

SHEET INDEX

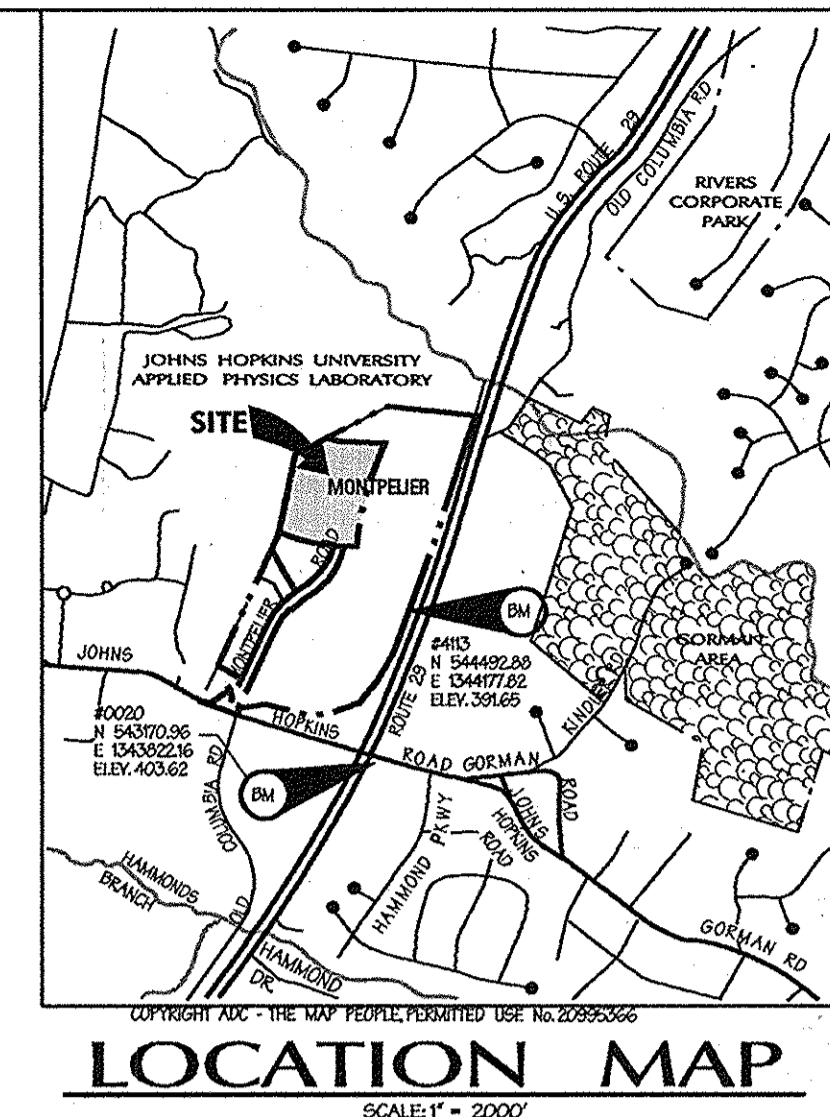
SHT.	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	GRADING PLAN
4	GRADING PLAN
5	DRAINAGE AREA MAP
6	STORM DRAIN PROFILES
7	STORM DRAIN PROFILES
8	WATER AND SEWER PROFILES
9	EROSION & SEDIMENT CONTROL PLAN
10	EROSION & SEDIMENT CONTROL DETAILS
11	EROSION & SEDIMENT CONTROL DETAILS
12	SITE DETAILS
13	LANDSCAPE & LIGHTING PLAN
14	LANDSCAPE PLAN DETAILS
15	RETAINING WALL CONSTRUCTION DETAILS
16	RETAINING WALL CONSTRUCTION DETAILS

ADDRESS CHART

Bldg.	Street Address
A	7701 MONTPELIER ROAD
B	7703 MONTPELIER ROAD
C	7705 MONTPELIER ROAD
D	7707 MONTPELIER ROAD

SITE DEVELOPMENT PLAN for MONTPELIER RESEARCH PARK PARCEL E-2

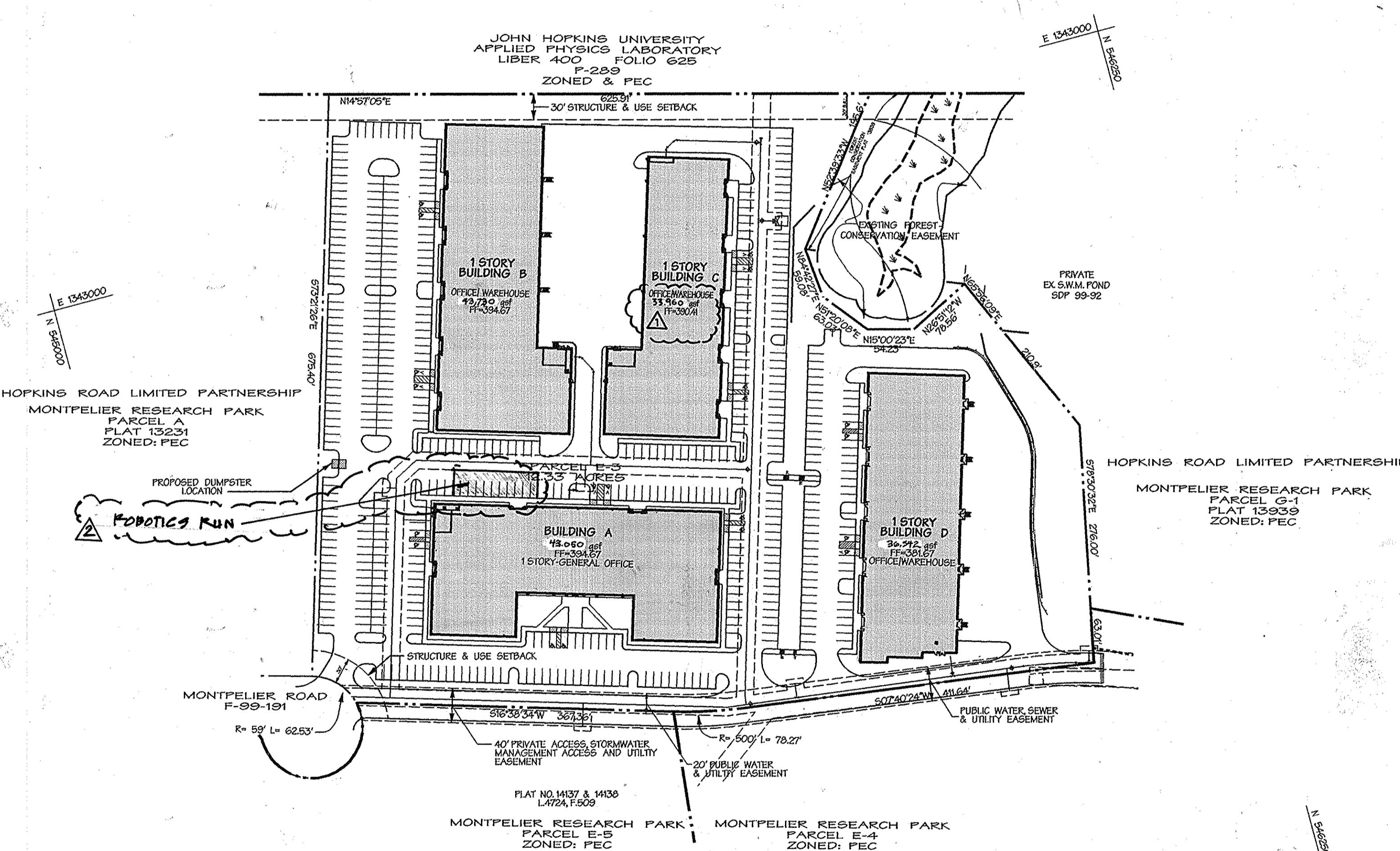
At Montpelier Research Park, Howard County, Maryland



LOCATION MAP
SCALE: 1" = 2000'

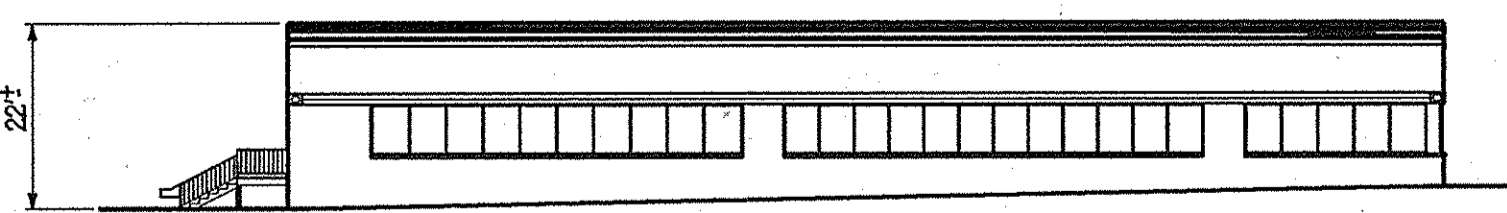
GENERAL NOTES

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are based solely on available records. Contractor shall verify the location of any utilities which may be impacted by the work. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be repaired at the Contractor's expense.
- Topo taken from mass grading per SDP 99-92 by Daft McCune Walker, Inc.
- Public water and sewer provided by contract number 34-3654D and 30-3789-D.
- The subsurface exploration and geotechnical engineering analysis for this project was made by Hills Carnes, Inc. on January 1997.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-100.
- Regional stormwater management and water quality are provided in a wetland pond system located on Parcel G1, approved per SDP 99-92.
- Forest Conservation requirements are provided per SDP 99-11, F99-45, SDP 99-92, F 99-191.
- There are no wetlands, floodplain, or streams on this site.
- Traffic Study by Lee Cunningham and Associates was previously approved for this use and square footage per F99-45. Date: December 1997.
- Operating existing valves, switches, services or start up of new services shall be coordinated with the owners representative.
- The buildings will be provided with a sprinkler system.
- Trench compaction for storm drains within the road or street right of way limits shall be in accordance with Howard County Design Manual IV, Std. No. G-2.01.
- Unless otherwise noted, dimensions from curb are measured at face of curb.
- Refer to architectural drawings for building dimensions.
- The Contractor shall coordinate the location of all water, sewer, and drain house connections with the mechanical drawings.
- The Contractor shall maintain 2.0 feet minimum cover over all utilities during construction.
- Unless otherwise noted, all utility connections shall be capped or plugged five feet from buildings.
- Electric, telephone, gas, cable, lighting, and retaining walls to be designed by others. Where those facilities are shown, they are for coordination purposes only.
- All Qurb radii 5' unless otherwise noted.
- There are no known cemeteries or burial grounds on this site. However, upon discovery of any evidence of burial or graves, the developer will be subject to Section 16.1305 of the Howard County Subdivision and Land Develop Regulations.
- All exterior lighting fixtures shall be installed in compliance with Section 134 of the Zoning Regulations.
- Trash collection will be provided by private contractor.



OVERALL PROPERTY OUTLINE

Scale: 1"=100'



Side Elevation Buildings 'A' 'B' 'C' & 'D'

SCALE: NTS

SITE ANALYSIS DATA CHART

- General Site Data**
 - Present Zoning: PEC
 - Applicable DPZ File References: F 99-45, SDP 99-11, BA 96-31, WP 97-21, PD 180, VP 86-64, WF 91-23, ZD 80-2 & 76, FDP#1, SDP 88-197, SDP 89-28 & WP 99-12, SDP 99-32, F 99-191, F-00-49
 - Proposed Use of Site or Structure(s): Office and Office Warehouse
 - Proposed Water: Public Proposed Sewer: Private
 - Water and Sewer contract number (34-3654D & 30-3789D)
- Area Tabulation**
 - Total Project Area: 12.927 Acres
 - Net Area of Site: 12.927 Acres
 - Area of This Plan Submission: 4.1235 Acres
 - Limit of Disturbed Area: 4.14 Acres
 - Building Coverage of Site: 4.38 Acres and 4.29 % of Gross Area (Proposed)
- Open Space Data: N/A**
- Parking Space Data**
 - Floor Space per floor of proposed use on site: 43,050 s.f. Office (Bldg. A), 114,030 s.f. Office Warehouse (Bldg. B, C & D)
 - Number of Parking Spaces Required by Zoning Regulations: 428 (43,050 s.f. General Office @ 3.2/1000, 114,030 s.f. Office Warehouse @ 2.5/1000)
 - Total Number of Parking Spaces Provided On-Site: 447
 - Number of Handicapped Parking Spaces Provided: 20 (2.5% of Total)
- Forest Conservation Summary**
 - 14.4[±] Acres Afforestation/Reforestation Required
 - 10.4[±] Acres Afforestation/Reforestation Site Under SDP 99-11
 - 2.8[±] Acres Afforestation/Reforestation on Sites Under F-99-191
 - 1.2[±] Acres Fee In-Lieu (Paid)

BENCHMARK

Coordinates and bearing shown are referred to the system of coordinates established in the Maryland Coordinate System as projected by Howard County Geodetic Control Stations: MAD 83. Elevations shown hereon are referred to the North American Vertical Datum-NVD 29 and are based on the following Howard County Survey Control Stations: (Translated meters to feet.)

DESIGNATION	NORTH (sFT)	EAST (sFT)	Elevation (sFT)
4113	544492.88	1344177.82	391.66
0020	543170.96	1343822.16	403.62

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 9/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/29/00
DIRECTOR DATE

Date	No.	Revision Description
10-23-00	1	REVISED SF BUILDING 1 AND PARKING DATA
10-16-00	2	REVISED PARKING COUNT DATA

Montpelier Research Park PARCEL E-2 HOWARD COUNTY MARYLAND

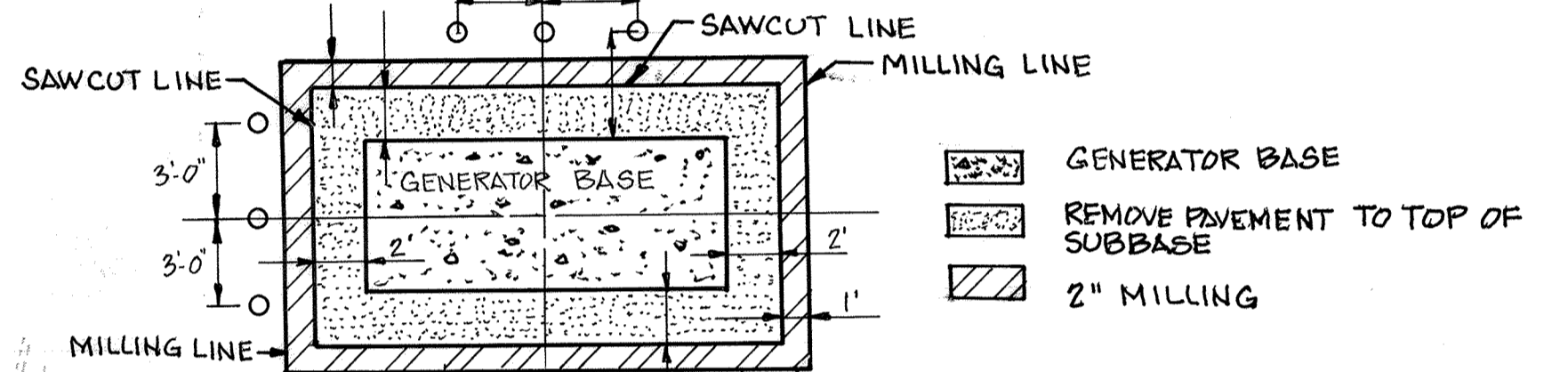
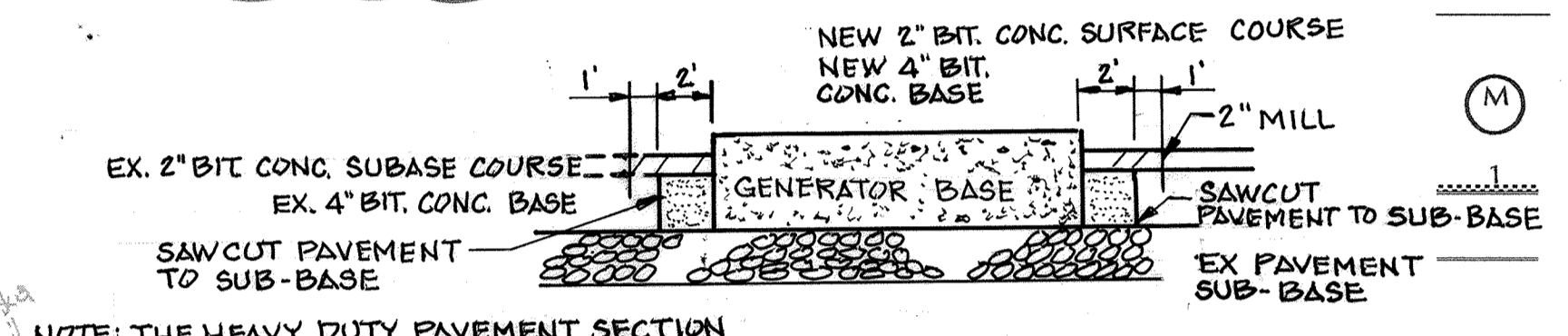
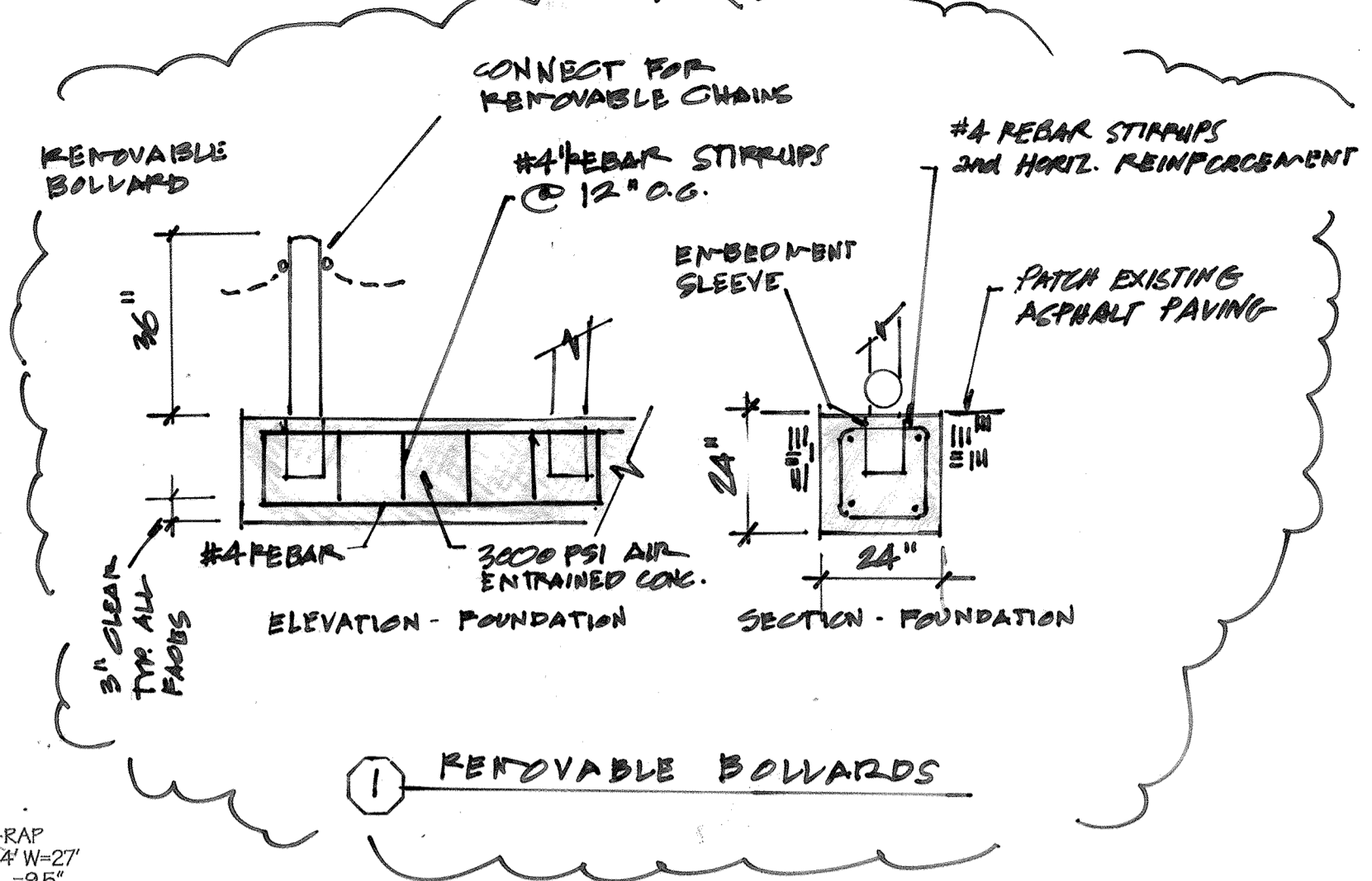
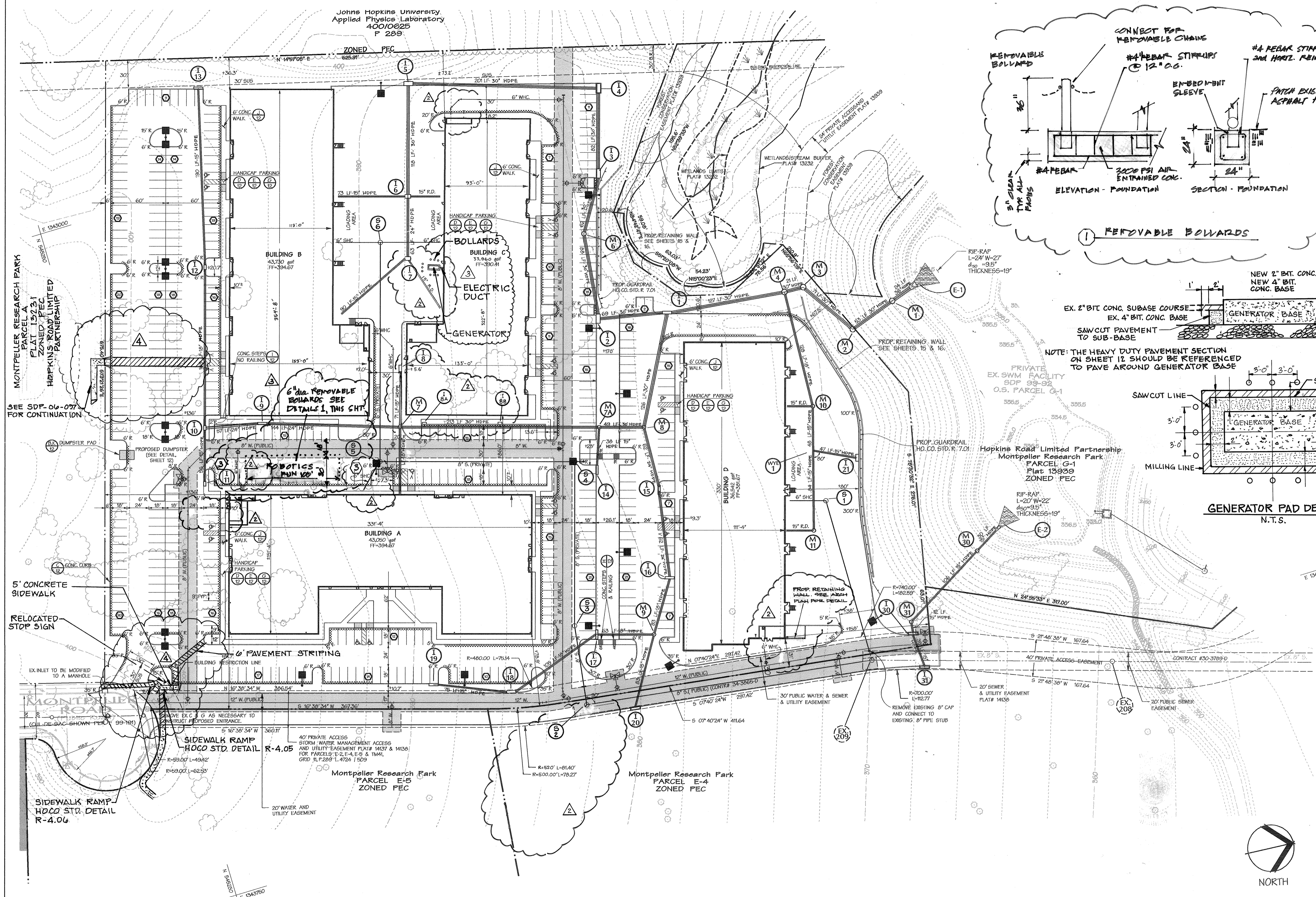
DMW
Daft McCune Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 896 3333
Fax 296 4705

SUBDIVISION NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT	BLK. #	BLK. #
14137	17	41
PLAT	BLK. #	BLK. #
14137	17	41
WATER CODE	E21	SEWER CODE
		6440000

COVER SHEET

Des By: CSC	Scale: 1"=100'	Proj. No. 94171.12
Drn By: CSC	Date: 8-30-00	1 OF 16
Approved:		

Johns Hopkins University
Applied Physics Laboratory
400/0625
P 288



LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
...	SOILS
---	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	WETLAND/ STREAM BUFFER
---	WETLAND
---	EXISTING TREES/ TREE LINE
---	STRUCTURE & USE SETBACK
---	VAN HANDICAPPED PARKING
---	HANDICAPPED PARKING
---	PARKING COUNT
---	EXISTING STORMDRAIN
---	EXISTING SEWER
---	EXISTING WATER
---	PROPOSED STORM DRAIN
---	PROPOSED SAN. SEWER
---	PROPOSED WATER
(M)	STORM DRAIN STRUCTURE
---	REVERSE CURB AND GUTTER
---	CURB AND GUTTER

Date	No.	Revision Description
2/19/19	1	ADDED GENERATOR & ELECTRIC DUCT
7/27/19	2	ADDED SIDEWALK AND STRIPING
DATE NO. REVISION DESCRIPTION		
10-16-19	3	ADD BALANCE FOR ROBOTIC RUN + PENNSV PARKING

Date	No.	Revision Description
10-23-00	1	REVISED RCP 10 HOPE + BLDG C SIZE
1-22-01	2	REVISED HMC TO BUILDING A.C.S.D, SD TO BUILDING C. CHC TO BLDG A. ADDED RETAINING WALL TO BLDG D. REMOVED GENERATOR TO PARCEL E-4 + E-5, ADDED INLET I-8A & I-8B.

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TRAMMELL CROW COMPANY
6025 BRIDGECRACK BLVD, SUITE 400
BETHESDA, MD 20887

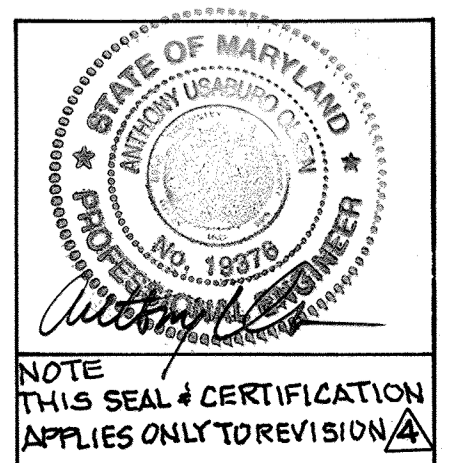
DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBJECT NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT # 14137	BLOCK # 17	ZONE: MAP # 41
WATER CODE: E21	SEWER CODE: 6440000	CENSUS TRACT: 605102

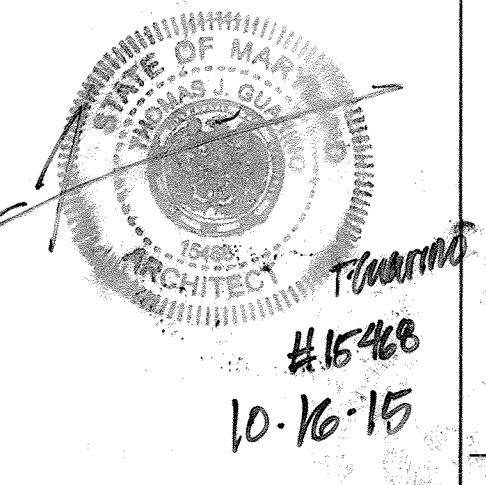
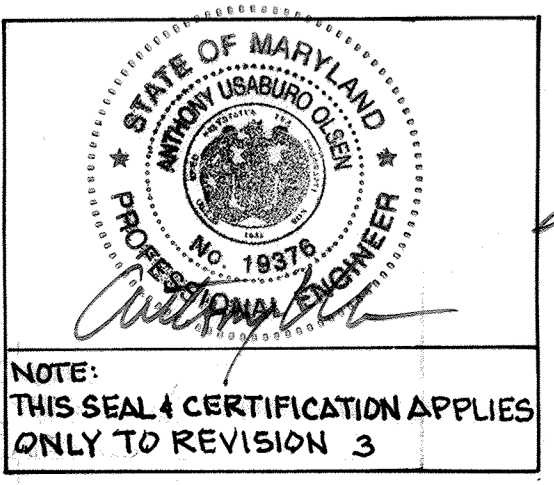
SITE PLAN

Des By:	Scale: 1"=50'	Proj. No. 94171.T2
Drn By: CSC	Date: 8-30-00	2 OF 16
Chk By:	Approved:	



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 19376 EXPIRATION DATE SEPTEMBER 22, 2021

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 19376 EXPIRATION DATE: SEPTEMBER 22, 2021.

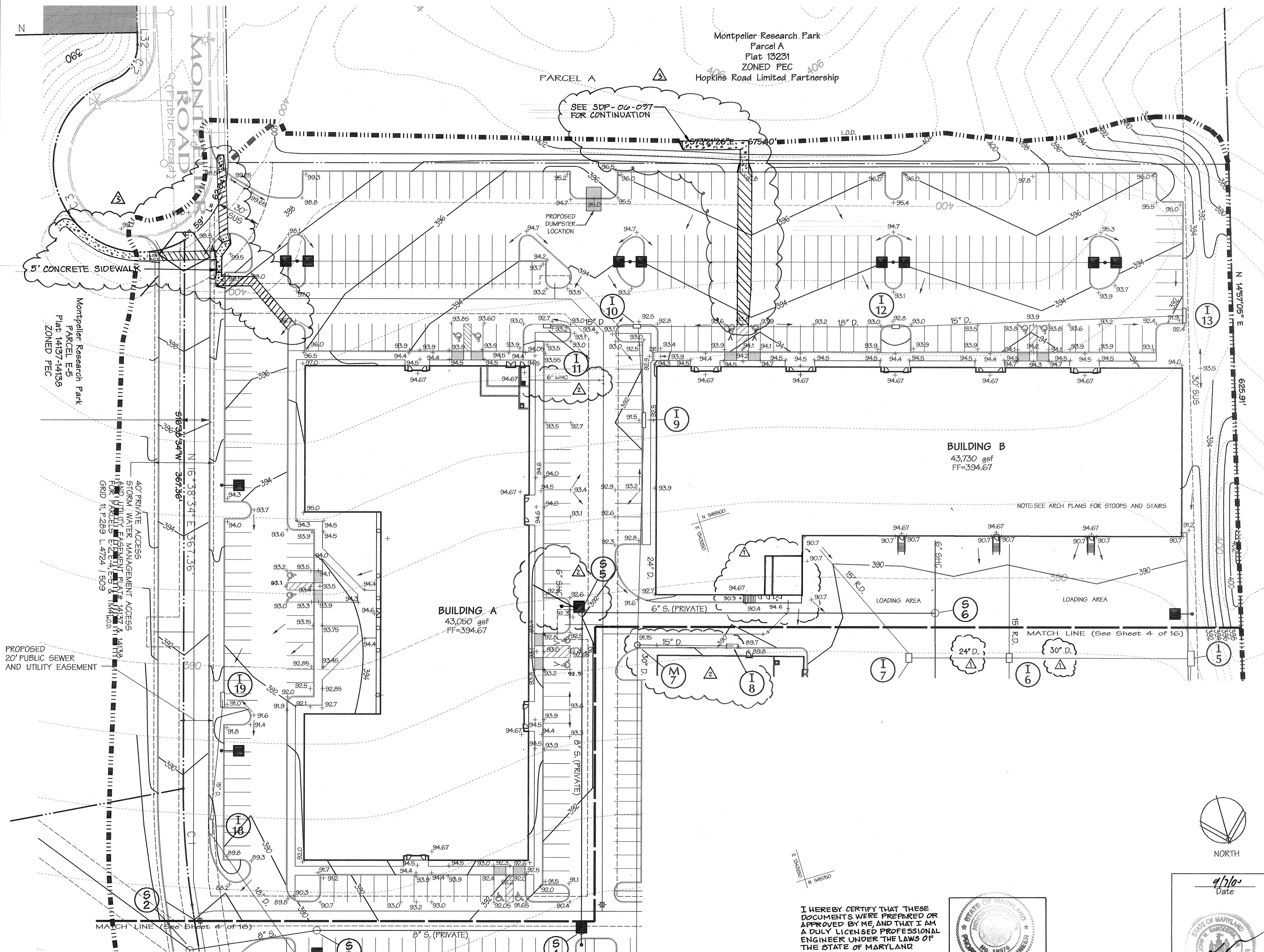


9/7/00
Date

Professional Engr. No. 10551

LEGEND

- | SYMBOL | DESCRIPTION |
|--------|---------------------------|
| --- | PROPERTY LINE |
| ~ | STREAM |
| — | SOILS |
| - - - | EXISTING CONTOURS |
| - - - | PROPOSED CONTOURS |
| — | WETLAND/ STREAM BUFFER |
| — | WETLAND |
| — | EXISTING TREES/ TREE LINE |
| — | FLOODPLAIN |
| 79.3+ | SPOT ELEVATION |
| → | FLOW ARROW |
| — | GUARDRAIL |
| — | DOUBLE HEAD LIGHT POLE |
| — | SINGLE HEAD LIGHT POLE |



JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
400/0625
P 289
ZONED PEC

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cinda Hamlet 9/28/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Rott 9/29/00
DIRECTOR DATE

Date	No.	Revision Description
10-23-00	1	REVISED UTILITY ROOM ENTRANCE
11-27-00	2	REVISED WMC TO BLDG A. SHC TO BLDG A I-8
9-27-19	3	ADD SIDEWALK AND STRIPING

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TRAMMELL CROW COMPANY
6700 EMBROIDERY BLVD, SUITE 400
BETHESDA, MD 20817

DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

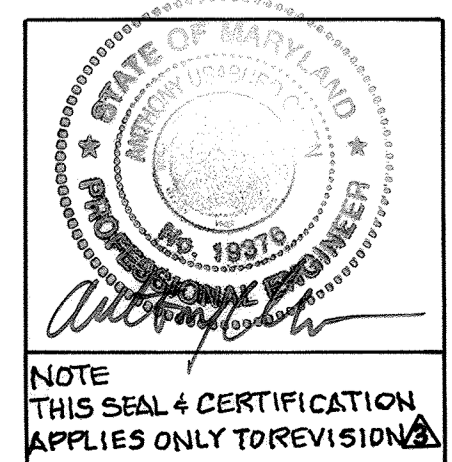
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: Montpelier Research Park	SECTION AREA: NA	PARCEL #	PARCEL E-2
PLAT: 14137	ZONE: 17 PEC	VAR. ZONE: 41	ELECT. DISTRICT: 5th
WATER CODE: E21	SEWER CODE: 6440000	CENSUS TRACT:	605102

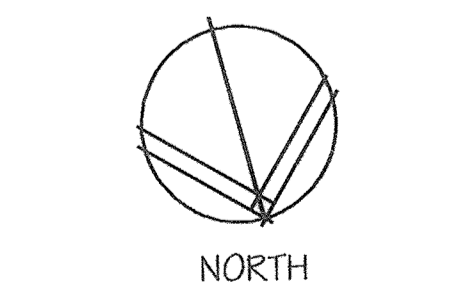
GRADING PLAN

Des By:	Scale: 1"=30'	Proj. No. 94171.T2
Dwn By: CSC	Date: 8-30-00	
Chk By:	Approved:	3 OF 16

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 19376 EXPIRATION DATE SEPTEMBER 22, 2021.

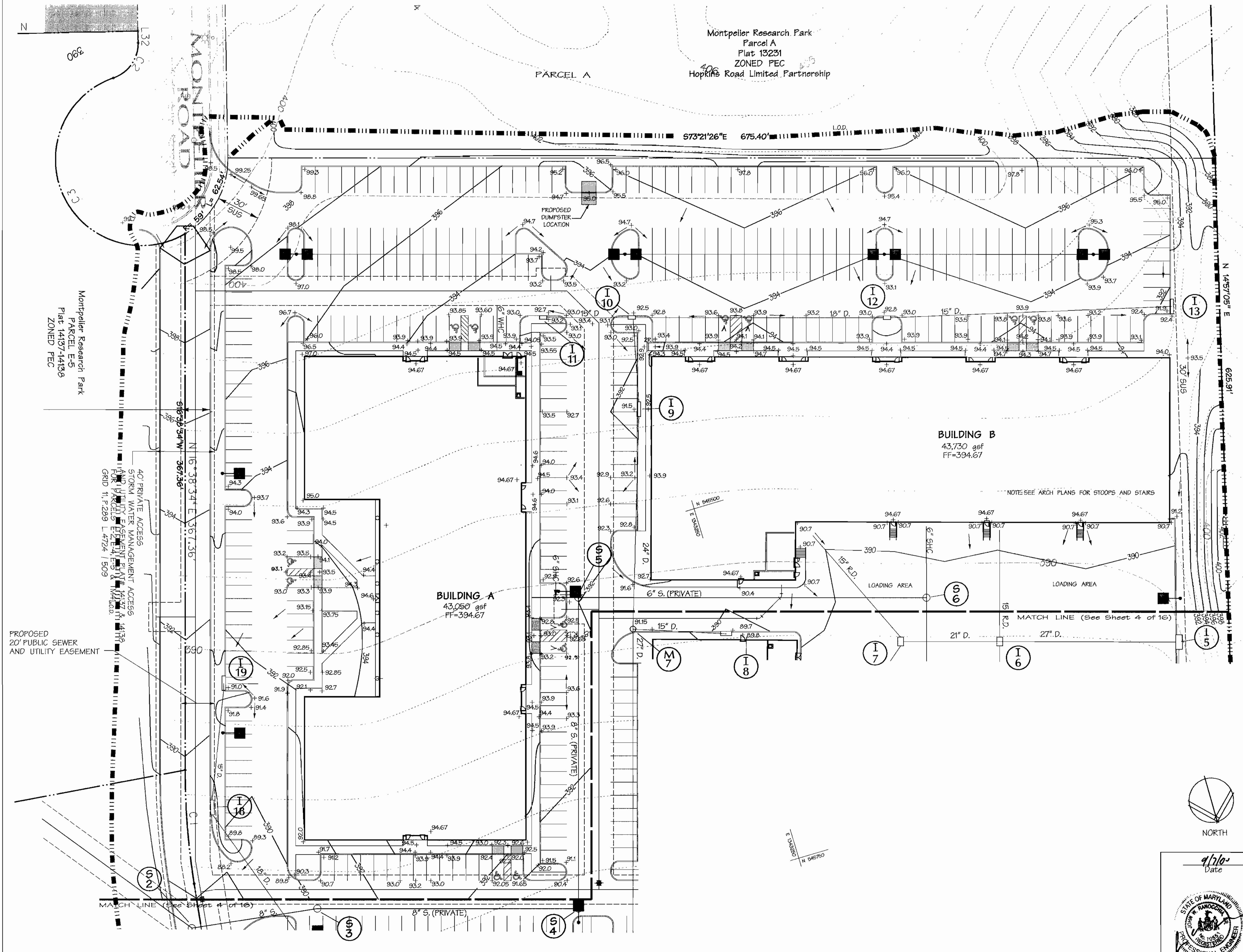


NOTE THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION



9/26/00
Date

Professional Engr. No. 10357



LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
---	SOILS
---	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	WETLAND/ STREAM BUFFER
---	WETLAND
---	EXISTING TREES/ TREE LINE
---	FLOODPLAIN
79.3+	SPOT ELEVATION
---	FLOW ARROW
---	GUARDRAIL
■	DOUBLE HEAD LIGHT POLE
■	SINGLE HEAD LIGHT POLE

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
400/0625
P 289
ZONED PEC

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris Hamner 9/28/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John F. Kelly 9/29/00
DIRECTOR DATE

Date No. Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TRAMMELL CROW COMPANY
6700 BROADWAY BLVD., SUITE 410
BETHESDA, MD 20817

DMW
Daft McCune Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 396 4705

SUBDIVISION NAME: Montpelier Research Park
PLAT: 14137
BLOCK: 17
ZONE: PEC
TAXING MAP: 41
ELECT. DISTRICT: 5th
CENSUS TRACT: 6051.02
WATER CODE: E21
SEWER CODE: 6440000

TITLE: **GRADING PLAN**

Des By: Scale: 1"=30' Proj. No. 94171.T2
Dwn By: CSC Date: 8-30-00
Chk By: Approved: **3** OF 16

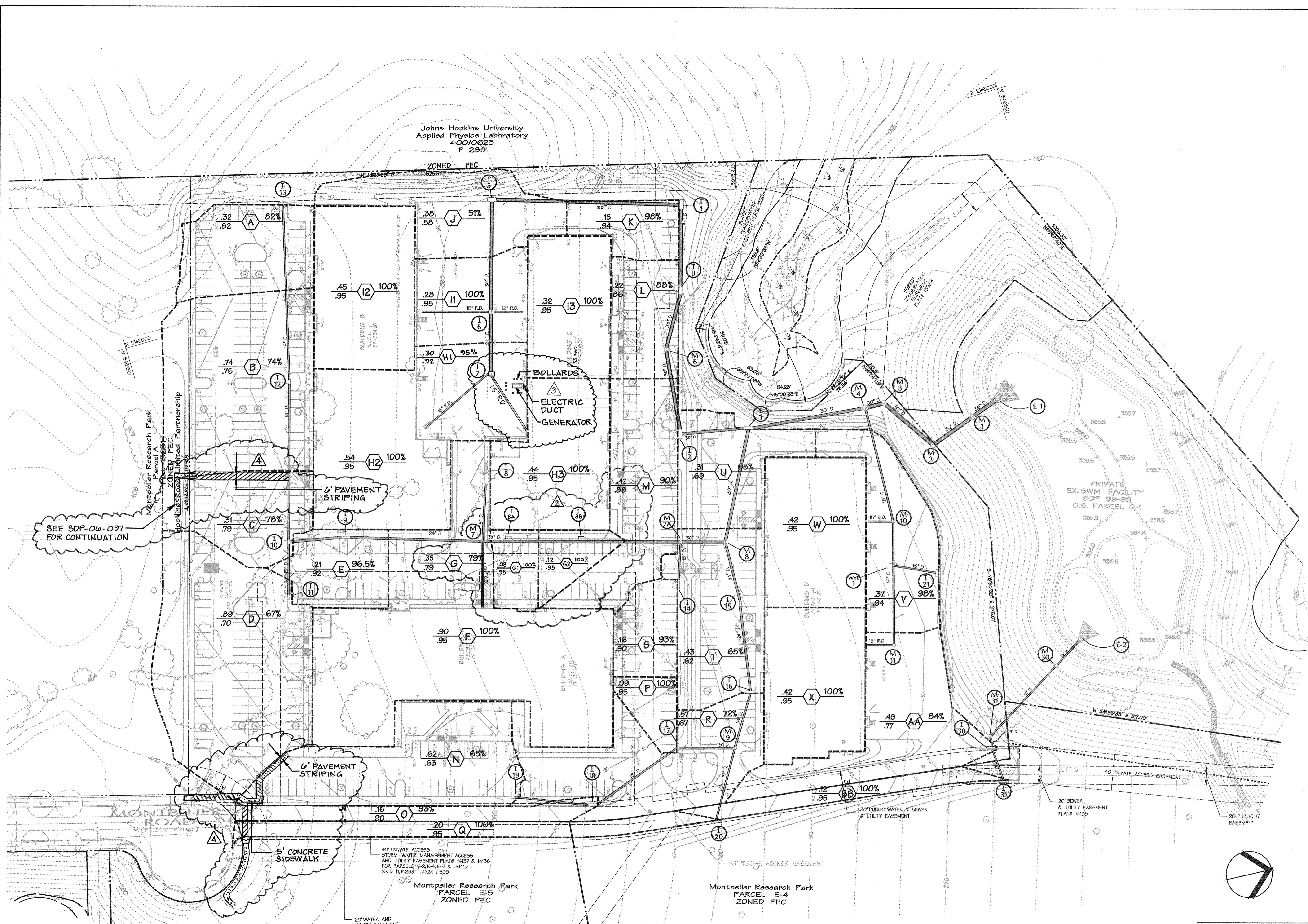
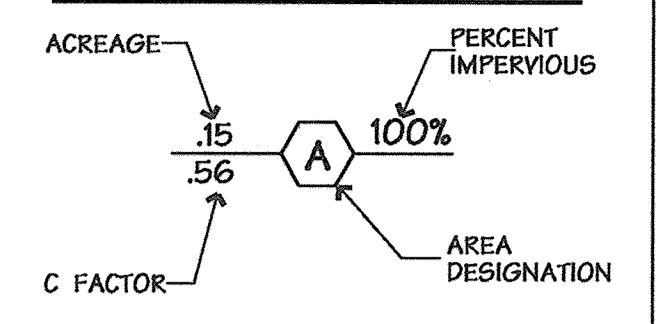
9/10/00
Date

