

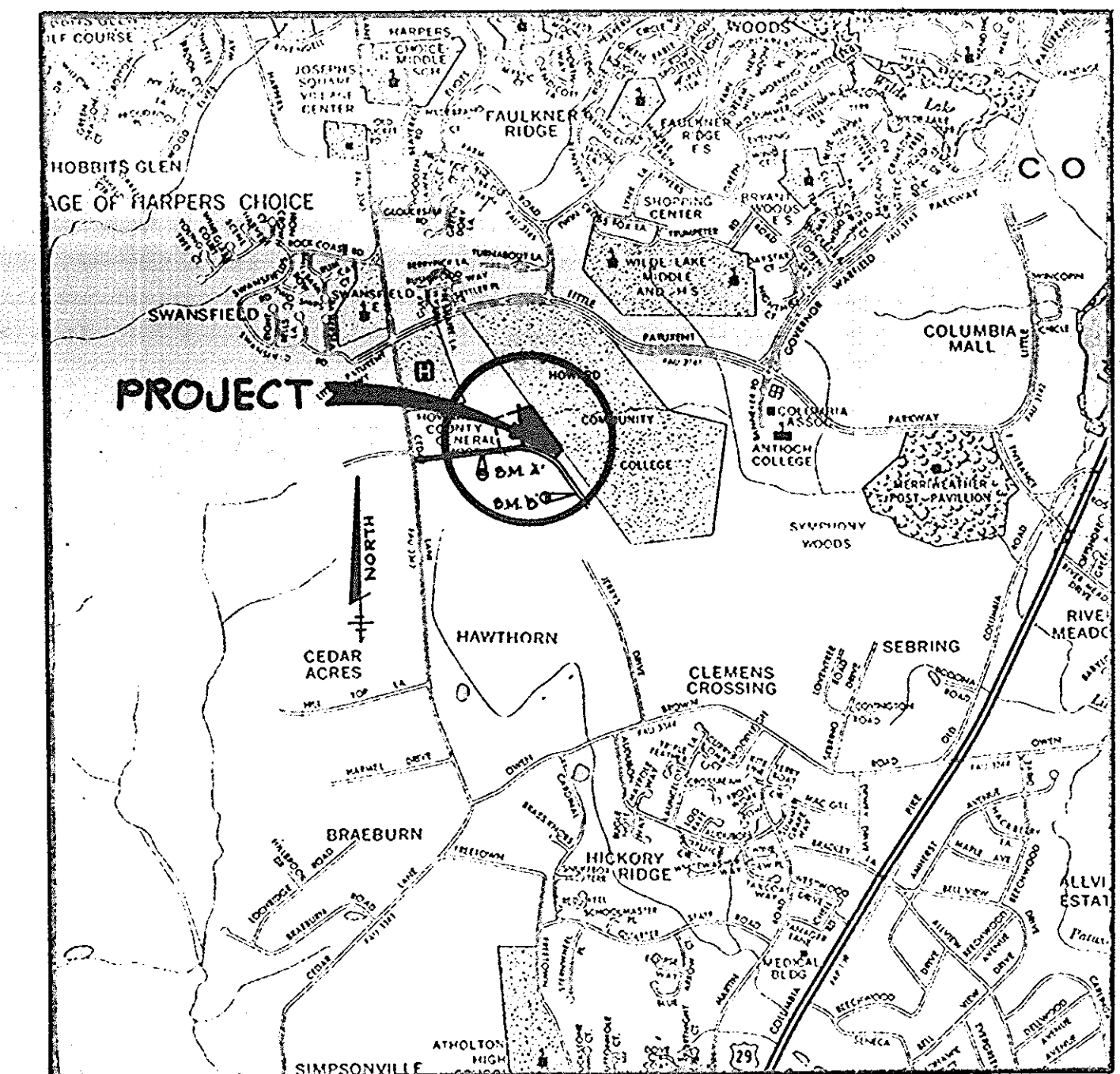
SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	STORM DRAIN PROFILES & DETAILS
5	STORM DRAIN & SANITARY PROFILES & SCHEDULES
6	DRAINAGE AREA MAP & SEDIMENT CONTROL PLAN
7	EROSION & SEDIMENT CONTROL PLAN
8	SWM & SEDIMENT CONTROL DETAILS
9	EROSION & SEDIMENT CONTROL NOTES & DETAILS
10	STORMWATER MANAGEMENT FACILITY SPECIFICATIONS
11	STORMWATER MANAGEMENT DETAILS
12	DRAINAGE AREA MAPS FOR STORMWATER MANAGEMENT
13	DRAINAGE AREA MAP FOR STORM DRAIN
14	PLANNING PLAN
15	LANDSCAPE PLAN

BENCH MARKS

BM #A ELEV 440.00
TOP OF EXISTING FIRE HYDRANT OPPOSITE STA. 4+00 OF HICKORY RIDGE ROAD

BM #B ELEV 445.21
TOP STEM OF EXISTING FIRE HYDRANT OPPOSITE ENTRANCE TO HOWARD COUNTY COMMUNITY COLLEGE.

SITE DEVELOPMENT PLAN COLUMBIA TOWN CENTER SECTION 8, AREA 4 - PARCEL-F 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1" = 2,000'

GENERAL NOTES

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- CORRUGATED STEEL PIPE SECTIONS WILL BE JOINED WITH A SINGLE OR TWO PIECE CORRUGATED BAND WITH A WATERTIGHT NEOPRENE GASKET. DIMPLED BAND CONNECTORS WILL NOT BE PERMITTED.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER. A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THIS/ THESE DRAWINGS:

C & P TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS AND ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION	992-2417/2418

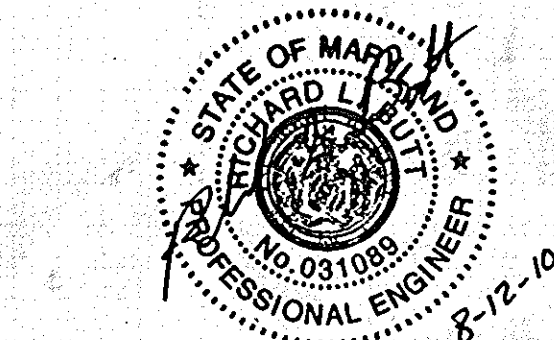
(24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.

SITE DATA

TOTAL AREA OF SITE	4.848 Acres
EXISTING ZONING FDP PHASE 177	New Town (Commercial)
PROPOSED BUILDING USE	CANVAS EDUCATIONAL CLASSROOMS
EX HICKORY BUILDING FOOTPRINT AREA	20,440 Square Feet
PROPOSED GARAGE FOOTPRINT AREA	5,170 SQUARE FEET
TOTAL PROPOSED BUILDING COVERAGE	34.1%
OPEN SPACE (LANDSCAPED AREA)	REQUIRED 20% PROVIDED 34.1%
IMPERVIOUS AREA	318 Acres
AREA TO BE RESEEDDED	1.67 Acres

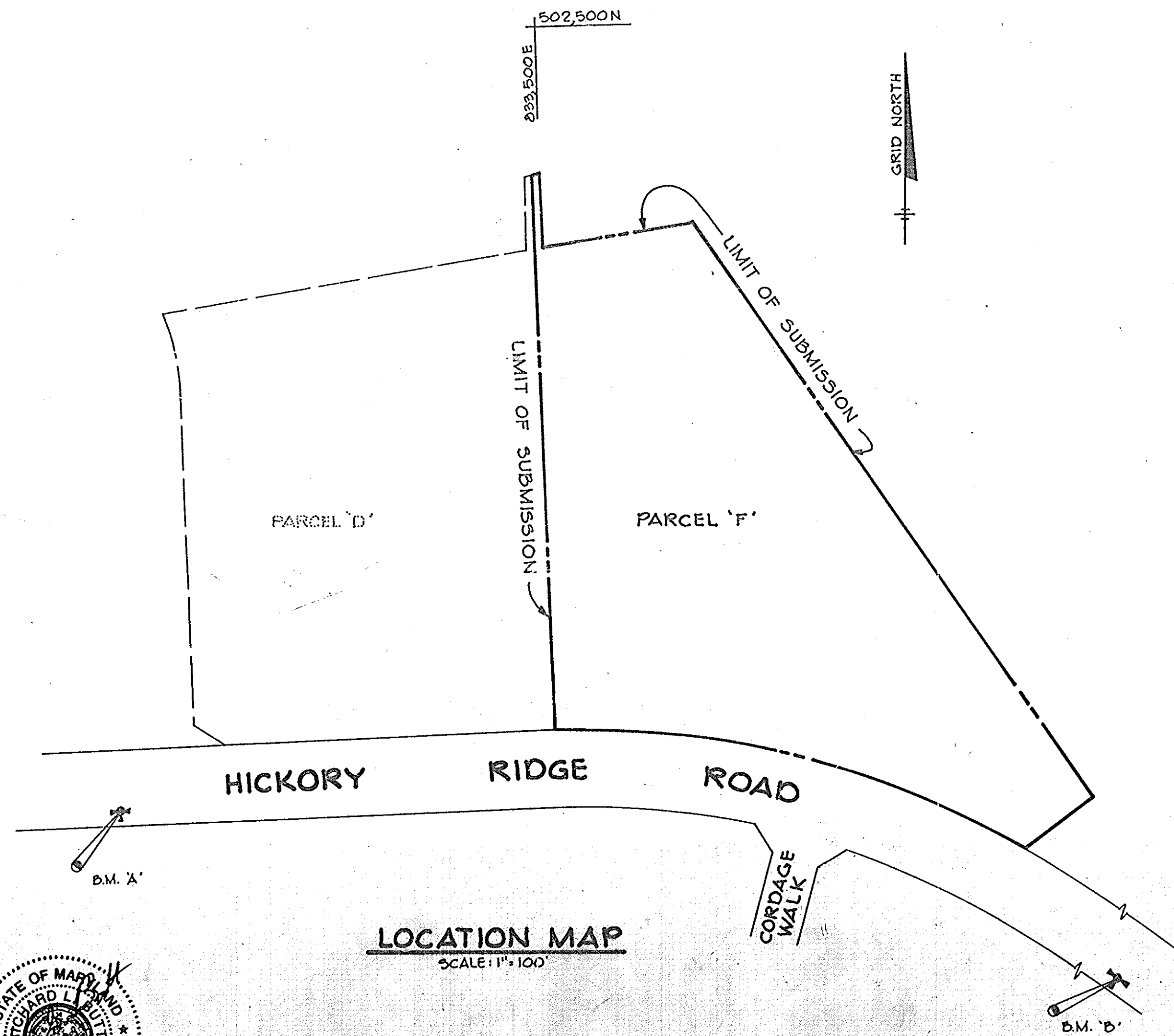
NOTE: SEE SHEET 3 OF 15 FOR PARKING TABULATION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31089, EXPIRATION DATE: 11-21-10



NOTE: NEW SEAL AND SIGNATURE ARE APPLICABLE ONLY TO REVISIONS.

LOCATION MAP
SCALE: 1" = 100'



NOTE: ON 7-15-10 THE PLANNING BOARD APPROVED RED-LINE REVISIONS FOR THE CONSTRUCTION OF HOWARD COUNTY PARKING GARAGE #2 OVER THE EXISTING PARKING AREA NORTH OF HICKORY RIDGE OFFICE BUILDING LOCATED ON PARCEL F.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

John P. Jones 5-28-82
HEALTH OFFICER DATE

James M. Ryan 5-28-82
PLANNING DIRECTOR DATE

ACTING Louis F. Dineen 5-28-82
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Henry F. Nunnally 5-24-82
DIRECTOR DATE

Walter J. ... 5-24-82
CHIEF, BUREAU OF ENGINEERING DATE

5-10-82 REVISOR AS PER H.C. COMMENTS DATED 12-18-81

OWNER/DEVELOPER
KATHLEEN WETHERINGTON, ED. D.
SECRETARY-TREASURER, PRESIDENT
HOWARD COUNTY COLLEGE
10901 LITTLE PATUXENT PARKWAY
COLUMBIA, MD 21044-3977
(410) 712-4820

PROJECT: GENERAL PHYSICS OFFICE BUILDING

AREA: COLUMBIA TOWN CENTER SECTION 8, AREA 4 - PARCEL 'F' TAX MAP NO 35 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: TITLE SHEET

Riemer - Tracy & Associates, Inc.
8659 Baltimore National Pike
Ellicott City, Maryland 21043
(301) 451-2690
Land Planning, Design & Civil Engineering

11-17-81 DATE

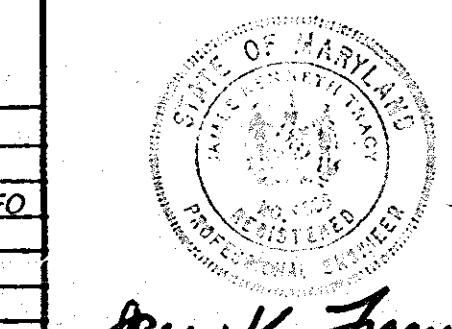
DESIGNED BY: R.J.W.

DRAWN BY: D.A.M.

PROJECT NO: 0081
DATE: 11-17-81
SCALE: AS SHOWN
DRAWING NO. 1 OF 15

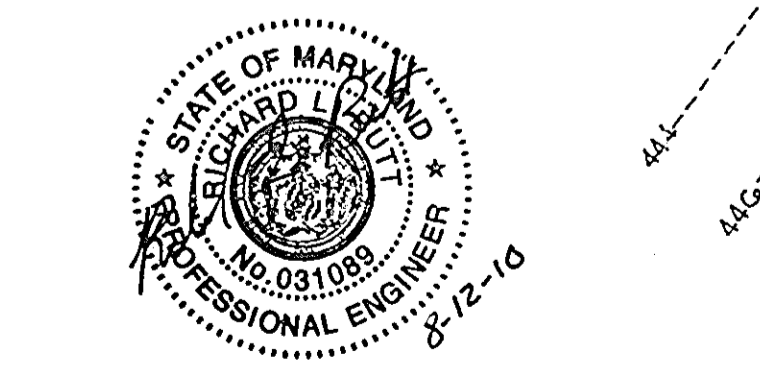
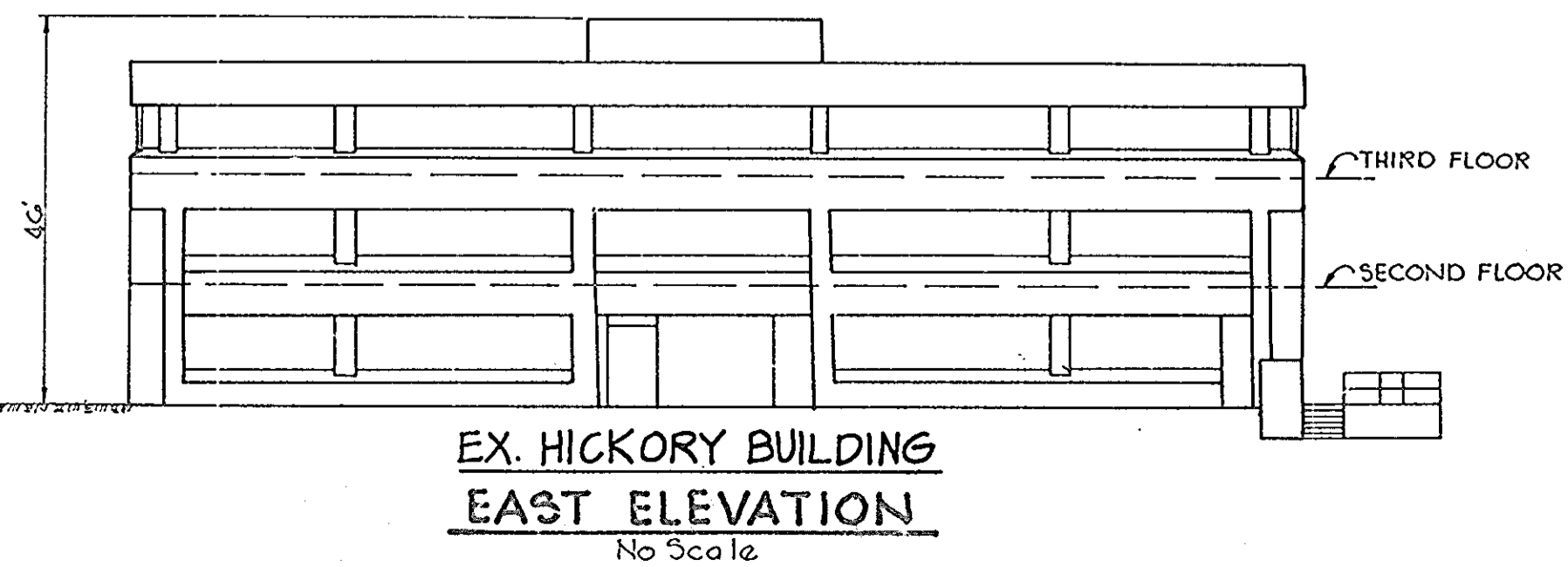
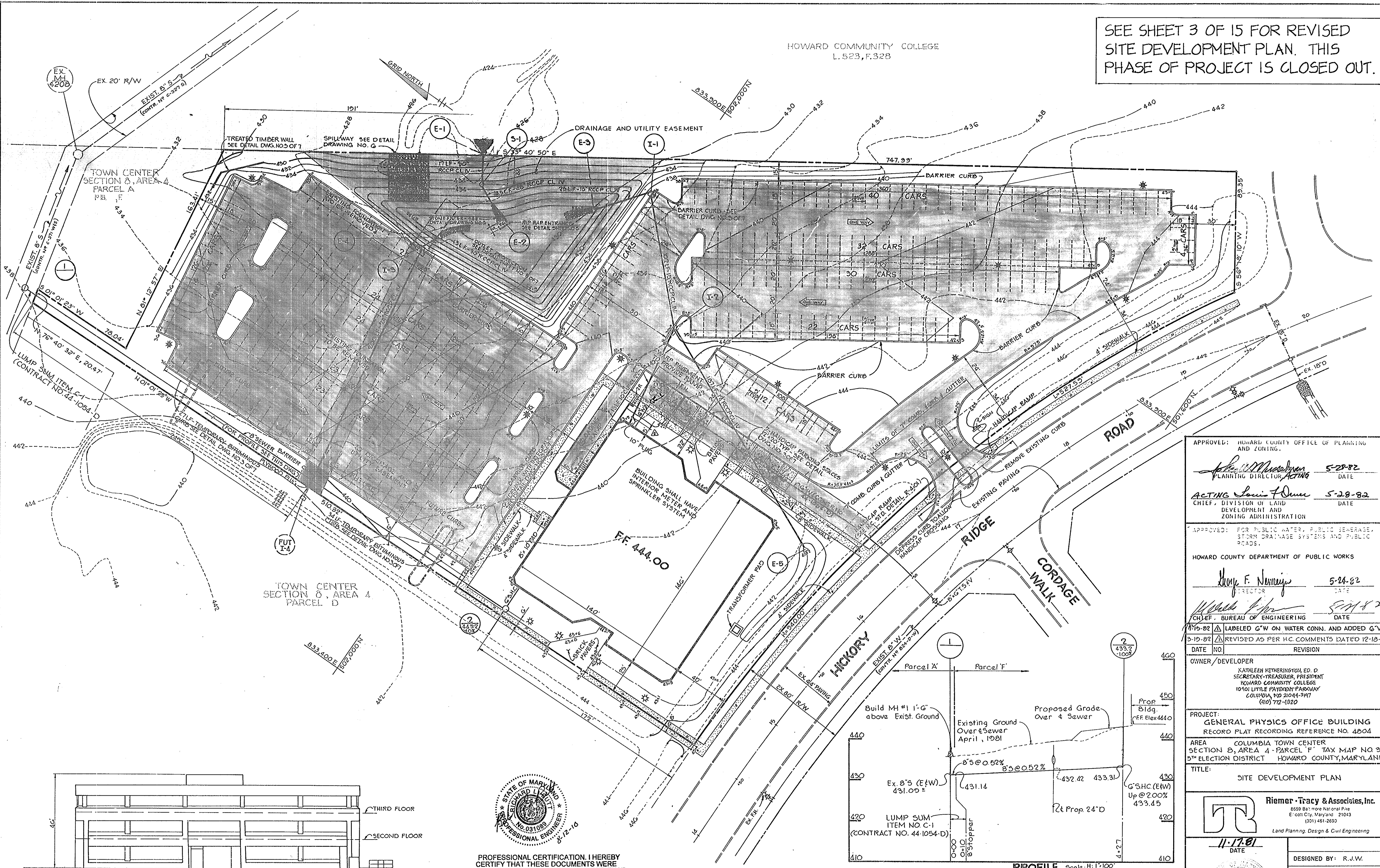
APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 4-21-82
L.F.D.

REVISIONS		
DATE	BY	DESCRIPTION
07-26-10	GAH	1 REVISE SHEET NUMBER INDEX & OWNER INFO



James H. Tracy
PROFESSIONAL ENGR. NO. 9566
SDP-82-65 MAY 11, 1982

SEE SHEET 3 OF 15 FOR REVISED
SITE DEVELOPMENT PLAN. THIS
PHASE OF PROJECT IS CLOSED OUT.



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31687 EXPIRATION DATE: 11-21-16

NOTE: NEW SEAL AND SIGNATURE ARE APPLICABLE ONLY TO REVISIONS.

REVISIONS		
DATE	BY	DESCRIPTION
07-26-10	GAR	1. ADD NOTE RE: REVISE SHEET INFO

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 4-21-82
LTD

PROFILE Scale: H: 1"=100'
V: 1"=10'
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
DATE: 5-28-82

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
PLANNING DIRECTOR, ACTING DATE: 5-28-82

ACTING Louis F. Owen DATE: 5-29-82
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howe F. Nemmup DATE: 5-24-82
DIRECTOR

Walter P. Phipps DATE: 5-21-82
CHIEF, BUREAU OF ENGINEERING

7-16-82 Labeled G*W on Water Conn. and Added G*V
3-19-82 Revised as per H.C. Comments Dated 12-18-81

DATE	NO.	REVISION

OWNER/DEVELOPER
KATHLEEN HETHERINGTON, ED. D.
SECRETARY-TREASURER, PRESIDENT
HOWARD COMMUNITY COLLEGE
10101 LITTLE PATENT PARKWAY
COLUMBIA, MD 21044-3417
(410) 712-1820

PROJECT:
GENERAL PHYSICS OFFICE BUILDING
RECORD PLAT RECORDING REFERENCE NO. 4804

AREA: COLUMBIA TOWN CENTER
SECTION 8, AREA 4 - PARCEL F - TAX MAP NO. 95
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

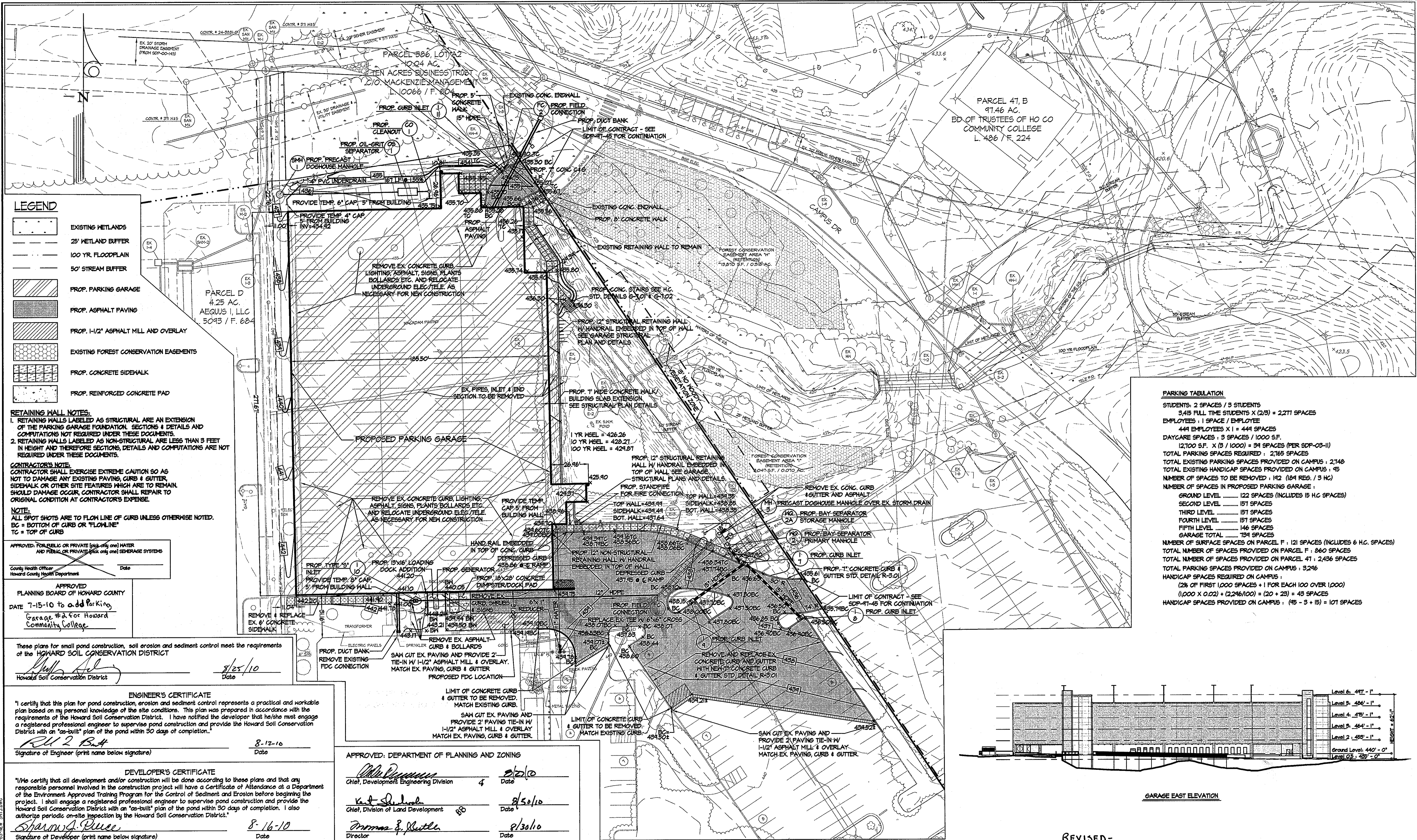
TITLE:
SITE DEVELOPMENT PLAN

Riemer, Tracy & Associates, Inc.
8659 Baltimore National Pike
E. coli City, Maryland 21043
(301) 461-2630
Land Planning, Design & Civil Engineering

11-17-81
DATE

DESIGNED BY: R.J.W.
DRAWN BY: L.S.T.
PROJECT NO: 0981
DATE: 11-17-81
SCALE: 1"=30'
DRAWING NO. 2 OF 15

SDP-82-65, MAY 11, 1982



PARKING TABULATION

STUDENTS: 2 SPACES / 3 STUDENTS
 3,415 FULL TIME STUDENTS X (2/3) = 2,277 SPACES

EMPLOYEES: 1 SPACE / EMPLOYEE
 444 EMPLOYEES X 1 = 444 SPACES

DAYCARE SPACES: 3 SPACES / 1000 S.F.
 12,700 S.F. X (3 / 1000) = 34 SPACES (PER SDP-03-11)

