

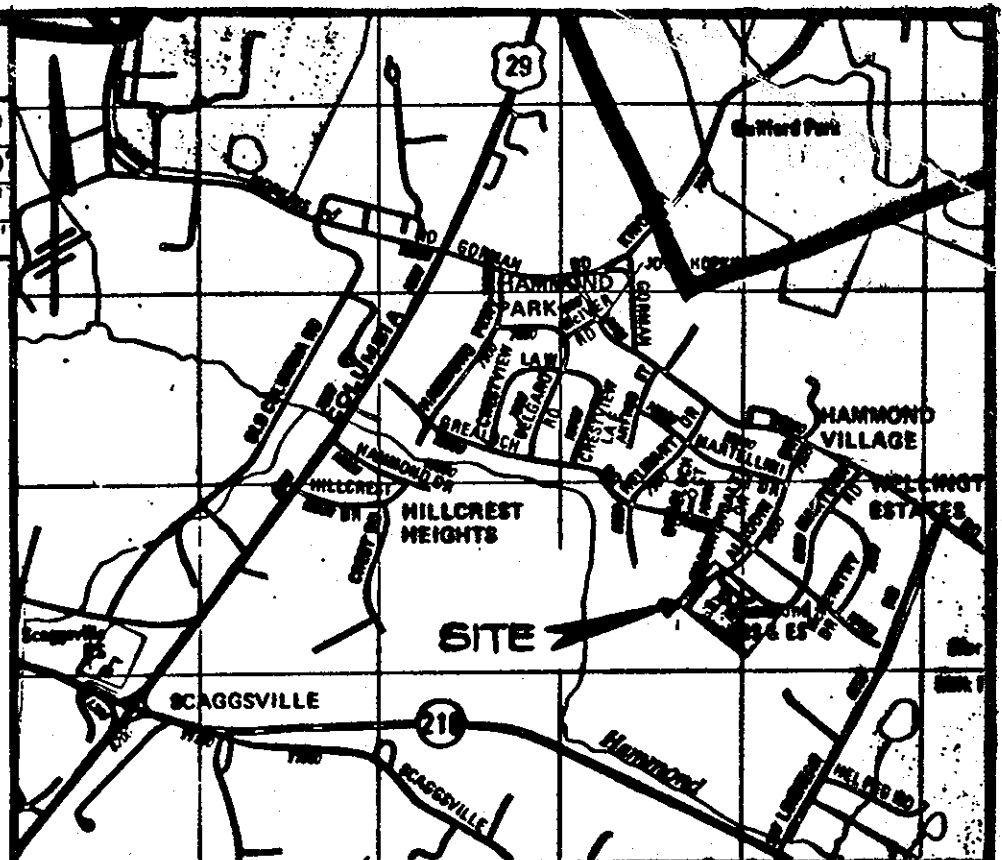
**SHEET INDEX**

SHEET No.	DESCRIPTION
1	SITE AND GRADING PLAN
2	SEWERAGE CONTROL PLAN
3	DETAILS AND PROFILES
4	ADDITIONAL SITE PLANS
5	BUILDING PLANS & ELEVATIONS
6	MICRO-BIORETENTION PLAN & BORING LOGS
7	MICRO-BIORETENTION FACILITY, NOTES & DETAILS
8	MICRO-BIORETENTION PROFILE, NOTES & DETAILS
9	

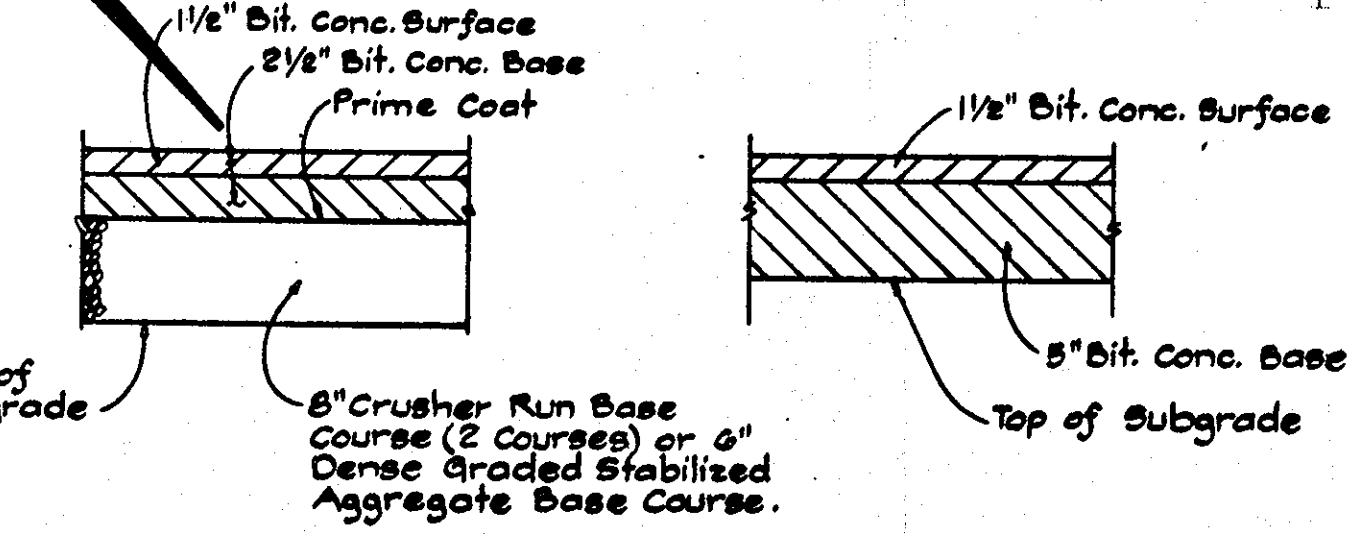
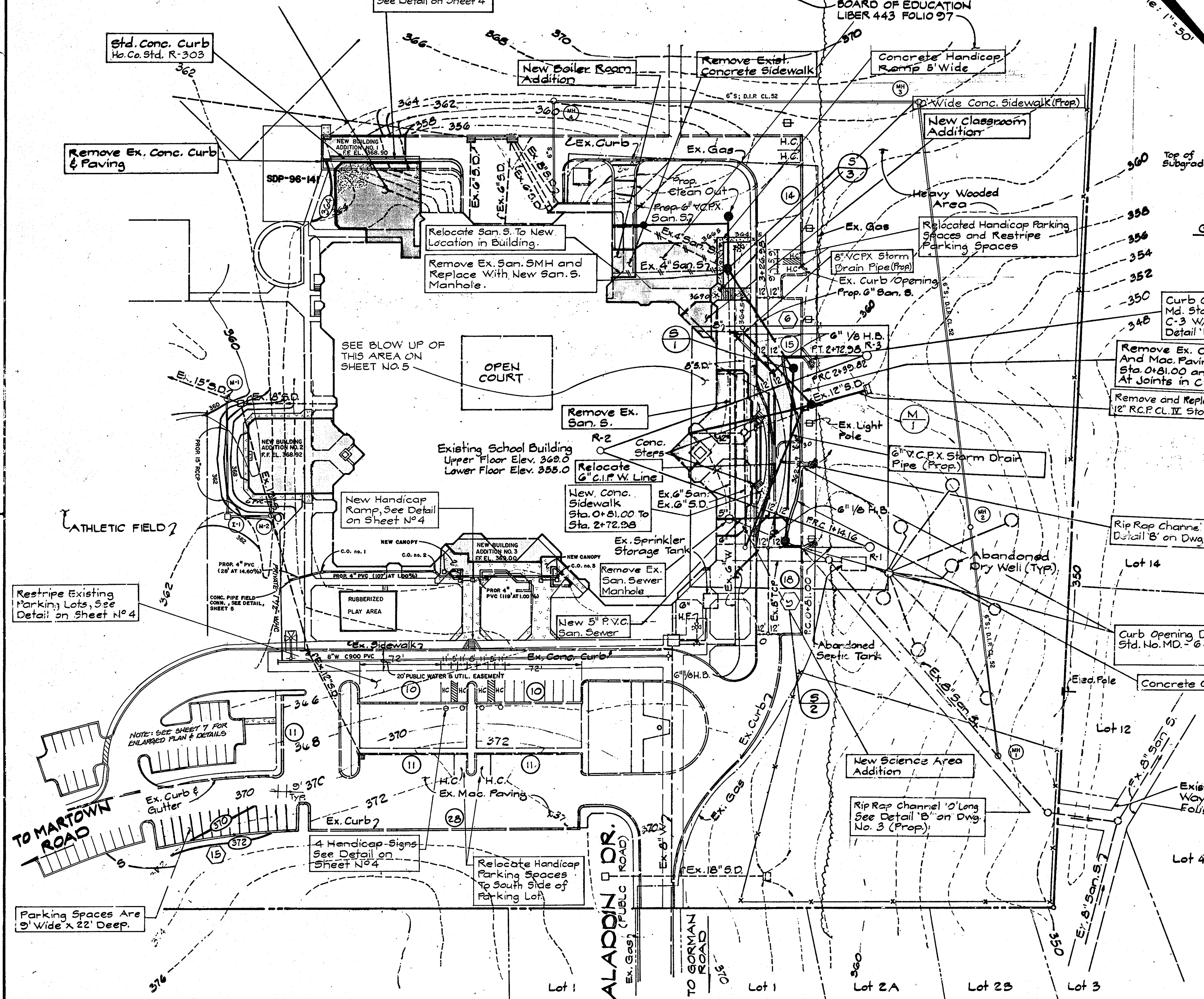
NOTE: "Fire Department" Egress and Ingress Must Be Maintained At All Times During Construction To The Rear of The Building.

**CURVE DATA**

NO	DELTA	DEGREE OF CURVE	RADIUS	TANGENT	ARC	M.O.	CHORD
1	20°00'00"	60°18'41"	95.00	16.75'	33.16'	1.44'	32.99'
2	40°00'00"	31°40'52"	180.00	48.51'	125.66'	10.86'	123.13'
3	20°00'00"	60°18'41"	95.00	16.75'	33.16'	1.44'	32.99'



**LOCATION MAP**  
Scale: 1" = 2000'



**PAVING SECTION USING P-2**  
Not To Scale

**LEGEND**

- 33.30.0 SPOT ELEVATIONS
- NOT IN CONTRACT
- ⊕ EXISTING LIGHT POLE
- ▭ NEW PAVING
- ▨ NEW CONCRETE SIDEWALK
- ▩ NEW BUILDING ADDITION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- ⊙ PROPOSED PARKING SPACES
- ⊖ EXISTING PARKING SPACES
- RIGHT OF WAY LINE
- ⊕ EXISTING MANHOLE
- ⊕ NEW MANHOLE

**GENERAL NOTES**

- Property Zoned: R-20
- Total Area of Property: 35.0 Acres
- Tax Map: 146
- Parcel: 259
- Parking Spaces Required: 125 Spaces
- Parking Spaces Provided: 166 Spaces
- Impervious Area Total Site: 6.1 Acres (17% of Total Area)
- Permeable Area Total Site: 28.9 Acres (83% of Total Area)
- Parking Lot Paving: 25,984 Sq. Ft. Interior Green Space: 15,290 Sq. Ft. (58% of Paving)
- Parking Spaces: 8' x 22'
- Existing Utilities Shown On Plan Are From Best Available Information And No Guarantee of Their Correctness or Completeness Can Be Given. Contractor Must Verify to His Own Satisfaction The Location And Elevation of All Utilities To His Complete Satisfaction.
- All Work to Be Done in Accordance With the Latest Howard County Design Manual "Standard Specifications and Details for Construction" As Amended to Date.
- 5'-0" Curb Radius At Curb Filets in Parking Lot.
- For Utility Trench Excavation Use Trench With Gravel Backfill Below Subgrade. See Ho. Co. Std. R-3-01.
- For Concrete Sidewalk See Ho. Co. Std. No. R-3-07. See Drawing 2 for Location of Sediment Control Devices.
- Ex. Handicap Parking Spaces Shown Will Be Relocated As Shown on Plan.
- The Contractor or Developer Shall Contact The Construction Inspection Division 24 Hours in Advance of Commencement of Work at 792-2650.
- Existing Roads at School Are For Use of:
  - SCHOOL BUSES
  - TEACHERS MAINTENANCE MEN, ETC.
  - PARENTS OF STUDENTS
- Full Plan and Elevations of Three New Buildings. See Sheet 6 of 9.
- See Sheet 5 of 9 for Structure and Fire Schedules
- THIS RESUBMISSION WILL BE EXEMPT FROM FOREST CONSERVATION BECAUSE THE LIMIT OF DISTURBANCE (L.O.D.) IS CONTAINED WITHIN THE PREVIOUS OR ORIGINAL L.O.D.
- TOTAL NUMBER OF HANDICAP SPACES REQUIRED = 7  
TOTAL NUMBER OF EXISTING HANDICAP SPACES = 8  
4 SPACES AT MAIN ENTRANCE, 4 SPACES AT THE REAR PARKING LOT.

**OWNER / DEVELOPER**  
HOWARD COUNTY PUBLIC SCHOOL  
10910 ROUTE 108 ELLICOTT CITY,  
MARYLAND 21043  
(301) 392-0503  
Mr. HENRY HORNUNG

**APPROVED**  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE: 6-17-87

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM HOWARD COUNTY HEALTH DEPARTMENT  
COUNTY HEALTH OFFICER: [Signature] DATE: 7-10-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
DIRECTOR: [Signature] DATE: 7-13-87

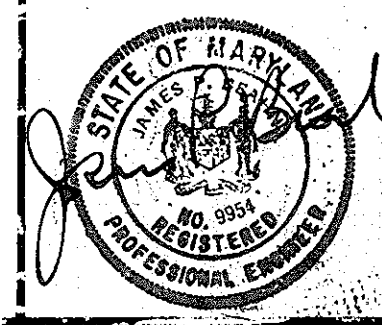
APPROVED: DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
DIRECTOR: [Signature] DATE: 7-13-87

PARCEL NUMBER	STREET ADDRESS	SUBDIVISION NAME	SECT. / AREA	PARCEL #
259	3110 ALADDIN DRIVE	HAMMOND ELEM./MIDDLE SCHOOL	6 / R-20	P-259
		PLAT OR L/F/BLOCK	TAX/ZONE MAP/ELEC. DIST	CENSUS TR.
		443 / 97	46	6TH
		WATER CODE	SEWER CODE	
		E17	7640000	

drawn by:	date	revisions
C.L.	8/28/09	THREE BUILDING ADDITIONS, PARKING ADDITION, RUBBERIZED PLAY AREA, SIDEWALKS, WATER, SEWER AND STORM DRAIN.
designer by:	G.G.	Added Private 1 1/2" W/C
checked by:	J.B.	Added Canopy & Roof Drains
	4/20/10	Added Sheets 7-9, Revised Parking Addition & Added Bus Loop
	6/21/10	
	8/17/10	

**SITE AND GRADING PLAN**

K.P.A. J.O. 86-153 (301) 467-1545  
kennedy, porter & associates  
consulting engineers  
baltimore, maryland  
2319 MARYLAND AVENUE  
BALTIMORE MARYLAND 21218



SCALE: 1" = 50'

**REVISED SITE DEVELOPMENT PLAN**  
ADDITIONS AND ALTERATIONS TO  
HAMMOND ELEM. / MIDDLE SCHOOL  
FOR BOARD OF EDUCATION  
HOWARD COUNTY, MARYLAND

date: 1/23/87  
sheet 1 of 9

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 Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer (6/2) Date 11/23/87  
HENRY MORNING SITE PLANNER 10910 RTE. 105  
992-0800 ELLICOTT CITY 21043

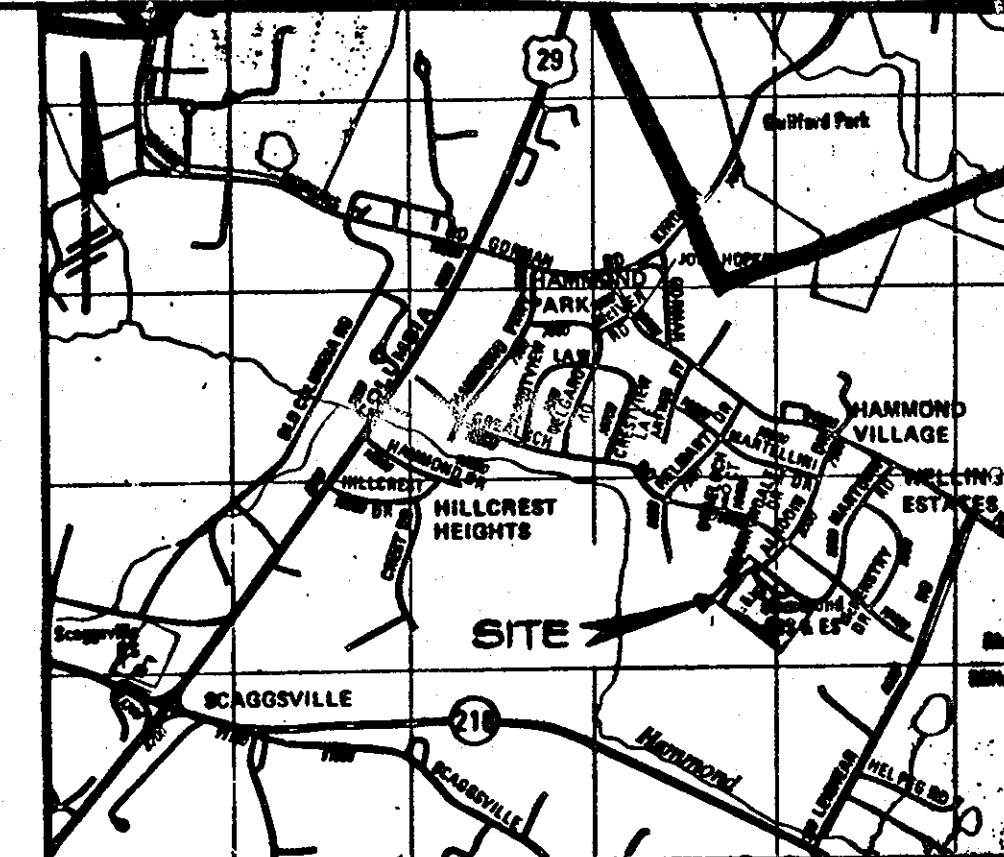
By the Engineer:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer Date 11/23/87  
JAMES P. SHANN P.E. #9954 KENNEDY PORTER & ASSOCIATES  
(301) 467-1645 2319 MARYLAND AVE.  
BALTO. MD. 21210

Signature of Engineer Date 7-8-87  
U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
Howard S.C.D. Date



LOCATION MAP  
Scale: 1" = 2000'

**LEGEND**

363.0	SPOT ELEVATIONS	→	DRAINAGE DIRECTION
N.I.C.	NOT IN CONTRACT	○	DRAINAGE AREA
⊕	EXISTING LIGHT POLE	▨	CONTRACTOR'S STOCK
□	NEW PAVING	▨	CONTRACTOR'S STORAGE
▨	NEW CONCRETE SIDEWALK	—S—	SILT FENCE (DIRT)
▨	NEW BUILDING ADDITION	—S—	SILT FENCE (PAVING)
---	EXISTING CONTOURS	—P—	INLET PROTECTION
---	PROPOSED CONTOURS	△	STABILIZED AREA
○	PROPOSED PARKING SPACES	.....	LIMIT OF DISTURBANCE
○	EXISTING PARKING SPACES		
—	RIGHT OF WAY LINE		

**STABILIZATION SCHEDULE**

AREA	ACTIVE	INACTIVE	SQ. FT.	TYPE OF STABILIZATION
A			11,725	PAVING
B			8,200	SEED AND MULCH
C			20,415	BUILDING

**SITE ANALYSIS**

TOTAL AREA OF SITE	35.00 ACRES
* AREA DISTURBED	0.92 ACRES
C.Y. OF CUT	50 CU. YDS.
C.Y. OF FILL	32.00 CU. YDS.
CUT/FILL RATIO	50/3200 CU. YDS.
	*(40,075 Sq. Ft.)

