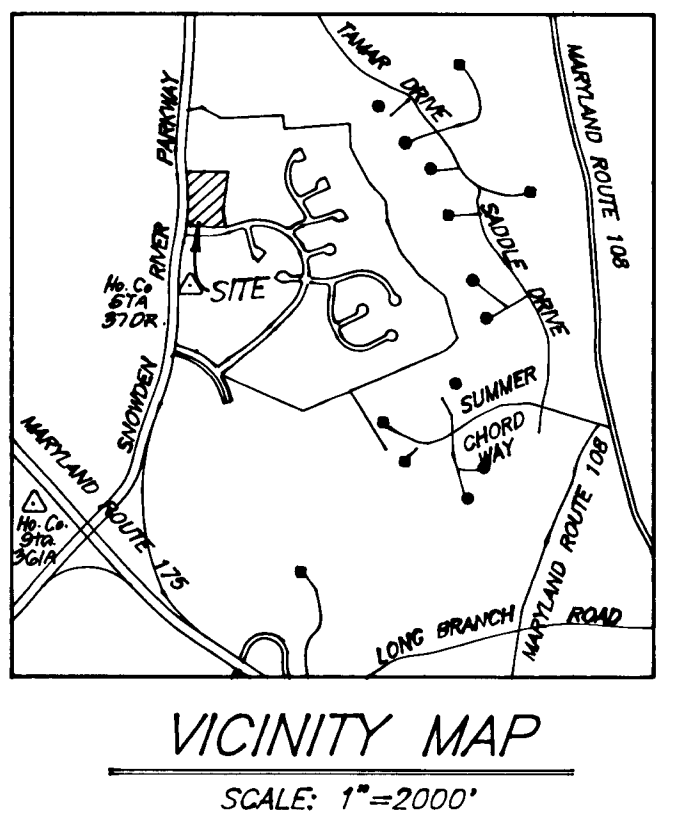


SHEET INDEX	SHEET NO.
Plan and Profile sheet Deep River Canyon and Yellow Dawn Ct.	1
Paving Details	2
Storm Drain Profiles And Details	3
Drainage Area Map, Storm Drain Plan And Details	4
Sediment and Erosion Control Plan	5
Sediment And Erosion Control Details	6

GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications.
- The contractor shall notify the Department of Public Works /Bureau of Construction Inspection at (410) 313-7272 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- Project Background:
Zoning: New Town, Single Family Attached
Total Tract Area: 11.907 AC
Number of proposed Lots: 61 (28 Buildable Lots)
Date Preliminary Plan was approved: 1-10-95 and DPZ Reference # SP 95-02, F-95.25, W/195-95
Design Speed: 30 mph Deep River Canyon.
- Information concerning underground utilities was obtained from available records and field survey, but the contractor must determine the exact location and elevation of mains by digging test pits, by hand, at all utility crossings well in advance of construction.
- All utility companies shall be notified 24 hours in advance of construction.
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- Topography shown hereon is taken from Aerial Survey prepared by Mops, Inc. and supplemented by field survey by Clark, Fierrock & Sackett, Inc. in November 1993. Coordinates are based on plat meridian for Village of Long Reach Section 4, Area 2, Parcels B as recorded on Plat No. 11597
- Horizontal and vertical datum control based on Howard County Control Station 361A EL. 400.81 and 370R EL. 380.34.
- Light poles and fixtures for street lights shall be in accordance with the latest Howard County Design Manual, Volume III, Roads and Bridges.
- Public water and sewer is to be provided under Contract No. 24-2400-D in compliance with ADA requirements.
- Stormwater Management is being provided at site for quality quantity control in the existing SWM facilities shown on F-95-25.
- Provide handicap ramps where shown in plan. See details Sheet 2, and Howard County Standards R-4.01 and R-6.15 as in accordance with ADA requirements.
- Sag and Crest vertical Curves were designed in accordance with Howard County Design Manual Vol. III.
- Trench compaction for storm drains within the road or street rights of way limits shall be in accordance with Howard County Design Manual, Vol. IV, Std. No. G-2.01.
- A traffic study was prepared by Walls and Associates Dec. 5, 1994.
- Wetlands shown have been determined by field delineation by Kiddie Construction and surveyed by Fisher, Collins and Carter. They were also delineated by GTA and surveyed by Gutschick, Little and Weber.
- All fillet radii are 5 ft unless indicated otherwise.
- Noise Study prepared by Wildman Environmental, Inc. (S-93-18) Geotechnical report was prepared by Robert A. Balter, Inc. (F-95-25).
- WR 95-93 was approved on 11-11-94 waiving Sec. 16.110(e)(5) to allow a public Right-Of-Way intersection without a truncation.
- All compacted fill shall be in accordance with AASHTO T-180 requirements.

LANDSCAPE BONDING NOTE:
This plan has been prepared in accordance with the New Town alternative compliance provision of the Howard County Landscape Manual. The Landscape Buffer Bond will be provided as part of the Builders Grading Permit. The street trees are bonded as part of the cost estimate and engineering fee submitted with the Road Construction Plans.



