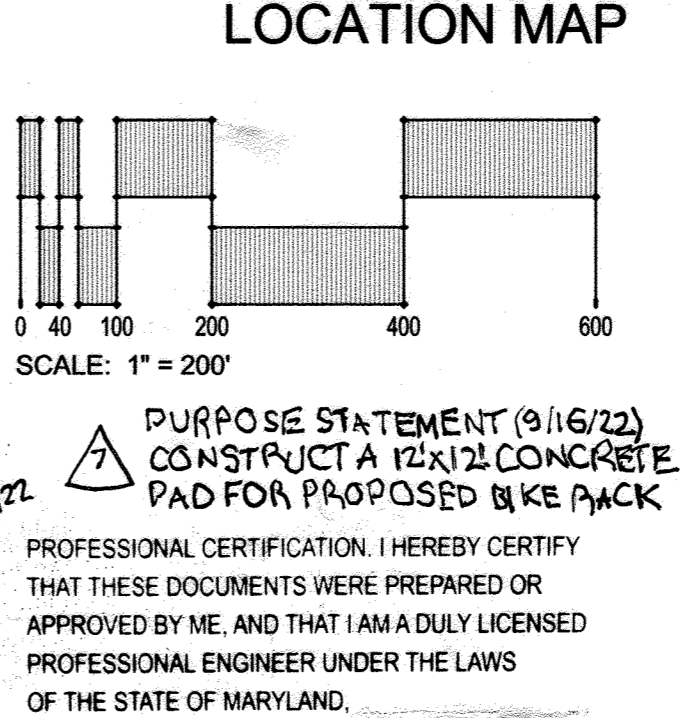
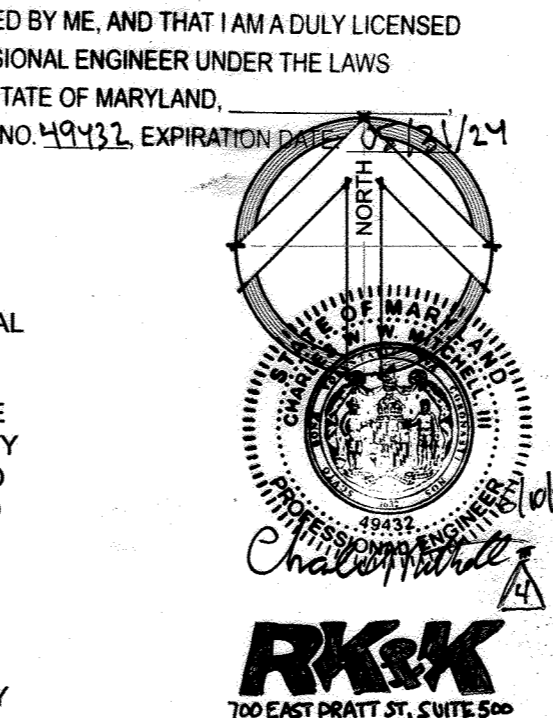
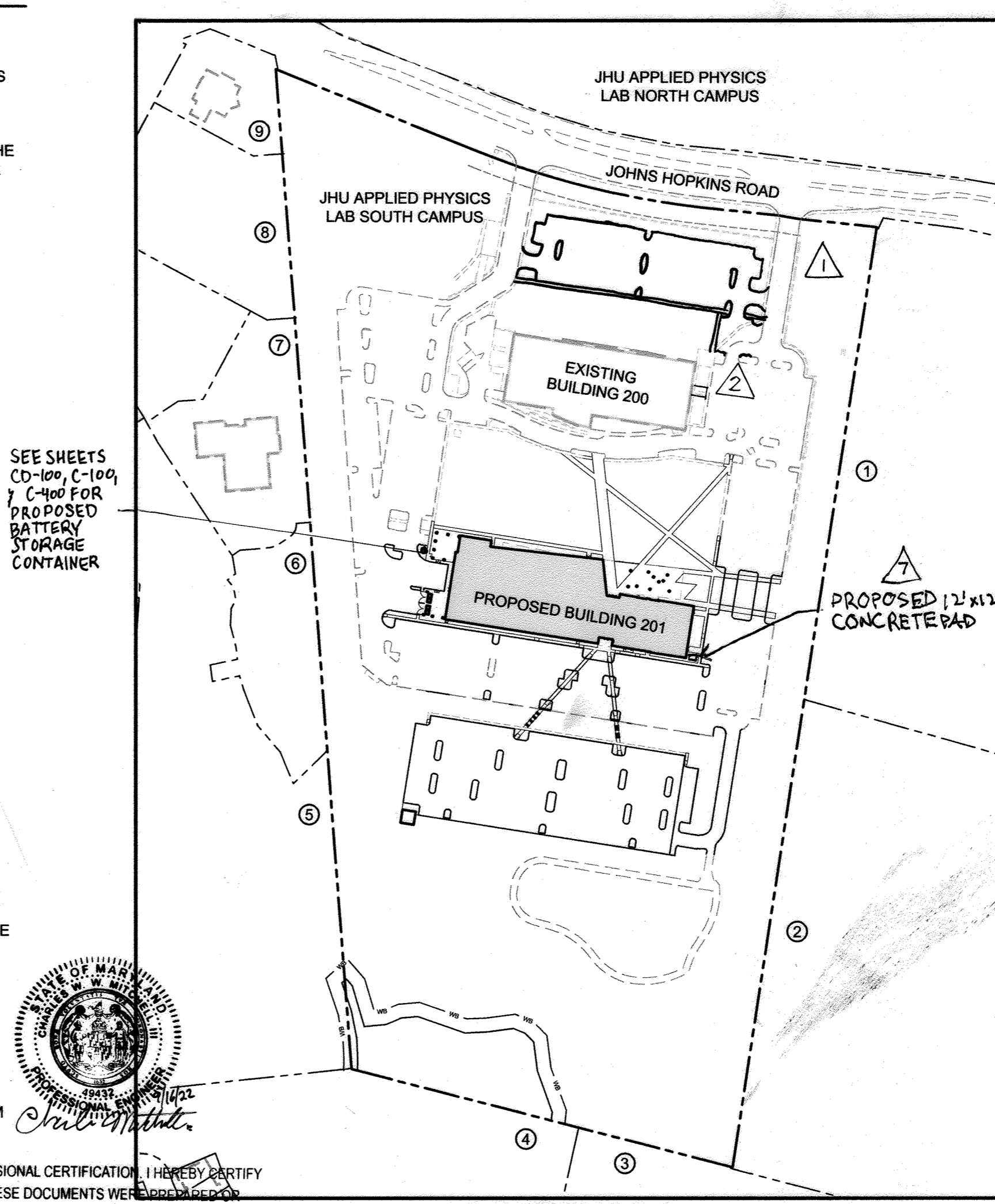


GENERAL NOTES (THESE NOTES PERTAIN TO ALL CIVIL DRAWINGS)

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY WAS OBTAINED FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY HANOVER LAND SERVICES, INC. DATED JULY 2016.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 41ED, 0002, 41EC AND 41HA WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC.
- SEWER IS PUBLIC.
- STORMWATER MANAGEMENT FOR THE ENTIRE PROPERTY DEVELOPMENT IS PROVIDED WITHIN THE EXISTING EXTENDED DETENTION WET POND (P-3) AND THROUGH THE USES OF VARIOUS SWM CREDITS APPROVED UNDER SDP-09-047 AND CONSTRUCTED UNDER GP-10-009. THIS FACILITY IS PRIVATELY MAINTAINED.
- EXISTING UTILITIES ARE BASED ON SURVEY BY HANOVER LAND SERVICES, INC. FROM JULY 2016 AND HOWARD COUNTY GIS.
- THERE IS NO FLOODPLAIN ON THIS SITE. FEMA FLOODPLAIN MAP PANEL #24027C0145D, EFFECTIVE NOVEMBER 6, 2013.
- NO STREAMS, WETLANDS OR THEIR BUFFERS WILL BE IMPACTED BY THIS DEVELOPMENT. HAMMOND BRANCH AND ITS ASSOCIATED NON-TIDAL WETLANDS ARE LOCATED ON-SITE BUT OUTSIDE OF THE PROPOSED LIMITS OF WORK. A WETLAND DELINEATION REPORT WAS PREPARED BY WHITMAN, REQUARDT & ASSOCIATES, LLP ON JUNE 2017.
- THE TRAFFIC STUDY WAS PREPARED BY WHITMAN, REQUARDT & ASSOCIATES, LLP ON OCTOBER 21, 2016.
- THE SUBJECT PROPERTY IS ZONED PEC (PLANNED EMPLOYMENT CENTER) PER THE OCTOBER 6, 2013, COMPREHENSIVE ZONING PLAN.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OF TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- LANDSCAPING NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$8,400 FOR 36 SHADE TREES, 0 EVERGREEN TREES AND 0 SHRUBS HAS BEEN POSTED WITH THE GRADING PERMIT. **\$10,000**

- THE PURPOSES SET FORTH ABOVE AND SHALL DO SO IN A TIMELY MANNER IN ORDER TO ALLOW TIME FOR ANALYSIS AND REDESIGN BY SITE RESOURCES AND/OR OTHER CONSULTANTS, WITHOUT DELAYING THE PROJECT SCHEDULE.
- IMMEDIATELY REPORT TO SITE RESOURCES, INC. THE RESULTS OF STEPS (A), (B) AND (C) WHICH MIGHT INDICATE ANY DISCREPANCY BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THE PLAN, AND ANY POTENTIAL CONFLICTS BETWEEN PROPOSED IMPROVEMENTS AND EXISTING CONDITION.
- TEST PITTING DEFINED: FOR THE PURPOSES OF THIS CONTRACT, EXCAVATION OF UTILITY TRENCHES DOES NOT CONSTITUTE TEST PITTING. TEST PITTING IS A SEPARATE OPERATION COMPLETED AT LEAST SEVEN DAYS BEFORE UTILITY INSTALLATION IS SCHEDULED TO BEGIN. TEST PITTING MEANS EXCAVATION TO EXPOSE EXISTING UTILITIES IN TWO SITUATIONS: (I) WHERE PROPOSED IMPROVEMENTS CROSS EXISTING UTILITIES (PIPES, LINES, STRUCTURES, APPURTENANCES) AND; (II) WHERE PROPOSED UTILITIES ARE DESIGNED TO CONNECT TO EXISTING UTILITIES. TEST PITTING INCLUDES RECORDING THE TYPE, SIZE, LOCATION AND ELEVATION OF THE EXPOSED UTILITIES, AND FAXING AND MAILING THE RECORD TO SITE RESOURCES, INC. AND THE OWNER. THE RECORD MAY BE A LEGIBLE HAND-WRITTEN FIELD SKETCH.
- EXISTING AND PROPOSED GAS LINES, ELECTRIC LINES, TELEPHONE LINES, COMMUNICATION LINES AND OTHER UTILITIES: THESE DRAWINGS INCLUDE INFORMATION AND DEPICTIONS OF BALTIMORE GAS & ELECTRIC COMPANY'S (BGE) ELECTRIC AND/OR GAS UTILITIES LOCATED WITHIN THE GENERAL PROJECT AREA. LOCATIONS, DIMENSIONS, DEPTHS, AND OTHER DETAILS OF ANY SUCH UTILITIES MAY NOT BE AS ACTUALLY CONSTRUCTED, AND THE INFORMATION SHALL NOT BE RELIED UPON WITHOUT FIELD VERIFICATION BY TEST PITTING AS DEFINED ABOVE. EXCAVATORS MUST EMPLOY SAFE DIGGING PRACTICES WHEN APPROACHING BGE ELECTRIC AND/OR GAS UTILITIES AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS INCLUDING, BUT NOT LIMITED TO, THE LAW GOVERNING NOTIFICATION OF MISS UTILITY. NO REPRESENTATION, GUARANTEES, OR WARRANTIES EXPRESSED OR IMPLIED ARE MADE BY BGE OR SITE RESOURCES, INC. AS TO THE QUALITY, COMPLETENESS, OR ACCURACY OF THE BGE UTILITY INFORMATION, AND IN ACCEPTING THESE DRAWINGS, THE RECIPIENT EXPRESSLY AGREES THAT IT IS NOT RELYING ON THE ACCURACY OF THE SAME.
- EXISTING AND PROPOSED GAS LINES, STEAM LINES, ELECTRIC LINES, TELEPHONE LINES, COMMUNICATION DUCTS AND OTHER SUCH UTILITIES ARE NOT PART OF THE SCOPE OF WORK SHOWN ON THESE SITE PLANS AND SITE RESOURCES, INC. HAS NO RESPONSIBILITY FOR DESIGN, SPECIFICATION OR INSTALLATION OF SAID UTILITIES. TO THE EXTENT THAT SOME OR ALL OF SUCH UTILITIES (WHETHER EXISTING OR PROPOSED) APPEAR ON THE SITE DRAWINGS, IT IS PRESENTED ONLY FOR THE CONVENIENCE OF THE CONTRACTOR AND THE CORRECTNESS AND COMPLETENESS OF THE INFORMATION SHOWING THESE UTILITIES IS NOT GUARANTEED.
- COORDINATION BETWEEN PROPOSED UTILITIES: THE CONTRACTOR SHALL ADJUST THE LOCATION AND ELEVATION OF PROPOSED GAS LINES, ELECTRIC LINES, TELEPHONE LINES, COMMUNICATION LINES, AND WATER LINES AS NEEDED TO CONSTRUCT THE PROPOSED STORM DRAINS AND SANITARY SEWER WITH MINIMUM CLEARANCES. COORDINATE WITH THE MECHANICAL/ELECTRICAL DRAWINGS AND SPECIFICATIONS AND APPROPRIATE UTILITY COMPANY.
- RELOCATION OF EXISTING UTILITIES: IN THE EVENT THAT THE LOCATION OR ELEVATION OF EXISTING MINOR UNDERGROUND ELECTRIC LINES AND PHONE LINES CONFLICT WITH PROPOSED STORM DRAINS, SANITARY SEWER LINES OR WATER LINES, THE CONTRACTOR SHALL, WITH THE PERMISSION OF THE OWNER AND WITHOUT AN EXTRA COST TO THE PROJECT, ADJUST THESE LINES TO PERMIT INSTALLATION OF THE NEW UTILITIES. IN THE EVENT THAT ANY OTHER UTILITY IS RELOCATED TO ACCOMMODATE A NEW UTILITY, SAID RELOCATION SHALL BE AN EXTRA COST TO THE PROJECT, SUBJECT TO THE TERMS AND CONDITIONS OF THE CONSTRUCTION CONTRACT.
- UTILITIES TO REMAIN OPERATIONAL: ADJUSTMENT FOR FINAL GRADE: ALL EXISTING UTILITIES SHALL BE RETAINED UNLESS MARKED OTHERWISE. EXISTING UTILITIES NOT TO BE REMOVED ARE TO REMAIN OPERATIONAL AT ALL TIMES. EXISTING UTILITIES TO BE REPLACED OR RELOCATED SHALL REMAIN IN SERVICE UNTIL REPLACED OR RELOCATED UTILITIES ARE OPERATIONAL. ALL EXISTING UTILITY APPURTENANCES SHALL BE ADJUSTED FOR FINAL GRADE.
- UTILITY TRENCHING, BACKFILL AND COMPACTION: ALL TRENCHING FOR SANITARY SEWER, STORM DRAINS AND WATER MAINS SHALL BE DONE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- UTILITY CERTIFICATION: THE CONTRACTOR SHALL HAVE A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND CERTIFY, ON A FORM PROVIDED BY THE OWNER, THAT ALL PROPOSED STORM DRAINS, SANITARY SEWERS AND WATER LINES SHOWN HEREON WERE INSTALLED IN ACCORDANCE WITH THESE PLANS AND HOWARD COUNTY SPECIFICATIONS. IF SAID CERTIFICATION IS NOT POSSIBLE BECAUSE THE UTILITIES WERE NOT INSTALLED IN ACCORDANCE WITH THESE PLANS AND HOWARD COUNTY SPECIFICATIONS, THEN THE OWNER HAS THE OPTION OF WAIVING, IN WRITING, THIS CERTIFICATION, IN WHOLE OR PART. IF THE OWNER DOES NOT ELECT TO WAIVE THE CERTIFICATION, THE CONTRACTOR SHALL, ADJUST AND, IF NECESSARY, RECONSTRUCT THE UTILITIES TO BRING THEM IN CONFORMANCE WITH THESE PLANS AND HOWARD COUNTY SPECIFICATIONS.
- UTILITY CAPPING AND PROTECTION: ALL BUILDING CONNECTIONS SHALL BE CAPPED AT UPSTREAM END, 5 FEET FROM PROPOSED BUILDINGS, CAISSONS OR COLUMN FOOTINGS OR AS NOTED, AND SHALL BE PROTECTED BY PROVIDING THREE STAKES (THE HEIGHT BEING A MINIMUM OF 18 INCHES ABOVE PROPOSED GRADE) WITH HIGH VISIBILITY FLAGGING AROUND THE CAPPED END OF THE UTILITY.
- PROPOSED WATER LINES: PROPOSED WATER LINES SHALL HAVE A MINIMUM OF 4'-0" COVER FROM FINISHED GRADE, 1'-0" CLEARANCE FROM STORM DRAINS AND 1'-0" CLEARANCE FROM SANITARY SEWERS, UNLESS INDICATED OTHERWISE ON THE PLANS. ALL WATER MAINS 3" OR LARGER SHALL BE CLASS 54 DIP MEETING AWWA C110/C153. ALL WATER LINES 2" AND SMALLER SHALL BE TYPE 'C' COPPER TUBING MEETING THE MATERIAL, CHEMICAL, AND MECHANICAL REQUIREMENTS OF ASTM B-88.
- PROPOSED STORM DRAINS: UNLESS INDICATED OTHERWISE ON THESE CONSTRUCTION DRAWINGS ALL REINFORCED CONCRETE CULVERT PIPE (RCCP) SHALL BE CLASS IV, ALL PVC SHALL BE SCHEDULE 40, AND ALL HDPE SHALL BE ADS N-12 ST IB OR EQUIVALENT.
- PROPOSED SANITARY SEWERS: UNLESS INDICATED OTHERWISE ON THESE CONSTRUCTION DRAWINGS, ALL PIPE AND FITTINGS FOR SANITARY HOUSE CONNECTION SHALL BE POLYVINYL CHLORIDE (PVC) MEETING MATERIAL REQUIREMENTS OF ASTM D3034, (SDR-35). JOINTS SHALL BE ELASTOMERIC GASKETED.
- STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS: UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS, ALL CONSTRUCTION SHALL FOLLOW THE LATEST HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- SEDIMENT CONTROL: THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL UTILITIES TO AVOID CONSTRUCTION PROBLEMS/CONFLICTS WITH SEDIMENT

- AND EROSION CONTROL MEASURES. ANY DISTURBANCE TO SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REPAIRED AT THE END OF EACH WORKING DAY. CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE PROJECT, REPAIR AND MAINTAIN EXISTING SEDIMENT CONTROL DEVICES UNTIL ALL AREAS WITHIN LIMITS OF CONSTRUCTION ARE STABILIZED. WITH THE APPROVAL OF SEDIMENT CONTROL INSPECTOR, ALL SEDIMENT CONTROL DEVICES SHALL BE REMOVED AND AREAS RESTORED AND STABILIZED. ALL SEDIMENT CONTROL MEASURES REFERRED TO ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE PUBLICATION ENTITLED 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- DISTURBED AREAS: ALL AREAS DISTURBED BY THE CONTRACTOR DURING OR PRIOR TO CONSTRUCTION, NOT DESIGNATED TO RECEIVE PAVING, MULCH OR SOLID SOD SHALL BE FINE GRADED, SEEDED AND MULCHED IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES AND SPECIFICATIONS SHOWN ON THE SEDIMENT CONTROL DRAWINGS.
- REPAIR AND REPLACEMENT OF DAMAGE CAUSED BY CONTRACTOR AND SUBCONTRACTORS: IN THE EVENT THAT THE CONTRACTOR OR ANY OF HIS SUBCONTRACTORS DAMAGE ANY EXISTING CURBS, CUTTER, PAVING, UTILITIES, SIDEWALKS, TREES, SHRUBS, LAWNS, OR ANY OTHER EXISTING CONDITIONS (NOT INDICATED TO BE DEMOLISHED), OR ANY NEWLY INSTALLED PROPOSED IMPROVEMENT, THE GENERAL CONTRACTOR SHALL REPAIR AND REPLACE SAID DAMAGE TO OWNER'S SATISFACTION, AT GENERAL CONTRACTOR'S SOLE COST AND EXPENSE.
- BENCHMARKS: SEE SURVEY NOTES ON THIS SHEET.
- ELEVATION AND LABELING: ALL SPOT GRADE ELEVATIONS IN ROADWAYS AND PARKING LOTS ARE FOR BOTTOM OF CURB UNLESS OTHERWISE NOTED. ELEVATIONS ON HARD SURFACES (ROADS, WALKS, WALLS, STEPS, MANHOLES, INLETS, ETC.) ARE LABELED TO THE HUNDRETH OF A FOOT (E.G. 245.45). ELEVATIONS ON PROPOSED LAWN AND PLANTING AREAS ARE LABELED TO THE TENTH OF A FOOT (E.G. 245.5).
- DIMENSIONS: UNLESS OTHERWISE NOTED ON THE DRAWING, ALL DIMENSIONS SHOWN ON THE SITE DRAWINGS FOLLOW THESE CONVENTIONS:
 - DIMENSIONS TO A BUILDING OR RETAINING WALL ARE TO THE FACE OF THE WALL;
 - DIMENSIONS TO A CURB ARE TO THE FACE (NOT THE BACK) OF THE CURB;
 - DIMENSIONS TO A FENCE ARE TO THE CENTERLINE OF THE FENCE;
 - DIMENSIONS FOR SIDEWALKS ABUTTING A CURB ARE FROM THE FACE OF CURB TO THE BACK EDGE OF THE WALK;
 - DIMENSIONS FOR OTHER SIDEWALKS OR OPEN PAVING SECTIONS ARE MEASURED TO THE EDGE OF PAVING;
 - DIMENSIONS TO A MANHOLE, INLET, CLEANOUT, PIPE BEND, VALVE, FIRE HYDRANT OR OTHER UTILITY APPURTENANCE ARE TO THE CENTER OF THE STRUCTURE;
 - DIMENSIONS FOR STEPS ARE TO THE OUTER EDGE OF THE STAIRCASE AND THE NOSE OF THE TOP OR BOTTOM STEP;
 - HEIGHT OF SEDIMENT CONTROL MEASURES AND PLANT MATERIAL SHALL BE SCALED.
- GRADING: IT IS THE INTENT OF THE GRADING DESIGN TO ACHIEVE POSITIVE DRAINAGE AND AESTHETICALLY PLEASING VERTICAL CURVES AND LINES. TRANSITIONS BETWEEN EXISTING AND PROPOSED PAVEMENT SHALL BE SMOOTH AND JOINTS FLUSH, UNLESS OTHERWISE EXPRESSLY NOTED ON THE PLAN (BY ARROW WITH THE PERCENT SLOPE LABELED). ALL PROPOSED BITUMINOUS PAVING SHALL HAVE A SLOPE OF AT LEAST 2 PERCENT AND ALL CONCRETE SHALL HAVE A MINIMUM SLOPE OF 1.5 PERCENT IN THE DIRECTION INDICATED BY PROPOSED CONTOURS. UNPAVED AREAS SHALL HAVE A MINIMUM SLOPE OF 2 PERCENT AND A MAXIMUM SLOPE OF 2:1. FINAL GRADING SHALL ACHIEVE POSITIVE SURFACE DRAINAGE AWAY FROM BUILDINGS AND TOWARD DRAINAGE FACILITIES (SWALES, GUTTERS, INLETS, ETC.).
- COMPACTION: ALL EARTH FILL MATERIAL UNDER SLABS, FOOTINGS AND PAVED AREAS SHALL BE PLACED IN 8" LOOSE LAYERS AND COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 998 OR AS INDICATED IN THE PROJECT'S GEOTECHNICAL REPORT. ALL OTHER FILL SHALL BE COMPACTED TO 90%.
- HEADINGS: THE HEADINGS CONTAINED IN THESE GENERAL NOTES ARE FOR THE CONVENIENCE OF THE READER ONLY AND SHALL NOT LIMIT THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLETING SUCH WORK.
- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT ALL THE PROVISIONS AND REQUIREMENTS OF THE NPDES PERMIT. THE PERMIT HAS BEEN APPLIED FOR BY THE OWNER, BUT NO LAND DISTURBANCE IS PERMITTED UNTIL THE NPDES PERMIT HAS BEEN ISSUED.
- ALL SIDEWALKS, PATHS AND OTHER PAVED AREAS SHALL BE FINISH GRADED WITH A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20) AND A MAXIMUM CROSS SLOPE OF 2% (1:50) UNLESS OTHERWISE NOTED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SITE ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE ADA 2010 STANDARDS FOR ACCESSIBLE DESIGN AND CURRENT LOCAL REQUIREMENTS.
- TO THE EXTENT THAT QUANTITIES MAY BE LISTED ON THESE PLANS, THEY ARE FOR PERMITTING PURPOSES ONLY AND NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL FORM HIS OWN CONCLUSIONS ABOUT THE QUANTITIES OF ALL MATERIALS AND OPERATIONS NECESSARY TO COMPLETE THE PROJECT.
- SWM AS-BUILT NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY, ON BEHALF OF THE OWNER, TO ENGAGE A LICENSED PROFESSIONAL ENGINEER TO CERTIFY THE STORMWATER MANAGEMENT FACILITIES AND TO PREPARE, SUBMIT AND PROCESS AS-BUILT DRAWINGS TO HOWARD COUNTY.
- HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.
- LEED NOTE: SEE SHEET C-002 FOR A COPY OF THE LATEST LEED CHECKLIST.



ADJOINER INFO

NO	INFORMATION
1	JOHNS HOPKINS UNIVERSITY MAP 41, GRID 41, PARCEL 128, LOT 2 L. 16052 F. 00240
2	JOHNS HOPKINS UNIVERSITY MAP 41, GRID 22, PARCEL 146 L. 16052 F. 00240
3	HOWARD COUNTY MARYLAND MAP 41, GRID 22, PARCEL 505, LOT 215 L. 12591 F. 00438
4	HOWARD COUNTY MARYLAND MAP 41, GRID 21, PARCEL 505, LOT 60 L. 10017 F. 00472
5	HOWARD COUNTY MARYLAND MAP 41, GRID 21, PARCEL 121, LOT 235 L. 10601 F. 00622
6	MAPLE LAWN COMMERCIAL ASSOCIATION MAP 41, GRID 21, PARCEL 121, LOT A18 L. 11428 F. 00340
7	MAPLE LAWN BLVD LLC MAP 41, GRID 21, PARCEL 121, LOT A17 L. 11118 F. 00578
8	G&R MIDTOWN LLC MAP 41, GRID 18, PARCEL 121, LOT A16 L. 08372 F. 00292
9	3N FULTON LLC MAP 41, GRID 16, PARCEL 121, LOT A15 L. 15230 F. 00179

ASSOCIATED PROJECT REVIEW FILE NUMBERS

PLANS ASSOCIATED WITH 11101 JOHNS HOPKINS ROAD: P-09-117, SDP-09-047, WP-09-039, GP-10-009, WP-10-010, 24-4614-D

PARKING TABULATION

1. REQUIRED PARKING:	SPECIFIC USE:	GROSS AREA:	RATE:	PARKING REQ'D:
OFFICE - EXISTING	215,000 SF	3.3 SPACES / 1000 SF	=	710 SPACES
OFFICE - PROPOSED	263,000 SF	3.3 SPACES / 1000 SF	=	868 SPACES
				REQUIRED PARKING = 1578 SPACES
				PROVIDED PARKING = 1142 SPACES INCLUDING 35 HANDICAP ACCESSIBLE SPACES

FOREST CONSERVATION

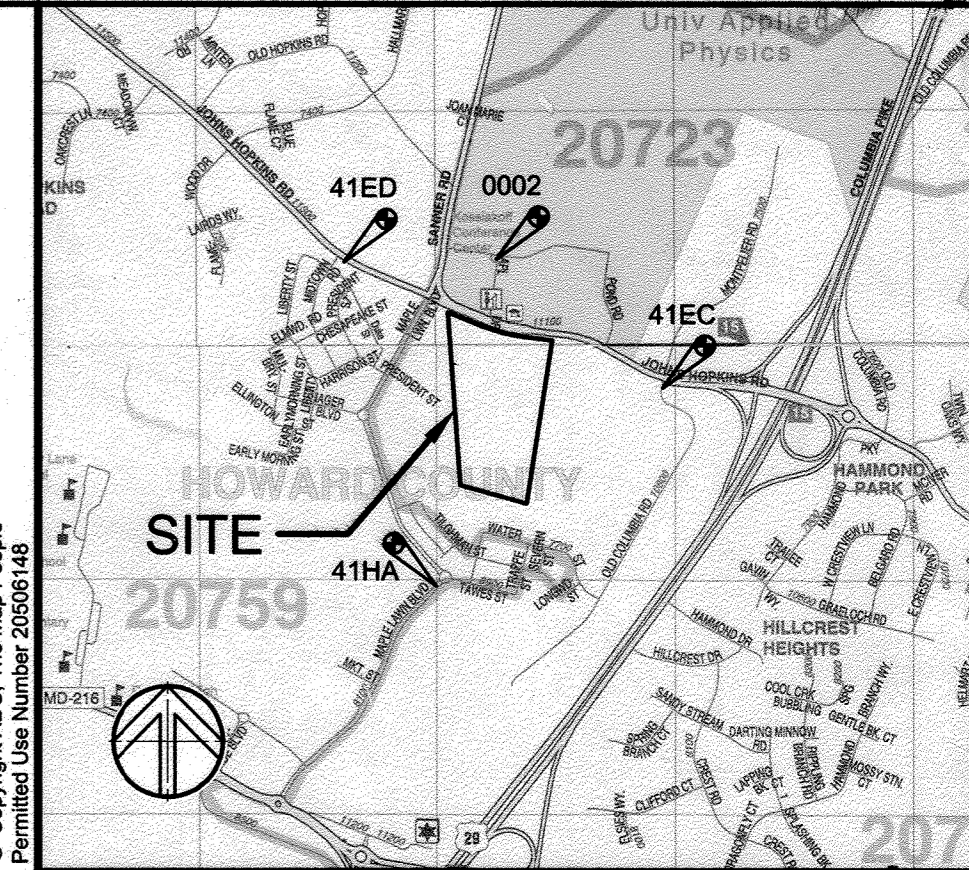
FOREST CONSERVATION REQUIREMENTS WERE PREVIOUSLY MET FOR THE DEVELOPMENT OF THE ENTIRE PROPERTY AS CONTAINED WITHIN SDP-09-047. FOREST CONSERVATION WAS ADDRESSED BY 5.58 AC OF ON-SITE RETENTION AND 3.81 AC OF ON-SITE REFORESTATION, AND THE REMAINING 0.80 AC WAS SATISFIED BY FEE-IN-LIEU. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN ANY OF THE EXISTING FOREST CONSERVATION EASEMENTS.

STORMWATER MANAGEMENT

STORMWATER MANAGEMENT REQUIREMENTS WERE PREVIOUSLY MET FOR THE DEVELOPMENT OF THE ENTIRE PROPERTY WITHIN THE STORMWATER MANAGEMENT FACILITY AS SHOWN PER SDP-09-047. THE EXISTING FACILITY ACCOMMODATES THE TOTAL OVERALL IMPERVIOUS AREA OF THE SITE. MODIFICATIONS TO THE EXISTING FACILITY ARE REQUIRED UNDER THIS SDP-17-047. PER HOWARD COUNTY, AN ECP IS NOT REQUIRED FOR SDP-17-047.

ADDRESS CHART

NO	Date	Description	MAP/GRID/PARCEL	STREET ADDRESS
1	2/5/2018	NORTH PARKING LOT ADDITION	MAP 0041/GRID 0022	11091 JOHNS HOPKINS RD, LAUREL, MD 20723
2	8/19/18	BIDDING ENTRANCE MODIFICATION	PARCEL 0300	
3	9/17/18	STORM DRAIN & SANITARY RELOCATION		
4	11/01/22	ADDITION OF BATTERY STORAGE CONTAINER		
7	9/16/22	ADDITION OF 12'X12' CONCRETE PAD FOR PROPOSED BATTERY STORAGE CONTAINER		



DATA SOURCES

EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON HOWARD COUNTY GIS, PREVIOUS SITE DEVELOPMENT PLANS AND A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED BY HANOVER LAND SERVICES JULY 2016.

SURVEY NOTE

BEARINGS, DISTANCES, COORDINATES AND ELEVATIONS AS SHOWN HEREON ARE BASED ON THE MARYLAND STATE SYSTEM OF PLANE COORDINATES, NAD '83 (2011 ADJUSTMENT) (EPOCH 2010) AND THE NAVD '88 VERTICAL SYSTEM FROM GPS OBSERVATIONS TO HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SURVEY DIVISION CONTROL STATIONS AS CITED BELOW, DURING A FIELD-RUN SURVEY BY HANOVER LAND SERVICES IN JULY 2016:

STATION	NORTH	EAST	ELEV	DESCRIPTION
41ED	544800.610	1339251.127	405.701	DISC IN CONCRETE
0002	544836.502	1340825.389	444.796	DISC IN CONCRETE
41EC	543588.801	1342628.807	430.193	DISC IN CONCRETE
41HA	541304.905	1340112.202	431.016	DISC IN CONCRETE

DRAWING INDEX

SHEET #	DRAWING TITLE
1	C-001 Cover Sheet
2	C-002 Building Elevations & Site Notes
3	C-101 Existing Conditions & Demolition Plan
4	C-102 Existing Conditions & Demolition Plan
5	C-121 Detail Reference Plan
6	C-122 Detail Reference Plan
7	C-131 Utility Plan
8	C-132 Utility Plan
9	C-201 Site Details
10	C-202 Site Details
11	C-301 Storm Drain Profiles
12	C-302 Utility Profiles
13	C-401 Grading Plan
14	C-402 Grading Plan
15	ESC-101 Existing Erosion & Sediment Control Plan
16	ESC-102 Existing Erosion & Sediment Control Plan
17	ESC-111 Proposed Erosion & Sediment Control Plan
18	ESC-112 Proposed Erosion & Sediment Control Plan
19	ESC-201 Erosion & Sediment Control Details
20	ESC-202 Erosion & Sediment Control Notes
21	ESC-203 Erosion & Sediment Control Notes
22	L-100 Overall Planting Plan
23	L-101 Planting Plan
24	L-102 Planting Plan
25	L-201 Planting Details & Notes
26	SWM-101 STORMWATER MANAGEMENT PLAN
27	SWM-201 STORMWATER MANAGEMENT DETAILS & NOTES
28	SWM-301 STORMWATER MANAGEMENT DETAILS
29	SWM-302 STORM DRAIN PROFILES
30	SWM-303 STORMWATER MANAGEMENT PLANTING PLAN
31	C-303 UTILITY PROFILES
32	CO-100 EXISTING CONDITIONS & DEMOLITION PLAN
33	C-100 PROPOSED SITE & UTILITY PLAN
34	C-400 PROPOSED SITE DETAILS

APPROVED: FOR PUBLIC WATER AND PRIVATE SEWERAGE SYSTEMS

Chief, Development Engineering Division

10-24-17 DATE

10-31-17 DATE

11-20-17 DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development

10-24-17 DATE

10-31-17 DATE

11-20-17 DATE

JOHNS HOPKINS UNIVERSITY

APPLIED PHYSICS LABORATORY BUILDING B201

11091 JOHNS HOPKINS ROAD, LAUREL, MARYLAND 20723

ATTN: BABS SHONAIYA, 443.778.2284

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PERMIT INFORMATION CHART

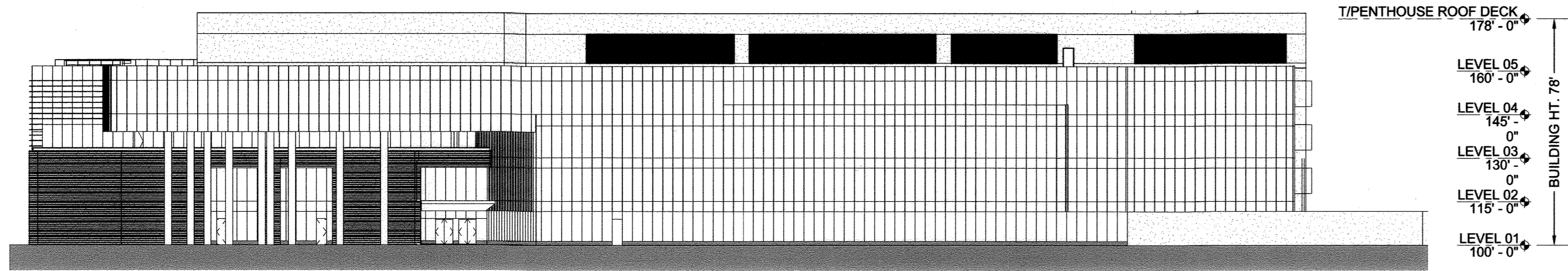
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.			
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300			
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
20928-20930	22	PEC	0041	5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	NEW OFFICE BUILDING - GREEN BUILDING		
550					

COVER SHEET

C-001

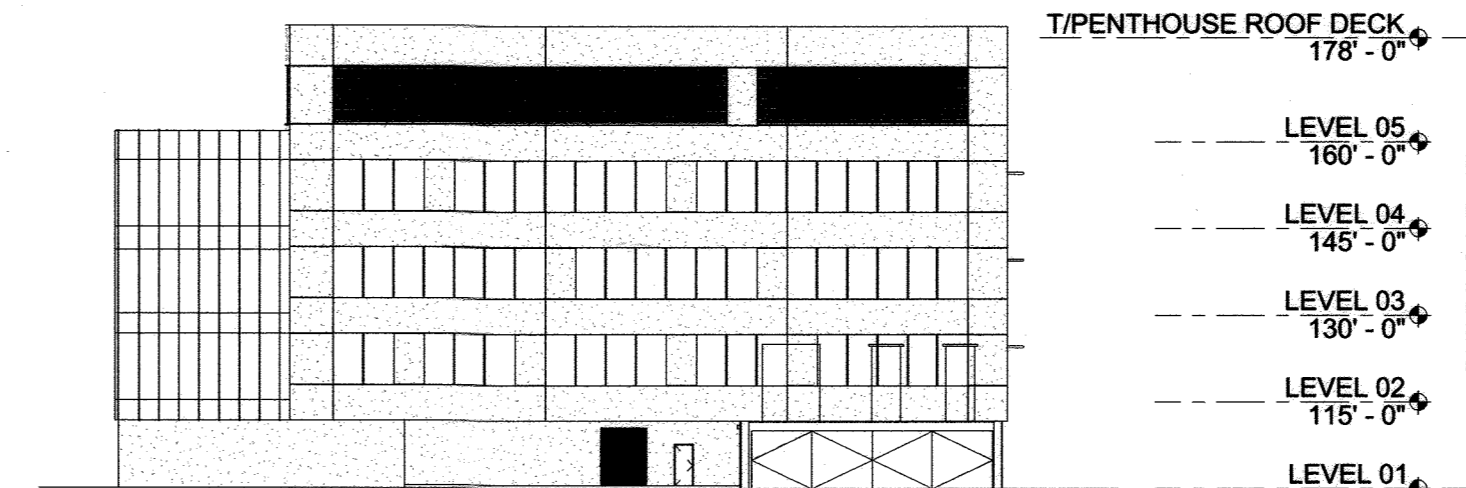
SHEET 1 OF 35

SDP-17-047



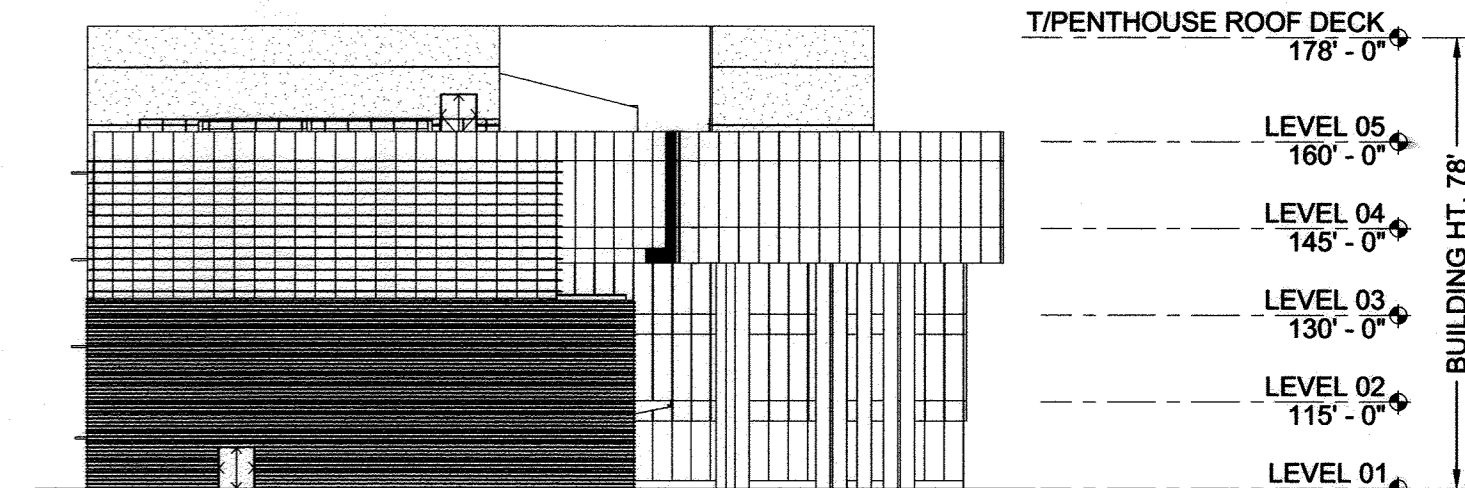
1 NORTH ELEVATION

NOT TO SCALE



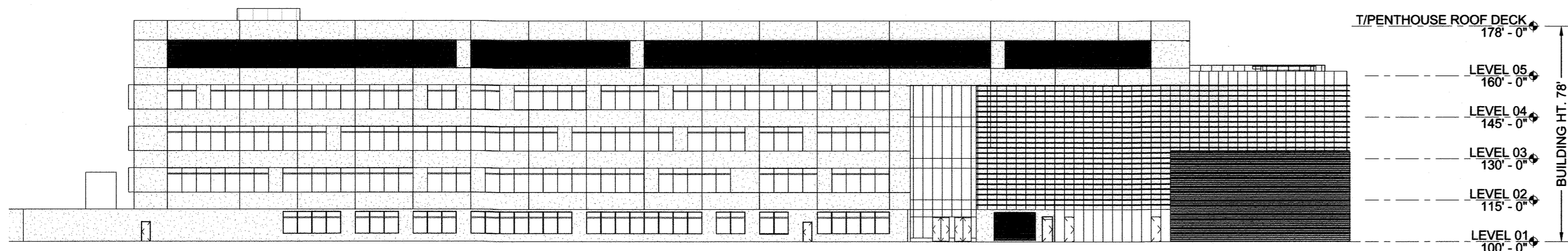
2 WEST ELEVATION

NOT TO SCALE



3 EAST ELEVATION

NOT TO SCALE



4 SOUTH ELEVATION

NOT TO SCALE

LEED 2009 for New Construction and Major Renovation Project Scorecard

Project Name: JHU AP1 Building 201
Project Address: 11091 Johns Hopkins Road, Laurel, Maryland 20723

Thomas Hanley
LEED AP BD+C

Category	Points
11 1 6 SUSTAINABLE SITES	26 Points
Prereq 1 Construction Activity Pollution Prevention	Required
Cr01.1 Site Selection	1
Cr01.2 Development Density and Community Connectivity	6
Cr01.3 Brownfield Redevelopment	1
Cr01.4 Alternative Transportation - Public Transportation Access	6
Cr01.4.2 Alternative Transportation - Bicycle Storage and Changing Rooms	1
Cr01.4.3 Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles	2
Cr01.4.4 Alternative Transportation - Parking Capacity	3
Cr01.5 Site Development - Protect or Restore Habitat	1
Cr01.5.2 Site Development - Maintain Open Space	1
Cr01.5.1 Stormwater Design - Quantity Control	1
Cr01.5.2 Stormwater Design - Quality Control	1
Cr01.7.1 Heat Island Effect - Nonroof	1
Cr01.7.2 Heat Island Effect - Roof	1
Cr01.8 Light Pollution Reduction	1
4 1 2 WATER EFFICIENCY	10 Points
Prereq 1 Water Use Reduction	Required
Cr01.1 Water Efficient Landscaping	2 to 4
Cr01.2	2
Cr01.3 Innovative Measurement Technologies	2 to 4
Cr01.4	2
Cr01.5	2
Cr01.6	4
11 2 5 ENERGY & ATMOSPHERE	75 Points
Prereq 1 Fundamental Commissioning of Building Energy Systems	Required
Prereq 2 Minimum Energy Performance	Required
Prereq 3 Fundamental Refrigerant Management	Required
Cr01.1 Outdoor Energy Performance	1 to 19
Cr01.1.1 Improve by 25% for New Buildings or 15% for Existing Building Renovations	1
Cr01.1.2 Improve by 15% for New Buildings or 10% for Existing Building Renovations	2
Cr01.1.3 Improve by 10% for New Buildings or 5% for Existing Building Renovations	3
Cr01.1.4 Improve by 5% for New Buildings or 0% for Existing Building Renovations	4
Cr01.1.5 Improve by 25% for New Buildings or 15% for Existing Building Renovations	5
Cr01.1.6 Improve by 20% for New Buildings or 10% for Existing Building Renovations	6
Cr01.1.7 Improve by 15% for New Buildings or 5% for Existing Building Renovations	7
Cr01.1.8 Improve by 10% for New Buildings or 0% for Existing Building Renovations	8
Cr01.1.9 Improve by 5% for New Buildings or 0% for Existing Building Renovations	9
Cr01.1.10 Improve by 20% for New Buildings or 10% for Existing Building Renovations	10
Cr01.1.11 Improve by 15% for New Buildings or 5% for Existing Building Renovations	11
Cr01.1.12 Improve by 10% for New Buildings or 0% for Existing Building Renovations	12
Cr01.1.13 Improve by 5% for New Buildings or 0% for Existing Building Renovations	13
Cr01.1.14 Improve by 20% for New Buildings or 10% for Existing Building Renovations	14
Cr01.1.15 Improve by 15% for New Buildings or 5% for Existing Building Renovations	15
Cr01.1.16 Improve by 10% for New Buildings or 0% for Existing Building Renovations	16
Cr01.1.17 Improve by 5% for New Buildings or 0% for Existing Building Renovations	17
Cr01.1.18 Improve by 40% for New Buildings or 20% for Existing Building Renovations	18
Cr01.1.19 Improve by 30% for New Buildings or 10% for Existing Building Renovations	19
Cr01.2 On-Site Renewable Energy	1 to 7
Cr01.2.1 1% Renewable Energy	1
Cr01.2.2 2% Renewable Energy	2
Cr01.2.3 3% Renewable Energy	3
Cr01.2.4 4% Renewable Energy	4
Cr01.2.5 5% Renewable Energy	5
Cr01.2.6 7% Renewable Energy	6
Cr01.2.7 10% Renewable Energy	7
Cr01.3 Enhanced Commissioning	2
Cr01.4 Enhanced Refrigerant Management	2
Cr01.5 Measurement and Verification	2
Cr01.6 Green Power	2
4 1 7 MATERIALS & RESOURCES	14 Points

LEED 2009 for New Construction and Major Renovation Project Scorecard

Project Name: JHU AP1 Building 201
Project Address: 11091 Johns Hopkins Road, Laurel, Maryland 20723

Category	Points
11 1 6 SUSTAINABLE SITES	26 Points
Prereq 1 Storage and Collection of Recyclables	Required
Cr01.1.1 Building Reuse - Maintain Existing Walls, Floors and Roof	1 to 2
Cr01.1.1.1 Reuse 50%	1
Cr01.1.1.2 Reuse 75%	2
Cr01.1.1.3 Reuse 90%	3
Cr01.2 Building Reuse - Maintain Interior Nonstructural Elements	1
Cr01.2.1 Construction Waste Management	1 to 2
Cr01.2.1.1 10% Recycled or Salvaged	1
Cr01.2.1.2 20% Recycled or Salvaged	2
Cr01.3 Materials Reuse	1 to 2
Cr01.3.1 Reuse 10%	1
Cr01.3.2 Reuse 15%	2
Cr01.4 Recycled Content	1 to 2
Cr01.4.1 10% of Content	1
Cr01.4.2 20% of Content	2
Cr01.5 Recycled Materials	1 to 2
Cr01.5.1 10% of Materials	1
Cr01.5.2 20% of Materials	2
Cr01.6 Regionally Sourced Materials	1
Cr01.7 Certified Wood	1
11 2 5 ENERGY & ATMOSPHERE	75 Points
Prereq 1 Minimum Indoor Air Quality Performance	Required
Prereq 2 Environmental Tobacco Smoke (ETS) Control	Required
Cr01.1 Outdoor Air Delivery Monitoring	1
Cr01.2 Increased Ventilation	1
Cr01.2.1 Construction Indoor Air Quality Management Plan - During Construction	1
Cr01.2.2 Construction Indoor Air Quality Management Plan - Before Occupancy	1
Cr01.4.1 Low-Emitting Materials - Adhesives and Sealants	1
Cr01.4.2 Low-Emitting Materials - Paints and Coatings	1
Cr01.4.3 Low-Emitting Materials - Flooring Systems	1
Cr01.4.4 Low-Emitting Materials - Composite Wood and Agglomer Products	1
Cr01.5 Indoor Chemical and Pollutant Source Control	1
Cr01.6 Controllability of Systems - Lighting	1
Cr01.6.1 Controllability of Systems - Thermal Comfort	1
Cr01.7 Thermal Comfort - Design	1
Cr01.7.2 Thermal Comfort - Verification	1
Cr01.8 Daylight and Views - Daylight	1
Cr01.8.2 Daylight and Views - Views	1
11 2 5 ENERGY & ATMOSPHERE	75 Points
Prereq 1 Innovation in Design	Required
Cr01.1 Innovation in Design	1 to 5
Cr01.1.1 LEED v2.2 Alternative Transportation - Bicycle Storage & Changing Rooms	1
Cr01.1.2 LEED v2.2 Construction Waste Management - 95% Diversion	1
Cr01.1.3 Low-Memory Lamps	1
Cr01.1.4 Green Cleaning	1
Cr01.1.5 Green Education	1
Cr01.1.6 LEED Accredited Professional	1
11 2 5 ENERGY & ATMOSPHERE	75 Points
Prereq 1 Regional Priority	Required
Cr01.1 Regional Priority	1 to 4
Cr01.1.1 LEED v2.2 Alternative Transportation - Public Transportation Access	1
Cr01.1.2 LEED v2.2 Site Development - Protect or Restore Habitat	1
Cr01.1.3 LEED v2.2 Stormwater Design - Quality Control	1
Cr01.1.4 LEED v2.2 Energy Performance - 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance	1
11 2 5 ENERGY & ATMOSPHERE	75 Points
Cr01.1 Regional Priority	1 to 4
Cr01.1.1 LEED v2.2 Alternative Transportation - Public Transportation Access	1
Cr01.1.2 LEED v2.2 Site Development - Protect or Restore Habitat	1
Cr01.1.3 LEED v2.2 Stormwater Design - Quality Control	1
Cr01.1.4 LEED v2.2 Energy Performance - 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance	1

Cr01.1.1 LEED v2.2 Alternative Transportation - Public Transportation Access
Cr01.1.2 LEED v2.2 Site Development - Protect or Restore Habitat
Cr01.1.3 LEED v2.2 Stormwater Design - Quality Control
Cr01.1.4 LEED v2.2 Energy Performance - 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance

Cr01.1.1 LEED v2.2 Alternative Transportation - Public Transportation Access
Cr01.1.2 LEED v2.2 Site Development - Protect or Restore Habitat
Cr01.1.3 LEED v2.2 Stormwater Design - Quality Control
Cr01.1.4 LEED v2.2 Energy Performance - 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance, 40% LEED v2.2 Energy Performance

NOT TO SCALE

5 LEED CHECKLIST

APPROVED: DEPARTMENT OF PLANNING & ZONING

Chad...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Vet...
CHIEF, DIVISION OF LAND DEVELOPMENT

V...
DIRECTOR

DATE: 10-24-17
DATE: 10-31-17
DATE: 11-20-17

JOHNS HOPKINS UNIVERSITY

APPLIED PHYSICS LABORATORY
BUILDING B201
11091 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723
ATTN: BABS SHONAYA, 443.778.2284

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No.	Date	Description

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-AP1 SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	-	NEW OFFICE BUILDING - GREEN BUILDING	

BUILDING ELEVATIONS & SITE NOTES

C-002

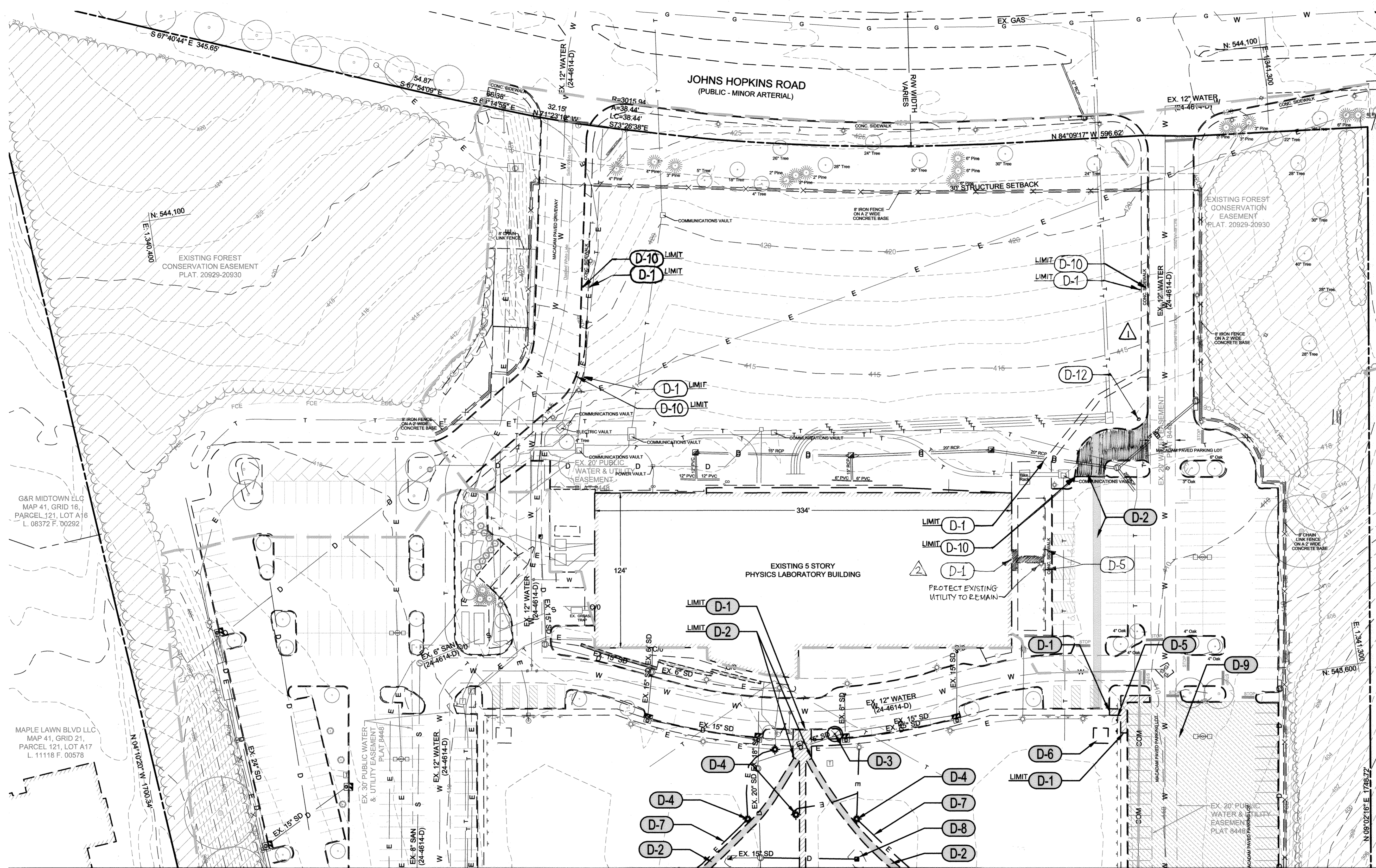
SHEET 2 OF 25

LIGHTING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMP DATA			VOLTS	REMARKS
				QTY.	TYPE	TOTAL WATTS		
☉	LED PARKING LOT POLE - 1 HEAD	GE LIGHTING	HAPCO ARSA-16DB5AD	12	LED	78	277	EXTERIOR PARKING LOT LIGHTING
☉☉	LED PARKING LOT POLE - 2 HEADS	GE LIGHTING	HAPCO ARSA-16DO5AD	13	LED	52	277	EXTERIOR PARKING LOT LIGHTING
◆	EXTERIOR SQUARE LED BOLLARD	GE LIGHTING	ANNAPOLIS	103	LED	41	UNIVERSAL	EXTERIOR SIDEWALK LIGHTING

NOTE:

OUTDOOR LIGHTING WILL COMPLY WITH THE STANDARDS SPECIFIED WITHIN SECTION 134.0 OF THE ZONING REGULATIONS.



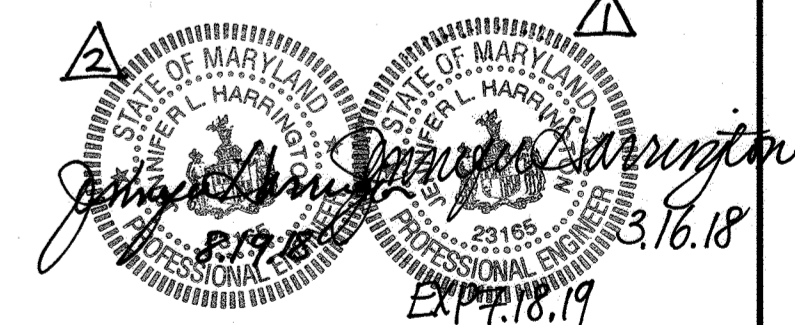
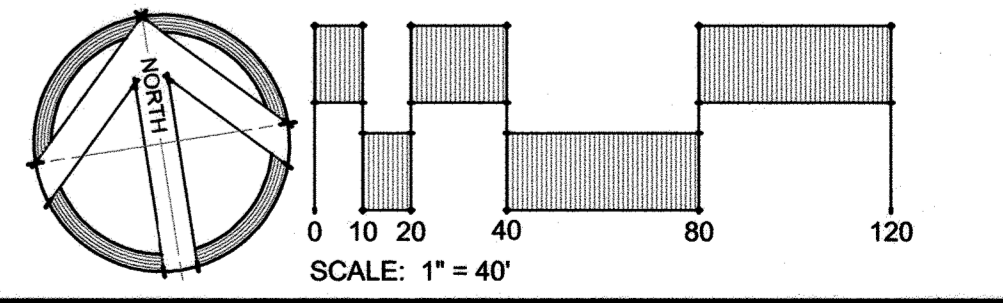
LEGEND

	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING CONTOURS
	EXISTING TREELINE TO REMAIN
	EXISTING TREES TO REMAIN
	EXISTING TREES TO BE REMOVED
	EXISTING SHRUBS TO REMAIN
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK TO REMAIN
	EXISTING ROAD TO REMAIN
	EXISTING CURB TO REMAIN
	EXISTING BITUMINOUS PAVING TO BE REMOVED
	EXISTING CONCRETE PAVING TO BE REMOVED
	EXISTING BITUMINOUS PAVING TO BE MILLED
	EX. 15" SD TO REMAIN
	EX. 15" SD TO BE REMOVED
	EX. 6" WATER TO REMAIN
	EX. 6" WATER TO BE REMOVED
	EX. 8" SAN TO REMAIN
	EX. 8" SAN TO BE REMOVED
	EX. TELE TO REMAIN
	EX. TELE TO BE REMOVED
	EX. ELEC TO REMAIN
	EX. ELEC TO BE REMOVED
	EXISTING LIGHTING TO REMAIN
	EXISTING LIGHTING TO BE REMOVED
	EXISTING COMMUNICATIONS TO REMAIN
	EX. UNKNOWN UTILITY TO REMAIN
	EX. UNKNOWN UTILITY TO BE REMOVED
	EXISTING FENCE TO REMAIN
	EXISTING BUILDING TO REMAIN
	LIMIT OF FIELD RUN SURVEY
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED

MATCHLINE - SEE DRAWING C-102

DEMOLITION NOTES (THESE NOTES APPLY TO THIS DRAWING ONLY)

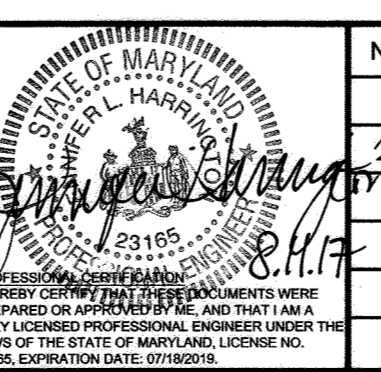
- D-1** SAW CUT AT LIMITS SHOWN AND REMOVE CONCRETE WALK AND BASE MATERIAL.
- D-2** SAW CUT AT LIMITS SHOWN AND REMOVE BITUMINOUS PAVING AND BASE MATERIAL.
- D-3** REMOVE TREE, STUMP AND MAJOR ROOTS. REPLACE WITH APPROVED COMPACTED FILL.
- D-4** REMOVE AND SALVAGE LIGHT FIXTURE AND POLE. AT OWNER'S DISCRETION, STORE ON SITE FOR REUSE OR RETURN TO OWNER. MAINTAIN EXISTING LIGHTING CONDUITS DURING FIXTURE REMOVAL.
- D-5** REMOVE AND SALVAGE SIGN AND POST. AT OWNER'S DISCRETION, STORE ON SITE FOR REUSE OR RETURN TO OWNER.
- D-6** REMOVE PAVERS AND BASE MATERIAL.
- D-7** ABANDON ELECTRIC CONDUIT/DUCTBANK IN PLACE. COMPLETELY REMOVE AS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION. (SEE ELECTRICAL PLANS).
- D-8** REMOVE INLET STRUCTURE AND PIPES. BULKHEAD OPENINGS OF REMOVED OR ABANDONED PIPES AT EXISTING STRUCTURES TO REMAIN.
- D-9** MILL AND OVERLAY BITUMINOUS PAVING.
- D-10** SAW CUT AT LIMITS, AND REMOVE CONCRETE CURB.
- D-12** RELOCATE EXISTING CAMERAS AND CAMERA POLE.



APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division
 10/24/17 DATE
 10/31/17 DATE
 11/20/17 DATE

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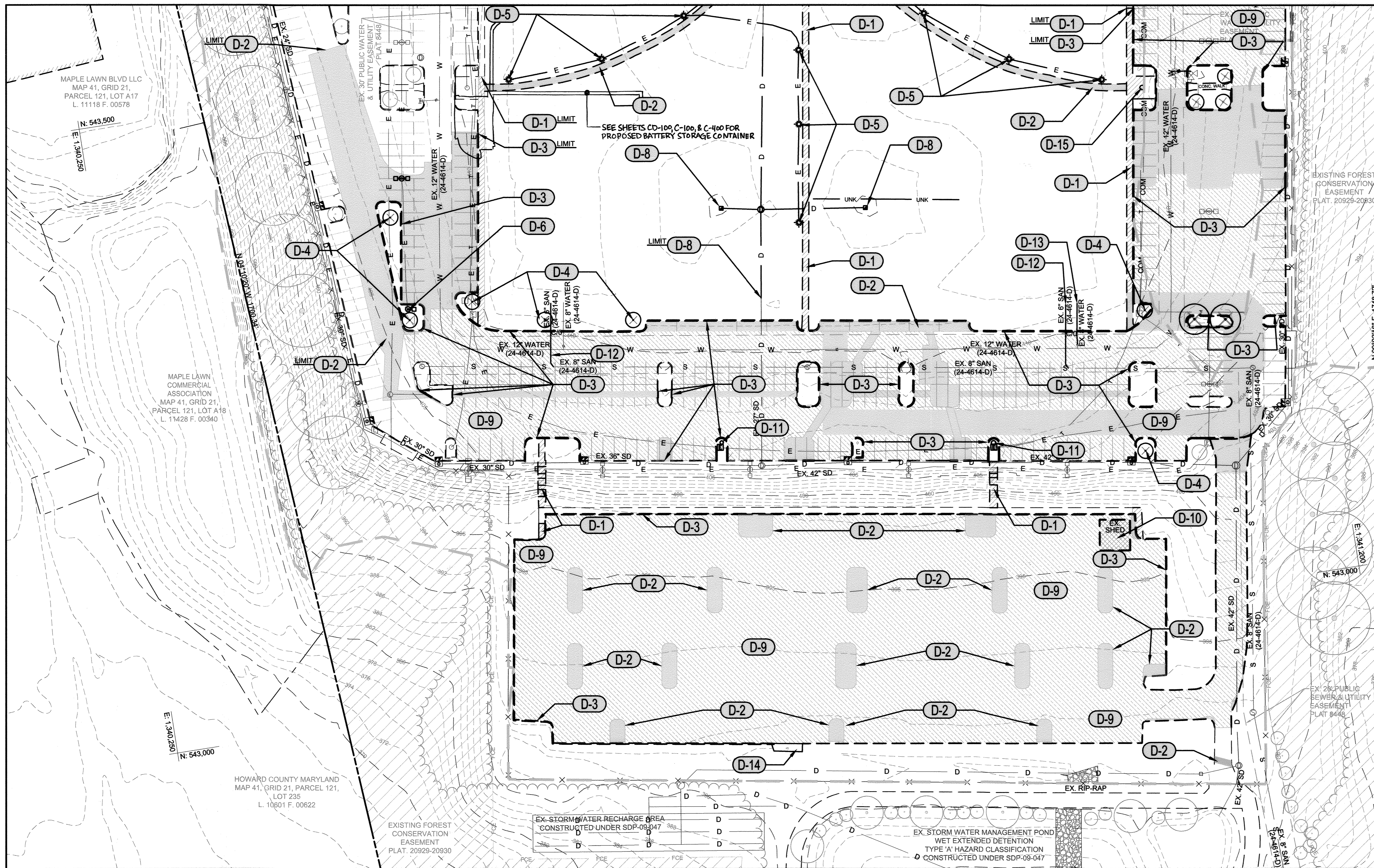
No.	Date	Description
1	2/5/2016	NORTH PARKING LOT ADDITION
2	8/19/18	EAST ENTRANCE MODIFICATION

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	--	NEW OFFICE BUILDING - GREEN BUILDING	

EXISTING CONDITIONS & DEMOLITION PLAN
C-101
 SHEET 3 OF 3
 SDP-17-047

MATCHLINE - SEE DRAWING C-101

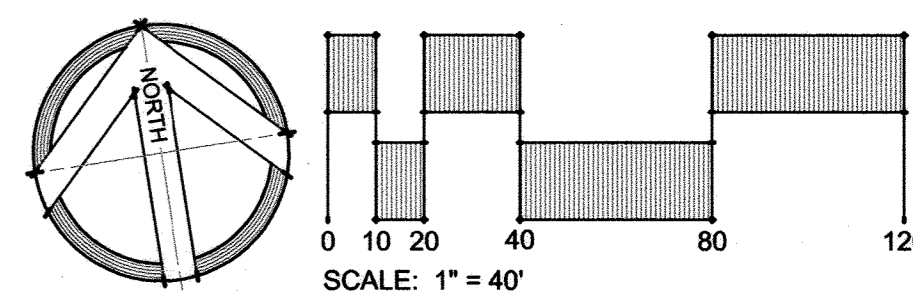


LEGEND

- PROPERTY LINE
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING CONTOURS
- EXISTING TREELINE TO REMAIN
- EXISTING TREES TO REMAIN
- EXISTING TREES TO BE REMOVED
- EXISTING SHRUBS TO REMAIN
- EXISTING RETAINING WALL TO REMAIN
- EXISTING WALK TO REMAIN
- EXISTING ROAD TO REMAIN
- EXISTING CURB TO REMAIN
- EXISTING BITUMINOUS PAVING TO BE REMOVED
- EXISTING CONCRETE PAVING TO BE REMOVED
- EXISTING BITUMINOUS PAVING TO BE MILLED
- EX. 15" SD TO REMAIN
- EX. 18" SD TO BE REMOVED
- EX. 6" WATER TO REMAIN
- EX. 6" WATER TO BE REMOVED
- EX. 8" SAN TO REMAIN
- EX. 8" SAN TO BE REMOVED
- EX. TELE TO REMAIN
- EX. TELE TO BE REMOVED
- EX. 8" ELECTRIC TO REMAIN
- EX. 8" ELECTRIC TO BE REMOVED
- EXISTING LIGHTING TO REMAIN
- EXISTING LIGHTING TO BE REMOVED
- EXISTING COMMUNICATIONS TO REMAIN
- EX. UNKNOWN UTILITY
- EX. UNKNOWN UTILITY TO BE REMOVED
- EXISTING FENCE TO REMAIN
- EXISTING BUILDING TO REMAIN
- LIMIT OF FIELD RUN SURVEY
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED

DEMOLITION NOTES (THESE NOTES APPLY TO THIS DRAWING ONLY)

- D-1** SAW CUT AT LIMITS SHOWN AND REMOVE CONCRETE WALK AND BASE MATERIAL.
- D-2** SAW CUT AT LIMITS SHOWN AND REMOVE BITUMINOUS PAVING AND BASE MATERIAL.
- D-3** SAW CUT AT LIMITS SHOWN, AND REMOVE CONCRETE CURB.
- D-4** REMOVE TREE, STUMP AND MAJOR ROOTS. REPLACE WITH APPROVED COMPACTED FILL.
- D-5** REMOVE AND SALVAGE LIGHT FIXTURE AND POLE. AT OWNER'S DISCRETION, STORE ON SITE FOR REUSE OR RETURN TO OWNER. MAINTAIN EXISTING LIGHTING CONDUITS DURING FIXTURE REMOVAL.
- D-6** REMOVE AND SALVAGE SIGN AND POST. AT OWNER'S DISCRETION, STORE ON SITE FOR REUSE OR RETURN TO OWNER.
- D-7** ABANDON ELECTRIC CONDUIT/DUCTBANK IN PLACE, COMPLETELY REMOVE AS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION. (SEE ELECTRICAL PLANS).
- D-8** REMOVE INLET STRUCTURE AND PIPES. BULKHEAD OPENINGS OF REMOVED OR ABANDONED PIPES AT EXISTING STRUCTURES TO REMAIN.
- D-9** MILL AND OVERLAY BITUMINOUS PAVING.
- D-10** RELOCATE EXISTING SHED. (SEE SHEET C-112 FOR PROPOSED LOCATION).
- D-11** RELOCATE EXISTING EMERGENCY TELEPHONE. (SEE SHEET C-112 FOR PROPOSED LOCATION).
- D-12** ABANDON SANITARY IN ACCORDANCE WITH HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- D-13** ABANDON WATER IN ACCORDANCE WITH HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- D-14** REMOVE EXISTING RIPRAP.
- D-15** RELOCATE EXISTING CAMERAS AND CAMERA POLE.



PURPOSE STATEMENT: ADDITION OF BATTERY STORAGE CONTAINER, REMOVAL OF 2 PARKING SPACES, AND UPDATED PLANTING PLAN AS BUILT.

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division
 10-23-17 DATE
 10-31-17 DATE
 11-20-17 DATE
 Director

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
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No.	Date	Description
4	10/10/21	ADDITION OF BATTERY STORAGE CONTAINER, UPDATED PLANTING PLAN AS-BUILT

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. / ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	CENSUS TRACT	
550	--	6051.02	
PROPERTY IMPROVEMENT		NEW OFFICE BUILDING - GREEN BUILDING	

EXISTING CONDITIONS & DEMOLITION PLAN
C-102
 SHEET 4 OF 5
 SDP-17-047

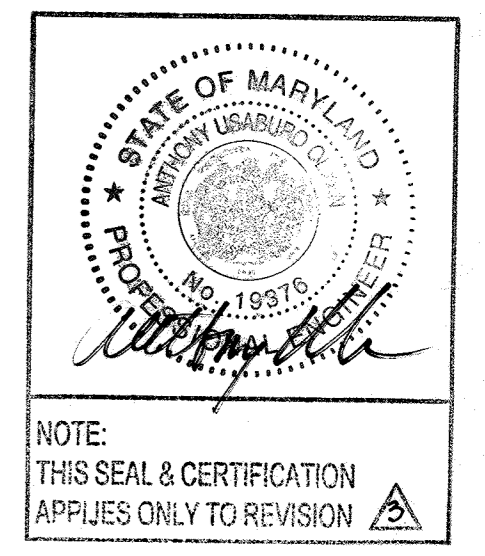


PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 49142, EXPIRATION DATE: 05/31/21

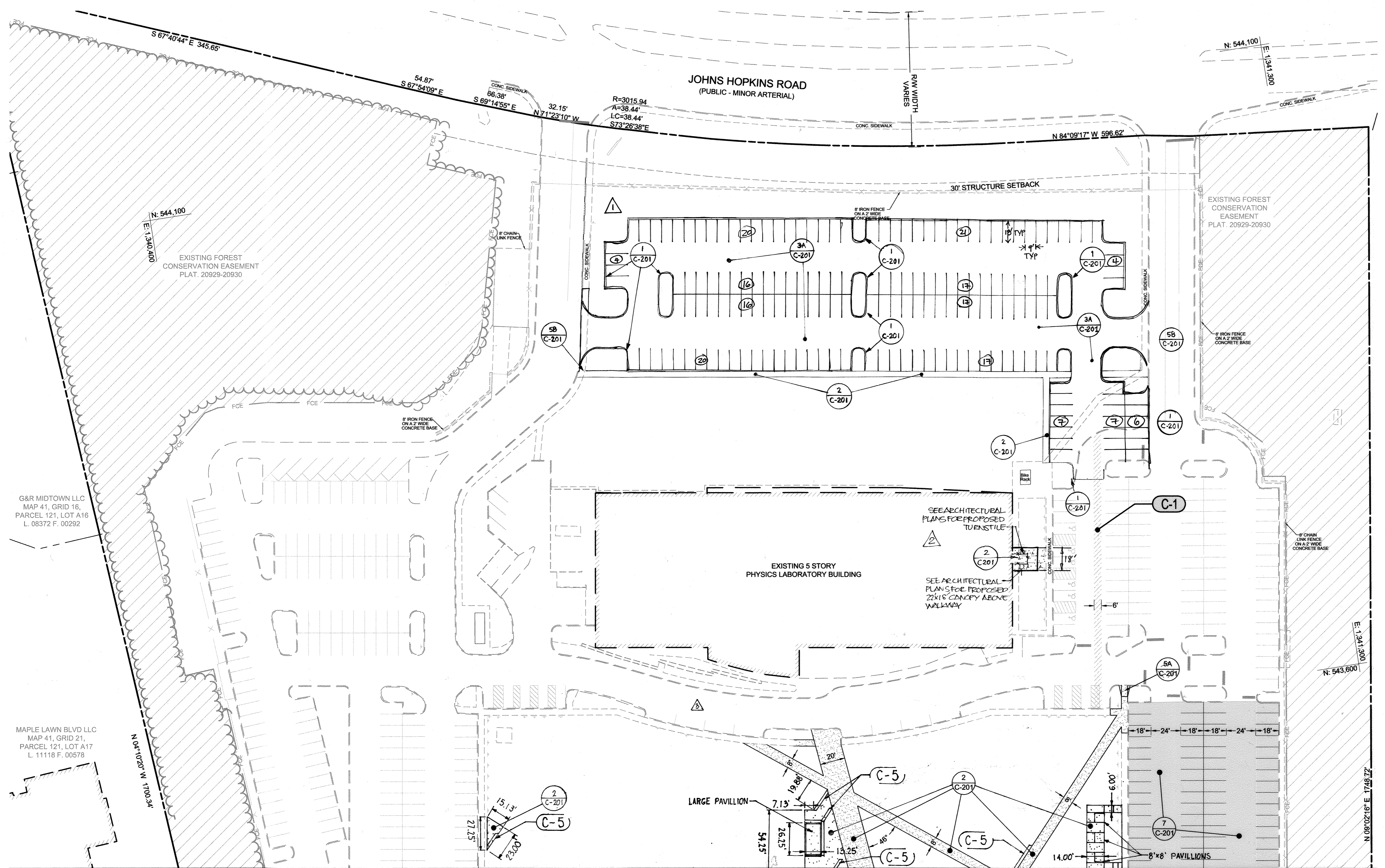
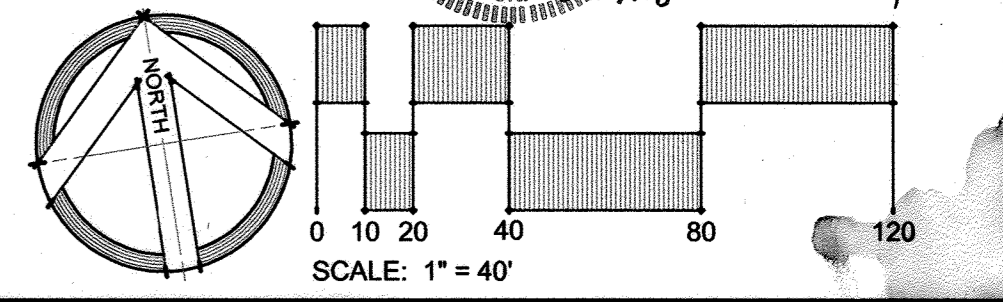
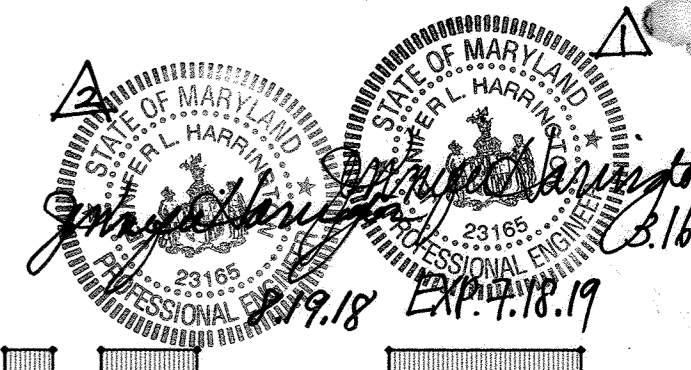
LEGEND

- PROPERTY LINE
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING RETAINING WALL TO REMAIN
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING SIGN
- PROPOSED CONCRETE WALK
- PROPOSED BITUMINOUS PAVING
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED BITUMINOUS MILL & OVERLAY
- PROPOSED VEHICULAR PAVERS
- PROPOSED CURB
- PROPOSED SITE WALL
- PROPOSED OVERHANG
- PROPOSED BUILDING
- PROPOSED SIGN
- PROPOSED PAVEMENT MARKING

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19376
 EXPIRATION DATE: 9/22/21



NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION



MATCHLINE - SEE DRAWING C-122

CONSTRUCTION NOTES (THESE NOTES APPLY TO THIS DRAWING ONLY)

(C-5) 1'-4" HT x 2'-0" W STEEL REINFORCED CAST-IN-PLACE CONCRETE SEAT WALL WITH CONTINUOUS STEEL REINFORCED C.I.P. CONCRETE SPREAD FOOTING TO 30" MIN. DEPTH BELOW FINISHED GRADE. LENGTH VARIES SEE PLANS

(C-1) SEE HOWARD COUNTY STANDARD DETAIL G-4.01 FOR UTILITY TRENCH ROADWAY REPAVING IN THIS AREA.

GENERAL NOTES

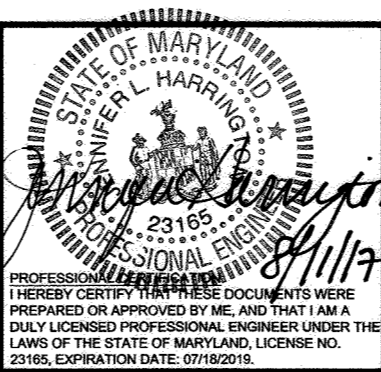
- UNLESS OTHERWISE SHOWN ON PLAN, CONCRETE WALKS SHALL BE 5' WIDE.
- UNLESS OTHERWISE SHOWN ON PLAN, ALL CURB RADII SHALL BE 5'.
- UNLESS OTHERWISE SHOWN ON PLAN, ALL WALK RADII SHALL BE 3'.

Z:\1616005-HU\A.P.A. Building 201 Design Services\04-DWG-C-121 Detail Reference Plan.dwg-121 Aug 11, 2017 02:07pm jh

APPROVED: DEPARTMENT OF PLANNING & ZONING
 [Signature] 10-24-17
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 10-31-17
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 11-20-17
 DIRECTOR DATE

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
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No.	Date	Description
1	2/8/2016	NORTH PARKING LOT ADDITION
2	8/19/18	B200 EAST ENTRANCE MODIFICATION
3	7/21	ADD PAVILIONS

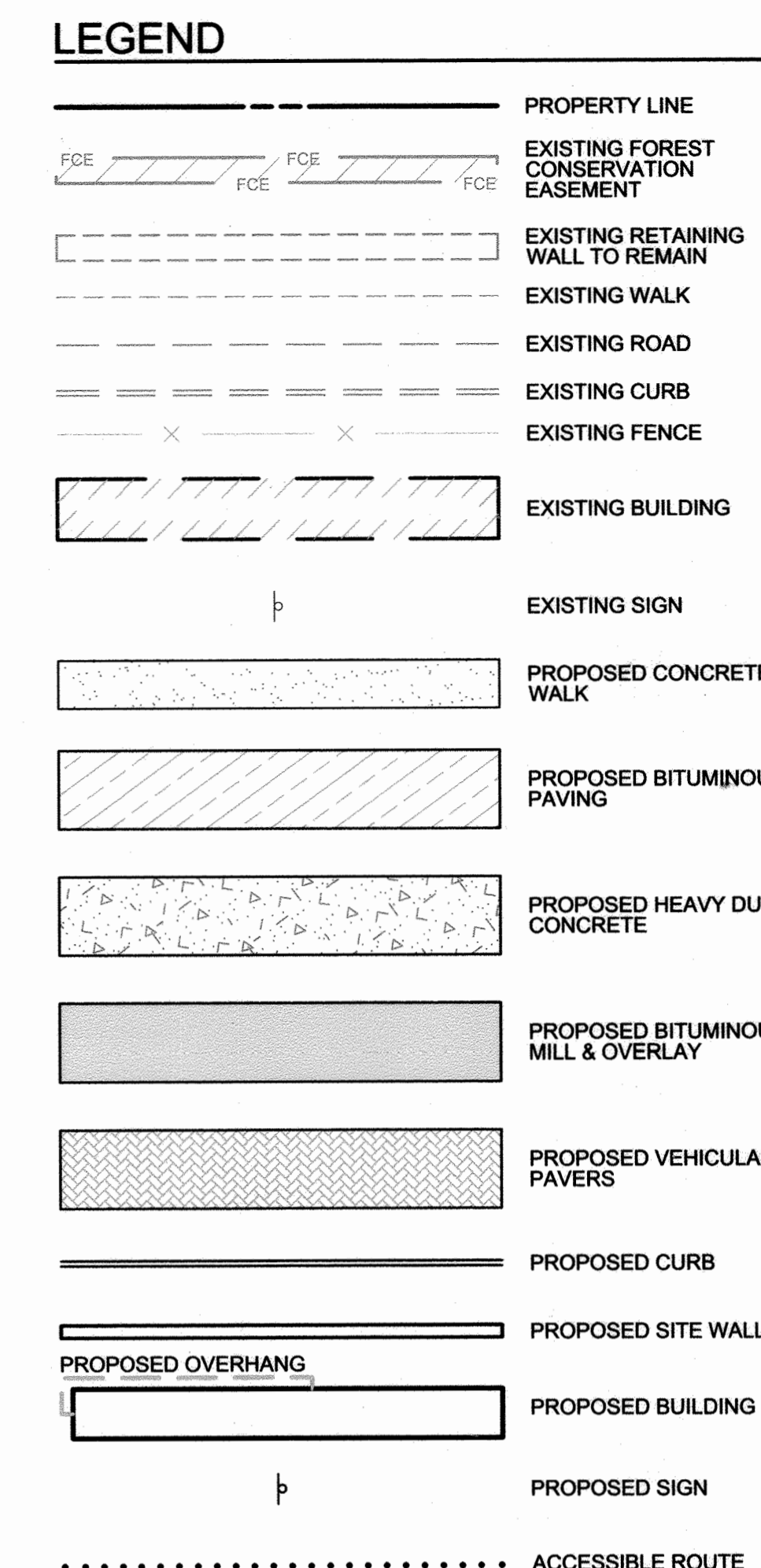
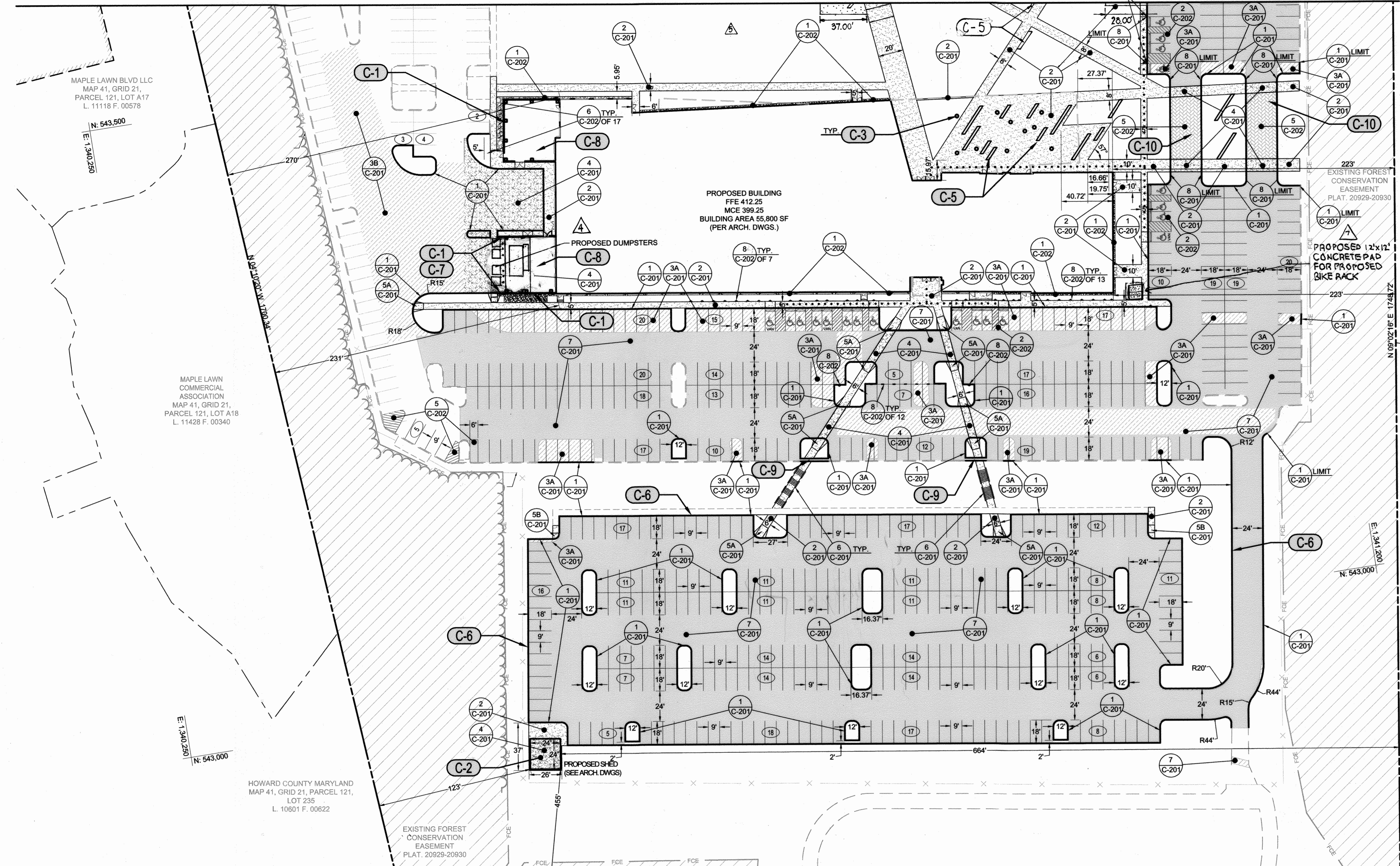
ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT CENSUS TRACT
20928-20930	22	PEC	0041 5th 6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	-	NEW OFFICE BUILDING - GREEN BUILDING	

DETAIL REFERENCE PLAN
C-121
 SHEET 5 OF 5
 SDP-17-047

MATCHLINE - SEE DRAWING C-121

BEGIN TRANSITION TO FULL HEIGHT CURB



- ### CONSTRUCTION NOTES
- (THESE NOTES APPLY TO THIS DRAWING ONLY)
- C-1** PROPOSED ENCLOSURE WALLS. (SEE ARCHITECTURAL PLANS). SEE DETAIL 7 ON SHEET C-202.
 - C-2** RELOCATED VINYL SHED.
 - C-3** PROPOSED BUILDING COLUMNS. (SEE ARCHITECTURAL PLANS).
 - C-4** STRIPE OR RESTRIPE PARKING AREA.
 - C-5** 1'-4" HT x 2'-0" W STEEL REINFORCED CAST-IN-PLACE CONCRETE SEAT WALL WITH CONTINUOUS STEEL REINFORCED C.I.P. CONCRETE SPREAD FOOTING TO 3" MIN. DEPTH BELOW FINISHED GRADE. LENGTH VARIES - SEE PLAN.
 - C-6** MAINTAIN EXISTING EDGE OF PAVING.
 - C-7** SOLID WASTE DOUBLE CONTAINER ENCLOSURE HOWARD COUNTY DETAIL R-8.05
 - C-8** SLAB ON GRADE. (SEE STRUCTURAL PLANS - MECHANICAL COURTYARD PLANS)
 - C-9** ZURN Z723 FRAME & GRATE SYSTEM P874-18-HPD GRATE
 - C-10** PROPOSED FLAT TOP SPEED TABLE CALMING DEVICE.

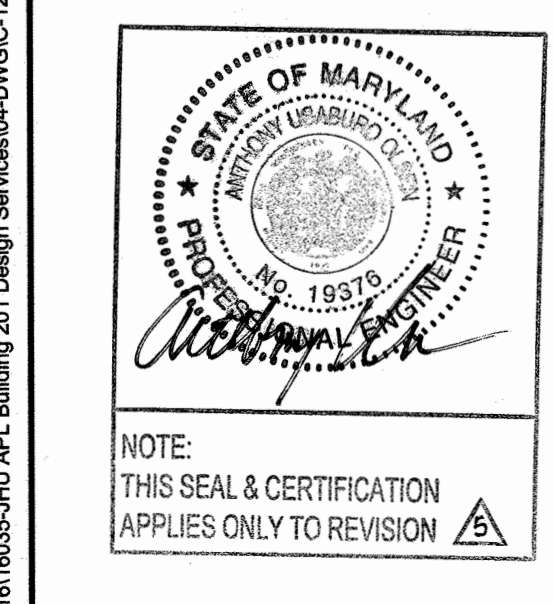
- ### GENERAL NOTES
- UNLESS OTHERWISE SHOWN ON PLAN, CONCRETE WALKS SHALL BE 5' WIDE.
 - UNLESS OTHERWISE SHOWN ON PLAN, ALL CURB RADII SHALL BE 5'.
 - UNLESS OTHERWISE SHOWN ON PLAN, ALL WALK RADII SHALL BE 3'.

PURPOSE STATEMENT (9/16/22): CONSTRUCT A 12'x12' CONCRETE PAD FOR PROPOSED BIKE RACK

LANDCOVER SUMMARY
 LIMITS OF DISTURBANCE.....196 SF
 EX. IMPERVIOUS AREA.....05F
 PROP. IMPERVIOUS AREA.....144 SF
 CUT.....SCY
 FILL.....OCY

PROFESSIONAL CERTIFICATION.
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19276
 EXPIRATION DATE: 9/22/21

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19112. EXPIRATION DATE: 05/31/21



APPROVED: DEPARTMENT OF PLANNING & ZONING

Johns Hopkins University
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

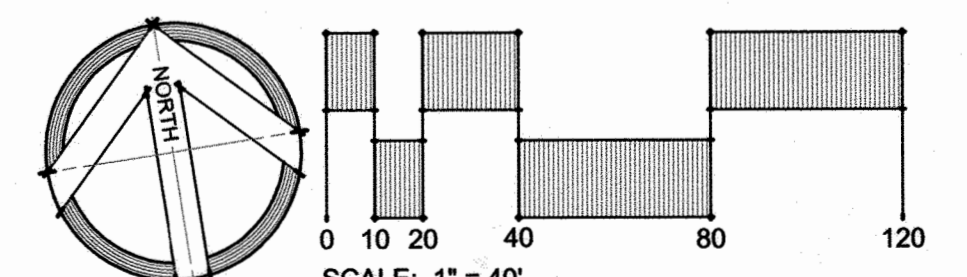
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No.	Date	Description
8/02/19		UTILITY YARD UPDATES
5	7/21	ADD PAVILIONS
7	9/16/22	ADDITION OF 12'x12' CONCRETE PAD FOR PROPOSED BIKE RACK

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO./ELECT DISTRICT
20928-20930	22	PEC	0041 5th
CENSUS TRACT	6051.02		
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	-	NEW OFFICE BUILDING - GREEN BUILDING	

DETAIL REFERENCE PLAN
C-122
 SHEET 6 OF 26
 SDP-17-047

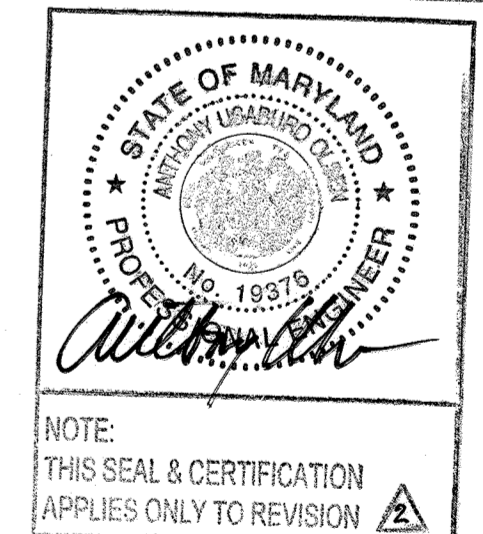


Z:\16\6035-JHU-APL-Building 201 Design Services\04-DWG-C-122 Detail Reference Plan.dwg-122 Aug 11, 2017 02:38pm jph

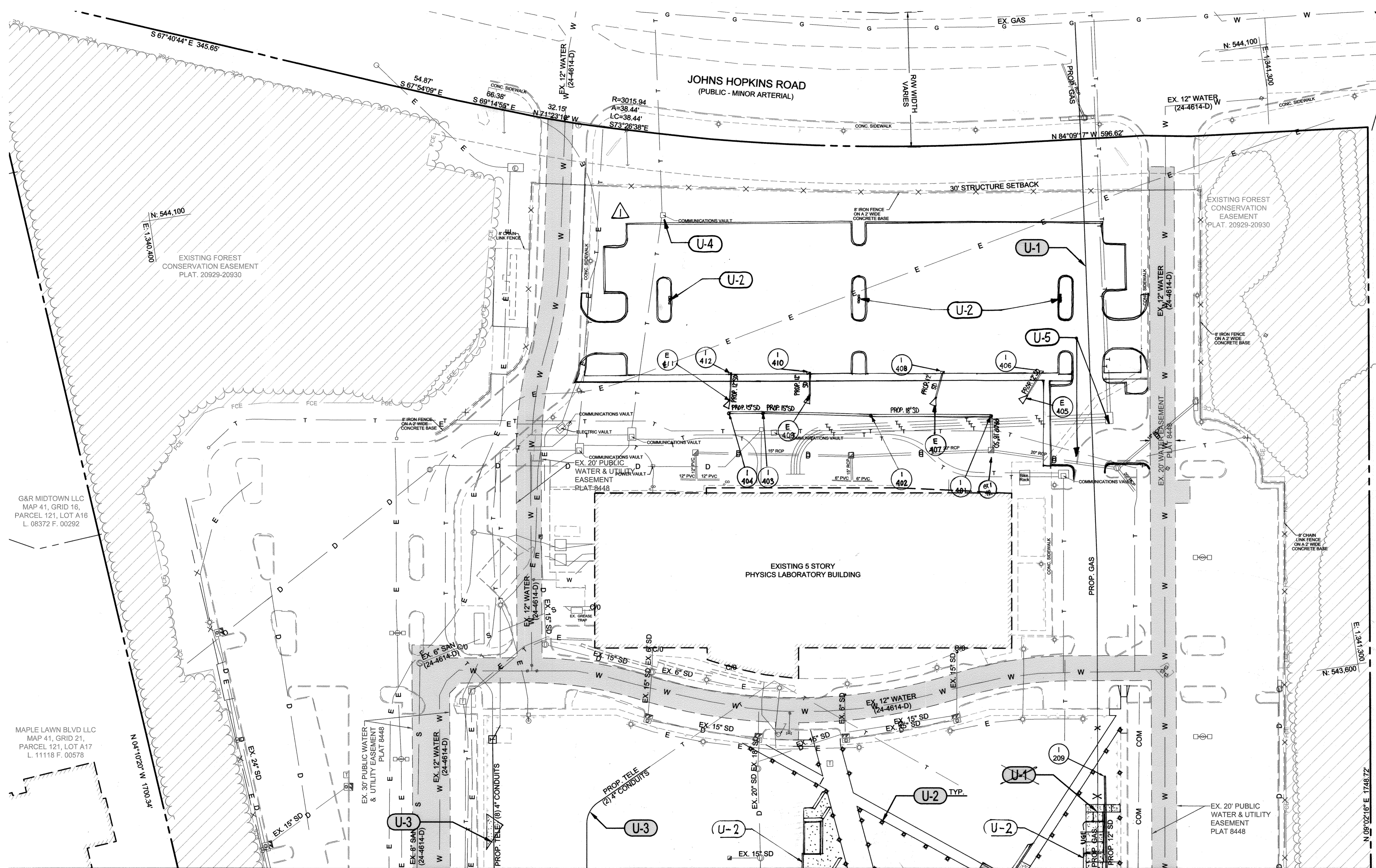
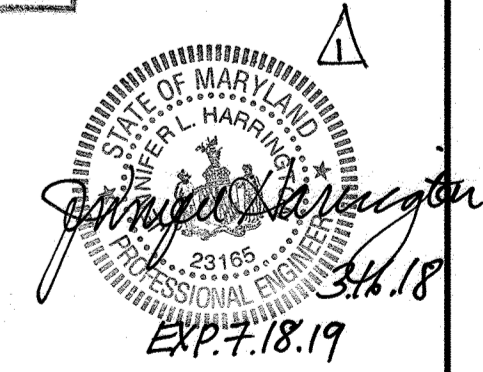
LEGEND

- PROPERTY LINE
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING RETAINING WALL TO REMAIN
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING TELEPHONE
- EXISTING ELECTRIC
- EXISTING LIGHTING
- EXISTING COMMUNICATIONS
- EXISTING UNKNOWN UTILITY
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING SIGN
- PROPOSED CONCRETE WALK
- PROPOSED CURB
- PROPOSED SITE WALL
- PROPOSED BUILDING
- PROPOSED SIGN
- PROPOSED 15" SD
- PROPOSED 6" WATER
- PROPOSED 8" SAN
- PROPOSED 2" GAS
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- PROPOSED LIGHTING
- EXISTING UTILITY EASEMENT

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12976
 EXPIRATION DATE: 9/22/21



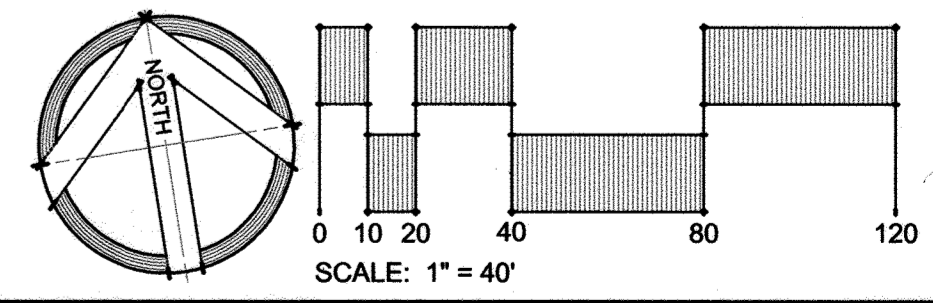
NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION



MATCHLINE - SEE DRAWING C-132

UTILITY NOTES (THESE NOTES APPLY TO THIS DRAWING ONLY)

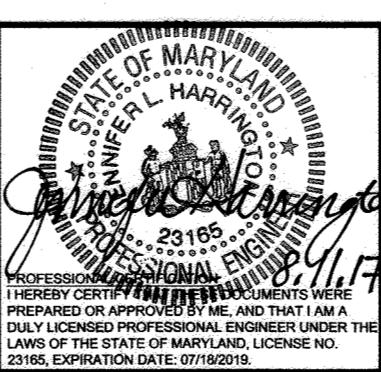
- U-1** PROPOSED GAS SERVICE. (SEE MECHANICAL DRAWINGS). COORDINATE WITH BGE.
- U-2** PROPOSED ELECTRIC SERVICE. (SEE ELECTRICAL DRAWINGS). COORDINATE WITH BGE.
- U-3** PROPOSED TELECOMM SERVICE. (SEE ELECTRICAL DRAWINGS).
- U-4** PROPOSED OUTDOOR LIGHTING WILL COMPLY WITH THE STANDARDS SPECIFIED WITHIN SECTION 134.0 OF THE ZONING REGULATIONS.
- U-5** ADJUST STRUCTURE TO PROPOSED GRADE. PROVIDE TRAFFIC BEARING STRUCTURE.



APPROVED: DEPARTMENT OF PLANNING & ZONING
 [Signature] 10-24-17
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 10-3-17
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 11-20-17
 DIRECTOR DATE

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAYA, 443.778.2284

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No.	Date	Description
1	2/2/2016	NORTH PARKING LOT ADDITION
2	7/2/21	ADD PAVILIONS

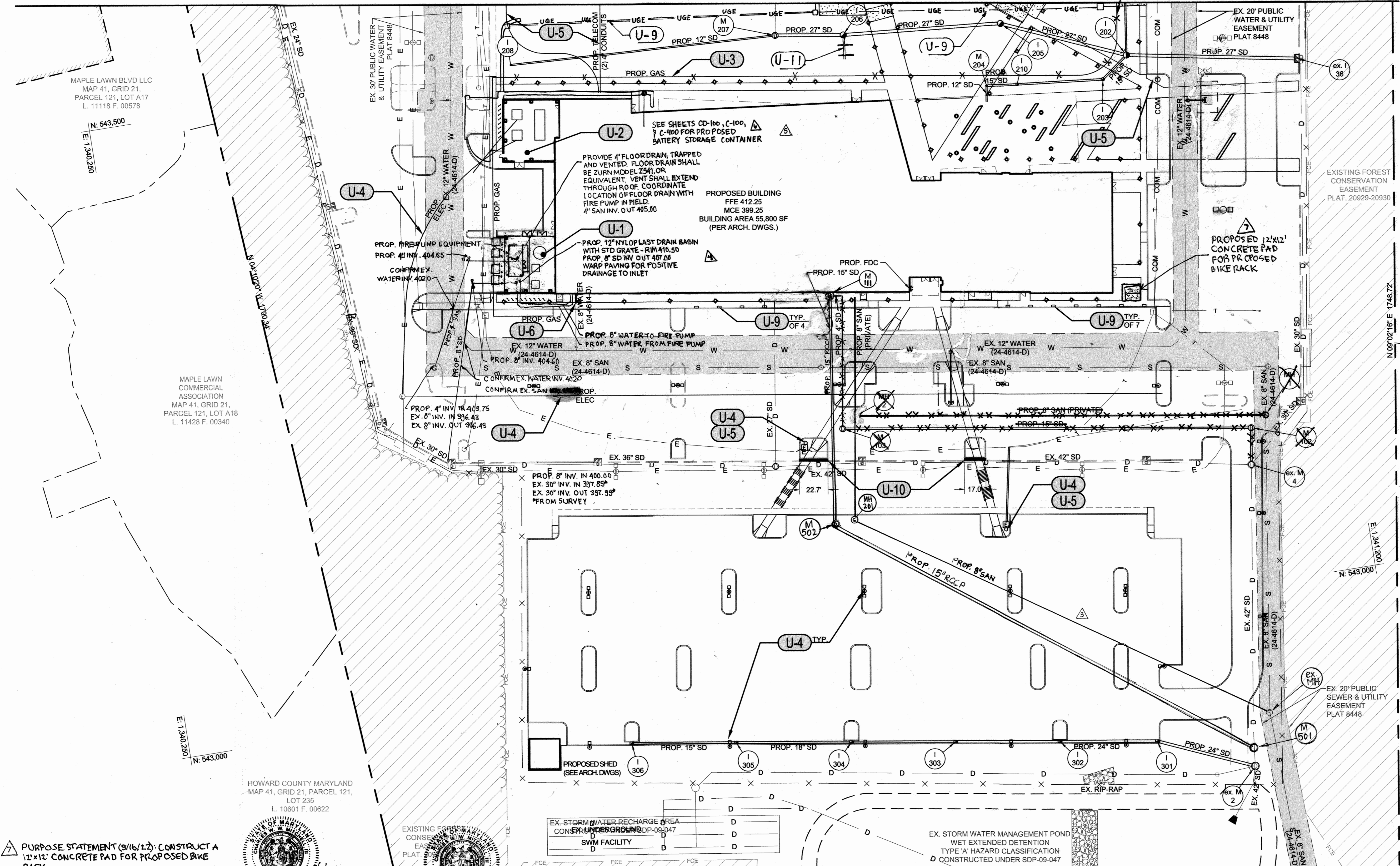
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME JHU-APL SOUTH CAMPUS BUILDING B201	SECTION/AREA N/A	LOT/PARCEL NO. 300	
PLAT # OR L/F 20928-20930	GRID # 22	ZONING PEC	TAX MAP NO. ELECT DISTRICT 0041 5th
WATER CODE 550	SEWER CODE -	CENSUS TRACT 6051.02	
PROPERTY IMPROVEMENT NEW OFFICE BUILDING - GREEN BUILDING			

UTILITY PLAN

C-131
 SHEET 7 OF 25
 SDP-17-047

MATCHLINE - SEE DRAWING C-131



LEGEND

	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING STORM DRAIN
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING TELEPHONE
	EXISTING ELECTRIC
	EXISTING LIGHTING
	EXISTING COMMUNICATIONS
	EXISTING UNKNOWN UTILITY
	EXISTING FENCE
	EXISTING BUILDING
	EXISTING SIGN
	PROPOSED CONCRETE WALK
	PROPOSED CURB
	PROPOSED SITE WALL
	PROPOSED OVERHANG
	PROPOSED BUILDING
	PROPOSED SIGN
	PROPOSED STORM DRAIN
	PROPOSED WATER
	PROPOSED SANITARY SEWER
	PROPOSED GAS
	PROPOSED TELEPHONE
	PROPOSED ELECTRIC
	PROPOSED LIGHTING
	EXISTING UTILITY EASEMENT

UTILITY NOTES (THESE NOTES APPLY TO THIS DRAWING ONLY)

	PROPOSED UTILITY YARD. (SEE MECHANICAL PLANS.)
	PROPOSED UTILITY YARD. (SEE ELECTRICAL PLANS.)
	PROPOSED GAS SERVICE. (SEE MECHANICAL PLANS.) COORDINATE WITH BGE.
	PROPOSED ELECTRIC SERVICE. (SEE ELECTRICAL PLANS.) COORDINATE WITH BGE.
	PROPOSED TELECOMM SERVICE. (SEE ELECTRICAL PLANS.)
	CONNECT TO EXISTING WATER. (SEE PLUMBING PLANS. INTERNAL WATER METER PROVIDED.)
	PROPOSED OUTDOOR LIGHTING WILL COMPLY WITH THE STANDARDS SPECIFIED WITHIN SECTION 134.0 OF THE ZONING REGULATIONS.
	WATER METER CONFIGURATION CONTAINED WITHIN BUILDING.
	PROPOSED ELECTRIC AND ELECTRIC EQUIPMENT (SEE ELECTRICAL PLANS)
	PROVIDE ZURN Z723 FRAME AND HPD GRATE (OR APPROVED EQUAL)
	4" SCH 40 PVC UNDERDRAIN

PURPOSE STATEMENT (9/16/12): CONSTRUCT A 12'x12' CONCRETE PAD FOR PROPOSED BIKE RACK

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF MARYLAND. LICENSE NO. 19376 EXPIRATION DATE: 9/22/21

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49432 EXPIRATION DATE: 05/31/24

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49432 EXPIRATION DATE: 05/31/24

PURPOSE STATEMENT: ADDITION OF BATTERY STORAGE CONTAINER, REMOVAL OF 2 PARKING SPACES, AND UPDATED PLANTING PLAN AS-BUILT.



APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10-24-17
 DATE: 10-31-17
 DATE: 11-20-17
 DIRECTOR

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

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No.	Date	Description
1	9/7/18	STORM DRAIN & SANITARY RELOCATION
2	09/27/18	UTILITY YARD UPDATES
3	7/21	ADD PAVILIONS
4	6/10/22	ADDITION OF BATTERY STORAGE CONTAINERS, UPDATED PLANTING PLAN, AS-BUILT POSITION OF 12'x12' CONCRETE PAD FOR PROPOSED BIKE RACK
5	9/16/22	

ADDRESS CHART

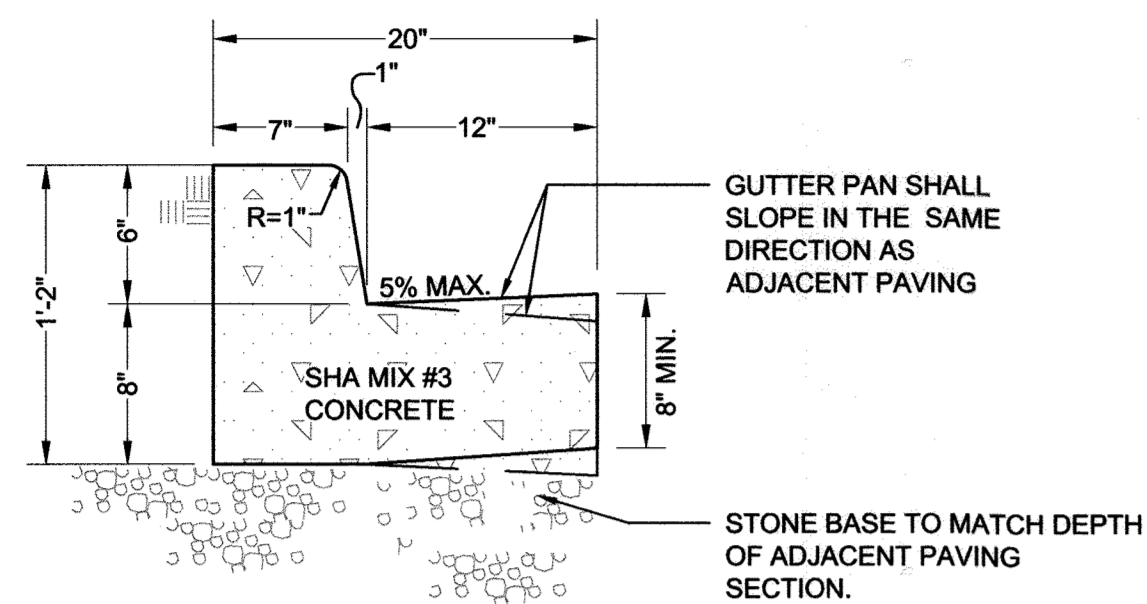
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART

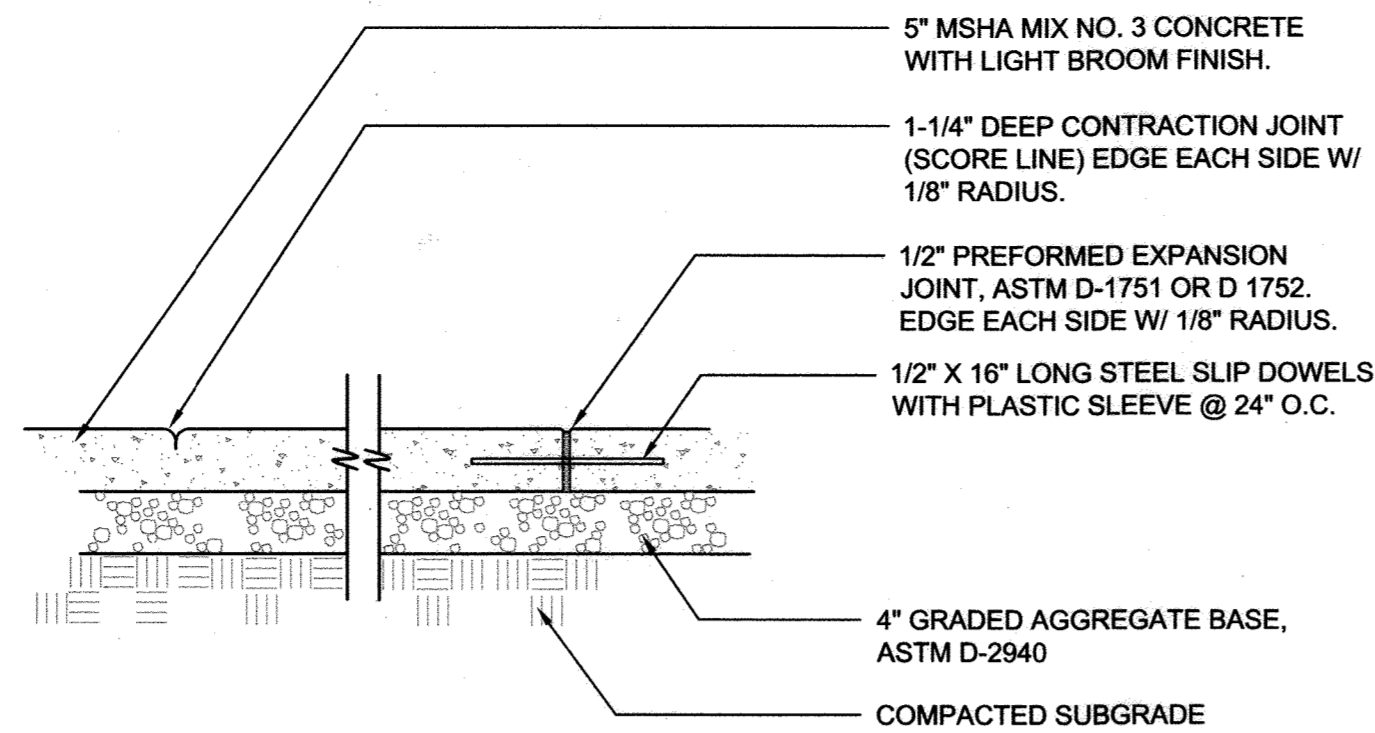
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300
PLAT # OR L/F	GRID #	ZONING
20928-20930	22	PEC
TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
0041	5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT
550	--	NEW OFFICE BUILDING - GREEN BUILDING

UTILITY PLAN
C-132
 SHEET 8 OF 25-30
 SDP-17-047

Z:\16\6035-JHU APL Building 201 Design Services\04-DWG-C-132 Utility Plan.dwg-132 Aug 11, 2017 02:08pm JPH



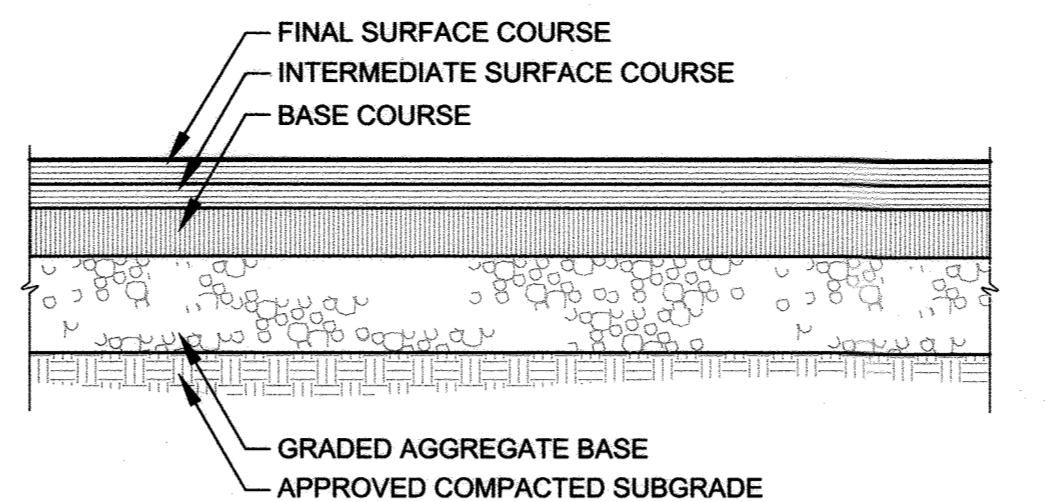
1 CONCRETE CURB & GUTTER
NOT TO SCALE



NOTES:

1. PLACE EXPANSION JOINTS NOT MORE THAN 20'-25' APART AND AT THE END OF EACH CONTIGUOUS POUR.
2. PLACE CONTRACTION JOINTS AT INTERVAL MATCHING WIDTH OF SIDEWALK BUT NOT MORE THAN 6' APART.
3. PROVIDE EXPANSION JOINTS WHERE POUR MEETS EXISTING CONCRETE PAVING OR CURB.
4. EXPANSION JOINTS TO BE RECESSED 1/4" BELOW SURFACE OF SIDEWALK.
5. WHEN SIDEWALK ABUTS BACK OF STREET CURB, WALK SHALL BE 1/4" ABOVE TOP OF CURB.
6. WHEN SIDEWALK ABUTS EXISTING CONCRETE WALK, CORE DRILL AND INSTALL DOWELS PER DETAIL.
7. MATCH SCORE PATTERN OF ADJACENT SIDEWALK WHERE PRACTICAL.
8. UNLESS OTHERWISE SHOWN ON PLAN, CONTRACTOR TO SUBMIT LAYOUT OF PROPOSED CONTRACTION EXPANSION JOINTS FOR APPROVAL PRIOR TO POURING CONCRETE.

2 CONCRETE WALK
NOT TO SCALE

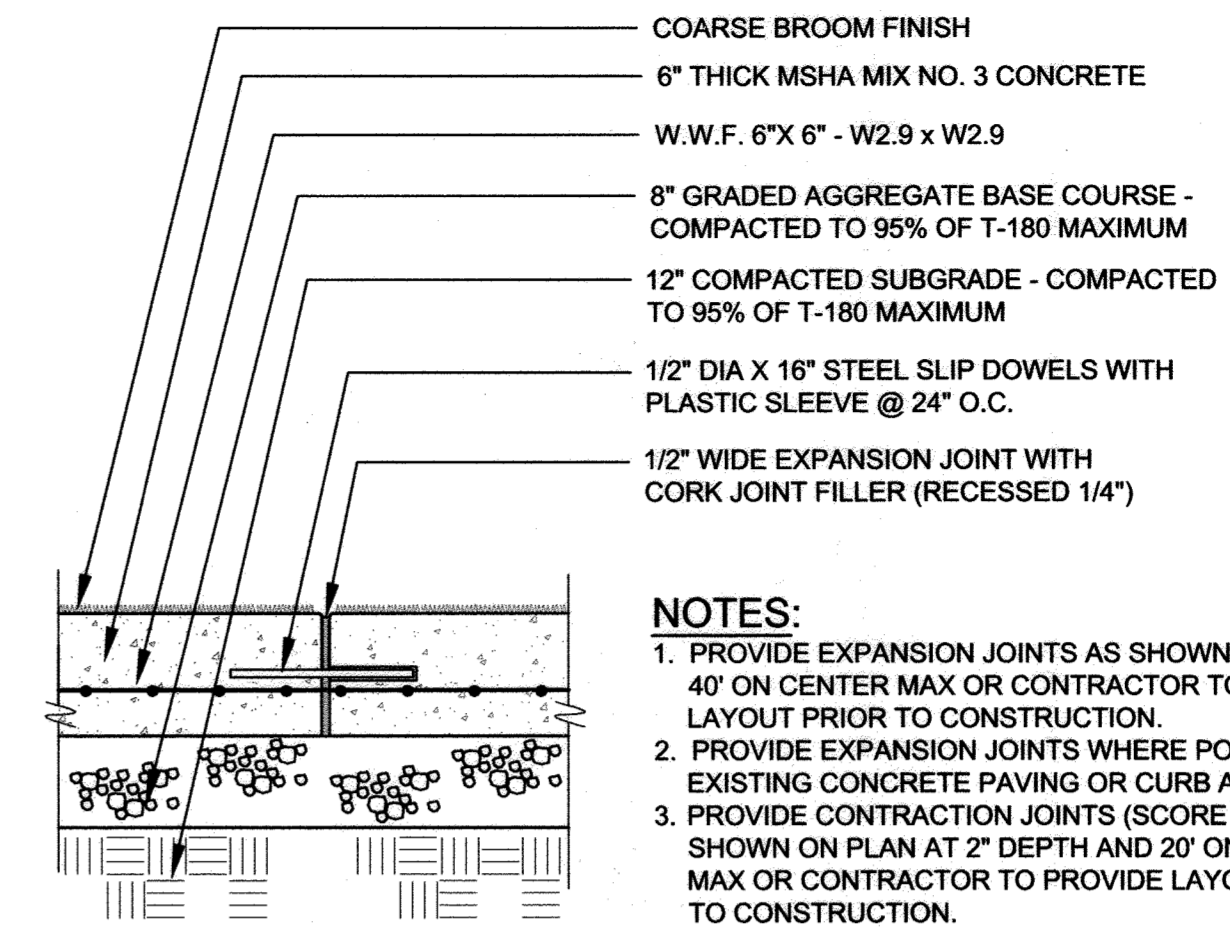


	A	B
FINAL SURFACE COURSE	P-3 LIGHT DUTY 1.5"	P-5 HEAVY DUTY 2.0"
INTERMEDIATE SURFACE COURSE	1.0"	2.0"
BASE COURSE	3.0"	6.0"
GRADED AGGREGATE BASE	10.0"	11.0"

NOTES:

1. UNLESS OTHERWISE DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER, USE THE ABOVE LAYERS BASED ON DETAIL R-2.01 OF THE HOWARD COUNTY STANDARD DETAILS.
2. A REPRESENTATIVE FROM THE ON-SITE GEO-TECHNICAL ENGINEER SHALL OBSERVE AND TEST ANY COMPACTED FILL TO BE USED FOR PAVEMENT SUPPORT, AND OBSERVE ANY PROOFROLLING OPERATIONS OF PAVEMENT SUBGRADES.

