

**PLAN**  
SCALE: 1"=50'

Reviewed for Howard S.C.D. Name  
and meets Technical Requirements  
B. James Greenfield 9-26-78 Signature Date  
U.S. Soil Conservation Service

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

**DEVELOPER'S CERTIFICATE**

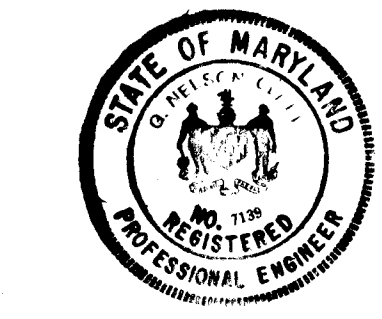
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

B. James Greenfield 8-9-78 Signature Date  
B. JAMES GREENFIELD

**ENGINEER'S CERTIFICATE**

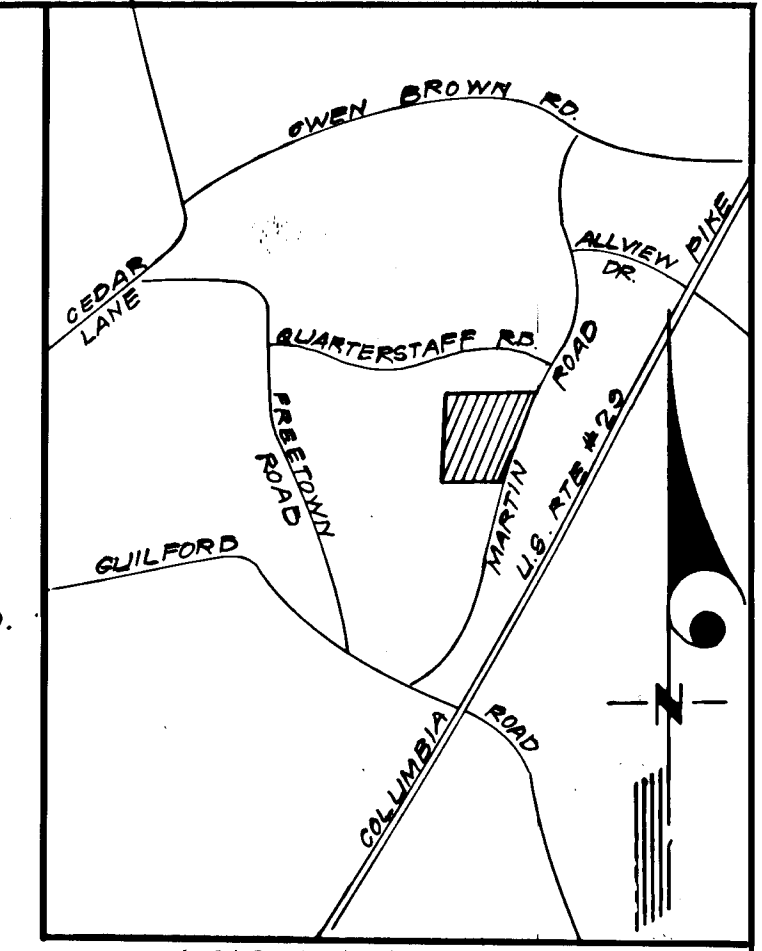
I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

G. Nelson Clark 8-9-78 Signature Date  
G. NELSON CLARK



**GENERAL NOTES**

1. All Storm Drain & Paving shall be constructed in accordance with the latest details and Specifications of Howard Co. of Md. S.H.A.
2. Types of Storm Drain Structures refer to the Standard Details of Howard County of Maryland State Highway Administration.
3. Trench Compaction for Storm Drains within Road or Street right of way limits shall be in accordance with the latest Howard Co. Road Code.
4. 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.
5. All utility companies shall be notified 24 hrs in advance of construction.
6. All traffic control services, parking, and signing to be done in accordance with the Manual of Uniform Traffic Control Devices, 1971 Edition.
7. Sag and Crest Vertical Curves were designed in accordance with 'A Policy on Geometric Design of Rural Highways', 1965, by A.A.S.H.O.
8. Provide Concrete Sidewalk Ramps in curbs where shown in plan. See detail Sheet 3.
9. Design Speed for All Roads is 25 mph.



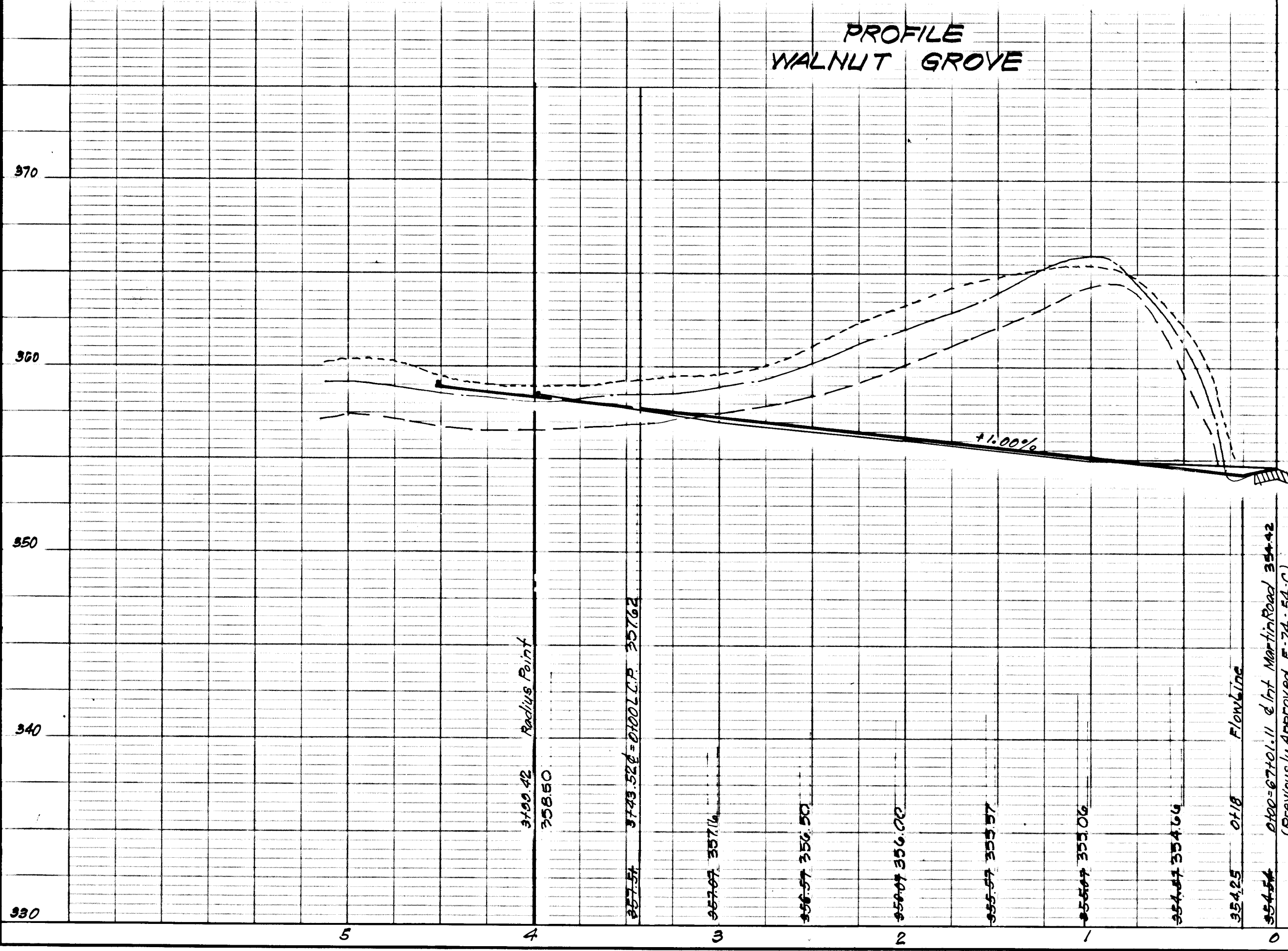
**VICINITY MAP**  
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PUBLIC WORKS  
W.O. Liberty 9-28-78  
CHIEF, Bureau of Engineering Date

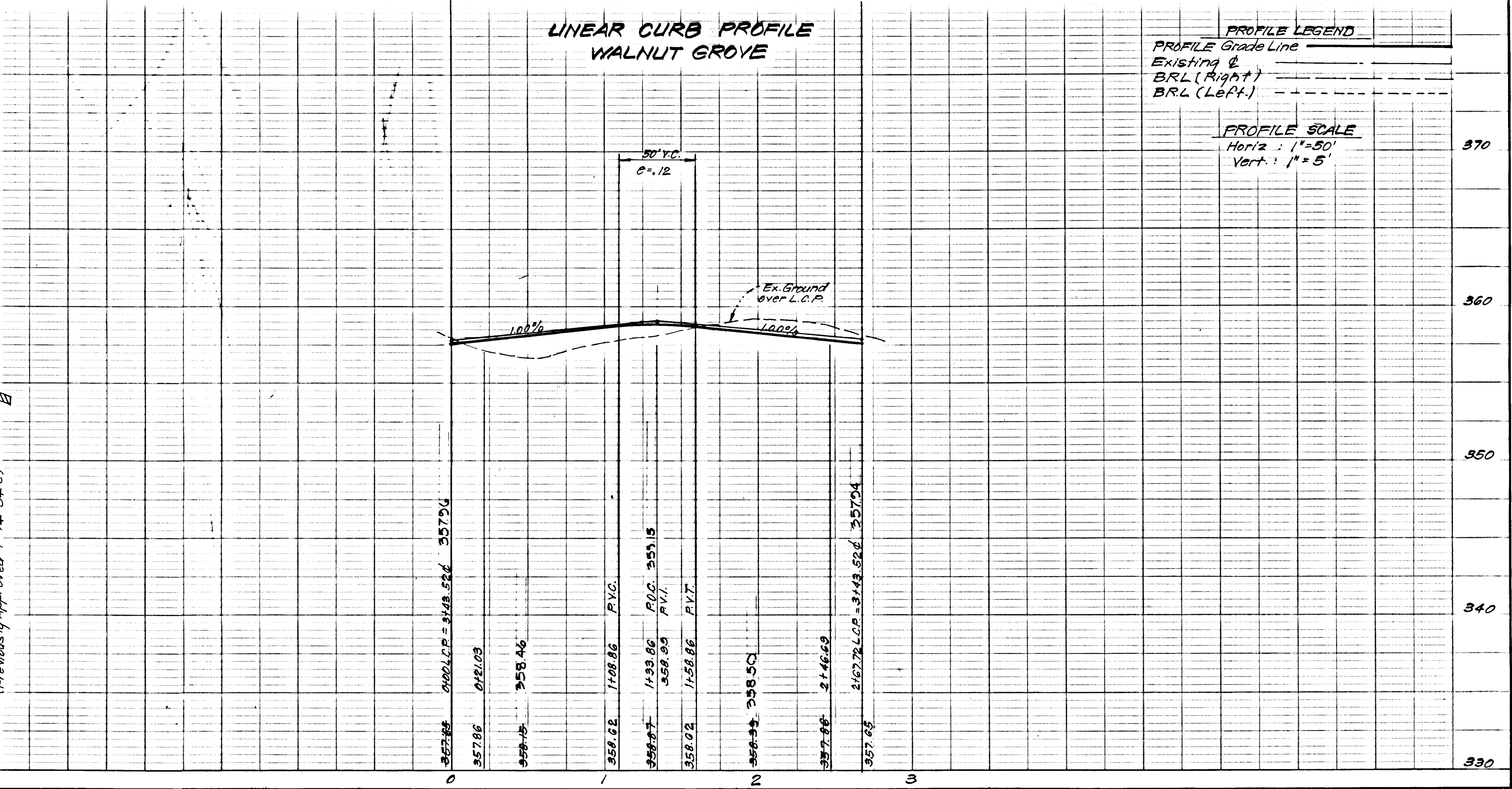
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
W.D. McNamee 10-9-78  
CHIEF, Division of Land Development Date