PLANTING NOTES

- All plantings shall be done in accordance with Columbia HRD planting specifications.
 - The Contractor shall verify the location of all underground utilities prior to digging.
 - Final location of plant material may vary per final field conditions.
 - See planting detail sheet 2 of 6.
- ⊕ Indicates existing street trees per F-95-25

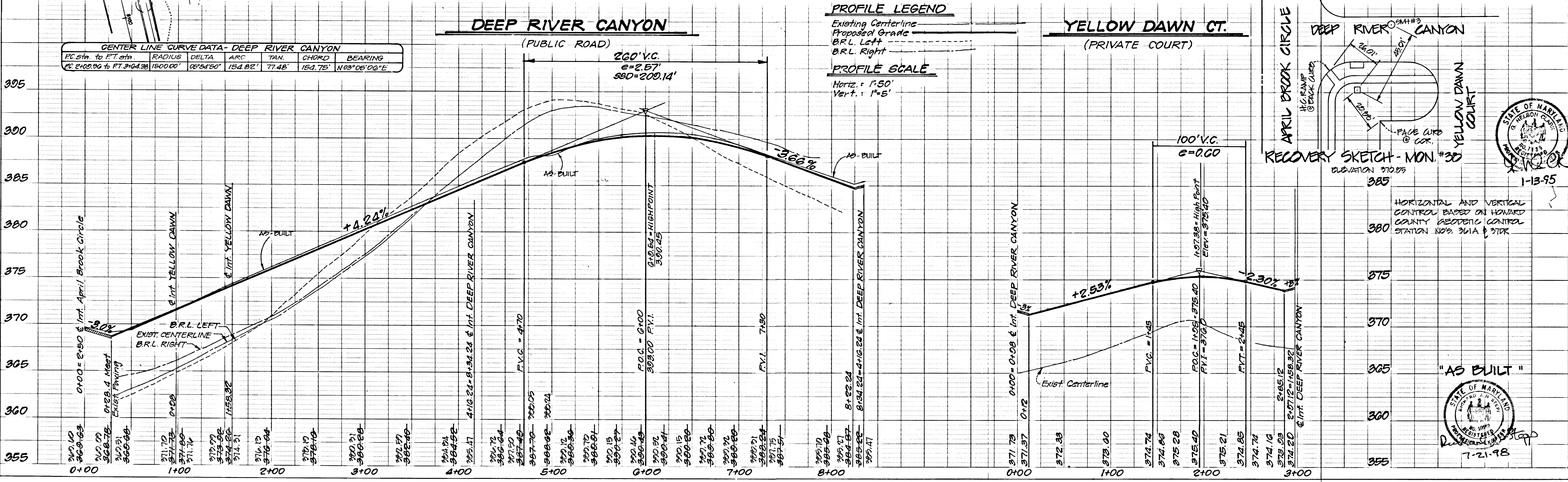
KEY	PLANT NAME	SIZE	QUANT.	REMARKS
⊕	ACER RUBRUM "RED SUNSET"	2-1/2" x 3" cal.	20	8/8 Heavy Heads
⊕	RED SUNSET MAPLE	12"-14" HT.		

STREET LIGHT INFORMATION

* Light Type to be 100 watt high pressure sodium vapor Modern Post top fixtures (bronze) mounted on a 14" bronze Fiberglass embedded pole 3' from face of curb unless otherwise noted.

NOTE: 20' minimum spacing between street trees and street lights.

CENTER LINE CURVE DATA- DEEP RIVER CANYON						
P.C. Sta to P.T. Sta	RADIUS	DELTA	ARC	TAN.	CHORD	BEARING
P.C. 2100.00 to P.T. 3104.28	15000'	02°54'50"	154.82'	77.48'	154.75'	N03°06'06"E



