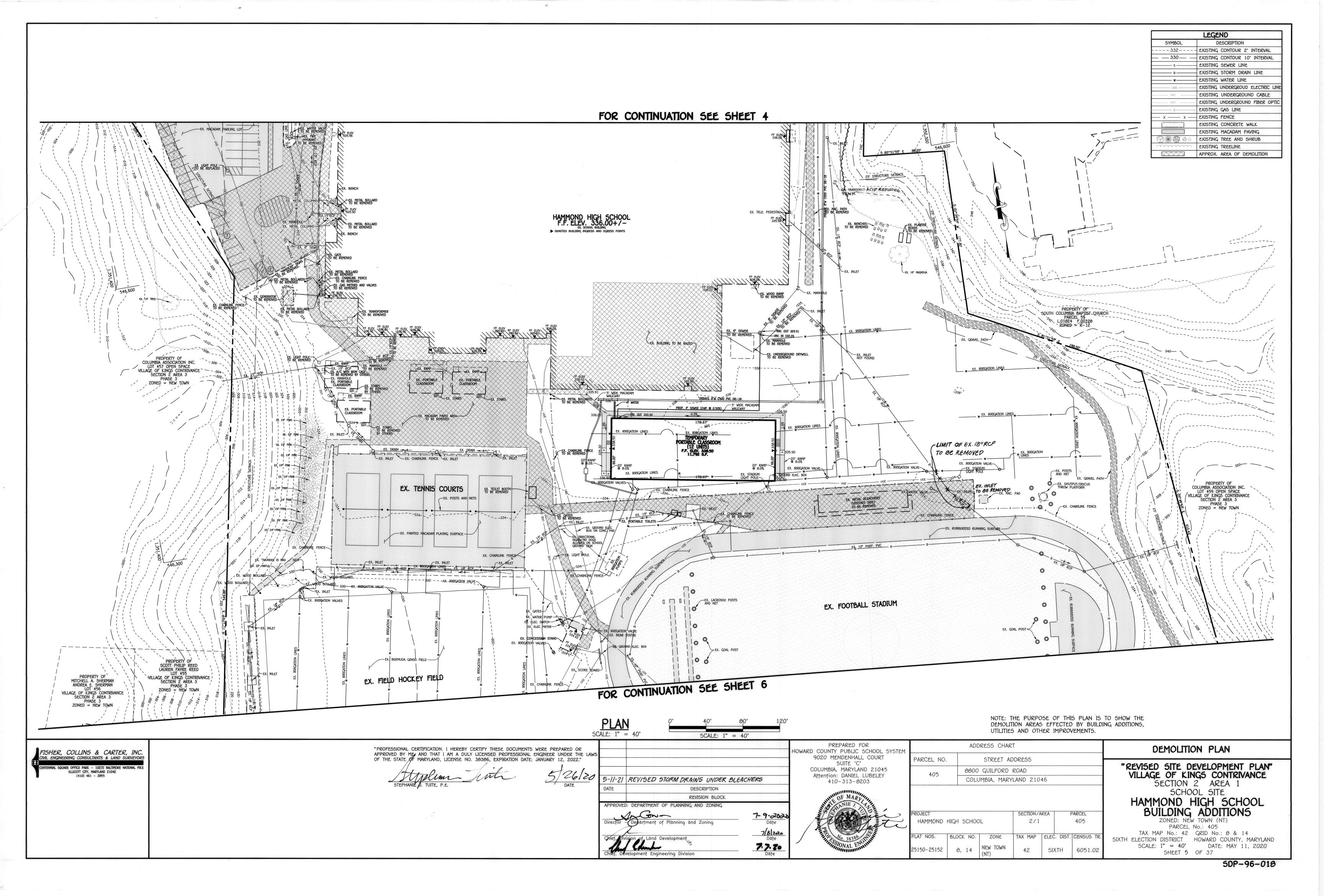
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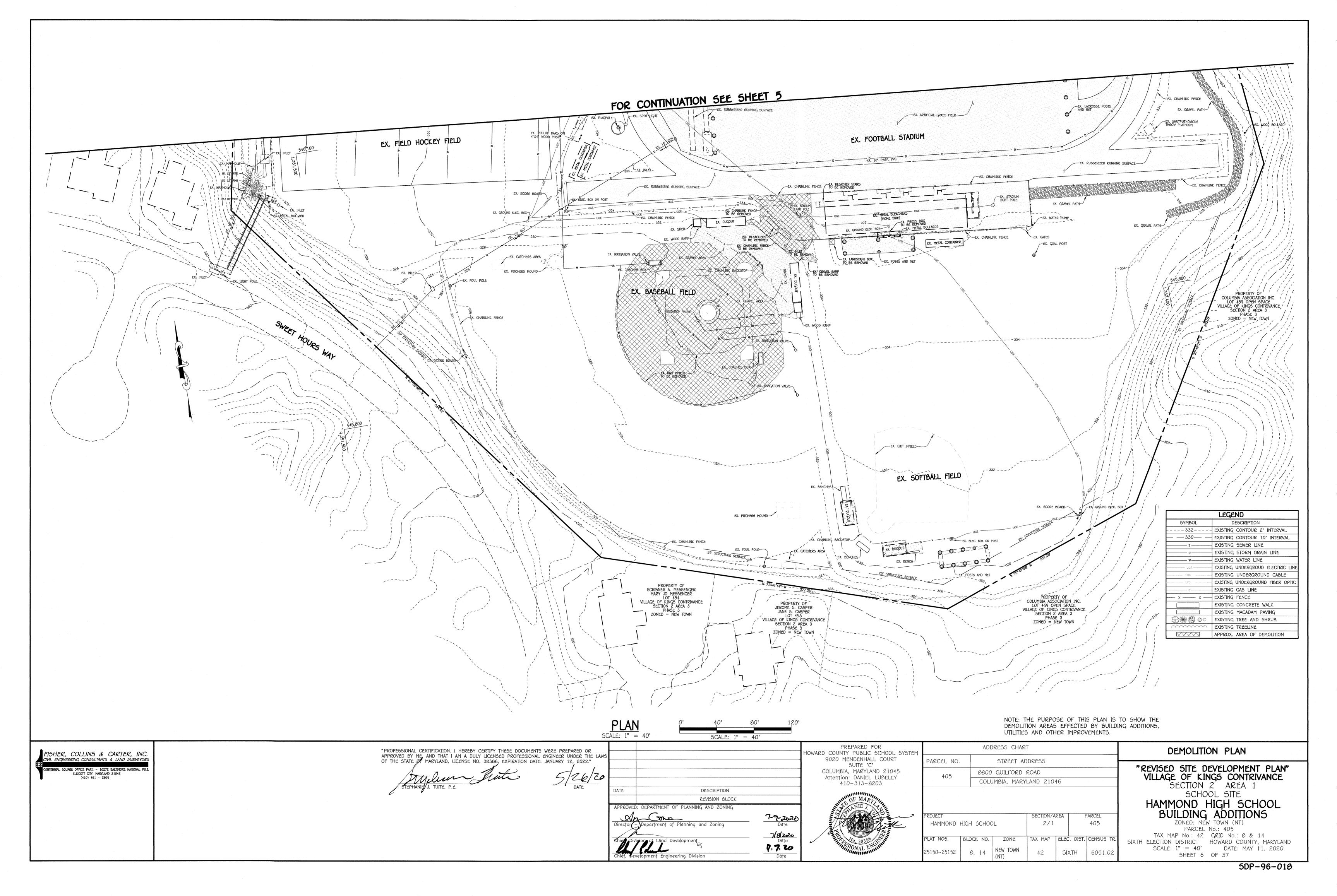
DRAWING NO. _ 1 _ OF _ 37