PROFESSIONAL ENGINEER

Professional Engr. No. 10551

SDP-00-112

LEGEND



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>John P. Smith</i>	9/19/00
CHIEF DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy Hamstra</i>	9/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>John P. Smith</i>	9/25/00
DIRECTOR	DATE

10-23-00	1	REVISED BLDG 'C' SF AND SD PIPE SIZES.
1-23-01	2	ADDED DA TO I-8A & I-8B
2/19/19	3	ADDED GENERATOR & ELECTRIC DUCT
9/27/19	4	ADDED SIDEWALK AND STRIPING

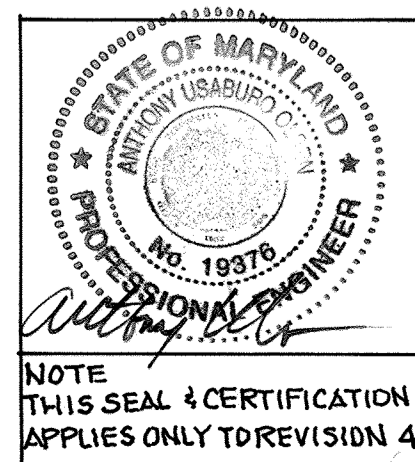
Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
FRANKELL COOK COMPANY
6701 DEMOCRACY BLVD, SUITE 410
BETHESDA, MD 20817

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

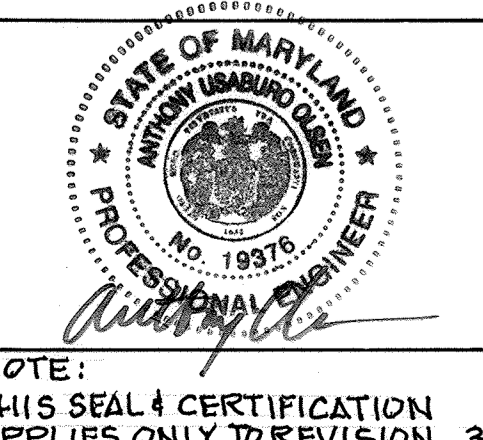
SUBDIVISION NAME: Montpelier Research Park	SECTION AREA: NA	PARCEL: PARCEL E-2
PLAT: 14137	BLOCK: 17	TRACED MAP: 41
WATER CODE: E21	SEWER CODE: 6440000	ELECTRICAL: 5th
CENSUS TRACT: 605102		
TITLE: DRAINAGE AREA MAP		
Des By: CSC	Scale: 1"=50'	Proj. No. 94171.12
Drn By: CSC	Date: 8-30-00	
Chk By:	Approved:	5 OF 16



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 19376 EXPIRATION DATE SEPTEMBER 22, 2021

ALL SOILS HYDROLOGIC GROUP B

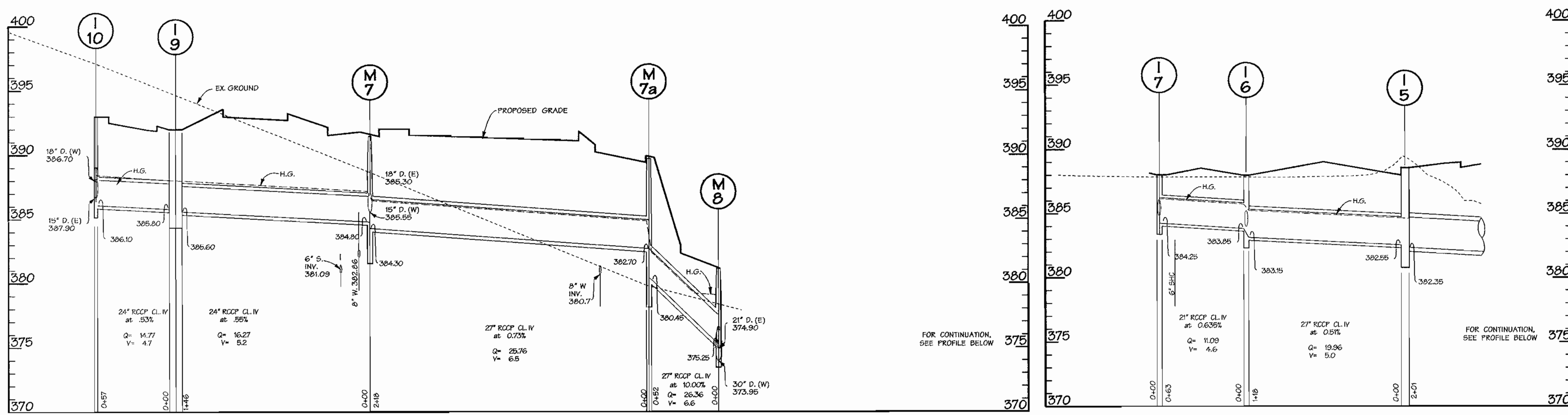
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NUMBER 19376 EXPIRATION DATE: SEPTEMBER 22, 2017



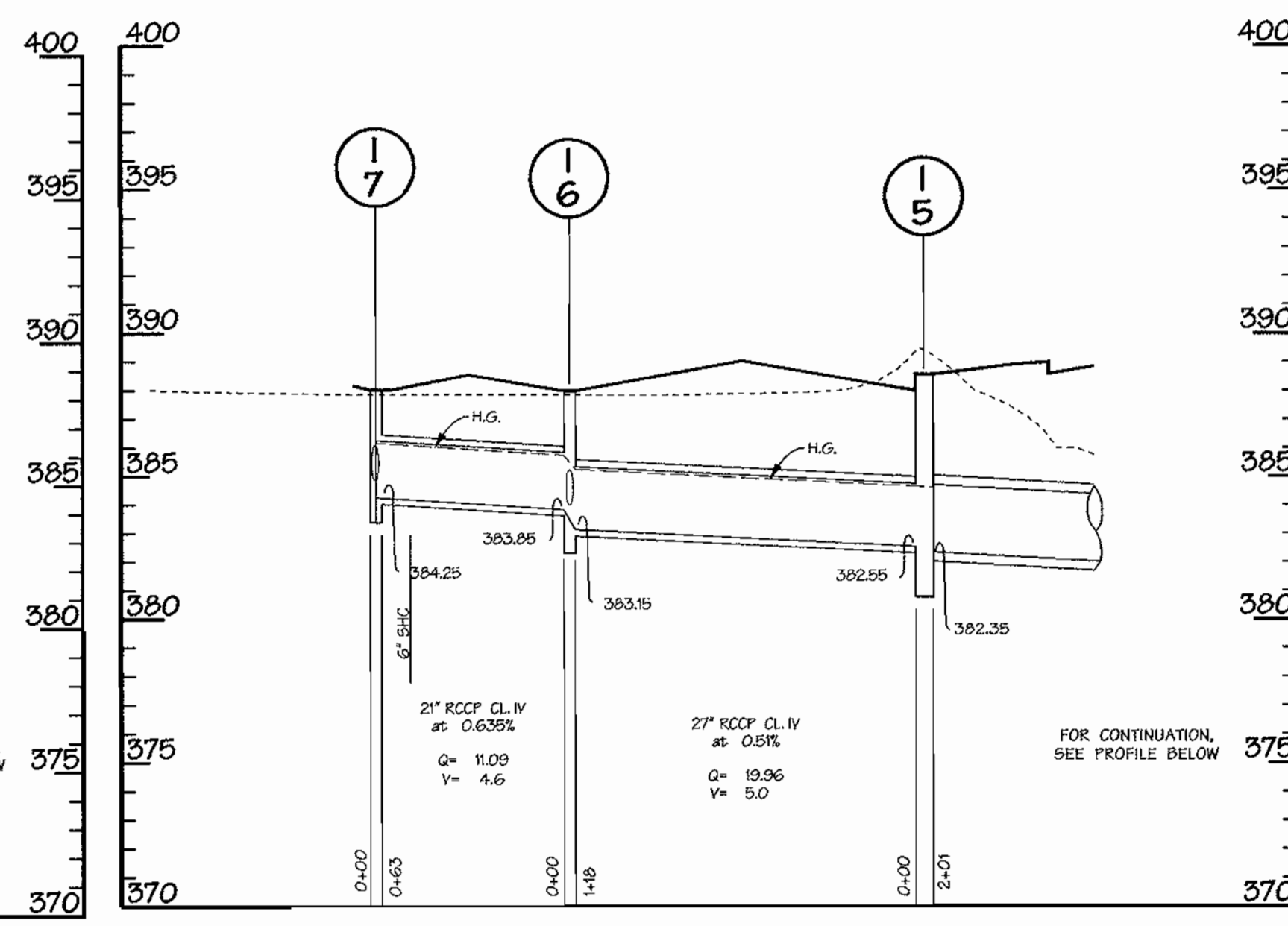
NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION 3

9/7/00
Date

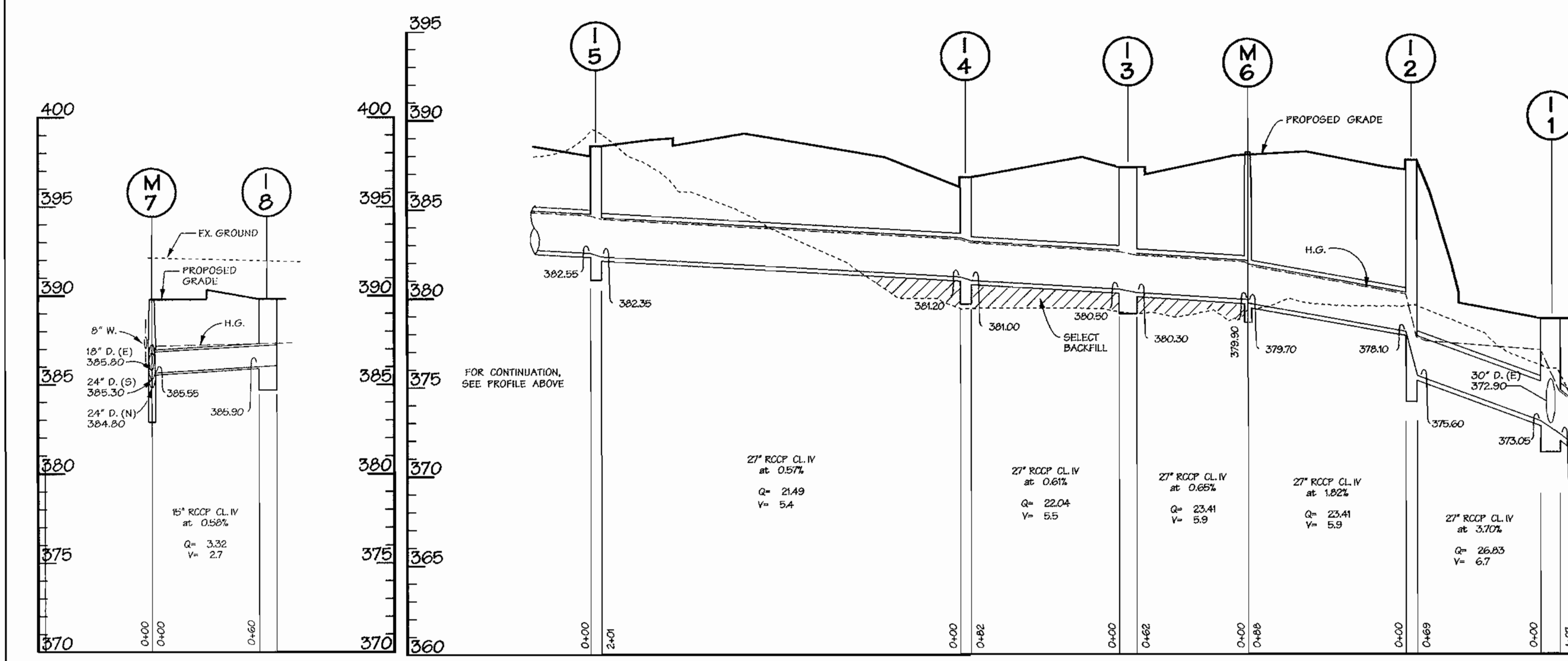
Professional Engr. No. 19376



FOR CONTINUATION, SEE PROFILE BELOW

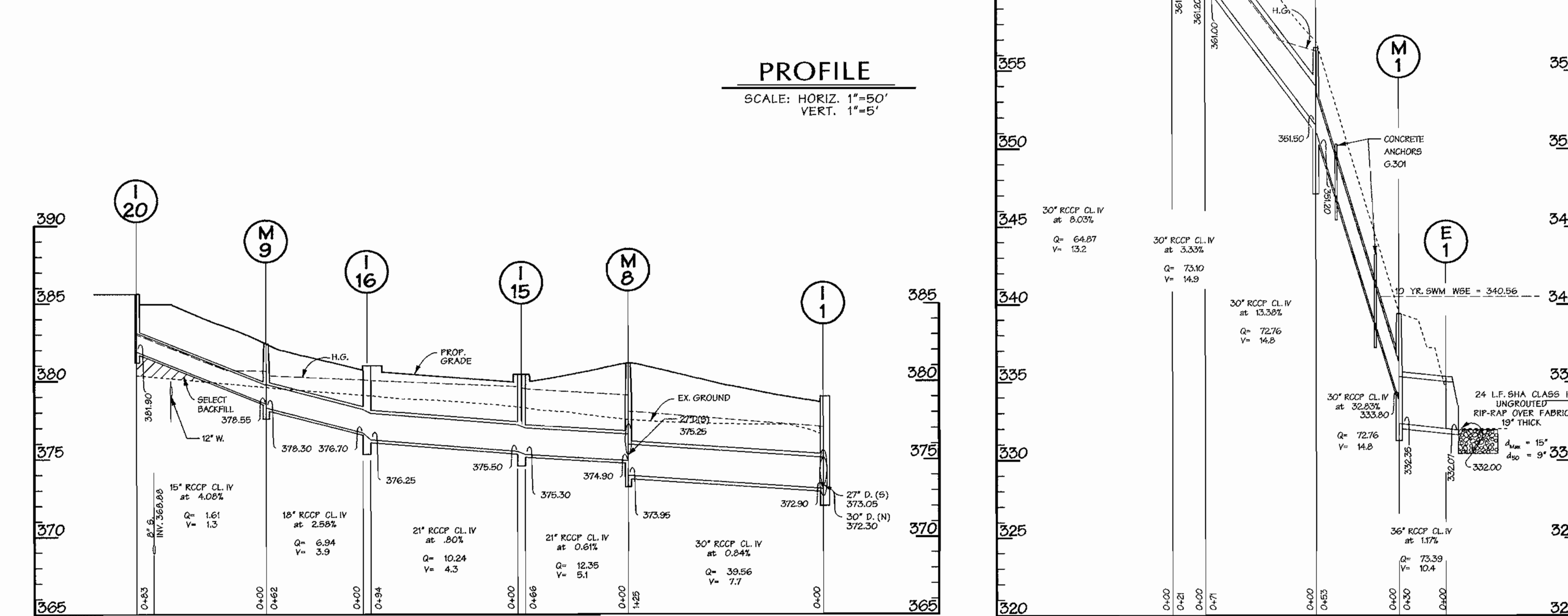


FOR CONTINUATION, SEE PROFILE BELOW



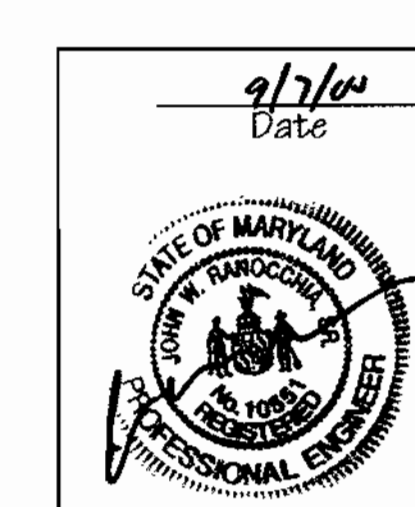
FOR CONTINUATION, SEE PROFILE ABOVE

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



STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.		REMARKS	COORDINATES	
				UPPER	LOWER		NORTH	EAST
I-1	A-10	373.05	372.30	379.00	379.00	SD 4.02 W= 3'-9"	545,282.2	1,343,279.4
I-2	A-10	378.10	375.60	387.70	387.70	SD 4.02 W= 3'-0"	545,280.4	1,343,282.0
I-3	A-10	380.50	380.00	387.30	387.30	SD 4.02 W= 3'-0"	545,281.6	1,343,110.9
I-4	A-10	381.20	381.00	386.80	386.80	SD 4.02 W= 3'-0"	545,279.2	1,343,022.0
I-5	A-10	382.55	382.35	388.50	388.50	SD 4.02 W= 3'-0"	545,281.7	1,342,960.5
I-6	DBL. 8	383.85	383.15	388.40	388.40	SD 4.23 -	545,284.6	1,343,075.8
I-7	DBL. 8	-	384.25	388.40	388.40	SD 4.23 -	545,282.6	1,343,140.6
I-8	A-10	-	386.00	389.70	389.70	SD 4.02 W= 2'-6"	545,286.7	1,343,253.14
I-9	A-10	385.80	385.60	389.00	389.00	SD 4.02 W= 2'-6"	545,423.4	1,343,268.0
I-10	A-5	387.90	386.10	393.00	393.00	SD 4.01 W= 2'-6"	545,361.0	1,343,255.1
I-11	A-5	-	389.69	393.20	393.20	SD 4.01 W= 2'-6"	545,543.6	1,343,311.1
I-12	A-5	388.20	387.75	392.90	392.90	SD 4.01 W= 2'-6"	545,411.0	1,343,086.7
I-13	A-10	-	389.15	392.40	392.40	SD 4.02 W= 2'-6"	545,460.2	1,342,898.6
I-14	A-10	-	386.35	390.50	390.50	SD 4.02 W= 2'-6"	545,759.3	1,343,419.6
I-15	A-5	375.50	375.30	380.40	380.40	SD 4.01 W= 2'-6"	545,818.4	1,343,459.2
I-16	A-10	376.70	376.25	381.32	381.10	SD 4.02 W= 2'-6"	545,802.9	1,343,556.4
I-17	A-10	381.83	380.33	389.90	389.90	SD 4.02 W= 2'-6"	545,709.0	1,343,591.1
I-18	A-10	386.00	385.75	389.14	389.92	SD 4.02 W= 2'-6"	545,601.4	1,343,625.6
I-19	A-10	-	388.50	391.50	391.50	SD 4.02 W= 2'-6"	545,522.7	1,343,591.3
I-20	A-10	-	391.90	395.64	395.19	SD 4.02 W= 2'-6"	545,727.1	1,343,679.1
I-21	DBL. 8' COMB.	-	371.15	375.17	375.17	SD 4.34 -	546,038.4	1,343,499.1
I-30	A-10	367.69	367.49	371.66	371.15	SD 4.02 W= 2'-6"	546,040.8	1,343,690.9
I-31	A-10	-	367.90	372.00	371.66	SD 4.02 W= 2'-6"	546,043.1	1,343,726.7
M-1	6" MANHOLE	383.80	382.35	389.75	-	MD 384.05	546,122.4	1,343,336.2
M-2	5" MANHOLE	381.50	381.20	388.00	-	G 5.13	546,072.3	1,343,363.4
M-3	5" MANHOLE	381.20	381.00	389.50	-	G 5.13	546,035.4	1,343,294.1
M-4	5" MANHOLE	382.10	381.90	371.00	-	G 5.13	546,012.3	1,343,288.2
M-6	5" MANHOLE	379.90	379.70	388.16	-	G 5.13	546,819.9	1,343,189.8
M-7	4" MANHOLE	384.80	384.30	391.36	-	G 5.12	545,567.0	1,343,313.7
M-7a	4" MANHOLE	382.70	380.45	389.70	-	G 5.12	546,776.0	1,343,376.2
M-8	5" MANHOLE	374.90	373.95	381.15	-	G 5.13	546,822.9	1,343,390.2
M-9	4" MANHOLE	378.55	378.30	382.00	-	G 5.12 SHALLOW	545,789.2	1,343,609.4
M-10	4" MANHOLE	370.40	370.20	376.77	-	G 5.12	546,006.5	1,343,421.1
M-11	4" MANHOLE	372.65	372.45	376.79	-	G 5.12	545,989.1	1,343,551.0
M-30	4" MANHOLE	354.73	353.48	359.40	-	G 5.12 SHALLOW	546,134.1	1,343,622.2
M-31	4" MANHOLE	367.41	367.21	372.00	-	G 5.12 SHALLOW	546,042.8	1,343,676.8
WYE	15"X15" TEE FTG.	370.87	370.87	-	-	SD 1.11	546,006.5	1,343,421.1
E-1	CONC. END SECT.	-	382.00	-	-	SD 5.51	546,152.7	1,343,325.8
E-2	CONC. END SECT.	-	382.00	-	-	SD 5.51	546,165.0	1,343,804.7



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County 9/14/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamilton 7/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James S. Smith 9/23/00
RECORDER DATE

Date No. Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

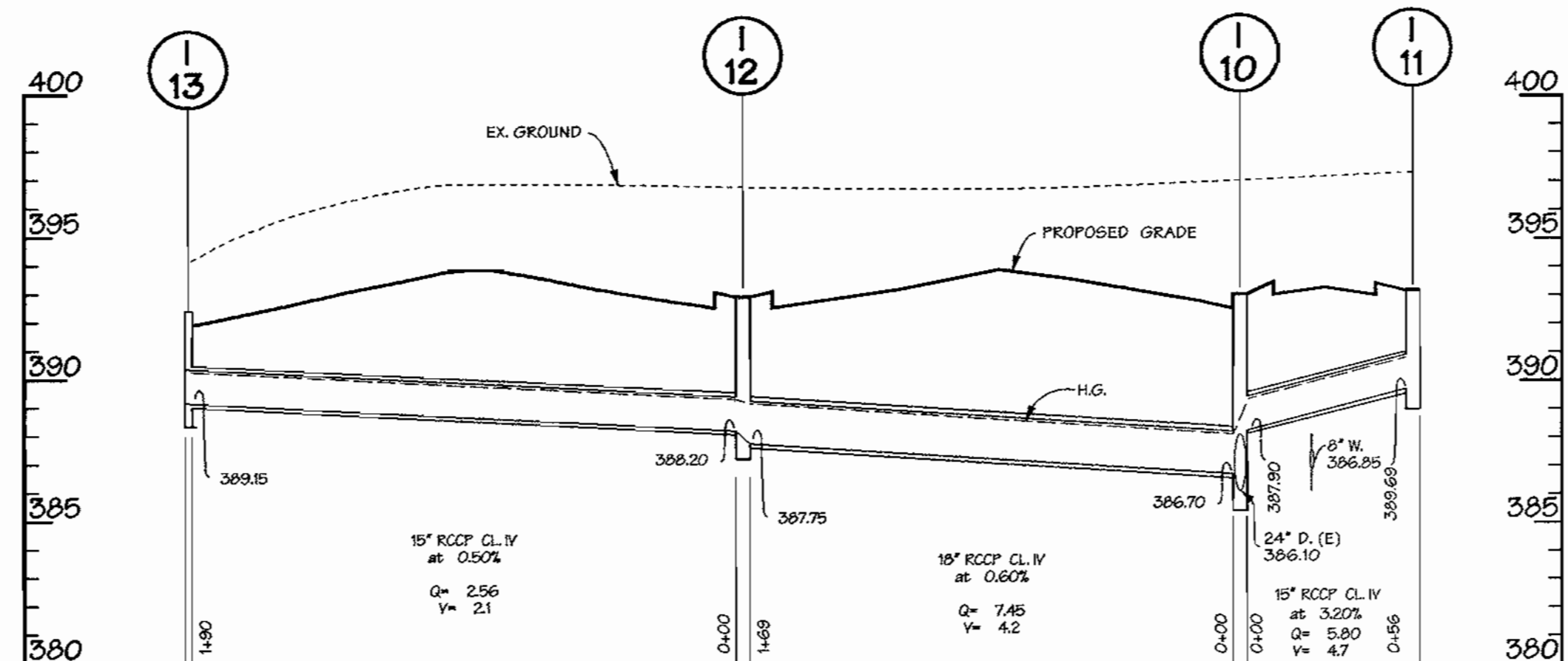
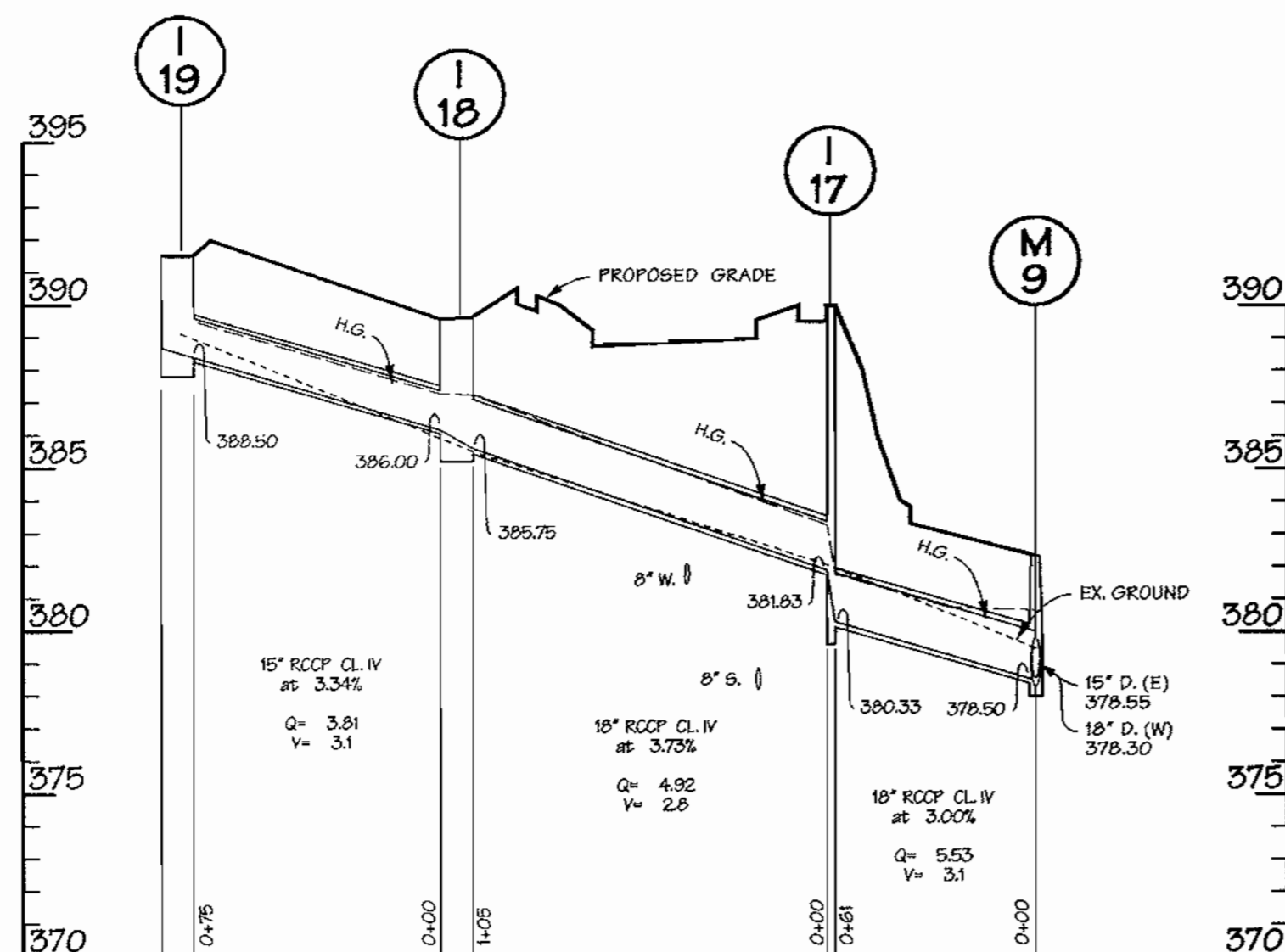
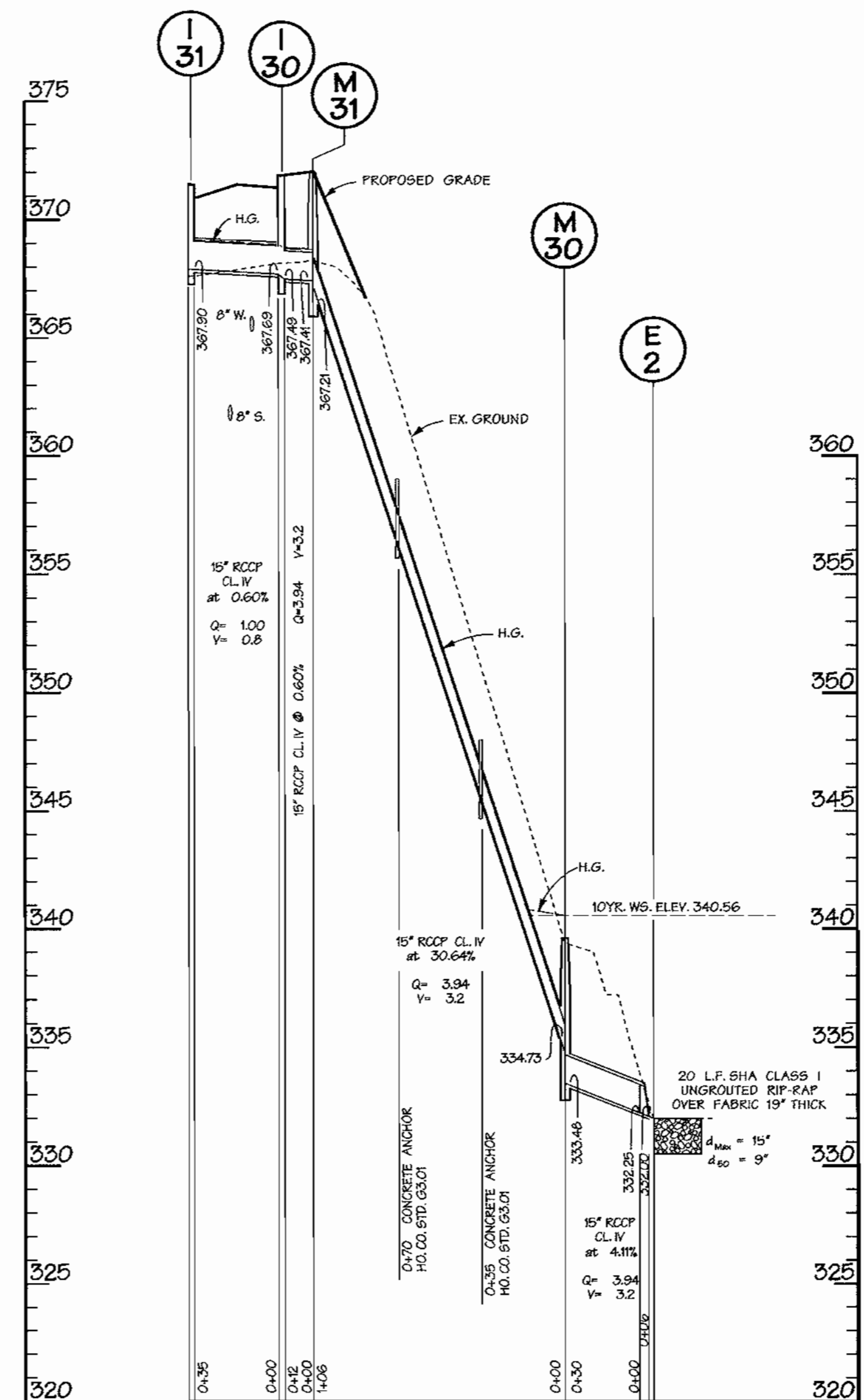
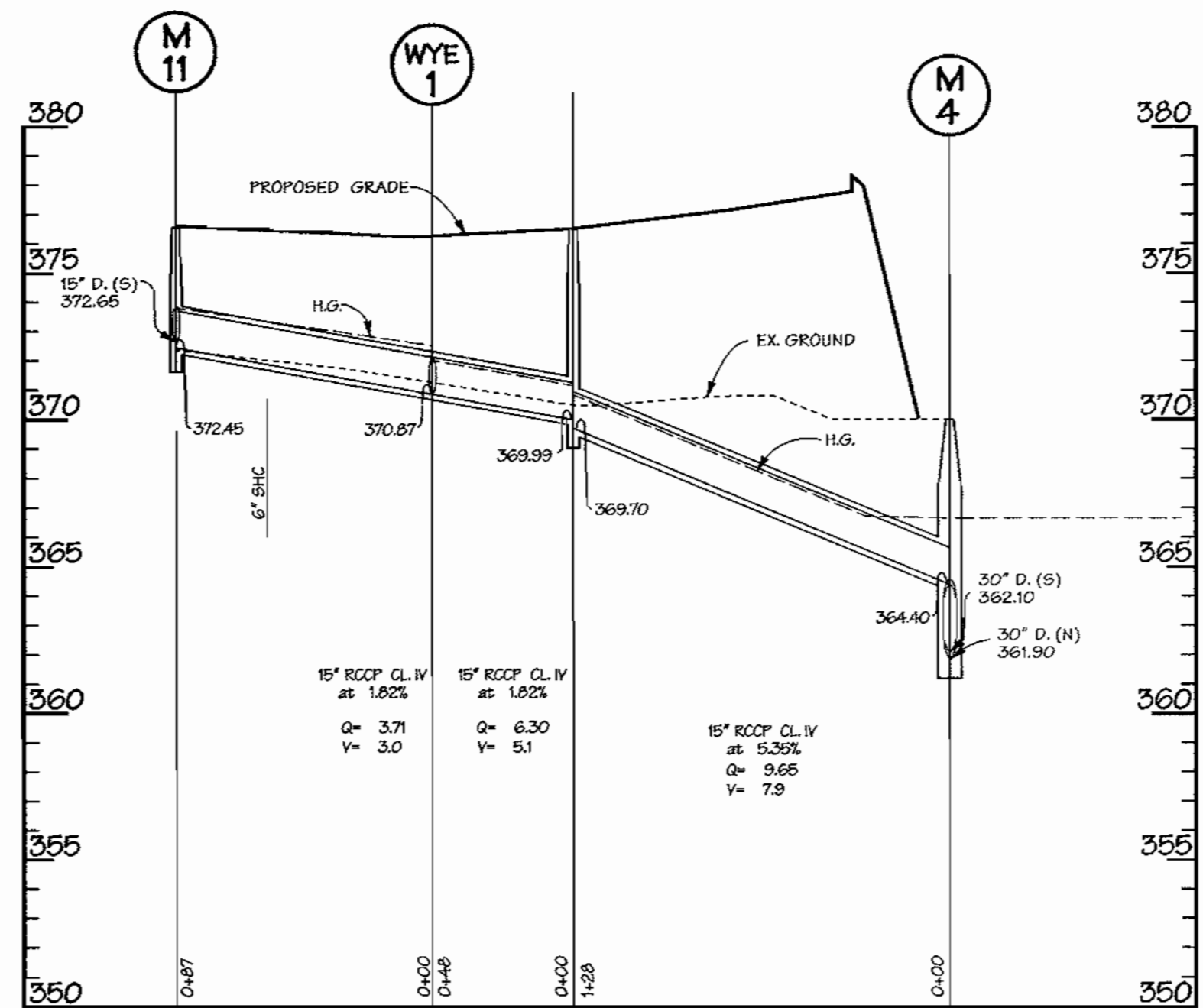
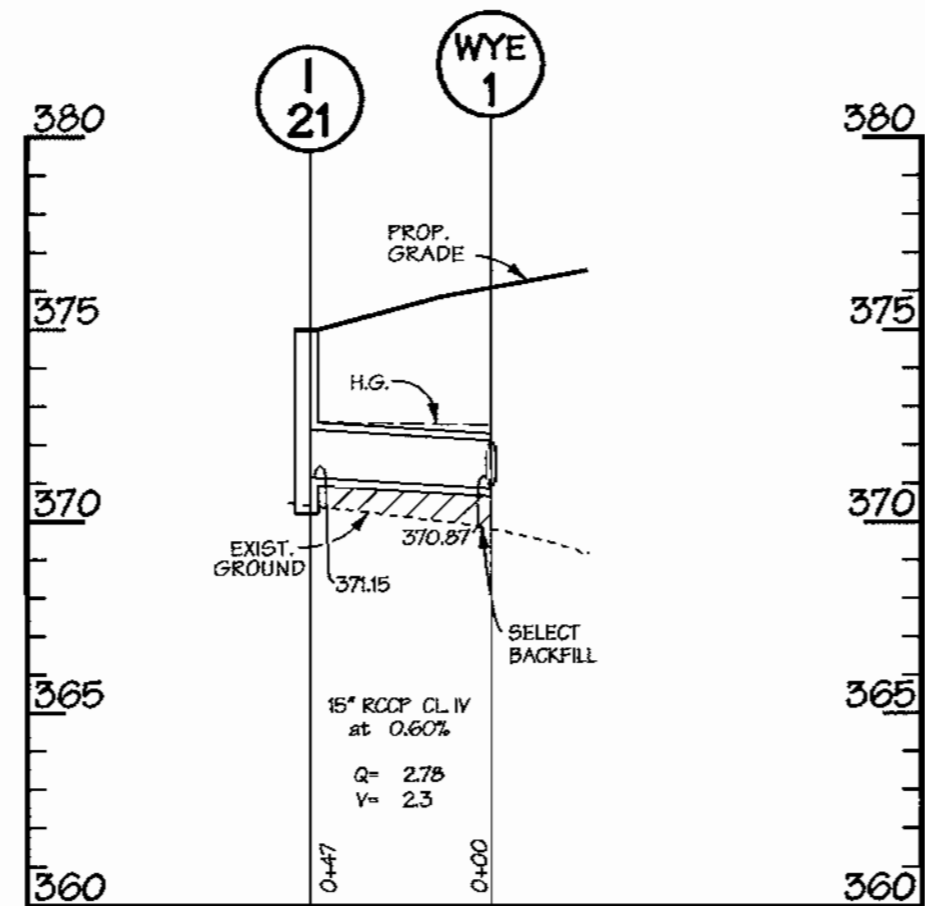
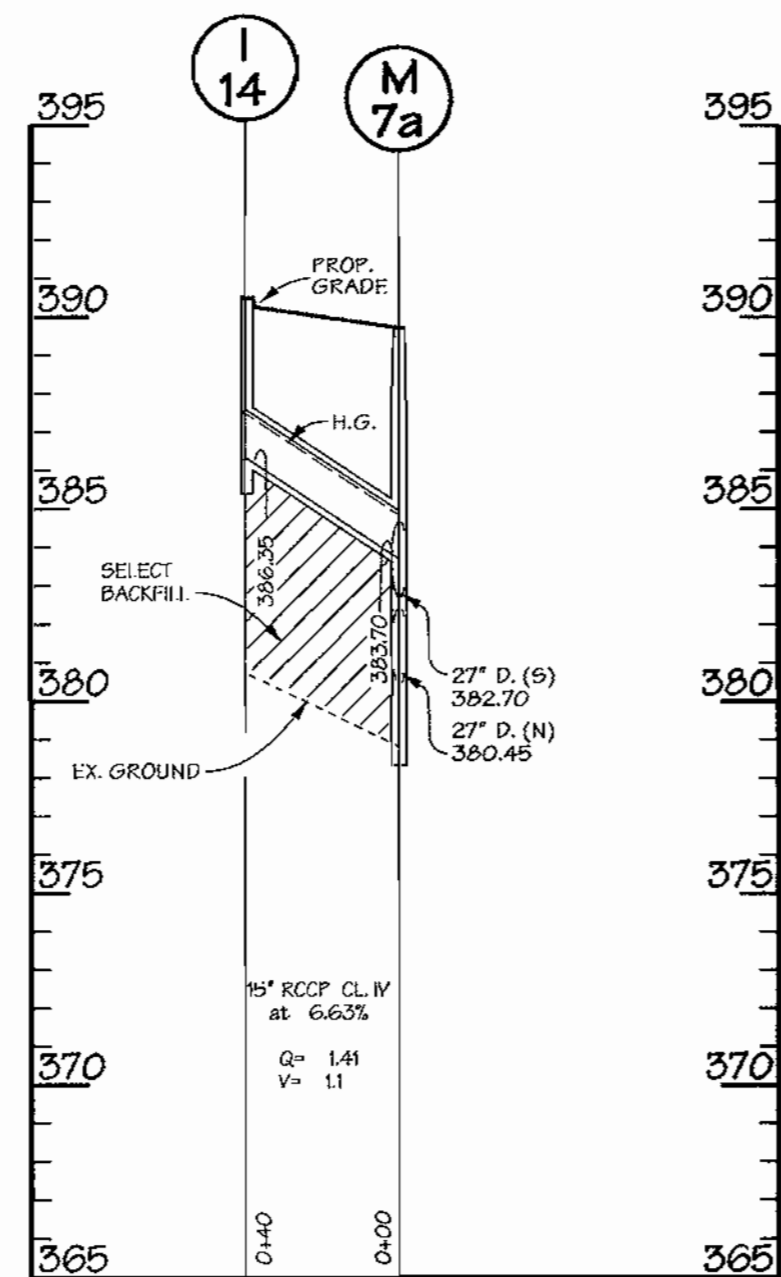
OWNER: TRIPLETT
TEAM: TRIPLETT
6701 DEMOCRACY BLVD, SUITE 410
BETHESDA, MD 20817

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBMITTER NAME: Montpelier Research Park
SECTION AREA: NA
PARCEL #: PARCEL E-2
TAXID: 14137
BLOCK & LOT: 17 PEC
TERRACE MAP: 41
ELECT. SURVEY: EPH
CENSUS TRACT: 6051.02
WATER CODE: E21
SEWER CODE: 6440000

TITLE: **STORM DRAIN PROFILES**

Des By: Scale: As Shown Proj. No. 94171.T2
Drm By: MSS Date: 8-30-00
Chk By: Approved: **6** OF 16



PROFILE

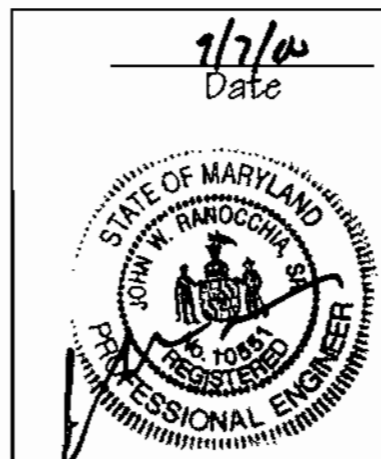
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Whitman 9/19/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Andy Hamilton 7/25/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Paul Butts 9/25/00
 DIRECTOR DATE