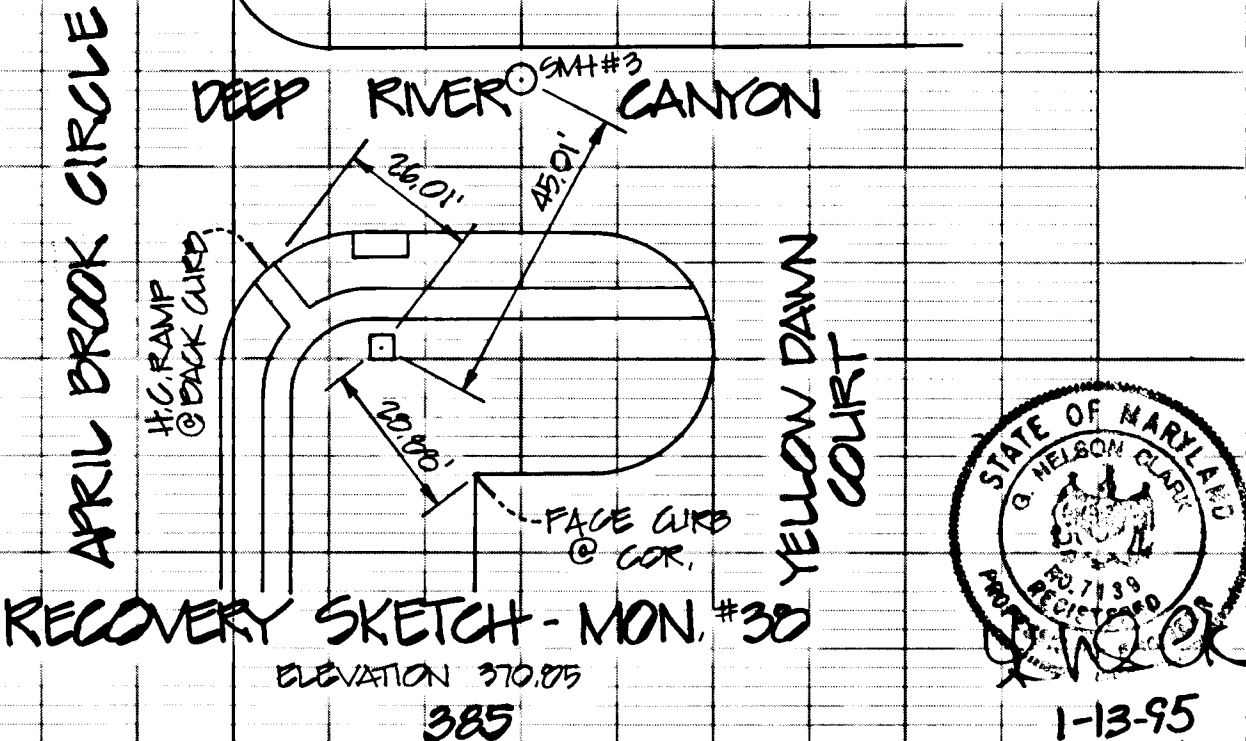
PROFILE LEGEND

- Existing Centerline
- Proposed Grade
- B.R.L. Left
- B.R.L. Right

PROFILE SCALE

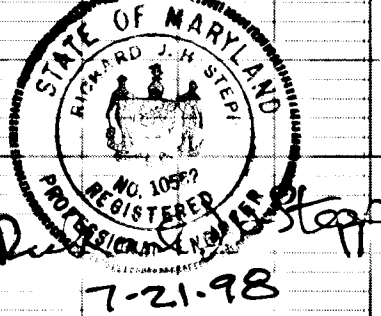
Horiz. : 1"=50'
Vert. : 1"=5'

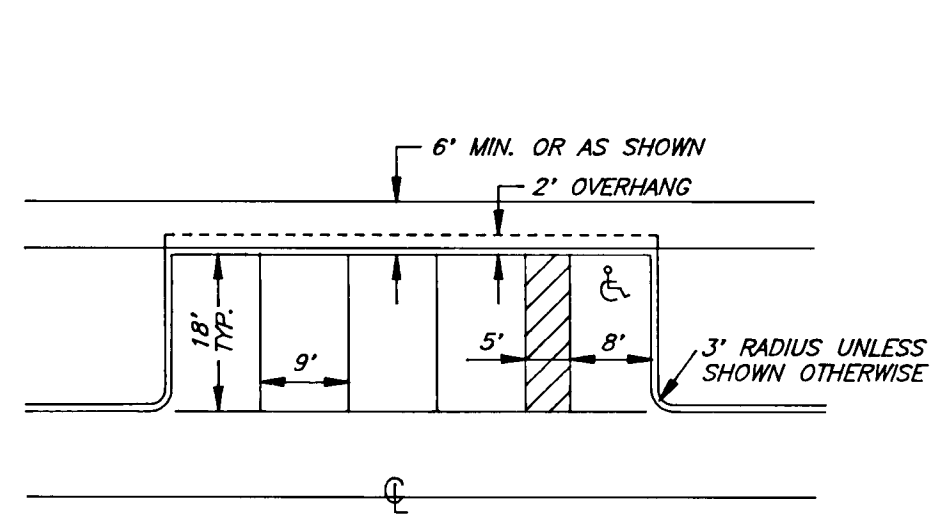
RECOVERY SKETCH - MON. #30



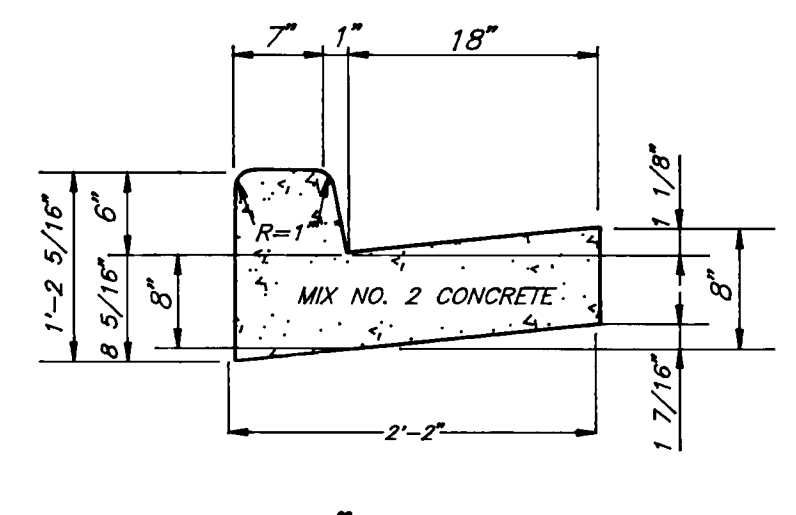
HORIZONTAL AND VERTICAL CONTROL BASED ON HOWARD COUNTY READING CONTROL STATION NOS 361A & 370R

"AS BUILT"

