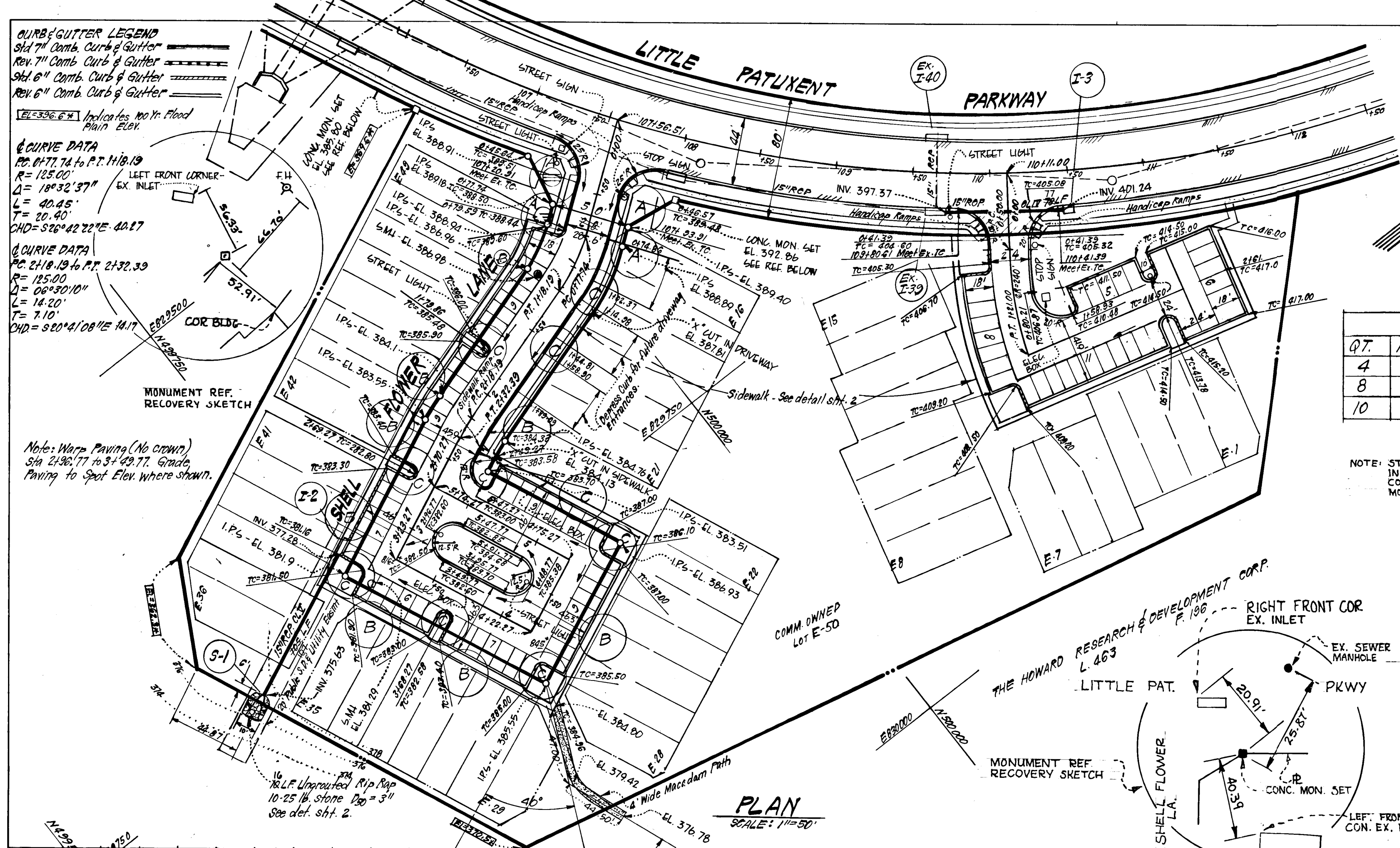


CURB & GUTTER LEGEND
 Sid 7" Comb. Curb & Gutter
 Rev 7" Comb. Curb & Gutter
 Sid 6" Comb. Curb & Gutter
 Rev 6" Comb. Curb & Gutter

CURVE DATA
 PC: 0174.74 to P.T. 118.19
 R = 125.00'
 L = 183.32' 37"
 Δ = 40.45°
 T = 20.40'
 CHD = 526°42'22"E = 40.17'

CURVE DATA
 PC: 2118.19 to P.T. 2132.33
 R = 125.00'
 L = 06°30'10"
 Δ = 14.20°
 T = 7.10'
 CHD = 526°41'08"E = 14.17'

Note: Warm Paving (No Crown)
 Sid 2 1/2" to 3 1/2" 17.75' Grading
 Paving to Spot Elev. where shown.



STREET TREES LEGEND

Q.T.	KEY	DESCRIPTION	SIZE
4	A	Zelcova 'Village Green'	2 1/2 - 3" Cal B & B
8	B	Liquidambar styraciflua	2 1/2 - 3" Cal B & B
10	C	Quercus Palustris	2 1/2 - 3" Cal B & B

NOTE: STANDARD T COMBO CURB AND GUTTER USED IN ALL AREAS IN LIEU OF STANDARD 6" COMBINATION CURB AND GUTTER AND 6" MONOLITHIC CURB.

DEVELOPER'S/BUILDER'S CERTIFICATE
 I hereby certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this project have received a Certificate of Attendance at a Dept. 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 or their authorized agents, as are deemed necessary.

B. James Greenfield 10/10/83
 Signature of Developer/Builder Date
B. James Greenfield

Reviewed for HOWARD S.C.D.
 Name: *James M. Helm* 12-20-83
 Signature Date
 U.S. Soil Conservation Service

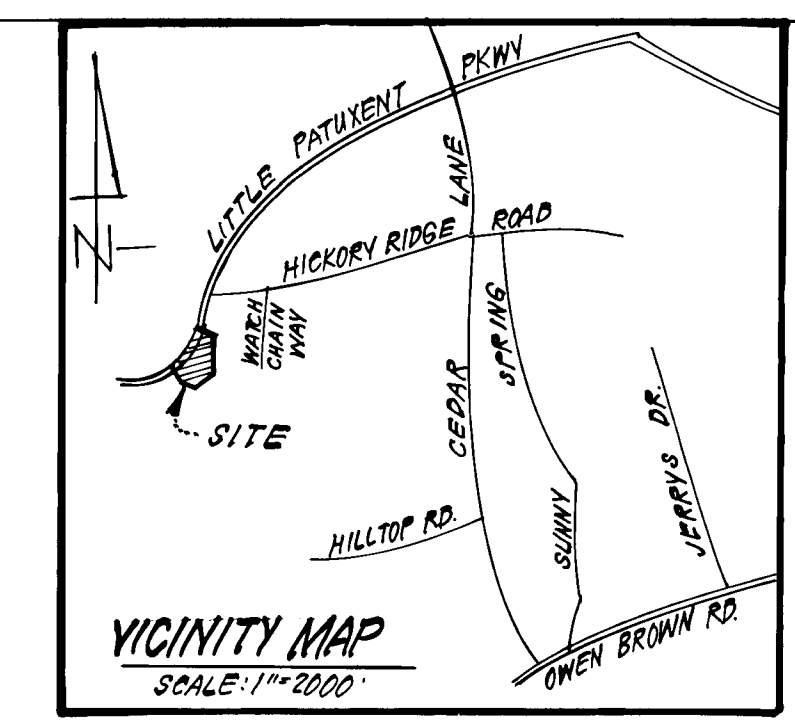
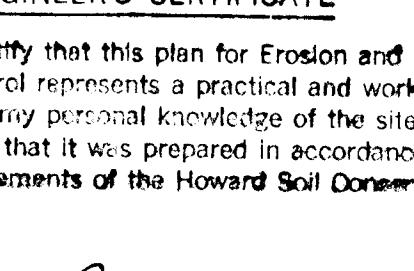
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

W. J. [Signature] 12-20-83
 Approved Date

ENGINEERS CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based upon the personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

D. M. [Signature] 10-7-83
 Approved Date



- GENERAL NOTES**
- All storm Drainage Paving shall be constructed in accordance with the latest details and specifications of Howard County & Md SHA.
 - Types of storm drain structures refer to the Standard Details of Howard County and Maryland State Highway Administration.
 - Trench compaction for Storm Drains within Road or Street right of way limits shall be in accordance with Howard Co. Design Manual, Volume II.
 - Information concerning underground utilities was obtained from available records, but the Contractor must determine the exact location and elevation of the mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
 - All utility companies shall be notified 24 hrs. in advance of construction.
 - All traffic control services, parking and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices", 1971 Edition.
 - See and Cross Vertical curves were designated in accordance with "A Policy on Geometric Design of Rural Highways, 1965" by A.A.S.H.O.
 - Provide concrete sidewalk ramps in curbs, where shown in plan (Max 12:1 slope, See Md. Co. Std. Type A R-4-D).
 - Design Speed: 30 mph Zoning: New Town Single Family Attached.
 - Class "C" trench bedding shall be utilized. See to Co. Std. G-2.01 Trench in Earth.
 - Storm Water Management provided in Central Facility Under Village of Hickory Ridge, Station 3, Area 1, F. 83 120.

