THE JOHNS HOPKINS UNIVERSITY

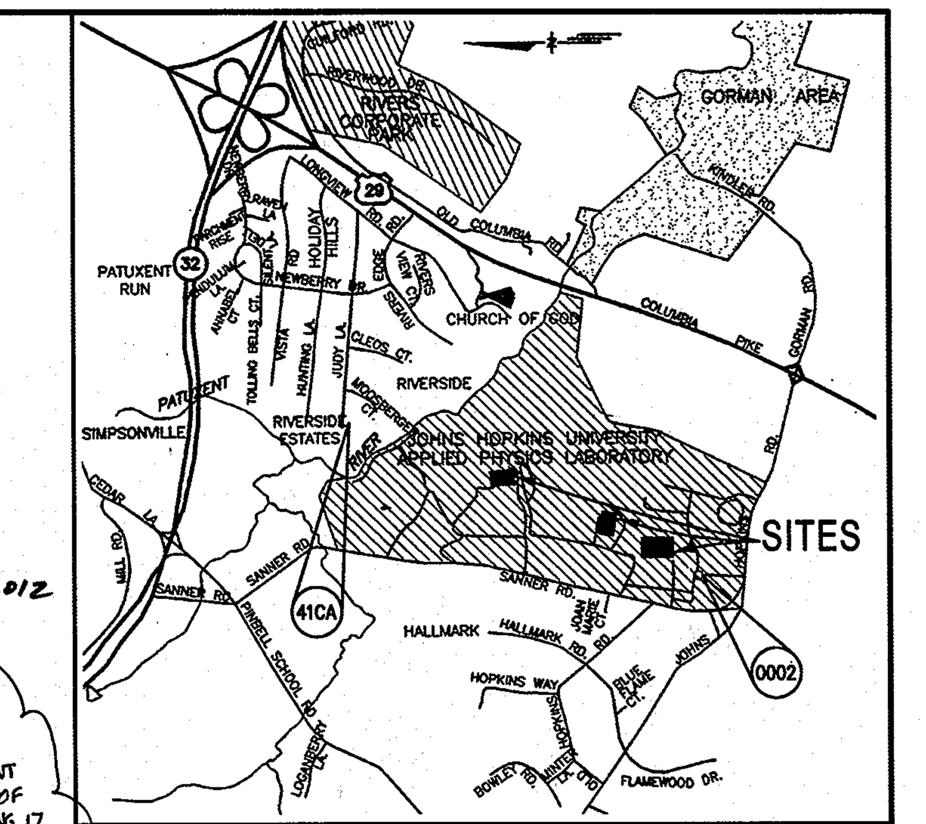
APPLIED PHYSICS LABORATORY

3 THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 3.

2-14-2012

NOTE:
THIS RED LINE SUBMISSION TO REVISE THE OUTDOOR PLAZA AREA IN FRONT OF BUILDING 17 AND REMOVE ASPHALT ALONG THE MAIN DRIVE IN FRONT OF BUILDING 17. SUBMISSION ALSO INCLUDES PARKING RESTRIPE BEHIND BUILDING 17 AND NEAR CENTER SERVICE ROAD.

1 OF 16	COVER SHEET
2 OF 16	SITE PLAN
4 OF 16	UTILITY PLAN
5 OF 16	UTILITY PROFILES
6 OF 16	STORM DRAIN DRAINAGE AREA MAPS
8 OF 16	BUILDING 17 PLAZA, SERVICE AREA LOT RESTRIPING. CENTRAL SERVICE ROAD LOT PARKING RESTRIPING.
9 OF 16	BUILDING 17 PLAZA GRADING & EROSION & SEDIMENT CONTROLS
14 OF 16	BUILDING PLAZA STORMWATER MANAGEMENT DETAILS



VICINITY MAP

Scale: 1"=2000'

GEODETIC CONTROL

0002:	N 544836.5284	E 1340825.353	NGVD ELEV. 444.991
41CA:	N 550124.8623	E 1342960.8820	NGVD ELEV. 295.397

ADC MAP 19, GRID A2

2 NOTE:
THIS RED LINE SUBMISSION IS TO REALIGN THE SERVICE ROAD TO BUILDINGS 7, 8 AND 9.

THE FOLLOWING SHEETS ARE MODIFIED.

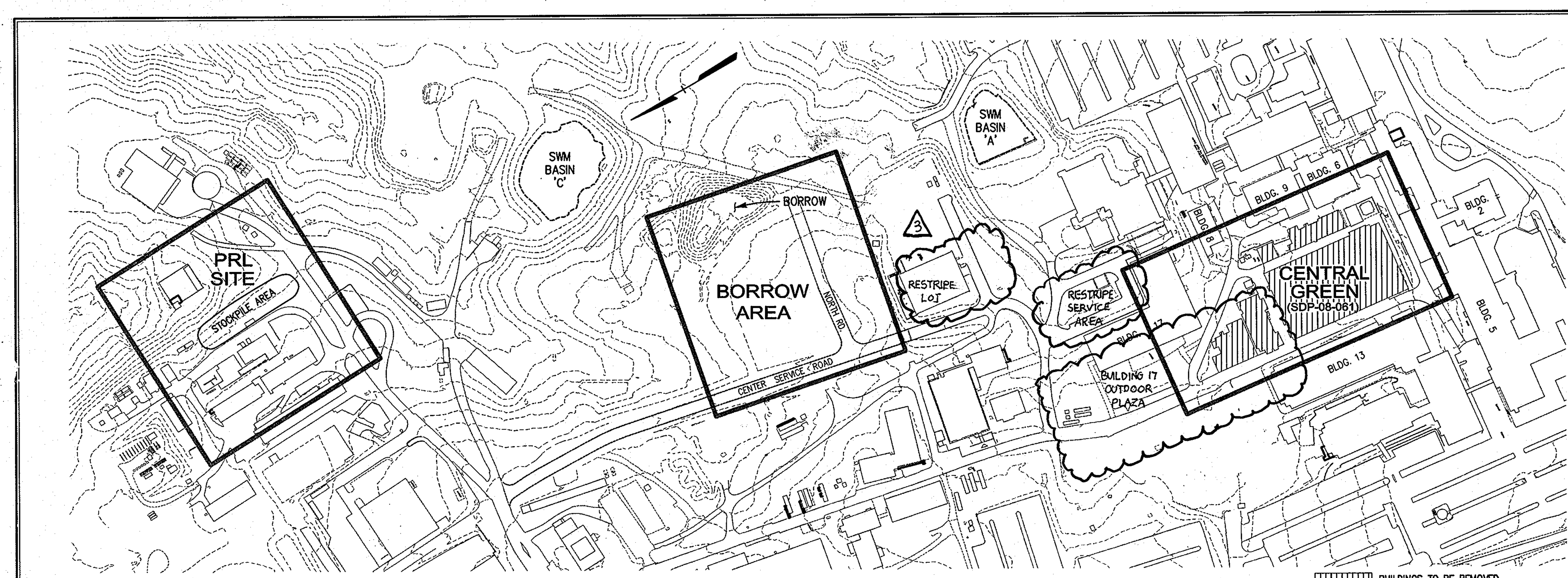
1 OF 16	COVER SHEET
2 OF 16	SITE PLAN
3 OF 16	GRADING PLAN
4 OF 16	UTILITY PLAN
5 OF 16	UTILITY PROFILES & NOTES
6 OF 16	STORM DRAIN DRAINAGE AREA MAP & FLOW TABULATIONS
7 OF 16	EROSION & SEDIMENT CONTROL PLAN
10 OF 16	EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP
15 OF 16	EROSION & SEDIMENT CONTROL DETAILS
16 OF 16	DEMOLITION

FOR 2 REVISION

1 NOTE:
THIS SDP IS A REVISION TO PREVIOUSLY APPROVED SDP08-061 AND REFLECTS THE CONSOLIDATION OF SUBSTATIONS #2 AND #3, AND THE INSTALLATION OF RELATED ELECTRICAL AND TELE-COMMUNICTIONS DUCT BANKS.

LEGEND

EX. MINOR CONTOUR	391
EX. MAJOR CONTOUR	390
EX. SPOT ELEVATION	× 387.6
EX. FIRE HYDRANT	
EX. STORM DRAIN	SD
EX. WATER LINE	W W
EX. SANITARY SEWER	S S
EX. ELECTRIC LINE	Elec
EX. COMMUNICATIONS LINE	
EX. MANHOLE	
EX. INLET	
EX. TREE LINE	
EX. BUILDING	
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
EX. CONCRETE SIDEWALK	
EX. FENCE	X X
EX. WALL	
EX. CLEANOUT	CO
EX. LIGHT STANDARD	
EX. BUSH	
EX. TREE	
EX. PIPE BOLLARD	
EX. UTILITY POLE	
PROP. MINOR CONTOUR	379
PROP. MAJOR CONTOUR	380
PROP. SPOT ELEVATION	+385.58
PROP. CURB & GUTTER	



LOCATION MAP

Scale: 1"=200'

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY PLUMBING CODE AND DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND DETAILS. IN CASE OF CONFLICT OR DISCREPANCY, THE PLUMBING CODE SHALL APPLY.
2. EXISTING SITE FEATURES AND UTILITIES SHOWN HAVE BEEN BASED UPON SURVEYS AND OTHER SOURCES BELIEVED TO BE RELIABLE. THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION SHOWN IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL INFORMATION BEFORE COMMENCING WORK.
3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF FIVE WORKING DAYS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL MAINTAIN, REPAIR, AND/OR REPLACE ANY EXISTING SEDIMENT CONTROL DEVICES ENCOUNTERED AND DISTURBED DURING THE COURSE OF CONSTRUCTION AT THE END OF EACH DAY, ALL MEASURES AND DEVICES SHALL BE REPAIRED OR REPLACED BEFORE LEAVING THE WORK SITE.
5. CONSTRUCTION SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION ON THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS.
6. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS.
7. THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
8. NUMERICALLY WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
9. UNLESS OTHERWISE NOTED, DIMENSIONS FROM CURB ARE MEASURED AT FACE OF CURB.
10. ALL GRADING AND EXCAVATION SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER.
11. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES, AS NECESSARY PRIOR TO INSTALLING STORM DRAINS. REPORT ANY DISCREPANCIES FROM THE PLANS TO CENTURY ENGINEERING, INC. ALL UTILITIES SHALL BE RETAINED UNLESS LABELED OTHERWISE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND WORK REQUIRED TO ADJUST EXISTING AND PROPOSED UTILITIES AND APPURTENANCES TO FINISH GRADES WITHIN THE LIMITS OF WORK. DAMAGE TO EXISTING CONDITIONS AND UTILITIES SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR. THE ULTIMATE STATUS OF ALL EXISTING ELECTRIC, TELEPHONE AND LIGHT POLES WITHIN THE LIMIT OF DISTURBANCE SHALL BE COORDINATED WITH FIELD ENGINEER FROM JHU/APL.
12. THE CONTRACTOR SHALL HAVE ALL PRIVATE UTILITIES LOCATED PRIOR TO ANY CONSTRUCTION.
13. EXISTING UTILITIES WHICH ARE NOT TO BE REMOVED OR ABANDONED SHALL REMAIN OPERATIONAL AT ALL TIMES. APPROPRIATE EXISTING UTILITIES SHALL REMAIN IN SERVICE UNTIL REPLACEMENT/RELOCATED UTILITIES ARE OPERATIONAL.
14. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL UTILITIES TO AVOID CONSTRUCTION PROBLEMS/CONFLICTS WITH EROSION AND SEDIMENT CONTROL MEASURES. SEE APPROVED SEDIMENT CONTROL PLAN.
15. THE CONTRACTOR SHALL MAINTAIN 2.0 FEET MINIMUM COVER OVER ALL UTILITIES DURING CONSTRUCTION.
16. UNLESS OTHERWISE NOTED, ALL PROPOSED WATER LINES SHALL HAVE FOUR FEET MINIMUM COVER, 1.0 FEET MINIMUM VERTICAL CLEARANCE FROM ALL STORM DRAIN LINES, AND 1.0 FEET MINIMUM VERTICAL CLEARANCE ABOVE SANITARY SEWER LINES.
17. THE SUBJECT PROPERTY IS ZONED PEC PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN AND THE COMP-LITE ZONING AMENDMENT.
18. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN ANY REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND/OR 100 YEAR FLOODPLAIN. NONE ARE LOCATED WITHIN 100 FEET OF THE LIMIT OF DISTURBANCE.
19. THE COORDINATES HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, GEODETIC CONTROLS 0002 AND 41CA.
20. WATER SERVICE IS PUBLIC.
21. SEWER SERVICE IS PUBLIC.
22. THE SITE IS LOCATED IN THE MIDDLE PATUXENT WATERSHED.
23. STORMWATER MANAGEMENT PROVIDED FOR CENTRAL GREEN IN ON-CAMPUS STORMWATER MANAGEMENT FACILITY SWM BASIN 'A'. IMPERVIOUS COVER REMOVED: 2.40 ACRES. IMPERVIOUS COVER ADDED (OR RESURFACED): 0.22 ACRES. IMPERVIOUS COVER REDUCED BY 2.18 ACRES OR 90%. STOCKPILE/LAYDOWN AREA PROVIDED FOR IN SWM BASIN 'C'. NO CHANGE IN IMPERVIOUS AREA. PRL SITE SWM PROVIDED FOR BY OVERMANAGEMENT IN SWM BASIN 'A'
24. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT BECAUSE NO TRAFFIC IS GENERATED BY THE APPROVAL OF THIS PROJECT.
25. THERE ARE NO STEEP SLOPES, FLOODPLAINS OR WETLANDS LOCATED IN THE AREAS OF PLAN SUBMISSION.
26. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY F-02-40.
27. NO PERIMETER LANDSCAPING IS REQUIRED FOR THIS PLAN DUE TO INTERIOR LOCATION OF THE SITE.
28. SOIL MAP IS SHEET NUMBER 29, HOWARD COUNTY SOIL SURVEY.

SHEET INDEX

1. COVER SHEET
2. SITE PLAN
3. GRADING PLAN
4. UTILITY PLAN
5. UTILITY PROFILES AND NOTES
6. STORM DRAIN DRAINAGE AREA MAP AND FLOW TABULATIONS
7. EROSION & SEDIMENT CONTROL PLAN
8. BORROW AREA GRADING PLAN
9. BORROW AREA EROSION & SEDIMENT CONTROL PLAN
10. EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP
11. BORROW AREA EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP
12. PRL SITE STOCKPILE AREA EROSION & SEDIMENT CONTROL PLAN
13. PRL SITE STOCKPILE AREA EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP
14. EROSION & SEDIMENT CONTROL SPECIFICATIONS AND NOTES
15. EROSION & SEDIMENT CONTROL DETAILS
16. DEMOLITION PLAN

PURPOSE OF PLAN

THIS SITE DEVELOPMENT PLAN IS FOR THE DEVELOPMENT OF THE CENTRAL GREEN. PHASE 1 COVERED THE DEMOLITION OF EXISTING STRUCTURES. PHASE 2 IS FOR THE SITE WORK NEEDED TO CREATE THE CENTRAL GREEN "PARK". THE BORROW AREA IS THE SOURCE OF FILL MATERIAL AND THE PRL SITE IS THE LOCATION WHERE CONCRETE RUBBLE FROM THE REMOVED BUILDING FOUNDATIONS WILL BE CRUSHED AND STOCKPILED.

PREVIOUS SDP AND FINAL PLAN REFERENCES

SDP-04-76: SERVICES AREA COMPLEX
F-02-40: SWM BASIN 'A', APFO, FOREST CONSERVATION
SDP-04-35: SWM BASIN 'G'
SDP-90-218: BUILDING No. 31 AND SWM BASIN 'G'
SDP-99-63: B52
F-02-77: SWM BASIN 'B'
SDP-04-66: MAIN PARKING LOT
SDP-04-133: BASIN 'C' SWM FACILITIES AND LAYDOWN AREA
SDP-05-042: JHU/LIBRARIES SERVICE CENTER (FOREST CONSERVATION AND WETLANDS UPDATES)
SDP-03-043: SANNER ROAD IMPROVEMENTS (NEW APFO NUMBER 4,600)
SDP-05-050: BUILDINGS 12 AND 15. CENTER SERVICE ROAD AND SA-3
SDP-05-133: PRECINCT 21, BUILDINGS 21 AND 43 (PARKING RATIO 1.62/1000)
SDP-07-080: MP-6 CONDUIT PATHWAY
F-04-188: FOREST CONSERVATION EASEMENT RE-PLAT
F-04-140: SANNER ROAD SWM, STORM DRAINS AND UTILITY EASEMENT
F-07-035: FOREST CONSERVATION, RE-PLAT EASEMENT

SITE ANALYSIS CHART

A. TOTAL PROJECT AREA: (JHU/APL CAMPUS) 357.98 ACRES/15,593,609 SQ.FT.
B. AREA OF PLAN SUBMISSION: (CENTRAL GREEN) 2.91 AC. ±
(BORROW AREA) 1.74 AC. ±
(STOCKPILE PRL SITE AREA) 1.72 AC. ±
C. LIMIT OF DISTURBED AREA: (CENTRAL GREEN) 2.91 AC. ±
(BORROW AREA) 1.74 AC. ±
(STOCKPILE PRL SITE AREA) 1.72 AC. ±
D. PRESENT ZONING DESIGNATION: PEC
E. PROPOSED USES FOR SITE AND STRUCTURES: RESEARCH CAMPUS PARK
F. FLOOR SPACE ON EACH LEVEL OF BUILDING(S) PER USE: N/A
G. TOTAL NUMBER OF UNITS ALLOWED FOR PROJECT AS SHOWN ON FINAL PLAT: N/A
H. TOTAL NUMBER OF UNITS PROPOSED ON SUBMISSION: N/A
I. MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE: 3937
J. NUMBER OF PARKING SPACES REQUIRED BY HOWARD COUNTY ZONING REGULATIONS AND/OR FDP CRITERIA: 2450 (SDP-11)
K. NUMBER OF PARKING SPACES PROVIDED ON SITE: ~~4940~~ 4954 (SDP-0466) 3
L. OPEN SPACE ON SITE: N/A
M. AREA OF RECREATION OPEN SPACE REQUIRED BY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS: N/A
N. BUILDING COVERAGE OF SITE: N/A
O. APPLICABLE DPZ FILE REFERENCES: N/A
P. ANY OTHER INFORMATION WHICH MAY BE RELAVENT: N/A
Q. FLOOR AREA RATIO (FAR): N/A

FOR 1 REVISION

ADDRESS CHART

LOT/PARCEL No.	STREET ADDRESS
1	11100 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL No.
JOHNS HOPKINS UNIV.-APL			N/A		1
PLAT# OR L/F	GRID #	ZONING	TAX MAP No.	ELECT. DISTRICT	CENSUS TRACT
15429/15433	16	PEC	41	5-05	605102
WATER CODE			SEWER CODE		
E-21			6480000		

JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED TO A THIRD PARTY AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF JHU/APL.

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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date 3/17/08
Chief, Division of Land Development	Date 3/19/08
Director	Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: A.J.D.				
DRAWN BY: M.S.S.				
CHECKED BY: A.J.D.	AFE	3	BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT	2/13/12
	REB	2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9	3/10/10
DATE: FEB. 15, 2008	RDT	1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09
	BY	NO.	REVISION	DATE

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

COVER SHEET
"CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 1 OF 16 (RESTRICTED FILE)

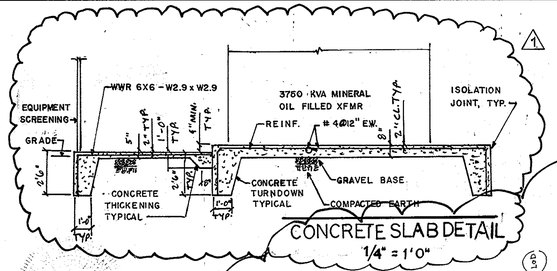
C.E.I. PROJECT NUMBER 22172.25

SCALE: AS SHOWN

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(00) CVRSHT HOWARD CO DPW.dwg, 2/15/2008 3:00:02 PM, msmith

MATCHLINE : SEE INSET BELOW



CONCRETE SLAB DETAIL
1/4" = 1'-0"

2-14-2012
THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 2

PREVIOUSLY PROPOSED WALKWAYS NO LONGER IN PROJECT

FOR REVISIONS TO LAYOUT, GRADING & DRAINAGE NORTH OF BUILDING 17, SEE SHEETS 8 & 9.