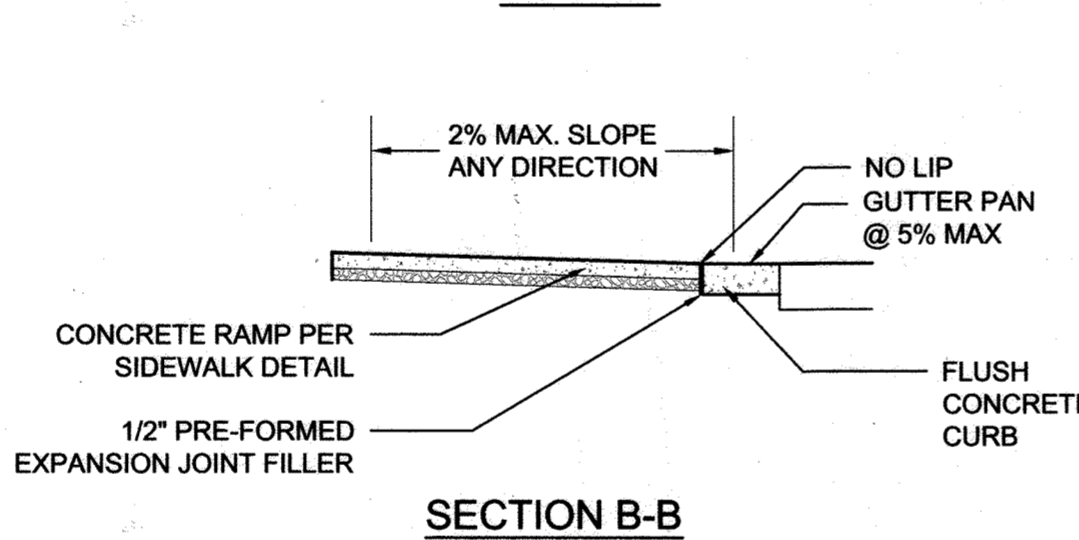
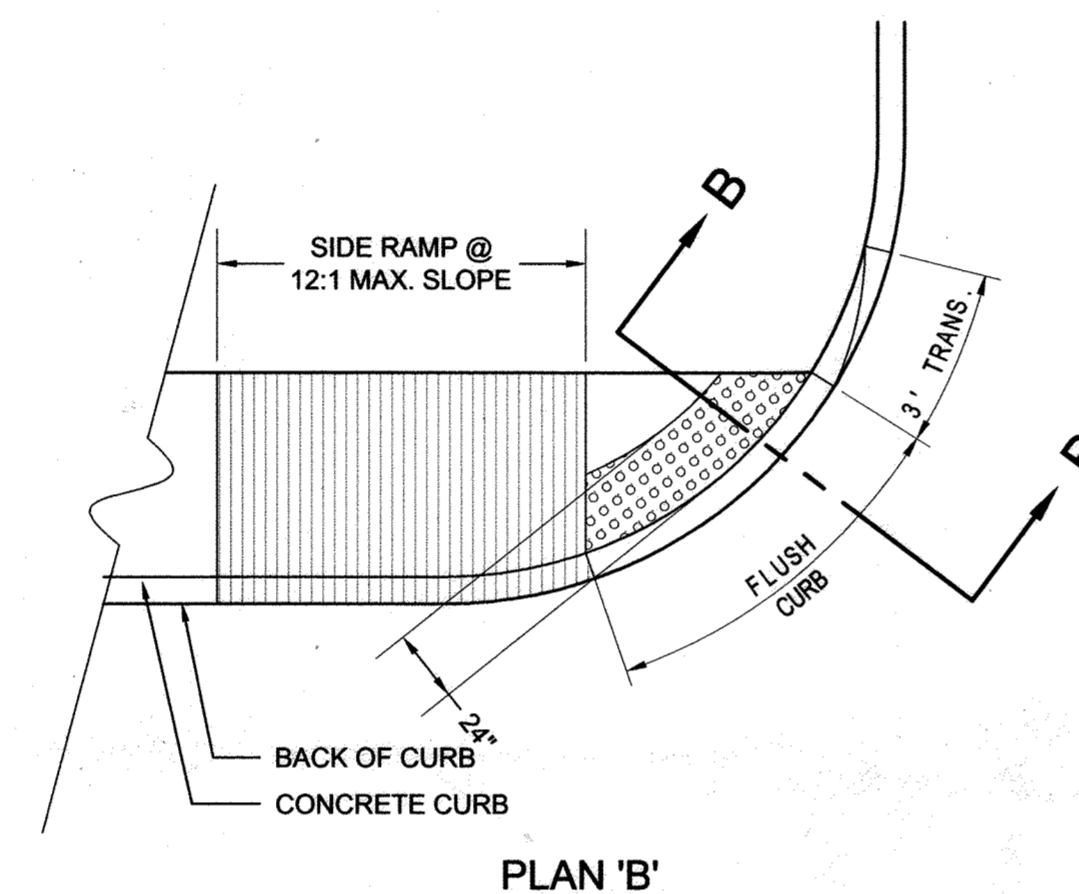
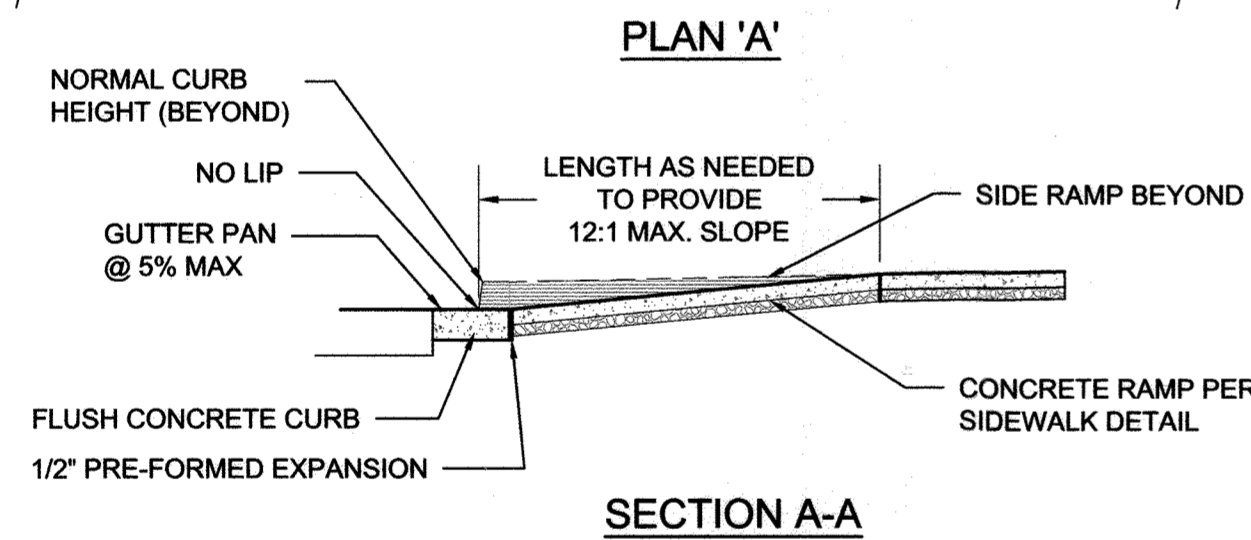
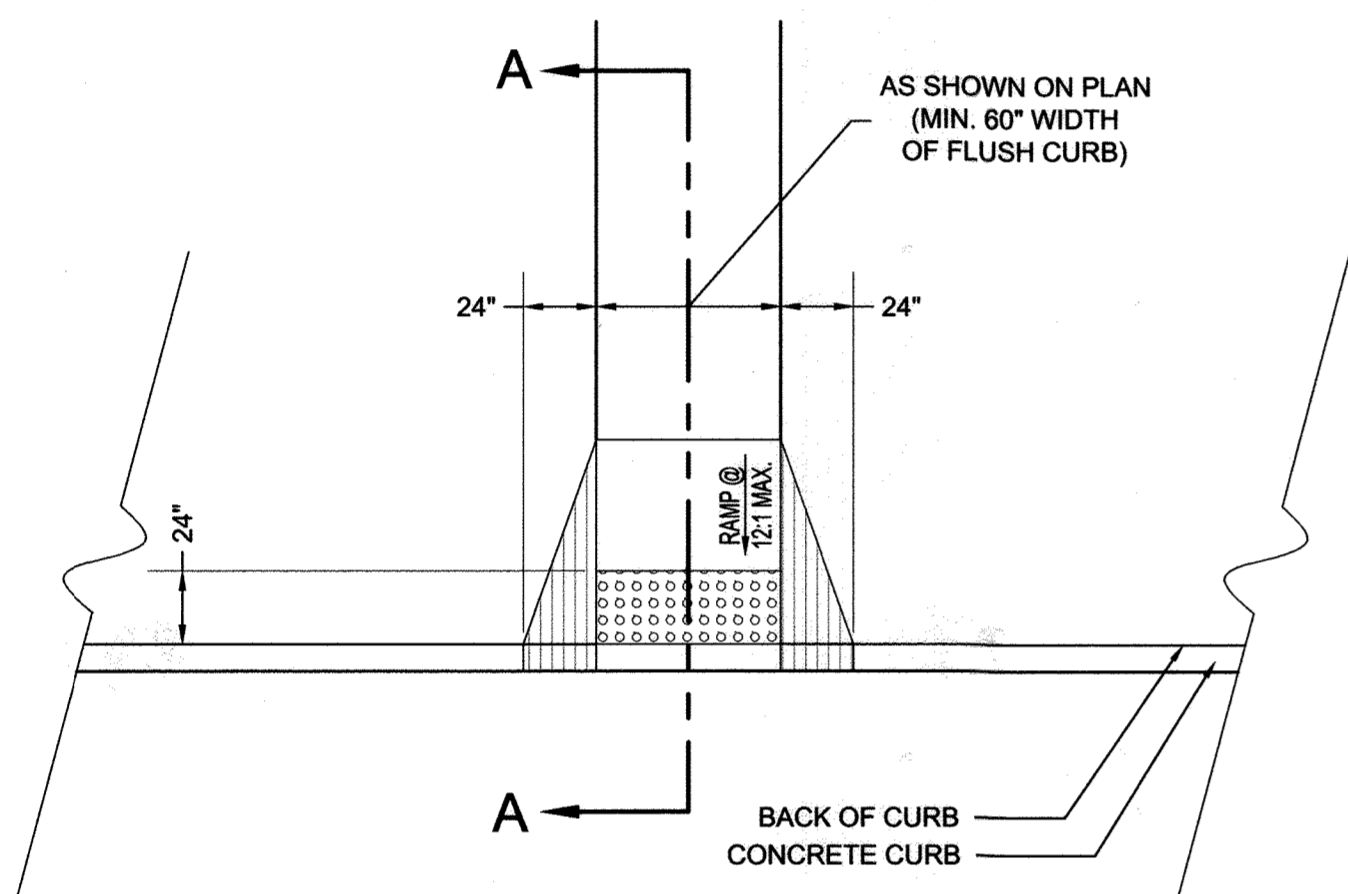
3 HOT-MIX ASPHALT PAVING
NOT TO SCALE



NOTES:

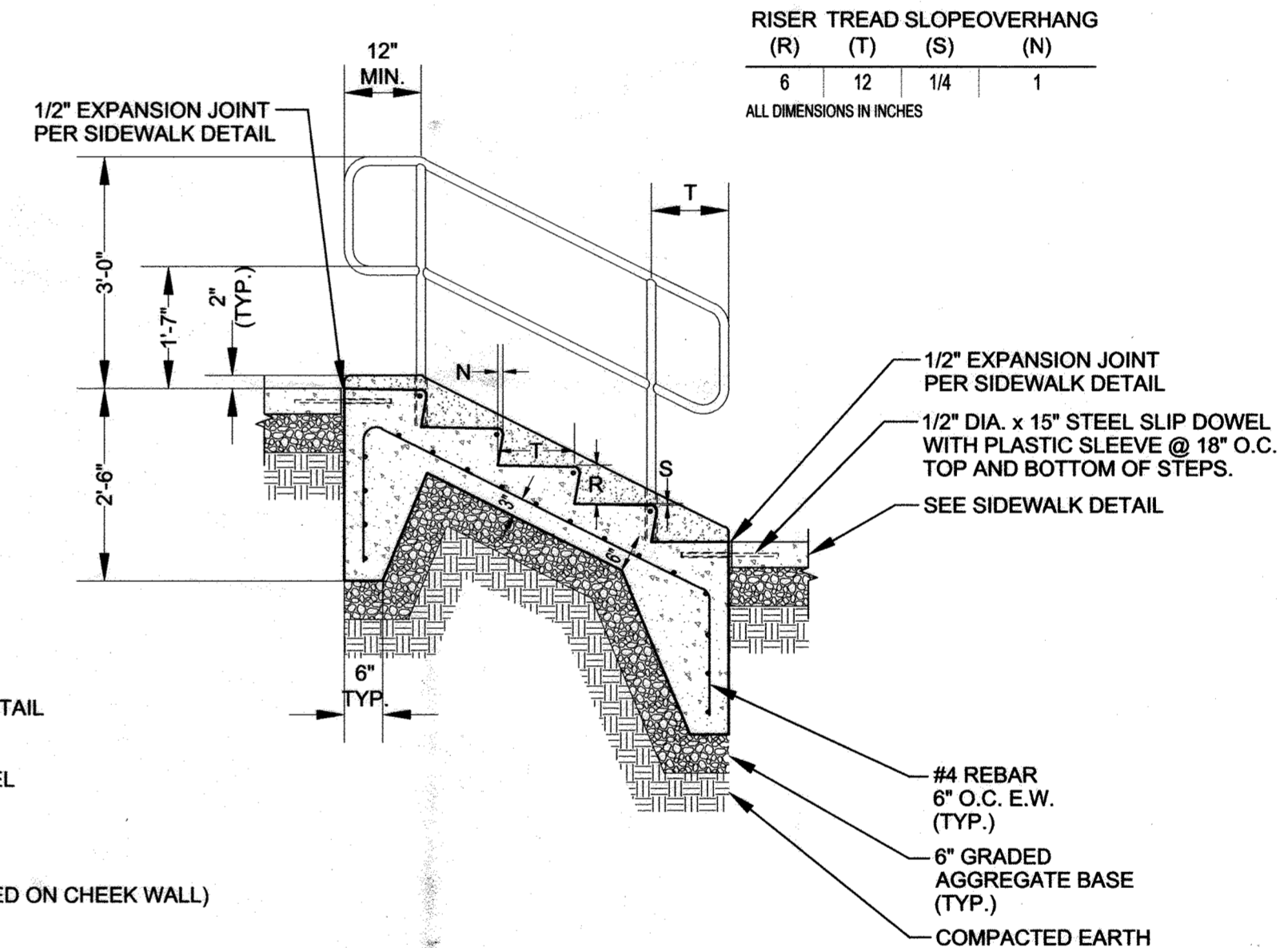
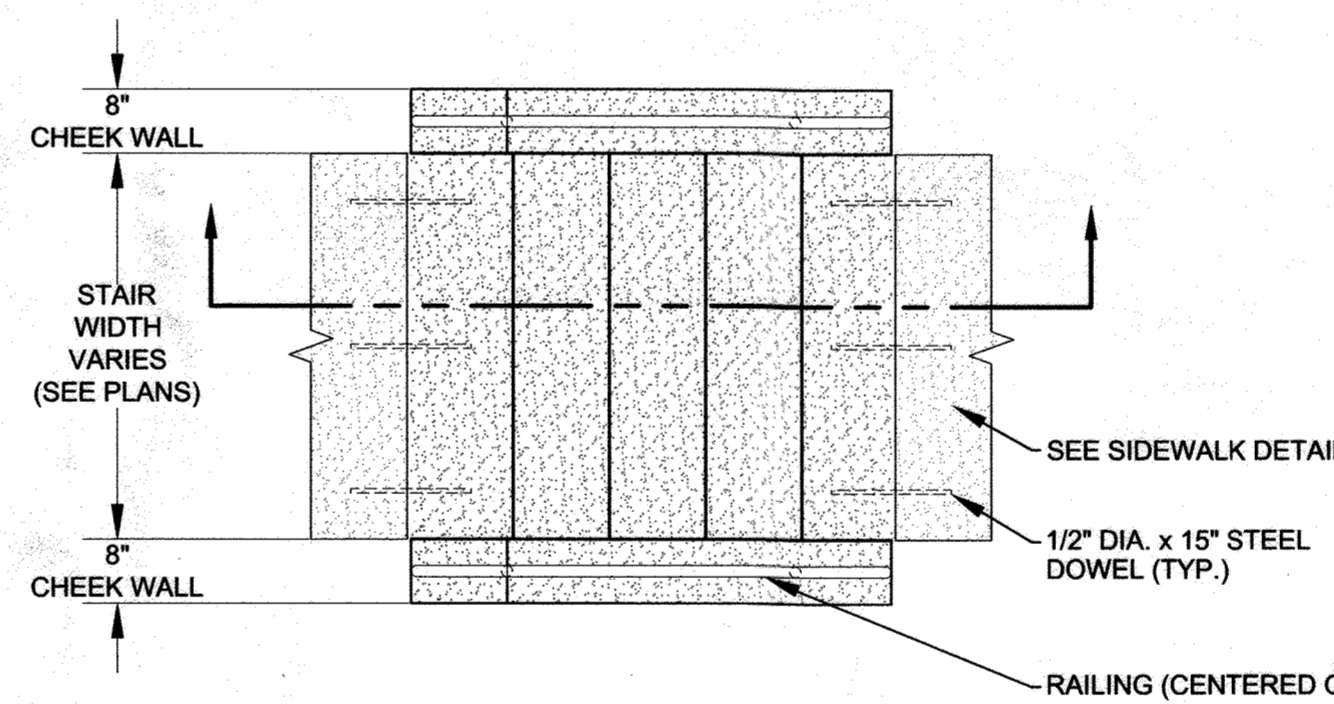
1. PROVIDE EXPANSION JOINTS AS SHOWN ON PLAN AT 40' ON CENTER MAX OR CONTRACTOR TO PROVIDE LAYOUT PRIOR TO CONSTRUCTION.
2. PROVIDE EXPANSION JOINTS WHERE POUR MEETS EXISTING CONCRETE PAVING OR CURB AND GUTTER.
3. PROVIDE CONTRACTION JOINTS (SCORE LINES) AS SHOWN ON PLAN AT 2' DEPTH AND 20' ON CENTER MAX OR CONTRACTOR TO PROVIDE LAYOUT PRIOR TO CONSTRUCTION.

4 HEAVY DUTY CONCRETE PAVEMENT
NOT TO SCALE



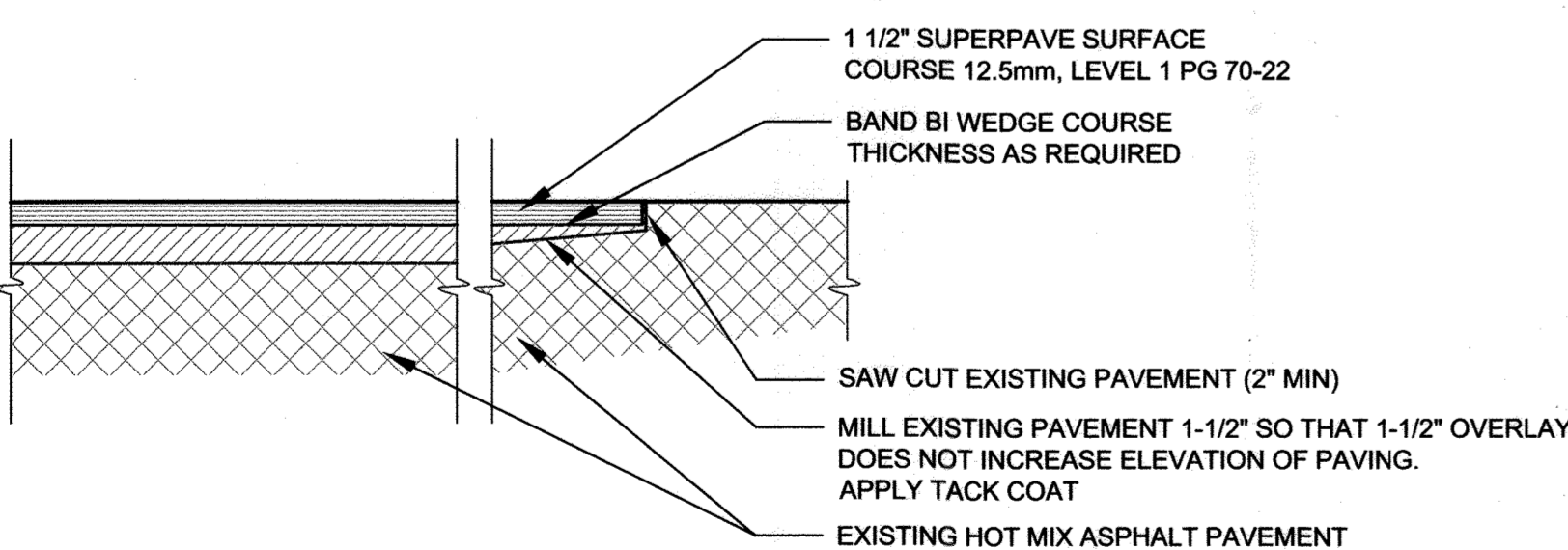
NOTES:

1. RAILINGS & POST TO BE SHOP FABRICATED OF 1-1/2" O.D. STAINLESS STEEL TUBING WITH ALL JOINTS CONTINUOUSLY WELDED.
2. TOP OF RAILING TO BE 36" ABOVE WALKING SURFACE AND STAIR NOSE.
3. RAILING TO EXTEND A MINIMUM OF 12" BEYOND TOP RISER AND A TREAD WIDTH BEYOND BOTTOM RISER.
4. ALL CONCRETE TO BE SHA MIX NO. 3.
5. ALL CHEEK WALL AND STAIR NOSE RADI SHALL BE 1/2".
6. CHEEK WALL SHALL BE 2" ABOVE STAIR NOSE AND WALKING SURFACE.
7. ALL RAILING EXTERIOR RADI SHALL BE 4".
8. RAILING POSTS SHALL BE INSTALLED AT A DEPTH OF 8" INTO CHEEK WALL. CHEEK WALL SHALL BE CORE DRILLED AND POST SET WITH NON-SHRINK GROUT.
9. STAIR TREADS TO RECEIVE LIGHT BRUSHED NON-SLIP FINISH. (SEE SPECS)
10. UNLESS OTHERWISE SHOWN ON PLAN, ALL REBAR SHALL HAVE A CLEARANCE OF 3" FROM SURFACE.

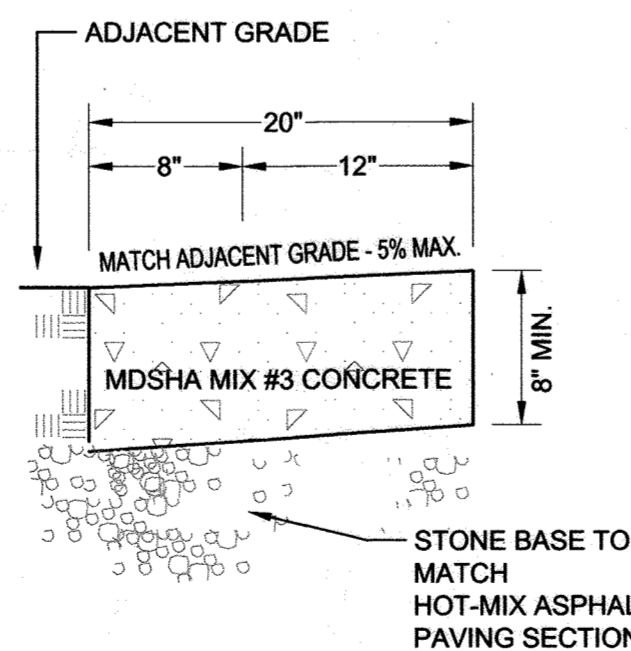


6 CONCRETE STAIRS
NOT TO SCALE

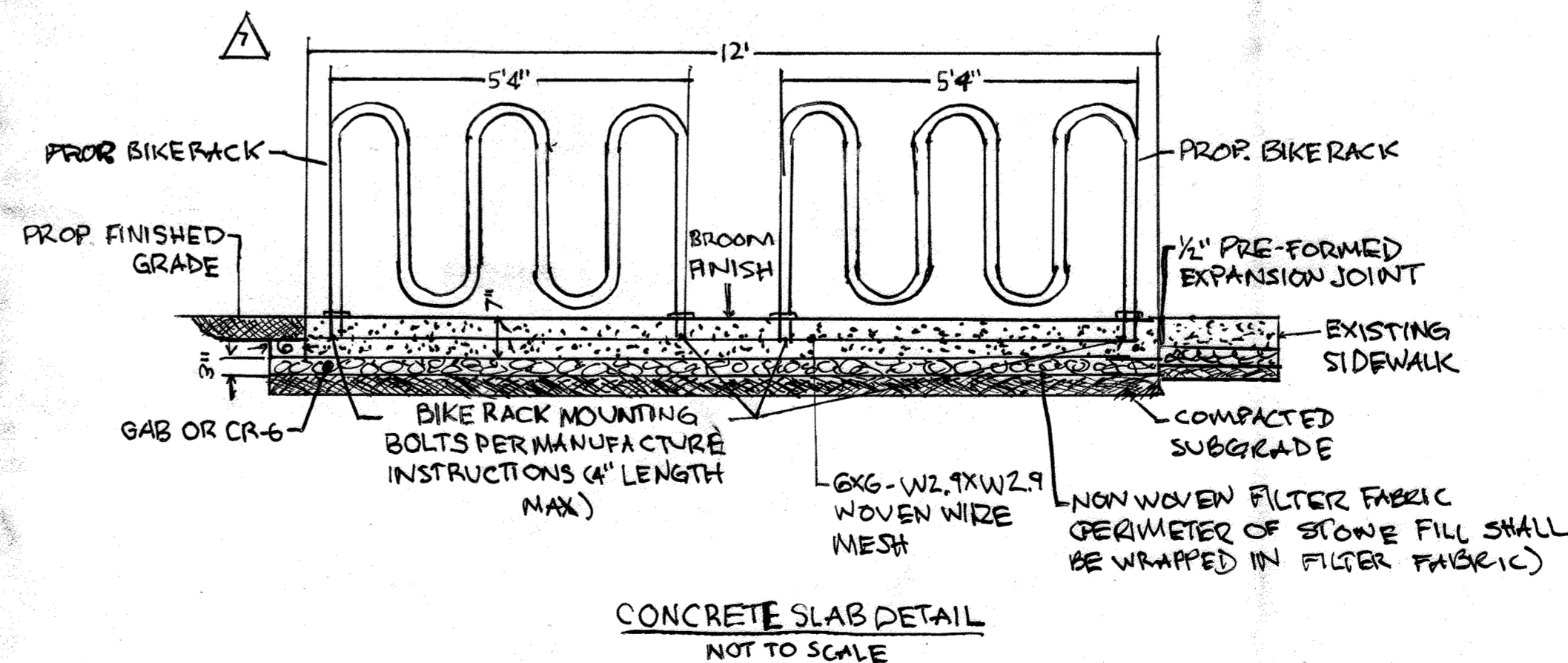
5 CONCRETE CURB RAMP
NOT TO SCALE



7 HOT-MIX ASPHALT MILL AND OVERLAY
NOT TO SCALE



8 FLUSH CURB & GUTTER
NOT TO SCALE



△ PURPOSE STATEMENT (11/16/22): CONSTRUCT A 12x12' CONCRETE PAD FOR PROPOSED BIKE RACK



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: 44432. EXPIRATION DATE: 05/31/24

APPROVED: DEPARTMENT OF PLANNING & ZONING

10-24-17 DATE

10-31-17 DATE

11-20-17 DATE

JOHNS HOPKINS UNIVERSITY

APPLIED PHYSICS LABORATORY

BUILDING B201

11091 JOHNS HOPKINS ROAD

LAUREL, MARYLAND 20723

ATTN: BABS SHONAIYA, 443.778.2284

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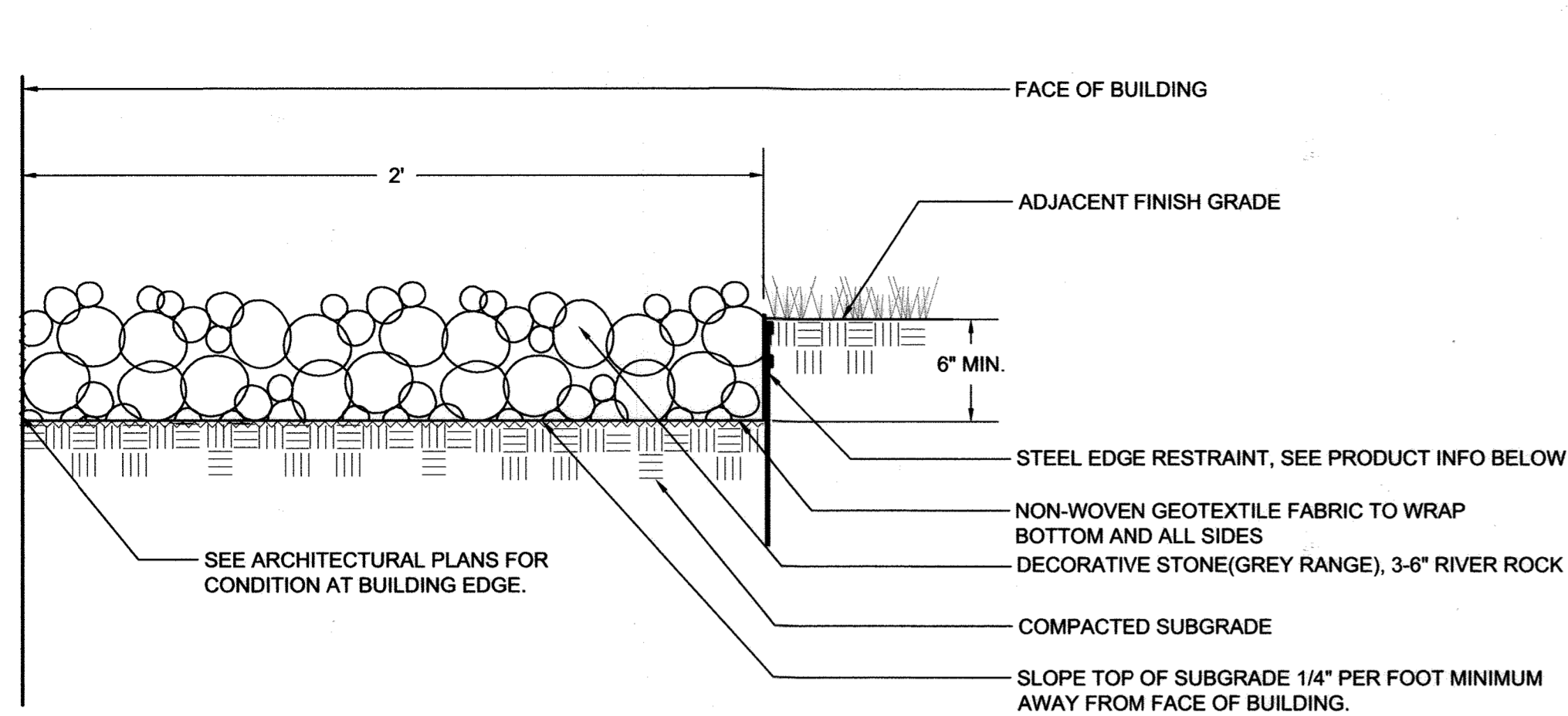
No.	Date	Description
7	3/16/22	ADDITION OF LEVEL CONCRETE PAD FOR PROPOSED BIKE RACK

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

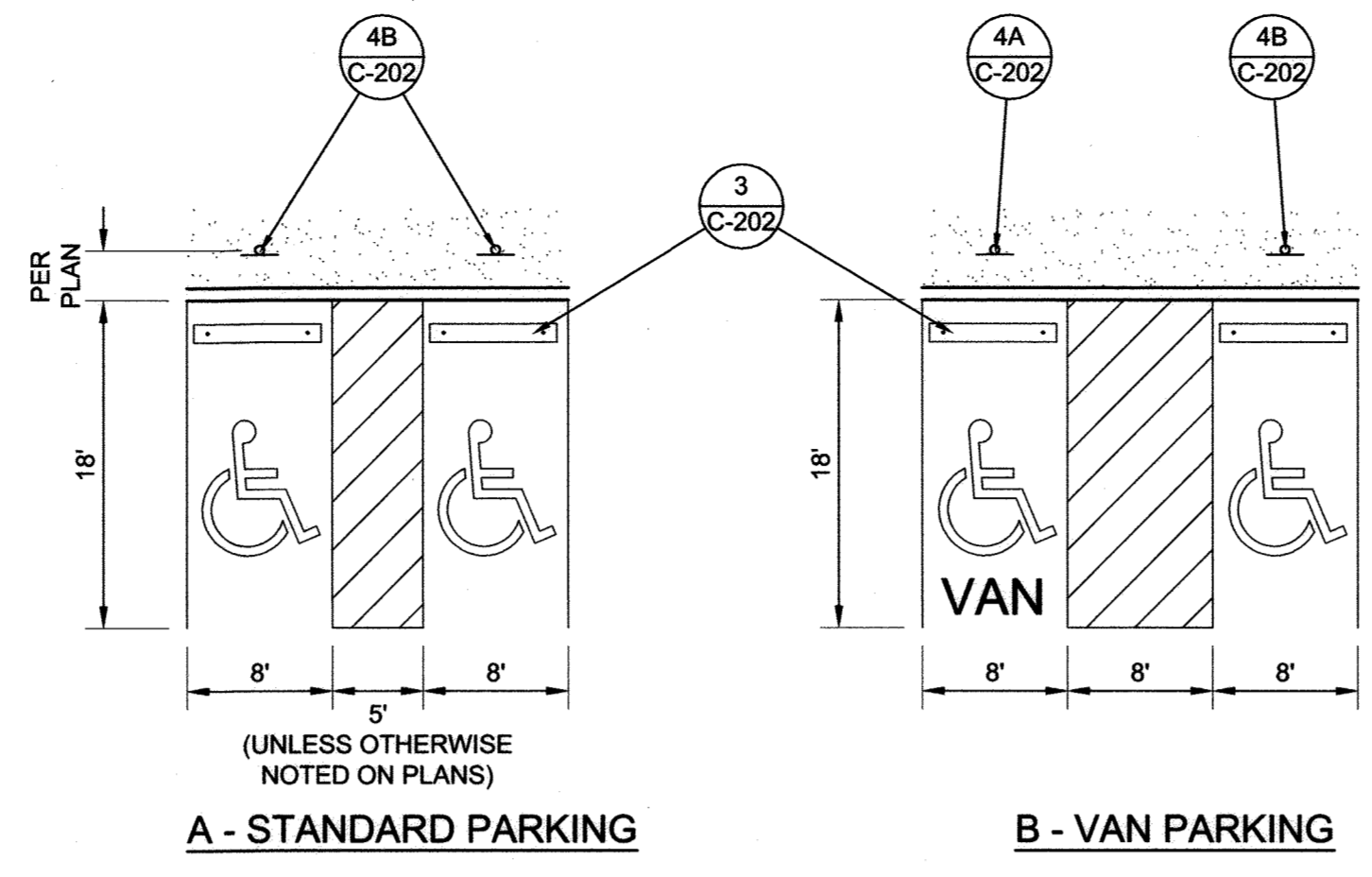
PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. / ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	--	NEW OFFICE BUILDING - GREEN BUILDING	

SITE DETAILS

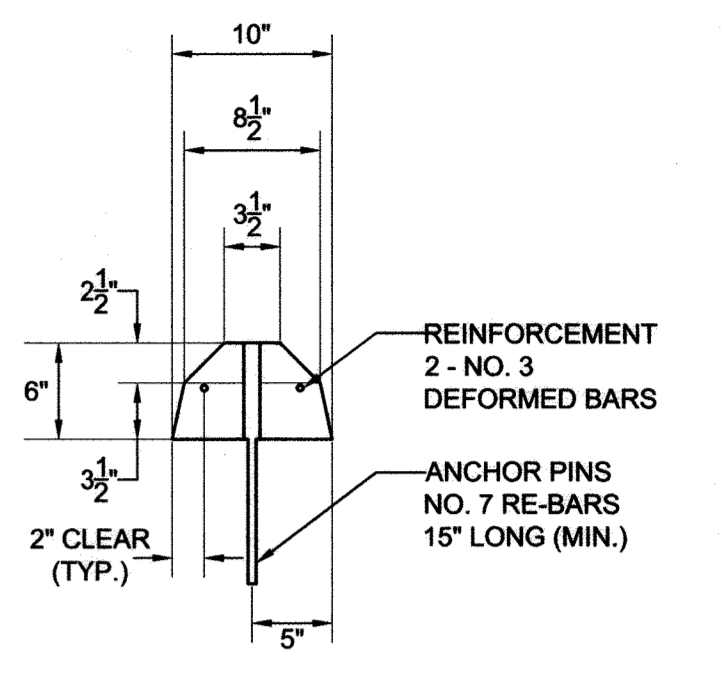
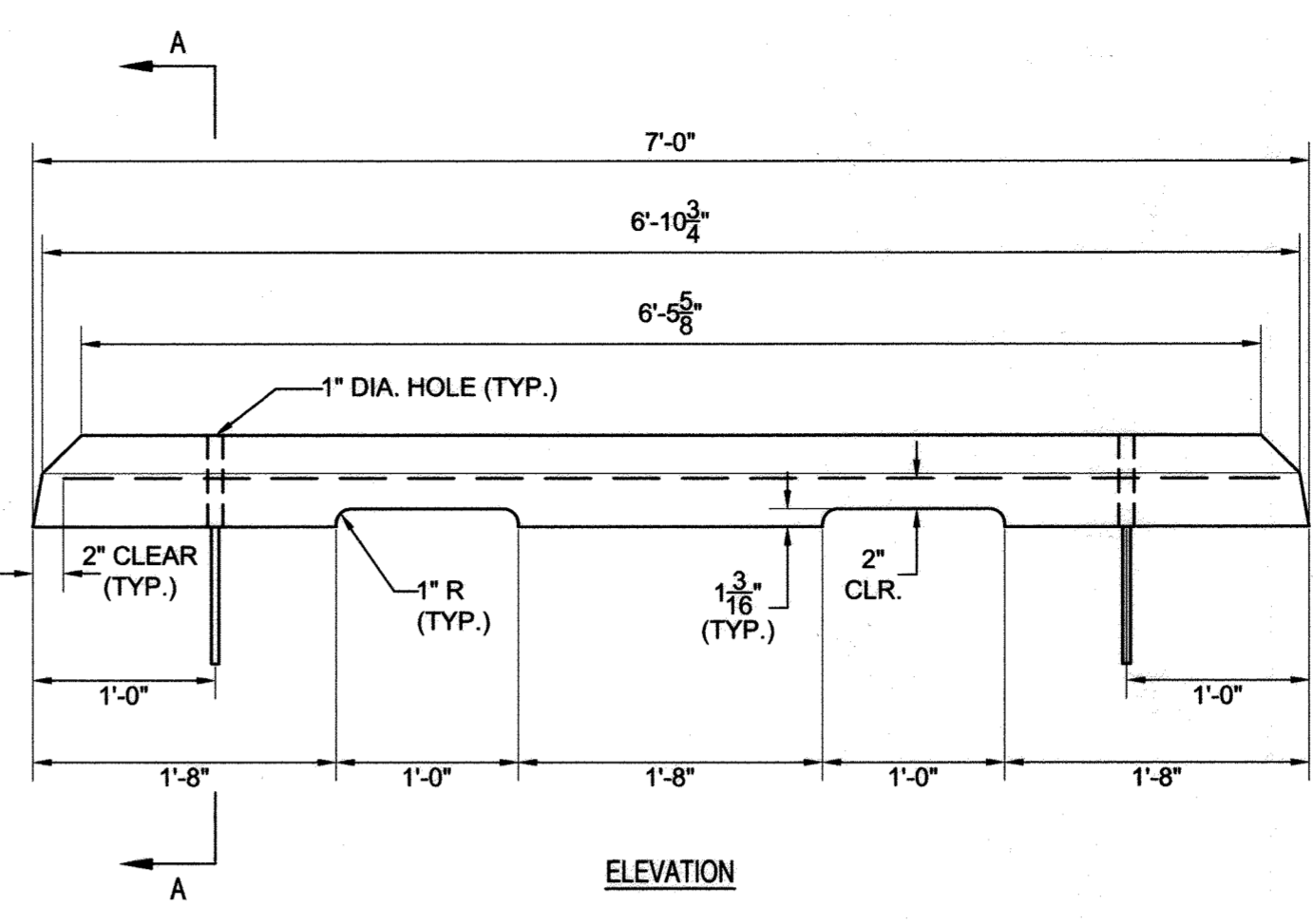
C-201
SHEET 9 OF 25
SDP-17-047



EDGE RESTRAINT PRODUCT INFO:
 MANUFACTURER: COL-MET
 PRODUCT: COMMERCIAL GRADE STEEL LANDSCAPE EDGING
 SIZE: 10\"/>



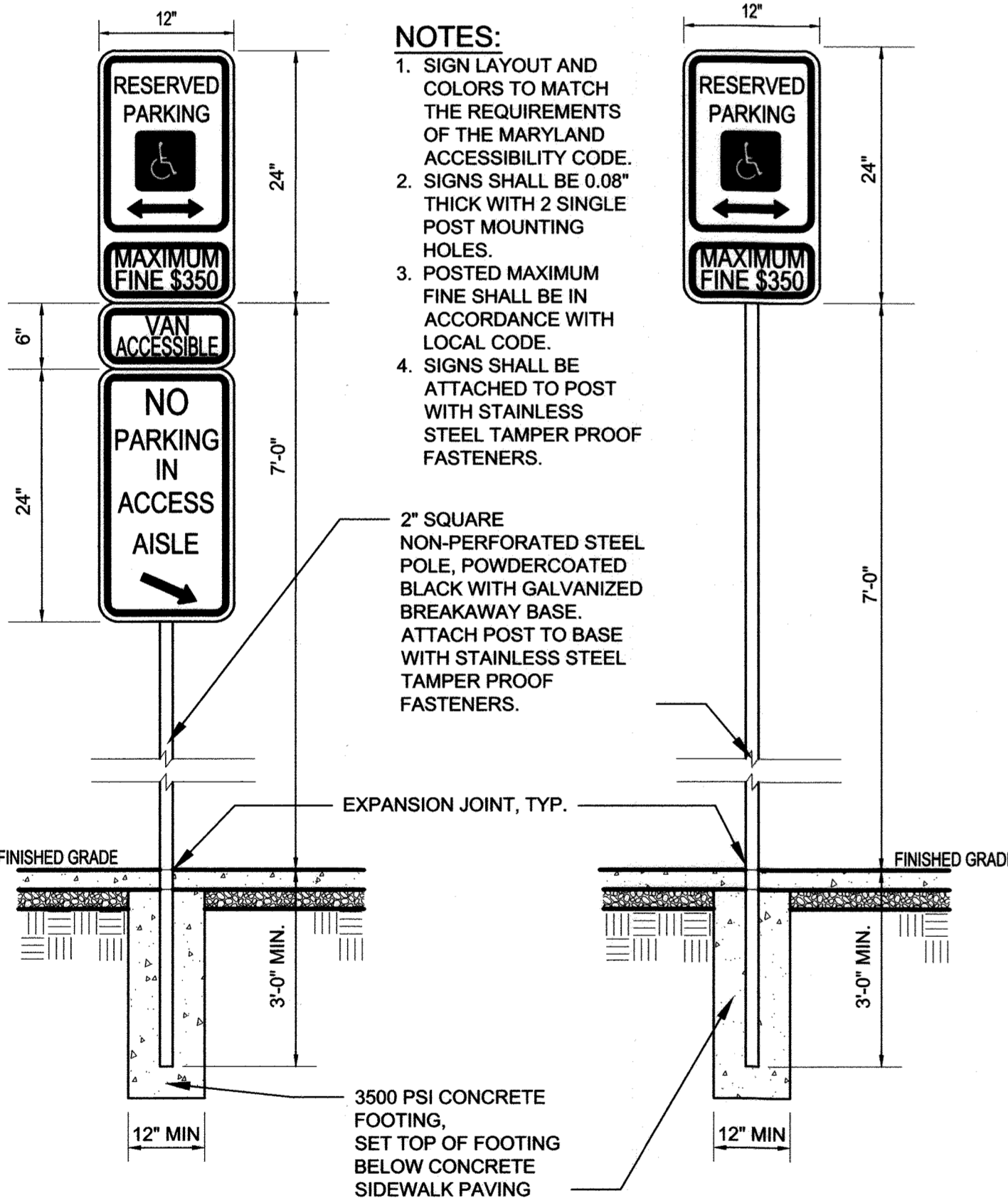
NOTES:
 1. HANDICAP PARKING AND ACCESS SHALL COMPLY WITH THE CURRENT ADA REQUIREMENTS AT TIME OF CONSTRUCTION.
 2. PARKING STALL AND ACCESS AISLE WIDTHS ARE SHOWN AS MINIMUMS.



1 BUILDING EDGE TREATMENT
NOT TO SCALE

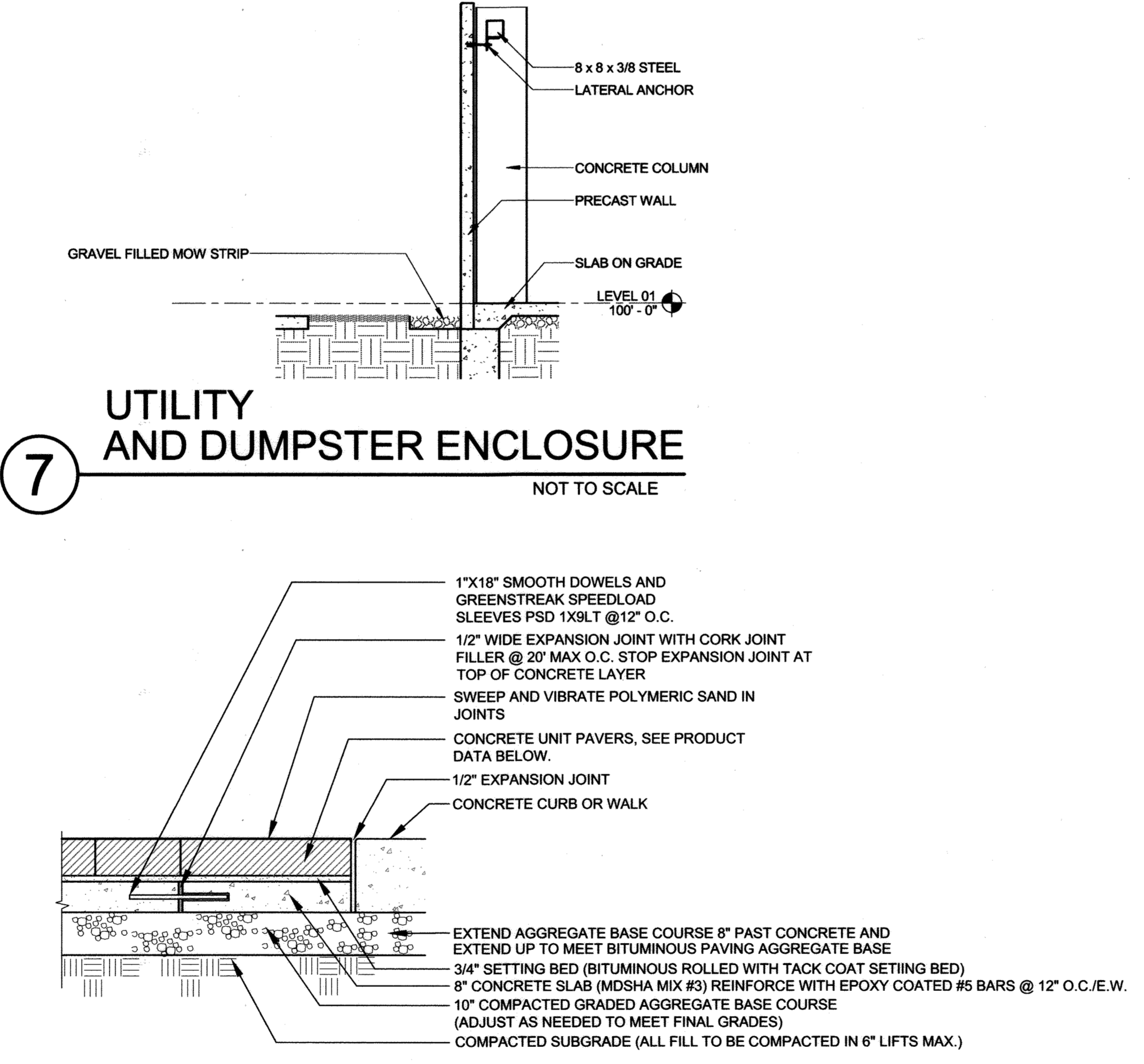
2 HANDICAP PARKING CONFIGURATION
NOT TO SCALE

3 CONCRETE WHEEL STOP
NOT TO SCALE



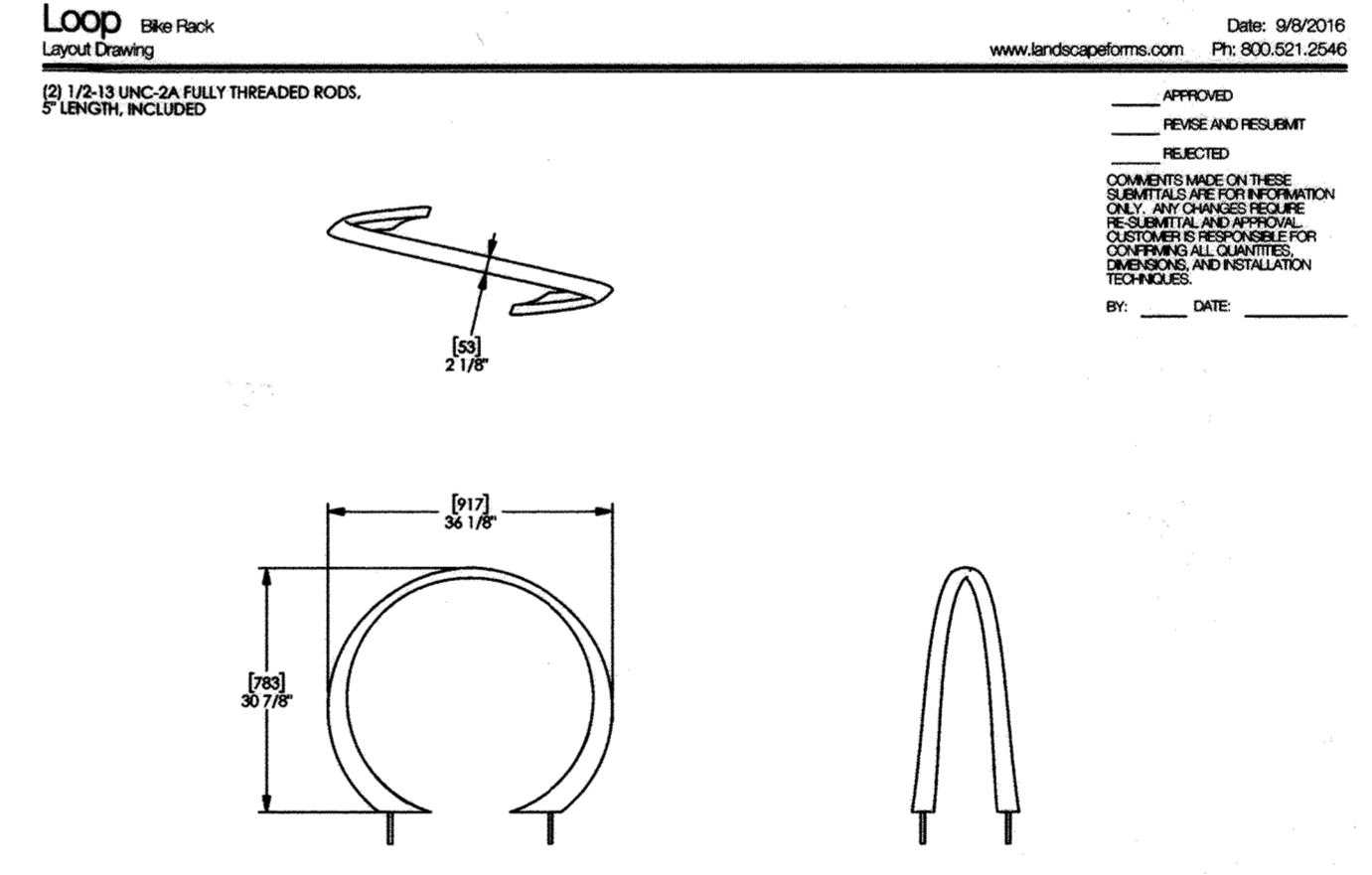
NOTES:
 1. SIGN LAYOUT AND COLORS TO MATCH THE REQUIREMENTS OF THE MARYLAND ACCESSIBILITY CODE.
 2. SIGNS SHALL BE 0.08\"/>

4 ACCESSIBLE PARKING SIGNS
NOT TO SCALE



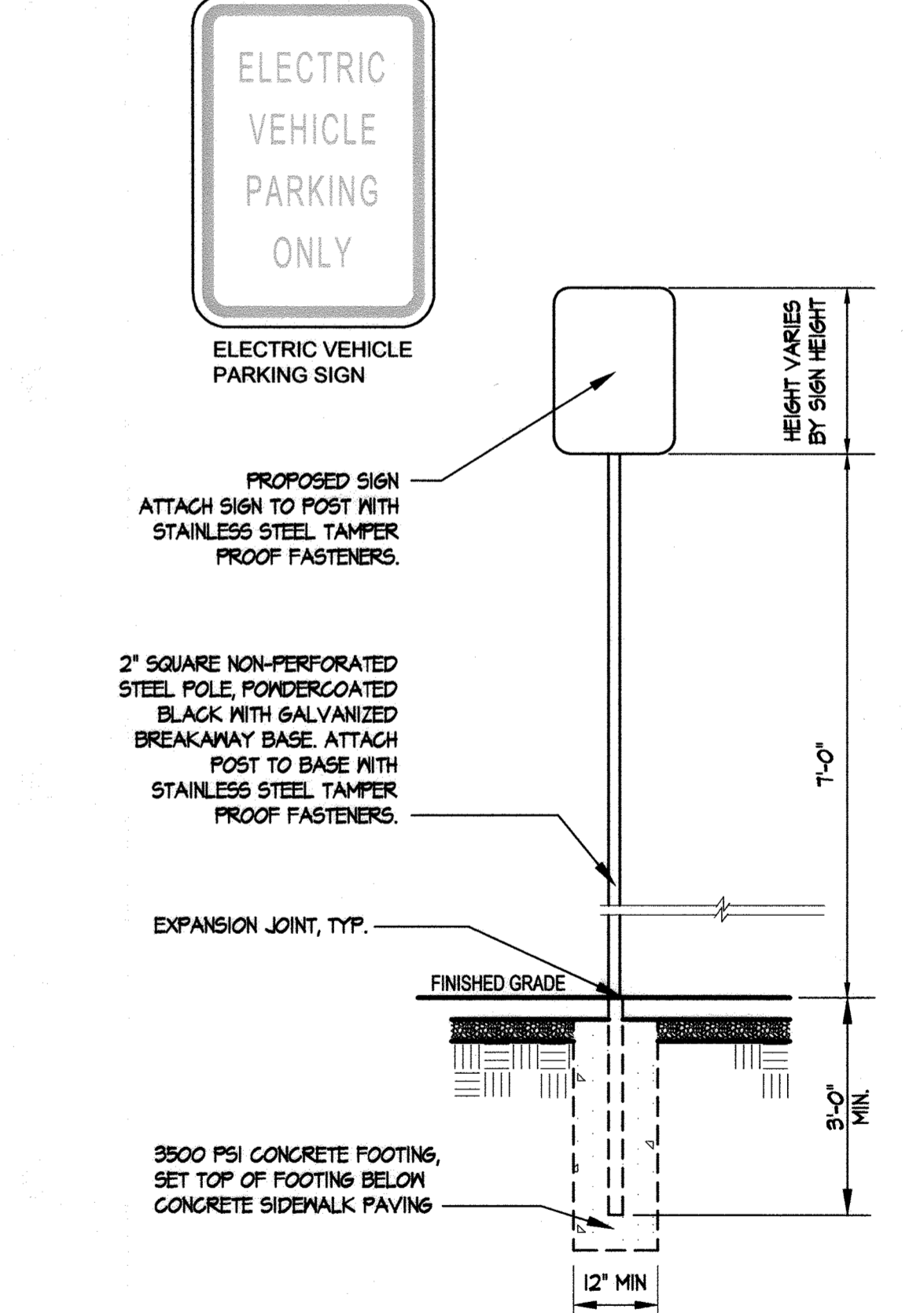
PRODUCT DATA: HEAVY DUTY CONCRETE UNIT PAVERS
 MANUFACTURER: HANOVER ARCHITECTURAL PRODUCTS
 PRODUCT: TRADITIONAL 4\"/>

5 HEAVY DUTY PAVER
NOT TO SCALE



PRODUCT DATA: BIKE RACKS
 MANUFACTURER: LANDSCAPE FORMS www.landscapeforms.com
 PRODUCT: LOOP BIKE RACK
 FINISH: PANGARD II
 COLOR: GRAY

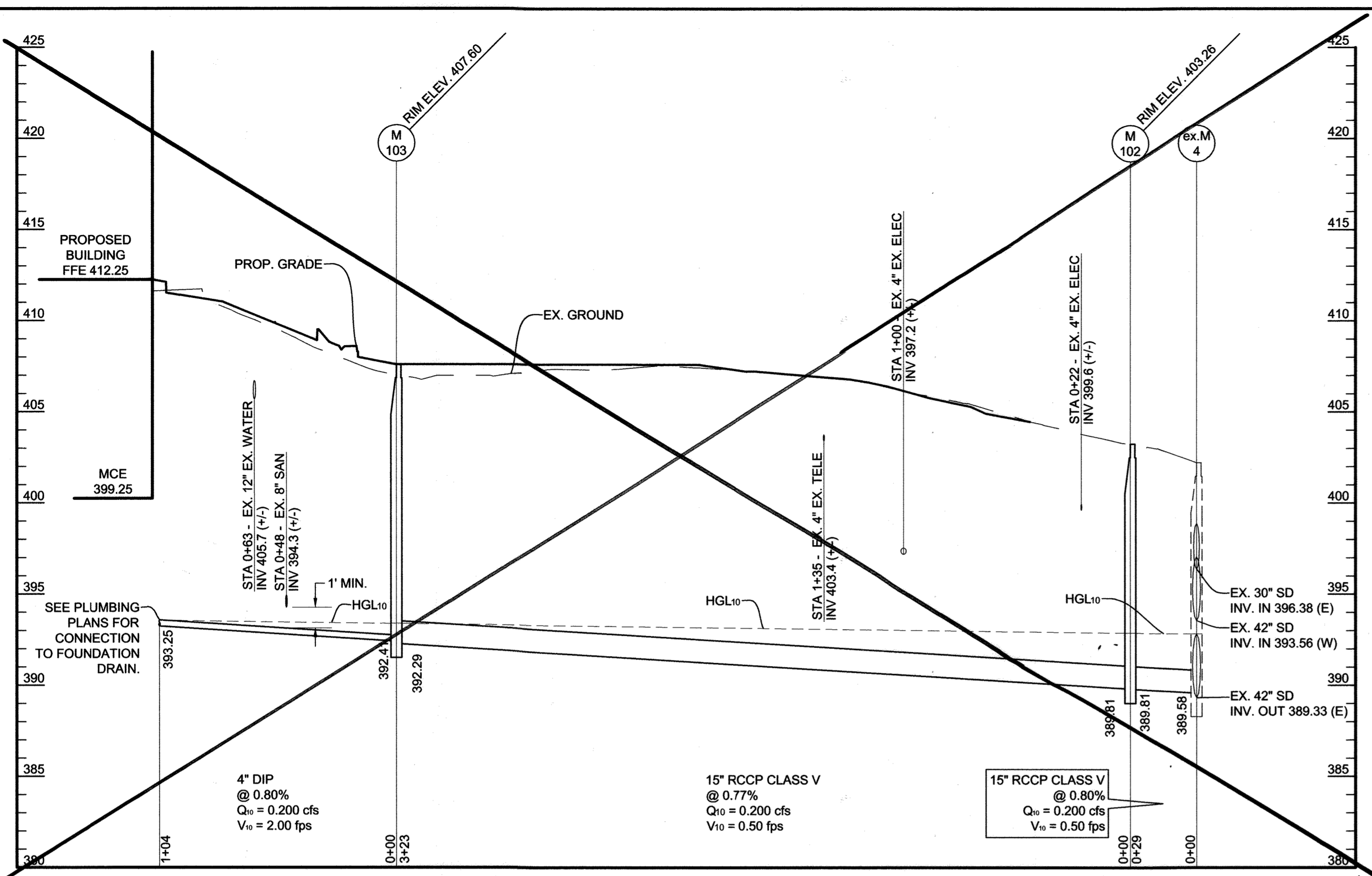
6 BIKE RACK
NOT TO SCALE



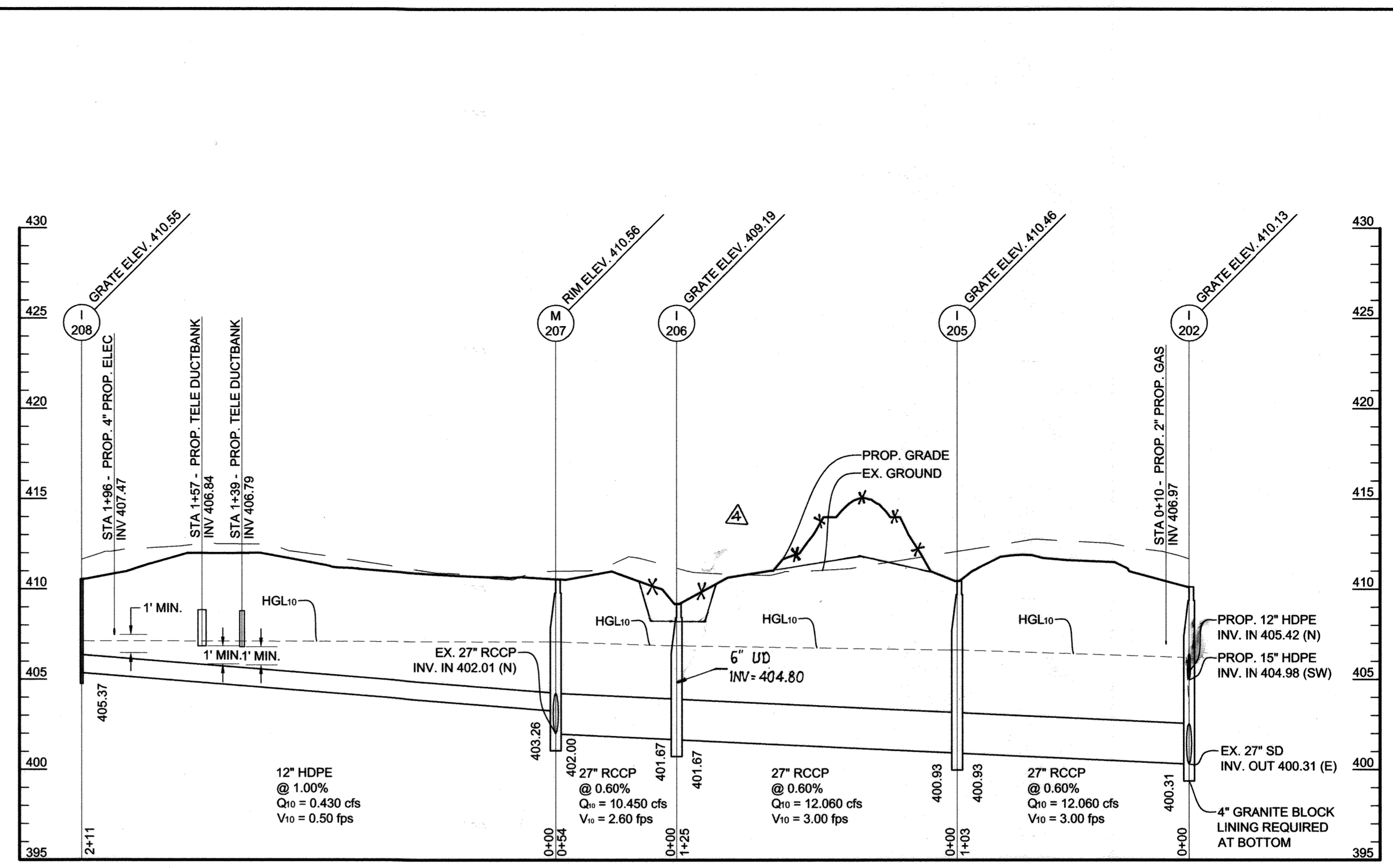
8 TYPICAL SIGN POST AND SIGN
NOT TO SCALE

Z:\161605-JHU-APL Building 201 Design Services\04-DWG\C-202 Site Details.dwg 2016 Aug 11, 2017 02:08pm JH