OWNER: The Howard Research & Development Corp.
 10276 Little Patuxent Pkwy., Columbia, Md 21044

APPROVED: Department of Public Works
[Signature] 12-13-83
 Chief Bureau of Engineering Date

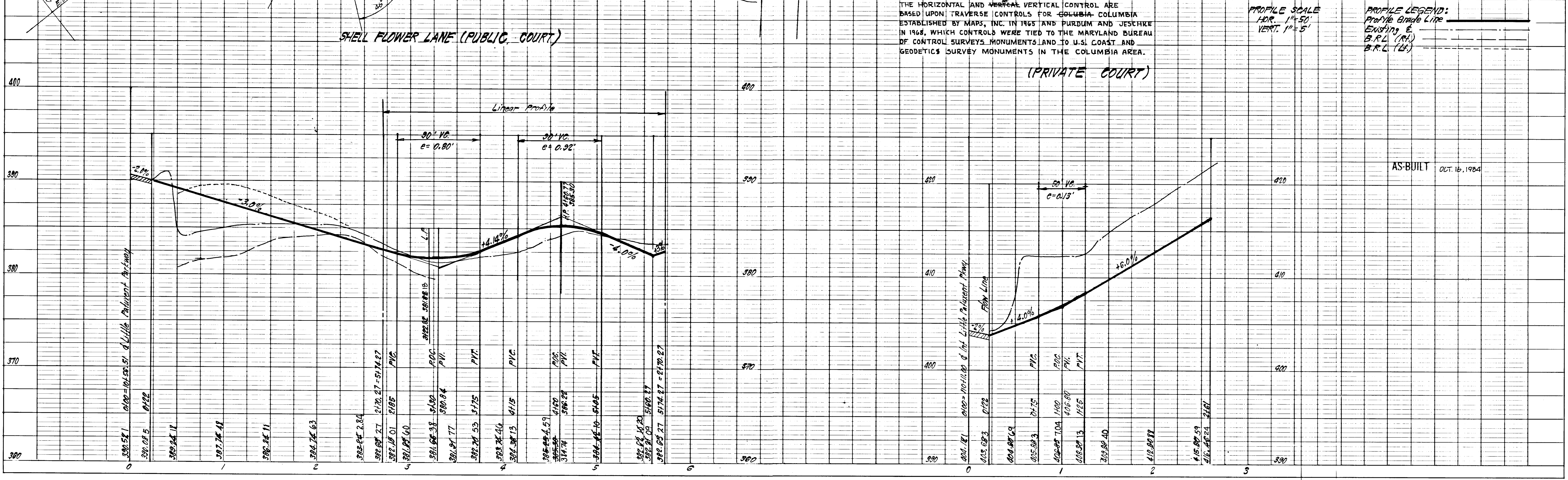
APPROVED: Howard County Office of Planning and Zoning
[Signature] 12-13-83
 Chief Division of Land Development Zoning Administration Date

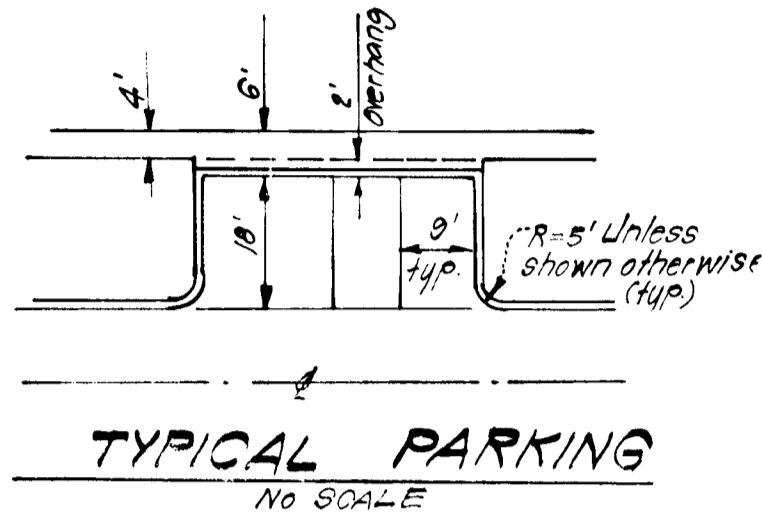
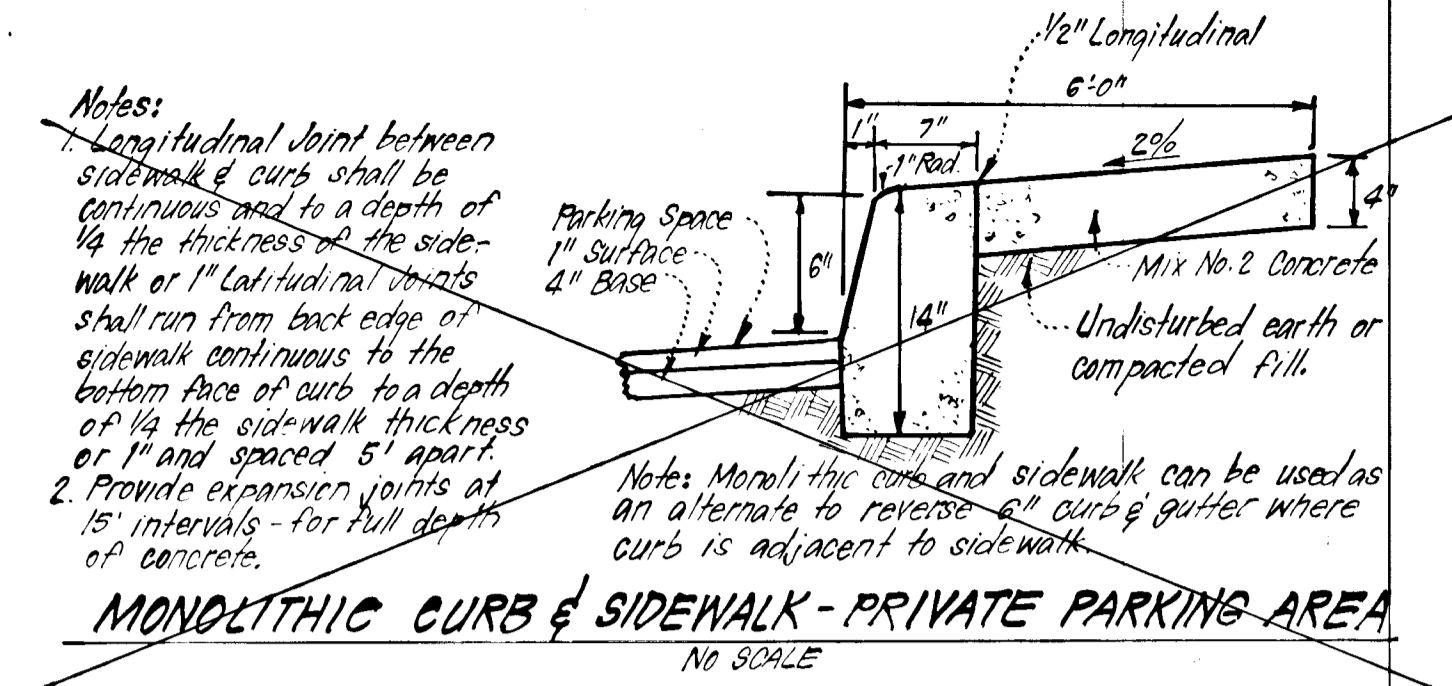
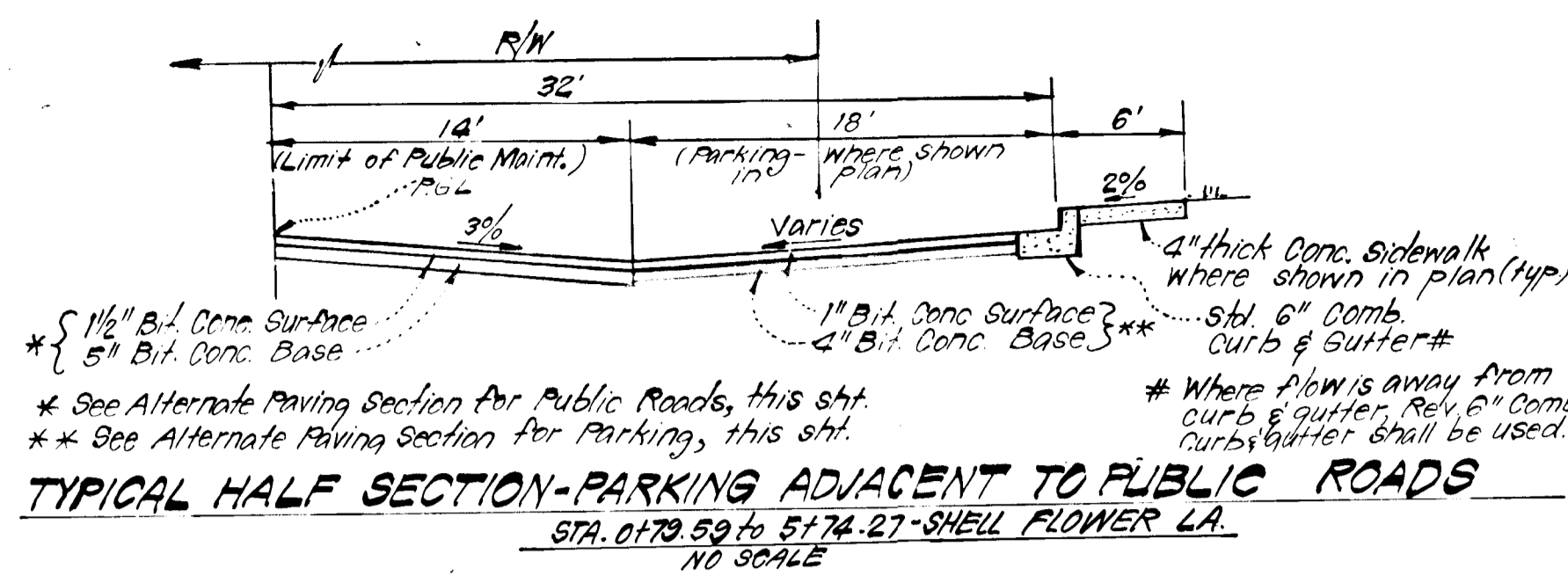
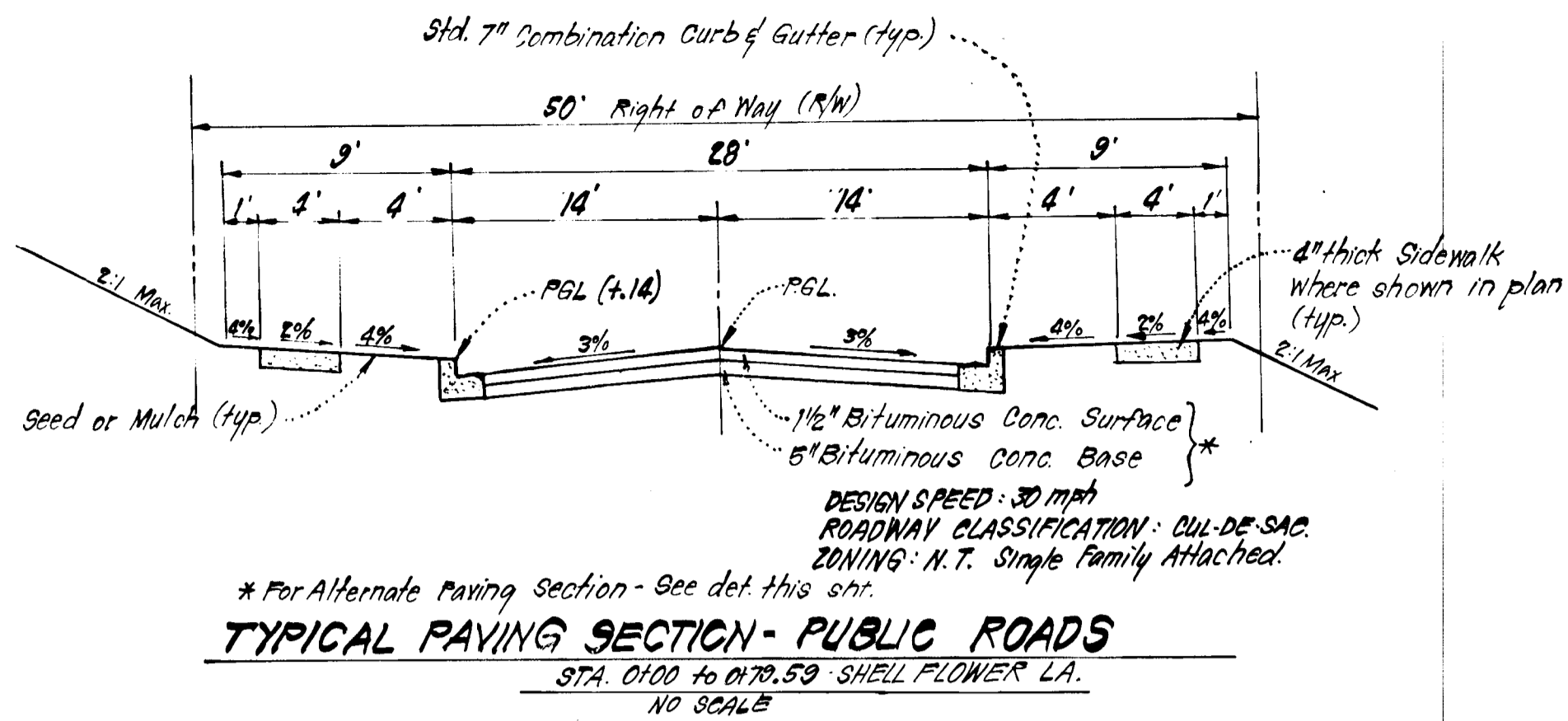
CLARK, FINEFROCK & SACKETT
 ENGINEERS - PLANNERS - SURVEYORS
 11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • 301-593 3400