TOTAL PARKING SPACES REQUIRED: 2,765 SPACES

TOTAL EXISTING PARKING SPACES PROVIDED ON CAMPUS: 2,748

TOTAL EXISTING HANDICAP SPACES PROVIDED ON CAMPUS: 95

NUMBER OF SPACES TO BE REMOVED: 142 (184 REG. / 3 HC)

NUMBER OF SPACES IN PROPOSED PARKING GARAGE:

- GROUND LEVEL: 122 SPACES (INCLUDES 15 H.C. SPACES)
- SECOND LEVEL: 151 SPACES
- THIRD LEVEL: 151 SPACES
- FOURTH LEVEL: 151 SPACES
- FIFTH LEVEL: 146 SPACES
- GARAGE TOTAL: 521 SPACES

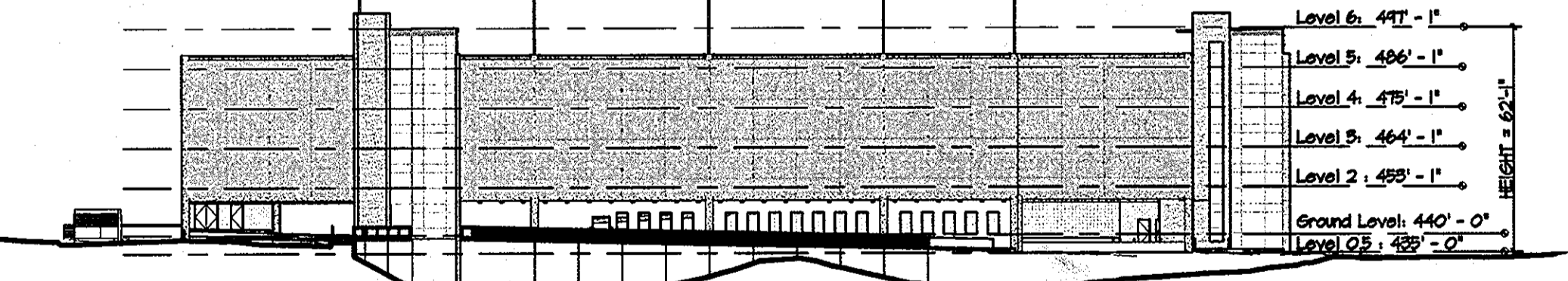
NUMBER OF SURFACE SPACES ON PARCEL F: 121 SPACES (INCLUDES 6 H.C. SPACES)

TOTAL NUMBER OF SPACES PROVIDED ON PARCEL F: 860 SPACES

TOTAL PARKING SPACES PROVIDED ON CAMPUS: 3,246

HANDICAP SPACES REQUIRED ON CAMPUS:
 (2% OF FIRST 1000 SPACES + 1 FOR EACH 100 OVER 1000)
 (1000 X 0.02) + (2246/100) = (20 + 23) = 43 SPACES

HANDICAP SPACES PROVIDED ON CAMPUS: (45 - 3 + 15) = 107 SPACES



REVISED-

SITE DEVELOPMENT PLAN

HOWARD COMMUNITY COLLEGE, PARKING GARAGE # 2
 COLUMBIA TOWN CENTER, SECTION 8, AREA 4 - PARCEL F
 TAX MAP 35 RECORD PLAT NO. 4804 5TH ELECTION DISCRITCT HOWARD COUNTY MARYLAND

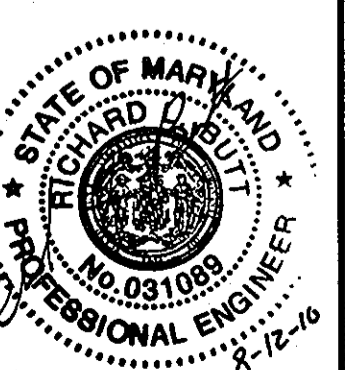
SHEET
 3
 OF
 15
 SC-1 OF 14
 KCI JOB NUMBER : 0102978

DEVELOPER / OWNER
 KATHLEEN HETHERINGTON, ED. D.
 SECRETARY-TREASURER, PRESIDENT
 HOWARD COMMUNITY COLLEGE
 10901 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD 21044-3197
 (410) 712-4820

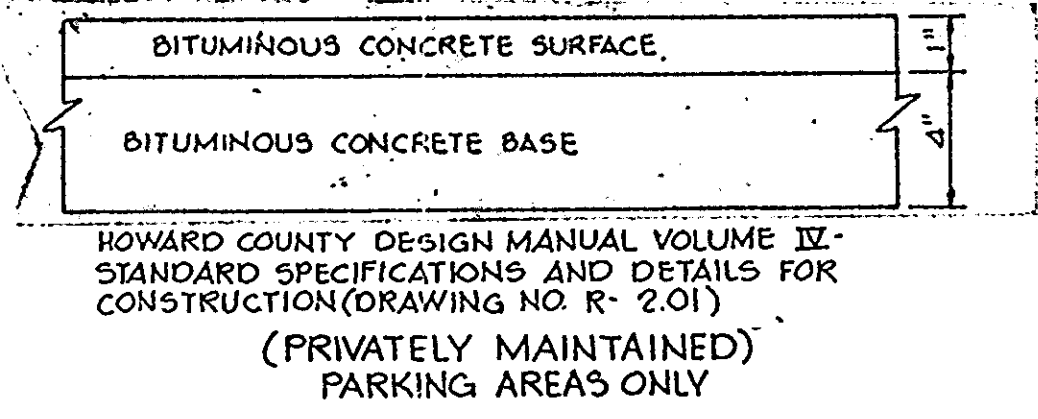
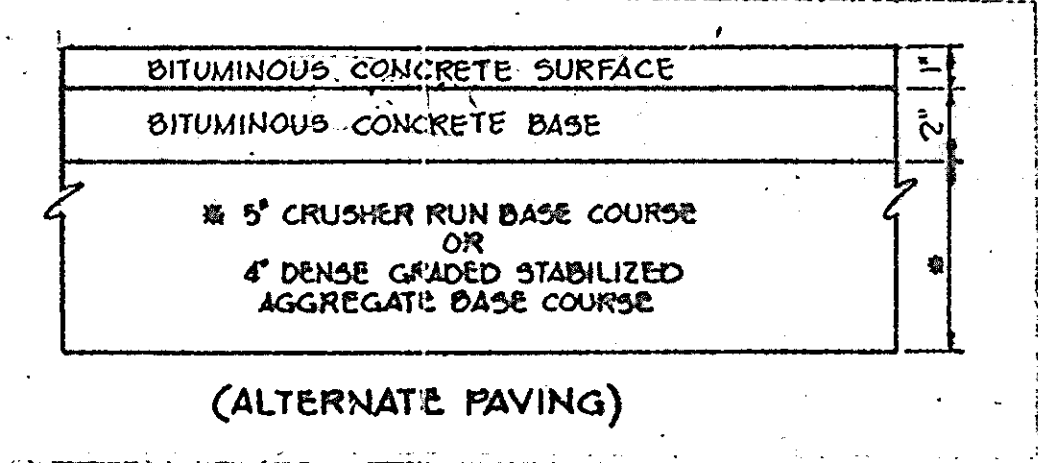
DESIGNED BY: GAH		DATE: 7/26/10	
DRAWN BY: GAH	CHECKED BY: RLB	APPROVED BY: RLB	SCALE: 1" = 30'

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
 936 RIDGEBROOK ROAD
 SPARKS, MD 21152
 PHONE: (410) 316-7800

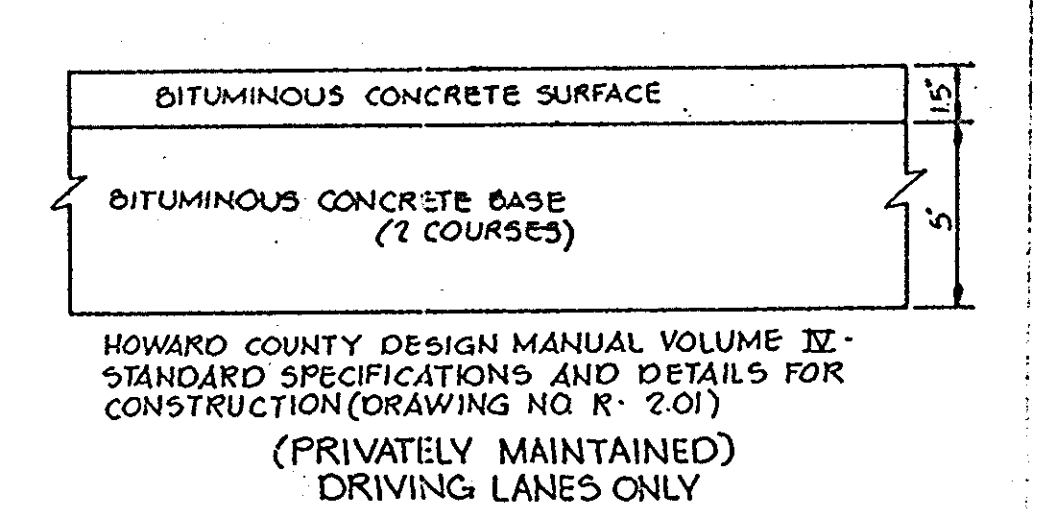
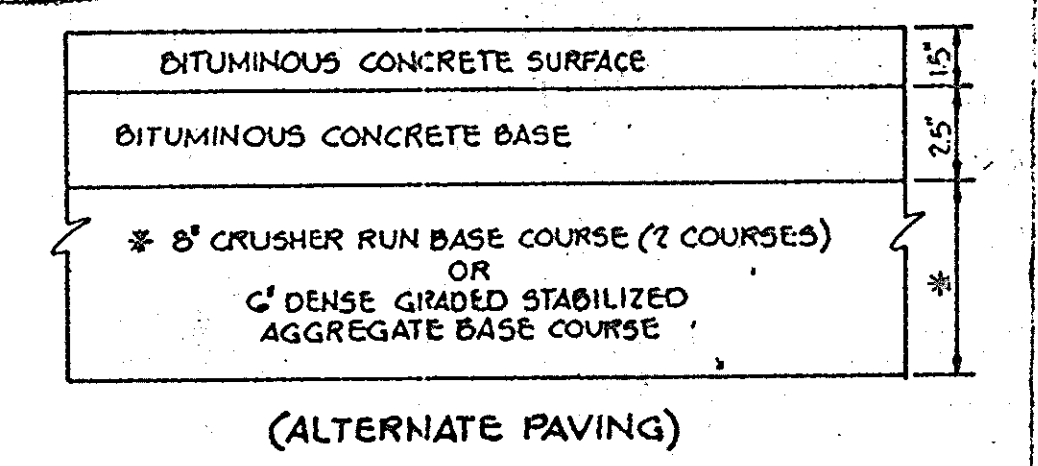
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 310294 EXPIRATION DATE: 11/21/10.



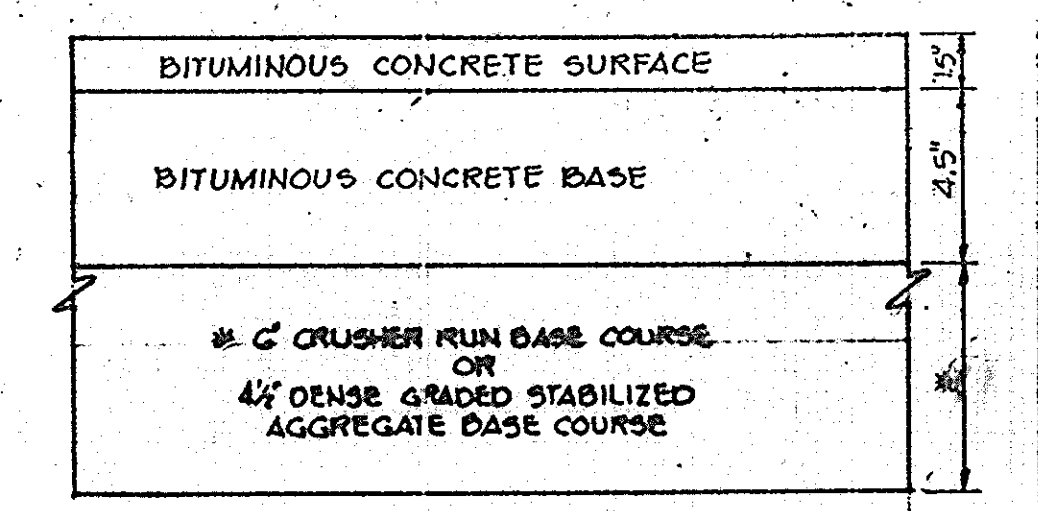
Friday, July 30, 2010 8:58:32 AM
 GAYLE HARRIS
 11-2008-0002978-01-000-NEW SHED.DWG



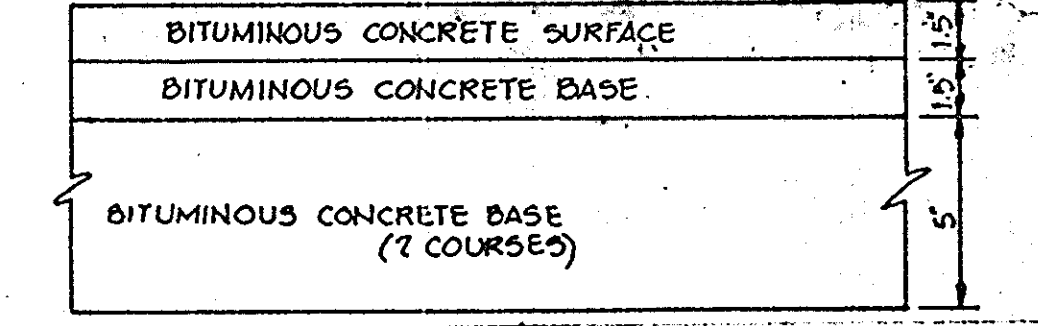
(5" PAVING - P-1)



(6 1/2" PAVING - P-2)



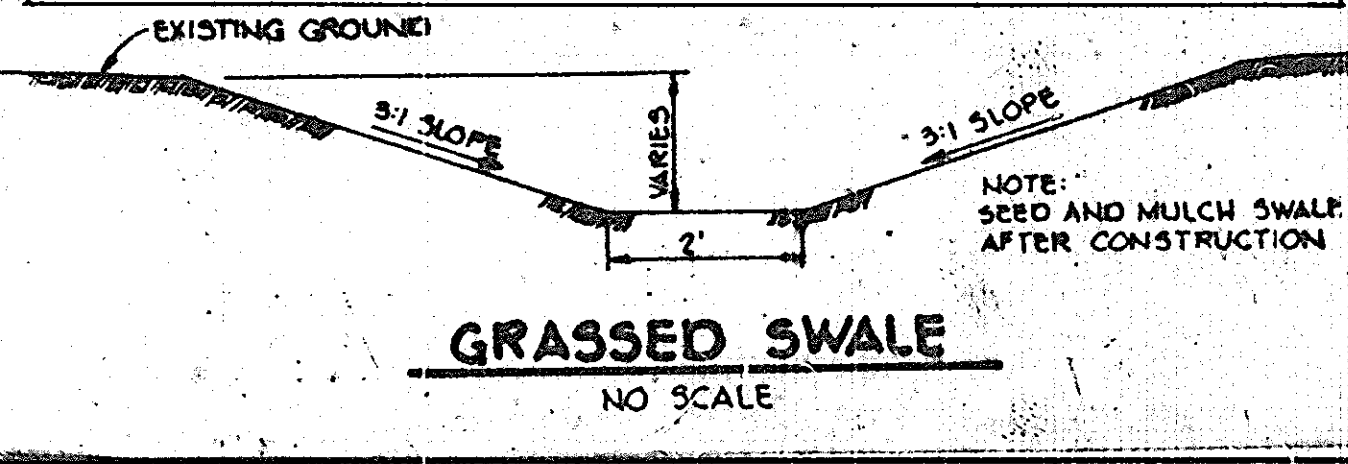
(ALTERNATE PAVING)



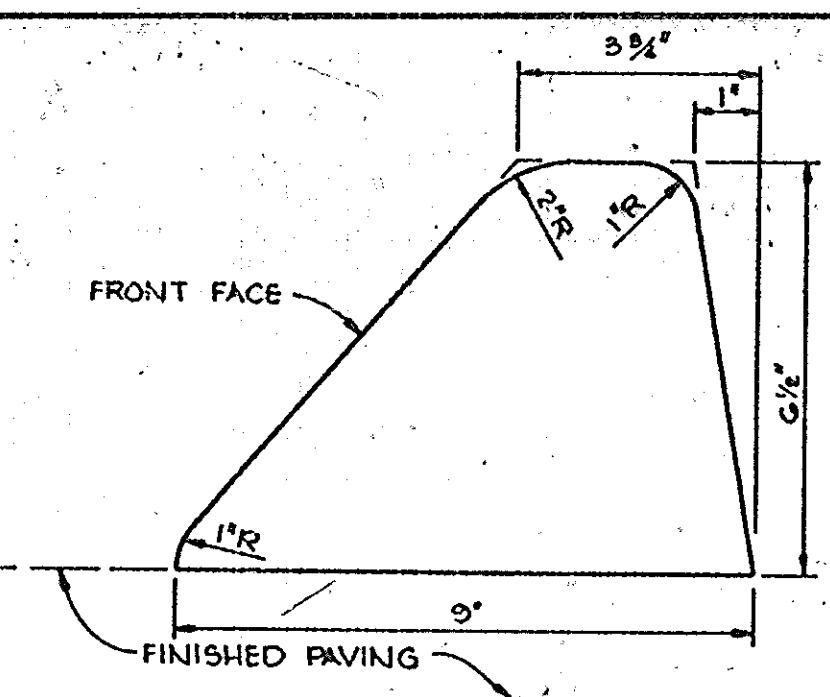
(PUBLICLY MAINTAINED) AREAS WITHIN ROAD R/W

(8" PAVING - P-3)

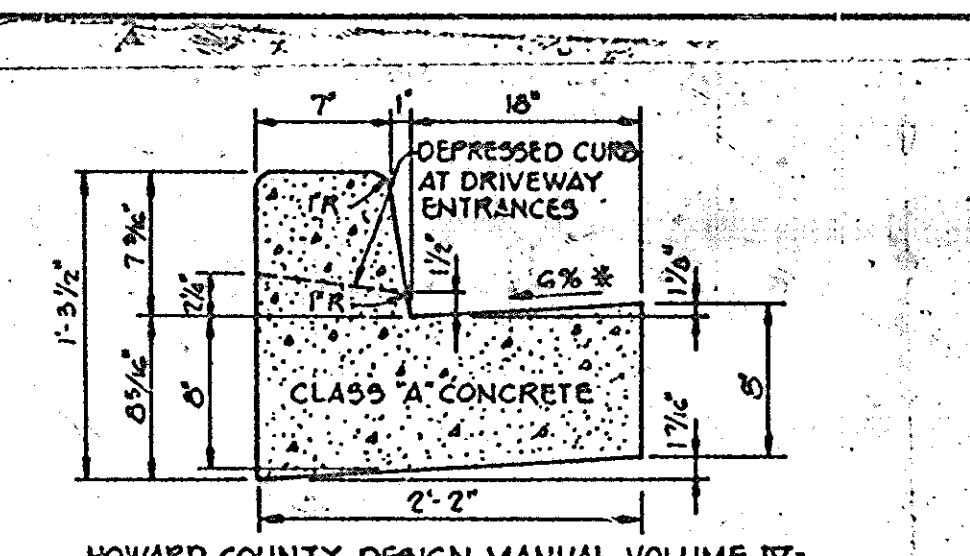
SEE SHEET 5 OF 15 FOR REVISED STORM DRAIN PROFILES & SCHEDULES. THIS PHASE OF PROJECT IS CLOSED OUT.



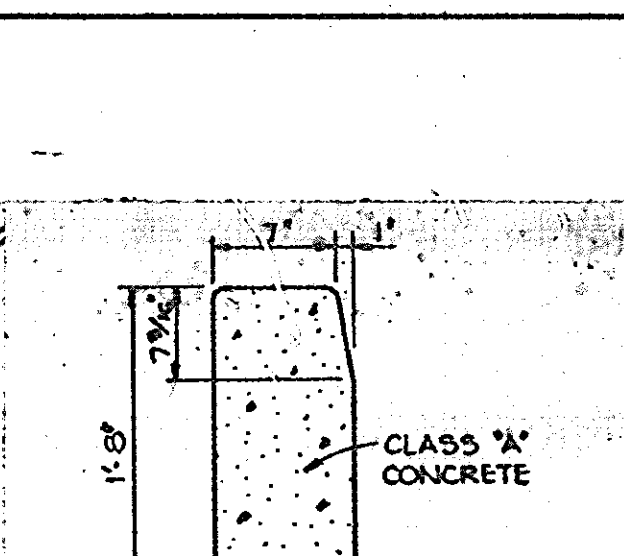
GRASSED SWALE NO SCALE



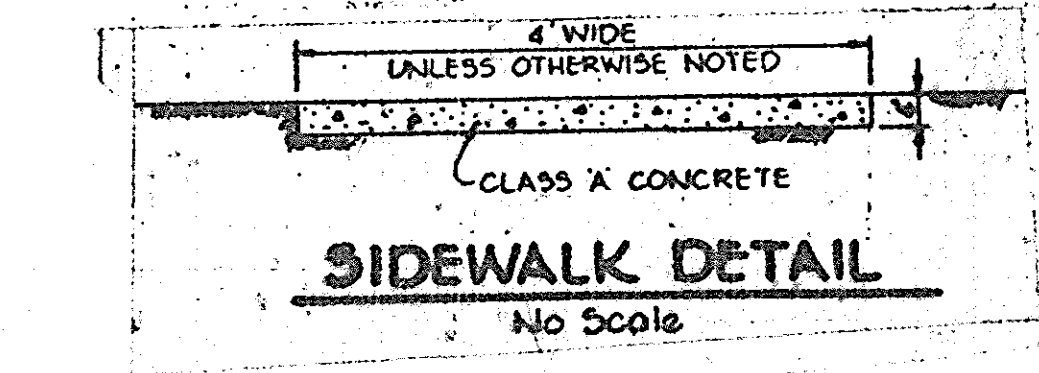
BITUMINOUS CURB No Scale



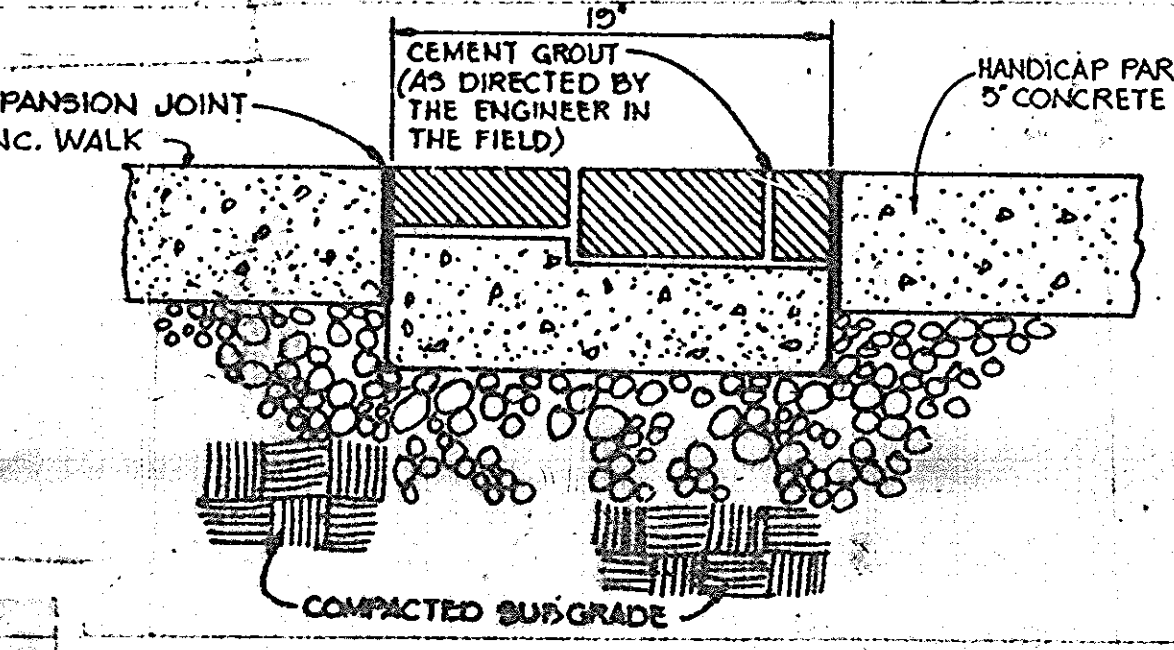
STANDARD 7" COMBINATION CURB AND GUTTER No Scale