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

DESIGNED D.A.B.	ROAD CONSTRUCTION PLANS WALNUT GROVE	SCALE 1"=50'	
DRAWN M.I.W.		DRAWING 1 of 5	
CHECKED D.A.B.		<b>CLEMENS SQUARE</b> TAX MAP NO. 25E36 SECTION 1 AREA 1 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
DATE Aug, 1978		FOR: COLUMBIA BUILDERS INC. 606 American City Bldg. Columbia, Maryland 21044	FILE NO. 1242-D



**PROFILE WALNUT GROVE**

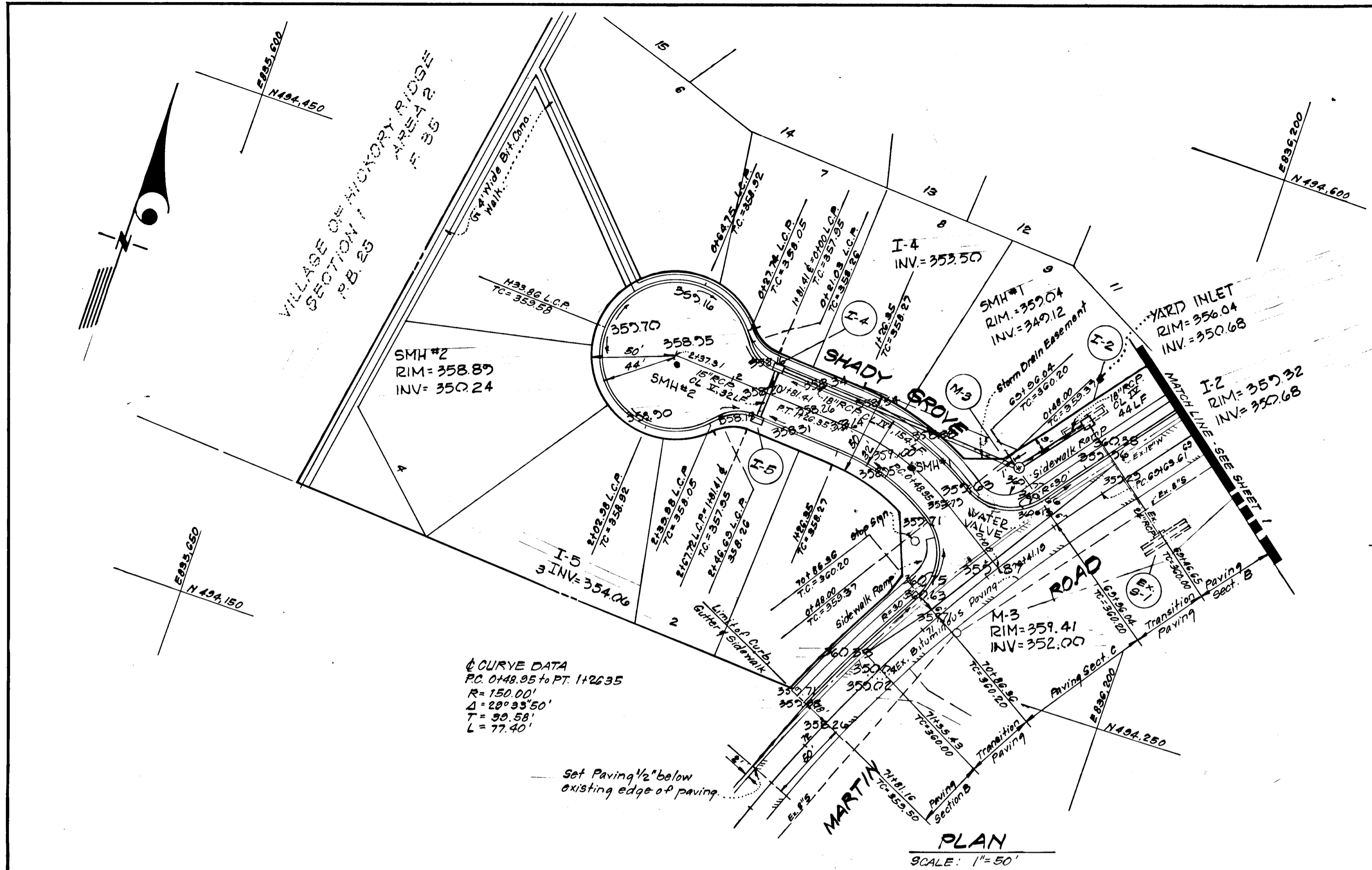


**LINEAR CURB PROFILE WALNUT GROVE**

**PROFILE LEGEND**  
PROFILE Grade Line  
Existing &  
BRL (Right)  
BRL (Left)

**PROFILE SCALE**  
Horiz: 1"=50'  
Vert: 1"=5'

#1692



Reviewed for Howard S.C.D.  
 Name  
and meets Technical Requirements  
 Signature W. J. Greenfield 9-26-78  
 Date  
 U.S. Soil Conservation Service

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

**DEVELOPER'S CERTIFICATE**

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Approved \_\_\_\_\_ DATE \_\_\_\_\_

B. James Greenfield 8-7-78  
 Signature Date  
 B. JAMES GREENFIELD

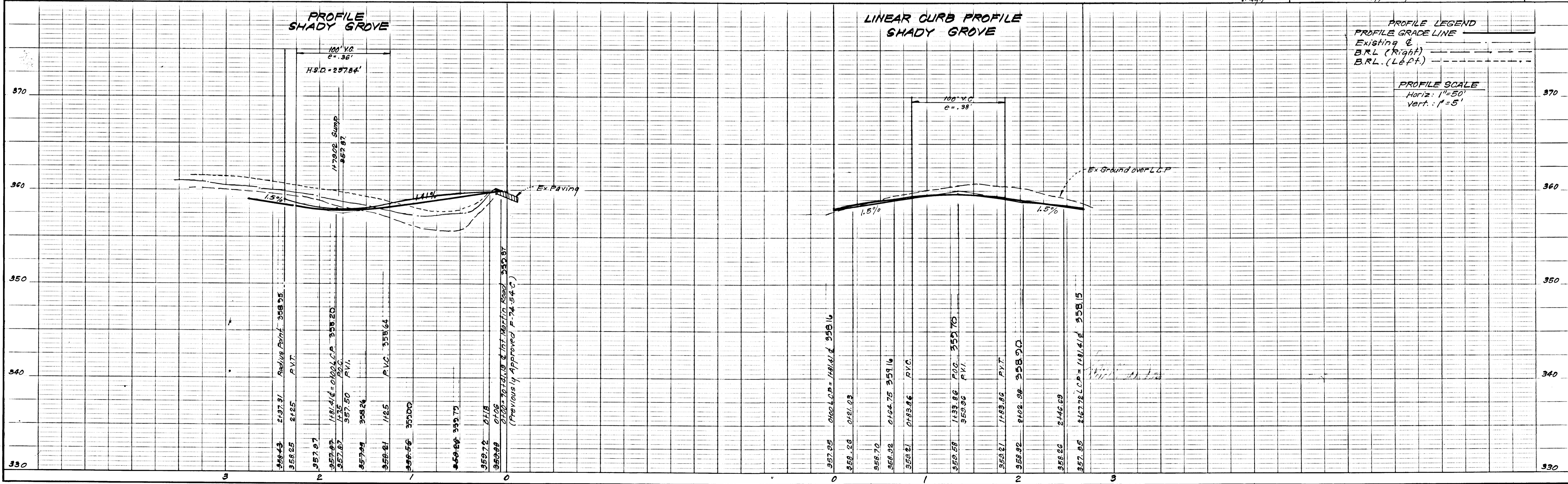
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B. Nelson Clark 8-7-78  
 Signature Date  
 B. NELSON CLARK

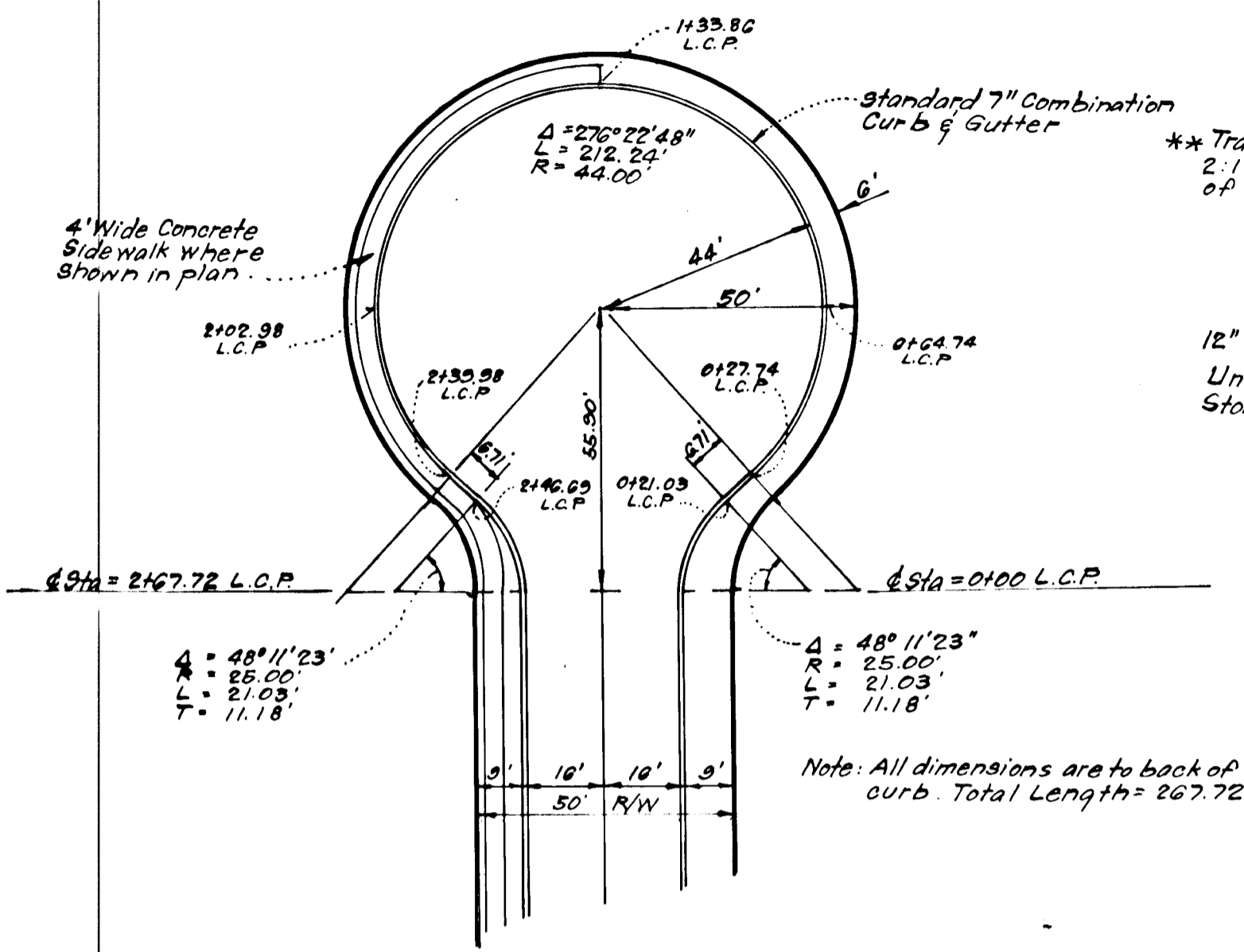


APPROVED: DEPARTMENT OF PUBLIC WORKS		
<u>W. J. Greenfield</u>	9-28-78	Date
Chief, Bureau of Engineering		
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING		
<u>W. J. Greenfield</u>	10-9-78	Date
Chief, Division of Land Development		
<b>CLARK • FINEFROCK &amp; SACKETT</b> ENGINEERS • PLANNERS • SURVEYORS 11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND • (301) 593-3400		
DESIGNED	ROAD CONSTRUCTION PLANS SHADY GROVE	SCALE 1" = 50'
DRAWN		DRAWING 2 of 3
CHECKED		
D.A.B.	<b>CLEMENS SQUARE</b> TAX MAP NO. 25f36 SECTION 1 AREA 1 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
DATE	FOR: COLUMBIA BUILDERS, INC. 606 American City Bldg. Suite 445 Columbia, Maryland 21044	FILE NO. 1242-D
	Aug. 1978	