DESIGNED	JLS	SCALE	AS SHOWN
DRAWN	KIM	DRAWING	1 OF 4
CHECKED	JLS	JOB NO.	83-065
DATE	10-7-83	FILE NO.	83-065-D

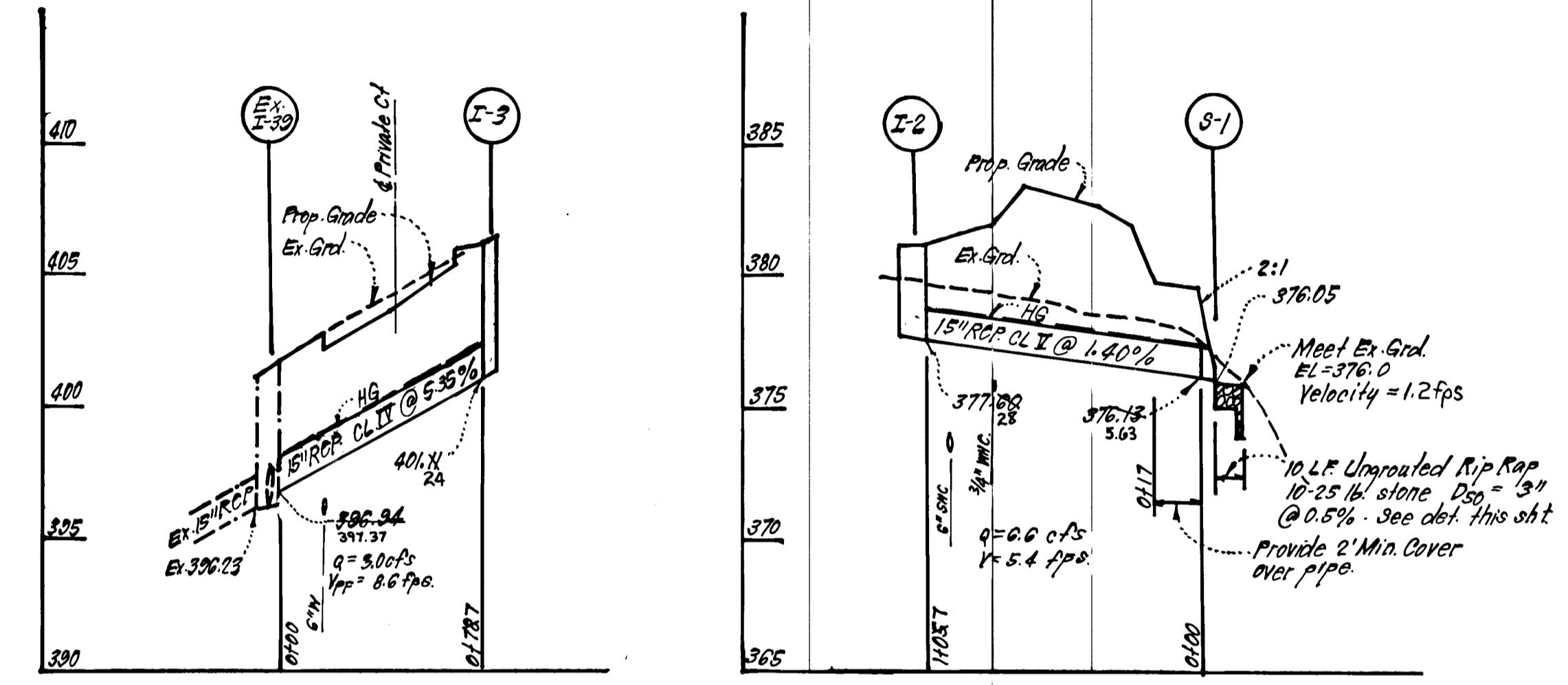
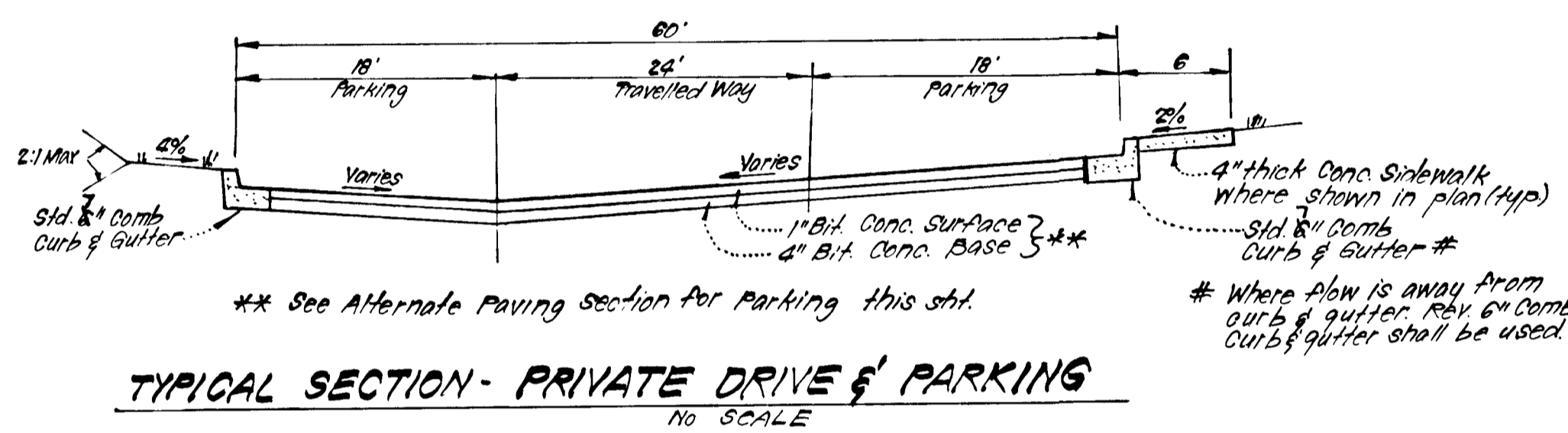
ROAD CONSTRUCTION PLANS
 SHELL FLOWER LANE
 A RESUBDIVISION OF PARCEL "E"
COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 2
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR: CLARY'S FOREST JOINT VENTURE
 Three Lafayette North, Bldg Suite 200
 Columbia, Md. 21044