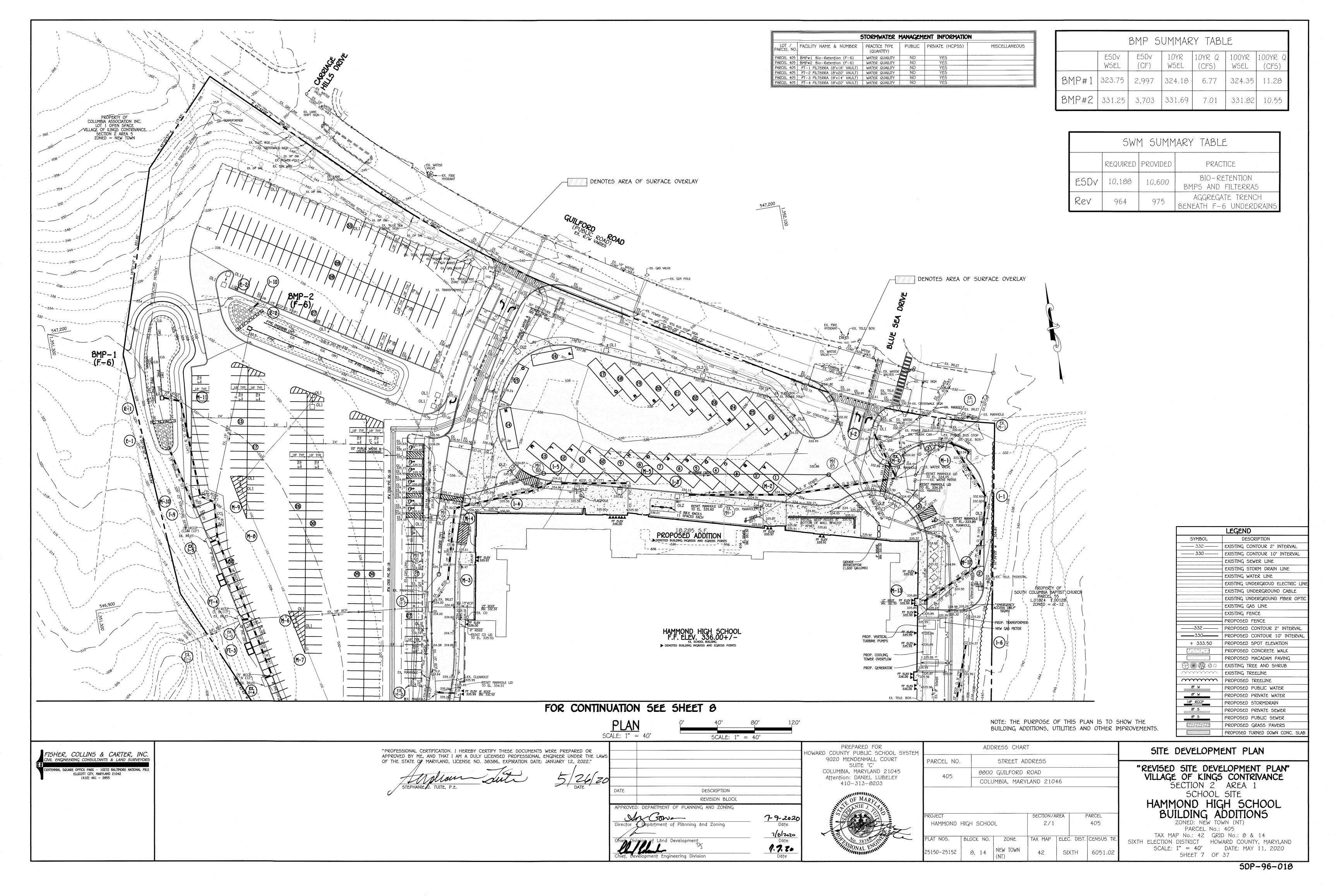


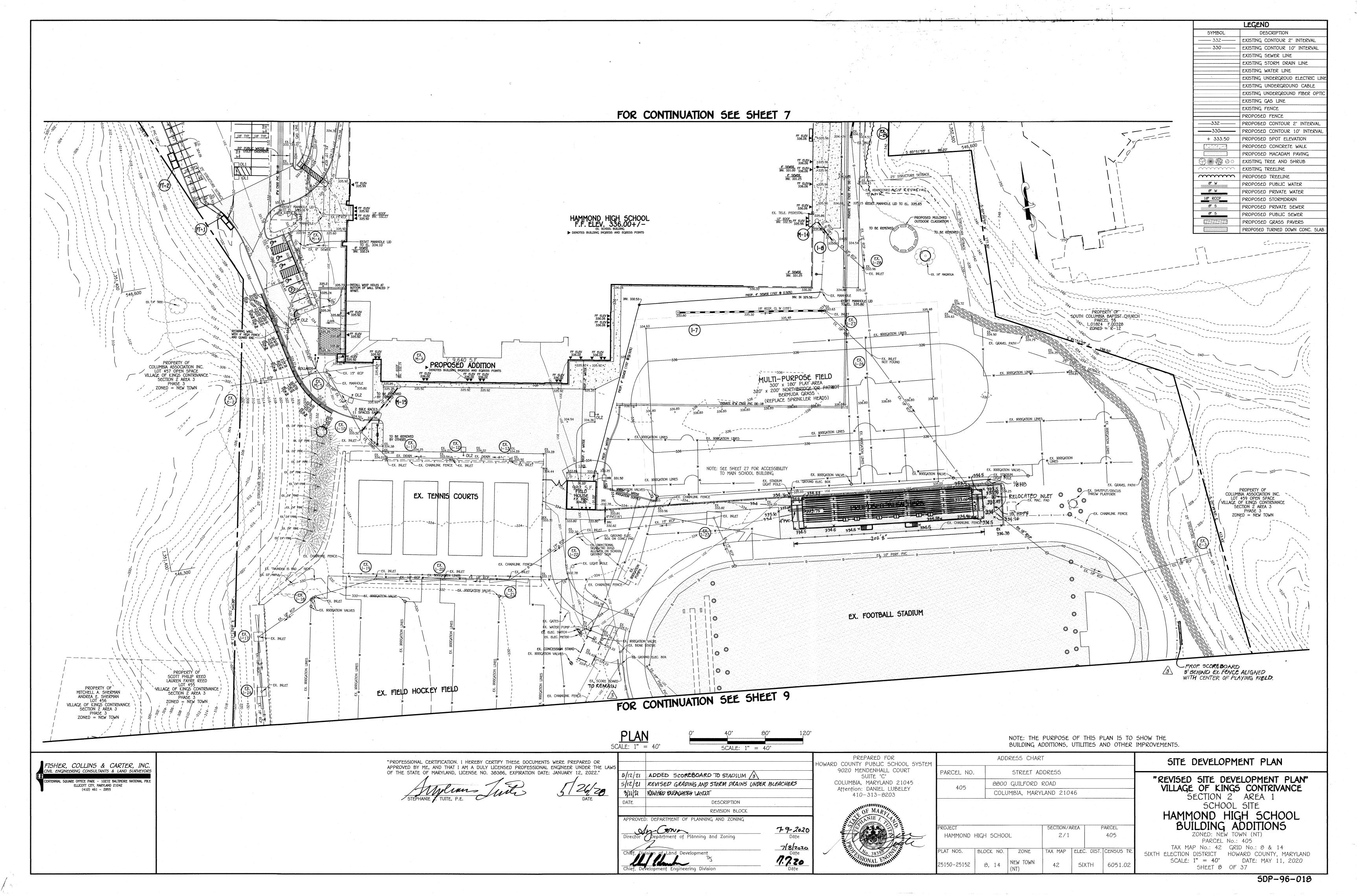


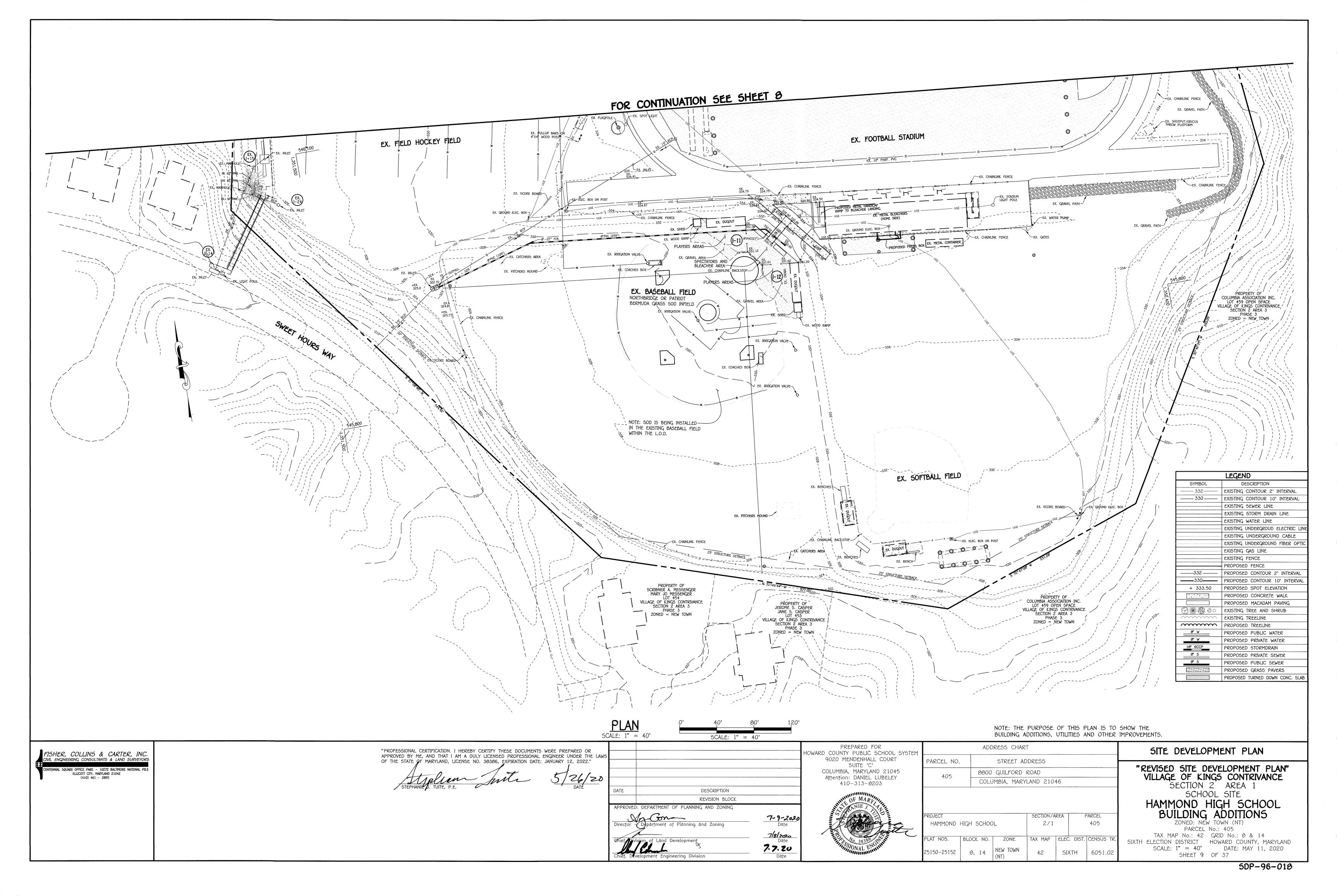


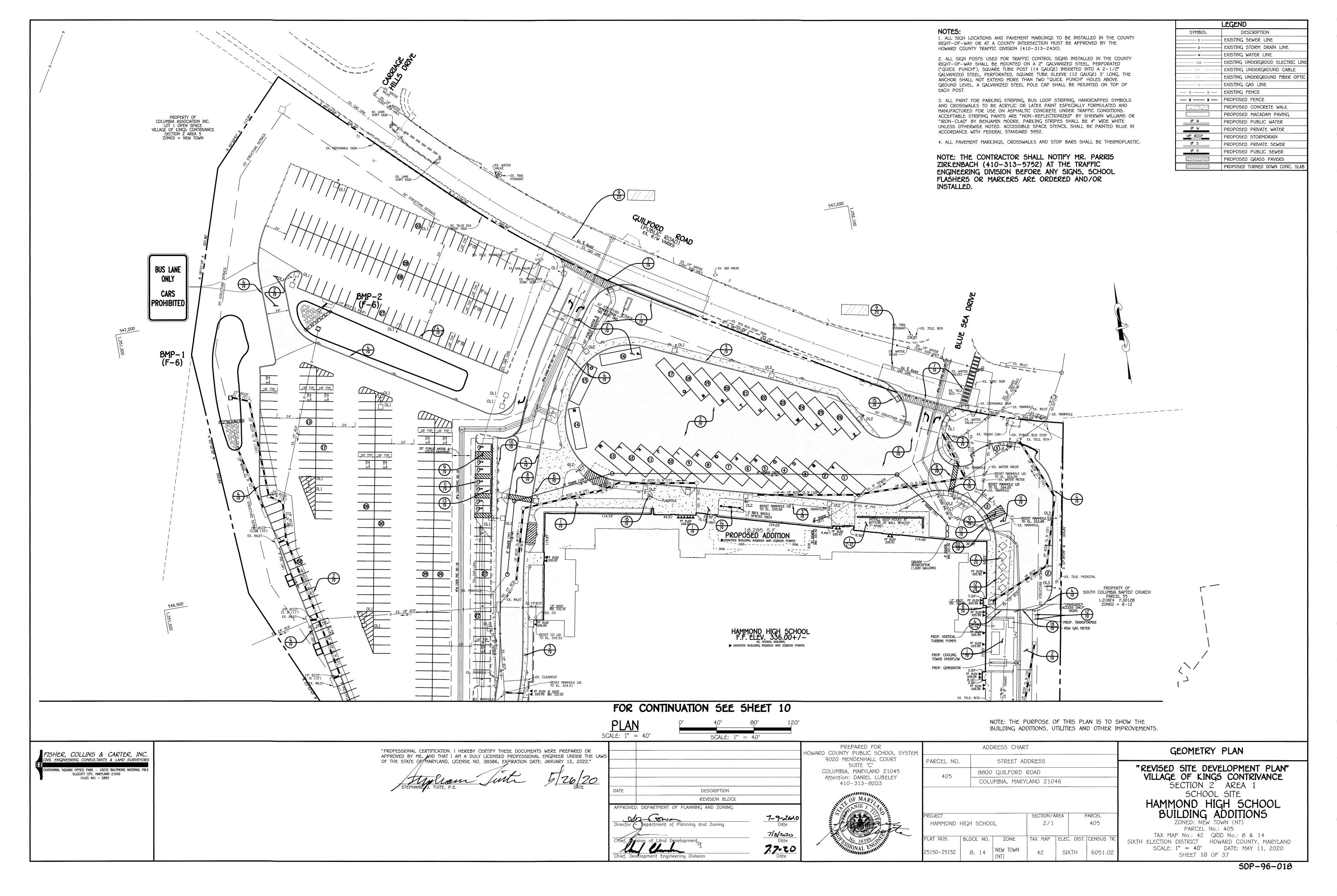


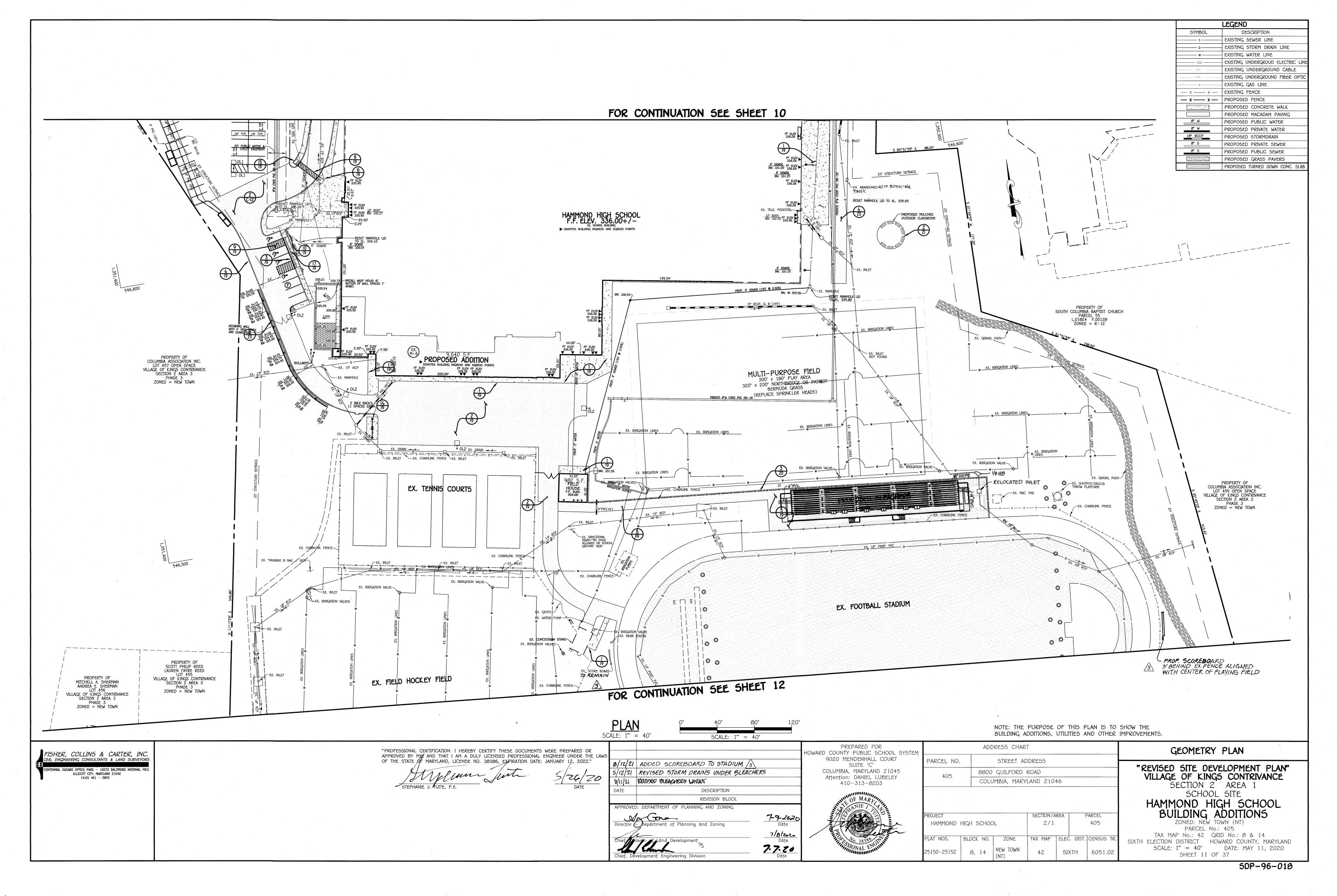


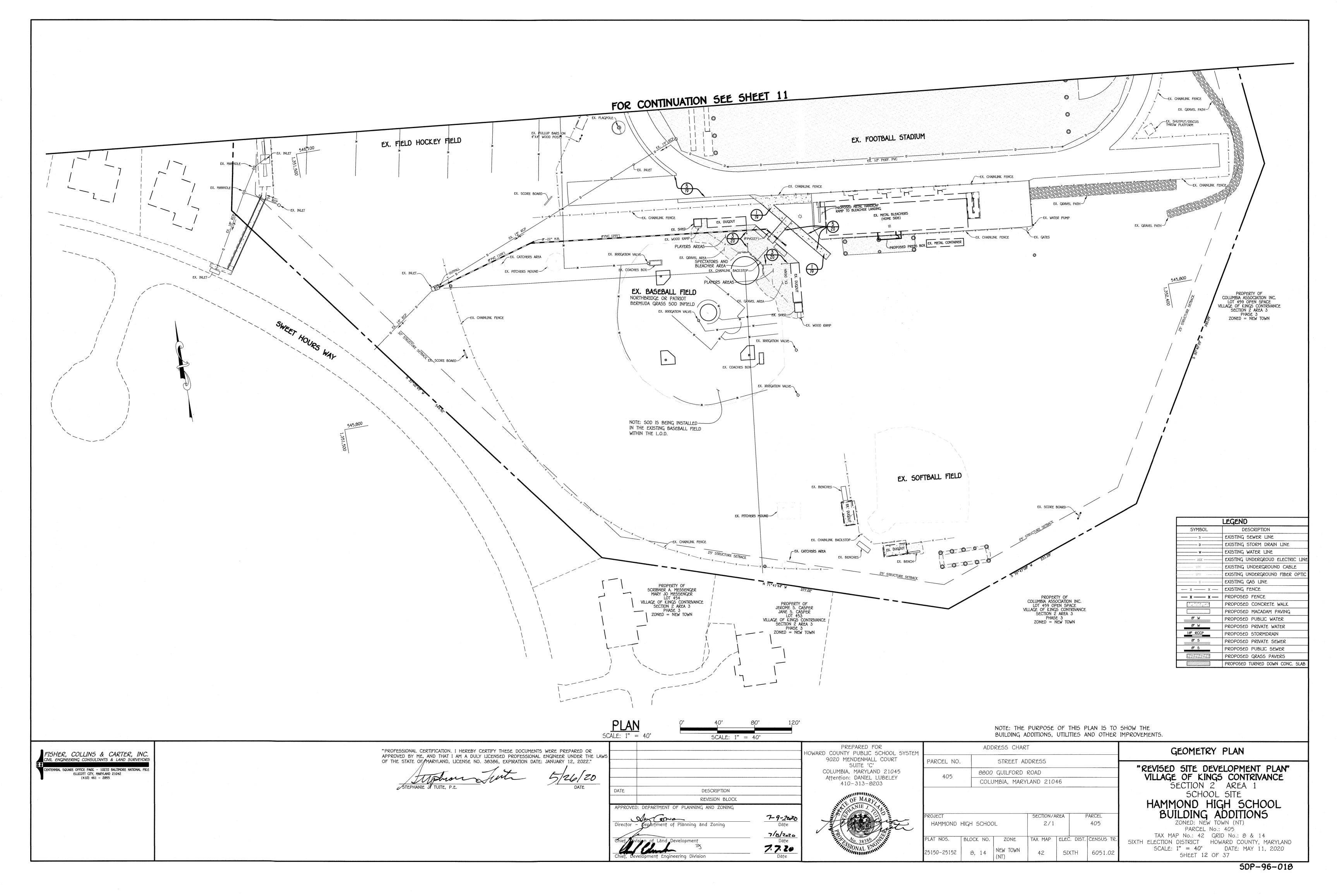


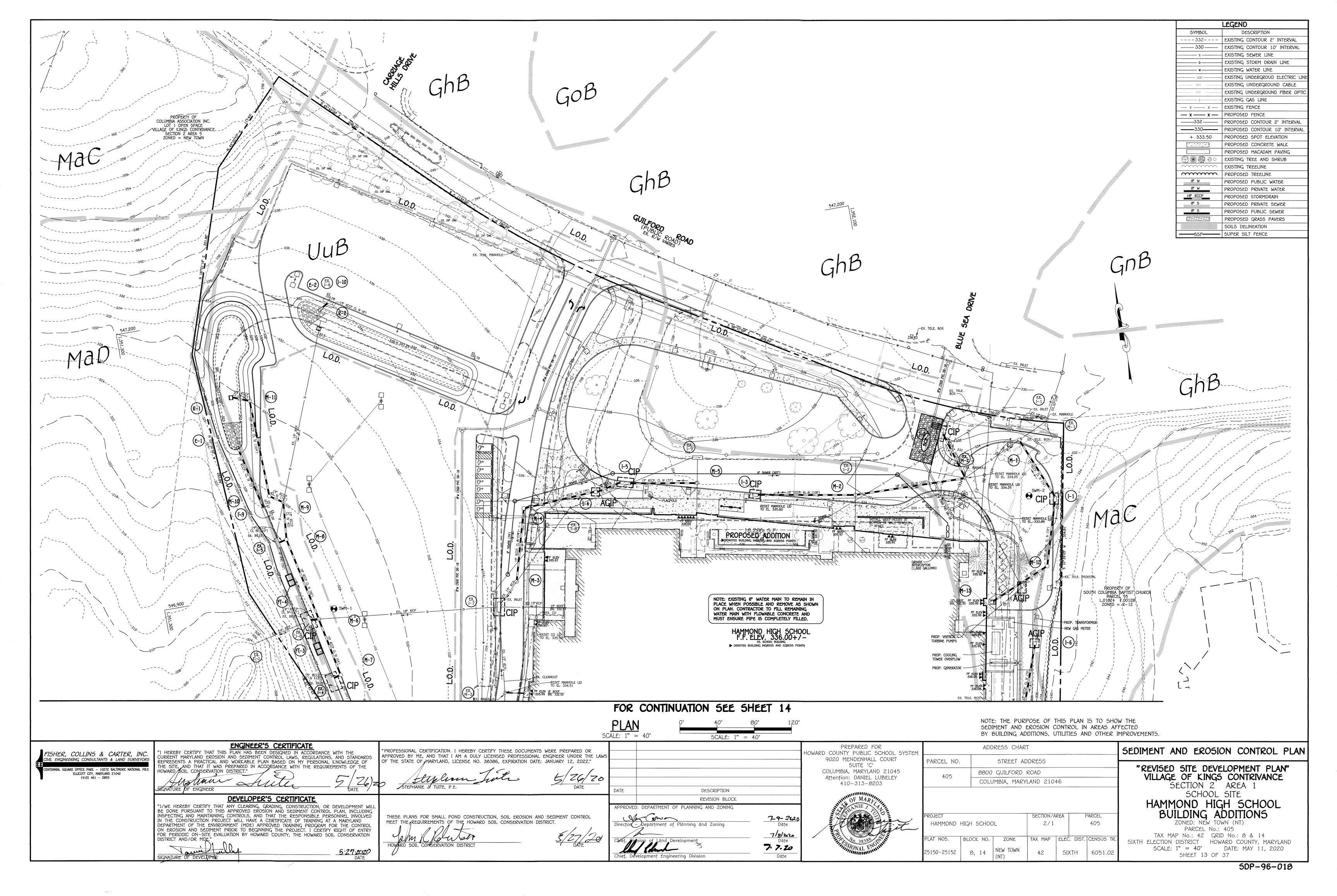


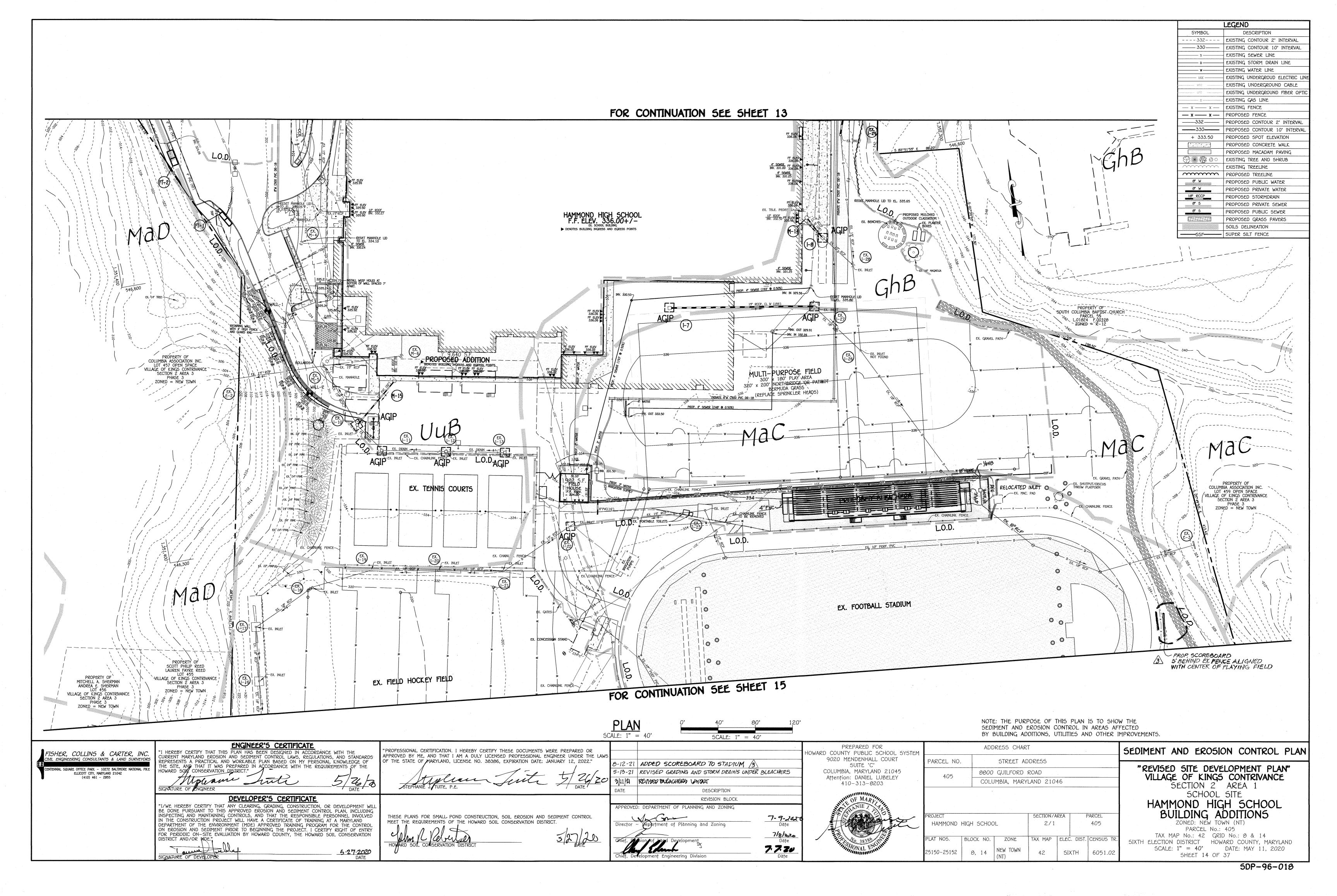


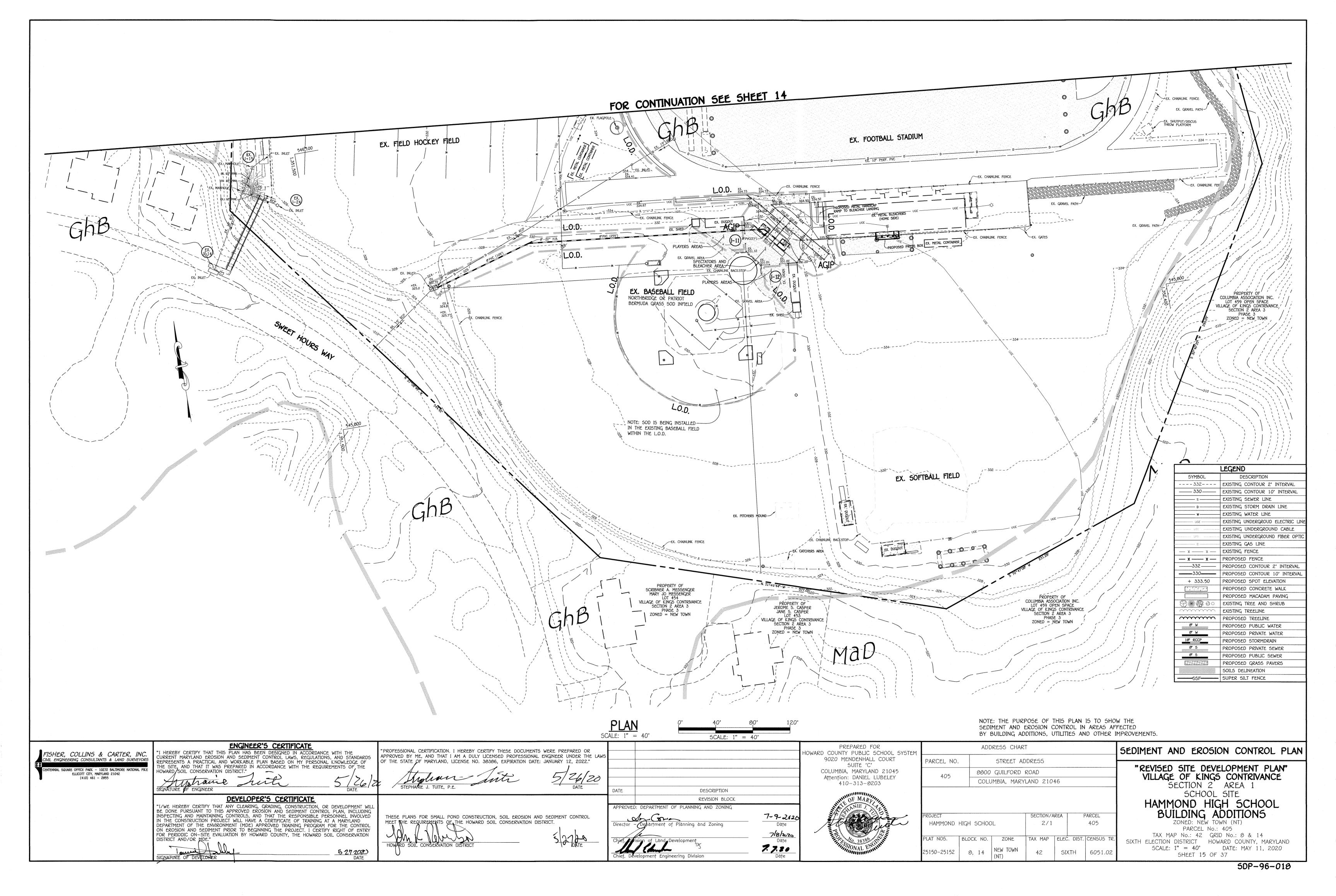


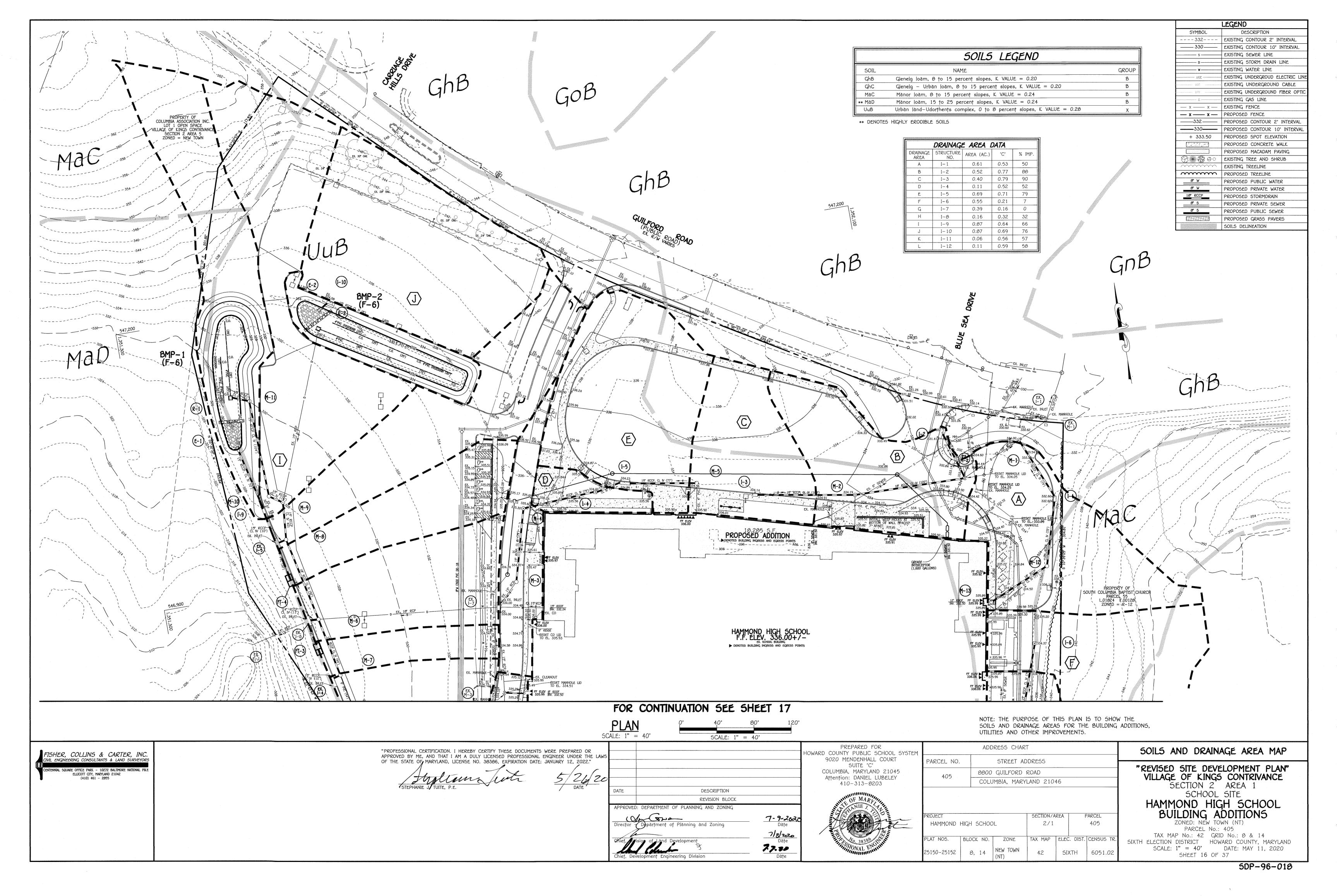


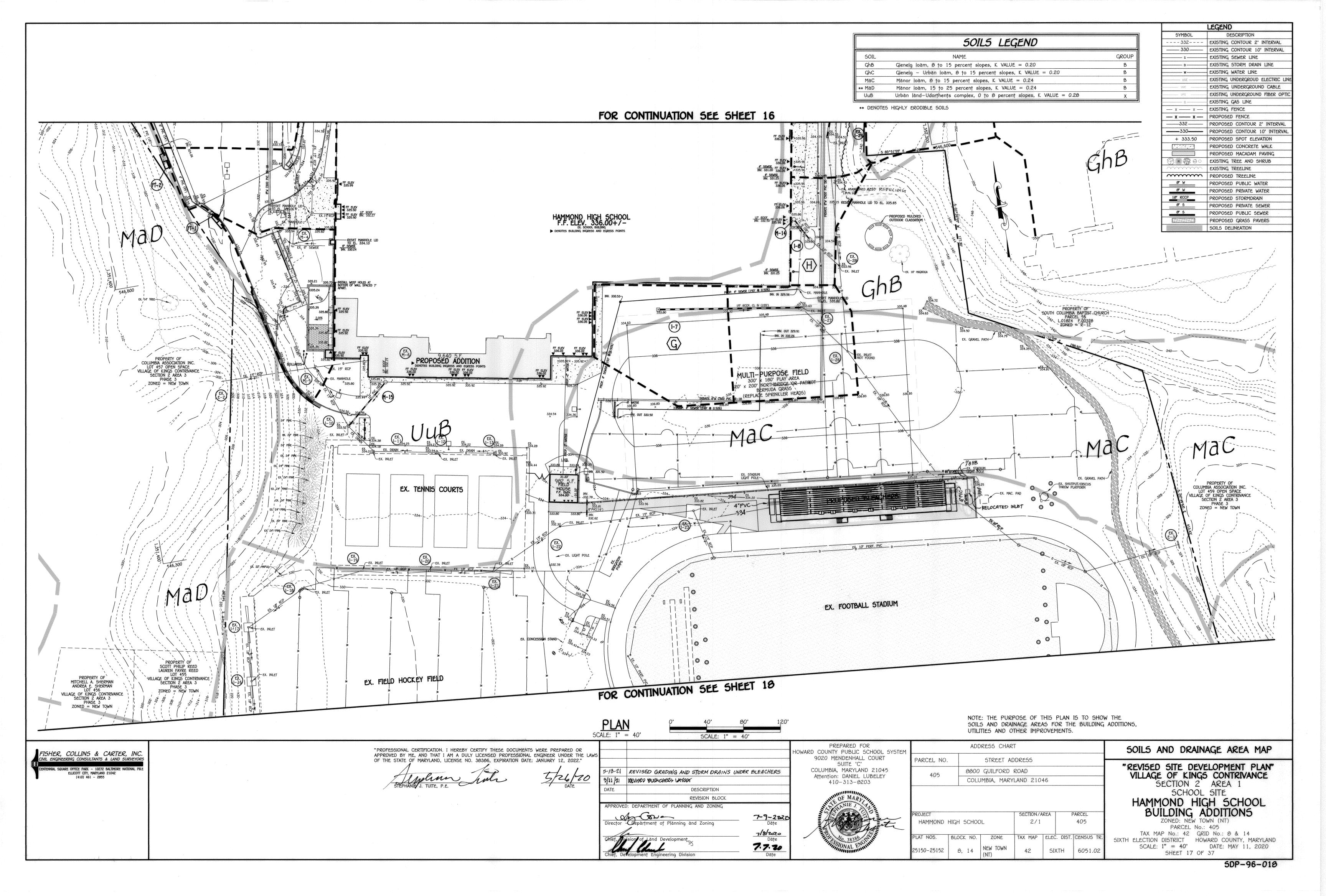


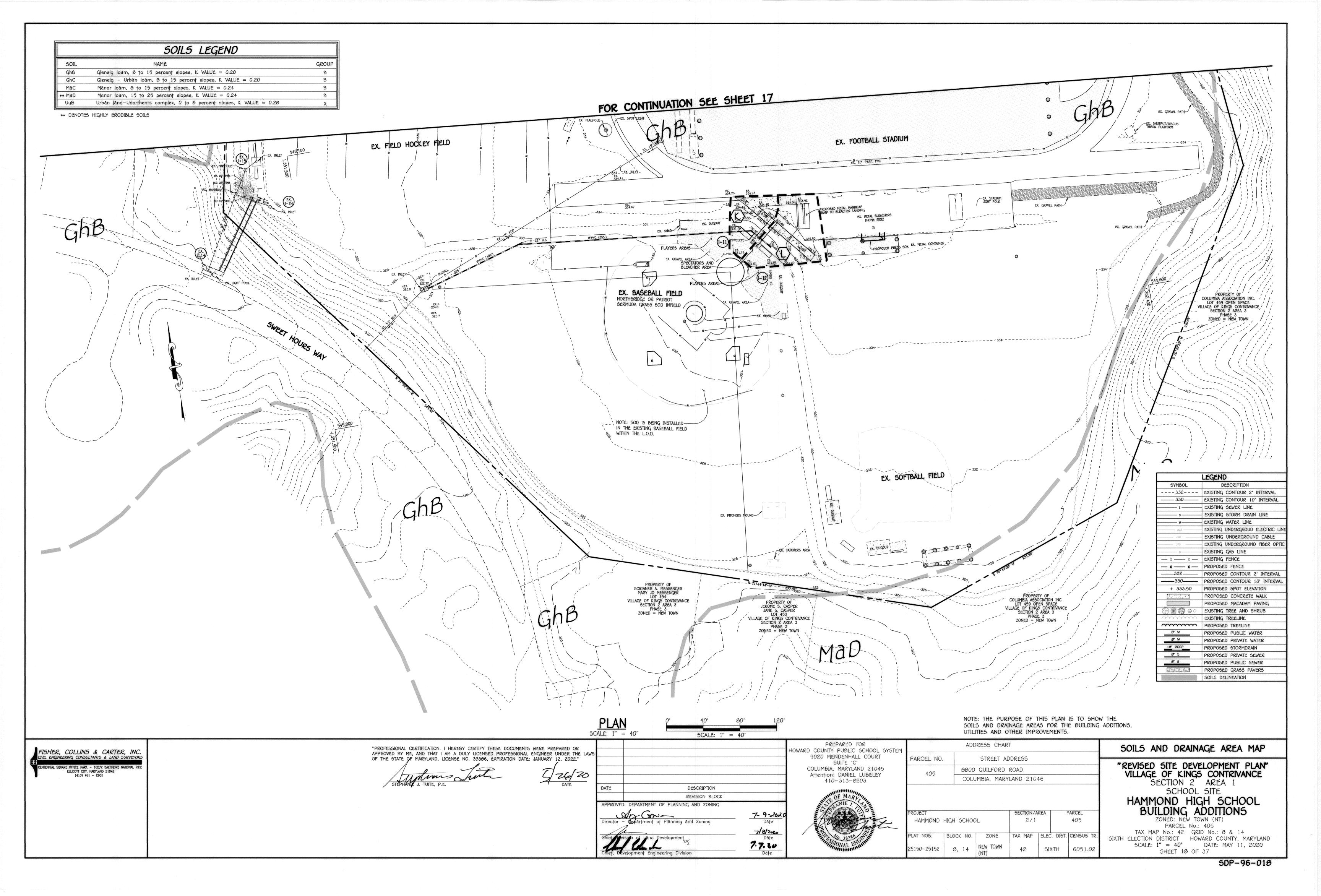


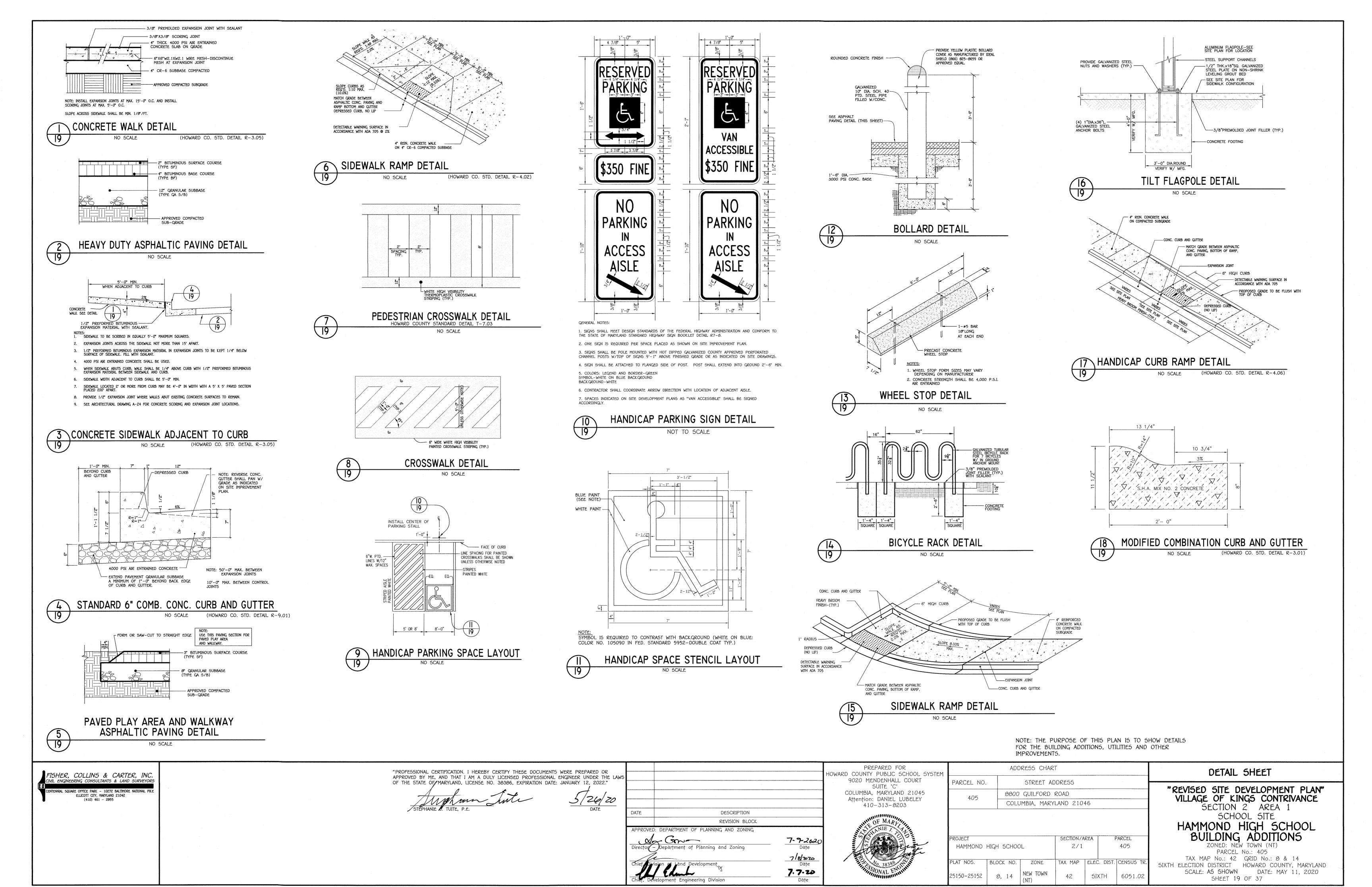


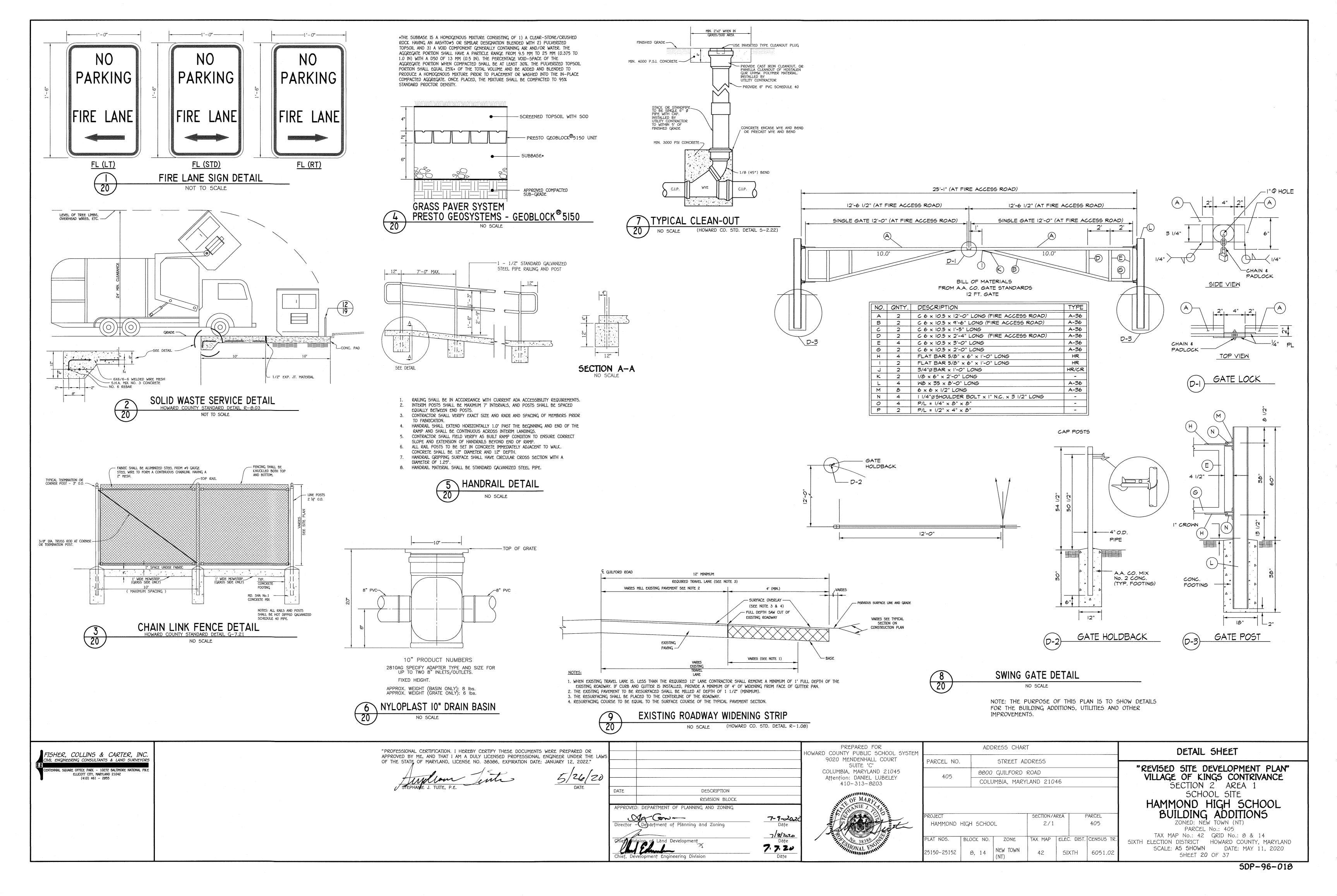


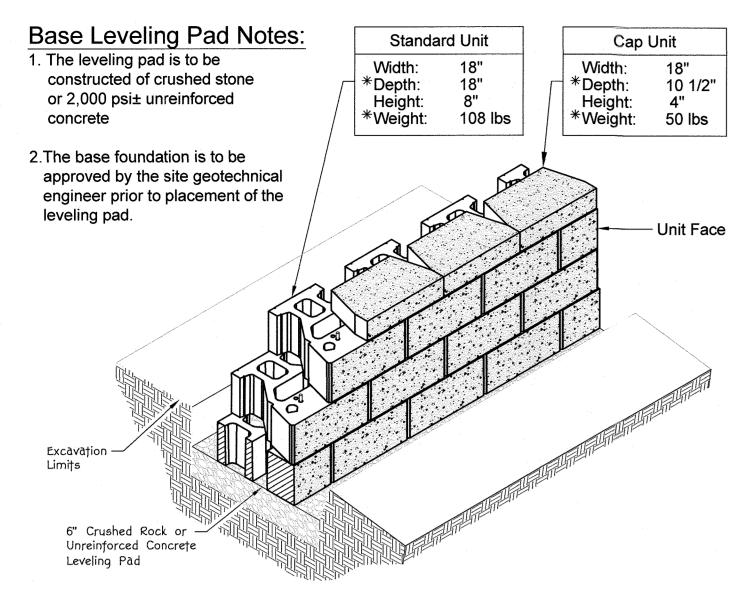




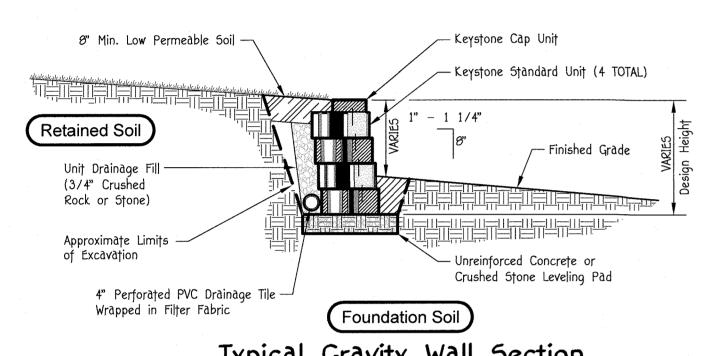






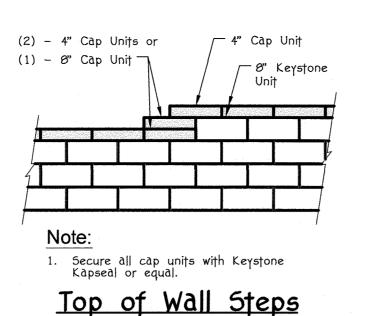


Standard Unit/Base Pad Isometric Section View

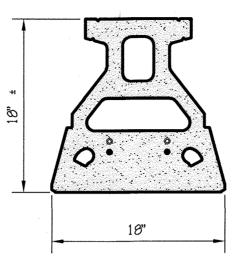


Construction Notes:

- . RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN
- 2. THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SPOILS TECHNICIAN. TESTING DOCUMENTATION SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE
- PENETROMETER TEST ASTM STP-399 3. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ONSITE SOILS TECHNICIAN. EACH EIGHT (Ø) INCH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTER DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.



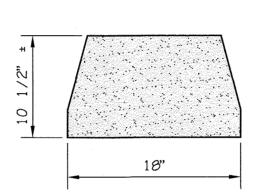
Standard Elevation



Standard Plan

Standard Unit

Cap Unit Elevation



Cap Unit Plan

Section

Leveling Pad Detail

6" Crushed Rock or

Leveling Pad

Unreinforced Concrete

<u>Elevation</u>

1. The leveling pad is to be constructed of

crushed stone or 2000 psi ± unreinforced

-1/2° x 5 1/4°

BLOCK RETAINING WALL DETAIL NO SCALE

Attach the 6' Recycled Planks to the

982 Frames using specified hardware.

FILTERRA STANDARD PLAN NOTES

CONSTRUCTION & INSTALLATION

A. EACH UNIT SHALL BE CONSTRUCTED AT THE LOCATIONS AND ELEVATIONS ACCORDING TO THE SIZES SHOWN ON THE APPROVED DRAWINGS. ANY MODIFICATIONS TO THE ELEVATION OR LOCATION SHALL BE AT THE DIRECTION OF AND APPROVED BY THE ENGINEER.

B. IF THE FILTERRA® IS STORED BEFORE INSTALLATION, THE TOP SLAB MUST BE PLACED ON THE BOX USING THE 2X4 WOOD PROVIDED, TO PREVENT ANY CONTAMINATION FROM THE SITE. ALL INTERNAL FITTINGS SUPPLIED (IF ANY), MUST BE LEFT IN PLACE AS PER THE DELIVERY.

C. THE UNIT SHALL BE PLACED ON A COMPACTED SUB-GRADE WITH A MINIMUM 6-INCH GRAVEL BASE MATCHING THE FINAL GRADE OF THE CURB LINE IN THE AREA OF THE UNIT. THE UNIT IS TO BE PLACED SUCH THAT THE UNIT AND TOP SLAB MATCH THE GRADE OF THE CURB IN THE AREA OF THE UNIT. COMPACT UNDISTURBED SUB-GRADE MATERIALS TO 95% OF MAXIMUM DENSITY AT +1- 2% OF OPTIMUM MOISTURE. UNSUITABLE MATERIAL BELOW SUB-GRADE SHALL BE REPLACED TO THE SITE ENGINEER'S APPROVAL.

D. OUTLET CONNECTIONS SHALL BE ALIGNED AND SEALED TO MEET THE APPROVED DRAWINGS WITH MODIFICATIONS NECESSARY TO MEET SITE CONDITIONS AND LOCAL REGULATIONS.

E. ONCE THE UNIT IS SET, THE INTERNAL WOODEN FORMS AND PROTECTIVE MESH COVER MUST BE LEFT INTACT. REMOVE ONLY THE TEMPORARY WOODEN SHIPPING BLOCKS BETWEEN THE BOX AND TOP SLAB. THE TOP LID SHOULD BE SEALED ONTO THE BOX SECTION BEFORE BACKFILLING, USING A NON-SHRINK GROUT, BUTYL RUBBER OR SIMILAR WATERPROOF SEAL. THE BOARDS ON TOP OF THE LID AND BOARDS SEALED IN THE UNIT'S THROAT MUST NOT BE REMOVED. THE SUPPLIER (AMERICAST OR ITS AUTHORIZED DEALER) WILL REMOVE THESE SECTIONS AT THE TIME OF ACTIVATION. BACKFILLING SHOULD BE PERFORMED IN A CAREFUL MANNER, BRINGING THE APPROPRIATE FILL MATERIAL UP IN 6" LIFTS ON ALL SIDES. PRECAST SECTIONS SHALL BE SET IN A MANNER THAT WILL RESULT IN A WATERTIGHT JOINT. IN ALL INSTANCES, INSTALLATION OF FILTERRA® UNIT SHALL CONFORM TO ASTM SPECIFICATION C891 "STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES", UNLESS DIRECTED OTHERWISE IN CONTRACT DOCUMENTS.