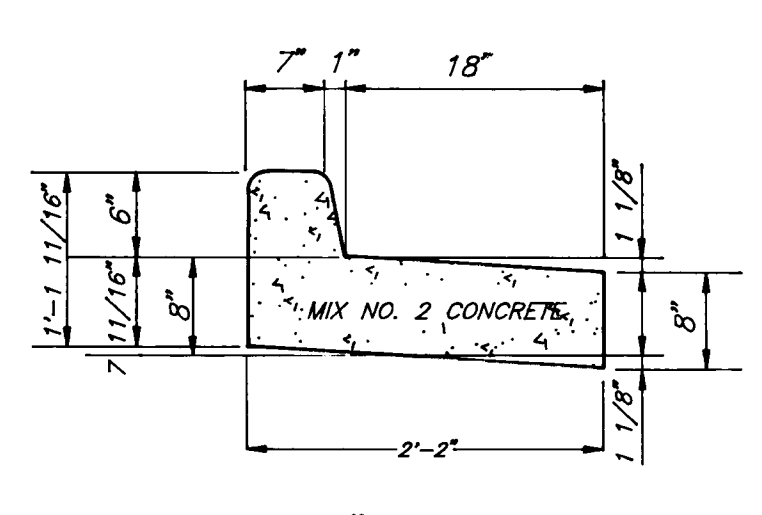




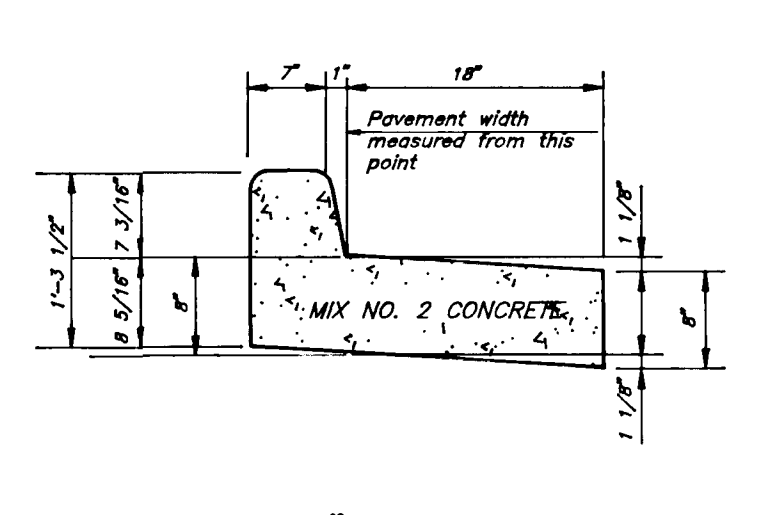
TYPICAL PARKING DETAIL
NO SCALE



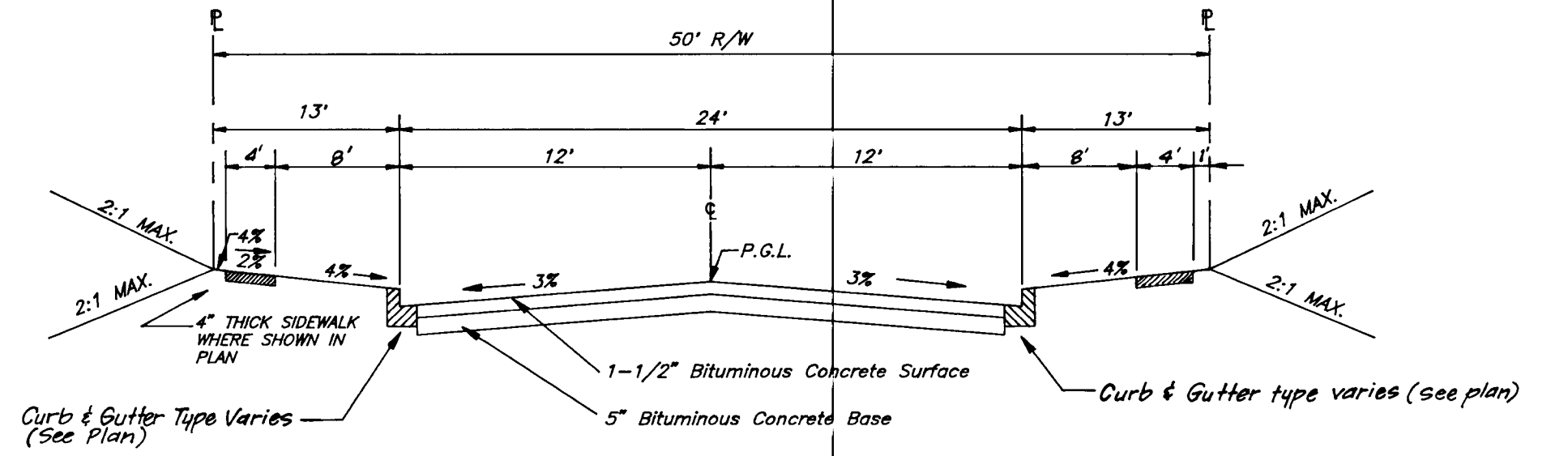
STANDARD 6" COMBINATION CURB AND GUTTER
NO SCALE



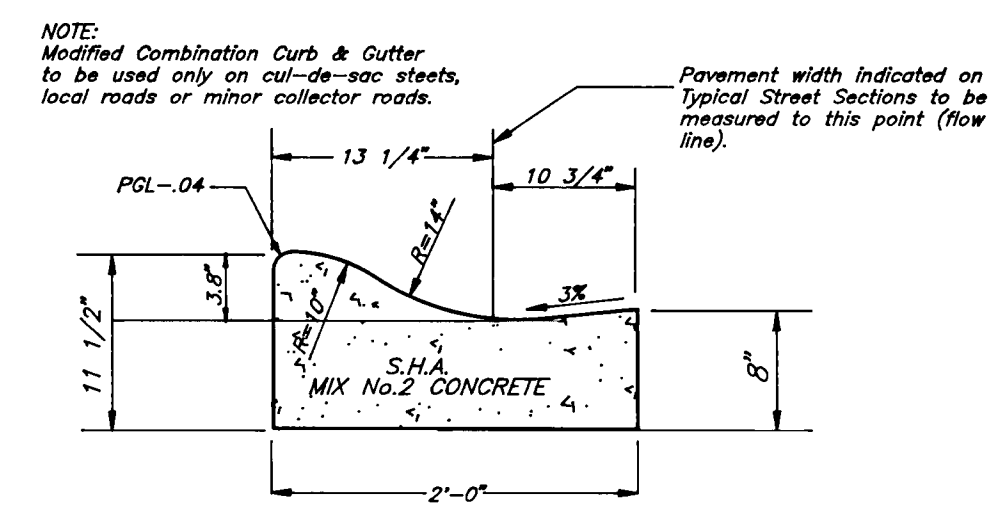
REVERSE 6" COMBINATION CURB AND GUTTER
NO SCALE