#692

Note: For Top of Curb Elevations See Respective Profiles

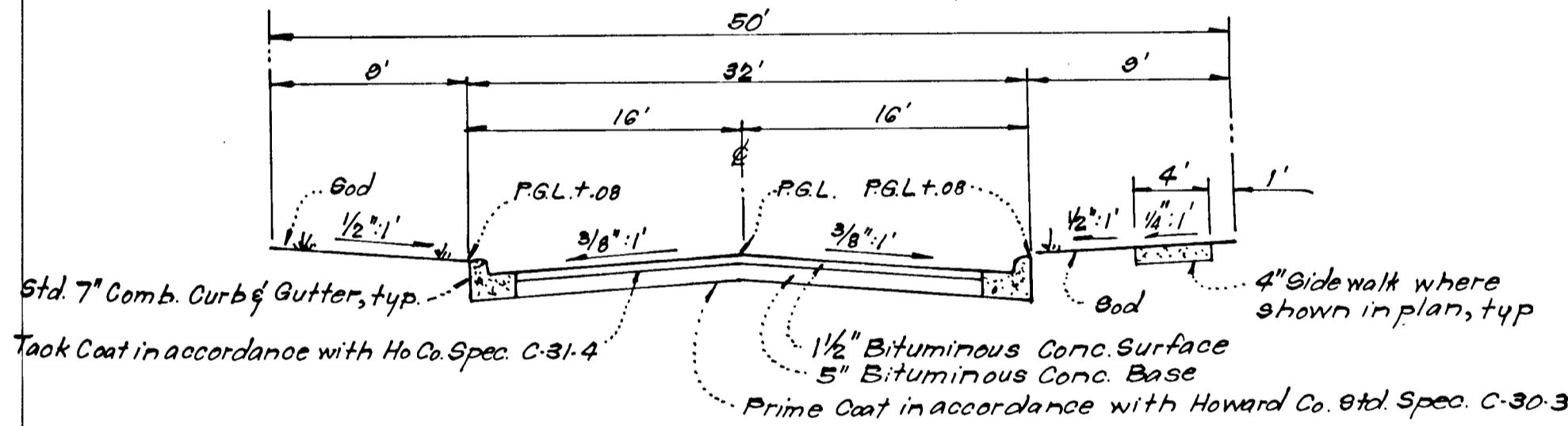


TYPICAL CUL-DE-SAC DETAIL

Scale: 1" = 30'

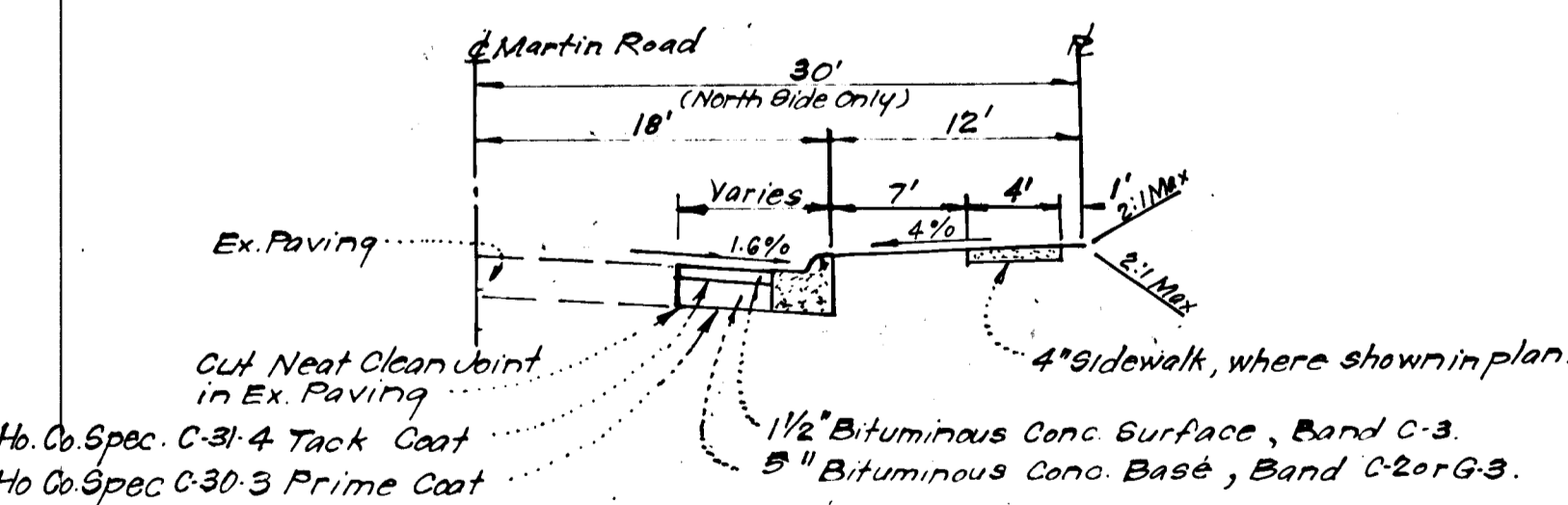
STREET CLASSIFICATION TABLE			
Zone	Land Use	Traffic Way	Design Speed
R-12	>2000 ft <sup>2</sup> /lots	Residential Street	25 mph

Note: Design Speed = 25 mph



TYPICAL PAVING SECTION

WALNUT GROVE (0+48.00 to 3+43.52)  
SHADY GROVE (0+48.00 to 1+81.41)  
No Scale



ROADWAY SECTION "A"

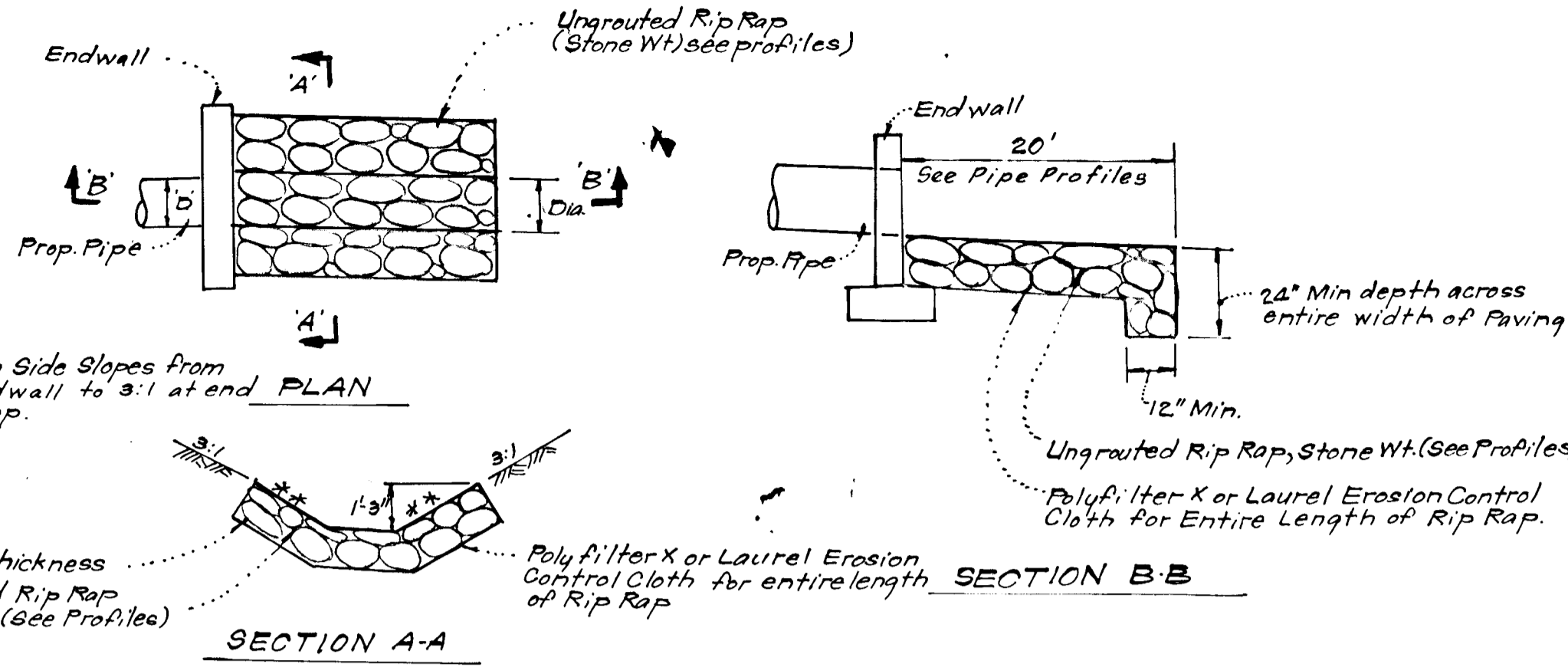
MARTIN ROAD  
Sta. 05+41.48 to 07+47.11  
No Scale

Reviewed for \_\_\_\_\_ Name \_\_\_\_\_ S.C.D.  
and meets Technical Requirements

Signature \_\_\_\_\_ Date \_\_\_\_\_  
U.S. Soil Conservation Service

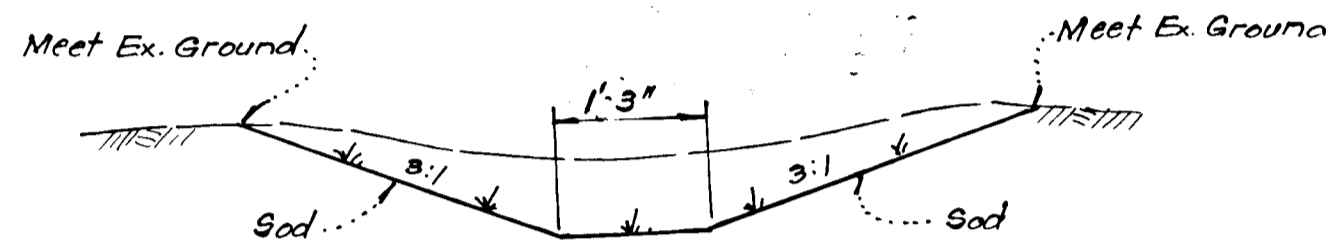
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved \_\_\_\_\_ Date \_\_\_\_\_