APPROVED  
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE: 6-17-87

REVISION 8/25/09/4/2/10  
FISHER CUMMINGS CARTER, INC.  
REVISION 6/11/10

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM HOWARD COUNTY HEALTH DEPARTMENT  
COUNTY HEALTH OFFICER DATE 7-11-87

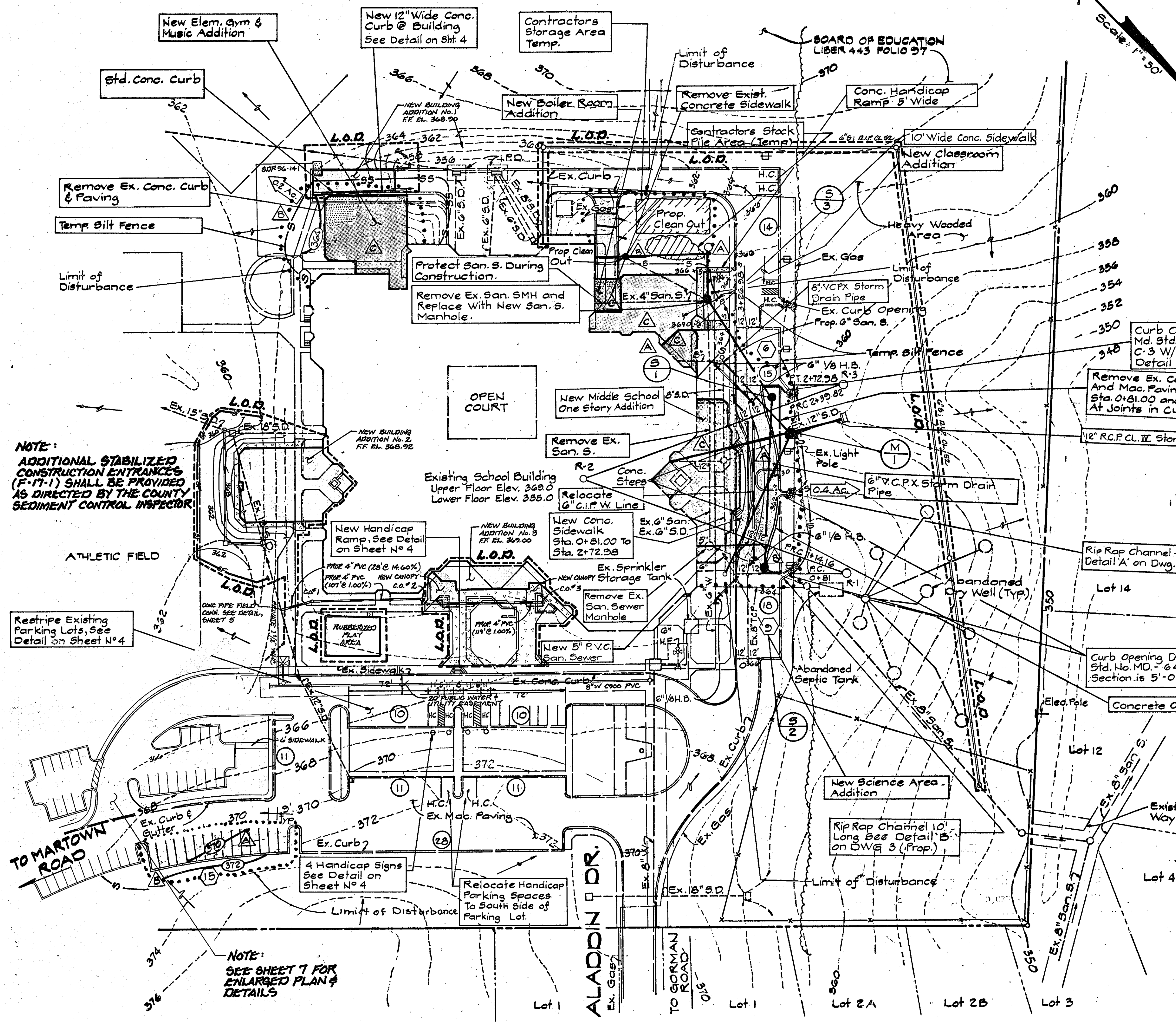
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
DIRECTOR DATE 7-13-87

APPROVED: DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
DATE 7-13-87

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM & PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DIRECTOR DATE 7/13/87

CHIEF BUREAU OF ENGINEERING DATE 7-9-87

ADDRESS CHART	SUBDIVISION NAME	SECT. / AREA	PARCEL #
PARCEL NUMBER	HAMMOND ELEM/MIDDLE SCHOOL	—	P-259
STREET ADDRESS	PLAT OR L/F/BLOCK	ZONE	TAX/ZONE MAP/ELEC. DIST. CENSUS TR.
259	443 / 97 . 6	R-20	46" 6TH 6062
8110 ALADDIN DRIVE	WATER CODE	SEWER CODE	
	E17	7640000	



**NOTE:**  
ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES (F-17-1) SHALL BE PROVIDED AS DIRECTED BY THE COUNTY SEDIMENT CONTROL INSPECTOR.

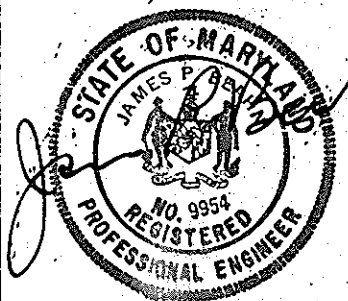
**NOTE:**  
EARTH WORK VOLUMES SHOWN ARE FOR THE ENGINEERS USE TO DETERMINE SEDIMENT CONTROL MEASURES AND ARE NOT PRECISE QUANTITIES.

**NOTE:**  
SEE SHEET 7 FOR ENLARGED PLAN & DETAILS

drawn by:	date	revisions
C.L.	8/26/09	THREE BUILDING ADDITIONS, PARKING ADDITION, RUBBERIZED PLAY AREA, SIDEWALKS, WATER, SEWER & STORM DRAIN
G.G.	4/24/10	Added Private 1/2" WHC
J.B.	4/21/10	Added Canopy And Roof Drains
	8/17/10	Added sheets 7-9, Revised Parking Addition & Added Bus Loop

**SEDIMENT CONTROL, PLAN**

K.P.A. J.O. 86-153 (301) 467-1645  
Kennedy, porter & associates  
consulting engineers  
baltimore, maryland  
2319 MARYLAND AVENUE  
BALTIMORE MARYLAND 21218

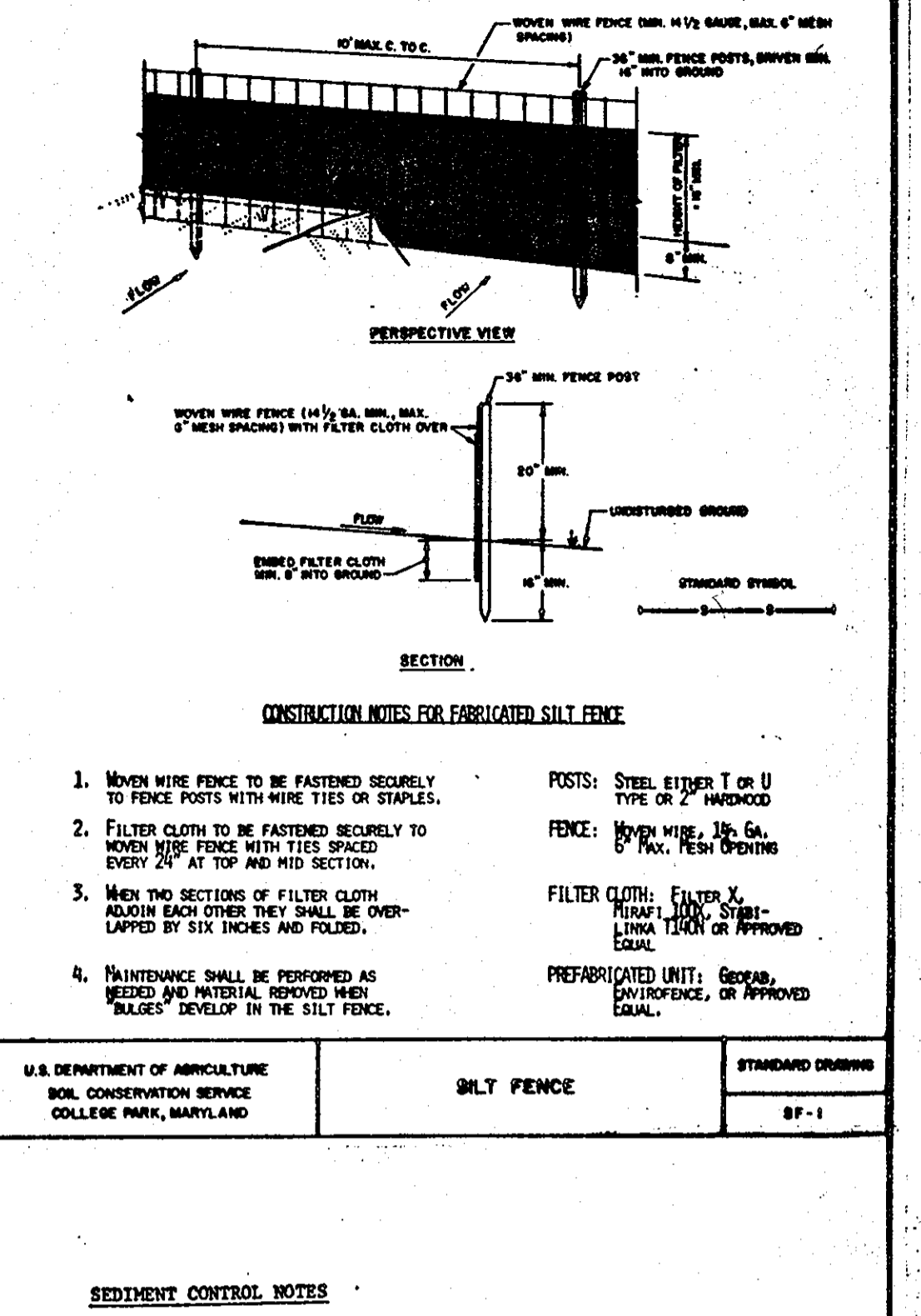
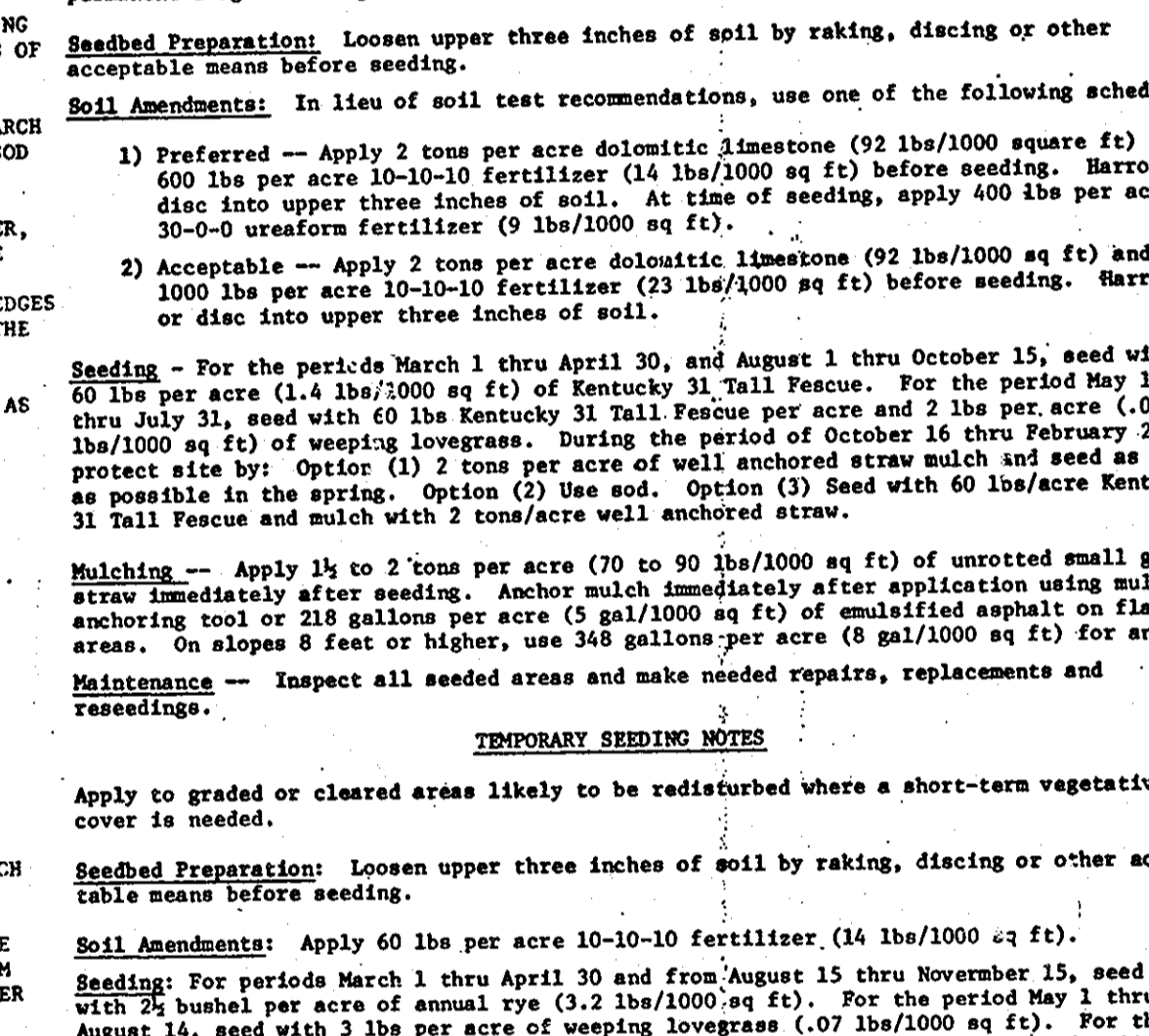
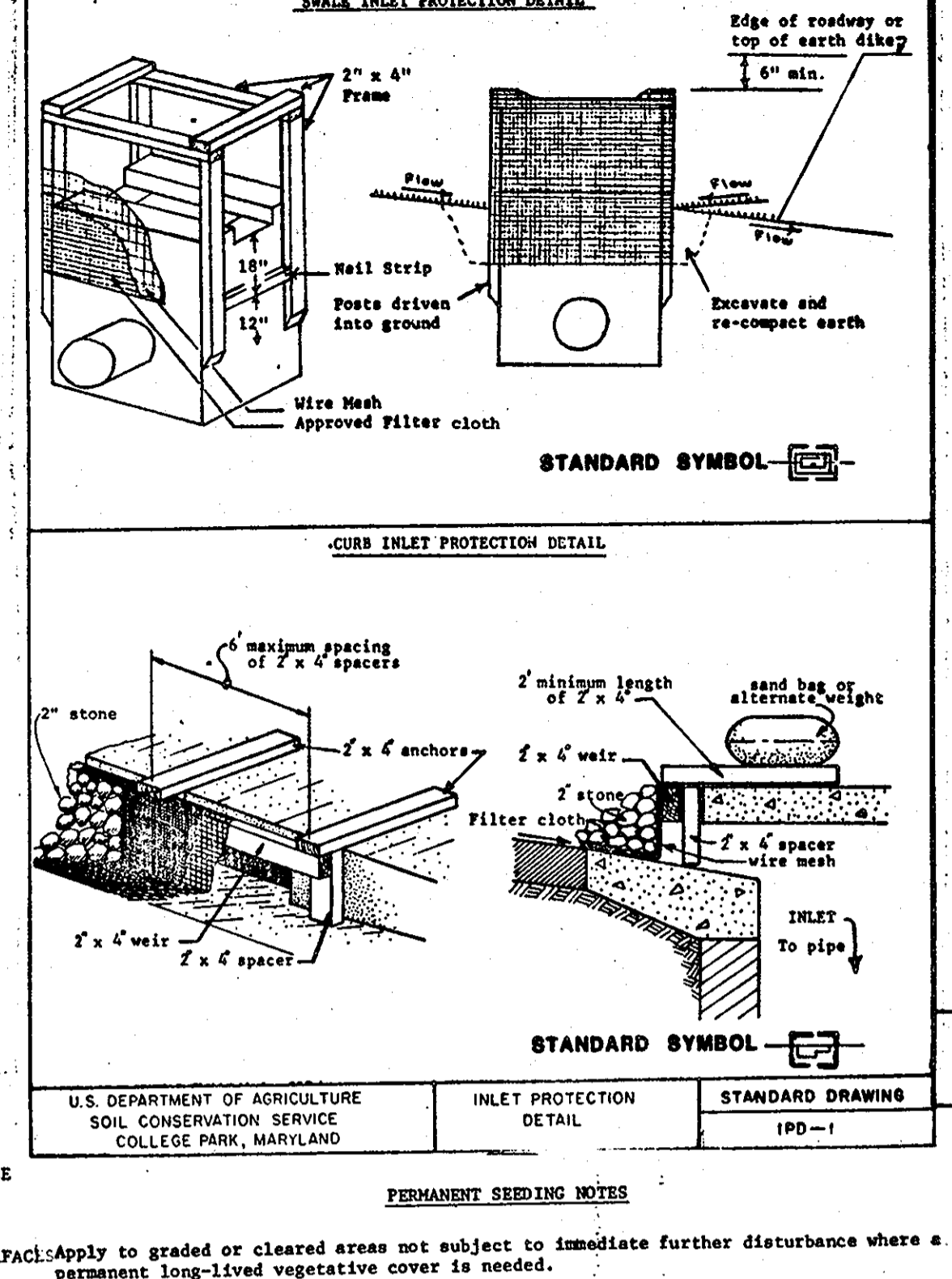
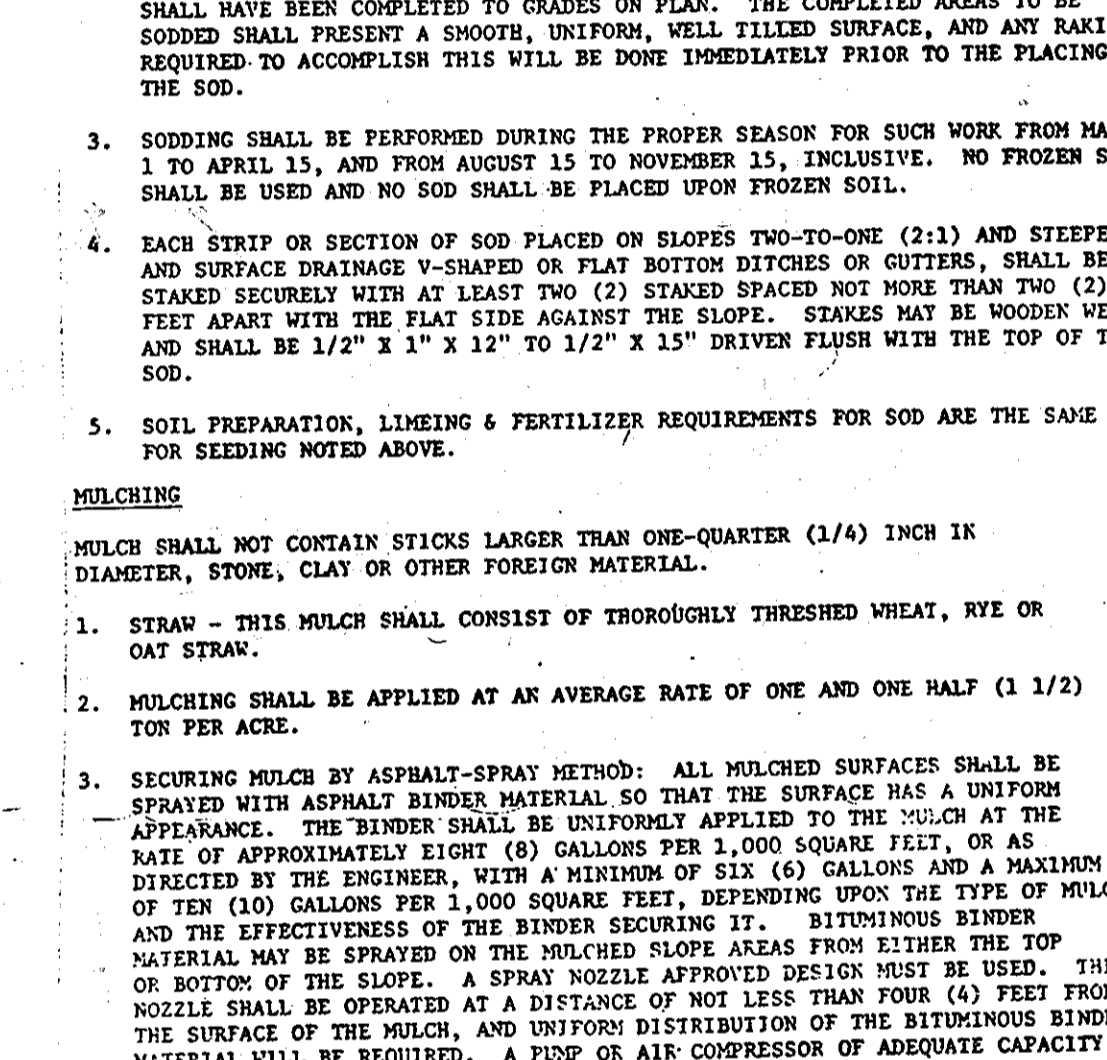
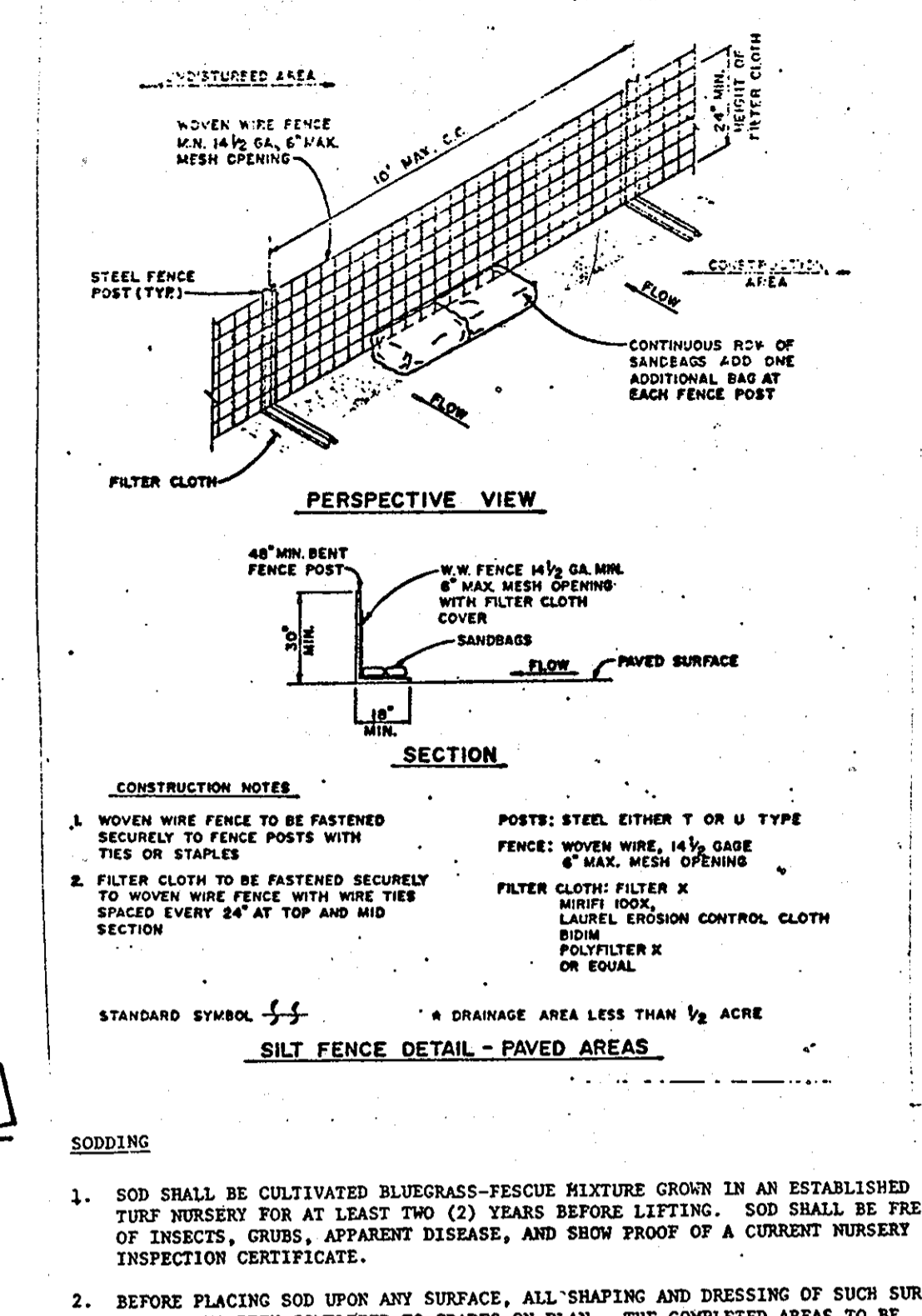
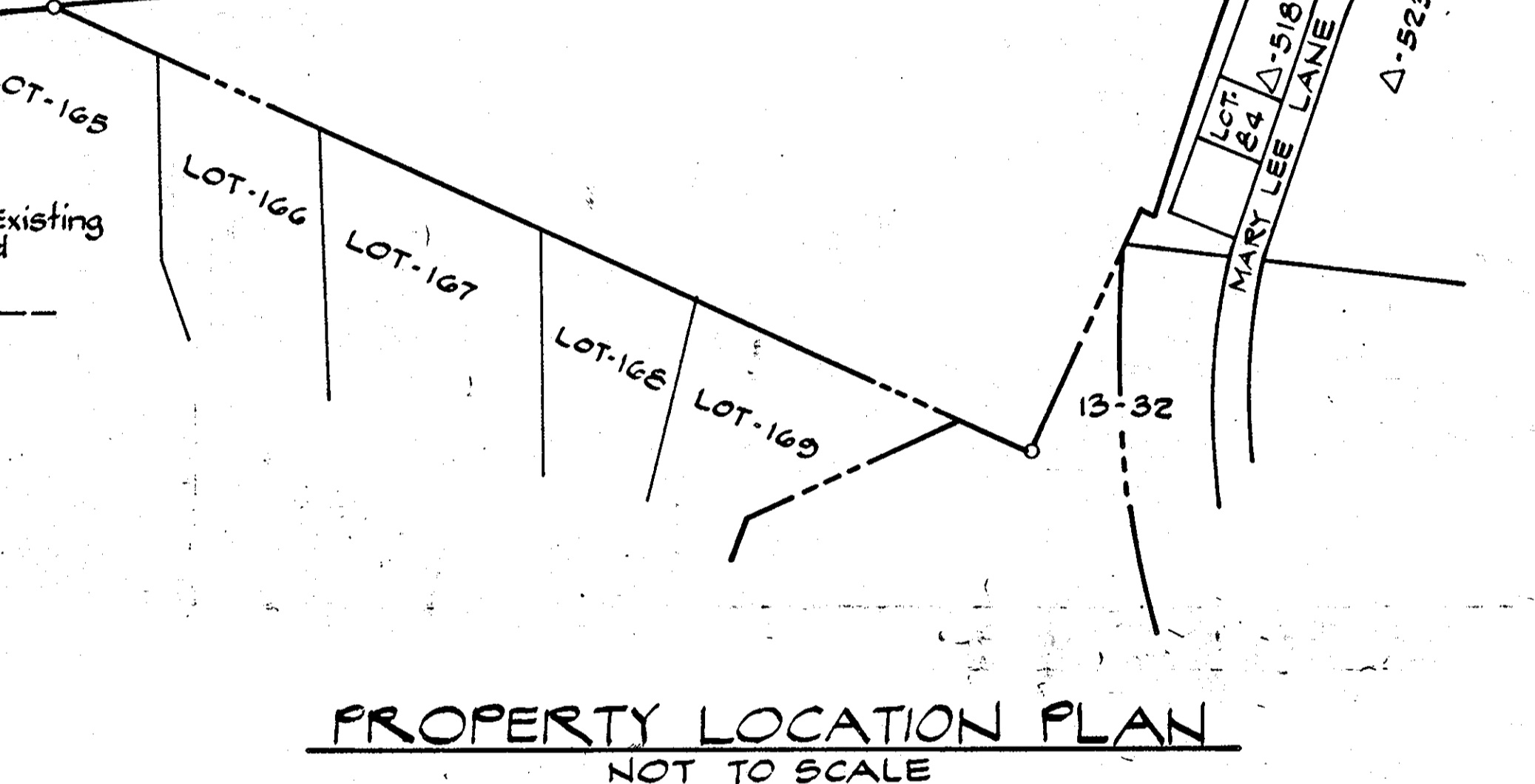
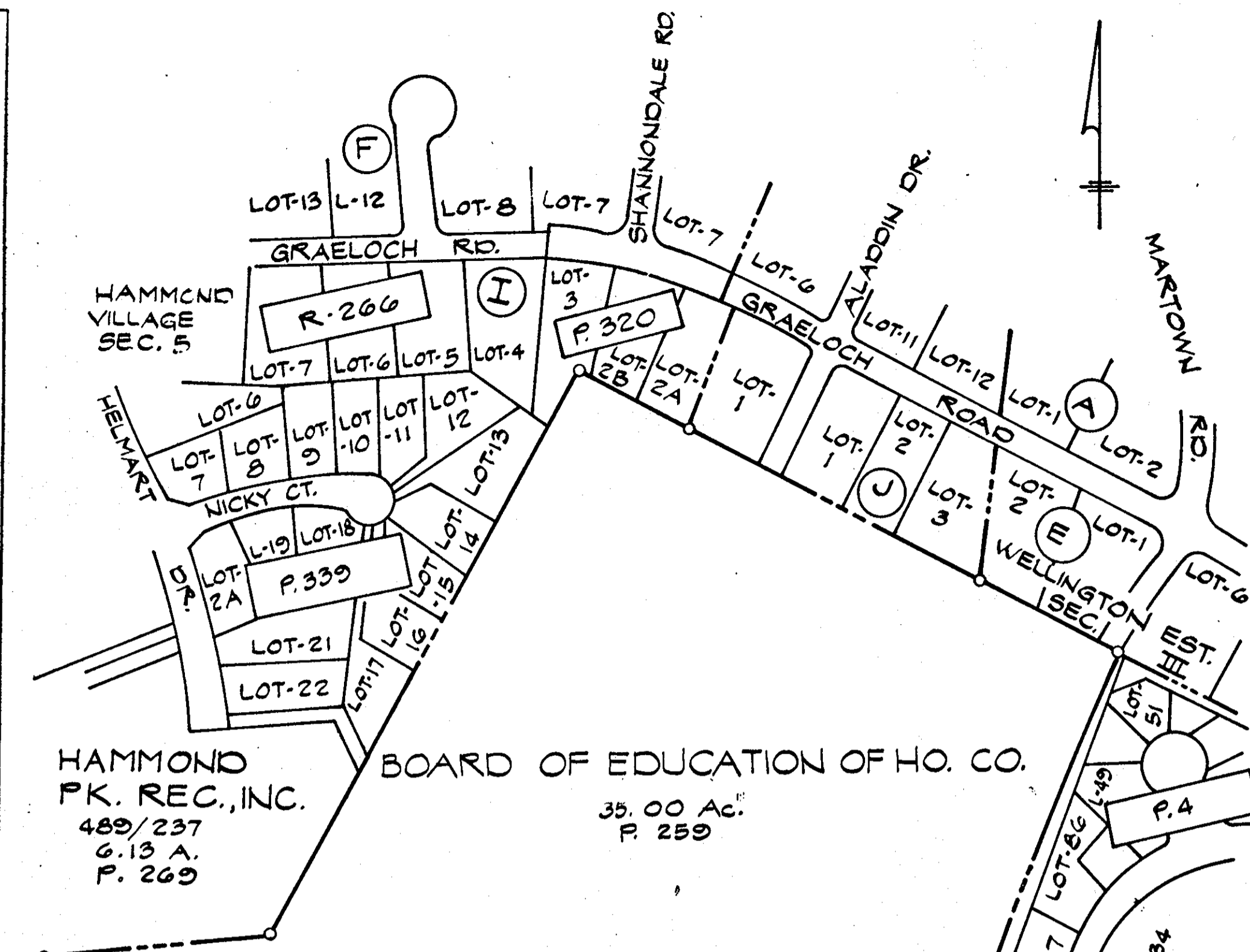
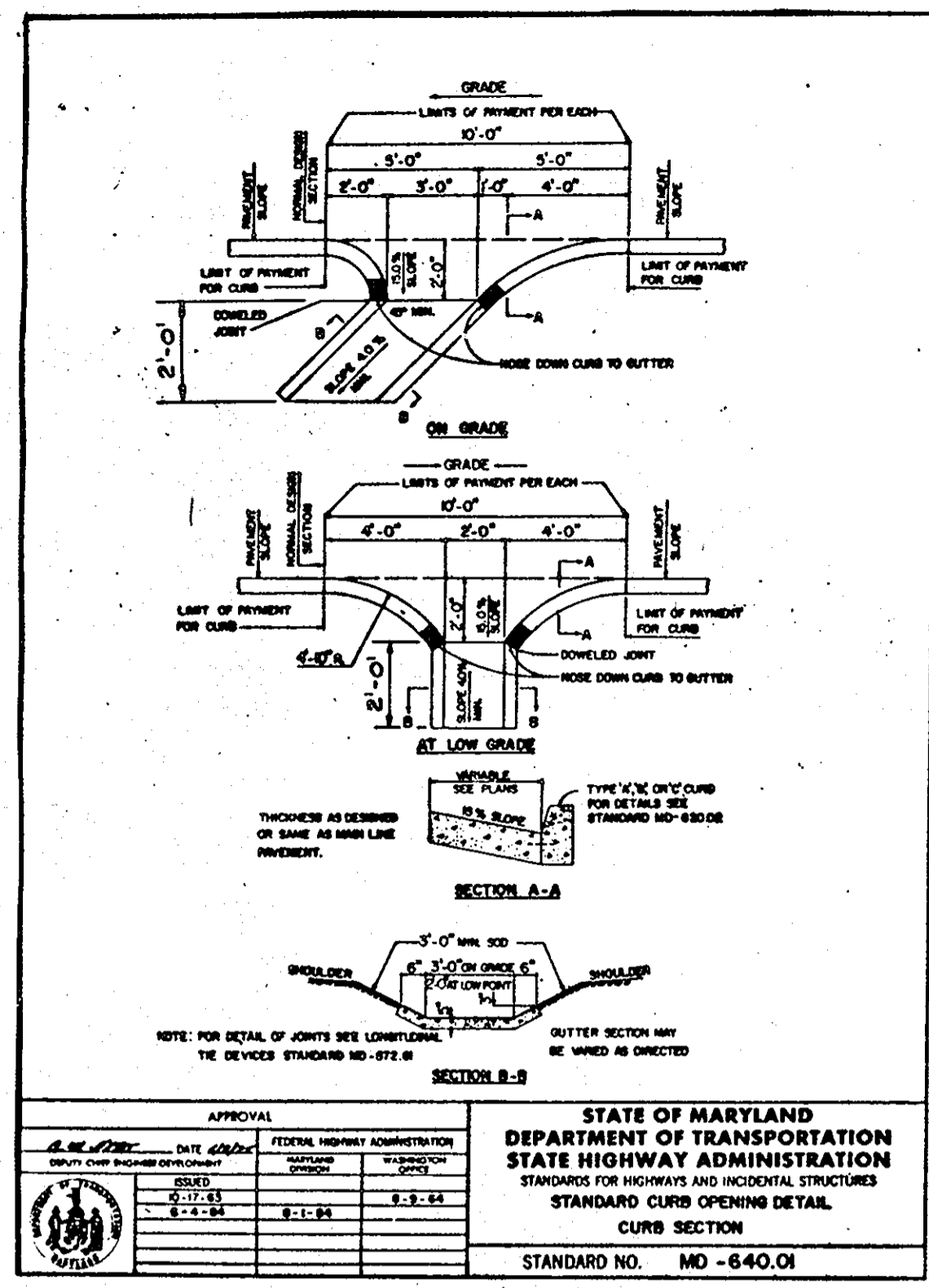