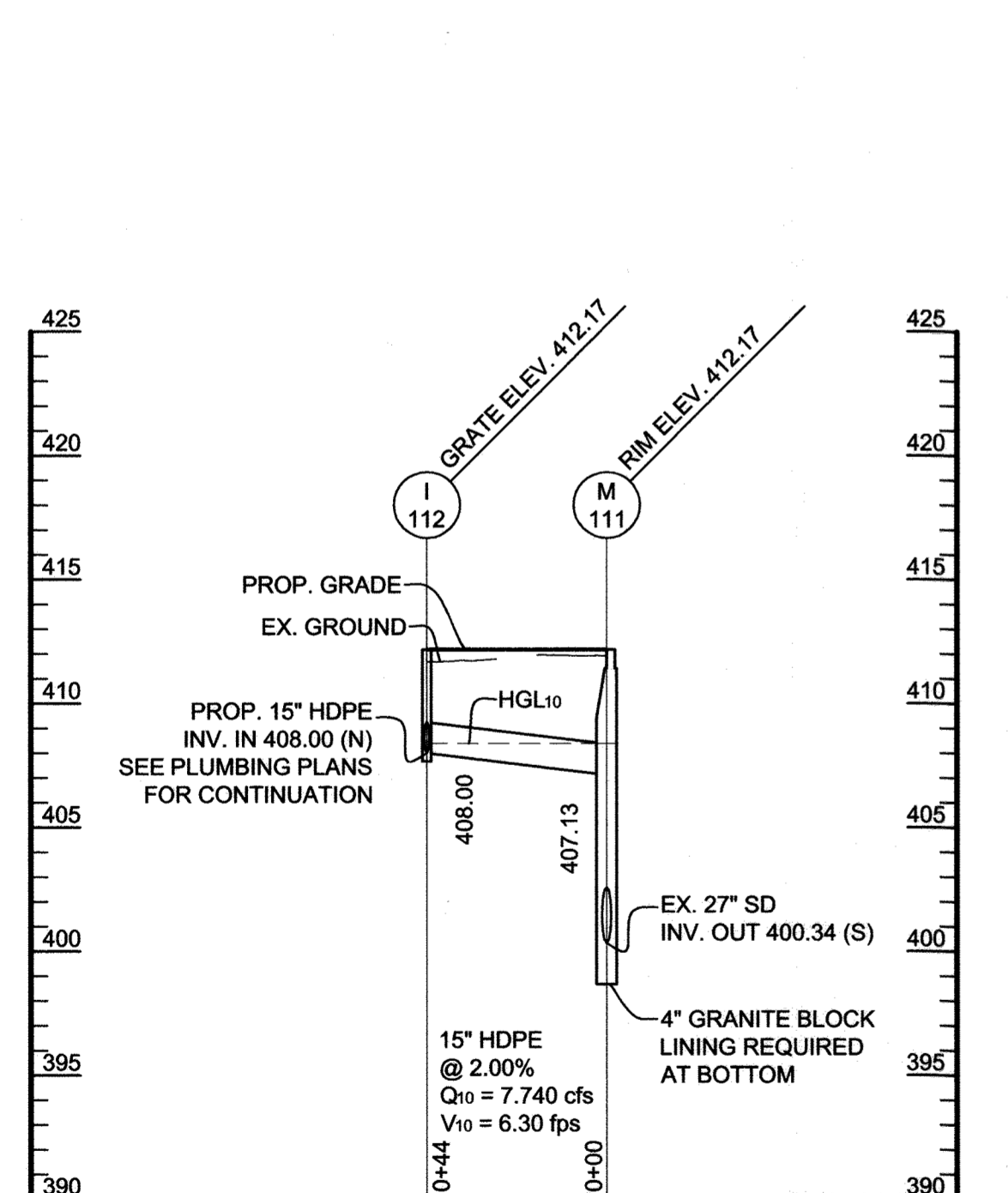
APPROVED: DEPARTMENT OF PLANNING & ZONING CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 10-24-17		JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY BUILDING B201 11091 JOHNS HOPKINS ROAD LAUREL, MARYLAND 20723 ATTN: BABS SHONAIYA, 443.778.2284		SITERESOURCES Creative Design. Successfully Engineered. 14315 Jarrettsville Pike, Phoenix, MD 21131-0249 410.683.3388 www.siteresourcesinc.com		No. Date Description _____ _____ _____		ADDRESS CHART MAP/GRID/PARCEL: MAP 0041/GRID 0022 PARCEL 0300 STREET ADDRESS: 11091 JOHNS HOPKINS RD, LAUREL, MD 20723		PERMIT INFORMATION CHART PROJECT NAME: JHU-APL SOUTH CAMPUS BUILDING B201 PLAT # OR L/F: 20928-20930 WATER CODE: 550 SECTION/AREA: N/A TAX MAP NO.: 0041 SEWER CODE: -- LOT/PARCEL NO.: 300 ELECT DISTRICT: 5th CENSUS TRACT: 6051.02 PROPERTY IMPROVEMENT: NEW OFFICE BUILDING - GREEN BUILDING			SITE DETAILS C-202 SHEET 10 OF 25 SDP-17-047	
--	--	---	--	--	--	---	--	--	--	--	--	--	---	--



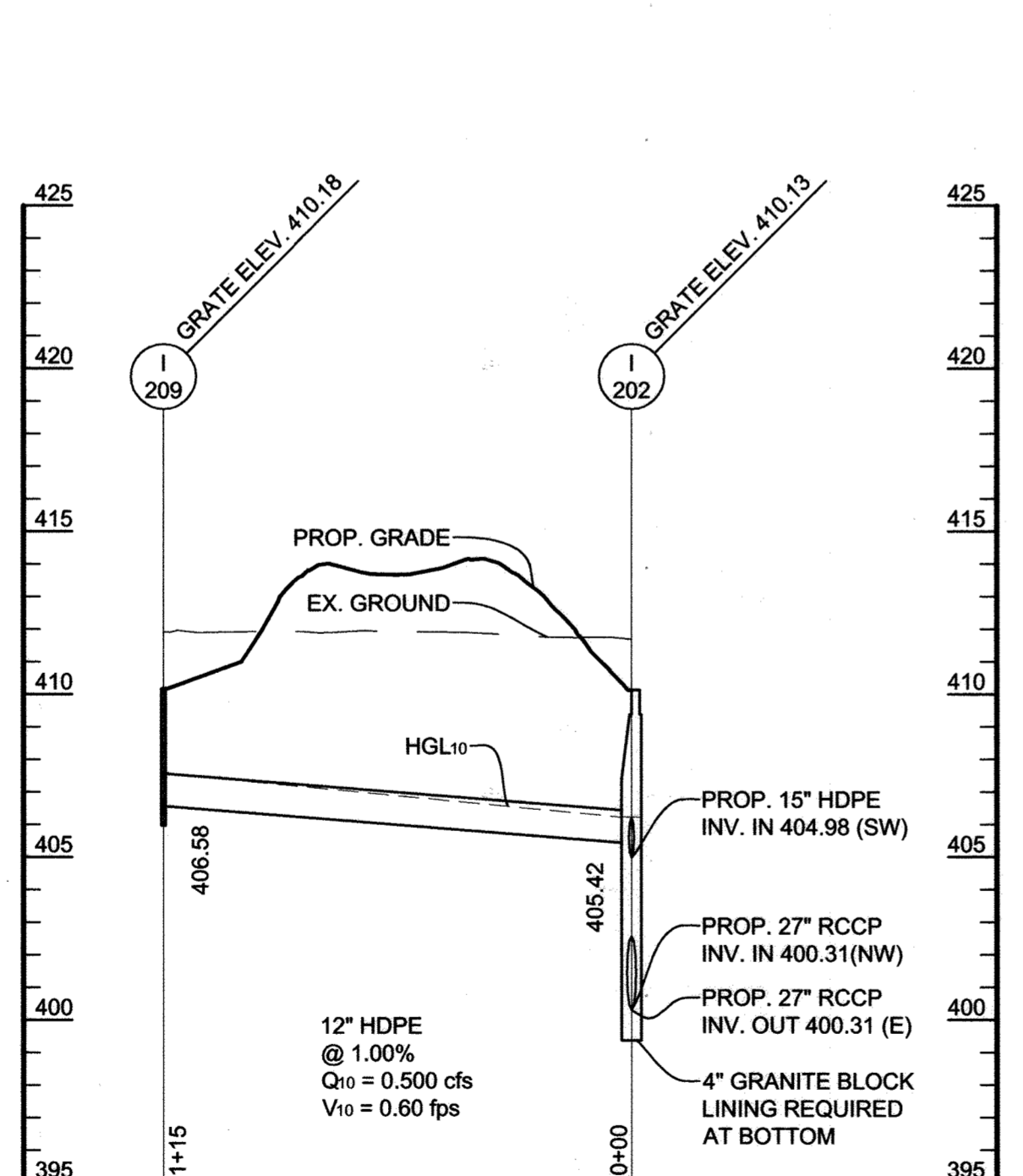
1 PROFILE: PROP. BUILDING FOUNDATION DRAIN TO EX. M-4
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



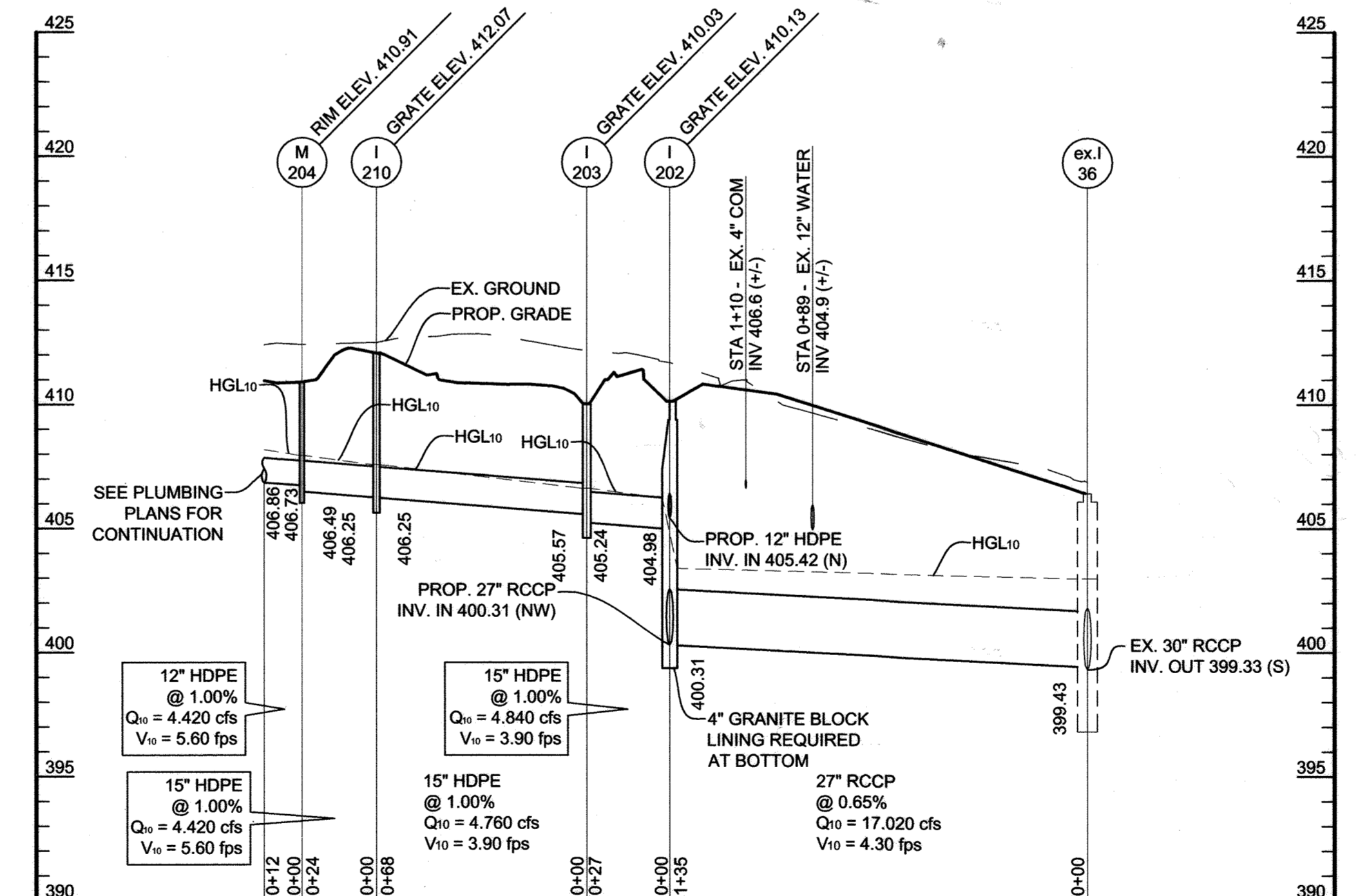
2 PROFILE: I-208 TO I-202
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



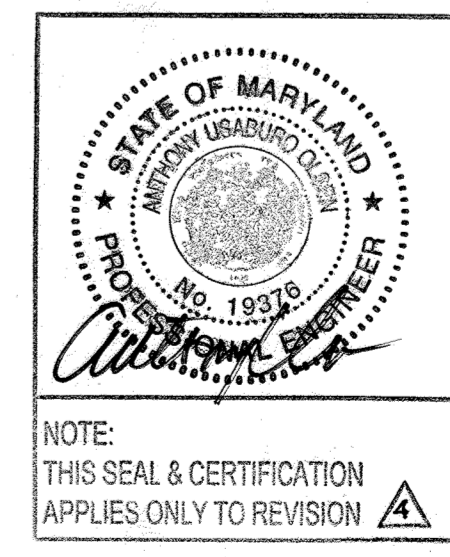
3 PROFILE: I-112 TO M-111
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



4 PROFILE: I-209 TO I-202
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



5 PROFILE: ROOF DRAIN TO EX. I-36
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



PROFESSIONAL CERTIFICATION.
 I HEREBY CERTIFY THAT THESE DOCUMENTS
 WERE PREPARED OR APPROVED BY ME, AND
 THAT I AM A DULY LICENSED PROFESSIONAL
 ENGINEER UNDER THE LAWS OF THE STATE OF
 MARYLAND. LICENSE NO. 19376
 EXPIRATION DATE: 9/22/21

APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10-24-17
 DATE: 10-31-17
 DATE: 11-20-17

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

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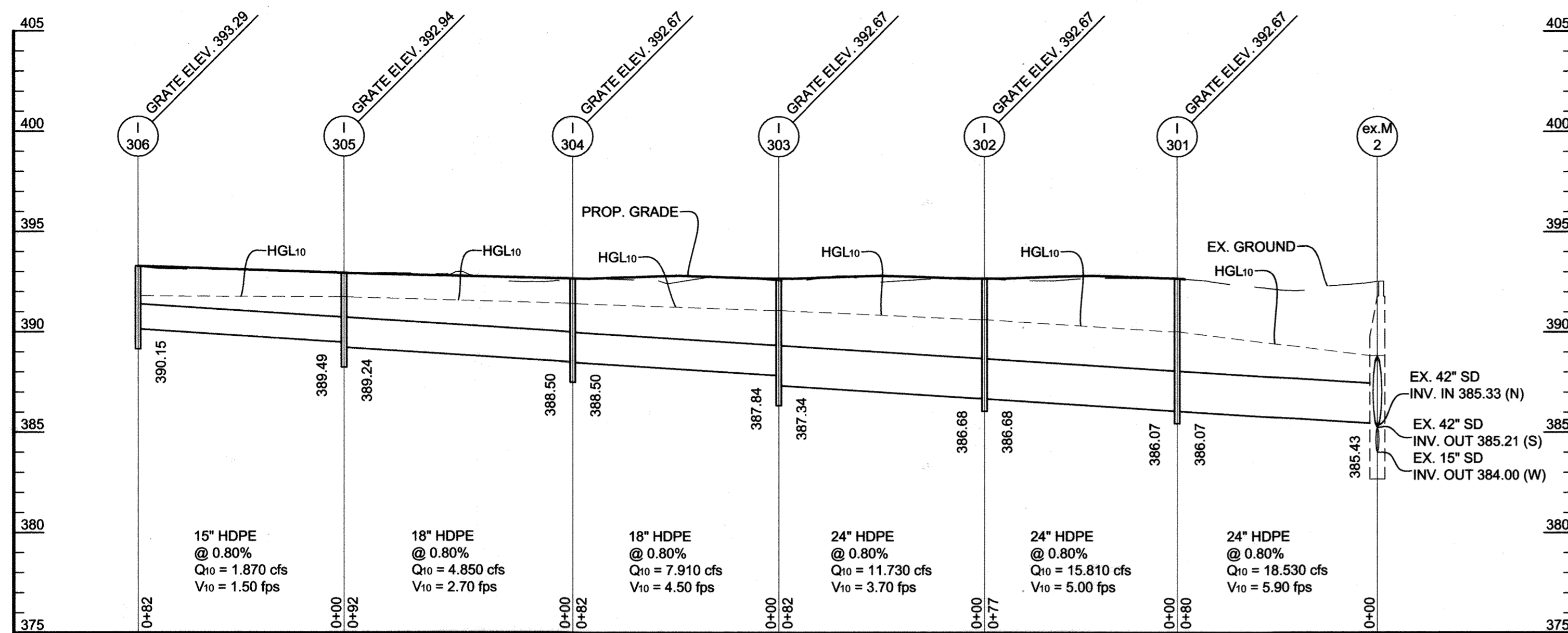


No.	Date	Description
3	7/7/18	STORM DRAIN & SANITARY RELOCATION
4	7/21	REV TO I-206 & GRADES

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART		
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300
PLAT # OR L/F	GRID #	ZONING
20928-20930	22	PEC
TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
0041	5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT
550	-	NEW OFFICE BUILDING - GREEN BUILDING

STORM DRAIN PROFILES
C-301
 SHEET 11 OF 25
 SDP-17-047



STORM DRAIN PIPE SCHEDULE

TYPE	LENGTH (LF)
4" DIP	104
12" HDPE	338
15" HDPE	246
18" HDPE	175
24" HDPE	240
15" RCCP	353
27" RCCP	282

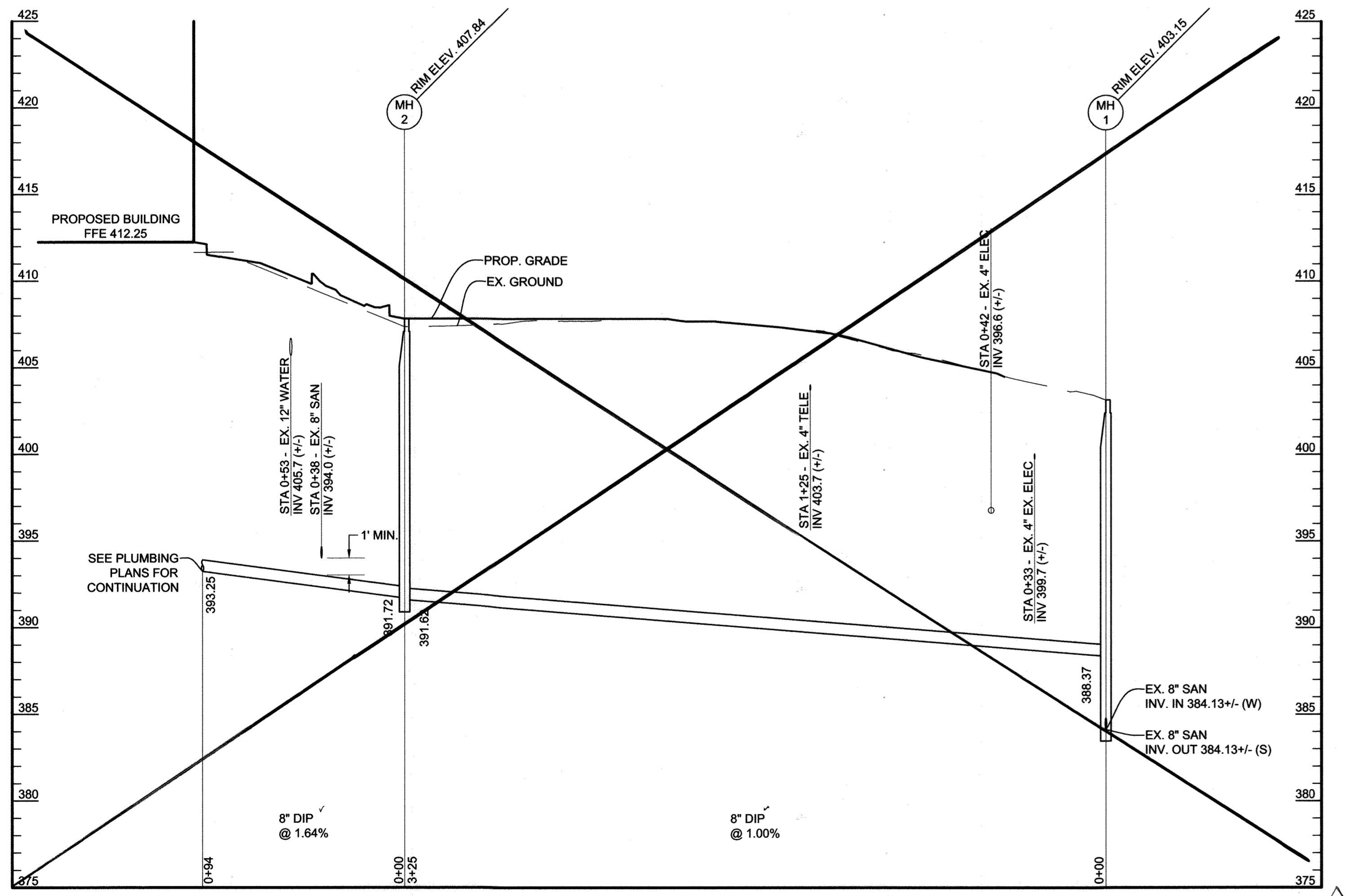
STORM DRAIN STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP ELEV.	INV. IN	INV. OUT	COORDINATES	NOTES
M-102	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 403.26	15" RCCP (W) 389.81	15" RCCP (S) 389.81	N: 543,122.78 E: 1,341,420.74	
M-103	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 407.60	15" HDPE (E) 392.41	15" RCCP (E) 392.29	N: 543,173.34 E: 1,340,801.26	
M-111	PRECAST DOGHOUSE MANHOLE HOWARD CO. G-5.14	RIM 412.17	27" RCCP (N) 400.34	27" RCCP (S) 400.34	N: 543,283.92 E: 1,340,764.59	
I-112	24" NYLOPLAST DRAIN BASIN	GRATE 412.17	15" HDPE (N) 408.00	15" HDPE (W) 408.00	N: 543,277.39 E: 1,340,807.50	SEE NOTE 2
I-202	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	GRATE 410.13	15" HDPE (SW) 404.98 27" RCCP (NW) 400.31 12" HDPE (N) 405.42	27" RCCP (E) 400.31	N: 543,428.41 E: 1,341,070.16	SEE NOTE 1
I-203	30" NYLOPLAST DRAIN BASIN	GRATE 410.03	15" HDPE (W) 405.57	15" HDPE (NE) 405.24	N: 543,412.57 E: 1,341,048.52	SEE NOTE 2
M-204	18" NYLOPLAST DRAIN BASIN	RIM 410.91	12" HDPE (S) 406.73	15" HDPE (E) 406.49	N: 543,422.04 E: 1,340,956.87	
I-205	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	GRATE 410.46	27" RCCP (W) 400.93	27" RCCP (SE) 400.93	N: 543,468.97 E: 1,340,975.51	SEE NOTE 1
I-206	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	GRATE 409.19	27" RCCP (W) 401.67	27" RCCP (E) 401.67	N: 543,479.53 E: 1,340,851.20	SEE NOTE 1
M-207	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 410.56	12" HDPE (W) 403.26 27" RCCP (N) 402.01	27" RCCP (E) 402.00	N: 543,487.89 E: 1,340,798.00	
I-208	12" NYLOPLAST DRAIN BASIN	GRATE 410.55		12" HDPE (E) 405.37	N: 543,498.52 E: 1,340,587.57	SEE NOTE 2
I-209	12" NYLOPLAST DRAIN BASIN	GRATE 410.18		12" HDPE (S) 406.58	N: 543,542.73 E: 1,341,086.21	SEE NOTE 2
I-210	24" NYLOPLAST DRAIN BASIN	GRATE 412.07	15" HDPE (W) 406.25	15" HDPE (E) 406.25	N: 543,419.55 E: 1,340,980.89	SEE NOTE 1
I-301	24" NYLOPLAST DRAIN BASIN	GRATE 392.67	24" HDPE (W) 386.07	24" HDPE (SE) 386.07	N: 542,890.72 E: 1,341,007.79	SEE NOTE 3
I-302	24" NYLOPLAST DRAIN BASIN	GRATE 392.67	24" HDPE (W) 386.68	24" HDPE (E) 386.68	N: 542,902.73 E: 1,340,931.57	SEE NOTE 3
I-303	24" NYLOPLAST DRAIN BASIN	GRATE 392.67	18" HDPE (W) 387.84	24" HDPE (E) 387.34	N: 542,915.56 E: 1,340,850.07	SEE NOTE 3
I-304	24" NYLOPLAST DRAIN BASIN	GRATE 392.67	18" HDPE (W) 388.50	18" HDPE (E) 388.50	N: 542,928.40 E: 1,340,768.60	SEE NOTE 3
I-305	24" NYLOPLAST DRAIN BASIN	GRATE 392.94	15" HDPE (W) 389.49	18" HDPE (E) 389.24	N: 542,942.64 E: 1,340,678.22	SEE NOTE 3
I-306	24" NYLOPLAST DRAIN BASIN	GRATE 393.29		15" HDPE (E) 390.15	N: 542,955.48 E: 1,340,596.72	SEE NOTE 3

- NOTES:**
- USE 24" SLOTTED GRATE LID.
 - USE STANDARD LOCKING GRATE LID.
 - USE 2'x3' HIGHWAY GRATE

1 PROFILE: I-308 TO EX. M-2

SCALES: HORIZ. 1" = 40'
VERT. 1" = 5'



2 SANITARY PROFILE: PROPOSED BUILDING TO MH-1

SCALES: HORIZ. 1" = 40'
VERT. 1" = 5'

SANITARY STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP ELEV.	INV. IN	INV. OUT	COORDINATES	NOTES
MH-1	PRECAST DOGHOUSE MANHOLE HOWARD CO. G-5.14	RIM 403.15	8" DIP (W) 388.37 8" PVC (S) 384.13	8" PVC (S) 384.13	N: 543,130.96 E: 1,341,133.70	SEE NOTE 1
MH-2	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 407.84	8" DIP (N) 391.72	8" DIP (E) 391.62	N: 543,181.65 E: 1,340,812.70	

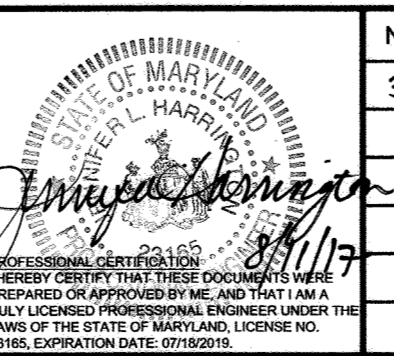
- NOTES:**
- INSTALL INTERMEDIATE LANDINGS IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL G-5.16. INSTALL TYPE "B" DROP CONNECTION IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL S-1.32.

Z:\1616005-JHU-APL Building 201 Design Services\04-DWG-C-302 Utility Profile.dwg-302 Aug 11, 2017 02:08pm .jhm

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief Development Engineering Division
 Division of Land Development
 DATE: 10-24-17
 DATE: 10-31-17
 DATE: 11-20-17

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

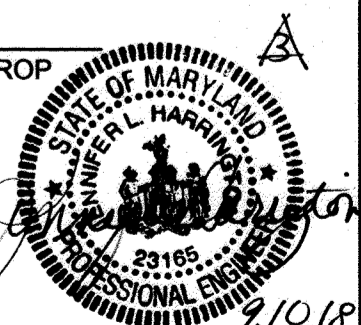
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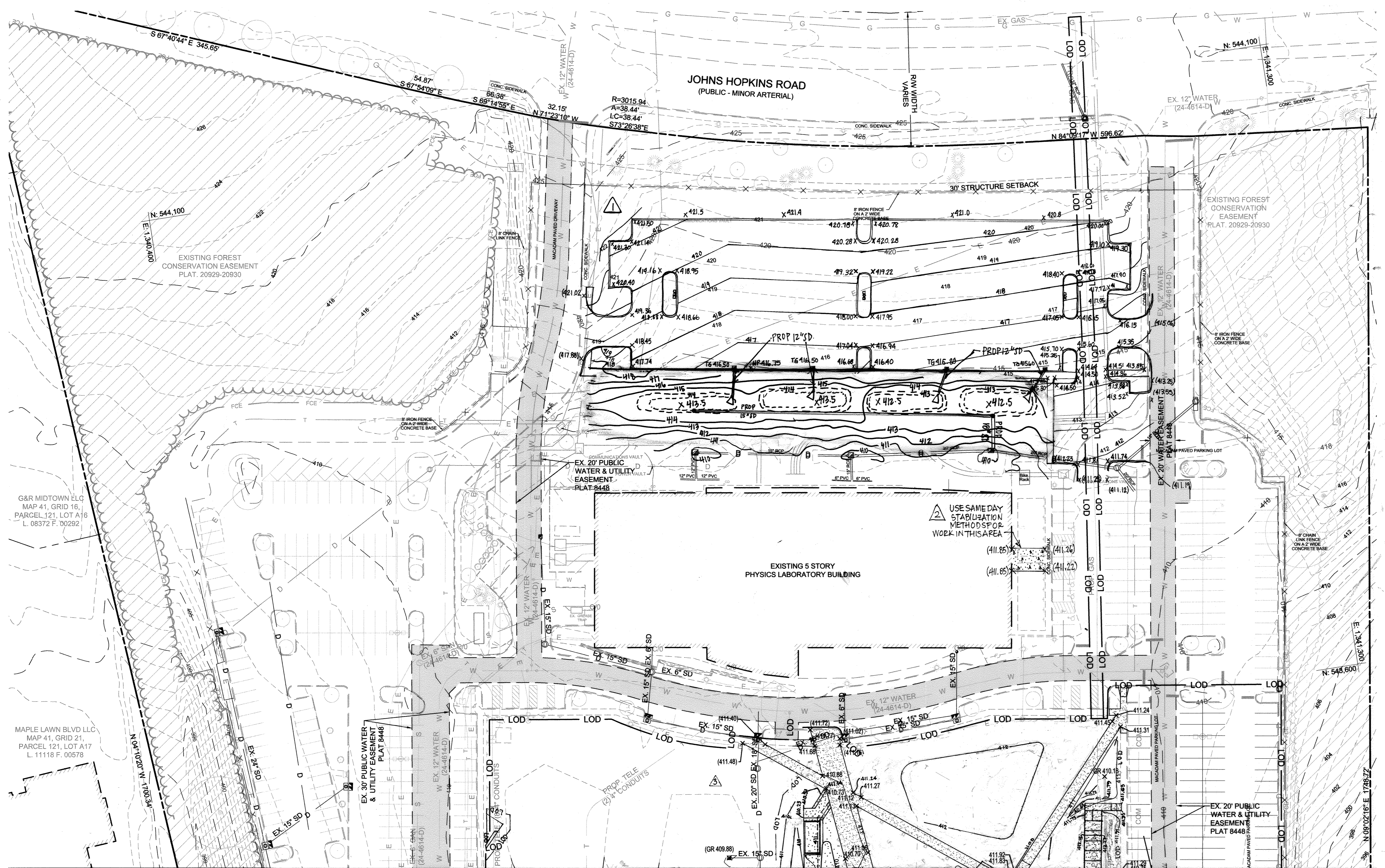
No.	Date	Description
3	11/7/17	STORM DRAIN & SANITARY RELOCATION

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	--	NEW OFFICE BUILDING - GREEN BUILDING	



UTILITY PROFILES
C-302
 SHEET 12 OF 25
 SDP-17-047



LEGEND

	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING SHRUBS
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING STORM DRAIN
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING TELEPHONE
	EXISTING ELECTRIC
	EXISTING LIGHTING
	EXISTING COMMUNICATIONS
	EXISTING UNKNOWN UTILITY
	EXISTING FENCE
	EXISTING BUILDING
	EXISTING SIGN
	PROPOSED CONCRETE WALK
	PROPOSED CURB
	PROPOSED SITE WALL
	PROPOSED BUILDING
	PROPOSED SIGN
	PROPOSED CONTOURS
	SPOT ELEVATIONS
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	PROPOSED WATER
	PROPOSED SANITARY SEWER
	PROPOSED GAS
	PROPOSED TELEPHONE
	PROPOSED ELECTRIC
	PROPOSED LIGHTING

MATCHLINE - SEE DRAWING C-402

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

Bryan R. Aloni
 NAME: BRYAN R. ALONI
 MARYLAND LICENSE NO. 51972
 EXPIRATION DATE: 12-11-19

SWM AS-BUILT PREPARED BY:
 KOI TECHNOLOGIES, INC.
 11830 WEST MARKET PLACE, SUITE F
 FULTON, MD 20759
 DATED: NOVEMBER 01, 2018

PROFESSIONAL CERTIFICATION.
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19376
 EXPIRATION DATE: 2/22/21

NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAYA, 443.778.2284

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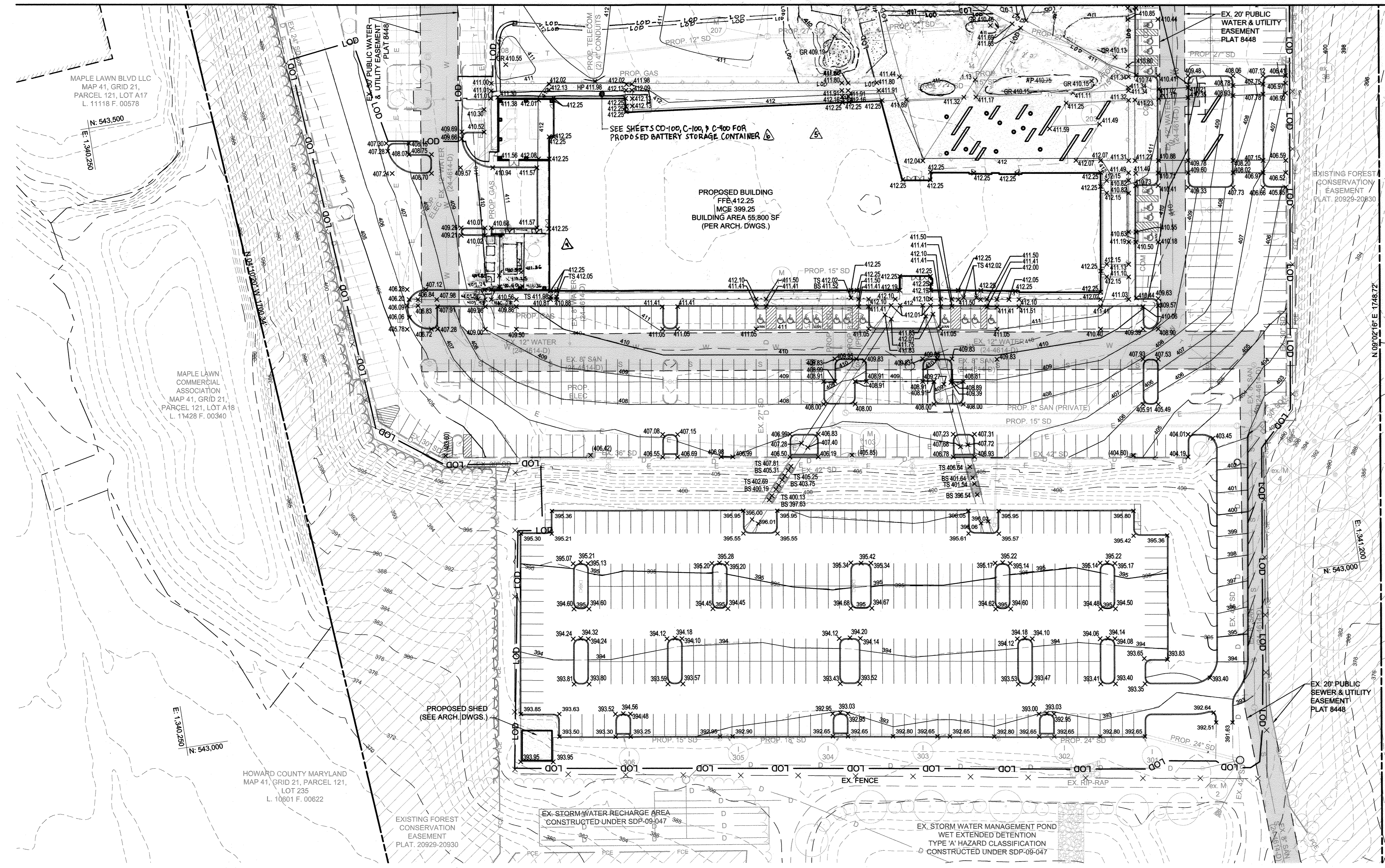
No.	Date	Description
1	2/9/2018	NORTH PARKING LOT ADDITION
2	8/19/18	B201 EAST ENTRANCE MODIFICATION
3	7/2/1	ADD PAVILIONS

MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300
PLAT # OR L/F	GRID #	ZONING
20928-20930	22	PEC
TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
0041	5th	6051.02
PROPERTY IMPROVEMENT	NEW OFFICE BUILDING - GREEN BUILDING	

GRADING PLAN
C-401
 SHEET 13 OF 25
 SDP-17-047

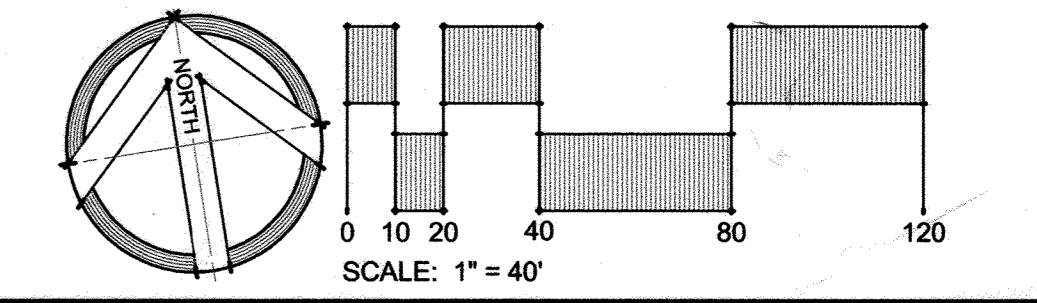
MATCHLINE - SEE DRAWING C-401



LEGEND

	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING SHRUBS
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING STORM DRAIN
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING TELEPHONE
	EXISTING ELECTRIC
	EXISTING LIGHTING
	EXISTING COMMUNICATIONS
	EXISTING UNKNOWN UTILITY
	EXISTING FENCE
	EXISTING BUILDING
	EXISTING SIGN
	PROPOSED CONCRETE WALK
	PROPOSED CURB
	PROPOSED SITE WALL
	PROPOSED OVERHANG
	PROPOSED BUILDING
	PROPOSED SIGN
	PROPOSED CONTOURS
	SPOT ELEVATIONS
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	PROPOSED WATER
	PROPOSED SANITARY SEWER
	PROPOSED GAS
	PROPOSED TELEPHONE
	PROPOSED ELECTRIC
	PROPOSED LIGHTING

NOTE
SPOT ELEVATIONS SHOWN AT CURBS ARE THE PROPOSED ELEVATION AT THE BOTTOM FACE OF CURB EXCEPT FOR THOSE SPOTS AT THE PROPOSED SPEED TABLES, ADA ACCESSIBLE SPACES AND RAMPS WHERE THE SPOTS DEFINE THE FLUSH CURB.



PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12376 EXPIRATION DATE: 9/22/21

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49932 EXPIRATION DATE: 05/31/24



RK&K
700 EAST PRATT ST, SUITE 500
BALTIMORE, MD 21202

PURPOSE STATEMENT: ADDITION OF BATTERY STORAGE CONTAINER, REMOVAL OF 2 PARKING SPACES, AND UPDATED PLANTING PLAN AS-BUILT.

APPROVED: DEPARTMENT OF PLANNING & ZONING

10-24-17 DATE

10-31-17 DATE

11-20-17 DATE

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
BUILDING B201
11091 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723
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No.	Date	Description
6/02/19		UTILITY YARD UPDATES
7/21		ADD PAVILIONS
4/10/22		ADDITION OF BATTERY STORAGE CONTAINERS, UPDATED PLANTING PLAN AS-BUILT.

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	GRADING PLAN
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	C-402
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	CENSUS TRACT
550		NEW OFFICE BUILDING - GREEN BUILDING	6051.02

GRADING PLAN
C-402
SHEET 14 OF 25
SDP-17-047

LEGEND

	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EX. 15" SD
	EX. 6" WATER
	EX. 8" SAN S
	EX. TELE
	EX. ELEC
	EXISTING STORM DRAIN
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING TELEPHONE
	EXISTING ELECTRIC
	EXISTING LIGHTING
	EXISTING COMMUNICATIONS
	EXISTING UNKNOWN UTILITY
	EXISTING FENCE
	EXISTING BUILDING
	EXISTING SOILS
	TSSF SUPER SILT FENCE
	SF SILT FENCE
	SFOP SILT FENCE ON PAVING
	AGIP AT GRADE
	SIP-A STANDARD A
	INLET PROTECTION
	CIP CURB
	REMOVABLE PUMPING STATION
	LOD LIMIT OF DISTURBANCE
	SCE STABILIZED CONSTRUCTION ENTRANCE



MATCHLINE - SEE DRAWING ESC-102

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Jennifer Harrington
 JENNIFER HARRINGTON, P.E. ENGINEER
 8/11/17 DATE

DEVELOPER'S CERTIFICATE
 "WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Glenn M. Carey
 DEVELOPER
 8/24/17 DATE

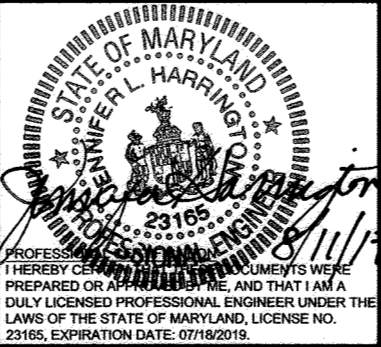
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson
 HOWARD SOIL CONSERVATION DISTRICT
 8/28/17 DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING
[Signature] 10-24-17 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 10-31-17 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 11-20-17 DATE
 DIRECTOR

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

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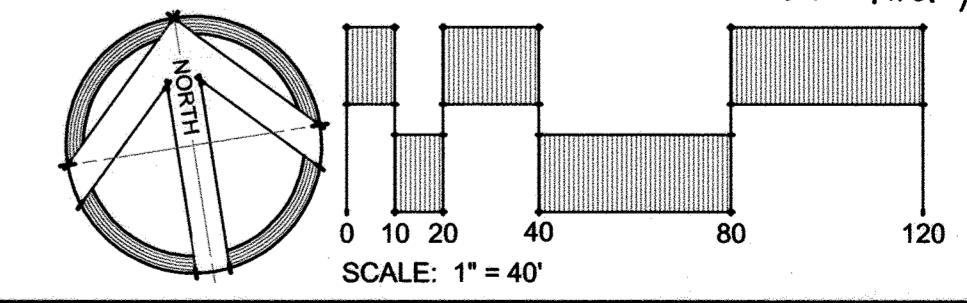


No.	Date	Description
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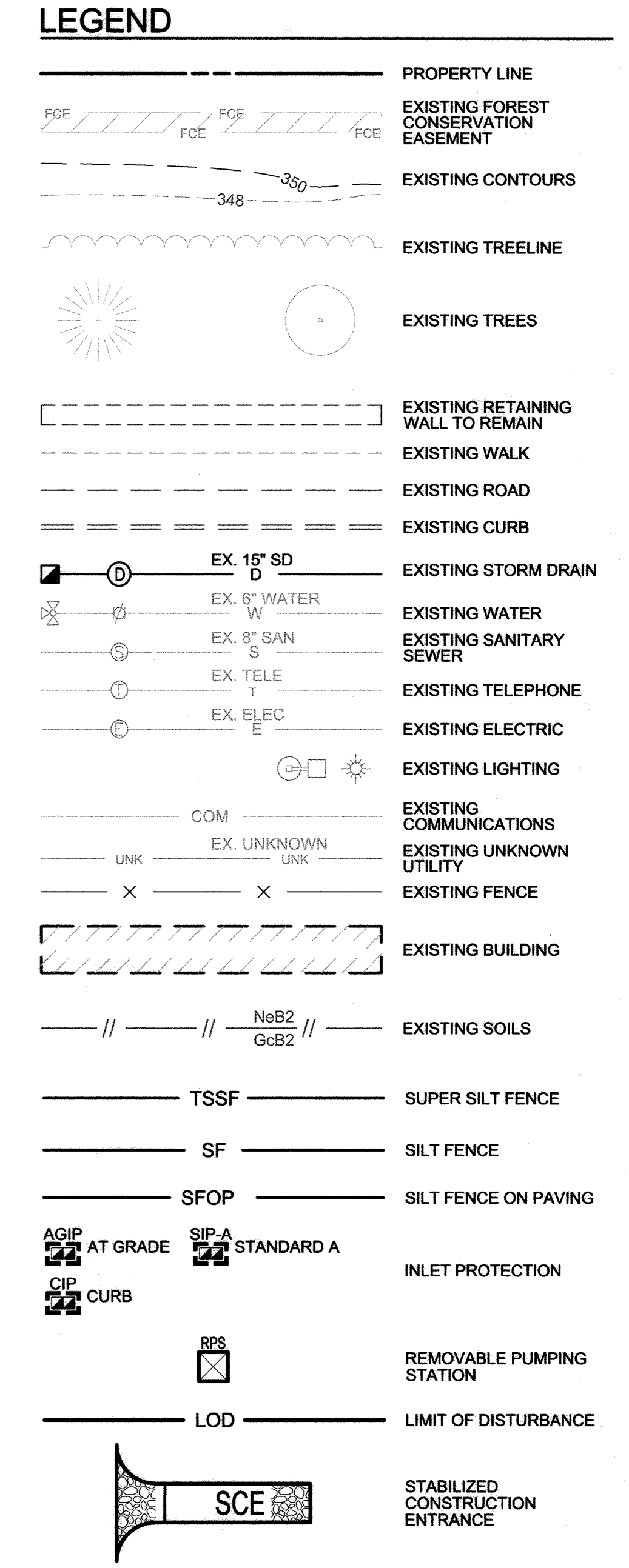
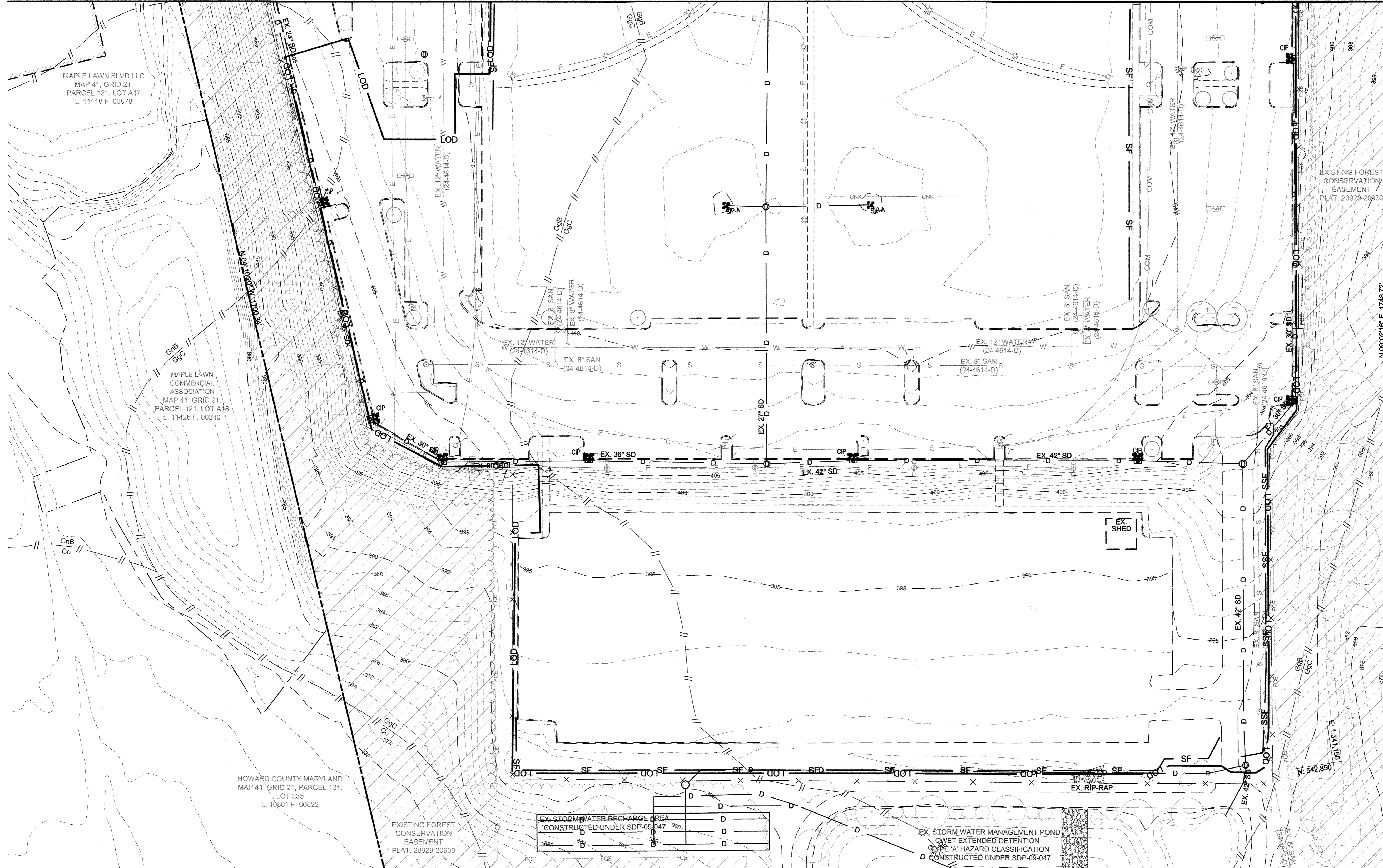
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MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	-	NEW OFFICE BUILDING - GREEN BUILDING	

EXISTING EROSION & SEDIMENT CONTROL PLAN
ESC-101
 SHEET 15 OF 25
 SDP-17-047



MATCHLINE - SEE DRAWING ESC-101



Z:\161605-JHU-APL Building 201 Design Services\DWG\ESC-102 Existing Erosion & Sediment Control Plan.dwg-102 Aug 11, 2017 02:11pm JH

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Jennifer Harrington
 JENNIFER HARRINGTON, P.E. - ENGINEER
 8/11/17
 DATE

DEVELOPER'S CERTIFICATE
 I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Glenn M. Caray
 DEVELOPER
 8/24/17
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts
 HOWARD SOIL CONSERVATION DISTRICT
 8/28/17
 DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING
Chief
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 10-24-17
 DATE
Karl
 CHIEF, DIVISION OF LAND DEVELOPMENT
 10-31-17
 DATE
Director
 DIRECTOR
 11-20-17
 DATE

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAYA, 443.778.2284

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No.	Date	Description

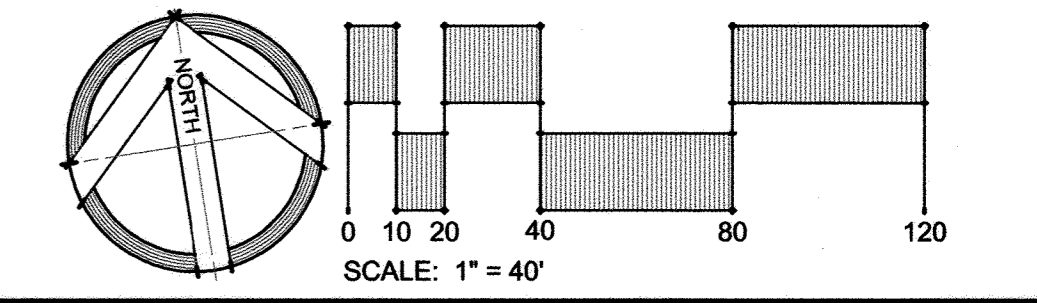
ADDRESS CHART

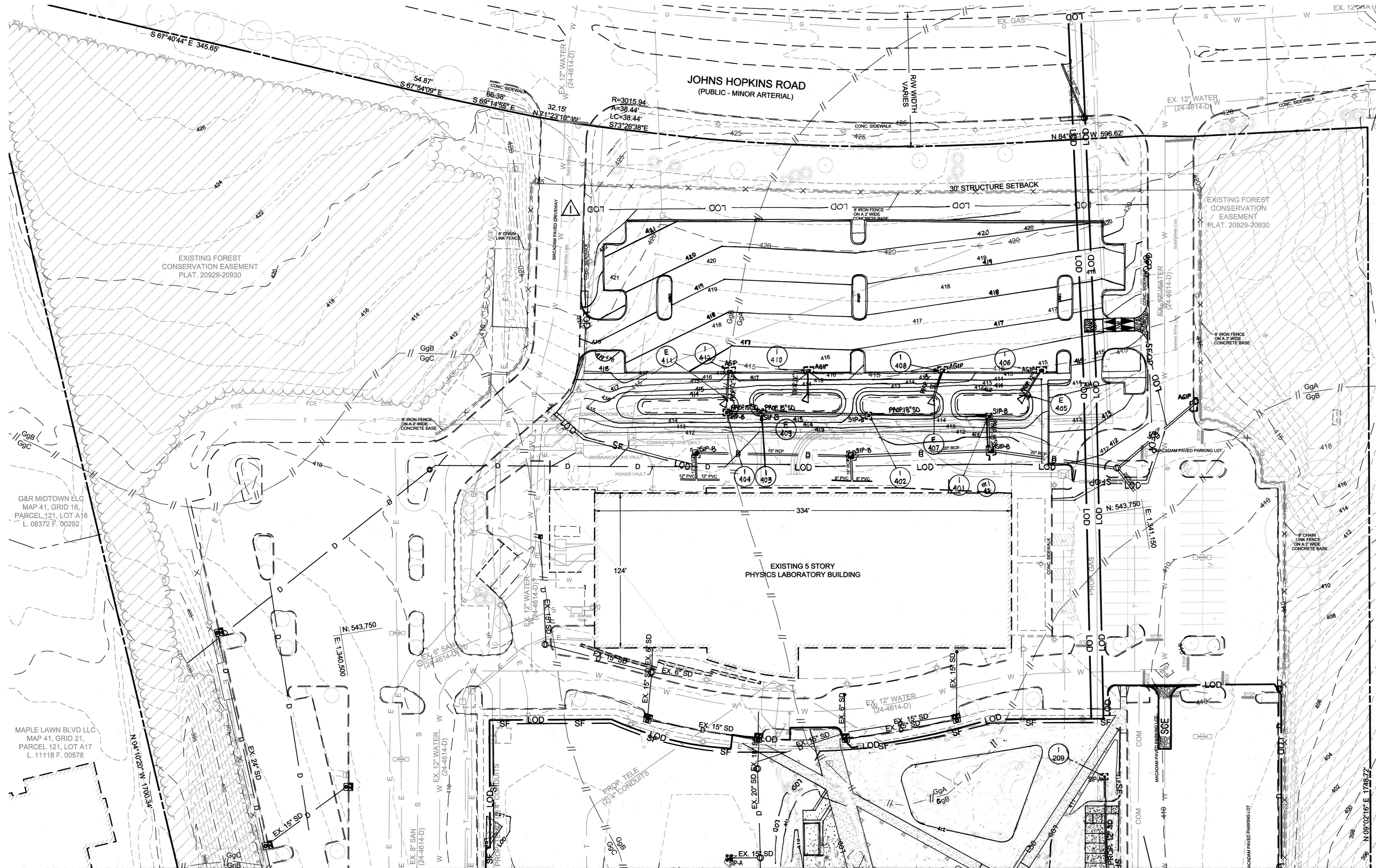
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART

PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.		
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300		
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. / ELECT DISTRICT	CENSUS TRACT
20928-20930	22	PEC	0041 5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT		
550	-	NEW OFFICE BUILDING - GREEN BUILDING		

EXISTING EROSION & SEDIMENT CONTROL PLAN
ESC-102
 SHEET 16 OF 25
 SDP-17-047





LEGEND	
	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING STORM DRAIN
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING TELEPHONE
	EXISTING ELECTRIC
	EXISTING LIGHTING
	EXISTING COMMUNICATIONS
	EXISTING UNKNOWN UTILITY
	EXISTING FENCE
	EXISTING BUILDING
	EXISTING SOILS
	PROPOSED CONTOURS
	TSSF SUPER SILT FENCE
	SF SILT FENCE
	SFOP SILT FENCE ON PAVING
	AGIP AT GRADE STANDARD A INLET PROTECTION
	CIP CURB
	RPS REMOVABLE PUMPING STATION
	LOD LIMIT OF DISTURBANCE
	SCE STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED CONCRETE WALK
	PROPOSED CURB
	PROPOSED SITE WALL
	PROPOSED OVERHANG
	PROPOSED BUILDING
	PROP. 15" SD PROPOSED STORM DRAIN
	PROP. 6" WATER PROPOSED WATER
	PROP. 8" SAN PROPOSED SANITARY SEWER
	PROP. 2" GAS PROPOSED GAS
	PROP. TELE PROPOSED TELEPHONE
	PROP. ELEC PROPOSED ELECTRIC
	PROP. LIGHTING PROPOSED LIGHTING

MATCHLINE - SEE DRAWING ESC-112

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Jennifer Harrington
 JENNIFER HARRINGTON, P.E. - ENGINEER
 8/11/17
 / DATE

DEVELOPER'S CERTIFICATE
 "WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Henry M. Cary
 DEVELOPER
 8/24/17
 / DATE

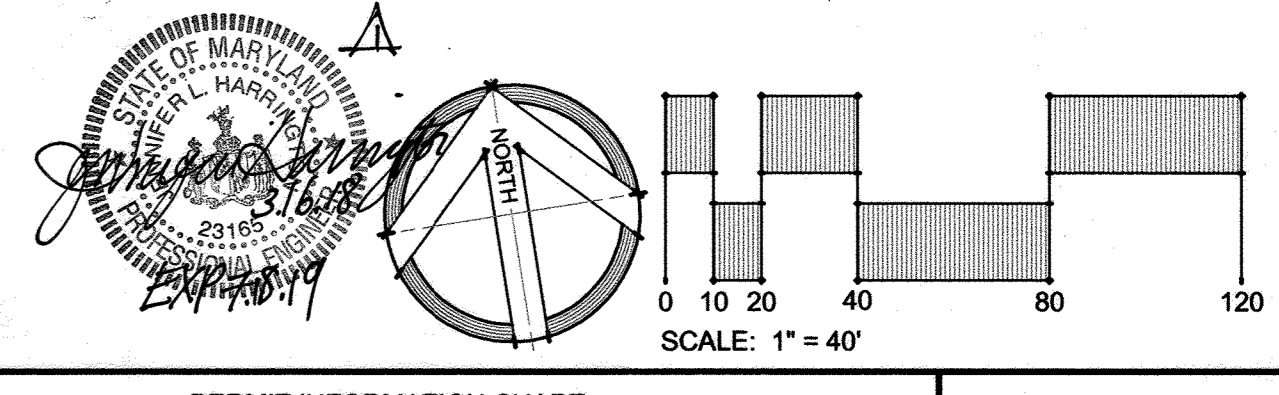
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Rhoton
 HOWARD SOIL CONSERVATION DISTRICT
 8/28/17
 / DATE

STATE OF MARYLAND
PROFESSIONAL ENGINEER
 19376
 2/22/21

NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19376 EXPIRATION DATE: 2/22/21



APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 10-24-17
 / DATE

Walter A. Saloosh
 CHIEF, DIVISION OF LAND DEVELOPMENT
 10-31-17
 / DATE

Walter A. Saloosh
 DIRECTOR
 11-20-17
 / DATE

JOHNS HOPKINS UNIVERSITY
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PROFESSIONAL ENGINEER
 23155
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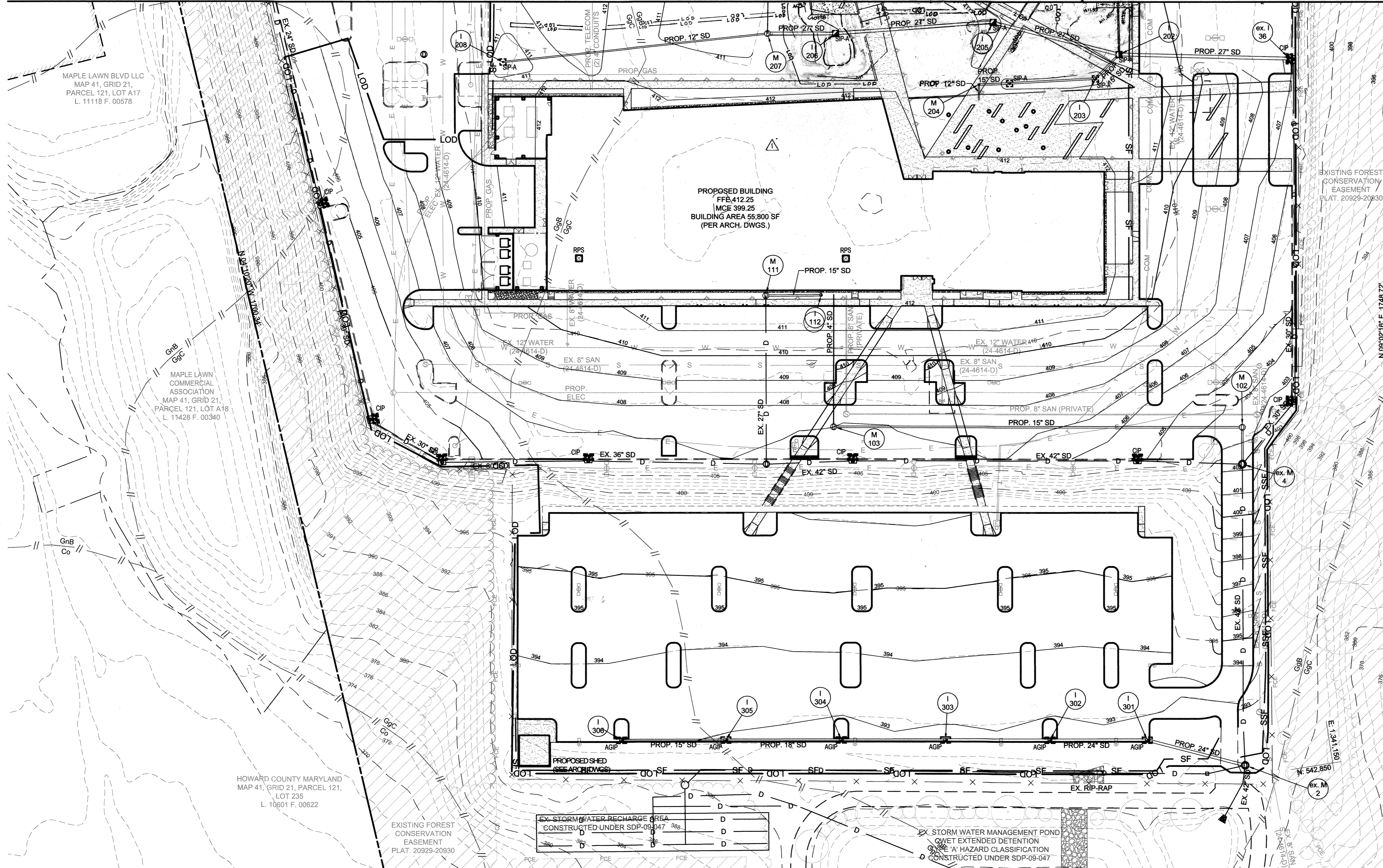
No.	Date	Description
1	2/25/18	NORTH PARKING LOT ADDITION
2	7/21	ADD PAVILIONS

MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME JHU-APL SOUTH CAMPUS BUILDING B201	SECTION/AREA N/A	LOT/PARCEL NO. 300	
PLAT # OR L/F 20928-20930	GRID # 22	ZONING PEC	TAX MAP NO. / ELECT DISTRICT 0041 / 5th
WATER CODE 550	SEWER CODE -	CENSUS TRACT 6051.02	
PROPERTY IMPROVEMENT NEW OFFICE BUILDING - GREEN BUILDING			