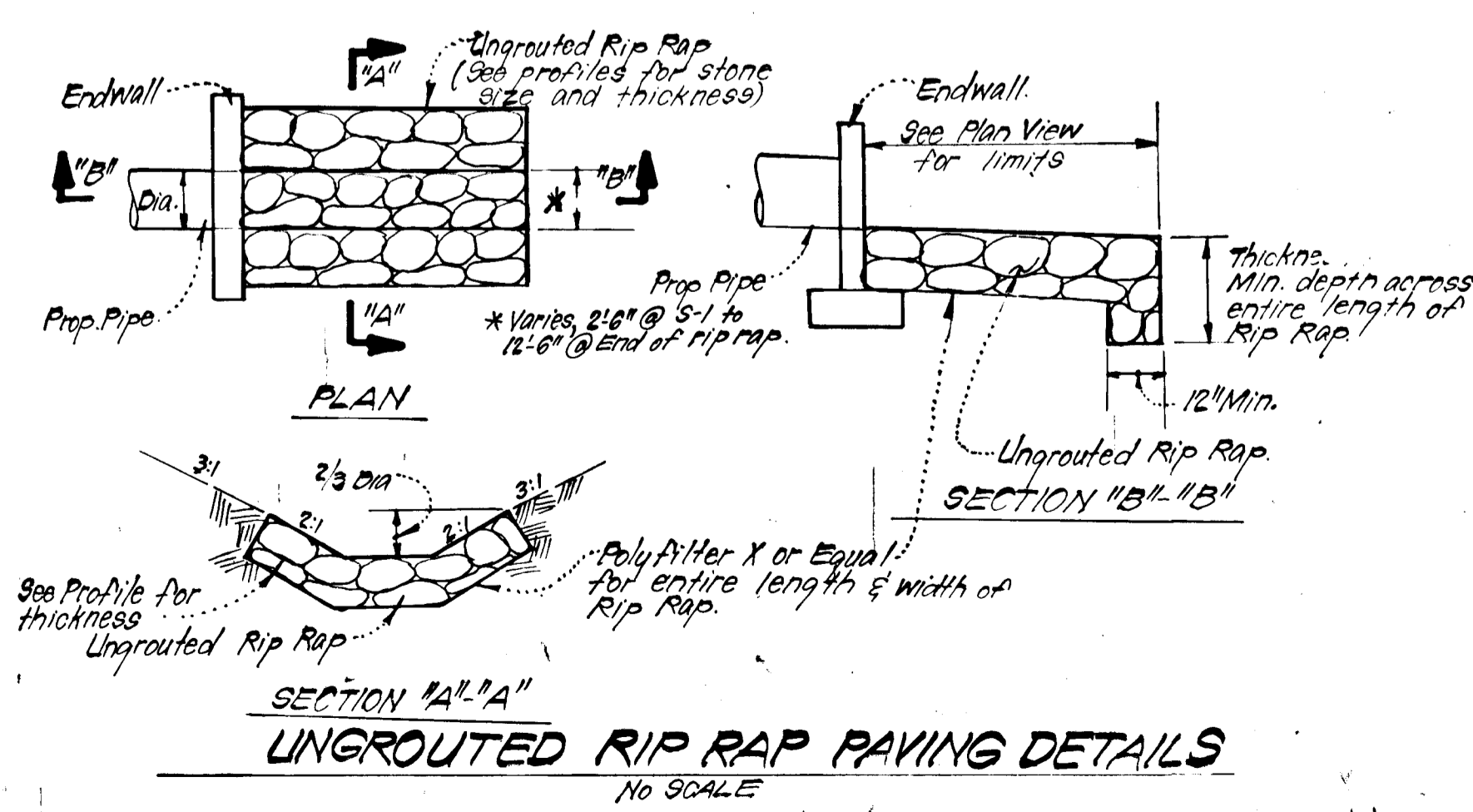
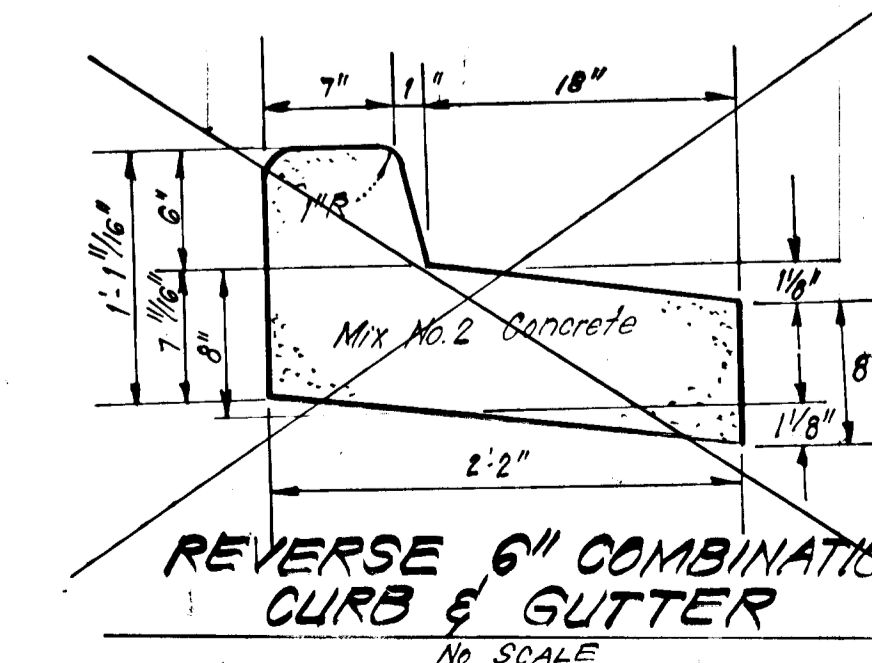
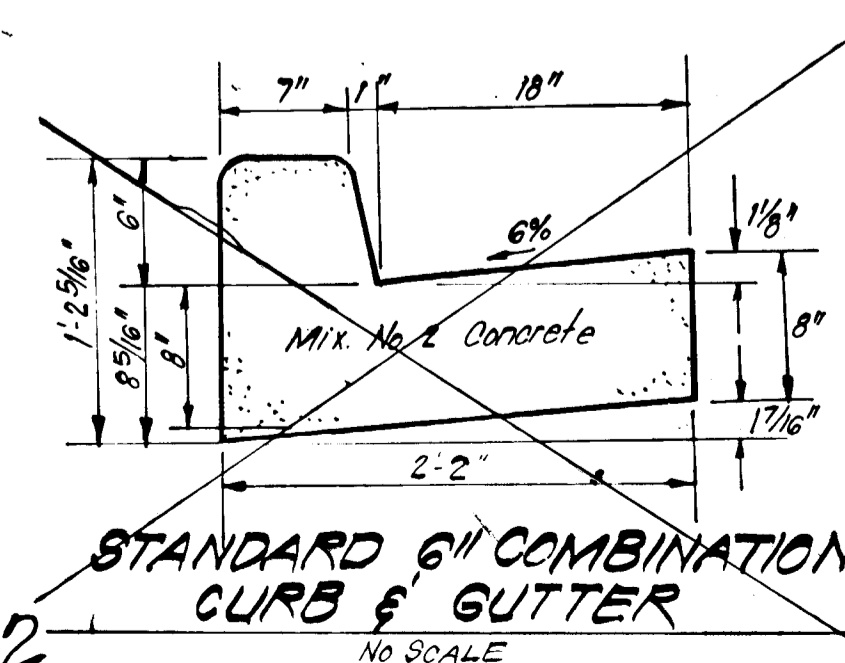
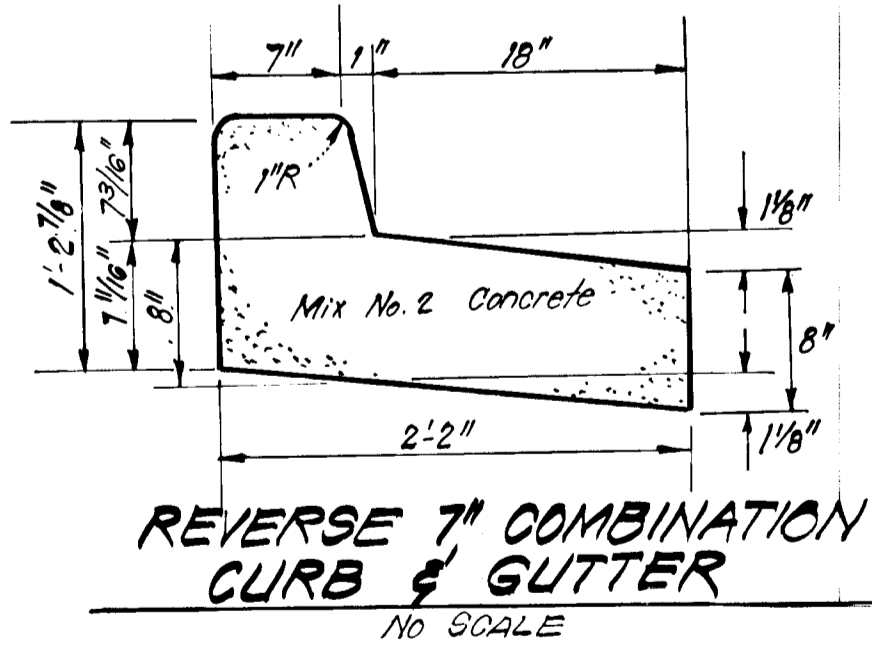
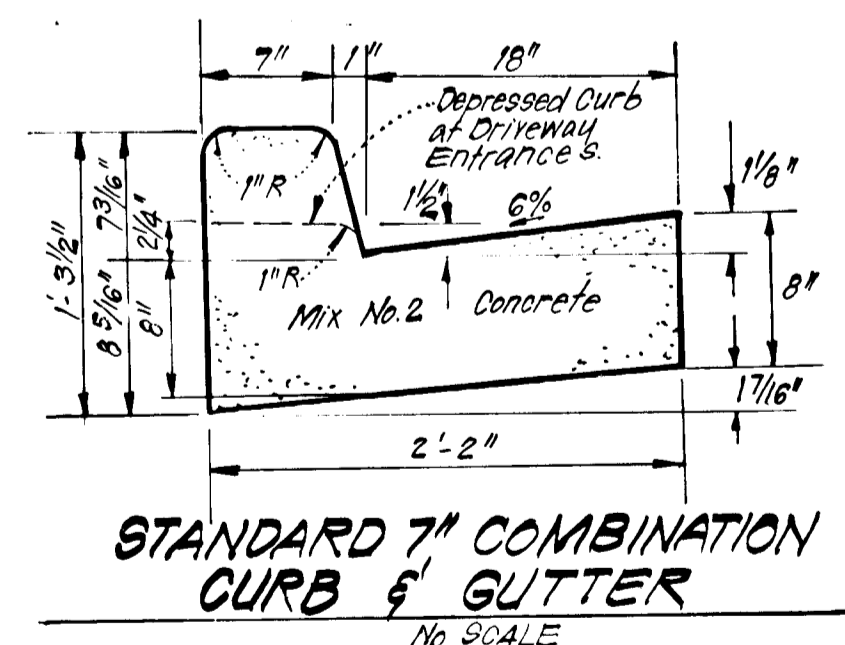
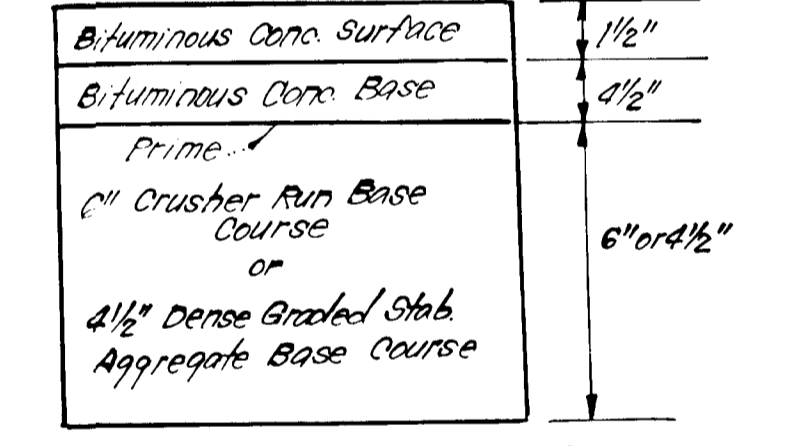
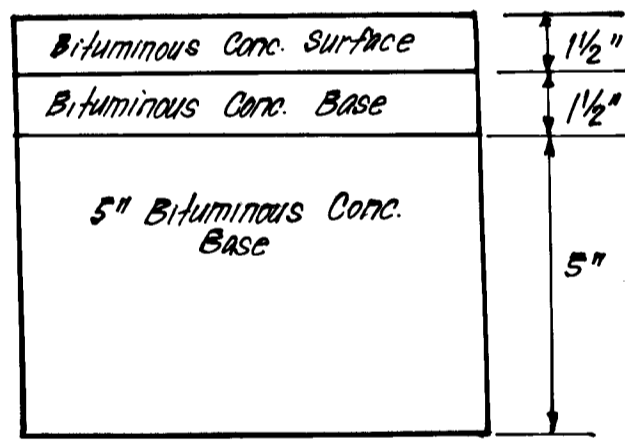
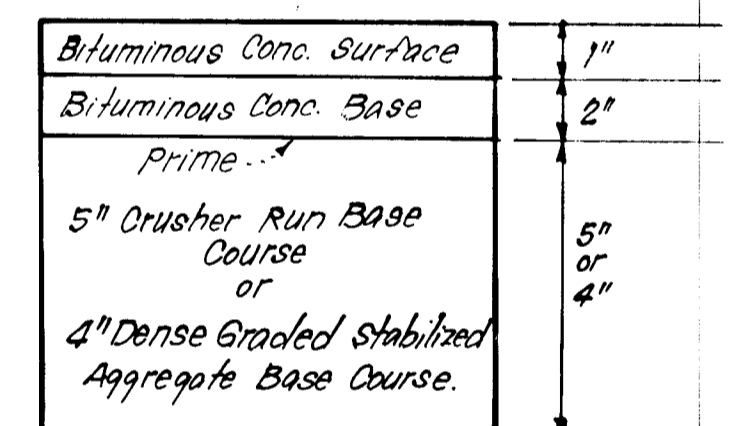
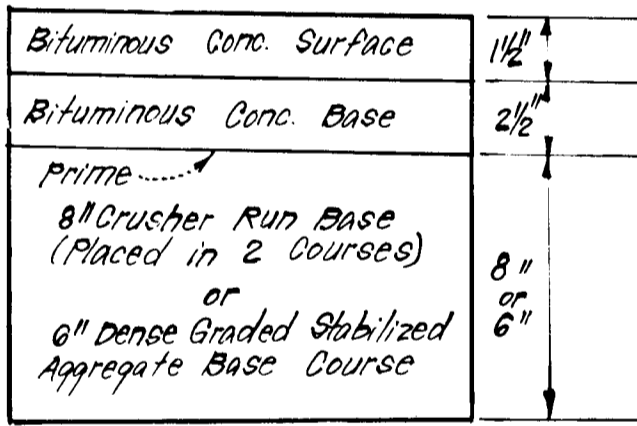
PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15"	RCP CL II	105 LF
18"	RCP CL III	78 LF