Date No. Revision Description

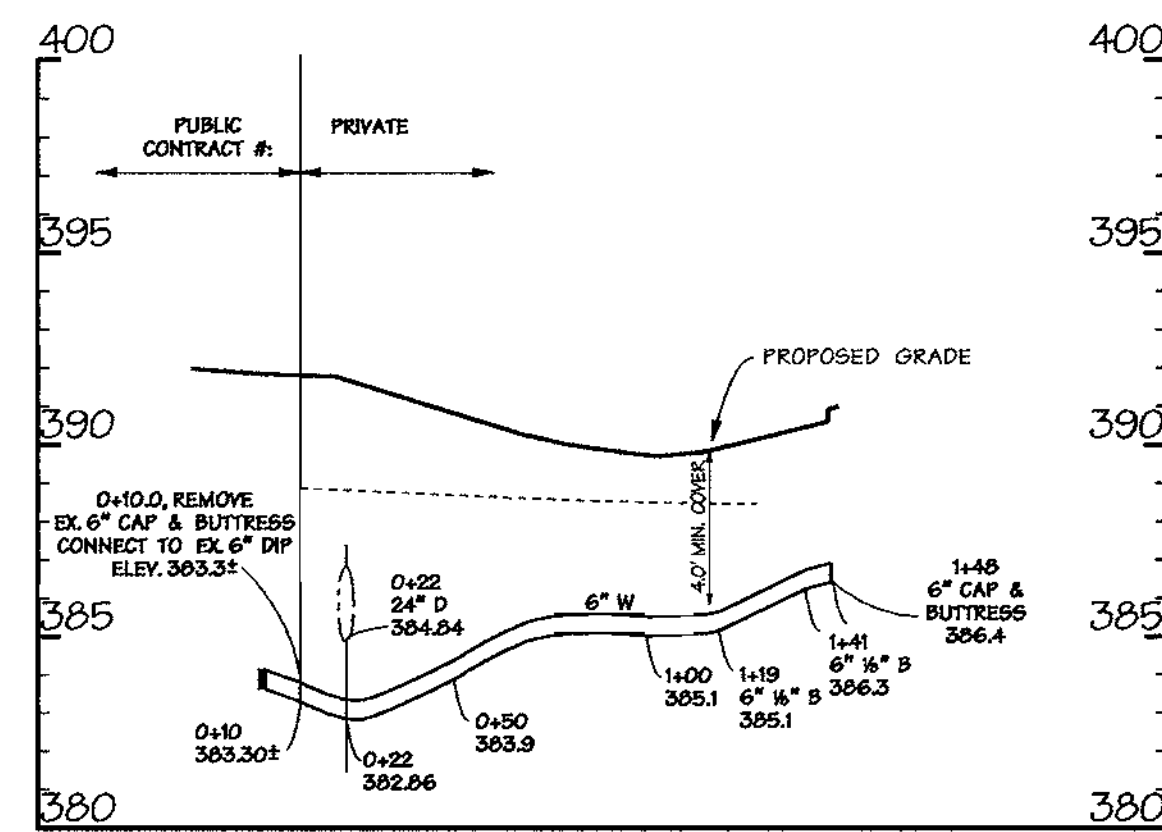
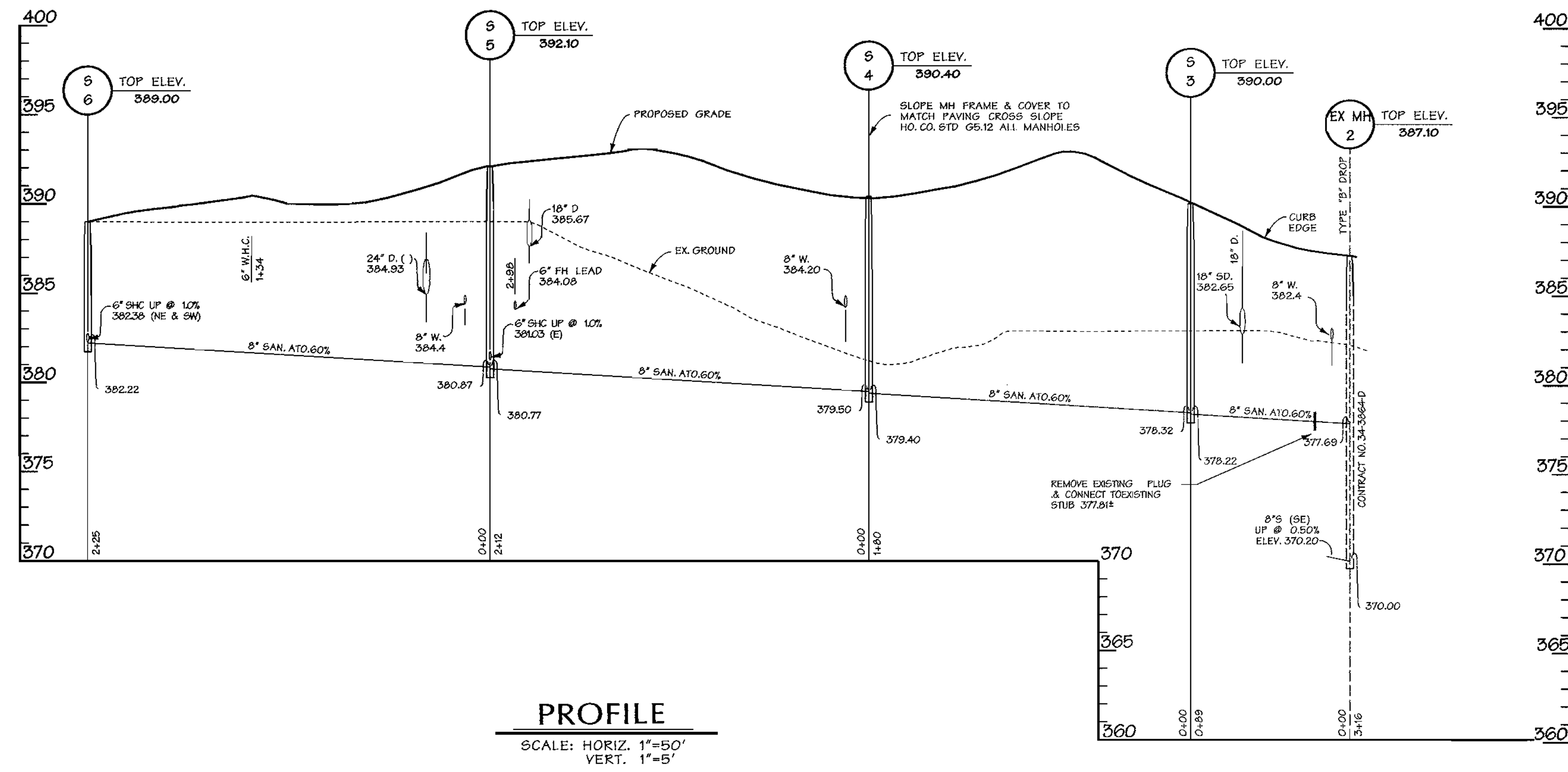
Montpelier Research Park
 PARCEL E-2
 HOWARD COUNTY MARYLAND

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 296 3333
 Fax 296 4705

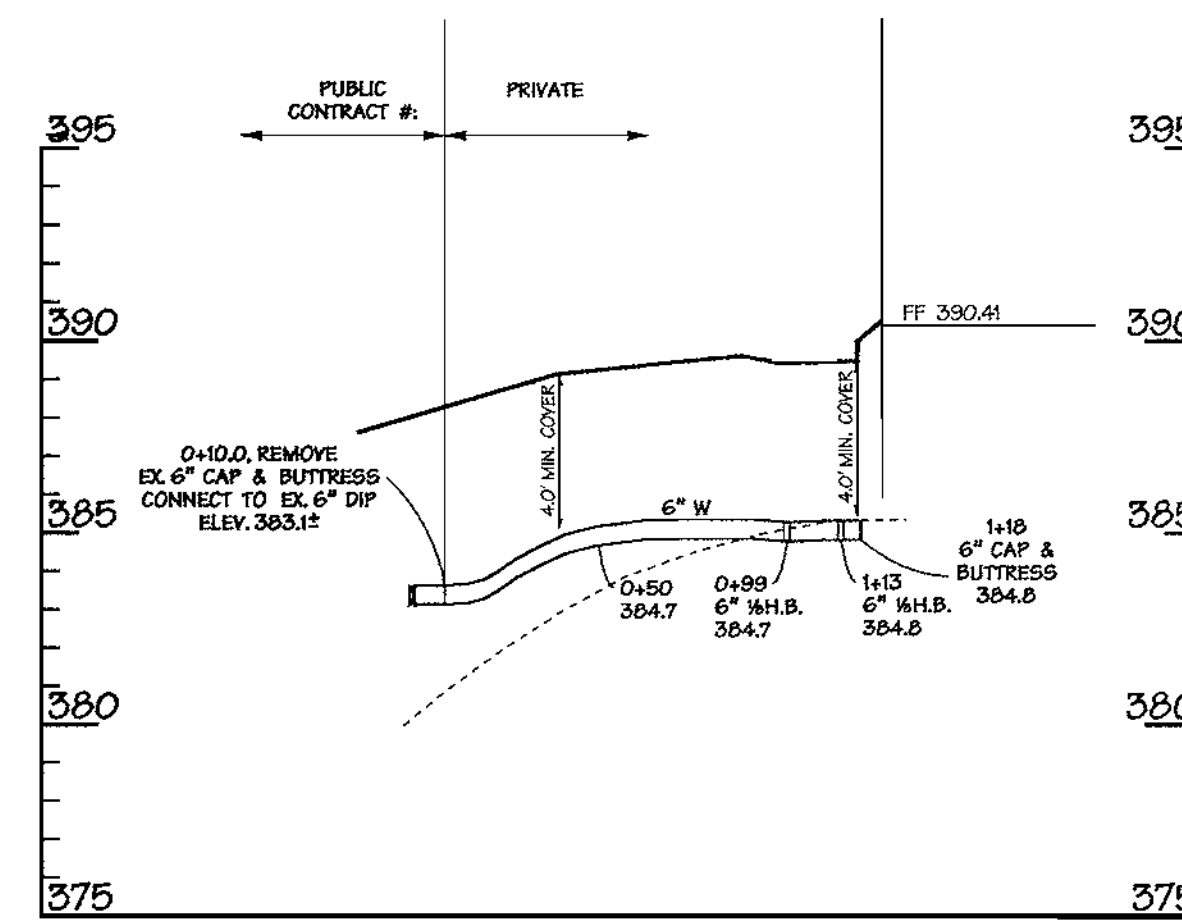


Professional Engr. No. 10528

SUBDIVISION NAME	Montpelier Research Park	SECTION AREA	NA	PARCEL #	PARCEL E-2
PLAT #	14157	BLOCK #	17	TOWNSHIP MAP #	41
WATER CODE	E21	SEWER CODE	6440000	ELECT. DISTRICT	22h
TITLE					
STORM DRAIN PROFILES					
Des By:	MSS	Scale:	As Shown	Proj. No.	94171.12
Drn By:	MSS	Date:	8-30-00	Sheet No.	7 OF 16
Chk By:		Approved:			



6" W. SERVICE TO BLDG. B



6" W. SERVICE TO BLDG. C

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

9/19/00
DATE
9/25/00
DATE
7/22/00
DATE

Date	No.	Revision Description

Montpelier Research Park
 PARCEL E-2
 HOWARD COUNTY MARYLAND

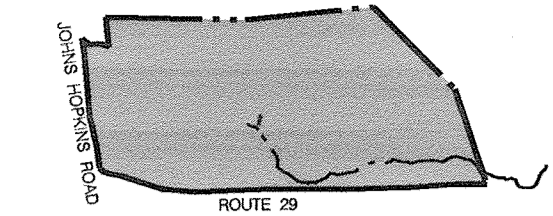
DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 296 3333
 Fax 296 4705

9/2/00
Date

Professional Engr. No. 10557

SUBDIVISION NAME Montpelier Research Park		SECTION AREA NA	PARCEL # PARCEL E-2
PLAT # 14137	BLOCK # 17	ZONE PEC	TAXATION MAP 41
WATER CODE E21		SEWER CODE 6440000	RELOT DISTRICT 514
CENSUS TRACT 605102			
TITLE WATER AND SEWER PROFILES			
Des By: MSS	Scale: As Shown	Proj. No. 94171.12	
Drn By: MSS	Date: 8-30-00		
Chk By:	Approved:		8 OF 16

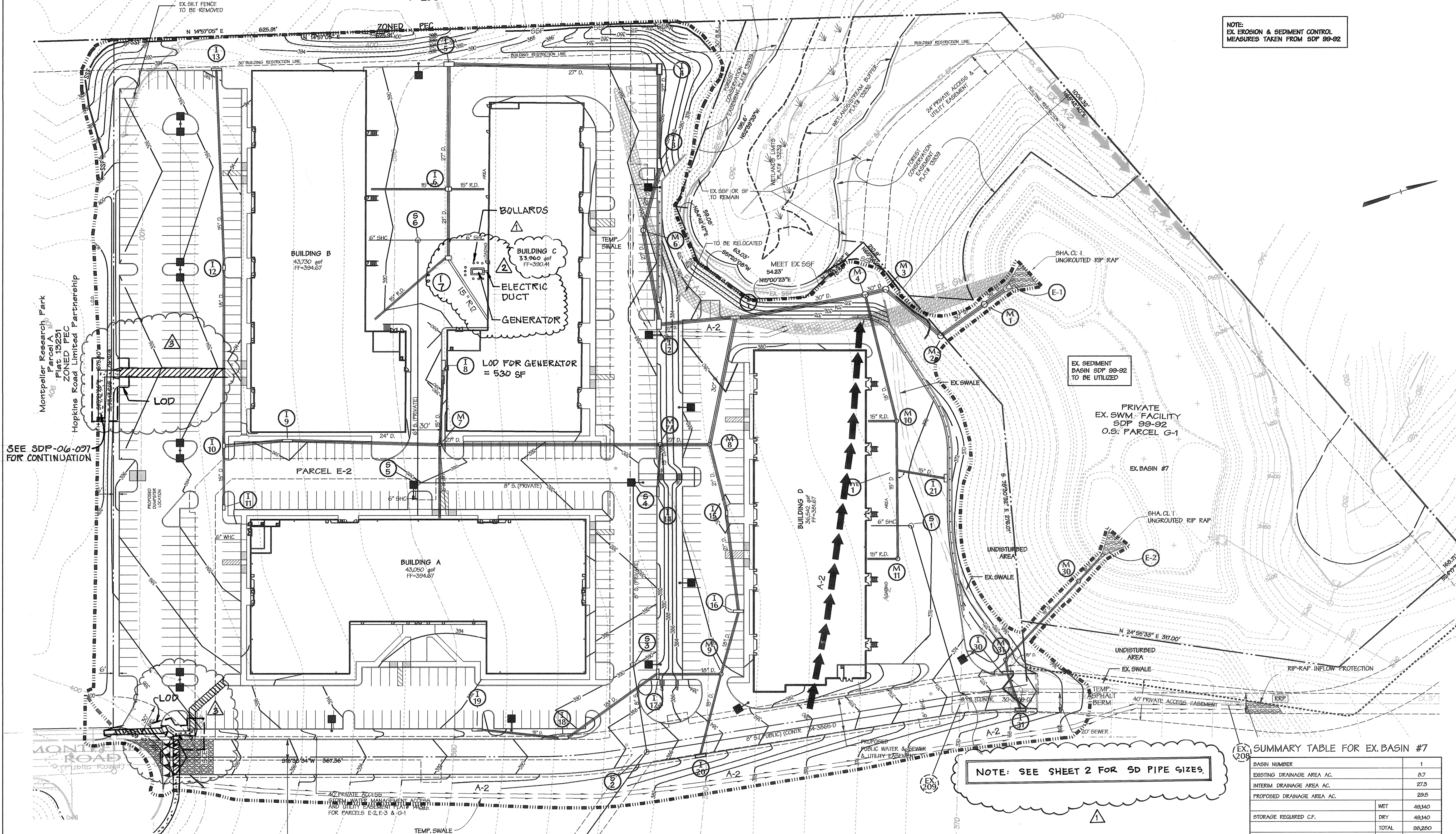
NOTE:
EX EROSION & SEDIMENT CONTROL
MEASURES TAKEN FROM SDP 99-92



KEY SHEET

LEGEND

SYMBOL	DESCRIPTION
	STREAM
	SUPER SILT FENCE
	EXISTING CONTOURS
	EXISTING TREES/TREE LINE
	WETLAND/STREAM BUFFER
	WETLAND
	PROPOSED CONTOURS
	FLOODPLAIN
	LIMIT OF DISTURBANCE
	EXISTING 25' WIDE UTILITY EASEMENT
	SOIL BORING
	SCE-STABILIZED CONSTRUCTION ENTRANCE
	EROSION CONTROL MATTING
	EARTH DIKE
	TEMP. ASPHALT BERM
	TEMP. SWALE
	RIP RAP INFLOW PROTECTION



SEE SDP-06-097 FOR CONTINUATION

NOTE: SEE SHEET 2 FOR SD PIPE SIZES.

SUMMARY TABLE FOR EX. BASIN #7

BASIN NUMBER	1
EXISTING DRAINAGE AREA AC.	8.7
INTERIM DRAINAGE AREA AC.	27.3
PROPOSED DRAINAGE AREA AC.	29.5
STORAGE REQUIRED C.F.	
DRY	49,140
TOTAL	98,280
STORAGE PROVIDED C.F.	
DRY	259,271
TOTAL	273,660
EXISTING GROUND ELEV.	340.0
TOP EMBANKMENT ELEV.	344.3
RISER CREST ELEV.	339.4
WET STORAGE / ELEV.	337.0 ²
CLEANOUT ELEV.	334.0
Q INTO BASIN C.F.S. 10YR	144.01
Q OUT BARREL C.F.S. 10YR	12.33
BASIN DEPTH	
WET	5.0
DRY	3.6
TOTAL	8.6
DESIGN HIGHWATER 100 yr. Clogged	342.26
FREEBOARD PROVIDED	2.0'
BASIN SIDE SLOPES	3:1
BARREL DIAMETER	48"
RISER DIMENSIONS	6x6
WET STORAGE ZONE ELEV.	332-337
DRY STORAGE ZONE ELEV.	337-339.4
BOTTOM DIMENSION	AS SHOWN
DIMENSION FROM CLEANOUT ELEV. TO RISER TOP	8.6'
START PERFORATIONS AT ELEVATION	337.0

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 19376 EXPIRATION DATE SEPTEMBER 22, 2021

Hopkins Road Limited Partnership
Montpelier Research Park
PARCEL E-3
Plat 14137-14138
ZONED PEC

LOD FOR REVISION 3 = 1,565 SF

9/7/09
Date

Professional Engr. No. 18551

CERTIFICATION 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."

John W. Ramonico, S.E.
9/7/09
DATE

CERTIFICATION 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 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."

Daniel S. Hudson, Esq., TC MIDATLANTE, INC.
8/1/00
DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Clay Simmons
U.S. SOIL CONSERVATION SERVICE
9/13/00
DATE

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

Clayton Jeffrey Schumpe
HOWARD S.C.D.
9/13/00
DATE

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 19376 EXPIRATION DATE: SEPTEMBER 22, 2017

Professional Engr. No. 18551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Mr. Dammann
CHIEF, DEVELOPMENT ENGINEERING DIVISION
9/19/00
DATE

Cindy Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT
7/28/10
DATE

John R. Smith
DIRECTOR
7/29/00
DATE

Date	No.	Revision Description
10-23-00	1	ADDED NOTE ABOUT PIPE SIZE
2/19/09	2	ADDED GENERATOR & ELECTRIC DUCT
9/27/10	3	ADDED SIDEWALK AND STRIPING

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER: HOPKINS ROAD LIMITED PARTNERSHIP
DEVELOPER: TRAVELLERS GROW COMPANY

DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: Montpelier Research Park
SECTION AREA: NA
PARCEL #: PARCEL E-2
PLAT #: 14137
PRECEDENCE: 41
ELECT. DISTRICT: 521A
CENSUS TRACT: 6051.02
WATER CODE: E21
SEWER CODE: 6440000

TITLE: **SEDIMENT & EROSION CONTROL PLAN**

Des By: [Signature]
Scale: 1"=50'
Proj. No. 94171.12

Drn By: CSC
Date: 7-27-00
9 OF 16

Chk By: [Signature]
Approved: [Signature]

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
Purpose
To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
Conditions Where Practice Applies
I. This practice is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications
I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel sticks, roots, trash, and other materials larger than 1 1/2 inch in diameter.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

IV. For sites having disturbed areas under 5 acres:
i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:
I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
b. Organic contents of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

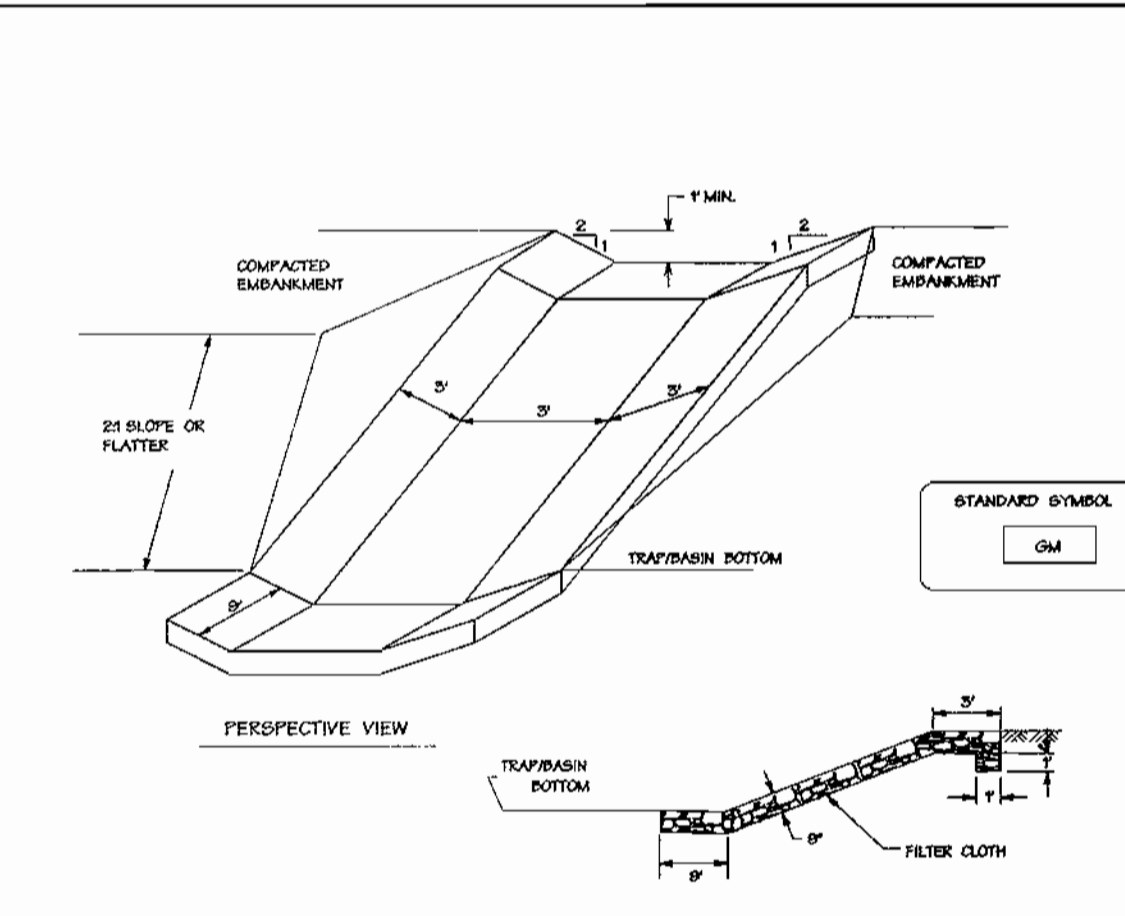
V. Topsoil Application
I. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

Topsoil Specifications



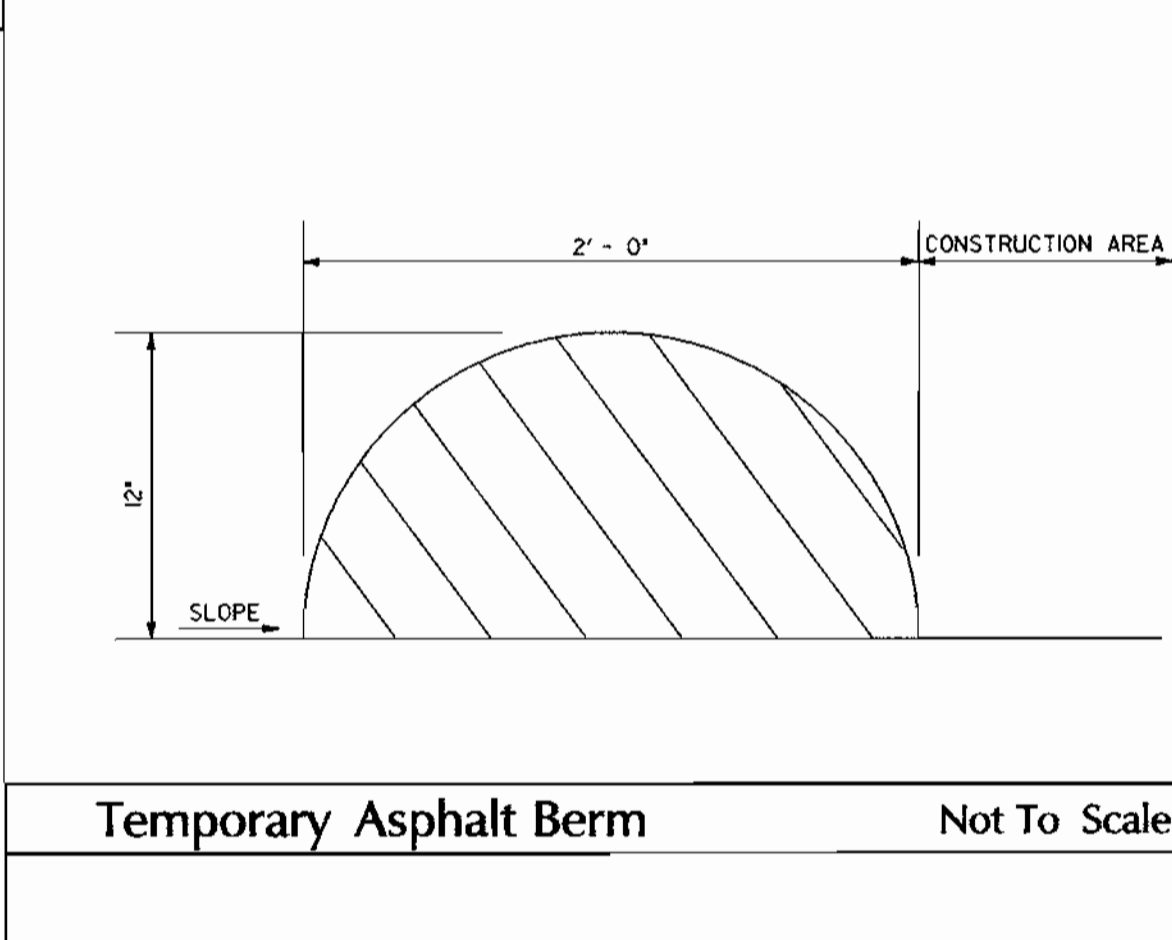
CONSTRUCTION SPECIFICATIONS
1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 2' x 3' x 9' GABION BASKETS FORMING A TRAPEZOIDAL CROSS SECTION 7' DEEP, WITH 2:1 SLOPE, AND A 3' BOTTOM WIDTH.
2. GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS.
3. THE STONE USED TO FILL THE GABION BASKETS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

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (310-1005).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 5:1.
B. FOURTEEN 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. I, CHAPTER 12 OF THE "HOWARD COUNTY MANUAL," STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SODS, TEMPORARY SEEDINGS, AND MULCHING (SECTION G), 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. SITE ANALYSIS:
TOTAL AREA OR SITE 12.55 ACRES
AREA DISTURBED +/- 14.00 ACRES
AREA TO BE ROOFED OR PAVED +/- 10.00 ACRES
AREA TO BE VEGETATIVELY STABILIZED +/- 6.00 ACRES
TOTAL CUT +/- 16,200 CUBIC YARDS
TOTAL FILL +/- 16,700 CUBIC YARDS
OFF-SITE WASTE/BROKEN AREA LOCATION WASTE -
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW 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 UNTIL 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 WITHIN ONE DAY, WHICHEVER IS SHORTER.

Sediment Control General Notes

or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
V. Topsoil Application
I. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

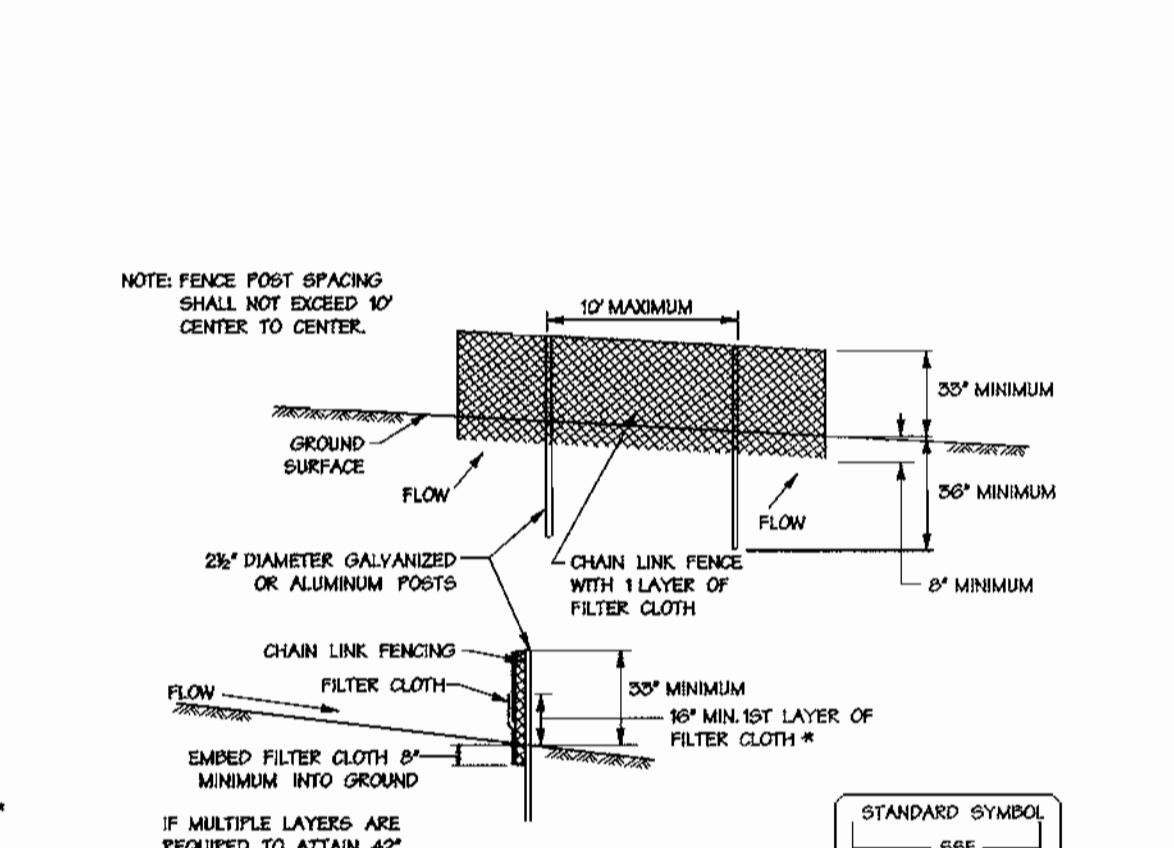
Topsoil Specifications



CONSTRUCTION SPECIFICATIONS
1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 2' x 3' x 9' GABION BASKETS FORMING A TRAPEZOIDAL CROSS SECTION 7' DEEP, WITH 2:1 SLOPE, 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 THE MANUFACTURERS RECOMMENDATIONS.
5. GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT ON SLOPES STEEPER THAN 4:1.

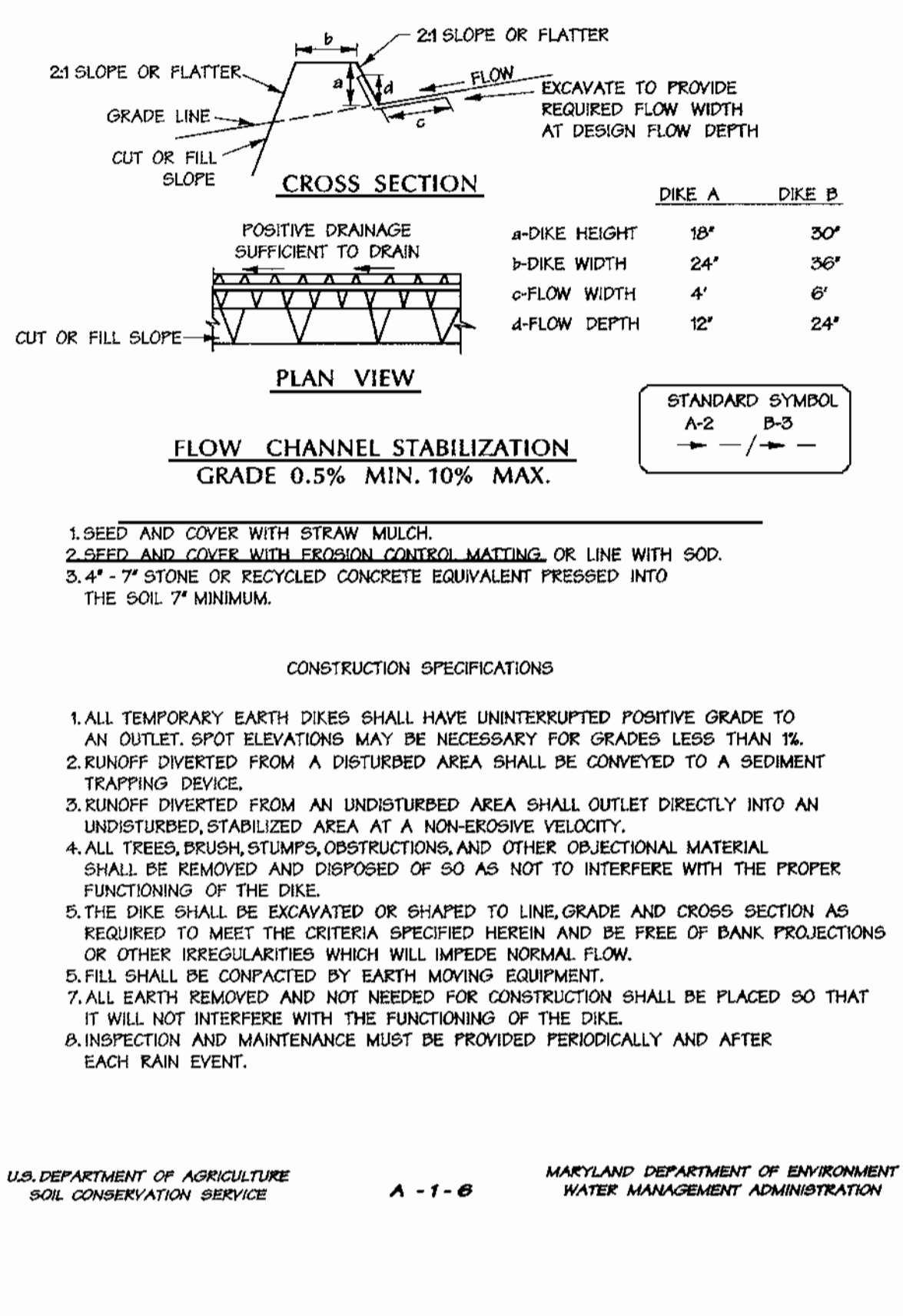
PERMANENT SEEDING NOTES
APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
1. UNDESEEDED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (82 LBS./1,000 SQ. FT.) AND 1,000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 LIQUID NITROGEN FERTILIZER (9 LBS./1,000 SQ. FT.)
2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (82 LBS./1,000 SQ. FT.) AND 1,000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.
SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1,000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (28 LBS./1,000 SQ. FT.) OF WHEATGRASS LONGVARIETY DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28. PROTECT SITE BY OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE 500 (2) - SEED WITH 80 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.
MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 - 90 LBS./1,000 SQ. FT.) OF UNKROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 250 GALLONS PER ACRE (5 GALS./1,000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 4 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALS./1,000 SQ. FT.) FOR ANCHORING.
MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.
TEMPORARY SEEDING NOTES
APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
SEEDING PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ. FT.)
SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (32 LBS./1,000 SQ. FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 2 LBS. PER ACRE OF WHEATGRASS LONGVARIETY (27 LBS./1,000 SQ. FT.) FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OR USE 600.
MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 - 90 LBS./1,000 SQ. FT.) OF UNKROTTED WEED FREE SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 250 GALS. PER ACRE (5 GALS./1,000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 4 FT. OR HIGHER, USE 348 GALS. PER ACRE (8 GALS./1,000 SQ. FT.) FOR ANCHORING.
REFER TO THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

Permanent/Temporary Seeding Notes



CONSTRUCTION SPECIFICATIONS
1. FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6" FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6" LENGTH POSTS.
2. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE. THE CHAIN LINK FENCING SHALL BE 50 (6) GAUGE OR HEAVIER.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 5' AT THE TOP AND MID SECTION.
5. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 6" INTO THE GROUND.
6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND TIED.
7. 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.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
CERTIFICATION 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.
CERTIFICATION BY THE DEVELOPER:
I HAVE CERTIFIED 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 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.

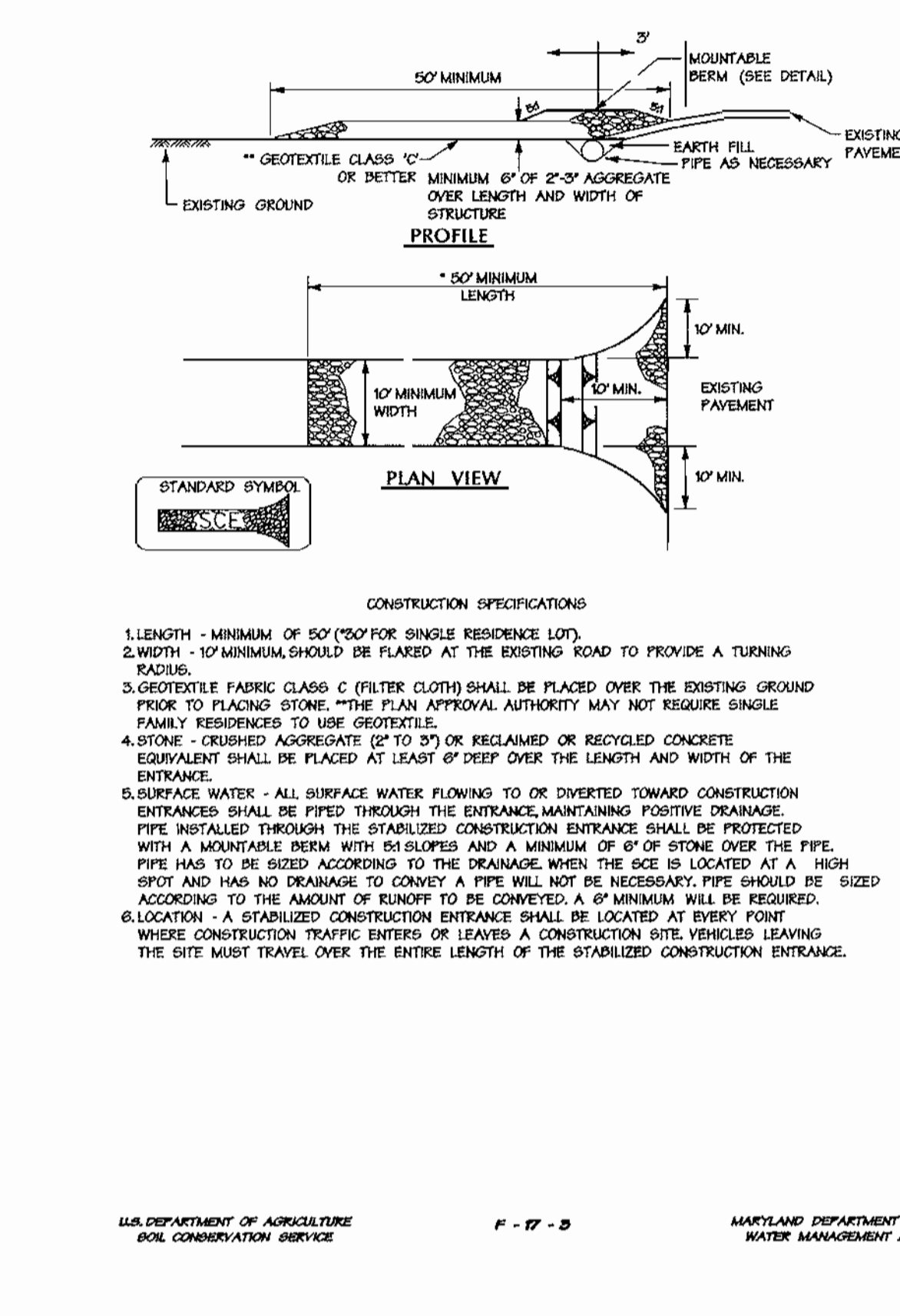


Earth Dike

CONSTRUCTION SPECIFICATIONS
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 OBJECTUAL 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 IMPED 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.

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



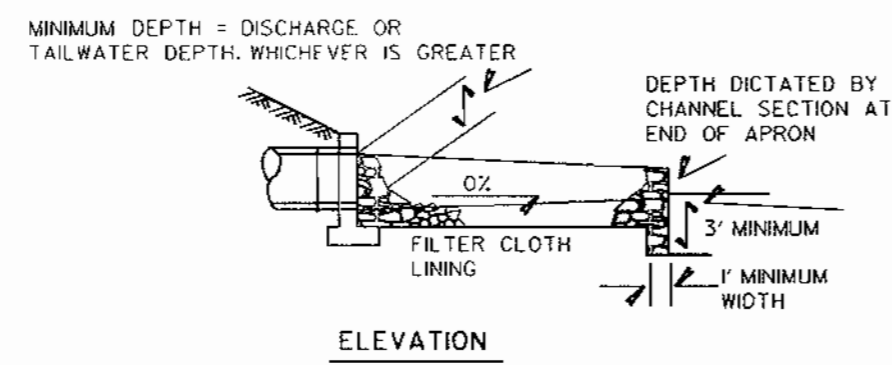
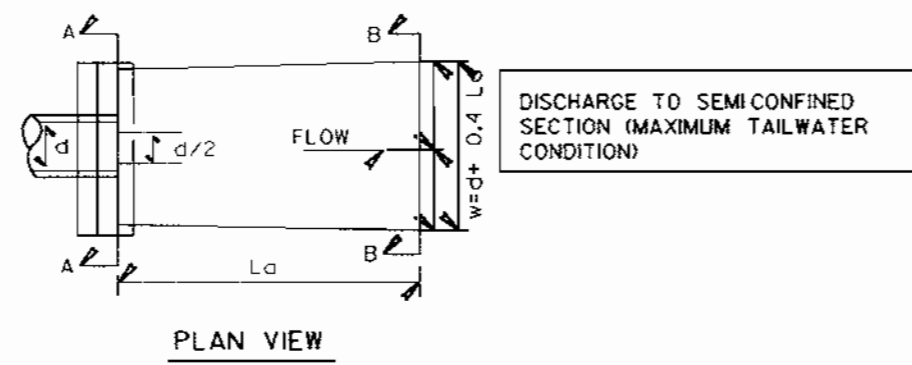
Stabilized Construction Entrance

CONSTRUCTION SPECIFICATIONS
1. LENGTH - MINIMUM OF 50' (50' FOR SINGLE RESIDENCE LOT).
2. WIDTH - 10' MINIMUM, SHOULD BE PLACED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC CLASS C (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 FILTERED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 6" STONE AND A MINIMUM OF 8" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE GEE 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.