PROPOSED EROSION & SEDIMENT CONTROL PLAN
ESC-111
 SHEET 17 OF 25
 SDP-17-047

MATCHLINE - SEE DRAWING ESC-111



LEGEND

- PROPERTY LINE
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TREES
- EXISTING RETAINING WALL TO REMAIN
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING TELEPHONE
- EXISTING ELECTRIC
- EXISTING LIGHTING
- EXISTING COMMUNICATIONS
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- EXISTING FENCE
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- EXISTING SOILS
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- SUPER SILT FENCE
- SILT FENCE
- SILT FENCE ON PAVING
- INLET PROTECTION
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- STABILIZED CONSTRUCTION ENTRANCE
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- PROPOSED WATER
- PROPOSED SANITARY SEWER
- PROPOSED GAS
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- PROPOSED LIGHTING

Z:\161605-JHU-APL Building 201 Design Services\04-DWG\ESC-112 Proposed Erosion & Sediment Control Plan.dwg-112 Aug 11, 2017 02:19pm jh

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Jennifer Harrington 8/11/17
 JENNIFER HARRINGTON, P.E. - ENGINEER / DATE

DEVELOPER'S CERTIFICATE
 I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Allen M. Carey 8/24/17
 DEVELOPER / DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robinson 8/28/17
 HOWARD SOIL CONSERVATION DISTRICT / DATE

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 JENNIFER HARRINGTON
 LICENSE NO. 17276
 EXPIRATION DATE: 7/22/21

NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION

PROFESSIONAL CERTIFICATION.
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 17276
 EXPIRATION DATE: 7/22/21

APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10-24-17

Kent LaRue 10-31-17
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-20-17

Valerie J. Grew
 DIRECTOR

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
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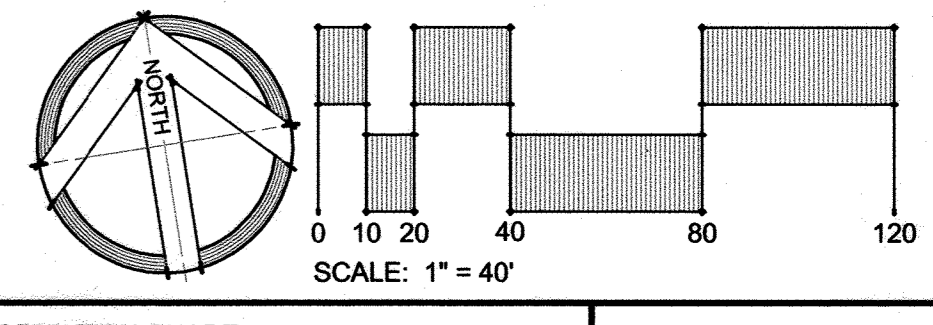
STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 JENNIFER HARRINGTON
 LICENSE NO. 17276
 EXPIRATION DATE: 7/22/21

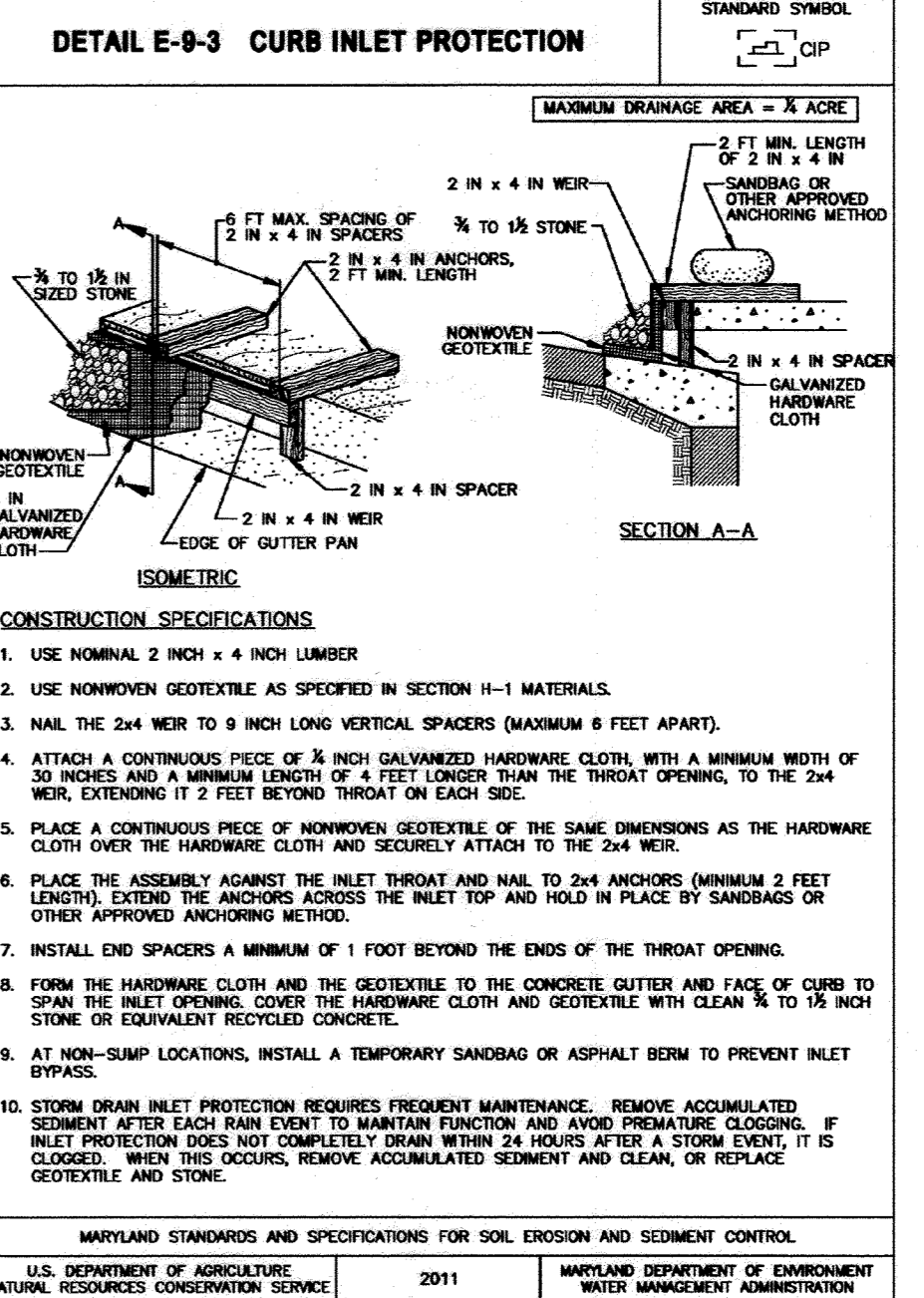
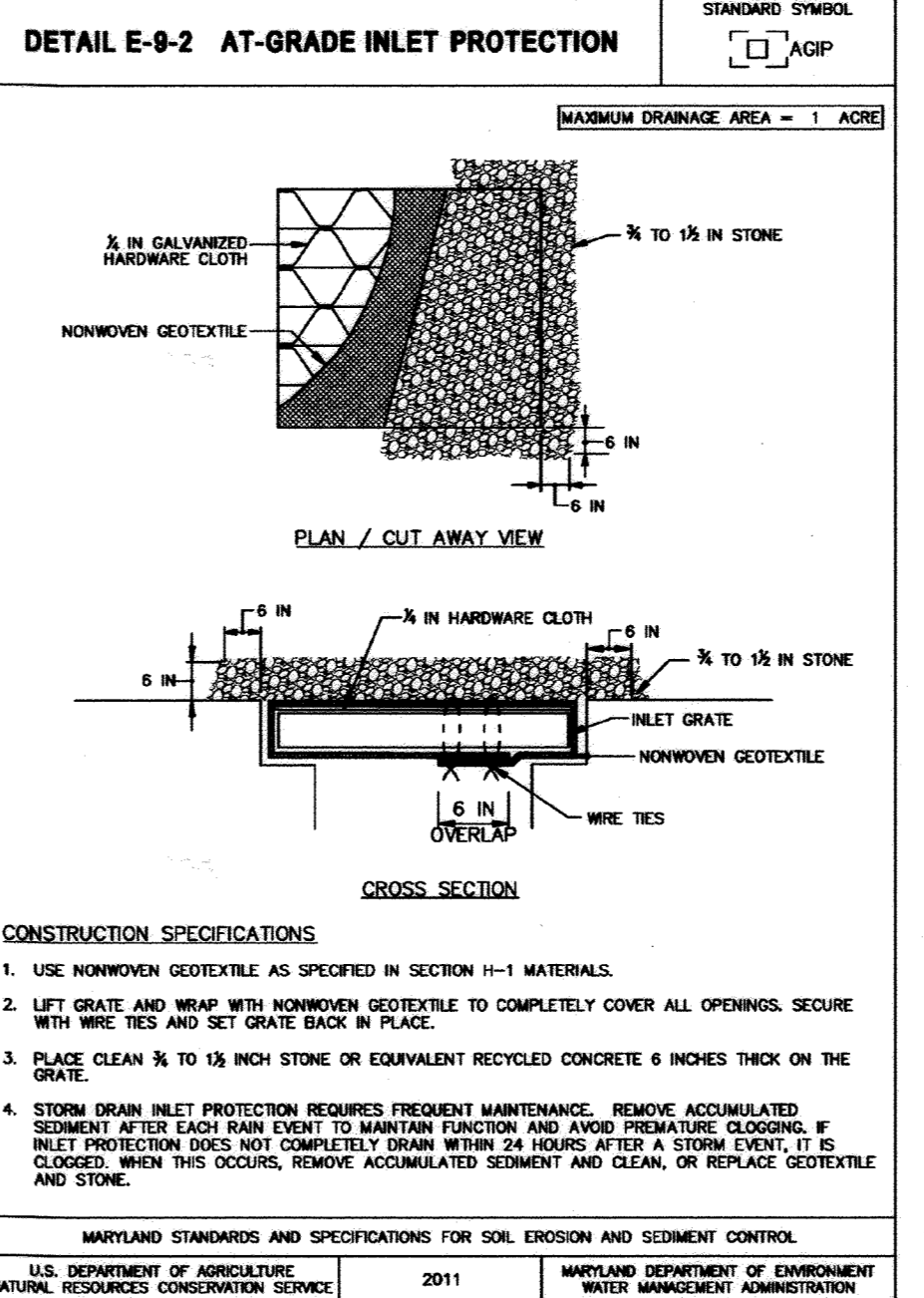
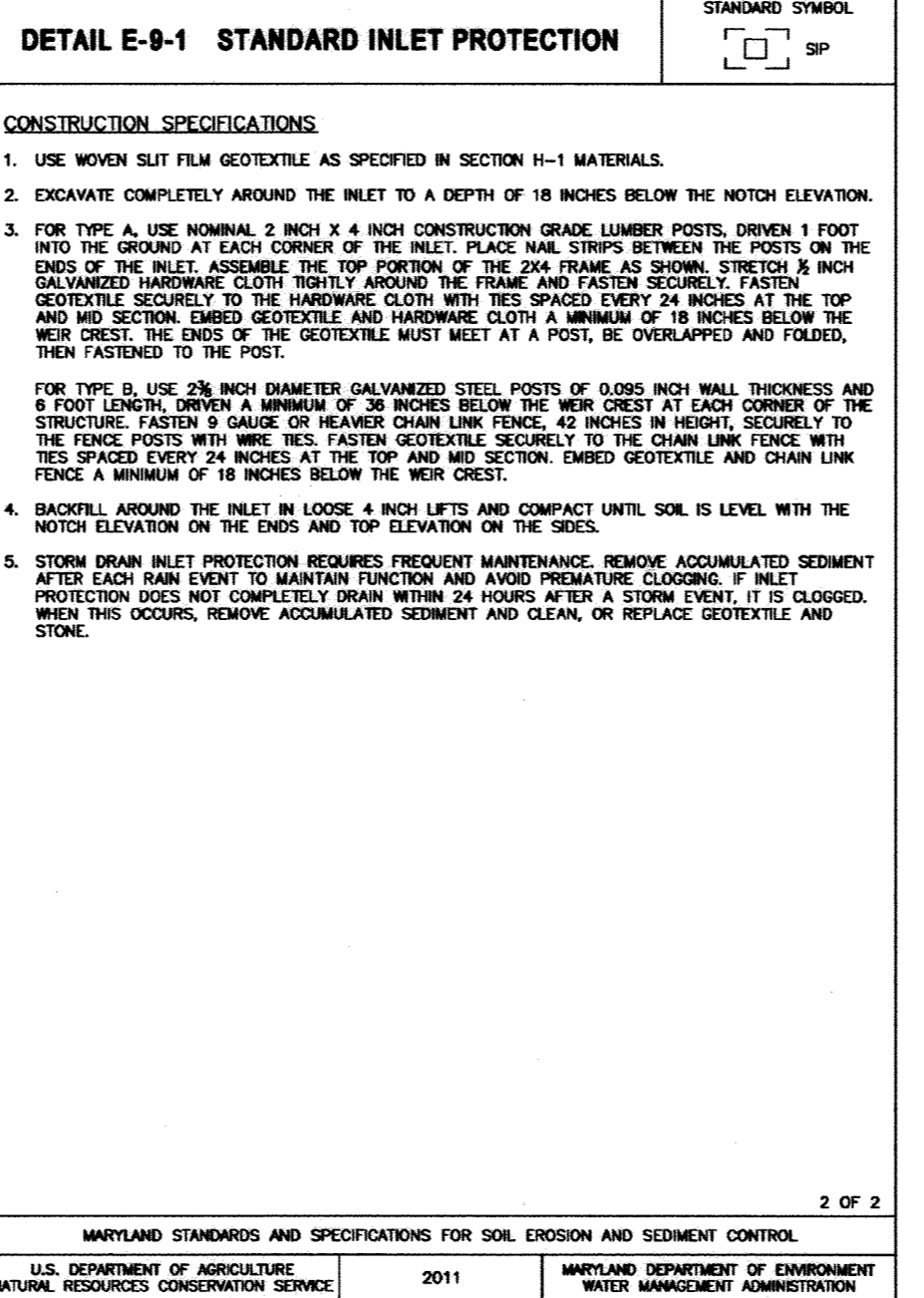
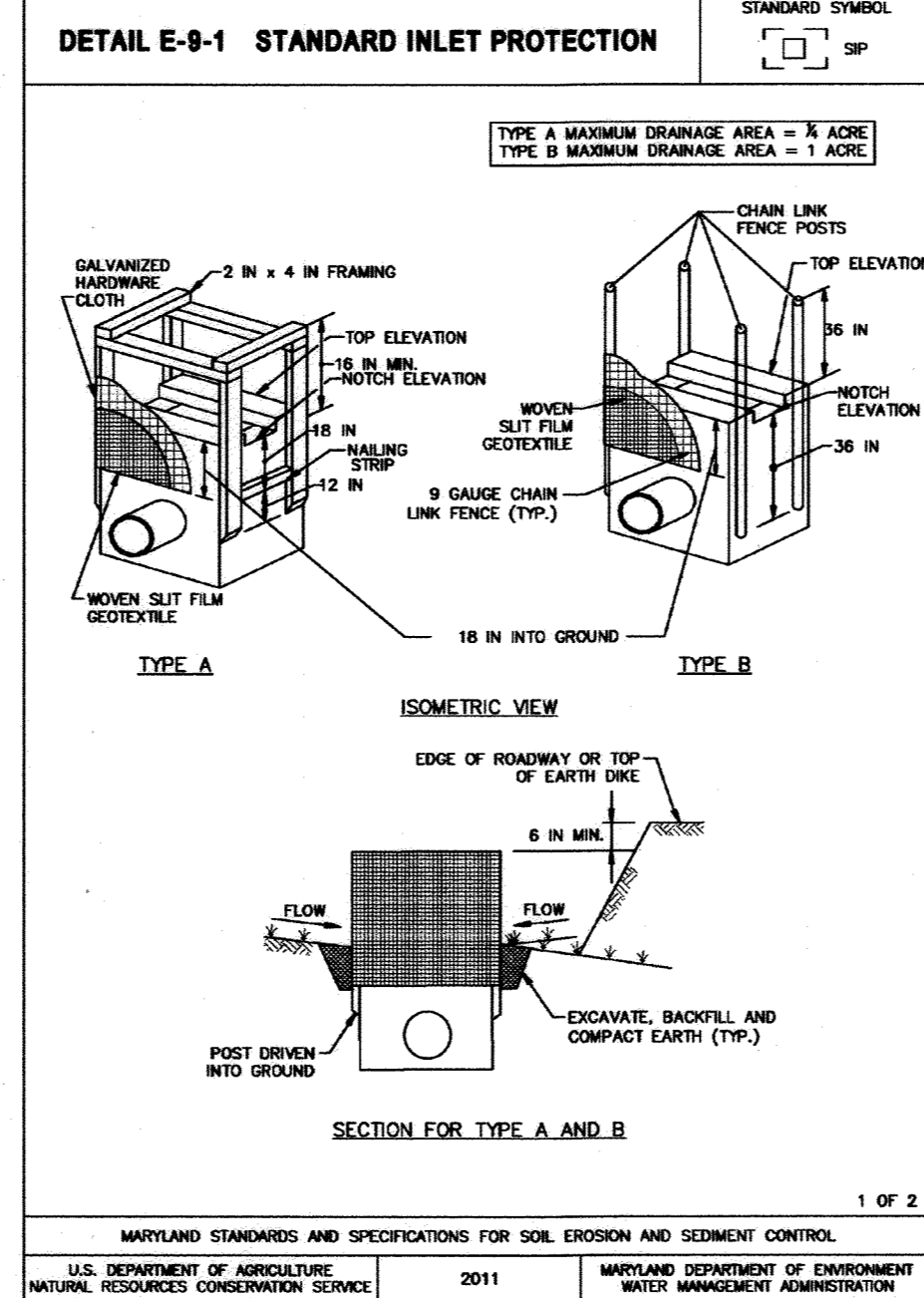
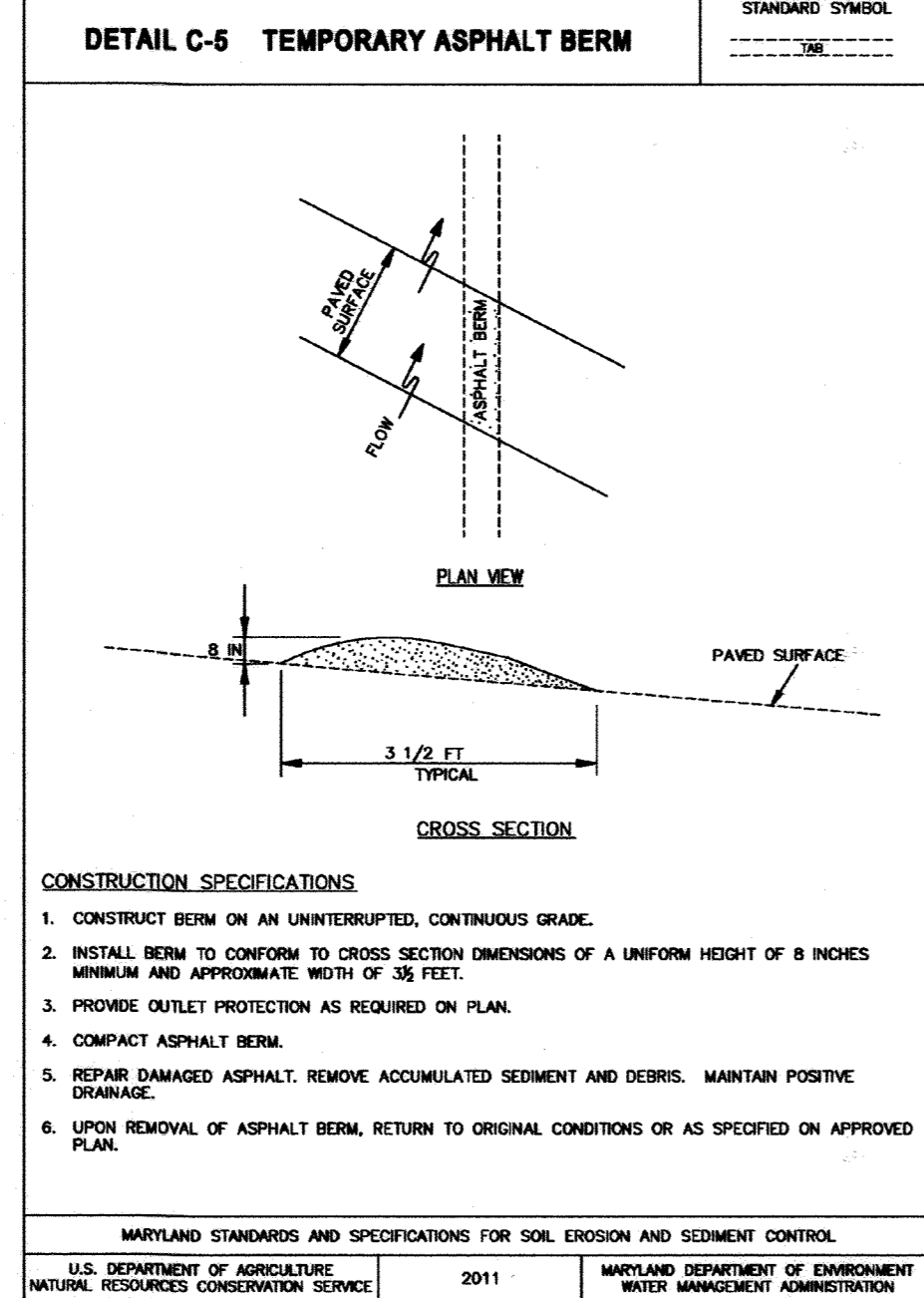
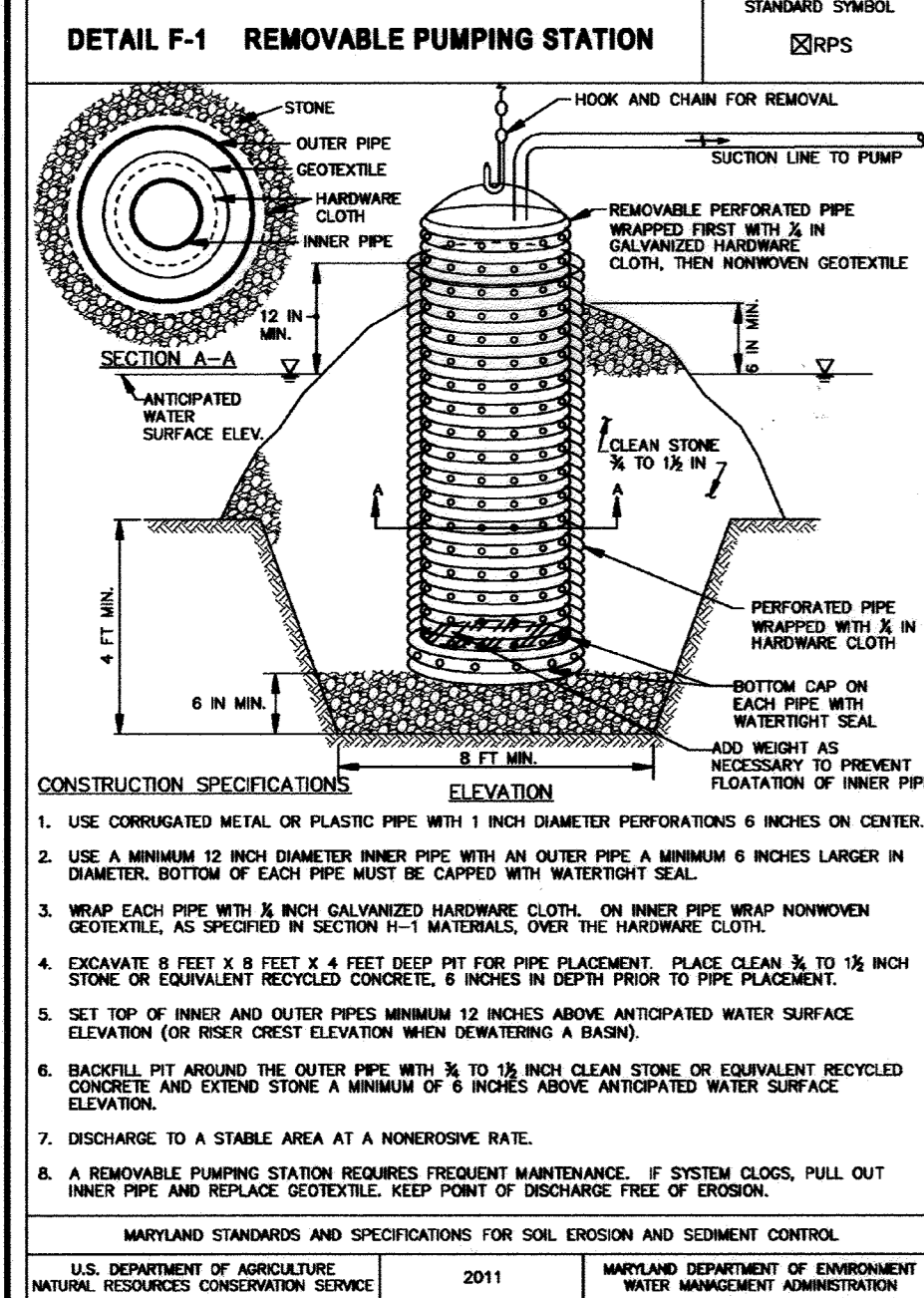
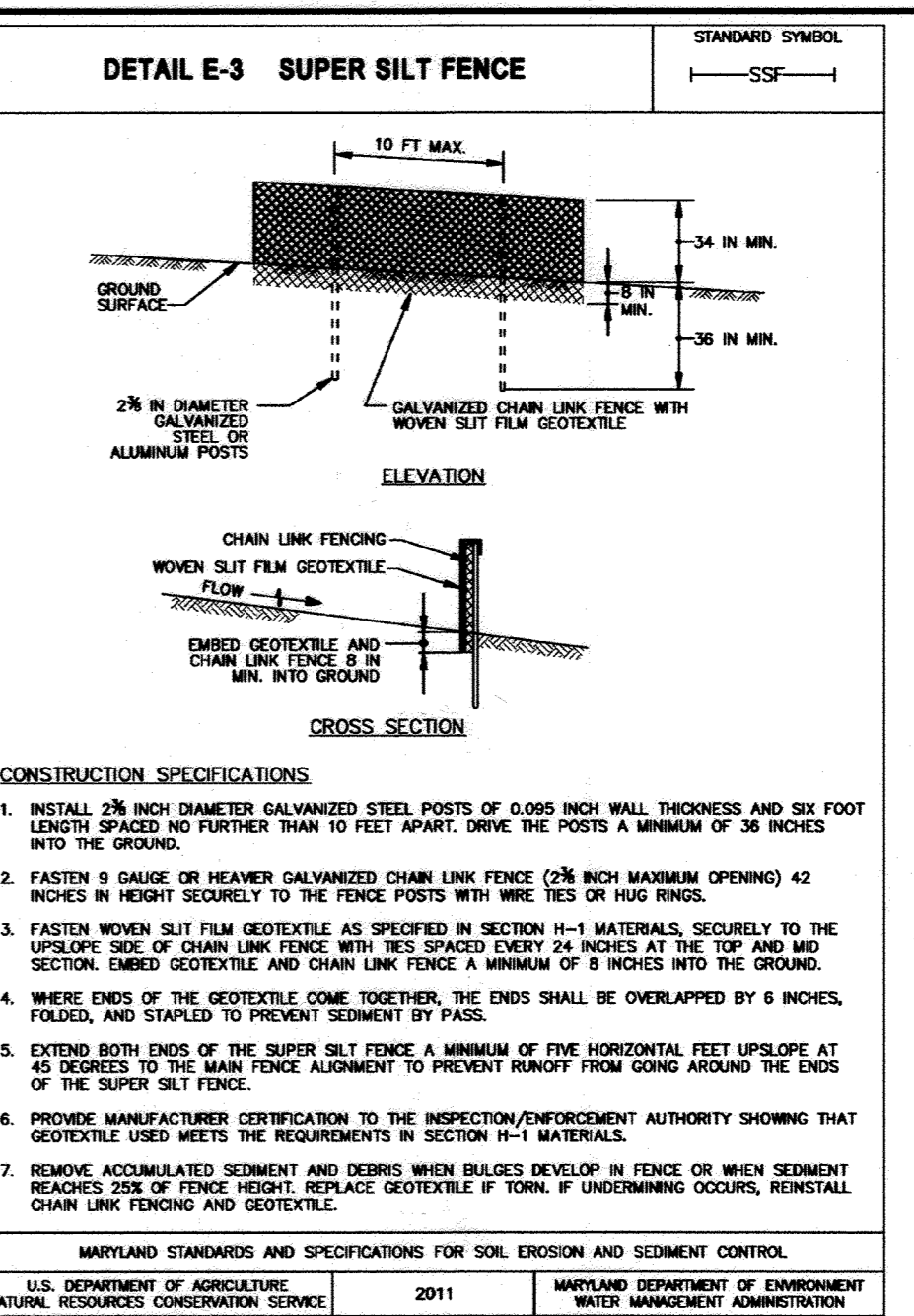
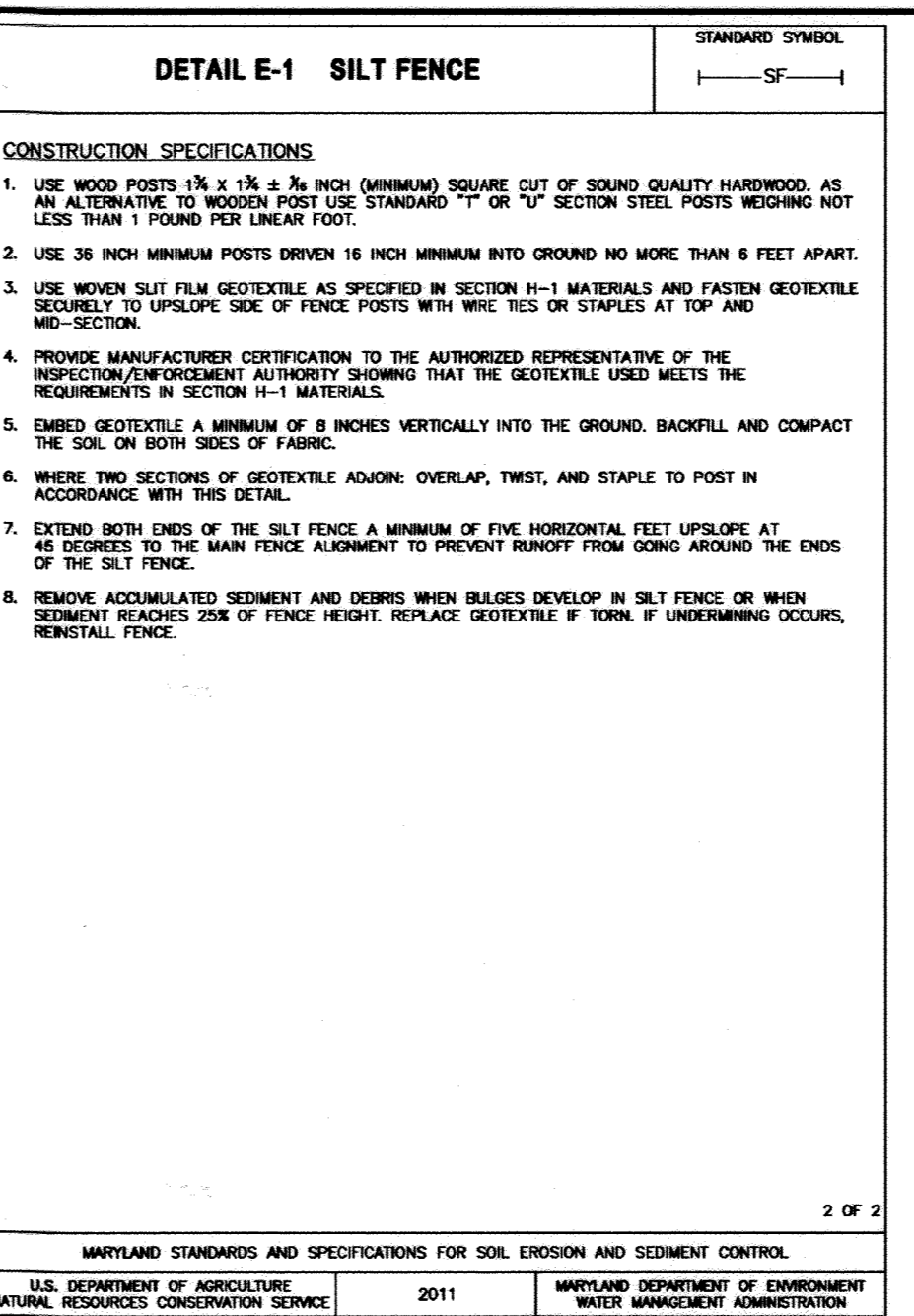
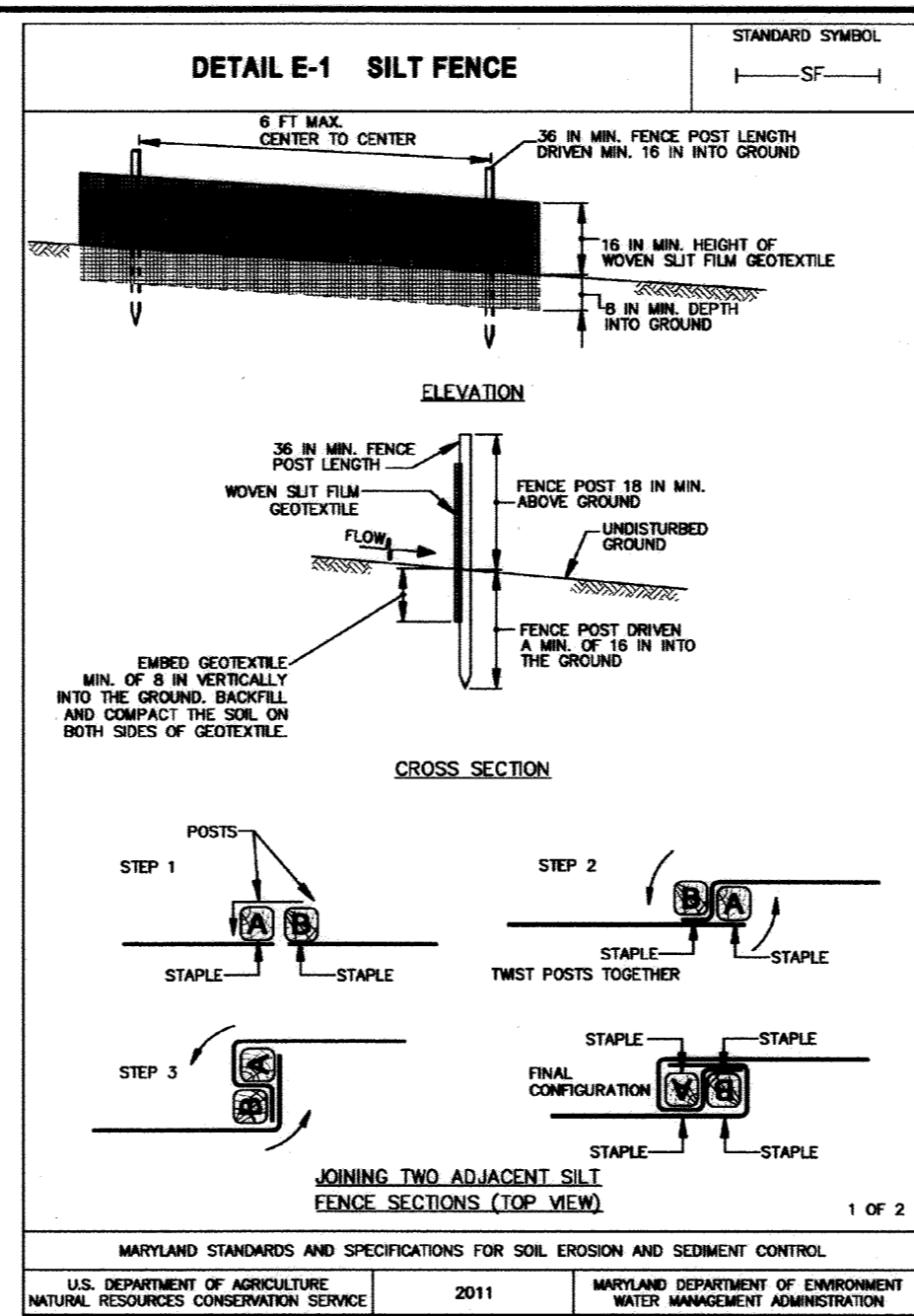
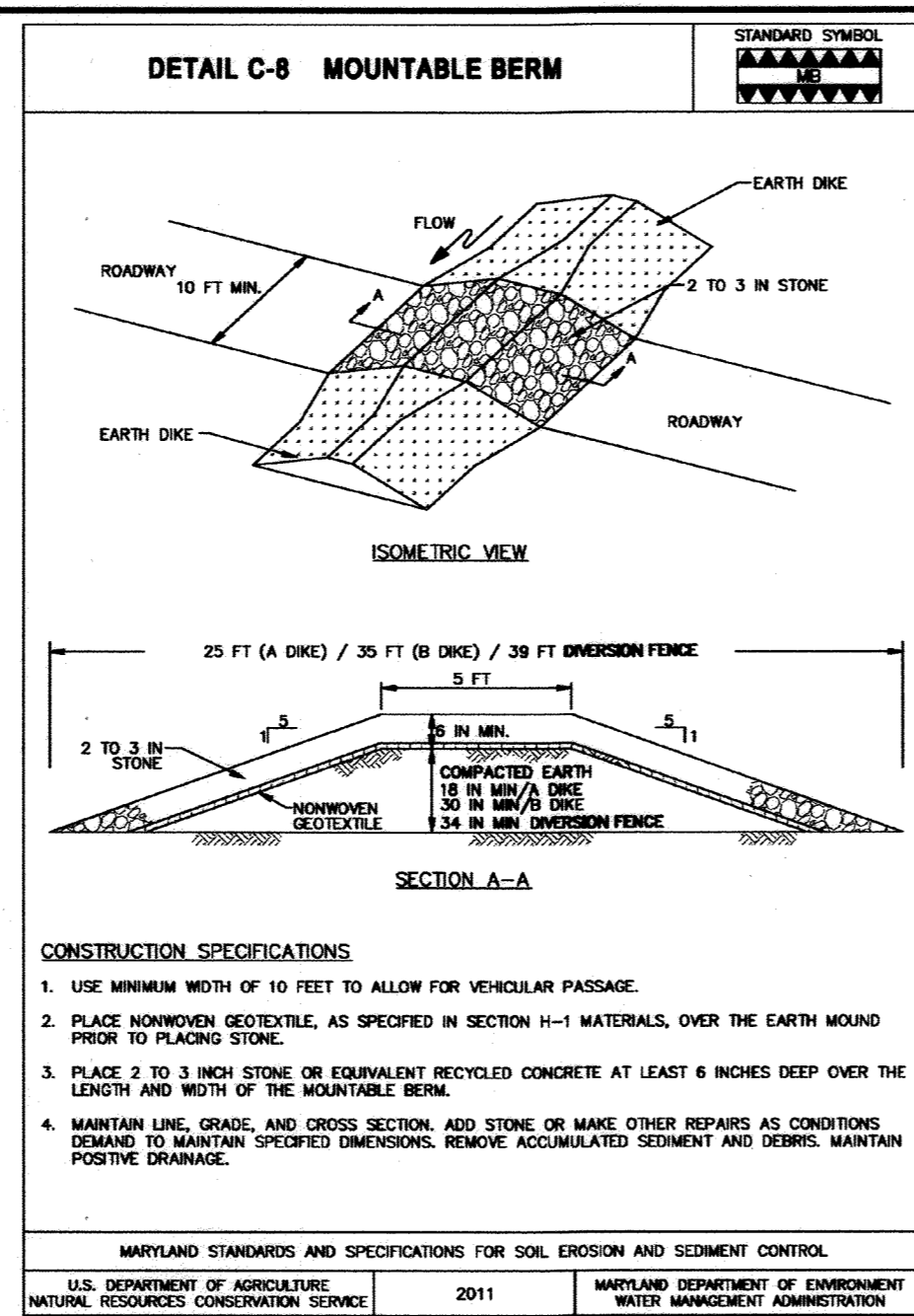
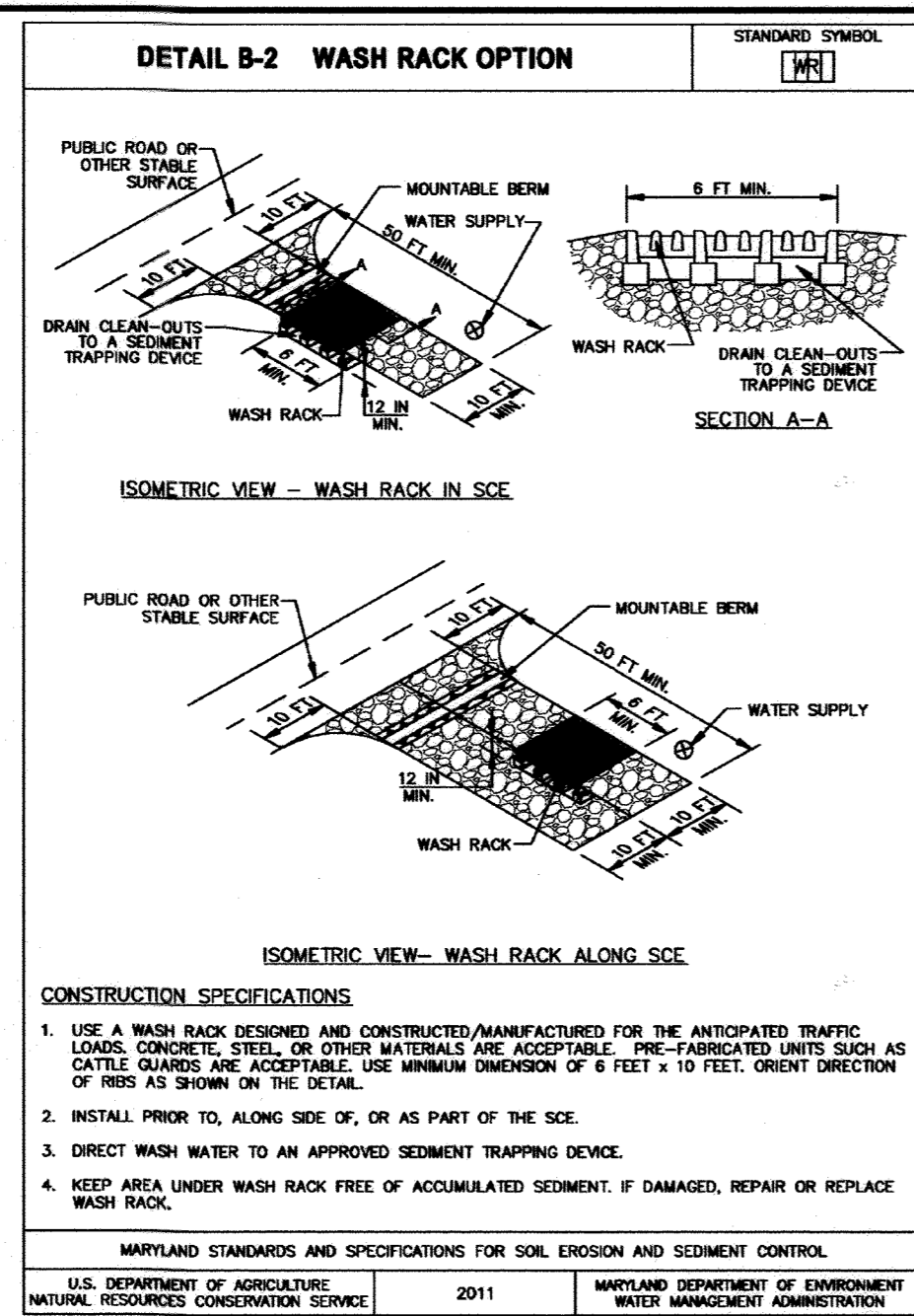
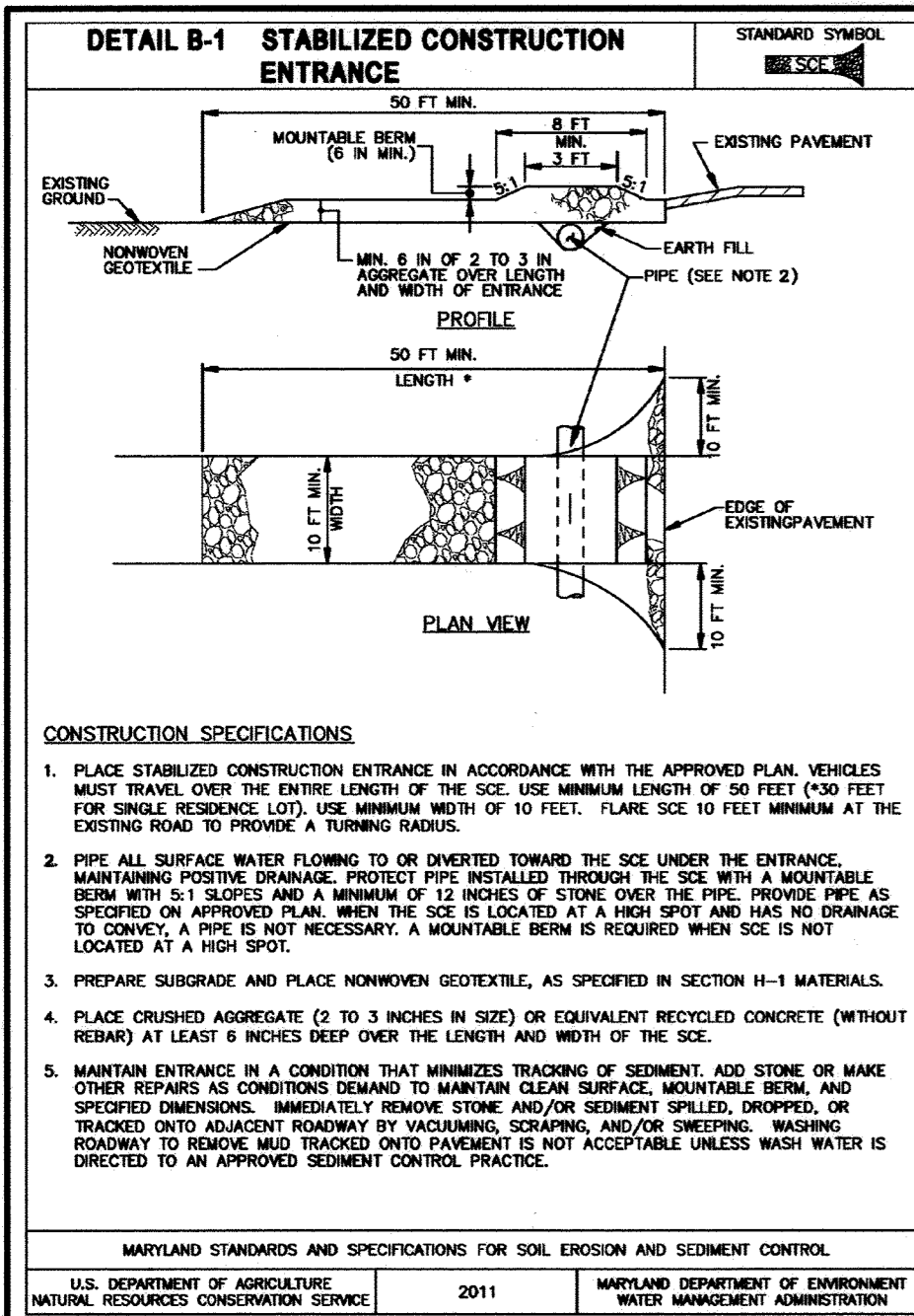
No.	Date	Description
1	7/21	ADD PAVILIONS

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	CENSUS TRACT
550	-	NEW OFFICE BUILDING - GREEN BUILDING	6051.02

PROPOSED EROSION & SEDIMENT CONTROL PLAN
ESC-112
 SHEET 18 OF 25
 SDP-17-047





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

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THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John A. Roberts / *ca* 8/28/07
HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPER'S CERTIFICATE
"I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER *Glen M. Carey* 8/14/17 DATE

ENGINEER'S CERTIFICATE
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Jennifer Harrington 8/14/17 DATE
JENNIFER HARRINGTON, P.E. - ENGINEER

APPROVED: DEPARTMENT OF PLANNING & ZONING

John E. Edwards 10-24-17 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kent S. Jones 10-31-17 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Neil J. Jones 11-20-17 DATE
DIRECTOR

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
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No.	Date	Description

ADDRESS CHART

MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME JHU-APL SOUTH CAMPUS BUILDING B201	SECTION/AREA N/A	LOT/PARCEL NO. 300	
PLAT # OR L/F 20928-20930	GRID # 22	ZONING PEC	TAX MAP NO. ELECT DISTRICT 0041 5th
WATER CODE 550	SEWER CODE -	PROPERTY IMPROVEMENT NEW OFFICE BUILDING - GREEN BUILDING	

EROSION & SEDIMENT CONTROL DETAILS
ESC-201
SHEET 19 OF 25
SDP-17-047

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.
PURPOSE
TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.
CONDITIONS WHERE PRACTICE APPLIES
ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.
EFFECTS ON WATER QUALITY AND QUANTITY
STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT
INSPECT SEEDBED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUND COVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUND COVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUND COVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

- CRITERIA**
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
 3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

SPECIES	APPLICATION RATE (lbs/ac)	SEEDING DATES	SEEDING DEPTH	HARDINESS ZONE 6b	
				FERTILIZER RATE (10-20-20)	LIME RATE
ANNUAL RYEGRASS	40 lbs/ac	3/1 - 5/15 8/1 - 10/15	1/2"	436 lb/ac (10 lb / 1000 sf)	2 tons/ac (90 lb / 1000 sf)
FOXTAIL MILLET	30 lbs/ac	5/16 - 7/31	1/2"		

DEVELOPER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER Alvin M. Caray DATE 8/24/17

ENGINEER'S CERTIFICATE
"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

JENNIFER HARRINGTON, P.E. - ENGINEER DATE 8/11/17

APPROVED: DEPARTMENT OF PLANNING & ZONING
DATE 10-24-17
DATE 10-31-17
DATE 11-20-17

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY BUILDING B201
11091 JOHNS HOPKINS ROAD LAUREL, MARYLAND 20723
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MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR U/L	GRID #	ZONING	TAX MAP NO. / ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	--	NEW OFFICE BUILDING - GREEN BUILDING	

EROSION & SEDIMENT CONTROL NOTES
ESC-202
SHEET 20 OF 25
SDP-17-047

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

- CRITERIA**
- A. SOIL PREPARATION**
1. 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 LOOSENEED, 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.
 2. 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:
 - i. SOIL PH BETWEEN 6.0 AND 7.0.
 - ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
 - c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENEED 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 TEST.
 - 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 BRANES. PREPARE 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 DETERMINED BY THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

- CRITERIA**
- A. SEED MIXTURES**
1. GENERAL USE
 - a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 - c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (50 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
 2. TURFGRASS MIXTURES
 - a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE OF THE DISTURBANCE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET.

- ii. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
- iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND AND PUBLICATION, AGRONOMY MEMO TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND*

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

- c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5b, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

- CRITERIA**
- A. SEEDING**
1. SPECIFICATIONS
 - a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
 - b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWES.
 - c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
 - d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
 2. APPLICATION
 - a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
 - i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDBED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
 - iii. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - iv. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBEDS MUST BE FIRM AFTER PLANTING.
 - v. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 - vi. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - vii. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHORUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
 - viii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - ix. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - x. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

- B. MULCHING**
1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
 - a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE (HARDINESS ZONES: 7A, 7B)
 - d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE AREAS TO PREPARE SEEDBEDS. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBEDS MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
 - e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

NO.	SPECIES	APPLICATION RATE (lbs/ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)			LIME RATE
					N	P ₂ O ₅	K ₂ O	
***	TALL FESCUE*	285 lbs/ac**	3/1 - 5/15 8/15 - 10/15	1/4" - 1/2"	45 lb/ac (1.0 lb/1000sf)	90 lb/ac (2 lb/1000sf)	90 lb/ac (2 lb/1000sf)	2 tons/ac (90 lb/1000sf)
	KENTUCKY BLUEGRASS*	15 lbs/ac	3/1 - 5/15 8/15 - 10/15	1/4" - 1/2"	1000sf/1000sf	1000sf/1000sf	1000sf/1000sf	

SELECT TURFGRASS VARIETIES FROM THOSE LISTED AS PROVEN CULTIVARS IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND. ** FOR TALL FESCUE CHOOSE 3 PROVEN CULTIVARS TO BE USED IN EQUAL PROPORTIONS IN THE SEED MIX. *** SEE 2011 MD STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL, PARAGRAPH A.2.8.B.II FOR TURFGRASS MIXTURE AND RATE AND PARAGRAPH A.2.C FOR TURFGRASS SEEDING DATES.

- B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).**
1. GENERAL SPECIFICATIONS
 - a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD UNITS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
 - c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 2. SOD INSTALLATION
 - a. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
 - b. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
 - c. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
 - d. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP. PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING. WATER THE UNDERLYING SOIL AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
 3. SOD MAINTENANCE
 - a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT CRACKING.
 - b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

- i. WCGM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
 - ii. WCGM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - iii. WCGM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
 - iv. WCGM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - v. WCGM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 8 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
- 2. APPLICATION**
- a. APPLY MULCH TO ALL SEEDBED AREAS IMMEDIATELY AFTER SEEDING.
 - b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDBED AREAS AT A RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
 - c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- 3. ANCHORING**
- a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
 - i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 - ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY 20 LBS PER ACRE AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TACK II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 - iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson, Director DATE 8/25/17

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
 A.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
 B.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STOCKPILE 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.

HSCD STANDARD SEDIMENT CONTROL NOTES

- 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 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 - PRIOR TO THE START OF EARTH DISTURBANCE.
 - 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.
 - 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.
- 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.
- 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.
- 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).
- 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: 11.20 ACRES
 - AREA DISTURBED: 6.90 ACRES 9.10 ACRES
 - AREA TO BE ROOFED OR PAVED: 4.20 ACRES 5.34 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 2.70 ACRES 3.71 ACRES
 - TOTAL CUT: 15,298 CU. YDS.
 - TOTAL FILL: 4,017 CU. YDS.
 - OFFSITE WASTE/BORROW AREA LOCATION: TO BE DETERMINED
- 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 HSCD. THE SITE AND ALL 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 DATE
 - 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
 - PHOTOGRAPHS
 - MONITORING/SAMPLING
 - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDDES, MDE).
- 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 SHORTER.
- 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 HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- 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.
- ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UP/HILL BY 2' IN ELEVATION.
- STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
 - USE I AND IP MARCH 1 - JUNE 15
 - USE III AND IIIIP OCTOBER 1 - APRIL 30
 - USE IV MARCH 1 - MAY 31
- 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 IS ACTIVE.

SEQUENCE OF CONSTRUCTION

- ASSURE THAT GRADING PERMIT AND ALL OTHER NECESSARY PERMITS ARE OBTAINED BY OWNER.
- NOTIFY HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS BEFORE START OF WORK. CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST THREE DAYS IN ADVANCE OF STARTING WORK SHOWN ON PLANS.
- WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB FOR AND INSTALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE (SF).
- NOTIFY SEDIMENT CONTROL INSPECTOR AND ENGINEER UPON COMPLETION OF THIS INSTALLATION.
- CLEAR AND GRUB SITE.
- ROUGH GRADE SITE AND INSTALL UTILITIES. FOR STORM DRAINS, INSTALL INLET PROTECTION (IP) AS SHOWN ON APPROVED EROSION AND SEDIMENT CONTROL PLANS. DO NOT DISTURB ANY UTILITIES TO REMAIN.
- REMOVE CURBS AND PORTIONS ROADWAY AS SHOWN ON THE DEMOLITION PLAN. ANY WALKS, PAVERS, ROADS, CURBS, ETC. OR ANY EXISTING UTILITY OR STRUCTURE DAMAGED DURING CONSTRUCTION, NOT SCHEDULED FOR DEMOLITION, SHALL BE REPAIRED BY THE CONTRACTOR, IN KIND AT THE CONTRACTOR'S EXPENSE.
- BEGIN BUILDING CONSTRUCTION.
- FINE GRADE THE REMAINING AREAS WITH AT LEAST 4 INCHES OF TOPSOIL AND PERMANENTLY STABILIZE THOSE AREAS.
- MILL AND OVERLAY ALL ROAD SURFACES AS SHOWN ON THE PLANS.
- AFTER PERMANENT STABILIZATION OF SITE WITH ESTABLISHED VEGETATION AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROL MEASURES OR DEVICES, AND STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS.

SITE ANALYSIS DATA	
TOTAL PROPERTY AREA	35.10 AC
EXISTING IMPERVIOUS AREA	10.51 AC
EX. WETLANDS / WETLAND BUFFER	0.00 AC
EX. FLOODPLAINS / BUFFER	0.00 AC
EX. FORESTS (FCE)	11.86 AC
STEEP SLOPES (15% TO 25%)	1.20 +/- AC
STEEP SLOPES (> 25%)	7.16 +/- AC
LOD AREA	6.90 +/- AC
EXISTING IMPERVIOUS AREA (LOD)	2.50 +/- AC
PROPOSED IMPERVIOUS AREA (LOD)	4.20 +/- AC
EXISTING GREEN OPEN AREA (LOD)	4.40 +/- AC
PROPOSED GREEN OPEN AREA (LOD)	2.70 +/- AC
ERODIBLE SOILS (LOD)	0.00 +/- AC
PROPOSED SITE USAGE	PLANNED EMPLOYMENT CENTER

SOIL TABLE		
SOIL NAME	HYDROLOGIC SOIL GROUP	EROSION FACTOR, Kw
Co - Codorus and Hatboro SILT LOAMS, 0-3% slopes	C	0.37
GgA - Glenelg LOAM, 0-3% slopes	B	0.20
GgB - Glenelg LOAM, 3-8% slopes	B	0.20
GgC - Glenelg LOAM, 8-15% slopes	B	0.20
GnB - Glenville-Baile SILT LOAM, 0-8% slopes	C	0.37
Ha - Hatboro-Codorus SILT LOAMS, 0-3% slopes	B/D	0.37

EROSION FACTOR, Kw, FOR SOIL SURVEY OF HOWARD COUNTY, MD 2003. COMAR DEFINES HIGHLY ERODIBLE SOILS AS THOSE SOILS WITH SLOPES GREATER THAN 15% OR SOILS WITH A K FACTOR GREATER THAN 0.35 AND WITH SLOPES GREATER THAN 5%.

DESIGN NARRATIVE

THE PROPOSED DEVELOPMENT SITE IS KNOWN AS THE JHU/APL SOUTH CAMPUS AND IS LOCATED AT 11101 JOHNS HOPKINS ROAD. THE DEVELOPMENT INCLUDES BUILDING 201 AND ASSOCIATED SITES/LANDSCAPE IMPROVEMENTS. THERE ARE NO STEEP SLOPES, WETLANDS, PERENNIAL AND INTERMITTENT STREAMS, NOR THEIR ASSOCIATED BUFFERS, IMPACTED BY THE DEVELOPMENT. THE SITE LIES OUTSIDE OF THE 100-YEAR FLOODPLAIN.

THE EXISTING STORMWATER MANAGEMENT FACILITY (GP-10-009 AND SDP-09-047) ACCOMMODATES TREATMENT FOR THE OVERALL EXISTING AND PROPOSED IMPERVIOUS AREA. MODIFICATIONS TO THIS EXISTING SWM FACILITY ARE NOT REQUIRED.