SCALE: 1" = 50'

ADDITIONS AND ALTERATIONS TO  
HAMMOND ELEM. / MIDDLE SCHOOL  
FOR BOARD OF EDUCATION  
HOWARD COUNTY, MARYLAND

date: 1/23/87

sheet 2 of 9



drawn by:	date	revisions
C.L.	8/25/09	THREE BUILDING ADDITIONS, PARKING ADDITION, RUBBERIZED PLAY AREA, SIDEWALKS, WATER, SEWER AND STORM DRAIN.
designed by:	G.G.	Added Sheets 7, 8 & 9
checked by:	J.B.	

**SEDIMENT CONTROL DETAILS, NOTES AND GENERAL DETAILS**

K.P.A. J.O. 86-153. (301) 467-1645  
Kennedy, Porter & associates  
consulting engineers  
baltimore, maryland  
2319 MARYLAND AVENUE  
BALTIMORE MARYLAND 21218



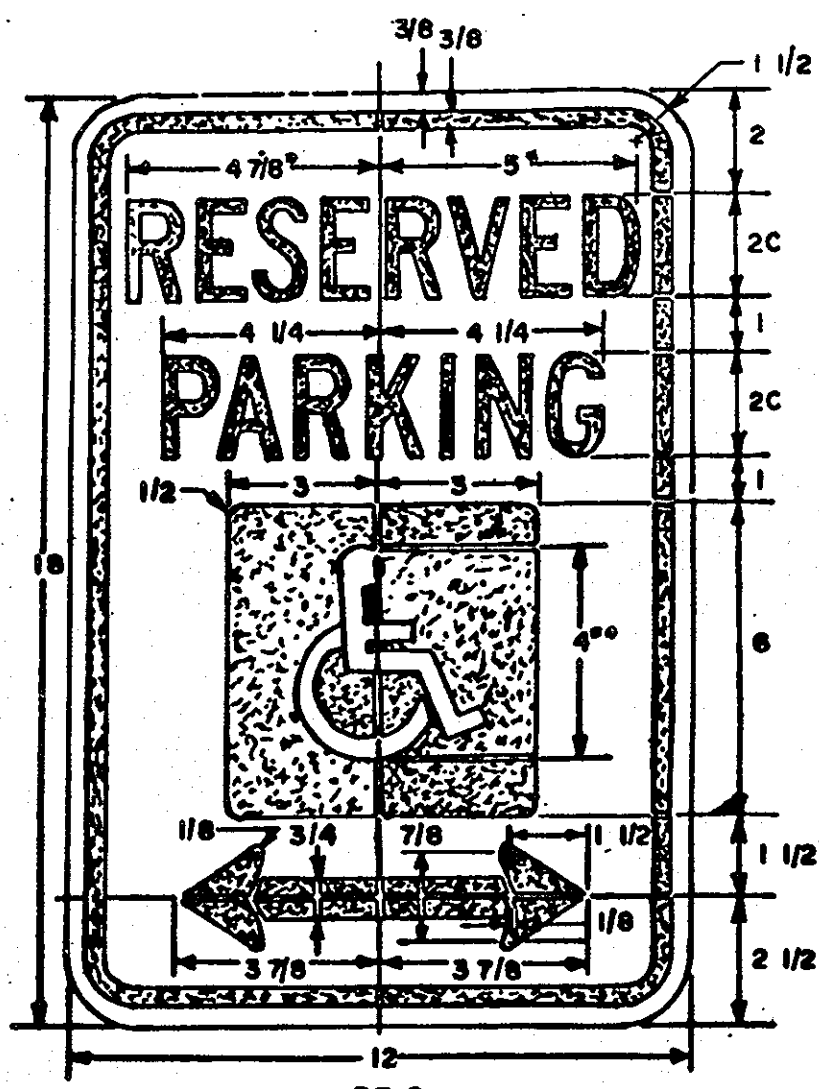
SCALE: AS SHOWN

TAX MAP: 46

ADDITIONS AND ALTERATIONS TO  
HAMMOND ELEM. / MIDDLE SCHOOL  
FOR BOARD OF EDUCATION  
HOWARD COUNTY, MARYLAND

date: 1/23/87  
sheet 3 of 9

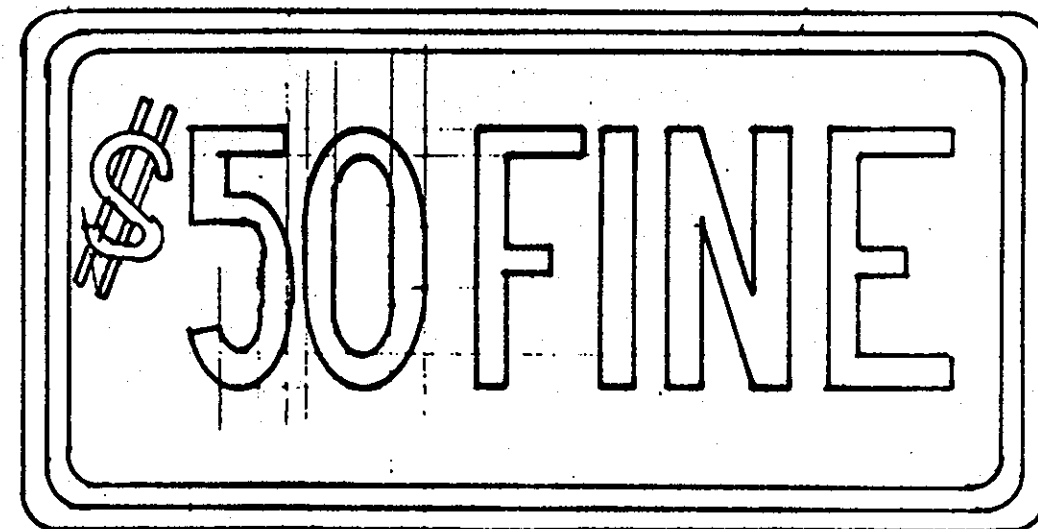
PARCEL: 259 ELECTION DISTRICT: 6TH



R7-8  
\*REDUCE SPACING 50%  
\*\*SEE PAGE 1864 FOR SYMBOL DESIGN

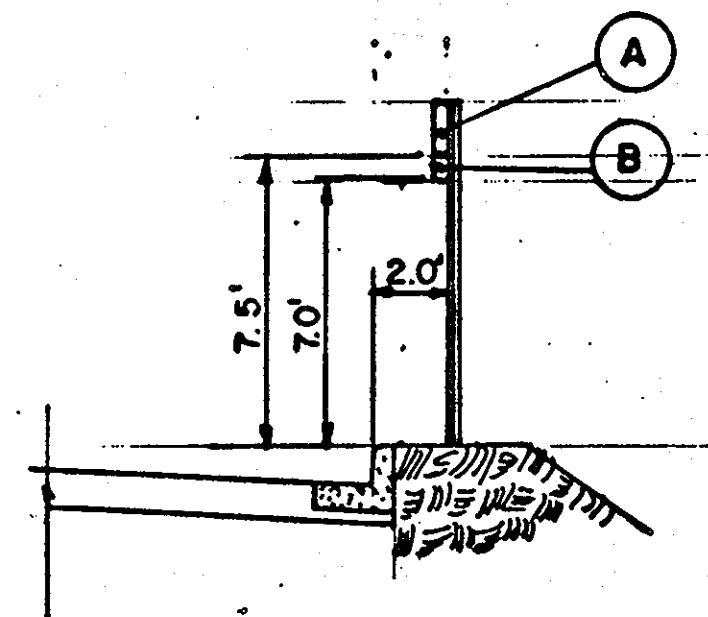
COLORS  
LEGEND AND BORDER—GREEN  
WHITE SYMBOL ON BLUE BACKGROUND  
BACKGROUND—WHITE