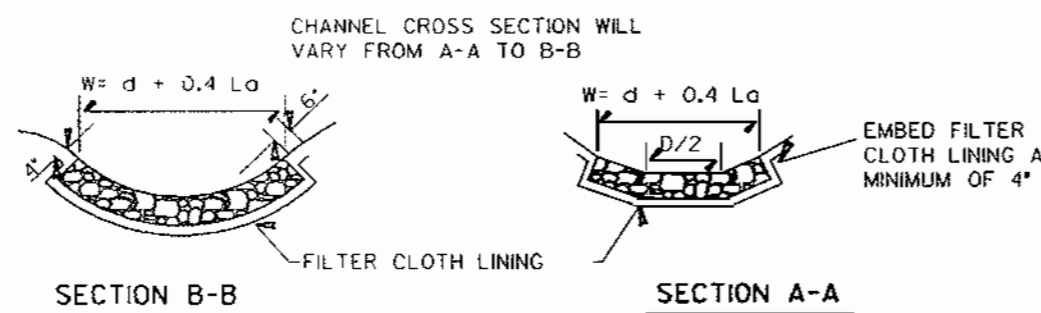
SEQUENCE OF CONSTRUCTION *
NUMBER OF DAYS
1. Obtain grading permit 7
2. Cleanout and repair existing sediment basin and install erosion and sediment control measures 14
3. Relocate temporary swale and earthdike 10
4. Construct storm drain E-1 to M-3, leave top off M-3 and temporarily divert drainage to M-3. Construct retaining walls 1 and 2, backfill retaining walls and rough grade etc. 90
5. Construct M-3 to I-4 and E-2 to I-31 30
6. Excavate for building foundation and construct remaining stormdrains 60
7. Construct utilities 60
8. Fine grade and construct paving, buildings and walks. 180
9. Fine grade and stabilize all remaining areas within the limits of disturbance in accordance with etds and specifications. 30
10. With approval of the sediment control inspector remove sediment control measures and stabilize. 7
11. With approval of the sediment control inspector cleanout and convert sediment basin to stormwater management facility in accordance with SDP 99-92. 30
*NOTE: SITE HAS BEEN MASS GRADED PER SDP 99-92.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND
OWNER: HOPKINS ROAD LIMITED PARTNERSHIP
DEVELOPER: TRAVELER BLOW COMPANY
2300A WOODBURN ROAD, SUITE 200 6704 VICTORY BLVD., SUITE 410
COLUMBIA, MD 21046-1909 BETHESDA, MD 20817
PH: 410-987-7222 FAX: 296-4705

Professional Engr. No. 10551
SDP-00-112
Date: 9/17/00
Scale: 1"=50'
Proj. No. 94171.12
Date: 7-27-00
Approved:
10 OF 16



NOTE: FILTER CLOTH MUST EXTEND A MINIMUM OF 6" BEYOND APRON AND SIDES



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

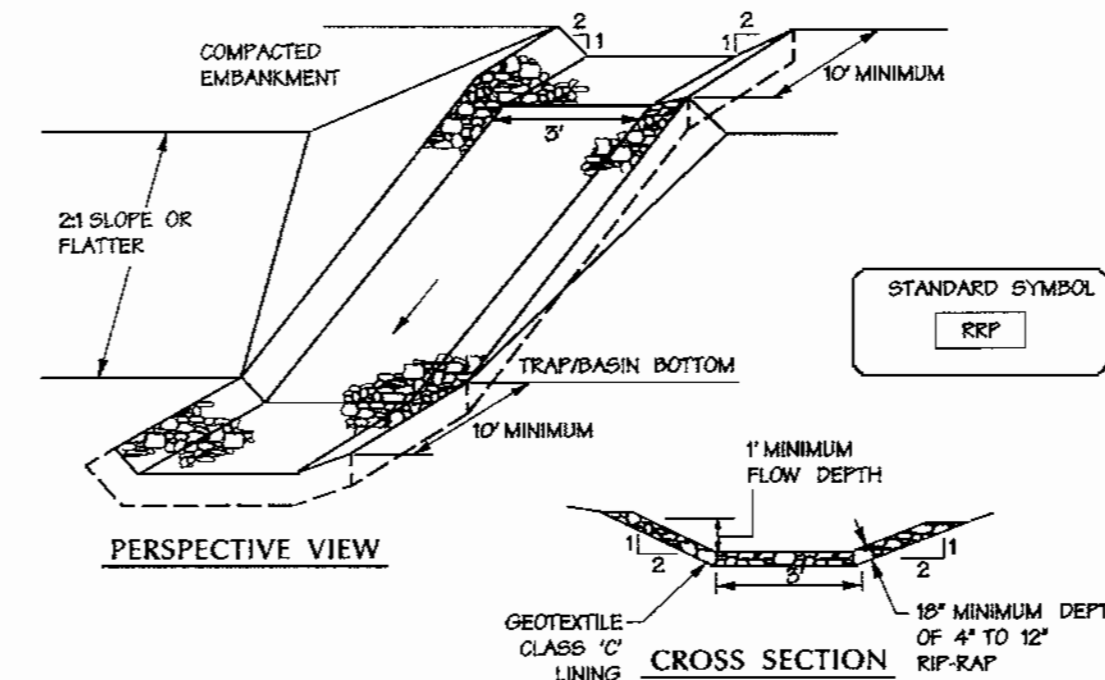
Construction Specifications

- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- Geotextile class C shall be protected from puncture, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
- Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
- The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

F - 18 - 8A, 9A, 10A

DUST CONTROL SPECIFICATIONS

- Temporary Methods:
- Mulches - See Standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
 - Vegetative Cover - See standards for temporary vegetative cover.
 - Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar types of equipment which may produce the desired effect.
 - Irrigation - This is generally done as an emergency treatment. Site is irrigated with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point the runoff begins to flow.
 - Barriers - Solid board fences, snow fences, burlap fences, straw bales, and similar material can be used to control dust currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
 - Calcium Chloride - Apply at a rate that will keep surface moist. May need retreatment.
- Permanent Methods:
- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
 - Topsoiling - Covering with less erodible soil materials. See standards for topsoiling.
 - Stone - Cover surface with crushed stone or coarse gravel.



CONSTRUCTION SPECIFICATIONS

- RIP-RAP LINED INFLOW CHANNELS SHALL BE 1' IN DEPTH, HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND 3' (MIN.) BOTTOM WIDTH. THE CHANNEL SHALL BE LINED WITH 4" TO 12" RIP-RAP TO A DEPTH OF 18".
- FILTER CLOTH SHALL BE INSTALLED UNDER ALL RIP-RAP. FILTER CLOTH SHALL BE GEOTEXTILE CLASS C.
- ENTRANCE AND EXIT SECTIONS SHALL BE INSTALLED AS SHOWN ON THE DETAIL SECTION.
- RIP-RAP USED FOR THE LINING MAY BE RECYCLED FOR PERMANENT OUTLET PROTECTION IF THE BASIN IS TO BE CONVERTED TO A STORMWATER MANAGEMENT FACILITY.
- GABION INFLOW PROTECTION MAY BE USED IN LIEU OF RIP-RAP INFLOW PROTECTION.
- RIP-RAP SHOULD BLEND INTO EXISTING GROUND.
- RIP-RAP INFLOW PROTECTION SHALL BE USED WHERE THE SLOPE IS BETWEEN 4:1 AND 10:1, FOR SLOPES FLATTER THAN 10:1 USE EARTH DIKE OR TEMPORARY SWALE LINING CRITERIA.

Rock Outlet Protection I

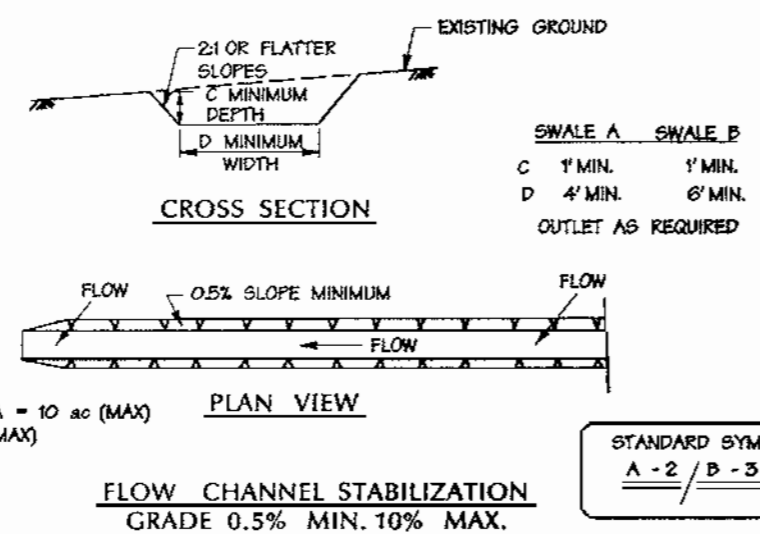
Not To Scale

Dust Control Specifications

Not To Scale

Rip Rap Inflow Protection

Not To Scale



- SEED AND COVER WITH STRAW MULCH.
- SEED AND COVER WITH EROSION CONTROL MATTING OR LIME WITH SOO.
- 4"-7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO SOIL IN A MINIMUM 7" LAYER.

CONSTRUCTION SPECIFICATIONS

- ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.
- RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A BEDMENT TRAPPING DEVICE.
- RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSIVE VELOCITY.
- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBSTRUCTIVE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
- THE SWALE 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 IMPED NORMAL FLOW.
- IF NECESSARY, SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
- ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

H - 30 - 1

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

Temporary Swale

Not To Scale

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Charles Simmons 9/13/00
U.S. SOIL CONSERVATION SERVICE DATE

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

John W. Ramoach, Jr. 9/13/00
HOWARD S.C.D. DATE

CERTIFICATION 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."

CERTIFICATION BY THE DEVELOPER:

"I HAVE 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 ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Daniel S. Hodson 8/1/00
DANIEL S. HODSON, EYP, TC MIDATLANTIC, INC. DATE

9/7/00
Date

Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County Planning & Zoning 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

David Hamilton 9/28/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James S. Smith 9/29/00
DIRECTOR DATE

Date	No.	Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER: HOWARD COUNTY
DEVELOPER: TRAVELLER DESIGN COMPANY

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4765

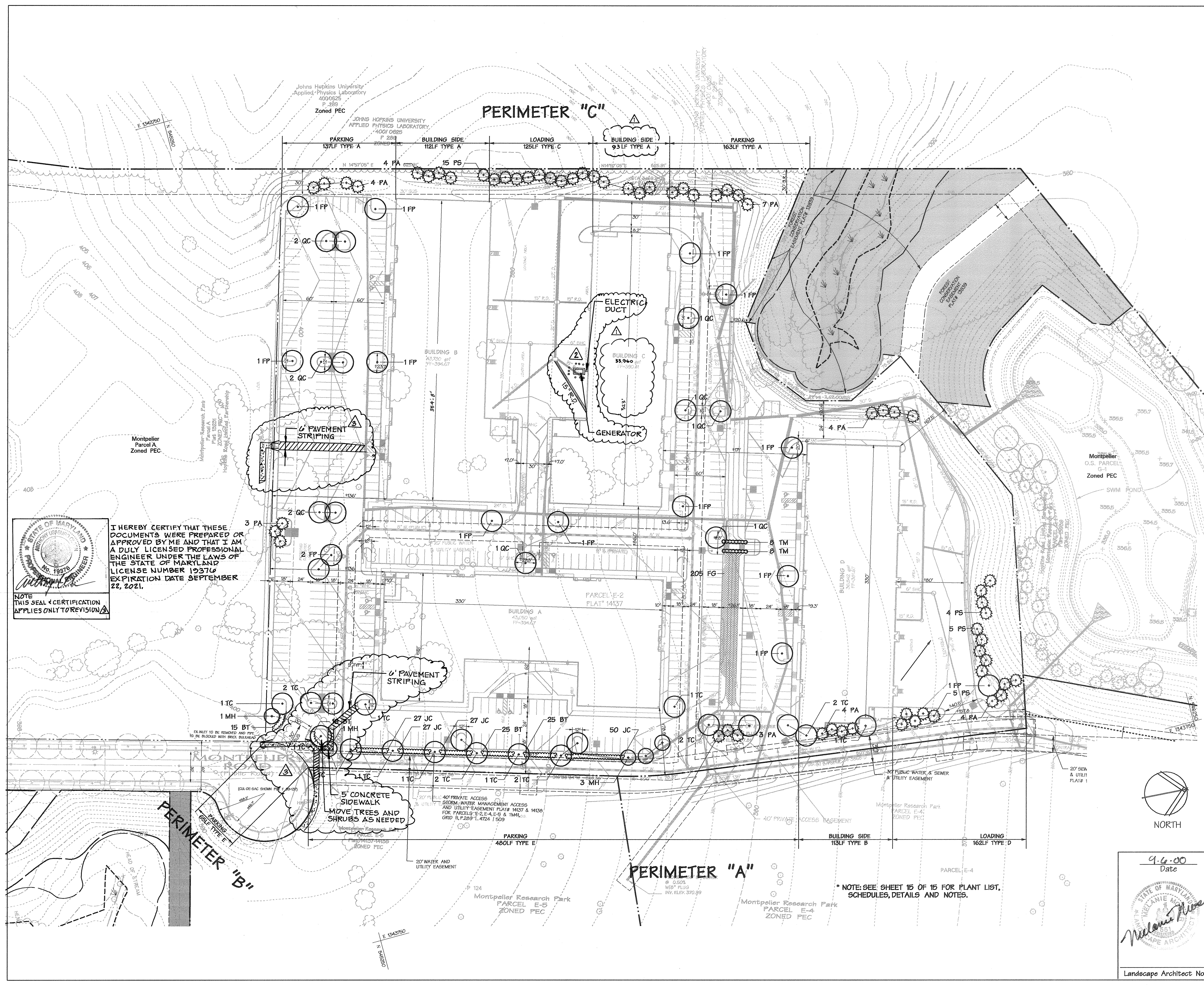
SUBDIVISION NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT #	BLOCK #	TRACT #
14327	17	6051.02
WATER CODE	SEWER CODE	
E21	6440000	

TITLE: **SEDIMENT & EROSION CONTROL DETAILS**

Des By:	Scale: AS NOTED	Proj. No. 94171.12
Drn By: CSC	Date: 7-27-00	11 OF 16
Chk By:	Approved:	

LEGEND

- SYMBOL DESCRIPTION
- PROPERTY LINE
- ~ STREAM
- SOILS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- WETLAND/STREAM BUFFER
- WETLAND
- EXISTING TREES/TREE LINE
- FLOODPLAIN
- 79.3+ SPOT ELEVATION
- FLOW ARROW
- GUARDRAIL
- DOUBLE HEAD LIGHT POLE
- SINGLE HEAD LIGHT POLE



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 19376 EXPIRATION DATE: SEPTEMBER 22, 2019

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 19376 EXPIRATION DATE SEPTEMBER 22, 2021.

NOTE: THIS SEAL & CERTIFICATION APPLIES ONLY TO REVISION 2.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

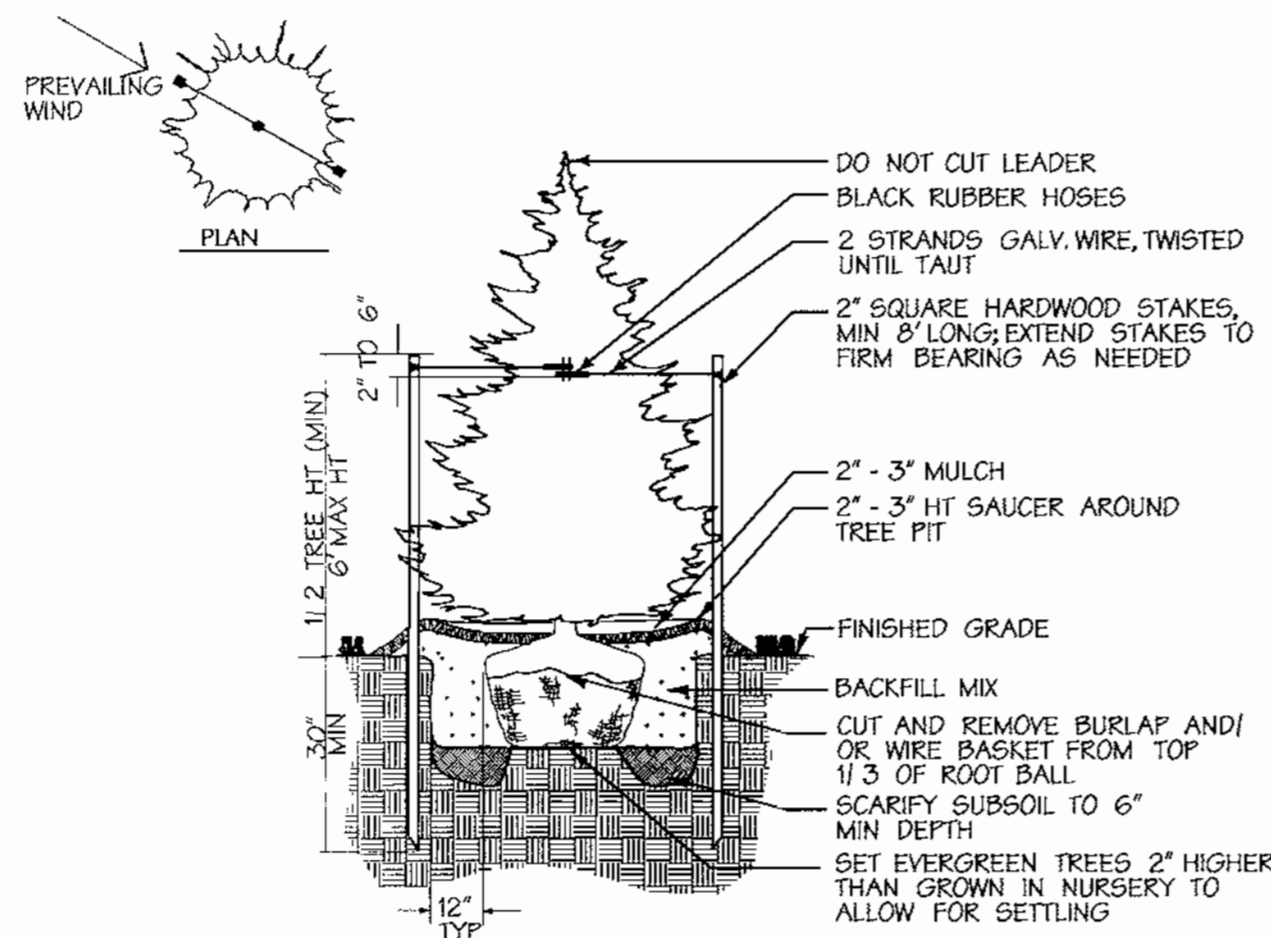
<i>David Williams</i>	9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chris Hampton</i>	9/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Angus Keith</i>	9/29/00
RECORDER	DATE

10-23-00	1	REV. PERIMETER 'C' INFO.
2/19/19	2	ADDED GENERATOR & ELECTRIC DUCT
9/27/19	3	ADDED SIDEWALK & STRIPING

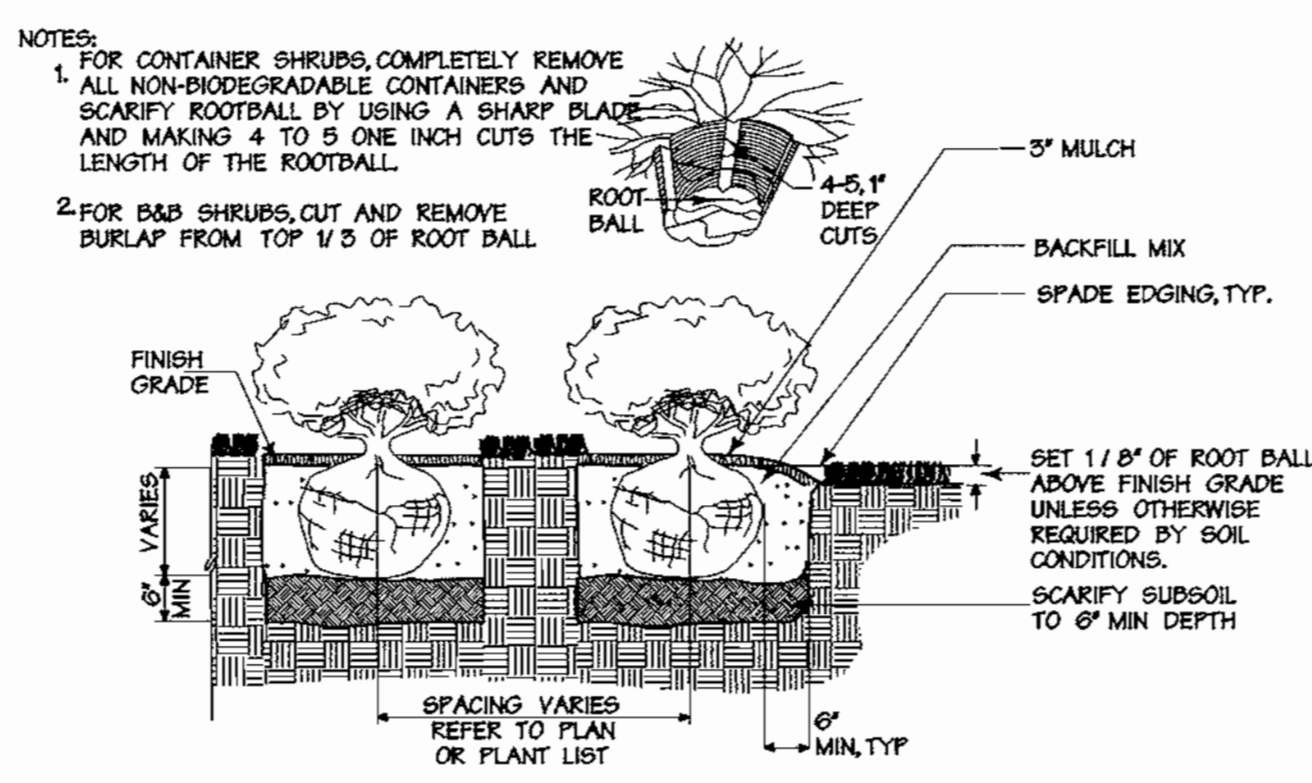
Date	No.	Revision Description
Montpelier Research Park		
PARCEL E-2		
HOWARD COUNTY MARYLAND		
OWNER / DEVELOPER: TRAMWELL GROW COMPANY 630 DEMOCRACY BLVD., SUITE 410 BETHESDA, MD 20817		
DMW Darr - McCune - Walker, Inc. A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals		
200 East Pennsylvania Avenue Towson, Maryland 21286 410 296 3333 Fax 296 4705		
SUBDIVISION NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT #	BLOCK #	ZONING MAP
14137	17	PEC
WATER CODE	E21	SEWER CODE
		6440000
TITLE		
LANDSCAPE PLAN		
Des By:	Scale: 1"=50'	Proj. No. 94171.T2
Drn By: BKC	Date: 8-30-00	13 OF 16
Chk By: MM	Approved:	

9.4.00 Date
William Moore
Landscape Architect

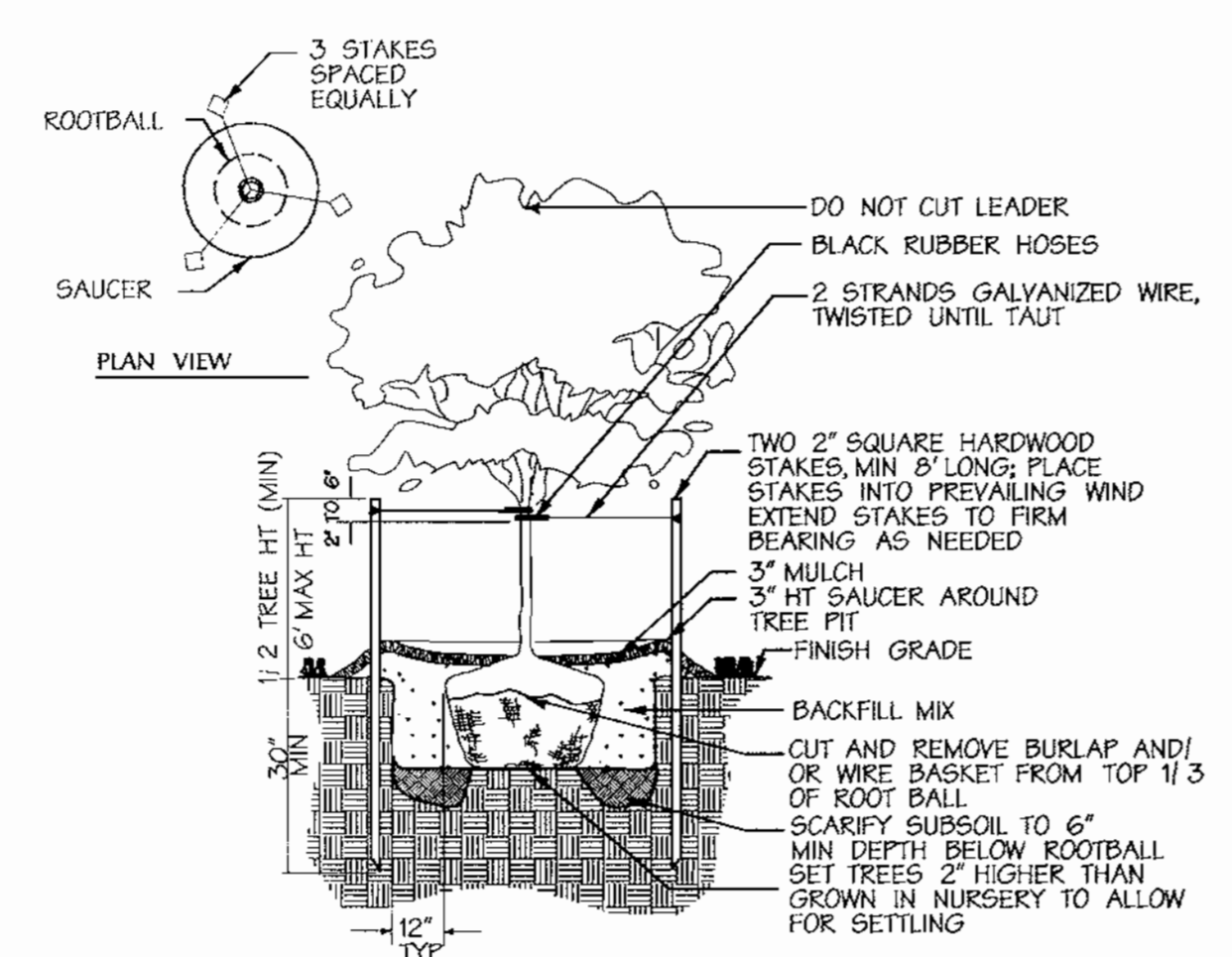
* NOTE: SEE SHEET 15 OF 15 FOR PLANT LIST, SCHEDULES, DETAILS AND NOTES.



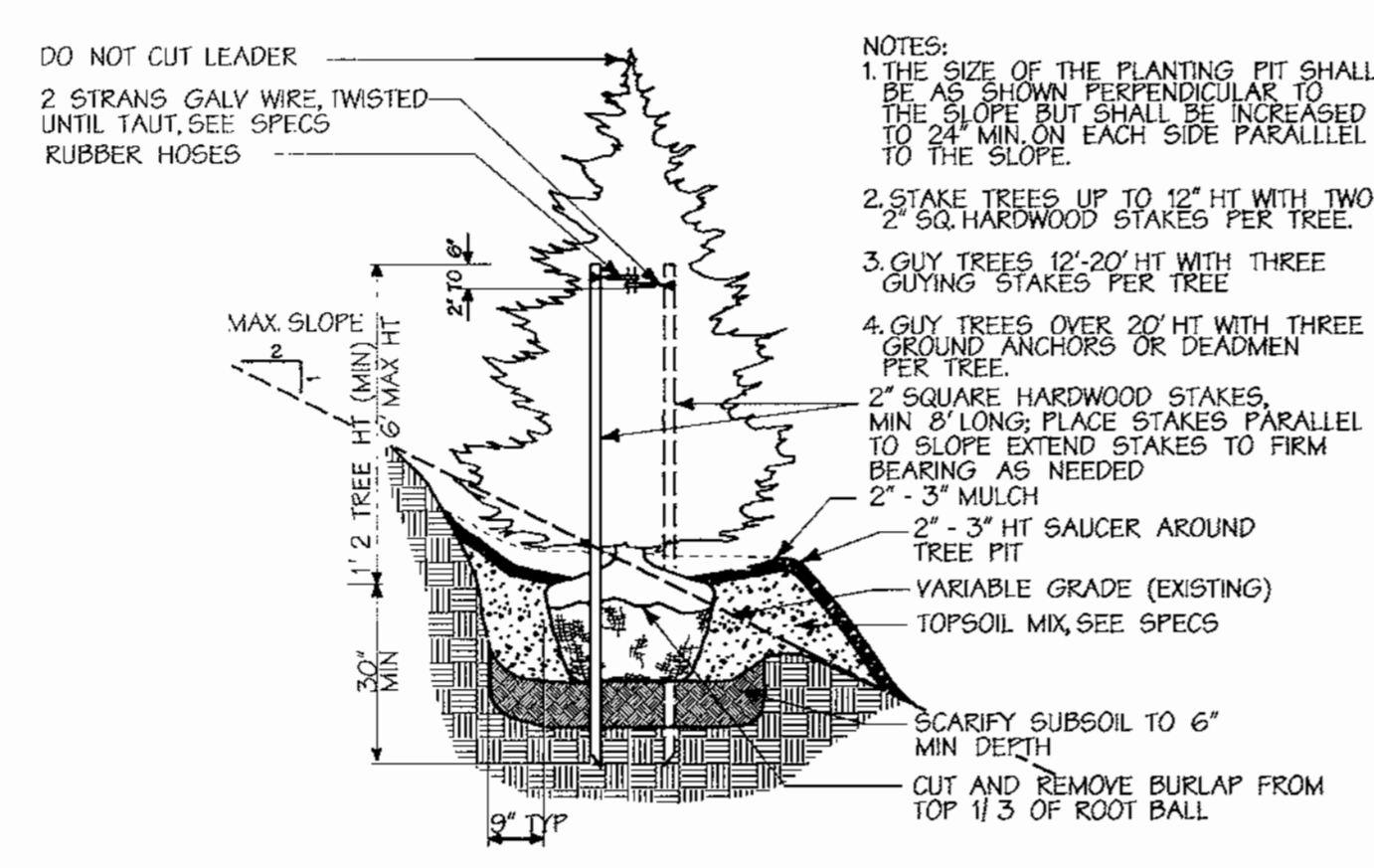
A Evergreen Tree Planting
Not To Scale



A Shrub Bed Planting
Not To Scale



B Less Than 3" Cal. Tree Planting
Not To Scale



C Evergreen Tree Planting on Slope
Not To Scale

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	LANDSCAPE CALCULATIONS
LINEAR FEET OF ROADWAY	PERIMETER A 40' LF. OF LANDSCAPE TYPE 'E'		1 SHADE TREE @ 40' LF = 12 SHADE TREE 1 SHRUB @ 4' LF = 120 SHRUB
	PERIMETER A 10' LF. OF LANDSCAPE TYPE 'D'		1 SHADE TREE @ 50' LF = 2 SHADE TREE 1 EVERGREEN @ 40' LF = 5 EVERGREEN
	PERIMETER A 162' LF. OF LANDSCAPE TYPE 'D'		1 SHADE TREE @ 60' LF = 3 SHADE TREE 1 EVERGREEN @ 10' LF = 16 EVERGREEN
	PERIMETER B 60' LF. OF LANDSCAPE TYPE 'E'		1 SHADE TREE @ 40' LF = 2 SHADE TREE 1 SHRUB @ 4' LF = 16 SHRUB
FRONTAGE / PERIMETER		PERIMETER C 502' LF. OF LANDSCAPE TYPE 'A'	1 SHADE TREE @ 60' LF = 9 SHADE TREES
		PERIMETER C 120' LF. OF LANDSCAPE TYPE 'C'	1 SHADE TREE @ 40' LF = 3 SHADE TREES 1 EVERGREEN @ 20' LF = 6 EVERGREENS
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)			NO
CREDIT FOR DEMO (DESCRIBE BELOW IF NEEDED)			NO
NUMBER OF PLANTS REQUIRED			
SHADE TREES			31
EVERGREEN TREES			25
SHRUBS			156
NUMBER OF PLANTS PROVIDED			
SHADE TREES			16
EVERGREEN TREES			59
OTHER TREES (2:1 SUBSTITUTION)			5
SHRUBS (10:1 SUBSTITUTION)			250
CREDITS BELOW IF NEEDED			

* SUBSTITUTIONS: 30 EVERGREEN TREES HAVE BEEN SUBSTITUTED FOR 15 SHADE TREES

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	510
Number of Trees Required	1220 ap. = 26
Number of Trees Provided	26
Shade Trees	
Other Trees (2:1 substitution)	
Number of Islands Required @ 1/20 ap.	26
Number of Islands Provided	29

Donating Amount: 57 shade trees @ \$300
25 evergreen trees @ \$50
156 shrubs @ \$50
Total: \$24,850

Landscape Notes

- The contractor shall review architectural/engineering plans to become thoroughly familiar with grading and surface utilities.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow. See Seasonal Plant List for planting times of bulbs and seasonal plants.
- The contractor shall coordinate with lighting and irrigation contractors regarding timing of installation of plant material.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. All discrepancies shall be reported to the landscape architect for clarification prior to bidding. The contractor shall furnish plant material in sizes as specified in plant list.
- The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball, and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- No substitutions shall be made without written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials.

- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting bed lines are not to be obstructed. Mulch shall have been shredded within the last six months.
- All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf, watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees shall be guaranteed for 12 months from the date of acceptance.
- The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soil conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, fertilizers, lime, and topsoil. Proper planting soils must be verified prior to planting of materials.
- PLANTING MIX:
 - Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
 - Thoroughly mixed in the following proportions for tree and shrub planting mix:
 - 5 cy existing soil
 - 2 cy sharp sand
 - 3 cy wood residuals
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
 - For bed planting shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 sf and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation:
 - 2 cy sharp sand
 - 3 cy organic material
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds and planters.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.

Plant List

QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
SHADE TREES				
15	FP	FRAXINUS PENNSYLVANICA 'MARSHALL'S SEEDLESS' GREEN ASH	2 1/2" - 3" CAL 12-14' HT	B & B FULL HEAD
11	QC	QUERCUS COCCINEA SCARLET OAK	2 1/2" - 3" CAL 12-14' HT	B & B FULL HEAD
19	TC	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LINDEN	2 1/2" - 3" CAL 12-14' HT	B & B FULL HEAD
FLOWERING TREES				
5	MH	MALUS 'HARGOZAM' HARVEST GOLD CRABAPPLE	8-10' HT.	B & B LIMBED UP 5'
EVERGREEN TREES				
33	PA	PICEA ABIES NORWAY SPRUCE	6'-8' HT.	B & B UNSHEARED
29	PS	PINUS STROBUS WHITE PINE	6'-8' HT.	B & B UNSHEARED
SHRUBS				
84	BT	BERBERIS THUNBERGII 'CRIMSON PYGMY' CRIMSON PYGMY BARBERY	18-24" SPD	CONT 3' OC
205	FG	FORSYTHIA 'GOLD TIDE' GOLD TIDE FORSYTHIA	18-24" SPD	CONT 4' OC
131	JC	JUNIPERUS CHINENSIS 'SAN JOSE' SAN JOSE JUNIPER	18-24" SPD	CONT 3' OC
16	TM	TAXUS X MEDIA 'WARDII' SPREADING YEW	18-24" HT	B&B 4' OC

NOTE: FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$24,980
THIS PROJECT COMPLIES WITH REQUIREMENTS OF SECTION 16.120 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION PER SDP 98-11 AND F 98-45

DEVELOPER'S / BUILDER'S CERTIFICATE
THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES & WALLS. ALL PLANT MATERIAL SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS, ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
James L. Hudson
NAME: DANIEL S. HUDSON, ENV, TC MIDATLANTIC, INC. DATE: 8/1/00

9.6.00
Date
Landscape Architect No. 051

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
William J. ... 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Condy Hamilton 9/28/00
CHIEF, DIVISION OF LAND DEVELOPMENT
James L. Hudson 9/28/00
DIRECTOR

Date: No. Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DEVELOPER: FRANKMILL CROW COMPANY
2000 RED BRANCH ROAD, SUITE 200 COLUMBIA, MD 21046
6701 GORDONWAY BLVD., SUITE 400 BETHESDA, MD 20817

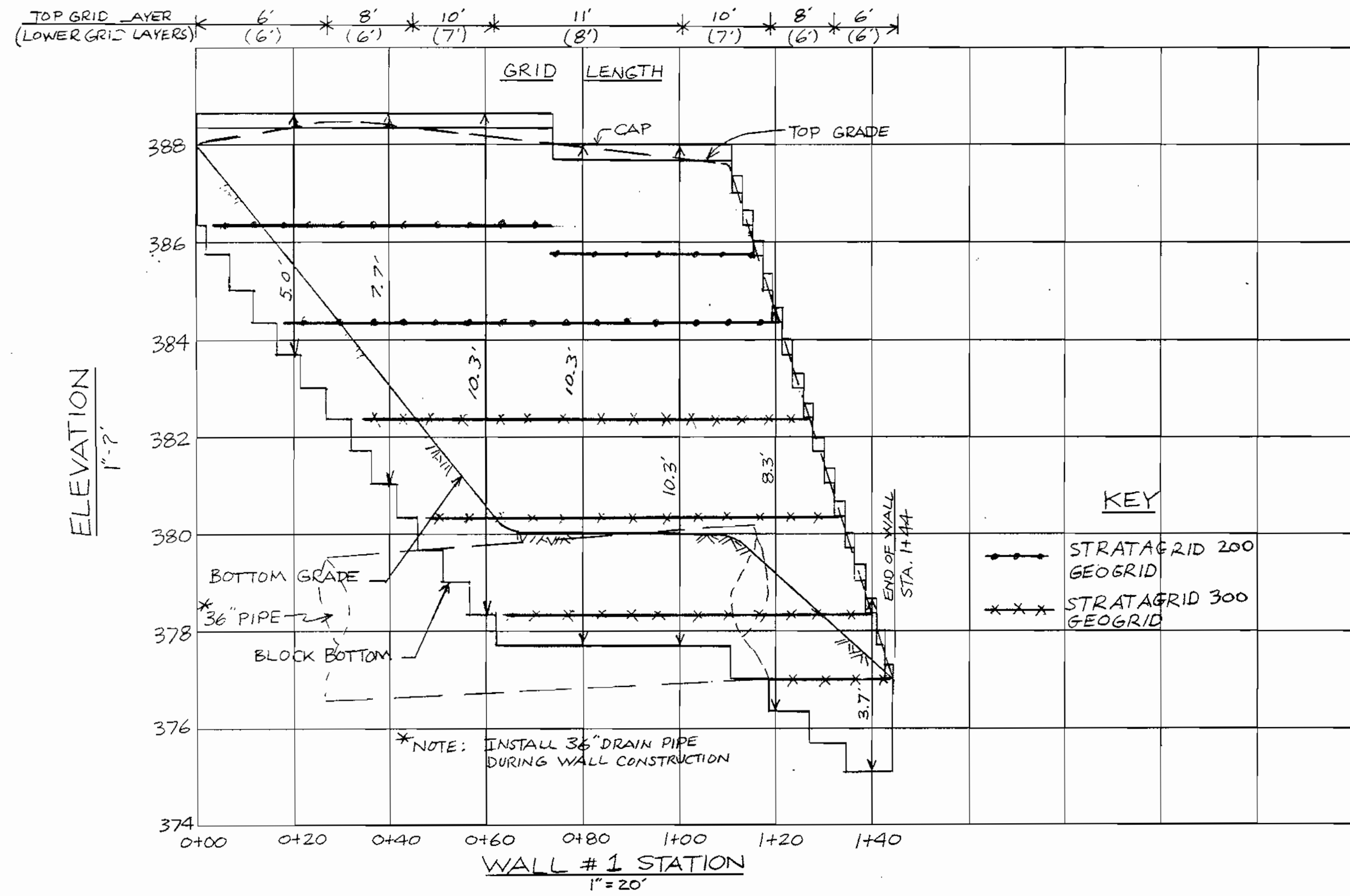
DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME	REVISION AREA	PHASE #	PARCEL E-2
Montpelier Research Park	NA		
PLAN 14157	BLOCK # 17	ZONING MAP 41	PLAT DISTRICT 5th
WATER CODE E21	SEWER CODE 6440000		

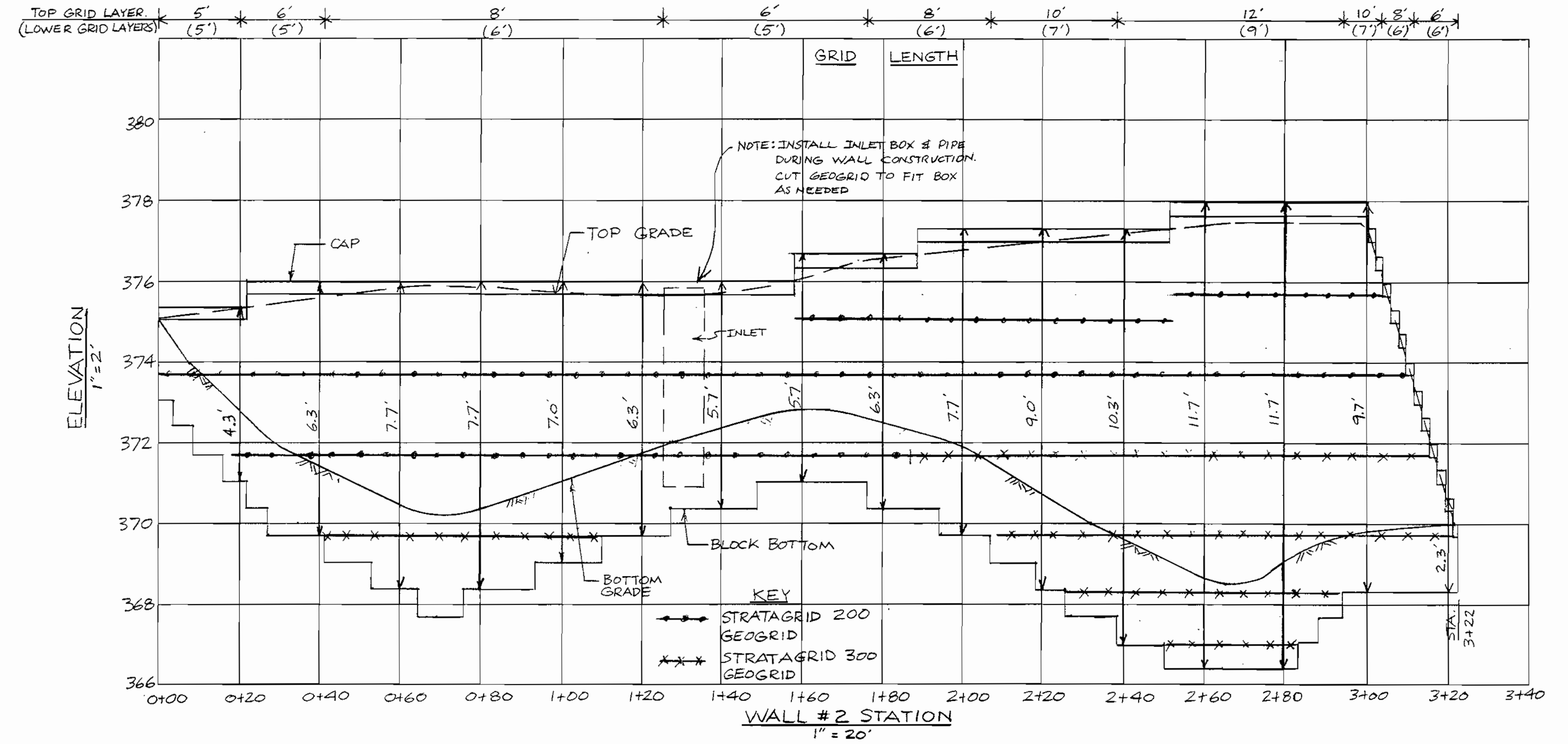
TITLE: **Landscape Notes & Details**

Des By: BKC	Scale: 1"=50'	Proj. No. 94171.12
Dwn By: BKC	Date: 7-27-00	
Chk By: MM	Approved:	

14 OF 16
SDP-00-112



WALL #1 PROFILE



WALL #2 PROFILE

SUBDIVISION NAME MONTPELIER RESEARCH PARK			SECTION AREA NA	PARCEL # PARCEL E-2
PLAT # 1A187	BLOCK # 17	ZONE PEC	TAX MAP # 41	SECTION DISTRICT 5th HOWARD COUNTY, MD
SCALE AS SHOWN		DATE 8-9-99	SHEET # 15 OF 16	

OWNER/DEVELOPER
TRAMMELL CROW COMPANY
6701 DEMOCRACY BLVD, SUITE 410
BETHESDA, MD 20817

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 9/19/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 9/25/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 9/23/00
 DIRECTOR DATE