STRUCTURE SCHEDULE						
No.	TYPE	INV. IN.	INV. OUT.	TOP ELEVATION	REMARKS	LOCATION
S-1	Concrete End Section	376.13	376.05	-	No. On Std. SD 5.51 D=15"	See Plan
I-2	A-10 Inlet	-	377.60	381.16	" SD 4.02 W=2'6"	See Plan
I-3	A-5 Inlet W/Deflector	-	401.11	406.66	" SD 4.01 W=2'6"	6' Inlet Sta. 1101+47.39 L.P.P. 22' R/L

All inverts to be fully developed

See No. Co. Std. SD 4.83 for Inlet Deflectors.



DEVELOPER'S/BUILDER'S CERTIFICATE

"I certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. 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 or their authorized agents, as are deemed necessary."

B. James Greenfield 10/10/83

B. JAMES GREENFIELD

Reviewed for HOWARD S.C.D. Requirements 10-20-83

U.S. Soil Conservation Service

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

Wm. J. Rowe 10/20/83

Approved Date

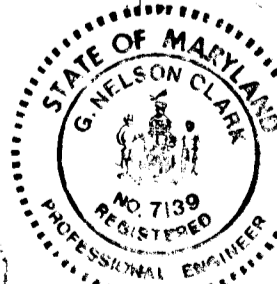
ENGINEER'S CERTIFICATE

I hereby 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.

G. Nelson Clark 10-20-83

G. NELSON CLARK

Date



OWNER: The Howard Research & Development Corp. 10275 Little Parkwood Parkway Columbia, Md. 21044

APPROVED: Department of Public Works

James E. Ray 12-15-83

Chief, Bureau of Engineering

APPROVED: Howard County Office of Planning and Zoning

John W. Murchman 12-14-83

Chief, Division of Land Development & Zoning Administration

CLARK • FINEFROCK & SACKETT

ENGINEERS • PLANNERS • SURVEYORS

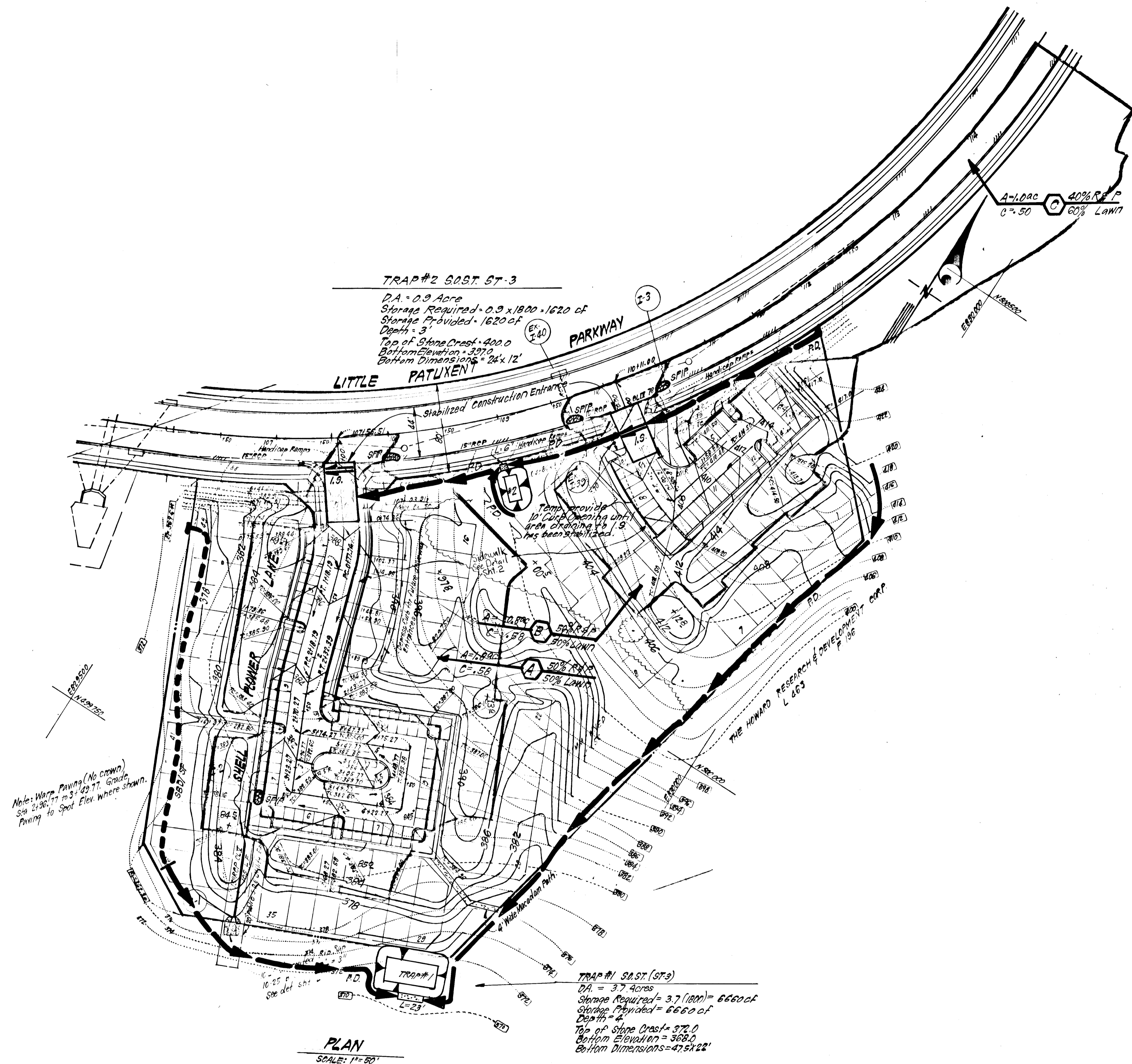
11314 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED	JLS	SCALE	AS SHOWN
DRAWN	K/W	DRAWING	2 OF 4
CHECKED	JLS	JOB NO.	83-065
DATE	10-7-83	FILE NO.	83-065-1

ROAD CONSTRUCTION PLANS
STORM DRAIN & PAVING DETAILS
A RESUBDIVISION OF PARCEL "E" IN
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 2
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: CLARY'S FOREST JOINT VENTURE
Three Lakefront North Bldg. Suite 200
Columbia, Md. 21044

AS-BUILT OCT. 16, 1984

F-84-68 AS-BUILT 05-16-86



TRAP #2 S.O.S.T. ST-3
 D.A. = 0.9 Acre
 Storage Required = 0.9 x 1800 = 1620 cf
 Storage Provided = 1620 cf
 Depth = 3'
 Top of Stone Crest = 400.0
 Bottom Elevation = 397.0
 Bottom Dimensions = 24' x 12'