**A HANDICAP SIGN**  
N.T.S.

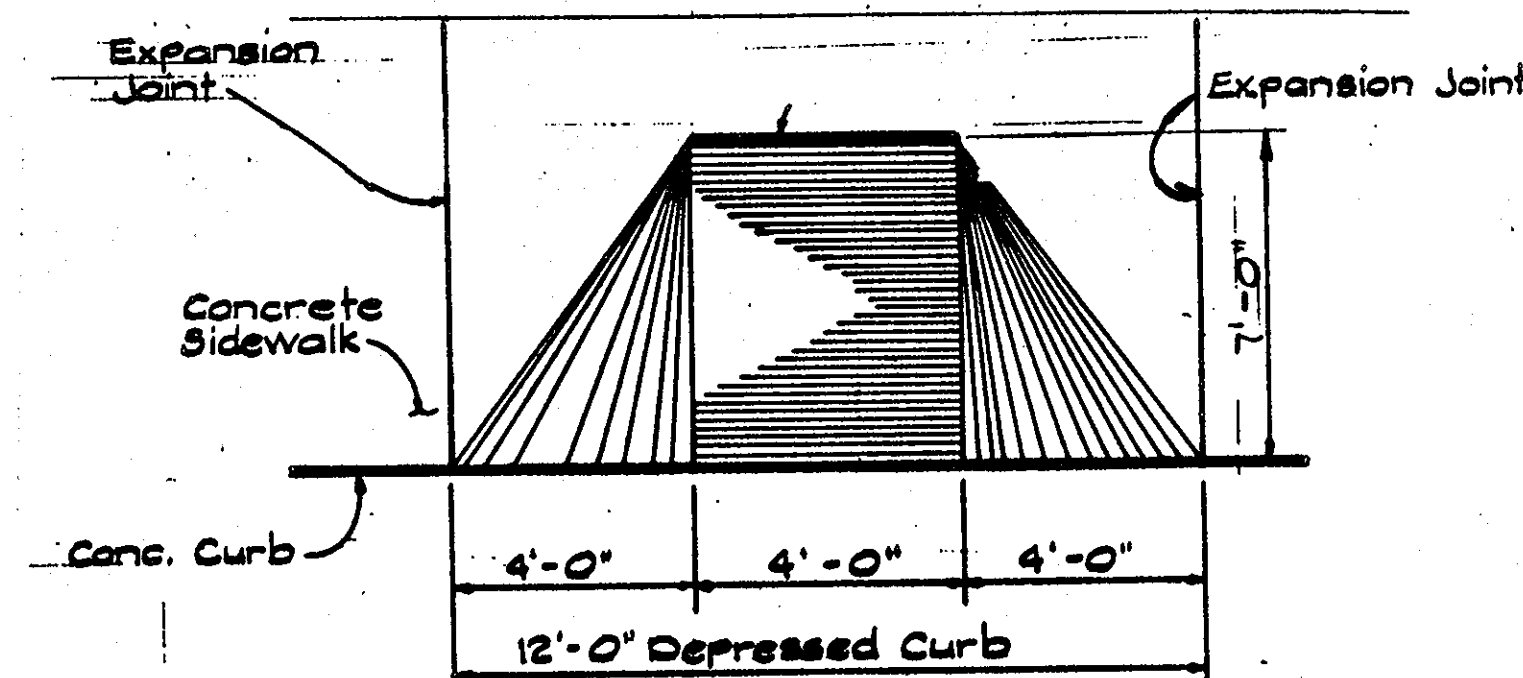
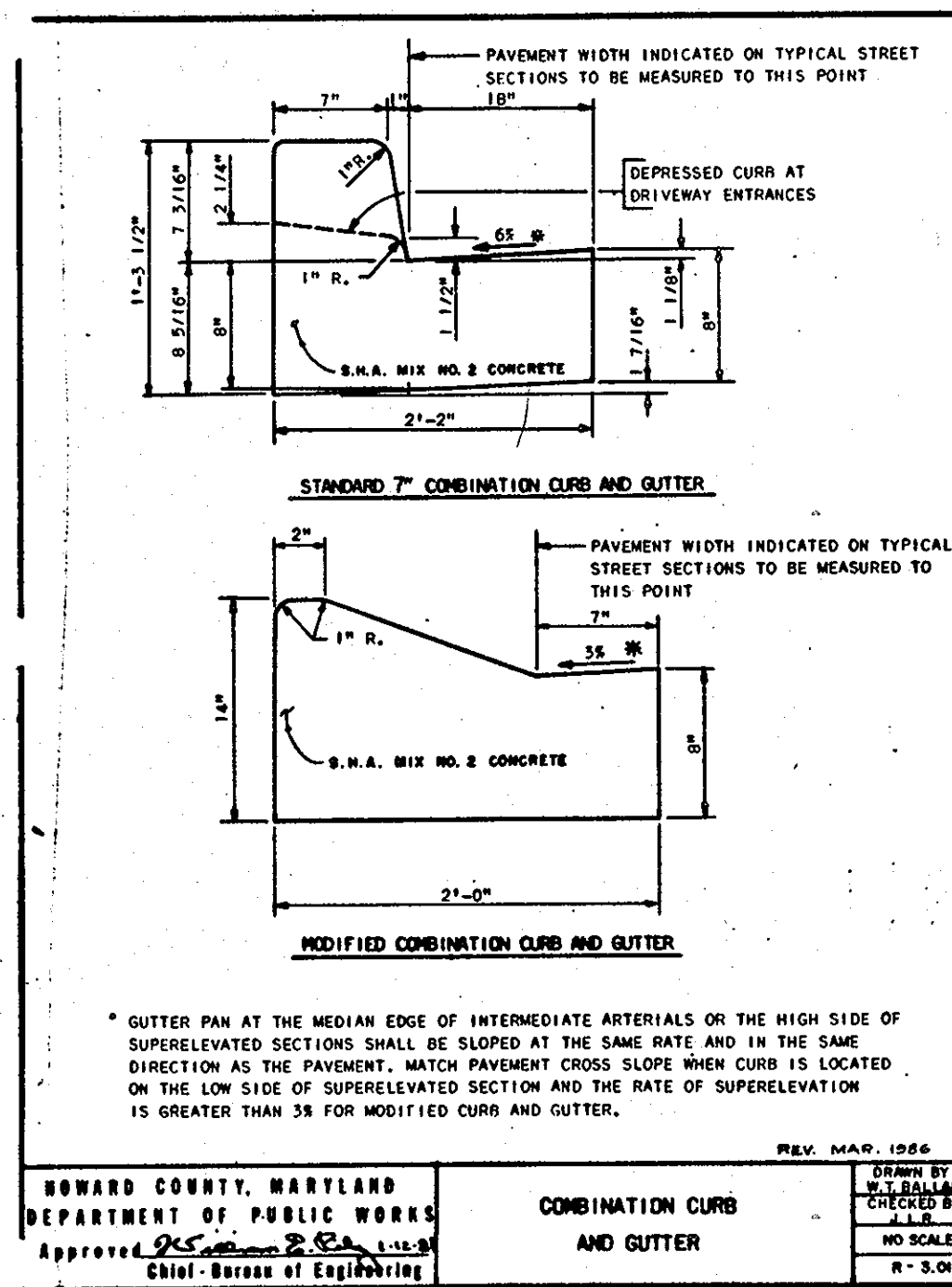


1. SIGN TO UTILIZE AN ALUMINUM BLANK 6"x12"x.0080 INCH THICK WITH TWO (2) SINGLE POST MOUNTING HOLES.  
2. THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS.

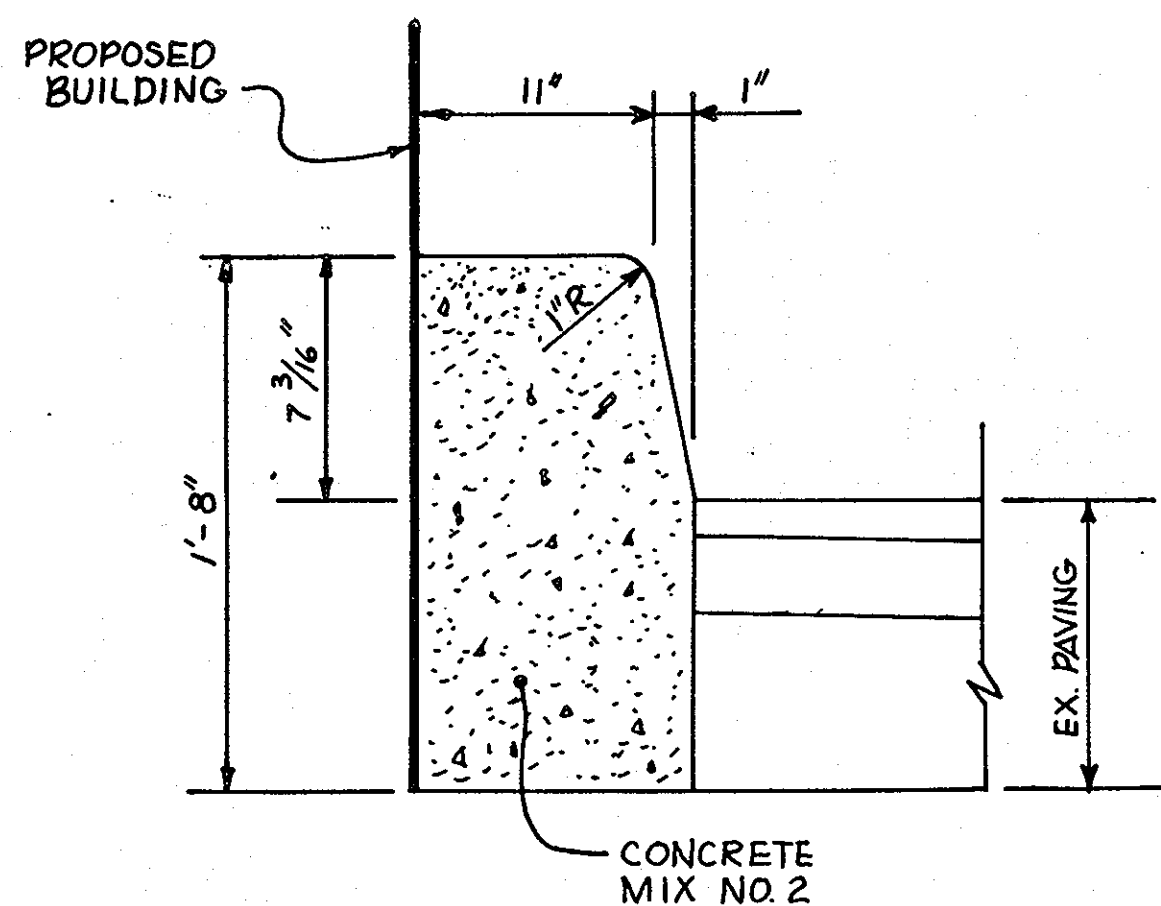
**B VIOLATION SIGN NOTATION**  
N.T.S.



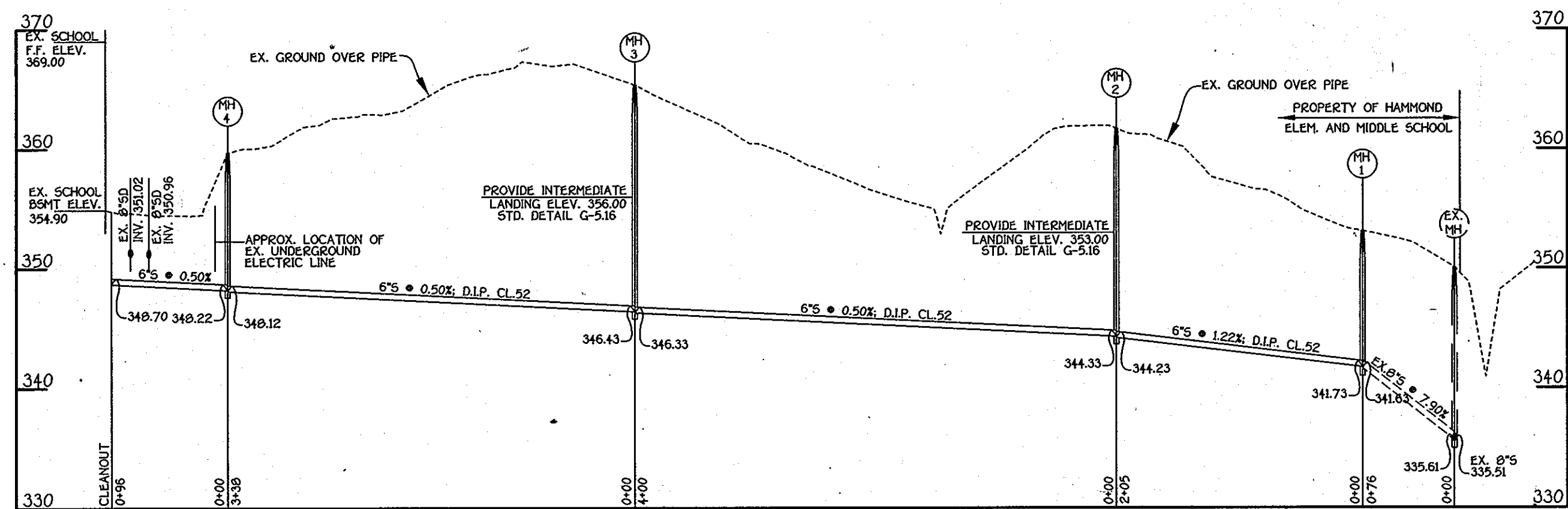
**PLAN LOCATION OF SIGNS**  
N.T.S.



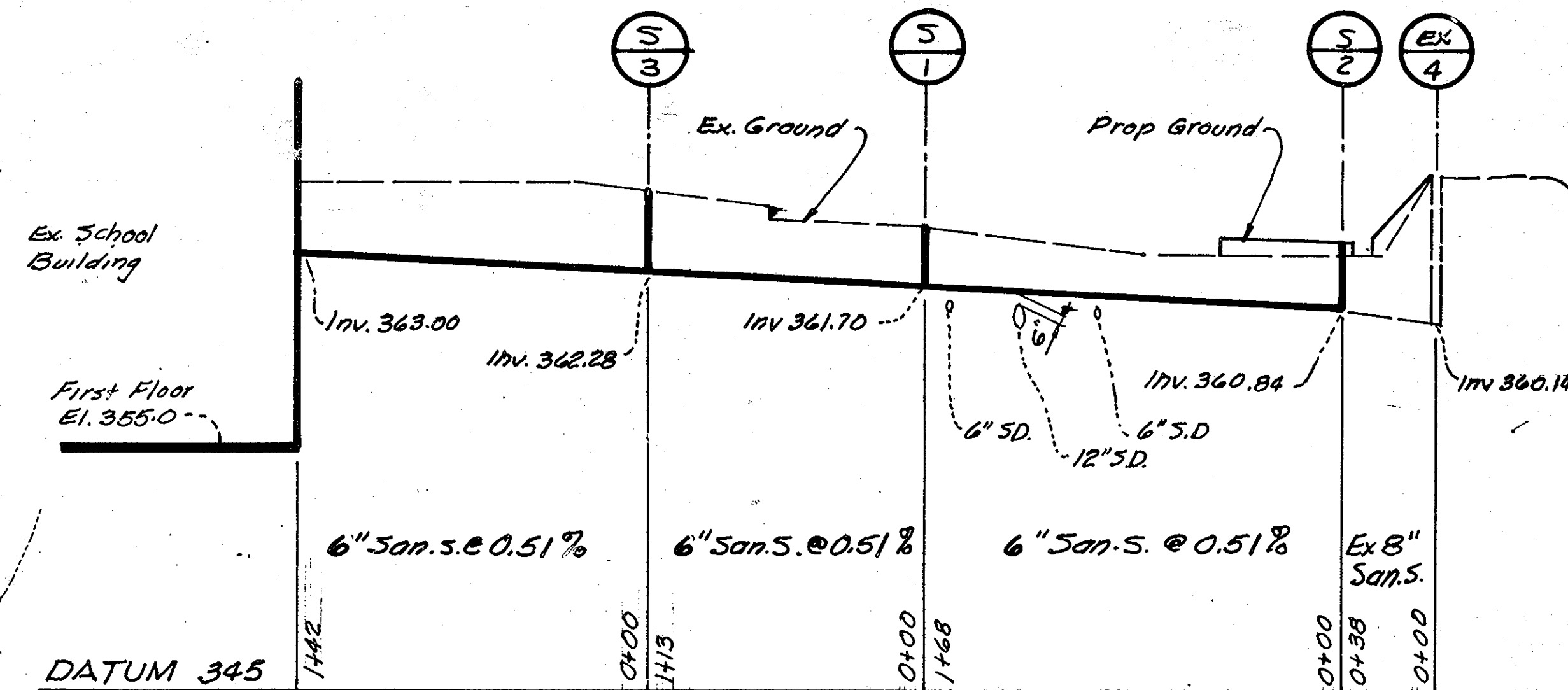
**C HANDICAP RAMP DETAIL**  
NOT TO SCALE



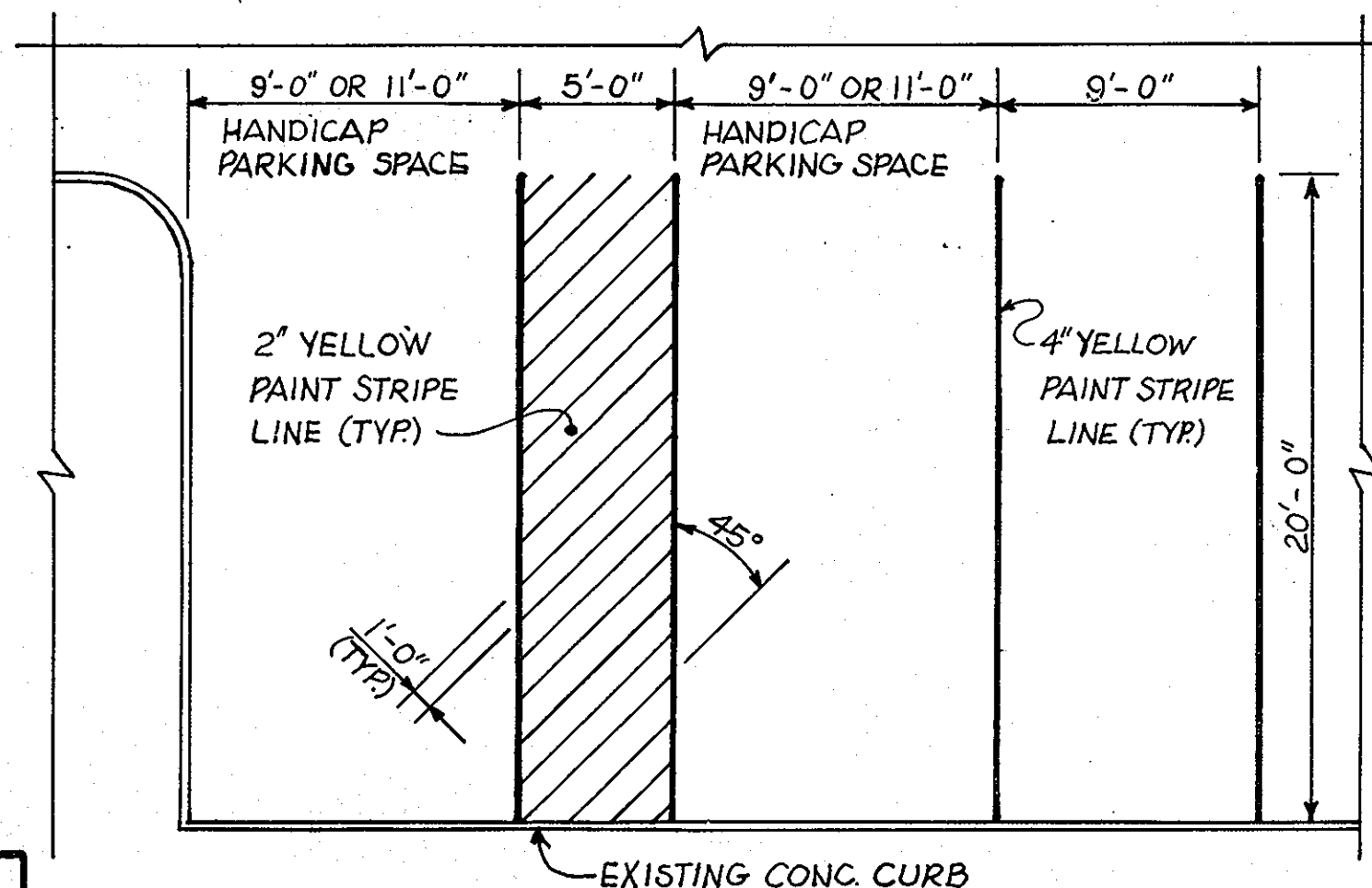
**D CONCRETE CURB DETAIL AT BUILDING**  
N.T.S.