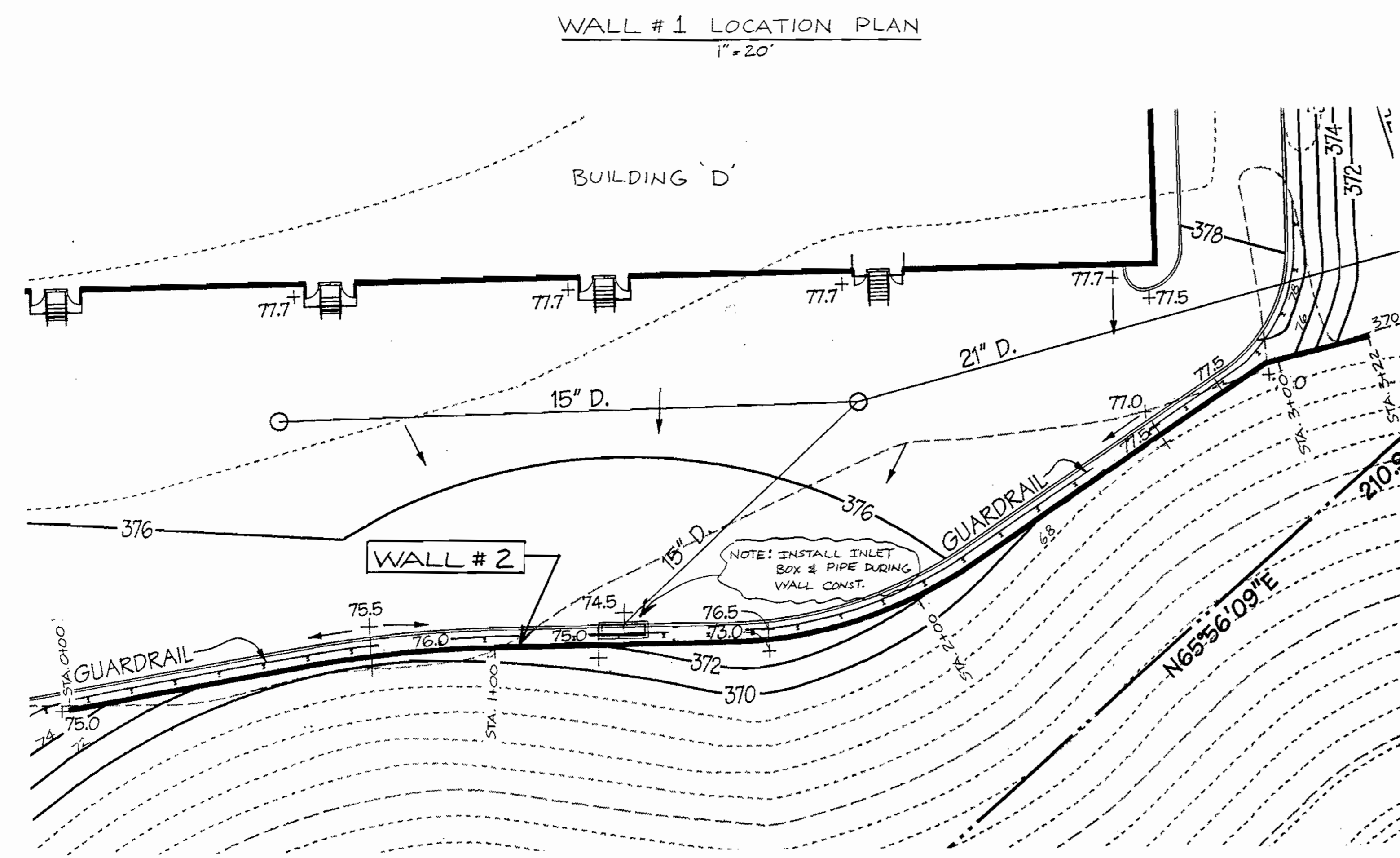
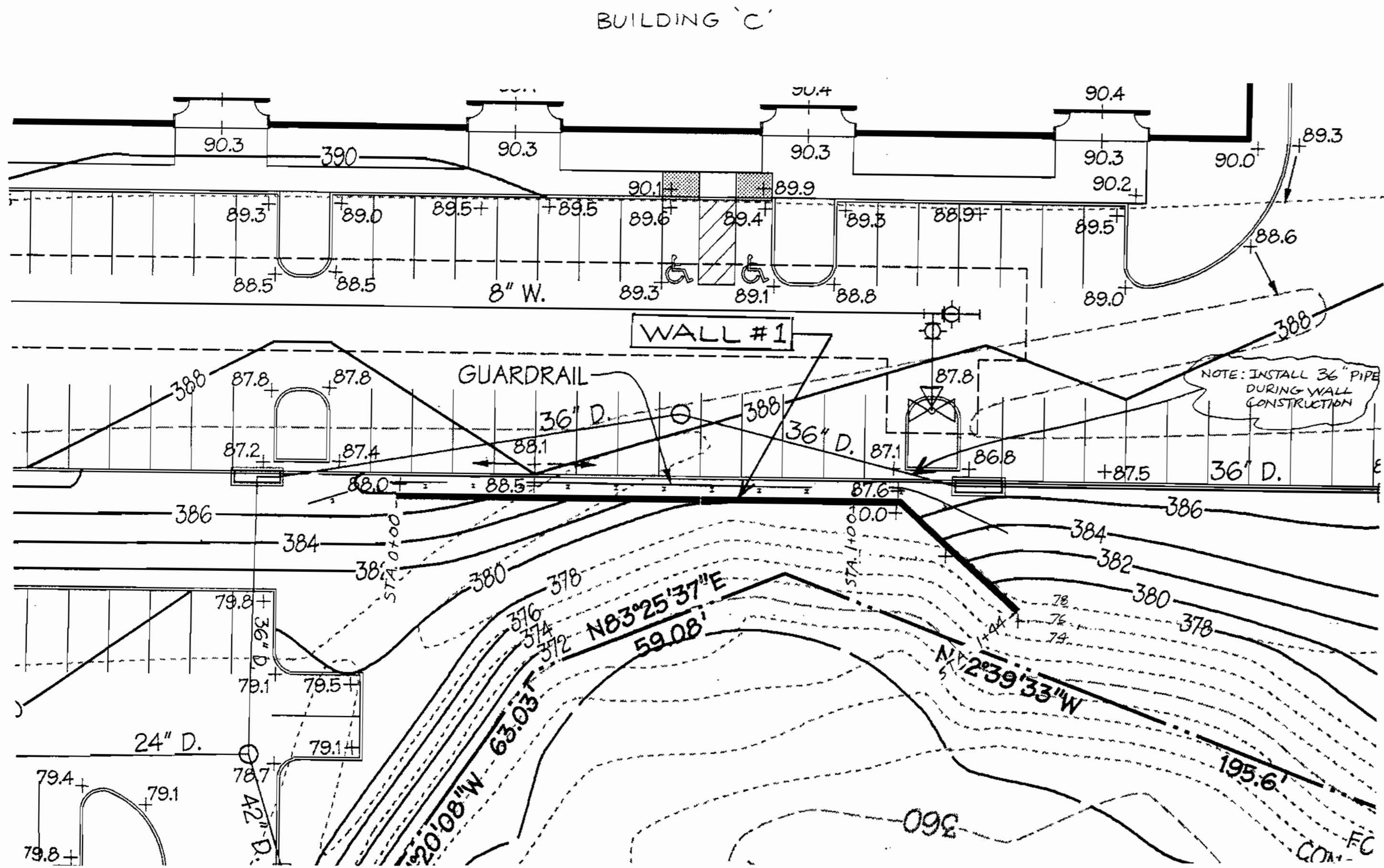
HILLIS-CARNES
ENGINEERING ASSOCIATES, INC.

12011 Guilford Road - Suite 106 Annapolis Junction, Maryland
(410) 880-4733 Fax: (410) 880-4098

FILE NUMBER:
JOB NUMBER: 98036-A
SCALE: AS SHOWN
PAGE 15 OF 16

REVISED DATE:
DRAWN BY: RWS
APPROVED BY: RMH
DATE: 8/9/99

RETAINING WALL CONSTRUCTION DETAILS
MONTPELIER RESEARCH PARK HOWARD COUNTY, MD. Sheet 15
SDP-00-112

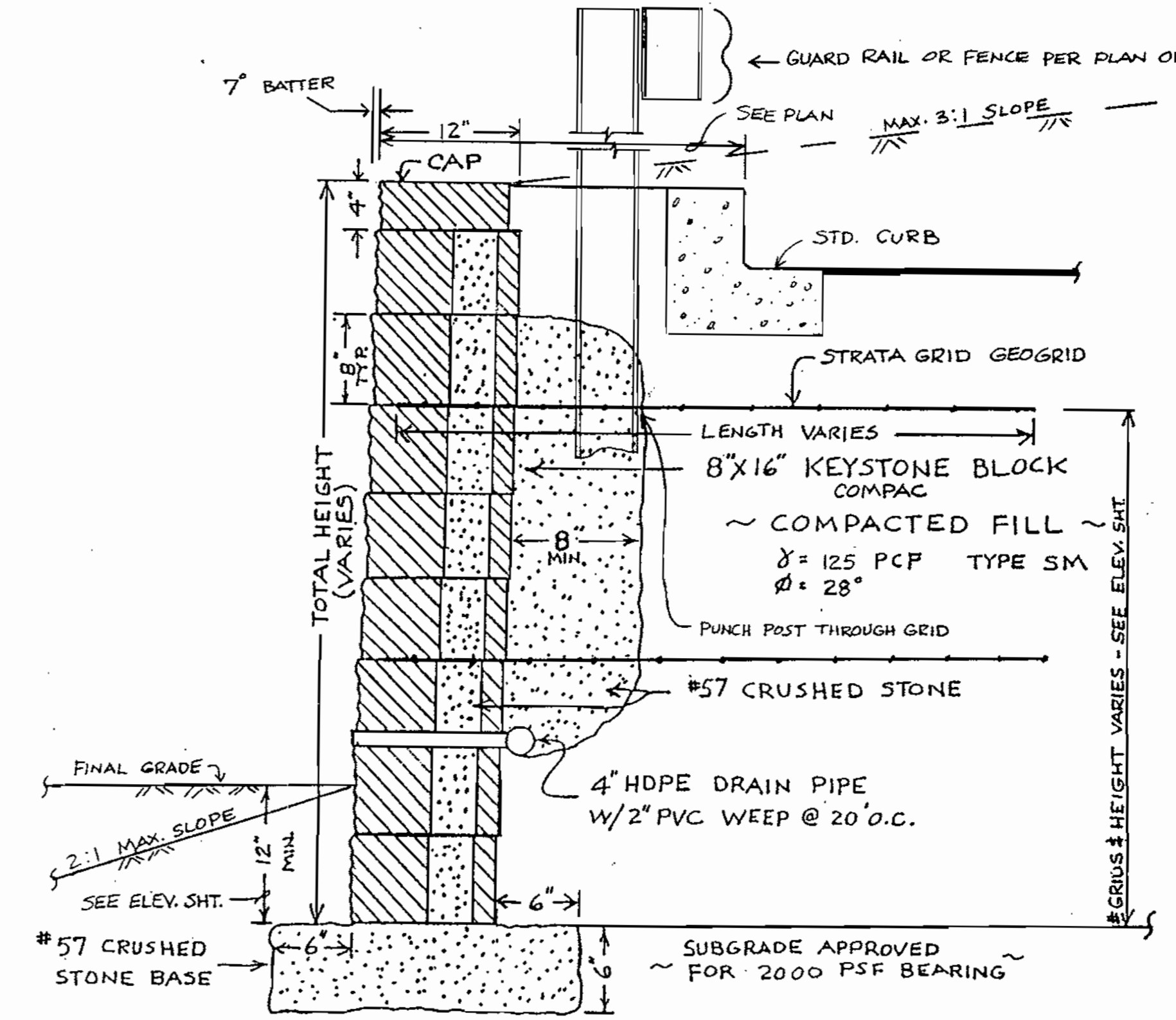


SPECIFICATION GUIDELINES
KEYSTONE CONCRETE MODULAR RETAINING WALL

- PART 1: GENERAL**
- 1.01 DESCRIPTION**
- A. Work includes furnishing and installing modular block retaining wall units to the lines and grades designated on the construction drawings and as specified herein.
- B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit fill and backfill to the lines and grades designated on the construction drawings.
- C. Furnishing and installing all appurtenant materials required for construction of the retaining wall as shown on the construction drawings.
- 1.02 RELATED WORK**
- A. Section 02275 - Geogrid Soil Reinforcement.
- 1.03 REFERENCE STANDARDS**
- A. ASTM C90 - 85 Hollow Load Bearing Masonry Units.
- B. ASTM C140 - 75 Sampling and Testing Concrete Masonry Units.
- C. ASTM C145 - 85 Solid Load Bearing Concrete Masonry Units.
- 1.04 DELIVERY, STORAGE AND HANDLING**
- A. Contractor shall check the materials upon delivery to assure that proper material has been received.
- B. Contractor shall prevent excessive mud, wet cement, epoxy, and like materials which may affix themselves, from coming in contact with the materials.
- C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated into the retaining wall structure.
- 1.05 SUBMITTALS**
- A. Samples of all products used in the work of this section.
- B. Latest edition of manufacturers specifications for proposed materials, method of installation and list of material proposed for use.
- 1.08 QUALITY ASSURANCE**
- A. Soil testing and inspection service for quality control testing during earthwork operations will be supplied by the owner.
- PART 2: PRODUCTS**
- 2.01 CONCRETE UNITS**
- A. Masonry units shall be Keystone® Retaining Wall Units as manufactured by:
- B. Concrete wall units shall have a minimum net 28 day compressive strength of 3000 psi. The concrete shall have a maximum moisture absorption of 6 to 8 lbs/ft³.
- C. Exterior dimensions may vary in accordance with ASTM C90 - 85. Standard and Compac units shall have a minimum of 1 square foot face area each. Mini units shall have a minimum 1/2 square foot face area each.
- D. Keystone Standard units shall provide a minimum of 150 psf of wall face area. Fill which is contained within the dimensions of the units may be considered as 80% effective weight.
- PART 3: EXECUTION**
- 3.01 EXCAVATION**
- A. Contractor shall excavate to the lines and grades shown on the construction drawings. Over excavation shall not be paid for and replacement with compacted fill and/or wall system components will be required at contractor expense. Contractor shall be careful not to disturb embankment materials beyond lines shown.
- 3.02 FOUNDATION SOIL PREPARATION**
- A. Foundation soil shall be excavated as required for footing dimensions shown on the construction drawings, or as directed by the Engineer.
- B. Foundation soil shall be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength. Soils not meeting required design strength shall be removed and replaced with acceptable material.
- C. Over-excavated areas shall be filled with approved compacted backfill material.
- 3.03 BASE LEVELING PAD**
- A. Leveling pad materials shall be placed as shown on the construction drawings, upon undisturbed in situ soils, to a minimum thickness of 6 inches.
- B. Material shall be compacted so as to provide a level hard surface on which to place the first course of units. Compaction shall be to 95% of standard proctor for sand or gravel type materials. For crushed rock, material shall be densely compacted.
- 3.04 UNIT INSTALLATION**
- A. First course of concrete wall units shall be placed on the base leveling pad. The units shall be checked for level and alignment. The first course is the most important to insure accurate and acceptable results.
- B. Issue that units are in full contact with base.
- C. Units are placed side by side for full length of wall alignment. Alignment may be done by means of a string line or offset from base line.
- D. Install fiberglass connecting pins and fill all voids at units with unit fill material. Tamp fill.
- E. Sweep all excess material from top of units and level each course. Insure each course is completely unit filled, backfilled and compacted prior to proceeding to next course.
- F. Lay up each course insuring that pins protrude into adjoining courses above a minimum of one inch. Two pins are required per unit. Pull each unit forward, away from the embankment, against pins in the previous course and backfill as the course is completed. Repeat procedure to the extent of wall height.
- G. As appropriate where the wall changes elevation, units can be stepped with grade or turned into the embankment with a convex return end. Provide appropriate buried units on compacted leveling pad in area of convex return end.
- 3.05 CAP INSTALLATION**
- A. Place Keystone Cap units over projecting pins from units below. Pull forward to set back position. Back fill and compact to finished grade.
- B. As required, provide permanent mechanical connection to wall units with construction adhesive or epoxy. Apply adhesive or epoxy to bottom surface of cap units and install on units below.
- 3.06 GEOGRID INSTALLATION**
- A. Follow the requirements of Section 02275, GEOGRID SOIL REINFORCEMENT.

GEOGRID SOIL REINFORCEMENT

- PART 1: GENERAL**
- 1.01 DESCRIPTION**
- A. Work includes furnishing and installing geogrid reinforcement, wall fill, and backfill to the lines and grades designated on the construction drawings.
- B. Work includes furnishing and installing all appurtenant materials required for construction of the geogrid reinforced soil retaining wall as shown on the construction drawings.
- 1.02 RELATED WORK**
- A. Section 02275 - KEYSTONE CONCRETE MODULAR RETAINING WALL.
- 1.03 REFERENCE STANDARDS**
- A. See specific geogrid manufacturers reference standards.
- 1.04 DELIVERY, STORAGE AND HANDLING**
- A. Contractor shall check the geogrid upon delivery to assure that the proper material has been received.
- B. Geogrids shall be stored above +20°F.
- C. Contractor shall prevent excessive mud, wet cement, epoxy and like materials which may affix themselves to the geogrid, from coming in contact with the geogrid material.
- D. Rolled geogrid material may be laid flat or stood on end for storage.
- 1.05 SUBMITTALS**
- A. Samples of all products used in the work of this section.
- B. Latest edition of manufacturers specifications for proposed materials, method of installation and list of material proposed for use.
- 1.08 QUALITY ASSURANCE**
- A. Soil testing and inspection services for quality control testing during earthwork operation will be supplied by the owner.
- PART 2: PRODUCTS**
- 2.01 DEFINITIONS**
- A. Geogrid products shall be high density polyethylene expanded sheet or polyester woven fiber materials, specifically fabricated for use as soil reinforcement.
- B. Concrete retaining wall units are as detailed on the drawings and are specified under Section 02275 - KEYSTONE CONCRETE MODULAR RETAINING WALL.
- C. Wall fill is a free draining granular material shall be allowed within 3 feet of the back surface of the Keystone units.
- D. Backfill is the soil which is used as fill for the reinforced soil mass.
- E. Foundation soil is the in situ soil.
- 2.02 GEOGRID**
- A. Geogrid shall be the type as shown on the drawings having the property requirements as described within the manufacturers specifications.
- 2.03 ACCEPTABLE MANUFACTURERS**
- A. A manufacturer's product shall be approved by the Engineer prior to bid opening.
- PART 3: EXECUTION**
- 3.01 FOUNDATION SOIL PREPARATION**
- A. Foundation soil shall be excavated to the lines and grades as shown on the construction drawings or as directed by the Engineer.
- B. Foundation soil shall be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength.
- C. Over-excavated areas shall be filled with approved compacted backfill material.
- 3.02 WALL ERECTION**
- A. Wall erection shall be as specified under Section 02275 - KEYSTONE CONCRETE MODULAR RETAINING WALL.
- 3.03 GEOGRID INSTALLATION**
- A. The geogrid soil reinforcement shall be laid horizontally on compacted backfill. Connect to the concrete wall units by hooking geogrid over fiberglass pins. Pull taut, and anchor before backfill is placed on the geogrid.
- B. Slack in the geogrid at the wall unit connections shall be removed.
- C. Geogrid shall be laid at the proper elevation and orientation as shown on the construction drawings or as directed by the Engineer.
- D. Correct orientation (roll direction) of the geogrid shall be verified by the contractor.
- E. To pretension geogrid, pull pinned geogrid taut to eliminate loose folds. Stake or secure back edge of geogrid prior to and during backfill and compaction.
- F. Follow manufacturers guidelines relative to overlap requirements of uniaxial and biaxial geogrids.
- 3.04 FILL PLACEMENT**
- A. Backfill material shall be placed in 8 inch lifts and compacted to 95% of Standard Proctor.
- B. Backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack or loss of pretension of the geogrid.
- C. Only hand-operated compaction equipment shall be allowed within 3 feet of the back surface of the Keystone units.
- D. Backfill shall be placed from the wall rearward into the embankment to insure that the geogrid remains taut.
- E. Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 8 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
- F. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.



DEVELOPER:
 TRANHILL CROW COMPANY
 0701 DEMOCRACY BLVD, SUITE 100
 GETHESDA, MD 20878

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chief Development Engineering Division: *[Signature]* 9/19/00
 Chief Division of Land Development: *[Signature]* 9/25/00
 Director: *[Signature]* 9/29/00

TYPICAL WALL PROFILE
N.T.S.

SECTION NAME: MONTPELIER RESEARCH PARK	SECTION AREA: NA	PARTIAL #:	PARTIAL E-2
PLAN #:	BLOCK #:	ZONE:	TAX/ZONE MAP:
14197	17	PEC	41
SHEET #:	AS SHOWN:	DATE:	SHEET #:
16 OF 16	8-9-99		16 OF 16



HILLIS-CARNES ENGINEERING ASSOCIATES, INC.
 12011 Guilford Road - Suite 136
 Annapolis Junction, Maryland
 (410) 880-4755 Fax: (410) 880-4098

FILE NUMBER: 98036-A
 JOB NUMBER: 98036-A
 SCALE: AS SHOWN
 PAGE 16 OF 16

REVISED DATE:
 DRAWN BY: RWS
 APPROVED BY: RMH
 DATE: 8/9/99

RETAINING WALL CONSTRUCTION DETAILS
MONTPELIER RESEARCH PARK
HOWARD COUNTY, MD. Sheet 16
 SDP-00-112

SHEET INDEX

SHT.	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	GRADING PLAN
4	GRADING PLAN
5	DRAINAGE AREA MAP
6	STORM DRAIN PROFILES
7	STORM DRAIN PROFILES
8	WATER AND SEWER PROFILES
9	EROSION & SEDIMENT CONTROL PLAN
10	EROSION & SEDIMENT CONTROL DETAILS
11	EROSION & SEDIMENT CONTROL DETAILS
12	SITE DETAILS
13	LANDSCAPE & LIGHTING PLAN
14	LANDSCAPE PLAN DETAILS
15	RETAINING WALL CONSTRUCTION DETAILS
16	RETAINING WALL CONSTRUCTION DETAILS

ADDRESS CHART

Bldg.	Street Address
A	7701 MONTEPELIER ROAD
B	7703 MONTEPELIER ROAD
C	7705 MONTEPELIER ROAD
D	7707 MONTEPELIER ROAD

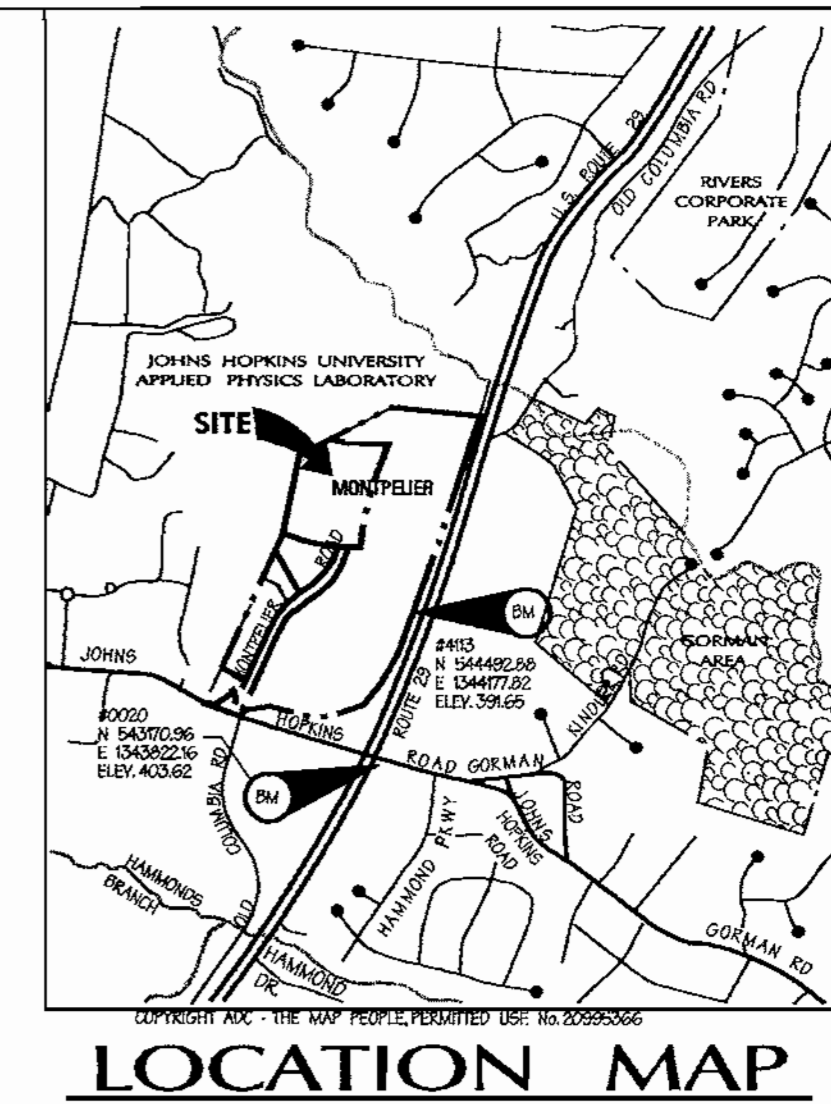
SITE DEVELOPMENT PLAN

for

MONTEPELIER RESEARCH PARK

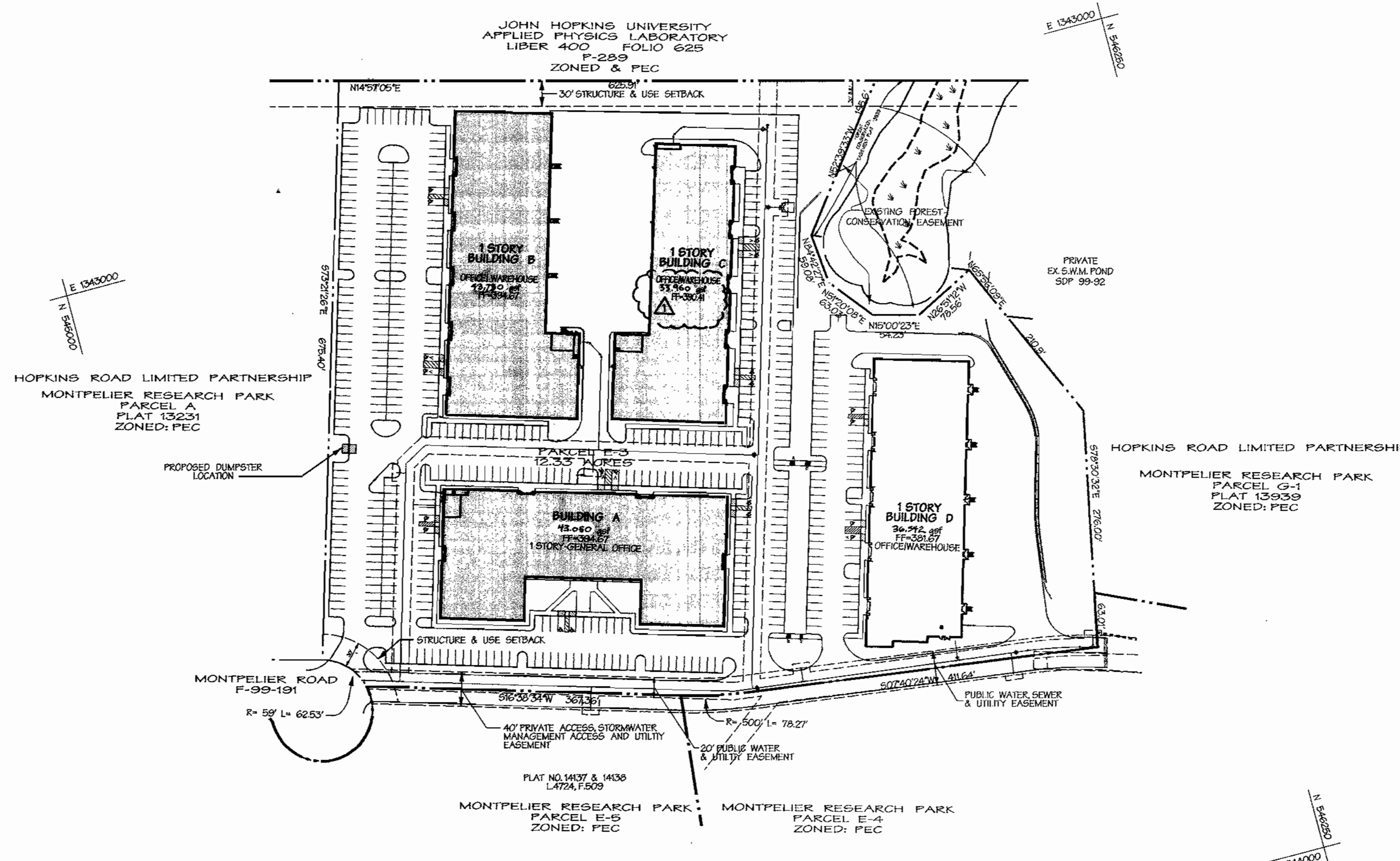
PARCEL E-2

At Montpelier Research Park, Howard County, Maryland



GENERAL NOTES

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are based solely on available records. Contractor shall verify the location of any utilities which may be impacted by the work. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1280 at least five (5) working days prior to the start of work.
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be repaired at the Contractor's expense.
- Topo taken from mass grading per SDP 99-92 by Darr McCune Walker, Inc.
- Public water and sewer provided by contract number 34-3654D and 30-3789-D.
- The subsurface exploration and geotechnical engineering analysis for this project was made by Hillis Carnes, Inc. on January 1997.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-190.
- Regional stormwater management and water quality are provided in a wetland pond system located on Parcel G1, approved per SDP 99-92.
- Forest Conservation requirements are provided per SDP 98-11, F98-45, SDP 99-92, F 99-191.
- There are no wetlands, floodplain, or streams on this site.
- Traffic Study by Lee Cunningham and Associates was previously approved for this use and square footage per F98-45, Date: December 1997.
- Operating existing valves, switches, services or start up of new services shall be coordinated with the owners representative.
- The buildings will be provided with a sprinkler system.
- Trench compaction for storm drains within the road or street right of way limits shall be in accordance with Howard County Design Manual IV, Std. No. G-2.01.
- Unless otherwise noted, dimensions from curb are measured at face of curb.
- Refer to architectural drawings for building dimensions.
- The Contractor shall coordinate the location of all water, sewer, and drain house connections with the mechanical drawings.
- The Contractor shall maintain 2.0 feet minimum cover over all utilities during construction.
- Unless otherwise noted, all utility connections shall be capped or plugged five feet from buildings.
- Electric, telephone, gas, cable, lighting, and retaining walls to be designed by others. Where those facilities are shown, they are for coordination purposes only.
- All Curb radii 5' unless otherwise noted.
- There are no known cemeteries or burial grounds on this site. However, upon discovery of any evidence of burial or graves, the developer will be subject to Section 16.1305 of the Howard County Subdivision and Land Develop Regulations.
- All exterior lighting fixtures shall be installed in compliance with Section 134 of the Zoning Regulations.
- Trash collection will be provided by private contractor.



OVERALL PROPERTY OUTLINE

Scale: 1"=100'



Side Elevation Buildings 'A' 'B' 'C' & 'D'

SCALE: NTS

SITE ANALYSIS DATA CHART

- General Site Data
 - Present Zoning: PEC
 - Applicable USE, FPA Regulations: F 98-45, SDP 98-11, BA 98-31, WF 97-21, PD 190, VP 89-64, WF 28-33, SD 202 & 78, FOP#1, SDP 88-197, SDP 88-88, MW 98-12, SDP 89-92, F 99-191, F-00-29
 - Proposed Use of Site or Structure(s): Office and Office Warehouse
 - Proposed Water: Public - X Proposed Sewer: Private - X
 - Water and Sewer contract number (34-3654D & 30-3789D)
- Area Tabulation
 - Total Project Area: 12.327 Acres
 - Net Area of Site: 12.327 Acres
 - Area of This Plan Submission: +/- 12.323 Acres
 - Limit of Disturbed Area: +/- 14 Acres
 - Building Coverage of Site: +/- 3.6 Acres and +/- 29 % of Gross Area (Proposed)
- Open Space Data: N/A
- Parking Space Data
 - Floor Space per floor of proposed use on site: 43,050 s.f. Office (Bldg. A), 14,959 s.f. Office/Warehouse (Bldgs. B, C & D)
 - Building 'A' floor: 1:43,050 s.f. Office
 - Building 'B' floor: 1:43,720 s.f. Office/Warehouse
 - Building 'C' floor: 1:33,650 s.f. Office/Warehouse
 - Building 'D' floor: 1:36,542 s.f. Office/Warehouse
- Number of Parking Spaces Required by Zoning Regulations: 428 (43,050 s.f. General Office @ 3.3/1000, 14,930 s.f. Office/Warehouse @ 2.5/1000)
- Total Number of Parking Spaces Provided On-Site: 510
- Number of Handicapped Parking Spaces Provided: 20 (2.5% of Total)

- Forest Conservation Summary
 - 14.4[±] Acres Afforestation/ Reforestation Required
 - 10.4[±] Acres Afforestation/ Reforestation Site Under SDP 98-11
 - 2.9[±] Acres Afforestation/ Reforestation on Site Under F-99-191
 - 1.2[±] Acres Fee In-Lieu (FILA)

BENCHMARK

Coordinates and bearing shown are referred to the system of coordinates established in the Maryland Coordinate System as projected by Howard County Geodetic Control Stations: NAD 83. Elevations shown hereon are referred to the North American Vertical Datum-NVD 29 and are based on the following Howard County Survey Control Stations: (Translated meters to feet.)

DESIGNATION	NORTH (sFT)	EAST (sFT)	Elevation (sFT)
4113	544492.88	1344177.82	391.65
0020	543170.96	1343822.16	403.62

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION 85 DATE

[Signature] 9/28/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

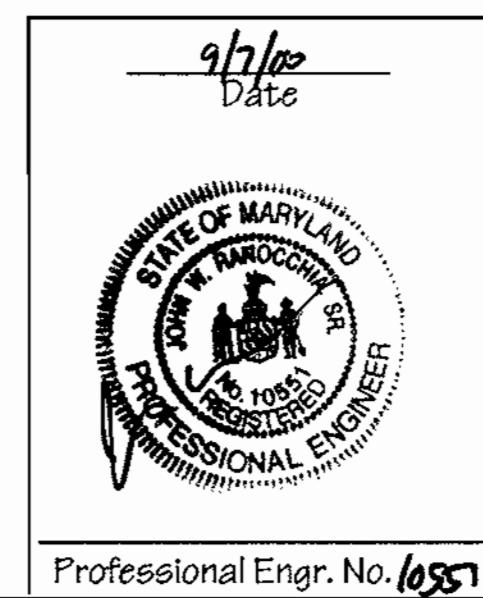
[Signature] 9/29/00
DIRECTOR DATE

Date	No.	Revision Description
10-13-00	1	REVISED SP BUILDING 1 AND PARKING DATA.

Montpelier Research Park

PARCEL E-2
HOWARD COUNTY MARYLAND

DMW
Darr McCune Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705



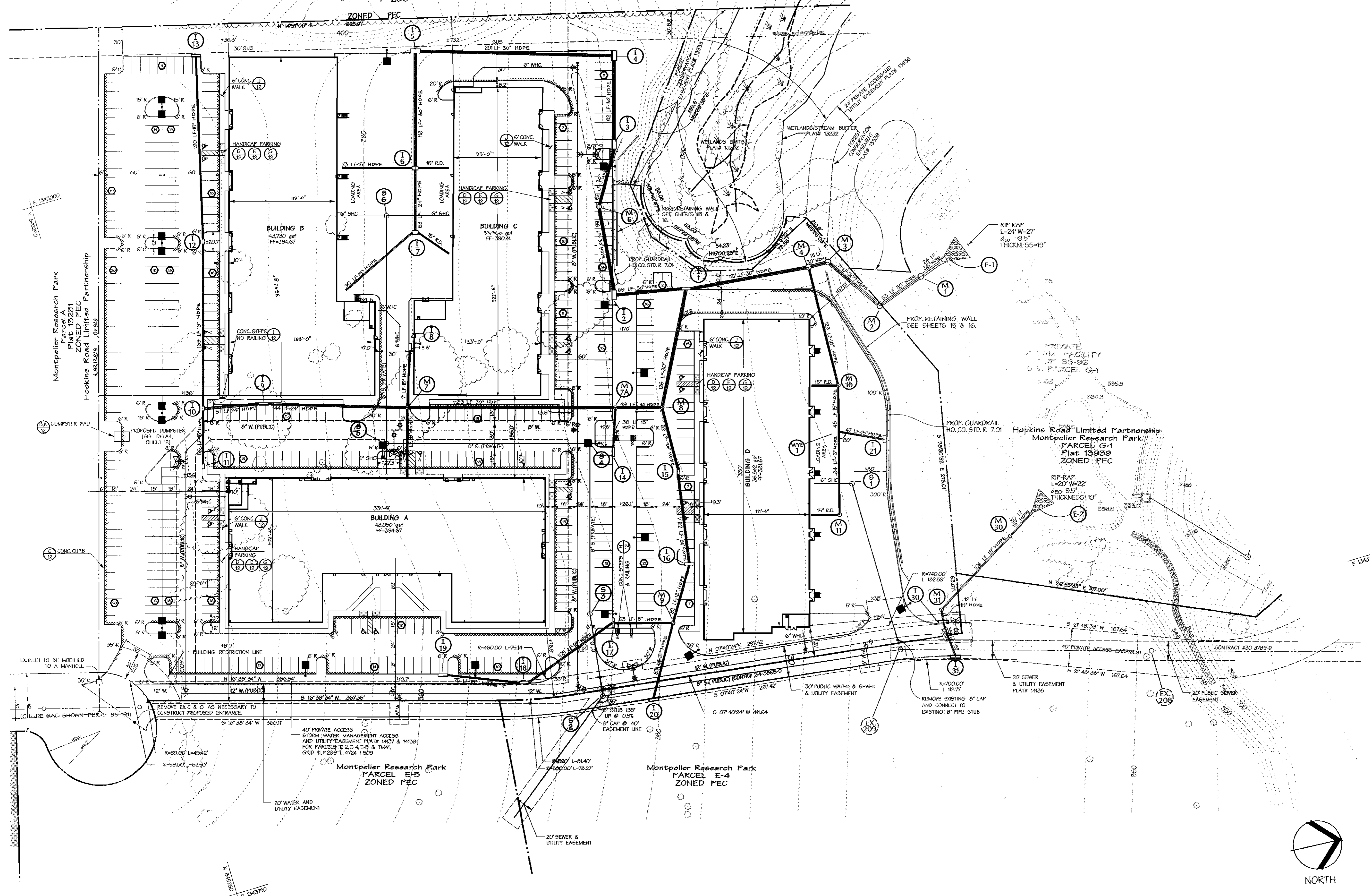
PROJECT NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT # 14137	ZONE # 41	ELECT. DIST. 50ft
WATER CODE E21	SEWER CODE 6440000	DENSUS TRACT 6051.02

COVER SHEET

Des By: CSC	Scale: 1"=100'	Proj. No. 94171.12
Drn By: CSC	Date: 8-30-00	1 OF 16
Approved: <i>[Signature]</i>		

Johne Hopkins University
Applied Physics Laboratory
400/0625
P 289

LEGEND	
SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
- - -	SOILS
...	EXISTING CONTOURS
...	PROPOSED CONTOURS
~	WETLAND/STREAM BUFFER
~	WETLAND
...	EXISTING TREES/TREE LINE
---	STRUCTURE & USE SETBACK
⊕	VAN HANDICAPPED PARKING
⊕	HANDICAPPED PARKING
⊕	PARKING COUNT
---	EXISTING STORMDRAIN
---	EXISTING SEWER
---	EXISTING WATER
---	PROPOSED STORM DRAIN
---	PROPOSED SAN. SEWER
---	PROPOSED WATER
⊕	STORM DRAIN STRUCTURE
---	REVERSE CURB AND GUTTER
---	CURB AND GUTTER



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
John D. ... 9/19/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Chris ... 9/28/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
John ... 9/29/00
 DIRECTOR

10-23-00	1	REVISED RCPP 10 HDPE + BLDG C SITE
----------	---	------------------------------------

Date No. Revision Description
Montpelier Research Park
PARCEL E-2
 HOWARD COUNTY MARYLAND
 OWNER / DEVELOPER:
 TRAMMELL CROW COMPANY
 6200 GARDENWAY DRIVE, SUITE 410
 BETHESDA, MD 20817

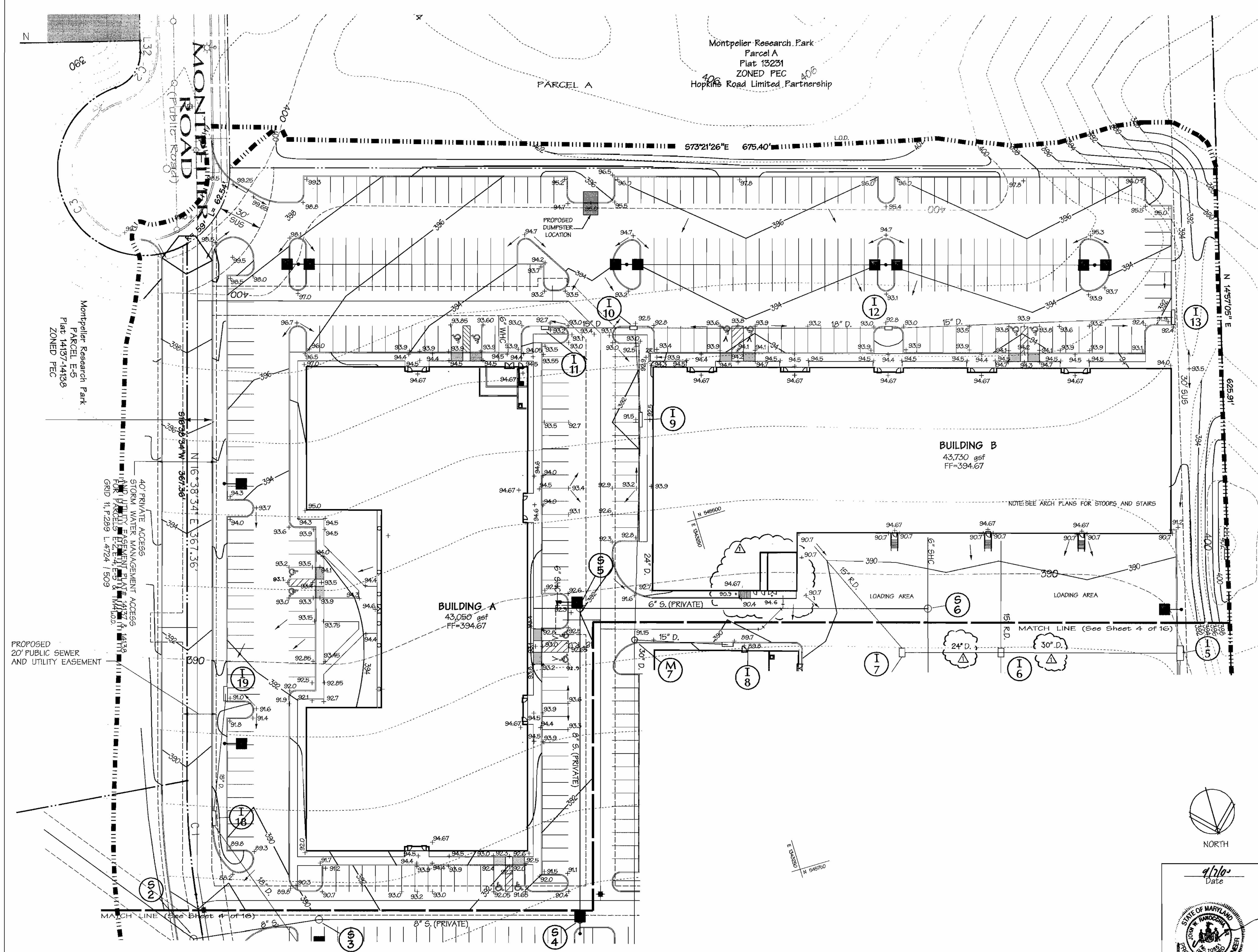
DMW
 Daft - McCune - Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 286 3333
 Fax 286 4705

SUBDIVISION NAME	Montpelier Research Park	SECTION AREA	NA	PARCEL #	PARCEL E-2
PLAT #	14137	BLOCK #	17	TRAVEL MAP	5th
WATER CODE	E21	BLK #	41	DEVELOPER	6051.02
TITLE	SITE PLAN				

Des By:	Scale:	1"=50'	Proj. No.	94171.T2
Drn By:	Date:	8-30-00	2 OF 16	
Chk By:	Approved:			