NOTE

- STANDARD FENCING IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

Z:\1616005-JHU-APL Building 201 Design Services\04-DWG\ESC-203 Erosion & Sediment Control Notes.dwg-203 Aug 11, 2017 02:13pm jh

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Jennifer Harrington
 JENNIFER HARRINGTON, P.E. - ENGINEER
 8/11/17
 DATE

DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Glenn M. Cary
 DEVELOPER
 8/24/17
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson, III
 HOWARD SOIL CONSERVATION DISTRICT
 8/28/17
 DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING
Paul Ch... 10-24-17
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
... 10-31-17
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
... 11-20-17
 DIRECTOR DATE

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
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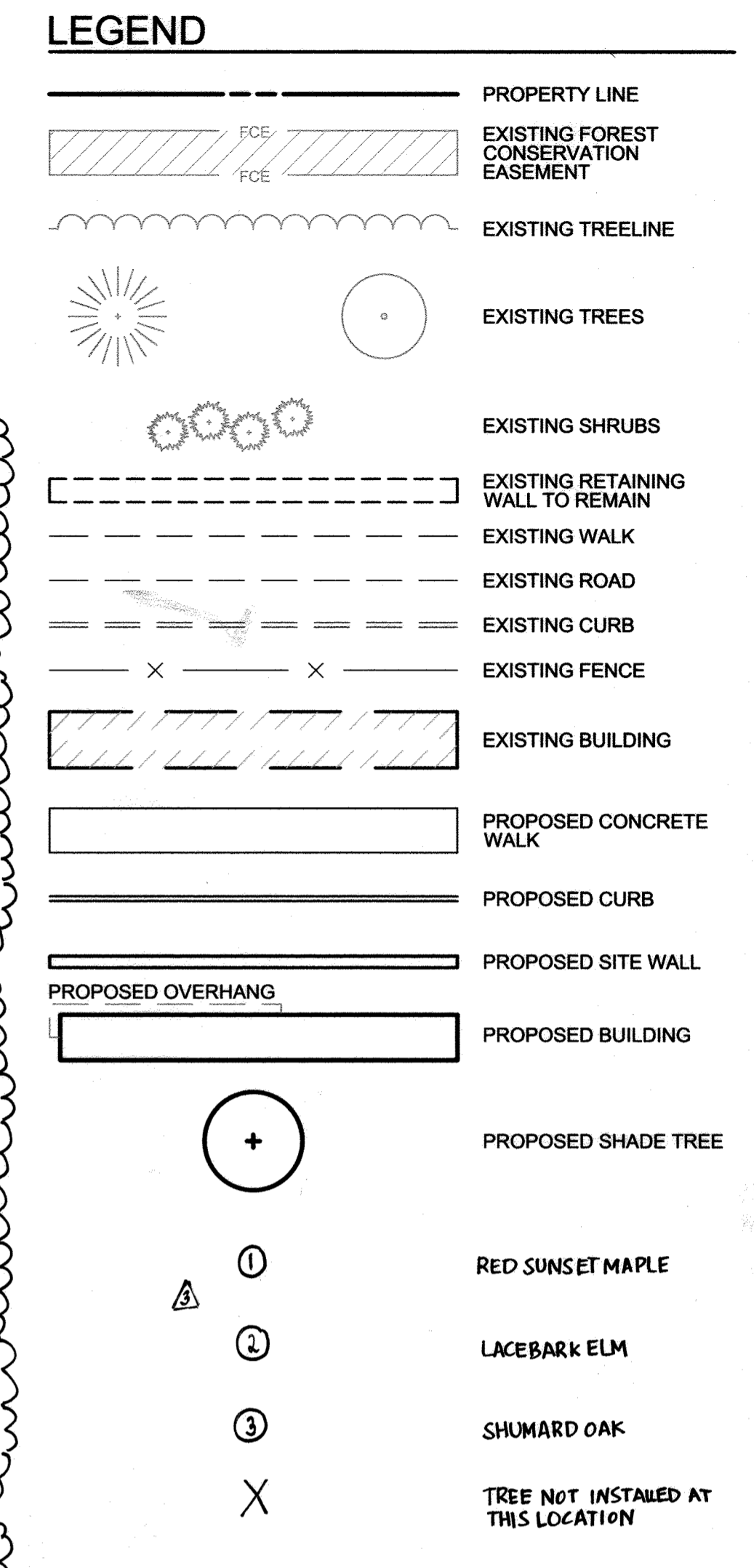
No.	Date	Description
1	2/22/18	NORTH PARKING LOT ADDITION

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	--	NEW OFFICE BUILDING - GREEN BUILDING	



EROSION & SEDIMENT CONTROL DETAILS
ESC-203
 SHEET 21 OF 25



MASTER PLANT SCHEDULE

QTY	KEY	BOTANICAL / COMMON NAME	SPR	ROOT	COMMENTS
SHADE TREES					
8	AB	Acer buergerianum 'ABMTF'	3.0-3.5' Cal.	B&B	Central Leader Full Crown
25	AR	Acer rubrum 'Frankford'	3.0-3.5' Cal.	B&B	Central Leader Full Crown
2	BA	Betula nigra 'Oval Head'	10'-12' Ht.	B&B	Multi-Stem - 5 Canes Full Crown, Matched
11	GB	Quercus prinus 'Princeton Sentry'	3.0-3.5' Cal.	B&B	Central Leader Full Crown, Matched
9	GT	Quercus prinus var. inermis 'Skygate'	4.5'-5' Cal.	B&B	Full Crown Matched
1	UA	Ulmus americana 'Jefferson'	4.5'-5' Cal.	B&B	Central Leader Full Crown
3	QP	Quercus phellos 'QFSTA'	4.5'-5' Cal.	B&B	Central Leader Full Crown
11	PA	Palmetto x acrifolia 'Marion Circle'	4.5'-5' Cal.	B&B	Central Leader Full Crown
FLORIBUND TREES					
1	AC	Amelanchier canadensis	8'-10' Ht.	B&B	Multi-Stem, 3-5 canes Full canopy, Matched
3	MV	Magnolia virginiana	8'-10' Ht.	B&B	Multi-Stem, 3-5 canes Full canopy, Matched
SHRUBS					
127	AL	Acrostaphylos uva-ursi	#1	Cont.	6"-8" Spd. Full 36" o.c.
57	IQ	Ilex glabra 'Shammock'	#5	Cont.	24" Spd. Full
27	N	Ilex verticillata 'Red Sprite'	#5	Cont.	24" Ht. 100% Male
68	CA	Clethra alnifolia 'Sister Cordis'	#5	Cont.	24"-30" Ht. Full
12	CS	Cornus sericea 'Farrow'	#7	Cont.	30"-36" Spd. Full
76	RA	Rhus aromatica 'Gro-Low'	#3	Cont.	18"-24" Spd. Full
60	PL	Prunus laurocerasus 'Obo Luyken'	#5	Cont.	24" Spd. Full
PERENNIALS / GROUNDCOVERS / GRASSES					
141	AMS	Anemone huibrichtii	#1	Cont.	24" o.c.
143	DES	Deschampsia cespitosa 'Gold Tau'	#1	Cont.	24" o.c.
54	ECH	Echinacea purpurea	#1	Cont.	18" o.c.
70	ELT	Elymus distachyon 'Little Joe'	#1	Cont.	18" o.c.
239	IEL	Iris versicolor	#1	Cont.	18" o.c.
239	JUL	Juncus effusus	#1	Cont.	18" o.c.
54	LIA	Ligularia spicata	#1	Cont.	18" o.c.
360	MHT	Muhlenbergia x ramosa	SPFH	Cont.	18" o.c.
172	RUD	Rubus flugida var. flugida	#1	Cont.	18" o.c.
100	SYM	Symphoricarpos alba 'Regina's Favorite'	#1	Cont.	18" o.c.

JOHNS HOPKINS UNIVERSITY
MAP 41, GRID 22,
PARCEL 146
L. 18052 F. 00240

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 44932. EXPIRATION DATE: 05/31/23.

RK&K
700 EAST PRATT ST., SUITE 500
BALTIMORE, MD 21202

PURPOSE STATEMENT: ADDITION OF BATTERY STORAGE CONTAINER, REQUIRING REMOVAL OF 2 PARKING SPACES, AND UPDATED PLANTING PLAN AS-BUILT.

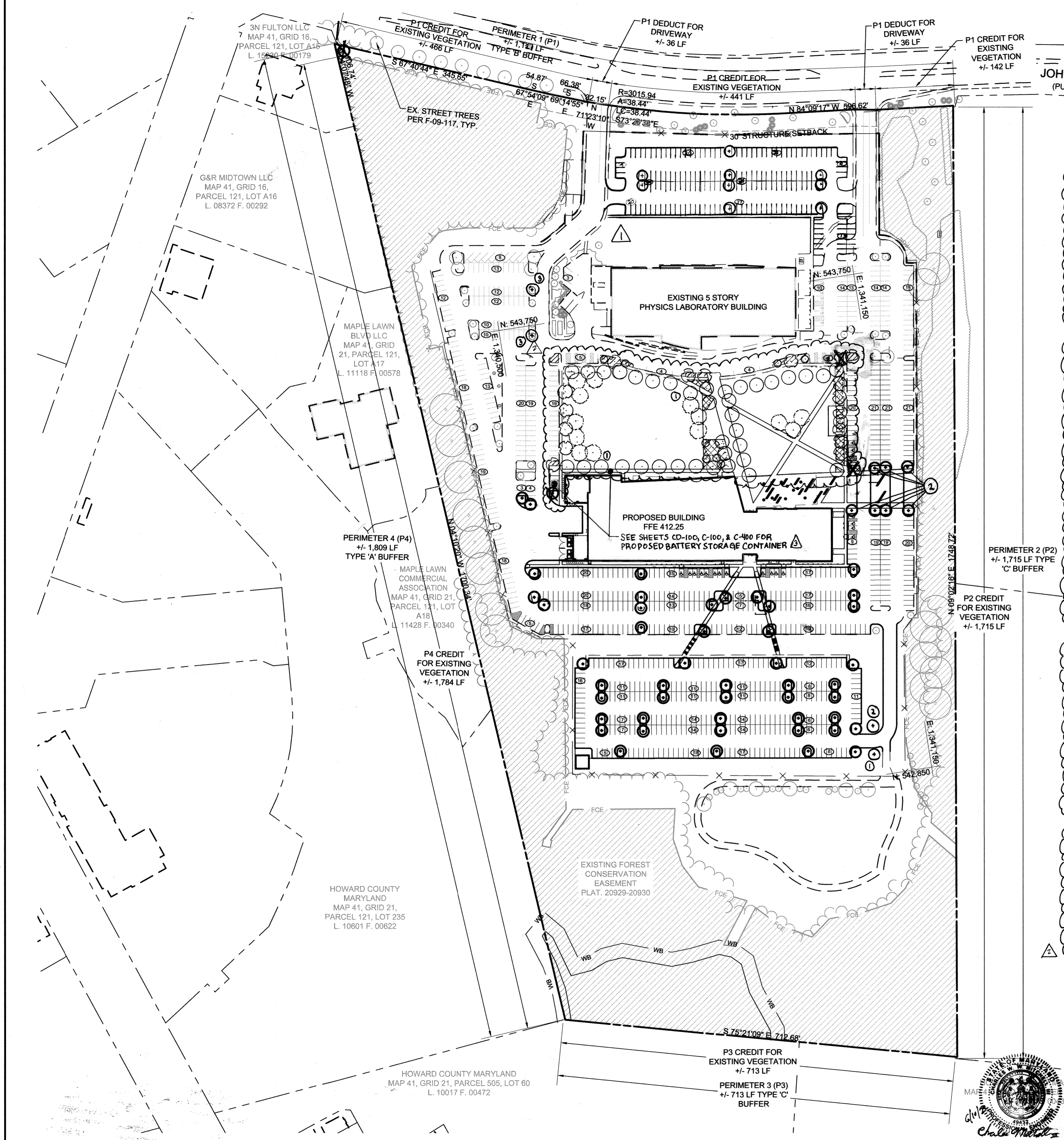
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 631
EXPIRATION DATE: 09/28/2024

NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISIONS.

STATE OF MARYLAND
LANDSCAPE ARCHITECT
NO. 631

STATE OF MARYLAND
LANDSCAPE ARCHITECT
NO. 23165
EXPIRATION DATE: 09/28/2024

SCALE: 1" = 100'



APPROVED: DEPARTMENT OF PLANNING & ZONING

10-21-17 DATE

10-31-17 DATE

11-30-17 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

JOHNS HOPKINS UNIVERSITY

APPLIED PHYSICS LABORATORY
BUILDING B201

11091 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723
ATTN: BABS SHONAIYA, 443.778.2284

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No.	Date	Description
1	2/5/2018	NORTH PARKING LOT ADDITION
2	7/23/2021	REVISED PLANTING
3	4/10/22	ADDITION OF BATTERY STORAGE CONTAINER, UPDATED PLANTING PLAN AS-BUILT

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

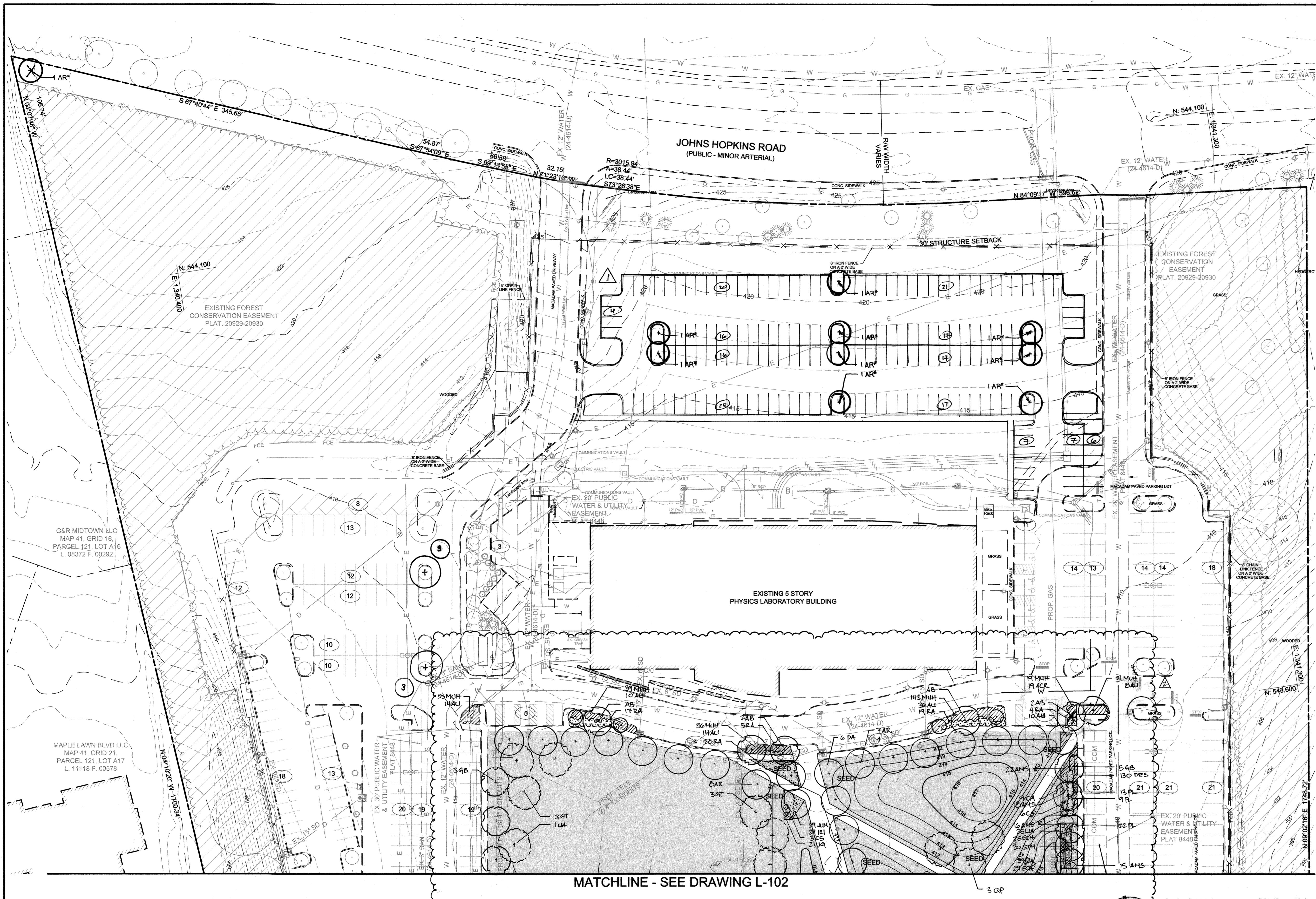
PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	-	NEW OFFICE BUILDING - GREEN BUILDING	

OVERALL PLANTING PLAN

L-100

SHEET 22 OF 25

SDP-17-047

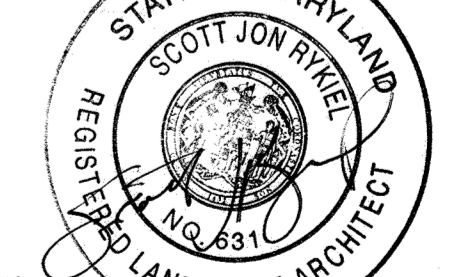


LEGEND

	PROPERTY LINE
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING SHRUBS
	EXISTING RETAINING WALL TO REMAIN
	EXISTING WALK
	EXISTING ROAD
	EXISTING CURB
	EXISTING 15" SD
	EXISTING 6" WATER
	EXISTING 8" SAN
	EXISTING TELE
	EXISTING ELEC
	EXISTING LIGHTING
	EXISTING COMMUNICATIONS
	EXISTING UNKNOWN UTILITY
	EXISTING FENCE
	EXISTING BUILDING
	PROPOSED CONCRETE WALK
	PROPOSED CURB
	PROPOSED SITE WALL
	PROPOSED BUILDING
	PROPOSED OVERHANG
	PROPOSED CONTOURS
	PROPOSED 15" SD
	PROPOSED 6" WATER
	PROPOSED 8" SAN
	PROPOSED 2" GAS
	PROPOSED TELE
	PROPOSED ELEC
	PROPOSED LIGHTING
	PROPOSED SHADE TREE
	PROPOSED SEEDING

- 1 RED SUNSET MAPLE
- 2 LACEBARK ELM
- 3 SHUMARD OAK
- X TREE NOT INSTALLED AT THIS LOCATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER: 631 EXPIRATION DATE: 03/31/21



NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO THIS SET.

MATCHLINE - SEE DRAWING L-102

▲ PURPOSE STATEMENT: ADDITION OF BATTERY STORAGE CONTAINER, REMOVAL OF 2 PARKING SPACES, AND UPDATED PLANTING PLAN AS-BUILT.



APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division: *Robert K. Kalk*
 Chief, Division of Land Development: *William J. Ellis*
 Director: *William J. Ellis*

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
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No.	Date	Description
1	2/5/2018	NORTH PARKING LOT ADDITION
2	7/23/2019	REVISED PLANTING
3	6/10/21	ADDITION OF BATTERY STORAGE CONTAINERS, UPDATED PLANTING PLAN AS-BUILT.

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART		
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300
PLAT # OR L/F	GRID #	ZONING
20928-20930	22	PEC
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT
550	-	NEW OFFICE BUILDING - GREEN BUILDING
TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
0041	5th	6051.02

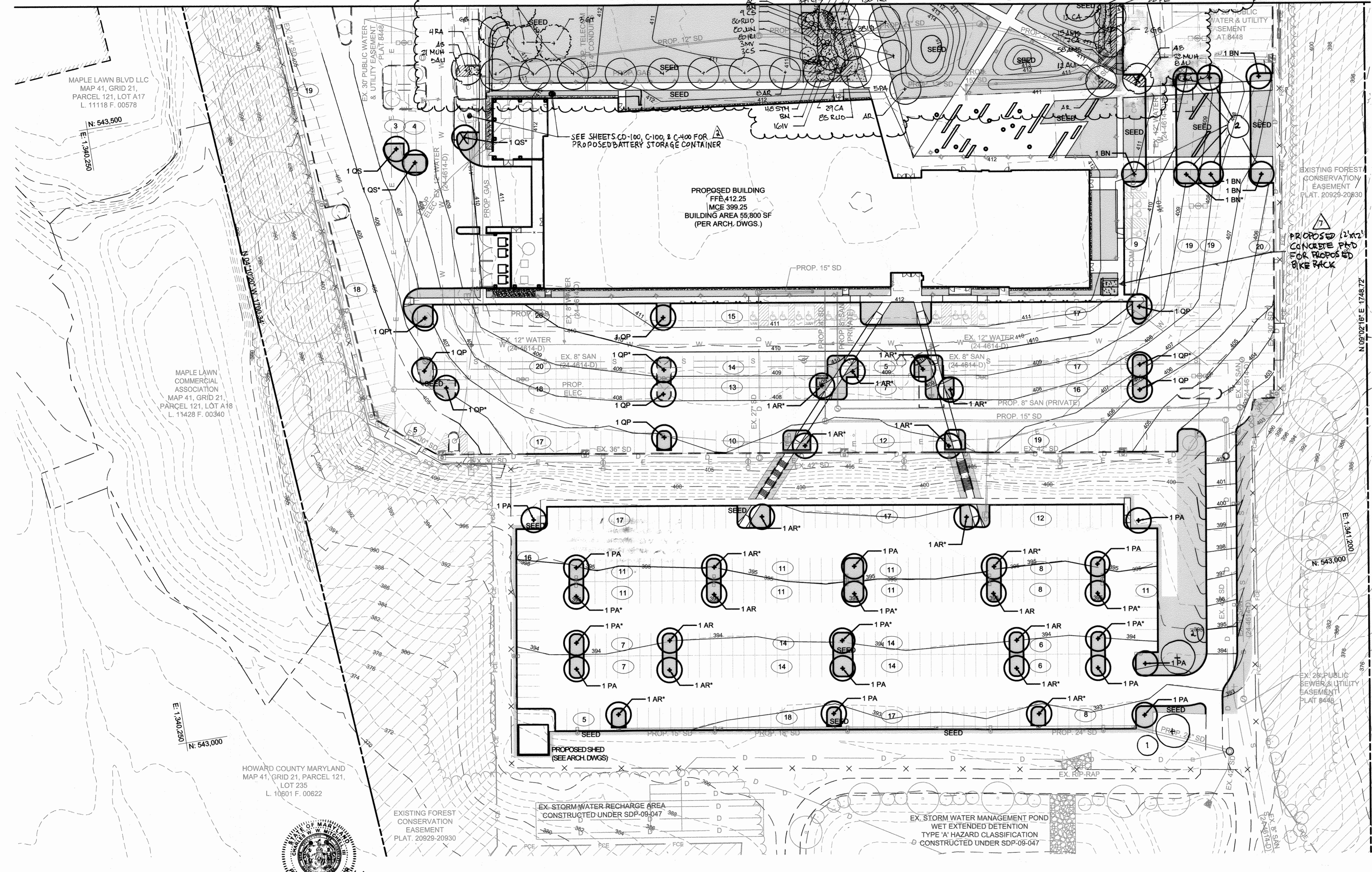
PLANTING PLAN
L-101
 SHEET 23 OF 25
 SDP-17-047

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49432, EXPIRATION DATE: 03/31/21

MATCHLINE - SEE DRAWING L-101

LEGEND

- PROPERTY LINE
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TREES
- EXISTING SHRUBS
- EXISTING RETAINING WALL TO REMAIN
- EXISTING WALK
- EXISTING ROAD
- EXISTING CURB
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING TELEPHONE
- EXISTING ELECTRIC
- EXISTING LIGHTING
- EXISTING COMMUNICATIONS
- EXISTING UNKNOWN UTILITY
- EXISTING FENCE
- EXISTING BUILDING
- PROPOSED CONCRETE WALK
- PROPOSED CURB
- PROPOSED SITE WALL
- PROPOSED BUILDING
- PROPOSED OVERHANG
- PROPOSED CONTOURS
- PROPOSED STORM DRAIN
- PROPOSED WATER
- PROPOSED SANITARY SEWER
- PROPOSED GAS
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- PROPOSED LIGHTING
- PROPOSED SHADE TREE
- PROPOSED SEEDING



I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER: 621 EXPIRATION DATE: 01/12/2021

SCOTT JON RITTEL
REGISTERED LANDSCAPE ARCHITECT
NO. 637

NOTE: THIS SEAL AND CERTIFICATION APPLIES ONLY TO DESIGN.

▲ PURPOSE STATEMENT (07/16/22): CONSTRUCT A 12x12 CONCRETE PAD FOR PROPOSED BIKE RACK

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 41932, EXPIRATION DATE: 03/31/24

▲ PURPOSE STATEMENT: ADDITION OF BATTERY STORAGE CONTAINER, REQUIRING REMOVAL OF 2 PARKING SPACES, AND UPDATED PLANTING PLAN AS-BUILT.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49932, EXPIRATION DATE: 03/31/24

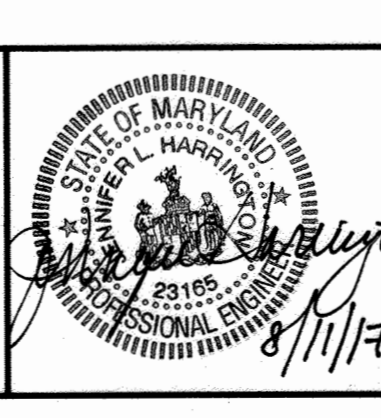
APPROVED: DEPARTMENT OF PLANNING & ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 03-24-17

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 03-31-17

DIRECTOR
DATE: 11-20-17

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
BUILDING B201
11091 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723
ATTN: BABS SHONAIYA, 443.778.2284

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No.	Date	Description
1	07/23/20	REVISED PLANTING
2	01/01/22	ADDITION OF BATTERY STORAGE CONTAINER, UPDATED PLANTING PLAN AS-BUILT
3	01/16/22	ADDITION OF 12x12 CONCRETE PAD FOR PROPOSED BIKE RACK

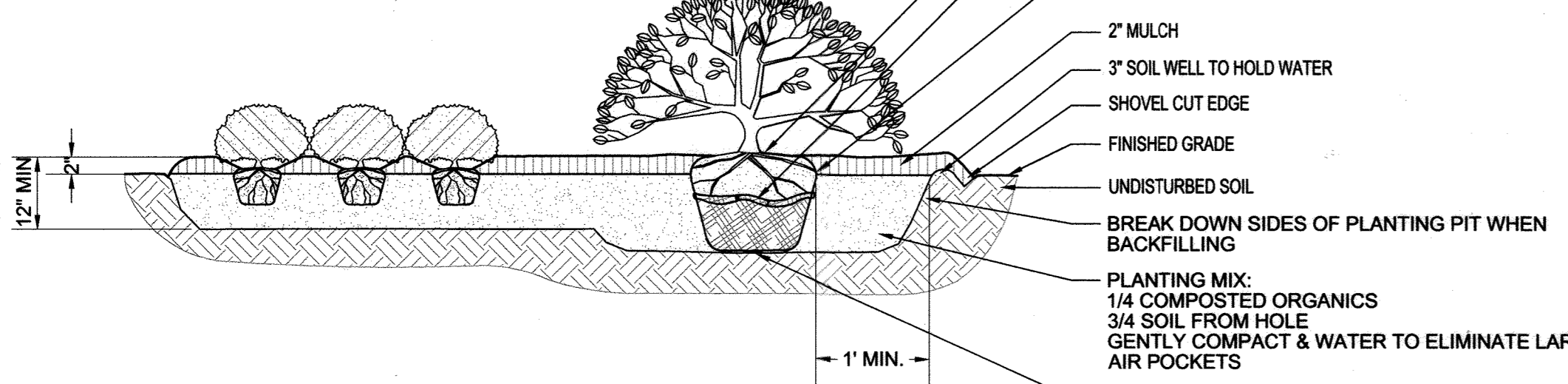
ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO. / ELECT DISTRICT
20928-20930	22	PEC	0041 5th
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT	
550	--	NEW OFFICE BUILDING - GREEN BUILDING	

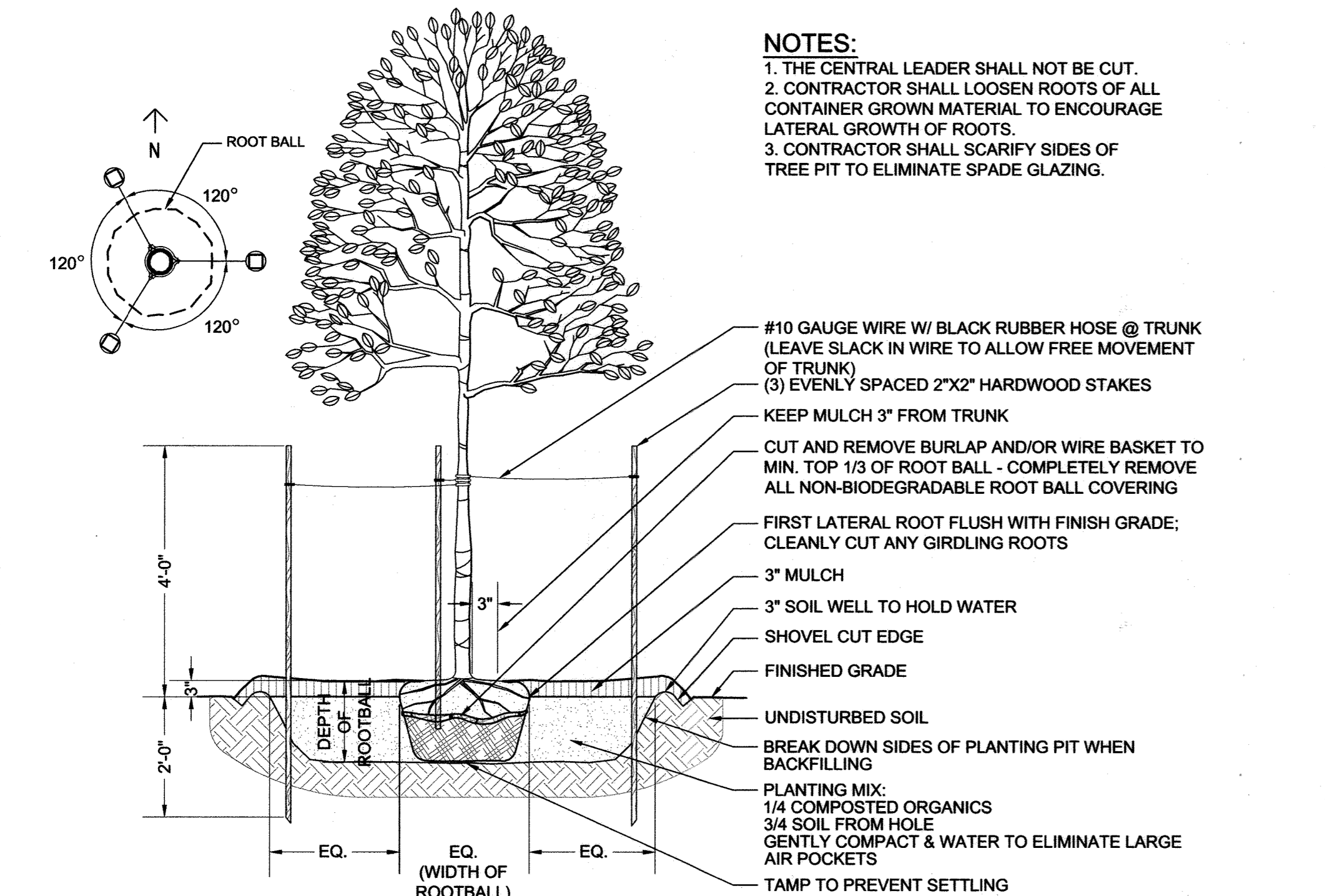
PLANTING PLAN
L-102
SHEET 24 OF 25
SDP-17-047

NOTES:

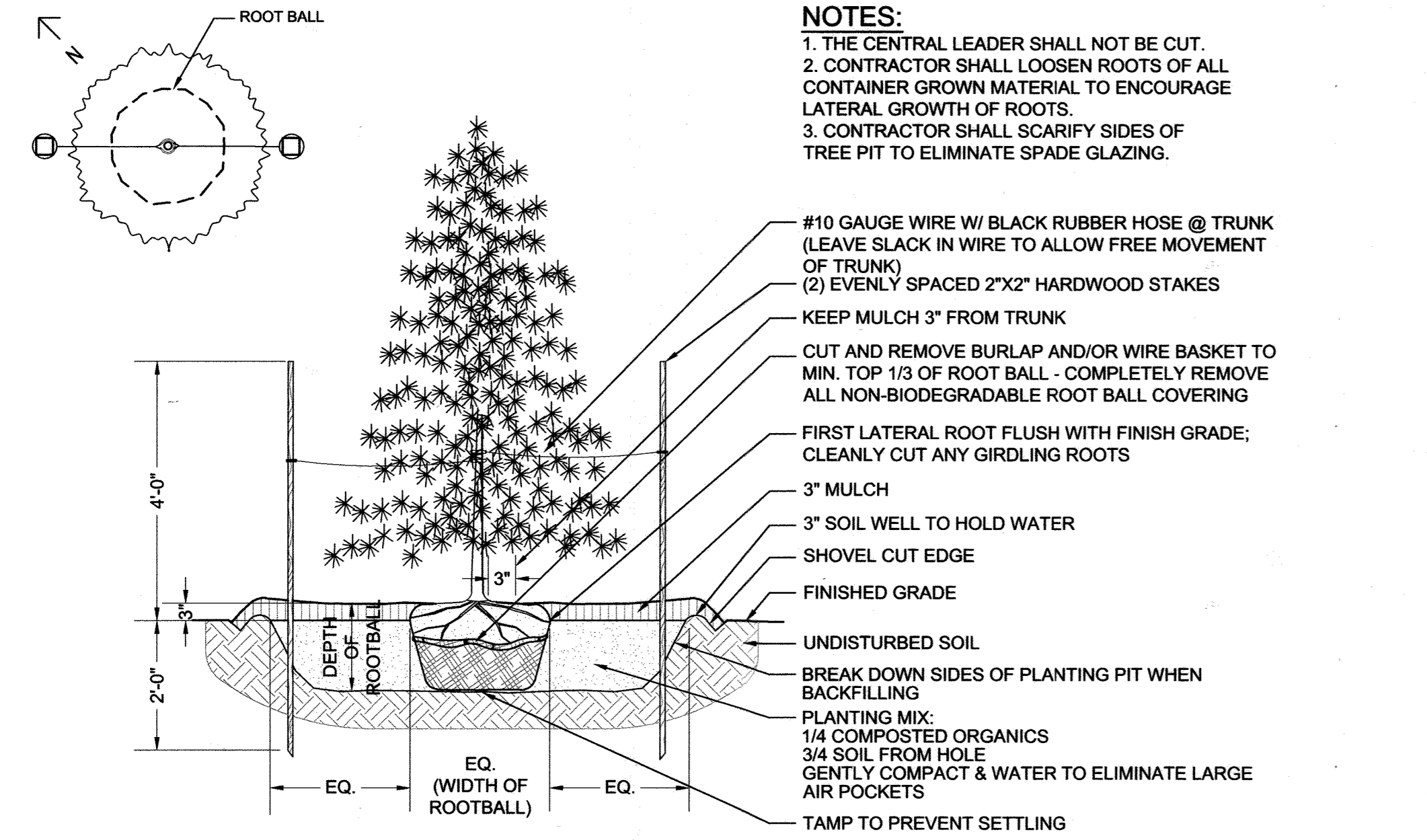
- CONTRACTOR SHALL LOOSEN ROOTS OF ALL CONTAINER GROWN MATERIAL TO ENCOURAGE LATERAL GROWTH OF ROOTS.
- CONTRACTOR SHALL SCARIFY SIDES OF SHRUB PIT TO ELIMINATE SPADE GLAZING.
- SHRUBS AND PERENNIALS TO BE PLANTED WITHIN MICROBIORETENTION AREAS SHALL RECEIVE MICROBIORETENTION PLANTING MEDIA IN LIEU OF PLANTING MIX.



SHRUB/ PERENNIAL DETAIL - NOT TO SCALE



DECIDUOUS TREE DETAIL - NOT TO SCALE



EVERGREEN TREE DETAIL - NOT TO SCALE

- NOTES:**
- THE CENTRAL LEADER SHALL NOT BE CUT.
 - CONTRACTOR SHALL LOOSEN ROOTS OF ALL CONTAINER GROWN MATERIAL TO ENCOURAGE LATERAL GROWTH OF ROOTS.
 - CONTRACTOR SHALL SCARIFY SIDES OF TREE PIT TO ELIMINATE SPADE GLAZING.

- #10 GAUGE WIRE W/ BLACK RUBBER HOSE @ TRUNK (LEAVE SLACK IN WIRE TO ALLOW FREE MOVEMENT OF TRUNK)
- (3) EVENLY SPACED 2"x2" HARDWOOD STAKES
- KEEP MULCH 3" FROM TRUNK
- CUT AND REMOVE BURLAP AND/OR WIRE BASKET TO MIN. TOP 1/3 OF ROOT BALL - COMPLETELY REMOVE ALL NON-BIODEGRADABLE ROOT BALL COVERING
- FIRST LATERAL ROOT FLUSH WITH FINISH GRADE; CLEANLY CUT ANY GIRDLING ROOTS
- 3" MULCH
- 3" SOIL WELL TO HOLD WATER
- SHOVEL CUT EDGE
- FINISHED GRADE
- UNDISTURBED SOIL
- BREAK DOWN SIDES OF PLANTING PIT WHEN BACKFILLING
- PLANTING MIX: 1/4 COMPOSTED ORGANICS 3/4 SOIL FROM HOLE GENTLY COMPACT & WATER TO ELIMINATE LARGE AIR POCKETS
- TAMP TO PREVENT SETTLING

- NOTES:**
- THE CENTRAL LEADER SHALL NOT BE CUT.
 - CONTRACTOR SHALL LOOSEN ROOTS OF ALL CONTAINER GROWN MATERIAL TO ENCOURAGE LATERAL GROWTH OF ROOTS.
 - CONTRACTOR SHALL SCARIFY SIDES OF TREE PIT TO ELIMINATE SPADE GLAZING.

- #10 GAUGE WIRE W/ BLACK RUBBER HOSE @ TRUNK (LEAVE SLACK IN WIRE TO ALLOW FREE MOVEMENT OF TRUNK)
- (2) EVENLY SPACED 2"x2" HARDWOOD STAKES
- KEEP MULCH 3" FROM TRUNK
- CUT AND REMOVE BURLAP AND/OR WIRE BASKET TO MIN. TOP 1/3 OF ROOT BALL - COMPLETELY REMOVE ALL NON-BIODEGRADABLE ROOT BALL COVERING
- FIRST LATERAL ROOT FLUSH WITH FINISH GRADE; CLEANLY CUT ANY GIRDLING ROOTS
- 3" MULCH
- 3" SOIL WELL TO HOLD WATER
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- FINISHED GRADE
- UNDISTURBED SOIL
- BREAK DOWN SIDES OF PLANTING PIT WHEN BACKFILLING
- PLANTING MIX: 1/4 COMPOSTED ORGANICS 3/4 SOIL FROM HOLE GENTLY COMPACT & WATER TO ELIMINATE LARGE AIR POCKETS
- TAMP TO PREVENT SETTLING

LANDSCAPE NOTES

- (THESE NOTES APPLY TO ALL PLANTING IN THIS CONTRACT)
- QUANTITIES SHOWN ON THE PLANT LIST ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. SYMBOLS ON THE PLAN SHALL TAKE PRECEDENCE. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES TO HIS OWN SATISFACTION.
 - PLANT MATERIAL SUBSTITUTIONS MUST BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.
 - CHANGES TO THE LOCATION OF ANY PLANT MATERIAL MUST BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.
 - ALL SHRUB AND GROUND COVER AREAS SHALL BE PLANTED IN CONTINUOUS PREPARED BEDS MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILED AND SPECIFIED.
 - PLANTING BEDS SHALL HAVE POSITIVE DRAINAGE WITH A MINIMUM 2% SLOPE.
 - CONTRACTOR SHALL VERIFY ACCURACY OF BASE INFORMATION AND EXISTING CONDITIONS AND UTILITIES IN THE FIELD TO HIS OWN SATISFACTION. UTILITIES BID SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF TWO WORKING DAYS PRIOR TO BEGINNING PLANTING AND CONSTRUCTION.
 - DAMAGE TO EXISTING CONDITIONS AND UTILITIES SHALL BE REPAIRED AND RESTORED AT THE EXPENSE OF THE CONTRACTOR.
 - ALL PLANT MATERIAL SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN NURSERY & LANDSCAPE ASSOCIATION'S AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1.
 - ALL SEEDED AND SODDED AREAS SHALL RECEIVE TOPSOIL AS PRESCRIBED ON ESC-202, B-4-2, SECTION B.
 - TREES MAY NOT BE PLANTED WITHIN 5 FEET OF STORM DRAIN, SANITARY OR WATER MAINS, OR WITHIN 12 FEET OF STREET OR PARKING LOT LIGHTS.
 - ALL PLANTS MUST BE WATERED THOROUGHLY AT PLANTING AND UNTIL THE END OF THE WARRANTY PERIOD.
 - REMOVE ALL LABELS FROM PLANTED LANDSCAPE MATERIAL.
 - AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
 - THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 - THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 28 SHADE TREES, 0 ORNAMENTAL TREES, 0 EVERGREEN TREES AND 0 SHRUBS PROVIDED WITH THE LANDSCAPE SURETY IN THE AMOUNT OF \$10,800 WITH THE GRADING PERMIT.

MINIMUM LANDSCAPE MAINTENANCE REQUIREMENTS

- LAWN AREAS SHALL BE MOWED TO A HEIGHT OF 2 TO 3 INCHES AND NOT ALLOWED TO REACH A HEIGHT OF 4 INCHES BEFORE MOWING.
- ALL CURBS AND WALKS SHALL BE EDGED AS NEEDED.
- ALL LAWN AREAS ADJACENT TO BUILDING FACES OR STRUCTURES SHALL BE TRIMMED.
- A SLOW RELEASE NITROGEN BALANCED FERTILIZER WITH A 2-1-1 RATIO SHALL BE APPLIED AT A RATE OF 0.9 POUNDS OF NITROGEN PER 1000 SQUARE FEET IN SEPTEMBER, OCTOBER, AND FEBRUARY.
- LIME SHALL BE APPLIED AT THE RATE DETERMINED BY A SOILS REPORT.
- IT IS RECOMMENDED THAT LAWN AREAS BE TREATED IN MID-MARCH TO EARLY APRIL WITH PRE-EMERGENT HERBICIDE (BETASAN) OR EQUAL APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE.
- A POST-EMERGENT HERBICIDE (TRIMEC) OR EQUAL IS RECOMMENDED TO BE SPRAYED ON LAWN AREAS IN THE LATE SPRING OR THE EARLY FALL. FOLLOW MANUFACTURER'S RATES AND RECOMMENDATIONS.
- RESEED BARE AREAS OF LAWN AS NECESSARY. YEARLY AERATION IS RECOMMENDED.
- ALL TRASH, LITTER, AND DEBRIS SHALL BE REMOVED FROM LAWN AREAS, PARKING LOTS, AND SHRUB BEDS AS NEEDED.
- MULCH ALL SHRUB AND GROUND COVER BEDS YEARLY WITH 2 INCHES OF SHREDDED HARDWOOD BARK.
- PERMIT SHRUBS AND TREES TO GROW AND ENLARGE TO THEIR DESIGN SIZE. CONSULT PROJECT LANDSCAPE ARCHITECT FOR DETAILS.
- PRUNE TREES IN ACCORDANCE WITH LANDSCAPE CONTRACTORS ASSOCIATION GUIDELINES.
- REMOVE STAKES, WIRE AND HOSES FROM ALL TREES AFTER ONE YEAR FROM THE DATE OF INITIAL ACCEPTANCE, UNLESS OTHERWISE DIRECTED BY THE OWNER.

PLANTING SCHEDULE (APPLIES TO L-101 AND L-102 ONLY)

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
28	AR	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2.5" CAL.	FULL CROWN / CONSISTENT HT. & FORM, CENTRAL LEADER
8	NB	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	3" CAL.	FULL CROWN / CONSISTENT HT. & FORM, SINGLE STEM, CENTRAL LEADER
17	PA	PLATANUS X ACERIFOLIA 'BLOODGOOD'	LONDON PLANE TREE	3" CAL.	FULL CROWN / CONSISTENT HT. & FORM, CENTRAL LEADER
10	QP	QUERCUS PHELLOS	WILLOW OAK	2.5" CAL.	FULL CROWN / CONSISTENT HT. & FORM, CENTRAL LEADER
5	QS	QUERCUS SHUMARDII	SHUMARD OAK	2.5" CAL.	FULL CROWN / CONSISTENT HT. & FORM, CENTRAL LEADER

SCHEDULE A - PERIMETER LANDSCAPE EDGE

PERIMETER DESIGNATION	PERIMETER 1 (P1)	PERIMETER 2 (P2)	PERIMETER 3 (P3)	PERIMETER 1 (P4)
CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
BUFFER TYPE	TYPE 'B'	TYPE 'C'	TYPE 'C'	TYPE 'A'
PERIMETER LENGTH	+/- 1,121 LF	+/- 1,715 LF	+/- 713 LF	+/- 1,809 LF
CREDIT FOR EXISTING VEGETATION	YES; +/- 1,049 LF	YES; 1,715 LF	YES; +/- 713 LF	YES; +/- 1,784 LF
CREDIT FOR WALL, FENCE OR BERM	NO	NO	NO	NO
CREDIT FOR DRIVEWAY ENTRANCE	YES; 72 LF	NO	NO	NO

NO. OF PLANTS REQUIRED	SHADE TREES	EVERGREEN TREES	SHRUBS	PLANT TOTALS
	0	0	0	1 @ 1:60 LF
	0	0	0	0 EVERGREEN TREES
	0	0	0	0 SHRUBS

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PROPOSED PARKING SPACES	526	171
INTERNAL ISLANDS REQUIRED (1 ISLAND / 20 PARKING SPACES)	27	9
INTERNAL ISLANDS PROVIDED (200 SQ. FT. / ISLAND)	30	9
NUMBER OF TREES REQUIRED (1 TREE / 20 PARKING SPACES)	27	9
NUMBER OF TREES PROVIDED		
SHADE TREES (TREES DENOTED ON PLAN WITH * ARE REQUIRED)	27	9
ADDITIONAL SHADE TREES	31	0
OTHER TREES (2:1 SUBSTITUTION)	0	0
TOTAL NUMBER TREES PROVIDED - SCHEDULE B	58	TOTAL 67

SEEDING SPECIFICATIONS

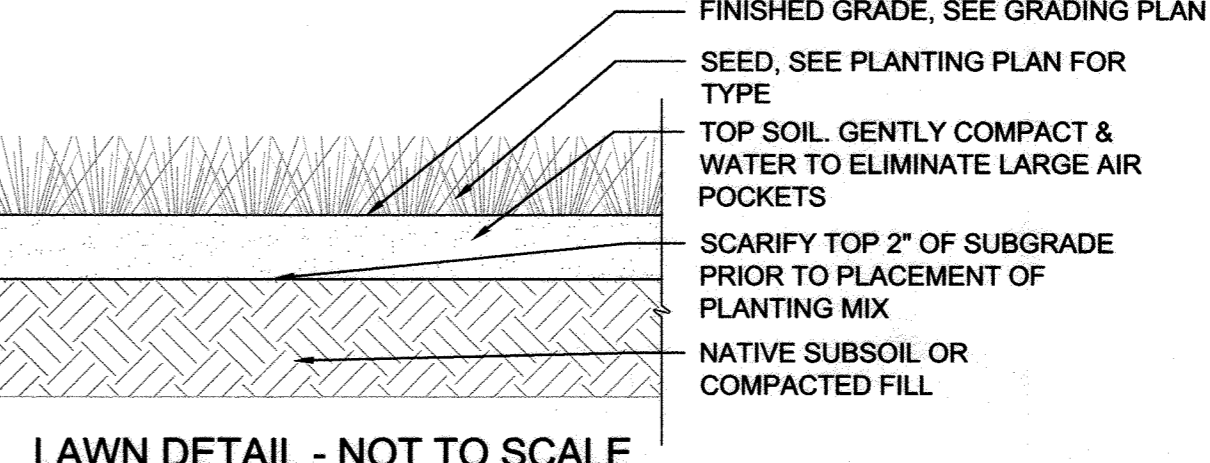
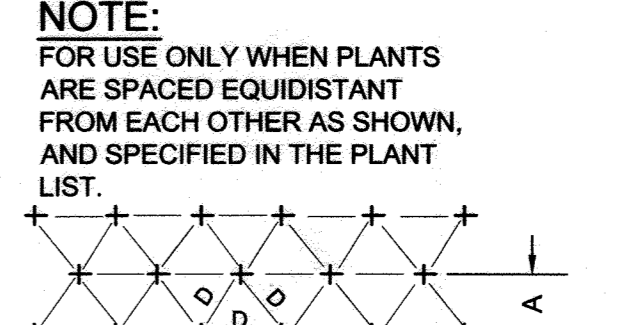
- PERMANENT TURFGRASS SEED SHALL BE IN ACCORDANCE WITH B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION ON DRAWING ESC-203.

STREET TREE LANDSCAPING

EXISTING STREET TREES ARE PLANTED IN ACCORDANCE WITH F-09-117.

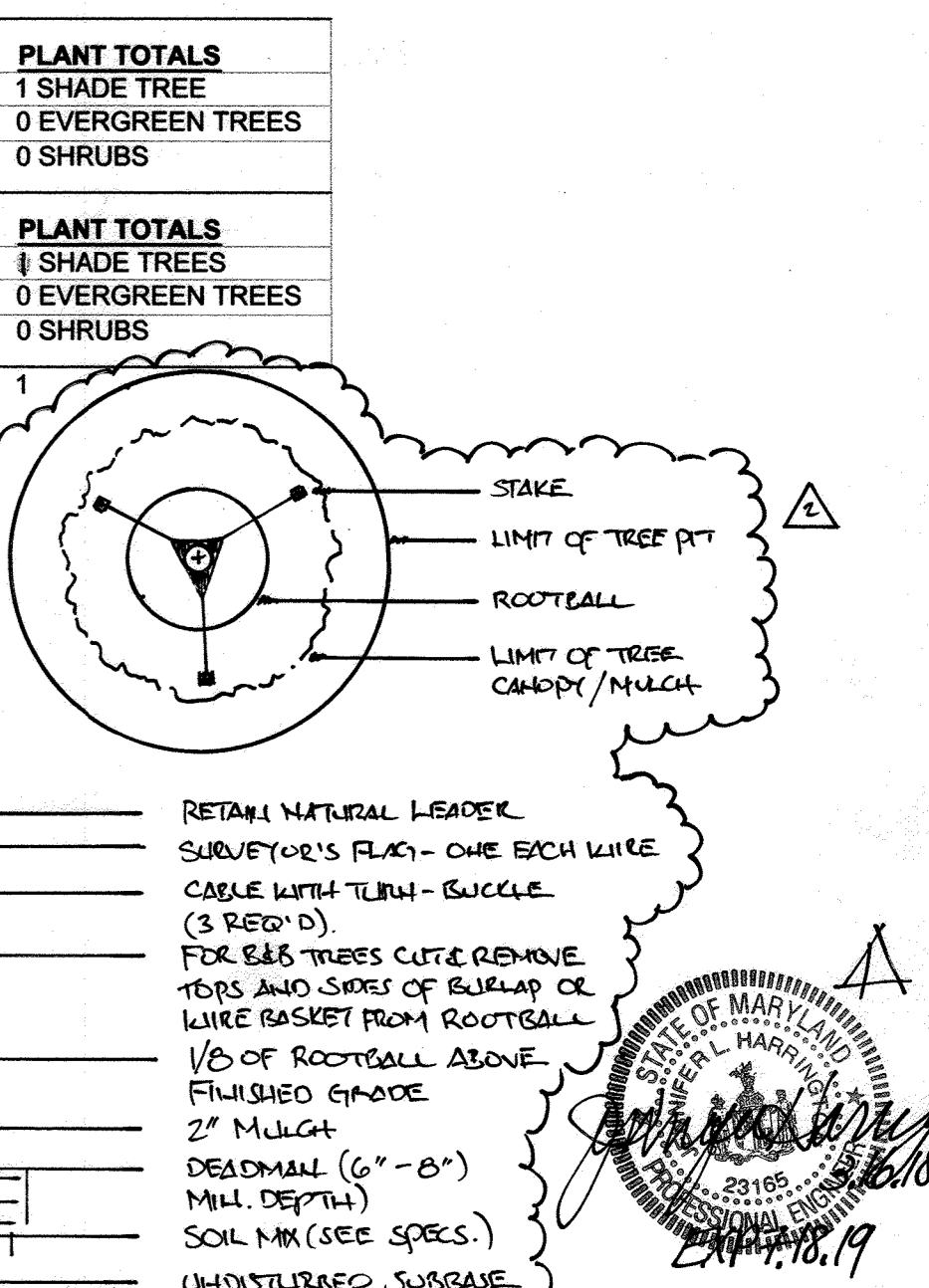
PLANT SPACING CHART

SPACING "D"	ROW "A"	PLANTS / S.F.
6" O.C.	5.20"	4.61
8" O.C.	6.93"	2.60
10" O.C.	8.66"	1.66
12" O.C.	10.40"	1.15
15" O.C.	13.00"	0.78
18" O.C.	15.00"	0.51
24" O.C.	20.80"	0.29
30" O.C.	26.00"	0.18
36" O.C.	30.00"	0.12



I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NUMBER: 631
 EXPIRES DATE: 09/21/2021

STATE OF MARYLAND
 REGISTERED LANDSCAPE ARCHITECT
 SCOTT JON RYKER
 NO. 831
 23185
 09/21/2021



BY THE DEVELOPER:
 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 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.

Glenn M. Carey
 SIGNATURE OF DEVELOPER/OWNER
 9/24/17
 DATE

Johns Hopkins University
 DEVELOPER
 Applied Physics Laboratory LLC

APPROVED: DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
 CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____
 CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

PREPARED BY: FREDRICK P. BEHLEN, PLA
 STATE OF MARYLAND
 REGISTERED LANDSCAPE ARCHITECT
 REGISTRATION NO. 698
 9.11.17
 NAME _____ DATE _____

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 SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 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.

Glenn M. Carey
 NAME _____ DATE _____

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
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STATE OF MARYLAND
 REGISTERED LANDSCAPE ARCHITECT
 SCOTT JON RYKER
 NO. 831
 23185
 09/21/2021

No.	Date	Description
1	7/25/2018	NORTH PARKING LOT ADDITION
2	8/15/2018	REVISED PLANTING

ADDRESS CHART

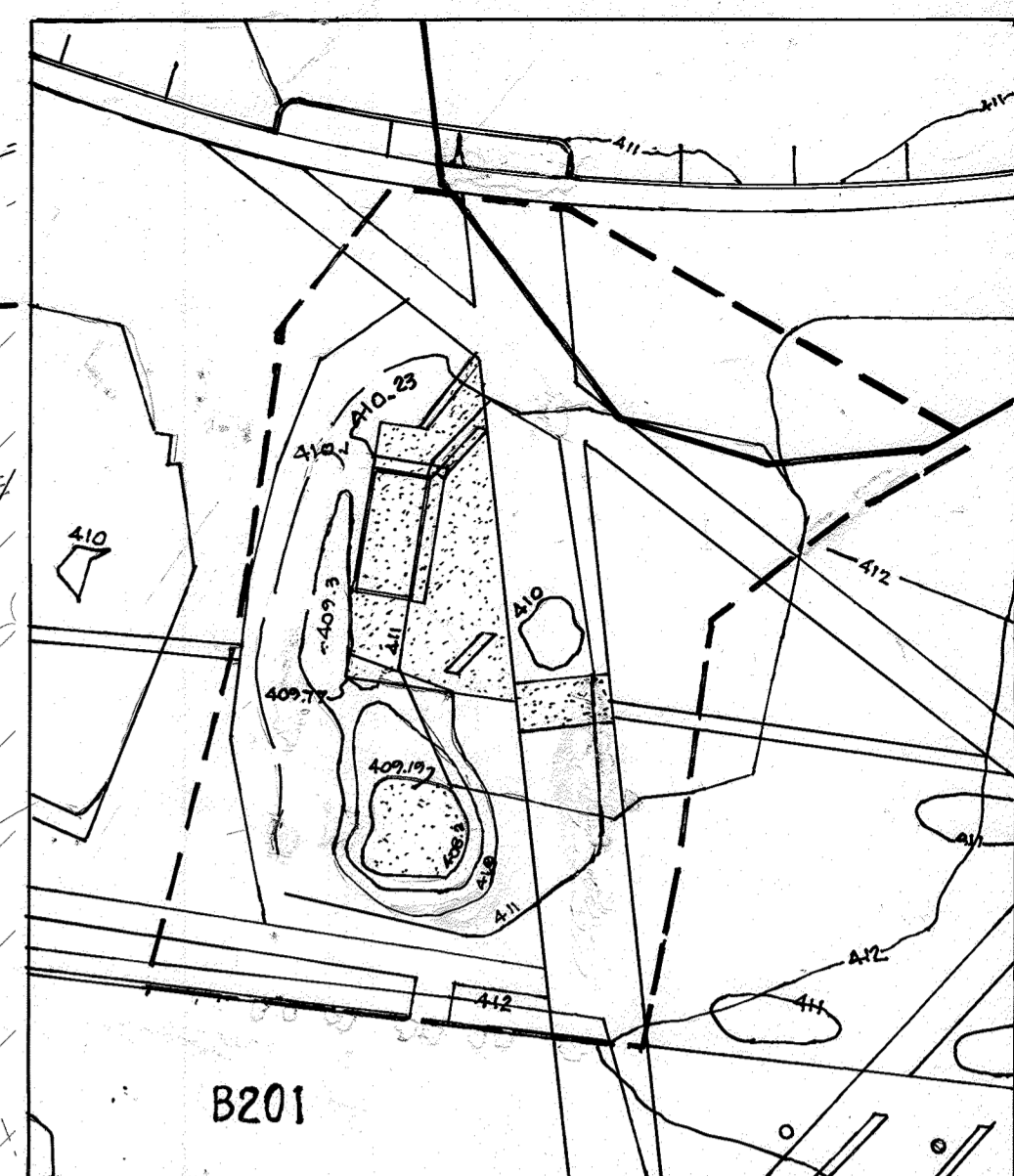
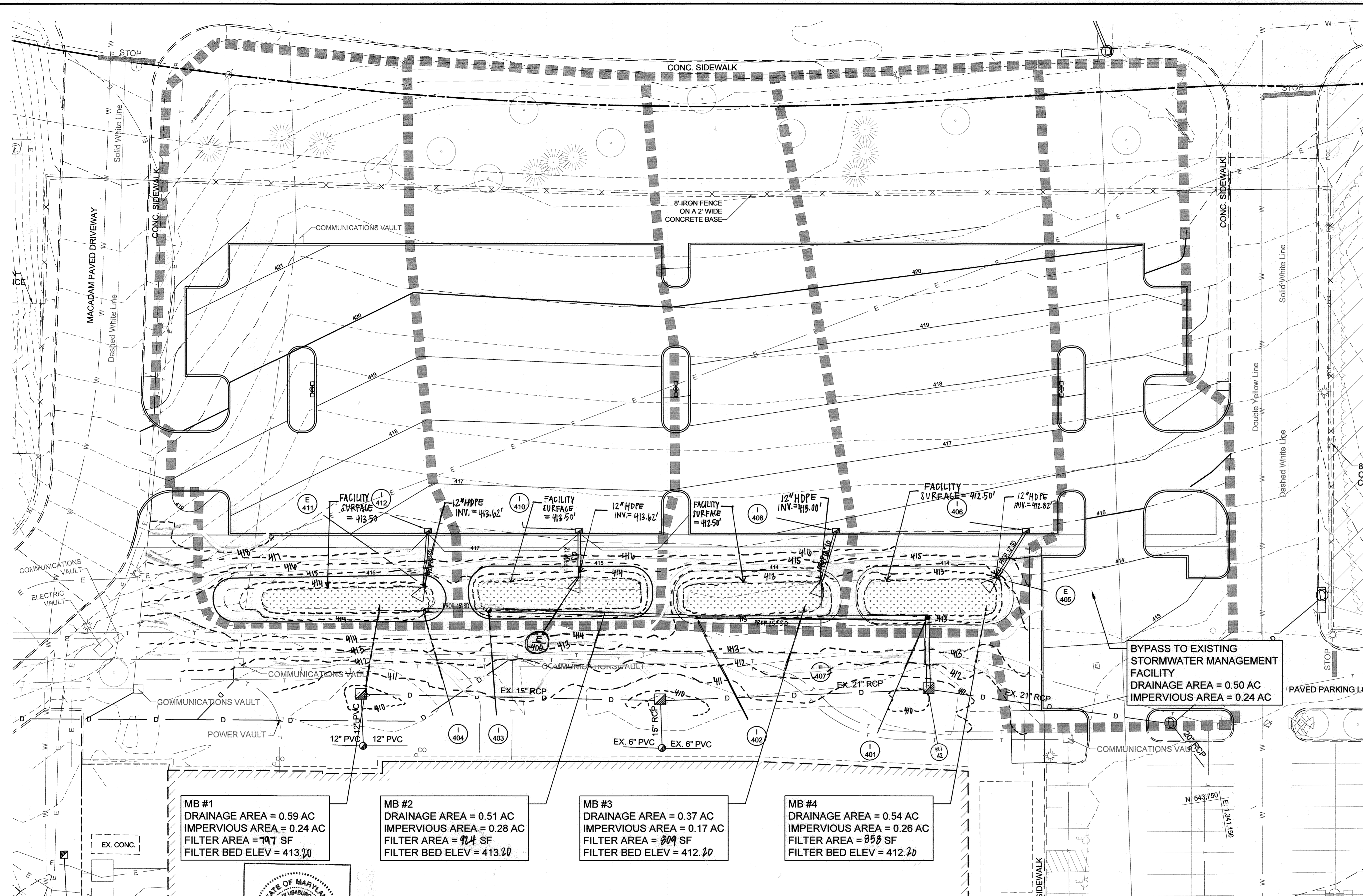
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART

PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.			
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300			
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
20928-20930	22	PEC	0041	5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT			
550	-	NEW OFFICE BUILDING - GREEN BUILDING			

PLANTING DETAILS & NOTES
L-201
 SHEET 25 OF 25

Z:\1616055-JHU-APL-Building 201-Design Services\DWG\DWGS - REGULINES FOR NORTH PARKING\REDLINE SWM-101 Stormwater Management Plan.dwg-101 Mar 15, 2018 04:45pm xl



MB#5 DRAINAGE AREA MAP
SCALE 1" = 40'

MB#5
DRAINAGE AREA = 0.43 AC.
IMPERVIOUS AREA = 0.15 AC.
FILTER AREA = 415 SF
FILTER BED ELEV = 408.20



AS-BUILT CERTIFICATION
I HEREBY CERTIFY BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLAN AND SPECIFICATIONS.

NAME: **BRYAN R. ALONI**
MARYLAND LICENSE NO: **51972**
EXPIRATION DATE: **11-19-19**

MB #1
DRAINAGE AREA = 0.59 AC
IMPERVIOUS AREA = 0.24 AC
FILTER AREA = 797 SF
FILTER BED ELEV = 413.20

MB #2
DRAINAGE AREA = 0.51 AC
IMPERVIOUS AREA = 0.28 AC
FILTER AREA = 924 SF
FILTER BED ELEV = 413.20

MB #3
DRAINAGE AREA = 0.37 AC
IMPERVIOUS AREA = 0.17 AC
FILTER AREA = 809 SF
FILTER BED ELEV = 412.20

MB #4
DRAINAGE AREA = 0.54 AC
IMPERVIOUS AREA = 0.26 AC
FILTER AREA = 858 SF
FILTER BED ELEV = 412.20

BYPASS TO EXISTING STORMWATER MANAGEMENT FACILITY
DRAINAGE AREA = 0.50 AC
IMPERVIOUS AREA = 0.24 AC

SITE AREA TABULATION

SWM STUDY AREA	=	2.20 +/- AC
EX. IMPERVIOUS AREA	=	0.03 +/- AC
PROP. IMPERVIOUS AREA	=	1.19 +/- AC
TARGET Pe	=	1.0 inches

SWM STORAGE REQUIREMENTS

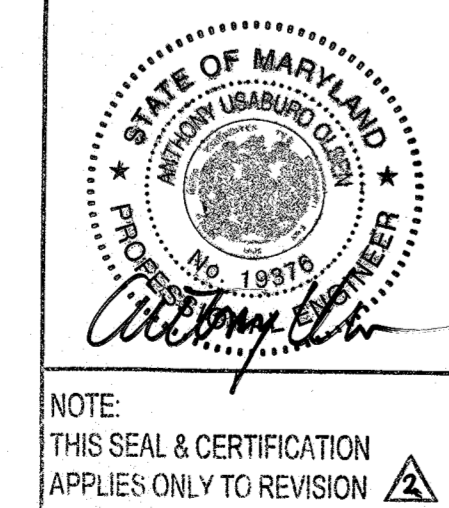
REQUIRED	VOLUME REQ'D (CF)	VOLUME PROV'D (CF)
ESD _v	4104	4252
REV	1067	1250

TREATMENT SUMMARY TABLE

ESD PRACTICE	DRAINAGE AREA (AC)	IMP. AREA (AC)	ESD VOL. (CF)	RECHARGE VOL. (CF)
M-6 MB#1	0.59	0.24	1102	280
M-6 MB#2	0.51	0.28	1159	340
M-6 MB#3	0.37	0.17	826	310
M-6 MB#4	0.54	0.26	1155	320
TO EX POND	0.50	0.24		
TOTAL	1.19		4252	1250

SWM AS-BUILT PREPARED BY:
KCI TECHNOLOGIES, INC.
11830 WEST MARKET PLACE, SUITE F
FULTON, MD 20759

DATED: NOVEMBER 01, 2018



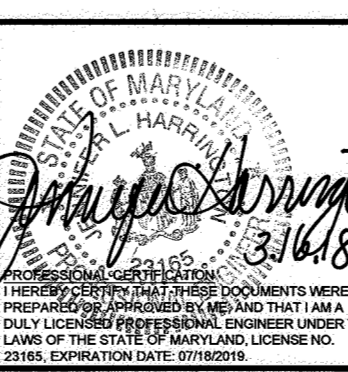
PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19376. EXPIRATION DATE: 12/22/21.

PURPOSE STATEMENT: ADDITIONAL SHEET FOR NORTH PARKING LOT STORMWATER MANAGEMENT.