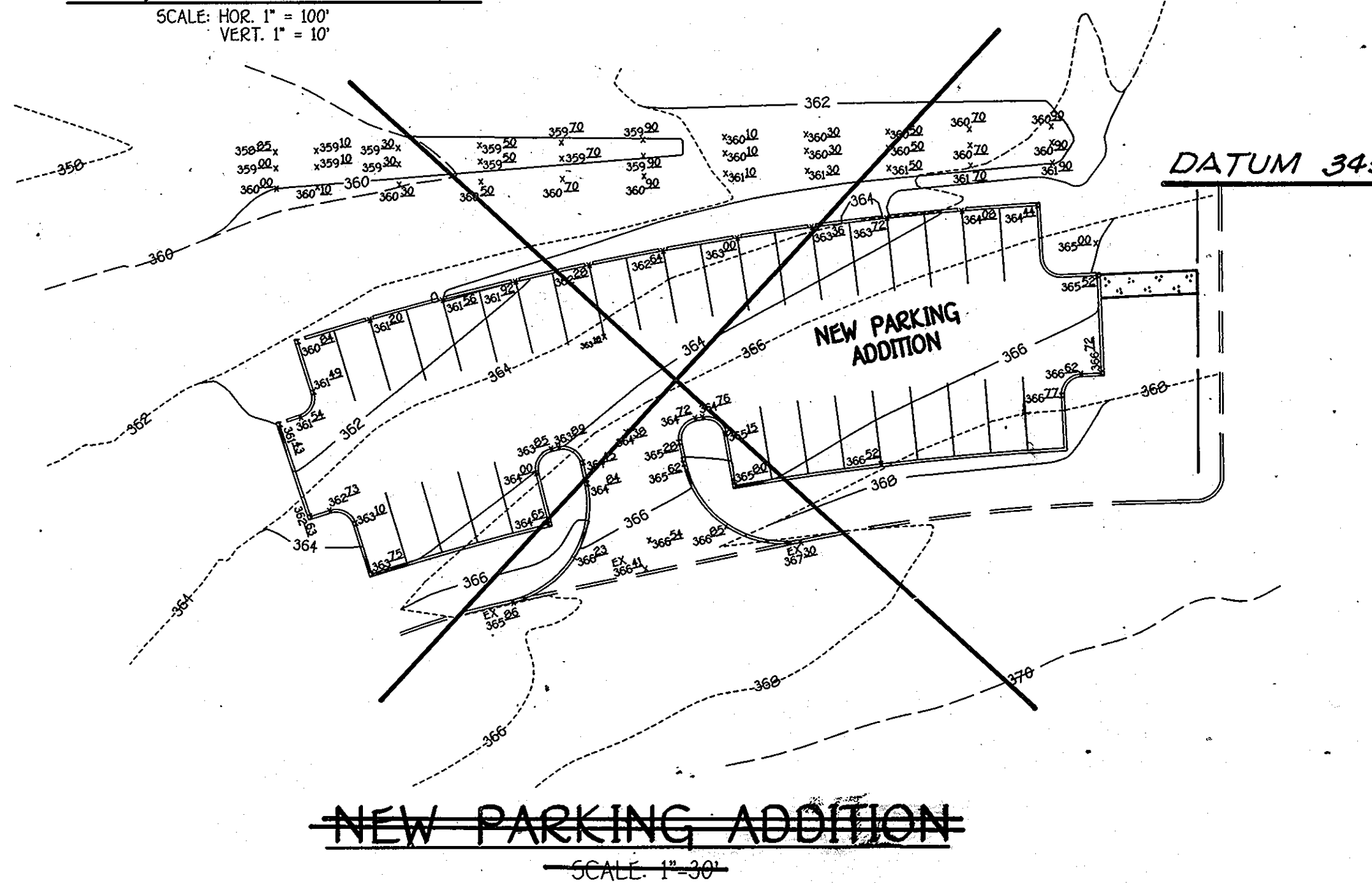
**SEWER PROFILE**  
SCALE: HOR. 1" = 10'  
VERT. 1" = 10'



**SANITARY SEWER PROFILE**  
Scale: Horiz 1" = 50'  
Vert. 1" = 5'



**PAINT STRIPING DETAIL**  
N.T.S.



**NEW PARKING ADDITION**  
SCALE: 1" = 30'

APPROVED  
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 6-17-87

REVISION 8/17/10  
REVISION 8/25/09  
FISHER COLLINS & COMPANY, INC.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM, HOWARD COUNTY HEALTH DEPARTMENT <i>[Signature]</i> COUNTY HEALTH OFFICER DATE 7-10-87	APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM & PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>[Signature]</i> DIRECTOR DATE 7-13-87
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING <i>[Signature]</i> DIRECTOR DATE 7-13-87	APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING <i>[Signature]</i> CHIEF BUREAU OF ENGINEERING DATE 7-13-87

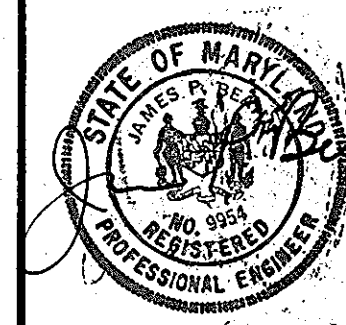
OWNER/DEVELOPER  
HOWARD COUNTY PUBLIC SCHOOL  
10910 ROUTE 108, ELLICOTT CITY,  
MARYLAND 21043

(301) 992-0500  
Mr. HENRY HORNING

drawn by:	date	revisions
	8/28/09	NEW PARKING ADDITION PLAN & SEWER PROFILE
	8/17/10	Added Sheets 7-9 & Crossed Out New Parking Addition
designed by:		
checked by:		

**DETAILS AND PROFILES**

K.P.A. J.O. 86-153 (301) 467-1645  
Kennedy, Porter & Associates  
consulting engineers  
baltimore, maryland  
2319 MARYLAND AVENUE  
BALTIMORE, MARYLAND 21219

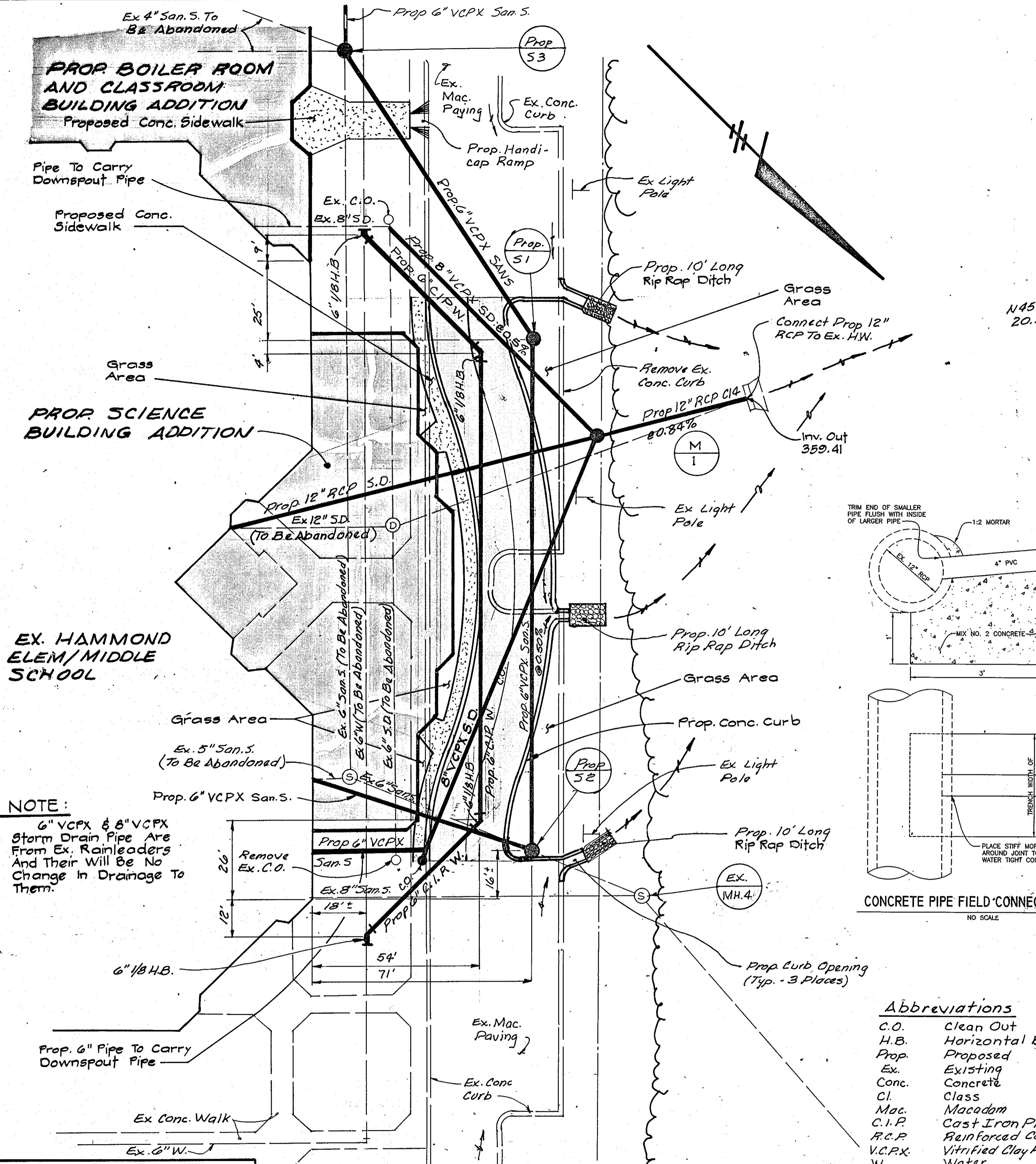


SCALE:  
AS SHOWN

ADDITIONS AND ALTERATIONS TO  
HAMMOND ELEM./MIDDLE SCHOOL  
FOR BOARD OF EDUCATION  
HOWARD COUNTY, MARYLAND

TAX MAP: 46 PARCEL: 259 ELECTION DISTRICT: 6TH

date: 1/23/07  
sheet 4 of 9



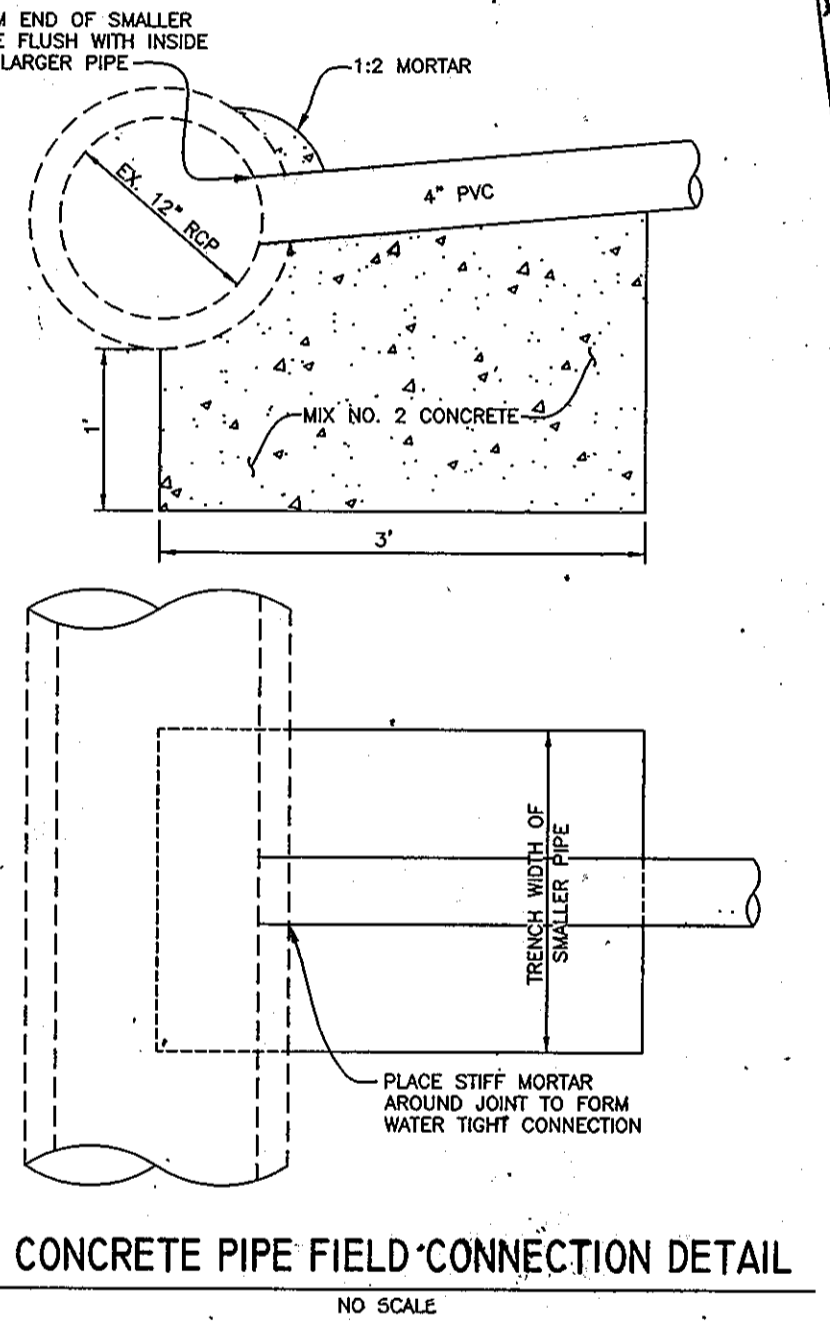
**NOTE:**  
 6" VCPX & 8" VCPX Storm Drain Pipe Are From Ex. Rainleaders And Their Will Be No Change In Drainage To Them.

**OWNER/DEVELOPER**  
 HOWARD COUNTY PUBLIC SCHOOL  
 10910 ROUTE 108, ELLICOTT CITY,  
 MARYLAND 21043

**BLOW UP OF SITE PLAN**  
 SCALE 1" = 20'

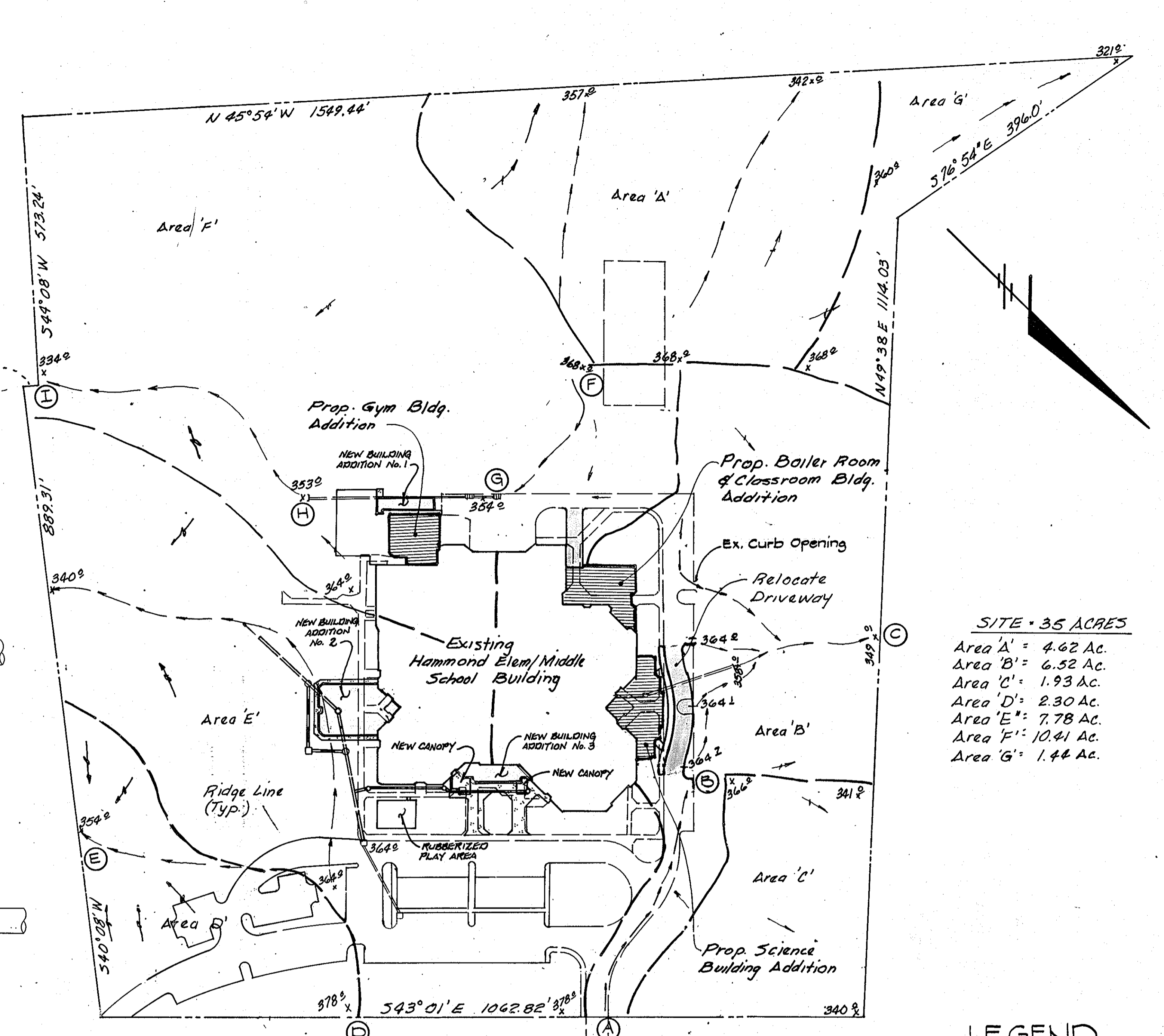
PIPE SCHEDULE		
SIZE	TYPE	LENGTH
6"	VCPX	36'
8"	VCPX	243'
12"	RCP	170'

STRUCTURE SCHEDULE						
NO.	TYPE	TOP ELEV.	INVERT IN	INVERT OUT	REMARKS	
1	SHALLOW BR. MH	363.00	359.91	359.81	HO. CO. STD. 9-5.05	



**CONCRETE PIPE FIELD CONNECTION DETAIL**  
 NO SCALE

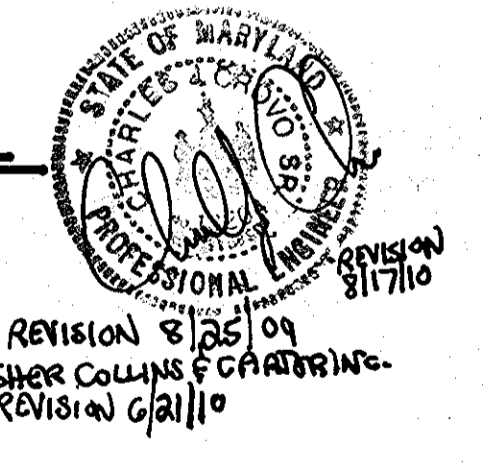
- Abbreviations**
- C.O. Clean Out
  - H.B. Horizontal Bend
  - Prop. Proposed
  - Ex. Existing
  - Conc. Concrete
  - Cl. Class
  - Mac. Macadam
  - C.I.P. Cast Iron Pipe
  - R.C.P. Reinforced Concrete Pipe
  - V.C.P.X. Vitrified Clay Pipe Extra Strength
  - W. Water
  - San.S. Sanitary Sewer
  - S.D. Storm Drain
  - H.W. Headwall



**SITE = 35 ACRES**  
 Area A' = 4.62 Ac.  
 Area B' = 6.52 Ac.  
 Area C' = 1.93 Ac.  
 Area D' = 2.30 Ac.  
 Area E' = 7.78 Ac.  
 Area F' = 10.41 Ac.  
 Area G' = 1.44 Ac.

**LEGEND**  
 (C)-(C) Drainage Course

**SITE AND DRAINAGE PLAN**  
 SCALE 1" = 100'



**APPROVED**  
 DIVISION OF LAND DEVELOPMENT &  
 ZONING ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 DATE 6-17-87

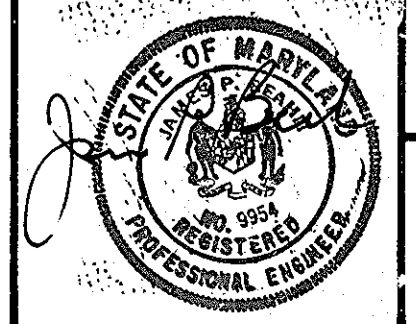
**APPROVED:** FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER DATE 7-13-87  
**U.P. Anni** DIRECTOR DATE 7-13-87  
**John P. Anni** CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE 7-13-87

**APPROVED:** FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR DATE 8/16/87  
**John P. Anni** CHIEF BUREAU OF ENGINEERING DATE 7-13-87

date	revisions
8/28/09	THREE BUILDING ADDITIONS, PARKING ADDITION, RUBBERIZED PLAY AREA, SIDEWALKS, WATER, SEWER & STORM DRAIN
4/21/10	Added Canopy And Roof Drain
8/17/10	Added Sheets 7-9, Revised Parking Addition & Added Bus Loop

**ADDITIONAL SITE PLANS**

K.P.A. J.O. 86-153 (301) 467-1645  
**Kennedy, Porter & associates**  
 consulting engineers  
 baltimore, maryland  
 2319 MARYLAND AVENUE  
 BALTIMORE, MARYLAND 21218