9/7/00
Date

Professional Engr. No. 10557



LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
...	SOILS
- - -	EXISTING CONTOURS
- - -	PROPOSED CONTOURS
~	WETLAND/ STREAM BUFFER
~	WETLAND
~	EXISTING TREES/ TREE LINE
~	FLOODPLAIN
79.3+	SPOT ELEVATION
→	FLOW ARROW
—	GUARDRAIL
■	DOUBLE HEAD LIGHT POLE
■	SINGLE HEAD LIGHT POLE

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
400/0625
P 289
ZONED PEC

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamlett 9/28/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Katz 9/28/00
DIRECTOR DATE

Date	No.	Revision Description
10-23-00	1	REVISED UTILITY ROOM ENTRANCE

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TRANMILL CROWN COMPANY
6107 BRIMROCK BLVD, SUITE 400
BETHESDA, MD 20817

DMW
Daft • McCune • Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT 14137	ZONE 17	TAXING MAP 41
WATER CODE E21	SEWER CODE 6440000	GENUS TRACT 605102

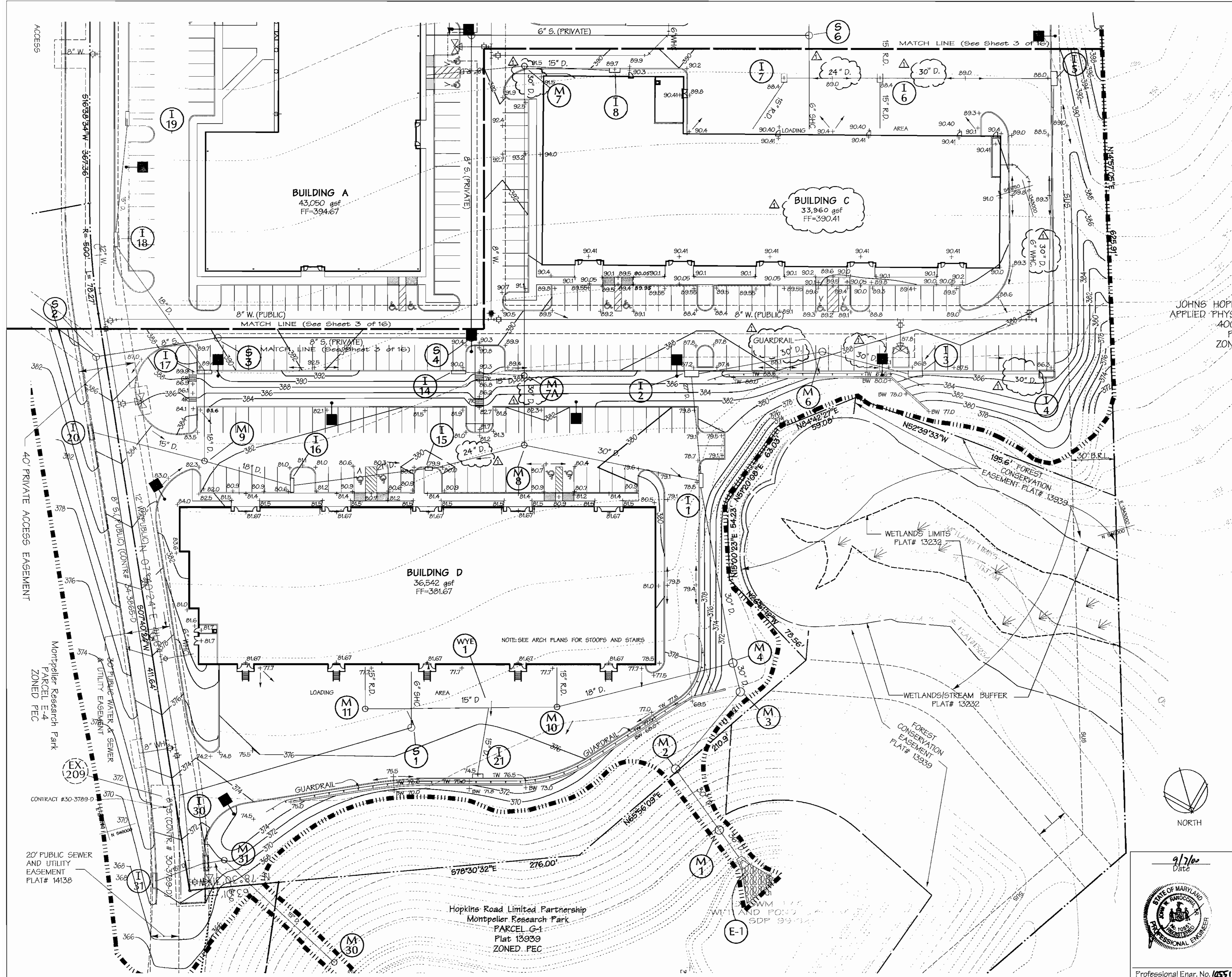
GRADING PLAN

Des By: Scale: 1"=30' Proj. No. 94171.12
 Dwn By: CSC Date: 8-30-00
 Chk By: Approved: 3 OF 16

Professional Engr. No. 10551

9/17/00 Date

STATE OF MARYLAND
JOHN W. RAMON
PROFESSIONAL ENGINEER



LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
- - -	SOILS
...	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	WETLAND/ STREAM BUFFER
---	WETLAND
---	EXISTING TREES/ TREE LINE
---	FLOODPLAIN
79.3+	SPOT ELEVATION
---	FLOW ARROW
---	GUARDRAIL
■	DOUBLE HEAD LIGHT POLE
■	SINGLE HEAD LIGHT POLE

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 4001 0625
 P 289
 ZONED PEC

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John D. ... 9/15/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamrick 9/15/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 9/15/00
 DIRECTOR DATE

10-23-00	1	REVISED BLDG 'C' SF & SD PIPE SIZES.
----------	---	--------------------------------------

Date No. Revision Description

Montpelier Research Park
 PARCEL E-2
 HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
 TRAMMELL OWEN COMPANY
 6301 EMBURY BLVD, SUITE 410
 BETHESDA, MD 20817

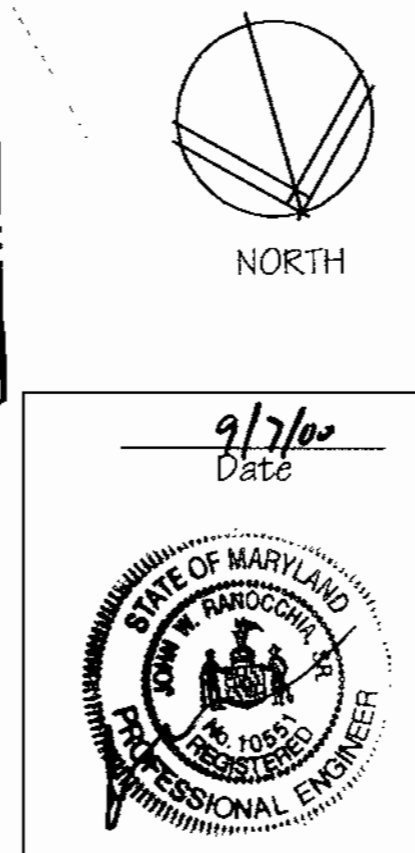
DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 296 3333
 Fax 296 4705

SUBDIVISION NAME: Montpelier Research Park
 PLAT: 14157 BLOCK: 17 ROAD: PEC
 TOWNSHIP: 41 COUNTY: 5th DISTRICT: 605L02
 WATER CODE: E21 SEWER CODE: 6440000

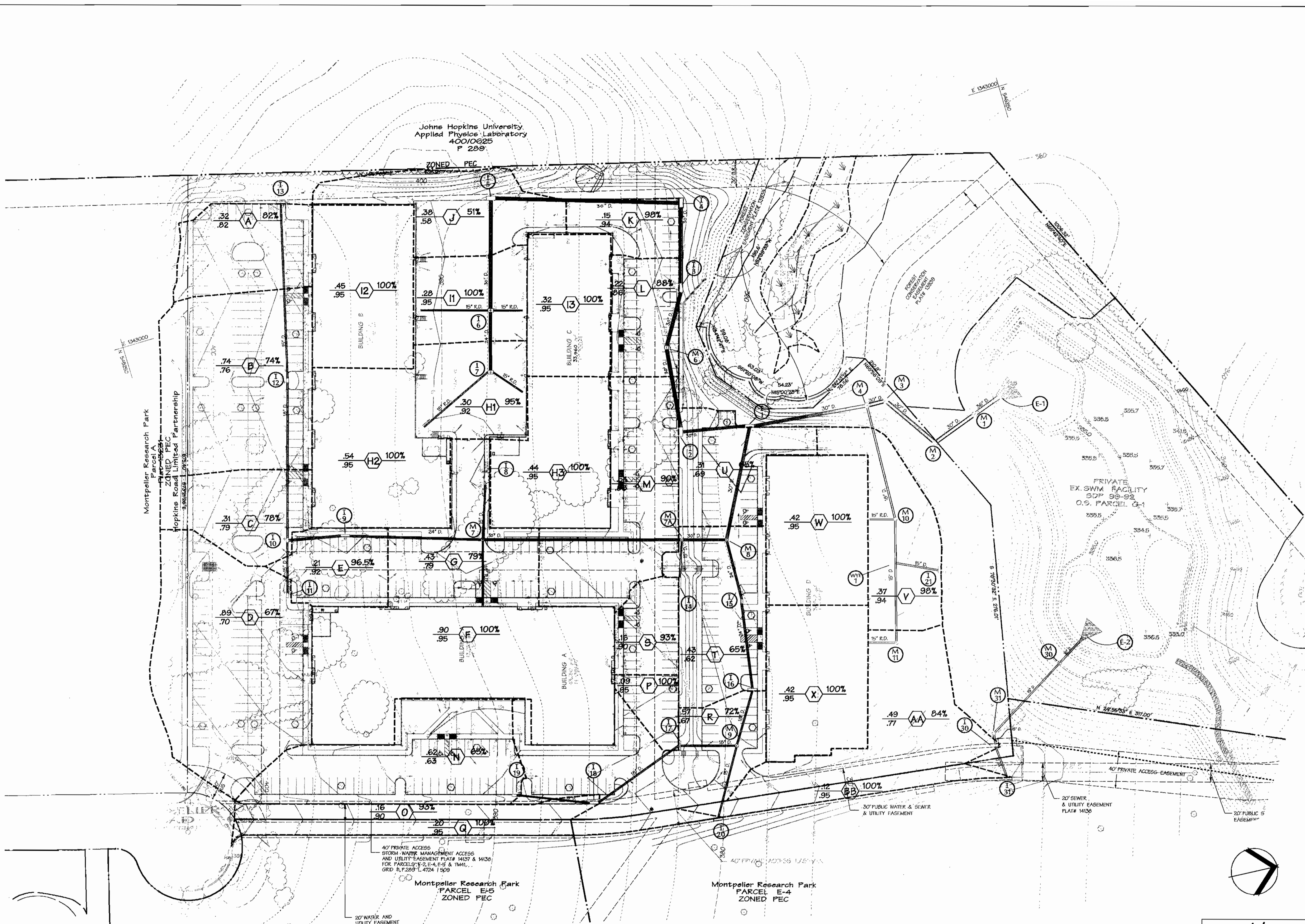
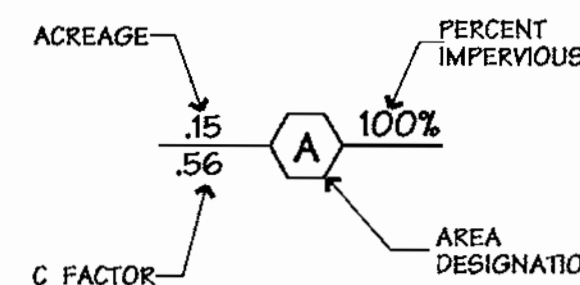
GRADING PLAN

Des By: Scale: 1"=30' Proj. No. 94171.12
 Dwn By: CSC Date: 8-30-00
 Chk By: Approved: 4 OF 16



Professional Engr. No. 10551

LEGEND



ALL SOILS HYDROLOGIC GROUP B

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>Howard D. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	9/19/00 DATE
<i>Cindy Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	9/25/00 DATE
<i>James ...</i> DIRECTOR	9/25/00 DATE

10-23-00	1	REVISED BLDG 'C' SF AND SD PIPE SIZES.
----------	---	--

Date	No.	Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TRANWELL COMM. COMPANY
600 BROADWAY BLVD., SUITE 410
BETHESDA, MD 20817

DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: Montpelier Research Park	SECTION AREA: NA	PARCEL: PARCEL E-2
PLAT: 14137	ZONE: PEC	PARCEL MAP: 41
FILED OFFICE: 5th	CENSUS TRACT: 605102	
WATER CODE: E21	SEWER CODE: 6440000	

TITLE
DRAINAGE AREA MAP

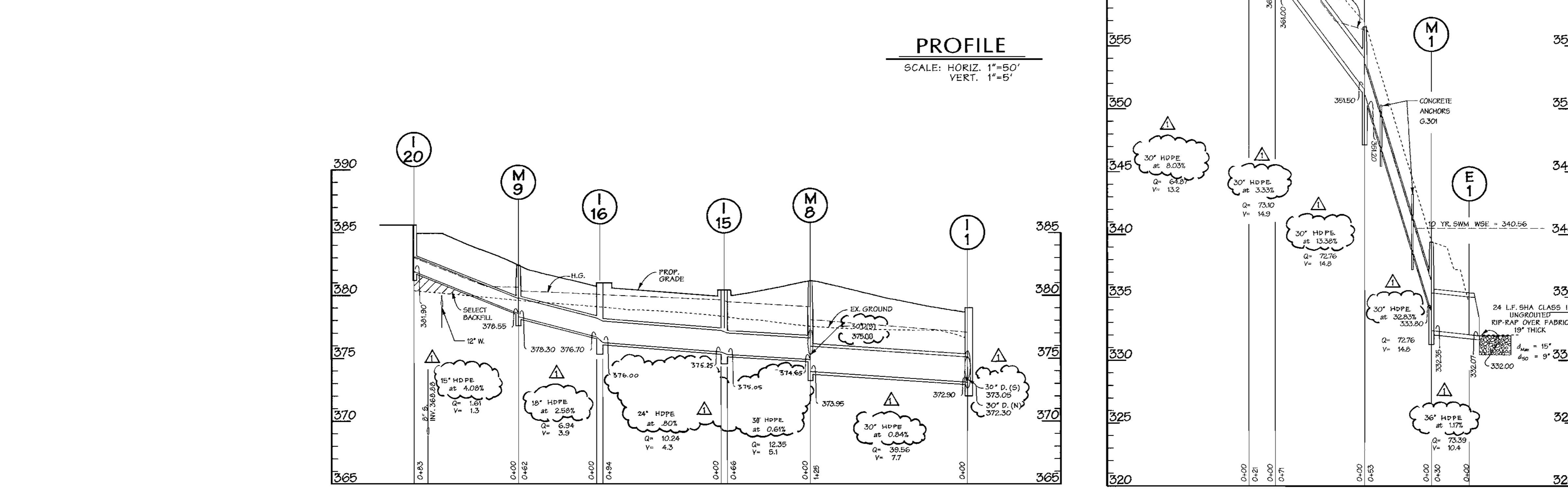
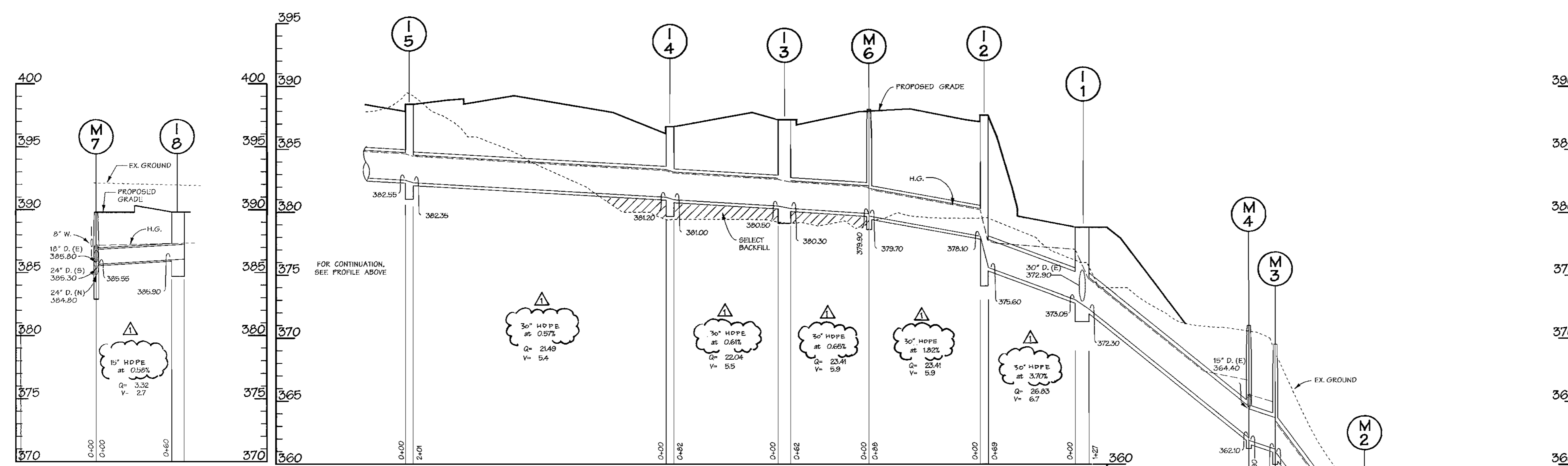
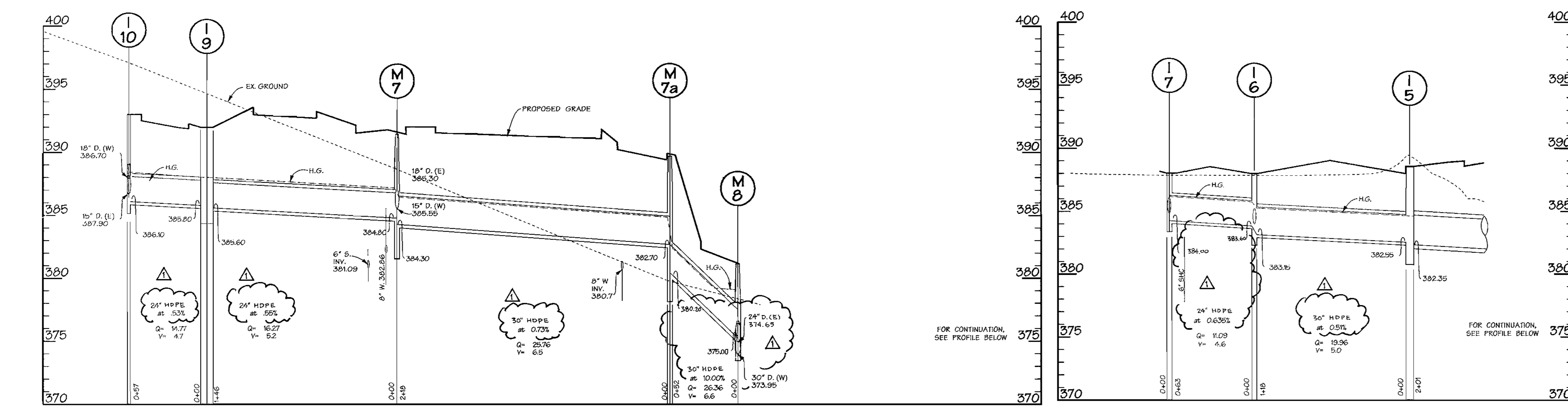
Des By:	Scale: 1"=50'	Proj. No. 94171.T2
Drn By: CSC	Date: 8-30-00	
Chk By:	Approved:	5 OF 16

9/2/00
Date

Professional Engr. No. **10512**

STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.		REMARKS	COORDINATES	
				UPPER	LOWER		NORTH	EAST
I-1	A-10	373.05	372.30	379.00	379.00	SD 4.02 W= 3'-9"	545,882.2	1,343,278.4
I-2	A-10	378.10	375.60	387.70	387.70	SD 4.02 W= 3'-9"	545,806.4	1,343,262.0
I-3	A-10	380.50	380.20	387.30	387.30	SD 4.02 W= 3'-9"	545,851.6	1,343,110.9
I-4	A-10	381.20	381.00	386.80	386.80	SD 4.02 W= 3'-9"	545,878.2	1,343,222.0
I-5	A-10	382.55	382.25	388.50	388.50	SD 4.02 W= 3'-9"	545,691.7	1,342,960.5
I-6	DBL. S	383.60	383.15	388.40	388.40	SD 4.23 -	545,646.9	1,343,075.8
I-7	DBL. S	-	384.00	388.40	388.40	SD 4.23 -	545,627.6	1,343,140.6
I-8	A-10	-	386.00	389.70	389.70	SD 4.02 W= 2'-6"	545,556.7	1,343,253.14
I-9	A-10	385.80	385.60	392.00	392.00	SD 4.02 W= 2'-6"	545,423.4	1,343,288.0
I-10	A-5	387.90	386.10	393.00	393.00	SD 4.01 W= 2'-6"	545,351.0	1,343,253.1
I-11	A-5	-	389.68	393.20	393.20	SD 4.01 W= 2'-6"	545,343.6	1,343,211.1
I-12	A-5	388.20	387.75	392.90	392.90	SD 4.01 W= 2'-6"	545,411.0	1,343,085.7
I-13	A-10	-	389.15	392.40	392.40	SD 4.02 W= 2'-6"	545,460.2	1,342,998.6
I-14	A-10	-	386.35	390.50	390.50	SD 4.02 W= 2'-6"	545,759.3	1,343,419.6
I-15	A-10	375.25	375.05	380.40	380.40	SD 4.01 W= 2'-6"	545,818.4	1,343,469.2
I-16	A-10	376.70	376.00	381.32	381.10	SD 4.02 W= 2'-6"	545,802.9	1,343,556.4
I-17	A-10	381.83	380.33	389.90	389.90	SD 4.02 W= 2'-6"	545,708.0	1,343,591.1
I-18	A-10	386.00	385.75	389.14	388.92	SD 4.02 W= 2'-6"	545,601.4	1,343,625.6
I-19	A-10	-	388.50	391.50	391.50	SD 4.02 W= 2'-6"	545,522.7	1,343,559.3
I-20	A-10	-	381.90	385.64	385.19	SD 4.02 W= 2'-6"	545,727.1	1,343,679.1
I-21	DBL. 'S' COMB.	-	371.15	375.17	375.17	SD 4.34 -	546,028.4	1,343,489.1
I-30	A-10	367.69	367.49	371.66	371.15	SD 4.02 W= 2'-6"	546,040.8	1,343,690.9
I-31	A-10	-	367.80	372.00	371.66	SD 4.02 W= 2'-6"	546,043.1	1,343,726.7
M-1	6" MANHOLE	333.80	332.35	339.75	-	MD 384.05	546,122.4	1,343,336.2
M-2	5" MANHOLE	361.60	361.20	369.00	-	G 5.13	546,072.3	1,343,353.4
M-3	5" MANHOLE	361.20	361.00	369.50	-	G 5.13	546,033.4	1,343,294.1
M-4	5" MANHOLE	362.10	361.90	371.00	-	G 5.13	546,012.5	1,343,293.2
M-6	5" MANHOLE	379.90	379.70	388.36	-	G 5.13	546,819.9	1,343,169.8
M-7	4" MANHOLE	384.20	384.20	391.26	-	G 5.12	545,587.0	1,343,313.7
M-7a	4" MANHOLE	382.70	380.20	389.70	-	G 5.12	545,776.0	1,343,376.2
M-8	5" MANHOLE	374.65	373.95	381.15	-	G 5.13	545,822.9	1,343,380.2
M-9	4" MANHOLE	378.55	378.30	382.00	-	G 5.12 SHALLOW	545,769.2	1,343,609.4
M-10	4" MANHOLE	370.40	370.20	376.77	-	G 5.12	546,006.5	1,343,421.1
M-11	4" MANHOLE	372.65	372.45	376.79	-	G 5.12	545,989.1	1,343,551.0
M-30	4" MANHOLE	334.73	333.48	339.40	-	G 5.12 SHALLOW	546,134.1	1,343,623.2
M-31	4" MANHOLE	367.41	367.21	372.00	-	G 5.12 SHALLOW	546,042.8	1,343,676.8
WYE	15'X15' TEE FTG.	370.87	370.87	-	-	SD 1.11	546,006.5	1,343,421.1
E-1	HDPE	332.00	-	-	-	SD 5.51	546,152.7	1,343,325.8
E-2	HDPE	332.00	-	-	-	SD 5.51	546,165.0	1,343,604.7



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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John W. ... 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris Hamilton 7/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 9/25/00
REG. DATE

10-23-00 1 REVISED RCP TO HDPE, PIPE SIZE & STRUCTURE INVERTS.

Date No. Revision Description

Montpelier Research Park

PARCEL E-2
HOWARD COUNTY MARYLAND

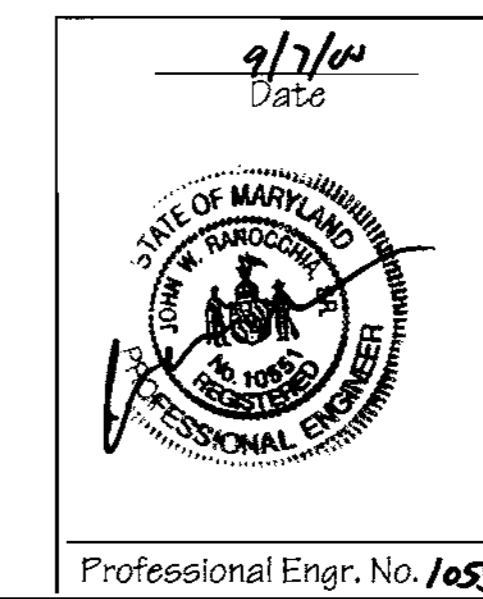
DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, 200 East Pennsylvania Avenue
Landscape Architects, Towson, Maryland 21286
Engineers, Surveyors & 410 296 3333
Environmental Professionals Fax 296 4705

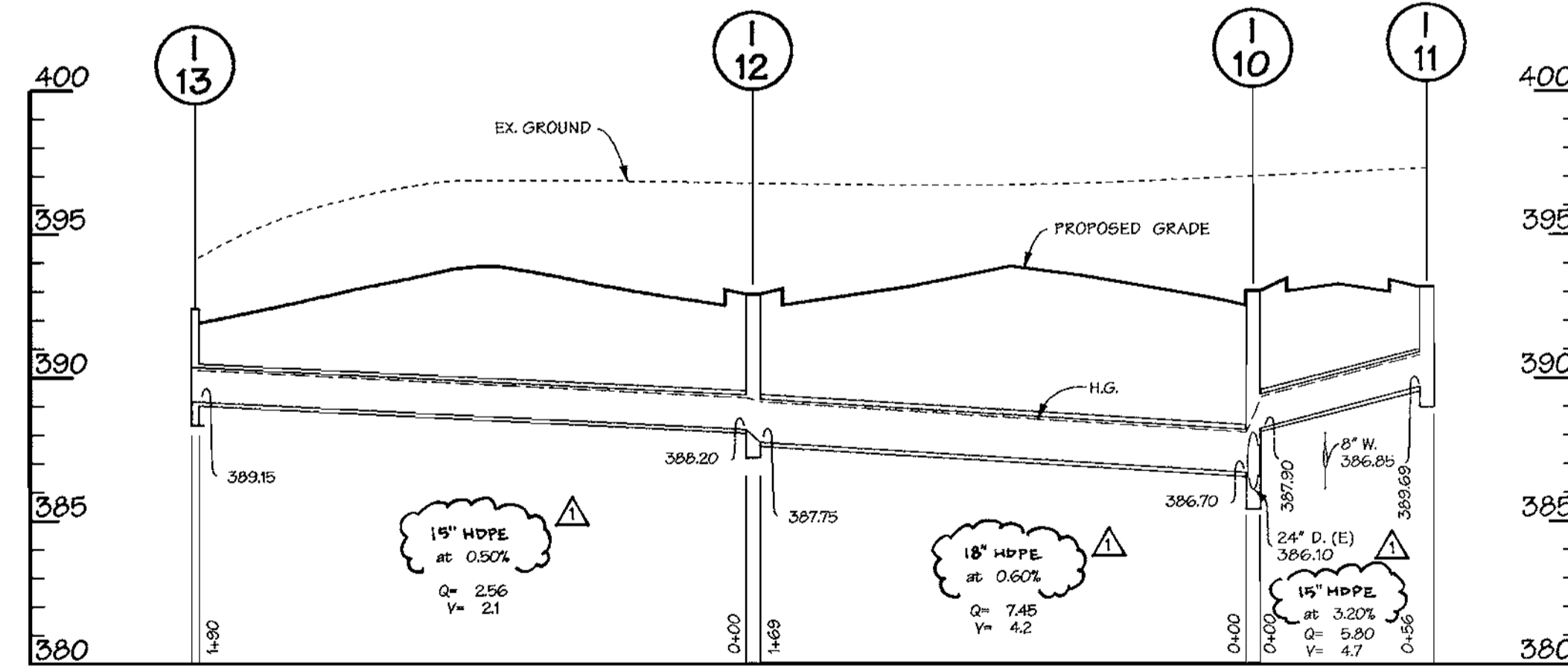
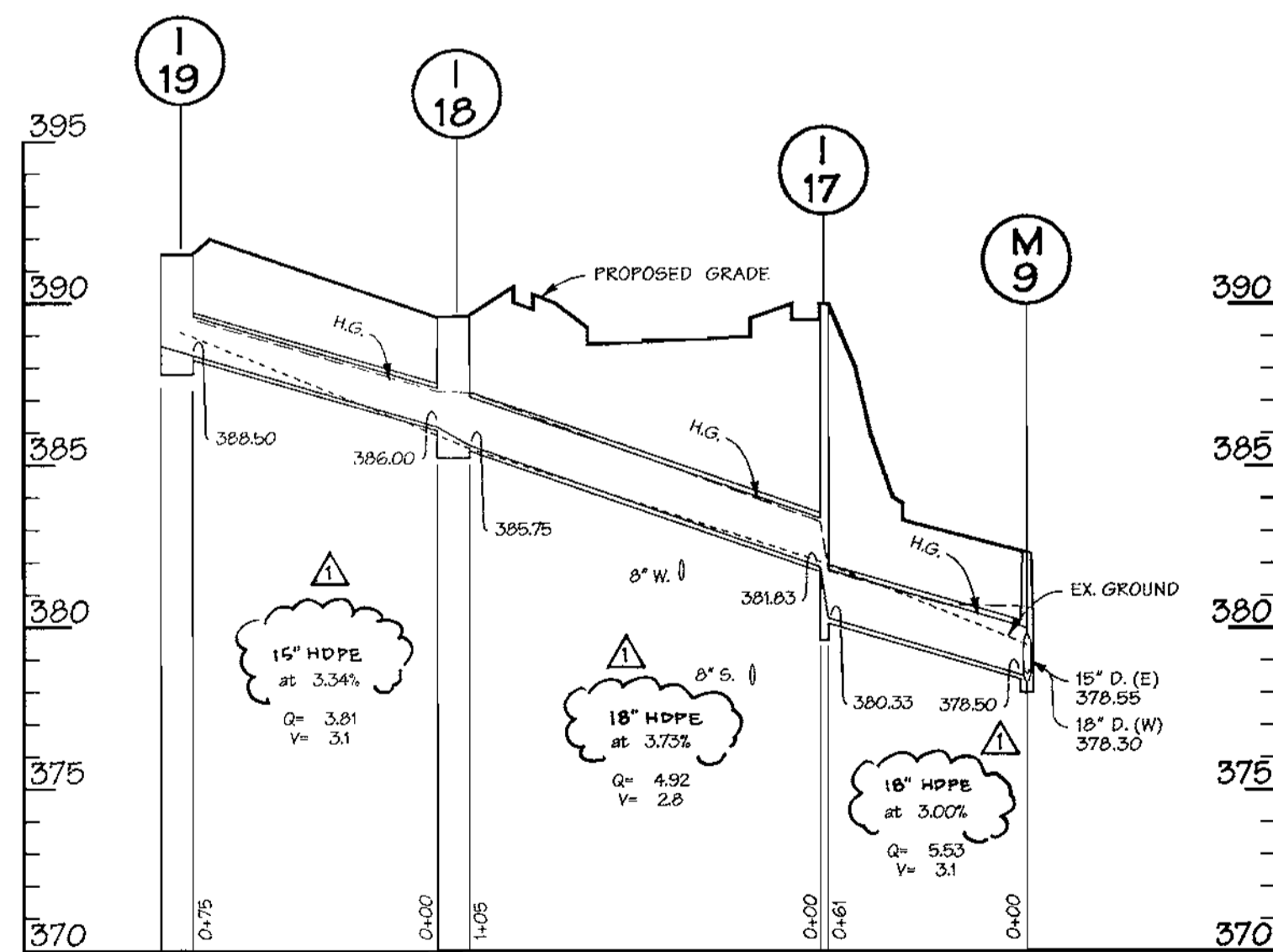
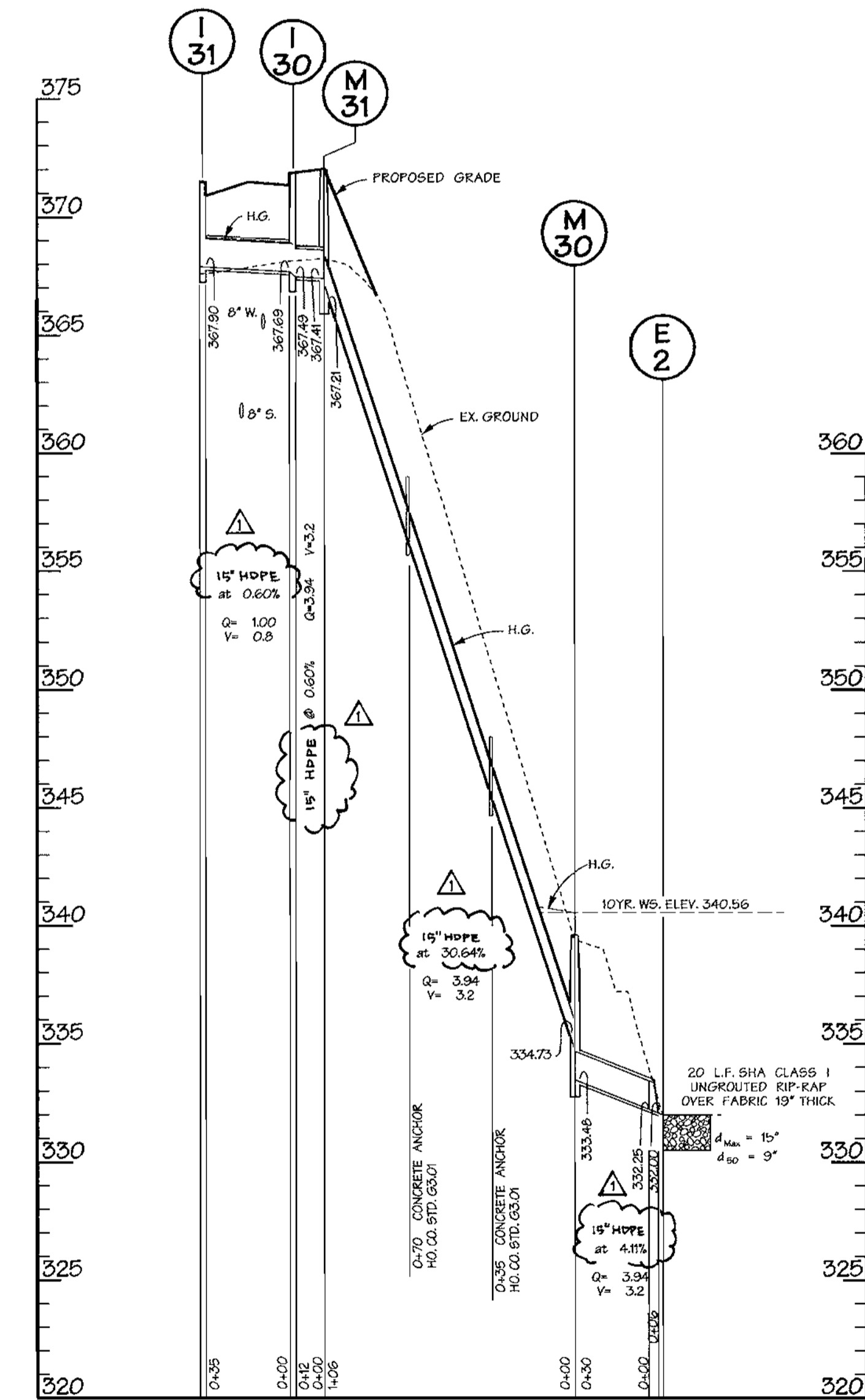
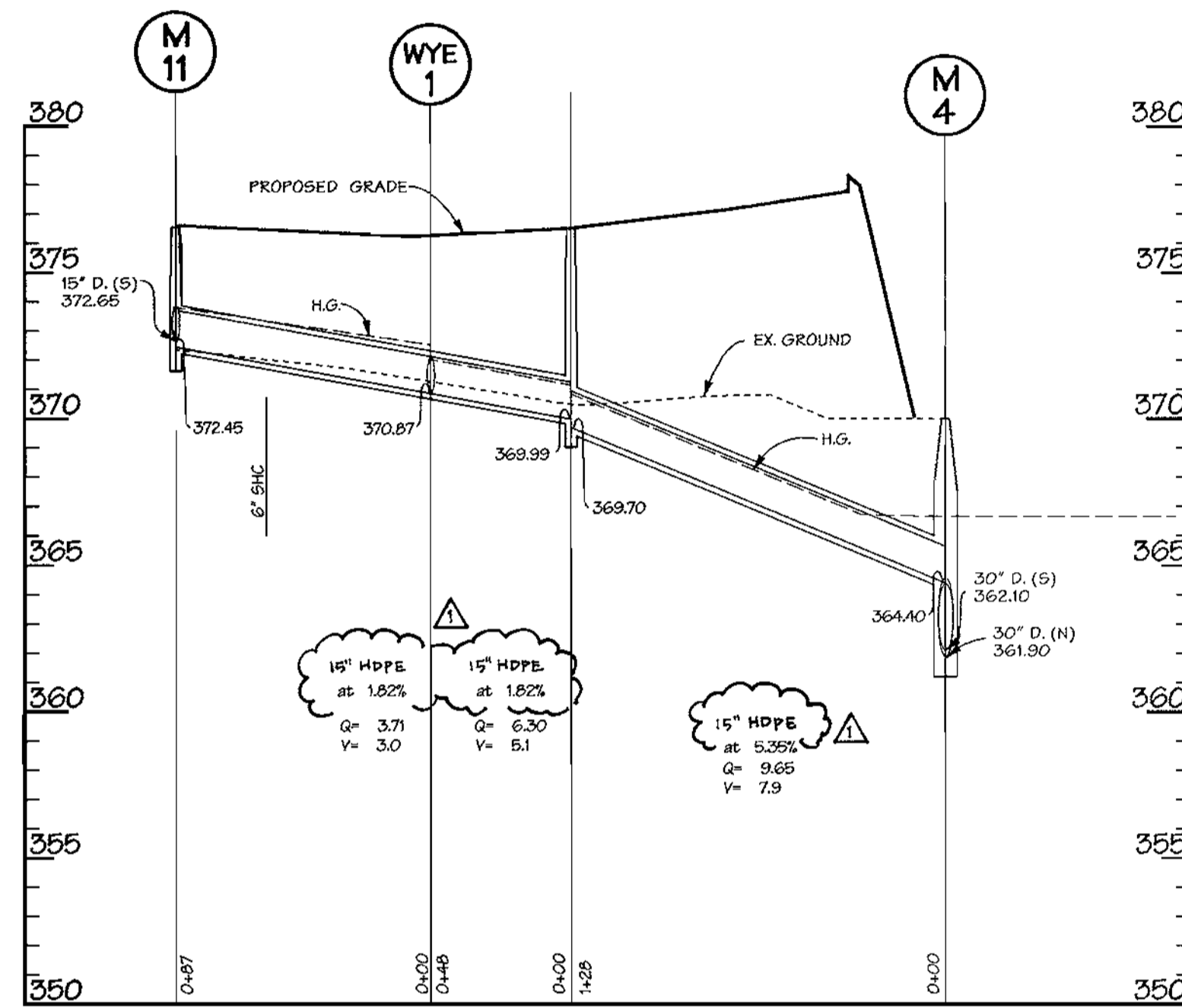
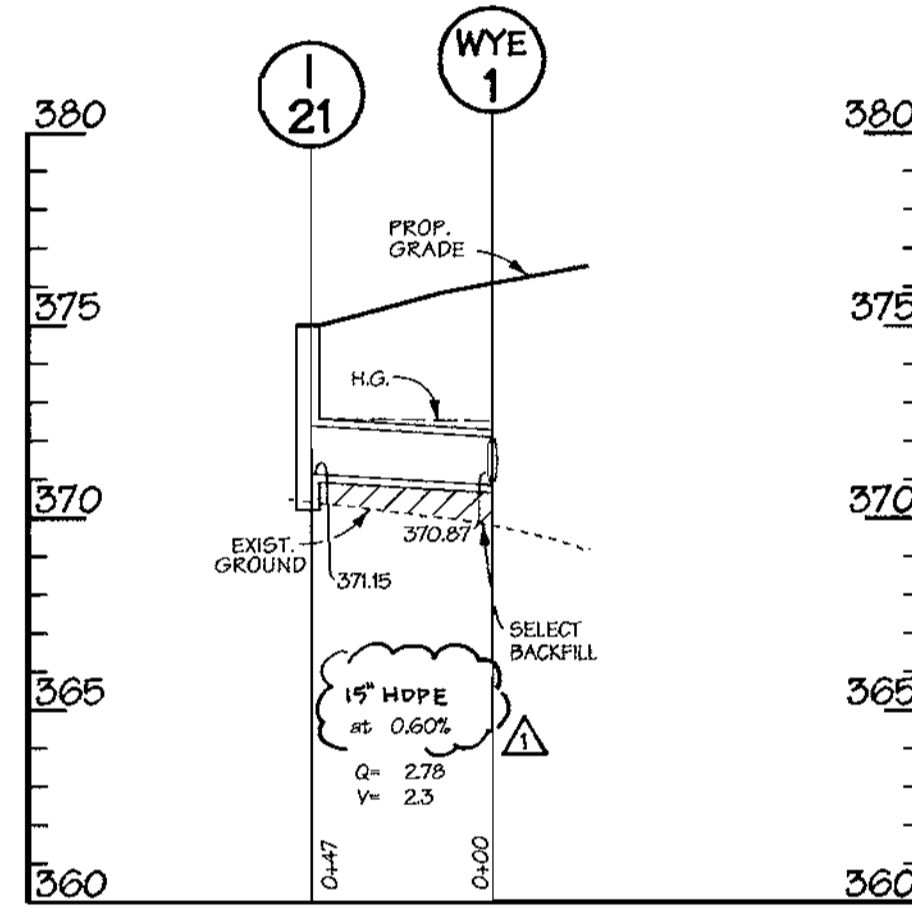
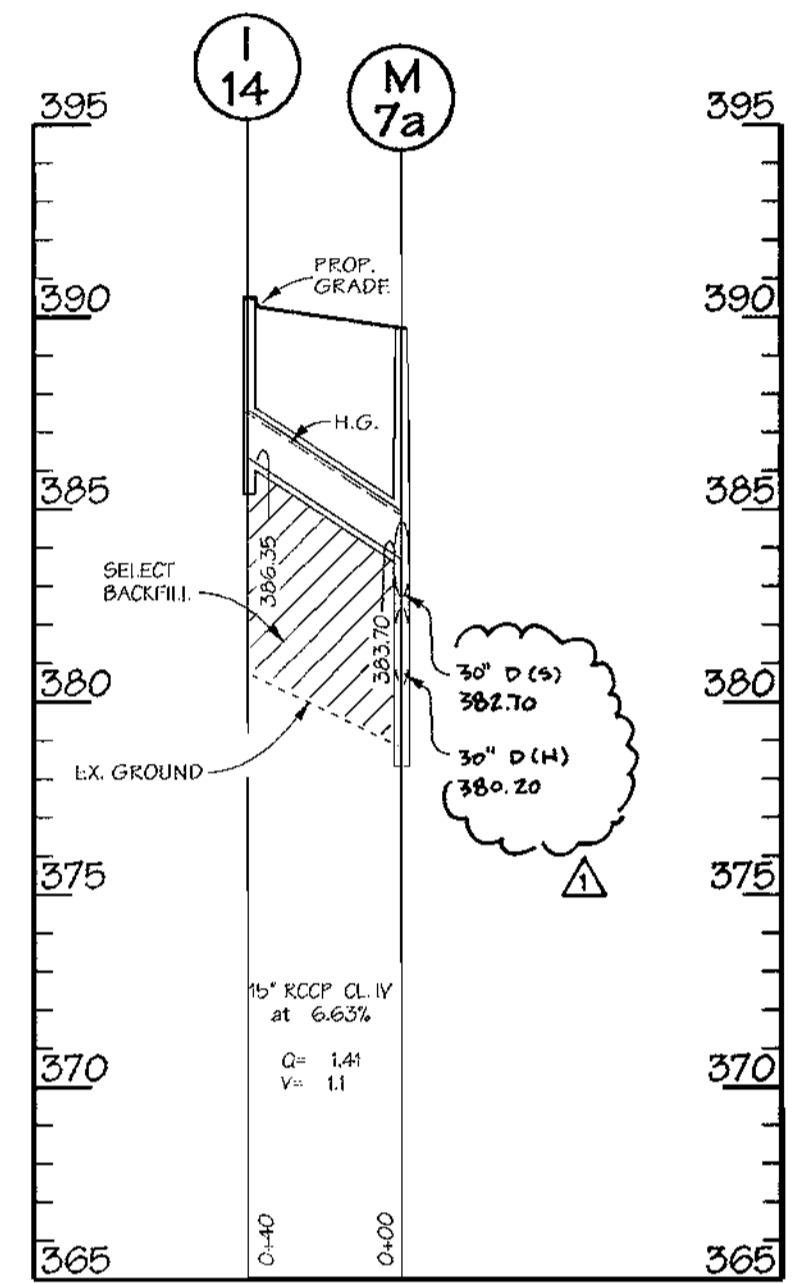
SUBDIVISION NAME: Montpelier Research Park SECTION AREA: NA PARCEL #: PARCEL E-2
PLAT: 14137 BLOCK #: 41 TARRANT MAP: 5th DISTRICT: 6051.02
WATER CODE: E21 BRINK CODE: 6440000