RIP RAP PAVING DETAILS

No Scale

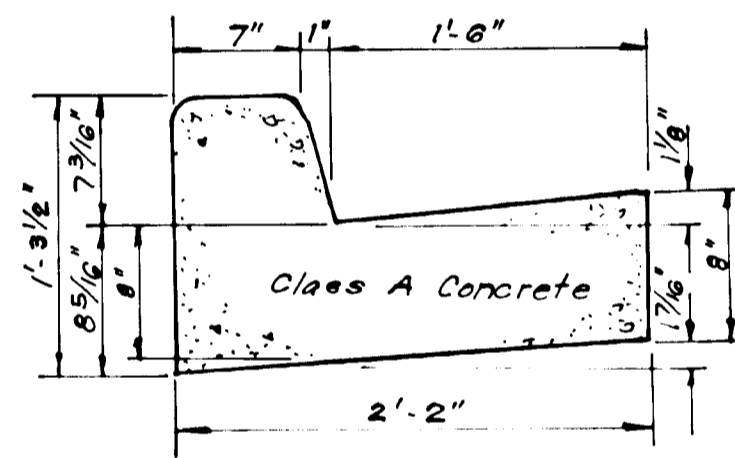


SODDED DITCH DETAIL

No Scale

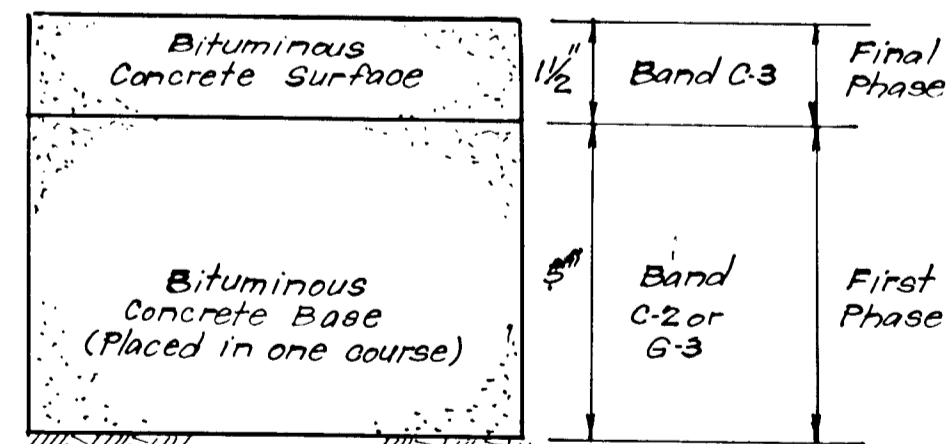
GENERAL SODDING NOTES

1. Apply 10-10-10 Fertilizer @ 1000# per acre (25#/1000#)
  2. Apply Ground Agricultural Limestone @ 2000#/acre (50#/1000#)
  3. Incorporate both Lime & Fertilizer into soil by discing (Firm up after incorporation)
  4. Lay sod to a tight fit. Roll to insure contact with underlying soil.
- Water as necessary for 1st two weeks (in summer) to ensure establishment.



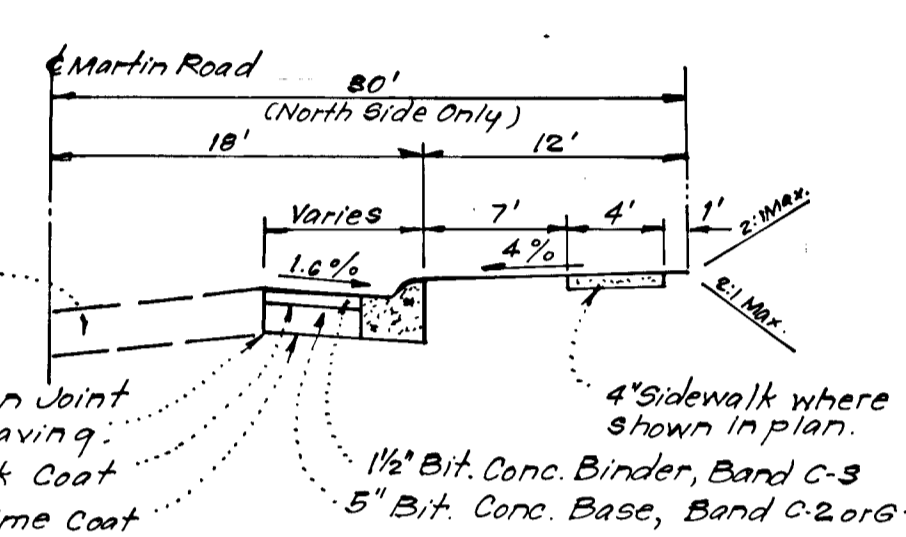
STANDARD 7" COMBINATION CURB & GUTTER

No Scale



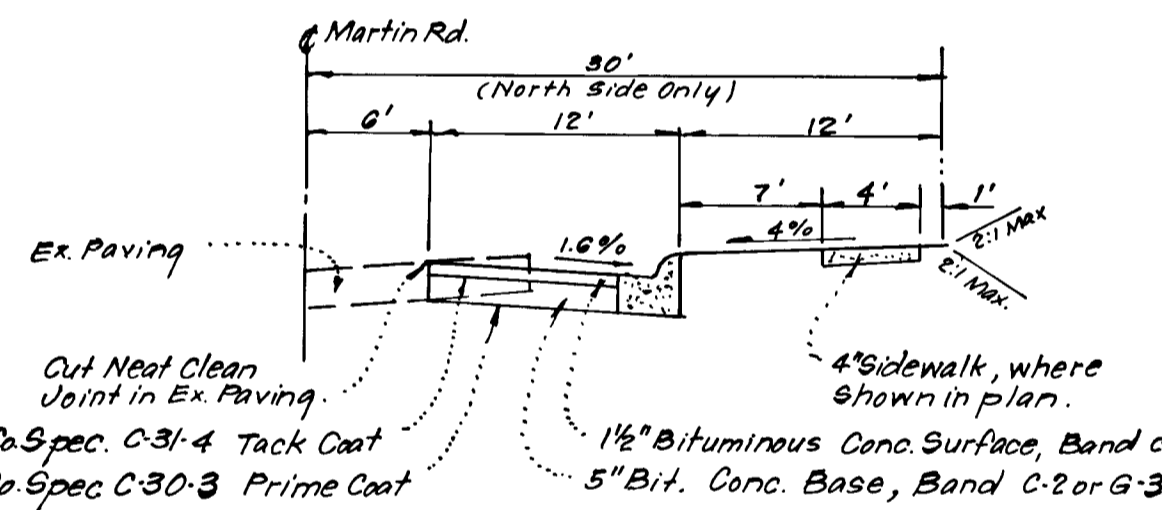
Clearing and Grading Article C-1  
Subgrade Article C-2  
Base Course Article C-31 or C-33  
Surface Course Article C-31

To be constructed in accordance with the Howard County Road Construction Code and Specifications.  
**PAVING SECTION FOR PUBLIC ROADS AND ENTRANCES TO PUBLIC ROADS**  
No SCALE  
Pg. 16 Drawing # D-11



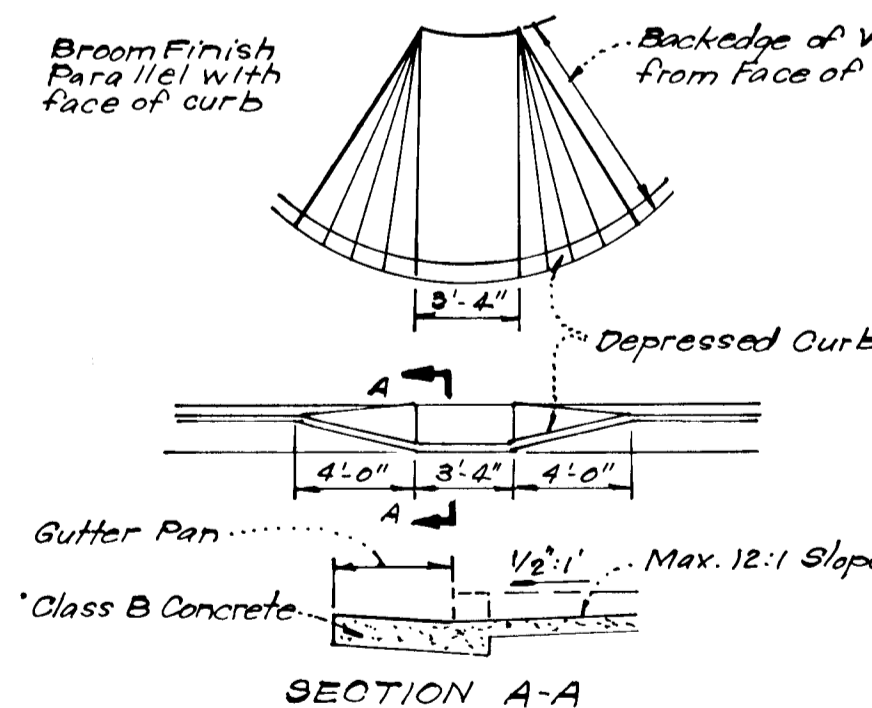
ROADWAY SECTION "B"

MARTIN ROAD  
Sta. 68+25 to 69+46.65 &  
Sta. 71+35.43 to 71+81.16  
No Scale



ROADWAY SECTION "C"