EXISTING BUILDING No. 17

EXISTING BUILDING No. 8

EXISTING BUILDING No. 9

EXISTING BUILDING No. 6

EXISTING BUILDING No. 2

EXISTING BUILDING No. 5

EXISTING BUILDING No. 13

PROP. CONCRETE SLAB (SEE DETAIL THIS SHEET & REFER TO SUBSTATION CONSOLIDATION PLANS)

42" BLACK VINYL COATED CHAIN LINK FENCE (SEE DETAIL THIS SHEET)

EX. RETAINING WALL TO REMAIN

EX. TIMBER WALL TO BE REMOVED

N 545576.687
E 1341310.363
MEET EXISTING EDGE OF PAVING FOR LINE & GRADE

EX. SUBSTATION TO REMAIN

N 545551.824
E 1341293.573
EX. BUILDING TO BE RAZED

N 545555.115
E 1341263.755

EX. BUILDING(S) TO BE RAZED

EX. BUILDING TO BE RAZED

EXIST. BUILDING TO REMAIN

N 545221.600
E 1341266.919

EX. STAIRS TO REMAIN

EX. RETAINING WALL TO REMAIN

EX. RETAINING WALL TO BE REMOVED

PROP. 6" BIT. CURB

EX. BUILDINGS TO BE RAZED

N 545615.323
E 1341250.280

N 545636.983
E 1341244.186

N 545223.655

EX. BUILDING TO BE RAZED

EXISTING BUILDINGS TO BE RAZED

PROP. 8' x 8' x 5' THICK CONCRETE SLAB

PROP. 30" TALL RETAINING WALL, WALL TO BE GREY VERSA-LOC OR KEYSTONE BLOCK OR APPROVED EQUAL (SEE DETAIL THIS SHEET)

N 545244.436
E 1341055.628

EXIST. TUNNEL

N 545214.617
E 1341052.336
MEET EXISTING EDGE OF PAVING FOR LINE & GRADE

EXISTING STAIRS/RAMP & RETAINING WALL TO BE REMOVED

N 545247.728
E 1341025.809

PROP. 6" BIT. CURB

6' A.D.A. COMPLIANT MULCH PATHWAY

HANDICAP RAMP

REPAVING AS REQUIRED, (TYP.)

EX. CURB

EXISTING ROAD

PROP. 6" BIT. CURB

N 545812.533
E 1341108.236

N 545815.249
E 1341093.495

N 545820.236
E 1341093.852

N 545800.281
E 1341092.421

N 545815.797
E 1341088.525

SERVICE ROAD REALIGNMENT TO BUILDINGS 7 & 8 MAR 19

(BUILDING 7, 8 & 9 SERVICE DRIVE)

CANOPY

5' CONCRETE SIDEWALK

CONCRETE SIDEWALK

EXISTING ROAD

PROPOSED LOCATION OF PUMPHOUSE

R 25'

MgC2(B)

Ba(D)

MIB2(B)

E 1341000

N 545750

E 1341250

N 545700

SEE SDP 05-33 FOR ROAD CONTINUATION

PLAN
SCALE: 1" = 30'

MATCHLINE : SEE PLAN ABOVE

BASE LEVELING PAD NOTES:

1. THE LEVELING PAD ISSUED BE CONSTRUCTED OF CRUSHED STONE OR 2,000 PSI± UNREINFORCED CONCRETE
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.

STANDARD UNIT
WIDTH: 18"
DEPTH: 21"
HEIGHT: 8"
WEIGHT: 115 LBS

MINI CAP UNIT
WIDTH: 18"
DEPTH: 16"
HEIGHT: 4"
WEIGHT: 45 LBS

SLOPE CUT — UNIT FACE — 6" CRUSHED ROCK OR UNREINFORCED CONCRETE LEVELING PAD

1 STANDARD UNIT/BASE PAD ISOMETRIC VIEW

*DIMENSIONS & WEIGHT MAY VARY BY REGION

6" CRUSHED ROCK OR UNREINFORCED CONCRETE LEVELING PAD

ELEVATION — 8" STEP — 7.5" — 21" — 36" — SECTION

2 LEVELING PAD DETAIL

KEYSTONE 4" CAP UNIT — KEYSTONE COMPAC UNIT — 6" SOIL LOW PERMEABLE SOIL — FINISHED GRADE — 8" — REINFORCED SOIL — 0.6 H MAX. — 6" — UNREINFORCED CONCRETE OR CRUSHED STONE LEVELING PAD — FOUNDATION SOIL (SEE NOTE 2) — PERFORATED DRAIN PIPE (OPTIONAL)

TYPICAL GRAVITY WALL SECTION
COMPAC UNIT = 1" SETBACK

LEGEND
- ROAD TO BE REMOVED
- SIDEWALK TO BE REMOVED
- RIPRAP TO BE REMOVED

ENTIRE LAWN AREA TO BE PROVIDED WITH A MINIMUM OF 4" OF SCREENED TOPSOIL (NO DEBRIS 3/4" OR LARGER)

2 PAVEMENT TO BE USED
- 1-1/2" BIT. CONC. SURFACE COURSE
- 1-1/2" BIT. CONC. BASE COURSE
- 5" BIT. CONC. BASE COURSE
- 4" GRADED AGGREGATE BASE
- COMPACTED SUBGRADE

Typical Paving Section
(HOWARD COUNTY STANDARD P-4 PAVING SECTION)
NOT TO SCALE

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 NUMBER: 22574 EXPIRATION DATE: 1/16/10

STATE OF MARYLAND — ANTHONY JOSEPH BURGONE — 22574 — PROFESSIONAL ENGINEER — FOR REVISION — 9/10/10

JHU/APL INTERNAL USE

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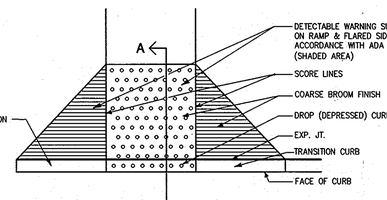
2" RAD. — 3¾" — 1" — 1" R. — DEPRESSED CURB — 1" RADIUS — TACK COAT — BITUMINOUS CONCRETE PAVING — 6½" — 2" R. — 1" R. — 9" — 2"

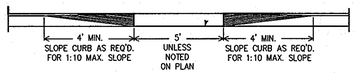
SECTION

Bituminous Concrete Curb
NOT TO SCALE

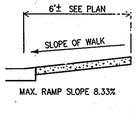
NOTE:
HC RAMPS SHALL CONFORM TO CURRENT ADA CRITERIA



PLAN

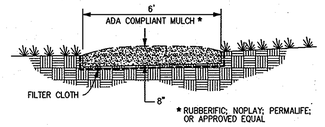


ELEVATION



SECTION A-A

Handicapped Ramp Type I
NOT TO SCALE



Pathway Detail
NOT TO SCALE

LEGEND

- PROP. TELECOM DUCT BANK
- PROP. ELECTRIC DUCT BANK
- PROP. CONCRETE SLAB FOR SUBSTATION
- EX. CONCRETE SIDEWALK
- EX. FENCE
- EX. WALL
- EX. TREE LINE
- EX. BUILDING
- EX. CURB AND GUTTER
- EX. BITUMINOUS PAVING
- EX. RETAINING WALL TO REMAIN
- PROP. CURB & GUTTER
- PROP. A.D.A. COMPLIANT MULCH SIDEWALK
- PROPOSED PAVING
- PROPOSED REPAVING
- SOIL LIMITS — SOIL SERIES — MIB2(B) — HSG
- LIGHT FIXTURES

6" — 42" BLACK VINYL COATED CHAIN LINK FENCE (2" MESH) — CONCRETE "NO MOW" STRIP ALONG BASE OF FENCE — 4" — 4'-0" — 2'-0" — 3'-0" — 3'-2" — 10" DIA. * (12" IN CORNERS)

STATE OF MARYLAND — ANTHONY JOSEPH BURGONE — 22574 — PROFESSIONAL ENGINEER — FOR REVISION — 9/10/10

42" FENCE DETAIL

NOT TO SCALE
REFER TO HOWARD COUNTY STD. DETAIL G.8.01 FOR ADDITIONAL INFORMATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date 3/17/08
Chief, Division of Land Development	Date 3/19/08
Director	Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND — MICHAEL SCOTT SMITH — 21598 — REGISTERED PROFESSIONAL ENGINEER

DESIGN BY:				
A.J.D.				
DRAWN BY:				
M.S.S.				
CHECKED BY:	AFE	3	BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT	2/13/12
A.J.D.	REB	2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9	9/10/10
DATE:	RDT	1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09
FEB. 15, 2008	BY	NO.	REVISION	DATE

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

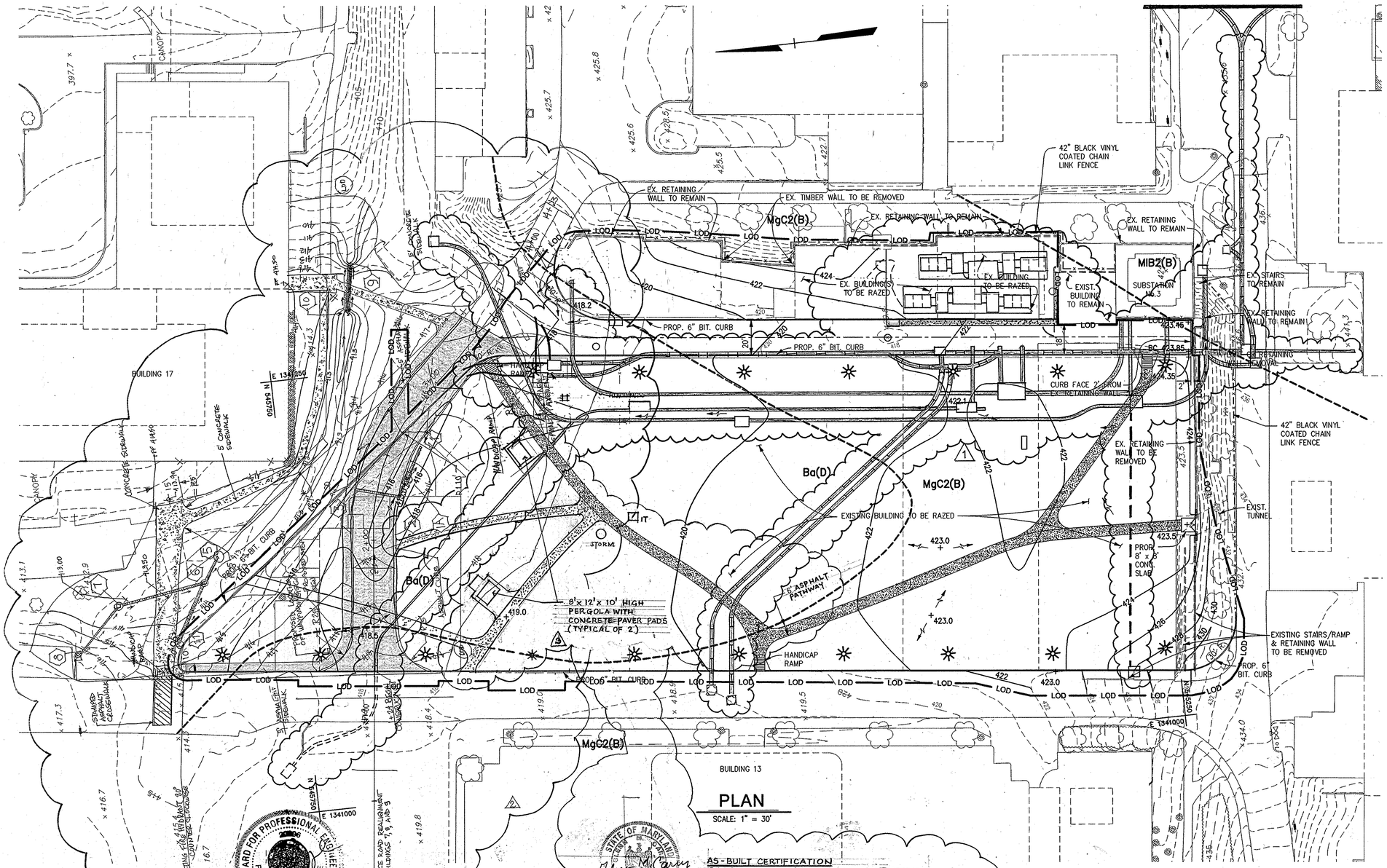
SITE PLAN
"CENTRAL GREEN, PHASE 2"
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 2 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(SP1) CGS Site Plan.dwg, 2/15/2008 3:23:57 PM, msmith



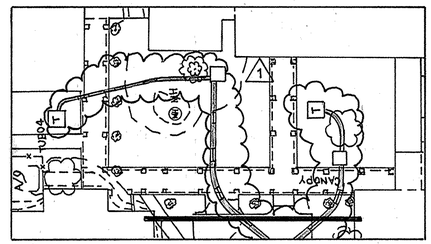
PLAN

SCALE: 1" = 30'

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.
GLENN M. CAREY, P.E., PE#15041 9/30/2015

SEE SDP-05-133 FOR ROAD CONTINUATION

FOR △2 REVISION



MATCHLINE : SEE PLAN LEFT

LEGEND

- EX. CONCRETE SIDEWALK
- EX. FENCE
- EX. WALL
- EX. TREE LINE
- EX. BUILDING
- EX. CURB AND GUTTER
- EX. BITUMINOUS PAVING
- EX. RETAINING WALL TO REMAIN
- PROP. CURB & GUTTER
- PROP. A.D.A. COMPLIANT MULCH SIDEWALK
- PROP. INLETS & MANHOLES
- PROP. MINOR CONTOUR — 379
- PROP. MAJOR CONTOUR — 380
- PROP. SPOT ELEVATION + 385.58
- LIMIT OF DISTURBANCE — LOD
- SOIL LIMITS — SOIL SERIES MIB2(B) HSG
- PROP. TELECOM DUCT BANK
- PROP. ELECTRIC DUCT BANK
- LIGHT FIXTURES

FOR △1 REVISION

JHU/APL INTERNAL USE

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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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/17/08

Chief, Division of Land Development — Date 3/19/08

Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: A.J.D.
DRAWN BY: M.S.S.
CHECKED BY: A.J.D.
DATE: FEB. 15, 2008

BY	NO.	REVISION	DATE
GMC	△3	8'x12' PERGOLAS (2) WITH CONCRETE PAVERS	9/30/15
REB	△2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9	3/10/10
RDT	△1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09

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443-778-5134

GRADING PLAN
"CENTRAL GREEN, PHASE 2"
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 3 OF 16 (RESTRICTED FILE)

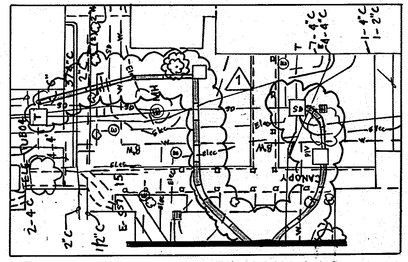
C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(GP1) CGS Grading Plan.dwg, 2/15/2008 3:25:04 PM, msmith

SDP-08-061

MATCHLINE: SEE INSET RIGHT

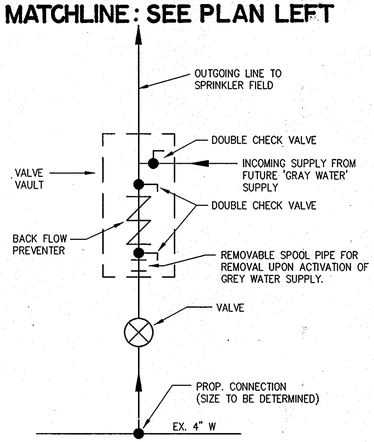


MATCHLINE: SEE PLAN LEFT

PLAN
SCALE: 1" = 30'

IRRIGATION SYSTEM VALVE & CONNECTION SCHEMATIC DETAIL

NOT TO SCALE



FOR ⚠2 REVISION

LEGEND

EX. MINOR CONTOUR	391	EX. LIGHT STANDARD	
EX. MAJOR CONTOUR	390	EX. BUSH	
EX. SPOT ELEVATION	× 387.6	EX. TREE	
EX. FIRE HYDRANT		EX. PIPE BOLLARD	
EX. STORM DRAIN	SD	EX. UTILITY POLE	
EX. WATER LINE	W W	EX. RETAINING WALL TO REMAIN	
EX. SANITARY SEWER	S S	EX. UTILITY TO BE REMOVED	X X SD X X
EX. ELECTRIC LINE	Elec	EX. UTILITY TO BE ABANDONED IN PLACE	SD
EX. COMMUNICATIONS LINE		PROP. MINOR CONTOUR	379
EX. MANHOLE		PROP. MAJOR CONTOUR	380
EX. INLET		PROP. SPOT ELEVATION	+ 385.58
EX. TREE LINE		PROP. CURB & GUTTER	
EX. BUILDING		PROP. SEWER	PROP. 4" S.
EX. CURB AND GUTTER		PROP. STORM DRAIN	PROP. 15" D.
EX. BITUMINOUS PAVING		SOIL LIMITS	
EX. CONCRETE SIDEWALK		SOIL SERIES	MIB2(B) HSG
EX. FENCE	X X	LIGHT FIXTURES	
EX. WALL			
EX. CLEANOUT	CO		

EXISTING VAULT
PROP. VAULT
PROP. TELECOM DUCT BANK
PROP. ELECTRIC DUCT BANK

NOTE: AN IRRIGATION SYSTEM IS TO BE PROVIDED FOR THE CENTRAL GREEN AREA. DESIGN TO BE PROVIDED BY OTHERS.