TITLE: STORM DRAIN PROFILES

Des. By: MSS Scale: As Shown Proj. No. 94171.12
Dwn. By: MSS Date: 8-30-00
Chk. By: Approved: 6 OF 16

Professional Engr. No. 10551





PROFILE

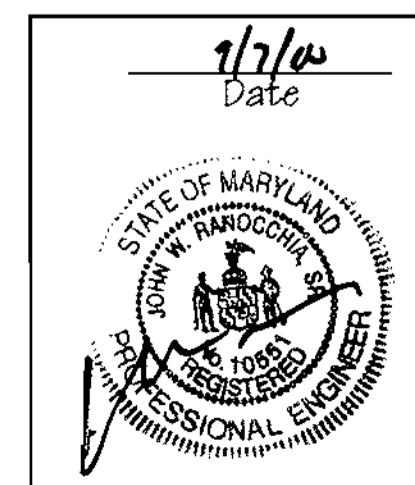
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
[Signature] 9/19/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 7/25/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 7/25/00
 DIRECTOR

10-23-00	1	REVISED RCCP TO HDPE.
----------	---	-----------------------

Date No. Revision Description

Montpelier
Research Park
 PARCEL E-2
 HOWARD COUNTY MARYLAND
 OWNER / DEVELOPER:
 TEAMWELL CROW COMPANY
 620 BRANZACRY BLVD. SUITE 410
 BETHESDA, MD 20817

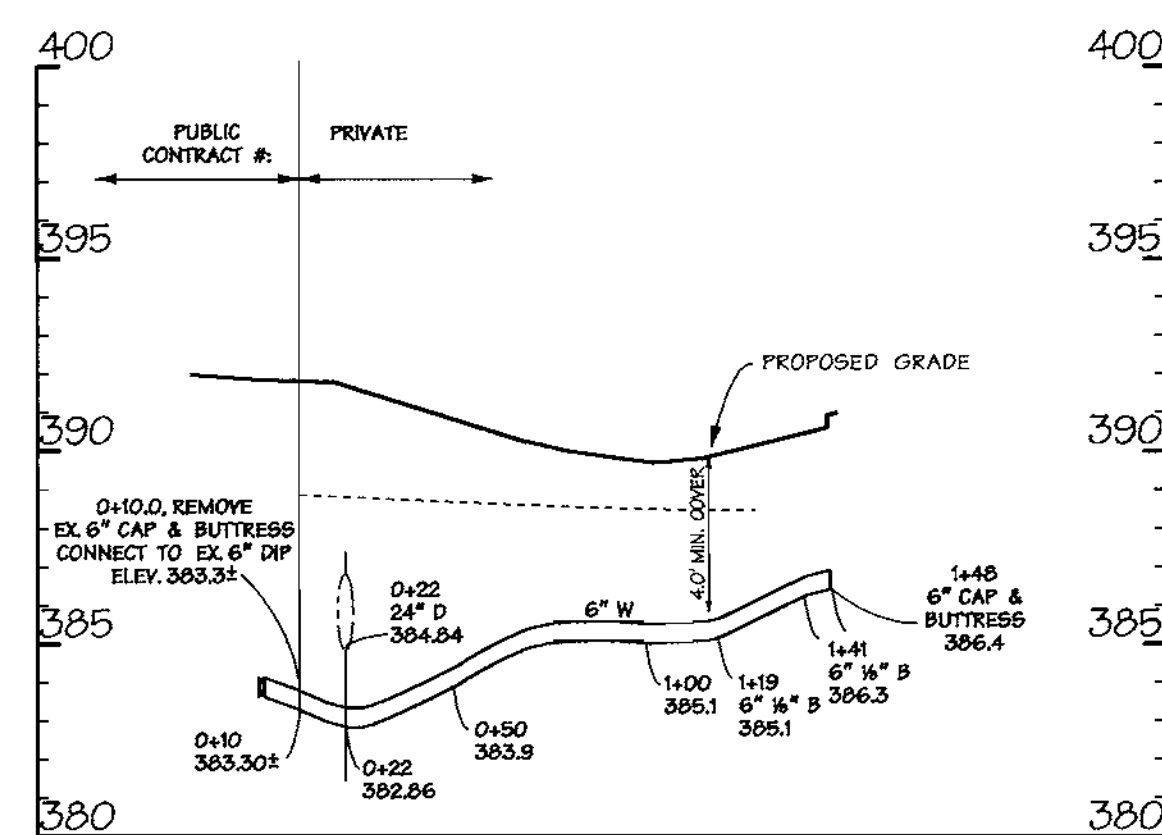
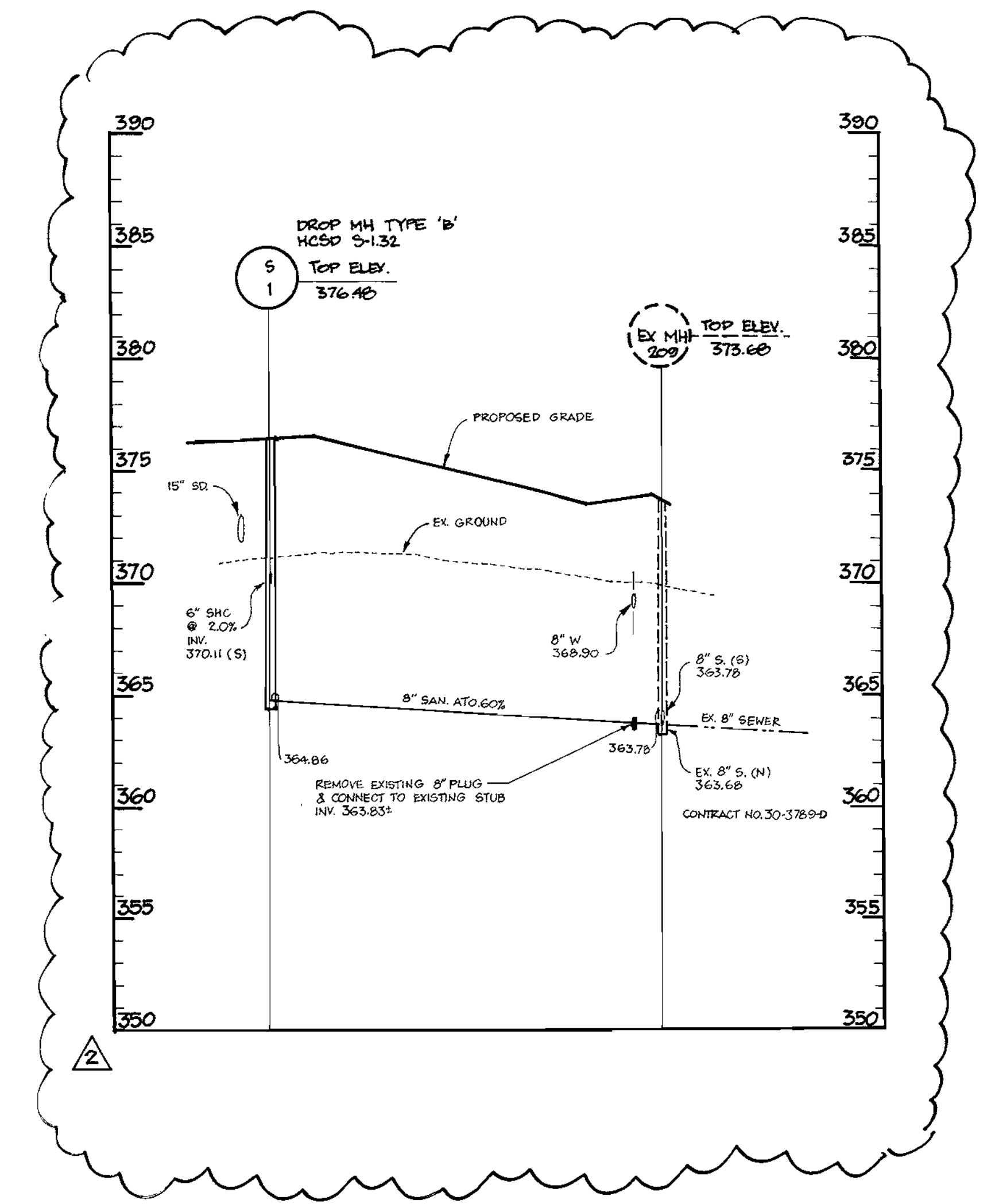
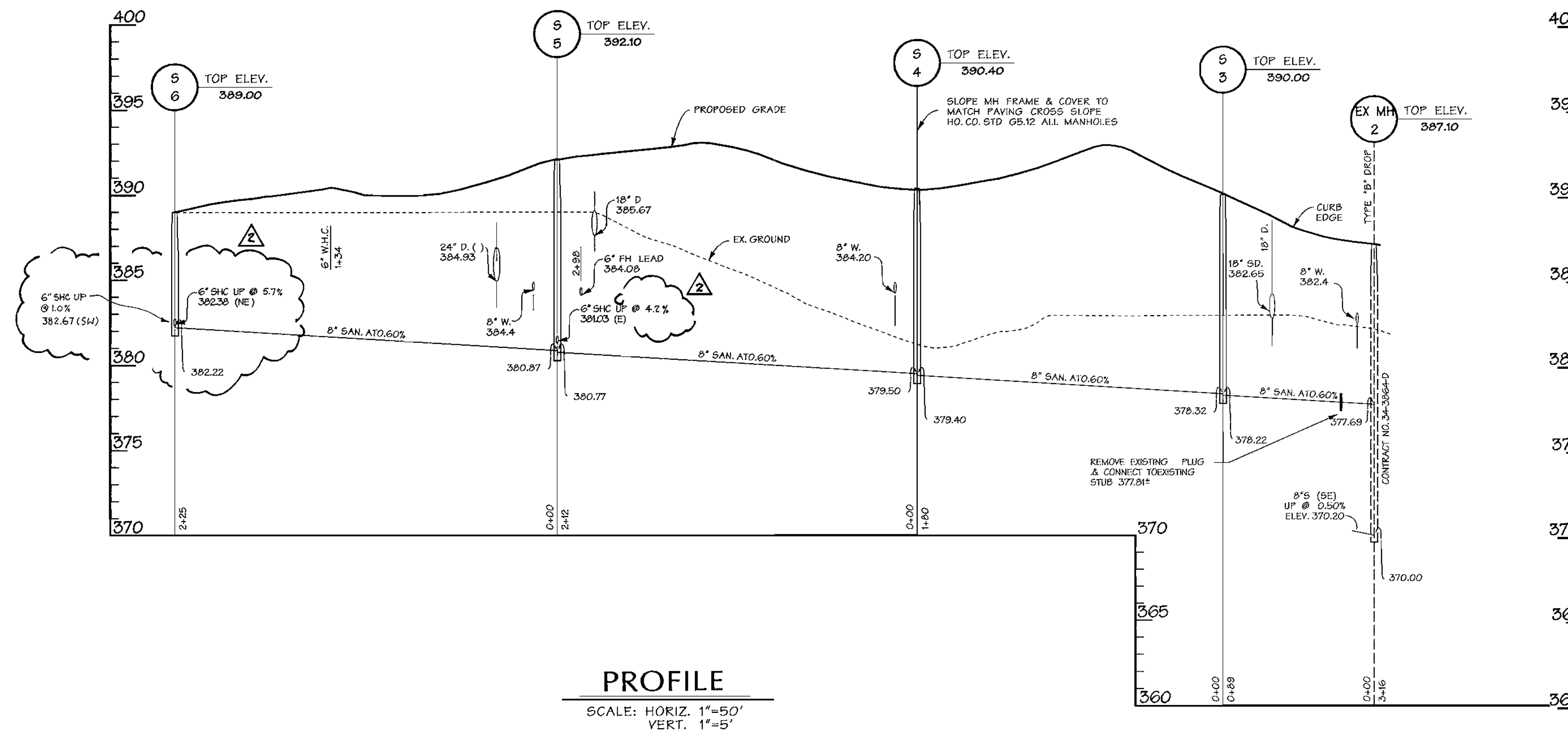


DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
 200 East Pennsylvania Avenue
 Towson, Maryland 21288
 410 296 3333
 Fax 296 4705

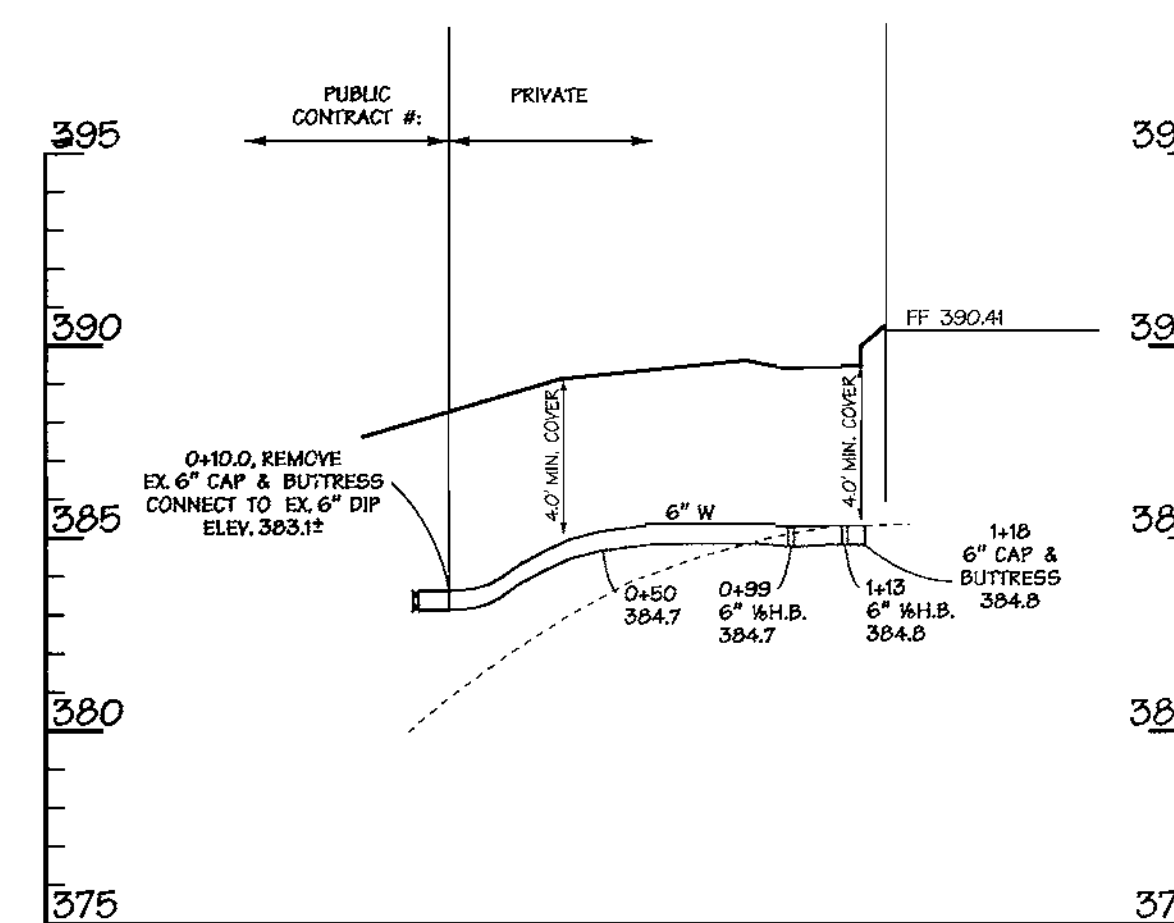
SUBDIVISION NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT #	BLOCK #	DATE
14157	17	PEC
WATER CODE	SEWER CODE	PARCEL #
E21	6440000	605102

TITLE
STORM DRAIN PROFILES

Des By: Scale: As Shown Proj. No. 94171.12
 Dwn By: MGS Date: 8-30-00
 Chk By: Approved: **7** OF 16



6" W. SERVICE TO BLDG. B



6" W. SERVICE TO BLDG. C

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chris Hamilton 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

Chris Hamilton 9/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

Greg S. Smith 7/22/00
DIRECTOR
DATE

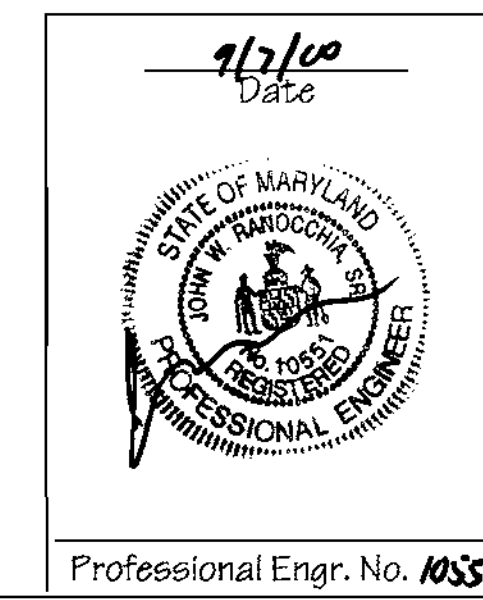
11-27-00	2	ADDED SEWER S-1 TO EX. MH 209. REV. 6" LMC BLDG. C.
----------	---	---

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TEAMWELL CDM GROUP
6700 PENNSYLVANIA BLDG., SUITE 410
BETHESDA, MD 20817

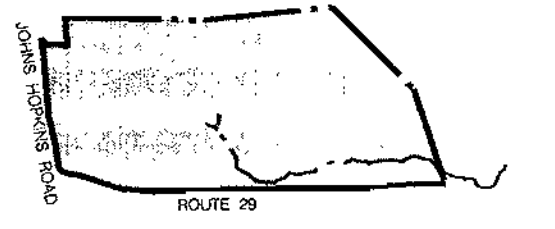
DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705



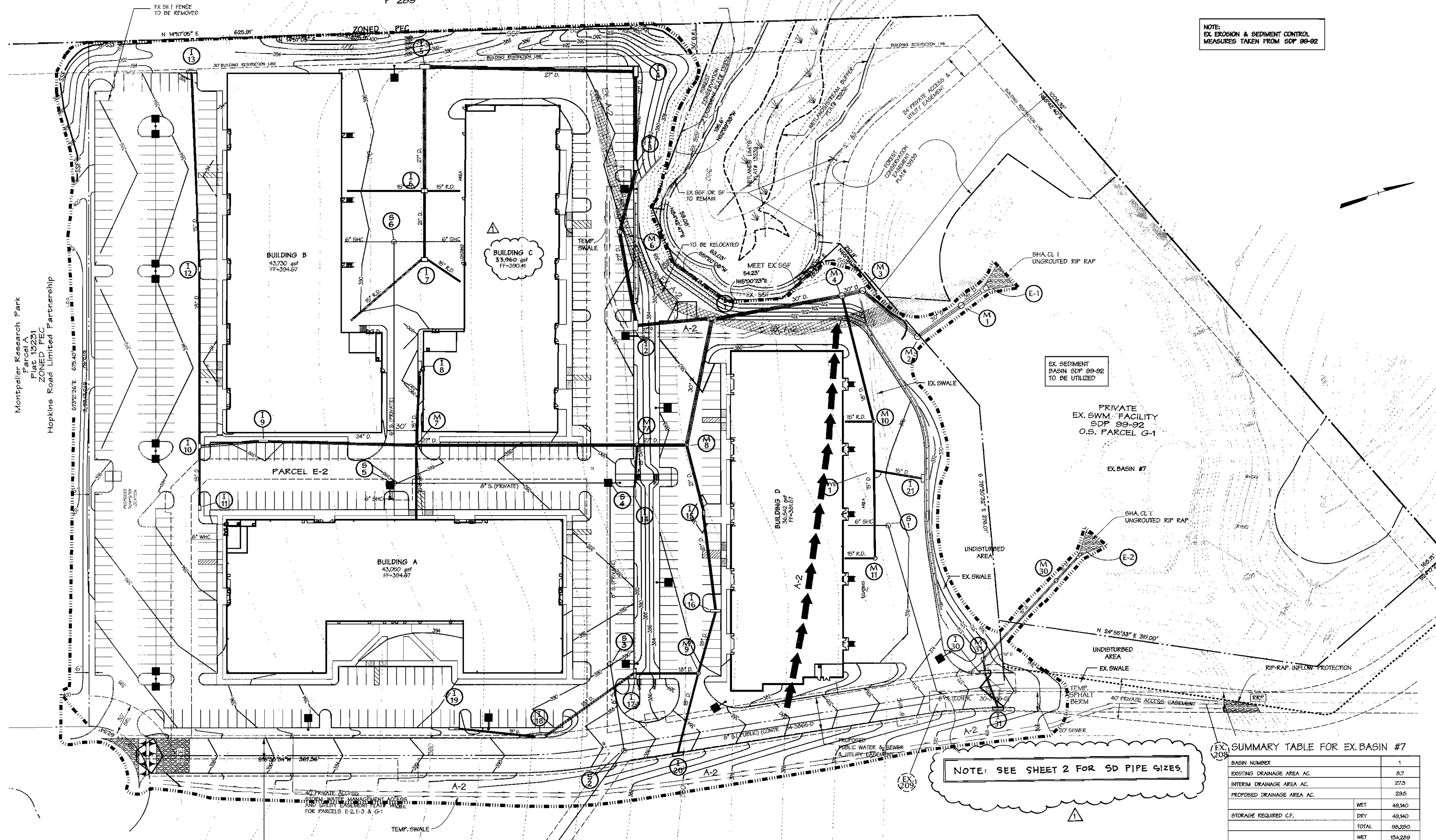
SUBDIVISION NAME: Montpelier Research Park		SECTION AREA: NA	PARCEL #	PARCEL E-2
PLAT #	BLOCK #	ZONE	TERRITORY MAP	ELECT. DISTRICT
14157	17	REC	41	USA
WATER CODE	E21	SEWER CODE	6440000	DENSITY TRACT
TITLE: WATER AND SEWER PROFILES				
Des. By:	Scale: As Shown	Proj. No. 94171.T2		
Drn. By: MSS	Date: 8-30-00			8 OF 16
Chk. By:	Approved:			

NOTE:
EX. EROSION & SEDIMENT CONTROL
MEASURES TAKEN FROM SDP 99-92



KEY SHEET

- LEGEND**
- | SYMBOL | DESCRIPTION |
|--------|--|
| | STREAM |
| | SUPER SILT FENCE |
| | EXISTING CONTOURS |
| | EXISTING TREES/
TREE LINE |
| | WETLAND/STREAM
BUFFER |
| | WETLAND |
| | PROPOSED CONTOURS |
| | FLOODPLAIN |
| | LIMIT OF DISTURBANCE |
| | EXISTING
25' WIDE UTILITY
EASEMENT |
| | SOIL BORING |
| | SCE-STABILIZED CONSTRUCTION
ENTRANCE |
| | EROSION CONTROL
MATTING |
| | A-2
EARTH DIKE |
| | TEMP. ASPHALT BERM |
| | TEMP. SWALE |
| | RIP RAP INFLOW PROTECTION |



SUMMARY TABLE FOR EX. BASIN #7

BASIN NUMBER	1
EXISTING DRAINAGE AREA AC.	8.7
INTERIM DRAINAGE AREA AC.	27.3
PROPOSED DRAINAGE AREA AC.	28.5
STORAGE REQUIRED C.F.	WET 48,140
	DRY 48,140
	TOTAL 96,280
STORAGE PROVIDED C.F.	WET 134,289
	DRY 229,271
	TOTAL 373,560
EXISTING GROUND ELEV.	340.0
TOP EMBANKMENT ELEV.	344.3
RISER CREST ELEV.	338.4
WET STORAGE / ELEV.	337.0'
CLEANOUT ELEV.	334.0
BOTTOM ELEV.	332.0
Q INTO BASIN C.F.S. 10YR	144.01
Q OUT BASIN C.F.S. 10YR	12.33
BASIN DEPTH	WET 5.0
	DRY 3.6
	TOTAL 8.6
DESIGN HIGHWATER 100 yr. Clogged	342.26
FREEBOARD PROVIDED	2.0'
BASIN SIDE SLOPES	3:1
BARREL DIAMETER	48"
RISER DIMENSIONS	6'x6'
WET STORAGE ZONE ELEV.	332-337
DRY STORAGE ZONE ELEV.	337-338.4
BOTTOM DIMENSION	AS SHOWN
DIMENSION FROM CLEANOUT ELEV. TO RISER TOP	8.6'
START PERFORATIONS AT ELEVATION	337.0

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John Dammann 9/15/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Andy Hamilton 7/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David Smith 7/25/00
DIRECTOR DATE

Date	No.	Revision Description
10.23.00	1	ADDED NOTE ABOUT PIPE SIZE.

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER: HOPKINS ROAD LIMITED PARTNERSHIP 200 EAST PENNSYLVANIA AVENUE
8000 RED BRANCH ROAD, SUITE 200 TOWSON, MARYLAND 21286
COLUMBIA, MD 21046 TEL: 410-527-7222 DEVELOPER: TEAMMILL CROW COMPANY
6700 PIMMICOCK BLVD, SUITE 410
BETHESDA, MD 20817 TEL: 301-271-1100

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUPERVISION NAME	SECTION AREA	PARCEL #
Montpelier Research Park	NA	PARCEL E-2
PLAT 14137	ZONE 17	PREC. 54A
WATER CODE E21	SEWER CODE 6440000	

TITLE
SEDIMENT & EROSION CONTROL PLAN

Des By: Scale: 1"=50' Proj. No. 94171.T2
 Dwn By: CSC Date: 7-27-00
 Chk By: Approved: 9 OF 16

9/7/00
Date

Professional Engr. No. 10551

CERTIFICATION 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."

John W. Ramonick, S.E. 9/7/00
DATE

CERTIFICATION 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 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."

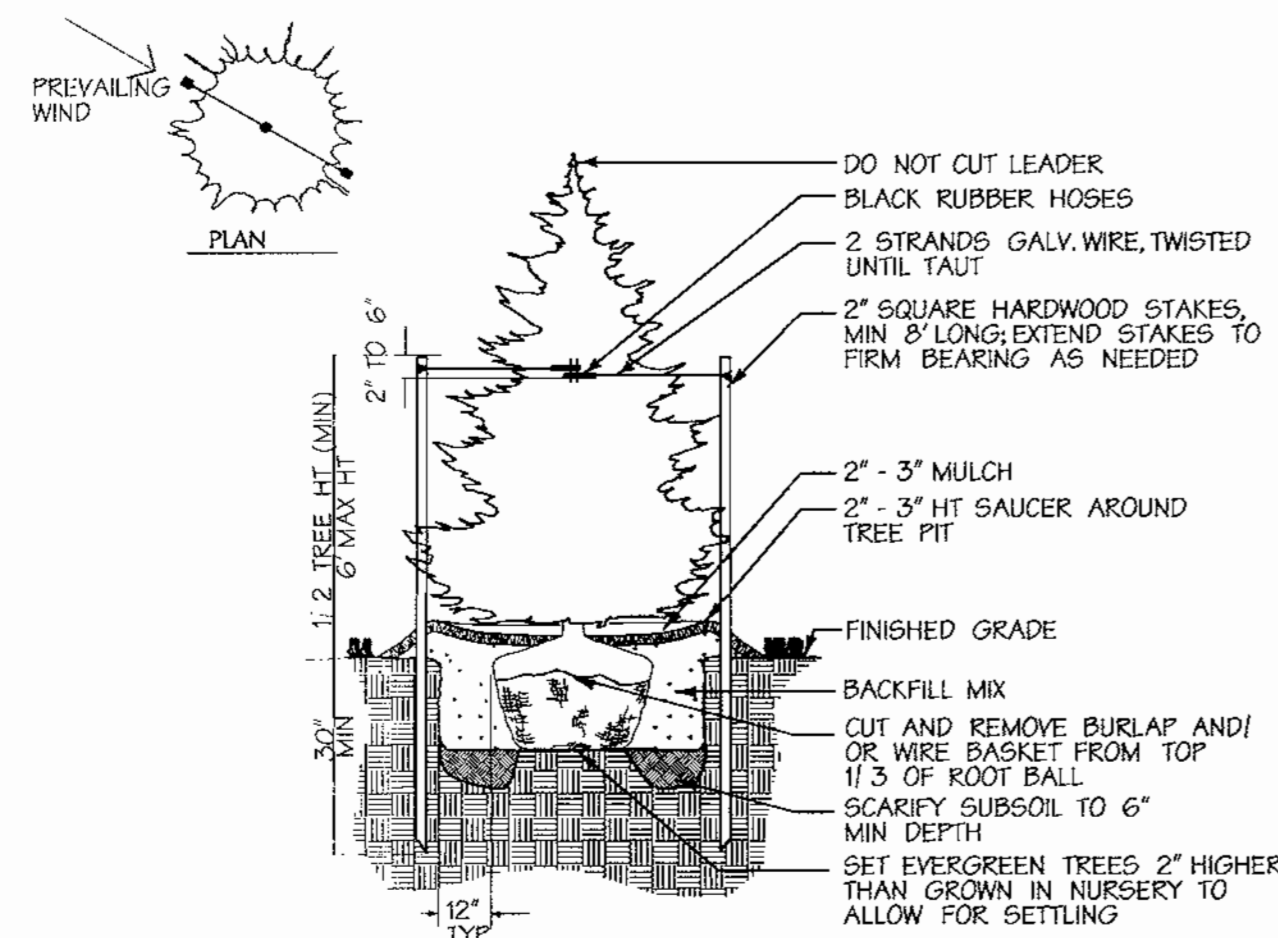
Daniel S. Adson 8/1/00
DATE
DANIEL S. ADSON, EVP, TC MID ATLANTIC, INC.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

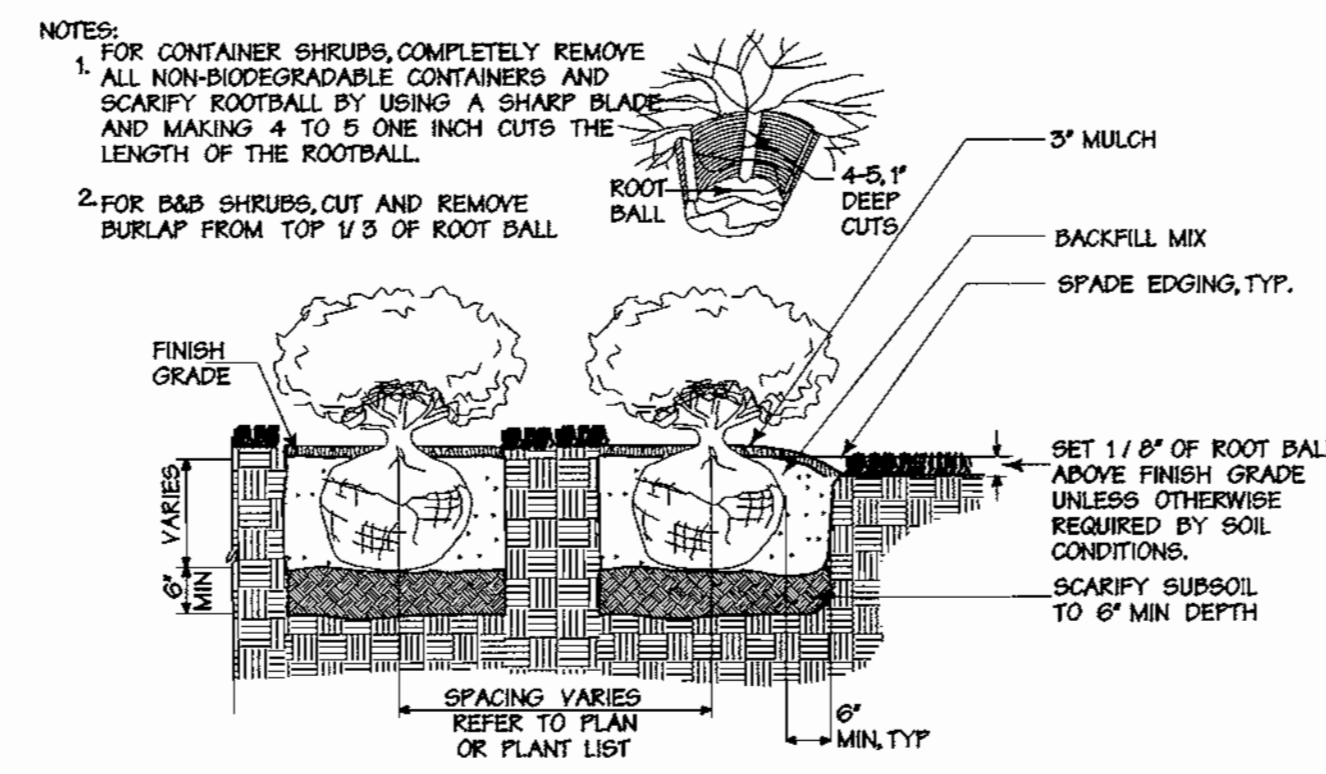
Clevis Simmons 9/13/00
U.S. SOIL CONSERVATION SERVICE DATE

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

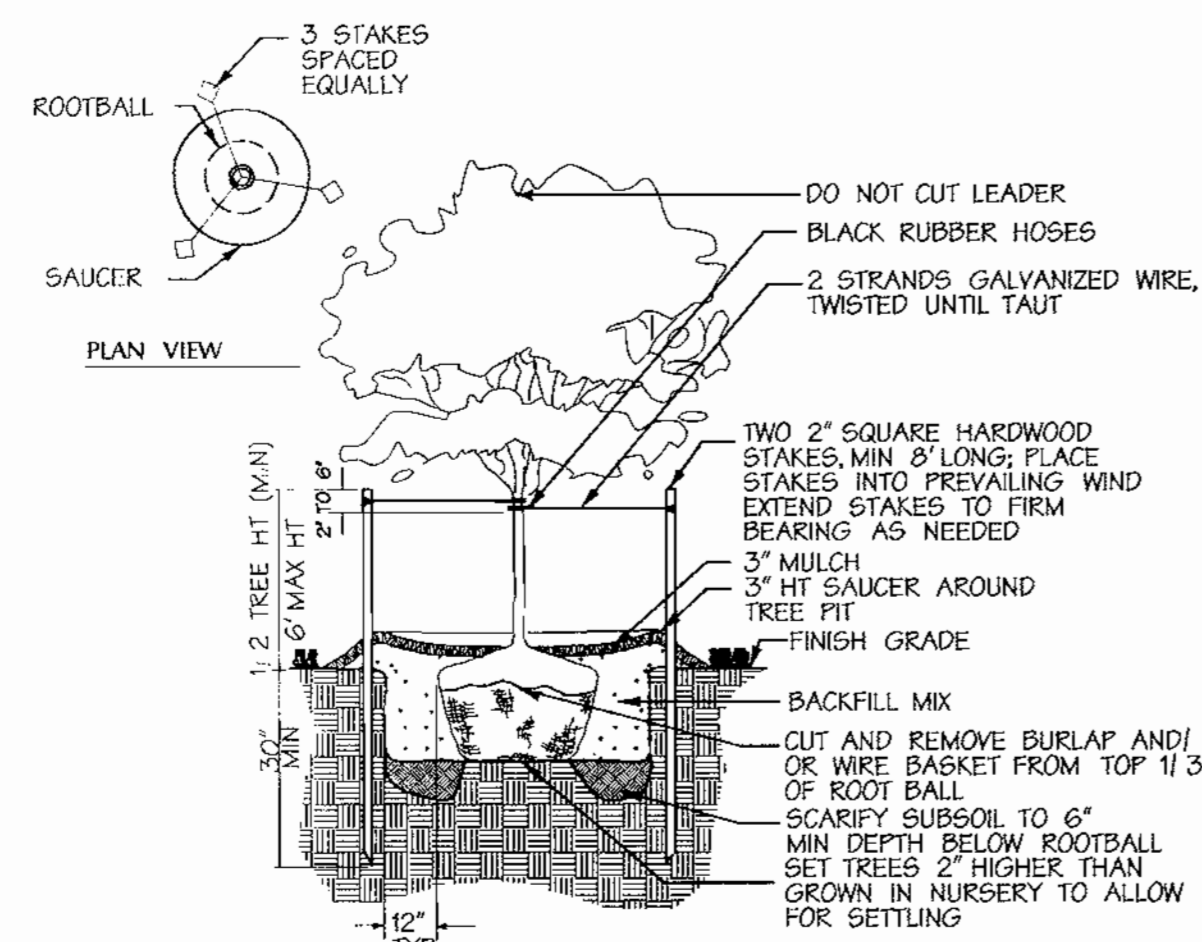
Clifford Jeffrey Schone 9/12/00
DATE
HOWARD S.C.D.



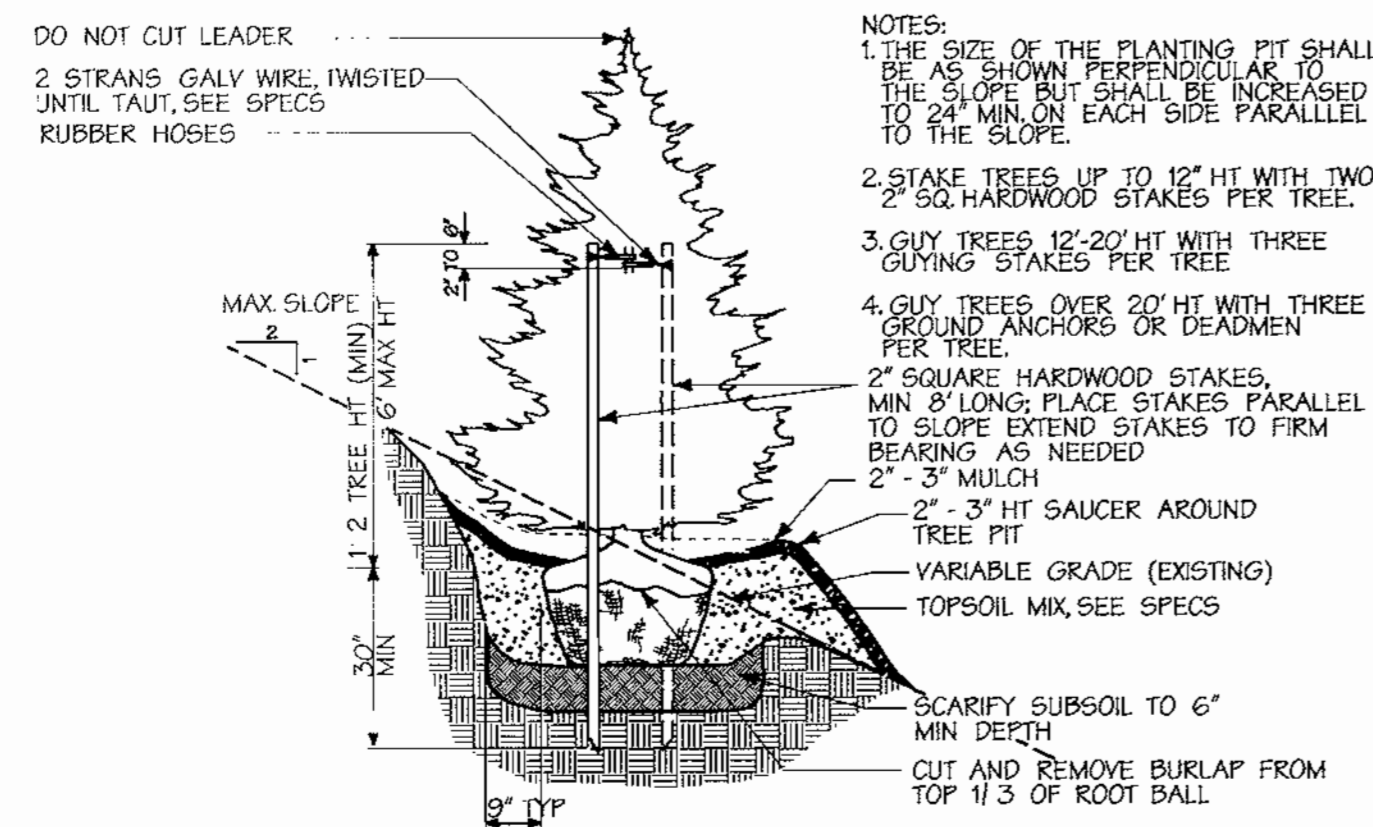
(A) Evergreen Tree Planting
Not To Scale



(A) Shrub Bed Planting
Not To Scale



(B) Less Than 3\"/> Cal. Tree Planting
Not To Scale



(C) Evergreen Tree Planting on Slope
Not To Scale

Landscape Notes

- The contractor shall review architectural/engineering plans to become thoroughly familiar with grading and surface utilities.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow. See Seasonal Plant List for planting times of bulbs and seasonal plants.
- The contractor shall coordinate with lighting and irrigation contractors regarding timing of installation of plant material.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. All discrepancies shall be reported to the landscape architect for clarification prior to bidding. The contractor shall furnish plant material in sizes as specified in plant list.
- The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball, and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- No substitutions shall be made without written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials.
- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting bed lines are not to be obstructed. Mulch shall have been shredded within the last six months.
- All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf, watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees shall be guaranteed for 12 months from the date of acceptance.
- The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soil conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, provide soil amendments as necessary. Proper planting soils must be verified prior to planting of materials.
- PLANTING MIX
 - Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
 - Thoroughly mixed in the following proportions for tree and shrub planting mix:
 - cy existing soil
 - cy sharp sand
 - cy wood residuals
 - 5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
 - For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 sf and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation.
 - cy sharp sand
 - cy organic material
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds and planters.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	LANDSCAPE CALCULATIONS
LINEAR FEET OF ROADWAY	PERIMETER A 480' L.F. OF LANDSCAPE TYPE 'E'		1 SHADE TREE @ 40' L.F. = 12 SHADE TREE 1 SHRUB @ 4' L.F. = 120 SHRUB
	PERIMETER A 183' L.F. OF LANDSCAPE TYPE 'D'		1 SHADE TREE @ 60' L.F. = 3 SHADE TREE 1 EVERGREEN @ 40' L.F. = 3 EVERGREEN
	PERIMETER A 182' L.F. OF LANDSCAPE TYPE 'D'		1 SHADE TREE @ 60' L.F. = 3 SHADE TREE 1 EVERGREEN @ 40' L.F. = 16 EVERGREEN
	PERIMETER B 66' L.F. OF LANDSCAPE TYPE 'E'		1 SHADE TREE @ 40' L.F. = 2 SHADE TREE 1 SHRUB @ 4' L.F. = 16 SHRUB
FRONTAGE / PERIMETER		PERIMETER C 508' L.F. OF LANDSCAPE TYPE 'A'	1 SHADE TREE @ 60' L.F. = 9 SHADE TREES
		PERIMETER C 122' L.F. OF LANDSCAPE TYPE 'C'	1 SHADE TREE @ 40' L.F. = 3 SHADE TREES 1 EVERGREEN @ 20' L.F. = 6 EVERGREENS
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)			NO
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)			NO
NUMBER OF PLANTS REQUIRED			SHADE TREES 31 EVERGREEN TREES 25 SHRUBS 136
NUMBER OF PLANTS PROVIDED			SHADE TREES 16 EVERGREEN TREES 29 OTHER TREES (2:1 SUBSTITUTION) 5 SHRUBS (10:1 SUBSTITUTION) 216

* SUBSTITUTIONS: 30 EVERGREEN TREES HAVE BEEN SUBSTITUTED FOR 15 SHADE TREES

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	510
Number of Trees Required @ 1/20 sp. = 26	
Number of Trees Provided	26
Shade Trees	
Other Trees (2:1 substitution)	
Number of Islands Required @ 1/20 sp.	26
Number of Islands Provided	29

Bonding Amount: 57 shade trees @ \$300
26 evergreen trees @ \$150
136 shrubs @ \$50
Total: \$24,900

Plant List

QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
SHADE TREES				
15	FP	FRAXINUS PENNSYLVANICA 'MARSHALL'S SEEDLESS' GREEN ASH	2 1/2" - 3" CAL. 12-14 HT	B & B FULL HEAD
11	QC	QUERCUS COCCINEA SCARLET OAK	2 1/2" - 3" CAL. 12-14 HT	B & B FULL HEAD
19	TC	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LINDEN	2 1/2" - 3" CAL. 12-14 HT	B & B FULL HEAD
FLOWERING TREES				
5	MH	MALUS 'HARGOZAM' HARVEST GOLD CRABAPPLE	8"-10" HT.	B & B LIMBED UP 5'
EVERGREEN TREES				
33	PA	PICEA ABIES NORWAY SPRUCE	6"-8" HT.	B & B UNSHADED
29	PS	PINUS STROBUS WHITE PINE	6"-8" HT.	B & B UNSHADED
SHRUBS				
84	BT	BERBERIS THUNBERGII 'CRIMSON PYGMY' CRIMSON PYGMY BARBERY	18-24" SPD	CONT 3" OC
205	FG	FORSYTHIA 'GOLD TIDE' GOLD TIDE FORSYTHIA	18-24" SPD	CONT 4" OC
131	JC	JUNIPERUS CHINENSIS 'SAN JOSE' SAN JOSE JUNIPER	18-24" SPD	CONT 3" OC
16	TM	TAXUS X MEDIA 'WARDII' SPREADING YEW	18-24" HT	B&B 4" OC

NOTE: FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$24,900
THIS PROJECT COMPLIES WITH REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION PER S.D.P. 98-11 AND F. 98-45

DEVELOPER'S / BUILDER'S CERTIFICATE

THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES & WALLS. ALL PLANT MATERIAL SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

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

David P. Hudson
NAME: DAVID P. HUDSON, ENV. TC MID ATLANTIC, INC. DATE: 8/1/00

9.6.00
Date
Melanie Mason
Landscape Architect No. 551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Cheryl D. Hamilton 9/14/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Condy Hamilton 9/25/00
CHIEF, DIVISION OF LAND DEVELOPMENT
David P. Hudson 9/25/00
DIRECTOR

Date	No.	Revision Description
10-23-00	1	REV. PERIMETER 'C' INFO.