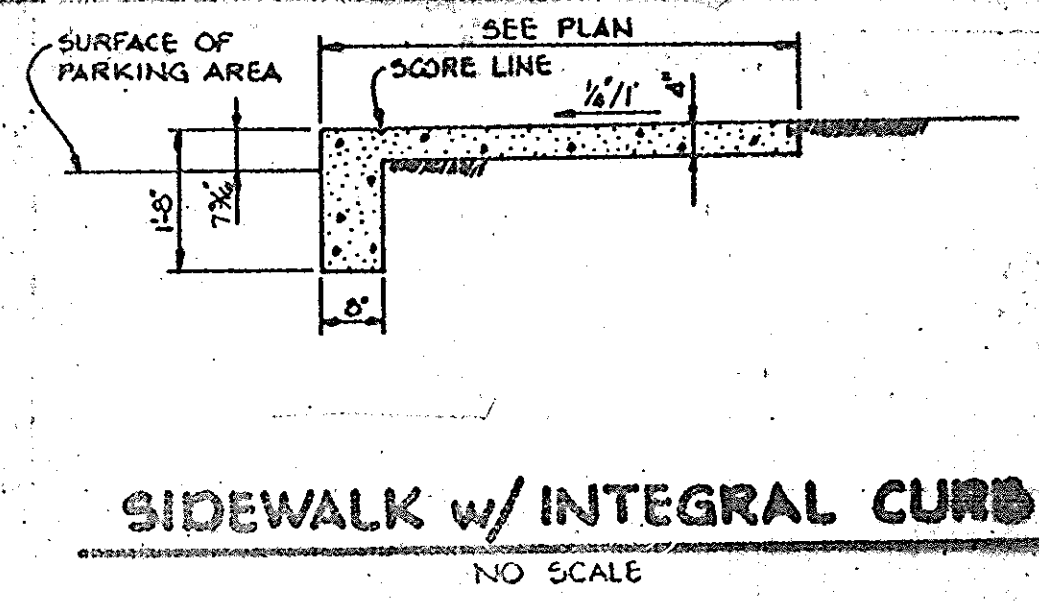
STANDARD BARRIER CURB No Scale



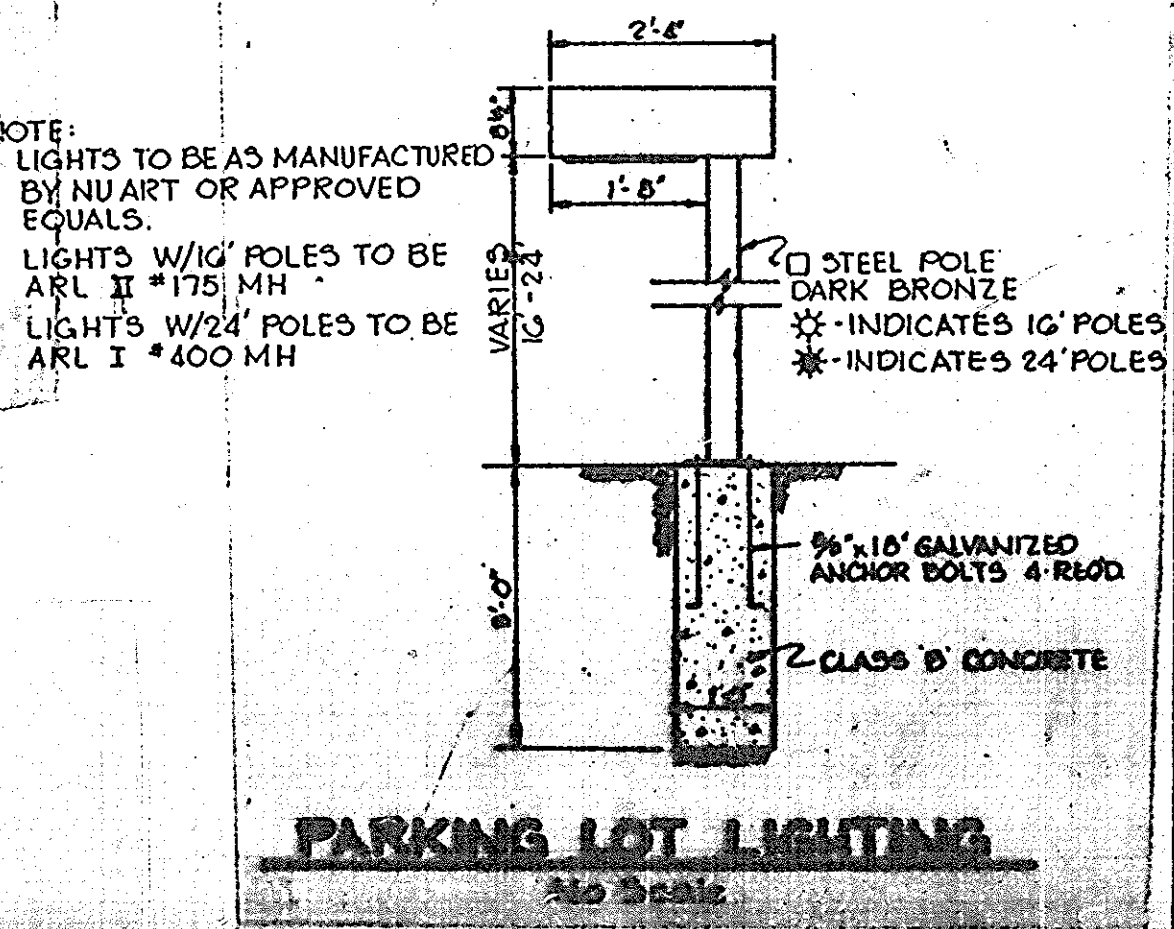
SIDEWALK DETAIL No Scale



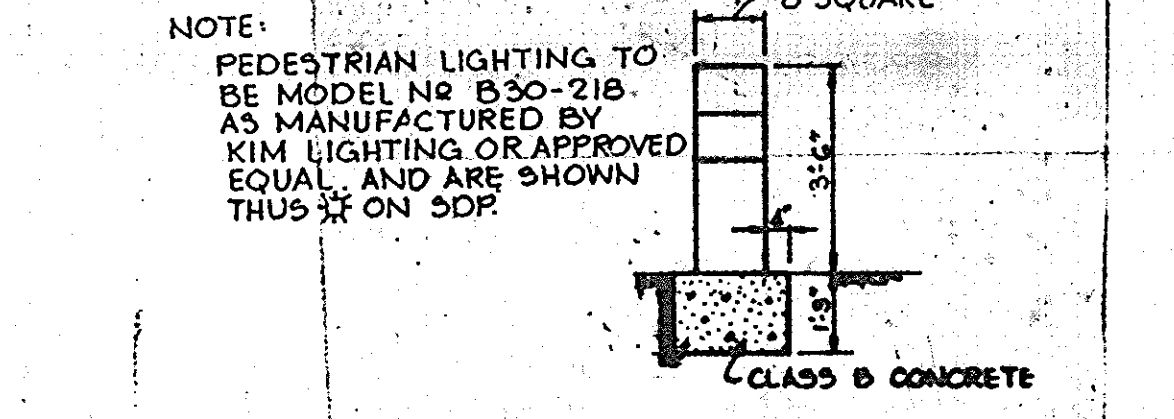
BRICK PAVER SECTION No Scale



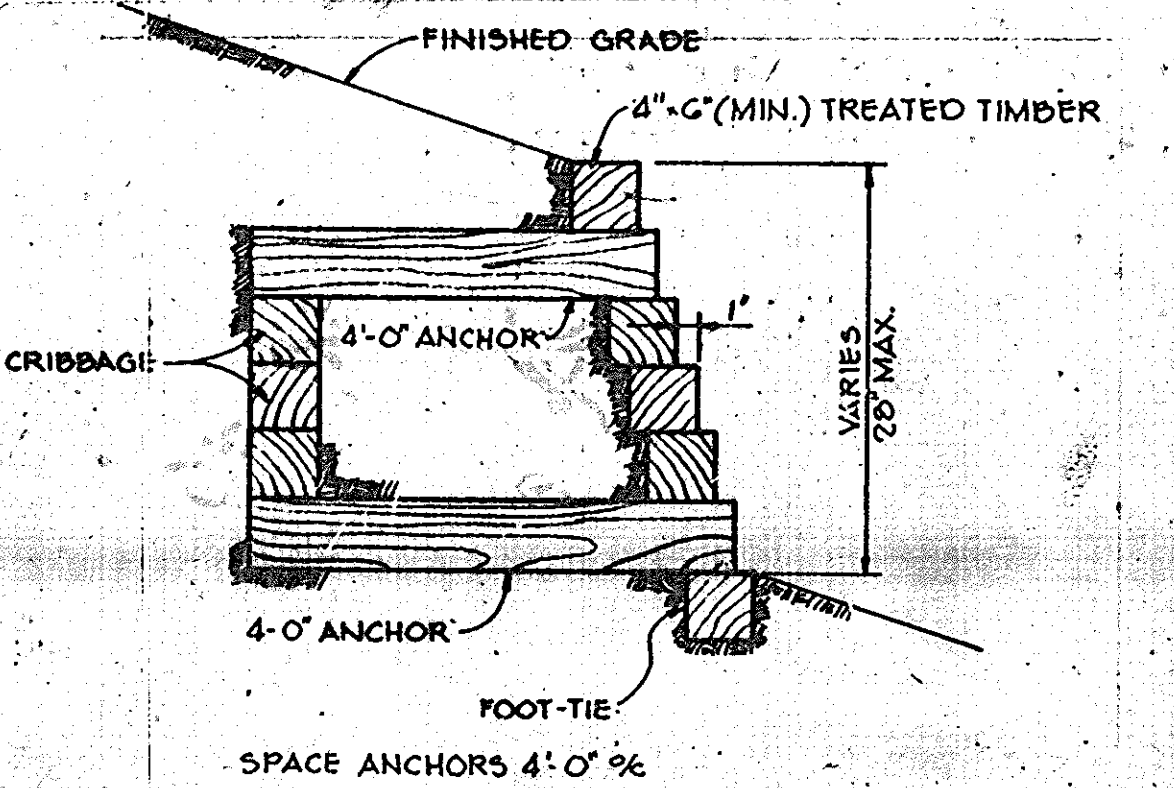
SIDEWALK w/ INTEGRAL CURB NO SCALE



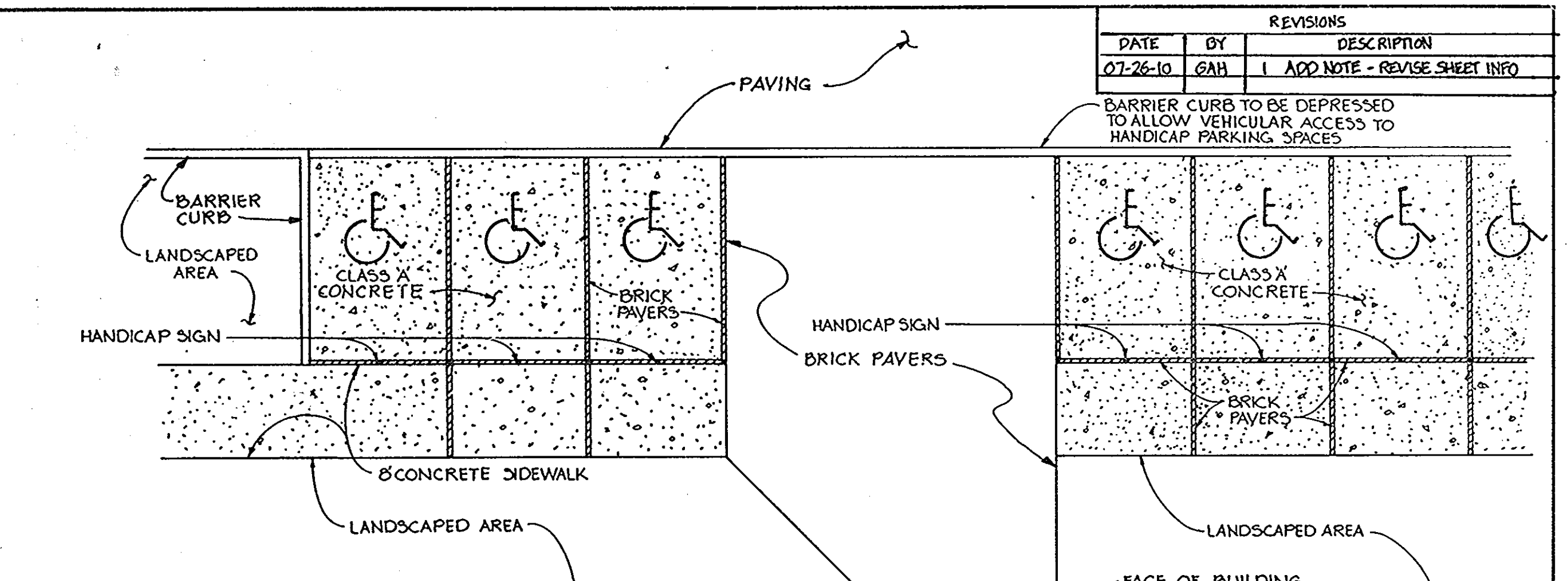
PARKING LOT LIGHTING No Scale



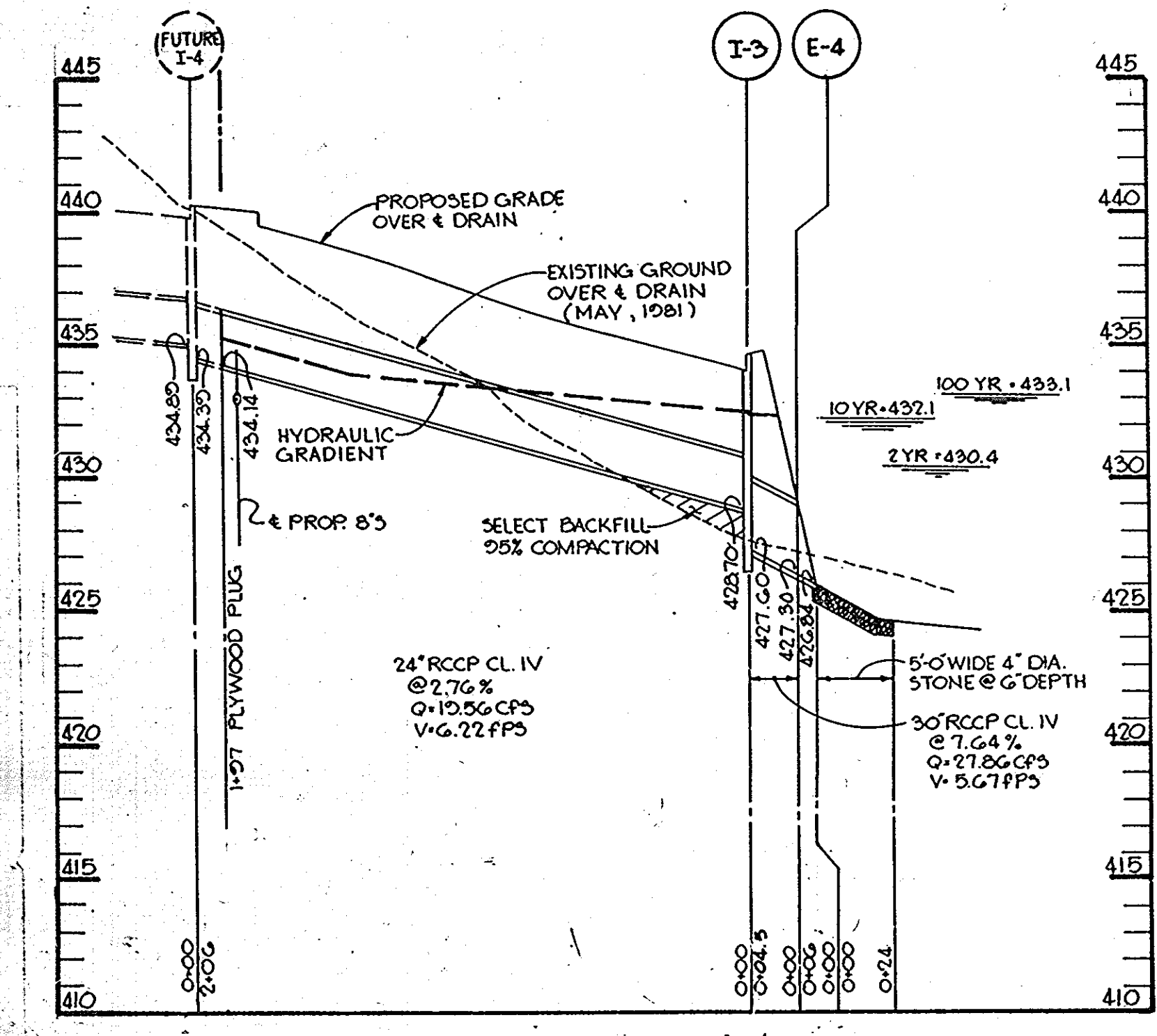
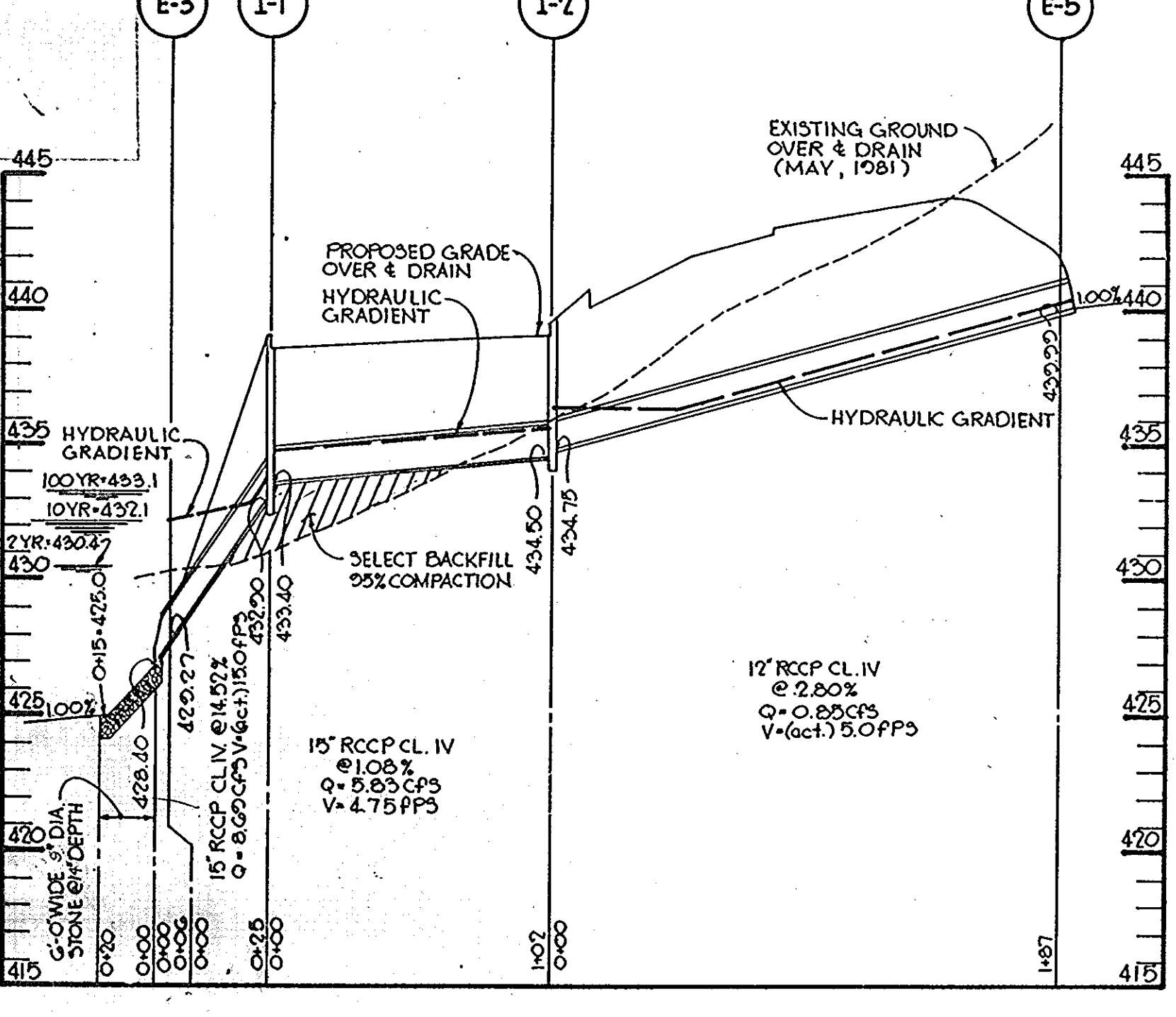
PEDESTRIAN LIGHTING No Scale



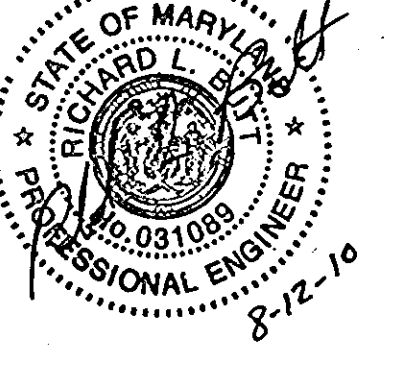
TIMBER RETAINING WALL No Scale



ENTRANCE PLAZA SCHEMATIC No Scale



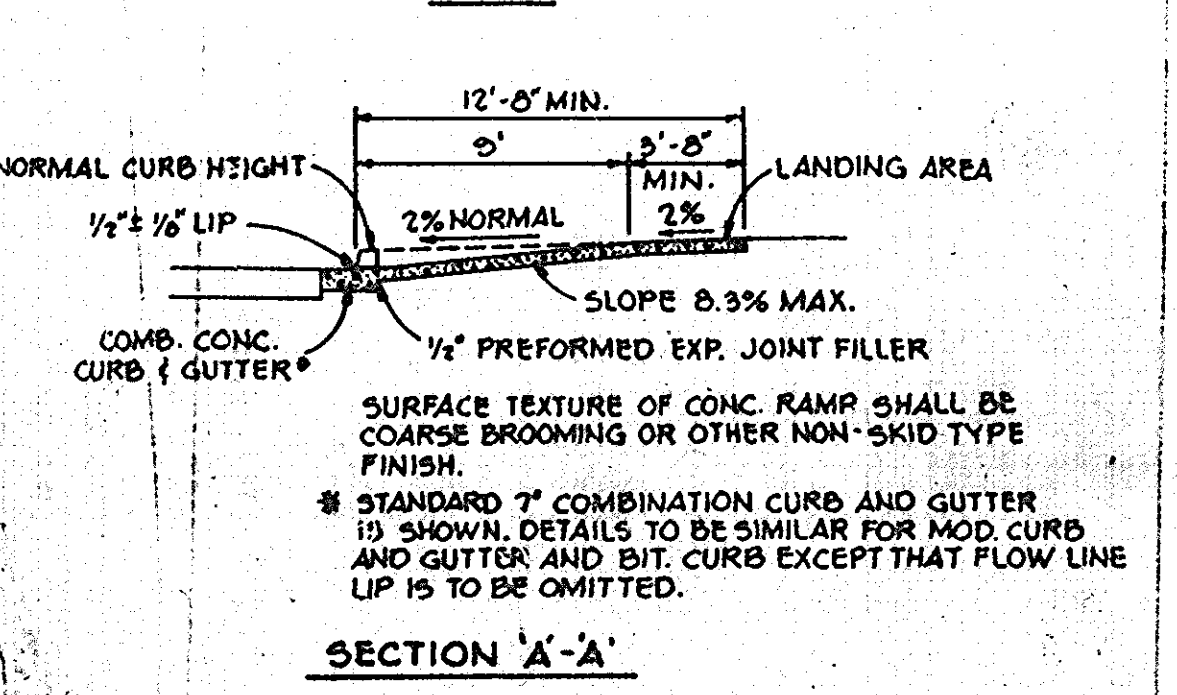
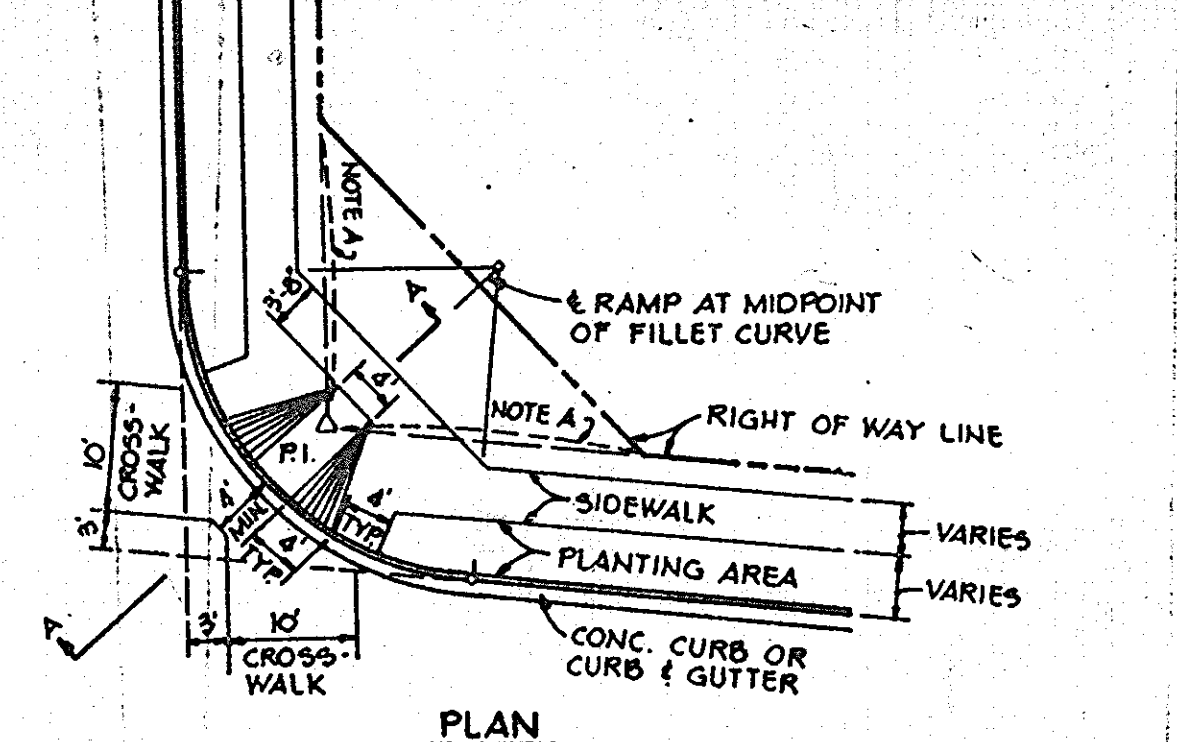
PROFILE SCALE: H:1"=5' V:1"=5'



NOTE: NEW SEAL AND SIGNATURE ARE APPLICABLE ONLY TO REVISIONS.

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 031083, EXPIRATION DATE: 11-21-18

- NOTES:
- RIGHT OF WAY LINE TRUNCATION TO BE SET 25' FROM R1 ALONG EACH OF THE INTERSECTING LINES AS SET FORTH IN SECTION 16-115, PAR. F3 OF SUBDIVISION REGULATIONS. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT OF WAY LINE TO BE 1 FOOT.
 - TYPE 'A' RAMP TO BE USED FOR ALL NEW CONSTRUCTION WHERE APPLICABLE UNLESS OTHERWISE DIRECTED BY D.P.W.