F. THE CONTRACTOR IS RESPONSIBLE FOR INLET PROTECTION/SEDIMENT CONTROL AND CLEANING AROUND EACH FILTERRA UNIT.

G. CURB AND GUTTER CONSTRUCTION (WHERE PRESENT) SHALL ENSURE THAT THE FLOW-LINE OF THE FILTERRA® UNITS IS AT A GREATER ELEVATION THAN THE FLOW-LINE OF THE BYPASS STRUCTURE OR RELIEF (DROP INLET, CURB CUT OR SIMILAR). FAILURE TO COMPLY WITH THIS GUIDELINE MAY CAUSE FAILURE AND/OR DAMAGE TO THE FILTERRAD ENVIRONMENTAL DEVICE.

H. EACH FILTERRA® UNIT MUST RECEIVE ADEQUATE IRRIGATION TO ENSURE SURVIVAL OF THE LIVING SYSTEM DURING PERIODS OF DRIER WEATHER.

THIS MAY BE ACHIEVED THROUGH A PIPED SYSTEM, GUTTER FLOW OR THROUGH THE TREE GRATE. ACTIVATION OF THE FILTERRA® UNIT IS PERFORMED ONLY BY THE SUPPLIER. PURCHASER IS RESPONSIBLE FOR FILTERRA® INLET PROTECTION

AND SUBSEQUENT CLEAN OUT COST. THIS PROCESS CANNOT COMMENCE UNTIL THE PROJECT SITE IS FULLY STABILIZED AND CLEANED (FULL LANDSCAPING, GRASS COVER, FINAL PAVING AND STREET SWEEPING COMPLETED), NEGATING THE CHANCE OF CONSTRUCTION MATERIALS CONTAMINATING THE FILTERRA® SYSTEM. CARE SHALL BE TAKEN DURING CONSTRUCTION NOT TO DAMAGE THE PROTECTIVE THROAT AND TOP PLATES.

B. ACTIVATION INCLUDES INSTALLATION OF PLANT(5) AND MULCH LAYERS AS NECESSARY.

INCLUDED MAINTENANCE

A. EACH CORRECTLY INSTALLED FILTERRA® UNIT 15 TO BE MAINTAINED BY THE SUPPLIER, OR A SUPPLIER APPROVED CONTRACTOR FOR A MINIMUM PERIOD OF 1 YEAR. THE COST OF THIS SERVICE IS TO BE INCLUDED IN THE PRICE OF EACH FILTERRA® UNIT. EXTENDED MAINTENANCE CONTRACTS

ANNUAL INCLUDED MAINTENANCE CONSISTS OF A MAXIMUM OF (2) SCHEDULED VISITS. THE VISITS ARE SCHEDULED SEASONALLY; THE SPRING VISIT AIMS TO CLEAN UP AFTER WINTER LOADS THAT MAY INCLUDE SALTS AND SANDS. THE FALL VISIT HELPS THE SYSTEM BY REMOVING EXCESSIVE

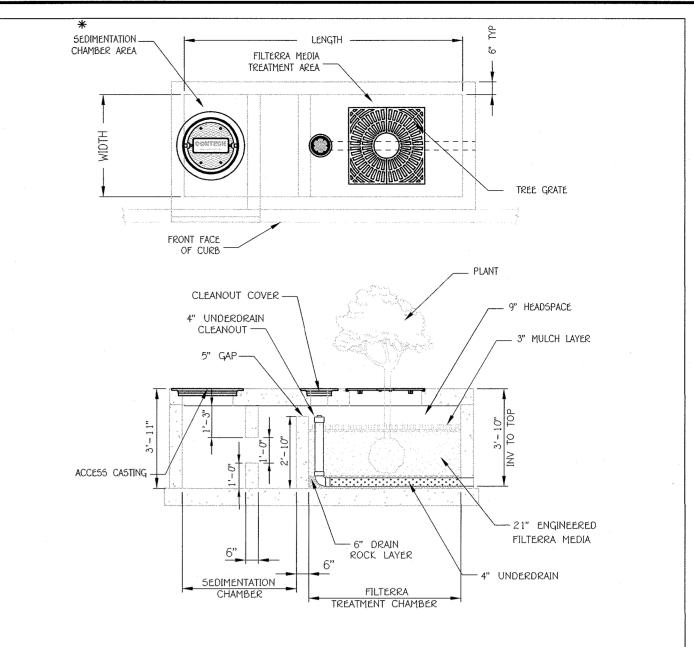
- C. EACH INCLUDED MAINTENANCE VISIT CONSISTS OF THE FOLLOWING TASKS.
- FILTERRA® UNIT INSPECTION
- FOREIGN DEBRIS, SILT, MULCH & TRASH REMOVAL FILTER MEDIA EVALUATION AND RECHARGE AS NECESSARY
- PLANT HEALTH EVALUATION AND PRUNING OR REPLACEMENT AS NECESSARY
- DISPOSAL OF ALL MAINTENANCE REFUSE ITEMS MAINTENANCE RECORDS UPDATED AND STORED (REPORTS AVAILABLE UPON REQUEST)

D. THE BEGINNING AND ENDING DATE OF SUPPLIER'S OBLIGATION TO MAINTAIN THE INSTALLED SYSTEM SHALL BE DETERMINED BY THE SUPPLIER AT THE TIME THE SYSTEM IS ACTIVATED. OWNERS MUST PROMPTLY NOTIFY THE SUPPLIER OF ANY DAMAGE TO THE PLANT(5), WHICH CONSTITUTE(5) AN INTEGRAL PART OF THE BIORETENTION TECHNOLOGY.

Estimated Required Concrete: 13 - 50 lb Bags of Concrete Mix

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12" ---



	UNIT DESIGNATION	INSIDE VAULT DIMENSIONS	FILTERRA TREATMENT AREA	IDRAINAGE AREA	WQv STORAGE CAPACITY (CF)	TOP ELEVATION	4" INV OUT	
FT-1	FT5C 8' x 4'	16' x 4'	8' x 4'	7,141	141	330.34	326.51	
FT-3	FT5C 6' x 6'	12' x 6'	6' x 6'	7,847	155	326.70	322.87	
FT-4	FT5C 6' x 6'	12' x 6'	6' x 6'	7,847	155	326.74	322.91	
FT-2	FT5C 8' x 6'	16' x 6'	8' x 6'	10,734	212	328.16	324.33	1
				•				•

1. MAXIMUM DRAINAGE AREA TREATED ASSUMES 25% WQv AND FILTER SURFACE AREA REQUIREMENTS ARE

2. STORAGE CAPACITY ASSUMES 40% VOIDS IN UNDERDRAIN STONE AND 30% VOIDS IN MULCH AND MEDIA. ALL INFORMATION IS BASED ON STANDARD 3.83' RIM TO OUTLET DEPTH. CONTACT CONTECH FOR CUSTOM

SIZING IF DEPTH IS NOT 3.83'. ACCEPTABLE DEPTH IS 3.33' MIN. TO 5.00' MAX. RIM TO INVERT OUT.