SANITARY SEWER STRUCTURE SCHEDULE

STRUCTURE NUMBER	TOP ELEV.	INVERT IN	INVERT IN	INVERT OUT	STRUCTURE TYPE	HOWARD CO. STD. DETAIL No.
SMH-1B	423.1	*	---	411.47	4'-0" DIA. PRE-CAST	G5.14
SMH-1	422.71	← TO BE DETERMINED		IN FIELD →	4'-0" DIA. PRE-CAST	G5.14

* TO BE DETERMINED

STORM DRAIN STRUCTURE SCHEDULE

STRUCTURE NUMBER	TOP ELEV.	INVERT IN	INVERT IN	INVERT OUT	STRUCTURE TYPE	HOWARD CO. STD. DETAIL No.
~~1-1~~	~~415.00*~~			~~405.60~~	~~DOUBLE TYPE 'S'~~	~~SD-4.23~~
1-2	418.75**	---	---	414.75	DOUBLE TYPE 'S'	SD-4.23
1-3	421.2**	---	---	417.18	DOUBLE TYPE 'S'	SD-4.23
1-4	421.30*	---	---	417.30	DOUBLE TYPE 'S'	SD-4.23
M-1	419.10	412.86	404.34	404.14	MANHOLE	MD SHA 374.55 & HO.CO. G 5.51
M-2	418.60	414.07***	---	413.97***	4' DIA. MANHOLE	G 5.12
M-3	421.10	416.55***	416.55	416.45***	4' DIA. MANHOLE	G 5.12
CUT-IN 1	N/A	399.73	400.60	399.73	FIELD CONNECTION	D-9.03

1 TO BE REMOVED

2

* TOP OF GRATE AT CENTERLINE OF STRUCTURE
** TOP OF GRATE AT CENTERLINE OF STRUCTURE AT FACE OF CURB
*** EXISTING INVERT ELEVATION

STORM DRAIN STRUCTURE SCHEDULE

STRUCTURE NUMBER	TOP ELEV.	INVERT IN	INVERT IN	INVERT OUT	STRUCTURE TYPE	HOWARD CO. STD. DETAIL No.
11	414.87	--	--	407.67	TYPE 'S' INLET	SD 4.23
10	411.3	410.3	--	410	TWIN 'S' CURB	SD 2.12
8	411.23	--	--	408	'S' INLET	SD 4.01
7	413.25	407.63	--	407.38	TYPE 'S' INLET	SD 4.23
6	413.15	406.87	406.7	406.53	TYPE 'S' INLET	SD 4.23
3	415.74	409.1	--	411.47	'S' INLET	SD 4.01
2	415.63	411.2	--	410.7	'S' INLET	SD 4.01 SD4.01
1A	415.84	410.58	--	410.5	STORMCEPTOR	STORMCEPTOR

PROFESSIONAL CERTIFICATION

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2-14-2012
FOR REVISION ⚠1 ONLY

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 5/17/08
Chief, Division of Land Development — Date 3/19/08
Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY:			
A.J.D.			
DRAWN BY:			
M.S.S.			
CHECKED BY:	AFE	⚠3	BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT — 2/13/12
A.J.D.	REG	⚠2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9 — 2/11/10
DATE:	RDT	⚠1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS — 05-18-09
FEB. 15, 2008	BY	NO.	REVISION — DATE

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
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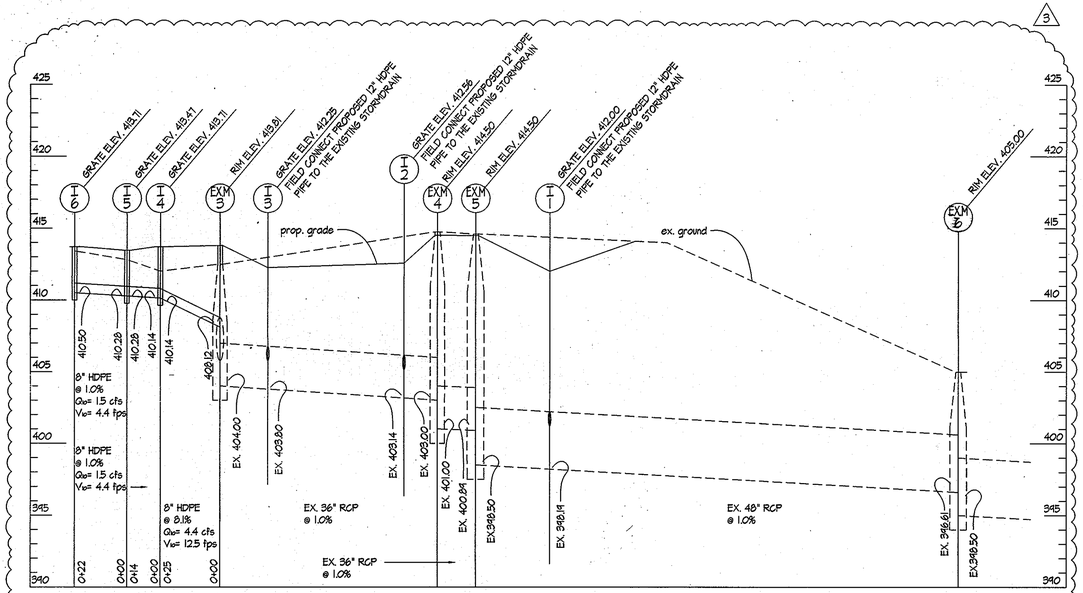
443-778-5134

UTILITY PLAN
"CENTRAL GREEN, PHASE 2"
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 4 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25
SCALE: 1"=30'

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(UT1) OGS Utility Plan.dwg, 2/15/2008 3:22:50 PM, msmith

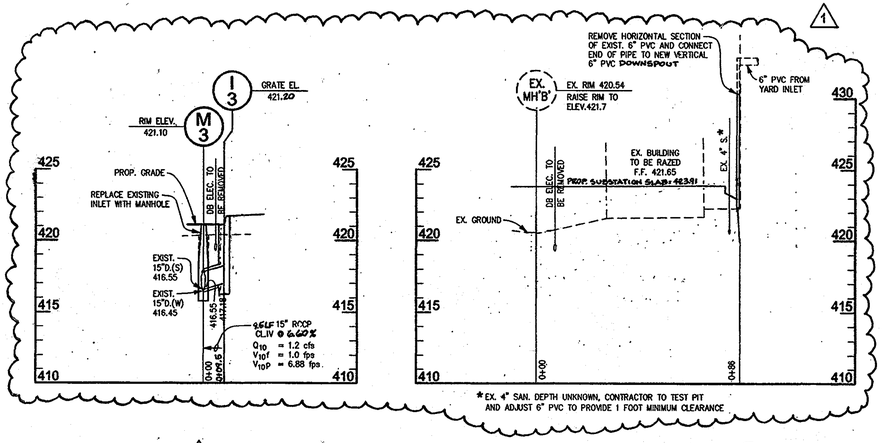
SDP-08-061

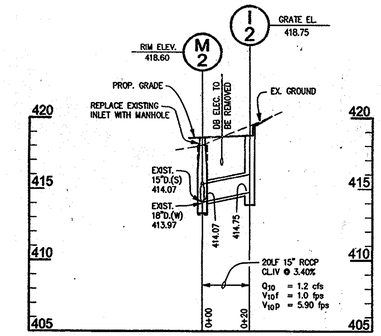


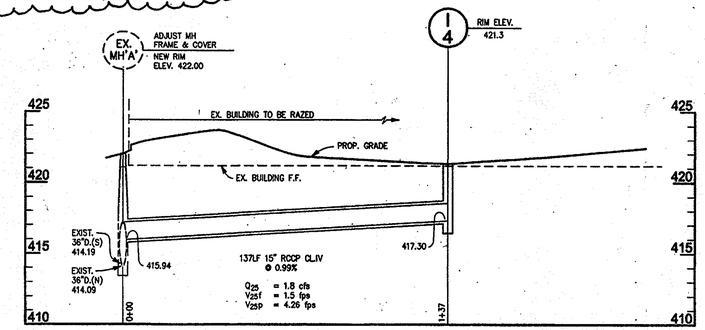
1 PROFILE 1-6 TO EX. M-6

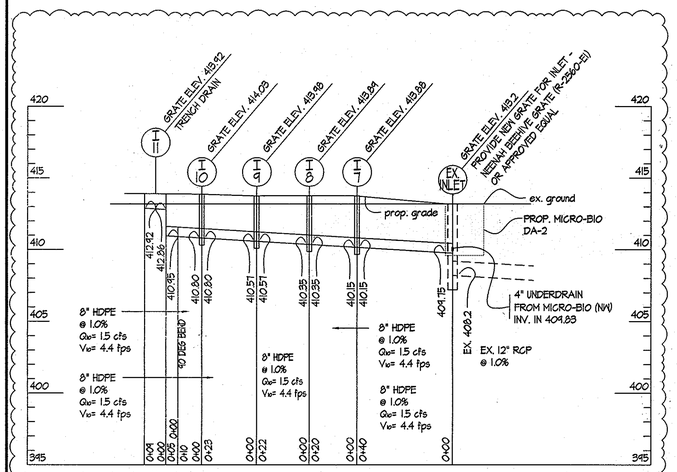
EXISTING PIPE INFORMATION OBTAINED FROM SDP-02-088B AS PROVIDED BY JHU-APL. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL LOCATION OF STORM DRAIN FOR FIELD CONNECTIONS. PROPOSED INLETS SHALL BE NYLOPLAST 2824AG WITH INTEGRATED STANDARD DUCTILE IRON FRAME AND GRATE OR APPROVED EQUAL

SCALES: HORIZ. 1" = 30'
VERT. 1" = 5'





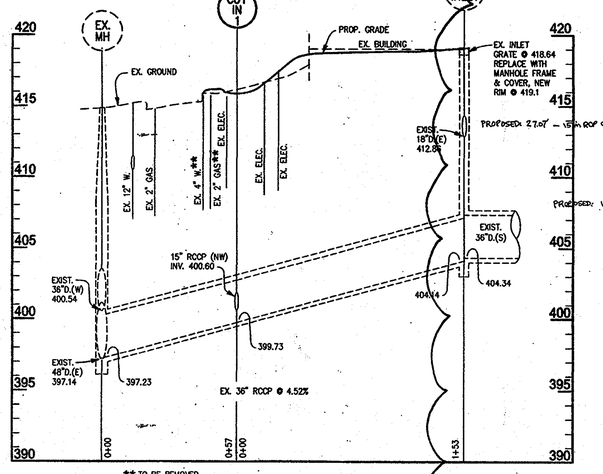


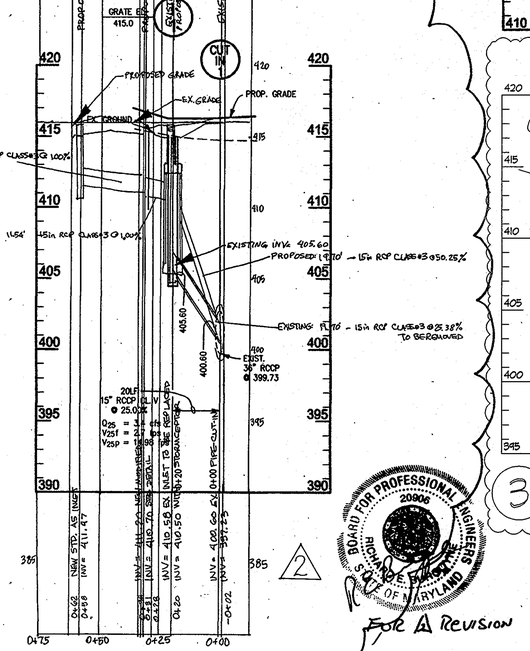


2 PROFILE 1-11 TO EX. INLET

EXISTING PIPE INFORMATION AS PROVIDED BY JHU-APL. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL LOCATION OF STORM DRAIN. PROPOSED INLETS SHALL BE NYLOPLAST 2824AG WITH INTEGRATED STANDARD DUCTILE IRON FRAME AND GRATE OR APPROVED EQUAL ACCEPT WHERE NOTED.

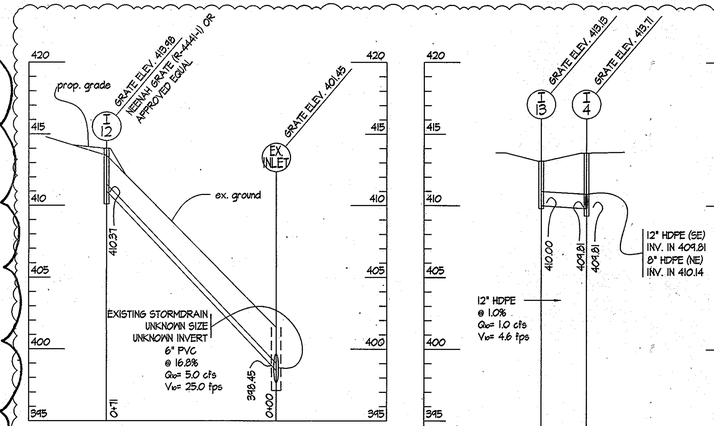
SCALES: HORIZ. 1" = 30'
VERT. 1" = 5'





STORM DRAIN PROFILES

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



3 PROFILE 1-12 TO EX. INLET

SCALES: HORIZ. 1" = 30'
VERT. 1" = 5'

EXISTING PIPE INFORMATION AS PROVIDED BY JHU-APL. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL LOCATION OF STORM DRAIN. PROPOSED INLETS SHALL BE NYLOPLAST 2812AG WITH INTEGRATED STANDARD DUCTILE IRON FRAME AND GRATE OR APPROVED EQUAL ACCEPT WHERE NOTED.

4 PROFILE 1-13 TO 1-4

SCALES: HORIZ. 1" = 30'
VERT. 1" = 5'

PROPOSED INLETS SHALL BE NYLOPLAST 2824AG WITH INTEGRATED STANDARD DUCTILE IRON FRAME AND GRATE OR APPROVED EQUAL ACCEPT WHERE NOTED.

BOARD FOR PROFESSIONAL ENGINEERS — 20906 — RICHARD A. BUCHANAN — STATE OF MARYLAND

FOR 2 REVISION

STATE OF MARYLAND — ANTHONY JOSEPH MARSH — 21508 — PROFESSIONAL ENGINEER — 8/21/09

FOR 3 REVISION

STATE OF MARYLAND — ANDREW JOSEPH BRUCKNER — 16114 — PROFESSIONAL ENGINEER

THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 4
2-14-2012

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LICENSE NUMBER: 21508 EXPIRATION DATE: 4/6/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 5/17/08

Chief, Division of Land Development — Date 5/19/08

Director — Date 5/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND — ANTHONY JOSEPH MARSH — 21508 — PROFESSIONAL ENGINEER

DESIGN BY:	A.J.D.
DRAWN BY:	M.S.S.
CHECKED BY:	A.J.D.
DATE:	FEB. 15, 2008

BY	NO.	REVISION	DATE
AFE	3	BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT	2/13/12
REB	2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9	3/10/10
RDT	1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09

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UTILITY PROFILES & NOTES
"CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 5 OF 16 (RESTRICTED FILE)

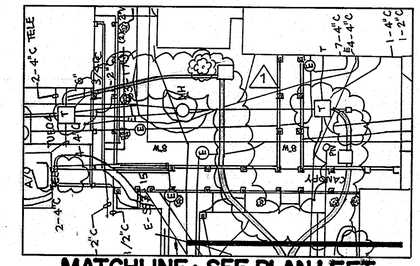
C.E.I. PROJECT NUMBER 22172.25

SCALE: AS SHOWN

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(UT2) CGS Utility Profiles & Notes.dwg, 2/15/2008 3:26:23 PM, msmith

MATCHLINE SEE INSET RIGHT



MATCHLINE : SEE PLAN LEFT

PLAN
SCALE: 1" = 30'

* BASED ON PROJECTED BUILDOUT IN GREEN SPACE USED FOR DESIGN

NOTE: MULCH AREA CONSIDERED LAWN FOR STORM DRAIN PURPOSES

NOTE: ALL TC'S ASSUMED TO BE 5.0 MINUTES

DRAINAGE AREA INFORMATION

A = AREA (ACRE)
B = AREA (I.D.)
C = COMPOSITE RATIONAL 'C'
Z = ZONING
P = WEIGHTED% IMPERVIOUS COVER
S = % SCS SOIL NOTE 'C' SOILS ASSUMED HSG

LEGEND

EX. MINOR CONTOUR	391	EX. LIGHT STANDARD	
EX. MAJOR CONTOUR	390	EX. BUSH	
EX. SPOT ELEVATION	X 387.6	EX. TREE	
EX. FIRE HYDRANT		EX. PIPE BOLLARD	
EX. STORM DRAIN	SD	EX. UTILITY POLE	
EX. WATER LINE	W W	EX. RETAINING WALL TO REMAIN	
EX. SANITARY SEWER	S S	EX. UTILITY TO BE REMOVED	X X SD X X
EX. ELECTRIC LINE	Elec	EX. UTILITY TO BE ABANDONED IN PLACE	SD
EX. COMMUNICATIONS LINE		PROP. MINOR CONTOUR	379
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EX. TREE LINE		PROP. CURB & GUTTER	
EX. BUILDING		PROP. SEWER	PROP. 4" S.
EX. CURB AND GUTTER		PROP. STORM DRAIN	PROP. 15" D.
EX. BITUMINOUS PAVING		DRAINAGE AREA	
EX. CONCRETE SIDEWALK		SOIL LIMITS	SOIL SERIES → MIB2(B) ← HSG
EX. FENCE	X X		
EX. WALL		PROP. TELECOM DUCT BANK	
EX. CLEANOUT	CO	PROP. ELECTRIC DUCT BANK	
		LIGHT FIXTURES	

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LICENSE NUMBER: 38574 EXPIRATION DATE: 1/16/10

THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 3.

FOR ⚠2 REVISION

FOR ⚠3 REVISION

3 11/2011 BUILDING 17 SITE IMPROVEMENTS (ACRES)	2 3/10/2010 SERVICE ROAD REALIGNMENT (ACRES)
42.4	42.4
26.5	26.5
28.5	28.3
0.1	0.0
28.6	28.3
10.3	10.6

STORMWATER MANAGEMENT DRAINAGE AREA 'A' BASIN – DEVELOPMENT ACCOUNTING

SEPT. 20, 2007

	FINAL PLAN "A" HOWARD CO. APPROVED	B17 AND B20 DEVELOPMENT	PRE SI'S DEMOLITION	SYSTEMS INTEGRATION BUILDINGS 12 & 15	PRE BUILDING 21 DEMOLITION CONCLUSION	BUILDING 21	POST SI'S CONSTRUCTION DEMOLITION	CENTRAL GREEN DEMO BLDGS. 41, 16, 14, 56, 33, 113, 38, 28, 54
AS OF DATE	2/28/2002 (ACRES)	MARCH 2004 (ACRES)	(ACRES)	(ACRES)	(ACRES)	(ACRES)	(ACRES)	⚠1 SUBSTATION CONSOLIDATION (ACRES)
DRAINAGE AREA	43.2	43.2	43.2	42.4	42.4	42.4	42.4	42.4
EXISTING IMPERVIOUS DRAINAGE AREA PRE 1984	27.2	27.2	27.0	26.7	24.4	26.5	26.5	26.5
IMPERVIOUS AREA SEPT. 2007								30.5
PROPOSED IMPERVIOUS DRAINAGE AREA POST 1984	11.7	1.4 HAI & RTKL	0.6 WR&A	4.4 WR&A	4.0 RTKL	4.0 RTKL	4.0	-2.0 ~~-2.2~~ CEI
TOTAL IMPERVIOUS AREA	38.9	28.6	27.6	31.1	28.4	30.5	30.5	28.5 ~~28.3~~
IMPERVIOUS DRAINAGE AREA MAXIMUM ALLOWABLE IMPERVIOUS AREA (38.9 AC.) AVAILABLE	0.0	10.3	11.3	7.8	10.5	8.4	8.4	10.5 ~~10.6~~

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Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: A.J.D.
DRAWN BY: M.S.S.
CHECKED BY: A.J.D.
DATE: FEB. 15, 2008

BY	NO.	REVISION	DATE
AFE	⚠3	BUILDING 17 OUTDOOR PL AZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT	
RDT	⚠1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	5-18-09

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

STORM DRAIN DRAINAGE AREA MAP
"CENTRAL GREEN, PHASE 2"
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 6 OF 16 (RESTRICTED FILE)