APPROVED: DEPARTMENT OF PLANNING & ZONING
DATE: 4-2-18
DATE: 4-5-18
DATE: 4-5-18

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
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No.	Date	Description
1	2/5/2018	NORTH PARKING LOT ADDITION
2	7/21	REVISED SDP - NEW SHEET. ADD MB #5

ADDRESS CHART

MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART

PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.			
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300			
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
20928-20930	22	PEC	0041	5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT			
550	-	NEW OFFICE BUILDING - GREEN BUILDING			

STORMWATER MANAGEMENT PLAN
SWM-101
SHEET 28 OF 31
SDP-17-047

MARYLAND STORMWATER DESIGN MANUAL CONSTRUCTION SPECIFICATIONS FOR MICRO-BIORETENTION

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION AND INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS - THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL - THE SOIL SHALL BE SHA 920.01.05 BIORETENTION SOIL MIX (BSM)

3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE. IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDS THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS - UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
• PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC).
• PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 1/4" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 3" (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH.
• GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
• THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
• A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
• A 4" LAYER OF PEA GRAVEL (1/4" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED

920.01.05 MDSHA BIORETENTION SOIL MIX

920.01.05 BIORETENTION SOIL MIX (BSM), A HOMOGENEOUS MIXTURE COMPOSED BY LOOSE VOLUME OF 5 PARTS COARSE SAND, 3 PARTS BASE SOIL, AND 2 PARTS FINE BARK. BSM SHALL CONFORM TO THE FOLLOWING:

(a) COMPONENTS. COMPONENTS OF BSM SHALL BE SAMPLED, TESTED AND APPROVED BEFORE MIXING AS FOLLOWS:
(1) COARSE SAND. MSMT 356. COARSE SAND SHALL BE WASHED SILICA SAND OR CRUSHED GLASS THAT CONFORMS TO ASTM FINE AGGREGATE C-33. COARSE SAND SHALL INCLUDE LESS THAN 1% BY WEIGHT OF CLAY OR SILT SIZE PARTICLES, AND LESS THAN 5% BY WEIGHT OF ANY COMBINATION OF DIABASE, GREYSTONE, CALCAREOUS OR DOLOMITIC SAND.
(2) BASE SOIL. BASE SOIL SHALL BE TESTED AND CERTIFIED BY THE PRODUCER TO CONFORM TO THE FOLLOWING REQUIREMENTS:

COMPOSITION - BASE SOIL					
TEST PROPERTY	TEST METHOD	TEST VALUE AND AMENDMENT			
PROHIBITED WEEDS	-	FREE OF SEED AND VIABLE PLANT PARTS OF SPECIES IN 920.06.02(a)(b)(c) WHEN INSPECTED.			
DEBRIS	-	NO OBSERVABLE CONTENT OF CEMENT, CONCRETE, ASPHALT, CRUSHED GRAVEL OR CONSTRUCTION DEBRIS WHEN INSPECTED.			
GRADING ANALYSIS	T 87	SIEVE SIZE		PASSING BY WEIGHT MINIMUM %	
		2 IN.		100	
		NO. 4		90	
		NO. 10		80	
TEXTURAL ANALYSIS	T 88	PARTICLE SIZE		% PASSING BY WEIGHT	
		mm	MINIMUM	MAXIMUM	
		SAND	2.0-0.050	50	85
		SILT	0.050-0.002	5	45
		CLAY	LESS THAN 0.002	5	10
SOIL pH	D 4972	pH OF 5.7 TO 6.9			
ORGANIC MATTER	T 194	1.0 TO 10.0% BY WEIGHT			
SOLUBLE SALTS	EC1.2 (V-V)	500 ppm (1.25 mmhos/cm) OR LESS			
HARMFUL MATERIALS	-	920.01.01(a)			

(3) FINE BARK. FINE BARK SHALL BE THE BARK OF HARDWOOD TREES THAT IS MILLED AND SCREENED TO A UNIFORM PARTICLE SIZE OF 2 IN. OR LESS. FINE BARK SHALL BE COMPOSTED AND AGED FOR 6 MONTHS OR LONGER, AND BE FREE FROM SAWDUST AND FOREIGN MATERIALS. A 1 TO 2 LB SAMPLE OF FINE BARK SHALL BE SUBMITTED TO THE LANDSCAPE OPERATIONS DIVISION FOR EXAMINATION.

(b) COMPOSITION. BSM SHALL BE SAMPLED AND TESTED ACCORDING TO THE REQUIREMENTS OF MSMT 356 AND CONFORM TO THE FOLLOWING:

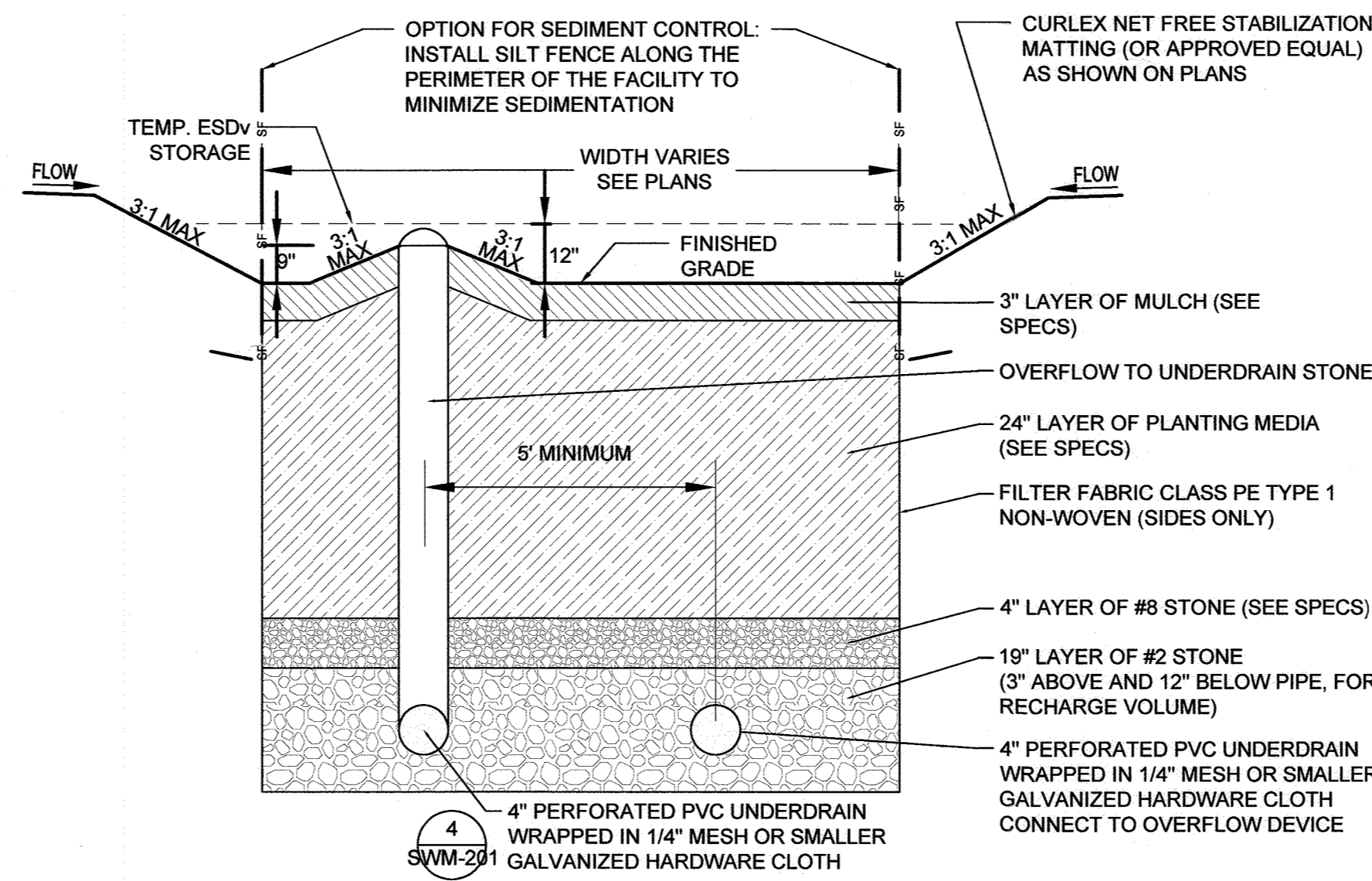
COMPOSITION - BIORETENTION SOIL MIX (BSM)						
TEST PROPERTY	TEST METHOD	TEST VALUE AND AMENDMENT				
WEEDS	-	FREE OF SEED AND VIABLE PLANT PARTS OF SPECIES IN 920.06.02(a)(b)(c) WHEN INSPECTED.				
DEBRIS	-	920.01.05(a)(2)				
TEXTURAL ANALYSIS	T 88	PARTICLE SIZE		% PASSING BY WEIGHT		
		mm	MINIMUM	MAXIMUM		
		SAND	2.0-0.050	55	85	
		SILT	0.050-0.002	-	20	
		CLAY	LESS THAN 0.002	1	8	
SOIL pH	D 4972	pH OF 5.7 TO 7.1				
ORGANIC MATTER	T 194	MINIMUM 1.5% BY WEIGHT				
NUTRIENT ANALYSIS AND SOLUBLE SALTS	MEHLICH-3	CONCENTRATION				
		ELEMENT	MINIMUM	FIV	MAXIMUM	FIV
		ppm	ppm	ppm	ppm	ppm
		CALCIUM (Ca)	32	25	NO LIMIT	NO LIMIT
		MAGNESIUM (Mg)	15	25	NO LIMIT	NO LIMIT
		PHOSPHORUS (P)	18	25	92	100
		POTASSIUM (K)	22	25	NO LIMIT	NO LIMIT
SULFUR (SO ₄)	25	N/A	NO LIMIT	NO LIMIT		
HARMFUL MATERIALS	EC1.2 (V-V)	SOLUBLE SALTS	40	N/A	500	N/A
			920.01.01(a)			

(c) AMENDMENT OR FAILURE. BSM THAT DOES NOT CONFORM TO COMPOSITION REQUIREMENTS FOR PH OR NUTRIENT ANALYSIS SHALL BE AMENDED AS SPECIFIED BY THE MNP. BSM THAT EXCEEDS MAXIMUM PHOSPHORUS CONCENTRATION OR FAILS OTHER COMPOSITION REQUIREMENTS WILL NOT BE ACCEPTED, AND SHALL NOT BE DELIVERED OR USED AS BSM.

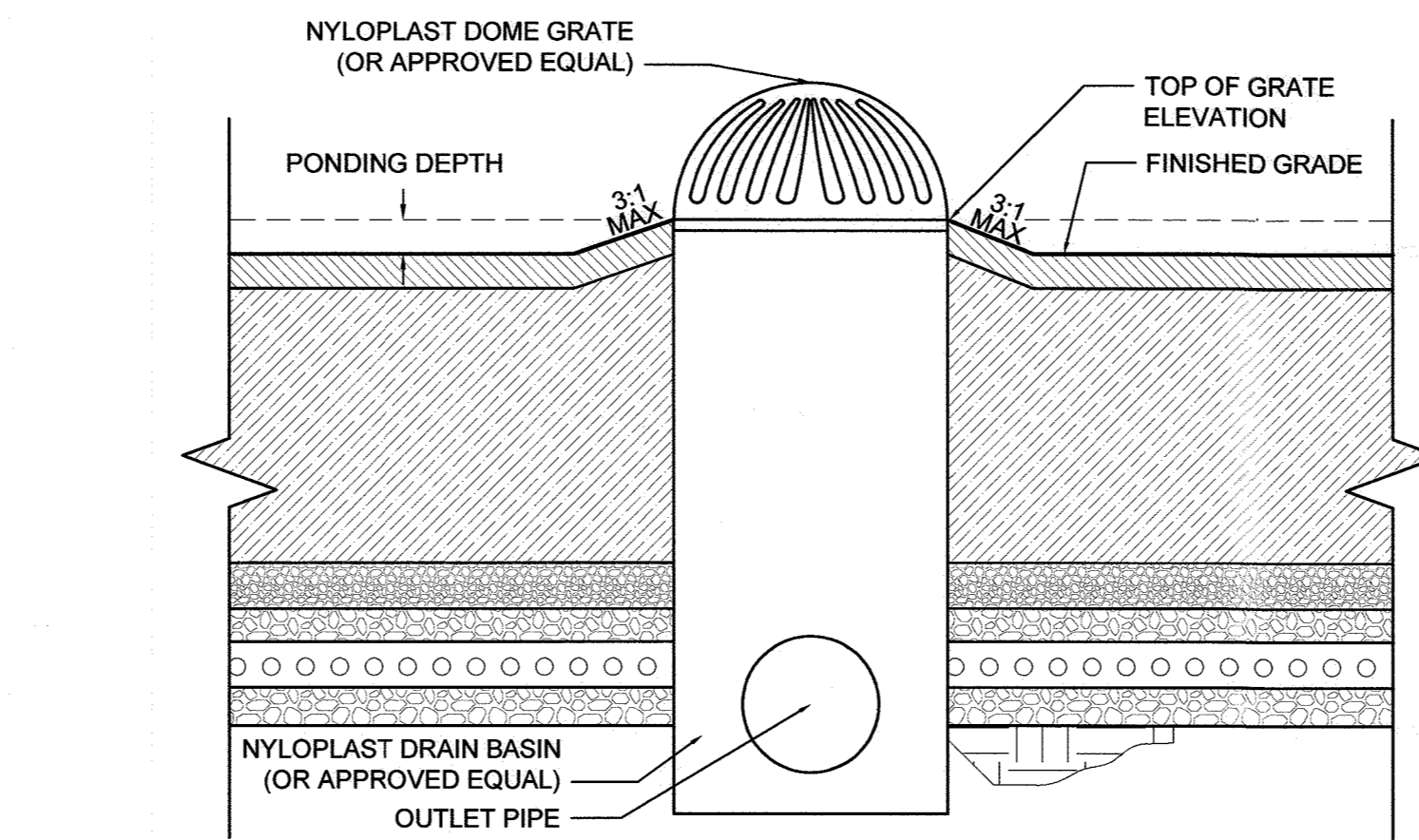
(d) STORAGE. 920.01.02(B) BSM SHALL BE STORED IN A STOCKPILE THAT IS PROTECTED FROM WEATHER UNDER TARP OR SHED. BSM STORED FOR 6 MONTHS OR LONGER SHALL BE RESAMPLED, RETESTED, AND REAPPROVED BEFORE USE.

(e) APPROVAL. 920.01.02(C).

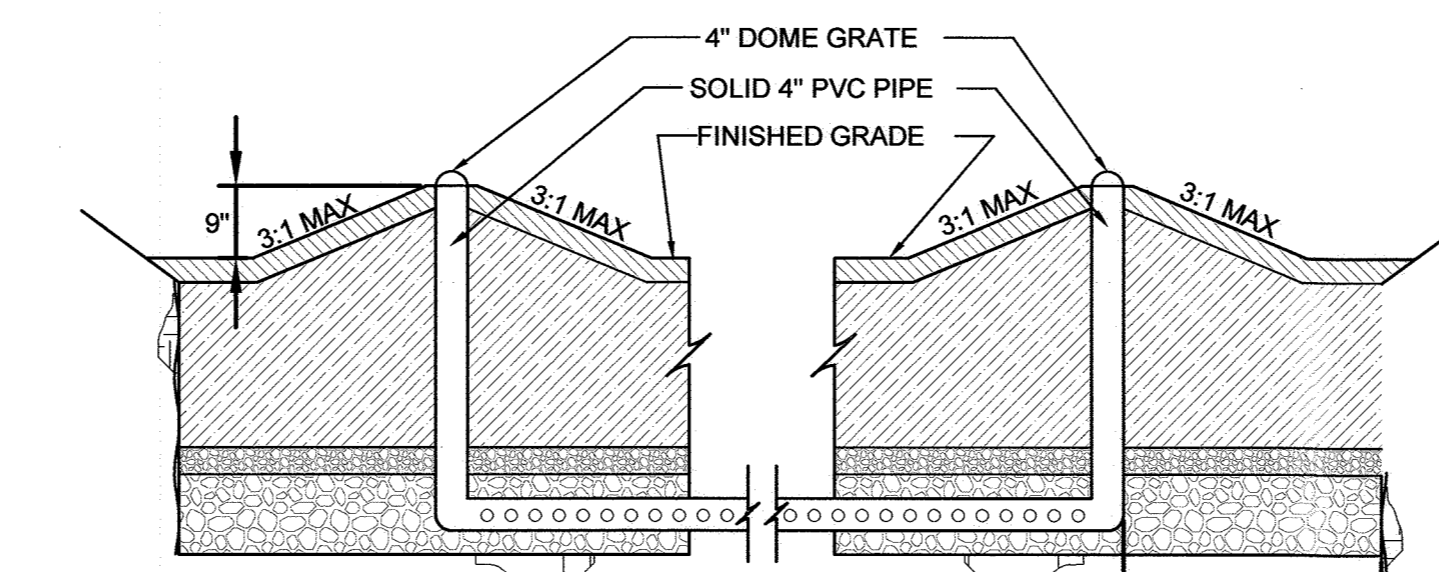
(f) CERTIFICATION AND DELIVERY. 920.01.02(D).



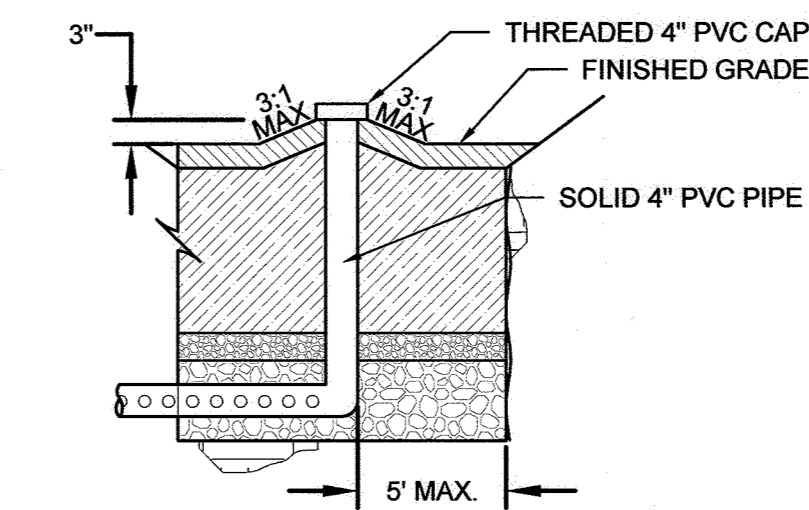
1 MICRO-BIORETENTION NOT TO SCALE



2 OVERFLOW DEVICE APPLIES TO ALL MICRO-BIORETENTION FACILITIES NOT TO SCALE

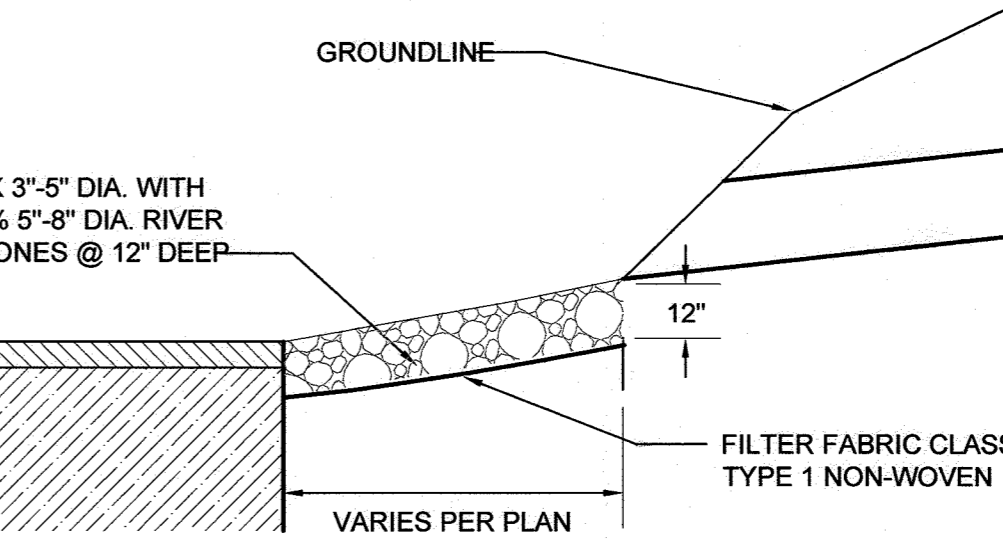


3 OVERFLOW TO UNDERDRAIN STONE NOT TO SCALE



NOTE: CONTRACTOR TO ENGRAVE DEPTH OF PIPE INVERT ON THE WELL'S CAP. DEPTH TO BE MEASURED IN THE FIELD.

4 CLEAN-OUT / OBSERVATION WELL NOT TO SCALE



NOTES
1. FILTER FABRIC FROM SIDES OF MICRO-BIORETENTION THROUGH STONE SHALL BE CONTIGUOUS. WHERE ENDS OF THE FABRIC COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
2. CONTRACTOR TO EVENLY WET DOWN FACILITY TO SETTLE PLANTING MEDIA AND REDRESS TOP SURFACE WITH ADDITIONAL PLANTING MEDIA TO SPECIFIED SURFACE ELEVATION PRIOR TO INSTALLING MULCH AND PLANT MATERIAL.

5 MICRO-BIORETENTION RIVER ROCK NOT TO SCALE

TABLE B.4.1 MATERIAL SPECIFICATIONS FOR MICRO-BIORETENTION, BIO-SWALE RAIN GARDENS & LANDSCAPE INFILTRATION

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANTING PLAN	N/A	PLANTINGS ARE SITE-SPECIFIC
* PLANTING SOIL (2' TO 4' DEEP)	LOAMY SAND (60-65%) & COMPOST (35-40%) OR SANDY LOAM (30%) & COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
* ORGANIC CONTENT	MIN 10% BY DRY WEIGHT (ASTM D 2974)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/4" TO 1 1/2")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR 35	SLOTTED OR PERFORATED PIPE: 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES; PERFORATED PIPE SHALL BE WRAPPED WITH 1/4 INCH GALVANIZED HARDWARE CLOTH.
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX NO. 3, F _c =3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED; REINFORCING TO MEET ASTM-615-60.	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND. DESIGN TO INCLUDE MEETING ALL CODES 5010.00; VERTICAL LOADING (H-10 OR H-20); ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING.
SAND	AASHTO-M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATE OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.

*SEE MATERIAL SPECIFICATIONS FOR SHA BIORETENTION SOIL MIX (BSM) THIS SHEET FOR SPECIFIC BIORETENTION SOIL MIX FOR THIS PROJECT.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Jennifer Harrington 3/16/18
SIGNATURE OF ENGINEER DATE
Jennifer Harrington
JENNIFER L. HARRINGTON, P.E.

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

Glenn M. Carey 3/16/18
SIGNATURE OF DEVELOPER DATE
GLENN CAREY, JHU APL

APPROVED: DEPARTMENT OF PLANNING & ZONING
Chad Edwards 4-2-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Kurt Balwade 4-5-18
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Valeria J. J. J. 4-5-18
DIRECTOR DATE

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
BUILDING B201
11091 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723
ATTN: BABS SHONAYA, 443.778.2284

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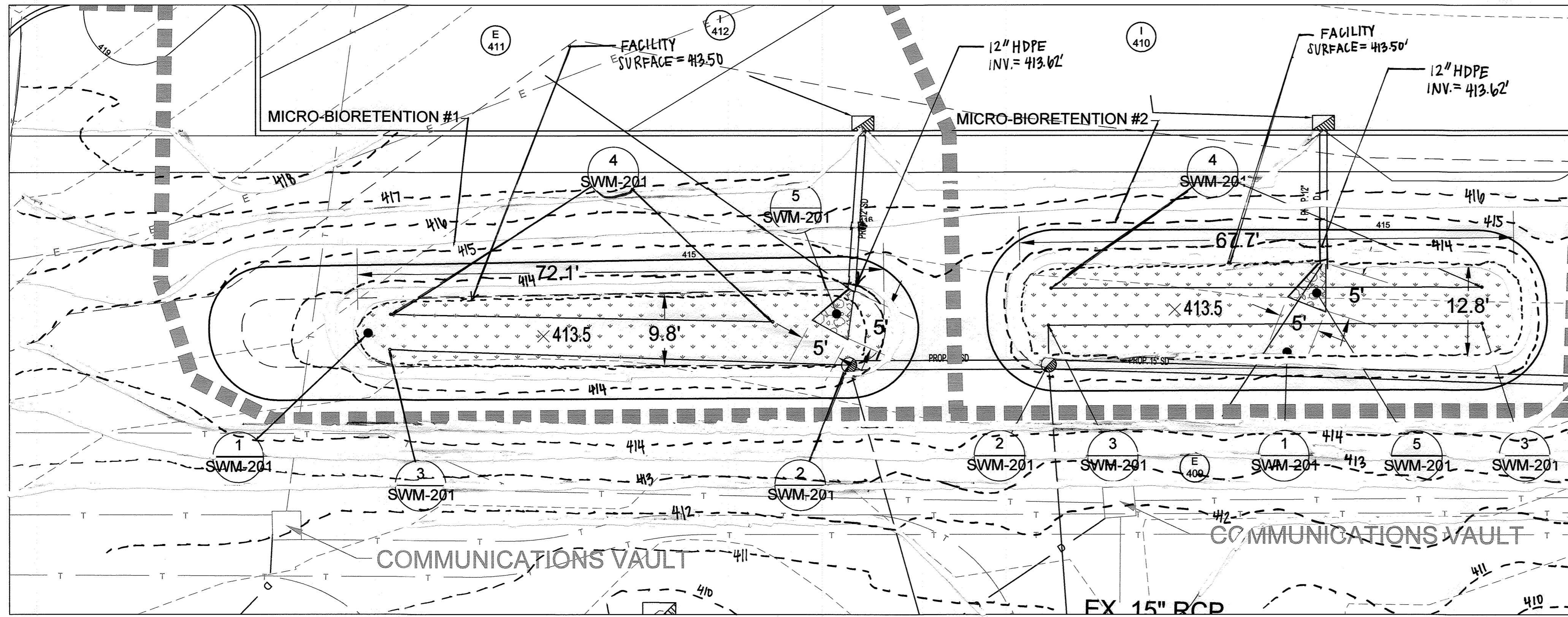
STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
JENNIFER L. HARRINGTON
2185 CORPORATE DRIVE, SUITE 200
2185 CORPORATE DRIVE SUITE 200
2185 CORPORATE DRIVE SUITE 200

No.	Date	Description
1	2/5/2018	NORTH PARKING LOT ADDITION REVISED APP. NEWSHEET

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART				
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	TAX MAP NO.	ELECT DISTRICT
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	0041	5th
PLAT # OR U/F	GRID #	ZONING	CENSUS TRACT	
20928-20930	22	PEC	6051.02	
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT		
550	-	NEW OFFICE BUILDING - GREEN BUILDING		

STORMWATER MANAGEMENT DETAILS & NOTES
SWM-201
SHEET 27 OF 34
SDP-17-047



PROJECT NAME: JHU APL BUILDING 201 NORTH PARKING LOT

AS-BUILT DATA FOR MICRO-BIORETENTION
*TO BE COMPLETED BY THE CONTRACTOR'S CERTIFYING ENGINEER

TYPE OF FACILITY:	DESIGN	*AS-BUILT
FEATURE	DESIGN	*AS-BUILT
FILTER BED DIMENSIONS & AREA	9.8' X 72.1' (700 SF)	797 SF
GRATE ELEVATION	414.50	414.45
FINISHED GRADE SURFACE ELEVATION	413.5	413.50
TOP ELEVATION FILTER MEDIA	413.2	413.20
TOP ELEVATION #8 STONE	411.2	411.15
TOP ELEVATION #2 STONE	410.9	411.00
UNDERDRAIN INVERT	410.33	410.31
#2 STONE BOTTOM ELEVATION	409.3	409.30

DATE AS-BUILT: _____
ACCEPTED BY COUNTY: _____

PROJECT NAME: JHU APL BUILDING 201 NORTH PARKING LOT

AS-BUILT DATA FOR MICRO-BIORETENTION
*TO BE COMPLETED BY THE CONTRACTOR'S CERTIFYING ENGINEER

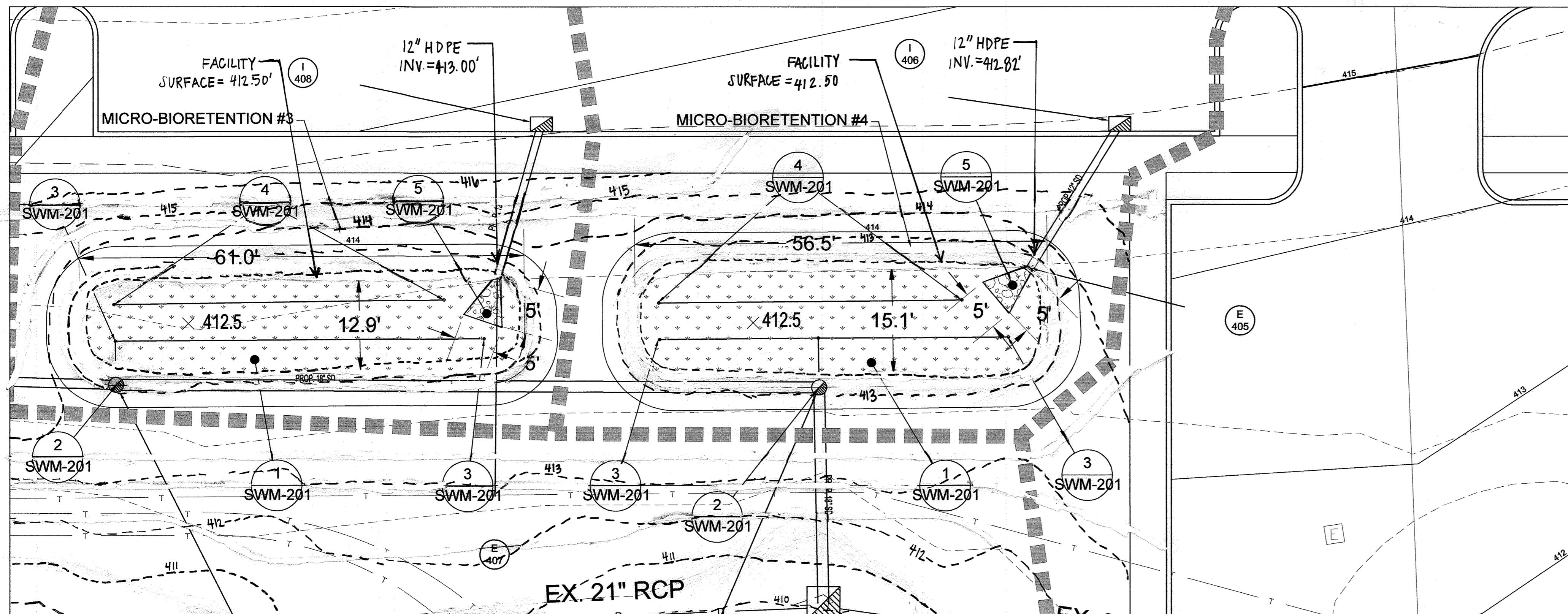
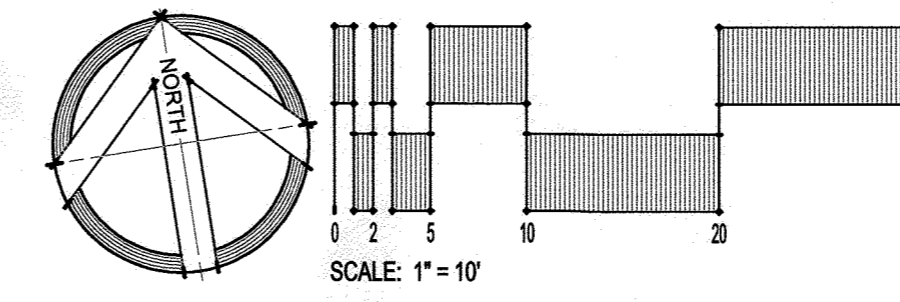
TYPE OF FACILITY:	DESIGN	*AS-BUILT
FEATURE	DESIGN	*AS-BUILT
FILTER BED DIMENSIONS & AREA	12.8' X 67.7' (850 SF)	924 SF
GRATE ELEVATION	414.50	414.40
FINISHED GRADE SURFACE ELEVATION	413.5	413.50
TOP ELEVATION FILTER MEDIA	413.2	413.20
TOP ELEVATION #8 STONE	411.2	411.25
TOP ELEVATION #2 STONE	410.9	410.95
UNDERDRAIN INVERT	410.33	410.33
#2 STONE BOTTOM ELEVATION	409.3	409.33

DATE AS-BUILT: _____
ACCEPTED BY COUNTY: _____

AS-BUILT CERTIFICATION
I HEREBY CERTIFY BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.



NAME: Bryan R. Alot
MARYLAND LICENSE NO.: 51972
EXPIRATION DATE: 12-11-19



PROJECT NAME: JHU APL BUILDING 201 NORTH PARKING LOT

AS-BUILT DATA FOR MICRO-BIORETENTION
*TO BE COMPLETED BY THE CONTRACTOR'S CERTIFYING ENGINEER

TYPE OF FACILITY:	DESIGN	*AS-BUILT
FEATURE	DESIGN	*AS-BUILT
FILTER BED DIMENSIONS & AREA	12.9' X 61.0' (800 SF)	809 SF
GRATE ELEVATION	413.50	413.30
FINISHED GRADE SURFACE ELEVATION	412.5	412.48
TOP ELEVATION FILTER MEDIA	412.2	412.20
TOP ELEVATION #8 STONE	410.2	410.25
TOP ELEVATION #2 STONE	409.9	409.94
UNDERDRAIN INVERT	409.33	409.30
#2 STONE BOTTOM ELEVATION	408.3	408.30

DATE AS-BUILT: _____
ACCEPTED BY COUNTY: _____

PROJECT NAME: JHU APL BUILDING 201 NORTH PARKING LOT

AS-BUILT DATA FOR MICRO-BIORETENTION
*TO BE COMPLETED BY THE CONTRACTOR'S CERTIFYING ENGINEER

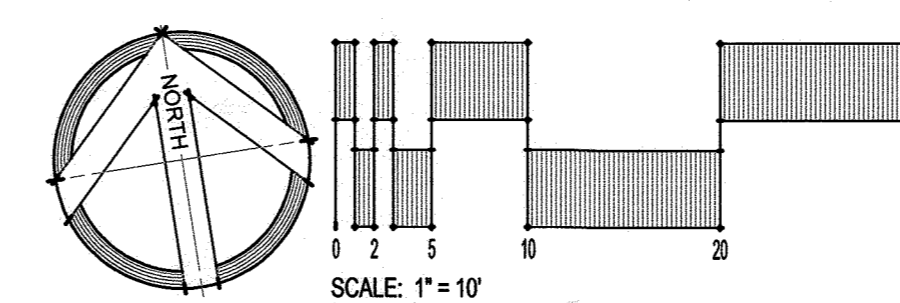
TYPE OF FACILITY:	DESIGN	*AS-BUILT
FEATURE	DESIGN	*AS-BUILT
FILTER BED DIMENSIONS & AREA	15.1' X 56.6' (800 SF)	858 SF
GRATE ELEVATION	413.50	413.45
FINISHED GRADE SURFACE ELEVATION	412.5	412.45
TOP ELEVATION FILTER MEDIA	412.2	412.20
TOP ELEVATION #8 STONE	410.2	410.28
TOP ELEVATION #2 STONE	409.9	410.95
UNDERDRAIN INVERT	409.33	409.29
#2 STONE BOTTOM ELEVATION	408.3	408.33

DATE AS-BUILT: _____
ACCEPTED BY COUNTY: _____

NOTE:
AS-BUILT PLANS AND CERTIFICATION ARE REQUIRED FOR THIS STORMWATER MANAGEMENT FACILITIES. THESE MUST BE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. HOWARD COUNTY WILL NOT PERFORM THE INSPECTION OR PREPARE THE AS-BUILT PLANS OR CERTIFICATION. THE STORMWATER MANAGEMENT PERMIT SECURITY WILL NOT BE RELEASED UNTIL THE AS-BUILT PLAN AND CERTIFICATION ARE APPROVED BY HOWARD COUNTY.

IT IS THE CONTRACTOR'S RESPONSIBILITY, ON BEHALF OF THE OWNER, TO ENGAGE A LICENSED PROFESSIONAL ENGINEER TO CERTIFY THE STORMWATER MANAGEMENT FACILITY AND TO PREPARE AND SUBMIT AS-BUILT DRAWINGS. "CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ON-SITE OBSERVATIONS AND/OR INSPECTIONS AT CRUCIAL MILESTONES DURING CONSTRUCTION OF THE FACILITY, MATERIAL TESTS CONDUCTED DURING CONSTRUCTION, AND POST-CONSTRUCTION SURVEYING AND VERIFICATION. VERIFICATION SHALL INCLUDE PHOTODOCUMENTATION CONSISTING OF AT LEAST TEN (10) PHOTOS AT EACH STAGE OF CONSTRUCTION PROGRESS.

CRUCIAL MILESTONES INCLUDE, AT A MINIMUM, REGULAR INSPECTIONS MADE AND DOCUMENTED DURING AND AT COMPLETION OF THE FOLLOWING STAGES OF CONSTRUCTION: 1) EXCAVATION TO SUBGRADE, 2) INSTALLATION OF GEOTEXTILE FABRIC, 3) INSTALLATION OF UNDERDRAIN SYSTEM WITH DRAINAGE STRUCTURE AND OUTFALL PIPE, 4) INSTALLATION OF UNDERDRAIN STONE AND REQUIRED SEPARATION STONE, 5) INSTALLATION OF FILTER MEDIA, AND 5) UPON COMPLETION OF FINAL GRADING, MULCH INSTALLATION, AND ESTABLISHMENT OF PERMANENT STABILIZATION.



SWM AS-BUILT PREPARED BY:
KOTI TECHNOLOGIES, INC.
11830 WEST MARKET PLACE, SUITE F
FULTON, MD 20759
DATED: NOVEMBER 01, 2018

APPROVED: DEPARTMENT OF PLANNING & ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 2/2/18
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 4-5-18

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
BUILDING B201
11091 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723
ATTN: BABS SHONAIYA, 443.778.2284

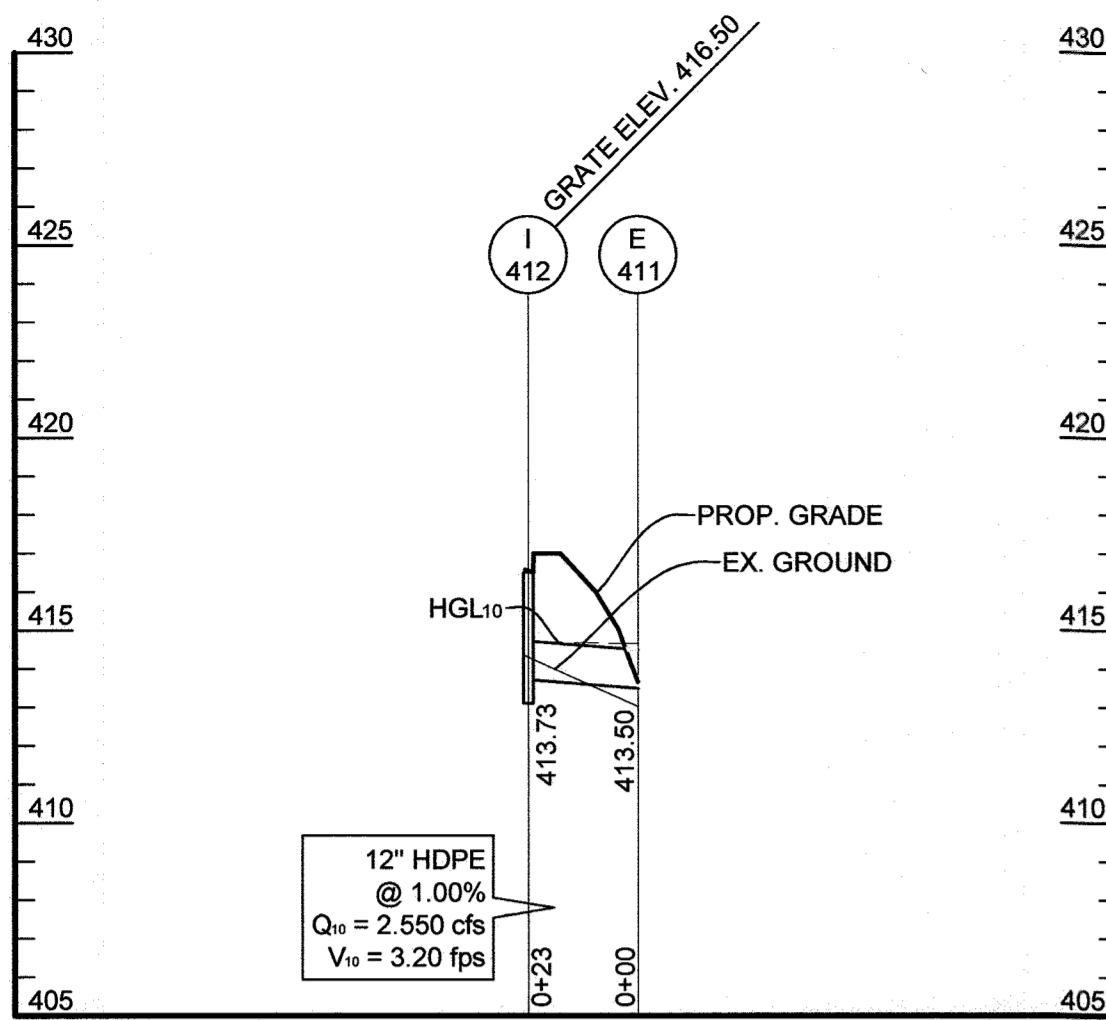
SITERESOURCES
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14315 Jarrattsville Pike, Phoenix, MD 21131-0249
410.683.3388 www.siteresourcesinc.com

ADDRESS CHART
MAP/GRID/PARCEL: MAP 0041/GRID 0022 PARCEL 0300
STREET ADDRESS: 11091 JOHNS HOPKINS RD, LAUREL, MD 20723

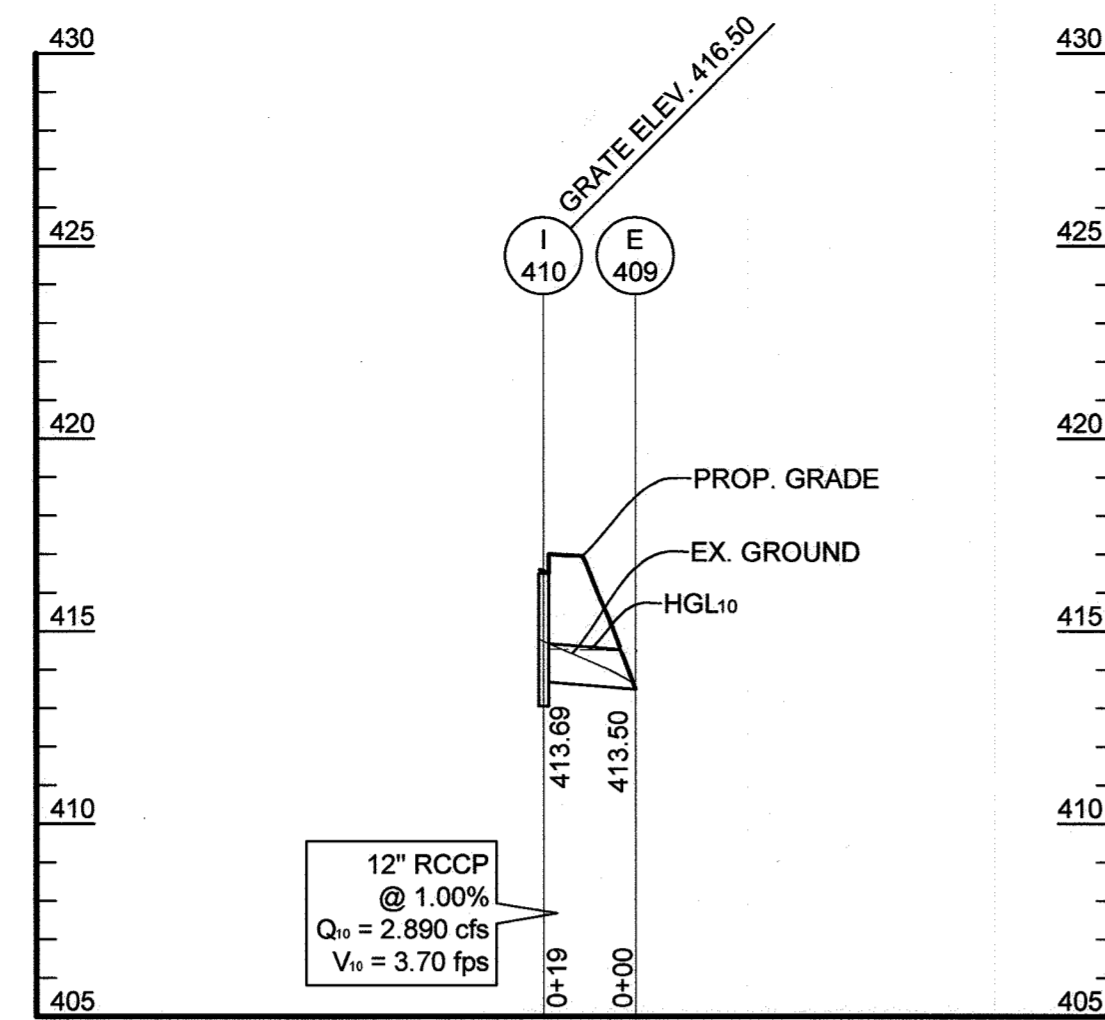
PERMIT INFORMATION CHART
PROJECT NAME: JHU APL SOUTH CAMPUS BUILDING B201
SECTION/AREA: N/A
LOT/PARCEL NO.: 300
PLAT # OR L/F: 20928-20930
GRID # ZONING: 22 PEC
TAX MAP NO. ELECT DISTRICT: 0041 5th
CENSUS TRACT: 6051.02
WATER CODE: 550
SEWER CODE: -
PROPERTY IMPROVEMENT: NEW OFFICE BUILDING - GREEN BUILDING

STORMWATER MANAGEMENT DETAILS
SWM-301
SHEET 28 OF 31
SDP-17-047

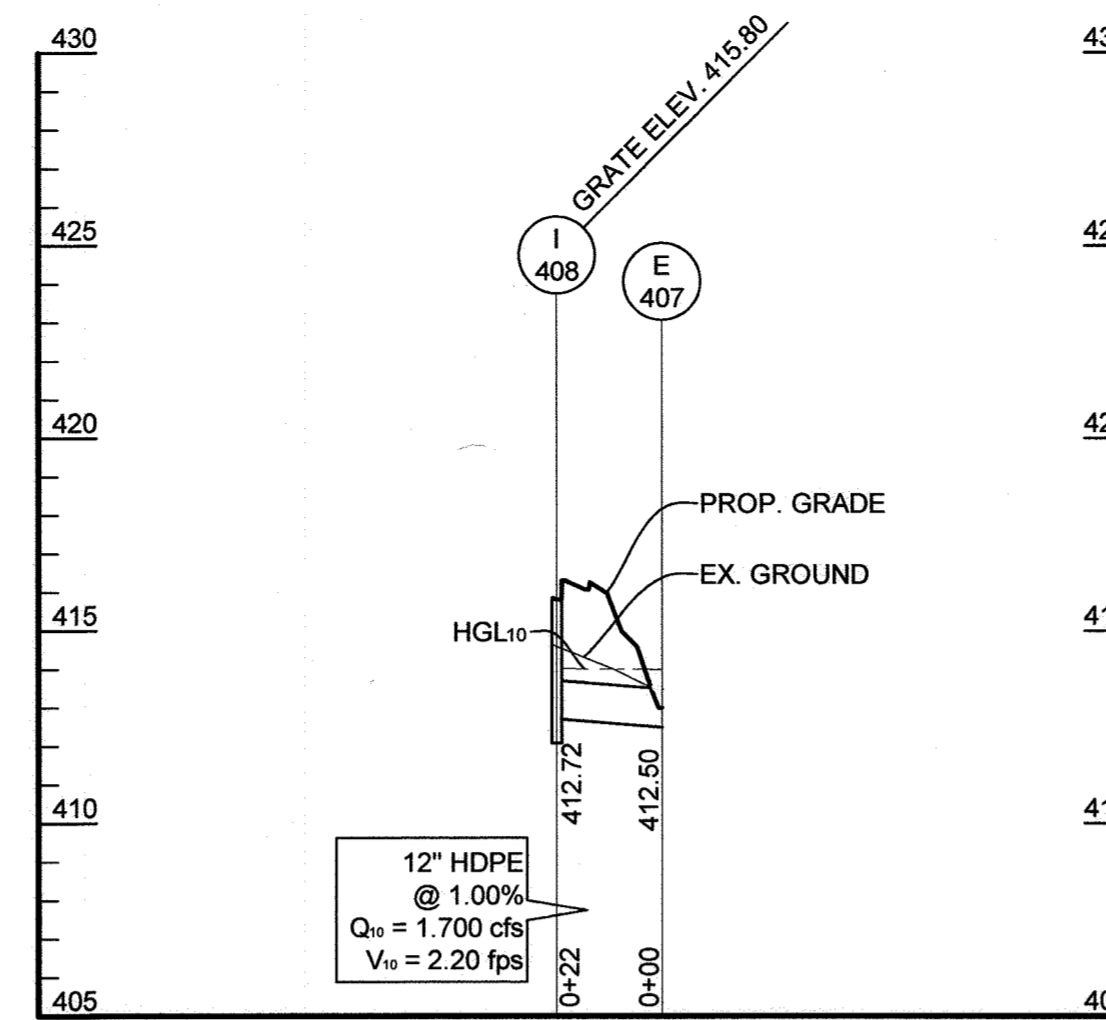
Z:\1610055-JHU APL Building 201 North Parking\REDLINE SWM-301 Stormwater Management\Details.dwg SWM-301 Mar-15-2018 04:30pm xl



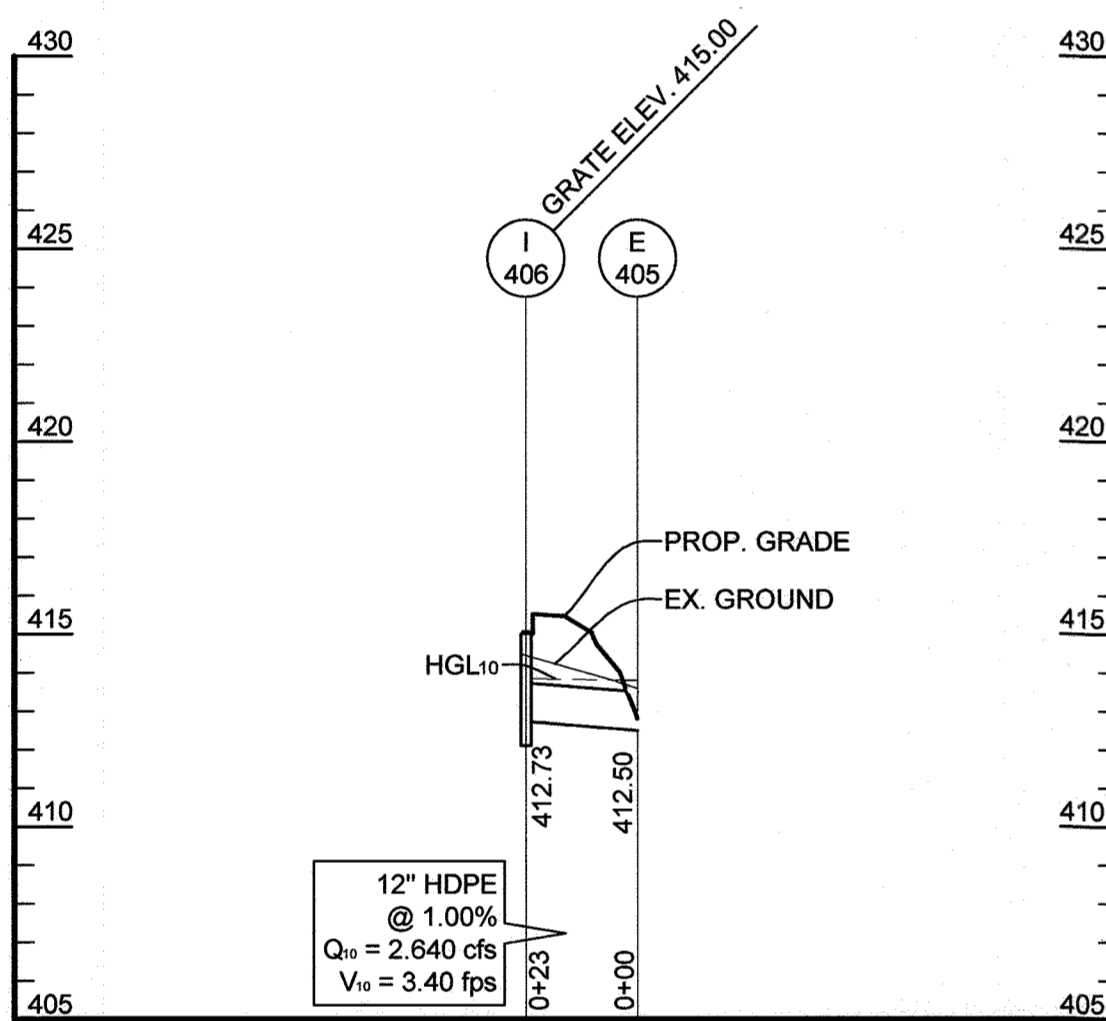
1 PROFILE: I-412 TO E-411
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



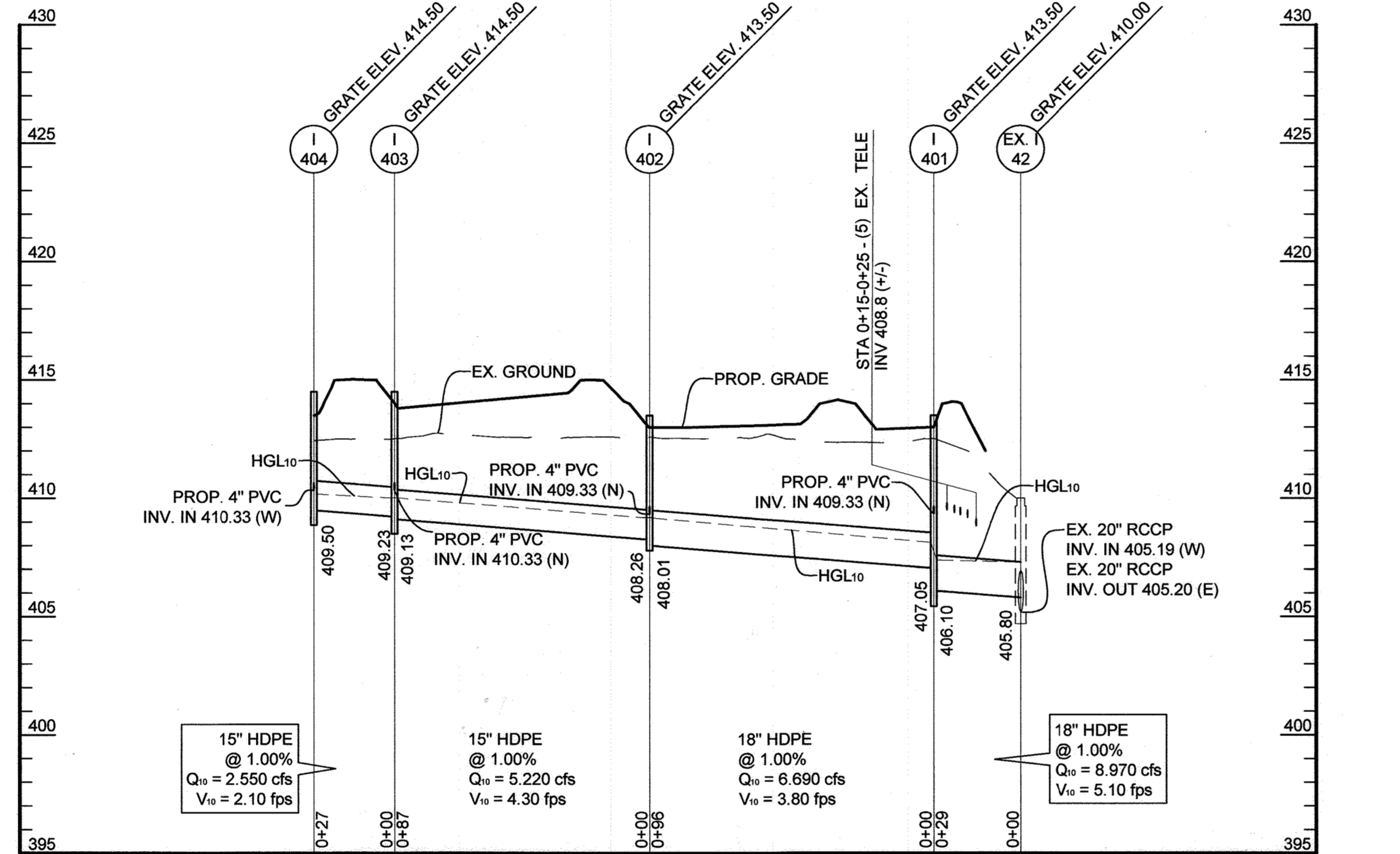
2 PROFILE: I-410 TO E-409
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



3 PROFILE: I-408 TO E-407
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'



4 PROFILE: I-406 TO E-405
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'

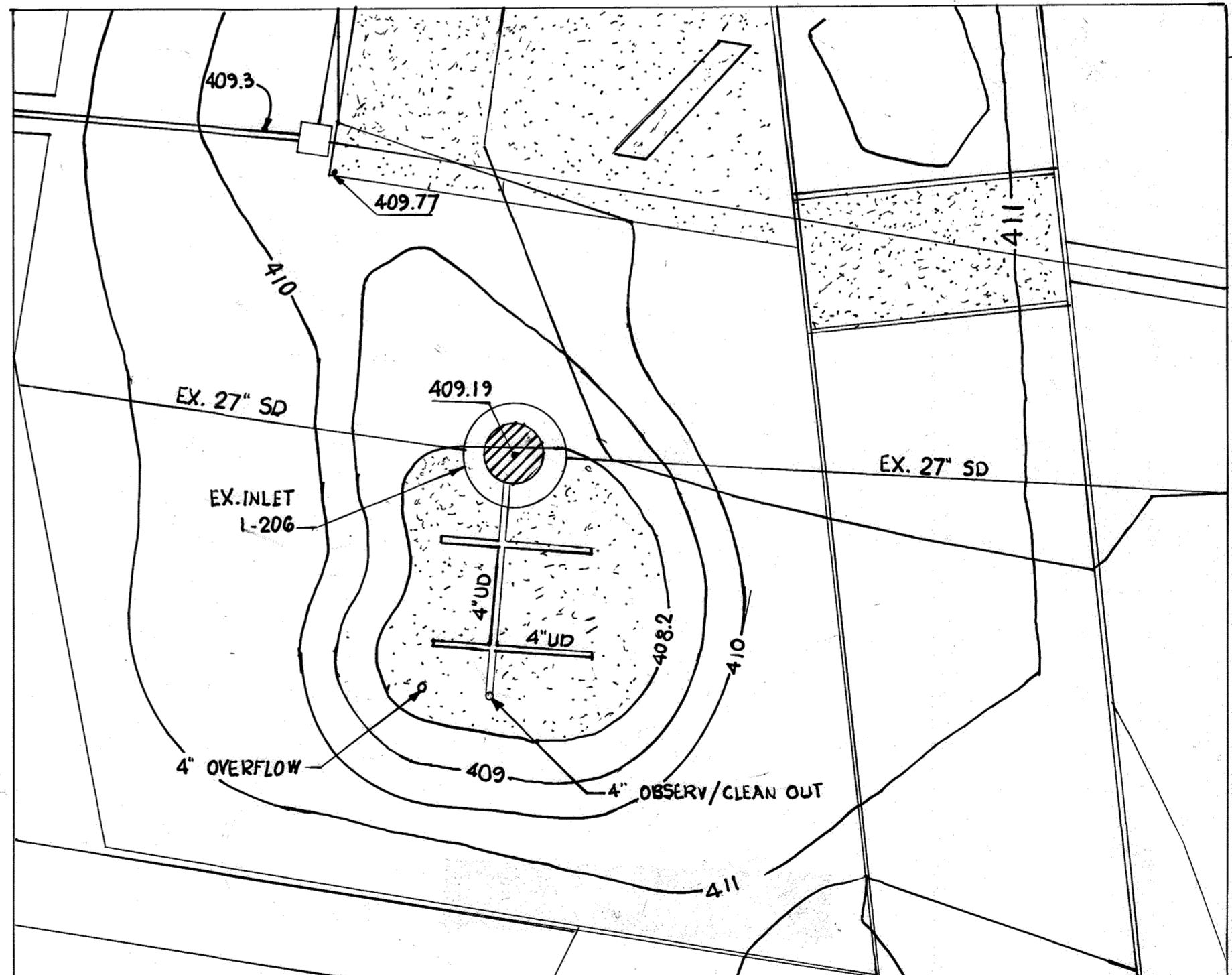


5 PROFILE: I-404 TO EX. I-42
 SCALES: HORIZ. 1" = 40'
 VERT. 1" = 5'

STORM DRAIN STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP ELEV.	INV. IN	INV. OUT	COORDINATES	NOTES
I-401	24" NYLOPLAST DRAIN BASIN	GRATE 413.50	18" HDPE (W) 407.05 4" PVC (N) 409.33	18" HDPE (S) 406.10	N: 543,843.61 E: 1,341,040.91	SEE NOTE 1
I-402	24" NYLOPLAST DRAIN BASIN	GRATE 413.50	15" HDPE (W) 408.26 4" PVC (N) 409.33	18" HDPE (E) 408.01	N: 543,858.93 E: 1,340,945.81	SEE NOTE 1
I-403	24" NYLOPLAST DRAIN BASIN	GRATE 414.50	15" HDPE (W) 409.23 4" PVC (N) 410.33	15" HDPE (E) 409.13	N: 543,875.02 E: 1,340,860.78	SEE NOTE 1
I-404	24" NYLOPLAST DRAIN BASIN	GRATE 414.50	4" PVC (W) 410.33	15" HDPE (E) 409.50	N: 543,879.23 E: 1,340,833.77	SEE NOTE 1
E-405	12" HDPE END SECTION	-	413.99	12" HDPE (NE) 412.50	N: 543,855.18 E: 1,341,071.99	
I-406	24" NYLOPLAST DRAIN BASIN	GRATE 415.00	-	12" HDPE (SW) 412.73	N: 543,872.72 E: 1,341,087.24	SEE NOTE 2
E-407	12" HDPE END SECTION	-	414.19	12" HDPE (NE) 412.50	N: 543,865.21 E: 1,340,999.66	
I-408	24" NYLOPLAST DRAIN BASIN	GRATE 415.80	-	12" HDPE (SW) 412.72	N: 543,885.08 E: 1,341,008.93	SEE NOTE 2
E-409	12" HDPE END SECTION	-	414.69	12" RCCP (N) 413.50	N: 543,882.88 E: 1,340,900.15	
I-410	24" NYLOPLAST DRAIN BASIN	GRATE 416.50	-	12" RCCP (S) 413.69	N: 543,901.75 E: 1,340,903.16	SEE NOTE 2
E-411	12" HDPE END SECTION	-	414.85	12" HDPE (N) 413.50	N: 543,889.26 E: 1,340,835.71	
I-412	24" NYLOPLAST DRAIN BASIN	GRATE 416.50	-	12" HDPE (S) 413.73	N: 543,911.58 E: 1,340,840.82	SEE NOTE 2