CINTECH www.ContechES.com

FILTERRA® WITH SEDIMENTATION CHAMBER

DESIGN GUIDELINES FOR USING FILTERRA

1. DO NOT PLACE IN A SUMP CONDITION. THE STANDARD FILTERRA® CANNOT BE USED AS A STAND ALONE INLET - IT WILL NEED EFFECTIVE BYPASS DURING HIGHER INTENSITY RAINFALL EVENTS. FOR SUMP CONDITIONS PLEASE CONTACT FILTERRA®.

PLANS MUST SHOW FILTERRA®TOP CURB (TC) AND FLOW LINE (FL) SPOT ELEVATIONS AND ALSO BYPASS TC (WHERE APPLICABLE) AND BYPASS IHE FILTERRA®TC AND FL ELEVATIONS MUST BE HIGHER THAN THE BYPASS TC AND FL ELEVATIONS FOR EFFECTIVE BYPASS. USE DRAWING

FLP-2 (P.24) AS A DETAIL ON THE PROJECT PLANS.

2. FOR PROPER TRASH COLLECTION ENSURE A MINIMUM 4" AND MAXIMUM 6" FILTERRA® THROAT OPENING DEPTH AND USE DRAWING CGT-5 (P.25) AS A DETAIL ON THE PROJECT PLANS.

3. DO NOT DIRECT SURFACE FLOW TO THE STANDARD FILTERRA®IN A "HEAD-ON" CONFIGURATION. REFER TO GUIDELINES GU1-A (P.13) AND GU2 (P.18) FOR GRADING DESIGN THAT ENCOURAGES FLOW TO ENTER A FILTERRA® IN A CROSS LINEAR FLOW - LEFT-TO-RIGHT OR RIGHT O-LEFT IN THE GUTTER IN FRONT OF THE THROAT, AS PER A WET CURB WHICH PREVENTS SYSTEM DAMAGE. DURING EXTREME STORM EVENTS THE EXCESS FLOW SHOULD CONTINUE PAST THE

FILTERRA®TO A BYPASS INLET OR OTHER MEANS OF RELIEF. GUIDELINE GU3, PARKING LOT CORNERS, SHOWS COMMON SITUATIONS (P.19). 4. TO CALCULATE WHICH SIZE FILTERRA® IS REQUIRED, USE TABLE 1, FILTERRA® QUICK SIZING TABLE, APPROPRIATE TO THE PROJECT'S GEOGRAPHICAL REGION AND TARGET TREATMENT REGIME (P.12). THE ENTIRE CONTRIBUTING DRAINAGE AREAD TO THE FILTERRA SHOULD BE CONSIDERED AND THE MINIMUM ALLOWABLE C FACTORS NOTED. THE MAXIMUM CONTRIBUTING DRAINAGE AREA IWLL VARY WITH SITE CONDITIONS.

FOR FURTHER INFORMATION RELATING TO SIZING PLEASE CONTACT FILTERRA. 5. TO ENSURE CORRECT INSTALLATION, INCLUDE THE STANDARD FILTERRA® PLAN NOTES (P.26-27) ON YOUR FILTERRA® DETAIL PROJECT SHEET,

AS WELL AS DETAILED DRAWINGS FLP-2 AND CGT-5 (P.24,25). 6. POSITIVE DRAINAGE OF EACH FILTERRA® UNIT'S EFFLUENT TREATMENT PIPE 15 REQUIRED TO PREVENT FREE STANDING WATER FROM ACCUMULATING IN THE SYSTEM OR UNDERDRAIN. THIS COULD OCCUR DUE TO TIDAL INFLUENCES OR IMPROPER CONNECTION OF FILTERRA'S

OPERATION AND MAINTENANCE SCHEDULE FOR A PRIVATELY OWNED & MAINTAINED FILTERRA SYSTEM

- ANNUAL MAINTENANCE CONSISTS OF A MAXIMUM OF (2) SCHEDULED VISITS. THE VISITS ARE SCHEDULED SEASONALLY; THE SPRING VISIT AIMS TO CLEAN UP AFTER WINTER LOADS INCLUDING SALTS AND SANDS. THE FALL VISIT HELPS THE SYSTEM BY REMOVING EXCESSIVE LEAF LITTER.
- EACH MAINTENANCE INSPECTION CONSISTS OF THE FOLLOWING TASKS:

EFFLUENT PIPE TO A BYPASS STRUCTURE OR OTHER OUTFALL

- FILTERRA UNIT INSPECTION
- FOREIGN DEBRIS, SILT, MULCH AND TRASH REMOVAL FILTER MEDIA EVALUATION AND RECHARGE AS NECESSARY
- PLANT HEALTH EVALUATION AND PRUNING OR REPLACEMENT AS NECESSARY REPLACEMENT OF MULCH
- DISPOSAL OF ALL MAINTENANCE REFUSE ITEMS 7. MAINTENANCE RECORDS UPDATED AND STORED

12"-12"-OUTDOOR CLASSROOM BENCH DETAIL NO SCALE

Ø12" x3 -

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW DETAILS FOR THE BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS.



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 38386, EXPIRATION DATE: JANUARY 12, 2022."

DATE DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING Mr. Gno Director (Department of Planning and Zoning

PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM 9020 MENDENHALL COURT SUITE 'C' 410-313-8203 7-9-20d 7/8/2020

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COLUMBIA, MARYLAND 21045 Attention: DANIEL LUBELEY

ADDRESS CHART PARCEL NO. STREET ADDRESS 8800 GUILFORD ROAD COLUMBIA, MARYLAND 21046 PARCEL SECTION/AREA HAMMOND HIGH SCHOOL

405 2/1 TAX MAP | ELEC. DIST. CENSUS T LAT NOS. BLOCK NO. ZONE NEW TOWN 5150-25152 8, 14 SIXTH 6051.02

DETAIL SHEET AND FILTERRA PLAN AND NOTES

"REVISED SITE DEVELOPMENT PLAN" VILLAGE OF KINGS CONTRIVANCE SECTION 2 AREA 1 SCHOOL SITE

HAMMOND HIGH 5CHOOL BUILDING ADDITIONS

ZONED: NEW TOWN (NT) PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY 11, 2020

SHEET 21 OF 37

5DP-96-018

STANDARDS AND SPECIFICATIONS

STOCKPILE AREA (B-4-8)

DEFINITION

THE 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.

THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THA 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE. 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.

WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE. 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. 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 LAND GRADING.

DUST CONTROL

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFFTY

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY

TEMPORARY METHOD

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING. 2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.

3. 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 15 GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE 15 SPRINKLED WITH WATER UNTIL THE SURFACE 15 MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW. 5. 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.

1. PERMENENT VEGETATION — SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE. 2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING. 3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

BIO-RETENTION AS-BUILTS

NOTE: UPON COMPLETE STABILATION OF THE SITE THE CONTRACTOR SHALL AS-BUILT BIO-RETENTION FACILITY #6.

. THE BIO-RETENTION FACILITY AS-BUILT INFORMATION SHALL BE REDLINED ON TWO SETS OF PRINTS OF THE APPROVED SITE DEVELOPMENT PLAN ELEMENTARY SCHOOL #42

2. THE SITE DEVELOPMENT PLAN IS ON FILE AT THE GEORGE HOWARD BUILDING, 3430 COURT HOUSE DRIVE, ELLICOTT CITY, MARYLAND 21043.

3. THE TWO SETS OF REDLINED AS-BUILT PLANS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER WILL BE SUBMITTED TO THE CONSTRUCTION/INSPECTION DIVISION ATTN: MR. ROBERT BARNETT FOR HIS REVIEW AND APPROVAL. MR. ROBERT BARNETT, CONSTRUCTION MANAGER

CONSTRUCTION/INSPECTION DIVISION 7125 RIVERWOOD DRIVE COLUMBIA, MARYLAND 21046

4. THE CONTRACTOR SHALL ADDRESS THE PUNCH LIST ITEMS GENERATED FROM A FIELD INSPECTION BY THE HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION. UPON APPROVAL THE REDLINED AS-BUILT INFORMATION WILL BE HAND DRAFTED ONTO THE ORIGINAL SITE DEVELOPMENT PLAN MYLARS THAT ARE ON FILE AT THE GEORGE HOWARD

5. TWO SETS OF PRINTS OF THE AS-BUILT DRAWINGS WILL BE SUBMITTED TO MR. CHAD PORTER, PROJECT MANAGER AT THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM.

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. SOIL PREPARATION

TEMPORARY STABILIZATION

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 MOUNTED 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

B. 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 MEANS.

PERMANENT STABILIZATION 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:

SOIL PH BETWEEN 6.0 AND 7.0. 50LUBLE 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) WOULD BE ACCEPTABLE. . SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT. . SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

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. 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 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.

B. TOPSOILING

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 ACIDIC 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: A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. 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 1 1/2 INCHES IN DIAMETER.

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.

6. TOPSOIL APPLICATION 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 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 AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. 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

2 FERTILIZERS MUST BE UNIFORM IN COMPOSITION FREE FLOWING AND SLITABLE 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 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

RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 40 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES: A. PRIOR TO THE START OF EARTH DISTURBANCE,

B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,

PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT, D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

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 2011 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 IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER

CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING. 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 TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY

SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

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 CID.

SITE ANALYSIS: TOTAL AREA OF SITE: 33.14 ACRES AREA DISTURBED: 11.5 ACRES AREA TO BE ROOFED OR PAVED: 7.0 ACRES AREA TO BE VEGETATIVELY STABILIZED: 4.5 ACRES TOTAL CUT 500 CU, YD5 TOTAL FILL 500 CU. YDS.

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND A11 CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:

. INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)

 NAME AND TITLE OF INSPECTOR . WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED

PRECIPITATION) BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES EVIDENCE OF SEDIMENT DISCHARGES IDENTIFICATION OF PLAN DEFICIENCIES

IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS

 COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS PHOTOGRAPH5

MONITORING/SAMPLING MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED

OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.

DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. 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 PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.

TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE. 14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED

15. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE

STANDARD STABILIZATION NOTE

AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.

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

B.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

HORIZONTAL TO 1 VERTICAL (3:1): AND

THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER IN THE BIO-RETENTION FACILITIES THROUGH A FILTERING DEVICE TO A CLEAR WATER OUTFALL WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT.

HAMMOND HIGH SCHOOL SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT

STEP I (12 MONTHS)

2.NOTIFY MISS UTILITY (1-800-257-7777) TWO (2) FULL BUSINESS DAYS BEFORE STARTING WORK. NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1055) 24 HOURS BEFORE STARTING WORK AND NOTIFY THE BALTIMORE GAS AND ELECTRIC COMPANY (410-291-5739) FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.

3. INSTALL ALL PERIMETER CONTROLS ASSOCIATED WITH PHASE 1 WORK. INSTALL SCE WITH WASH RACK. INSTALL PERIMETER SUPER SILT FENCE, TREE PROTECTION FENCE AND PERIMETER CONSTRUCTION FENCING.

4. BEGIN DEMOLITION OF EXISTING BUILDING SECTIONS.

10. INSTALL NEW SEWER LINE FROM 5-1 TO 5-4.

5. DEMOLISH EXISTING CURB AND GUTTER AT EXISTING BUS LOOP. ROUGH GRADE FRONT OF BUILDING TO ESTABLISH LAY DOWN AREA FOR ALL TRADES. EXISTING PAVING MAY REMAIN

6. INSTALL TEMPORARY MODULAR CLASSROOM BUILDING.

7. INSTALL WATER LINES.

8. DEMO CURB AND GUTTER AND PAVING AT EXISTING PARKING AREA.

9.INSTALL STORM DRAINS AND STRUCTURES I-1, I-2, I-3, I-4, I-5, M-1, M-2, M-3, M-4, M-5, M-12, EX 2.

11. UPON COMPLETION OF DEMOLITION OF EXISTING BUILDING, GRADE BUILDING PAD AND PARKING AT SERVICE ENTRANCE.

12. BEGIN CONSTRUCTION OF SCHOOL BUILDING - PHASE 1 13. INSTALL CURB, GUTTER AND PAVING AT EXISTING PARKING AREAS.

14. INSTALL TEMPORARY BARRICADES ALONG TEMPORARY BUS LOOP. 15. INSTALL CURB, GUTTER, AND BASE PAVING FOR SERVICE AREA

19. BEGIN DEMOLITION OF EXISTING BUILDING SECTIONS - PHASE 2.

16. INSTALL SIDEWALKS, LIGHTING AND STABILIZATION ALONG WORKING NORTH AND EAST CORNER OF THE SCHOOL BUILDING.

17. BEGIN CONSTRUCTION OF PHASE 3.

STEP II (2.5 MONTHS)

16. INSTALL PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE AND PERIMETER CONSTRUCTION FENCING. RELOCATE EXISTING PERIMETER CONSTRUCTION FENCING

20. INSTALL STORM DRAINS AND STRUCTURE FROM I-6 TO EX I-29

21. INSTALL 20' TEMPORARY ACCESS ROAD AT WORKING EAST OF THE SCHOOL BUILDING. 22. DEMOLISH EXISTING CURB, GUTTER AND PAVING NECESSARY FOR INSTALLATION OF STORM WATER MANAGEMENT SYSTEM.

23. INSTALL STORM WATER MANAGEMENT SYSTEM INCLUSIVE OF FT-1, FT-2, FT-3, FT-4, EX-I-4, M-7, M-6, EX-I-5, M-0, I-9, M-9, M-10, M-11, R-1, EX-I-6, I-10, R-2.

24. EXCAVATE BIO-RETENTION FACILITIES TO SUBGRADE AND STABILIZE WITH TEMPORARY SEED.

25. INSTALL CURB, GUTTER, AND PAVING

26. UPON COMPLETION OF DEMOLITION OF EXISTING BUILDING, GRADE BUILDING PAD.

27. BEGIN CONSTRUCTION OF SCHOOL BUILDING - PHASE 2.

28. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING. STEP III (4 MONTHS)

29. CONTINUE CONSTRUCTION OF PHASE 2. 30. INSTALL PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE, TREE PROTECTION AND PERIMETER CONSTRUCTION FENCING. RELOCATE EXISTING PERIMETER

CONSTRUCTION FENCING 31. BEGIN CONSTRUCTION OF SCHOOL BUILDING - PHASE 4.

32. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING.

33. CONTINUE CONSTRUCTION OF PHASE 2.

STEP IV (5 MONTHS)

34. INSTALL PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE, TREE PROTECTION FENCE AND PERIMETER CONSTRUCTION FENCING. RELOCATE EXISTING PERIMETER CONSTRUCTION FENCING.

35. BEGIN CONSTRUCTION OF SCHOOL BUILDING - PHASE 5.

36. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING.

37. INSTALL CURB AND GUTTER, SIDEWALKS, LIGHTING AND STABILIZATION ALONG WORKING NORTH AND WEST CORNER OF THE SCHOOL BUILDING UPON COMPLETION OF BUILDING PHASE 2. 38. UPON COMPLETION OF PHASE 2, RELOCATE PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE, TREE PROTECTION FENCE AND PERIMETER CONSTRUCTION FENCING.

STEP V (2.5 MONTHS

39. INSTALL PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE, TREE PROTECTION FENCE AND PERIMETER CONSTRUCTION FENCING. RELOCATE EXISTING PERIMETER CONSTRUCTION FENCING.

40. BEGIN CONSTRUCTION OF PHASE 6 AND 7. 41. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING.

42. EXTEND TEMPORARY ROADWAY. 43. COMPLETE WORK AT EXISTING BASEBALL FIELD, FOOTBALL FIELD AND CONCESSION STAND. COMPLETE ALL PAVING FROM ETR TENNIS COURTS TO FOOTBALL

44. BEGIN DEMOLITION OF EXISTING BUILDING, INDIVIDUAL MODULAR CLASSROOMS AND 12 CLASSROOM MODULAR UNIT. TEMPORARILY STABILIZE AREAS AFTER

45. ESTABLISH CONTRACTOR LAYDOWN AREA.

46. DEMOLISH EXISTING PAVING, CURB AND GUTTER AT SOUTH WEST CORNER OF THE SCHOOL BUILDING 47. BEGIN CONSTRUCTION OF NEW SITE RETAINING WALL. ONCE RETAINING WALL IS COMPLETE, INSTALL CURB, GUTTER AND BASE PAVING.

STEP VI (2 MONTHS)

48. CONTINUE CONSTRUCTION OF PHASE 7. BEGIN CONSTRUCTION OF PHASE 8.

49. RELOCATE PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE, TREE PROTECTION FENCE AND PERIMETER CONSTRUCTION FENCING. RELOCATE EXISTING PERIMETER CONSTRUCTION FENCING

50. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING.

STEP VII (2 MONTHS)

51. CONTINUE CONSTRUCTION OF PHASE 8. 52. RELOCATE PERIMETER CONTROLS, PERIMETER SUPER SILT FENCE, TREE PROTECTION FENCE AND PERIMETER CONSTRUCTION FENCING. RELOCATE EXISTING

PERIMETER CONSTRUCTION FENCING. 53. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING.

54. BEGIN DEMOLITION OF EXISTING BUILDING. 55. UPON COMPLETION OF DEMOLITION OF EXISTING BUILDING, GRADE BUILDING PAD.

56. BEGIN CONSTRUCTION OF PHASE 9 SCHOOL BUILDING.

STEP VIII (5.5 MONTHS) 57. CONTINUE CONSTRUCTION OF PHASE 9.

58. PROVIDE WEEKLY STREET SWEEPING OF SERVICE ENTRANCE BASE PAVING.

59. COMPLETE DEMOLITION OF EXISTING FRONT BUS LOOP. 60. COMPLETE GRADING, INSTALL CURB AND GUTTER, INSTALL BASE AND TOP PAVING, COMPLETE ALL SIDEWALKS AND INSTALL ALL PLANTINGS AND LANDSCAPING AT

FRONT OF SCHOOL BUILDING. 61. UPON COMPLETION OF SCHOOL BUILDING, ROUGH GRADE FOR MULTIPURPOSE FIELD AND INSTALL SPRINKLER WORK.

STEP IX (2.5 MONTHS)

IMMEDIATELY AFTER EACH RAINFALL

62. CONTINUE CONSTRUCTION OF PHASE 9. 63. BEGIN CONSTRUCTION OF PHASE 10.

64. FINE GRADE MULTIPURPOSE FIELD AND PLANT BERMUDA GRASS.

65. REMOVE TEMPORARY CONSTRUCTION ACCESS ROADWAYS AND CONSTRUCT PERMANENT ACCESS ROADWAY.

66. INSTALL ALL REMAINING CURB, GUTTER, SIDEWALK, BASE AND TOP COATS OF PAVING.

67. UPON FULL STABILIZATION OF THE AREAS DRAINING TO THE BIO-RETENTION FACILITIES REMOVE THE SEDIMENT FROM THE BIO-RETENTION FACILITIES, INSTALL UNDERDRAIN SYSTEM, STONE AND PLANTINGS AT SAME. 68. FINALIZE STABILIZATION THROUGHOUT SITE. REMOVE ALL SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND

PARCEL NO.

STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING.

EROSION AND SEDIMENT CONTROL NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES AND PRACTICES ON A DAILY BASIS AND

> NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW NOTES FOR THE BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS.

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

ENGINEER'S CERTIFICATE 'I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF HE SITE. AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER'S CERTIFICATE

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING. CONSTRUCTION. OR DEVELOPMENT WIL

5.27.2020

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAW IF THE STATE OF MARYLAND, LICENSE NO. 30306, EXPIRATION DATE: JANUARY 12, 2022."

DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING Wa Cona 1 Department of Planning and Zoning

elopment Engineering Division

SUITE 'C' COLUMBIA, MARYLAND 21045 Attention: DANIEL LUBELEY 410-313-8203

PREPARED FOR

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

9020 MENDENHALL COURT

COLUMBIA, MARYLAND 21046 SECTION/AREA PARCEL HAMMOND HIGH SCHOOL 2/1 405 TAX MAP ELEC. DIST. CENSUS BLOCK NO. ZONE NEW TOWN 25150-25152 8, 14 SIXTH 6051.02

ADDRESS CHART

8800 GUILFORD ROAD

STREET ADDRESS

AND SEQUENCE OF CONTRUCTION "REVISED SITE DEVELOPMENT PLAN" VILLAGE OF KINGS CONTRIVANCE

SEDIMENT AND EROSION CONTROL NOTES

SCHOOL SITE HAMMOND HIGH SCHOOL BUILDING ADDITIONS ZONED: NEW TOWN (NT)

SECTION 2 AREA 1

PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY 11, 2020 SHEET 22 OF 37

5DP-96-018

nnial square office park – 10272 Baltimore national pik when IGNATURE OF ENGINEER

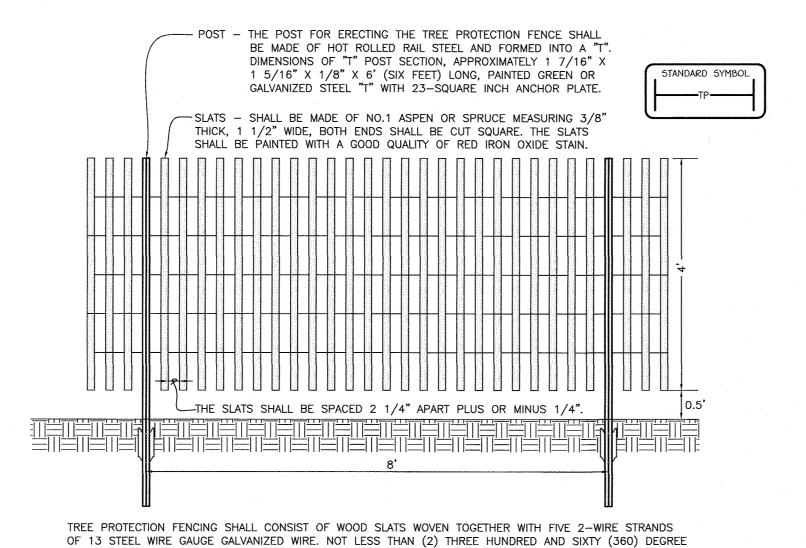
IGNATURE OF DEVELOPER

SE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN. INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED N THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

HOWARD SOIL CONSERVATION DISTRICT

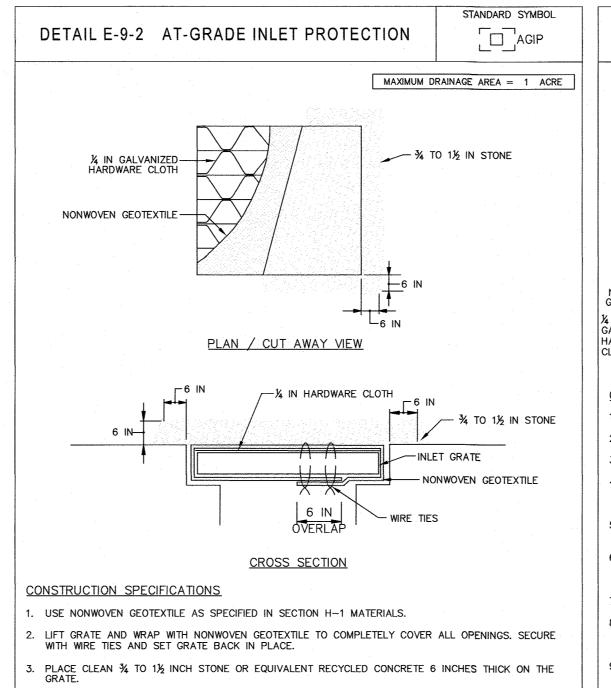
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. \$ 27/20 DATE

7-9-2020 7/8/2020 rision of Land Developmen 77.20



TWISTS OF THE WIRE IN THE WEAVE BETWEEN THE SLATS.