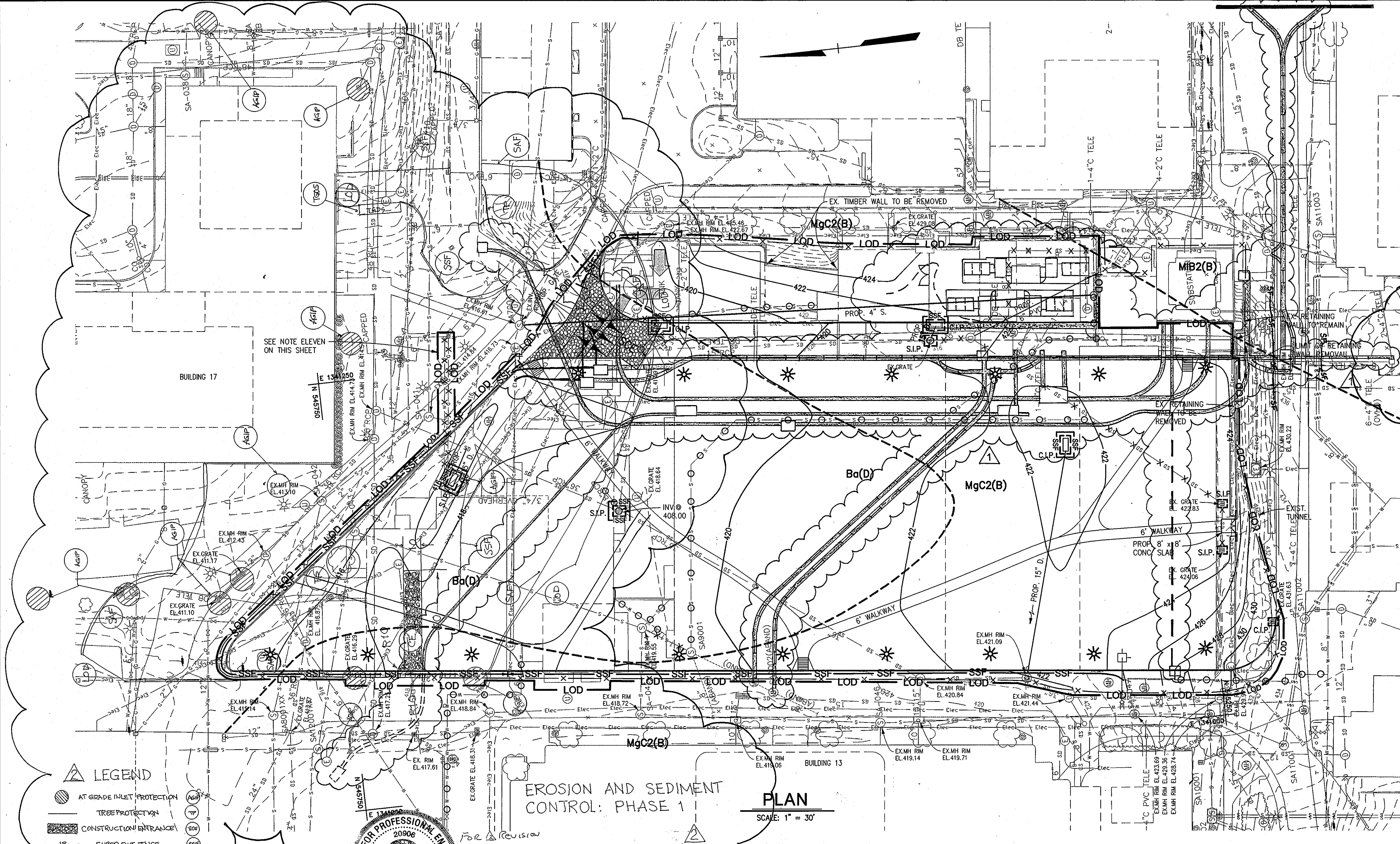
C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(SDAM) Storm Drain DAM.dwg, 2/15/2008 3:27:26 PM, msmith

MATCHLINE : SEE INSET BELOW



EROSION AND SEDIMENT CONTROL: PHASE 1

FOR ⚠2 REVISION

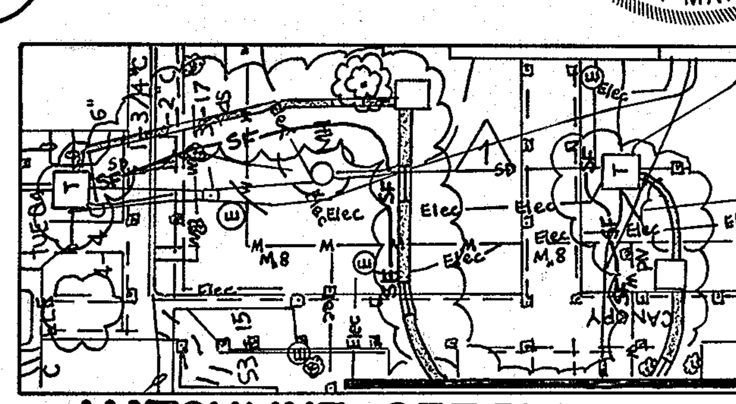
PLAN

SCALE: 1" = 30'

⚠2 LEGEND

(hatched circle)	AT GRADE INLET PROTECTION	AGIP
———	TREE PROTECTION	TP
(hatched bar)	CONSTRUCTION ENTRANCE	SCE
IP——	SUPER SILT FENCE	SSF
TGDS	TEMPORARY GABION OUTLET STRUCTURE	TGOS
———	LIMITS OF DISTURBANCE	LOD
———	SAFETY FENCE	SAF

NOTE
THIS SITE DRAINS TO EXISTING SWM FACILITY 'A' ON THE APPLIED PHYSICS LABORATORY CAMPUS. INTERIM STORMWATER MANAGEMENT IS NOT REQUIRED.



MATCHLINE : SEE PLAN ABOVE

⚠1 INSTALL SILT FENCE FOR ALL DUCT BANK INSTALLATION IN VEGETATED AREAS OUTSIDE LIMITS OF DISTURBANCE. FOR DUCT BANK INSTALLATION IN PAVED AREAS OUTSIDE LIMITS OF DISTURBANCE LIMIT INSTALLATION TO THAT WHICH CAN BE INSTALLED IN A SINGLE DAY, BACKFILL AND STABILIZE TRENCH AT END OF EACH WORK DAY.

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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

LEGEND

EX. MINOR CONTOUR	— — 391 — —
EX. MAJOR CONTOUR	—— 390 ——
EX. SPOT ELEVATION	× 387.6
EX. FIRE HYDRANT	
EX. STORM DRAIN	—— SD ——
EX. WATER LINE	— W —— W —
EX. SANITARY SEWER	— S —— S —
EX. ELECTRIC LINE	—— Elec ——
EX. COMMUNICATIONS LINE	- - - -
EX. MANHOLE	○
EX. INLET	▫
EX. TREE LINE	⌒⌒⌒
EX. BUILDING	▭
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
EX. CONCRETE SIDEWALK	
PROP. TELECOM DUCT BANK	
PROP. ELECTRIC DUCT BANK	
EX. FENCE	—×——×—
EX. WALL	
EX. CLEANOUT	○CO
EX. LIGHT STANDARD	
EX. BUSH	
EX. TREE	
EX. PIPE BOLLARD	○
EX. UTILITY POLE	∅
PROP. MINOR CONTOUR	—— 379 ——
PROP. MAJOR CONTOUR	—— 380 ——
PROP. SPOT ELEVATION	+385.58
PROP. CURB & GUTTER	═══
PROP. SILT FENCE	—— SF ——
PROP. SUPER SILT FENCE	—— SSF ——
EX. UTILITY TO BE REMOVED	—×—×— SD —×—×—
EX. UTILITY TO BE ABANDONED IN PLACE	—○—○— SD —○—○—
PROP. CURB INLET PROTECTION	C.I.P.
PROP. INLET PROTECTION	S.I.P.
PROP. LIMIT OF DISTURBANCE	—— LOD ——
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE
PROP. CONSTRUCTION FENCE	——×——×
REMOVABLE PUMP STATION	⊠ RPS
GABION INFLOW PROTECTION	
SOIL LIMITS	SOIL SERIES → MIB2(B) ← HSG
LIGHT FIXTURES	✳

FOR ⚠1 REVISION

HOWARD SOIL CONSERVATION DISTRICT

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).

2. ALL VEGETATIVE AND STRUCTURAL PREACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL 1, CHAPTED 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

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 HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. ⚠2 SITE ANALYSIS:

	Revised (⚠2)	CENTRAL GREEN	BORROW AREA	STOCKPILE AREA
TOTAL AREA OF SITE	3.61 ACRES	2.91 ACRES	3.40 ACRES	1.72 ACRES
AREA DISTURBED	1.29 ACRES	2.81 ACRES	3.23 ACRES	1.72 ACRES
AREA TO BE ROOFED OR PAVED	0.23 ACRES	0.18 ACRES	0.0 ACRES	0.0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.06 ACRES	2.73 ACRES	3.23 ACRES	1.72 ACRES
TOTAL CUT	755 YD³	3,871 CU.YDS.	3,357 CU.YDS.	STOCKPILE
TOTAL FILL	450 YD³	3,357 CU.YDS.	3,871 CU.YDS.	STOCKPILE
OFFSITE WASTE/BORROW AREA LOCATION		JHU/APL CAMPUS	JHU/APL CAMPUS	JHU/APL CAMPUS

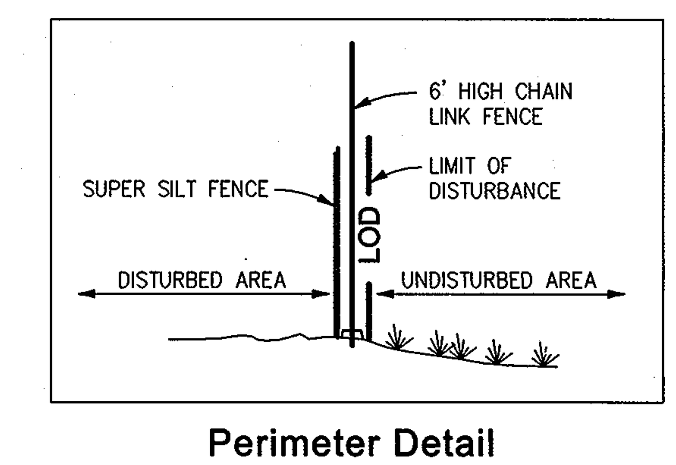
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTIITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

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

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

12. A TEMPORARY 6 FOOT HIGH SECURITY.CONSTRUCTION FENCE WITH GATE SHALL BE PLACED ABOUT THE PERIMETER OF THE CONSTRUCTION AREA TO RESTRICT ACCESS TO THE CONSTRUCTION AREA BY UNAUTHORIZED PERSONNEL DURING CONSTRUCTION.



Perimeter Detail

Not to Scale

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 2/21/08

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

James E. Loesch — SIGNATURE OF DEVELOPER — DATE 2.15.08

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

John R. Robertson — HOWARD S.C.D. — DATE 3/13/08

JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED TO A THIRD PARTY AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF JHU/APL.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 5/17/08
Chief, Division of Land Development — Date 3/19/08
Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: A.J.D.
DRAWN BY: M.S.S.
CHECKED BY: A.J.D
DATE: FEB. 15, 2008

BY	NO.	REVISION	DATE
REB	⚠2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9.	3/10/10
RDT	⚠1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	5-18-09

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

EROSION & SEDIMENT CONTROL PLAN
"CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 7 OF 16 (RESTRICTED FILE)

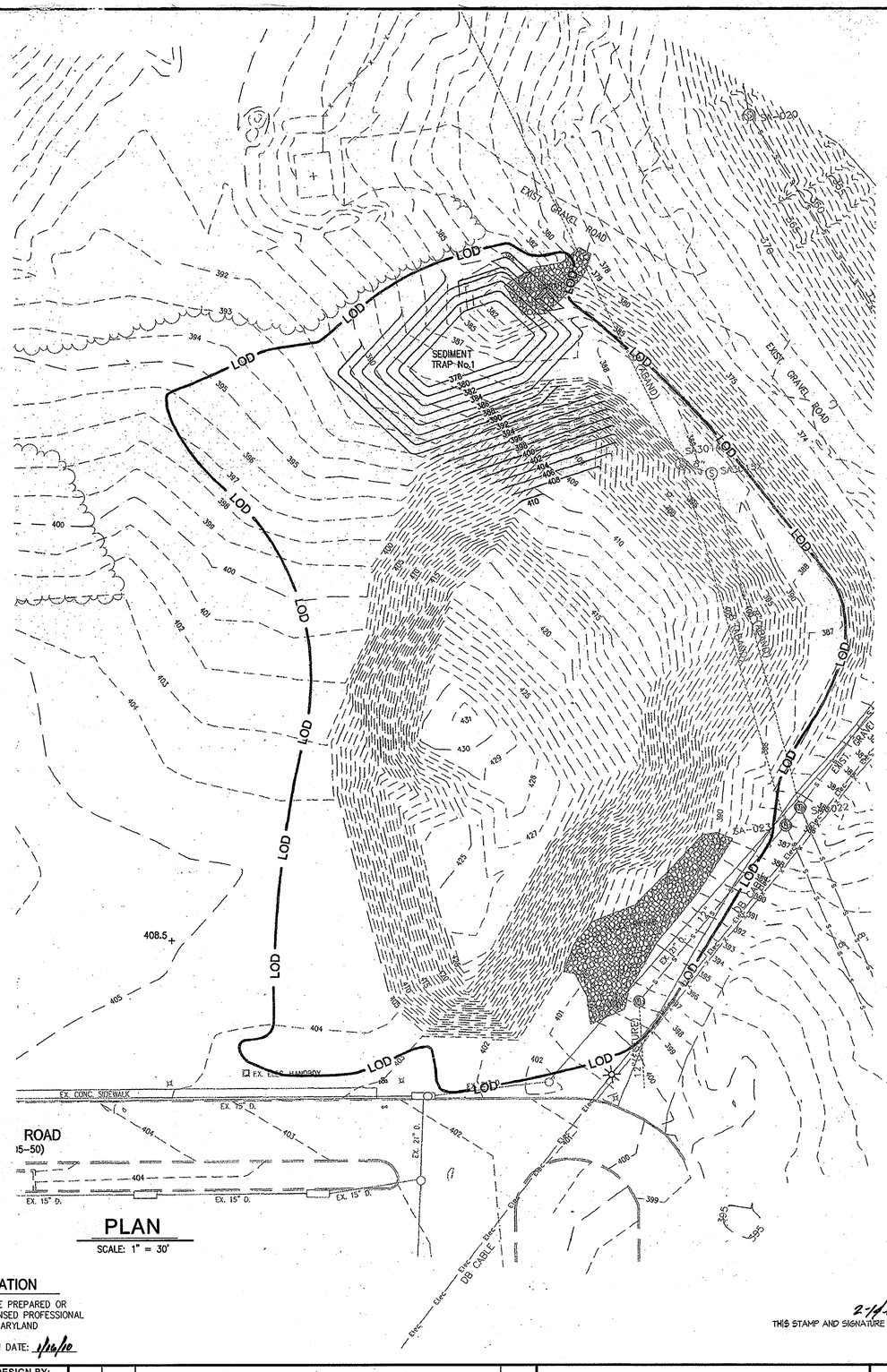
C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

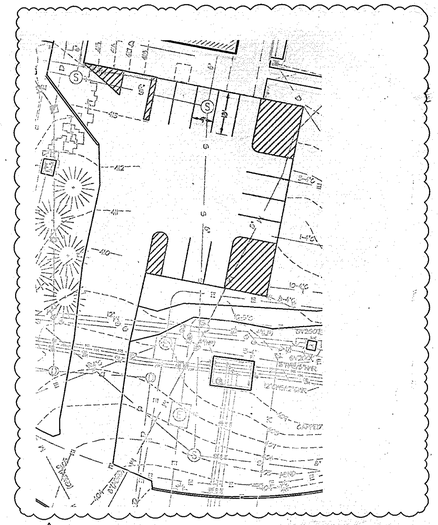
O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(ESC1) CGS ESC Plan.dwg, 2/15/2008 3:28:34 PM, msmith

3 BUILDING 17 PLAZA

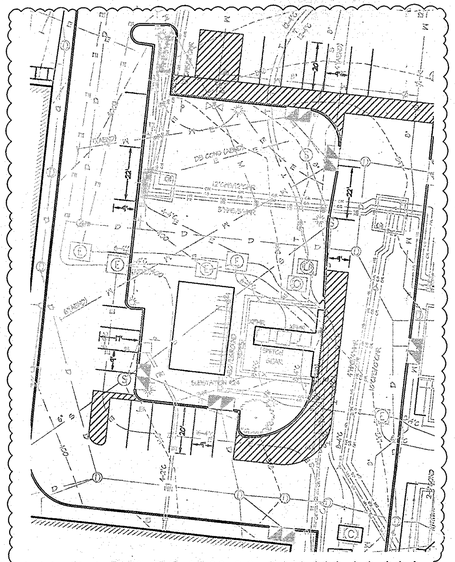


PLAN

SCALE: 1" = 30'



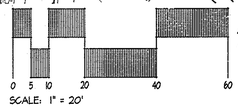
3 CENTER SERVICE ROAD - PARKING LOT RESTRIPING



3 BUIDING 17 SERVICE LOT AREA - PARKING RESTRIPING

LEGEND

EX. CONCRETE SIDEWALK	
EX. FENCE	
EX. WALL	
EX. TREE LINE	
EX. BUILDING	
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
PROP. CURB & GUTTER	
PROP. MINOR CONTOUR	379
PROP. MAJOR CONTOUR	380
PROP. SPOT ELEVATION	+ 385.58
LIMIT OF DISTURBANCE	LOD



SCALE: 1" = 20'

3 ALL REVISION 3 PLANS SHOWN AT 1"=20' SCALE

JHU/APL INTERNAL USE

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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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

2-14-2012

THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 3.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/17/08

Chief, Division of Land Development — Date 3/19/08

Director — Date 3/19/08

CENTURY ENGINEERING

CONSULTING ENGINEERS - PLANNERS

10710 Gilroy Road, Hunt Valley, MD 21031

Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND — ANTHONY JOSEPH LOTZ — No. 32574 — PROFESSIONAL ENGINEER

DESIGN BY: A.J.D.			
DRAWN BY: M.S.S.			
CHECKED BY: A.J.D.			
DATE: FEB. 15, 2008	AFE	3	BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT — 2/13/12
	BY	NO.	REVISION — DATE

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY

11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

GRADING PLAN
"CENTRAL GREEN, PHASE 2" - BORROW AREA

JOHNS HOPKINS UNIVERSITY PROPERTY

TAX MAP: 41 GRID: 16 PARCEL: 123

ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND

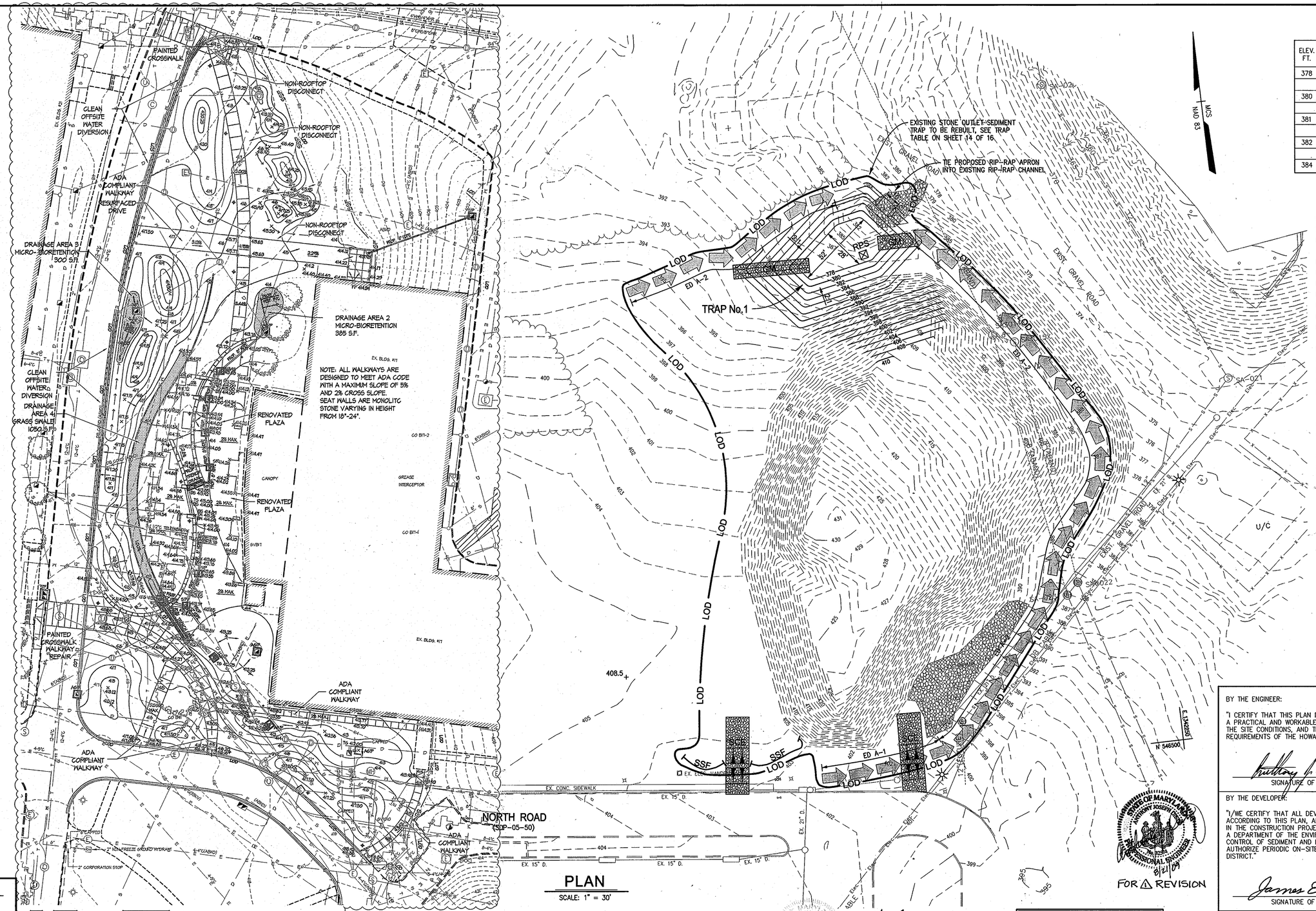
SHEET 8 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(GP2) SLA Grading Plan.dwg, 2/15/2008 3:29:56 PM, msmith