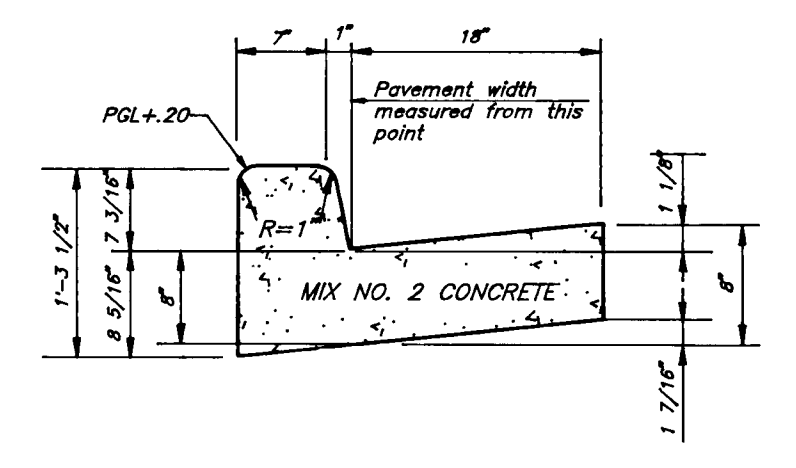
REVERSE 7" COMBINATION CURB AND GUTTER
NO SCALE



TYPICAL PAVING SECTION
NO SCALE
Design Speed: 30 MPH
Type of Roadway: Cul-De-Sac
Zoned: NT Single Family Attached
STA. 0+00 TO STA. 2+06.56 (Deep River Canyon)
STA. 2+77 TO STA. 3+05.87 (Deep River Canyon)
STA. 3+39.24 TO STA. 4+48.24 (Deep River Canyon)
STA. 6+25.24 TO STA. 6+97.2 (Deep River Canyon)
STA. 0+00 TO STA. 0+45.08 (Yellow Dawn Ct.)
STA. 2+97.12 TO STA. 2+97.12 (Yellow Dawn Ct.)



MODIFIED COMBINATION CURB AND GUTTER
NO SCALE



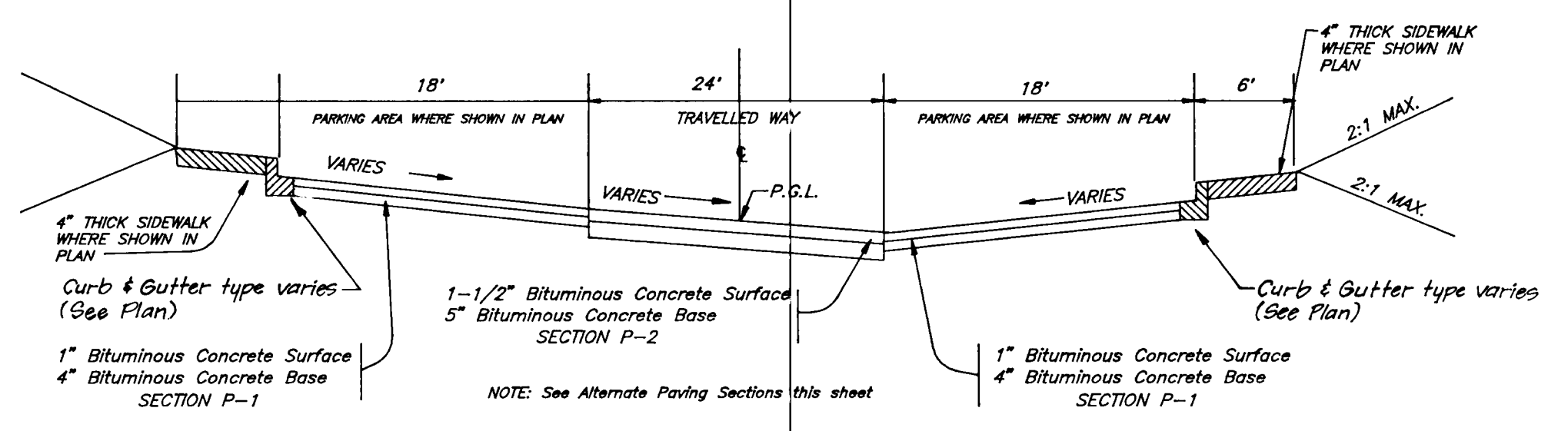
STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE

1-1/2" Bituminous Concrete Surface	1-1/2"
1-1/2" Bituminous Concrete Base	1-1/2"
5" Bituminous Concrete Base	5"

TYPICAL PAVING SECTION APRIL BROOK CIRCLE
NO SCALE (SECTION P-3)