TREE PROTECTION FENCE DETAIL



. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED

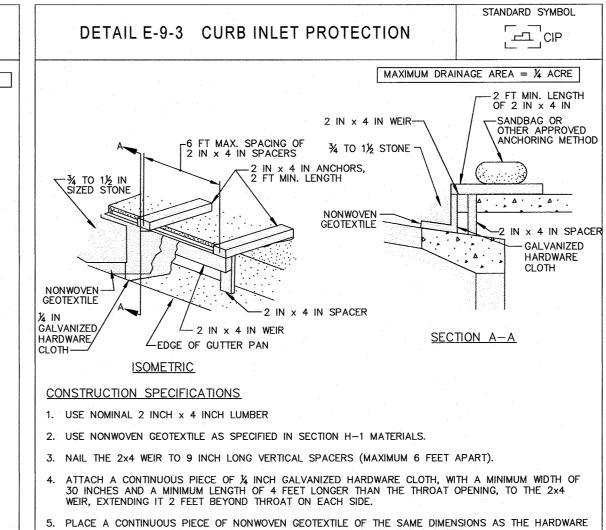
SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS

CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

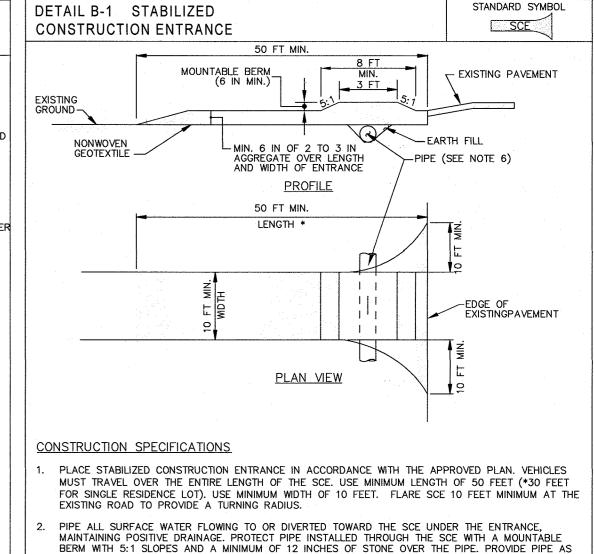
MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION



- ATTACH A CONTINUOUS PIECE OF 1/4 INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF
- CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
- LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
- 3. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 34 TO 11/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
- . AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET
- 10. 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, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE

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

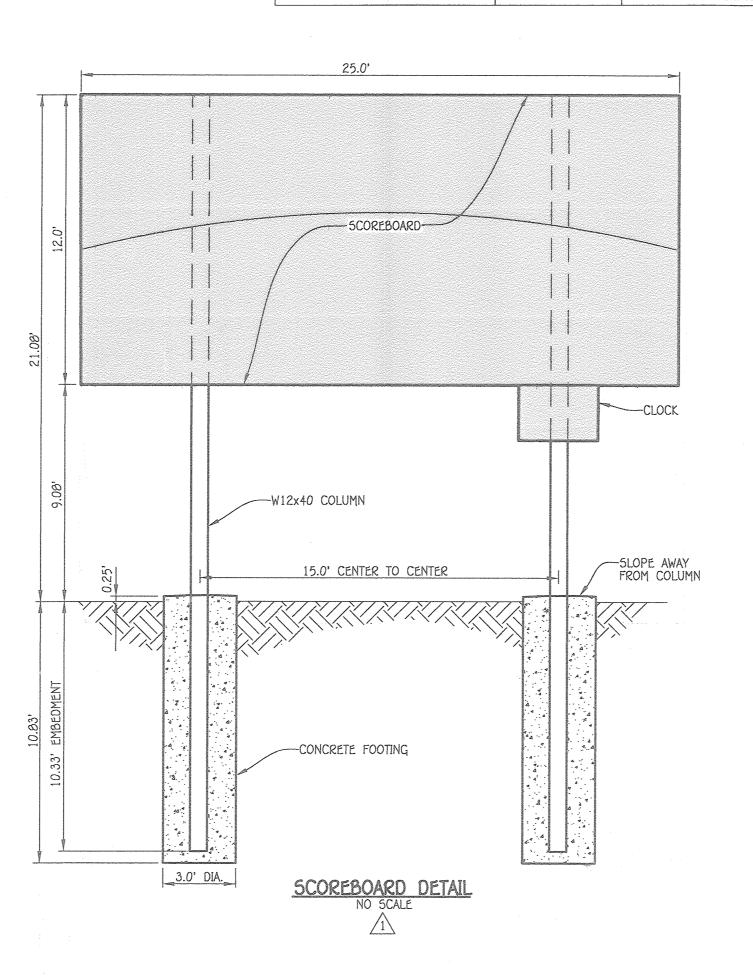


- MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- 4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS

DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

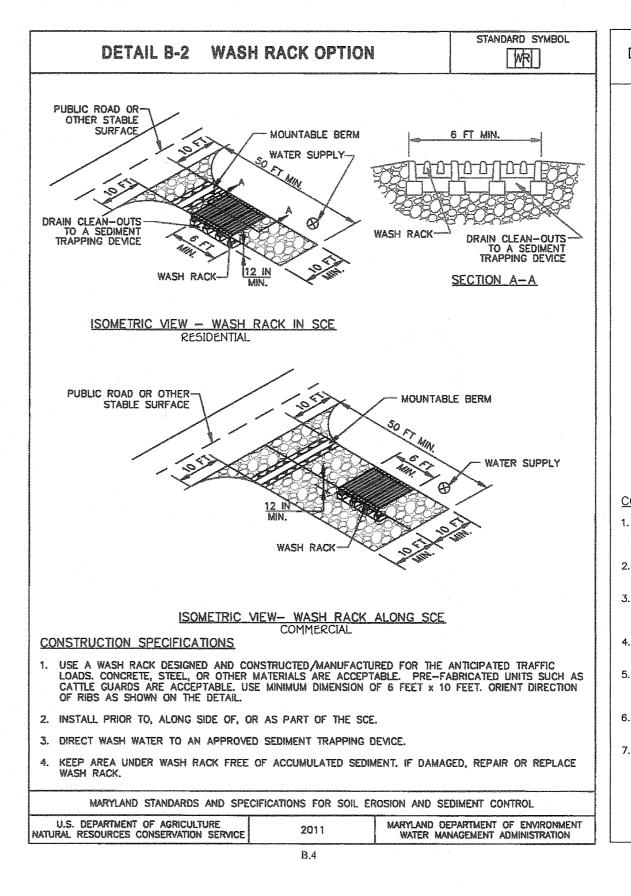
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

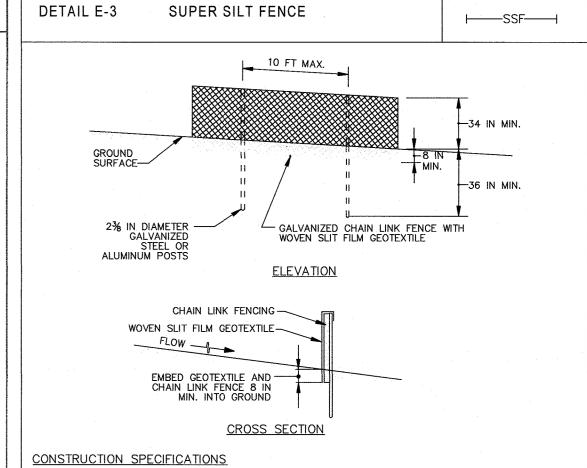
STANDARD SYMBOL



U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE





U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

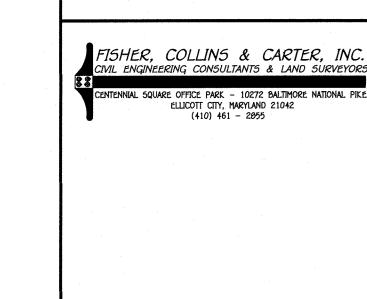
- INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (23/8 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- 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. 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 AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW DETAILS FOR THE BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS.

SIXTH

42

6051.02



ENGINEER'S CERTIFICATE "I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF HE SITE. AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT." Sulphane 126/20 SIGNATURE OF ENGINEER

DEVELOPER'S CERTIFICATE I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED N THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE." 5.27.2020

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 30306, EXPIRATION DATE: JANUARY 12, 2022."

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. SOIL CONSERVATION DISTRICT

6/26/20 3-12-21 ADDED SCOREBOARD DETAIL REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING an Cona 7-9-202 Department of Planning and Zoning 7/8/2020 Development

thief, Development Engineering Division

COLUMBIA, MARYLAND 21045 Attention: DANIEL LUBELEY 410-313-8203

PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM 9020 MENDENHALL COURT SUITE 'C' AT NOS.

ADDRESS CHART PARCEL NO. STREET ADDRESS 8800 GUILFORD ROAD COLUMBIA, MARYLAND 21046 SECTION/AREA PARCEL 405 HAMMOND HIGH SCHOOL BLOCK NO. TAX MAP | ELEC. DIST. CENSUS T

NEW TOWN

8, 14

25150-25152

SEDIMENT AND EROSION CONTROL DETAILS "REVISED SITE DEVELOPMENT PLAN"

> VILLAGE OF KINGS CONTRIVANCE SECTION 2 AREA 1 SCHOOL SITE HAMMOND HIGH 5CHOOL BUILDING ADDITIONS

ZONED: NEW TOWN (NT) PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY 11, 2020

SHEET 23 OF 37

_**IG**HT POLE--EX. BENCH RESET MANHOLE LID TO EL. 334.10 STA. 0+00 RETAINING WALL 335.21 335.77 15 (RCP-5) 15" RCP-E) COLUMBIA ASSOCIATION INC. LOT 457 OPEN SPACE 55 ELEV 336.02 'ILLAGE OF KINGS CONTRIVANCE' SECTION 2 AREA 3 = NEW TOWN -GRID EMBEDMENT LIMITS 335.44× LIMIT OF FENCE ⊣STA. 1+50 LIMIT OF GUARDRAIL **WALL LOCATION PLAN** 1" = 20 ----- DENOTES GUARDRAIL

SPECIFICATIONS 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
- B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT FACING SYSTEM, UNIT DRAINAGE FILL AND REINFORCED 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

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 MAY BE SPECIFIED BY THE OWNER. FACE FINISH - HARD SPLIT IN ANGULAR TRI-PLANE OR STRAIGHT FACE CONFIGURATION. OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF
- BOND CONFIGURATION RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT IN VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED
- EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 20 FEET UNDER DIFFUSED LIGHTING.
- B. MODULAR CONCRETE UNITS 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 ASTM C140 SAMPLING & TESTING CONCRETE MASONRY UNITS.
- COMPRESSIVE STRENGTH = 3000 PSI MINIMUM: ABSORPTION = 8% MAXIMUM (6% MAXIMUM IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES;
- DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE ± 1/6" FROM NOMINAL UNIT HEIGHT, UNIT SIZE - 8" (H) X 18" (W) X 12" (D) MINIMUM FOR COMPAC III UNITS; [UNIT SIZE - 8" (H) X 18" (W) X 18" (D) MINIMUM FOR STANDARD UNITS.] INTER-UNIT SHEAR STRENGTH - 1000 PLF MINIMUM AT 2 PSI NORMAL PRESSURE; AT 2 PSI NORMAL FORCE.

[GEOGRID/UNIT PEAK CONNECTION STRENGTH - 1000 PLF

- 1. NO TREES SHALL BE PLANTED WITHIN 10 FEET OF THE TOP OF THE RETAINING WALL.
- 2. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL, OR EQUIV.) CERTIFIED SOILS TECHNICIAN.
- 3. ONE SOIL BORING SHALL BE REQUIRED EVERY ONE HUNDRED FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
- 4. 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.
- 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.
- 7. WALLS SHALL NOT BE CONSTRUCTED WITHIN A HOWARD CO. RIGHT-OF-WAY OR EASEMENT.

2.08 GEOTEXTILE FILTER FABRIC

A. WHEN REQUIRED, FILTER FABRIC SHALL BE A NEEDLE-PUNCHED NONWOVEN FABRIC MEETING REQUIREMENTS OF AASHTO M288.

PART 3 EXECUTION 3.01 EXCAVATION

D. MODULAR CONCRETE UNITS SHALL CONFORM TO THE

OR [1"± PER COURSE] PER TYPICAL WALL SECTION;

FIBERGLASS PINS, TWO PER UNIT MINIMUM; MAXIMUM

A. SHEAR AND REINFORCEMENT PIN CONNECTORS SHALL BE

OR EQUIVALENT TO PROVIDE CONNECTION BETWEEN

1/2 INCH DIAMETER THERMOSET ISOPTHALIC POLYESTER

RESIN PULTRUDED FIBERGLASS REINFORCEMENT RODS

VERTICALLY AND HORIZONTALLY ADJACENT UNITS AND

GEOSYNTHETIC REINFORCEMENT WITH THE FOLLOWING

REQUIREMENTS: FLEXURAL STRENGTH IN ACCORDANCE

B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE

GEOGRID IN THE PROPER DESIGN POSITION DURING GRID

WITH ASTM D4476: 128,000 PSI MINIMUM; SHORT BEAM

SHEAR IN ACCORDANCE WITH ASTM D4475: 6,400 PSI

STONE BASE OR CONCRETE AS SHOWN ON THE

A. UNIT DRAINAGE FILL SHALL CONSIST OF #57 CRUSHED

A. REINFORCED BACKFILL SHALL BE TYPE SM, FREE OF

ACCORDANCE WITH ASTM D422 AND MEET OTHER

DEBRIS AND MEET THE FOLLOWING GRADATION TESTED IN

100

100-75

0-60

0-35

PLASTICITY INDEX (PI) <15 AND LIQUID LIMIT <40, PER ASTM

ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS

B. MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE

FOR BACKFILL (HIGHLY PLASTIC CLAYS OR ORGANIC

SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL

C. CONTRACTOR SHALL SUBMIT REINFORCED FILL SAMPLE

AND LABORATORY TEST RESULTS FOR APPROVAL PRIOR

MANUFACTURED FROM HIGH TENACITY POLYESTER (PET)

A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED

HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM

TO THE USE OF ANY REINFORCED BACKFILL MATERIAL.

A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF

REINFORCEMENT APPLICATIONS AND SHALL BE

GEOGRIDS MANUFACTURED SPECIFICALLY FOR SOIL

PERCENT PASSING

PRE-TENSIONING AND BACKFILLING.

PROPERTIES SHOWN ON THE PLAN:

SIEVE SIZE

1 1/2 INCH

3/4 INCH

NO. 40

NO. 200

2.06 GEOGRID SOIL REINFORCEMENT

2.07 DRAINAGE PIPE

2.03 BASE LEVELING PAD MATERIAL

CONSTRUCTION DRAWINGS.

2.04 UNIT DRAINAGE FILL

2.05 REINFORCED BACKFILL

STONE.

ALIGNMENT AND GRID ATTACHING MECHANISM -

2.02 SHEAR AND REINFORCEMENT PIN CONNECTORS

VERTICAL SETBACK = 1/8"± PER COURSE (NEAR VERTICAL)

HORIZONTAL GAP BETWEEN ERECTED UNITS SHALL BE 1/2

FOLLOWING CONSTRUCTABILITY REQUIREMENTS:

A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE SUBGRADE 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 MODULAR WALL UNIT.
- B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE
- C. COMPACT TO MINIMUM 95% OF STANDARD PROCTOR DENSITY PER ASTM D698

A. MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED 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, NOT LESS THAN 1.3 CU. FT. OF DRAINAGE FILL SHALL BE USED FOR EACH SQ. FT. OF WALL FACE, UNLESS NOTED OTHERWISE.
- E. PLACE AND COMPACT REINFORCED BACKFILL SOIL BEHIND DRAINAGE FILL. FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH BACKFILL.
- F. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT

AND COMPACTION, SHALL NOT EXCEED TWO COURSES. 3.04 STRUCTURAL GEOGRID INSTALLATION

- A. GEOGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL
- B. GEOGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE
- C. THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNIT PINS AND WITHIN 1 INCH OF THE FACE OF THE 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 GREATER THAN 2 INCHES BETWEEN ADJACENT PIECES OF GEOGRID ARE NOT

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 TO GEOGRID.
- B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND OPERATED COMPACTION EQUIPMENT 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 + 0% TO - 3% OF OPTIMUM.
- D. ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE BACK 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 OR DISPLACING THE MODULAR CONCRETE UNITS OR
- RUBBER TIRED EQUIPMENT MAY PASS OVER GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH.
- SUDDEN BRAKING AND TURNING SHALL BE AVOIDED. 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 WALL CONSTRUCTION

3.06 CAP INSTALLATION

- A. PRIOR TO PLACEMENT OF CAP UNITS, THE UPPER SURFACE OF THE TOP COURSE WALL UNITS SHALL BE CLEANED OF SOIL AND ANY OTHER MATERIAL.
- B. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER EXTERIOR CONSTRUCTION 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, RETAINED SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND

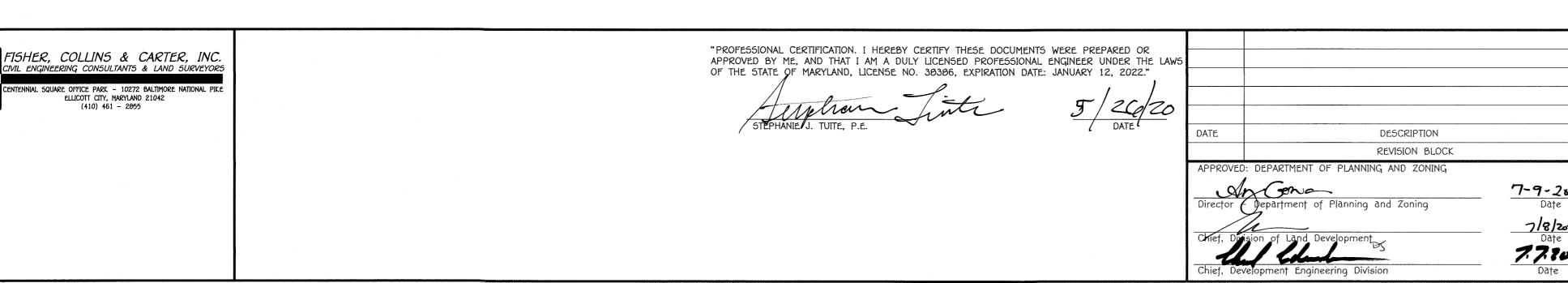
NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW THE DEMOLITION AREAS EFFECTED BY BUILDING ADDITIONS. UTILITIES AND OTHER IMPROVEMENTS.

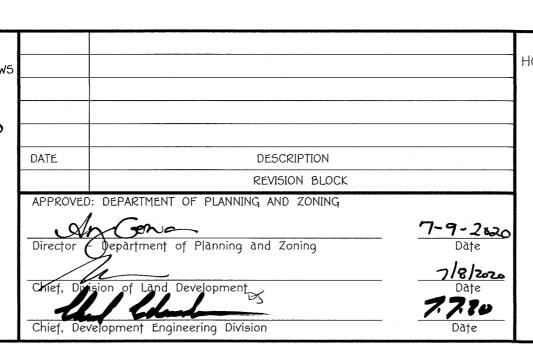
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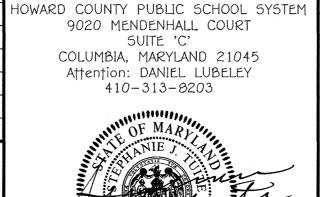
SIXTH

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42







LAT NOS.

25150-25152

BLOCK NO.

8, 14

PREPARED FOR

ADDRESS CHART RETAINING WALL PLAN AND SPECIFICATIONS PARCEL NO. STREET ADDRESS 8800 GUILFORD ROAD COLUMBIA, MARYLAND 21046 SECTION/AREA PARCEL 405 HAMMOND HIGH SCHOOL 2/1

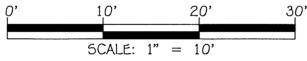
ZONE

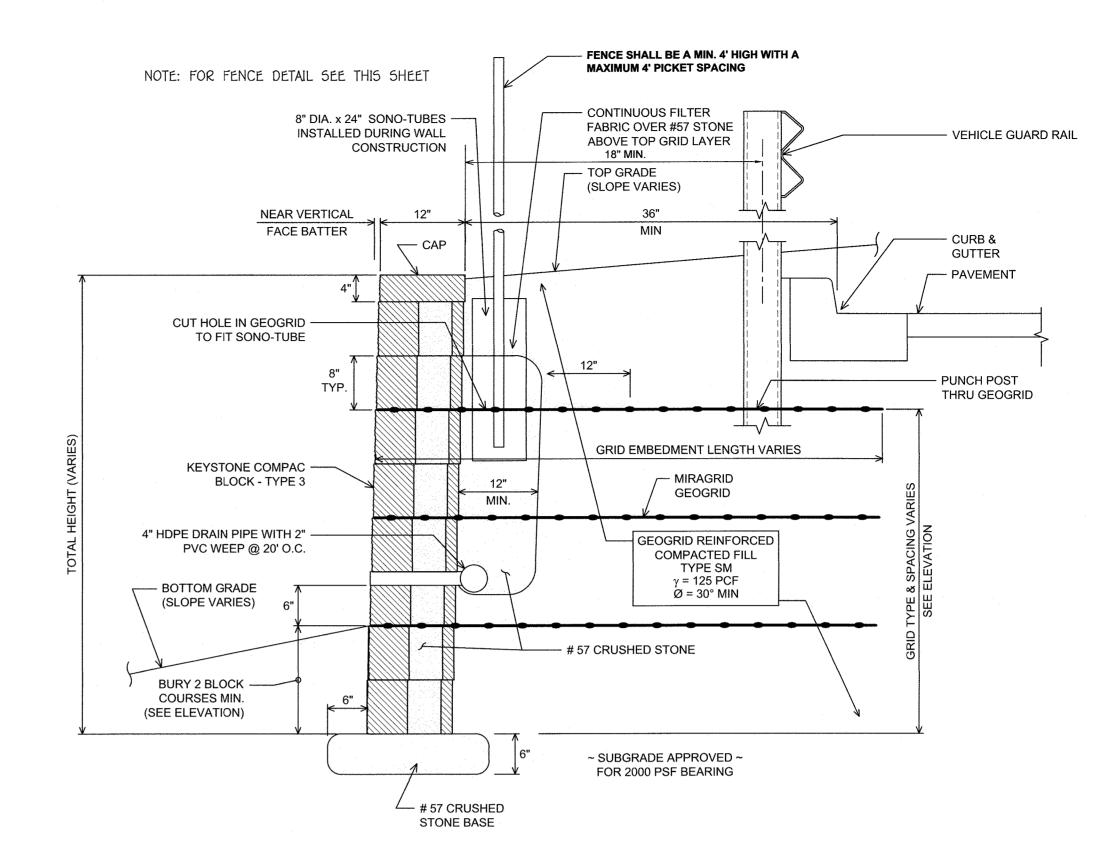
NEW TOWN

"REVISED SITE DEVELOPMENT PLAN" VILLAGE OF KINGS CONTRIVANCE SECTION 2 AREA 1 SCHOOL SITE HAMMOND HIGH 5CHOOL BUILDING ADDITIONS

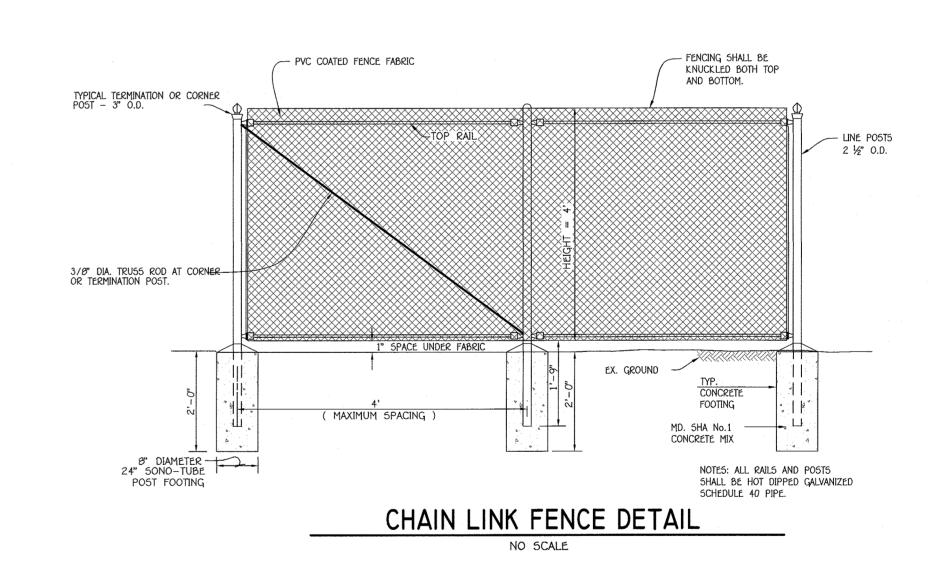
ZONED: NEW TOWN (NT) PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 20' DATE: MAY 11, 2020 SHEET 24 OF 37