MARTIN ROAD  
Sta. 69+96.04 to 70+86.36  
No Scale



SIDEWALK RAMP DETAILS

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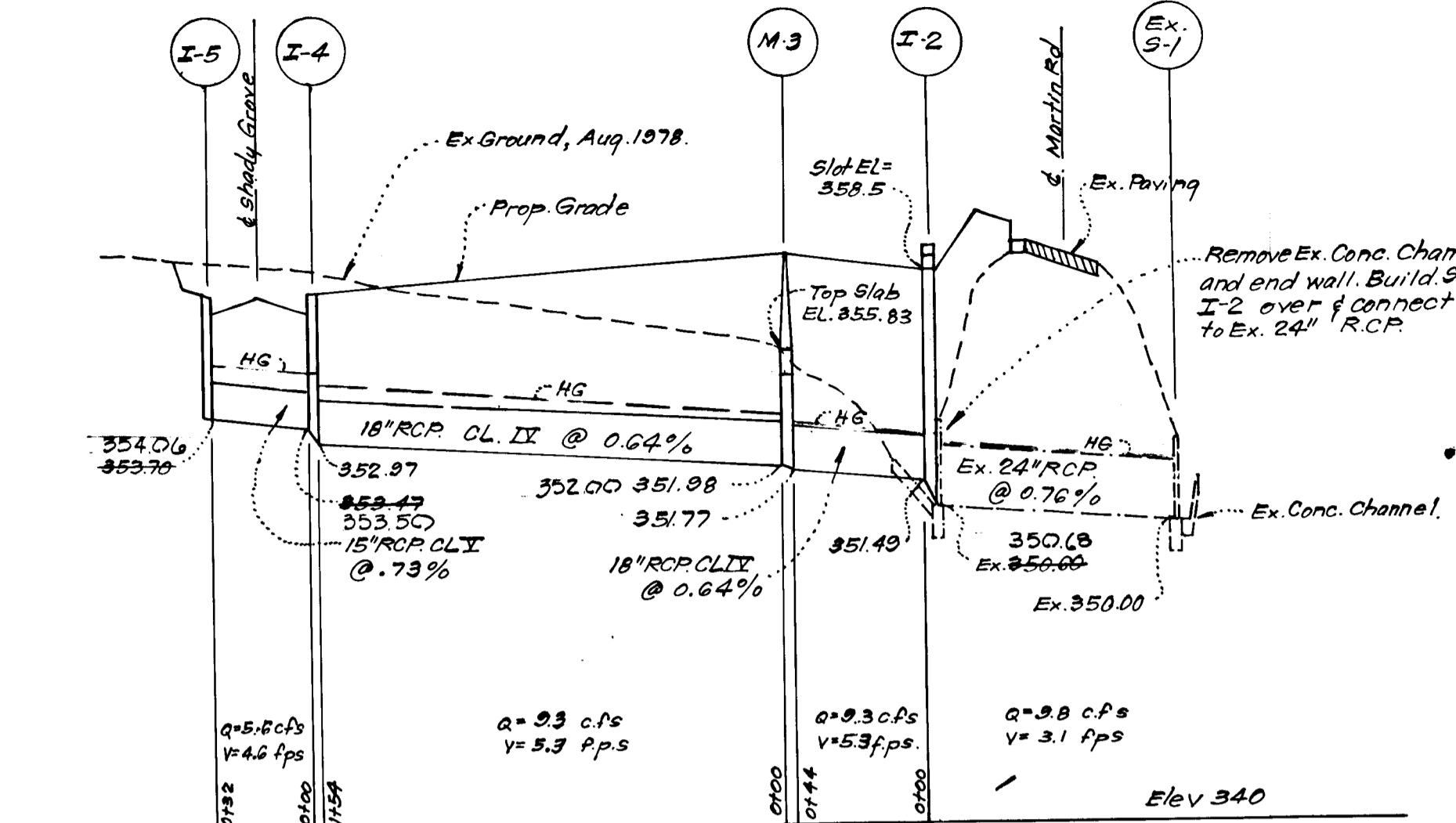
B. James Greenfield 8-4-78  
Signature Date  
B. JAMES GREENFIELD

ENGINEER'S CERTIFICATE

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G. Nelson Clark 8-4-78  
Signature Date  
G. NELSON CLARK

PIPE SCHEDULE		
Size	Type	Length
18"	R.C.P. Class I	227 LF
18"	R.C.P. Class II	108 LF



STORM DRAINAGE PROFILES

Scale: Horiz: 1" = 20'  
Vert: 1" = 5'

STRUCTURE SCHEDULE

NR	Type	Inv. In.	Inv. Out.	Top Elevation		Remarks	Location
				Upper	Lower		
I-2	C-Inlet	351.49	350.60	353.33	353.33	Ho. Co. Std. D-64-C pg. 110C 30" dia	See Plan
M-9	Standard Manhole	351.98	351.77	352.00	352.00	Ho. Co. Std. D-103, pg. 153 48" dia	See Plan
I-4	A-B Inlet	353.47	352.97	357.95	357.95	Ho. Co. Std. D-64-A pg. 110A W=21" dia	14.78 24' 16.00' RT
I-5	A-B Inlet	353.70	353.70	357.95	357.95	Ho. Co. Std. D-64-A pg. 110A W=21" dia	14.78 24' 16.00' LT
S-6	C-End wall	347.69	347.69	349.44	349.44	Ho. Co. Std. D-52 pg. 107 Dia=15"	See Plan
I-7	A-10 Inlet	350.50	350.50	354.74	354.63	Ho. Co. Std. D-64-A pg. 110A W=21" dia	0+53.67 16.00' LT

\* Provide Slops on all sides of structure  
\* Increase H dimension by 12" to allow for Rip Rap Paving.

APPROVED: DEPARTMENT OF PUBLIC WORKS

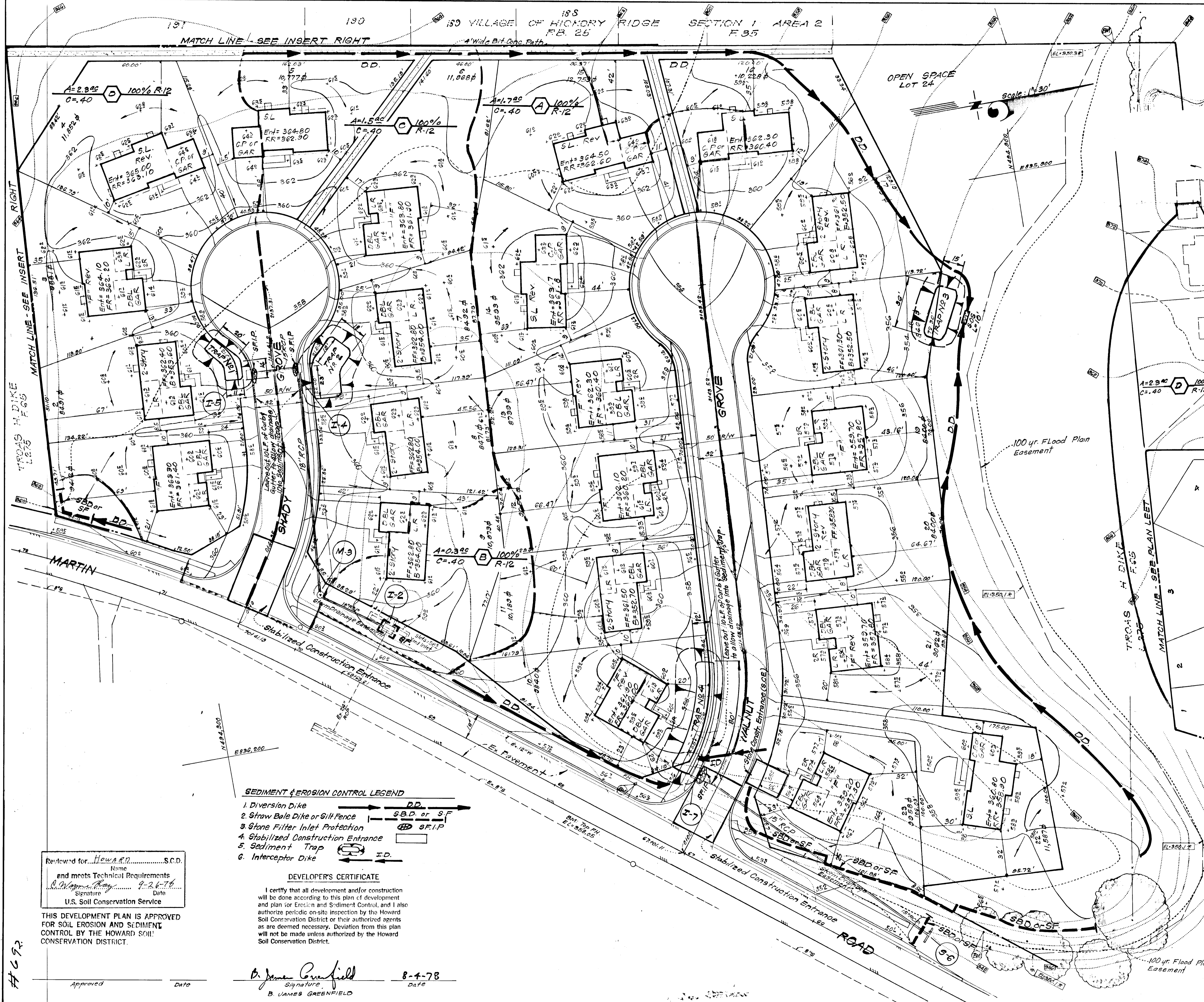
G. O. Pickett 9-28-78  
Signature Date  
CHIEF, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

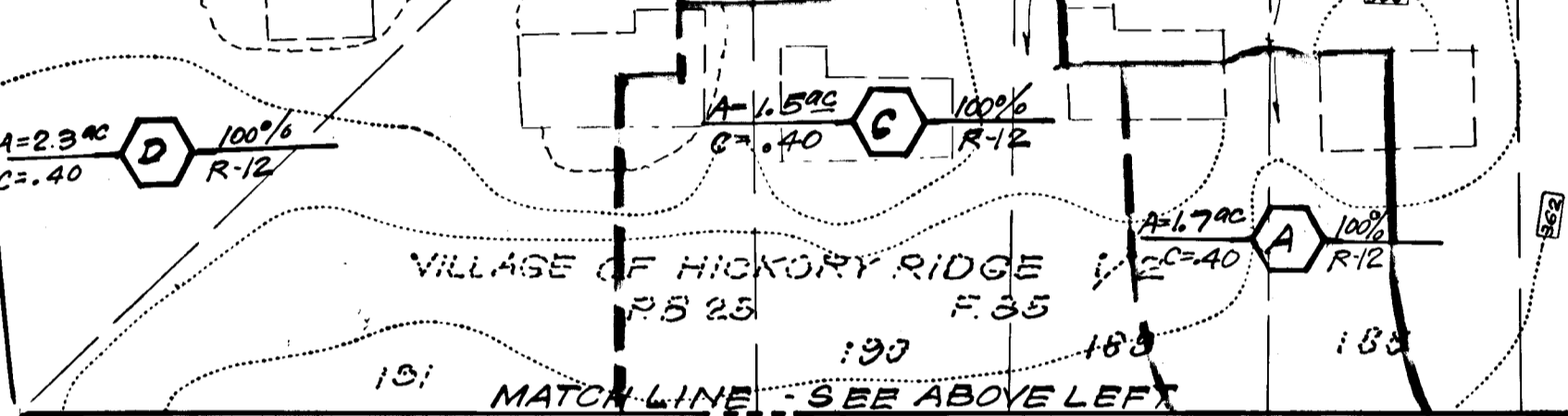
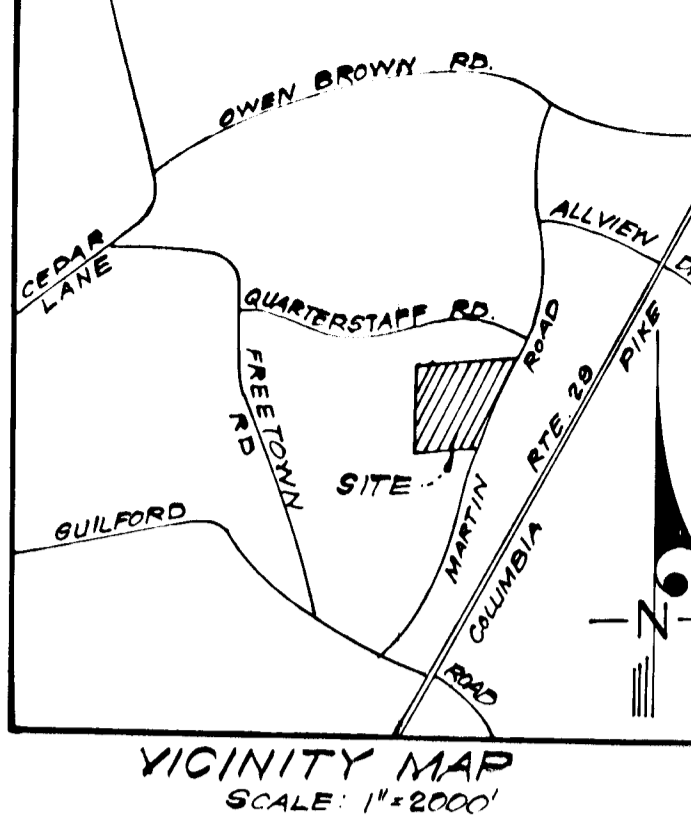
G. Nelson Clark 10-9-78  
Signature Date  
CHIEF, Division of Land Development