SDP-08-061



3 BUILDING 17 PLAZA PROPOSED GRADING & EROSION & SEDIMENT CONTROLS

PLAN
SCALE: 1" = 30'

3 REVISION 3 PLAN SHOWN AT 1"=20' SCALE

0 5 10 20 40 60
SCALE: 1" = 20'

TRAP No.2 STAGE/STORAGE TABLE

ELEV. FT.	AREA FT.^{2}	AVG. AREA FT.^{2}	ΔELEV. FT.	ΔVOL. FT.^{3}	ΣVOL. FT.^{3}
378	1260				0
		1426	2	2852	
380	1592				2852
		1847	1	1847	
381	2102				4699
		2356	1	2356	
382	2610				7055
		3040	2	3040	
384	3470				10095

LEGEND

EX. MINOR CONTOUR	391
EX. MAJOR CONTOUR	390
EX. SPOT ELEVATION	× 387.6
EX. FIRE HYDRANT	
EX. STORM DRAIN	SD
EX. WATER LINE	W
EX. SANITARY SEWER	S
EX. ELECTRIC LINE	Elec
EX. COMMUNICATIONS LINE	
EX. MANHOLE	
EX. INLET	
EX. TREE LINE	
EX. BUILDING	
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
EX. CONCRETE SIDEWALK	
EX. FENCE	X X
EX. WALL	
EX. CLEANOUT	CO
EX. LIGHT STANDARD	
EX. BUSH	
EX. TREE	
EX. PIPE BOLLARD	
EX. UTILITY POLE	
PROP. MINOR CONTOUR	379
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PROP. CURB & GUTTER	
PROP. SILT FENCE	SF
PROP. SUPER SILT FENCE	SSF
PROP. LIMIT OF DISTURBANCE	LOD
PROP. EARTH DIKE	
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE
REMOVABLE PUMP STATION	RPS
GABION INFLOW PROTECTION	
LIGHT FIXTURES	

PROFESSIONAL CERTIFICATION
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THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 3.

FOR 1 REVISION

NOTE:
THIS SITE DRAINS TO EXISTING SWM FACILITY 'C' SOUTH BASIN (SDP-04-133) ON THE APPLIED PHYSICS LABORATORY CAMPUS. INTERIM STORMWATER MANAGEMENT IS NOT REQUIRED.

BY THE ENGINEER:
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SIGNATURE OF ENGINEER — DATE 2/21/08

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SIGNATURE OF DEVELOPER — 2.15.08 DATE

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HOWARD S.C.D. — 3/13/08 DATE

JHU/APL INTERNAL USE
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APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division — Date 5/7/08
Chief, Division of Land Development — Date 3/19/08
Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY:	A.J.D.
DRAWN BY:	M.S.S.
CHECKED BY:	A.J.D.
DATE:	FEB. 15, 2008

BY	NO.	REVISION	DATE
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EROSION & SEDIMENT CONTROL PLAN
"CENTRAL GREEN, PHASE 2" - BORROW AREA
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TAX MAP: 41 GRID: 16 PARCEL: 123
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SHEET 9 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25
SCALE: 1"=30'

SDP-08-061

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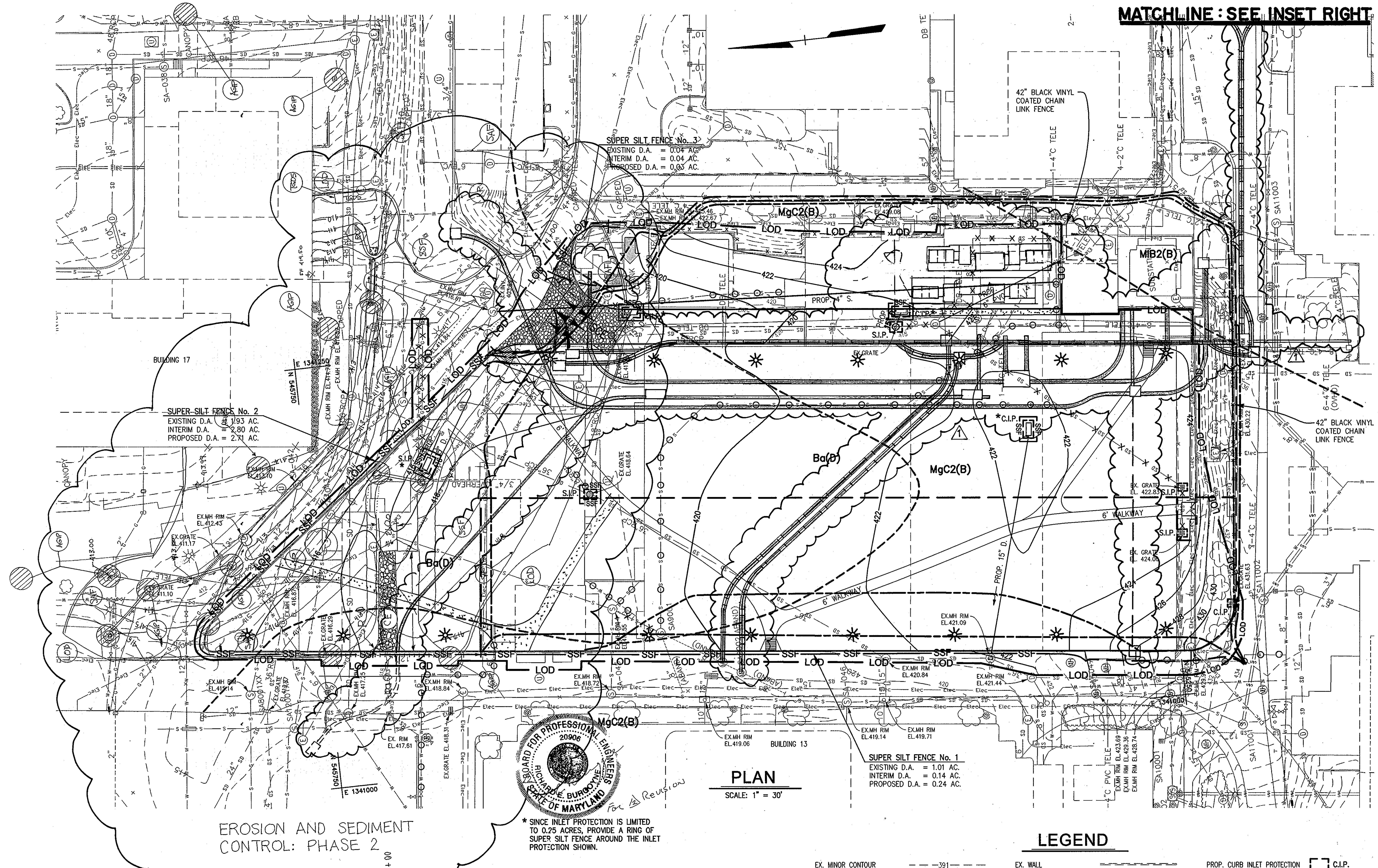
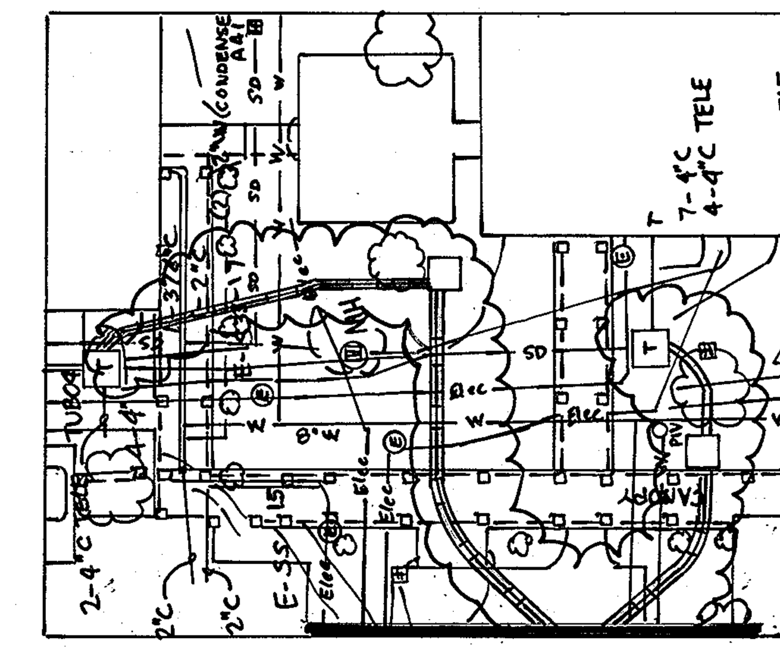


PLAN

SCALE: 1" = 30'

* SINCE INLET PROTECTION IS LIMITED TO 0.25 ACRES, PROVIDE A RING OF SUPER SILT FENCE AROUND THE INLET PROTECTION SHOWN.



MATCHLINE : SEE PLAN LEFT

2 LEGEND

AT GRADE INLET PROTECTION	AGIP
TREE PROTECTION	TP
CONSTRUCTION ENTRANCE	SCE
SUPER SILT FENCE	SSF
TEMPORARY GABION OUTLET STRUCTURE	TGOS
LIMITS OF DISTURBANCE	LOD
SAFETY FENCE	SAF

FOR ⚠1 REVISION

LEGEND

EX. MINOR CONTOUR	— 391 —
EX. MAJOR CONTOUR	— 390 —
EX. SPOT ELEVATION	× 387.6
EX. FIRE HYDRANT	
EX. STORM DRAIN	— SD —
EX. WATER LINE	— W — W —
EX. SANITARY SEWER	— S — S —
EX. ELECTRIC LINE	— Elec —
EX. COMMUNICATIONS LINE	— — —
EX. MANHOLE	○
EX. INLET	▫
EX. TREE LINE	
EX. BUILDING	
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
EX. CONCRETE SIDEWALK	
EX. FENCE	—X—X—
EX. WALL	
EX. CLEANOUT	○CO
EX. LIGHT STANDARD	
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PROP. CURB & GUTTER	
PROP. SILT FENCE	— SF —
PROP. SUPER SILT FENCE	— SSF —
EX. UTILITY TO BE REMOVED	—X—X— SD —X—X—
EX. UTILITY TO BE ABANDONED IN PLACE	—O—O— SD —O—O—
LIGHT FIXTURES	✳
PROP. CURB INLET PROTECTION	C.I.P.
PROP. INLET PROTECTION	S.I.P.
PROP. LIMIT OF DISTURBANCE	— LOD —
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE
SOIL LIMITS	SOIL SERIES → MIB2(B) ← HSG
EXISTING DRAINAGE AREA	— — —
INTERIM DRAINAGE AREA	— - — -
PROPOSED DRAINAGE AREA	— - - —
PROP. TELECOM DUCT BANK	
PROP. ELECTRIC DUCT BANK	

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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."

Anthony J. Dietz — SIGNATURE OF ENGINEER — 2/21/08 DATE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

James E. Loesch — SIGNATURE OF DEVELOPER — 2.15.08 DATE

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

John R Robertson — HOWARD S.C.D. — 3/13/08 DATE

JHU/APL INTERNAL USE

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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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

For ⚠2 Revision

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date 3/17/08
Chief, Division of Land Development	Date 3/19/08
Director	Date 3/19/08

CENTURY ENGINEERING

CONSULTING ENGINEERS - PLANNERS

10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: A.J.D.
DRAWN BY: M.S.S.
CHECKED BY: A.J.D.
DATE: FEB. 15, 2008

BY	NO.	REVISION	DATE
REB	2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9	3/10/10
RDT	1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY

11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

EROSION & SEDIMENT CONTROL DRAINAGE ARA MAP

"CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY

TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND

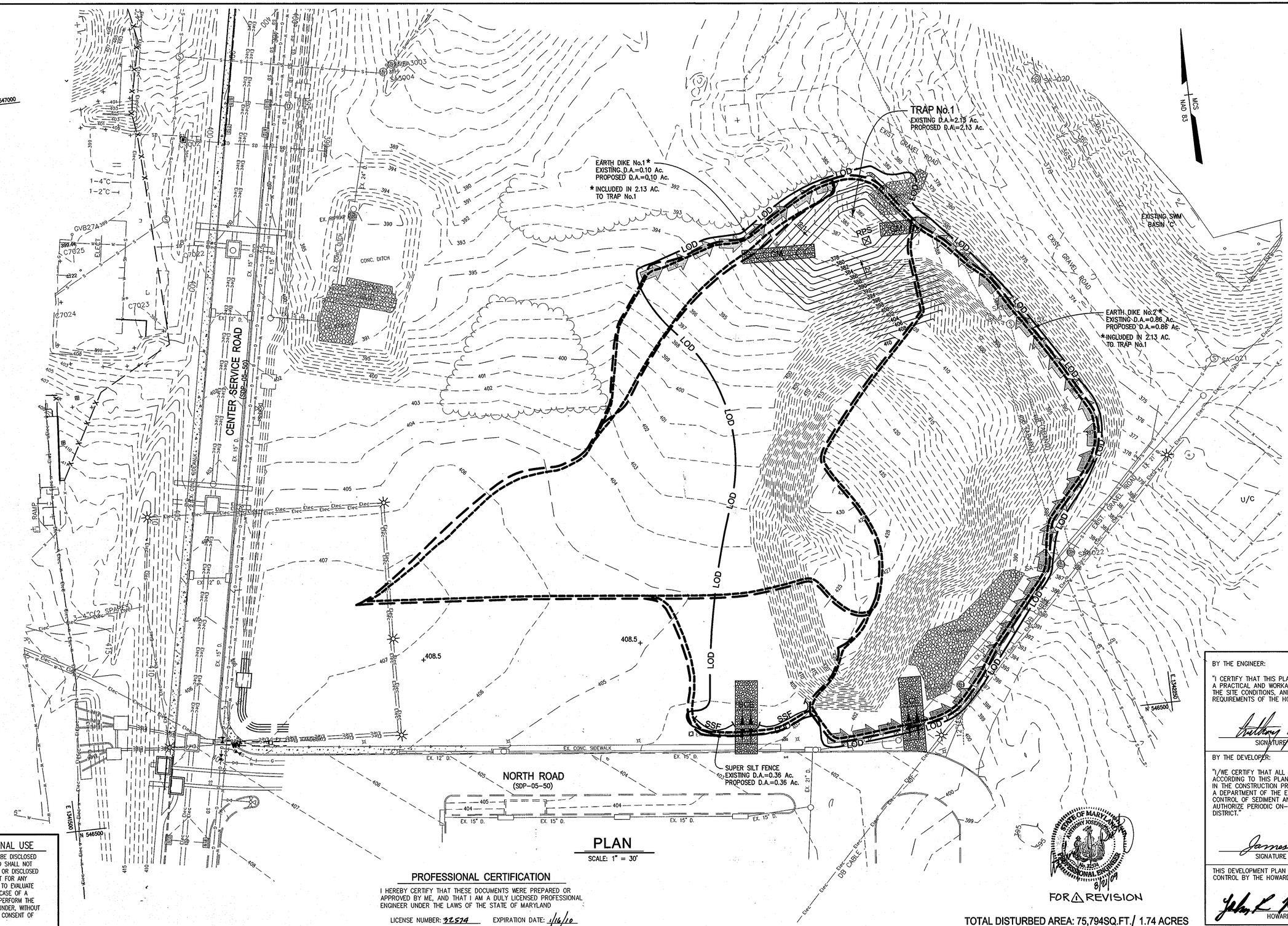
SHEET 10 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(ESC2) CGS ESC DAM.dwg, 2/15/2008 3:32:01 PM, msmith



PLAN

SCALE: 1" = 30'

LEGEND

EX. MINOR CONTOUR	391
EX. MAJOR CONTOUR	390
EX. SPOT ELEVATION	× 387.6
EX. FIRE HYDRANT	
EX. STORM DRAIN	SD
EX. WATER LINE	W W
EX. SANITARY SEWER	S S
EX. ELECTRIC LINE	Elec
EX. COMMUNICATIONS LINE	
EX. MANHOLE	
EX. INLET	
EX. TREE LINE	
EX. BUILDING	
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
EX. CONCRETE SIDEWALK	
EX. FENCE	X X
EX. WALL	
EX. CLEANOUT	
EX. LIGHT STANDARD	
EX. BUSH	
EX. TREE	
EX. PIPE BOLLARD	
EX. UTILITY POLE	
PROP. MINOR CONTOUR	379
PROP. MAJOR CONTOUR	380
PROP. SPOT ELEVATION	+385.58
PROP. CURB & GUTTER	
PROP. SILT FENCE	SF
PROP. SUPER SILT FENCE	SSF
PROP. LIMIT OF DISTURBANCE	LOD
PROP. EARTH DIKE	
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE
EXISTING DRAINAGE AREA	
PROPOSED DRAINAGE AREA	
LIGHT FIXTURES	

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 2/21/08

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — DATE 2.15.08

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

HOWARD S.C.D. — DATE 3/18/03

FOR ⚠ REVISION

TOTAL DISTURBED AREA: 75,794SQ.FT./ 1.74 ACRES

JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED TO A THIRD PARTY AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF JHU/APL.