SLOPE TOP GEOGRID LAYER DOWN AS NEEDED TO AVOID CONFLICT WITH **CURB AND PAVEMENT INSTALLATION** GRID EMBEDMENT LENGTH 338 338 DOUBLE CAP AT WALL — BLOCK STEPS AS NEEDED TO PROVIDE SMOOTH - MIRAGRID GEOGRID CAP -**GRADE TRANSITION** 336 336 TOP GRADE — 334 334 332 330 328 328 326 326 **BOTTOM GRADE** 324 324 GEOGRID KEY → → → MIRAGRID 3XT GEOGRID **BLOCK BOTTOM** → × × MIRAGRID 5XT GEOGRID 322 322 4" SOLID WALL HDPE PIPE FILLED WITH #57 STONE EMBEDDED IN BLOCK STONE BASE AND DAYLIGHTED DOWN SLOPE. WALL STATION WALL ELEVATION

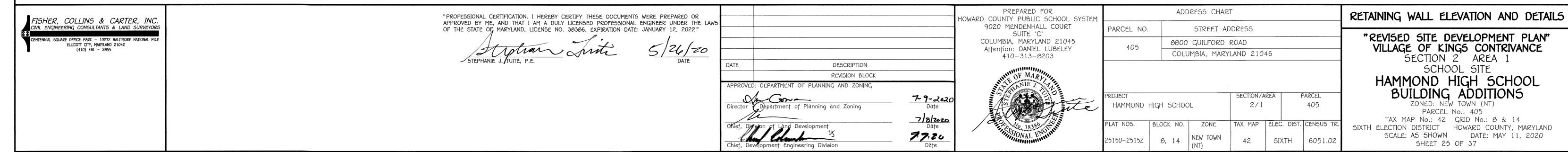


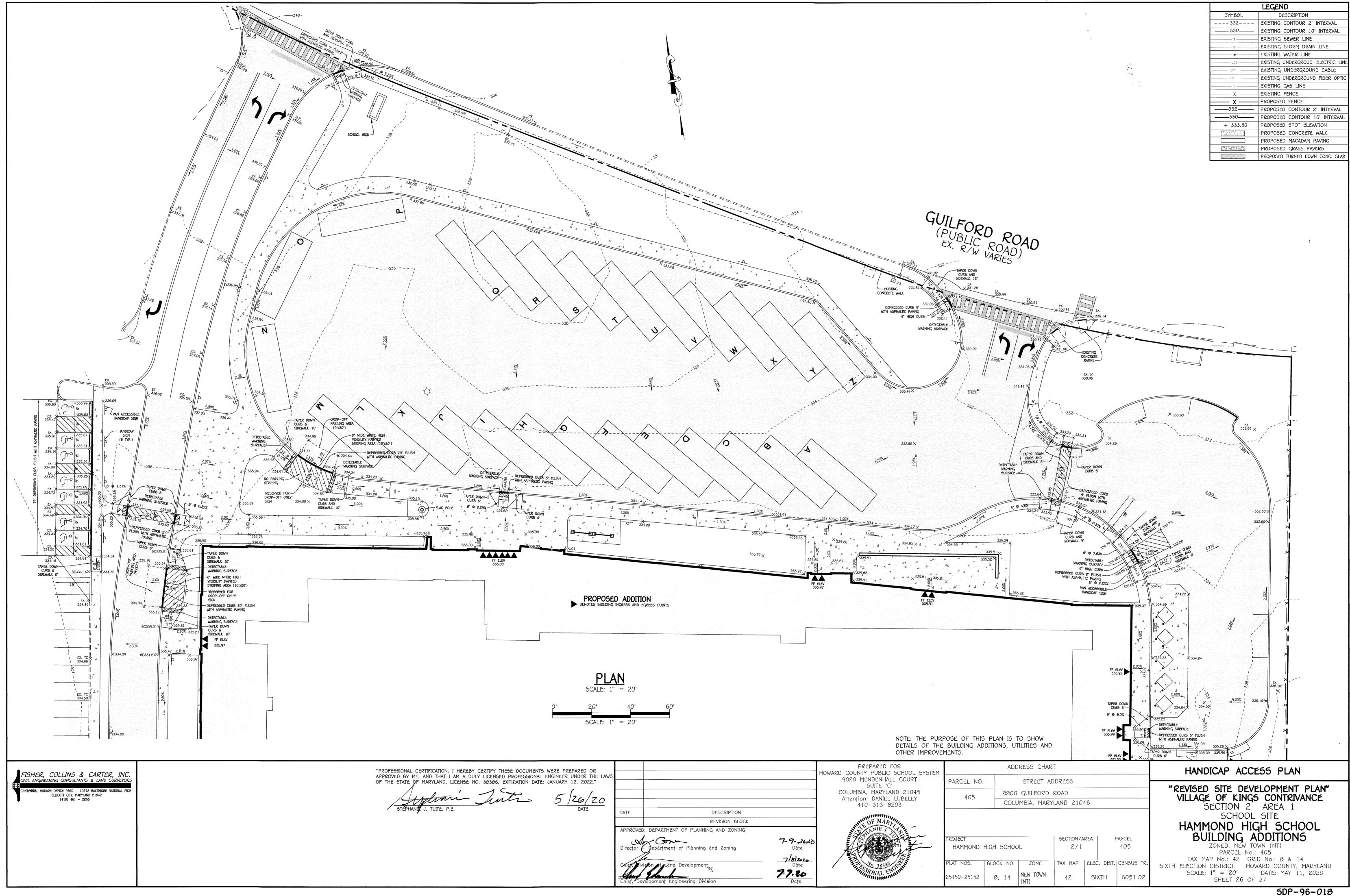


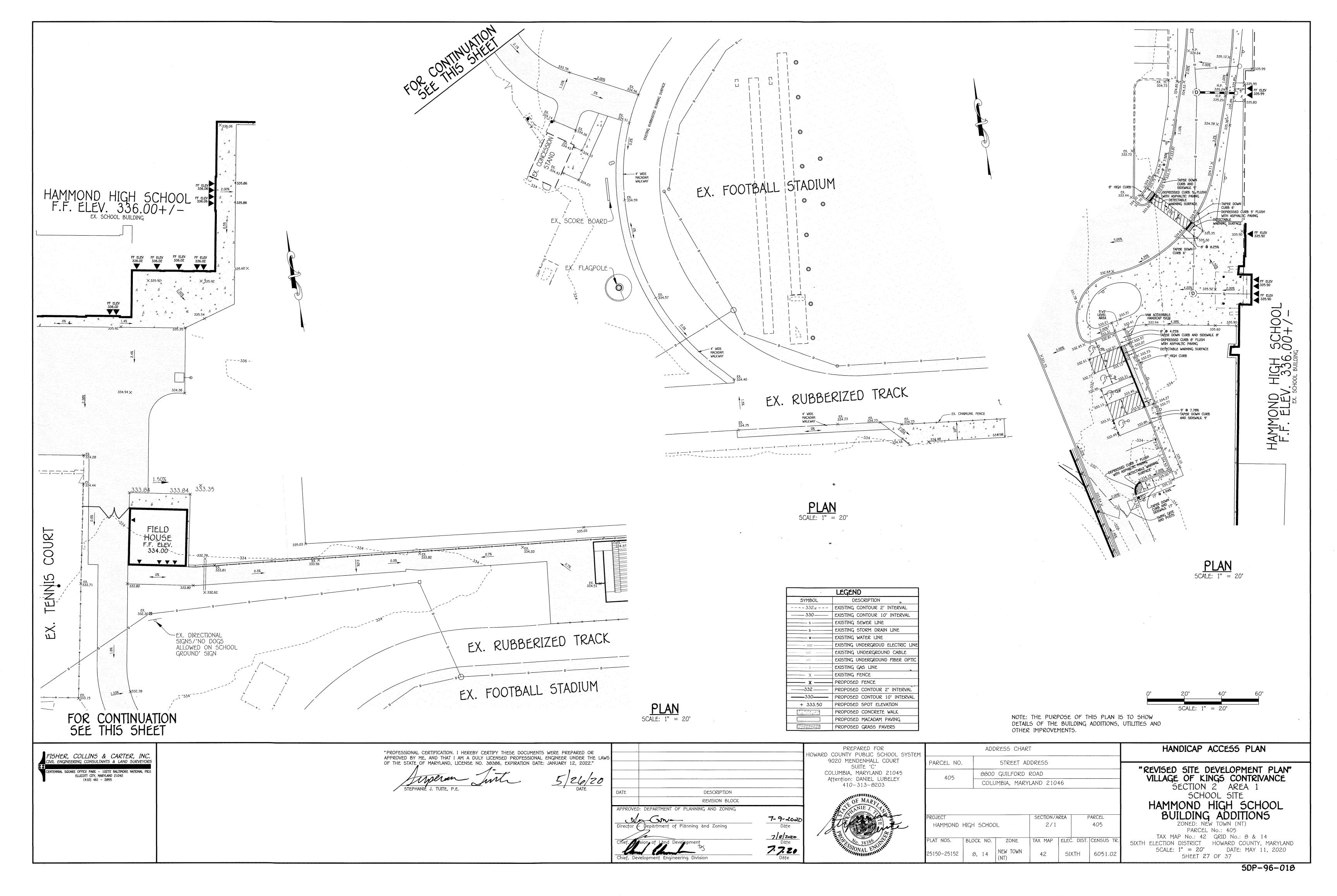
TYPICAL WALL SECTION N.T.S.

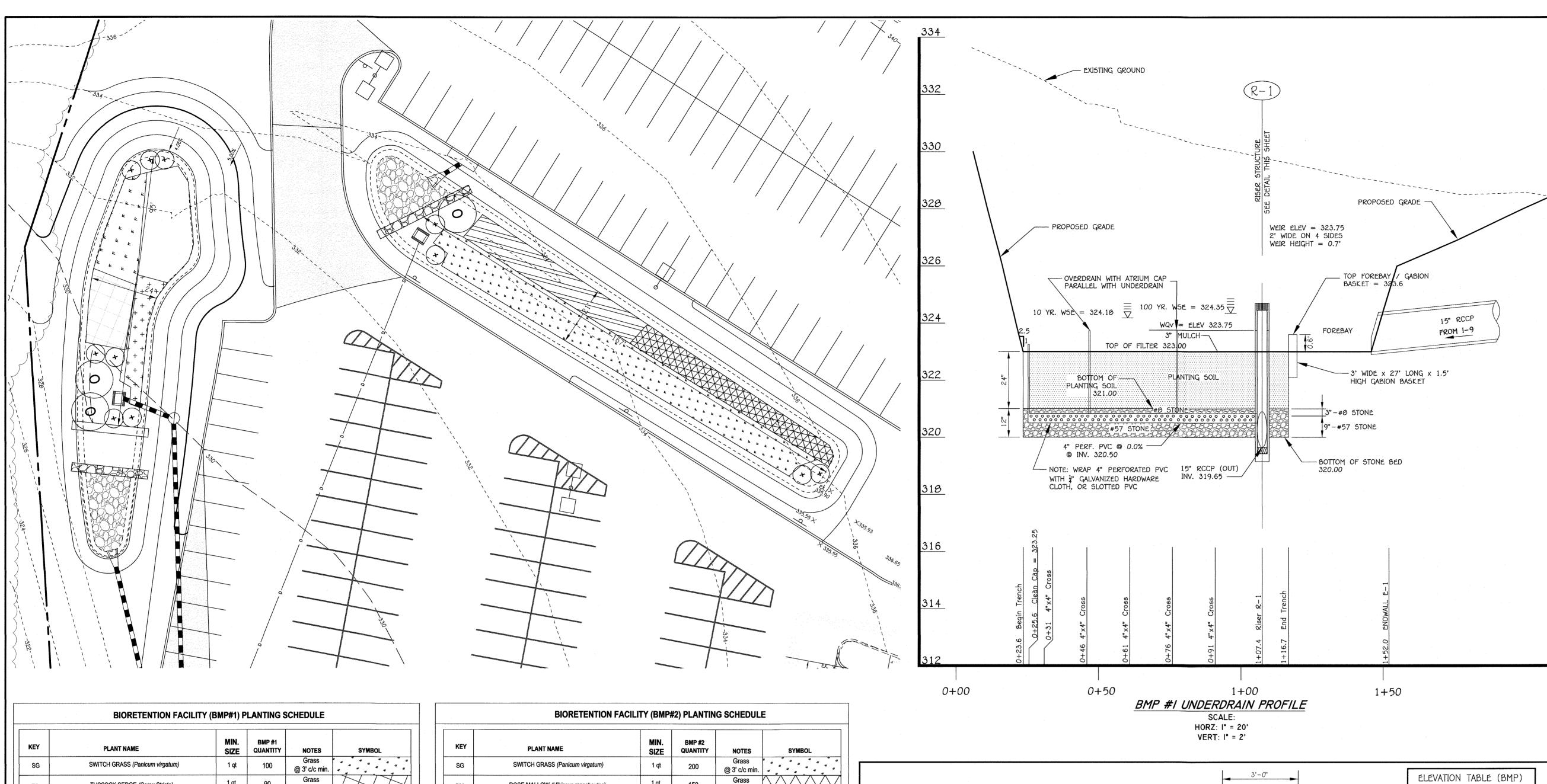


NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW THE DEMOLITION AREAS EFFECTED BY BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS.









	4'-4" WEIR 15" RCCP 2'-0" WEIR PLAN (SHOWN W/O GRATE)	PROP. GRADE (BMP SURFACE © ELLY) 323.00 AND 330.50 PROP. GRADE (BMP SURFACE EL. H 2'-0" RCCP EL. J 4" Perf. PVC u/d EL. I, see note 3. 15" RCCP LELYATION
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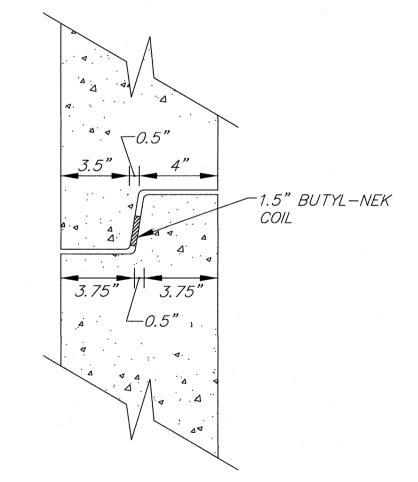
ELEVATION TABLE (BMP) R-1 R-2324.70 332.10 ELEV. H 323.75 331.25 320.50 327.90 ELEV. J 319.65 327.87

1 SEE MSHA STD DETAIL MD-378.11 FOR DETAILS NOT SHOWN. 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 PLAN FOR UNDERDRAIN ENTRANCE WALL LOCATION. 4. SLOPE RISER INVERT 4":1' TOWARD RCCP OUTFALL WITH CONCRETE. 5. THIS STRUCTURE SHALL BE CONSTRUCTED WITH FOUR (4) 2' WIDE WEIR OPENINGS.

334

332

324



LEGEND

----- s ------

+ 333.50

DESCRIPTION EXISTING CONTOUR 2' INTERVAL EXISTING CONTOUR 10' INTERVAL

EXISTING STORM DRAIN LINE

EXISTING UNDERGROUD ELECTRIC LI EXISTING UNDERGROUND CABLE EXISTING UNDERGROUND FIBER OPTI

- EXISTING SEWER LINE

EXISTING WATER LINE

EXISTING GAS LINE EXISTING FENCE PROPOSED FENCE ----332 PROPOSED CONTOUR 2' INTERVAL

-----330------ PROPOSED CONTOUR 10' INTERVAL

PROPOSED SPOT ELEVATION

PROPOSED CONCRETE WALK PROPOSED MACADAM PAVING

PROPOSED GRASS PAVERS

PROPOSED TURNED DOWN CONC. SLA

RISER JOINT DETAIL NTS

- 1. Riser joints shall join evenly and be watertight. Purge 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.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW DETAILS OF THE BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS. 5CALE: 1" = 20"

FISHER, COLLINS & CARTER, INC. INIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

ELLICOTT CITY, MARYLAND 21042

(410) 461 - 2855

TUSSOCK SEDGE (Carex Stricta)

CUTLEAF CONEFLOWER (Rudbeckia laciniata)

JOE PYE WEED (Eupatorium maculatum 'Gateway')

TOTAL

5. ALL PLANTS MUST BE THOROUGHLY AND REGULARLY WATERED PRIOR TO ACCEPTANCE.

RED OSIER DOGWOOD (Cornus sericea)

BEEBALM (Monarda didyma)

TS

BB

ROD

HERBICIDE.

PLANTING SPECIFICATIONS:

SPECIFICATIONS, AND AS BELOW.

DEVELOPER'S / BUILDER'S CERTIFICATE

@ 3' c/c min.

@ 3' c/c min. |

@ 4' c/c min.

Perennial

Shrub

@ 7' c/c.

@ 5' c/c min.

000000

(+)

0

75

150

423

1 gal

1. PLANT INSTALLATION SHALL BE PER MDE SPECIFICATIONS IN THE 2000 STORMWATER DESIGN MANUAL, PER THE PROJECT

1. PLANT BMP LEVEL SURFACE AS SHOWN IN THE ABOVE TABLE WITH AN EVEN DISTRIBUTION DENSITY. STABILIZE BMP SIDE

2. THE CONTRACTOR SHALL PROVIDE PLANT MAINTENANCE AND GUARANTEE IN ACCORDANCE WITH THE PROJECT LANDSCAPING

4. PLANTING PERENNIALS & GRASSES: ROOT SYSTEMS SHALL BE SPLIT OR CRUMBLED. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH EXISTING GRADE. TREAT THE MULCHED AND PLANTED AREA WITH A PRE-EMERGENT

6. DO NOT PLANT VEGETATION WITHIN 1.5 ft OF THE FOREBAY WEIR SPLASH APRONS AND IN THE NO PLANTING ZONE NEAR THE

CLEAN TOPSOIL ON TILLED SUB-SOIL AND CURLEX MATTING. WATER AS NECESSARY UNTIL ESTABLISHED VEGETATION.

3. PLANT MATERIAL SHALL CONFORM TO THE U.S. STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF

SLOPES WITH PERMANENT GRASS SEED PER NRCS SPECIFICATIONS. SIDE SLOPE PERMANENT GRASS AREAS SHALL HAVE 3" OF

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.



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 38386, EXPIRATION DATE: JANUARY 12, 2022."

1 qt

1 gal

2 gal

<u>PLAN</u>

5CALE: 1" = 20"

150

160

515

@ 3' c/c min. Grass

@ 3' c/c min.

@ 5' c/c min.

@ 7' c/c.

ROSE MALLOW (Hibiscus moscheutos)

NEW ENGLAND ASTER (Aster novae angliae)

JOE PYE WEED (Eupatorium maculatum 'Gateway')

RED OSIER DOGWOOD (Comus sericea)

TOTAL

RM

JP

ROD

DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING Director - Department of Planning and Zoning 7-9-2020 7/8/2020

HOWARD COUNTY PUBLIC SCHOOL SYSTEM 9020 MENDENHALL COURT SUITE 'C' COLUMBIA, MARYLAND 21045 Attention: DANIEL LUBELEY 410-313-8203

PREPARED FOR

MODIFIED K-INLET TYPICAL SECTION

FOR STRUCTURE R-I AND R-2

NTS

ADDRESS CHART PARCEL NO. STREET ADDRESS 8800 GUILFORD ROAD 405 COLUMBIA, MARYLAND 21046 SECTION/AREA PARCEL

HAMMOND HIGH SCHOOL 405 2/1 BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS T NEW TOWN 25150-25152 8, 14 42 SIXTH 6051.02 (NT)

SWM PLAN, PROFILES, NOTES & DETAILS

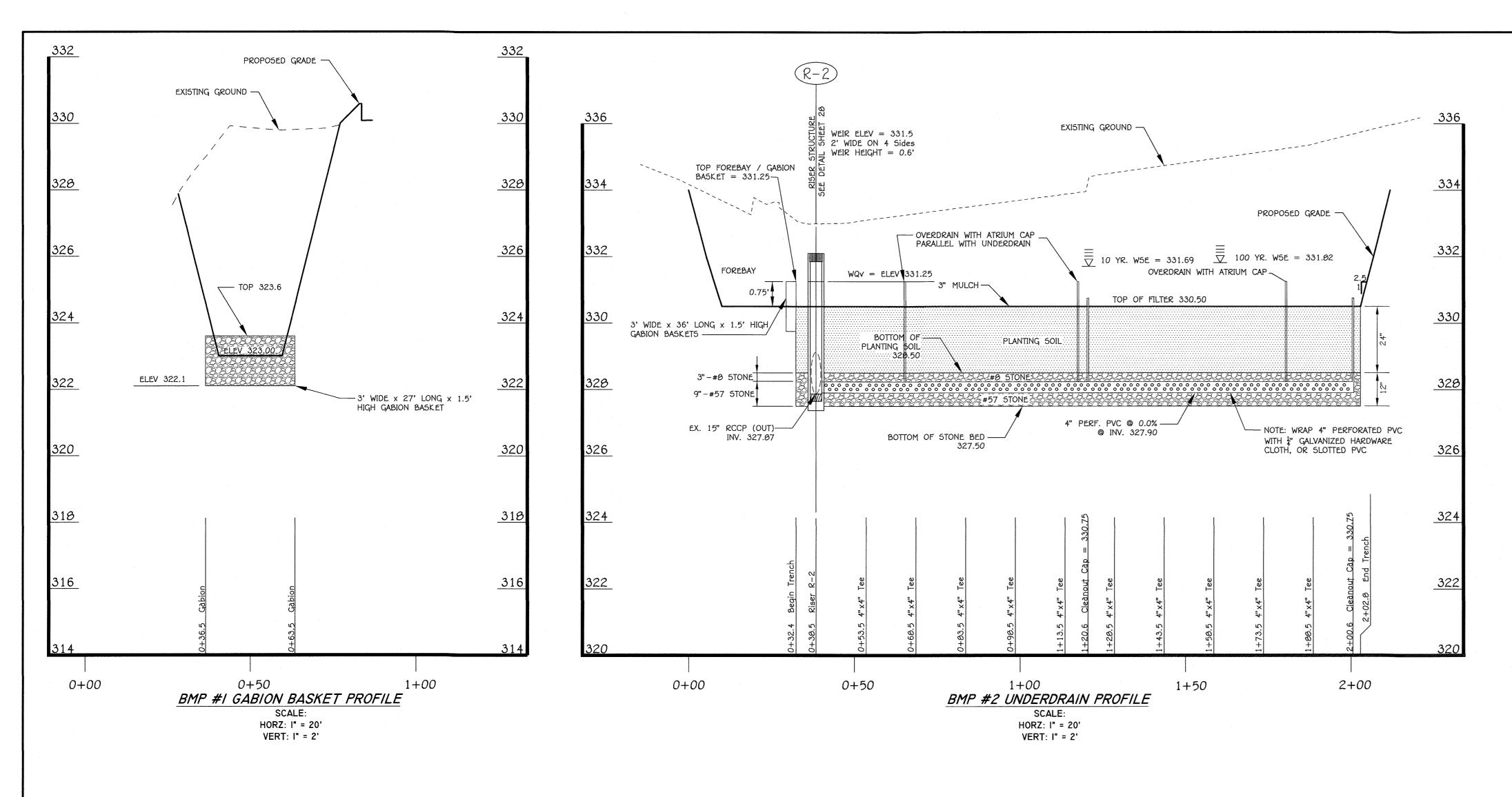
SECTION 2 AREA 1 SCHOOL SITE HAMMOND HIGH SCHOOL BUILDING ADDITIONS ZONED: NEW TOWN (NT)

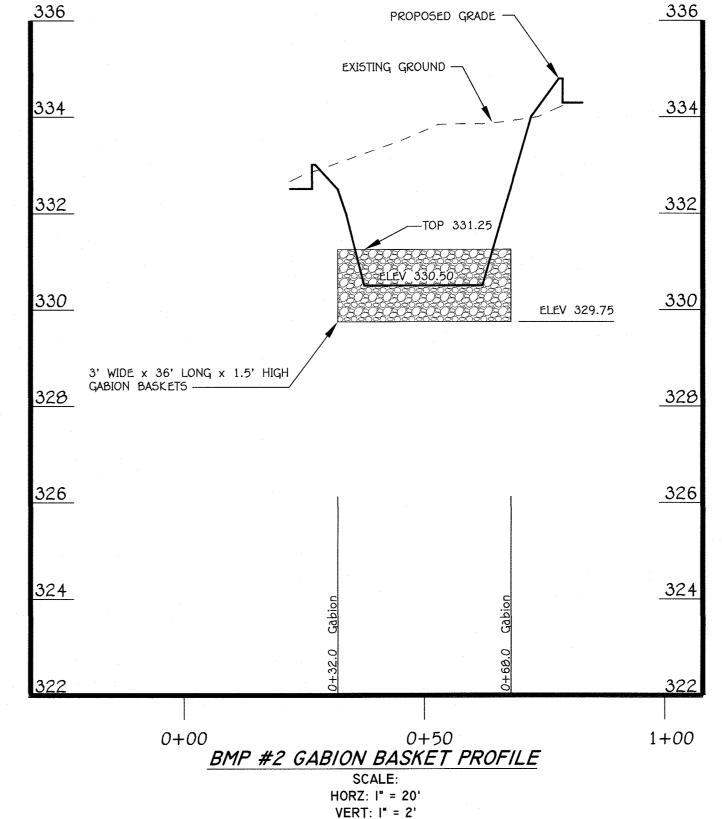
"REVISED SITE DEVELOPMENT PLAN"

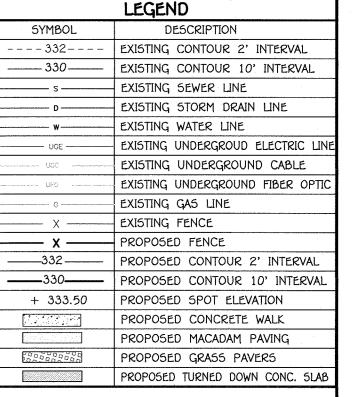
VILLAGE OF KINGS CONTRIVANCE

PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 20' DATE: MAY 11, 2020 SHEET 28 OF 37

5DP-96-018







BMP BIORETENTION FACILITY NOTES AND SPECIFICATIONS

1. REFER TO THE LATEST MARYLAND SWM DESIGN MANUAL FOR BIORETENTION SPECIFICATIONS FOR INFORMATION NOT LISTED HEREIN AND FOR ADDITIONAL INFORMATION.