TYPICAL HANDICAP RAMP NO SCALE

REVISIONS		
DATE	BY	DESCRIPTION
07-26-10	GAH	ADD NOTE - REVISE SHEET INFO

APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: 4-21-82

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT. DATE: 5-28-82

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING. DATE: 5-28-82

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. DATE: 5-24-82

REVISIONS: 3-10-82 REVISED AS PER H.C. COMMENTS DATED 12-18-81

OWNER/DEVELOPER: KATHLEEN METHERINGTON, ED. D. SECRETARY-TREASURER PRESIDENT HOWARD COUNTY COLLEGE

PROJECT: GENERAL PHYSICS OFFICE BUILDING

AREA: COLUMBIA TOWN CENTER SECTION B, AREA 4-PARCEL 'F' TAX MAP NO 95 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES AND DETAILS

DESIGNED BY: R.J.W. DRAWN BY: T.E.S. PROJECT NO: 0081 DATE: 11-17-81 SCALE: AS SHOWN DRAWING NO. 4 OF 15

SDP-82-65, MAY 11, 1982

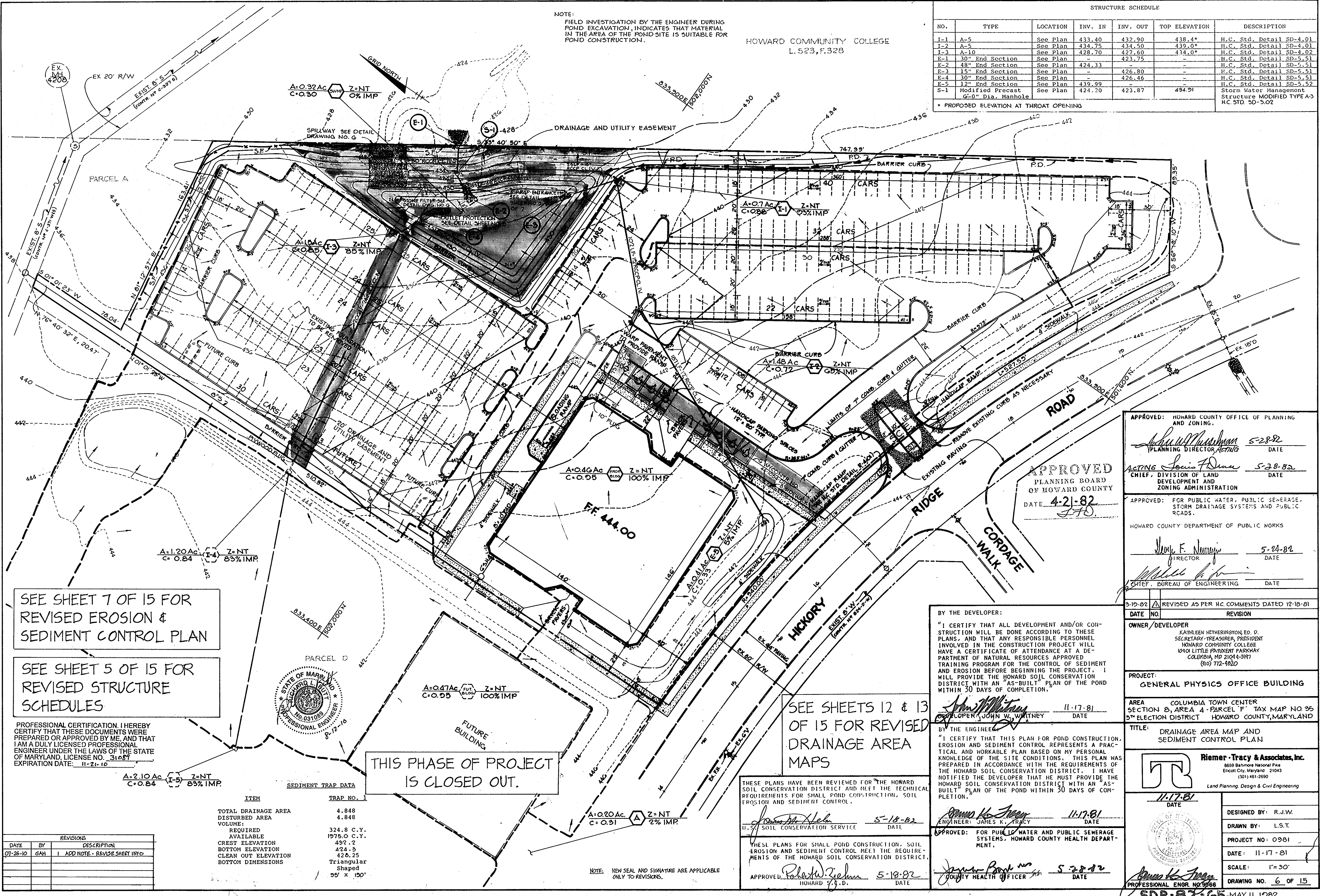
STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEVATION	DESCRIPTION
I-1	A-5	See Plan	433.40	432.90	438.4*	H.C. Std. Detail SD-4.01
I-2	A-5	See Plan	434.75	434.50	439.0*	H.C. Std. Detail SD-4.01
I-3	A-10	See Plan	428.70	427.60	434.0*	H.C. Std. Detail SD-4.02
E-1	30" End Section	See Plan	-	-	-	H.C. Std. Detail SD-5.51
E-2	48" End Section	See Plan	424.33	423.75	-	H.C. Std. Detail SD-5.51
E-3	15" End Section	See Plan	-	426.80	-	H.C. Std. Detail SD-5.51
E-4	30" End Section	See Plan	-	426.46	-	H.C. Std. Detail SD-5.51
E-5	12" End Section	See Plan	439.99	-	-	H.C. Std. Detail SD-5.52
S-1	Modified Precast 6'-0" Dia. Manhole	See Plan	424.20	423.87	434.91	Storm Water Management Structure MODIFIED TYPE A-3 H.C. STD. SD-5.02

* PROPOSED ELEVATION AT THROAT OPENING

NOTE:
FIELD INVESTIGATION BY THE ENGINEER DURING
POND EXCAVATION, INDICATES THAT MATERIAL
IN THE AREA OF THE POND SITE IS SUITABLE FOR
POND CONSTRUCTION.

HOWARD COMMUNITY COLLEGE
L. 523, F.328



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
John W. Whitney 5-28-82
PLANNING DIRECTOR DATE

APPROVED: PLANNING BOARD OF HOWARD COUNTY
DATE 4-21-82
JTD

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John F. Nunn 5-24-82
DIRECTOR DATE

William H. Tracy
CHIEF, BUREAU OF ENGINEERING DATE

3-10-82 REVISOR AS PER H.C. COMMENTS DATED 12-18-81
DATE NO. REVISION

OWNER/DEVELOPER
KATHLEEN HETHERINGTON, ED. D.
SECRETARY-TREASURER, PRESIDENT
HOWARD COMMUNITY COLLEGE
10400 LITTLE PATRICK PARKWAY
COLUMBIA, MD 21044-3377
(410) 712-4820

PROJECT:
GENERAL PHYSICS OFFICE BUILDING

AREA SECTION 8, AREA 4 - PARCEL F TAX MAP NO 35
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:
DRAINAGE AREA MAP AND
SEDIMENT CONTROL PLAN

Riener - Tracy & Associates, Inc.
8659 Baltimore National Pike
Encinitas, Maryland 21043
(301) 461-2690
Land Planning, Design & Civil Engineering

11-17-81
DATE

DESIGNED BY: R.J.W.
DRAWN BY: L.S.T.
PROJECT NO: 0981
DATE: 11-17-81
SCALE: 1" = 30'
DRAWING NO. 6 OF 15

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
James K. Tracy 5-28-82
COUNTY HEALTH OFFICER DATE

SDP-82-65, MAY 11, 1982

BY THE DEVELOPER:
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
John W. Whitney 11-17-81
DEVELOPER: JOHN W. WHITNEY DATE

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
James K. Tracy 11-17-81
ENGINEER: JAMES K. TRACY DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
Robert W. Zehner 5-18-82
U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Zehner 5-18-82
HOWARD COUNTY HEALTH OFFICER DATE

SEE SHEET 7 OF 15 FOR REVISED EROSION & SEDIMENT CONTROL PLAN

SEE SHEET 5 OF 15 FOR REVISED STRUCTURE SCHEDULES

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31087, EXPIRATION DATE: 11-21-10



THIS PHASE OF PROJECT IS CLOSED OUT.

SEDIMENT TRAP DATA

ITEM	TRAP NO. 1
TOTAL DRAINAGE AREA	4.848
DISTURBED AREA	4.848
VOLUME REQUIRED	324.8 C.Y.
AVAILABLE	1975.0 C.Y.
CREST ELEVATION	432.2
BOTTOM ELEVATION	424.3
CLEAN OUT ELEVATION	426.25
BOTTOM DIMENSIONS	Triangular Shaped 95' x 130'

REVISIONS

DATE	BY	DESCRIPTION
07-26-10	GAH	1 ADD NOTE - REVISE SHEET INFO

NOTE: NEW SEAL AND SIGNATURE ARE APPLICABLE ONLY TO REVISIONS.

LEGEND

- PROPOSED PARKING GARGE
- PROP. ASPHALT PAVING
- PROP. 1/2" ASPHALT MILL AND OVERLAY
- PROP. CONCRETE SIDEWALK
- PROP. REINFORCED CONCRETE PAD
- EXISTING FOREST CONSERVATION EASEMENTS
- EXISTING WETLANDS
- 25' WETLAND BUFFER
- 100 YR. FLOODPLAIN
- 50' STREAM BUFFER
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- TEMPORARY ASPHALT BERM
- BLAZE ORANGE MESH SAFETY FENCE
- AT GRADE INLET PROTECTION
- CURB INLET PROTECTION
- STANDARD INLET PROTECTION
- RIP-RAP PROTECTION
- EROSION CONTROL MATTING
- COFFER DAM
- ROCK FILTER BERM
- SEDIMENT BASIN BAFFLES
- LIMIT OF WOODY VEGETATION REMOVAL

CONTRACTOR'S NOTE:
 CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO DAMAGE ANY EXISTING PAVING, CURB & GUTTER, SIDEWALK OR OTHER SITE FEATURES WHICH ARE TO REMAIN. SHOULD DAMAGE OCCUR, CONTRACTOR SHALL REPAIR TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

NOTE:
 ALL SPOT SHOTS ARE TO FLOW LINE OF CURB UNLESS OTHERWISE NOTED
 BC = BOTTOM OF CURB OR "FLOWLINE"
 TC = TOP OF CURB

APPROVED FOR PUBLIC OR PRIVATE (pick only one) WATER AND PUBLIC OR PRIVATE (pick only one) SEWERAGE SYSTEMS
 County Health Officer _____ Date _____
 Howard County Health Department

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE 7-15-10 to add Parking Garage #2 for Howard Community College
 _____ Date _____

These plans for small pond construction, soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT
 _____ Date 8/25/10
 Howard Soil Conservation District

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
 _____ Date 8-12-10
 Signature of Engineer (print name below signature)

DEVELOPER'S CERTIFICATE
 "I/we certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
 _____ Date 8-16-10
 Signature of Developer (print name below signature)

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 _____ Date 8/2/10
 Chief, Development Engineering Division
 _____ Date 8/30/10
 Chief, Division of Land Development
 _____ Date 8/30/10
 Director

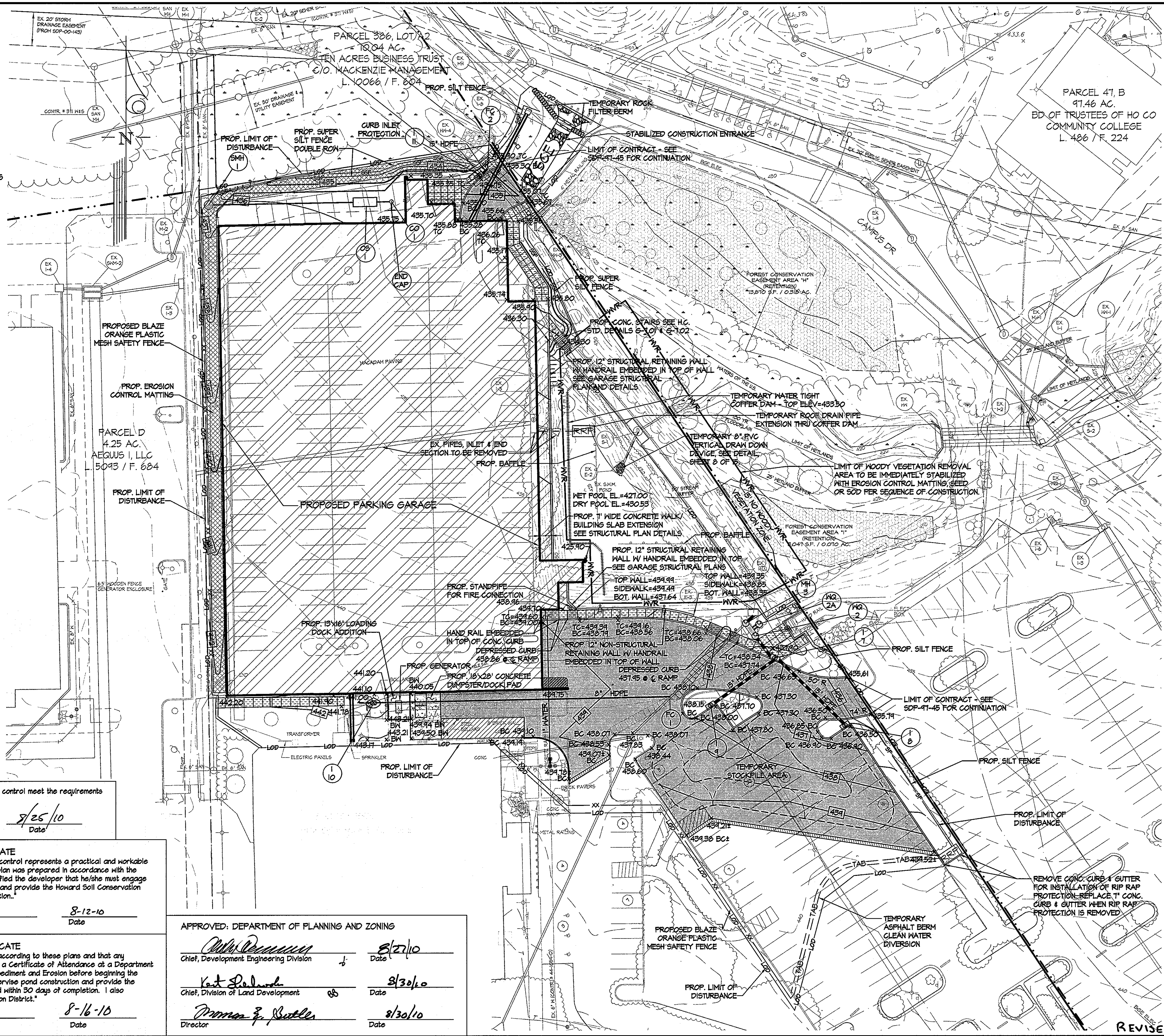


Figure 2 Temporary Sediment Basin Design Data Sheet

Computed by: GAH Date: 05/03/10 Checked by: _____ Date: _____
 Project name: HOWARD COMMUNITY COLLEGE Basin #: TEMP. SEDIMENT BASIN #1
 Location: PARKING GARAGE # 2 - PARCEL F, WEST OF CAMPUS DRIVE

Total area draining to basin: 3.46 acres (ac)

Basin Volume Design
 Note: 1. Also see Surface Area Design #30, this form.
 2. To convert ft³ to yd³, divide ft³ by 27. To convert ft² to yd², divide ft² by 9.

- Min. required vol. = 3600 ft³/ac x 3.46 ac. drainage = 12,456 ft³
- Actual Volume of basin = 23,594 ft³
- Excavate 0 ft³ (0 yd³) to obtain required capacity. (POND IS EXISTING)
- Vol. at dewatering elev. = 1800 ft³/ac x 3.46 ac. = 6,228 ft³
- Vol. of basin at cleanout = 900 ft³/ac x 3.46 ac. = 3,114 ft³
- Elevation corresponding to min. required volume of basin (riser crest elevation) = 430.53 ft.
- Permanent pool elevation = 427.00 ft.
- Distance from riser crest elevation to permanent pool elevation = 3.53 ft.
- Basin cleanout elevation = 426.10 ft.
- Distance from riser crest elevation to cleanout elevation = 4.43 ft.

Spillway Design
 11. Q₁₀ = 16.12 cfs (peak discharge from 10-yr, 24-hr storm event, attach computations)

Principal Spillway (O/S) (See Detail 11)

- Design Principal Spillway (Barrel) discharge, Design Q₁₀ = 16.12 cfs (min. 10% of 10 year peak or 8" Diameter Pipe)
- H = 6.35 ft.; Barrel length = 10 ft.
- Barrel Diam. 30 in. Note: Q₁₀ must equal or exceed Design Q₁₀, Q₁₀ = Q (from Table 13 or 14) 33.33 x (length correction factor) 112 = 42.96 cfs.
- Riser Diameter N/A in.; Riser Height N/A ft.; Riser Head (h) = N/A ft.
- Trash Rack Diam. N/A in.; Trash Rack Height = N/A ft.
- (CONTROL STRUCTURE IS EXISTING AND IS INTERNAL TO EXISTING MANHOLE)

NOTE: A table showing design data shall be included on the plan for each basin.

C-10-10

Emergency Spillway (O/S) (NO EMERGENCY SPILLWAY)

- Emergency spillway cap., Q_e = Q₁₀ - Q₁₀ = N/A - N/A = N/A cfs
- Width N/A ft.; H_p N/A ft.
- Entrance channel slope N/A %
- Exit channel slope N/A %

Anti-Seep Collar Design (If Required) (EXISTING PER SHEET 8 OF 15)

- y = N/A ft.; z = N/A ft.; pipe slope = N/A %; L_s = N/A ft.
- Use N/A collars, N/A ft. x N/A in. square; projection = N/A ft.

Design Elevations

- Riser Crest = 430.53 ft.
- Emergency Spillway Crest = N/A ft.
- Permanent pool = 427.00 ft.
- Draw-down orifice invert = 423.53 ft.
- Design High Water = 431.14 ft.
- Min. settled top of dam = 434.00 ft.
- Bottom of Basin = 423.65 ft.

Surface Area Design

- Min. basin surface area; SA ≥ 0.0035 x Q₁₀ = 0.0035 x 16.12 cfs ≤ 0.06 ac. = 2,450 S.F. MIN. ACTUAL = 6,093 @ ELEV. 432.00

Draw-down Device

- Draw-down device orifice diameter = 2 in. (From Table 11)
- A₁ = Total area of perforations ≥ 4A₂ At REQUIRED = 0.04
 A₁ = (# of perforation/foot)(perforation area ft²)(perforated section length ft.)
 A₁ = 0.23 ft² [12 x 0.055 x 3.53] (1" PERFS. @ 4" O.C. EVERY 90")
 A₂ = Internal orifice area (from Table 11 or computed) = 0.234

C-10-11

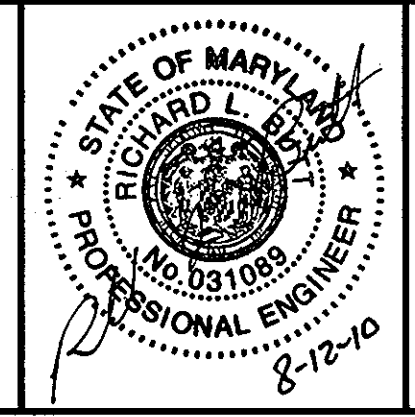
NOTE FOR REMOVAL OF WOODY VEGETATION:
 CONTRACTOR SHALL REMOVE ALL TREES AND OTHER WOODY VEGETATIVE GROWTH WITHIN THE LIMITS OF WOODY VEGETATION REMOVAL, ACCORDING TO THE WOODY VEGETATION REMOVAL SPECIFICATIONS ON SHEET 11 OF 15.

DEVELOPER: /OWNER
 KATHLEEN HETHERINGTON, ED. D.
 SECRETARY-TREASURER, PRESIDENT
 HOWARD COMMUNITY COLLEGE
 10901 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD 21044-3197
 (410) 712-4820

DESIGNED BY: GAH		DATE: 7/26/10	
DRAWN BY: GAH	BY: GAH	DATE: 7/26/10	DESCRIPTION: NEW SHEET FOR REV. #1/Parking Garage #2 for Howard Community College
CHECKED BY: RLB			
APPROVED BY: RLB			
SCALE: 1" = 30'			

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
 936 RIDGEBROOK ROAD
 SPARKS, MD 21152
 PHONE: (410) 316-7800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31024 EXPIRATION DATE: 11/21/10.



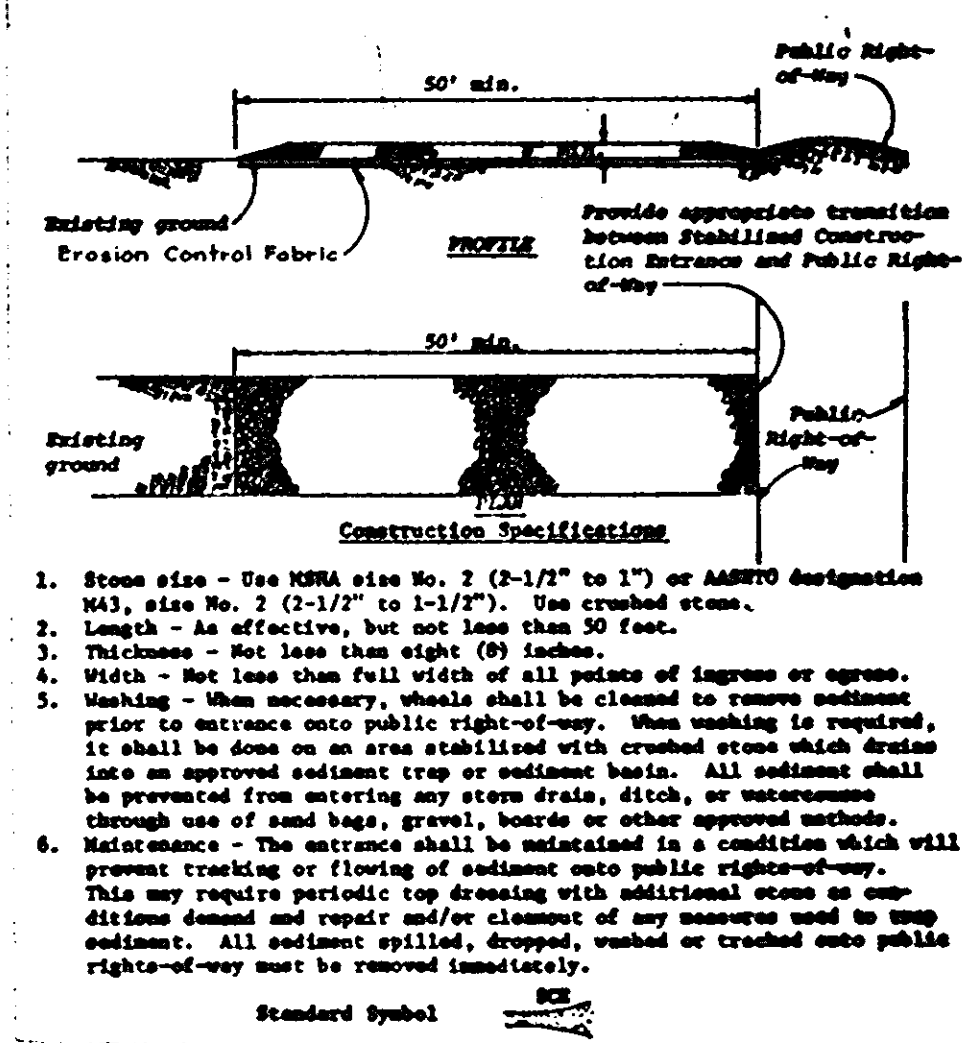
EROSION & SEDIMENT CONTROL PLAN
 HOWARD COMMUNITY COLLEGE, PARKING GARAGE # 2
 COLUMBIA TOWN CENTER, SECTION 8, AREA 4 - PARCEL F
 TAX MAP 35 RECORD PLAT NO. 4804 5TH ELECTION DISRICT HOWARD COUNTY MARYLAND

SHEET 7 OF 15
 SC-3 OF 14
 KCI JOB NUMBER : 01082978

Friday, July 30, 2010 9:08:17 AM
 G:\E\10080\10082978\DRAWINGS\SDP-82-65-NET-SHT.DWG

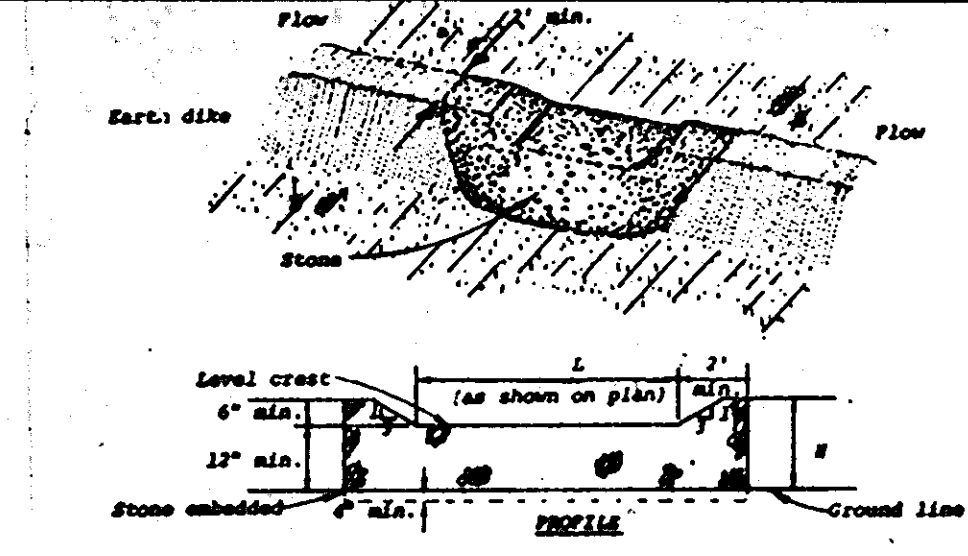
SEDIMENT CONTROL CONSTRUCTION NOTES
GENERAL NOTES

- (CLOSED OUT)**
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (322-2070).
 - ALL SEDIMENT CONTROL STRUCTURES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
 - SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
 - ALL DISTURBED AREAS ARE TO BE DRESSED AND STABILIZED ACCORDING TO THE TEMPORARY OR PERMANENT SEEDING SCHEDULES AS SOON AS PROPER WEATHER CONDITIONS EXIST FOR THE ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER.
 - SEDIMENT WILL BE REMOVED FROM TRAPS WHEN THE DEPTH REACHES THE CLEAN OUT ELEVATION SHOWN ON THE PLANS.
 - FERTILIZER AND LIME RATES MAY BE CHANGED THROUGH AUTHORIZATION BY THE HOWARD SOIL CONSERVATION DISTRICT IF SOIL TESTS DETERMINE A REDUCTION IN THE SPECIFIED RATES IS JUSTIFIED.
 - 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.
 - REFERENCES CALLED FOR ON THE SEDIMENT CONTROL CONSTRUCTION PLAN AND DETAILS ARE MADE TO "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS".
 - SEDIMENT CONTROL WILL BE INSTALLED BEFORE CLEARING AND GRUBBING REMAINDER OF SITE.