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LICENSE NUMBER: 32574 EXPIRATION DATE: 7/16/10

STATE OF MARYLAND — ANTHONY JOSEPH PITTA — No. 32574 — PROFESSIONAL ENGINEER — 6/19/08

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/17/08

Chief, Division of Land Development — Date 3/19/08

Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND — ANTHONY JOSEPH PITTA — No. 32574 — PROFESSIONAL ENGINEER

DESIGN BY:	A.J.D.		
DRAWN BY:	M.S.S.		
CHECKED BY:	A.J.D.		
DATE:	FEB. 15, 2008		
RDT	⚠	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	5-18-09
BY	NO.	REVISION	DATE

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

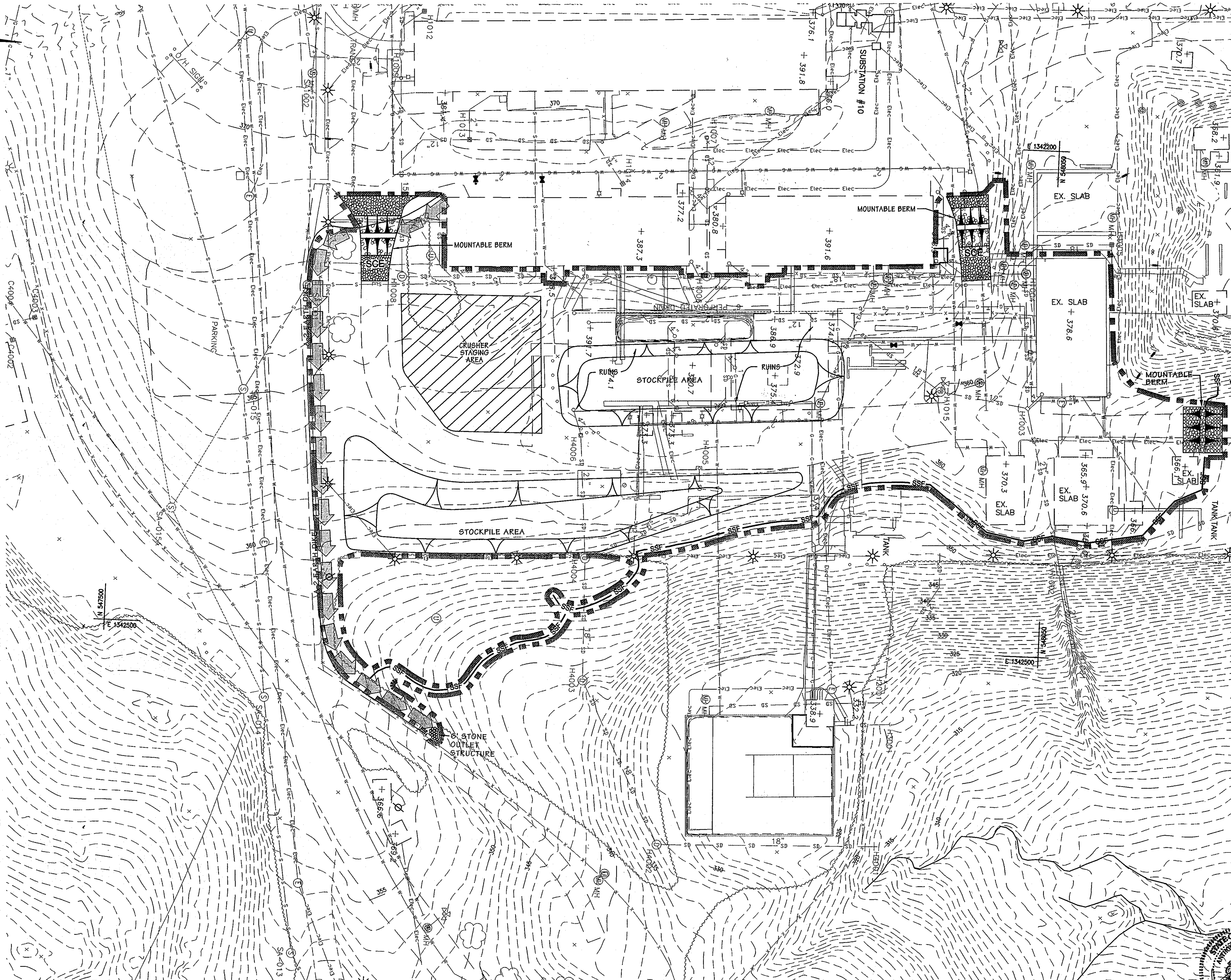
EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP
"CENTRAL GREEN, PHASE 2" - BORROW AREA
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 11 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(ESC6) SLA ESC DAM.dwg, 2/15/2008 3:32:54 PM, msmith



LEGEND

- EX. MINOR CONTOUR — 391
- EX. MAJOR CONTOUR — 390
- EX. SPOT ELEVATION — × 387.6
- EX. FIRE HYDRANT
- EX. STORM DRAIN — SD
- EX. WATER LINE — W
- EX. SANITARY SEWER — S
- EX. ELECTRIC LINE — Elec
- EX. COMMUNICATIONS LINE
- EX. MANHOLE
- EX. INLET
- EX. TREE LINE
- EX. BUILDING
- EX. CURB AND GUTTER
- EX. BITUMINOUS PAVING
- EX. CONCRETE SIDEWALK
- EX. FENCE
- EX. WALL
- EX. CLEANOUT — CO
- EX. LIGHT STANDARD
- EX. BUSH
- EX. TREE
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- PROP. MINOR CONTOUR — 379
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- PROP. SILT FENCE — SF
- PROP. SUPER SILT FENCE — SSF
- PROP. LIMIT OF DISTURBANCE
- PROP. EARTH DIKE
- PROP. STABILIZED CONSTRUCTION ENTRANCE — SCE
- MOUNTABLE BERM
- PROP. CONSTRUCTION FENCE — × ×

BY THE ENGINEER:

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Anthony J. Dietz — SIGNATURE OF ENGINEER — 2/21/08 DATE

BY THE DEVELOPER:

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James E. Loesch — SIGNATURE OF DEVELOPER — 2.15.08 DATE

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

John R Robertson — HOWARD S.C.D. — 3/13/08 DATE

STATE OF MARYLAND — ANTHONY JOSEPH DIETZ — No. 32574 — PROFESSIONAL ENGINEER — 8/21/09

FOR ⚠1 REVISION

JHU/APL INTERNAL USE

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LICENSE NUMBER: 32574 EXPIRATION DATE: 1/16/10

NOTE:
THERE ARE NO DRAIANGE AREAS ON THIS SITE GREATER THAN 2.0 ACRES. THEREFORE INTERIM STORMWATER MANAGEMENT IS NOT REQUIRED.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/17/08

Chief, Division of Land Development — Date 3/19/08

Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND — ANTHONY JOSEPH DIETZ — No. 32574 — PROFESSIONAL ENGINEER

DESIGN BY: A.J.D.
DRAWN BY: M.S.S.
CHECKED BY: A.J.D
DATE: FEB. 15, 2008

BY	NO.	REVISION	DATE
RDT	⚠1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

EROSION AND SEDIMENT CONTROL PLAN
STOCKPILE PRL SITE AREA

"CENTRAL GREEN, PHASE 2"

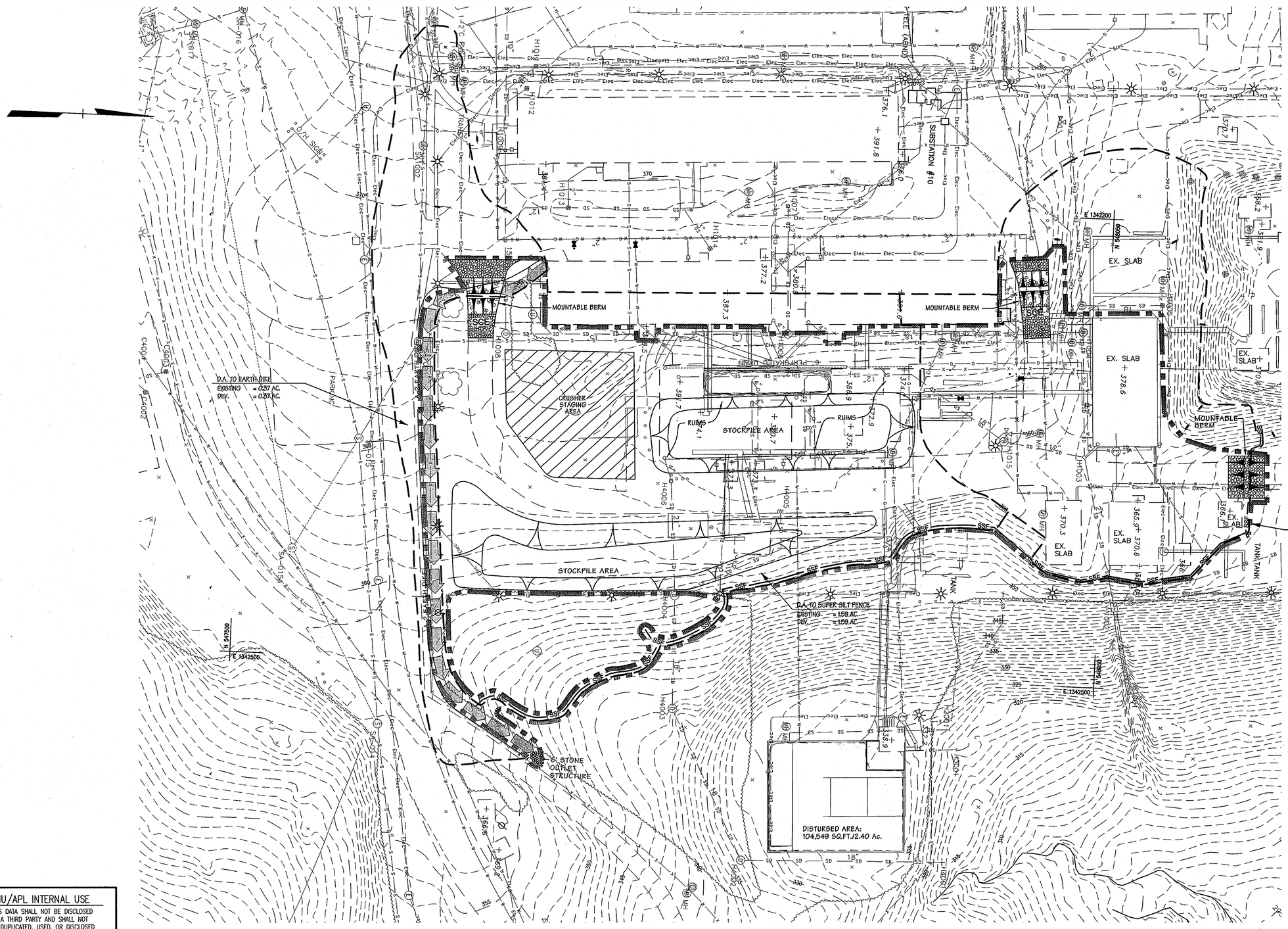
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 12 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.26\Cadd\(Central Green, Phase 2) ESC Stockpile PRLSite Area.dwg, 2/15/2008 3:35:13 PM, msmith.



LEGEND

EX. MINOR CONTOUR	391
EX. MAJOR CONTOUR	390
EX. SPOT ELEVATION	× 387.6
EX. FIRE HYDRANT	
EX. STORM DRAIN	SD
EX. WATER LINE	W W
EX. SANITARY SEWER	S S
EX. ELECTRIC LINE	Elec
EX. COMMUNICATIONS LINE	
EX. MANHOLE	○
EX. INLET	□
EX. TREE LINE	
EX. BUILDING	
EX. CURB AND GUTTER	
EX. BITUMINOUS PAVING	
EX. CONCRETE SIDEWALK	
EX. FENCE	X X
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PROP. LIMIT OF DISTURBANCE	
PROP. EARTH DIKE	
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE
MOUNTABLE BERM	
PROP. CONSTRUCTION FENCE	×—×—×

STATE OF MARYLAND
ANTHONY JOSEPH DEL DOTTO
No. 22574
PROFESSIONAL ENGINEER
2/21/08

FOR ⚠ REVISION

BY THE ENGINEER:

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SIGNATURE OF ENGINEER — DATE 2/21/08

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James E. Tesch — SIGNATURE OF DEVELOPER — 2.15.08 DATE

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John R. Robertson — HOWARD S.C.D. — 3/13/08 DATE

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LICENSE NUMBER: 22574 EXPIRATION DATE: 1/16/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/17/08

Chief, Division of Land Development — Date 3/19/08

Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND ANTHONY JOSEPH DEL DOTTO No. 22574 PROFESSIONAL ENGINEER 2/21/08

DESIGN BY:	A.J.D.
DRAWN BY:	M.S.S.
CHECKED BY:	A.J.D.
DATE:	FEB. 15, 2008

BY	NO.	REVISION	DATE
RDT	⚠	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09

THE JOHNS HOPKINS UNIVERSITY
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11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
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EROSION AND SEDIMENT CONTROL
DRAINAGE AREA MAP STOCKPILE PRL SITE AREA
"CENTRAL GREEN, PHASE 2"
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 13 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV2002\22172.12 JHU elctric Vault at Bldg 26\22172.26\Cadd\(Central Green, Phase 2) ESC DAM Stockpile PRLSite Area.dwg, 2/15/2008 3:36:47 PM, msmith

HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES (BORROW & STOOCKPILE AREAS)

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED – APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92,000 LBS/1000 SQ. FT) AND 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.).

2. ACCEPTABLE – APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING – FOR THE PERIODS MARCH 1 – APRIL 30 AND AUGUST 1 – OCTOBER 15, SEED WITH 60 LBS/ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY – JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS/ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 – FEBRUARY 28, PROTECT SITE BY: OPTION 1 – TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION 2 – USE SOD. OPTION 3 – SEED WITH 60 LBS/ACRE KENTUCKY 30 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING – APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

PERMANENT SEEDING NOTES (CENTRAL GREEN)

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. PROVIDE A MINIMUM OF 4" OF SCREENED TOP-SOIL (NO DEBRIS 3/4" OR LARGER)

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED – APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92,000 LBS/1000 SQ. FT) AND 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.).

2. ACCEPTABLE – APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING – FOR THE PERIODS MARCH 1 – MAY 15 AND AUGUST 15 – OCTOBER 15, SEED WITH 125 LBS/ACRE (2.9 LBS/1000 SF) 3-WAY TALL FESCUE MIX & 25 LBS/ACRE (0.6 LBS/1000 SF) OF PERENNIAL RYE GRASS. FOR THE PERIOD MAY 15 – AUGUST 14, SEED WITH 125 LBS/ACRE (2.9 LBS/100 SF) OF 3-WAY TALL FESCUE MIX & 25 LBS/ACRE (0.6 LBS/1000 SF) OF PERENNIAL RYE GRASS. DURING THE PERIOD OF OCTOBER 16-FEBRUARY 28, PROTECT SITE BY: OPTION 1 – TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION 2 – USE SOD. OPTION 3-SEED WITH 125 LBS/ACRE 3-WAY TALL FESCUE MIX AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING – APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION – LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS – APPLY 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

SEEDING – FOR PERIOD MARCH 1 – APRIL 30 FROM AUGUST 15 – OCTOBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 – AUGUST 14, SEED WITH 3 LBS/ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 – FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING – APPLY 1 1/2 TO 2 TONS/ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED WEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

UTILITY NOTES

1. CONTRACTOR SHOULD OPEN THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE) THE TRENCH.
2. PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTUCTION ARE TO BE REPAIRED IMMEDIATELY.

JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED TO A THIRD PARTY AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF JHU/APL.

CENTRAL GREEN

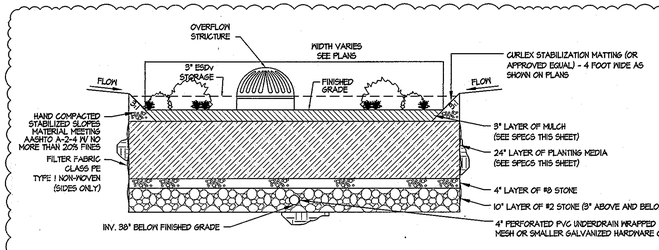
SEQUENCE OF CONSTRUCTION	TIMETABLE
1. OBTAIN ALL REQUIRED PERMITS FROM HOWARD COUNTY.	1 WEEK
2. NOTIFY JAMES LOESCH, PE AT THE APPLIED PHYSICS LABORATORY AT 443-778-5134 AT LEAST 10 DAYS PRIOR TO BEGINNING WORK.	1 DAY
3. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS & LICENSES, GRADING AND SEDIMENT CONTROL INSPECTIONS AT 410-313-1855, AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.	1 DAY
4. INSTALL PERIMETER SECURITY FENCE, SILT FENCE/SUPER SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE.	1 WEEK
5. RAZE BUILDINGS 14, 16, 38, 56, 28, 54, 113 53 AND 41. CONTRACTOR TO COORDINATE WITH JHU-APL FACILITIES PERSONNEL FOR TERMINATION OF UTILITY SERVICES AND COMMUNICATION LINES.	1 MONTH
6. CONSTRUCT NEW 4" SANITARY SEWER FOR BUILDING NUMBER 3 FROM EXISTING MANHOLE TO SMH No. 1. SEVER EXISTING SERVICE AT SMH No. 1.	2 WEEKS
7. REMOVE BUILDING NUMBER 16 SLAB.	1 WEEK
8. REMOVE REMAINING BUILDING SLABS AND GRADE SITE. PLACE A MINIMUM OF 36" OF EARTH FILL AGAINST REMAINING RETAINING WALLS ON EAST SIDE OF DISTURBED AREA. CONSTRUCT NEW TUNNEL ENTRANCE AND RETAINING WALLS AT SUBSTATION IN SOUTHEAST CORNER OF THE SITE	1 MONTH
9. REMOVE OR ABANDON IN PLACE THOSE STORM DRAINS, WATER AND SEWER LINES DESIGNATED AS SUCH ON THE SITE DEVELOPMENT PLAN.	2 WEEKS
10. FINE GRADE ROAD.	1 WEEK
11. INSTALL NEW STORM DRAINS AND INLETS. PROVIDE INLET PROTECTION. INSTALL SUPER SILT FENCE AROUND INLET PROTECTION AS SHOWN.	2 WEEKS
12. INSTALL ROAD SUBBASE AND FOR ANY NEW PAVING ALONG PERIMETER OF SITE.	2 DAYS
13. PAVE ALL ROAD SURFACES AND INSTALL 6" BITUMINOUS CONCRETE CURB.	1 WEEK
14. INSTALL A.D.A. COMPLIANT MULCH WALKWAY.	2 DAYS
15. FINE GRADE AND STABILIZE ALL REMAINING NON-PAVED SURFACES.	2 DAYS
16. REMOVE SEDIMENT CONTROLS, FINE GRADE AND STABILIZE THOSE AREAS.	1 WEEK

BORROW AREA

SEQUENCE OF CONSTRUCTION	TIMETABLE
1. OBTAIN ALL REQUIRED PERMITS FROM HOWARD COUNTY.	1 WEEK
2. NOTIFY JAMES LOESCH, PE AT THE APPLIED PHYSICS LABORATORY AT 443-778-5134 AT LEAST 10 DAYS PRIOR TO BEGINNING WORK.	1 DAY
3. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS & LICENSES, GRADING AND SEDIMENT CONTROL INSPECTIONS AT 410-313-1855, AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.	1 DAY
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE. REBUILD EXISTING STONE OUTLET SEDIMENT TRAP NUMBER ONE. INSTALL EARTH DIKES, SILT FENCE AND SUPER SILT FENCE.	1 WEEK
5. BEGIN GRADING IS CONJUNCTION WITH OPERATIONS AT CENTRAL GREEN.	5 MONTHS
6. FINE GRADE AND STABILIZE ALL AREAS.	2 DAYS
7. SEDIMENT CONTROLS TO REMAIN IN PLACE FOR FUTURE STOCKPILE NEEDS.	

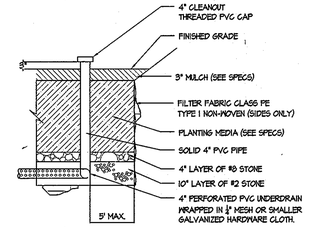
STOCKPILE AREA

SEQUENCE OF CONSTRUCTION	TIMETABLE
1. OBTAIN ALL REQUIRED PERMITS FROM HOWARD COUNTY.	1 WEEK
2. NOTIFY JAMES LOESCH, PE AT THE APPLIED PHYSICS LABORATORY AT 443-778-5134 AT LEAST 10 DAYS PRIOR TO BEGINNING WORK.	1 DAY
3. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS & LICENSES, GRADING AND SEDIMENT CONTROL INSPECTIONS AT 410-313-1855, AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.	1 DAY
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE, EARTH DIVERSION DIKE, MOUNTABLE BERM, SILT FENCE, SUPERSILT FENCE, AND STONE OUTLET STRUCTURE.	1 WEEK
5. CLEAR AND GRUB STOCKPILE AREAS AND DEPLOY STONE/ROCK CRUSHER ON-SITE.	2 WEEKS
6. BEGIN STONE/ROCK CRUSHING OF CONCRETE FROM CENTRAL GREEN SITE AND STOCKPILE RECYCLED CONCRETE ON-SITE IN DESIGNATED STOCKPILE AREAS.	5 MONTH
7. FINE GRADE AND STABILIZE STOCKPILE	2 DAYS
8. SEDIMENT CONTROLS TO REMAIN IN PLACE FOR FUTURE STOCKPILE NEEDS.	