- 2. THE BIORETENTION BMP MATERIALS ARE AS FOLLOWS:
- PLANTING SOIL: PER PLANTING SOIL SPECIFICATIONS OUTLINED IN MDE'S 2000 SWM MANUAL, APPENDIX B.4. - PVC UNDERDRAIN PIPE OUTSIDE BMP: SCHEDULE 40. SOLID PIPE WITH MINIMUM SLOPE of 0.5% OR AS PER PLAN.
- _PVC UNDERDRAIN IN BMP: 5CHEDULE 40 AND PERFORATED WITH 3/8" DIA. HOLES. WRAP UNDERDRAIN WITH GALVANIZED 1/4" HARDWARE CLOTH (WELDED WIRE MESH) PER HOWARD COUNTY SPECIFICATIONS. PROVIDE FOUR (4)-3/8" DIA. HOLES EVENLY SPACED AROUND THE 4" PIPE CIRCUMFERENCE, SPACE PERFORATIONS ALONG PIPE AT 3" ON CENTER. ADJACENT SETS OF PERFORATIONS SHALL BE STAGGERED AT 45°. PERFORATIONS MUST TOTAL 1.76 SQ. IN. PER LF OF 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.

3. 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.

- 4. BOARDS SHALL NOT BE LEFT IN PLACE DURING THE CONSTRUCTION OF THE BIORETENTION BMP.
- 5. GEOTEXTILE (FILTER FABRIC) SHALL BE PLACED ONLY 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.

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

- 7. 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 1/4" HARDWARE CLOTH TO PREVENT AGGREGATE FROM ENTERING THE PERFORATIONS.
- 9. 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.

GENERAL STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT HAS BEEN PROVIDED WITH TWO (2) BIORETENTION (F-6) BMP (BEST MANAGEMENT PRACTICE).

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 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 AT THE CONTRACTOR'S EXPENSE.
- 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 BMP MAY BE GRADED, HOWEVER, THE PLANTING SOIL SHALL NOT BE INSTALLED IN THE BMP UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., THICK GRASS COVER, OR PAVED).
- 8. THE STORMWATER MANAGEMENT BIORETENTION BMP'S FOR THIS PROJECT WILL BE PRIVATELY OWNED AND MAINTAINED.

OPERATION AND MAINTENANCE SCHEDULE FOR BIORETENTION FACILITIES

ALL MICRO-BIORETENTION FACILITIES SHALL BE INSPECTED AT LEAST TWICE PER YEAR, ONCE EACH IN THE SPRING AND FALL, AND AFTER LARGE STORMS. THE 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 #1 BELOW). MAINTENANCE INCLUDES PRUNING, AND REPLACEMENT OF DEFICIENT STAKES AND
- 2. MULCH LAYER: SHALL BE REPLACED EVERY 2-3 YEARS (IN THE SPRING) DUE TO THE ACCUMULATION OF HEAVY METALS. THE OWNER SHALL PROPERLY DISPOSE THE OLD MULCH SO AS NOT TO CAUSE STORMWATER CONTAMINATION ELSEWHERE. WASHED OUT AREAS SHALL BE
- 3. SOIL LAYER: SHOULD STORMWATER POND FOR MORE THAN 48 HOURS, THE TOP 6 INCHES (MINIMUM) OF THE PLANTING SOIL LAYER SHALL BE REPLACED. THE OLD SOIL SHALL BE PROPERLY DISPOSED OF. 4. SPILLWAY OUTFALL, INTERIOR SLOPES: ERODED AREAS SHALL BE REPAIRED (FILLED IN AND SEEDED). BARE AREAS SHALL BE TREATED AND

PARCEL

SIXTH

405

6051.02

- 5. INLET: REPAIR CRACKS, DAMAGED CONCRETE, ETC. AS NECESSARY.
- 6. REMOVE AND PROPERLY DISPOSE OF ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.

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

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

ADDRESS CHART

NEW TOWN

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW DETAILS OF THE BUILDING ADDITIONS, UTILITIES AND



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.



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 38386, EXPIRATION DATE: JANUARY 12, 2022."

> 5/26/20 DATE DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING An Con-7-9-2020 Director 🗹 Department of Planning and Zoning 7/8/2020

HOWARD COUNTY PUBLIC SCHOOL SYSTEM 9020 MENDENHALL COURT SUITE 'C' COLUMBIA, MARYLAND 21045 Attention: DANIEL LUBELEY 410-313-8203

PREPARED FOR

PARCEL NO. STREET ADDRESS 8800 GUILFORD ROAD 405 COLUMBIA, MARYLAND 21046 SECTION/AREA HAMMOND HIGH SCHOOL 2/1 PLAT NOS. TAX MAP ELEC. DIST. CENSUS BLOCK NO. ZONE

8, 14

25150-25152

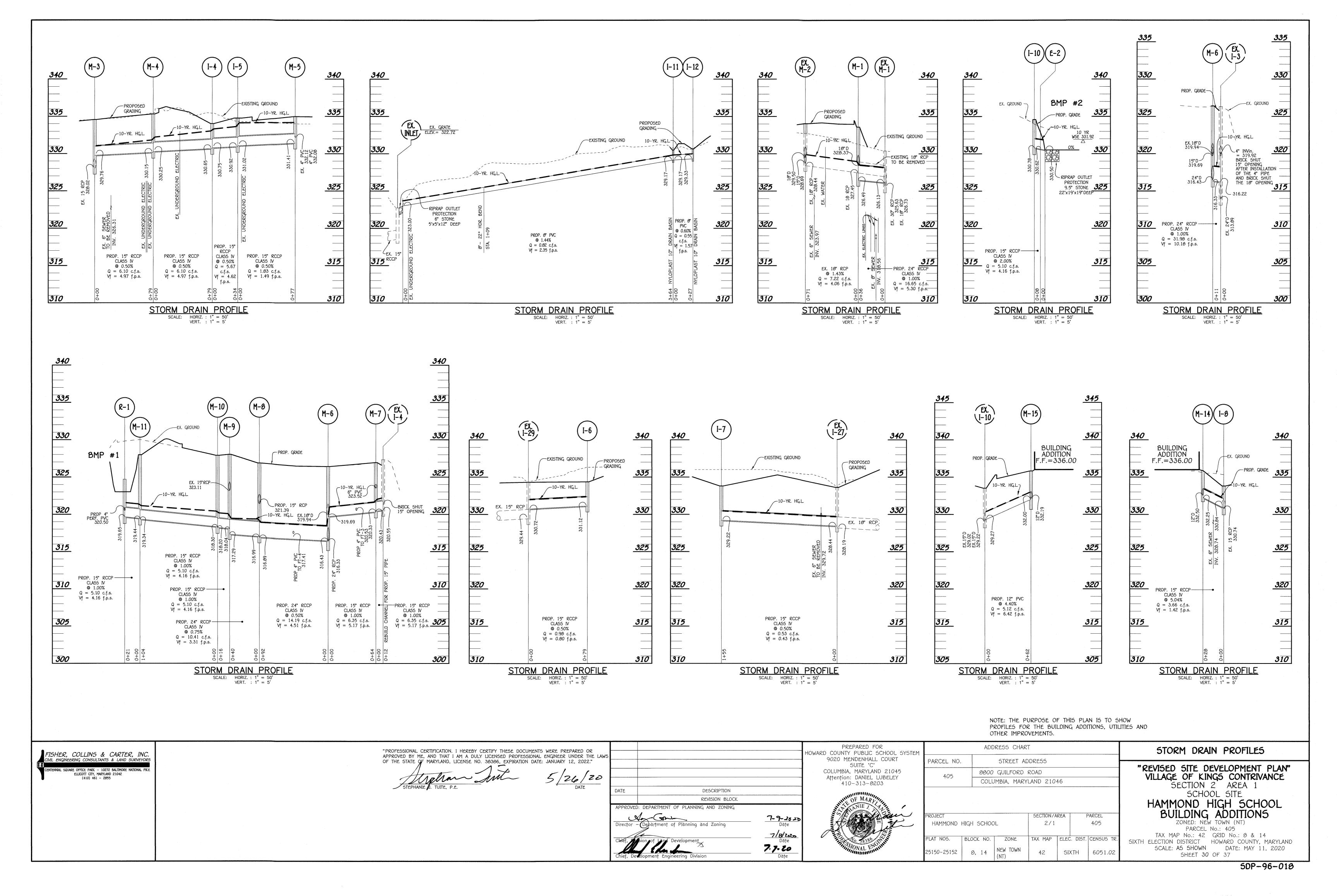
OTHER IMPROVEMENTS.

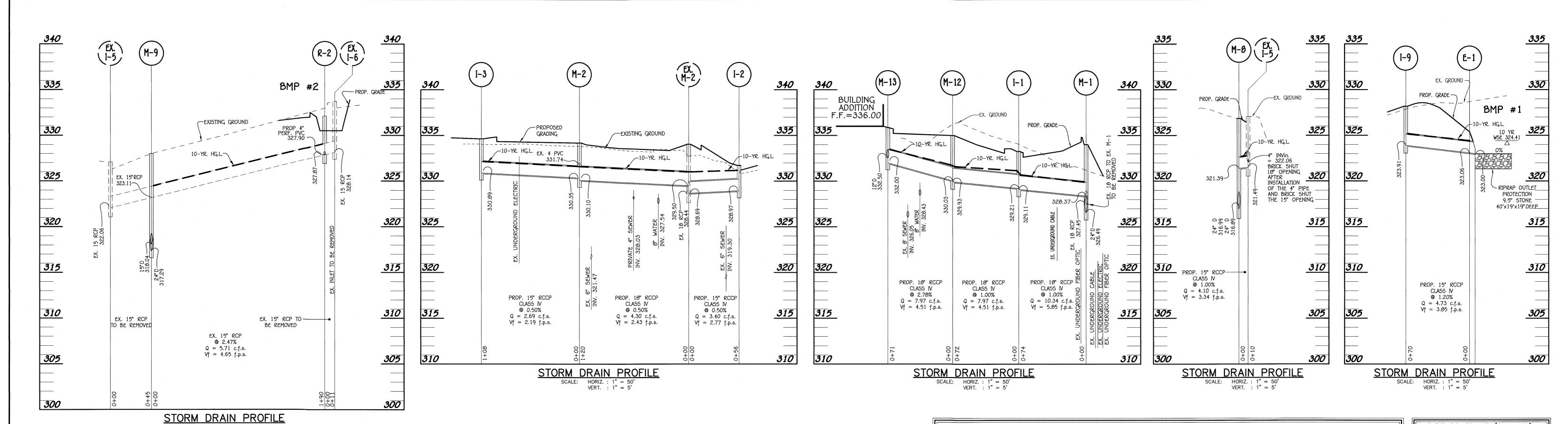
SWM PROFILES & NOTES

"REVISED SITE DEVELOPMENT PLAN"

VILLAGE OF KINGS CONTRIVANCE SECTION 2 AREA 1 SCHOOL SITE HAMMOND HIGH SCHOOL BUILDING ADDITIONS ZONED: NEW TOWN (NT) PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND 5CALE: 1" = 20' DATE: MAY 11, 2020

SHEET 29 OF 37





STRUCTURE SCHEDULE								
RUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV.IN	INV.OUT	COORDINATES	WIDTH	TYPE	REMARK5
I-1	PRIVATE	331.10 *	329.21 (18")	329.11 (18")	N 546852.00 E 1352262.45	2.50'	A-5 INLET	D-4.02
I-2	PRIVATE	331.52 *	-	328.97 (15")	N 546943.42 E 1352154.60	2.50'	A-10 INLET	D-4.03
I-3	PRIVATE	334.64 *	. –	330.09 (15")	N 546913.05 E 1351940.02	2.50'	A-5 INLET	D-4.02
I-4	PRIVATE	334.00**	330.75 (15")	330.65 (15")	N 546944.92 E 1351778.84	2.58'	5-INLET	D-4.24
I-5	PRIVATE	334.73 *	331.02 (15")	330.92 (15")	N 546950.54 E 1351812.83	2.50'	A-10 INLET	D-4.03
I-6	PRIVATE	334.37**	-	331.12 (15")	N 546702.93 E 1352216.14	2.58'	5-INLET	D-4.24
I-7	PRIVATE	333.80**	-	329.22 (15")	N 546476.78 E 1351976.94	2.58'	5-INLET	D-4.24
I-8	PRIVATE	333.80**	330.04 (15")	330.74 (EX.15")	N 546522.64 E 1352152.27	2.58'	5-INLET	D-4.24
I-9	PRIVATE	327.84 *	- ·	323.91 (15")	N 546905.22 E 1351426.51	2.50'	A-10 INLET	D-4.03
I-10	PRIVATE	334.58 *	_	330.78 (15")	N 547197.39 E 1351531.60	2.50'	A-10 INLET	D-4.03
I-11	PRIVATE	330.50**	329.17 (8")	329.17 (8")	N 545932.55 E 1351984.41	10"	NYLOPLAST 10" DRAIN BASIN	SEE DET. 6/20
I-12	PRIVATE	330.66**		329.33 (8")	N 545912.43 E 1352001.71	10"	NYLOPLAST 10" DRAIN BASIN	SEE DET. 6/20
M-1	PRIVATE	334.00	320.37 (18"), 327.45 (18")	326.49 (24")	N 546920.64 E 1352237.49	4'	STD. MANHOLE	G - 5.12
M-2	PRIVATE	334.19	331.74 (4"), 330.35 (15")	330.10 (18")	N 546893.37 E 1352053.57	4'	5TD. MANHOLE	G - 5.12
M-3	PRIVATE	334.55	329.76 (15")	328.02 (EX. 15")	N 546064.07 E 1351670.59	4'	5TD. MANHOLE	G - 5.12
M-4	PRIVATE	335.30	330.25 (15")	330.15 (15")	N 546941.03 E 1351699.68	4'	STD. MANHOLE	G - 5.12
M-5	PRIVATE	334.97	332.12 (4") 332.00 (4")	331.41 (15")	N 546935.27 E 1351888.18	4'	5TD. MANHOLE	G - 5.12
M-6	PRIVATE	326.40	319.94 (18"), 316.43 (24")	316.33 (24")	N 546861.99 E 1351461.78	4'	STD. MANHOLE	G - 5.12
M-7	PRIVATE	326.93	323.52 (6"), 320.43 (15")	320.33 (15")	N 546798.87 E 1351474.56	4'	STD. MANHOLE	G - 5.12
M-8	PRIVATE	326.85	321.39 (15"), 316.99 (24")	316.89 (24")	N 546952.17 E 1351442.13	4'	STD. MANHOLE	G - 5.12
M-9	PRIVATE	328.00	323.11 (15"), 310.04 (15")	317.29 (15")	N 546992.08 E 1351445.78	4'	STD. MANHOLE	G - 5.12
M-10	PRIVATE	327.88	310.30 (15")	318.20 (15")	N 547000.86 E 1351432.22	4'	STD. MANHOLE	G - 5.12
M-11	PRIVATE	328.00	319.44 (15")	319.34 (15")	N 547105.12 E 1351429.16	4'	STD. MANHOLE	G - 5.12
M-12	PRIVATE	335.00	330.03 (18")	329.93 (18")	N 546782.15 E 1352243.74	4'	STD. MANHOLE	G - 5.12
M-13	PRIVATE	335.80	332.50 (12")	332.00 (18")	N 546754.65 E 1352178.17	4'	STD. MANHOLE	G - 5.12
M-14	PRIVATE	335.76	332.50 (12")	332.25 (15")	N 546546.99 E 1352138.88	4'	5TD. MANHOLE	G - 5.12
M-15	PRIVATE	335.62	330.13 (15")	330.03 (15")	N 546477.04 E 1351646.24	4'	STD. MANHOLE	G - 5.12
R-1	PRIVATE	324.70	320.50 (4")	319.65 (15")	N 547112.08 E 1351409.80	-	-	SEE SHT. 20
R-2	PRIVATE	332.10	327.90 (4")	327.07 (EX. 15")	N 547168.98 E 1351515.69	-	<u> </u>	SEE SHT. 20
E-1	PRIVATE	324.31		323.00 (15")	N 547053.13 E 1351408.83	15"	CONC. END SECTION	D - 5.51
E-2	PRIVATE	331.07	·-	330.50 (15")	N 547191.02 E 1351524.32	15"	CONC. END SECTION	D - 5.51
FT-1	PRIVATE	330.21 331.06		326.51 (4")	N 546661.60 E 1351520.52 N 546661.59 E 1351520.52		FT5C (Ø'x16' VAULT)	SEE 5HT. 21
FT-2	PRIVATE	329.46 329.22	-	324.33 (4")	N 546719.02 E 1351402.99 N 546736.45 E 1351479.47	-	FT5C (Ø'x20' VAULT)	SEE 5HT. 21
FT-3	PRIVATE	326.81 326.62	<u>-</u>	322.87 (4")	N 546 <i>0</i> 25.06 E 1351460.55 N 546 <i>0</i> 37.77 E 1351457.04	-	FTSC (0'x14' VAULT)	SEE SHT. 21
FT-4	PRIVATE	326.56 326.03	-	322.91 (4")	N 546902.77 E 1351443.73 N 546915.40 E 1351441.02		FT5C (6'x20' VAULT)	SEE 5HT. 21

** - DENOTES GRATE ELEVATION

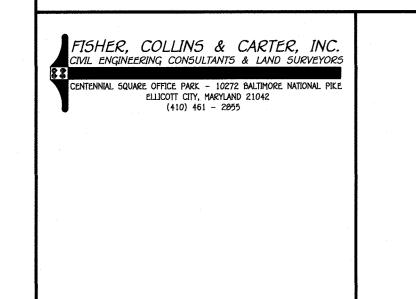
'S' INLETS SHALL HAVE RETICULAR GRATES.

'FTSC' FILTERRA COORDINATES ARE AT CORNERS AT THE BACK OF CURB.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW PROFILES FOR THE BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS.

TAX MAP ELEC. DIST. CENSUS TR

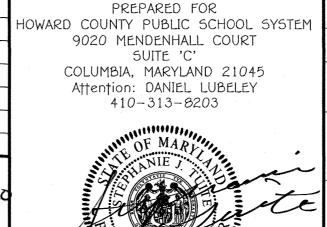
SIXTH 6051.02



SCALE: HORIZ. : 1" = 50' VERT. : 1" = 5'

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 38386, EXPIRATION DATE: JANUARY 12, 2022."

DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING do Gona 7-9-2020 Date Department of Planning and Zoning 7/B/zwzo
Date 77.20



LAT NOS.

25150-25152 8, 14

BLOCK NO.

NEW TOWN

ADDRESS CHART PARCEL NO. STREET ADDRESS 8800 GUILFORD ROAD 405 COLUMBIA, MARYLAND 21046 PARCEL SECTION/AREA 405 HAMMOND HIGH SCHOOL 2/1

42

WATER, SEWER & STORM DRAIN PROFILES AND STRUCTURE SCHEDULE "REVISED SITE DEVELOPMENT PLAN" VILLAGE OF KINGS CONTRIVANCE SECTION 2 AREA 1 SCHOOL SITE

PIPE SCHEDULE (PRIVATE)

PVC 5CH 40

PVC 5CH 40

PVC 5CH 40

PVC 5CH 40

RCCP, CLASS IV

RCCP, CLASS IV

24" RCCP, CLASS IV 103 L.F.

PERF PVC

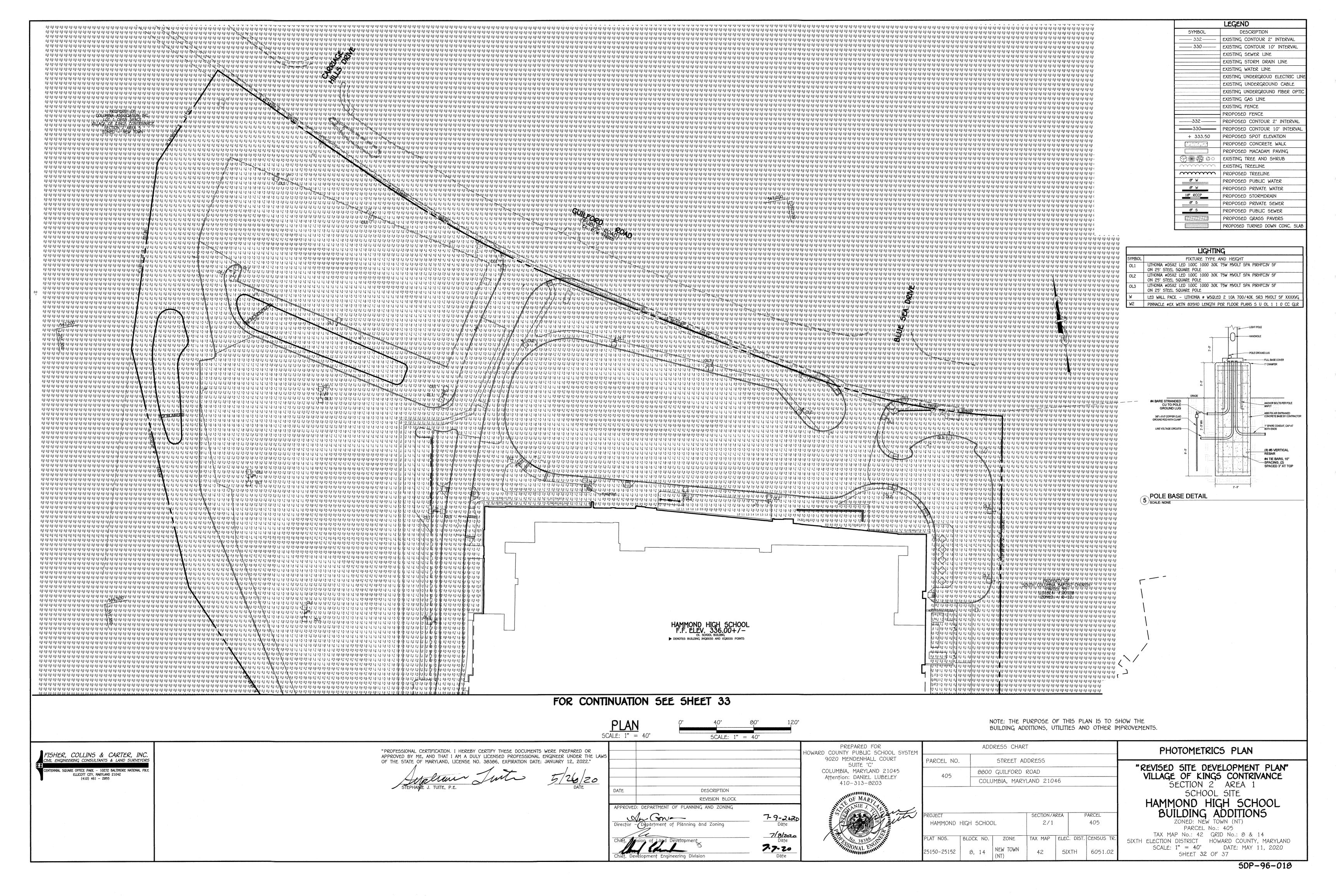
81 L.F.