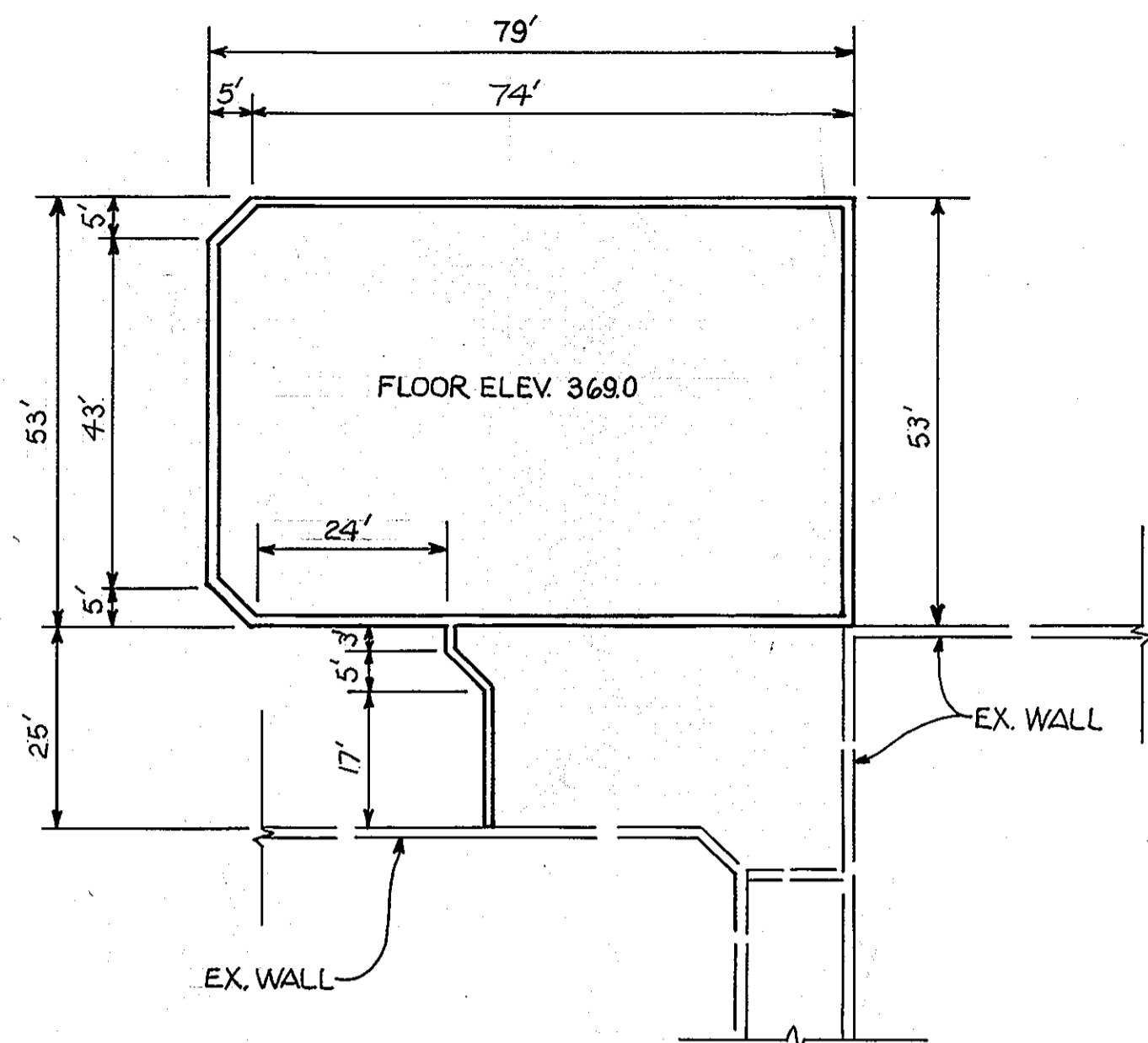


**SCALE:**  
 AS SHOWN

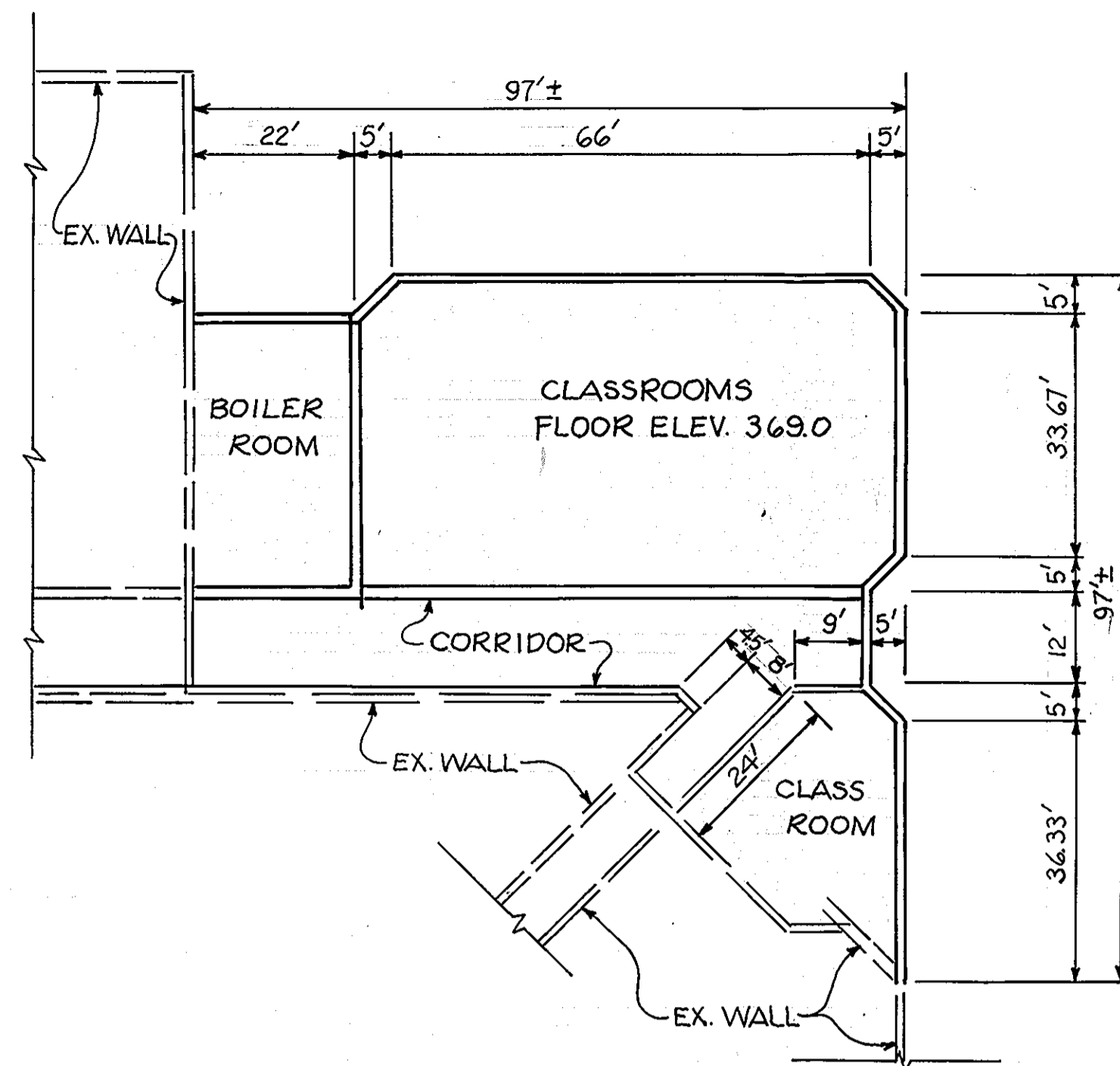
**ADDITIONS AND ALTERATIONS TO**  
 HAMMOND ELEM./MIDDLE SCHOOL  
 FOR BOARD OF EDUCATION  
 HOWARD COUNTY, MARYLAND

TAX MAP: 46 PARCEL: 259 ELECTION DISTRICT: 6TH

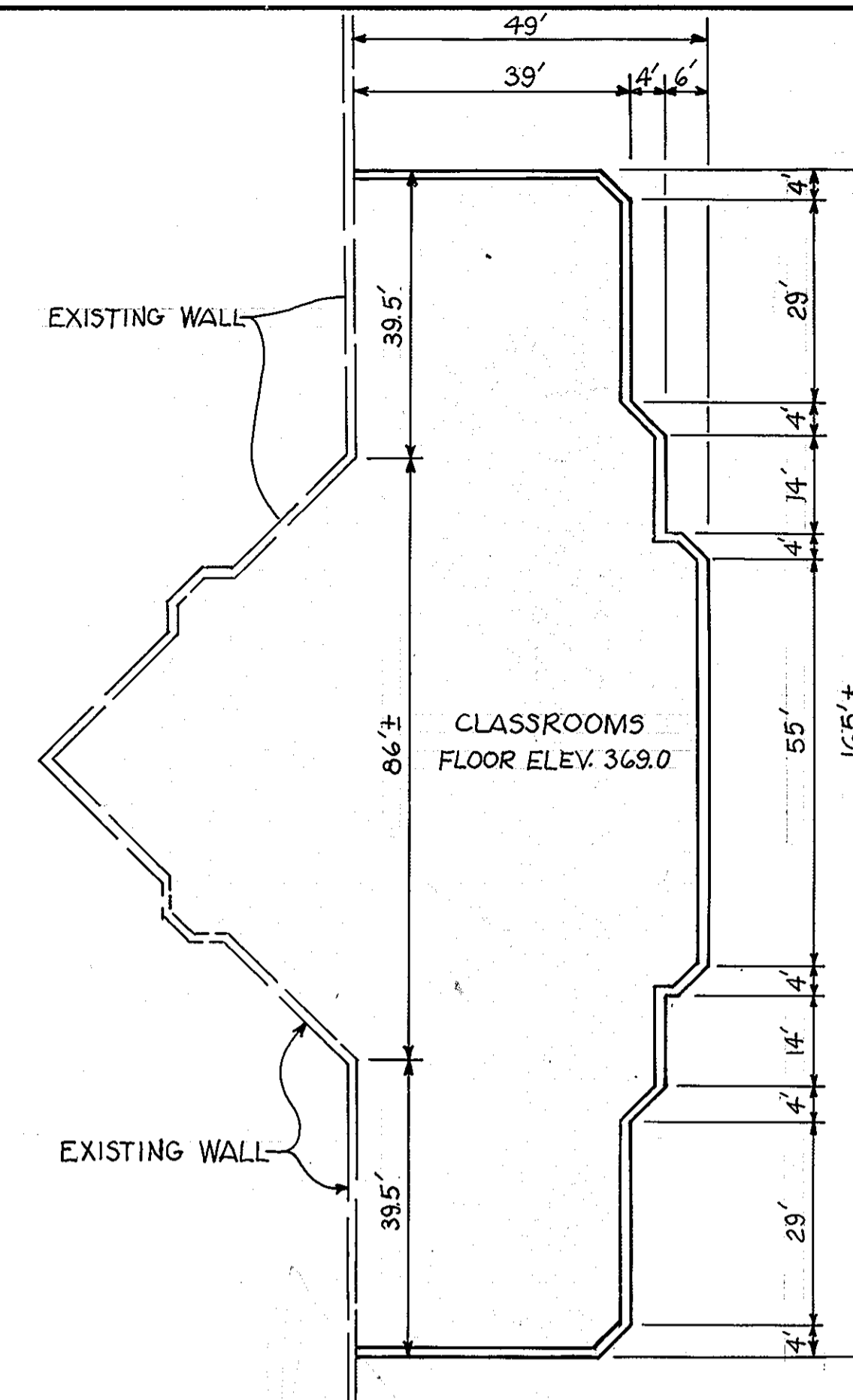
date: 1/23/87  
 sheet 5 of 9



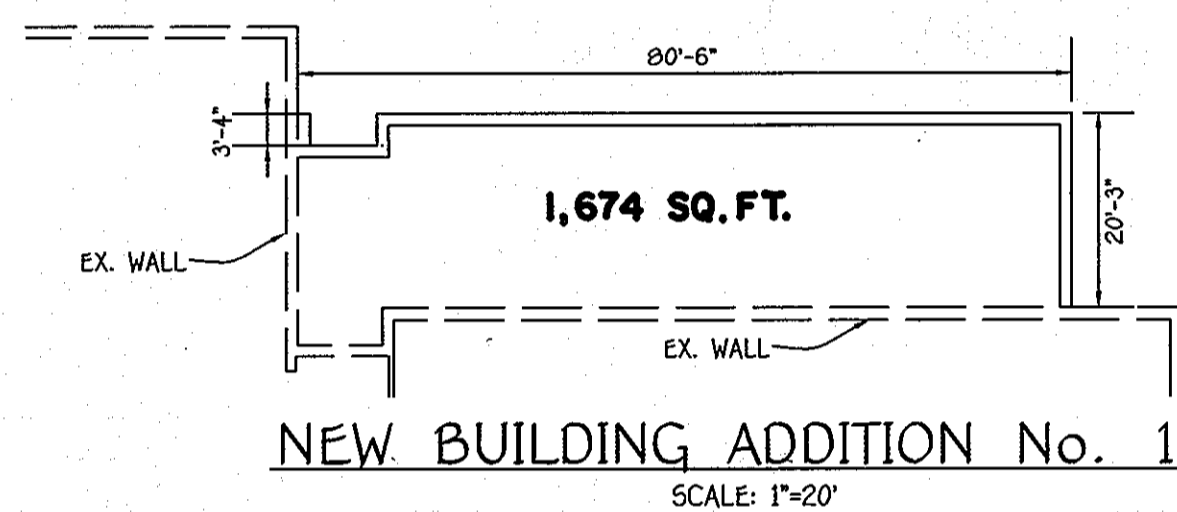
**ELEMENTARY GYMNASIUM ADDITION**  
SCALE: 1" = 20'



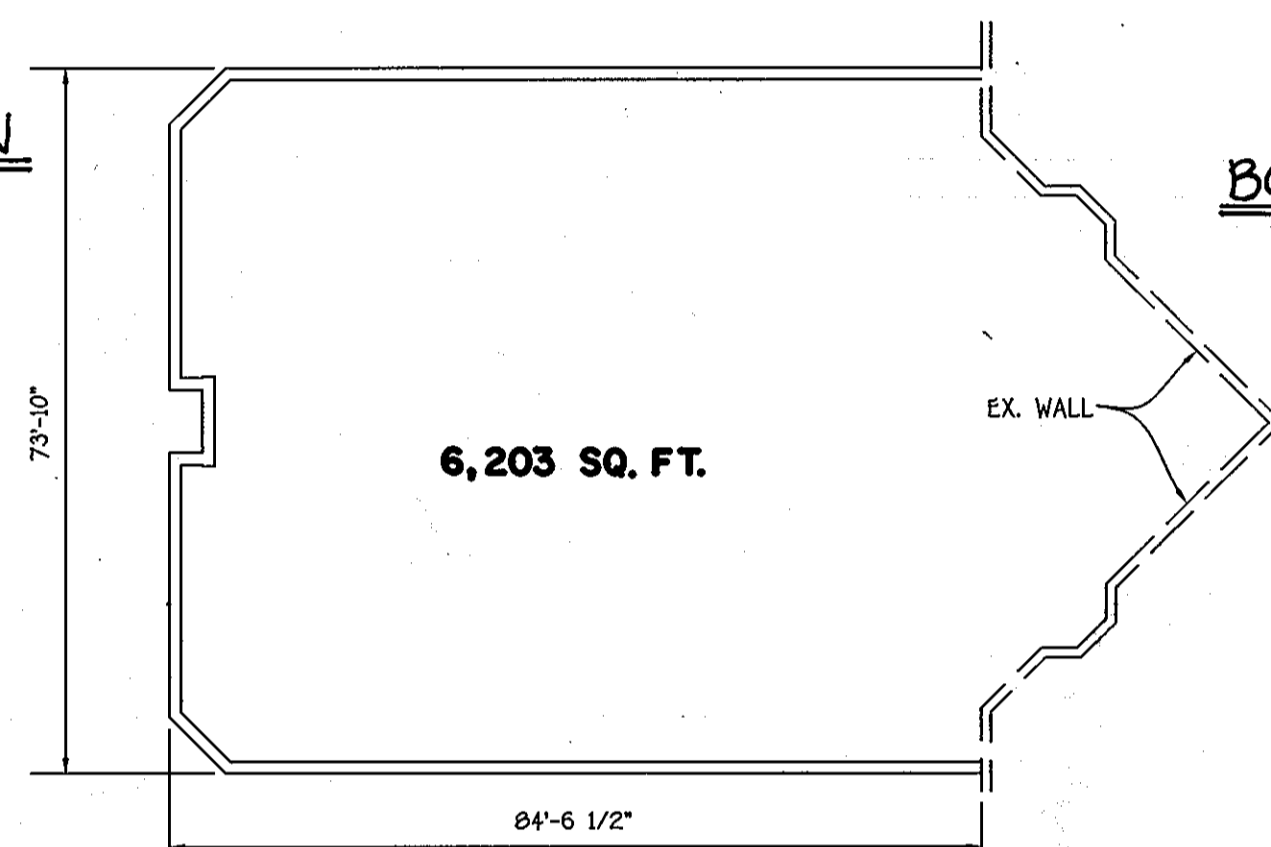
**BOILER ROOM AND CLASSROOM BUILDING ADDITION**  
SCALE: 1" = 20'



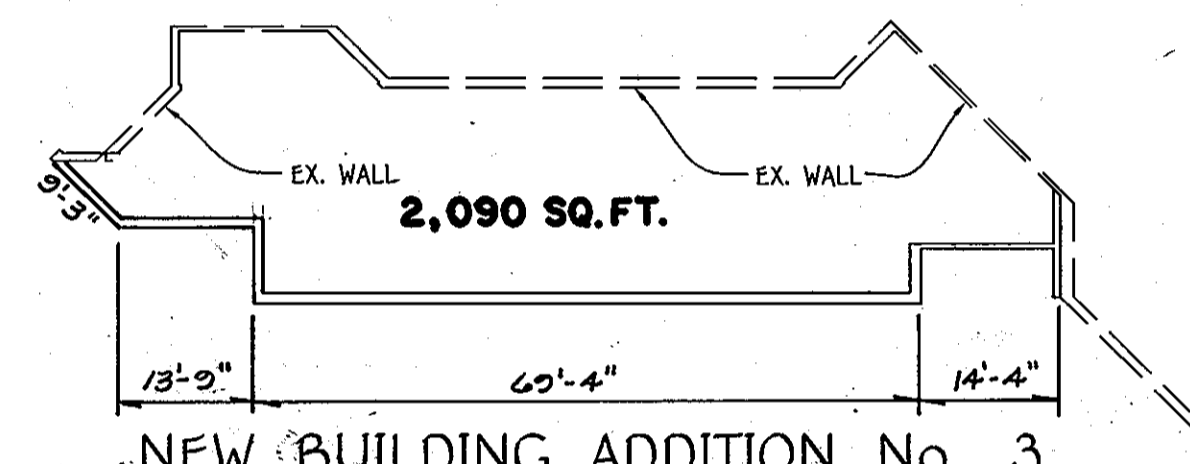
**SCIENCE BUILDING ADDITION**  
SCALE: 1" = 20'



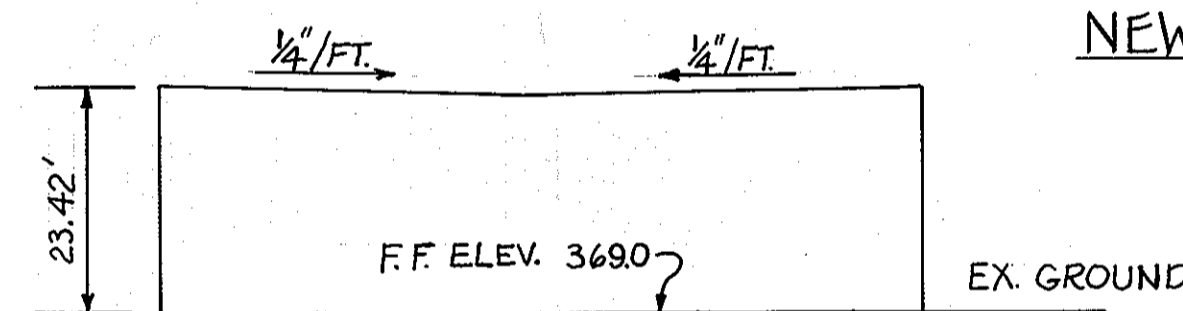
**NEW BUILDING ADDITION No. 1**  
SCALE: 1" = 20'



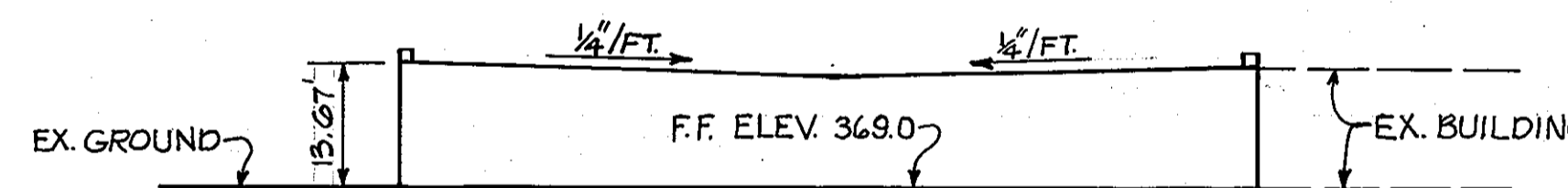
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SCALE: 1" = 20'



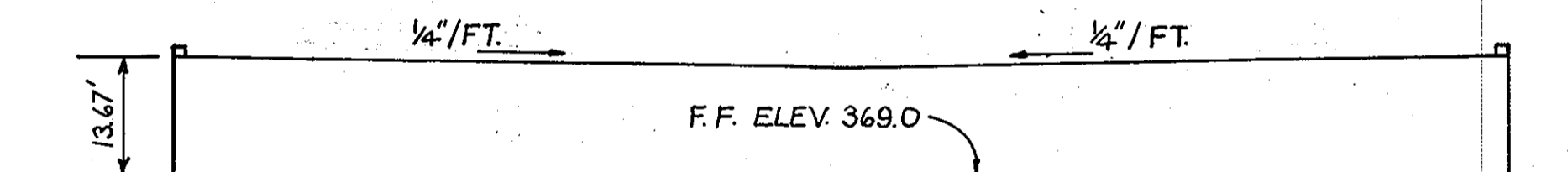
**NEW BUILDING ADDITION No. 3**  
SCALE: 1" = 20'