1 MICRO-BIORETENTION

NOT TO SCALE

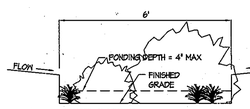


2 CAPPED CLEANOUT

NOT TO SCALE

MICRO-BIORETENTION SUMMARY TABLE

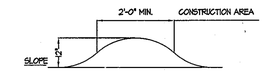
PROPOSED SWM FACILITY	SURFACE ELEVATION	BOTTOM ELEVATION	UNDERDRAIN ELEVATION	OVERFLOW ELEVATION
	FT	FT	FT	FT
DA-2 MICRO-BIORETENTION	413.0	409.6	409.83	413.25
DA-3 MICRO-BIORETENTION	416.5	413.1	413.33	416.75



CHANNEL SLOPE = 1%
Qa = 1.0 CFS
DEPTH OF FLOW AT 10 YR STORM = 4.1"
MAX. VELOCITY AT ESDv = 0.44 FPS

3 GRASS SWALE

NOT TO SCALE



4 CLEAN WATER DIVERSION

NOT TO SCALE

TRAP TABLE

TRAP NUMBER		1
TRAP TYPE		ST II
EXISTING DRAINAGE AREA: ACRES		2.13
INTERIM DRAINAGE AREA: ACRES		N/A
PROPOSED DRAINAGE AREA: ACRES		2.13
STORAGE REQUIRED: CUBIC FEET	WET	3,834
	DRY	3,834
	TOTAL	7,668
STORAGE PROVIDED: CUBIC FEET	WET	4,935
	DRY	5,160
	TOTAL	10,095
EXISTING GROUND ELEVATION		383.9
TOP EMBANKMENT ELEVATION		385.0
WEIR CREST OR RISER CREST* ELEV.		384.0
WET STORAGE ELEVATION		381.1
CLEANOUT ELEVATION		379.5
BOTTOM ELEVATION		378.0
DEPTH OF CHANNEL (a)		1.0
OUTLET WIDTH (b)		10'
BOTTOM DIMENSION		28' x 52' (AVG.)
TRAP SIDESLOPES		2:1
TRAP DEPTH	WET	3.1'
	DRY	2.9'
	TOTAL	6.0'
BARREL DIAMETER		N/A
RISER DIAMETER		N/A
WET STORAGE ZONE ELEVATION		381.1-378.0
DRY STORAGE ZONE ELEVATION		384.0-381.1

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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

STATE OF MARYLAND ANTHONY JOSEPH DISCH 32574 PROFESSIONAL ENGINEER

3-14-2012

THIS STAMP AND SIGNATURE APPLY ONLY TO REVISION 3.

STATE OF MARYLAND ANTHONY JOSEPH DISCH 32574 PROFESSIONAL ENGINEER

8/21/09

FOR 2 REVISION

3 STORMWATER MANAGEMENT & EROSION & SEDIMENT CONTROL DETAILS FOR BUILDING 17 PLAZA

SEQUENCE OF CONSTRUCTION

1. Assure that Grading Permit and all other necessary permits are obtained from Owner.
2. Notify Howard County Department of Public Works at least 48 hours before start of work. Notify the Howard County Bureau of Engineering Construction Inspection Division prior to start of any land disturbances.
3. The Contractor shall notify JHUAPL Construction Manager, Greg Dranning at 443-250-4211 at least 48 hours prior to any work on site including utilities and sediment control installation.
4. The Contractor shall notify their Inspection Engineer at least 5 business days prior to beginning work so that the SWM as-builts construction inspection may be completed.
5. With the approval of the sediment control inspector, clear and grub for and install sediment controls including super silt fence, inlet protection, tree protection fencing, and bituminous diversion berm.
6. Notify Howard County sediment control inspector upon completion of the installation and receive approval to begin construction. The Contractor shall provide access to Building 17 throughout the construction process to the south west side doors or south doors in cooperation with APL. Field adjustments to the sediment controls to provide access may be necessary and should be reviewed with the Howard County sediment control inspector.
7. Remove existing sidewalks, existing roadway, existing patio, and existing storm drain inlets and drain pipe as shown on the demolition plan.
8. Do not disturb any utilities to remain. Field adjustments to the temporary bituminous diversion berm may be necessary as field conditions dictate to provide access to building 17 and the contractor should make adjustments as necessary with the consultation with the Howard County Inspector.
9. Install storm drain structures and connecting pipes. Block up inlet/manholes openings within structures that will remain. Install inlet protection on new inlets.
10. Bring proposed plaza area to subgrade level. Construct seat walls and plaza hardscape and paving. Construct proposed walkways.
11. Do not begin installation of micro-bioretention facilities within DA-2 or 3 shown on SWM plans until areas draining to the facilities are stabilized. Once these areas are stabilized, construction micro-bioretention facilities per the approved Stormwater Management Plans.
12. Fine grade all remaining areas.
13. Provide landscaping installation.
14. Permanently stabilize all remaining areas within the LOD according to the stabilization notes and the specifications.
15. Upon stabilization of the site with established vegetation and with the permission of the sediment control inspector, remove sediment control measures and stabilize those areas disturbed by this process.

OPERATION AND MAINTENANCE SCHEDULE

MICRO-BIORETENTION (M-6)

1. Inspection shall be performed during not weather to determine if the facility is functioning properly. Visual inspection of all components shall be completed by the Owner. All drains shall be opened by the Owner once a year. The Owner shall keep notes of each inspection.
2. Annual maintenance of plant material, mulch layer and soil layer is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning.
3. Debris and litter shall be removed as a regular operation and as needed. All appurtenances shall be kept free of trash.
4. Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead and diseased vegetation considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires. Watering of plant material may be required during prolonged dry periods.
5. Mulch shall be inspected each spring. Replace mulch annually where practice treats areas with high concentrations of heavy metals. Otherwise, replace top 2-3 inches of mulch as necessary.
6. Soil erosion to be addressed on an as needed basis, with a minimum of once per month and after heavy storm events.
7. Remove accumulated sediment from the surface of the filter bed when accumulation exceeds one inch.
8. When water ponds for more than 48 hours, the top few inches of filter media should be removed and replaced.
9. All required maintenance shall be performed by the Owner or the Owner's representative at the Owner's expense.

GRASS SWALES (M-8)

1. Regular mowing (at least bi-annually) is required to reduce competition from weeds and woody plants and shrubs.
2. Inspect swales annually, to assess slope integrity, vegetative health, soil stability, compaction, erosion, ponding, and sedimentation. Remove sediment, debris, or obstructions as needed. Repair and stabilize slopes where needed.
3. Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead and diseased vegetation considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires. Watering of plant material may be required during prolonged dry periods.

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 2/21/08

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — DATE 2.15.08

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

HOWARD S.C.D. — DATE 3/13/08

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/12/08

Chief, Division of Land Development — Date 3/19/08

Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND ANTHONY JOSEPH DISCH 32574 PROFESSIONAL ENGINEER

DESIGN BY: A.J.D.
DRAWN BY: M.S.S.
CHECKED BY: A.J.D.
DATE: FEB. 15, 2008

BY	NO.	REVISION	DATE
AFE	3	BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEHIND BUILDING 17 AND CENTER SERVICE LOT	2/13/12
RDT	1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	5-18-09

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

EROSION & SEDIMENT CONTROL SPECIFICATIONS and NOTES
"CENTRAL GREEN, PHASE 2"
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 14 OF 16 (RESTRICTED FILE)

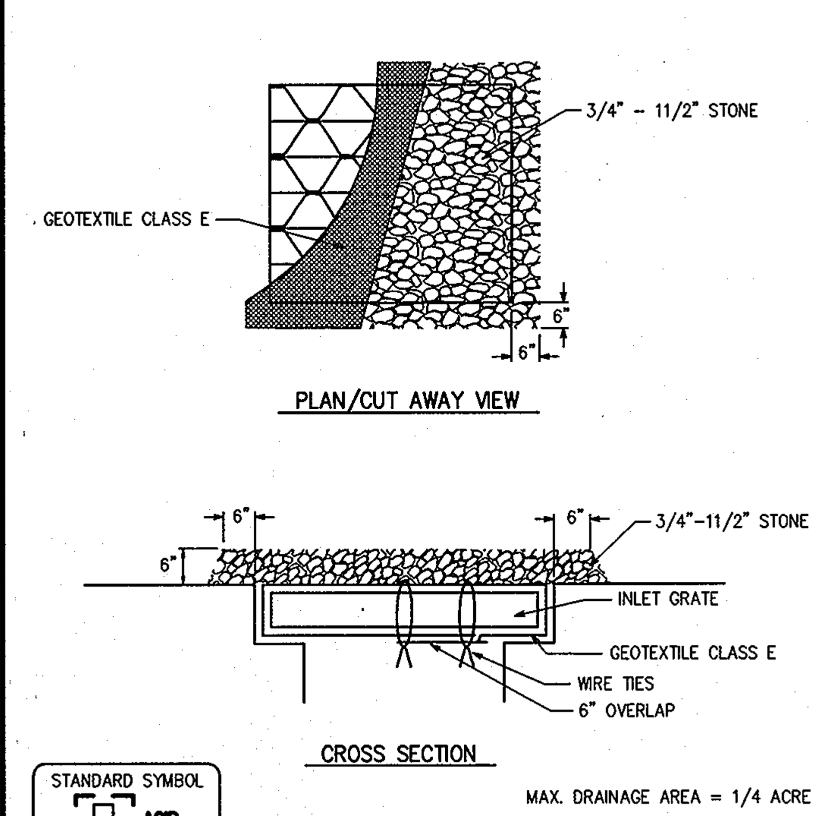
C.E.I. PROJECT NUMBER 22172.25

SCALE: AS SHOWN

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(ESC3) ESC Specs.dwg, 2/15/2008 3:37:43 PM, msmith

DETAIL 23B – AT GRADE INLET PROTECTION

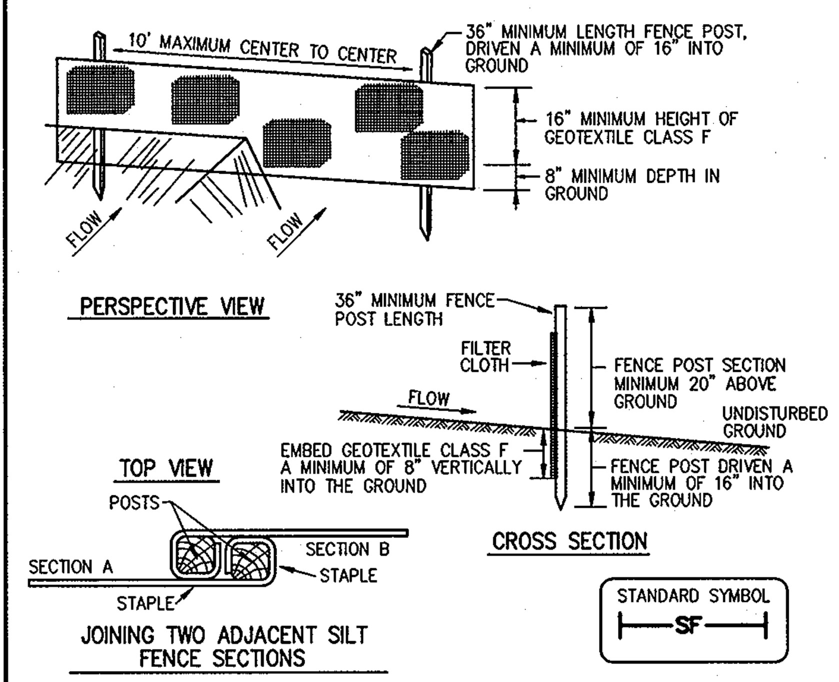


CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
2. PLACE 3/4" TO 11/2" STONE, 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 16 – 5A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 – SILT FENCE



CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 11/2" X 11/2" SQUARE (MINIMUM) CUT, OR 13/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POND PER LINEAR FOOT.
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL FT²/ MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

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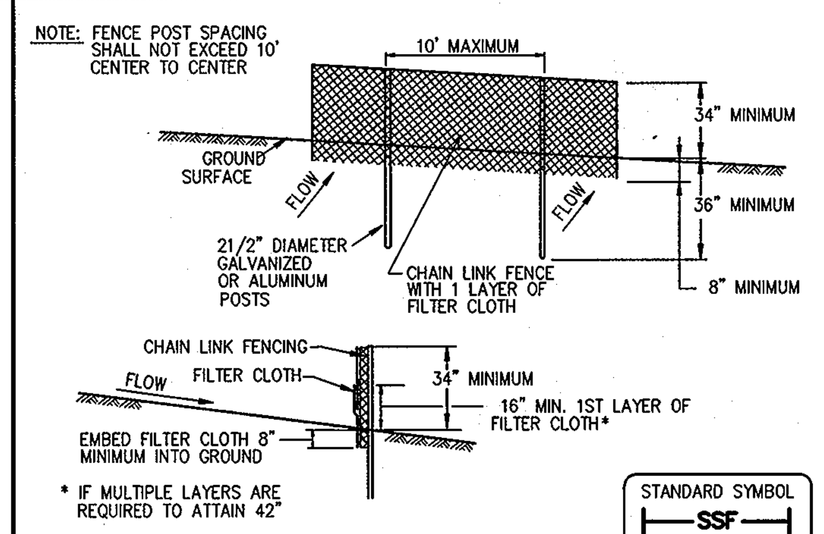
DETAIL 33 – SUPER SILT FENCE



CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT
7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL FT²/ MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

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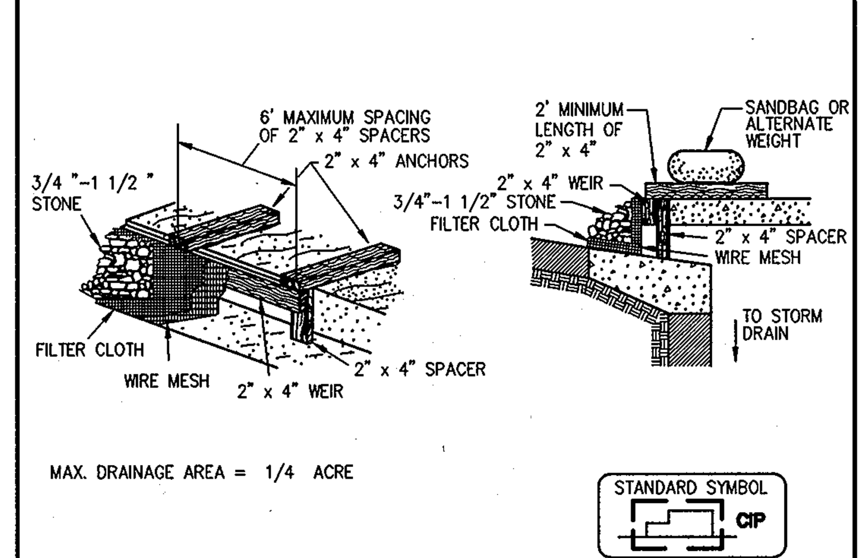
DETAIL 23C – CURB INLET PROTECTION (COG OR COS INLETS)

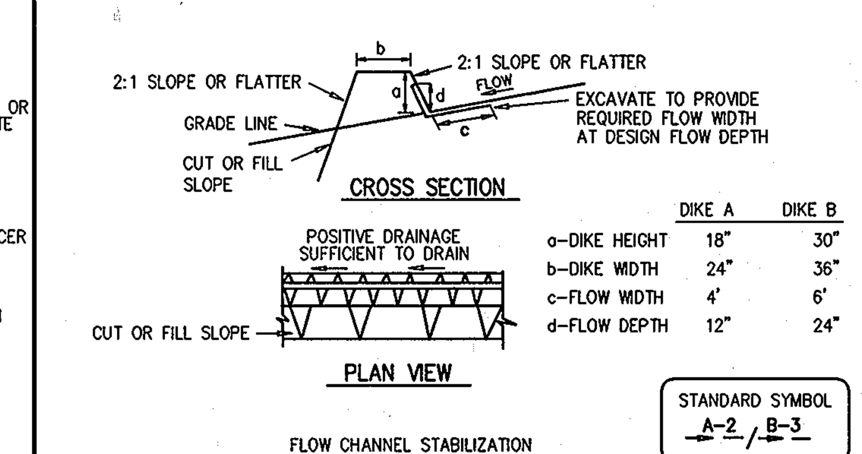


CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" X 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" X 4" WEIR.
3. SECURELY NAIL THE 2" x 4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2' LENGTHS OF 2" X 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" x 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE 1/2 " x 1/2 " WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4" x 1-1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW TO THE INLET.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 16 – 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 – EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

1. SEED AND COVER WITH STRAW MULCH.
2. SEED AND COVER WITH EROSION CONTROL MATTING OR LINE WITH SOD.
3. 4" – 7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.
2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.
5. THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.
8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

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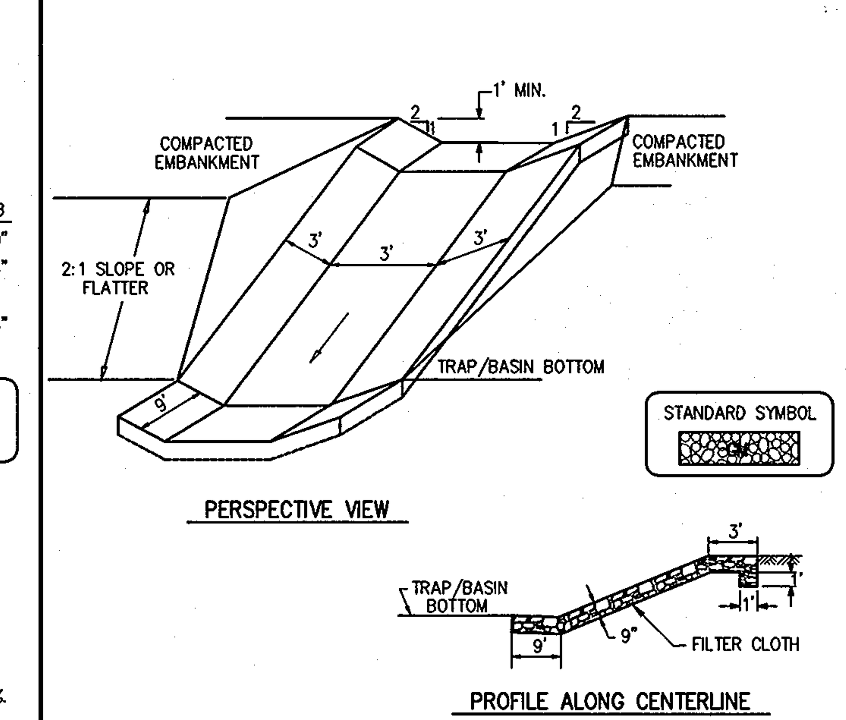
DETAIL 6 – GABION INFLOW PROTECTION