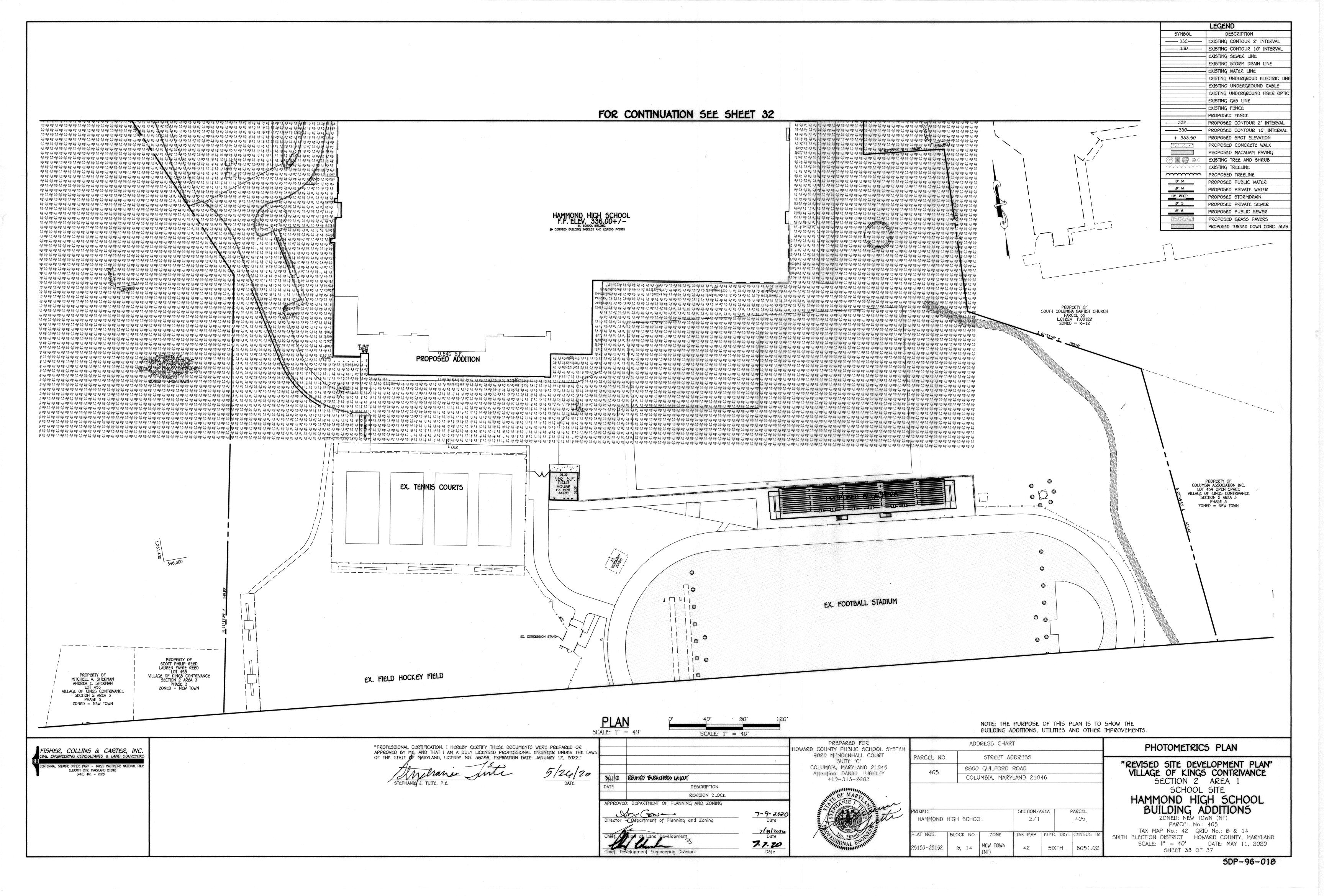
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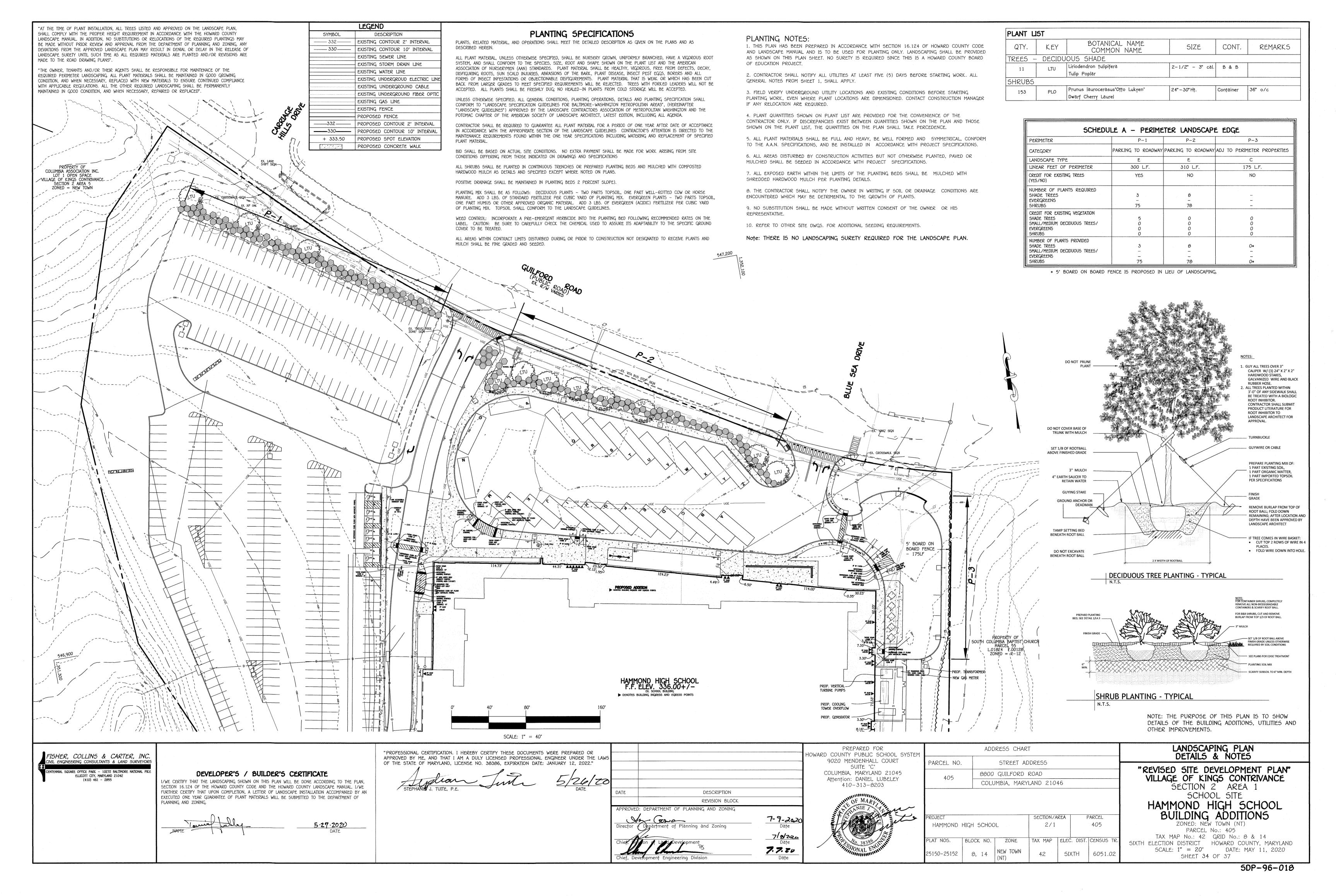
377 L.F.

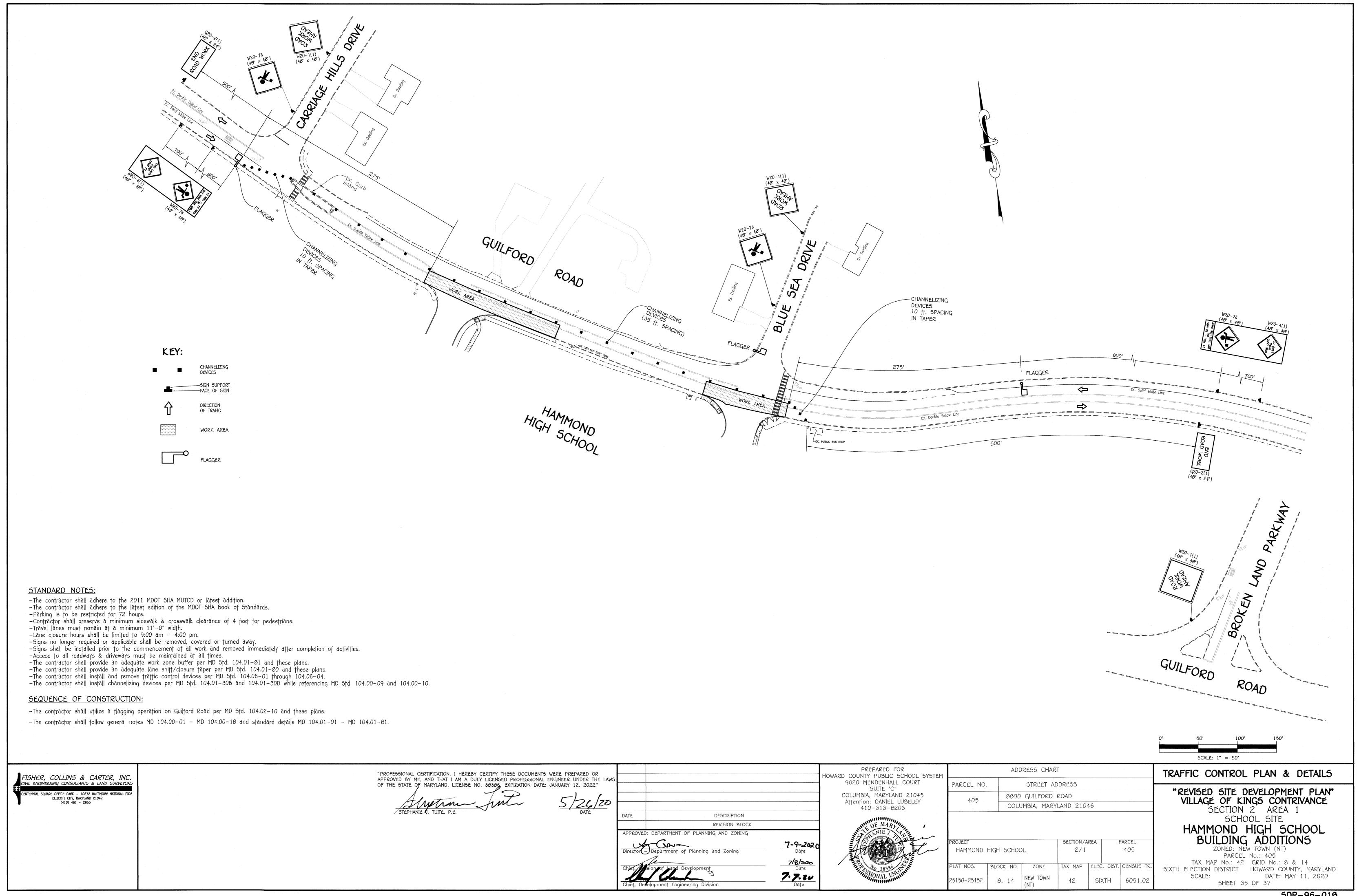
HAMMOND HIGH 5CHOOL BUILDING ADDITIONS ZONED: NEW TOWN (NT)

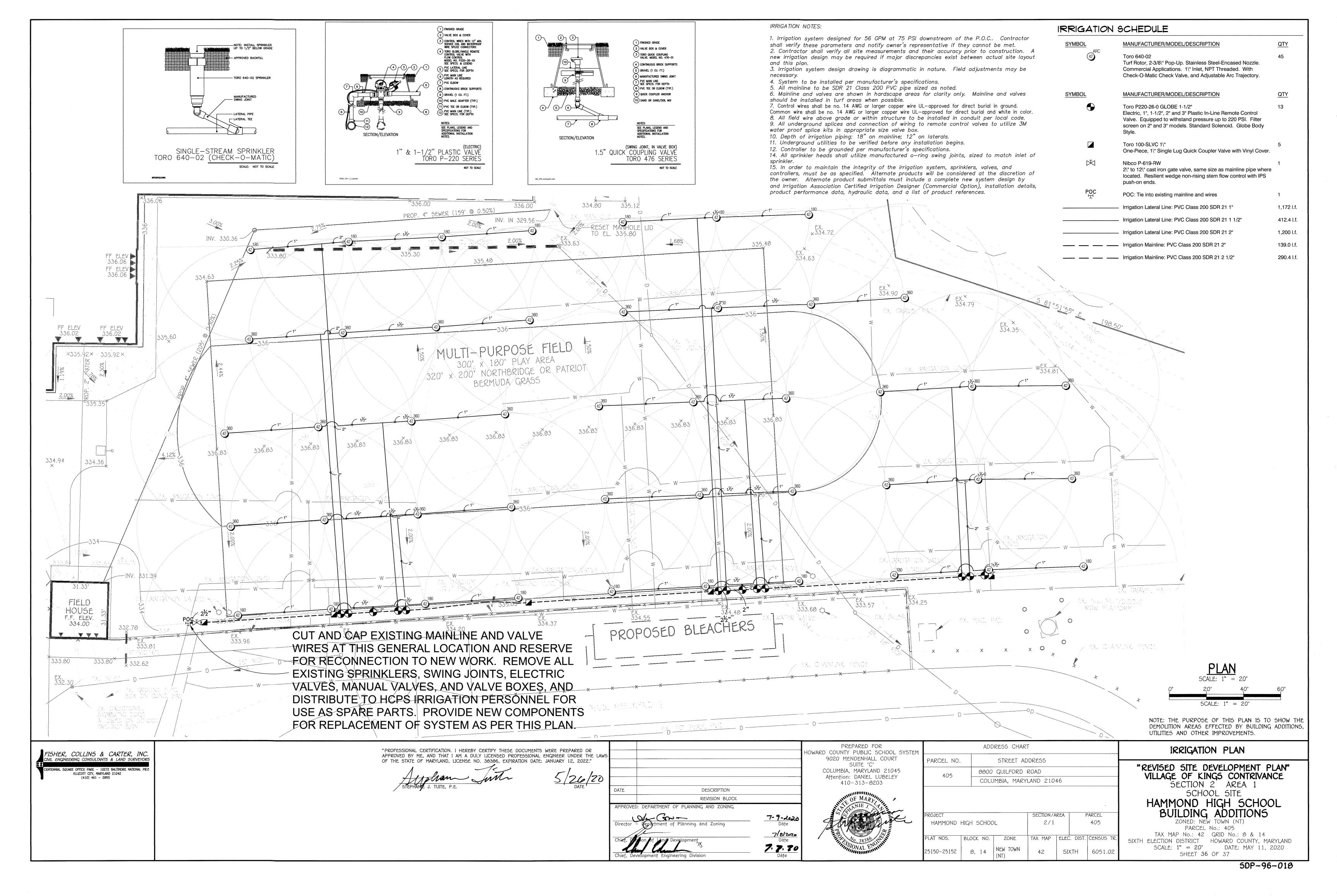
PARCEL No.: 405 TAX MAP No.: 42 GRID No.: 8 & 14 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY 11, 2020 SHEET **31** OF 37



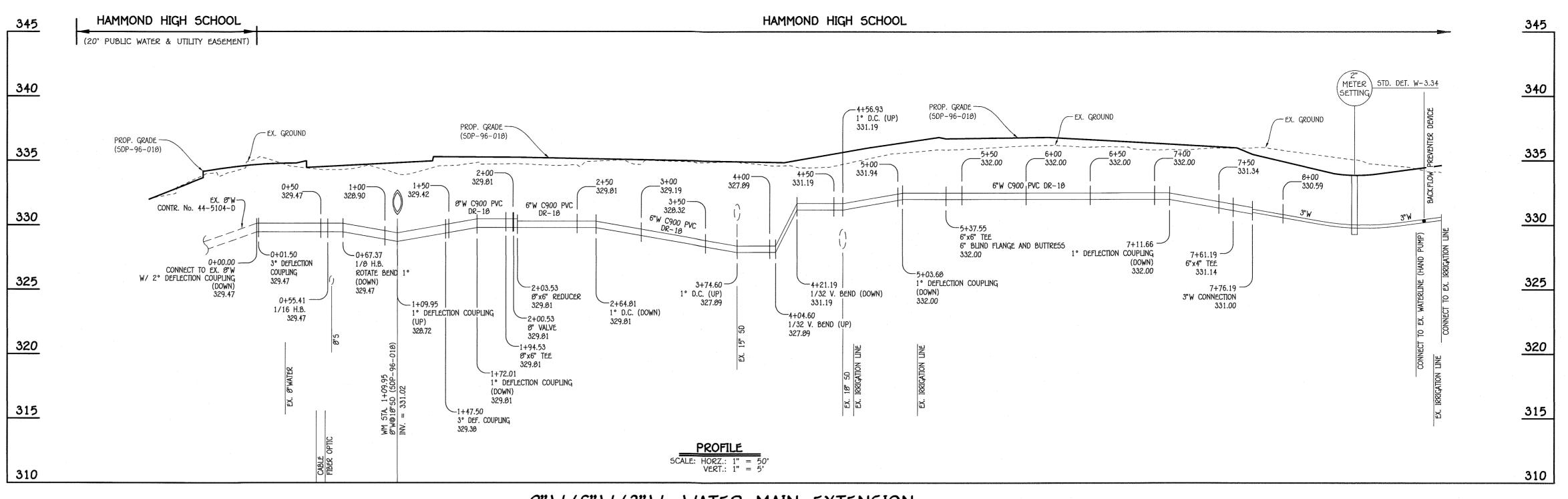




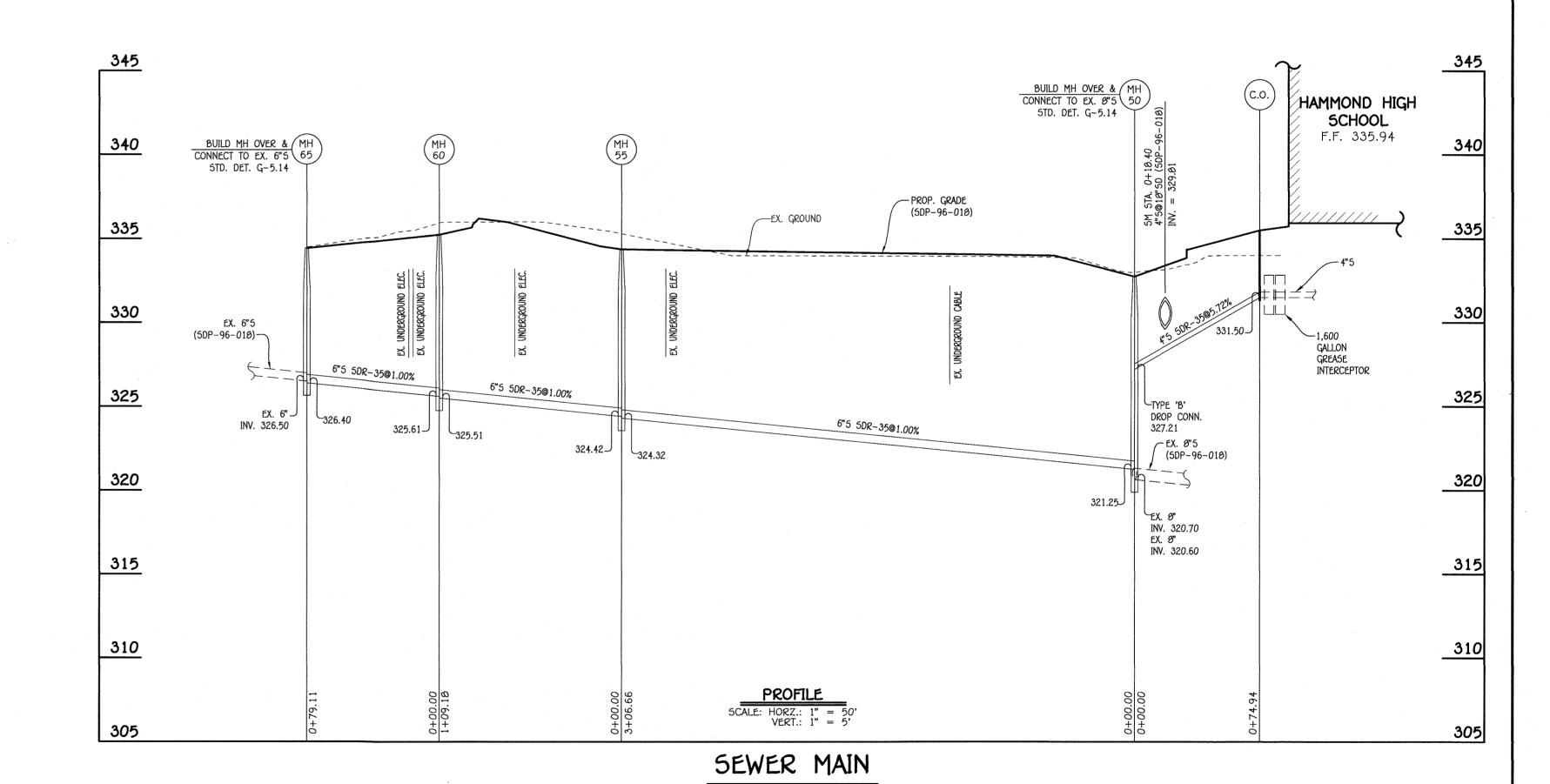




WATER MAIN TABULATION CHART								
W.M. 5TA.	W.M. STA. APPURTENANCE		EASTING					
8'W/6"W/3"W: WATER MAIN EXTENSION								
0+00.00	CONNECT TO EX. 8'W W/ 2° D.C.	546,847.76	1,352,161.02					
0+01.50	3° DEFLECTION COUPLING	546,847.07	1,352,162.35					
0+55.41	1/16 H.B.	546,820.05	1,352,209.01					
0+67.37	1/8 H.B. ROTATE BEND 1° DOWN	546,810.56	1,352,216.27					
1+09.95	1° DEFLECTION COUPLING (UP)	546,768.35	1,352,210.66					
1+47.50	1+47.50 3° DEFLECTION COUPLING		1,352,205.70					
1+72.01	1° DEFLECTION COUPLING (DOWN)	546,707.04	1,352,201.17					
1+94.53	8" X6" TEE	546,684.90	1,352,197.00					
2+00.53	8" VALVE	546,679.01	1,352,195.89					
2+03.53	8"X6" REDUCER	546,676.06	1,352,195.34					
2+64.81	1° DEFLECTION COUPLING (DOWN)	546,615.84	1,352,184.00					
3+74.60	1° DEFLECTION COUPLING (UP)	546,507.94	1,352,163.69					
4+04.60	4+04.60 1/32 V.B. (UP)		1,352,158.14					
4+21.19	4+21.19 1/32 V.B. (DOWN)		1,352,155.07					
4+56.93	4+56.93 1° DEFLECTION COUPLING (UP)		1,352,148.45					
5+03.60	5+03.68 1° DEFLECTION COUPLING (DOWN)		1,352,139.80					
5+37.55	5+37.55 6"X6" TEE/6" BLIND FLANGE		1,352,133.53					
7+11.66	1° DEFLECTION COUPLING (DOWN)	546,380.03	1,351,962.44					
7+61.19	6"x4" TEE	546,389.19	1,351,913.76					
7+76.19	3"W CONNECTION	546,391.97	1,351,899.02					



8"W/6"W/3"W: WATER MAIN EXTENSION



MANHOLE/C.O. TABULATION CHART NORTHING EASTING RIM/TOP ELEVATION 65 546,874.15 1,351,670.52 334.43 60 546,950.39 1,351,691.63 335.25 55 546,961.28 1,351,800.26 334.38 546,906.86 332.75 50 1,352,102.06 C.O. 546,846.43 1,352,146.37 335.51

NOTE: SET MH RIMS/C.O. TOP FLUSH W/ PROPOSED GRADE.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW PROFILES FOR THE BUILDING ADDITIONS, UTILITIES AND OTHER IMPROVEMENTS.