**ELEMENTARY GYMNASIUM ADDITION ELEVATION**  
SCALE: 1" = 20'



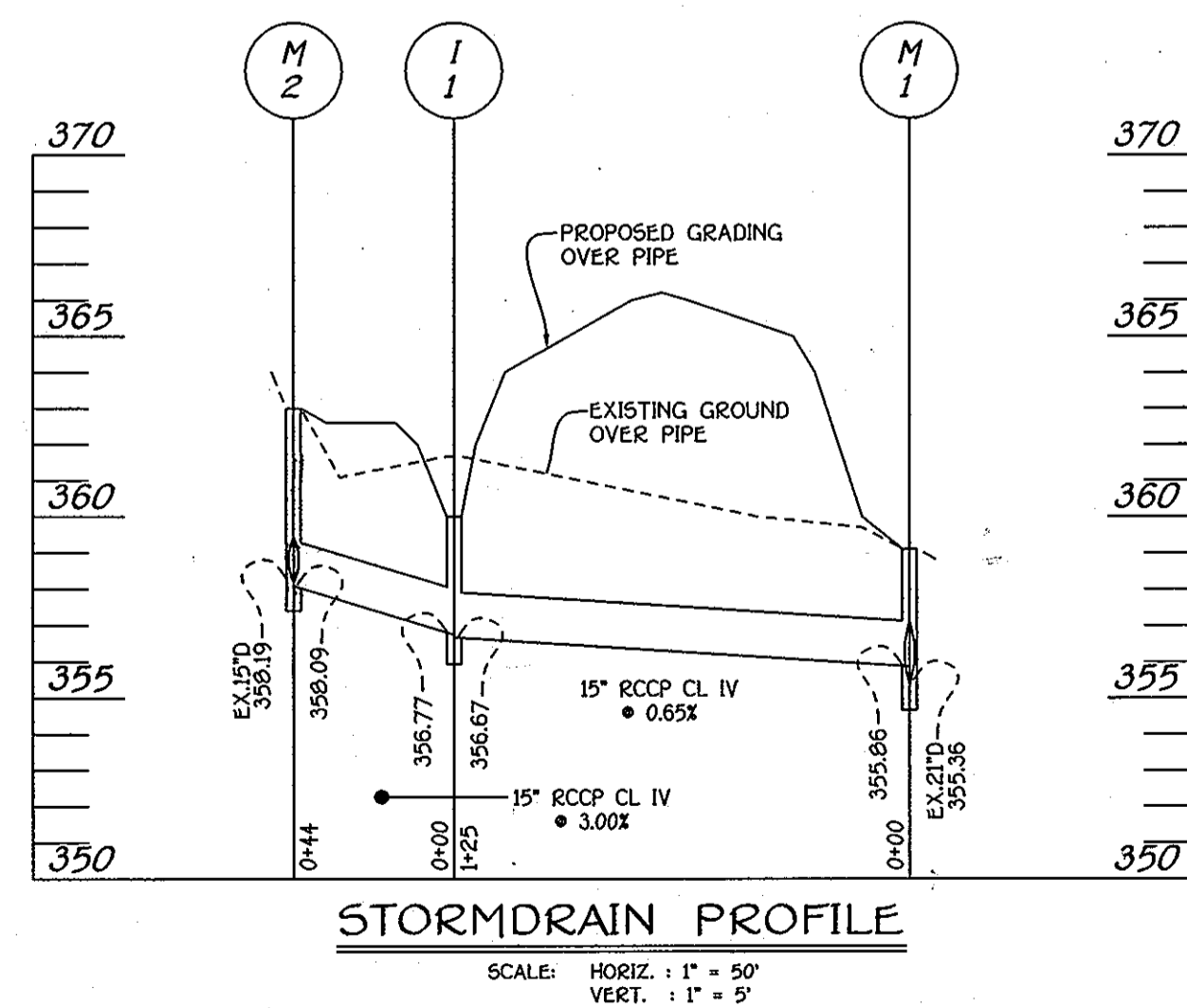
**BOILER ROOM AND CLASSROOM ADDITION ELEVATION**  
SCALE: 1" = 20'



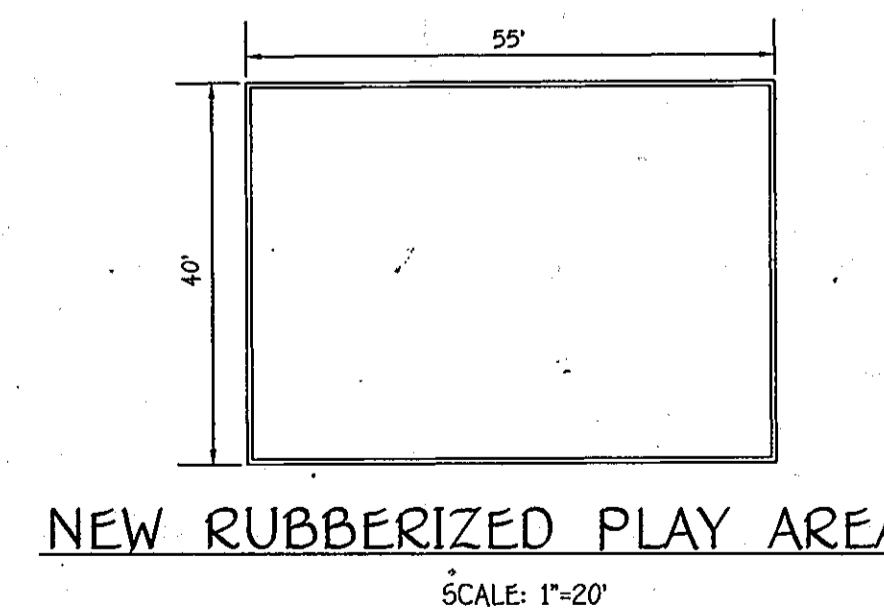
**SCIENCE BUILDING ADDITION ELEVATION**  
SCALE: 1" = 20'

STRUCTURE SCHEDULE							
STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	COORDINATES	WIDTH	TYPE	REMARKS
I-1	360.00	356.77 (15')	356.67 (15')	N 539478.33 E 1346997.96	2.625'	5' INLET W/ RET. GRATE	D - 4.22 & 4.93
M-1	359.10	355.86 (15')	355.36 (18')	N 539381.21 E 1346919.12	4'	4' STD. MANHOLE	G - 5.12
M-2	363.00	358.19 (15')	358.09 (15')	N 539506.12 E 1346963.71	4'	4' STD. MANHOLE	G - 5.12

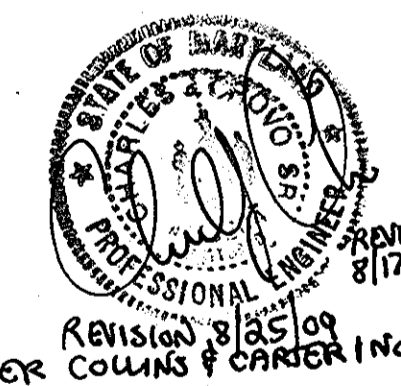
NOTES:  
1. TOP ELEVATION AND COORDINATES FOR '5' INLETS ARE LOCATED AT CENTER OF GRATE.



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



**NEW RUBBERIZED PLAY AREA**  
SCALE: 1" = 20'



APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE **6-17-87**  
*M. H. H. H.*

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM, HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* COUNTY HEALTH OFFICER  
DATE **7-10-87**

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*[Signature]* DIRECTOR  
DATE **7-13-87**

*[Signature]* CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
DATE **7-13-87**

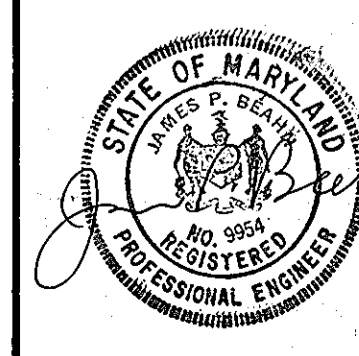
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM & PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* DIRECTOR  
DATE **7/15/87**

*[Signature]* CHIEF, BUREAU OF ENGINEERING  
DATE **7-9-87**

drawn by:	date	revisions
	8/25/00	THREE BUILDING ADDITIONS, RUBBERIZED PLAY AREA, STORM DRAIN PROFILE & STRUCTURE SCHEDULE
designed by:	8/17/10	Added sheets 7, 8 & 9
checked by:		

**BUILDING PLANS AND ELEVATIONS**

K.P.A. J.O. 86-153 (301) 467-1645  
**Kennedy, Porter & Associates**  
consulting engineers  
baltimore, maryland  
2319 MARYLAND AVENUE  
BALTIMORE, MARYLAND 21218



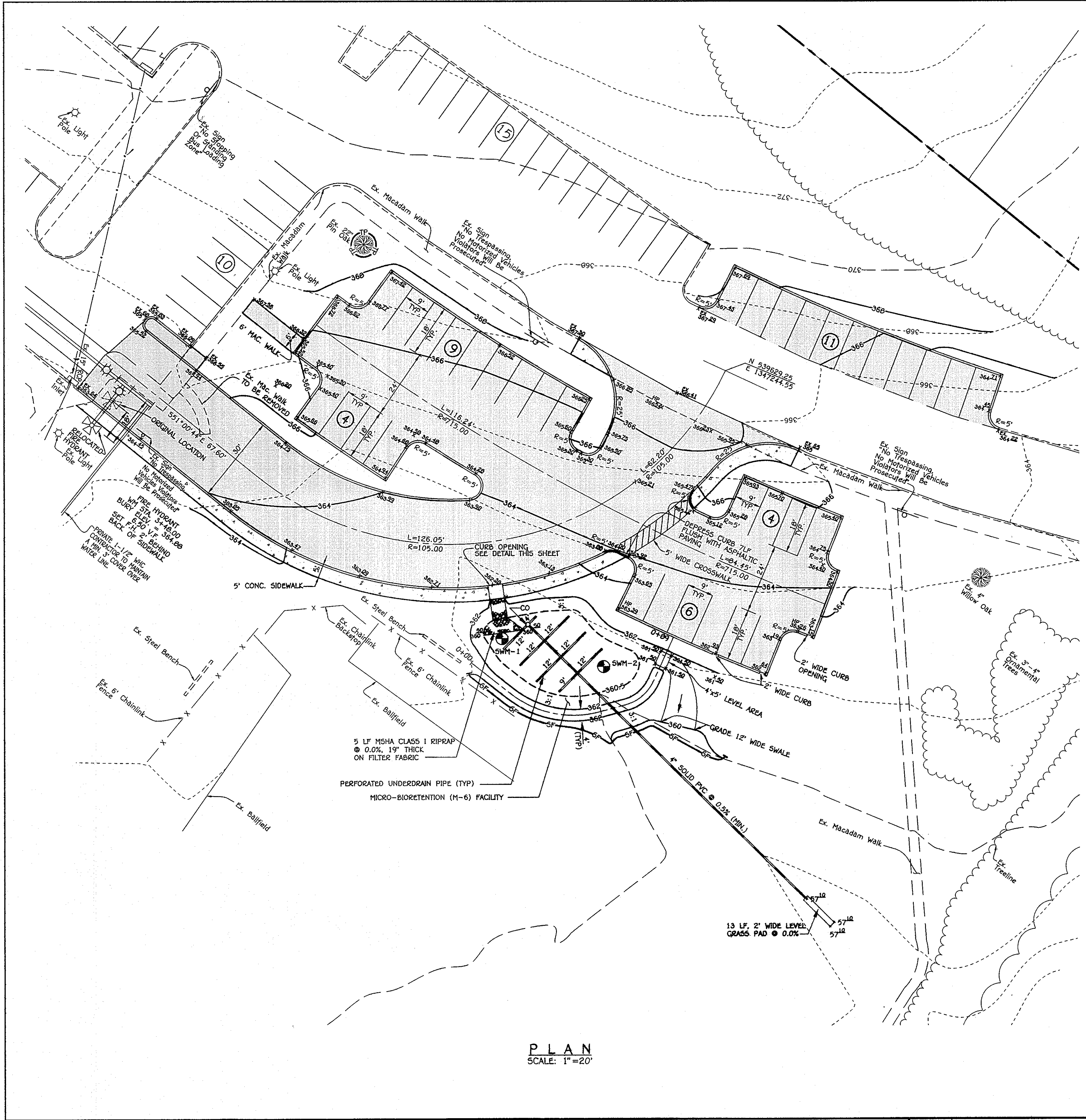
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AS SHOWN

ADDITIONS AND ALTERATIONS TO  
HAMMOND ELEM./MIDDLE SCHOOL  
FOR BOARD OF EDUCATION  
HOWARD COUNTY, MARYLAND

TAX MAP: 46

PARCEL: 259 ELECTION DISTRICT: 6TH

date:  
sheet  
**6 of 9**



PLAN  
SCALE: 1"=20'

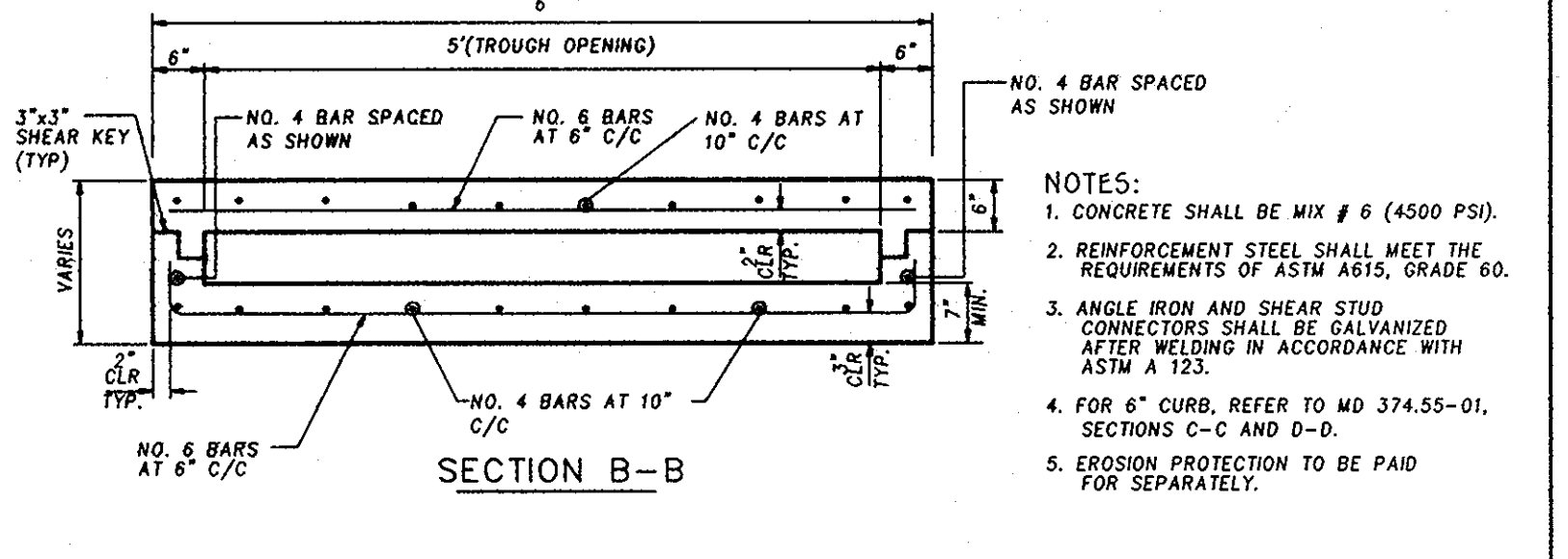
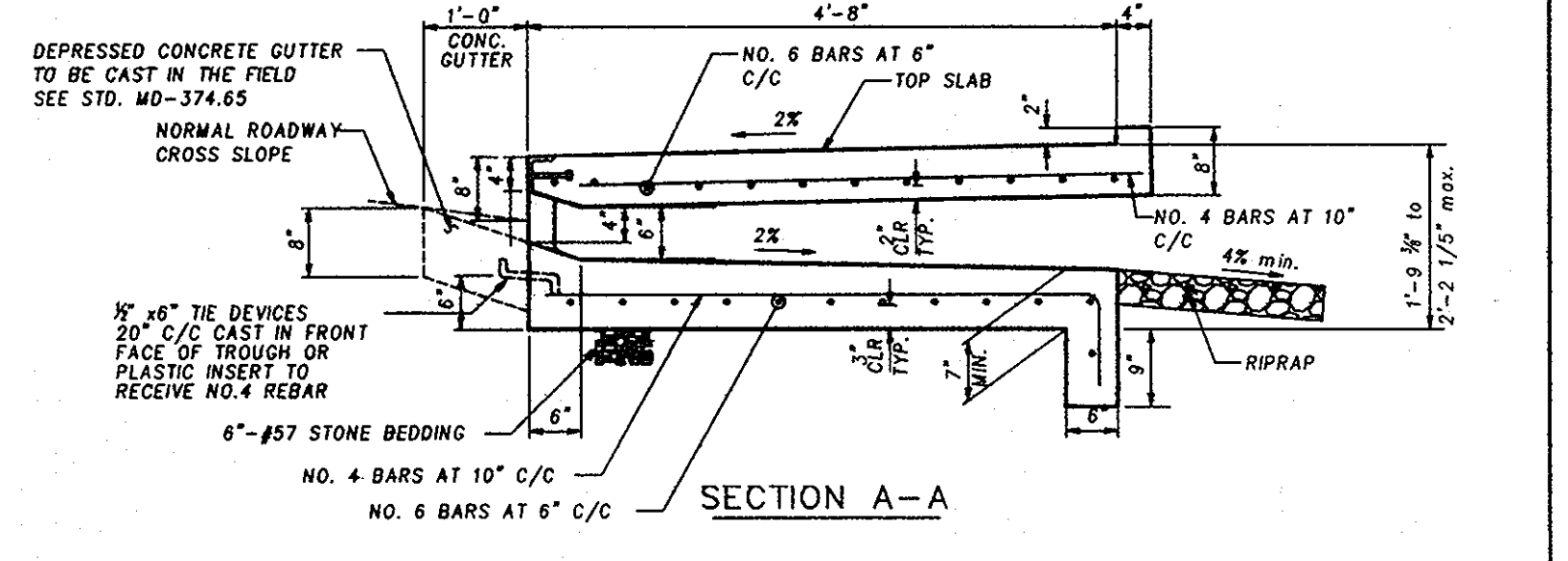
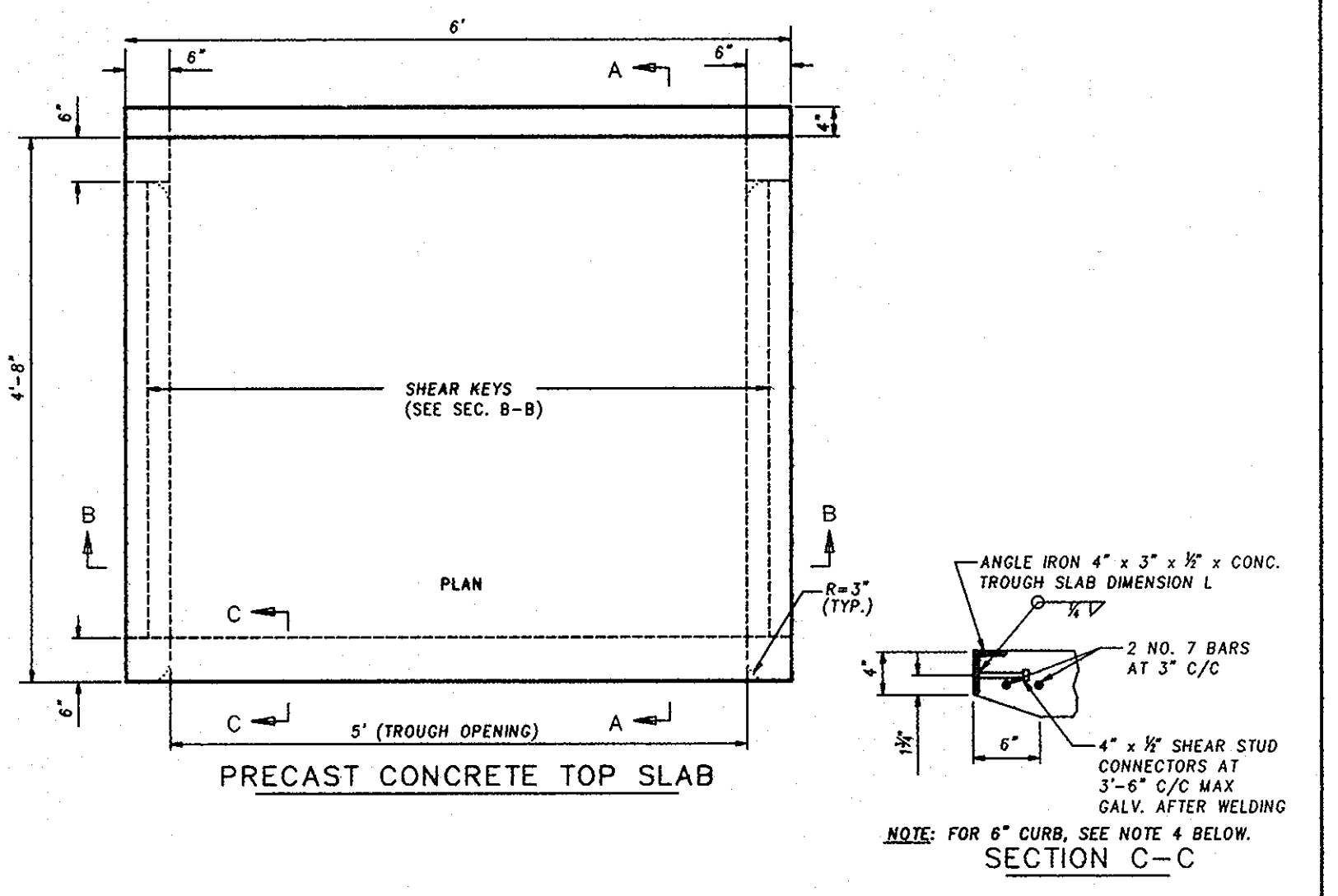
**Reuling Associates, Inc. Boring Log**

PROJECT: Hammond Elementary Middle School  
 Location: See Boring Location Plan  
 DATE START: 8/23/2010 PROJECT No.: BORING No.: SWM-1  
 FINISH: 8/23/2010 ELEV: 360.8 INSPECTOR:  
 HAMMER WT.: 140 lb SPOON O.D.: 2" FOREMAN: B. Taylor  
 BORING METHOD: HSA ROCK CORE DIA.: HAMMER DROP: 30 in.

Scale	Elev	Description	Depth	Scale	No	Blows / ft	Type	REC	Notes
		Brown, gray, red, orange, mottled, loam, fine to medium micaceous silty sand, and decomposed rock (SM)	0-5		S-1	3-3-4	DS	18"	
			5-8		S-2	5-4-8	DS	14"	
		Medium dense	8-10		S-3	8-8-10	DS	18"	
			10-15		S-4	8-8-11	DS	18"	
		Dense	15-20		S-5	8-13-21	DS	18"	
		End of Boring	20						

**LEGEND**  
 DS DRIVEN SPOON  
 ST SHELBY  
 PS PISTON SAMPLE  
 RC ROCK CORE  
 HSA HOLLOW STEM AUGER

**GROUND WATER**  
 WATER ON RODS: N/A  
 WATER AT COMPLETION: Dry  
 AT 24 HOURS: 4' 6"  
 CAVED: 11' 9"



**Reuling Associates, Inc. Boring Log**

PROJECT: Hammond Elementary Middle School  
 Location: See Boring Location Plan  
 DATE START: 8/23/2010 PROJECT No.: BORING No.: SWM-2  
 FINISH: 8/23/2010 ELEV: 360.1 INSPECTOR:  
 HAMMER WT.: 140 lb SPOON O.D.: 2" FOREMAN: B. Taylor  
 BORING METHOD: HSA ROCK CORE DIA.: HAMMER DROP: 30 in.