1-1/2" Bituminous Concrete Surface	1-1/2"
4-1/2" Bituminous Concrete Base	4-1/2"
Prima	6" OR 4-1/2"
8" Crusher Run Base Course or 4-1/2" Dense Graded Stabilized Aggregate Base Course	6" OR 4-1/2"

TYPICAL PAVING SECTION APRIL BROOK CIRCLE
NO SCALE (SECTION P-3)



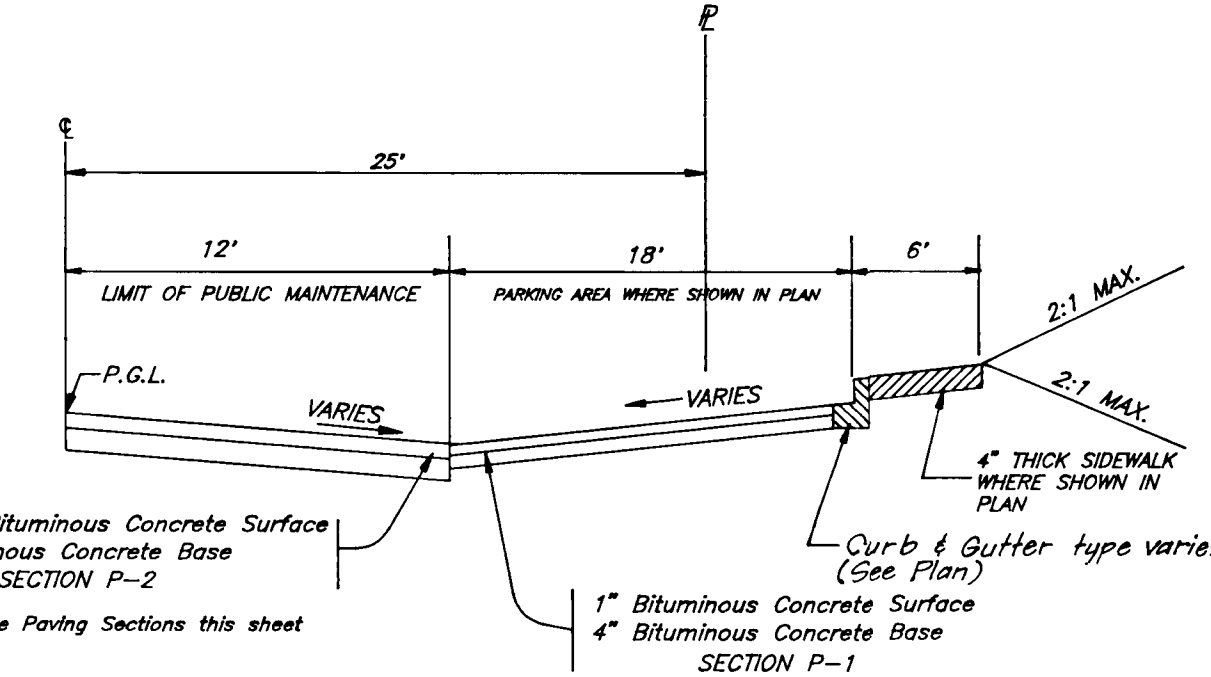
TYPICAL PAVING SECTION
NO SCALE
STA. 6+97.24 TO STA. 8+34.24 (Deep River Canyon)
STA. 0+45.08 TO STA. 2+52.12 (Yellow Dawn Ct.)

1" Bituminous Concrete Base	1"
2" Bituminous Concrete Base	2"
Prima	4" OR 5"
5" Crusher Run Base Course or 4" Dense Graded Stabilized Aggregate Base Course	4" OR 5"

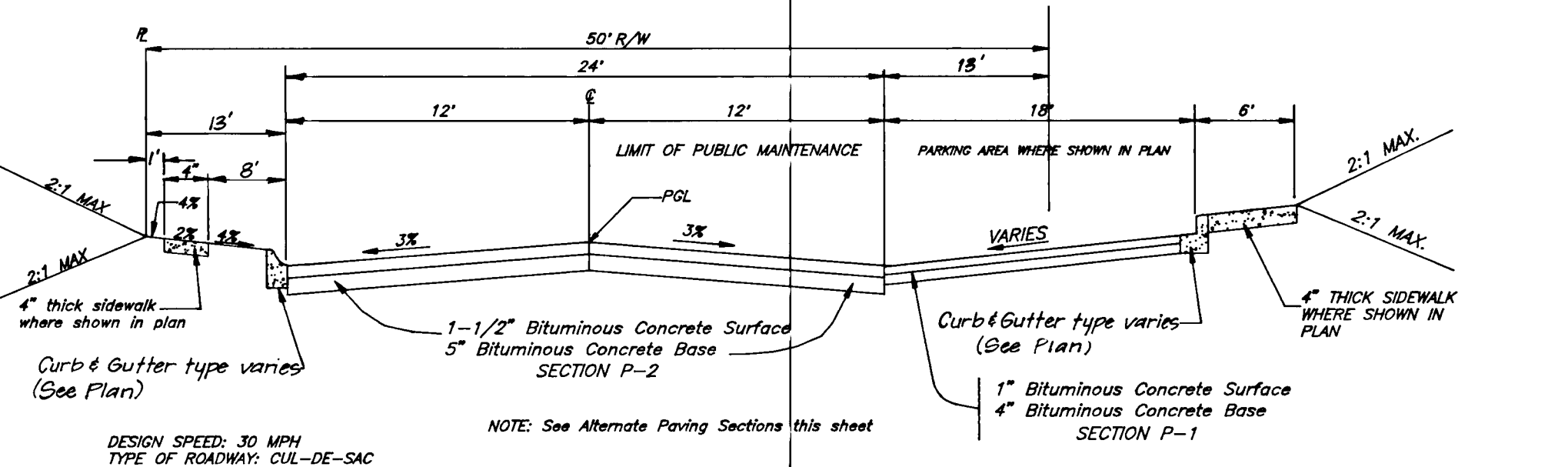
ALTERNATE PAVING SECTION FOR PARKING AREAS
NO SCALE (SECTION P-1)