CLARK • FINECROCK & SACKETT  
ENGINEERS • PLANNERS • SURVEYORS  
11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593 3400

DESIGNED	ROAD CONSTRUCTION PLANS	SCALE
D.A.B.	STORM DRAINAGE & PAVING DETAILS	As Shown
DRAWN	CLEMENS SQUARE	3 OF 5
K.I.W.		
CHECKED	SECTION 1 AREA 1	JOB NO.
D.A.B.	6th ELECTION DISTRICT	FILE NO.
DATE	FOR: COLUMBIA BUILDERS, INC.	1242-D
Aug, 1978	806 American City Building, Suite 445 Columbia, Maryland 21044	



- LEGEND:**
- 1. Contour Interval 2 FT
  - 2. Existing Contour - - - - -
  - 3. Proposed Contour - - - - -
  - 4. Spot Elevation + 0.5
  - 5. Direction of Drainage - - - - -
  - 6. Exist. Trees to be Retained
  - 7. 100 yr Flood Plain Elev. [E: 350.70]



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*G. Nelson Clark* 8-4-78  
G. Nelson Clark Date

- SEDIMENT & EROSION CONTROL LEGEND**
- 1. Diversion Dike **DD**
  - 2. Straw Bale Dike or Silt Fence **SBD or SF**
  - 3. Stone Filter Inlet Protection **SF.I.P.**
  - 4. Stabilized Construction Entrance
  - 5. Sediment Trap **ST**
  - 6. Interceptor Dike **ID**

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*B. James Greenfield* 8-4-78  
B. JAMES GREENFIELD Date

Reviewed for *Howard* S.C.D. Name  
and meets Technical Requirements  
*R. Wayne Ray* 9-26-78 Date  
Signature  
U.S. Soil Conservation Service

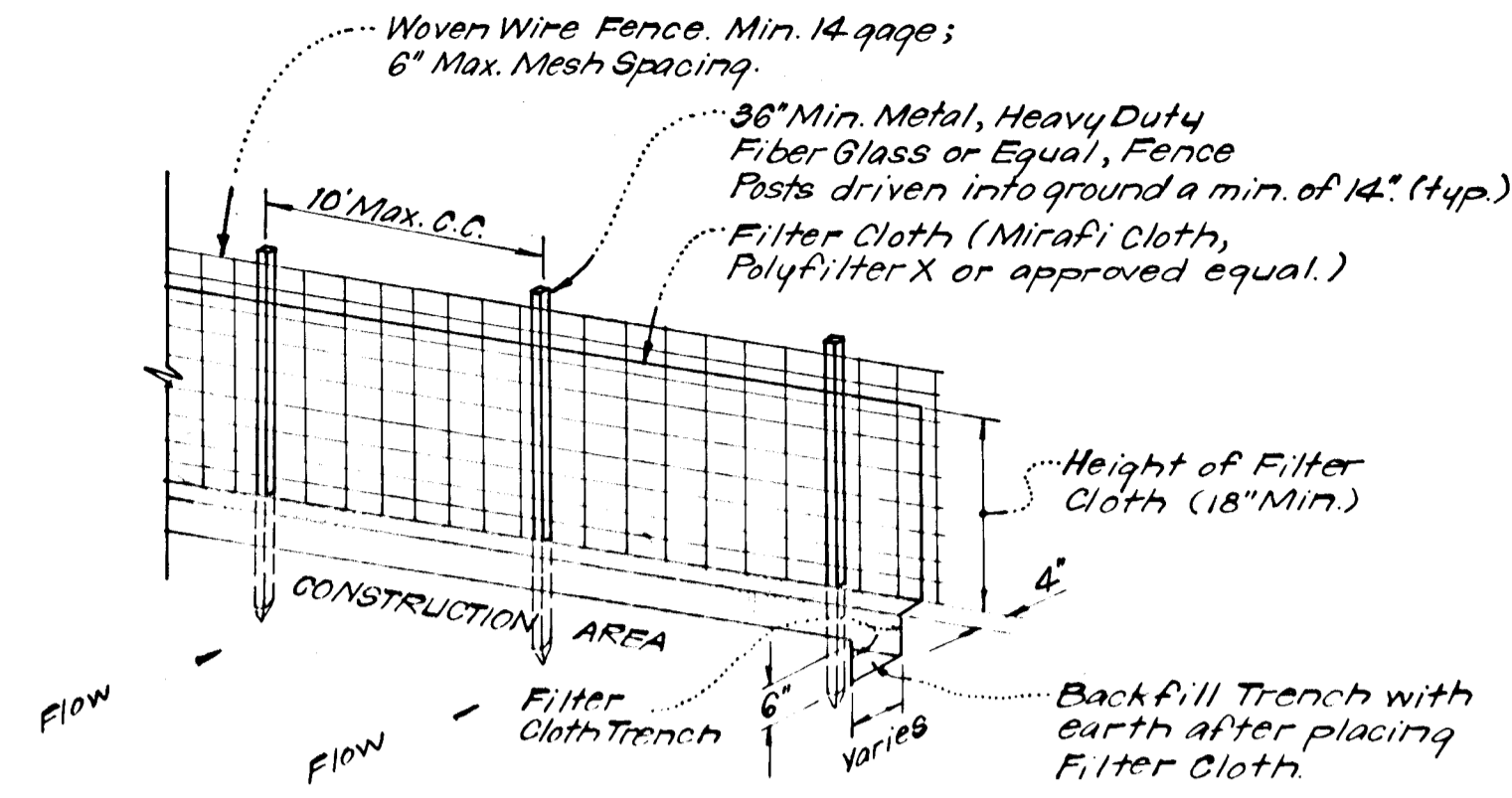
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APPROVED: DEPARTMENT OF PUBLIC WORKS		
<i>W. O. Libon</i>	9-28-78	Date
CHIEF, Bureau of Engineering		
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING		
<i>Ann W. Munn</i>	10-9-78	Date
CHIEF, Division of Land Development		
<b>CLARK • FINEFROCK &amp; SACKETT</b> ENGINEERS • PLANNERS • SURVEYORS 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400		
DESIGNED	ROAD CONSTRUCTION PLANS	
D.A.B.	SEDIMENT & EROSION CONTROL PLAN & DRAINAGE AREA MAP	
DRAWN	SCALE 1"=30'	
K.I.W.	DRAWING 4025	
CHECKED	JOB NO.	
D.A.B.	FILE NO.	
DATE	Aug, 1978	

See Also: HC 35C F-79-19 1363-X

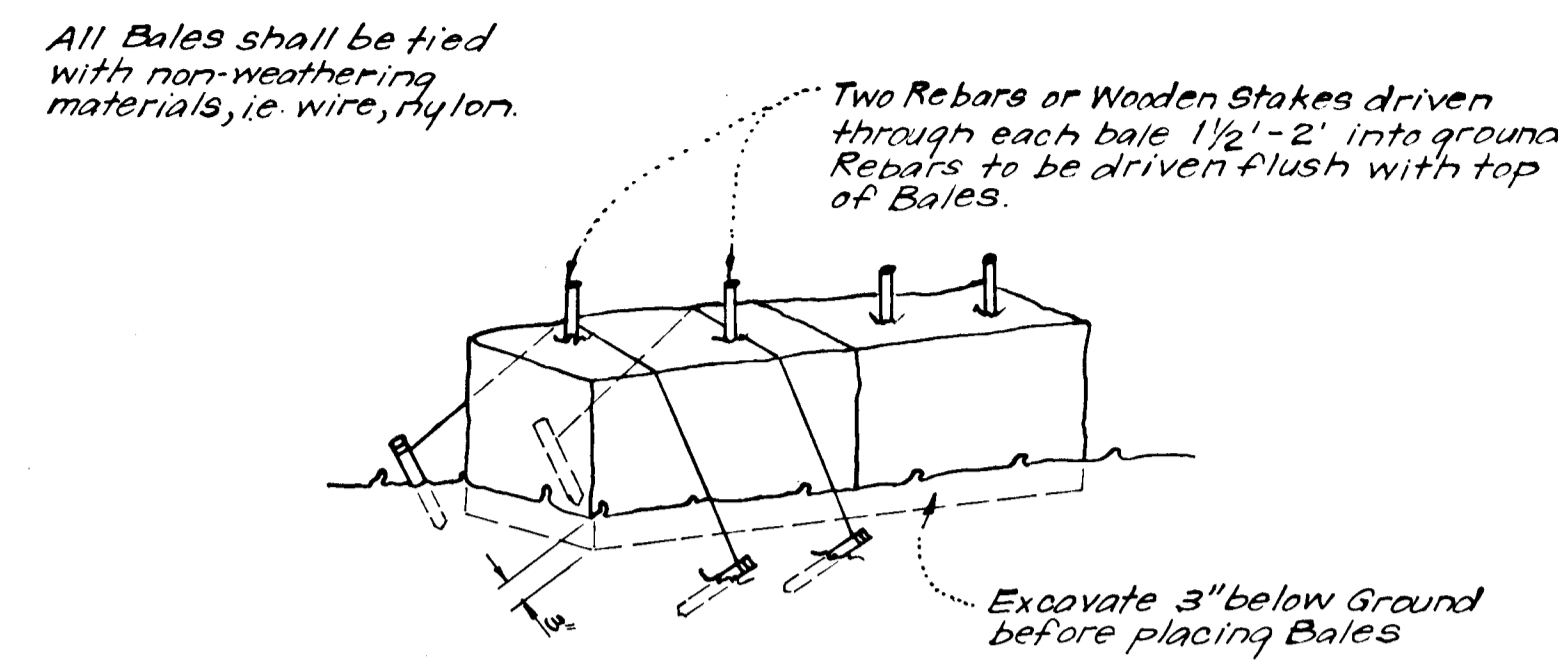
**GENERAL NOTES**

- Grading Permits shall be obtained prior to installation of Sediment Control or 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 #5 for stabilization except that the seed mixture will be annual rye applied at a rate of 1.4 lbs/1000 s.f.
- Notify the Bureau of Inspections and Permits at least 24 hours 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 Grading shall be treated in accordance with the following Specifications:
  - Seed - certified 85% germination applied at the rate of 3 lbs/1000 s.f. mixture - 40% Kentucky Blue, 20% Chewy Fescue, 20% Kentucky 31, and 20% annual rye.
  - Fertilizer - 10-10-10 applied at the rate of 23 lbs/1000 sq. ft. Ground Agricultural Lime or Dolomitic Lime applied at the rate of 46 lbs/1000 s.f.
  - Mulch - Weed free grain straw applied at the rate of 70 lbs/1000 s.f. Mulch shall be secured to the ground by any approved method i.e. asphalt tacks, chemical binder, wood chips, etc.
- 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.
- Protection of stabilized area from sediment runoff shall be provided by the use of an approved Sediment Control Device, i.e. straw bale, diversion dike, etc.
- The Contractor shall keep all public roads free of sediment deposits left from traffic leaving construction site.
- Stabilized Construction Entrances shall be placed at all construction entrances.
- SITE ANALYSIS:**
  - Total Area = 5.18 Acres
  - Area to be Roofed = 0.85 Acres
  - Area to be Paved = 1.30 Acres
  - Area to be Seeded = 3.03 Acres
  - Area Undisturbed = 0 Acres
- CONSTRUCTION SEQUENCE:**
  - Install all Sediment & Erosion Control except for S.F.I.P.'s.
  - Grade streets as necessary to construct storm drainage.
  - Install storm drainage and S.F.I.P.'s.
  - Construct Streets, grade lots and excavate for house foundations.
  - Construct Houses, sidewalks and driveways.
  - Install Utilities.
  - Fine grade and stabilize in accordance with Note #6.
  - Sediment and Erosion Control devices to be removed only after areas draining to them have been stabilized.
- Upstream ends of all Storm drain pipes shall be blocked at the end of each working day. See det. this sheet.
- It will be the Developer's responsibility to provide additional Sediment & Erosion Control Devices to protect stabilized areas during construction.