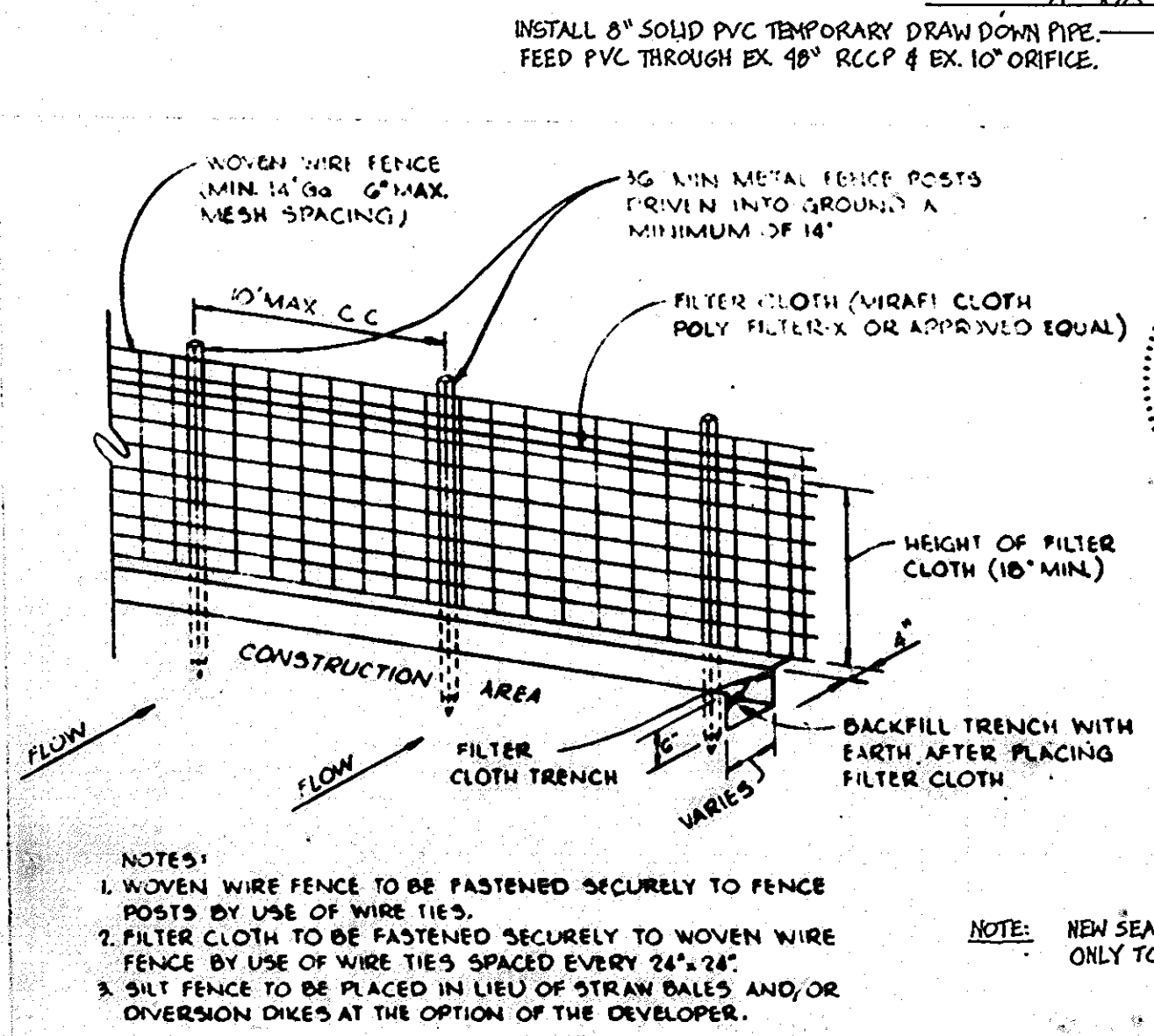
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STABILIZED CONSTRUCTION ENTRANCE
No Scale

SEE SHEET 11 OF 15 FOR ADDITIONAL STORMWATER MANAGEMENT DETAILS.
SEE SHEET 9 OF 15 FOR ADDITIONAL EROSION & SEDIMENT CONTROL DETAILS.

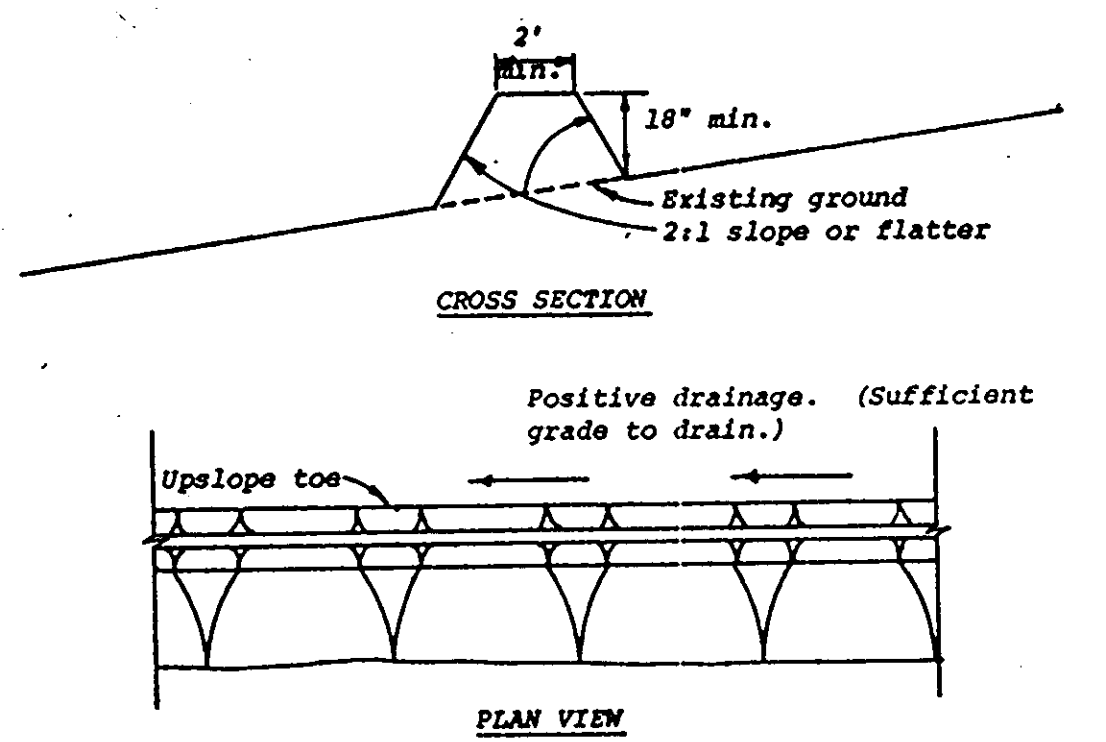


(CLOSED OUT)
STONE OUTLET STRUCTURE
No Scale

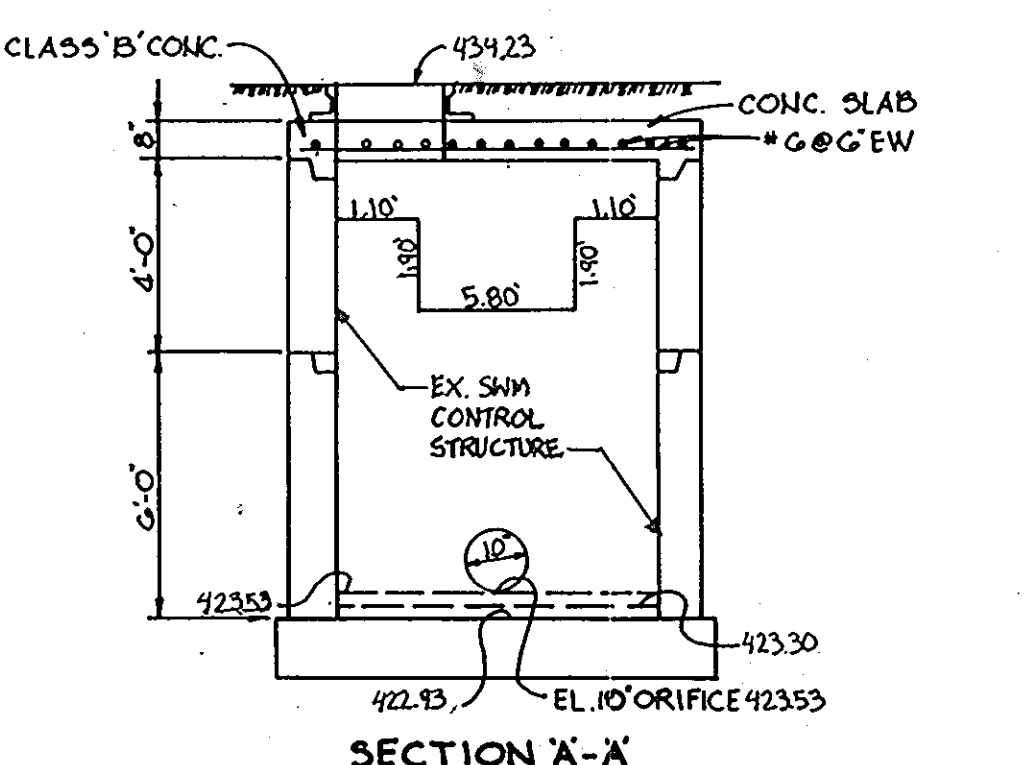
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31087, EXPIRATION DATE: 11-21-10



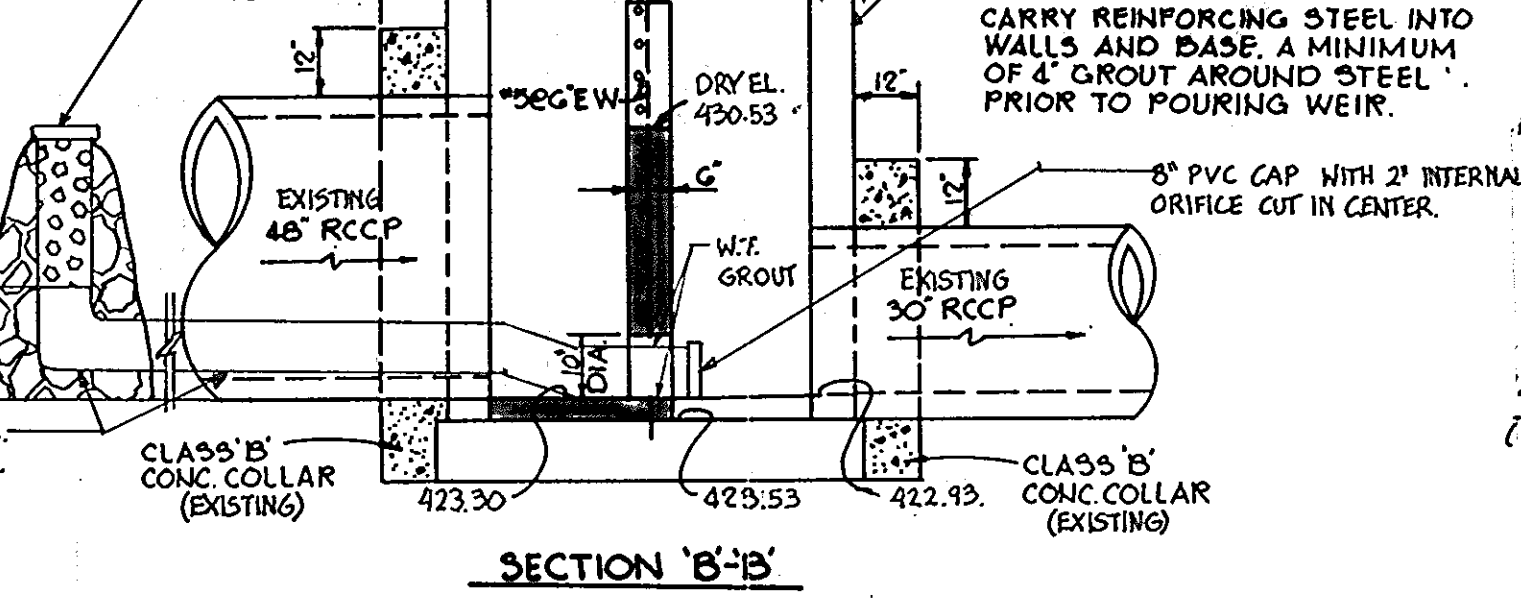
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SILT FENCE DETAIL
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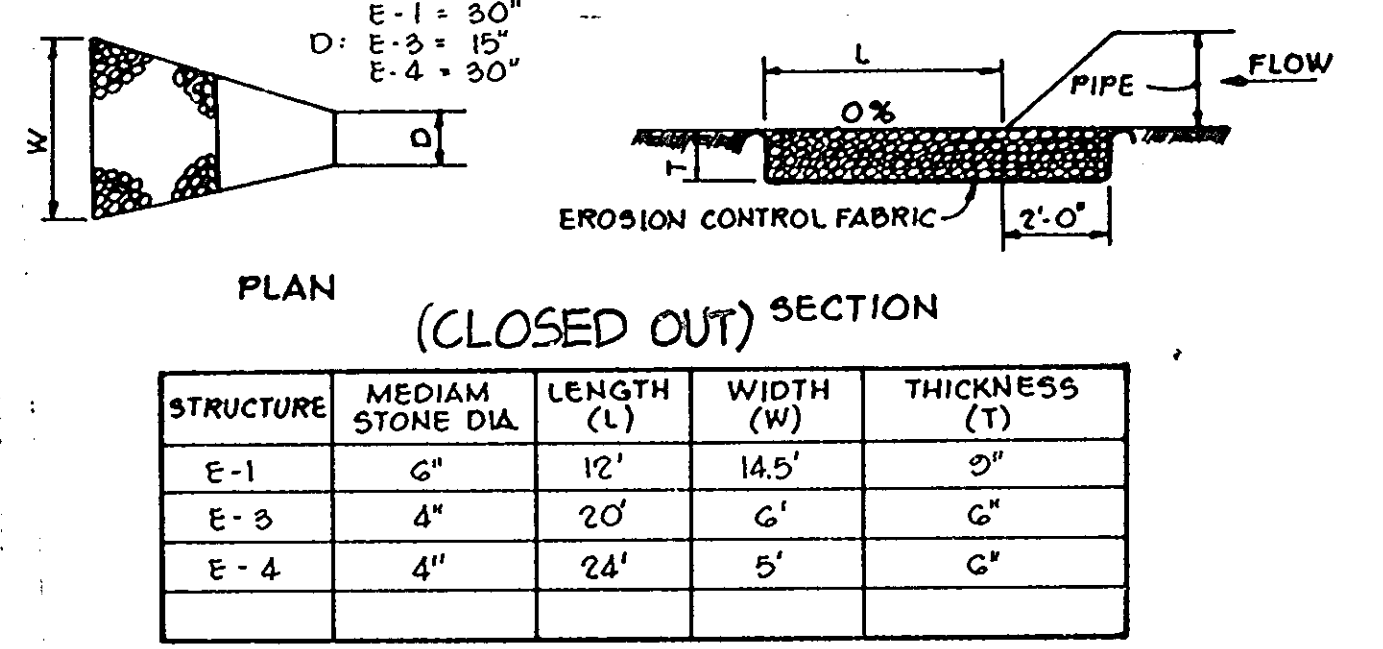
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PERIMETER DIKE
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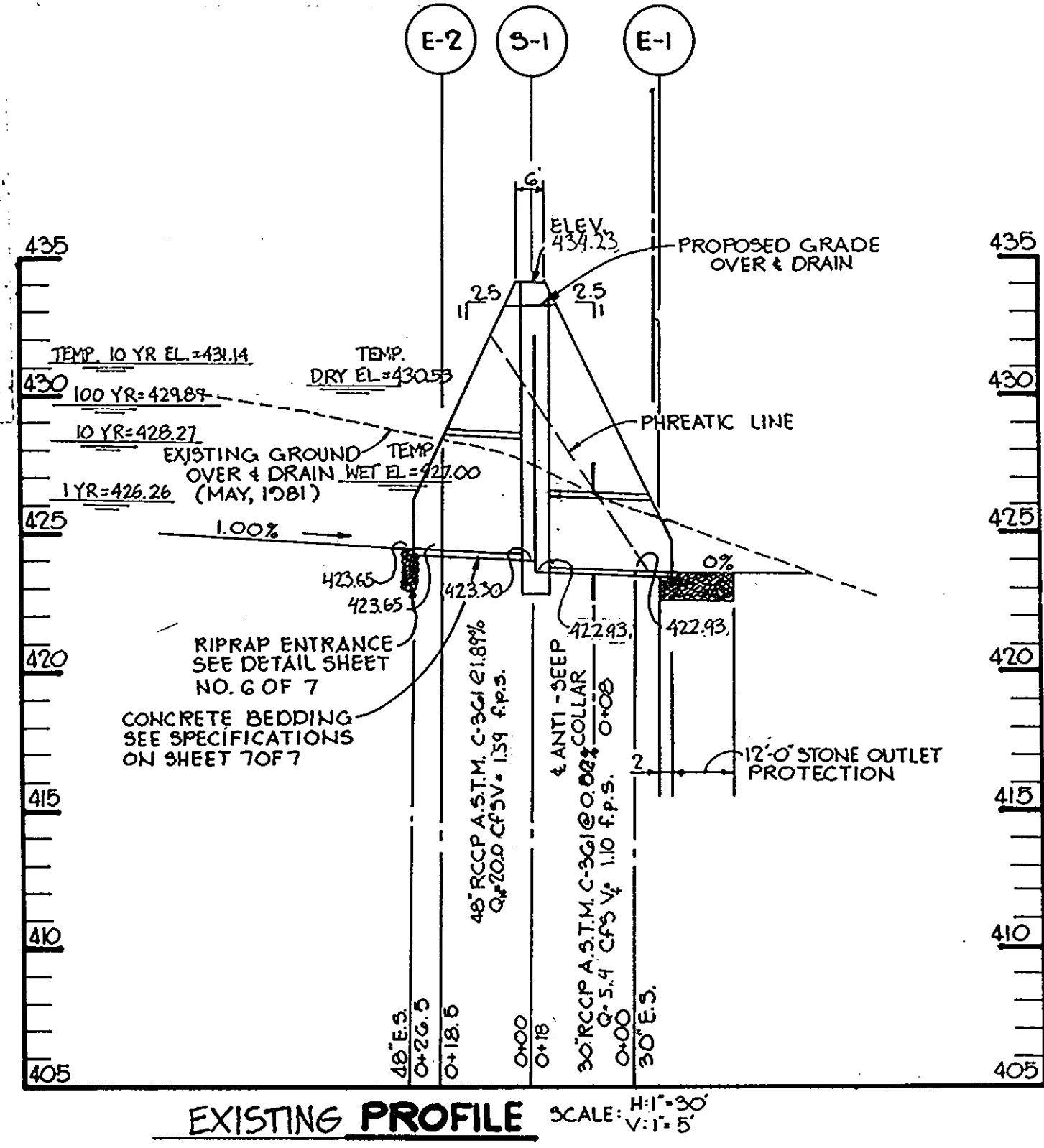
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SECTION A-A



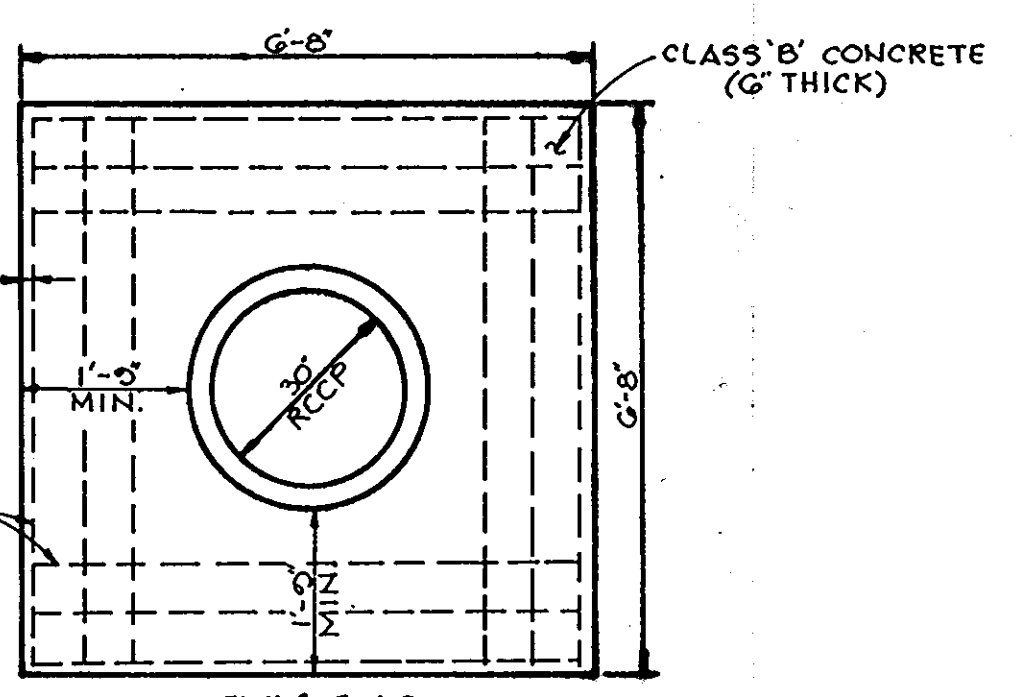
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DETAIL - STORM WATER MANAGEMENT CONTROL STRUCTURE S-1
No Scale



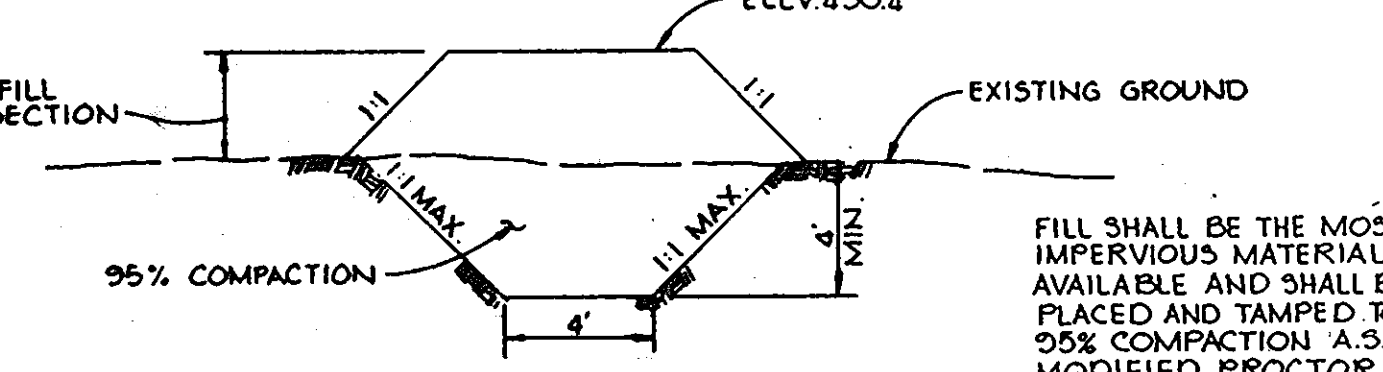
OUTLET PROTECTION DETAIL
No Scale



EXISTING PROFILE
SCALE: H:1\"/>



ANTI-SEEP COLLAR
NO SCALE



EXISTING CORE TRENCH TYPICAL SECTION
No Scale

(CLOSED OUT) **TEMPORARY SEEDING**

- AREA TO BE SEEDED SHALL BE RECENTLY LOOSENEED. IF THE GROUND IS PACKED, CRUSTED OR HARD, THE TOP LAYER OF SOIL SHALL BE LOOSENEED BY DISCING, RACKING OR OTHER ACCEPTABLE MEANS.
- APPLY 10-20-10 FERTILIZER (OR EQUIVALENT) AT THE RATE OF 600 LBS. PER ACRE OR 15 LBS. PER 1000 SQ. FT.
 - WHERE SOIL IS KNOWN TO BE HIGHLY ACID, APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TON PER ACRE.
 - WORK BOTH INTO SOIL AND SEED WITH CYCLONE SEEDER, DRILL, CULTIPAKER SEEDER OR HYDROSEEDER (SLURRY WILL INCLUDE SEED AND FERTILIZER) AT THE RATE OF 40 LBS. PER ACRE OF ITALIAN OR PERENNIAL RYEGRASS.
 - MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.

(CLOSED OUT) **PERMANENT SEEDING**

- FINAL STABILIZATION WILL TAKE PLACE AS SOON AS POSSIBLE AS WEATHER CONDITIONS PERMIT. AS FOLLOWS:
- APPLY DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE (ONE TON PER ACRE IF APPLICATION OF TON PER ACRE WAS MADE FOR TEMPORARY SEEDING).
 - APPLY 0-20-20 FERTILIZER AT THE RATE OF 600 LBS. PER ACRE HARROW OR DISC LIME AND 0-20-20 FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 2\"/>

(CLOSED OUT) **SDP-02-65 PHASE 1 SEQUENCE OF CONSTRUCTION**
(APPLICABLE TO GP-02-23 ONLY - THIS PHASE CLOSED OUT - SEE NOTE)

- MASS GRADING PERMIT OBTAINED ON NOVEMBER 25, 1981 (GP-82-23)
- REPAIR STABILIZED CONSTRUCTION ENTRANCE AS NECESSARY.
- REPAIR EXISTING PERIMETER DIKES AS NECESSARY.
- INSTALL SILT FENCE AND SWM/SEDIMENT POND AND SEED IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
- INSTALL UTILITIES AND CONSTRUCT BUILDING; BLOCK INLETS IN ACCORDANCE WITH DETAIL (DRAWING 6 OF 7).
- INSTALL CONCRETE CURB AND GUTTER AND PAVING.
- STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
- UPON APPROVAL OF THE SOIL CONSERVATION SERVICE INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND CONVERT THE SEDIMENT POND TO THE STORM WATER MANAGEMENT FACILITY AS FOLLOWS:
 - PUMP OUT IMPOUNDED WATER.
 - REMOVE SILT AND STONE FILTER AT OUTLET PIPE AND RESTORE BASIN TO ORIGINAL DIMENSIONS.
 - REMOVED SILT SHALL BE SPREAD IN OPEN TRIANGULAR AREA EAST OF BUILDING AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

NOTE: SEE SHEET 11 OF 15 (SC-5 OF 14) FOR NEW PHASE 2 SEQUENCE OF CONSTRUCTION FOR GP-10-13.

DATE	BY	DESCRIPTION
07-26-10	GAH	ADD NOTE - REVISE SHEET INFO - ADD TEMP. DRAW DOWN DEVICE - AS BUILT ELEV.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

APPROVED: *John W. Whitney* 5-28-82
COUNTY HEALTH OFFICER DATE

APPROVED: *John W. Whitney* 5-28-82
PLANNING DIRECTOR DATE

APPROVED: *John W. Whitney* 5-28-82
ACTING CHIEF OF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: *John F. Nunn* 5-04-82
DIRECTOR DATE

APPROVED: *John F. Nunn* 5-04-82
CHIEF, BUREAU OF ENGINEERING DATE

BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

APPROVED: *John W. Whitney* 11-17-81
DEVELOPER: JOHN W. WHITNEY DATE

BY THE ENGINEER:

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

APPROVED: *James K. Tracy* 11-17-81
ENGINEER: JAMES K. TRACY DATE

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

APPROVED: *John W. Whitney* 5-18-82
U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED: *Robert Ziehm* 5-18-82
HOWARD S.C.D. DATE

DATE	NO.	REVISION
8-19-82	1	REVISED AS PER H.C. COMMENTS DATED 12-16-81

OWNER/DEVELOPER
KATHLEEN HETHERINGTON, ED. D.
SECRETARY-TREASURER, PRESIDENT
HOWARD COMMUNITY COLLEGE
10801 LITTLE PATENT PARKWAY
COLLEGE PARK, MD 20749-3977
(410) 772-4820

PROJECT: GENERAL PHYSICS OFFICE BUILDING

AREA: COLUMBIA TOWN CENTER
SECTION B, AREA 4 - PARCEL F TAX MAP NO. 35
5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND

TITLE: SWM AND SEDIMENT CONTROL DETAILS

APPROVED: *John W. Whitney* 4-21-82
PLANNING BOARD OF HOWARD COUNTY DATE

Riemer-Tracy & Associates, Inc.
8659 Baltimore National Pike
Ellicott City, Maryland 21043
(301) 461-2690
Land Planning, Design & Civil Engineering

DESIGNED BY: R.J.W.
DRAWN BY: D.A.M.
PROJECT NO: 0901
DATE: 11-17-81
SCALE: AS SHOWN
DRAWING NO. 8 OF 15

SDP-82-65 MAY 11, 1982

I. SITE PREPARATION

Areas under the borrow areas, embankment, and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Cutoff Trench

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

Reinforced Concrete Pipe

- Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. Approved equivalents are AWA Specification C-300, 301, and 302.
 - Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its diameter with a minimum thickness of 3", or as shown on the drawings.
 - Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.
 - Backfilling shall conform to structural backfill as shown above.
 - Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.
- B. For pipes of other materials, specific specifications shall be shown on the drawings.