1-1/2" Bituminous Concrete Base	1-1/2"
2-1/2" Bituminous Concrete Base	2-1/2"
Prima	6" OR 8"
8" Crusher Run Base Course or 6" Dense Graded Stabilized Aggregate Base Course	6" OR 8"

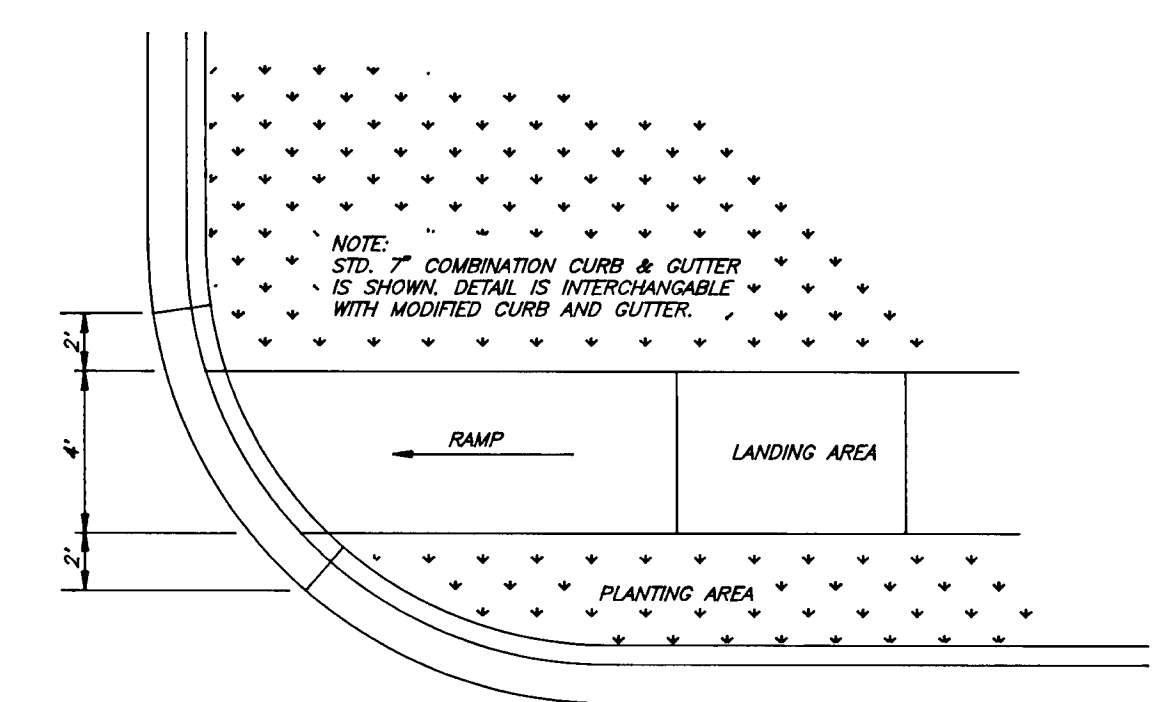
ALTERNATE PAVING SECTION FOR PUBLIC ROADS
NO SCALE (SECTION P-2)



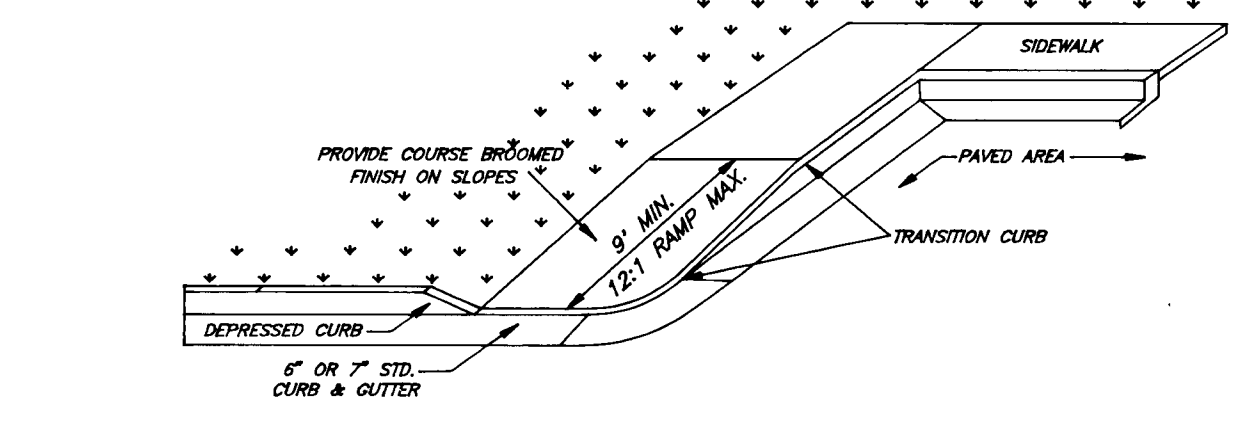
TYPICAL HALF PAVING SECTION
NO SCALE
STA. 4+88.24 TO STA. 6+25.24 (Deep River Canyon)