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER: HOPKINS ROAD LIMITED PARTNERSHIP 2900 REE BRANCH ROAD, SUITE 200 COLUMBIA, MD 21046 781-482-9272/252
DEVELOPER: IRAMWELL GROW COMPANY 6075 LEONARDWAY BLDG. SUITE 410 BETHESDA, MD 20817

DMW
Daft McCune Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: Montpelier Research Park		SECTION AREA: NA	PARCEL #
PLAN: 14137	BLOCK # 17	TRACED MAP: PEC	PLAT: 41
WATER CODE: E21	SEWER CODE: 6440000	FISCAL DISTRICT: 5th	CENSUS TRACT: 605102

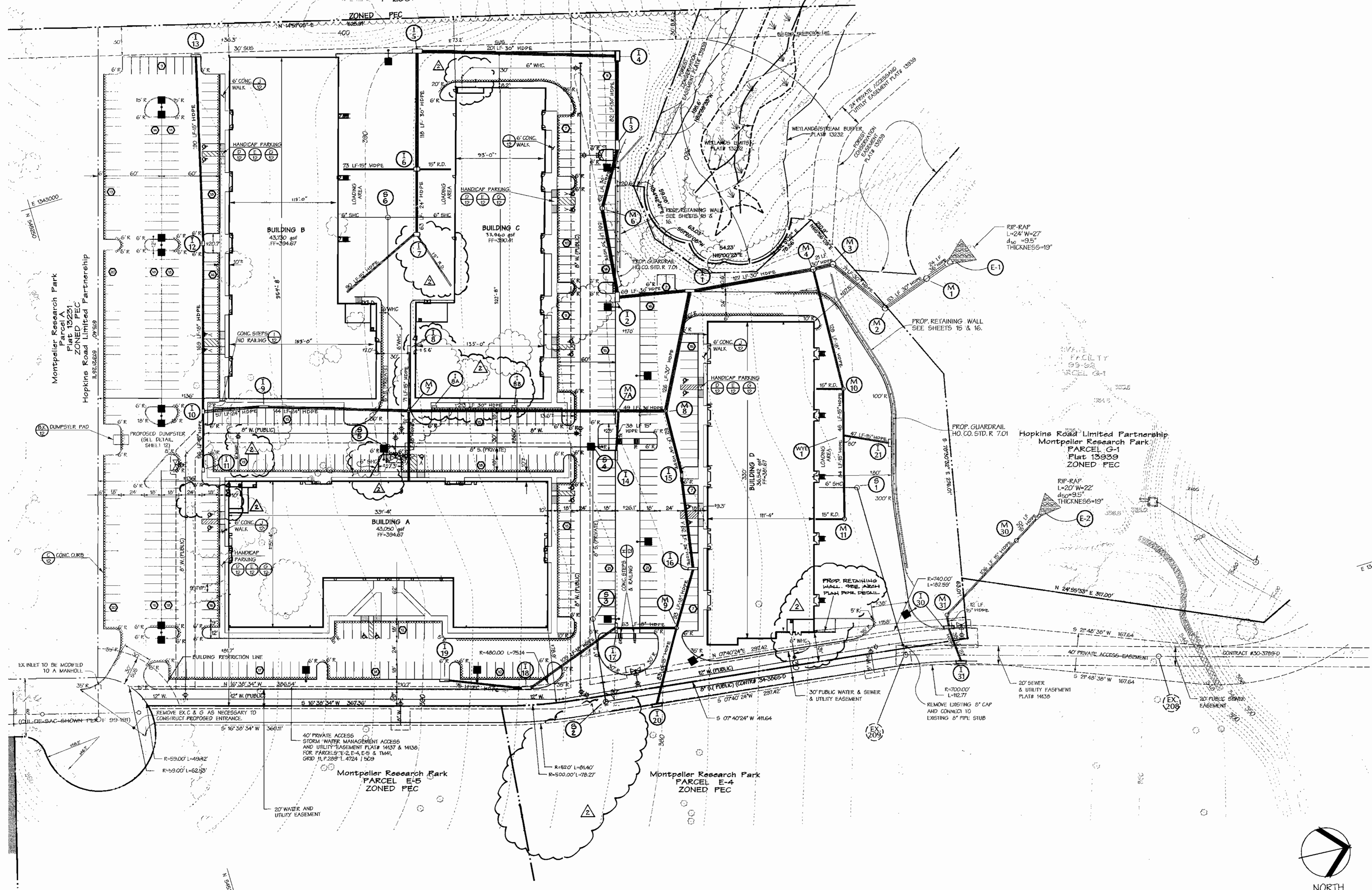
LANDSCAPE NOTES & DETAILS

Des By: Scale: 1"=50'
Dwn By: BRC Date: 7-27-00
Chk By: MM Approved: 14 OF 16
SDP-00-112

Johns Hopkins University
Applied Physics Laboratory
400/0625
P 289

LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
- - -	SOILS
...	EXISTING CONTOURS
...	PROPOSED CONTOURS
~	WETLAND/STREAM BUFFER
W	WETLAND
...	EXISTING TREES/ TREE LINE
---	STRUCTURE & USE SETBACK
Y	VAN HANDICAPPED PARKING
⊕	HANDICAPPED PARKING
⊙	PARKING COUNT
---	EXISTING STORMDRAIN
---	EXISTING SEWER
---	EXISTING WATER
---	PROPOSED STORM DRAIN
---	PROPOSED SAN SEWER
---	PROPOSED WATER
(M)	STORM DRAIN STRUCTURE
---	REVERSE CURB AND GUTTER
---	CURB AND GUTTER



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>Howard County</i>	9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chris Samanta</i>	9/27/00
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Joseph R. Raths</i>	9/29/00
DIRECTOR	DATE

10-29-00	1	REVISED RCP 10 HDPE + BLD+C SIZE
1-22-01	2	REVISED HHC TO BUILDING A,C&D, SD TO BUILDING C, GIC TO BLDG A, ADDED RETAINING WALL TO BLDG D, REMOVED GEMBE TO PARCEL E-4 + E-5, ADDED INLET I-8A & I-8B.

Date	No.	Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
FRANKMILL CROW COMPANY
6702 BRADDOCK BLVD, SUITE 410
BETHESDA, MD 20817

DMW
Dait - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

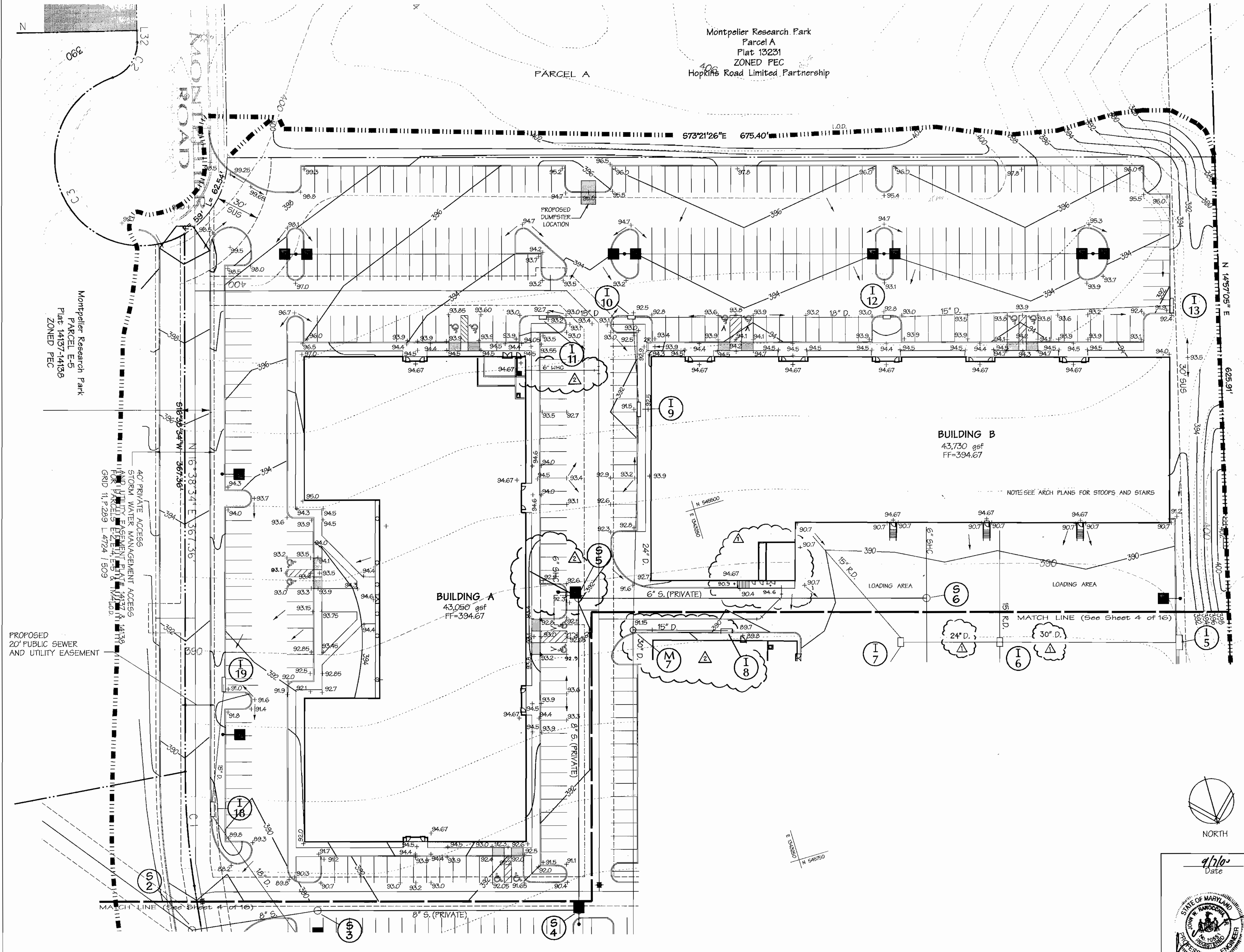
SUBDIVISION NAME Montpelier Research Park	SECTION AREA NA	PARCEL # PARCEL E-2
PLAT # 14137	TAXING MAP 41	ELECT. EGRESS 5th
PROJ. # 17	ZONE PEC	CENSUS TRACT 6051.02
WATER CODE E21	SEWER CODE 6440000	

SITE PLAN

Des By:	Scale: 1"=50'	Proj. No. 94171.T2
Drn By: CSC	Date: 8-30-00	2 OF 16
Chk By:	Approved:	

9/2/00
Date

Professional Engr. No. 10557



LEGEND

- | SYMBOL | DESCRIPTION |
|--------|---------------------------|
| --- | PROPERTY LINE |
| ~ | STREAM |
| --- | SOILS |
| --- | EXISTING CONTOURS |
| --- | PROPOSED CONTOURS |
| --- | WETLAND/ STREAM BUFFER |
| --- | WETLAND |
| --- | EXISTING TREES/ TREE LINE |
| --- | FLOODPLAIN |
| --- | 79.3+ SPOT ELEVATION |
| --- | FLOW ARROW |
| --- | GUARDRAIL |
| --- | DOUBLE HEAD LIGHT POLE |
| --- | SINGLE HEAD LIGHT POLE |

JOHN HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
4001 0625
P 289
ZONED PEC

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chris D... 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris Hamer 9/26/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Roth 9/29/00
DIRECTOR DATE

No.	Revision Description
10-23-00	1 REVISED UTILITY BOOM ENTRANCE
11-27-00	2 REVISED MHC TO BLDG A, SHC TO BLDG A I-8

Date No. Revision Description

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER
TRANSMISSION COMPANY
6075 BRADDOCK BLVD., SUITE 410
BETHESDA, MD 20817

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

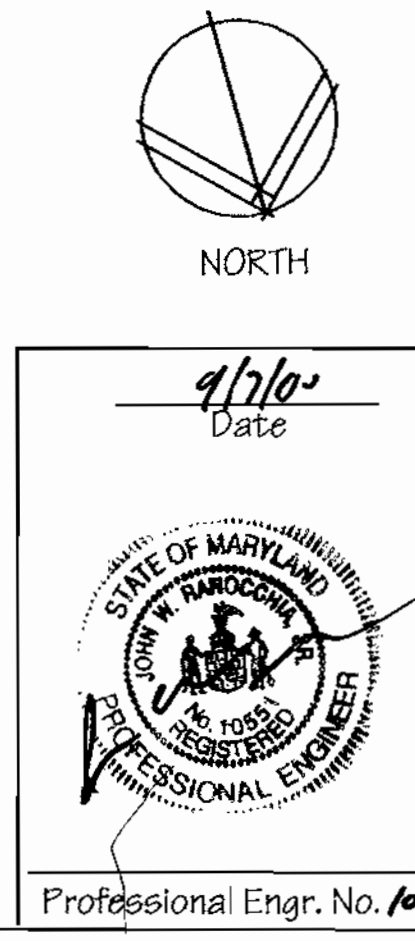
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 286 3333
Fax 296 4705

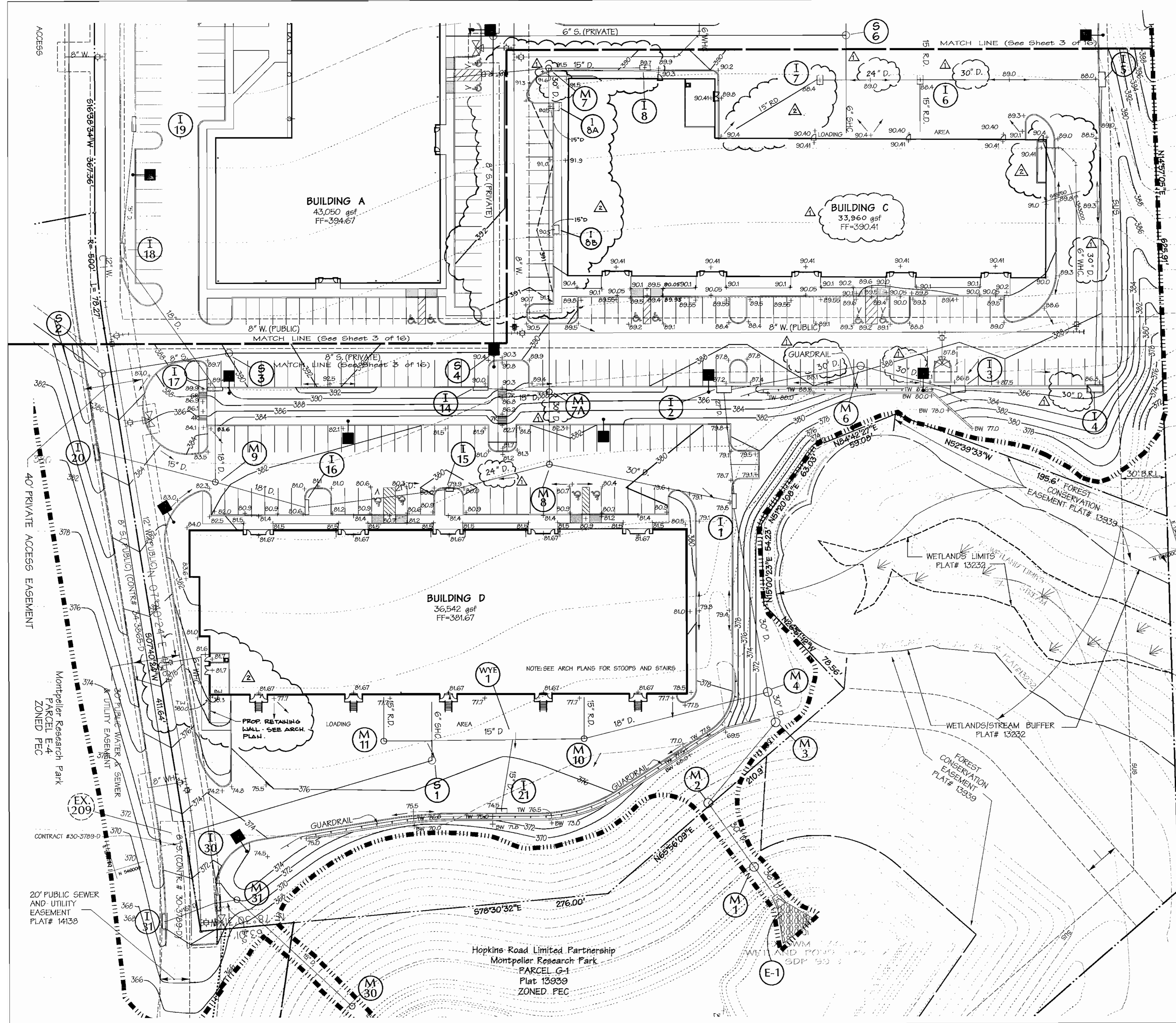
SUBDIVISION NAME: Montpelier Research Park SECTION AREA: NA PARCEL #: PARCEL E-2
PLAT: 14157 BLOCK #: 17 ZONING MAP: 5th DISTRICT: 5th CENSUS TRACT: 605102
WATER CODE: E21 SEWER CODE: 6440000

GRADING PLAN

Des By: Scale: 1"=30' Proj. No. 94171.T2
Dwn By: CSC Date: 8-30-00
Chk By: Approved: 3 OF 16

Professional Engr. No. 10351





LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
~	STREAM
---	SOILS
---	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	WETLAND/STREAM BUFFER
---	WETLAND
---	EXISTING TREES/TREE LINE
---	FLOODPLAIN
79.3+	SPOT ELEVATION
---	FLOW ARROW
---	GUARDRAIL
■	DOUBLE HEAD LIGHT POLE
■	SINGLE HEAD LIGHT POLE

JOHNS HOPKINS UNIVERSITY
 APPLIED PHYSICS LABORATORY
 4001 0625
 P 289
 ZONED PEC

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John Dammann 9/15/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 15 DATE

Cindy Hamrick 9/25/00
 CHIEF, DIVISION OF LAND DEVELOPMENT 17 DATE

Robert R. Smith 9/29/00
 DIRECTOR 18 DATE

Date	No.	Revision Description
10-23-00	1	REVISED BLDG 'C' SF & SD PIPE SIZES.
1-22-01	2	REVISED RD TO BLDG 'C', WMC TO BLDG 'C' & 'D', I-B ADDED WALL + SIDEWALK NE CORNER BLDG 'D', ADDED INLETS I-8A + I-8B, REVISED GRADING BETWEEN BLDG 'A' &

Montpelier Research Park
 PARCEL E-2
 HOWARD COUNTY MARYLAND

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

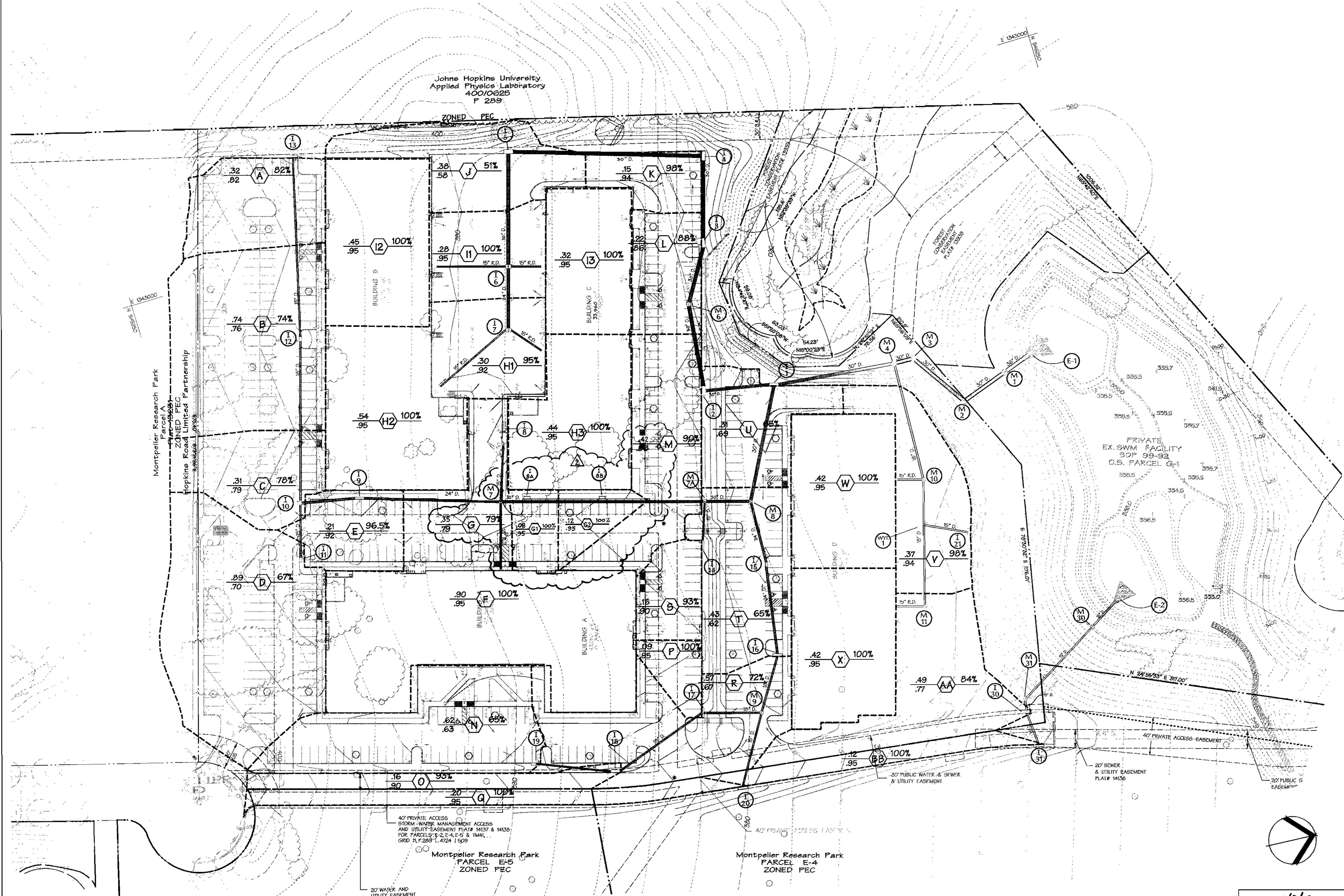
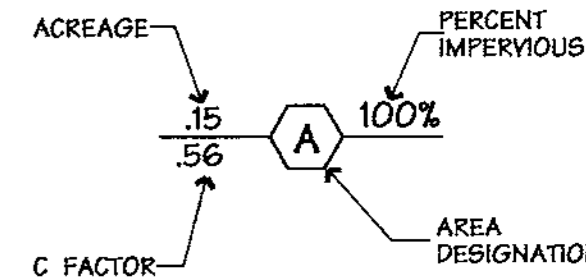
SUBDIVISION NAME	Montpelier Research Park	SECTIONAL AREA	NA	PARCELS #	PARCEL E-2
PLAT #	14137	BLDG #	17	PLANNING MAP	41
WATER CODE	E21	SUMMER CODE	6440000	PLANNING DISTRICT	5th
TITLE	GRADING PLAN				

Des By:	Scale: 1"=30'	Proj. No. 94171.12
Drn By: CSC	Date: 8-30-00	4 OF 16
Chk By:	Approved:	

9/7/00
Date

Professional Engr. No. 10551

LEGEND



ALL SOILS HYDROLOGIC GROUP B

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>John D. ...</i>	9/19/00
CHIEF DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy Hamilton</i>	9/18/00
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Joseph ...</i>	9/25/00
DIRECTOR	DATE

10-23-00	1	REVISED BLDG "C" SF AND 30" PIPE SIZES.
1-23-01	2	ADDED DA TO 1-8A & 1-8B

Date: No. Revision Description

Montpelier Research Park

PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER / DEVELOPER:
TRAMMELL CROW COMPANY
6000 BRADDOCK BLVD, SUITE 400
BETHESDA, MD 20817

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME		RECTOR AREA	PARCEL
Montpelier Research Park		NA	PARCEL E-2
PLAN	ZONE	VARZONED MAP	TRUST DISTRICT
14137	17	41	5th
WATER CODE		SEWER CODE	CENSUS TRACT
E21		6440000	605102

TITLE
DRAINAGE AREA MAP

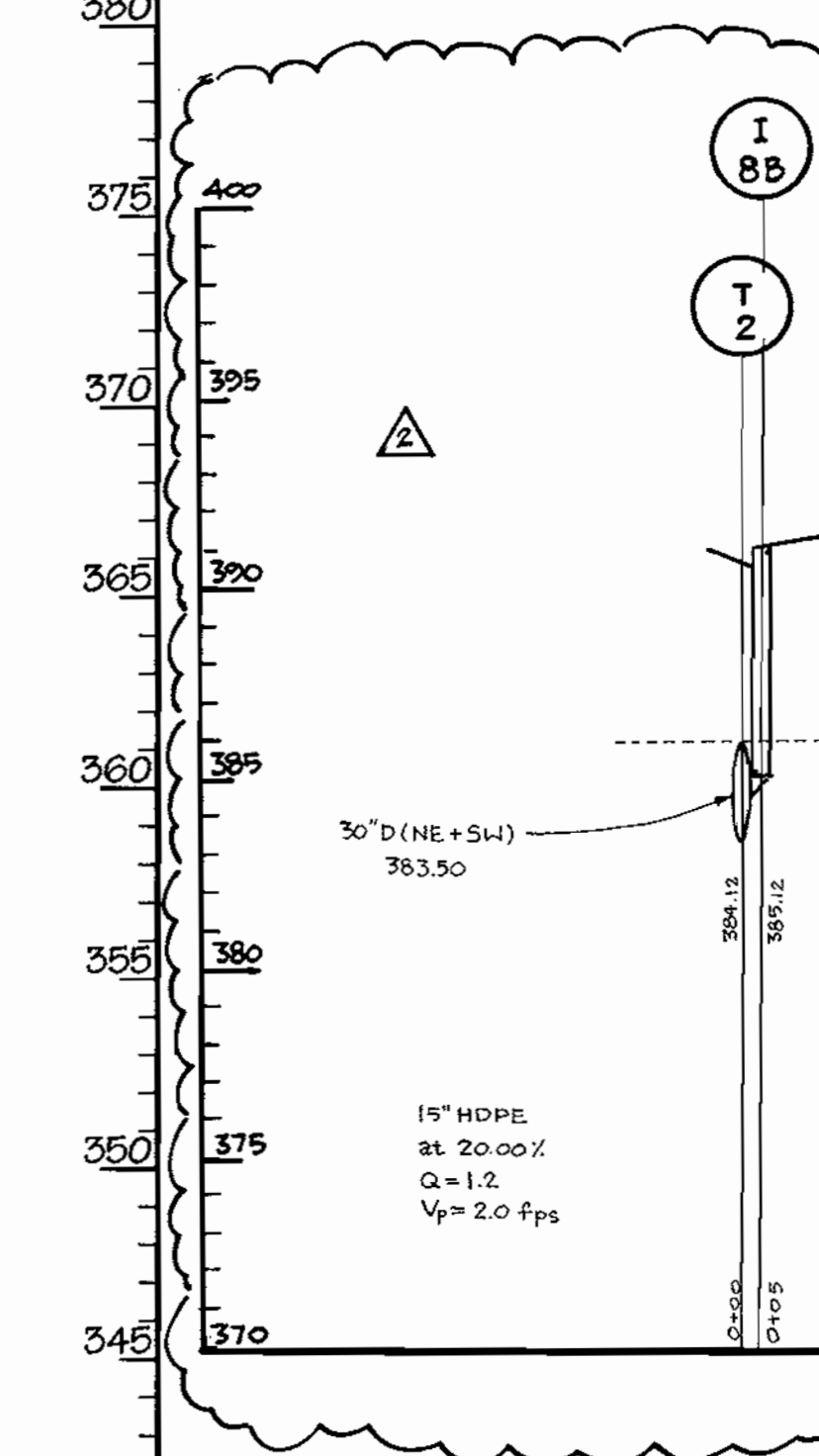
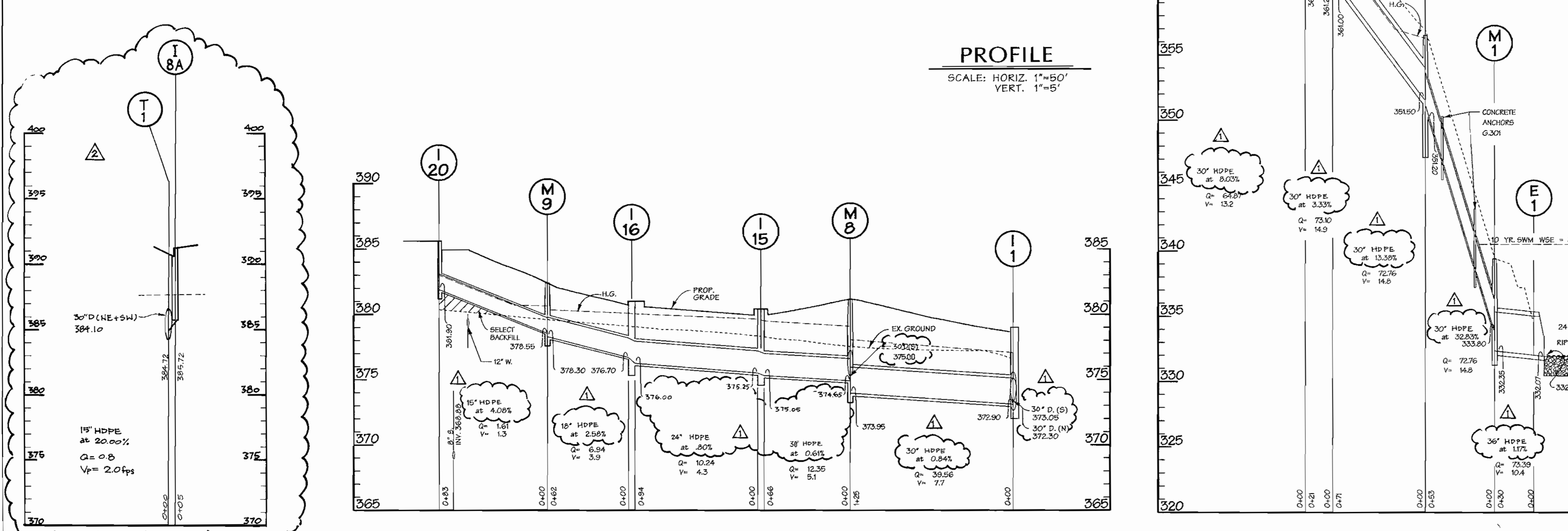
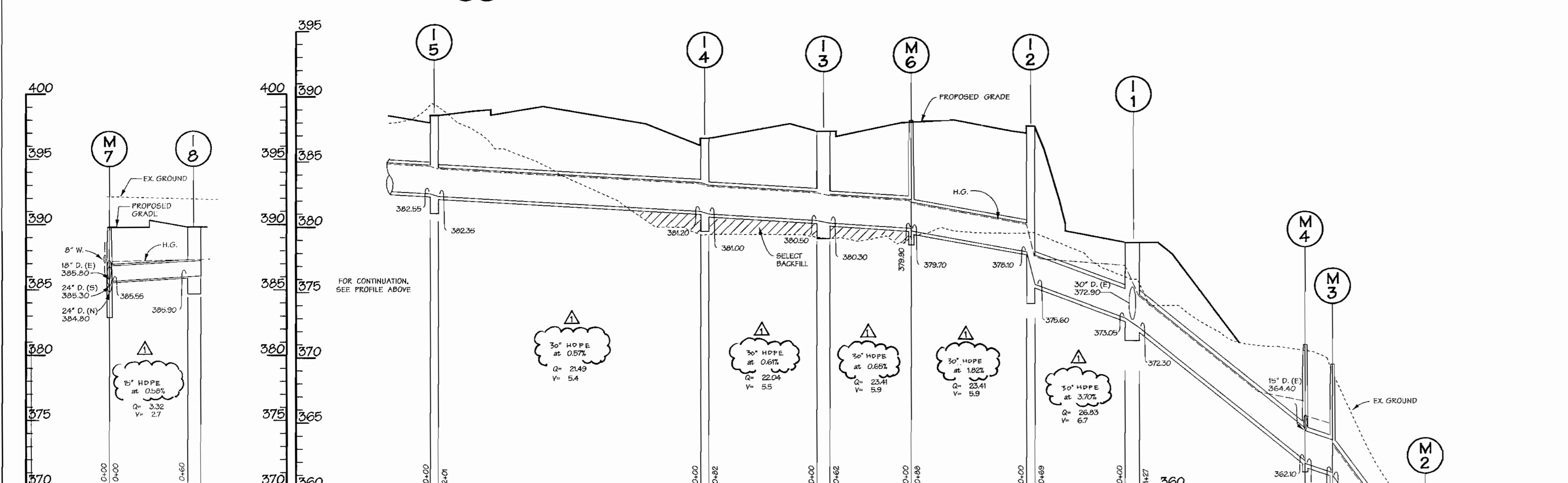
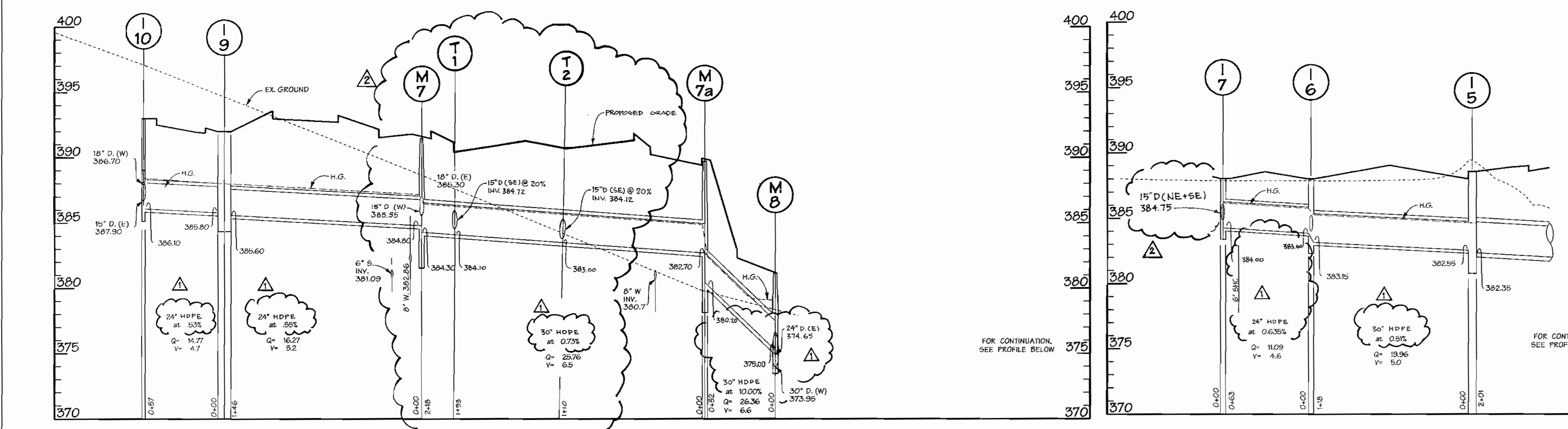
Des By:	Scale: 1"=50'	Proj. No. 94171.T2
Drn By: CSC	Date: 8-30-00	5 OF 16
Chk By:	Approved:	

9/7/00
Date

Professional Engr. No. 1055

STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.		REMARKS	COORDINATES	
				UPPER	LOWER		NORTH	EAST
I-1	A-10	373.05	372.30	379.00	379.00	SD 4.02 W= 3'-9"	545,882.2	1,343,279.4
I-2	A-10	378.10	375.60	387.70	387.70	SD 4.02 W= 3'-9"	545,806.4	1,343,262.0
I-3	A-10	380.50	380.30	387.30	387.30	SD 4.02 W= 3'-9"	545,801.6	1,343,110.9
I-4	A-10	381.20	381.00	386.80	386.80	SD 4.02 W= 3'-9"	545,879.2	1,343,022.0
I-5	A-10	382.55	382.35	388.50	388.50	SD 4.02 W= 3'-9"	545,881.7	1,342,960.5
I-6	DPL S	383.60	383.15	388.40	388.40	SD 4.23	545,646.9	1,343,075.8
I-7	DPL S	-	384.00	388.40	388.40	SD 4.23	545,627.6	1,343,140.6
I-8	DPL S COMB	-	386.00	389.70	389.70	SD 4.34	545,588.7	1,343,253.14
I-9	A-10	385.80	385.60	392.00	392.00	SD 4.02 W= 2'-6"	545,423.4	1,343,268.0
I-10	A-5	387.90	386.10	393.00	393.00	SD 4.01 W= 2'-6"	545,361.0	1,343,253.1
I-11	A-5	-	389.69	393.20	393.20	SD 4.01 W= 2'-6"	545,343.6	1,343,311.1
I-12	A-5	388.20	387.75	392.90	392.90	SD 4.01 W= 2'-6"	545,411.0	1,343,085.7
I-13	A-10	-	389.15	392.40	392.40	SD 4.02 W= 2'-6"	545,460.2	1,342,898.6
I-14	A-10	-	386.26	390.50	390.50	SD 4.02 W= 2'-6"	545,419.4	1,343,419.6
I-15	A-5	375.25	375.05	380.40	380.40	SD 4.01 W= 2'-6"	545,818.4	1,343,459.2
I-16	A-10	376.70	376.00	381.32	381.10	SD 4.02 W= 2'-6"	545,802.9	1,343,556.4
I-17	A-10	381.83	380.33	389.90	389.90	SD 4.02 W= 2'-6"	545,708.0	1,343,591.1
I-18	A-10	386.00	385.75	389.14	388.92	SD 4.02 W= 2'-6"	545,601.4	1,343,625.6
I-19	A-10	-	388.50	391.50	391.50	SD 4.02 W= 2'-6"	545,522.7	1,343,591.3
I-20	A-10	-	381.90	385.64	385.19	SD 4.02 W= 2'-6"	545,727.1	1,343,679.1
I-21	DPL S COMB	-	371.15	375.17	375.17	SD 4.34	546,008.4	1,343,489.1
I-30	A-10	367.69	367.49	371.66	371.15	SD 4.02 W= 2'-6"	546,040.9	1,343,690.9
I-31	A-10	-	367.90	372.00	371.66	SD 4.02 W= 2'-6"	546,043.1	1,343,726.7
M-1	6" MANHOLE	333.90	332.35	339.75	-	MD 384.05	546,122.4	1,343,336.2
M-2	8" MANHOLE	351.50	351.20	359.00	-	G 5.15	546,072.3	1,343,353.4
M-3	8" MANHOLE	361.20	361.00	369.50	-	G 5.15	546,033.4	1,343,294.1
M-4	8" MANHOLE	362.10	361.80	371.00	-	G 5.15	546,012.3	1,343,293.2
M-6	8" MANHOLE	379.90	379.70	388.16	-	G 5.15	546,819.9	1,343,169.8
M-7	4" MANHOLE	384.80	384.30	391.36	-	G 5.12	545,567.0	1,343,313.7
M-7a	4" MANHOLE	382.70	380.20	389.70	-	G 5.12	545,776.0	1,343,376.2
M-8	8" MANHOLE	374.65	373.95	381.15	-	G 5.15	545,822.9	1,343,390.2
M-9	4" MANHOLE	378.55	378.30	382.00	-	G 5.12 SHALLOW	545,789.2	1,343,609.4
M-10	4" MANHOLE	370.40	370.20	376.77	-	G 5.12	546,006.5	1,343,421.1
M-11	4" MANHOLE	372.65	372.45	376.79	-	G 5.12	545,969.1	1,343,551.0
M-20	4" MANHOLE	334.73	333.48	338.40	-	G 5.12 SHALLOW	546,134.1	1,343,623.2
M-31	4" MANHOLE	367.41	367.21	372.00	-	G 5.12 SHALLOW	546,042.8	1,343,676.8
WYE	15"X15" TEE FTG.	370.87	370.87	-	-	SD 1.11	546,006.5	1,343,421.1
E-1	HDPE	-	332.00	-	-	SD 5.81	546,162.7	1,343,325.8
E-2	HDPE	-	332.00	-	-	SD 5.81	546,165.0	1,343,604.7
I-8A	A-5	-	385.12	391.0	391.0	SD 4.01 W= 2'-6"	-	-
I-8B	A-5	-	385.12	391.0	391.0	SD 4.01 W= 2'-6"	-	-



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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Alvin Dammann 9/19/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Houston 7/25/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Scott Sauts 9/25/00
REGISTERED PROFESSIONAL ENGINEER DATE

Date	No.	Revision Description
10-23-00	1	REVISED RCP TO HDPE, PIPE SIZE & STRUCTURE
11-27-00	2	REVISED I-8, ADDED I-8A & I-8B

Montpelier Research Park
PARCEL E-2
HOWARD COUNTY MARYLAND

OWNER: DEVELOPER
REARFIELD CONN COMPANY
6701 DEMOCRACY BLVD, SUITE 410
BETHESDA, MD 20817

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 286 3333
Fax 296 4705

SUBDIVISION NAME	SECTION AREA	NA	PARCEL #
Montpelier Research Park	REARFIELD CONN COMPANY	41	PARCEL E-2

TITLE: **STORM DRAIN PROFILES**

Des By: Date: As Shown Proj. No. 94171.12
Drm By: MSS Scale: 8-30-00
Chk By: Approved: 6 OF 16