V. CONCRETE

Materials

- Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.
- Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
- Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.
- Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.
- Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

- Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U. S. gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.
- Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.
- Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete. The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed. Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.
- Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.
- Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.
- Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.
- Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.
- Placing Temperature - Concrete may not be placed at temperatures below 37° F with the temperature falling, or 34° with the temperature rising.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications shown on or accompanying the drawings.

SEE SHEET 11 OF 15 FOR NEW & REVISED STORMWATER MANAGEMENT DETAILS. THIS PHASE OF PROJECT IS CLOSED OUT.

REVISIONS		
DATE	BY	DESCRIPTION
07-26-80	GAH	1. ADD NOTE - REVISE SHEET 11 AND 12

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 COUNTY HEALTH OFFICER: *[Signature]* DATE: 5-28-82

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
 PLANNING DIRECTOR, ACTING: *[Signature]* DATE: 5-28-82
 ACTING CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION: *[Signature]* DATE: 5-28-82

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DIRECTOR: *[Signature]* DATE: 5-28-82
 CHIEF, BUREAU OF ENGINEERING: *[Signature]* DATE: 5-28-82

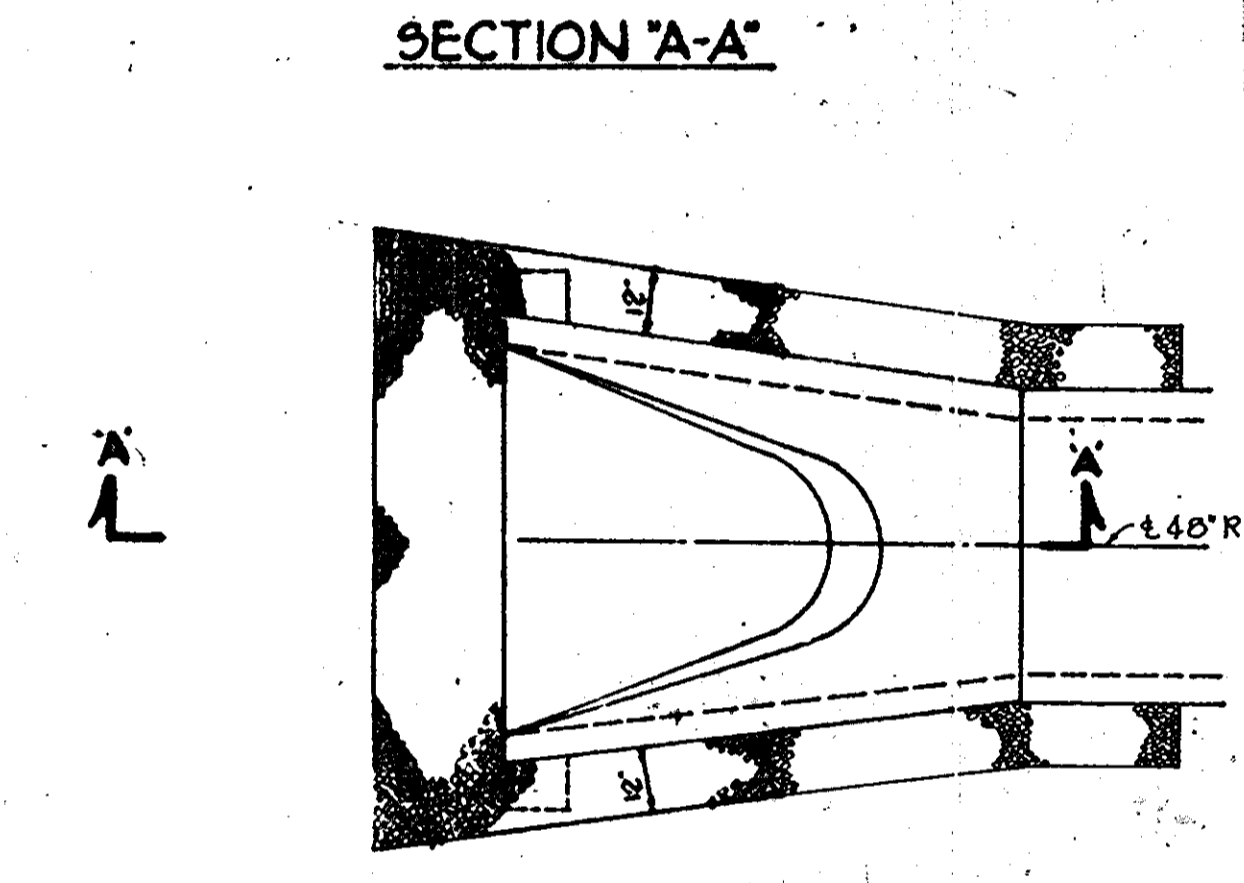
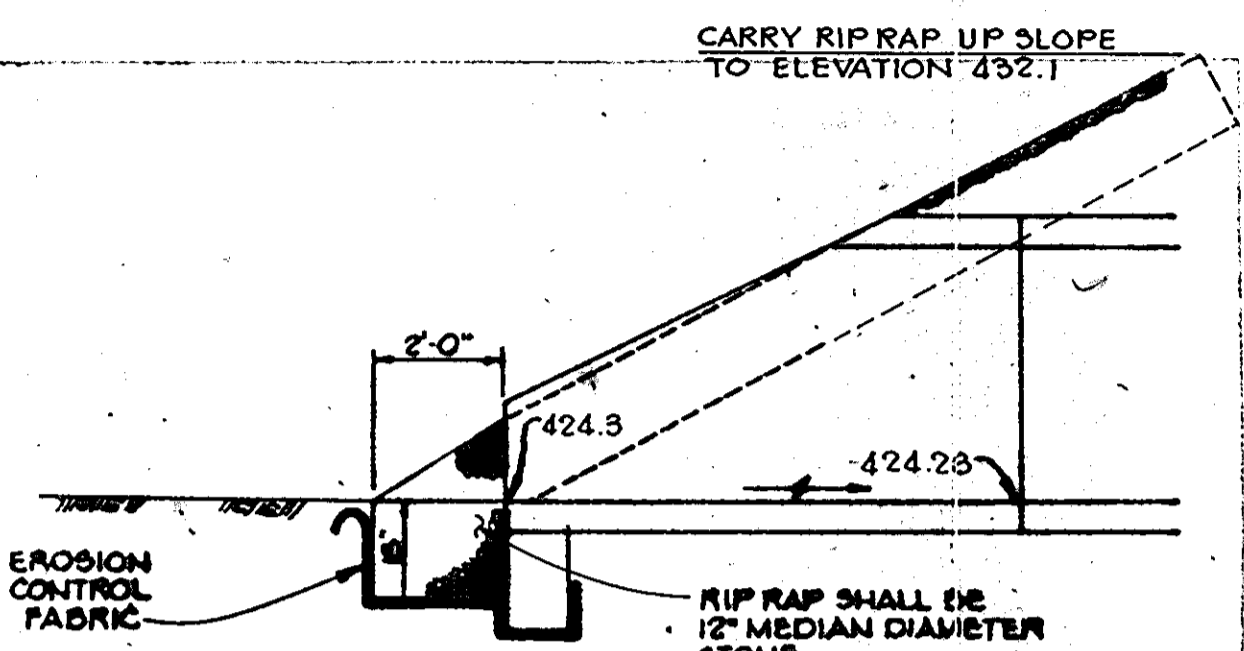
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 U.S. SOIL CONSERVATION SERVICE: *[Signature]* DATE: 5-18-82

BY THE DEVELOPER:
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 DEVELOPER: JOHN W. WHITNEY DATE: 11-17-81

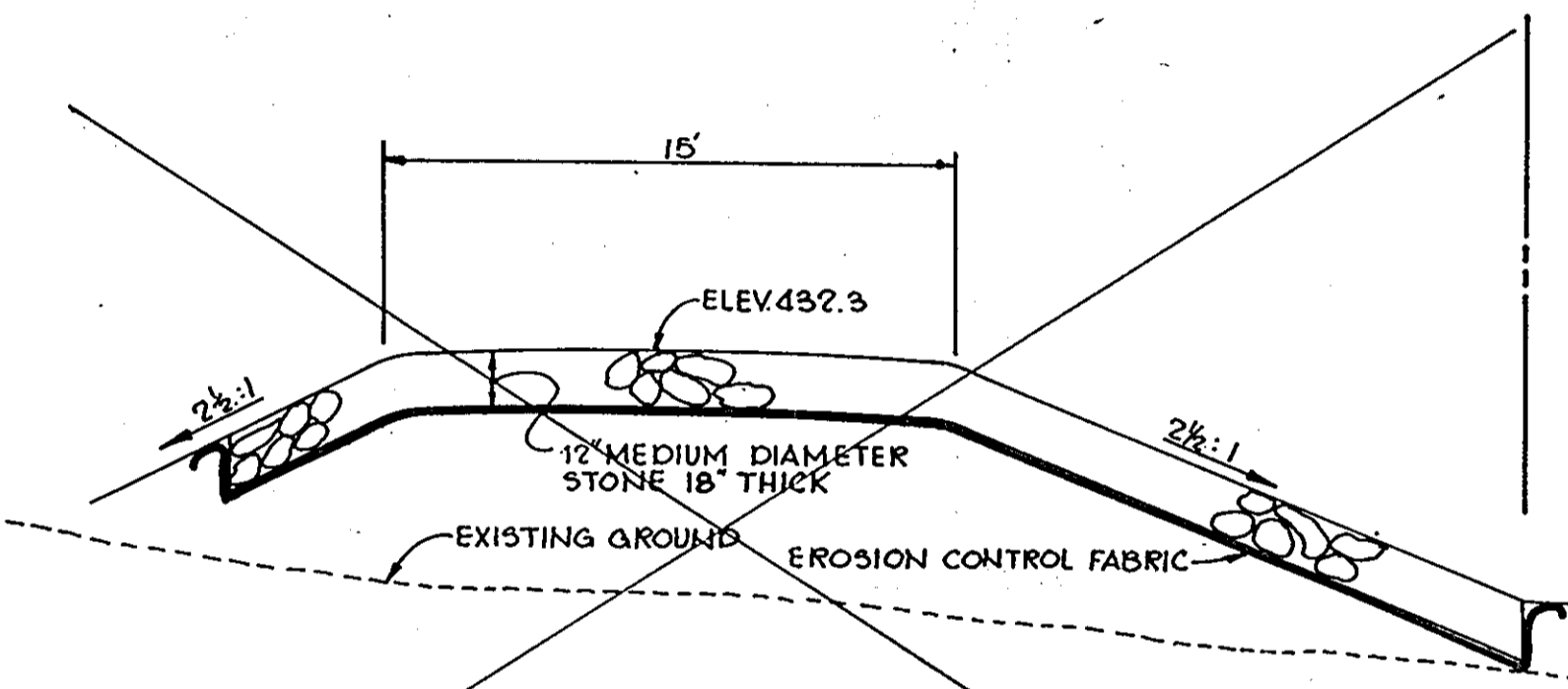
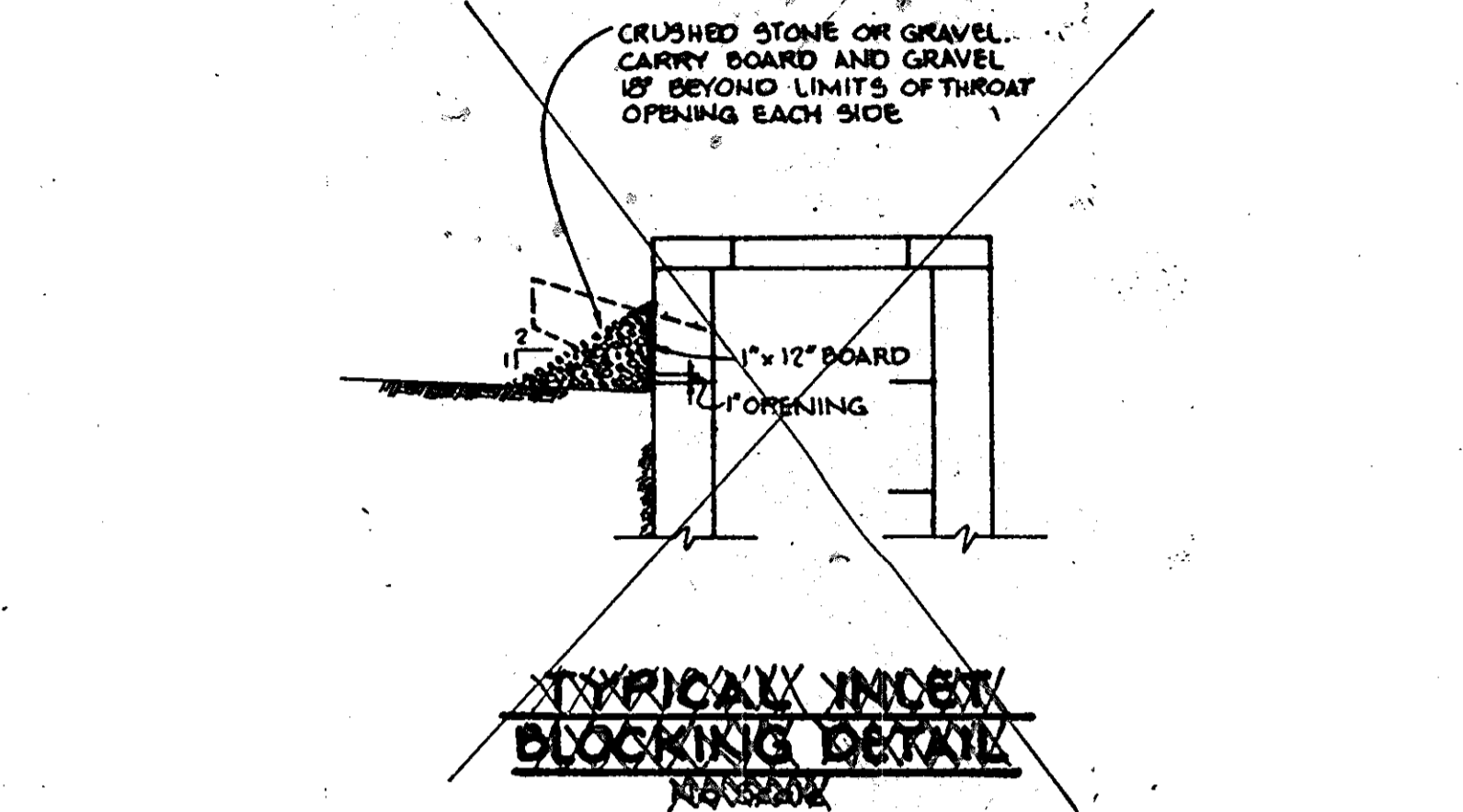
BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 ENGINEER: JAMES K. JACZY, P.E. DATE: 11-17-81

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: HOWARD S.C.D. DATE: 11-18-82

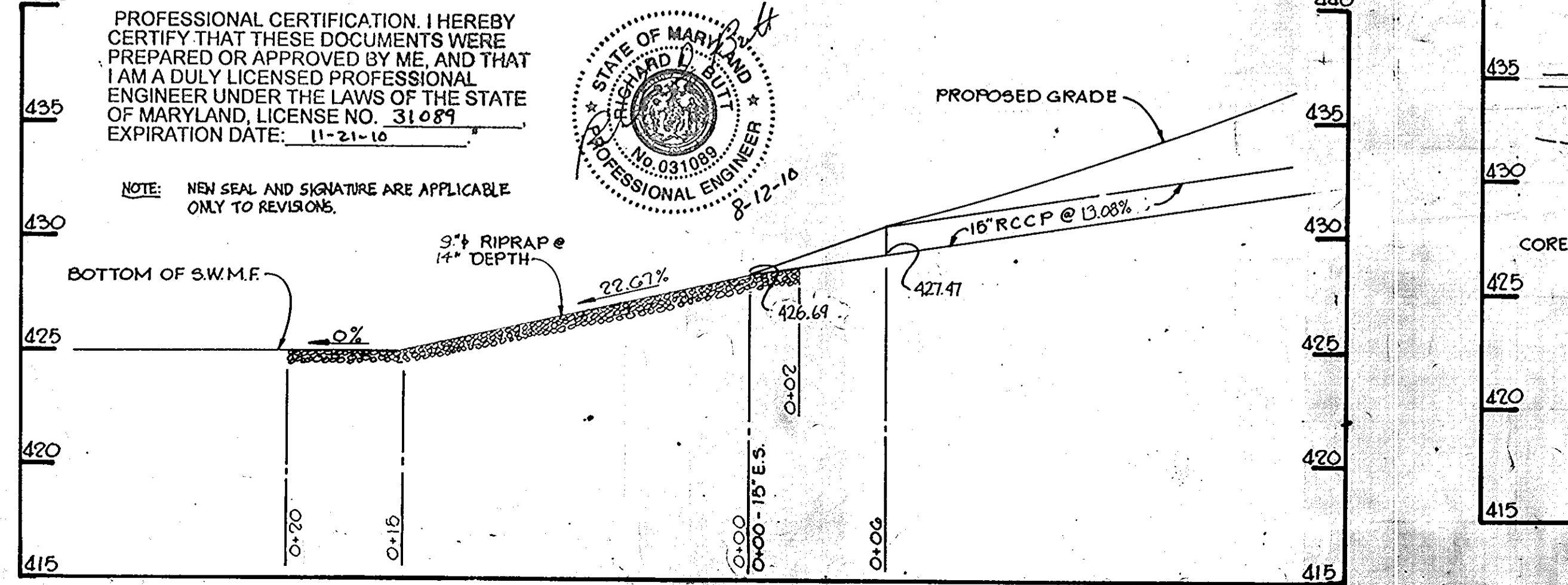
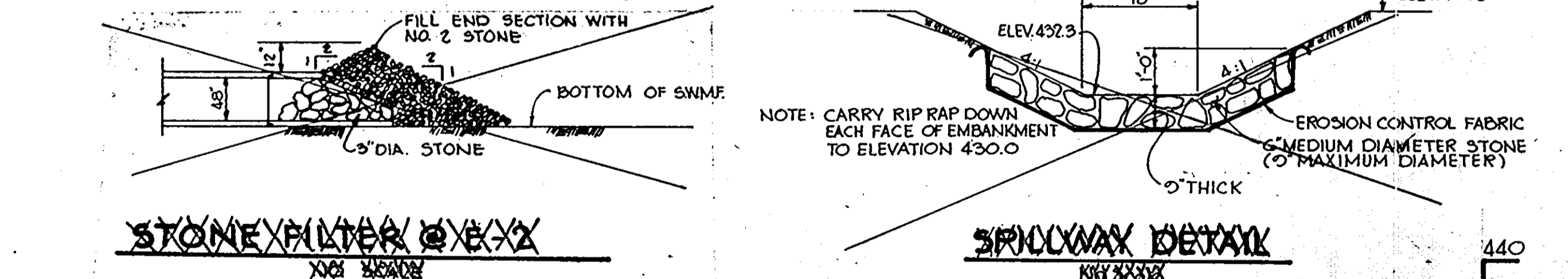
APPROVED - PLANNING BOARD OF HOWARD COUNTY
 DATE: 4-21-82
[Signature]



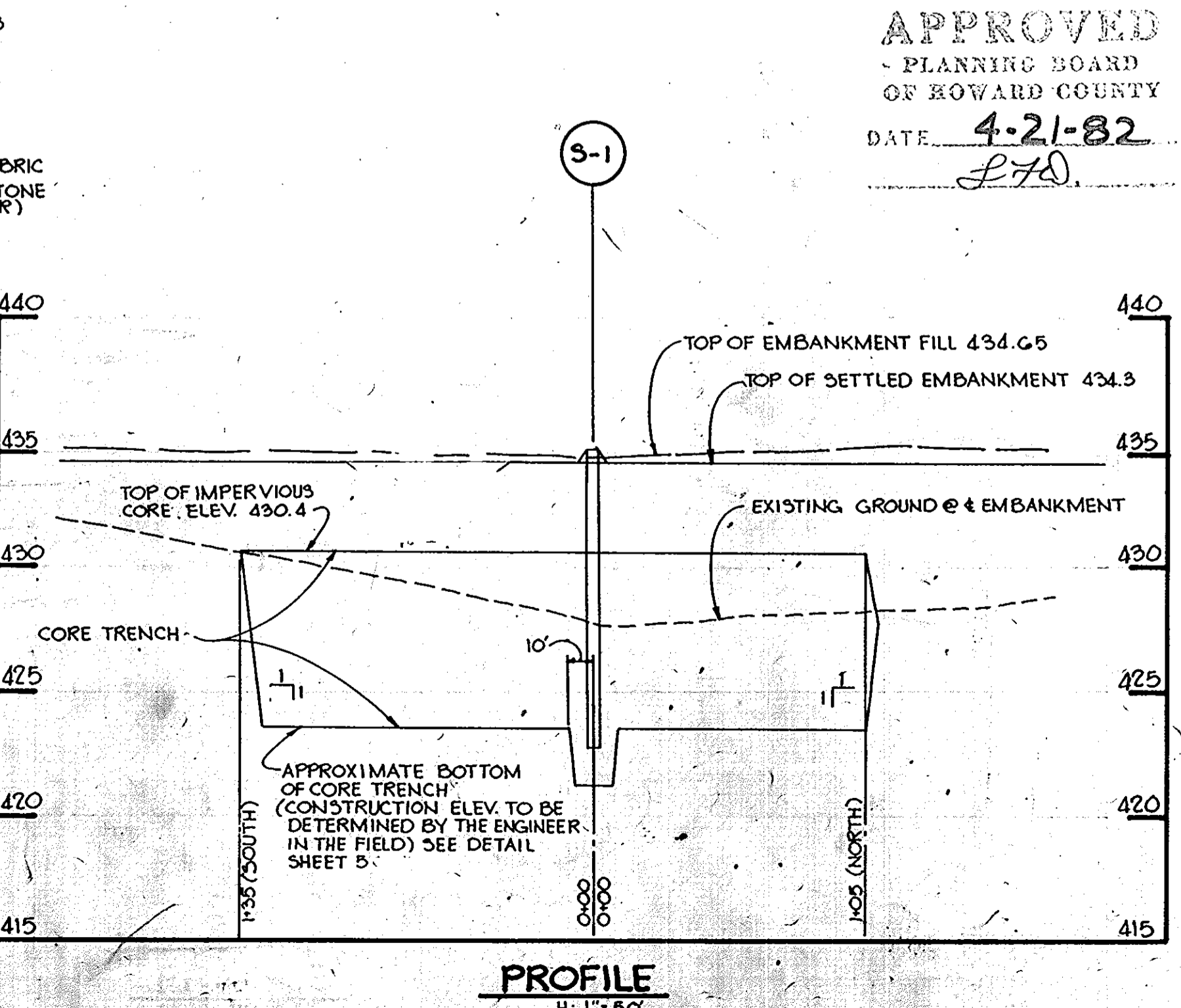
SECTION 'A-A'
 PLAN
 DETAIL - RIP RAP ENTRANCE @ E-2
 NO SCALE



TYPICAL INLET BLOCKING DETAIL
 EMERGENCY SPILLWAY PROFILE
 NO SCALE



SECTION THRU RIP RAP @ E-3
 Scale: H:V = 1:5



PROFILE
 SCALE: H:V = 1:5

REVISOR: 5-10-82 REVISOR: 12-10-81
 DATE NO. REVISION

OWNER/DEVELOPER: KATHLEEN HEMERINGTON, ED. D. SECRETARY-TREASURER, PRESIDENT HOWARD COMMUNITY COLLEGE 1090 LITTLE PATENT PARKWAY COLUMBIA, MD 21044-3477 (410) 712-4820

PROJECT: GENERAL PHYSICS OFFICE BUILDING

AREA: COLUMBIA TOWN CENTER SECTION 8, AREA 4 - PARCEL 'F' TAX MAP NO 25 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: STORM WATER MANAGEMENT FACILITY SPECIFICATIONS

Riomer - Tracy & Associates, Inc.
 8659 Sunrise National Pike
 Escott City, Maryland 21043
 (301) 461-2690
 Land Planning, Design & Civil Engineering

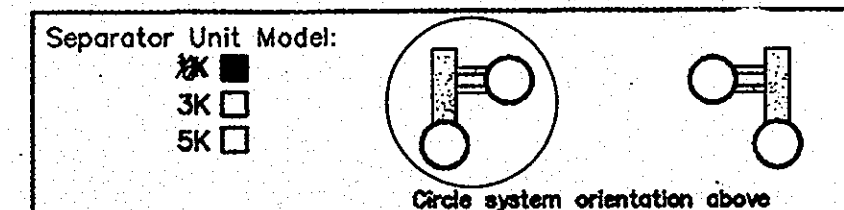
DATE: 11-17-81
 DESIGNED BY: J.K.T.
 DRAWN BY: R.J.W.
 PROJECT NO: 0081
 DATE: 11-17-81
 SCALE: AS SHOWN
 DRAWING NO. 10 OF 15

[Signature]
 PROFESSIONAL ENGR. NO. 2668
 SDP-82-056 MAY 11, 1982

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS

STAGE (X = APPROVAL REQUIRED)	DEVELOPER/ENGINEER APPROVAL		INSPECTOR		GEOTECHNICAL ENGINEER	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
1. PRE-CONSTRUCTION MEETING.	X		X		X	
2. INSTALL MANHOLES AND ASSOCIATED STORM DRAINAGE. a. OBTAIN APPROVAL OF SUBGRADE FROM GEOTECHNICAL ENGINEER. (SUBGRADE TO HAVE A MINIMUM OF 95% COMPACTION)					X	
b. INSTALLATION OF PRECAST BASE, LOWER TANK AND LOWER PIPING.	X		X			
c. BACKFILL AND MIN. 95% COMPACTION AROUND LOWER TANK AND LOWER PIPING.	X		X		X	
d. INSTALLATION OF PRECAST MIDDLE SECTIONS WITH SEPARATOR UNIT AND REMAINING PIPING.	X		X			
e. INSTALLATION OF PRECAST TOP SLAB.	X		X			
f. INSTALLATION OF ADJUSTMENT RINGS AND FRAME AND COVER.	X		X			
g. INSTALLATION OF FLOWABLE FILL OR CONCRETE BACKFILL.					X	
3. BACKFILLING OPERATION AND COMPACTION.					X	
4. SITE IS PERMANENTLY STABILIZED. SEDIMENT CONTROL MEASURES REMOVED AND ALL SEDIMENT DEBRIS REMOVED FROM DUAL MANHOLE SEPARATORS.			X			
5. FINAL INSPECTION.			X			

Project: HOWARD COUNTY COLLEGE
 Address: 10901 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD 21044
 Designer: KCI TECHNOLOGIES
 Contact: MICHAEL BRYAN
 Phone: 410-316-7800
 Fax: 410-316-7800
 Delivery Date: _____
 Owner: HOWARD COUNTY COLLEGE
 Contact: MICHAEL BRYAN
 Address: _____
 Phone: _____
 Fac: _____