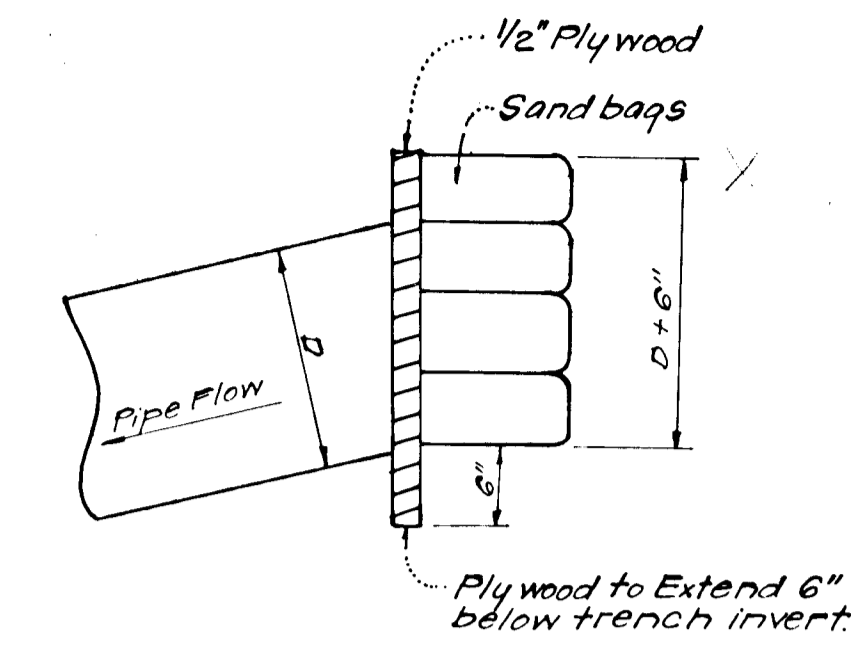
**NOTES:**  
 1. Woven Wire Fence to be fastened securely to fence posts by use of wire ties.  
 2. Filter Cloth to be fastened securely to woven wire fence by use of wire ties spaced every 24" x 24"

**SILT FENCE DETAIL (S.F.)**  
 No Scale

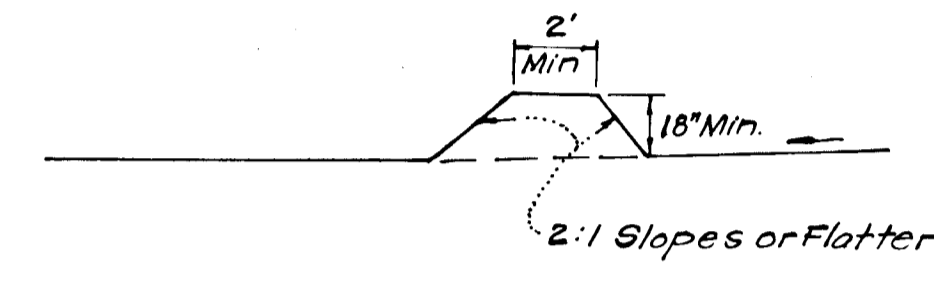


**NOTE:**  
 1. In lieu of the use of rebar each Straw Bale may be fastened to ground with pegs (4 per bale and wire or nylon as shown above).

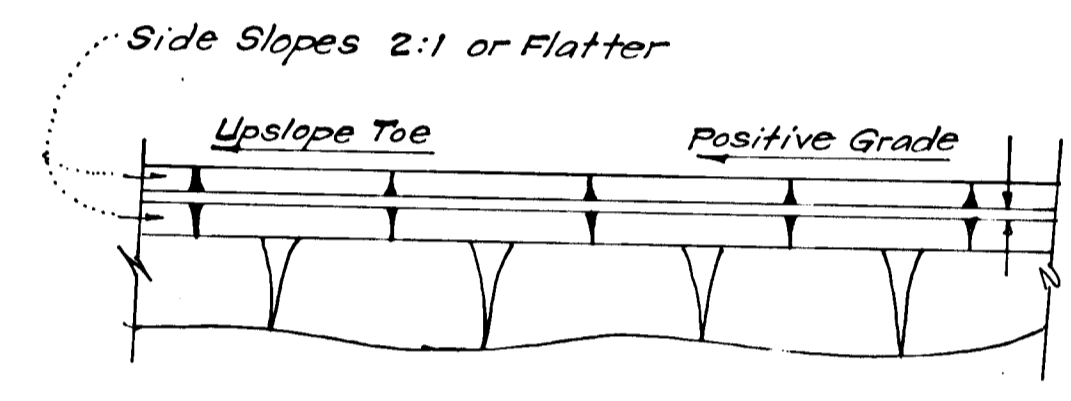
**TYPICAL STRAW BALE DETAIL (S.B.D.)**  
 No Scale



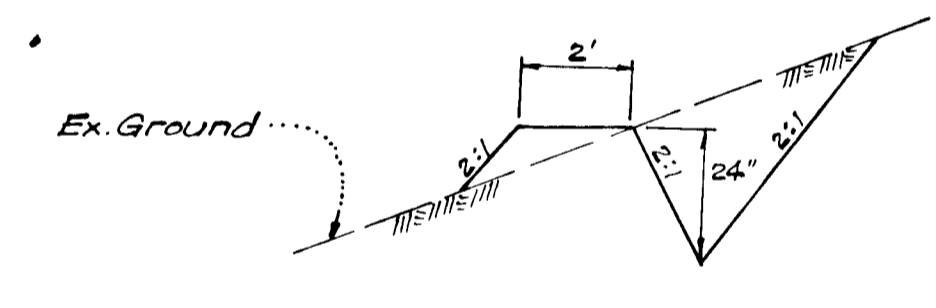
**PIPE BLOCKING DETAIL**  
 No Scale



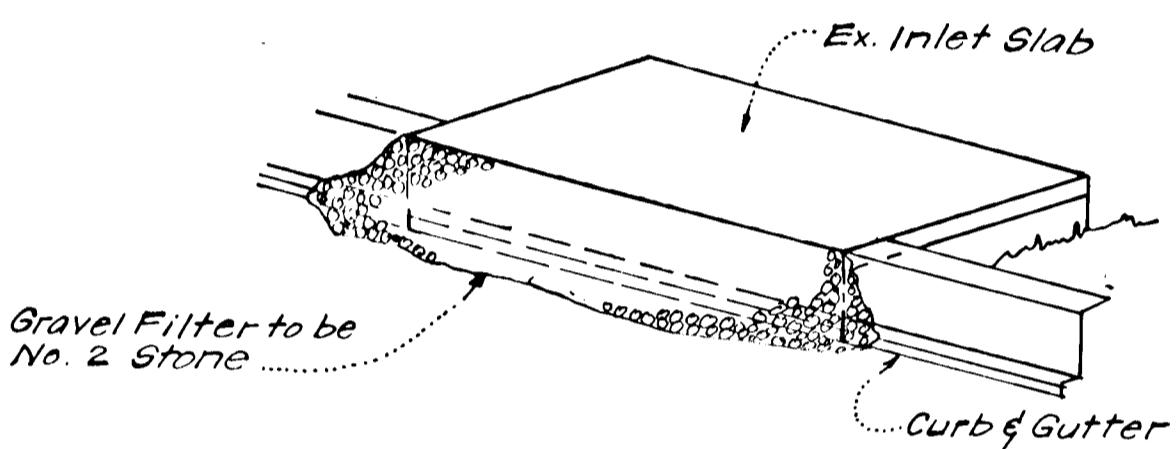
**CROSS SECTION**



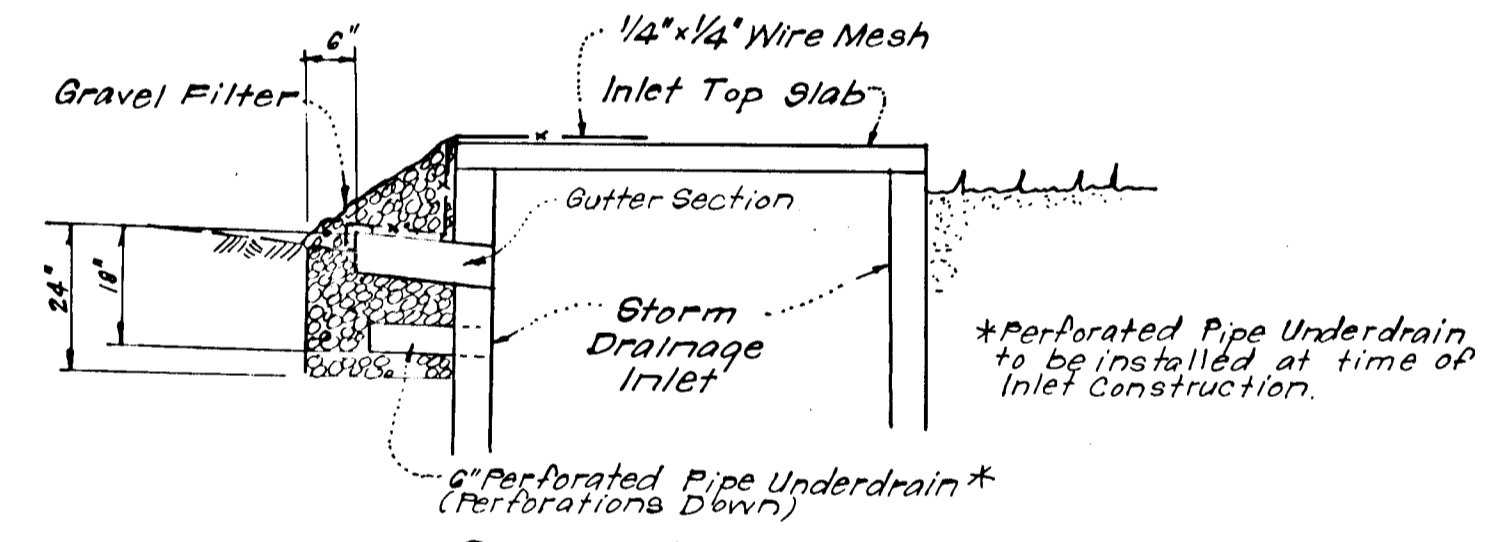
**PLAN VIEW**  
**DIVERSION DIKE (D.D.)**  
 No Scale