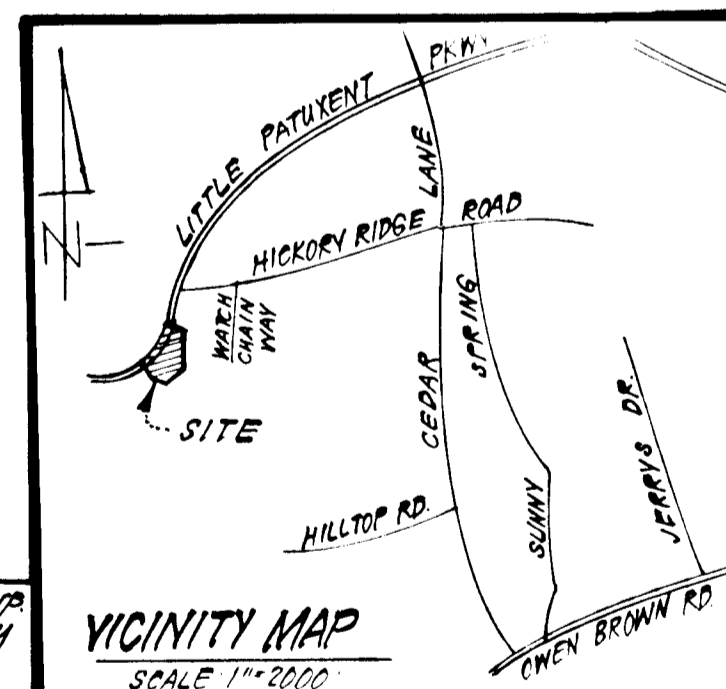
TRAP #1 S.O.S.T. ST-3
 D.A. = 3.7 Acres
 Storage Required = 3.7 (1800) = 6660 cf
 Storage Provided = 6660 cf
 Depth = 4'
 Top of Stone Crest = 372.0
 Bottom Elevation = 368.0
 Bottom Dimensions = 47.5' x 22'

PLAN
 SCALE: 1" = 50'

Note: Warm Paving (No Crown)
 See 2-36-77 to 3-1-77. Grade Paving to Spot Elev. Where Shown.

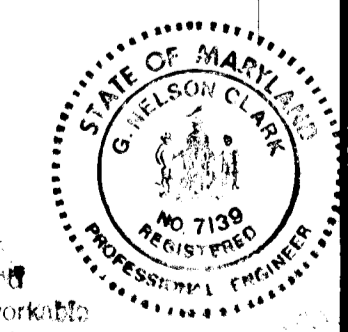
AS-BUILT OCT 16, 1984

- LEGEND:**
- Existing Contour (2.0' Interval)
 - Proposed Contour
 - Proposed Storm Drain
 - Perimeter Dike
 - Straw Bale Dike / Silt Fence
 - Stone Filter Inlet Protection



OWNER: The Howard Research & Develop. Corp.
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044

APPROVED: Department of Public Works
 [Signature] 12-13-83
 Chief, Bureau of Engineering
 APPROVED: Howard County Office of Planning and Zoning
 [Signature] 12-14-83
 Chief, Division of Land Development & Zoning Administration



CLARK FINEFROCK & SACKETT
 ENGINEERS - PLANNERS - SURVEYORS
 1135 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • 301-593-3400

Reviewed for... HOWARD... S.C.D.
 [Signature] 12-20-83
 U.S. Soil Conservation Service
 THE DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 12-10-83
 Approved Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 "I hereby certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. 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 or their authorized agents, as are deemed necessary."
 [Signature] 10/10/83
 B. James Greenfield Date

ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable design 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] 10-7-83
 G. Nelson Clark Date

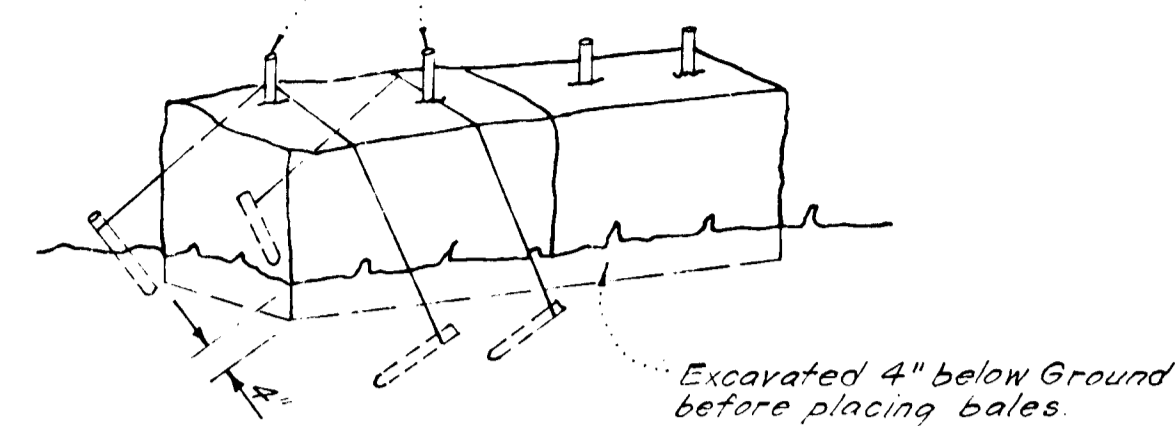
DESIGNED JLS	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL PLAN & DRAINAGE AREA MAP A RE-REVISION OF PROJECT 5	SCALE AS SHOWN
DRAWN K/W	COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 3 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 3 OF 4
CHECKED JLS		JOB NO. 83 065
DATE 10-7-83	FOR CLARK'S FOREST JOINT VENTURE Three Lakes, 204 North Bldg. Suite 200 Columbia, Md. 21044	FILE NO. 83 065.0

F-84-68

GENERAL NOTES

- Grading Permits shall be obtained prior to installation of Sediment Control & Grading.
- All Sediment and Erosion Control Measures will be installed and stabilized according to this plan prior to any other grading, clearing or disturbance of the existing surface of the site. See note #6 for stabilization except that the seed mixture will be annual ryegrass applied at a rate of 14 lbs/1000 sf.
- Notify the Bureau of Inspections and Permits at least 24 hrs before starting any work.
- All Sediment Control Practices to conform to the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" and shall be adjusted to meet actual field conditions.
- Stabilization of Disturbed ground to be done as soon after construction as possible.
- All disturbed area to be stabilized in accordance with the following Specifications:
 - Seed - certified 85% germination applied at the rate of 3 lbs/1000 sf Mixture - 40% Kentucky Blue, 20% chewing Fescue, 20% Kentucky 31 and 20% annual ryegrass.
 - Fertilizer - 10-10-10 applied at a rate of 23 lbs/1000 sf.
 - Mulch - Weed free grain straw applied at a rate of 70-90 lbs/1000 sf. Mulch shall be secured to the ground by any approved method i.e.; asphalt tacks, chemical binder etc.
 - All Sod used shall be Maryland State Certified.
- All structural Sediment Control Measures are to remain in place until permission for their removal has been obtained from the Bureau of Inspections and Permits.
- On-Site Inspection and Maintenance of all Sediment Control Measures including clean out of Sediment Traps and Dikes, and proper establishment of all planned vegetative measures will be the responsibility of the developer or his representative on the site, on a continuing day to day basis.
- It will be the developers responsibility to provide additional Sediment & Erosion Control Devices to protect stabilized areas during construction.
- The Contractor shall keep all public roads free of sediment deposits left from traffic leaving construction site.
- Approval of this plan is conditional upon the approval of Sediment Control Plan for the off-site waste or borrow area prior to the import of any borrow or export of waste to or from this site.
- All pipes to be blocked at the end of each day. See detail this sheet.
- Total Amount of Straw Bales or Silt Fence shown = 300 L.F.
- SITE ANALYSIS:**
 - Total Area: 4.889 Acres
 - Area to be Roofed: None Acres
 - Area to be Paved: 0.243 Acres
 - Area to be Seeded: 3.446 Acres
 - Area Undisturbed: 0.500 Acres
- CONSTRUCTION SEQUENCE:**
 - Install Sediment & Erosion Control Measures, except SFIP's
 - Clear & Rough Grade Site.
 - Construct Storm drainage & Install SFIP's
 - Construct Utilities.
 - Final grade and construct paving, sidewalks, etc. except at I.S. at Private Of.
 - Stabilize all other disturbed areas onsite in accordance with S.D.S. specs.
 - Remove sediment & erosion control measures after all areas draining to them have been stabilized and construct remainder of curb & gutter and paving.

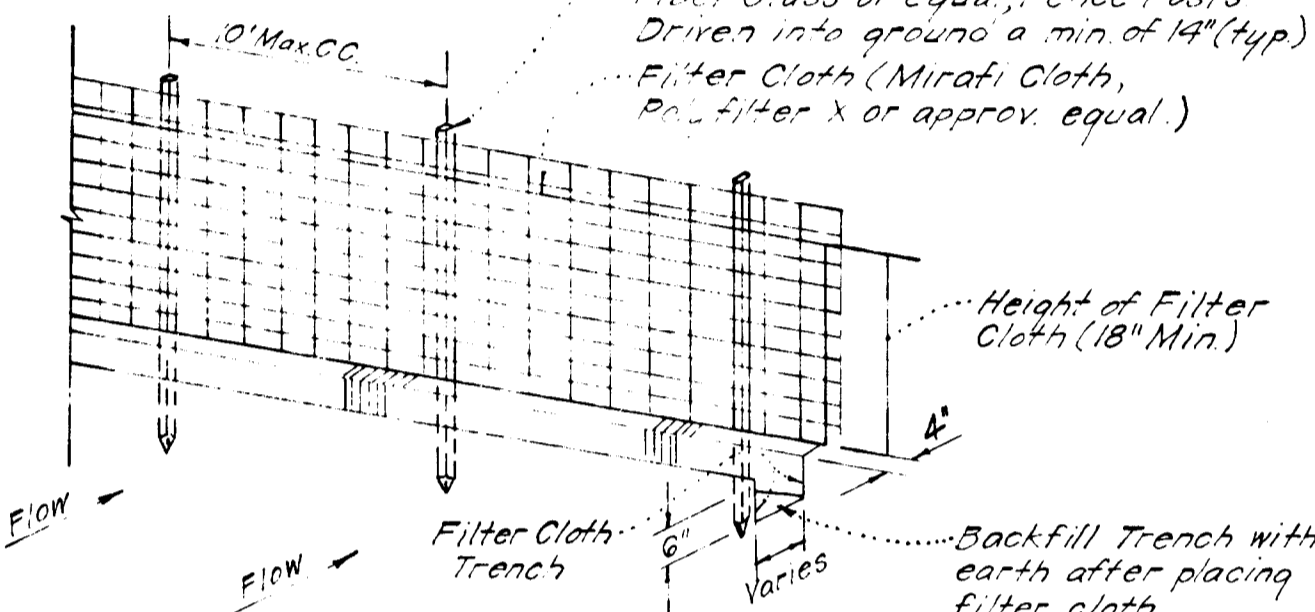
All bales shall be tied with non-weathering materials, i.e. wire, nylon.