Manhole Specifications:
 Primary Manhole Diameter: 48 inches
 Storage Manhole Diameter: 48 inches
 Floor Elevation: _____
 Primary Manhole: 241.00
 Storage Manhole: 241.00
 Primary Manhole Inverts:
 Separator Unit: 405.25
 Inlet Pipe(s): 405.25
 Cover Elevation:
 Primary Manhole: 405.00
 Storage Manhole: 405.00
 M-2 & M-3

Please show orientation (including angle), size and material of inlet pipes above.
 This order can be faxed to Boy Saver, Inc. at (301) 829-3747

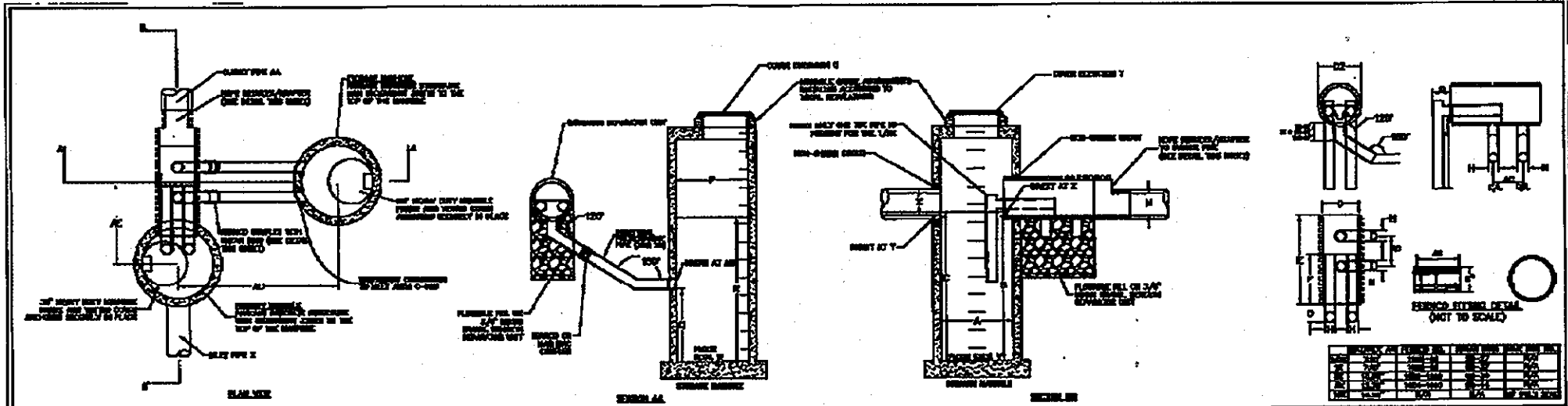
APPROVED FOR PUBLIC OR PRIVATE (pick only one) WATER AND PUBLIC OR PRIVATE (pick only one) SEWERAGE SYSTEMS
 County Health Officer: _____ Date: _____
 Howard County Health Department

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE 7-15-10 to add parking Garage #2 for Howard Community College
 Signature of Engineer (print name below signature): Kelly Z Butt Date: 8-12-10

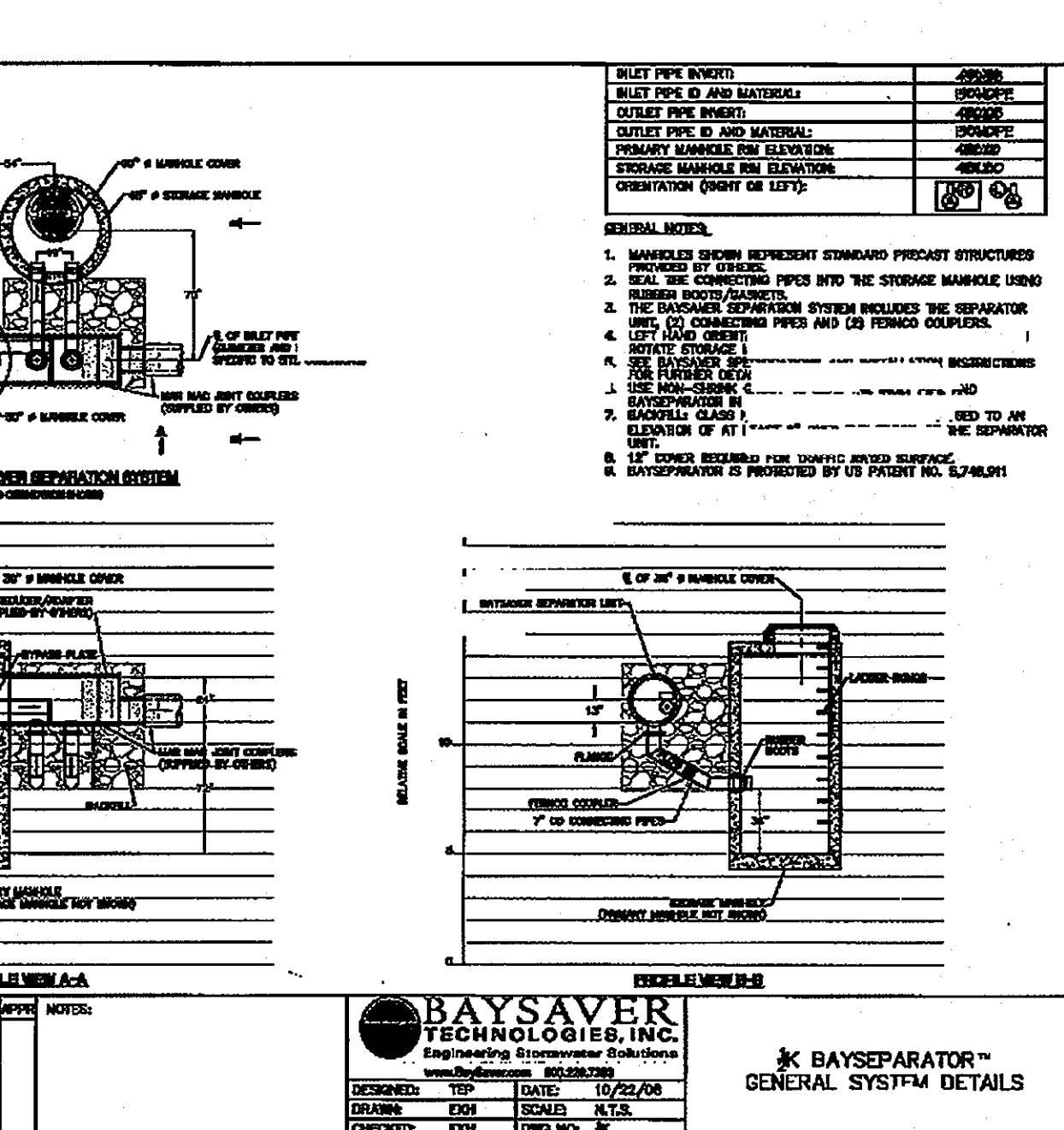
These plans for small pond construction, soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT
 Signature: _____ Date: 8/25/10
 Howard Soil Conservation District

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
 Signature: Kelly Z Butt Date: 8-12-10

DEVELOPER'S CERTIFICATE
 "We certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
 Signature: Sherryl Reese Date: 8-16-10



REVISION	DATE	DESCRIPTION
1	7/26/10	NEW SHEET FOR REV. #1 FOR KCI
2	8/30/10	Garage #2 for Howard Community College



BAYSAYER SEPARATOR UNIT	BAYSAYER MANHOLE SIZES (PRIM. X STOR.)	MAXIMUM TREATMENT (CFS) ¹	MAXIMUM HYDRAULIC RATE (CFS) ¹
1/2 K BAYSAYER SEPARATOR	48x48 48x72 60x60	11 24 7.8	8.5 10 30

NOTE: BAYSAYERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES.
 UPON COMPLETION OF THE SITE STABILIZATION, EACH BAYSAYER SYSTEM SHALL BE FLUSHED & CLEANED OUT AND REFILLED WITH CLEAN WATER.
 NOTE: DIMENSIONAL SHOP DRAWINGS ARE TO BE APPROVED BY THE DESIGN ENGINEER.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: _____ Date: 8/27/10
 Chief, Division of Land Development: _____ Date: 8/30/10
 Director: _____ Date: 8/30/10

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS	INITIALS	DATE
1. PRE-CONSTRUCTION MEETING.	X	
2. INSTALL MANHOLES AND ASSOCIATED STORM DRAINAGE.		
3. BACKFILLING OPERATION AND COMPACTION.		
4. SITE IS PERMANENTLY STABILIZED.		
5. FINAL INSPECTION.		

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BAYSAYER WATER QUALITY DEVICE

1. THE BAYSAYER WATER QUALITY SHALL BE PERIODICALLY INSPECTED AND CLEANED TO MAINTAIN OPERATION AND FUNCTION. THE OWNER SHALL INSPECT THE BAYSAYER UNIT YEARLY AT A MINIMUM, UTILIZING THE BAYSAYER INSPECTION/MONITORING FORM. INSPECTIONS SHALL BE DONE BY USING A GRADE STICK OR SIMILAR DEVICE. WHEN THE SEDIMENT DEPTHS EXCEED 2 FEET, THE UNIT MUST BE CLEANED.
2. THE BAYSAYER WATER QUALITY STRUCTURE SHALL BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTRACT THE APPROPRIATE REGULATORY AGENCIES.
3. THE MAINTENANCE OF THE BAYSAYER UNIT SHALL BE DONE USING A VACUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING HYDROCARBONS AND OTHER MATERIALS IN THE UNIT. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
4. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND THE OWNER SHALL HAVE THEM REMOVED. STRUCTURAL PARTS OF THE BAYSAYER UNIT SHALL BE REPAIRED AS NEEDED.
5. THE OWNER SHALL RETAIN AND MAKE THE BAYSAYER INSPECTION/MONITORING FORMS AVAILABLE TO HOWARD COUNTY OFFICIALS UPON THEIR REQUEST.

- BAYSAYER INSTALLATION INSTRUCTIONS**
1. EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAYER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
 2. VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
 3. MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON GAGE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTION AS REQUIRED. SEAL LIFT HOLES WITH NON-SHUNK GROUT.
 4. BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
 5. INSTALL BAYSAYER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
 6. BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
 7. INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.
 8. INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

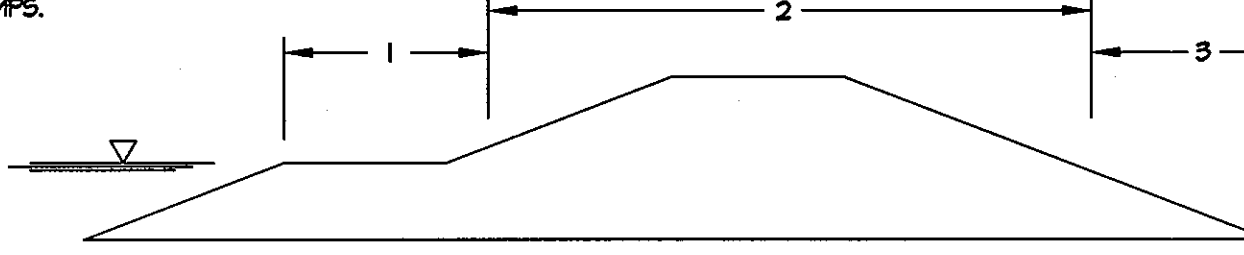
BAYSAYER MAINTENANCE
 INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET.
 MAINTENANCE CONSISTS OF THE FOLLOWING:

- A. CONTAMINANT STORAGE MANHOLE**
1. REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
 2. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. PRIMARY SEPARATION MANHOLE**
1. USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 2. REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 3. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
 4. CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

TABLE A
 GENERAL RECOMMENDATIONS FOR TREE REMOVAL 1/

TREE LOCATION ZONE	TREE TYPE A (TAP ROOT)				TREE TYPE B (SPREADING ROOT)			
	DEH < 8'		DEH ≥ 8'		DEH < 8'		DEH ≥ 8'	
	LIGHT COVER	HEAVY COVER	LIGHT COVER	HEAVY COVER	LIGHT COVER	HEAVY COVER	LIGHT COVER	HEAVY COVER
1/	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.	CUT AND KILL STUMPS.
2/	CUT AND KILL STUMPS. 2/	CUT AND GRUB STUMPS AND ROOT MASS TO 18" DEPTH UNIFORMLY.	CUT AND GRUB STUMPS AND ROOT MASS TO 24" DEPTH IN 1/2 CROWN WIDTH DIAMETER AREA. 3/	CUT AND GRUB STUMPS AND ROOT MASS TO 24" DEPTH UNIFORMLY.	CUT AND KILL STUMPS. 2/	CUT AND GRUB STUMPS AND ROOT MASS TO 12" DEPTH UNIFORMLY.	CUT AND GRUB STUMPS AND ROOT MASS TO 18" DEPTH IN CROWN WIDTH DIAMETER AREA.	CUT AND GRUB STUMPS AND ROOT MASS TO 18" DEPTH UNIFORMLY.
3/	CUT AND KILL STUMPS.	CUT AND GRUB STUMPS AND ROOT MASS TO 18" DEPTH UNIFORMLY.	CUT AND GRUB STUMPS AND ROOT MASS TO 24" DEPTH IN 1/2 CROWN WIDTH DIAMETER AREA. 3/	CUT AND GRUB STUMPS AND ROOT MASS TO 24" DEPTH UNIFORMLY.	CUT AND KILL STUMPS. 2/	CUT AND GRUB STUMPS AND ROOT MASS TO 12" DEPTH UNIFORMLY. 5/	CUT AND GRUB STUMPS AND ROOT MASS TO 18" DEPTH IN CROWN WIDTH DIAMETER AREA. 3/ 5/	CUT AND GRUB STUMPS AND ROOT MASS TO 12" DEPTH. 6/

- 1/ TREE GROWTH SMALLER THAN 2" DEH WILL BE REMOVED BY SPRAYING, INJECTION OR CUTTING AND STUMP KILLING. TREES AND SHRUBS PLANTED FOR SHORELINE PROTECTION IN ZONE 1 SHALL BE MAINTAINED AT HEIGHTS 4 FEET.
- 2/ IN EMBANKMENT TYPE (a) DISPERSED SOIL-CUT STUMPS 12 INCHES BELOW SURFACE AND BACKFILL WITH COMPACTED SOIL.
- 3/ IN EMBANKMENT TYPE (b) EARTH FILL WITH LOW PIPING POTENTIAL-CUT AND KILL STUMPS.
- 4/ IN RIPRAFFED OR HEAVY ROCKFILL SECTIONS GRUBBING IS NOT REQUIRED.
- 5/ FOR WATER-LOVING TREES SUCH AS WILLOWS, REMOVE STUMP AND ROOT MASS IN TWICE THE CROWN WIDTH AREA.
- 6/ FOR WATER-LOVING TREES SUCH AS WILLOWS, REMOVE STUMPS AND ROOT MASS TO 18" DEPTH UNIFORMLY.
- 7/ INDIVIDUAL LARGE TREES IN THIS ZONE MAY NEED THE SPECIAL TREATMENT AS DESCRIBED IN SECTION 5.



III. CRITERIA AND RECOMMENDATIONS FOR STUMP AND ROOT MASS REMOVAL

A. DEFINITION OF TREATMENT METHODS

CONSIDERATION OF THE FACTORS PREVIOUSLY LISTED WAS USED TO DEVELOP THE APPROPRIATE TREATMENT METHODS FOR STUMP AND ROOT MASS REMOVAL ON EMBANKMENTS. GENERAL RECOMMENDATIONS ARE SUMMARIZED IN TABLE A.
 DEFINITIONS OF EACH OF THE TREATMENT METHODS LISTED IN THIS TABLE IS AS FOLLOWS:

1. CUT AND KILL STUMP

TREES SHOULD BE CUT APPROXIMATELY SIX INCHES BELOW THE GROUND SURFACE TO ELIMINATE THE HAZARD OF ANY SURFACE OBSTRUCTION.
 AN APPROVED SILVICIDE SHOULD BE APPLIED TO THE STUMP SURFACE, AS RECOMMENDED BY THE MANUFACTURER, PRIOR TO BACKFILLING AND RESEEDING.

2. CUT AND GRUB STUMPS AND ROOT MASS TO SPECIFIED DEPTH UNIFORMLY

IN THE AREA SPECIFIED, A UNIFORM CUT WILL BE MADE WITH APPROPRIATE EQUIPMENT. THE UNDERLYING ROOT MASS THAT REMAINS WILL BE DISTURBED AS LITTLE AS POSSIBLE BY USING SHARP CUTTING TOOLS. EXPOSED TAP ROOTS WILL BE TREATED WITH AN APPROPRIATE SILVICIDE TO PREVENT REEMERGENCE.

3. CUT AND GRUB STUMPS AND ROOT MASS TO DEPTH AND DIAMETER OF REMOVAL DICTATED BY TYPE AND SIZE OF TREE (SEE TABLES)

FOR TAPROOTED TREES, THE REMOVAL OF THIS MASS SHOULD CREATE A ROUGHLY PARABOLIC SHAPED HOLE WITH A DEPTH AND DIAMETER AT THE SURFACE AS SPECIFIED IN THE TABLES. FOR SPREADING ROOT TREES, THE DEPTH OF REMOVAL SHOWN IN THE TABLES SHOULD BE UNIFORM OVER THE DIAMETER AREA SPECIFIED IN THE TABLES.

4. COMPLETE REMOVAL OF STUMP AND ROOT SYSTEM

IT IS ANTICIPATED THAT THIS TREATMENT WILL BE UNUSUAL AND MUST BE JUDGED ON AN INDIVIDUAL BASIS. GENERALLY THIS WOULD BE AN INTRACTABLE SITUATION AND MAY, IN SOME CASES, BE DETRIMENTAL TO THE STRUCTURE. SOME OF THE COMPLICATIONS ARE AS FOLLOWS: (1) AREA OF DISTURBANCE, (2) DEPTH AND SLOPES OF EXCAVATION, (3) PROCEDURES FOR EFFECTIVE BACKFILLING OF EXCAVATION, (4) TIMING AND DURATION OF THE REMOVAL OPERATION.

5. PARTIAL REMOVAL OF STUMPS AND ROOT SYSTEMS AND THE ADDITION OF A FILTER (SEE BACKFILL METHOD 3, PAGE 6)

THIS TREATMENT MAY BE THE MOST POSITIVE SOLUTION WHEN THERE IS CONCERN FOR PIPING BUT TREATMENT NUMBER 4 (COMPLETE REMOVAL) IS NOT FEASIBLE.

B. TYPES OF BACKFILL AND METHODS OF BACKFILLING AFTER REMOVAL OF STUMPS AND ROOT MASS

1. SELECTION OF SOIL MATERIALS FOR BACKFILL

THE SELECTION OF SOIL FOR BACKFILLING OF TREATED AREAS SHOULD BE BASED PRIMARILY ON THE PERMEABILITY CHARACTERISTICS OF THE BACKFILL WITH RESPECT TO THE SURROUNDING EMBANKMENT.

GENERALLY BACKFILL MATERIALS IN ZONES 1 AND 2 OF THE EMBANKMENT SHOULD BE OF SIMILAR PERMEABILITY TO THE ADJACENT EMBANKMENT. IN EMBANKMENTS OF KNOWN DISPERSIVE CLAYS CARE MUST BE TAKEN TO FIND NONDISPERSIVE CLAY BORROW MATERIAL OR TREAT DISPERSIVE BORROW MATERIAL WITH HYDRATED LIME.

FOR BACKFILL IN ZONES 3 AND 4, IF THE MATERIALS IN THE EMBANKMENT ARE PERMEABLE SHELL TYPE MATERIALS, IT IS IMPORTANT THAT BORROW MATERIAL BE AT LEAST AS PERMEABLE AND PREFERABLY MORE PERMEABLE THAN THE ADJACENT FILL MATERIAL. AT THE SAME TIME, IN CRITICAL LOCATIONS, THE BORROW SOILS SHOULD SATISFY FILTER DESIGN CRITERIA TO PREVENT ANY POSSIBLE PIPING.

2. METHOD OF PLACEMENT AND BACKFILL

WHERE STUMP AND ROOT MASS REMOVAL IS TO A UNIFORM DEPTH OVER AN ACCESSIBLE AREA, BACKFILL SHOULD BE PLACED IN LIFTS NO THICKER THAN 6" AND COMPACTED AT ABOUT OPTIMUM MOISTURE BY AT LEAST TWO PASSES OF THE TRACKS OF THE EARTH MOVING EQUIPMENT.

WHERE STUMP AND ROOT MASS REMOVAL IS IN CONFINED AREAS, BACKFILL SHOULD BE COMPACTED WITH HAND DIRECTED POWER TAMPERS. BACKFILL SHOULD BE PLACED AT A MINIMUM OF 90 PERCENT MAXIMUM DRY DENSITY (ASTM D-698) AND APPROXIMATELY OPTIMUM MOISTURE. LIFT THICKNESS SHOULD BE 4'-6".

3. SPECIAL TREATMENT

WHERE EXTENSIVE ROOT MASS REMOVAL IS NECESSARY AND SEEPAGE IS EITHER EVIDENT OR PROBABLE, THE USE OF A FILTER MAY BE APPROPRIATE. FILTER MATERIAL GRADATIONS MUST BE SELECTED TO PREVENT PIPING OR MOVEMENT OF EMBANKMENT MATERIALS BUT ALLOW SEEPAGE AND SAFE EXIT OF WATER. THE FILTER MAY BE ADDED IN CONJUNCTION WITH PARTIAL REMOVAL OF EXTENSIVE ROOT SYSTEMS.

REVISED-

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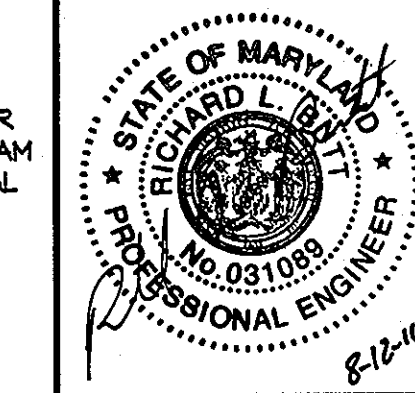
DEVELOPER:/OWNER
 KATHLEEN THERINGTON, ED. D.
 SECRETARY-TREASURER, PRESIDENT
 HOWARD COMMUNITY COLLEGE
 10901 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD 21044-3197
 (410) TT-4820

DESIGNED BY:	BCC/JAD
DRAWN BY:	GAH
CHECKED BY:	RLB
APPROVED BY:	RLB
SCALE:	AS SHOWN

REVISIONS		
DATE	BY	DESCRIPTION
7/26/10	GAH	NEW SHEET FOR REV. #1 FOR KCI
		Garage #2 for Howard Community College

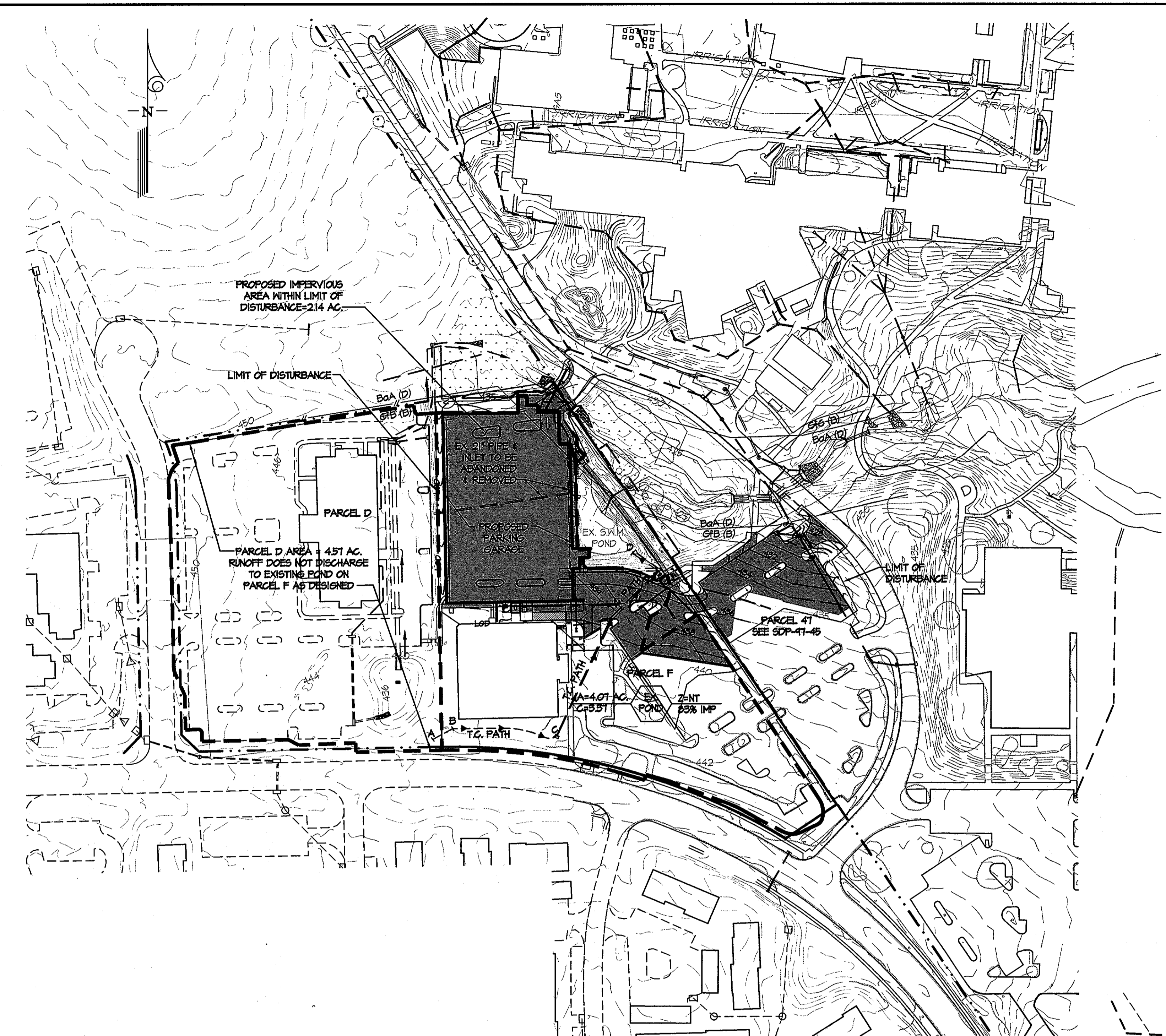
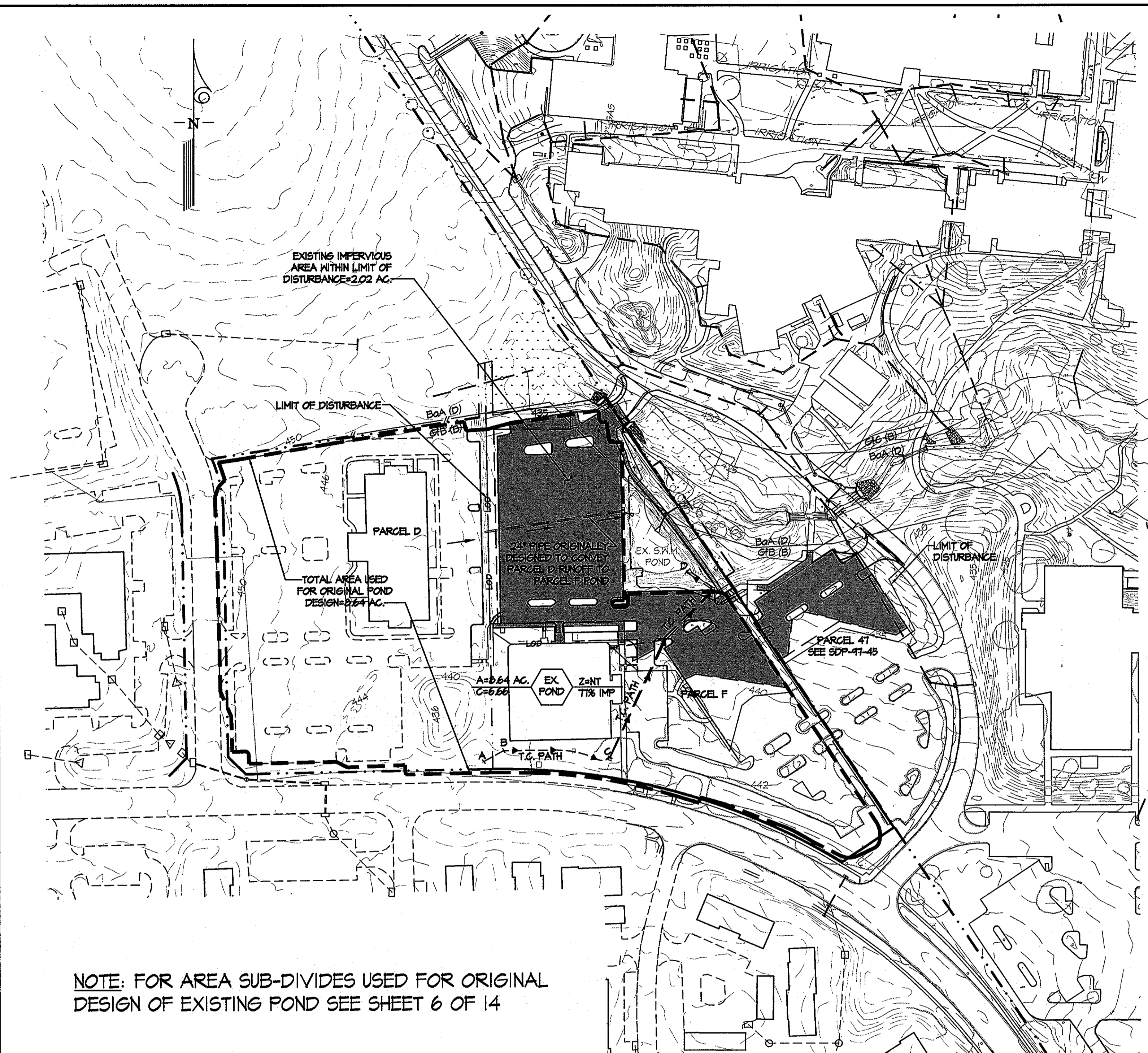
ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS
KCI TECHNOLOGIES
 936 RIDGEBROOK ROAD
 SPARKS, MD 21152
 PHONE: (410) 316-7800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31084
 EXPIRATION DATE: 11/21/10.