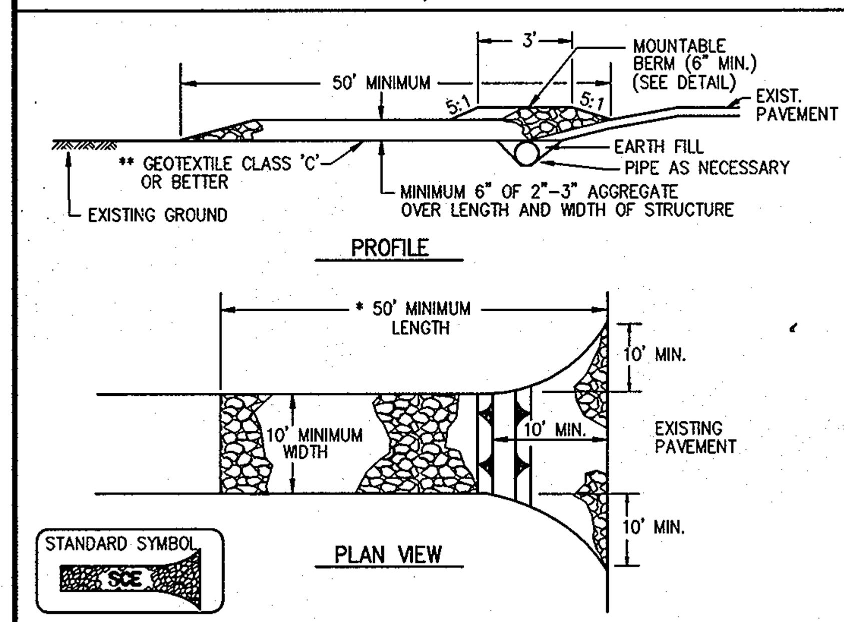


CONSTRUCTION SPECIFICATIONS

1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 9' x 3' x 9" GABION BASKETS FORMING A TRAPEZOIDAL CROSS SECTION 1' DEEP, WITH 2:1 SIDE SLOPES, AND A 3' BOTTOM WIDTH.
2. GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS.
3. THE STONE USED TO FILL THE GABION BASKETS SHALL BE 4" – 7".
4. GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
5. GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT ON SLOPES STEEPER THAN 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	MODIFIED B – 7 – 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE

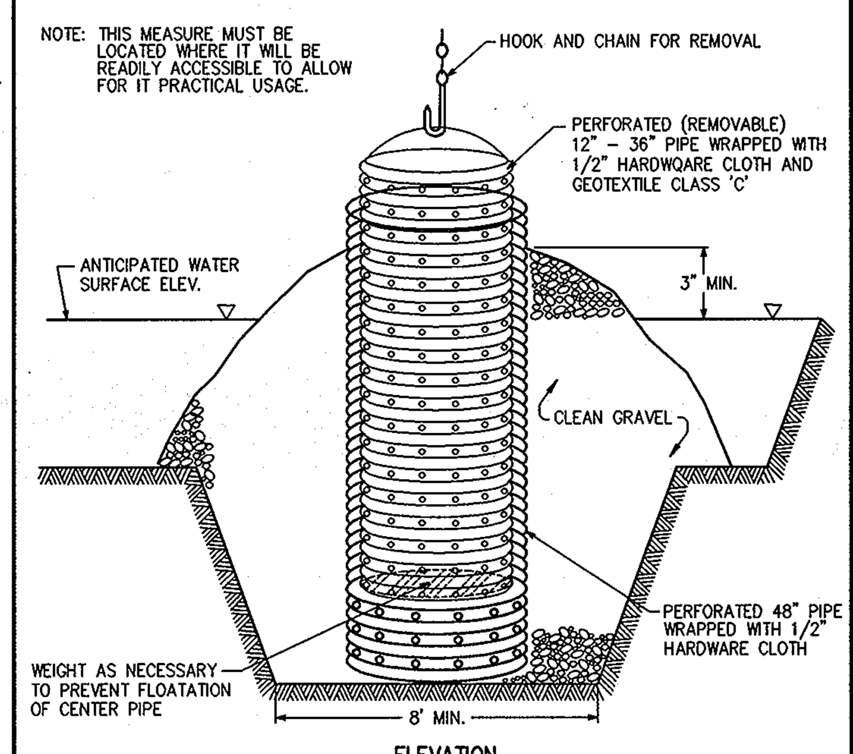


CONSTRUCTION SPECIFICATIONS

1. LENGTH – MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT).
2. WIDTH – 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE – CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
6. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 20A – REMOVABLE PUMPING STATION



CONSTRUCTION SPECIFICATIONS

1. THE OUTER PIPE SHOULD BE 48" DIA. OR SHALL, IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE 1/2" x 6" SLITS OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS C.
4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN.

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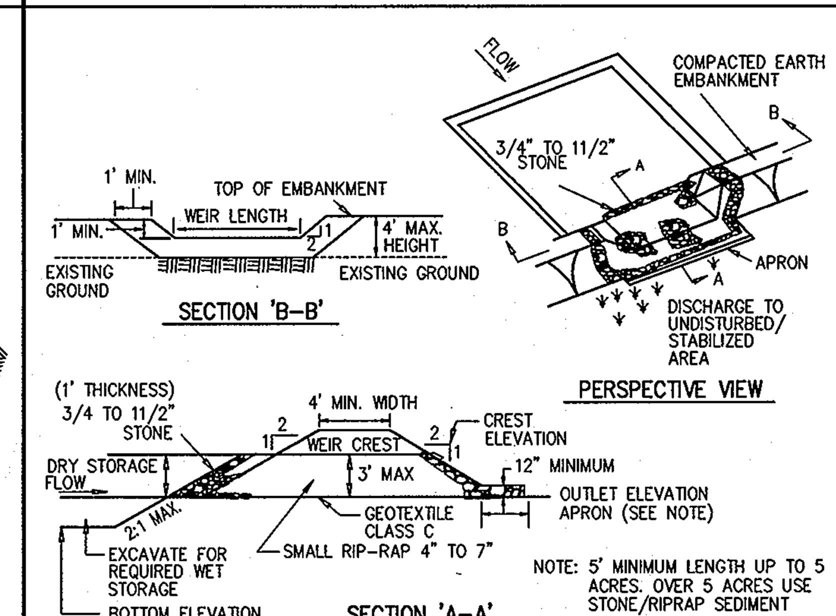
DETAIL 9 – STONE OUTLET SEDIMENT TRAP – ST II



CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIP-RAP 4" TO 7" IN SIZE WITH A 1' THICK LAYER OF 3/4" TO 11/2" WASHED AGGREGATE PLACED ON THE UPSTREAM FACE OF THE OUTLET. STONE FACING SHALL BE AS NECESSARY TO PREVENT CLOGGING. GEOTEXTILE CLASS C MAY BE SUBSTITUTED FOR THE STONE FACING BY PLACING IT ON THE INSIDE FACE OF THE STONE OUTLET.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

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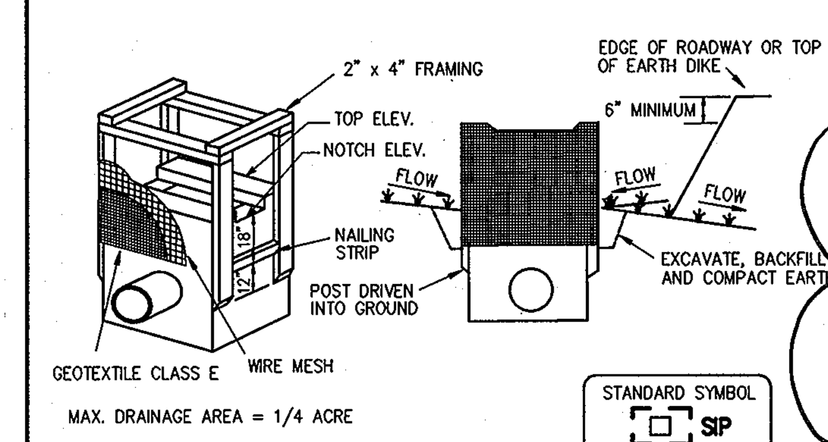
DETAIL 23A – STANDARD INLET PROTECTION

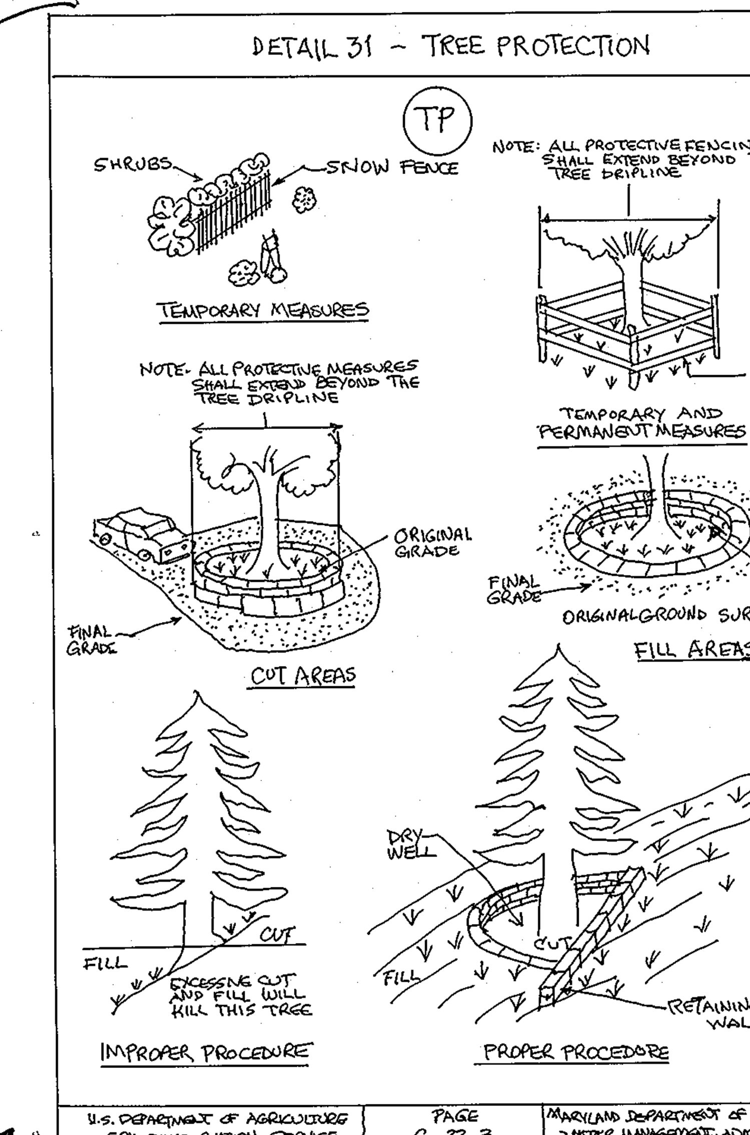


CONSTRUCTION SPECIFICATIONS

1. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION.
2. DRIVE THE 2" x 4" CONSTRUCTION GRADE LUMBER POSTS 1' INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2" x 4" FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL 23A. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.
3. STRETCH THE 1/2" x 1/2" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. THE ENDS MUST MEET AND OVERLAP AT A POST.
4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTIXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED DOWN.
5. BACKFILL AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
6. IF THE INLET IS NOT IN A SUMP, CONSTRUCT A COMPACTED EARTH DIKE ACROSS THE DITCH LINE DIRECTLY BELOW IT. THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.
7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 16 – 5	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

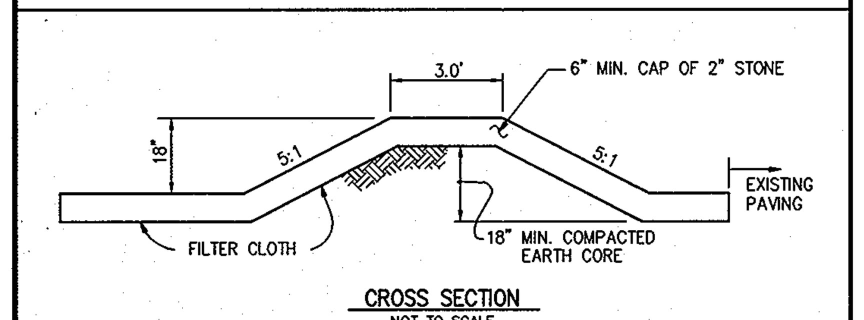
DETAIL 31 – TREE PROTECTION



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G-23-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

△2

MOUNTABLE BERM DETAIL



For Revision △2

FOR △1 REVISION

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 2/21/08

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

James E. Loesch — SIGNATURE OF DEVELOPER — DATE 2.15.08

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

HOWARD S.C.D. — DATE 3/13/08

JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED TO A THIRD PARTY AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF JHU/APL.

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 NUMBER: 32574 EXPIRATION DATE: 1/16/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 3/17/08
Chief, Division of Land Development — Date 3/19/08
Director — Date 3/19/08

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: A.J.D.				
DRAWN BY: M.S.S.				
CHECKED BY: A.J.D.	REB	△2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9.	3/10/10
DATE: FEB. 15, 2008	RDT	△1	ADD SUBSTATION CONSOLIDATION & DUCT BANKS	05-18-09
	BY	NO.	REVISION	DATE

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20723-6099
443-778-5134

EROSION & SEDIMENT CONTROL DETAILS
"CENTRAL GREEN, PHASE 2"

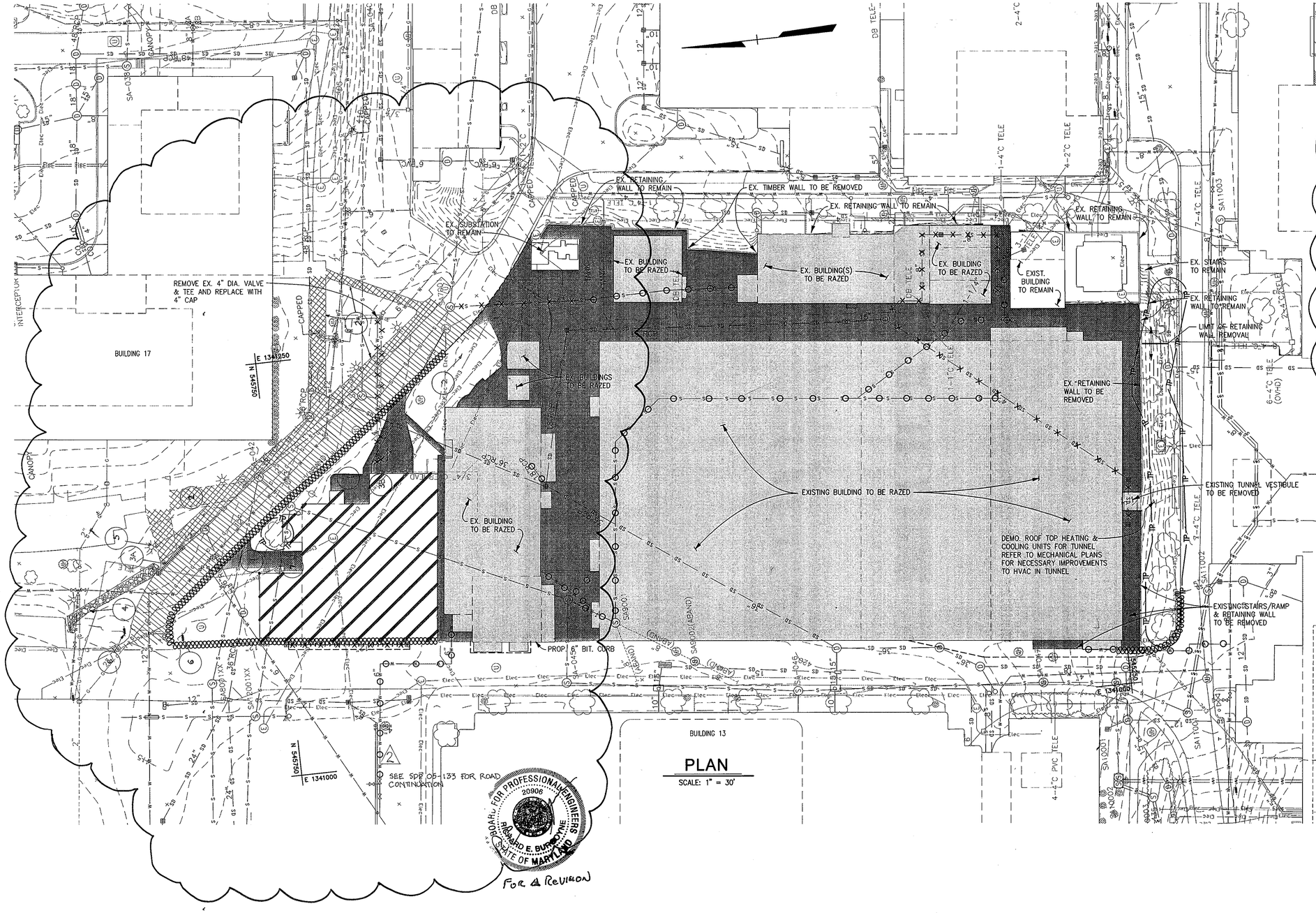
JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 15 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: AS SHOWN

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(ESC4) ESC Details.dwg, 2/15/2008 3:38:22 PM, msmith



PLAN

SCALE: 1" = 30'

DEMOLITION LEGEND

1	REMOVE EX. ROAD AND BASE MATERIAL
2	REMOVE SIDEWALK AND BASE MATERIAL
3	REMOVE UTILITIES
4	REMOVE RIPRAP
5	RELOCATE EXISTING LIGHTS
6	RELOCATE SIGNS
7	TREE PROTECTION
	LIMITS OF DISTURBANCE

DEMOLITION NOTES

3A	REMOVE EXISTING STORM SEWER INLETS AND STORM SEWER LINES
3B	REMOVE EXISTING WATER LINE, GAS LINE, ELECTRIC LINE, AND STORM SEWER INLET

LEGEND

EX. MINOR CONTOUR	391	EX. LIGHT STANDARD	
EX. MAJOR CONTOUR	390	EX. BUSH	
EX. SPOT ELEVATION	× 387.6	EX. TREE	
EX. FIRE HYDRANT		EX. PIPE BOLLARD	
EX. STORM DRAIN	SD	EX. UTILITY POLE	
EX. WATER LINE	W W	EX. UTILITY TO BE REMOVED	X X SD X X
EX. SANITARY SEWER	S S	EX. UTILITY TO BE ABANDONED IN PLACE	SD
EX. ELECTRIC LINE	Elec	EX. RETAINING WALL TO REMAIN	
EX. COMMUNICATIONS LINE		PROP. MINOR CONTOUR	379
EX. MANHOLE		PROP. MAJOR CONTOUR	380
EX. INLET		PROP. SPOT ELEVATION	+ 385.58
EX. TREE LINE		PROP. CURB & GUTTER	
EX. BUILDING		EX. BUILDING TO BE RAZED	
EX. CURB AND GUTTER		EX. PAVING & SIDEWALKS TO BE REMOVED	
EX. BITUMINOUS PAVING		EX. FOUNDATION TO BE REMOVED	
EX. CONCRETE SIDEWALK		TREE PROTECTION FENCE	TP TP
EX. FENCE	X X		
EX. WALL			
EX. CLEANOUT	CO		
SAWCUT EX. PAVING			
EX. CURB AND GUTTER TO BE REMOVED			

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 NUMBER: 21574 EXPIRATION DATE: 1/16/10

BOARD FOR PROFESSIONAL ENGINEERS — RICHARD E. BURDETTE — 20906 — STATE OF MARYLAND

FOR ⚠2 REVISION

STATE OF MARYLAND — ANTHONY JOSEPH MOSCATELLO — NO. 21574 — PROFESSIONAL ENGINEER

FOR ⚠2 REVISION

JHU/APL INTERNAL USE

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

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Phone: 443.589.2400 Fax: 443.589.2401

STATE OF MARYLAND — ANTHONY JOSEPH MOSCATELLO — NO. 21574 — PROFESSIONAL ENGINEER

DESIGN BY: A.J.D.			
DRAWN BY: M.S.S.			
CHECKED BY: A.J.D.	REB	⚠2	SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9 — 3/10/10
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THE JOHNS HOPKINS UNIVERSITY
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DEMOLITION PLAN
"CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY
TAX MAP: 41 GRID: 16 PARCEL: 123
ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND
SHEET 16 OF 16 (RESTRICTED FILE)

C.E.I. PROJECT NUMBER 22172.25

SCALE: 1"=30'

SDP-08-061

O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(DM1) CGS Demo Plan.dwg, 2/15/2008 3:39:19 PM, msmith