Scale	Elev	Description	Depth	Scale	No	Blows / ft	Type	REC	Notes
		Brown, gray, red, orange, mottled to silty sand, medium dense, fine to medium micaceous silty sand, and decomposed rock (SM)	0-5		S-1	4-5-7	DS	14"	
			5-8		S-2	5-6-8	DS	14"	
		Loose	8-10		S-3	4-4-5	DS	18"	
		Medium dense	10-15		S-4	4-5-6	DS	14"	
		Loose	15-20		S-5	4-4-6	DS	14"	
		End of Boring	20						

**LEGEND**  
 DS DRIVEN SPOON  
 ST SHELBY  
 PS PISTON SAMPLE  
 RC ROCK CORE  
 HSA HOLLOW STEM AUGER

**GROUND WATER**  
 WATER ON RODS: 9' 0"  
 WATER AT COMPLETION: 8' 9"  
 AT 24 HOURS: 5' 7"  
 CAVED: 9' 10"

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2055

**ENGINEER'S CERTIFICATE**  
 "I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
 Signature of Engineer: *[Signature]* Date: 10/25/10

**DEVELOPER'S CERTIFICATE**  
 "I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."  
 Signature of Developer: *[Signature]* Date: 10/25/10

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *[Signature]* Date: 11/13/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Signature: *[Signature]* Date: 11/23/10  
 Director - Department of Planning and Zoning  
 Signature: *[Signature]* Date: 11/23/10  
 Chief, Division of Land Development  
 Signature: *[Signature]* Date: 11/17/10  
 Chief, Development Engineering Division

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 10B  
 Ellicott City, Maryland 21042  
 Attention: Bruce Gist  
 410-313-6805

**ARCHITECT**  
**SEAM**  
 Smolen + Emery  
 1355 FREDERICK STREET, SUITE 200  
 ROCKVILLE, MD 20850  
 301-770-0177(P) 301-350-3224(F)

Address Chart

Parcel Number	Street Address
P. 259	8110 ALLADIN DRIVE
	LAUREL, MARYLAND, 20723

PROJECT	SECTION/AREA	PARCELS
HAMMOND ELEM./MIDDLE SCHOOL		259

DEED REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
	6	R-20	46	SIXTH	6068.02

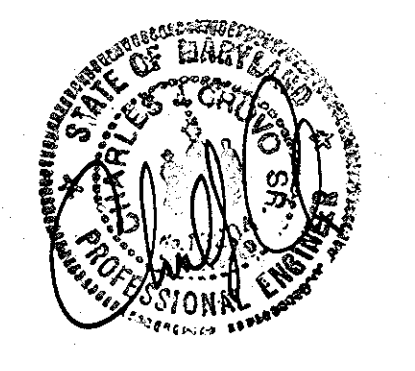
WATER CODE: - SEWER CODE: -

**MICRO-BIORETENTION PLAN AND BORING LOGS**

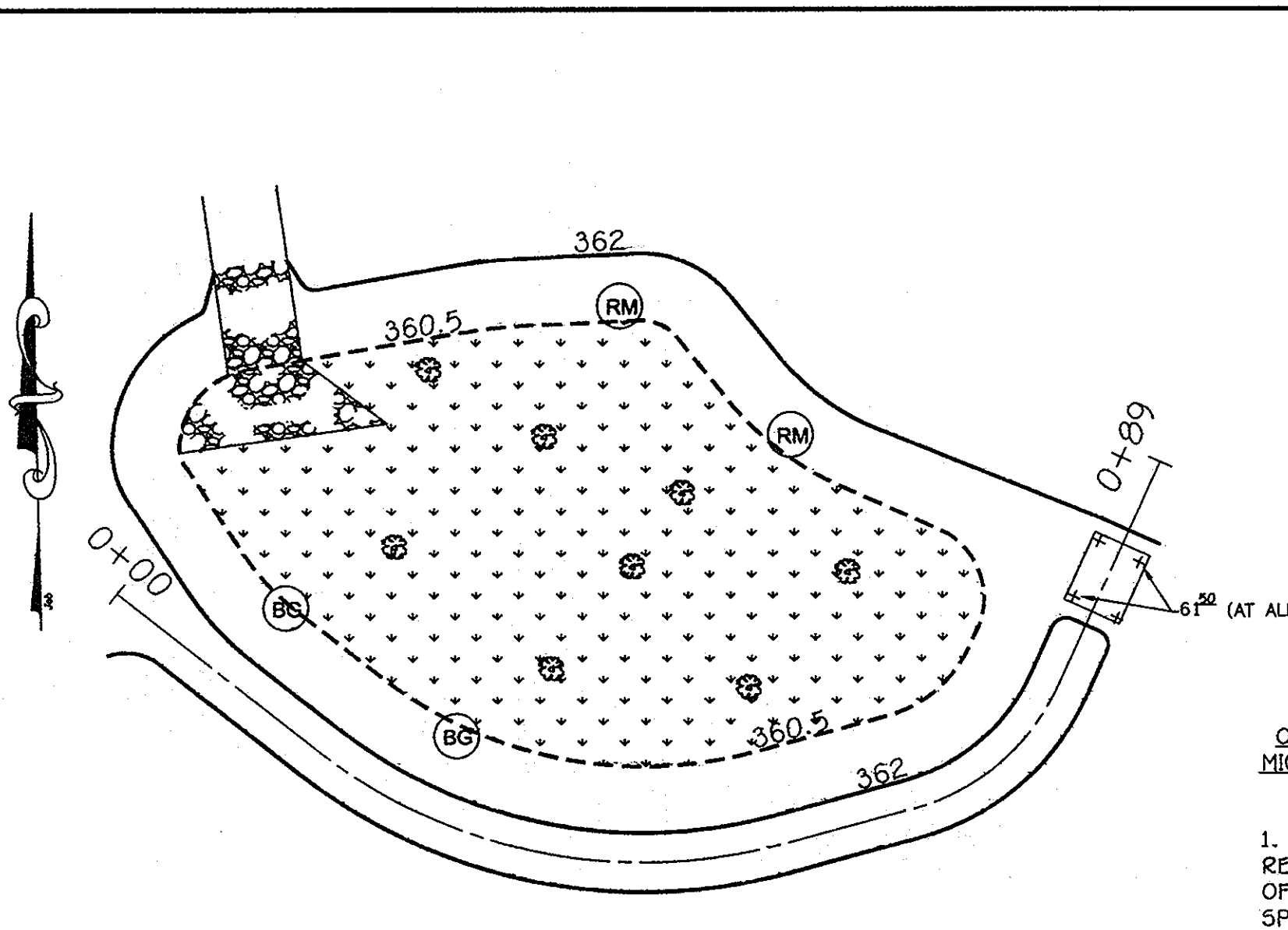
**"REVISED SITE DEVELOPMENT PLAN"**  
**HAMMOND ELEM./MIDDLE SCHOOL**  
**PARKING ADDITION AND SCHOOL BUS LOOP**

PARCEL No.: 259  
 TAX MAP No.: 46 QRD No.: 6  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: AUGUST 16, 2010

SHEET 7 OF 9 **SDP-87-141**  
**SDP-87-141**



NOTE: THE PURPOSE OF THIS PLAN IS FOR THE PARKING LOT ADDITION AND STORMWATER MANAGEMENT.



MICRO-BIORETENTION PLANTING SCHEDULE			
PLANT NAME	FORM	QUANTITY	SYMBOL
SWITCH GRASS ( <i>panicum virgatum</i> )	Grass	175 Qts <sup>a</sup>	
FOX SEDGE ( <i>carex vulpinoidea</i> )	Grass	175 Qts <sup>a</sup>	
RED MAPLE ( <i>acer rubrum</i> )	Tree (4'-6', 1" cal.)	2	
BLACKGUM ( <i>nyssa sylvatica</i> )	Tree (5'-8', 1" cal.)	2	
RED OSIER DOGWOOD ( <i>cornus sericea</i> )	Shrub	8	

<sup>a</sup> Plant BMP level surface only. Side slopes to be stabilized with permanent grass seed per NRCS regulations.

**OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), ENHANCED FILTERS (M-9)**

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING; 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

**BIORETENTION BMP NOTES AND SPECIFICATIONS**

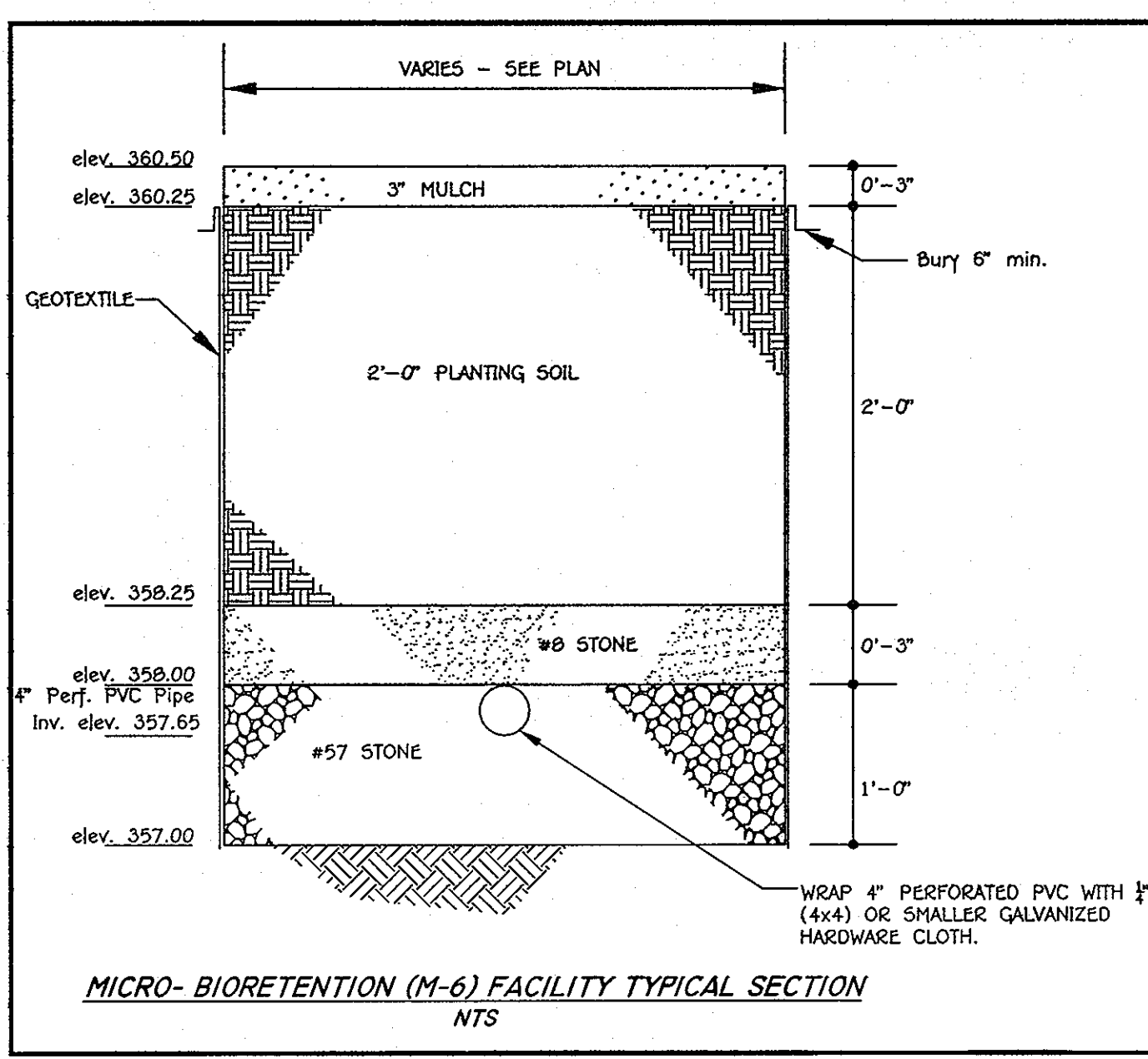
- REFER TO THE 2000 MARYLAND SWM DESIGN MANUAL FOR BIORETENTION SPECIFICATIONS (PG. B.3.7) NOT LISTED HEREIN AND FOR ADDITIONAL INFORMATION. THE SPECIFICATIONS LISTED BELOW SUPERSEDE SPECIFICATIONS LISTED IN MANUAL.
- THE BIORETENTION BMP MATERIALS ARE AS FOLLOWS:
  - PLANTING SOIL (TREATED EARTH): SHALL MEET PLANTING SOIL SPECIFICATIONS OUTLINED IN MDE'S 2000 SWM MANUAL. SEE PLANTING SCHEDULE THIS SHEET FOR VEGETATION STABILIZATION.
  - SAND: ASTM C33 "CONCRETE SAND" - VERY CLEAN; FREE OF ALL DIRT AND DEBRIS.
  - PVC PIPE: SCHEDULE 40. PERFORATED PORTION TO BE HAVE NO SLOPE (0.0%). SOLID PORTION TO HAVE A 0.5% MINIMUM GRADE. CAP ENDS.
  - STONE AGGREGATE: AS SPECIFIED ON TYPICAL SECTION; AGGREGATE MUST BE FREE OF FINES, DIRT AND DEBRIS.
  - GEOTEXTILE: MIRAFI 140N OR APPROVED EQUAL.
  - MULCH: SHREDDED, WELL-AGED (6-12 MONTHS) HARDWOOD MULCH; NO WOOD CHIPS OR PINE MULCH.
- THE CONTRACTOR SHALL UNDER NO CIRCUMSTANCES ALLOW SURFACE DRAINAGE INTO THE MICRO-BIORETENTION UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., PAVED OR WELL-ESTABLISHED VEGETATION).
- BOARDS SHALL NOT BE LEFT IN PLACE DURING THE CONSTRUCTION OF THE BIORETENTION BMP.
- GEOTEXTILE (FILTER FABRIC) SHALL BE PLACED AGAINST EXCAVATED SURFACES. SCARIFY EARTH PRIOR TO GEOTEXTILE PLACEMENT. INSTALL GEOTEXTILE PER MANUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS AND USE A 2 FT MINIMUM OVERLAP AND NOTCH ENDS WITH A 6" MINIMUM BURY OR EQUIVALENT ANCHORING METHOD.
- THE CONTRACTOR SHALL PROVIDE INDEPENDENT CERTIFICATION THAT THE SOILS AND OTHER MATERIALS MEET THE SPECIFICATIONS DURING THE AS-BUILT STAGE.
- THE BIORETENTION FACILITIES SHALL BE VEGETATED (TOP LEVEL SURFACE ONLY) IN ACCORDANCE WITH THE PLANTING SCHEDULE.
- INSTALL CLEANOUT (SOLID PVC PIPE) AS SHOWN. THE CLEANOUT TOP SHALL EXTEND 3" ABOVE TOP OF MULCH.
- USE PERFORATED PVC PIPE UNDER THE BMP AND USE SOLID PVC PIPE (SCHEDULE 40) OUTSIDE OF THE BMP (IN NATURAL SOIL) TO OUTLET/DAYLIGHT.

**OPERATION AND MAINTENANCE SCHEDULE FOR THE BIO-RETENTION BMP (M-6)**

- THE MICRO-BIORETENTION FACILITY SHALL BE INSPECTED AT LEAST TWICE PER YEAR (ONCE EACH IN THE SPRING AND FALL) AND AFTER HEAVY STORMS. THE OWNER IS RESPONSIBLE FOR MAINTAINING A DETAILED LOG OF THE MAINTENANCE INSPECTION FINDINGS AND A HISTORY OF THE COMPLETED WORK. THE LOG SHALL BE MADE AVAILABLE TO HOWARD COUNTY DPZ AND/OR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UPON REQUEST.
- MICRO-BIORETENTION FACILITY COMPONENTS TO BE INSPECTED AND MAINTAINED INCLUDE THE ITEMS AS FOLLOWS:
- PLANT MATERIAL: PLANTS SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION. REMOVE AND REPLACE DEAD OR DYING VEGETATION CONSIDERED BEYOND TREATMENT (SEE NOTE BELOW). MAINTENANCE ALSO INCLUDES PRUNING, AND REPLACEMENT OF DEFICIENT STAKES AND WIRE.
  - MULCH LAYER: SHALL BE REPLACED ONCE EVERY SPRING DUE TO THE HEAVY METALS GENERATED FROM THE PARKING LOT. THE OWNER SHALL PROPERLY DISPOSE OF THE OLD MULCH SO AS NOT TO CAUSE STORMWATER CONTAMINATION ELSEWHERE. WASHED OUT AREAS SHALL BE REPAIRED AS NECESSARY.
  - SOIL LAYER: SHOULD STORMWATER POND FOR MORE THE 48 HOURS, THE TOP 6 INCHES (MINIMUM) OF THE SOIL LAYER SHALL BE REPLACED. THE OLD SOILS SHALL BE PROPERLY DISPOSED.
  - SPILLWAY OUTFALL, INTERIOR SLOPES: ERODED AREAS SHALL BE REPAIRED (FILLED IN AND SEEDED) AS NEEDED. BARE AREAS SHALL BE TREATED AND RE-SEEDED.
  - INLET: REPAIR CRACKS, DAMAGED CONCRETE, ETC. AS NECESSARY.
  - REMOVE AND PROPERLY DISPOSE ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.
- NOTES:
- IF SPECIFIC PLANTS ARE NOT SURVIVING, THE PLANT TYPE SHOULD CHANGED TO BETTER SUITED SPECIES.
  - PLANT WATERING MAY BE NEEDED DURING PROLONGED DRY PERIODS.

**GENERAL STORMWATER MANAGEMENT NOTES**

- STORMWATER MANAGEMENT FOR ESDV HAS BEEN PROVIDED WITH A MICRO-BIORETENTION FACILITY (M-6). PLEASE REFER TO THE SWM REPORT PREPARED BY FISHER, COLLINS, & CARTER, INC. DATED AUGUST 13, 2010 FOR MORE INFORMATION.
- ALL CONSTRUCTION SHALL MEET THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS, EARTHEN DAM POND SPECIFICATION MD-378, AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S CURRENT STORMWATER DESIGN MANUAL, OR AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONSULT THE ENGINEER SHOULD THERE BE ANY DISCREPANCIES.
- THE UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL TEST PIT ALL KNOWN EXISTING UTILITIES TO VERIFY, SIZE, SHAPE, LOCATION, AND TYPE PRIOR TO PERFORMING CONSTRUCTION. UTILITY RELOCATIONS, WHETHER SHOWN OR NOT, ARE THE RESPONSIBILITY OF THE OWNER. ANY UTILITY DAMAGED DUE TO CONSTRUCTION MUST BE REPAIRED IMMEDIATELY.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. IF THE CONTRACTOR MAKES FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
- CONTRACTOR SHALL NOTIFY MISS UTILITY 1-800-257-7777 AND THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES & PERMITS THREE (3) WORKING DAYS BEFORE BEGINNING CONSTRUCTION.
- FISHER, COLLINS & CARTER, INC. IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS PROJECT. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH CODE/SPECIFICATION REQUIREMENTS.
- THE BMP MAY BE GRADED, HOWEVER, THE PLANTING SOIL IN THE BMP SHALL NOT BE INSTALLED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (I.E., GOOD GRASS COVER OR PAVED).
- THE STORMWATER MANAGEMENT MICRO-BIORETENTION BMP SHOWN ON THIS SHEET WILL BE PRIVATELY OWNED AND MAINTAINED.



MICRO-BIORETENTION (M-6) FACILITY TYPICAL SECTION NTS

NOTE: The purpose of this plan is for the PARKING LOT ADDITION AND STORMWATER MANAGEMENT



FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2005

DATE	DESCRIPTION	REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Thomas G. Rutledge* 11/23/10  
Director - Department of Planning and Zoning Date

*Victor S. Deane* 11/23/10  
Chief, Division of Land Development Date

*Michael J. ...* 11/17/10  
Chief, Development Engineering Division Date

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention: Bruce Gist  
410-313-6805

ARCHITECT  
**SEM**  
Smolen + Emr  
1325 PEARSON DRIVE, SUITE 200  
ROCKVILLE, MD 20850  
301-770-0177(P) 301-330-3224(F)

Address Chart	
Parcel Number	Street Address
P. 259	8110 ALLADIN DRIVE
LAUREL, MARYLAND. 20723	

PROJECT	SECTION/AREA	PARCELS
HAMMOND ELEM./MIDDLE SCHOOL	-	259

DEED REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
	6	R-20	46	SIXTH	6060.02

WATER CODE	SEWER CODE
-	-

MICRO-BIORETENTION FACILITY NOTES & DETAILS

**"REVISED SITE DEVELOPMENT PLAN"**  
**HAMMOND ELEM./MIDDLE SCHOOL**  
PARKING ADDITION AND SCHOOL BUS LOOP

PARCEL No.: 259  
TAX MAP No.: 46 GRID No.: 6  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: AUGUST 16, 2010

SHEET 8 OF 9 **SDP-87-141**

K:\SDP87\SDP167191\DWG\RED LINE-BUS LOOP & SUPPL DWG\SDP167191\_SJPP\DWG\DWG\_Sheet 8\_11