STORMWATER MANAGEMENT DETAILS
 HOWARD COMMUNITY COLLEGE, PARKING GARAGE # 2
 COLUMBIA TOWN CENTER, SECTION 8, AREA 4 - PARCEL F
 TAX MAP 35 RECORD PLAT NO. 4804S SHOWN 5TH ELECTION DISCRITCT HOWARD COUNTY MARYLAND

SHEET
 11
 OF
 15
 SC-5 OF 14
 KCI JOB NUMBER : 01082978



NOTE: FOR AREA SUB-DIVIDES USED FOR ORIGINAL DESIGN OF EXISTING POND SEE SHEET 6 OF 14

EXISTING CONDITIONS DRAINAGE AREA MAP FOR STORMWATER MANAGEMENT & WATER QUALITY
SCALE: 1" = 100'

PROPOSED CONDITIONS DRAINAGE AREA MAP FOR STORMWATER MANAGEMENT & WATER QUALITY
SCALE: 1" = 100'

ENGINEER'S CERTIFICATE
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.
R. J. 2 Bull
Signature of Engineer (print name below signature) 8-12-10
Date

DEVELOPER'S CERTIFICATE
I/we certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District.
Sharon G. Reese
Signature of Developer (print name below signature) 8-16-10
Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
McDermott 8/27/10
Chief, Development Engineering Division Date

Kot Sedwick 9/30/10
Chief, Division of Land Development Date

Thomas F. Buttle 8/30/10
Director Date

APPROVED: PLANNING BOARD OF HOWARD COUNTY
DATE 7-15-10 to add Parking Garage #2 for Howard Community College

APPROVED: PUBLIC OR PRIVATE (pick only one) WATER AND PUBLIC OR PRIVATE (pick only one) SEWERAGE SYSTEMS
[Signature]
County Health Officer Date
Howard County Health Department

LEGEND

- IMPERVIOUS AREAS
- DRAINAGE DIVIDE FOR STORMWATER MANAGEMENT QUANTITY
- LIMIT OF DISTURBANCE FOR WATER QUALITY CALCULATIONS
- TIME OF CONCENTRATION PATH

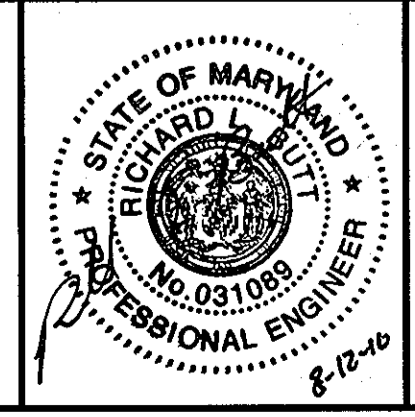
These plans for small pond construction, soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT
[Signature] 8/15/10
Howard Soil Conservation District Date

DEVELOPER:/OWNER
KATHLEEN HETHERINGTON, ED. D.
SECRETARY-TREASURER, PRESIDENT
HOWARD COMMUNITY COLLEGE
10901 LITTLE PATUXENT PARKWAY
COLUMBIA, MD 21044-3197
(410) 712-4820

DESIGNED BY:	DATE	BY	DESCRIPTION
GAH	7/26/10	GAH	NEW SHEET FOR REV. #1/2 at K. and Garage #2 for Howard Community College
DRAWN BY:			
GAH			
CHECKED BY:			
RLB			
APPROVED BY:			
RLB			
SCALE:	1" = 100'		

KCI TECHNOLOGIES
ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SPARKS, MD 21152
PHONE: (410) 316-7800

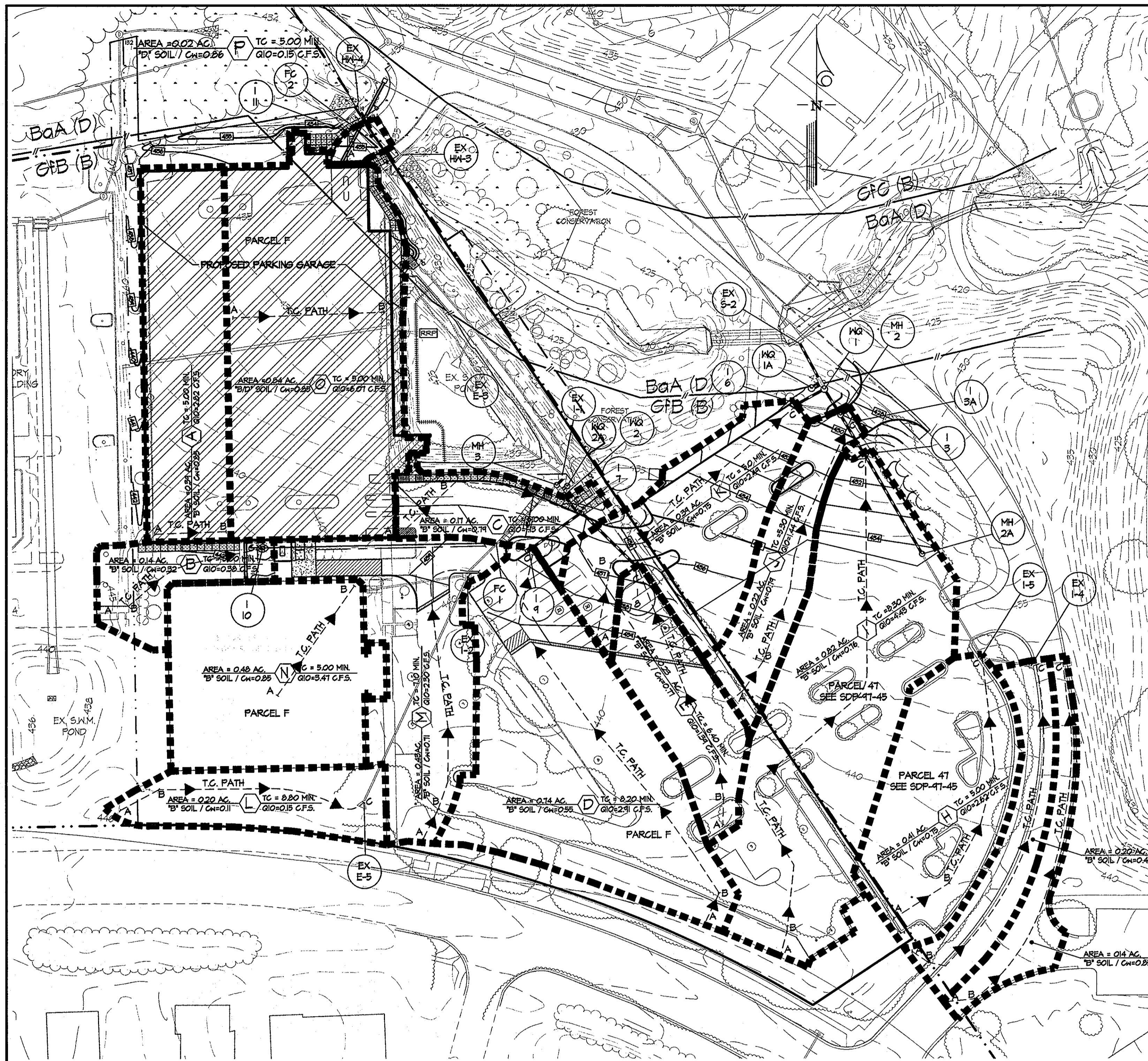
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE No. 31024 EXPIRATION DATE: 11/21/10.



DRAINAGE AREA MAP FOR STORMWATER MANAGEMENT
HOWARD COMMUNITY COLLEGE, PARKING GARAGE # 2
COLUMBIA TOWN CENTER, SECTION 8, AREA 4 - PARCEL F
TAX MAP 35 RECORD PLAT NO. 4804 5TH ELECTION DISRICTCT HOWARD COUNTY MARYLAND

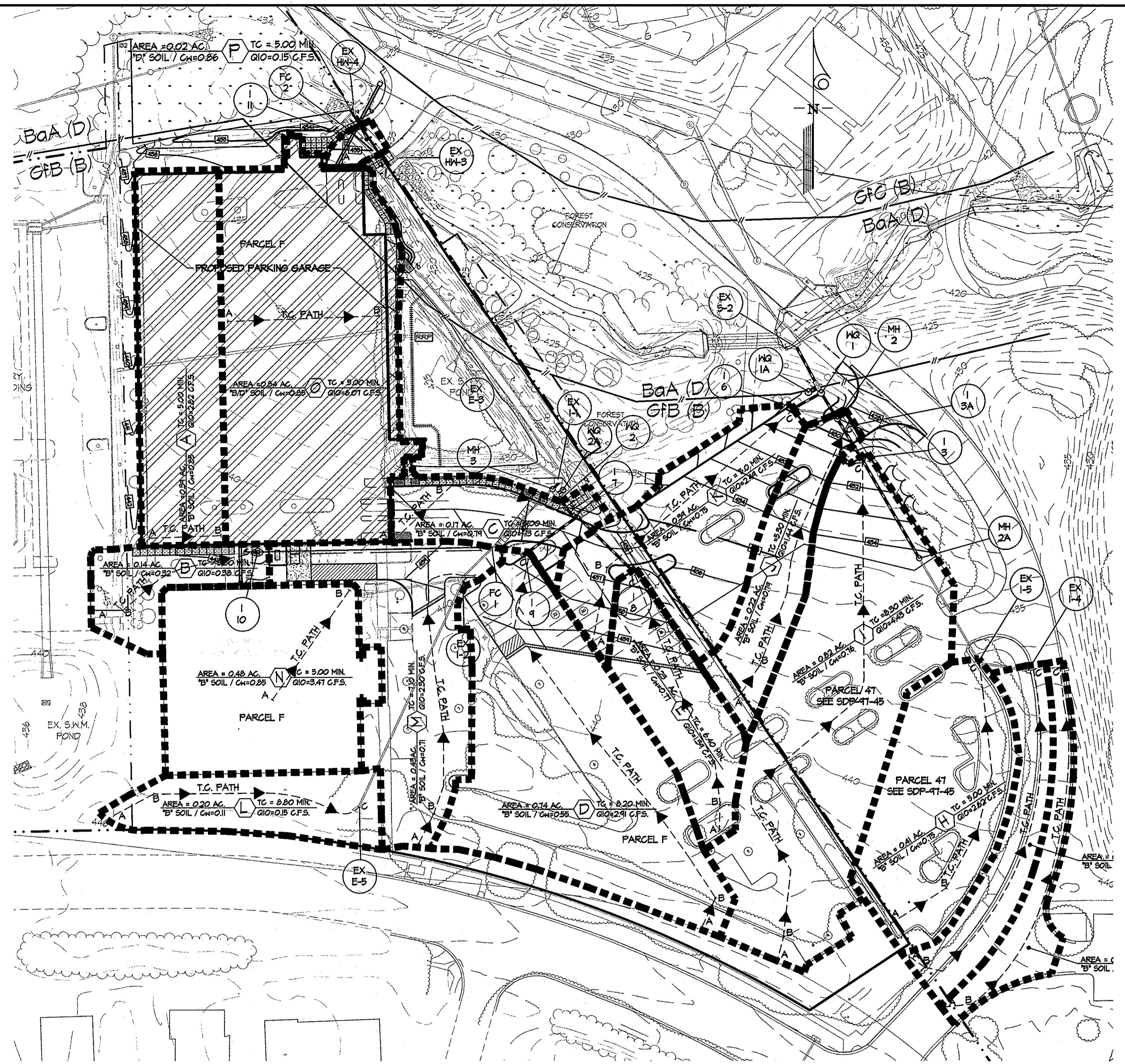
SHEET 12 OF 15
SC-6 OF 14
KCI JOB NUMBER : 01082978

Friday, July 30, 2010 9:23:55 AM
GATLE IMPROD
14-2085-0082978-DRAWINGS-SDP-82-65-SHEET 15 OF 15



SEDIMENT CONTROL DRAINAGE AREA MAP

SCALE: 1" = 50'



STORM DRAIN DRAINAGE AREA MAP

SCALE: 1" = 50'

LEGEND

- DRAINAGE DIVIDE FOR STORM DRAIN
- - - DRAINAGE DIVIDE FOR SEDIMENT CONTROL
- A ---> B TIME OF CONCENTRATION PATH

ENGINEER'S CERTIFICATE
 I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

RLB
 Signature of Engineer (print name below signature) 8/12/10
Date

DEVELOPER'S CERTIFICATE
 I/we certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Shawn J. Reese
 Signature of Developer (print name below signature) 8/16/10
Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mr. [Signature] 8/21/10
 Chief, Development Engineering Division
Mr. [Signature] 8/30/10
 Chief, Division of Land Development
Mr. [Signature] 8/30/10
 Director

APPROVED: PLANNING BOARD OF HOWARD COUNTY
 DATE 7-15-10 to add Parking Garage #2 for Howard Community College

APPROVED: FOR PUBLIC OR PRIVATE (pick only one) WATER AND PUBLIC OR PRIVATE (pick only one) SEWERAGE SYSTEMS
 County Health Officer: _____ Date: _____
 Howard County Health Department

These plans for small pond construction, soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT
[Signature] 8/25/10
 Howard Soil Conservation District Date

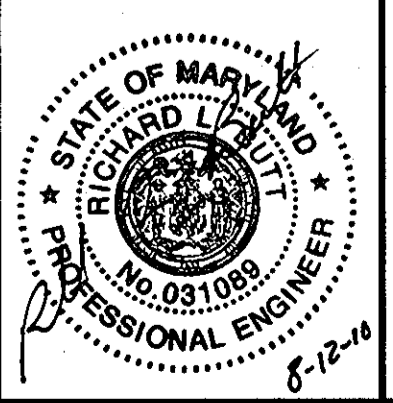
DEVELOPER:/OWNER
 KATHLEEN HETHERINGTON, ED. D.
 SECRETARY-TREASURER, PRESIDENT
 HOWARD COMMUNITY COLLEGE
 10401 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD 21044-3197
 (410) 712-4820

DESIGNED BY: GAH
 DRAWN BY: GAH
 CHECKED BY: RLB
 APPROVED BY: RLB
 SCALE: 1" = 50'

REVISIONS		
DATE	BY	DESCRIPTION
7/26/10	GAH	NEW SHEET FOR REV. #1/8/10 Garage #2 for Howard Community College

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
 936 RIDGEBROOK ROAD
 SPARKS, MD 21152
 PHONE: (410) 316-7800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31084 EXPIRATION DATE: 11/21/10.



DRAINAGE AREA MAP FOR STORMWATER MANAGEMENT
 HOWARD COMMUNITY COLLEGE, PARKING GARAGE # 2
 COLUMBIA TOWN CENTER, SECTION 8, AREA 4 - PARCEL F
 TAX MAP 35 RECORD PLAT NO. 4804 5TH ELECTION DISRICT HWY HOWARD COUNTY MARYLAND

SHEET 13 OF 15
 SC-7 OF 14
 KCI JOB NUMBER: 01082978

Friday, July 30, 2010 9:28:50 AM GATE: HRR00 IN: C:\WORK\01082978\DRAWINGS\SDP-82-65-NEW\SETTLING

LEGEND

- PROPOSED PARKING GARGE
- PROP. ASPHALT PAVING
- PROP. 1/2" ASPHALT MILL AND OVERLAY
- PROP. CONCRETE SIDEWALK
- EXISTING FOREST CONSERVATION EASEMENTS
- LOD - LIMIT OF DISTURBANCE
- MAJOR DECIDUOUS TREE
- MINOR DECIDUOUS TREE
- EVERGREEN TREE
- SHRUBS

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B	A
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	0 LF	510 LF
EXISTING VEGETATION CREDIT	YES, 345 LF	0
WALL, FENCE, BERM CREDIT	NO	NO
PLANTS REQUIRED		
SHADE TREES	0	4
EVERGREEN TREES	0	0
SHRUBS	0	0
PLANTS PROVIDED		
SHADE TREES	0	5
EVERGREEN TREES	0	0
SHRUBS	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	6.5
OTHER SHRUBS (10:1 SUBSTITUTION)	0	3.4

NOTE: SEE SHEET 14 OF 15 FOR ORIGINAL LANDSCAPE PLAN

CONTRACTOR'S NOTE:
CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO DAMAGE ANY EXISTING PAVING, CURB & GUTTER, SIDEWALK OR OTHER SITE FEATURES WHICH ARE TO REMAIN. SHOULD DAMAGE OCCUR, CONTRACTOR SHALL REPAIR TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

NOTE:
NOT FOR CONSTRUCTION

APPROVED FOR PUBLIC OR PRIVATE (pick only one) WATER AND PUBLIC USE PRIVATE (pick only one) SEWERAGE SYSTEMS

County Health Officer: _____ Date: _____
Howard County Health Department

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE 7-15-10 to add Parking Garage #2 for Howard Community College

These plans for small pond construction, soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT

Howard Soil Conservation District _____ Date: _____

ENGINEER'S CERTIFICATE
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

R. Z. Cuth
Signature of Engineer (print name below signature) _____ Date: 8-12-10

DEVELOPER'S CERTIFICATE
"I/We certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

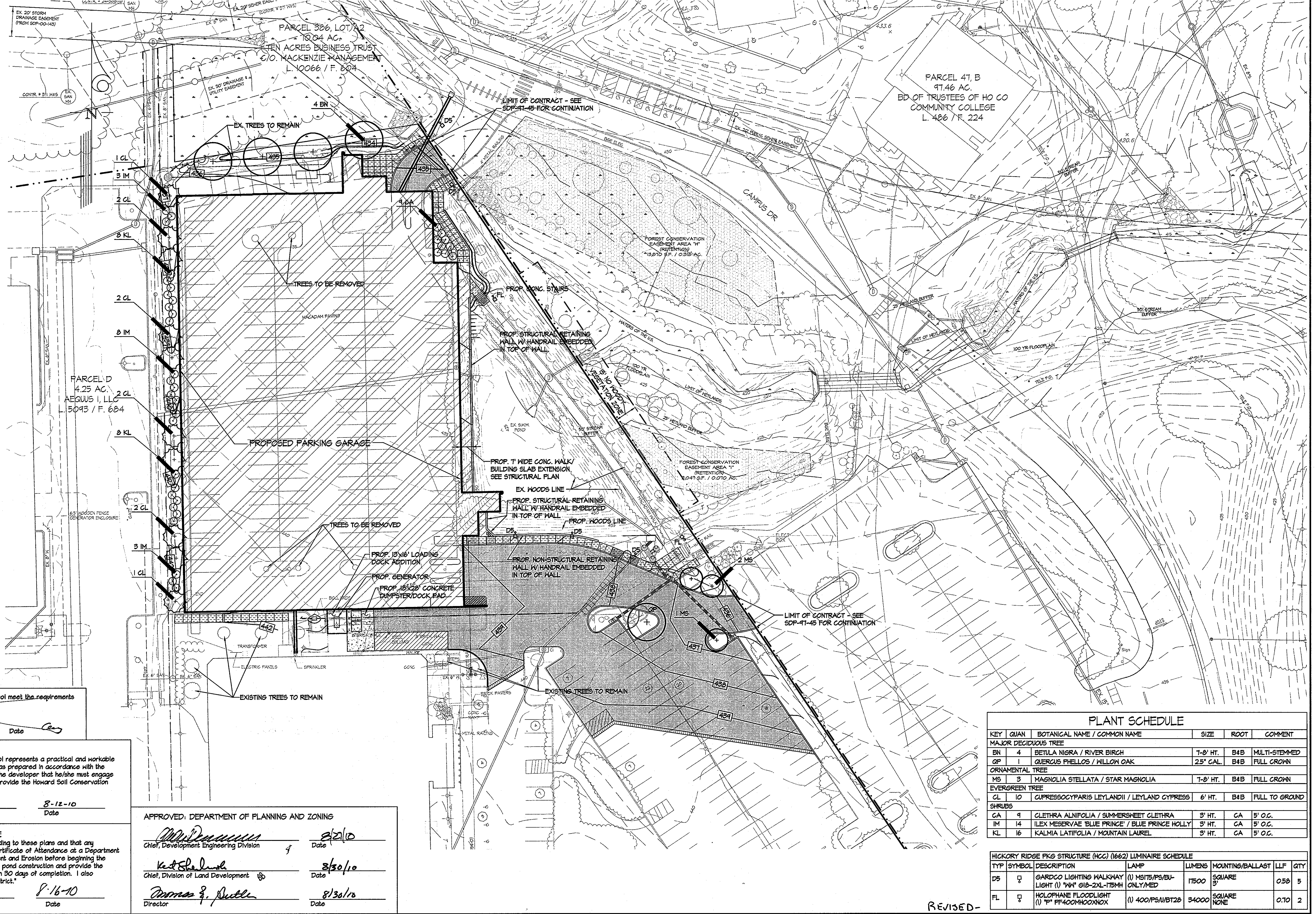
Sharon A. Reese
Signature of Developer (print name below signature) _____ Date: 8-16-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Michael J. ...
Chief, Development Engineering Division Date: 8/2/10

Kurt ...
Chief, Division of Land Development Date: 8/30/10

Thomas J. ...
Director Date: 8/30/10



PLANT SCHEDULE

KEY	QUAN	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENT
MAJOR DECIDUOUS TREE					
BN	4	BETULA NIGRA / RIVER BIRCH	7-8' HT.	B4B	MULTI-STEMMED
GP	1	QUERCUS PHELLOS / WILLOW OAK	25' CAL.	B4B	FULL CROWN
ORNAMENTAL TREE					
MS	3	MAGNOLIA STELLATA / STAR MAGNOLIA	7-8' HT.	B4B	FULL CROWN
EVERGREEN TREE					
CL	10	CUPRESSOCYPARIS LEYLANDII / LEYLAND CYPRESS	6' HT.	B4B	FULL TO GROUND
SHRUBS					
CA	4	CLETHRA ALNIFOLIA / SUMMERSHEET CLETHRA	3' HT.	CA	5' O.C.
IM	14	ILEX MESERVAE 'BLUE PRINCE' / BLUE PRINCE HOLLY	3' HT.	CA	5' O.C.
KL	16	KALMIA LATIFOLIA / MOUNTAIN LAUREL	3' HT.	CA	5' O.C.

HICKORY RIDGE PKG STRUCTURE (HCC) (1662) LUMINAIRE SCHEDULE

TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING/BALLAST	LLF	QTY
DS	□	GARDCO LIGHTING WALKWAY LIGHT (1) 1"MM" 618-2XL-175MH	(1) M815/PS/BU-ONLY/MED	17500	SQUARE	0.58	5
FL	□	HOLOPHANE FLOODLIGHT (1) 1" P" PF400MH00XNOX	(1) 400/PS/MBT28	34000	SQUARE	0.10	2

REVISED - LANDSCAPE PLAN

DEVELOPER: OWNER
KATHLEEN THERINGTON, ED. D.
SECRETARY-TREASURER, PRESIDENT
HOWARD COMMUNITY COLLEGE
10901 LITTLE PATUXENT PARKWAY
COLUMBIA, MD 21044-3197
(410) 712-4820

DESIGNED BY: NVF
DRAWN BY: NVF
CHECKED BY: RLB
APPROVED BY: RLB
SCALE: 1" = 30'

REVISIONS

DATE	BY	DESCRIPTION
7/26/10	GAH	NEW SHEET FOR REV. #1/Parking Garage #2 for Howard Community College

KCI TECHNOLOGIES
ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SPARKS, MD 21152
PHONE: (410) 316-7800

PROFESSIONAL CERTIFICATION
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HOWARD COMMUNITY COLLEGE, PARKING GARAGE # 2
COLUMBIA TOWN CENTER, SECTION 8, AREA 4 - PARCEL F
TAX MAP 35 RECORD PLAT NO. 4804 5TH ELECTION DISRICT HOWARD COUNTY MARYLAND

SHEET 15 OF 15
SC-8 OF 14
KCI JOB NUMBER: 01082978

Friday, July 30, 2010 9:32:27 AM
GAYLE HARROD
M:\2008\082978\DRAWINGS\SDP-82-65-NEW_SHEETS.DWG