**CUT DIVERSION DIKE**  
 No Scale

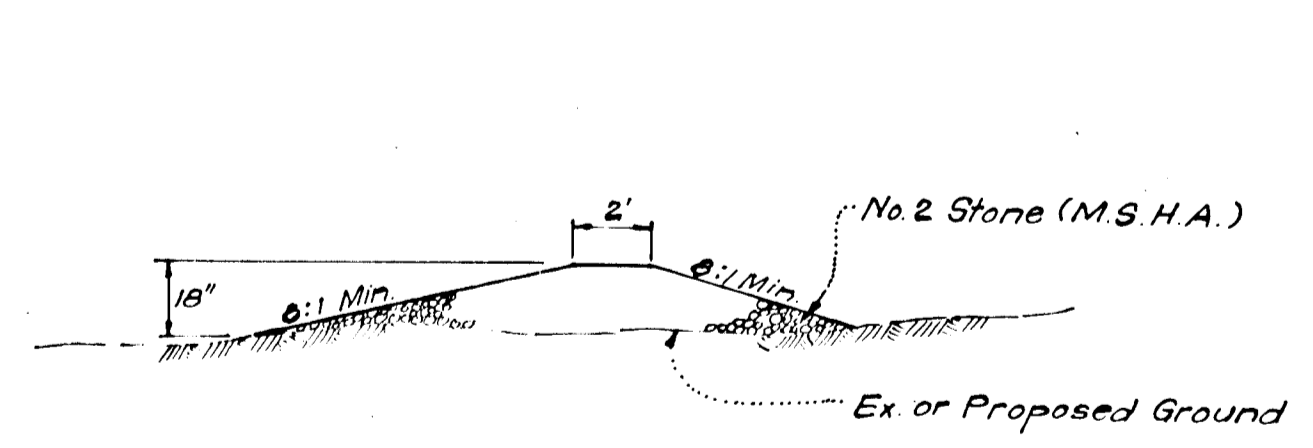


**ISOMETRIC VIEW**



**SECTION VIEW**

**STONE FILTER INLET PROTECTION**  
**DETAIL (S.F.I.P.)**  
 No Scale

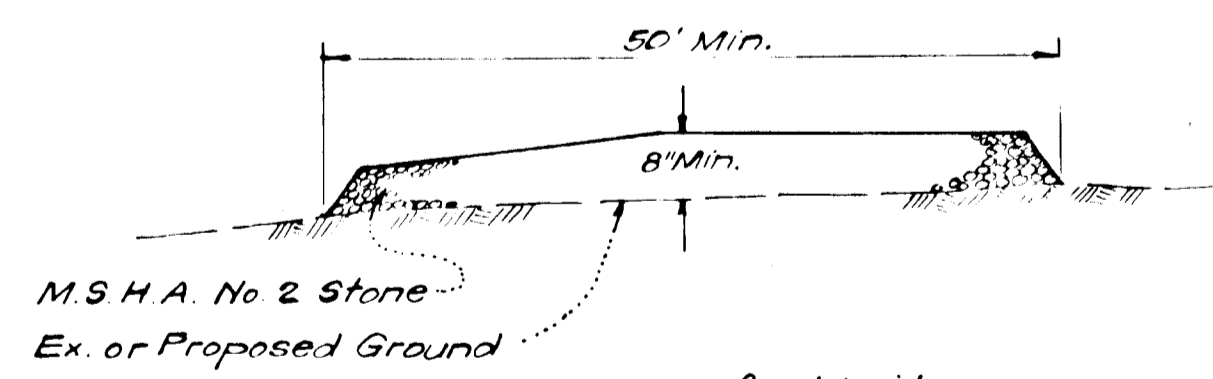


**SECTION VIEW**

**STONE CONSTRUCTION ENTRANCE DETAIL (S.C.E.)**  
 No Scale

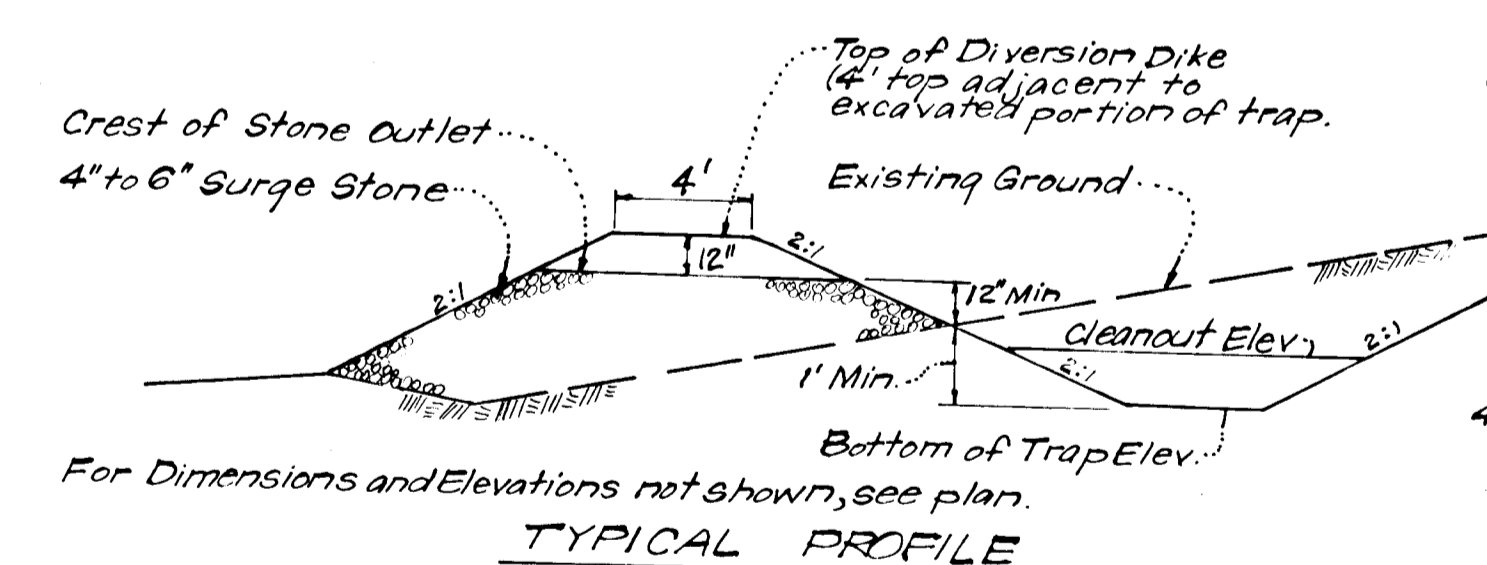
SEDIMENT TRAP TABLE AND DIMENSIONS												
TRAP No.	TYPE	App No.	DWG. No.	L.	W.	D.	Bottom Elev.	D.A. Acres	Required Volume	Provided Volume	Top Elev.	Spillway Crest EL.
1	S.I.P.T.	20.08	ST-4	See Plan	3'	354.00	2.3	4140	2040*	358.00	357.00	
2	S.I.P.T.	20.08	ST-4	See Plan	3.5'	353.50	1.1	1380	4288*	358.00	357.00	
3	S.O.S.T.	20.07	ST-3	See Plan	3'	348.00	1.3	2340	2646	353.00	352.00	
4	S.I.P.T.	20.08	ST-4	See Plan	2.5'	351.30	2.0	3600	3612	354.80	353.80	

Note: Clean out sediment when it reaches 1' below outfall crest.  
 \* Note: The sum of these volumes equals the total required for Traps No. 1 & 2. These traps are in a low point and act as one trap.



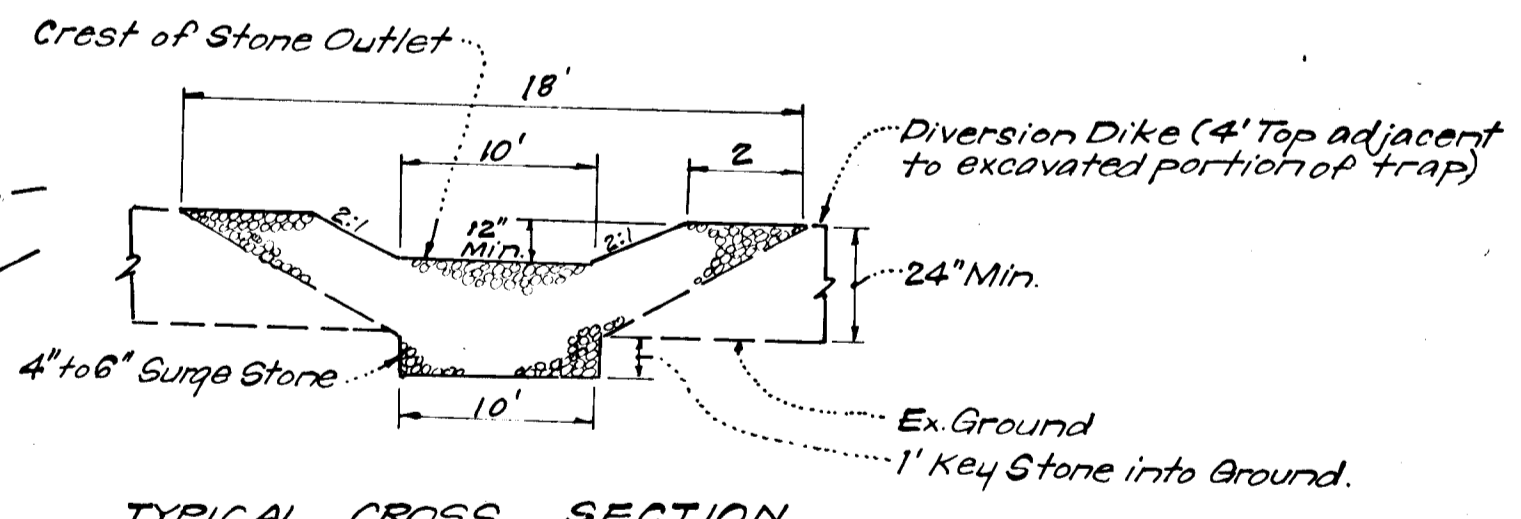
**SECTION VIEW**

**STABILIZED CONSTRUCTION ENTRANCE**  
 No Scale



**TYPICAL PROFILE**

**DETAILS OF STONE FILTER OUTLET**  
**(For Stone Outlet Sediment Trap)**  
 No Scale



**TYPICAL CROSS SECTION**

**STONE FILTER OUTLET NOTES:**  
 1. Sediment Trap to be cleaned out when sediment reaches a level of 1 ft. below the 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 portion of Sediment Trap.

**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.



*Nelson Clark*  
 Nelson Clark  
 8-4-78  
 Date

Reviewed for HOWARD S.C.D.  
 Name  
 and meets Technical Requirements  
*C. Williams*  
 Signature Date  
 U.S. Soil Conservation Service

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

Approved \_\_\_\_\_ Date \_\_\_\_\_

**DEVELOPER'S CERTIFICATE**  
 I certify that all development and/or construction was done according to this plan of development and that I am in full compliance with all requirements of the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

*B. James Greenfield*  
 B. JAMES GREENFIELD  
 8-4-78  
 Date

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*W. O. ...*  
 CHIEF, BUREAU OF ENGINEERING 9-28-78  
 DATE

APPROVED: HOWARD COUNTY OF PLANNING & ZONING  
*...*  
 CHIEF, DIVISION OF LAND DEVELOPMENT 10-9-78  
 DATE

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

DESIGNED DAB ROAD CONSTRUCTION PLANS  
 DRAWN DAB SEDIMENT & EROSION CONTROL DETAILS SCALE As Shown  
 CHECKED K.I.W. DRAWING 5 of 5  
 DATE DAB **CLEMENS SQUARE** JOB NO.  
 FOR: COLUMBIA BUILDERS INC. FILE NO.  
 606 American City Building Suite 445  
 Columbia, Maryland 21044  
 Aug 1978 1242-D

#692