Note:
1. In lieu of the use of rebar, each straw bale may be fastened to ground with pegs (4 per bale and wire or nylon as shown above.)

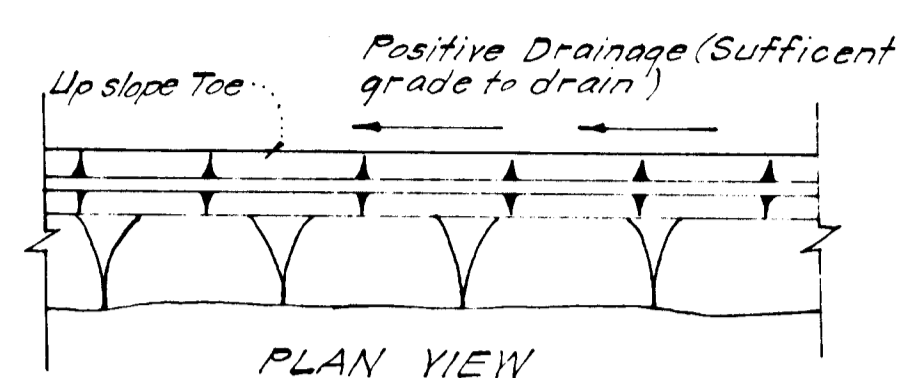
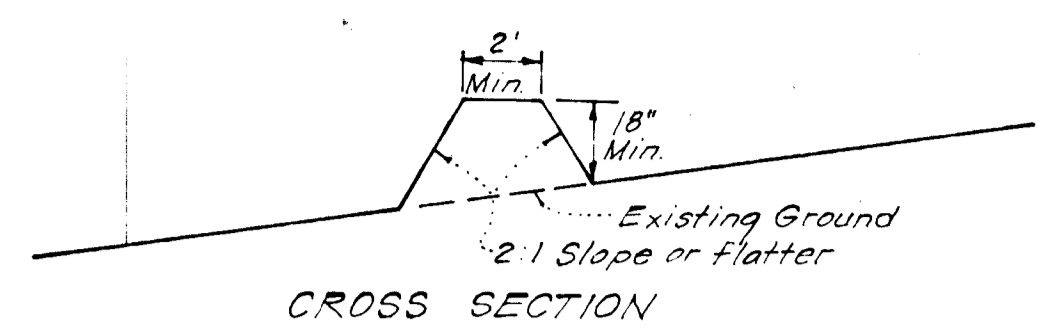
STRAW BALE DIKE DETAIL (S.B.D.)
NO SCALE

Woven wire fence - Min 14 gage;
6" Max spacing
36" Min. Metal, Heavy Duty Fiber Glass or equal, Fence Posts Driven into ground a min of 14" (typ)
Filter Cloth (Mirafi Cloth, Poly-Filter X or approved equal)

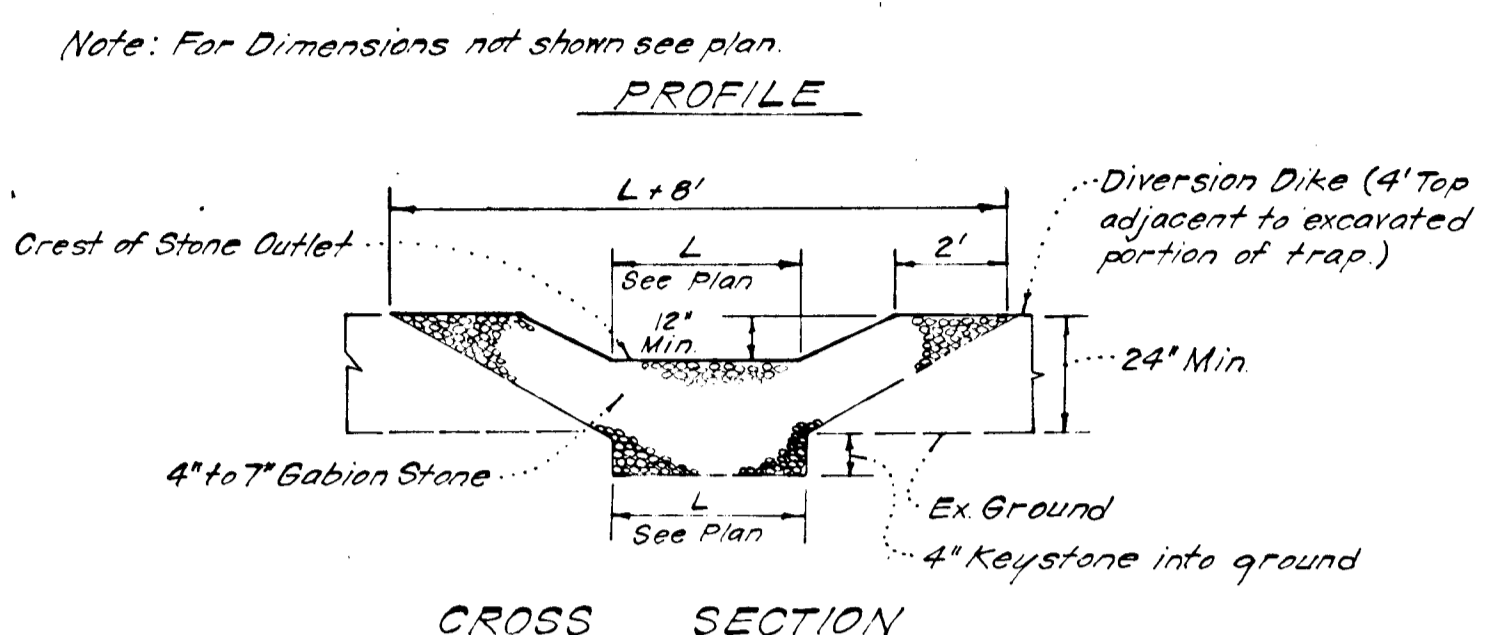
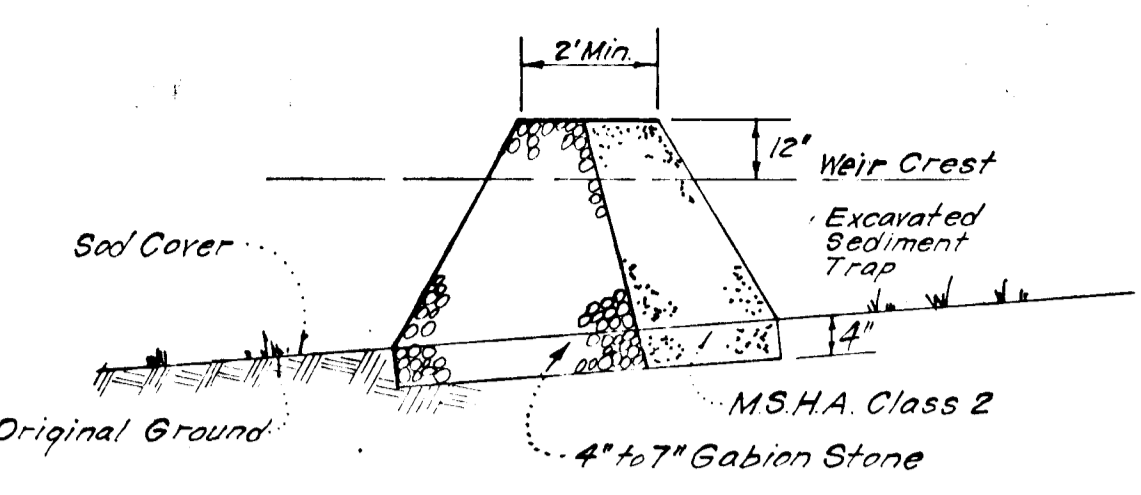


Notes:
1. Woven Wire Fence to be fastened securely to fence posts by use of wire ties
2. Filter Cloth to be fastened securely to Woven Wire, by use of wire ties spaced every 24"x24".