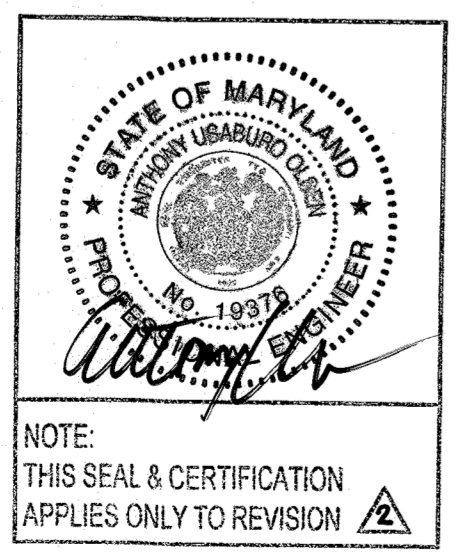
NOTES
 1. USE 24" DOME GRATE LID
 2. USE 2'x3' HIGHWAY GRATE



MBR #5 PLAN
 SCALE 1" = 10'

PROJECT NAME: JHU APL BUILDING 201 NORTH PARKING LOT		
AS-BUILT DATA FOR MICRO-BIORETENTION TO BE COMPLETED BY THE CONTRACTOR'S CERTIFYING ENGINEER.		
TYPE OF FACILITY: MICRO-BIORETENTION	DESIGN	ESD ID: 5
FEATURE	DESIGN	* AS-BUILT
FILTER BED DIMENSIONS & AREA	25' x 15' (314 SF)	
GRATE ELEVATION	409.19	
FINISHED GRADE SURFACE ELEVATION	408.20	
TOP ELEVATION FILTER MEDIA	407.86	
TOP ELEVATION #8 STONE	405.85	
TOP ELEVATION #2 STONE	405.55	
UNDERDRAIN INVERT	404.80	
#2 STONE BOTTOM ELEVATION	403.80	

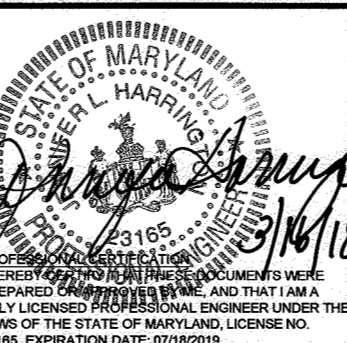
DATE AS-BUILT ACCEPTED BY COUNTY



PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19376 EXPIRATION DATE: 9/22/21

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division: 4/2/18
 Chief, Division of Land Development: 4/5/18
 Director: 4-5-18

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

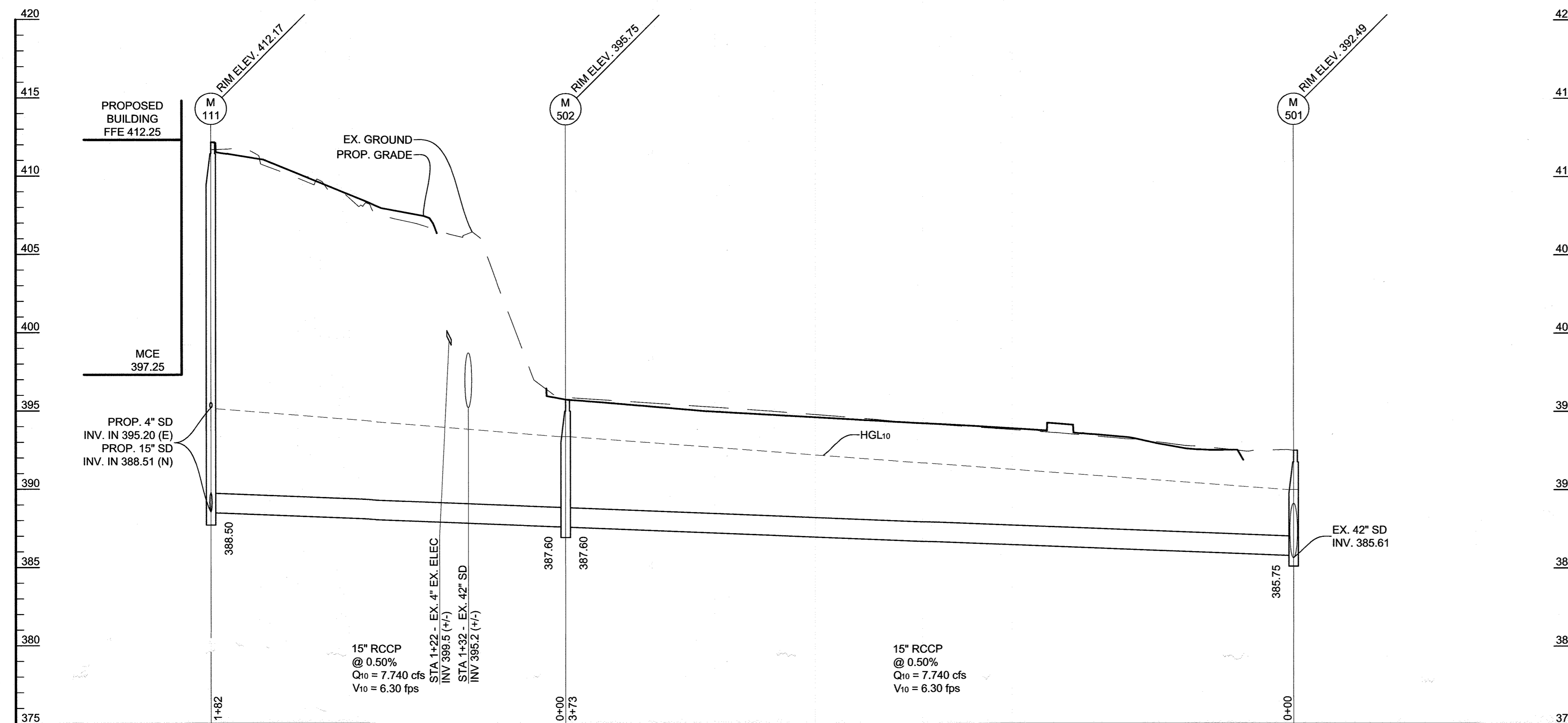


No.	Date	Description
1	2/5/2018	NORTH PARKING LOT ADDITION
		REVISED SDP NEWSHEET
2	7/21	ADD MBR #5

ADDRESS CHART
 MAP/GRID/PARCEL: MAP 0041/GRID 0022/PARCEL 0300
 STREET ADDRESS: 11091 JOHNS HOPKINS RD, LAUREL, MD 20723

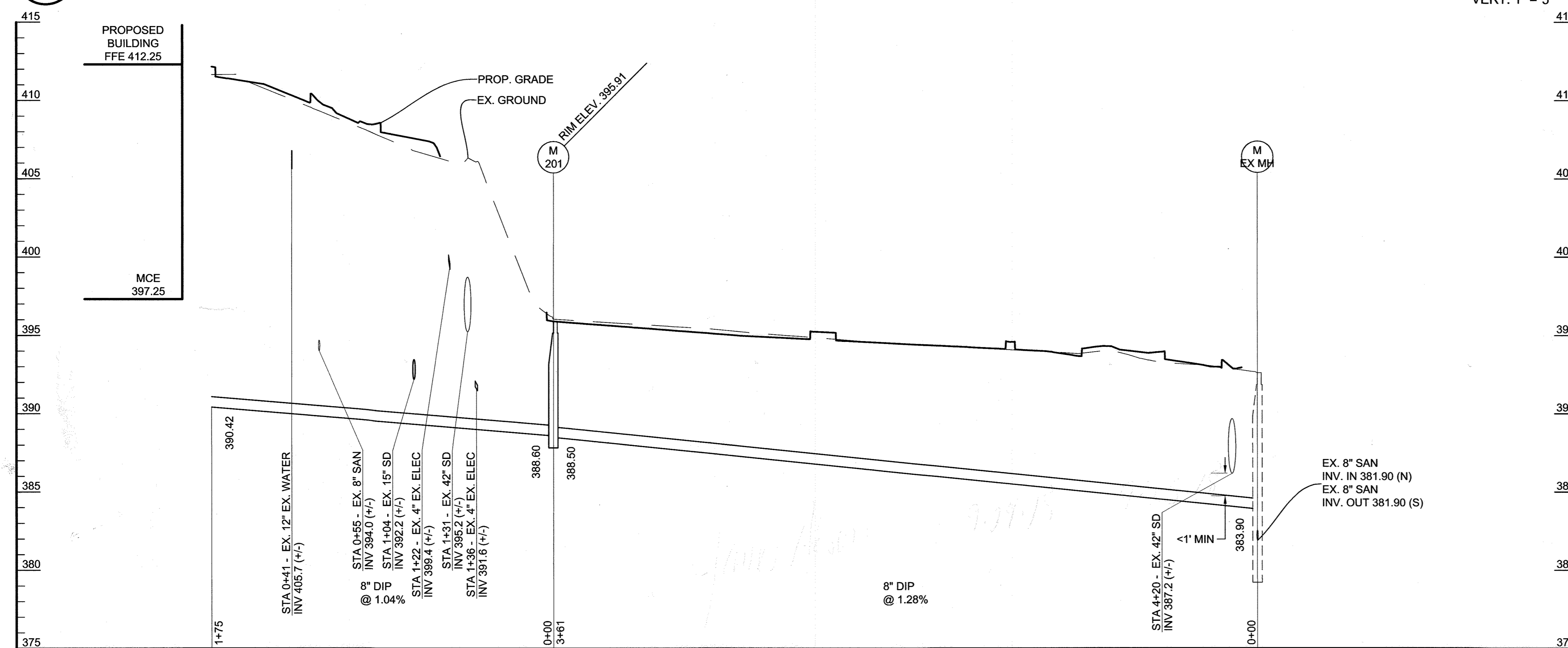
PERMIT INFORMATION CHART
 PROJECT NAME: JHU-APL SOUTH CAMPUS BUILDING B201
 SECTION/AREA: N/A
 LOT/PARCEL NO.: 300
 PLAT # OR L/F: 20928-20930
 GRID # ZONING: 22 PEC
 TAX MAP NO. ELECT DISTRICT: 0041 5th
 CENSUS TRACT: 6051.02
 WATER CODE: 550
 SEWER CODE: --
 PROPERTY IMPROVEMENT: NEW OFFICE BUILDING - GREEN BUILDING

SWM STORM DRAIN PROFILES
SWM-302
 SHEET 28 OF 30
 SDP-17-047



1 STORM DRAIN: BUILDING TO M-501

SCALES: HORIZ. 1" = 40'
VERT. 1" = 5'



2 SANITARY: BUILDING TO EX. MH

SCALES: HORIZ. 1" = 40'
VERT. 1" = 5'

STORM DRAIN STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP ELEV.	INV. IN	INV. OUT	COORDINATES	NOTES
M-502	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 395.75	15" RCCP (N) 387.60	15" RCCP (SE) 387.60	N: 543,097.07 E: 1,340,784.55	
M-111	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 412.17	4" PVC (N) 395.20 15" RCCP (N) 388.51	15" RCCP (S) 388.50	N: 543,277.34 E: 1,340,807.50	
M-501	PRECAST DOGHOUSE MANHOLE HOWARD CO. G-5.14	RIM 392.49	15" RCCP (NW) 385.75		N: 542,874.21 E: 1,341,083.56	

SANITARY STRUCTURE TABLE

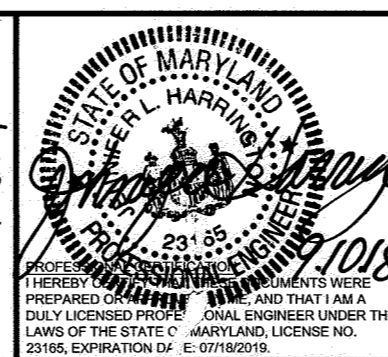
STRUCTURE #	STRUCTURE TYPE	TOP ELEV.	INV. IN	INV. OUT	COORDINATES	NOTES
M-201	PRECAST STANDARD MANHOLE HOWARD CO. G-5.12	RIM 395.91	8" DIP (N) 388.60	8" DIP (N) 388.50	N: 543,101.15 E: 1,340,800.41	

Z:\161605-JHU-APL Building 201 Design Services\04-DWG-C-303 Utility Profiles.dwg-C-303 Sep 10, 2016 05:22pm .cwr

APPROVED: DEPARTMENT OF PLANNING & ZONING
Chad Chandler
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9-21-18
J. McArthur
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9-25-18
Walter J. J...
 DIRECTOR
 DATE: 9-25-18

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

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No.	Date	Description
1	9/28/2018	STORM DRAIN AND SANITARY RELOCATION

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP 0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART					
PROJECT NAME		SECTION/AREA	LOT/PARCEL NO.		
JHU-APL SOUTH CAMPUS BUILDING B201		N/A	300		
PLAT # OR L/F	GRID #	ZONING	TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
20928-20930	22	PEC	0041	5th	6051.02
WATER CODE	SEWER CODE	PROPERTY IMPROVEMENT			
550	--	NEW OFFICE BUILDING - GREEN BUILDING			

C-303 UTILITY PROFILES

C-303
 SHEET 31 OF 31 34
 SDP-17-047

PURPOSE STATEMENT:
 REVISED STORM DRAIN AND SANITARY PROFILES
 REVISED SITE DEVELOPMENT PLAN

GENERAL NOTES

1. THE TOPOGRAPHIC INFORMATION SHOWN HEREON, WAS OBTAINED FROM AN AERIAL SURVEY FLOWN BY AXIS GEOSPATIAL ON APRIL 6, 2014 AND PROVIDED TO RK&K IN AUGUST OF 2017. THE UTILITY INFORMATION WAS PROVIDED ELECTRONICALLY TO RK&K BY JHU APL IN MARCH OF 2021. TOPOGRAPHIC AND UTILITY INFORMATION MAY NOT REFLECT CURRENT CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
2. BEARINGS, COORDINATES AND ELEVATIONS SHOWN ON THIS PLAN ARE SHOWN IN MARYLAND STATE PLANE. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
3. ALL WORK MUST BE IN COMPLIANCE WITH THE HOWARD COUNTY VOLUME IV DESIGN MANUAL (STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION).

SITE & UTILITY PLAN GENERAL NOTES

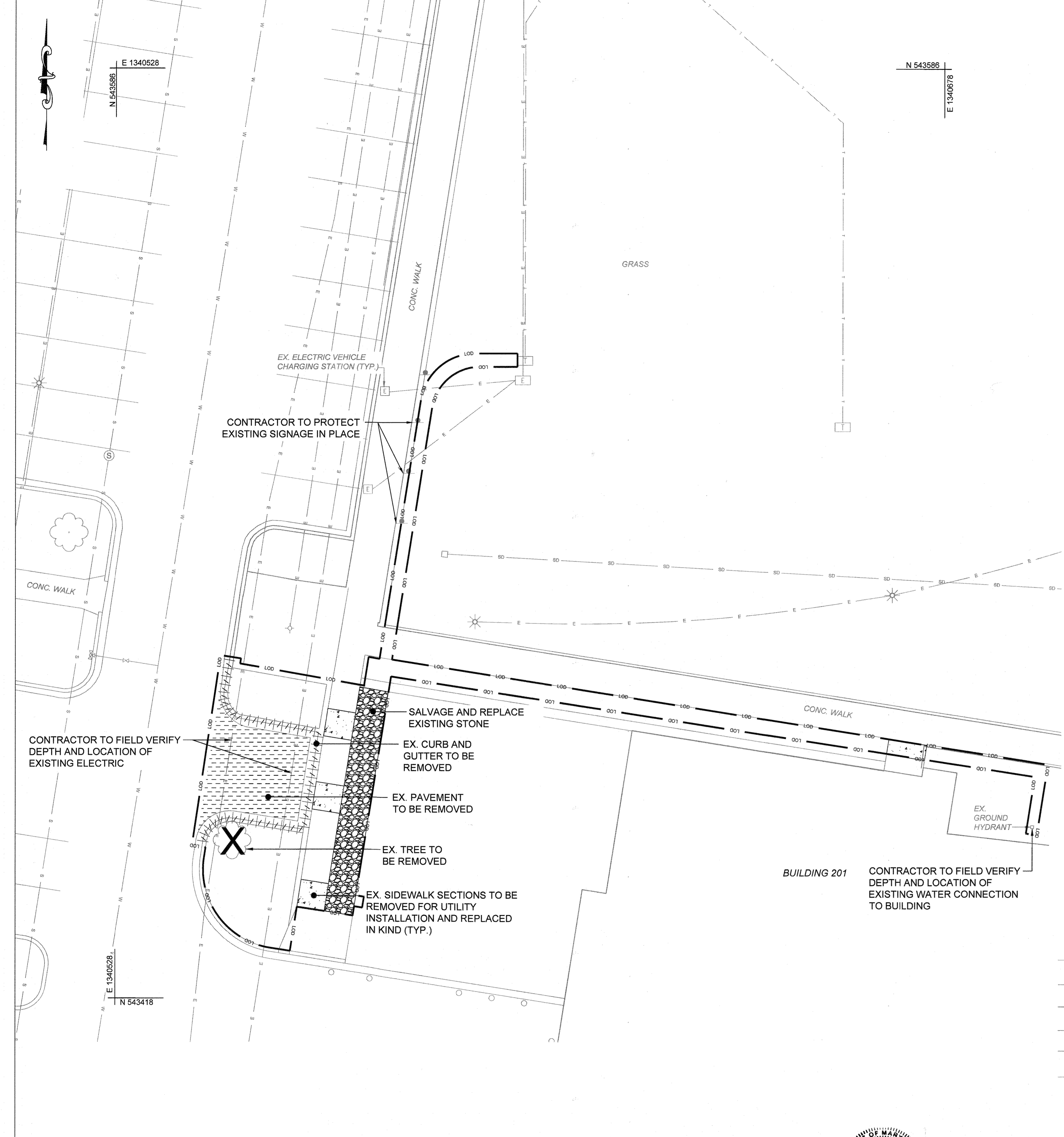
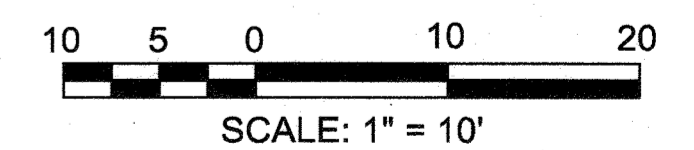
1. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT EXIST.
2. ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO INLETS, MANHOLES, HAND HOLES, MECHANICAL LIDS, FIRE HYDRANTS, VALVE BOXES, ETC. WITHIN THE LIMITS OF DISTURBANCE TO BE ADJUSTED TO FINISHED GRADE UNLESS OTHERWISE NOTED.
3. ALL EXISTING FEATURES OUTSIDE OF THE LIMITS OF DISTURBANCE ARE TO REMAIN, UNLESS OTHERWISE NOTED.
4. ALL CUTS OF EXISTING PAVEMENT SHALL BE NEAT AND IN A STRAIGHT LINE TO FACILITATE NEW PAVING. CONTRACTOR SHALL REMOVE TWO FEET OF THE SURFACE COURSE OF PAVEMENT (2' DEPTH) BEYOND ANY SAW CUTS TO OVERLAP PAVEMENT PATCHES.
5. CONTRACTOR TO PROTECT EXISTING UTILITIES TO REMAIN WITHIN LOD DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" AT 1-800-257-7777 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.
7. THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
8. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL EXISTING AND PROPOSED BUILDING ENTRANCES DURING ALL PHASES OF CONSTRUCTION, UNLESS OTHERWISE NOTED IN THESE DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER / OWNER IF EXISTING OR PROPOSED CONDITIONS RESTRICT ABILITY TO ACHIEVE POSITIVE DRAINAGE FROM BUILDINGS PRIOR TO THE START OF CONSTRUCTION.
9. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES WHEN WORKING ADJACENT TO OR CROSSING EXISTING UTILITIES.
10. PROTECT PERIMETER OF WORK AREA WITH SILT FENCE PER MDE DETAIL E-1, SEE SHEET C-110.
11. FOR ADDITIONAL SITE & UTILITY NOTES, SEE SHEET C-402.

SURVEY LEGEND

- (S) SANITARY SEWER MANHOLE
- (E) ELECTRIC HANDHOLE
- (T) TELECOMMUNICATIONS HANDHOLE
- ⊗ WATER VALVE
- ⊕ FIRE HYDRANT
- GRATE
- ☀ LIGHT POLE
- ⊕ TELEPHONE POLE
- EXISTING SIGN
- BUILDING LINE
- E — ELECTRIC
- SD — STORM DRAIN
- T — COMMUNICATIONS
- W — WATER
- S — SANITARY SEWER
- ☼ TREE

DEMOLITION LEGEND

- EXISTING CURB AND GUTTER TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- SALVAGE AND REPLACE EXISTING STONE
- EXISTING SIDEWALK SECTIONS TO BE REMOVED FOR UTILITY INSTALLATION AND REPLACED IN KIND



APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JP 8/3/22
 CHIEF, DIVISION OF LAND DEVELOPMENT 8/1/22
 MAURA KENDRICK 8/1/22
 DIRECTOR

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

RK&K
 700 East Pratt Street
 Suite 500
 Baltimore, MD 21202
 United States
 Tel 410.728.2900
 Fax 410.728.2834

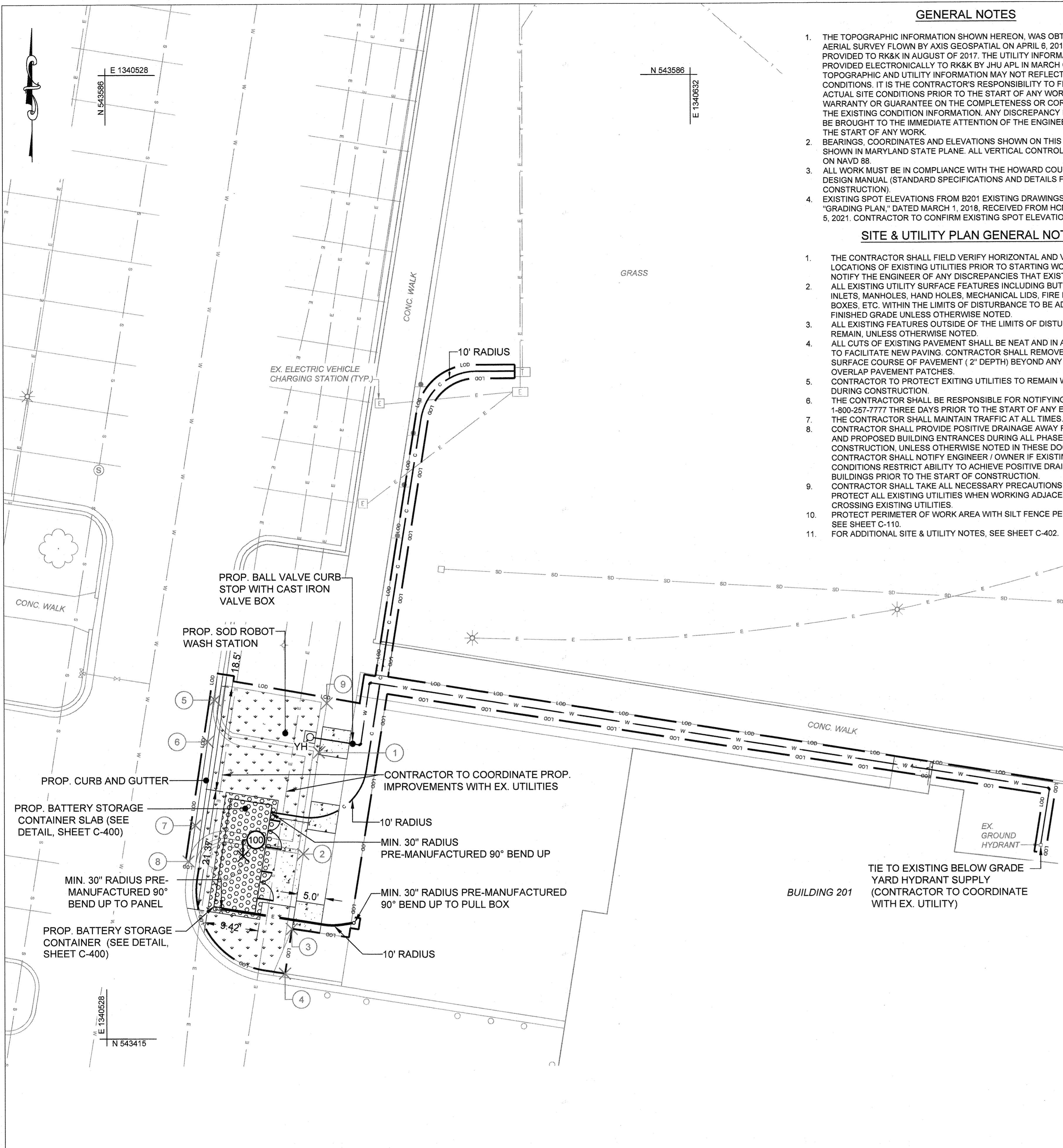
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 49432, EXPIRATION DATE: 03/31/24
 CHALMERS MITCHELL

No.	Date	Description
1	5/9/22	ADDITION OF BATTERY STORAGE CONTAINER

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART					
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	TAX MAP NO.	ELECT DISTRICT	CENSUS TRACT
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	0041	5th	6051.02
PLAT # OR L/F	GRID #	ZONING	PROPERTY IMPROVEMENT		
20928-20930 24425-24427	22	PEC	NEW OFFICE BUILDING - GREEN BUILDING		
WATER CODE	SEWER CODE				
550	-				

EXISTING CONDITIONS & DEMOLITION PLAN
CD-100
 SHEET 22 OF 34
 SDP-17-047



GENERAL NOTES

1. THE TOPOGRAPHIC INFORMATION SHOWN HEREON, WAS OBTAINED FROM AN AERIAL SURVEY FLOWN BY AXIS GEOSPATIAL ON APRIL 6, 2014 AND PROVIDED TO RK&K IN AUGUST OF 2017. THE UTILITY INFORMATION WAS PROVIDED ELECTRONICALLY TO RK&K BY JHU APL IN MARCH OF 2021. TOPOGRAPHIC AND UTILITY INFORMATION MAY NOT REFLECT CURRENT CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
2. BEARINGS, COORDINATES AND ELEVATIONS SHOWN ON THIS PLAN ARE SHOWN IN MARYLAND STATE PLANE. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
3. ALL WORK MUST BE IN COMPLIANCE WITH THE HOWARD COUNTY VOLUME IV DESIGN MANUAL, (STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION).
4. EXISTING SPOT ELEVATIONS FROM B201 EXISTING DRAWINGS, C-402, "GRADING PLAN," DATED MARCH 1, 2018, RECEIVED FROM HCM ON OCTOBER 5, 2021. CONTRACTOR TO CONFIRM EXISTING SPOT ELEVATIONS.

SITE & UTILITY PLAN GENERAL NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT EXIST.
2. ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO INLETS, MANHOLES, HAND HOLES, MECHANICAL LIDS, FIRE HYDRANTS, VALVE BOXES, ETC. WITHIN THE LIMITS OF DISTURBANCE TO BE ADJUSTED TO FINISHED GRADE UNLESS OTHERWISE NOTED.
3. ALL EXISTING FEATURES OUTSIDE OF THE LIMITS OF DISTURBANCE ARE TO REMAIN, UNLESS OTHERWISE NOTED.
4. ALL CUTS OF EXISTING PAVEMENT SHALL BE NEAT AND IN A STRAIGHT LINE TO FACILITATE NEW PAVING. CONTRACTOR SHALL REMOVE TWO FEET OF THE SURFACE COURSE OF PAVEMENT (2" DEPTH) BEYOND ANY SAW CUTS TO OVERLAP PAVEMENT PATCHES.
5. CONTRACTOR TO PROTECT EXITING UTILITIES TO REMAIN WITHIN LOD DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" AT 1-800-257-7777 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION WORK. THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
7. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL EXISTING AND PROPOSED BUILDING ENTRANCES DURING ALL PHASES OF CONSTRUCTION, UNLESS OTHERWISE NOTED IN THESE DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER / OWNER IF EXISTING OR PROPOSED CONDITIONS RESTRICT ABILITY TO ACHIEVE POSITIVE DRAINAGE FROM BUILDINGS PRIOR TO THE START OF CONSTRUCTION.
8. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES WHEN WORKING ADJACENT TO OR CROSSING EXISTING UTILITIES.
9. PROTECT PERIMETER OF WORK AREA WITH SILT FENCE PER MDE DETAIL E-1, SEE SHEET C-110.
10. FOR ADDITIONAL SITE & UTILITY NOTES, SEE SHEET C-402.

HOWARD COUNTY STANDARD SEDIMENT CONTROL NOTES

1. 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.
2. 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.
3. 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).
4. 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.
5. SITE ANALYSIS:
 - *TOTAL AREA OF SITE: 0.044 ACRES
 - *AREA DISTURBED: 0.044 ACRES
 - *AREA TO BE ROOFED OR PAVED: 0.003 ACRES
 - *AREA TO BE VEGETATIVELY STABILIZED: 0.013 ACRES
 - *TOTAL CUT: 55 CU. YDS.
 - *TOTAL FILL: 25 CU. YDS.
6. OFFSITE WASTE/BORROW AREA LOCATION: TO BE DETERMINED BY CONTRACTOR.
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 APL. THE SITE AND ALL 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 DATE
 - 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
 - PHOTOGRAPHS
 - 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).
8. 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 SHORTER.
9. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D.
10. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
11. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
12. 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 IS ACTIVE.

EROSION SEDIMENT CONTROL NOTES (PROJECTS < 30,000 SF)

1. CUTS/FILLS SHALL NOT EXCEED 10' IN DEPTH.
2. NO EARTH DISTURBANCE SHALL OCCUR WITHIN THE LIMITS OF ANY 100 YEAR FLOORPLAIN OR 100 FEET OF ANY STREAM OR WATER BODY.
3. THE PROPOSED WORK DOES NOT REQUIRE A STATE WATERWAY OR WETLAND PERMIT.
4. EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE) SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE EXCEPT THAT NECESSARY FOR INSTALLATION OF THE CONTROLS.
5. ALL EROSION SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
6. ALL CLEARING AND GRADING SHALL BE COMPLETED IN THE FOLLOWING SEQUENCE:
 - a. LIMIT INITIAL CLEARING AND GRUBBING FOR THE INSTALLATION OF THE CONSTRUCTION ENTRANCE, PERIMETER CONTROLS AND ANY REMAINING CONTROLS.
 - b. CLEAR, GRUB AND GRADE THE REMAINDER OF THE SITE AS SPECIFIED BY THE LIMITS OF DISTURBANCE SHOWN ON THE ATTACHED PLAT.
 - c. CONSTRUCT ANY STRUCTURES AND UTILITIES.
 - d. PROVIDE FINAL GRADING AND STABILIZATION ACCORDING TO THE SEEDING OR SODDING SPECIFICATIONS (MINIMUM STABILIZATION BY SEEDING AND MULCHING).
 - e. AFTER THE SITE HAS BEEN STABILIZED WITH ADEQUATE VEGETATION REMOVE SEDIMENT CONTROL PRACTICES AND STABILIZE REMAINING DISTURBED AREAS.
7. ALL EROSION SEDIMENT CONTROL DEVICES REQUIRE CONTINUAL MAINTENANCE. ANY CONTROLS THAT ARE DAMAGED OR DISTURBED SHALL BE RESTORED OR REPAIRED BEFORE THE END OF EACH DAY.
8. DEVELOPMENT ACTIVITIES SHALL NOT IMPAIR ANY DRAINAGE, CREATE AN EROSION HAZARD, OR CREATE A SOURCE OF SEDIMENT TO ANY ADJACENT WATERCOURSE, WETLAND OR PROPERTY.
9. ANY PUMPING OF WATER MUST BE FILTERED OR DONE ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
10. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS FOR ALL SEDIMENT CONTROL STOCKPILES, AND 3:1 OR GREATER SLOPES AND SEVEN (7) DAYS FOR ALL OTHER DISTURBED AREAS ON THE SITE NOT BEING ACTIVELY GRADED.
11. ALL CONCRETE AND ASPHALT PAVEMENT AREAS REQUIRE SAME DAY STABILIZATION.

LANDCOVER SUMMARY

LIMITS OF DISTURBANCE.....	1,904 SF
EX. IMPERVIOUS AREA.....	678 SF
PROP. IMPERVIOUS AREA.....	599 SF
CUT.....	55 CY
FILL.....	25 CY

PERMANENT STABILIZATION NOTE

UNLESS OTHERWISE NOTED, ALL DISTURBED AREAS SHOULD RECEIVE 4" OF TOPSOIL AND SEED MIX CONTAINING 70% TURF TYPE TALL FESCUE AND 30% PERENNIAL RYE, WITH A CURLEX COVERING. LOOSE STRAW IS NOT PERMITTED.

SURVEY LEGEND

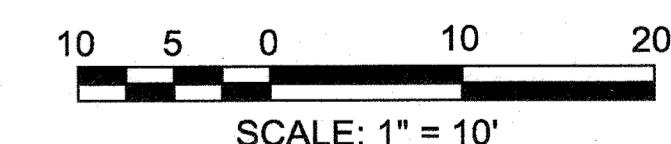
- (S) SANITARY SEWER MANHOLE
- (E) ELECTRIC HANDHOLE
- (T) TELECOMMUNICATIONS HANDHOLE
- (W) WATER VALVE
- (F) FIRE HYDRANT
- (G) GRATE
- (L) LIGHT POLE
- (P) TELEPHONE POLE
- (S) EXISTING SIGN
- B— BUILDING LINE
- E— ELECTRIC
- SD— STORM DRAIN
- T— COMMUNICATIONS
- W— WATER
- S— SANITARY SEWER
- (T) TREE

PROPOSED LEGEND

- (YH) YARD HYDRANT (SEE DETAIL, SHEET C-400)
- (S) SOD
- (C) CONCRETE SIDEWALK (SEE DETAIL, SHEET C-400)
- (B) BATTERY STORAGE CONTAINER SLAB
- (C&G) CURB AND GUTTER
- (W) WATER (3/4" COPPER)
- (E) ELECTRIC (4" PVC)
- (C) COMMUNICATIONS (2" PVC)
- (L) LIMITS OF DISTURBANCE

PROPOSED ELEVATIONS	DESCRIPTION
(100) 410.60±	BATTERY CONTAINER SLAB

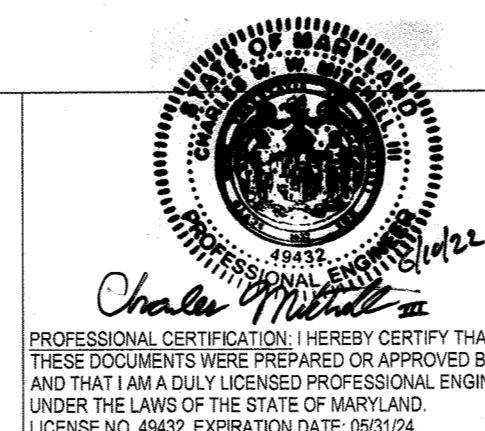
EXISTING ELEVATIONS	DESCRIPTION
(1) 410.34±	BACK OF CURB (SIDEWALK)
(2) 410.30±	BACK OF CURB (SIDEWALK)
(3) 410.74±	SIDEWALK
(4) 410.64±	SIDEWALK
(5) 410.00±	PAVEMENT
(6) 409.92±	PAVEMENT
(7) 409.69±	PAVEMENT
(8) 409.66±	PAVEMENT
(9) 410.58±	SIDEWALK



APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *JR* 8/1/22
 CHIEF, DIVISION OF LAND DEVELOPMENT *Maurice Kendall* 8/1/22
 DIRECTOR *For Amy Gasser* 8/1/22

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 BUILDING B201
 11091 JOHNS HOPKINS ROAD
 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

RK&K
 700 East Pratt Street
 Suite 500
 Baltimore, MD 21202
 United States
 Tel 410.728.2900
 Fax 410.728.2834



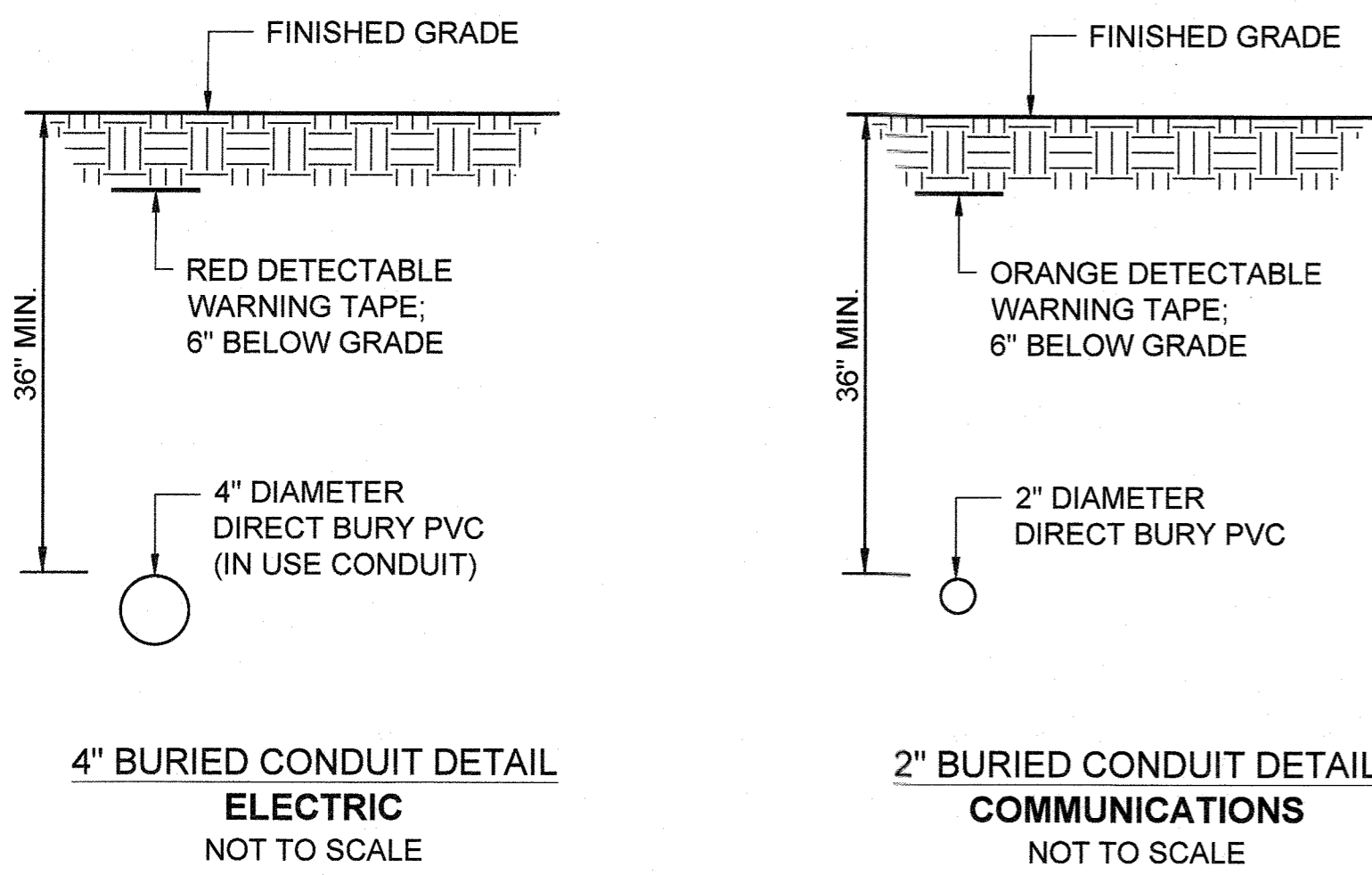
No.	Date	Description
1	5/9/22	ADDITION OF BATTERY STORAGE CONTAINER

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

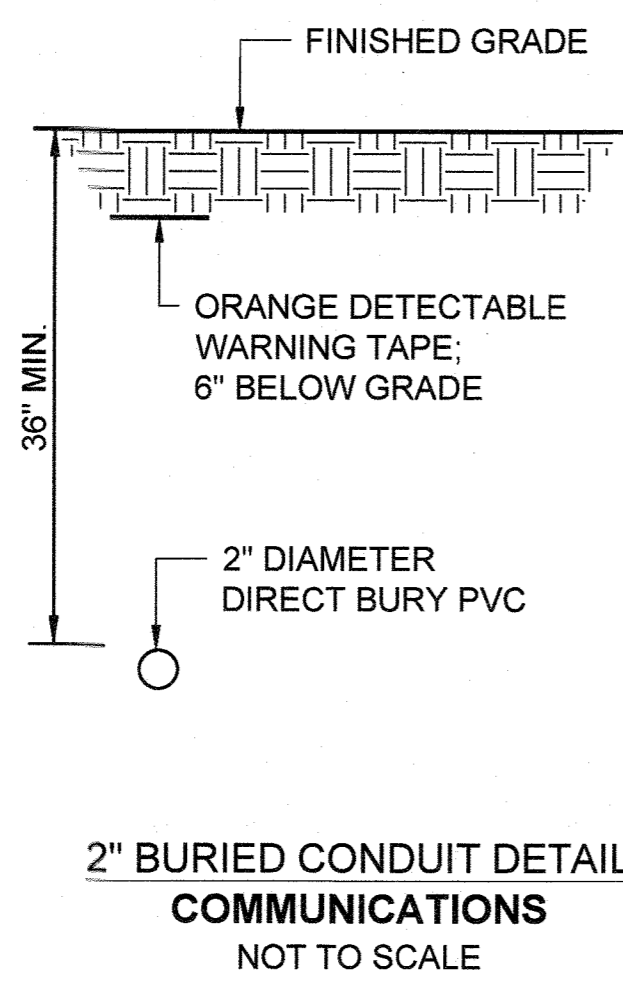
PERMIT INFORMATION CHART			
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.	
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300	
PLAT # OR L/F 20928-20930 24425-24427	GRID # 22	ZONING PEC	TAX MAP NO. ELECT DISTRICT 0041 5th
WATER CODE 550	SEWER CODE -	CENSUS TRACT 6051.02	
PROPERTY IMPROVEMENT NEW OFFICE BUILDING - GREEN BUILDING			

PROPOSED SITE & UTILITY PLAN

C-100
 SHEET 33 OF 34
 SDP-17-047



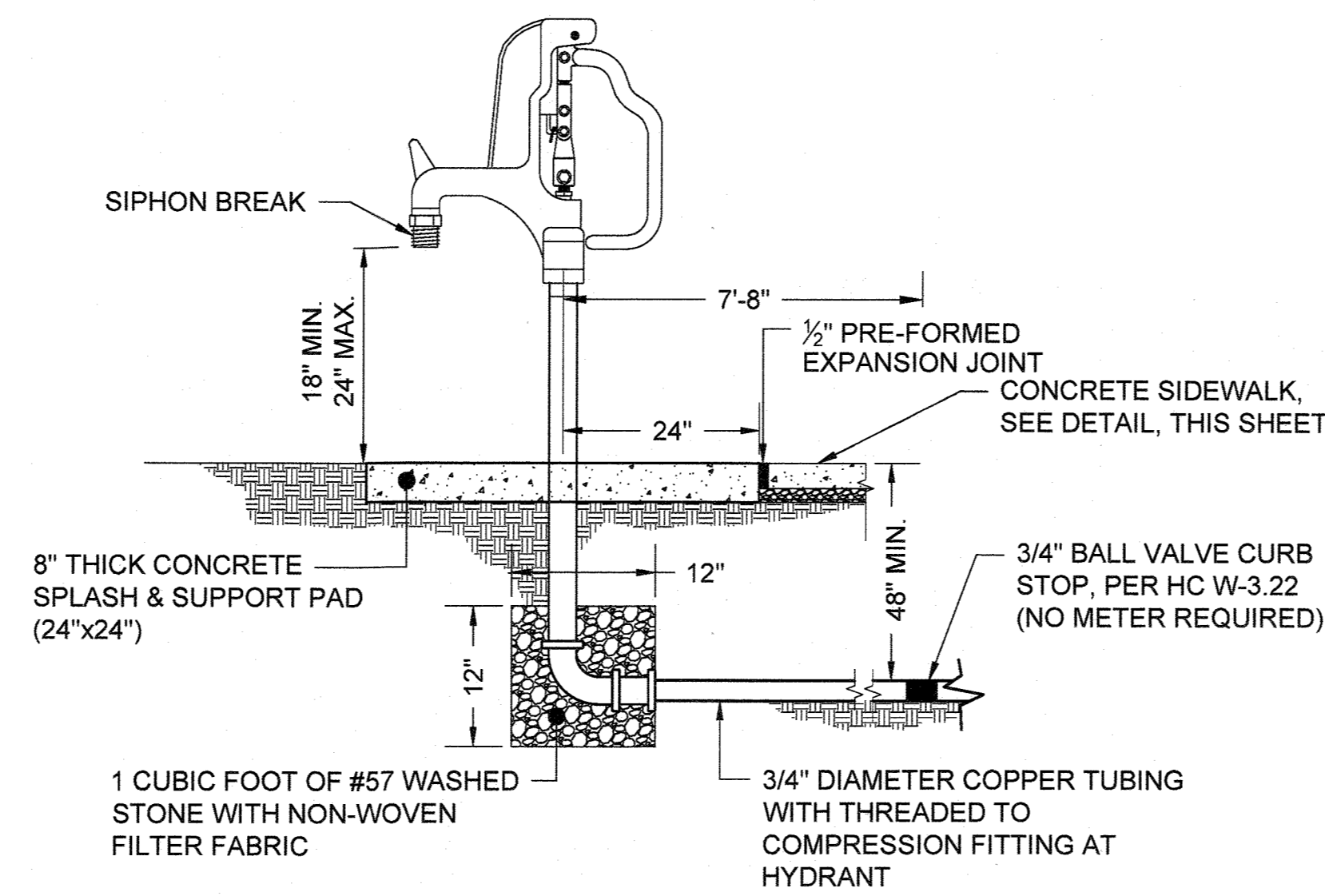
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2\"/>

BURIED CONDUIT DETAIL NOTES:

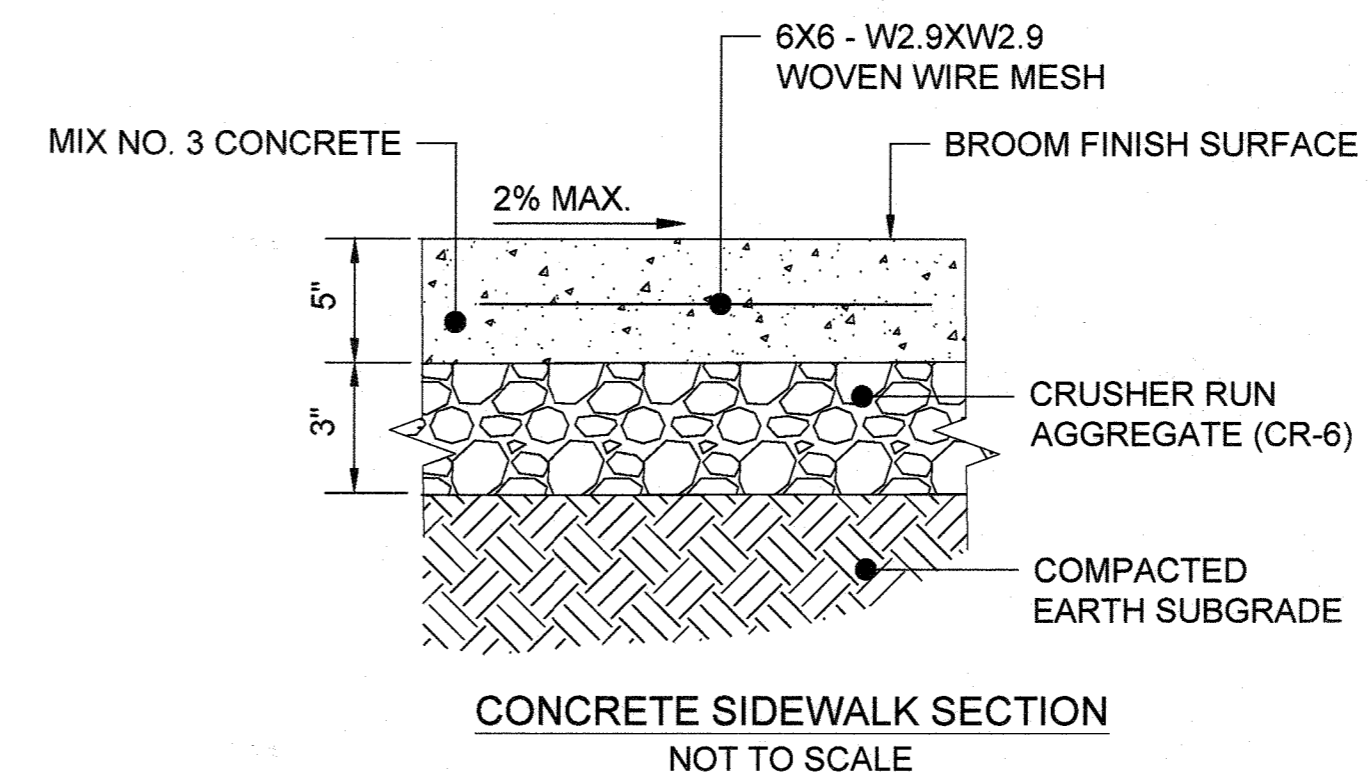
1. DUCT SHALL BE SCHEDULE 40 PVC IN TRENCHES AND SCHEDULE 80 PVC IN TRENCHES UNDER ROADWAYS.
2. PROVIDE MAKER TAPE 6" BELOW FINISH GRADE AND CENTERED ABOVE DUCT.
3. PROVIDE PULL STRING INSTALLED IN EACH CONDUIT. PULL STRING SHALL HAVE A MINIMUM OF 240 LBS TENSILE STRENGTH AND SHALL BE ROT AND MILDEW RESISTANT. PULL STRING SHALL HAVE PERMANENTLY PRINTED SEQUENTIAL MEASUREMENTS AT ONE FOOT INCREMENTS. LEAVE NOT LESS THAN 2 FEET OF SLACK AT EACH END OF PULL STRING. CONDUIT PULL STRING SHALL PENETRATE THROUGH SEALS.
4. SEE HOWARD COUNTY DETAIL G-2.12 FOR TRENCH REQUIREMENTS. FOR DIMENSION "D" USE THE DIAMETER OF THE CONDUIT MULTIPLIED BY NUMBER OF BURIED CONDUIT IN THE TRENCH.
5. DETECTABLE WARNING TAPE SHALL BE ACID- AND ALKALI-RESISTANT. POLYETHYLENE FILM WARNING TAPE MANUFACTURED FOR MARKING AND IDENTIFYING UNDERGROUND UTILITIES, 4 INCHES WIDE AND 4 MILS THICK, CONTINUOUSLY INSCRIBED WITH A DESCRIPTION OF THE UTILITY, WITH METALLIC CORE ENCASED IN A PROTECTIVE JACKET FOR CORROSION PROTECTION, DETECTABLE BY A METAL DETECTOR WHEN TAPE IS BURIED UP TO 30 INCHES DEEP; COLORED AS FOLLOWS:
RED: ELECTRIC
ORANGE: COMMUNICATIONS



FROST FREE YARD HYDRANT
NOT TO SCALE

FROST FREE YARD HYDRANT NOTES:

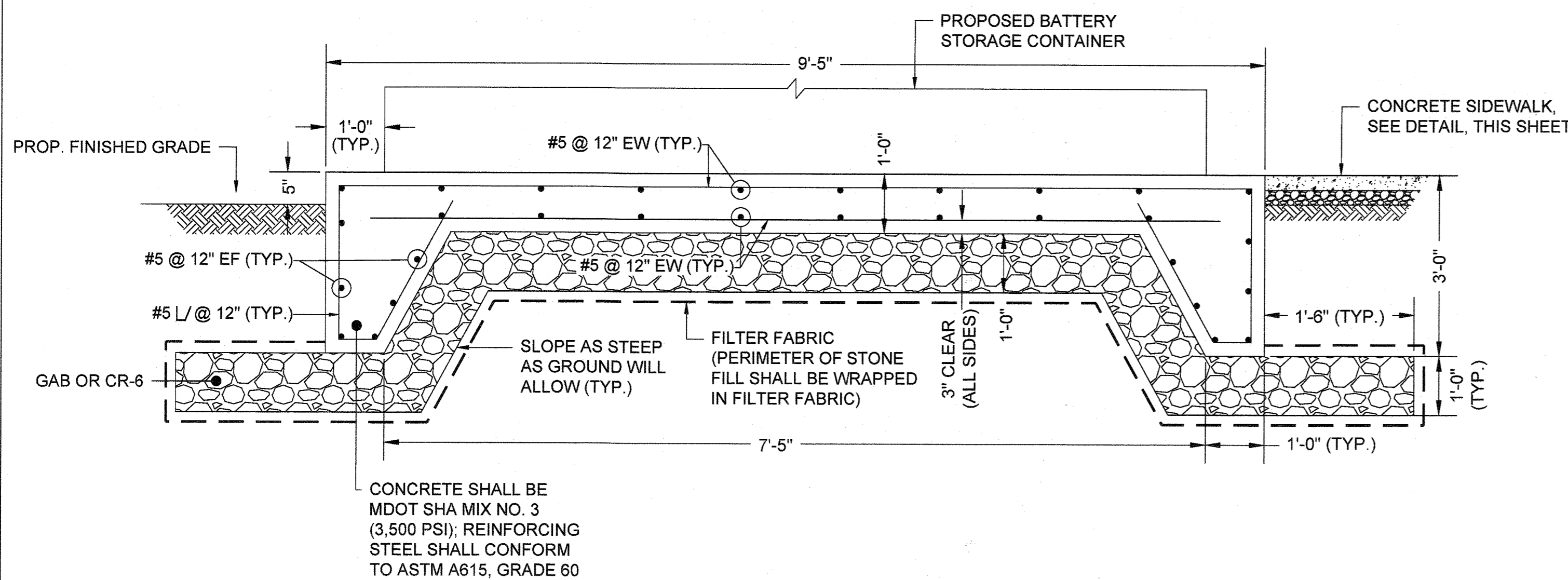
1. HOSE BIB SHALL ACCOMMODATE STANDARD 3/4" GARDEN HOSE.
2. ALL FITTINGS SHALL BE 'NO LEAD' BRASS MEETING UNS C89833 PER ASTM B584.
3. CONDUCT A FLOW TEST AFTER INSTALLATION OF YARD HYDRANT TO MEASURE FLOW RATE.
4. YARD HYDRANT MUST HAVE LOCKABLE HANDLE.
5. YARD HYDRANT MUST HAVE METAL BANDED TAG WITH LABEL "POTABLE WATER" AND MEASURED FLOW RATE.



CONCRETE SIDEWALK SECTION
NOT TO SCALE

STANDARD HOWARD COUNTY SIDEWALK NOTES:

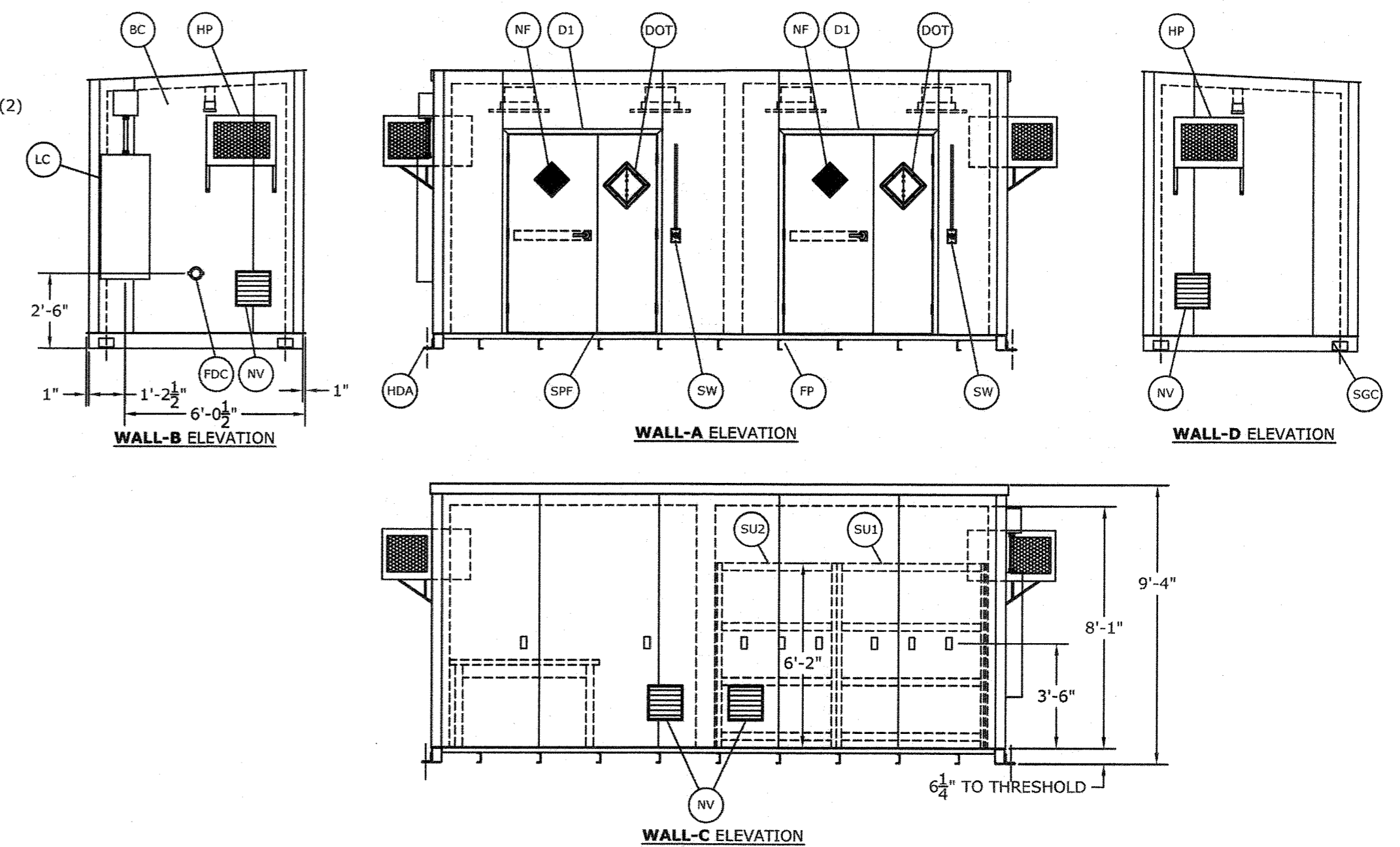
1. SIDEWALK TO BE SCRIBED IN 5'-0" MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
3. 1/2" PREFORMED EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
4. CONCRETE TO BE MIX NO. 3.
5. WHEN SIDEWALK ABUTS CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED EXPANSION JOINT BETWEEN SIDEWALK AND CURB.
6. WHEN PROPOSED CONCRETE ABUTS EXISTING CONCRETE, ADD 1/2" PREFORMED EXPANSION JOINT.



BATTERY STORAGE CONTAINER SLAB
NOT TO SCALE

LEGEND

- DOT- DEPARTMENT OF TRANSPORTATION FLIP CHART PLACARD (2)
- NF- NATIONAL FIRE PROTECTION ASSOCIATION 704 SIGN (2)
- HDA- HOLD DOWN ANGLE (4)
- FP- FORKLIFT POCKETS
- SGC- STATIC GROUND CONNECTOR
- BC- BUILDING COLOR: BLEACHED BONE
- NV- NATURAL VENTILATION WITH RAIN LOUVRE (4)
- D1- 60"W x 80" DOUBLE LEAF DOOR SYSTEM, 3HR FIRE RATED w/ PANIC HRDW (2)
W/ CORBIN RUSSWIN 7PIN LARGE FORMAT 1/C CORE
- SPP- 3/16" SMOOTH PLATE FLOOR
- SU1- SHELVING UNIT, 74"H x 60"L x 24"D, FREE STANDING (2)
- SU2- SHELVING UNIT, 74"H x 48"L x 24"D, FREE STANDING (1)
- WB- WORK BENCH, 30"W x 60"L x 35"H w/ STAIN. STEEL TOP (1)
- PW- PARTITION WALL, 4 HR BI-DIRECTIONAL (1)
- LC- LOAD CENTER, 208V/30/225A (1)
- HP- (NON-EXPLOSION PROOF) HEAT PUMP 24K COOLING, 22K HEAT (2)
- IL- (EXPLOSION PROOF) INTERIOR 2' "LED" LIGHT, C1-D2 (4)
- SW- (NON-EXPLOSION PROOF) LIGHT SWITCH (2)
- O1- (NON-EXPLOSION PROOF) SINGLE GANG GFCI RECEPTACLE, 20A (10)
THESE (10) RECEPTACLES ARE ON DEDICATED CIRCUITS
(2) OF THESE REQUIRED FOR HEAT PUMP COOLING UNITS
- SPS- WATER SPRINKLER SYSTEM, 2 NOZZLE
- FE- FIRE EXTINGUISHER, CLASS-D MOUNTED IN EACH ROOM (NOT SHOWN (2)
- RHINO MAT 1/8" THICK, SMOOTH TOP FLOOR COVERING
- FDC- FIRE DEPARTMENT HOSE CONNECTION (1)



BATTERY STORAGE CONTAINER ELEVATIONS*
NOT TO SCALE

*DETAILS AND LEGEND FROM U.S. CHEMICAL STORAGE, DATED 07/13/18.

APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

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 APPLIED PHYSICS LABORATORY
 BUILDING B201
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 LAUREL, MARYLAND 20723
 ATTN: BABS SHONAIYA, 443.778.2284

RK&K
 700 East Pratt Street
 Suite 500
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No.	Date	Description
5/9/22	5/9/22	ADDITION OF BATTERY STORAGE CONTAINER

ADDRESS CHART	
MAP/GRID/PARCEL	STREET ADDRESS
MAP0041/GRID 0022 PARCEL 0300	11091 JOHNS HOPKINS RD, LAUREL, MD 20723

PERMIT INFORMATION CHART				
PROJECT NAME	SECTION/AREA	LOT/PARCEL NO.		
JHU-APL SOUTH CAMPUS BUILDING B201	N/A	300		
PLAT # OR L/F 20928-20930 24425-24427	GRID # 22	ZONING PEC	TAX MAP NO. 0041	ELECT DISTRICT 5th
WATER CODE 550	SEWER CODE --	PROPERTY IMPROVEMENT NEW OFFICE BUILDING - GREEN BUILDING		

PROPOSED SITE DETAILS
C-400
 SHEET 34 of 34
 SDP-17-047