SILT FENCE DETAIL (S.F.)
NO SCALE

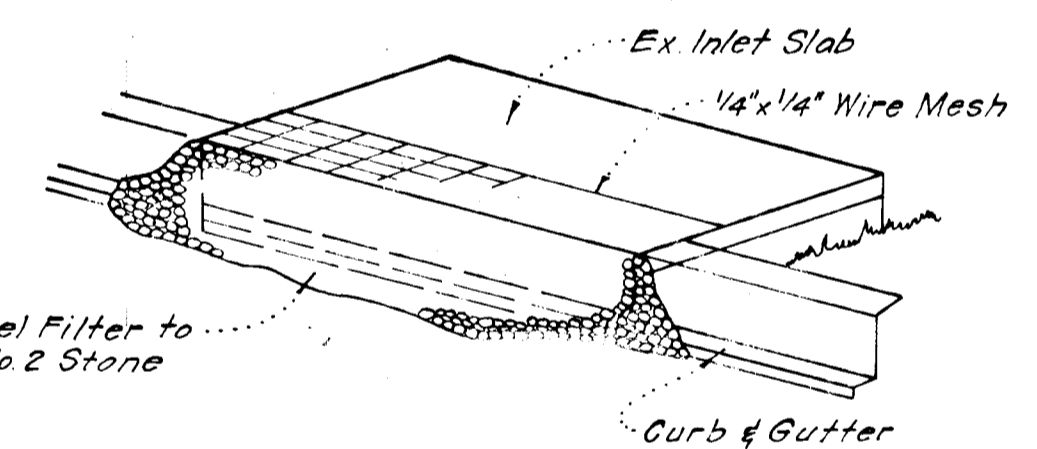


PERIMETER DIKE (P.D.)
NO SCALE

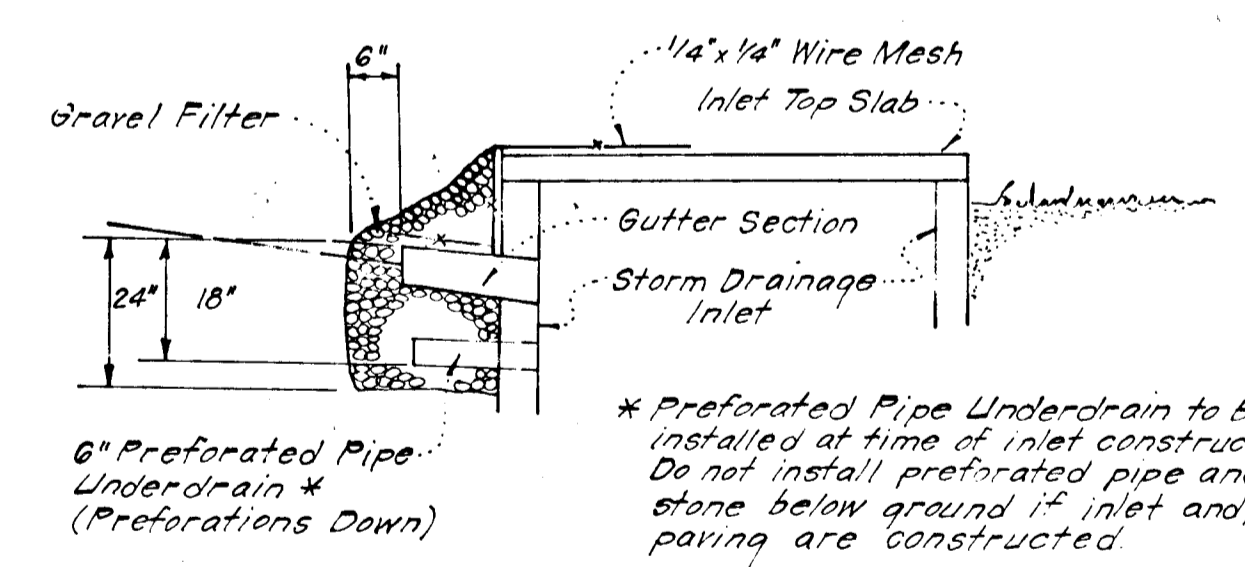


Notes:
1. Sediment Trap to be cleaned out when sediment reaches a level of 1ft below crest of stone outlet.
2. Bottom of Sediment Trap to be level and constructed to the dimensions shown on plan.
3. Stone Outlet to be constructed through diversion dike adjacent to excavated trap.

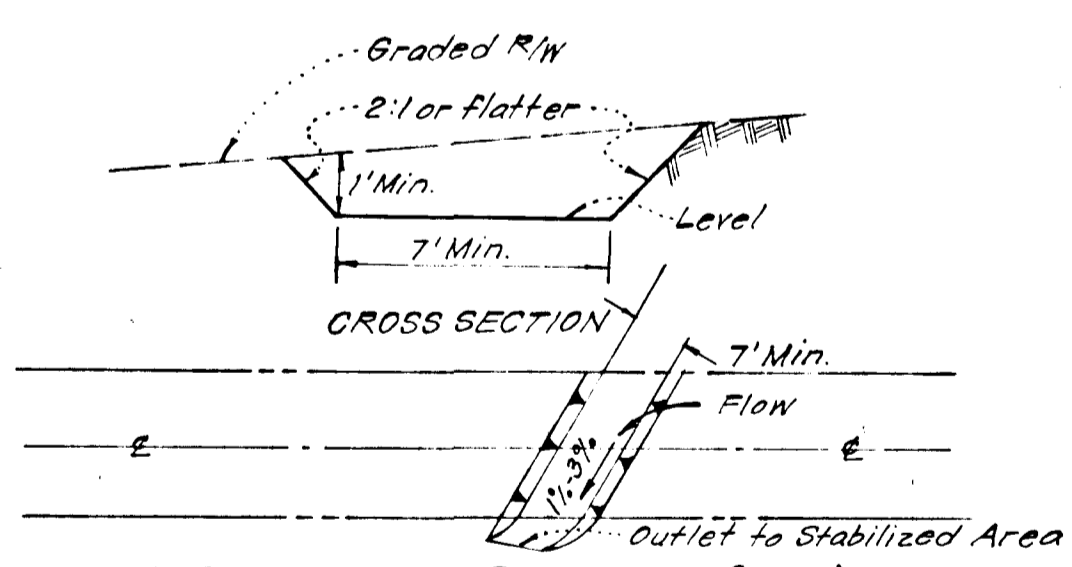
DETAILS OF STONE FILTER OUTLET FOR STONE OUTLET SEDIMENT TRAP
NO SCALE



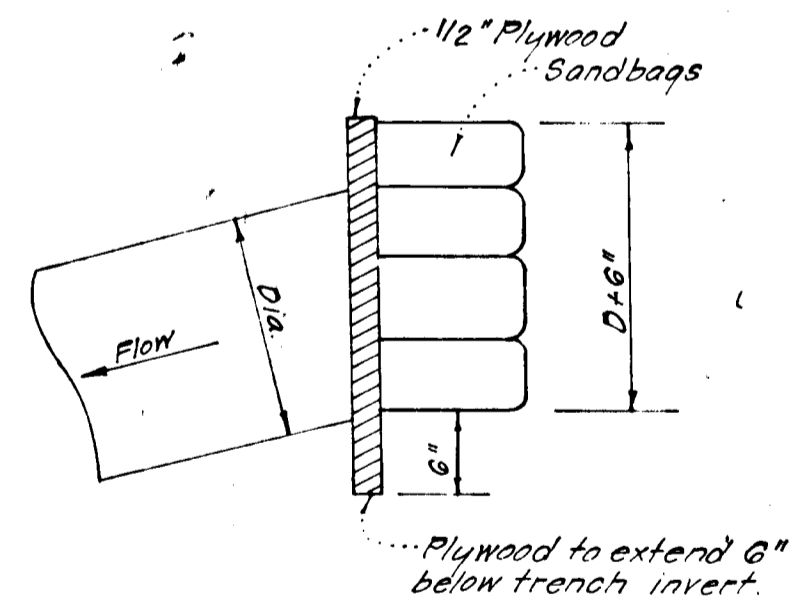
ISOMETRIC VIEW



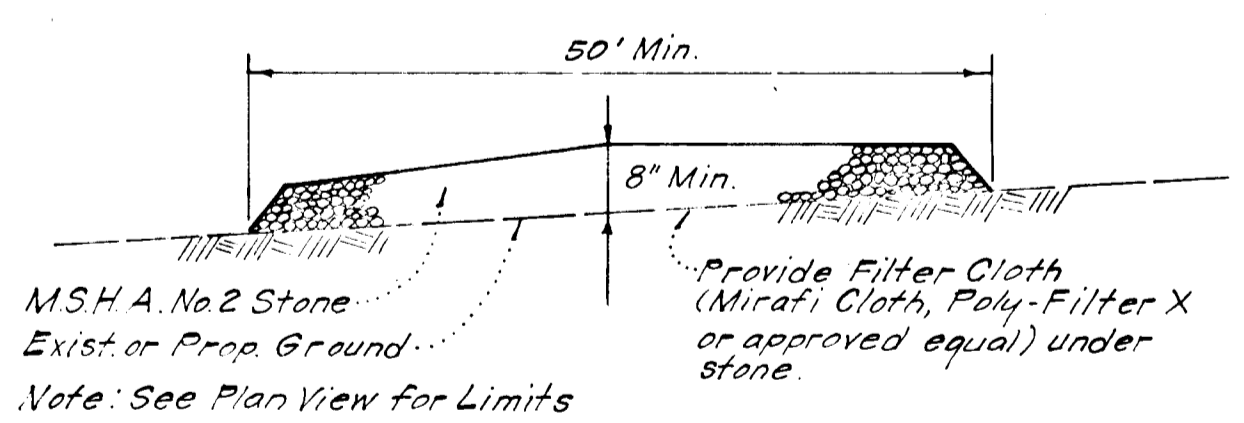
STONE FILTER INLET PROTECTION (SF.I.P.)
NO SCALE



INTERCEPTOR SILE (I.S.)
NO SCALE



PIPE BLOCKING DETAIL
NO SCALE



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

Reviewed for Howard S.C.D. Name
Date 12-20-93
U.S. Soil Conservation Service
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

W.S. Rowe 12-20-93 Date
Approved

DEVELOPER/BUILDER'S CERTIFICATE
"I/we certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. 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 or its authorized agents, as are deemed necessary."

B. Daniel Greenfield 10/10/93 Date
B. Daniel Greenfield

ENGINEERS CERTIFICATE
I hereby 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.

G. Nelson Clark 10-7-93 Date
G. Nelson Clark



AS-BUILT OCT. 16, 1994

DRAWN: The Howard Research & Development Corp.
10275 Little Patuxent Parkway
Columbia, Md 21044
APPROVED: Department of Public Works
James B. Reilly 12-13-93 Date
Chief, Bureau of Engineering
APPROVED: Howard County Office of Planning and Zoning
Shirley M. Sherman 12-14-93 Date
Chief, Division of Land Development & Zoning Administration Date

CLARK • FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS 11314 LOCKWOOD DRIVE SUITE 100 WILKESVILLE, MARYLAND 21094 101-593-3400		
DESIGNED JLS	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL DETAILS A RESUBDIVISION OF PARCEL "E" COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 2 SITE LOCATION DISTRICT HOWARD COUNTY, MARYLAND FOR: CLARK'S FOREST JOINT VENTURE Three Lake Park North Bldg. Suite 200 Columbia, Md 21044	SCALE As Shown
DRAWN KIM		40P4
CHECKED JLS		JOB NO. 83-065
DATE 10-7-93		FILE NO. 83-065-D

F-84-68