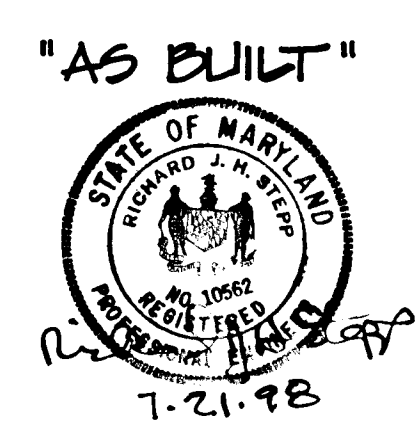
TYPICAL PAVING SECTION
NO SCALE
STA. 2+06.56 TO STA. 2+77.00 (Deep River Canyon)
STA. 3+05.87 TO STA. 3+79.24 (Deep River Canyon)



HANDICAP RAMP DETAILS
NO SCALE



PLANTING DETAIL
NO SCALE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division
 3/23/95
 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Division of Land Development and Research
 3/28/95
 DATE

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.

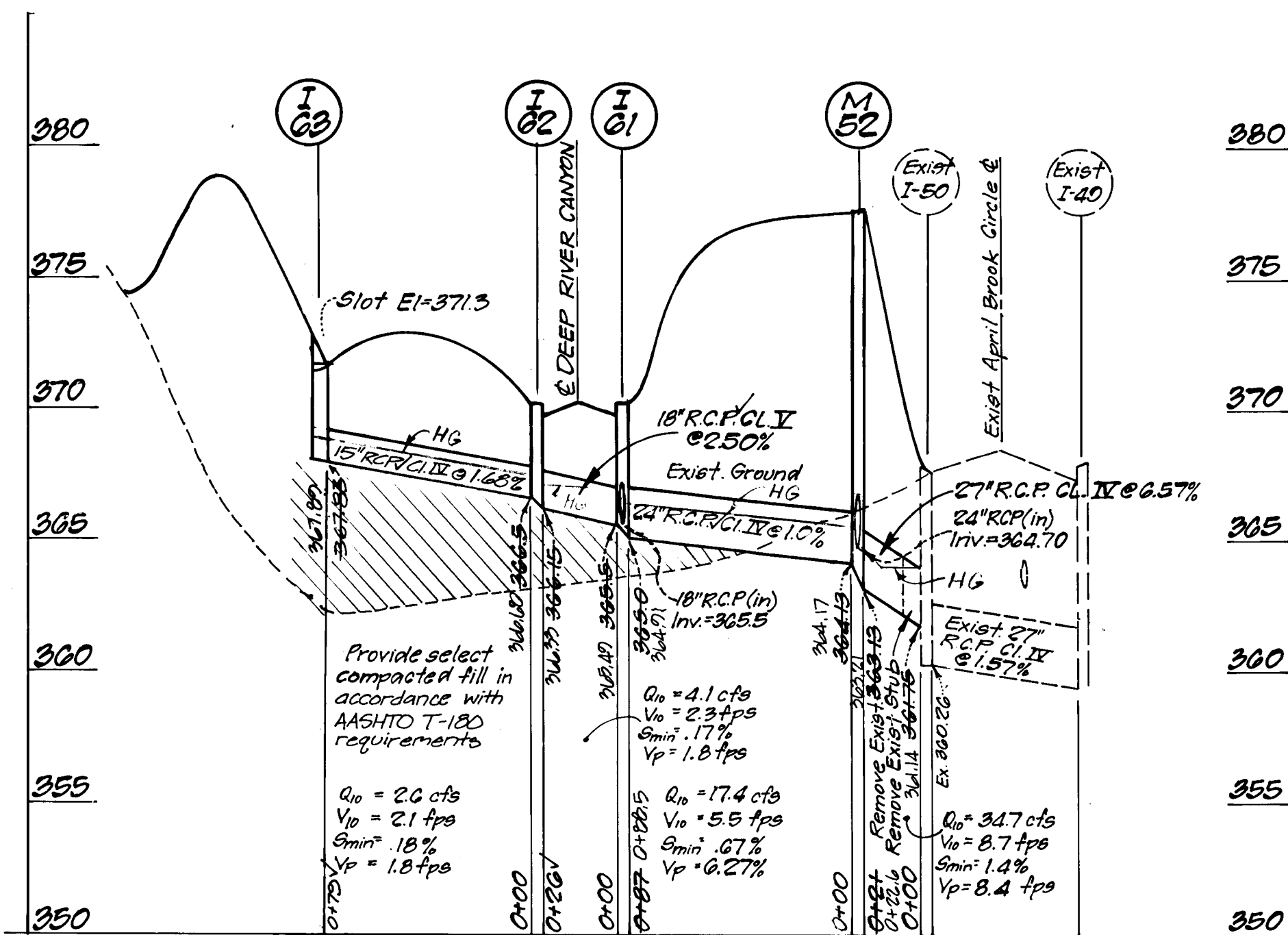
DESIGNED: ZAL
 DRAWN: ZAH
 CHECKED: K71
 DATE: 3-7-95

PAVING DETAILS FOR ROAD CONSTRUCTION
COLUMBIA
VILLAGE OF LONGREACH
 PARCEL B
 SECTION 4 AREA 2
 SIXTH (6th) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE: No Scale
 DRAWING: 2 of 6
 JOB NO: 04005
 FILE NO: 04-005-D



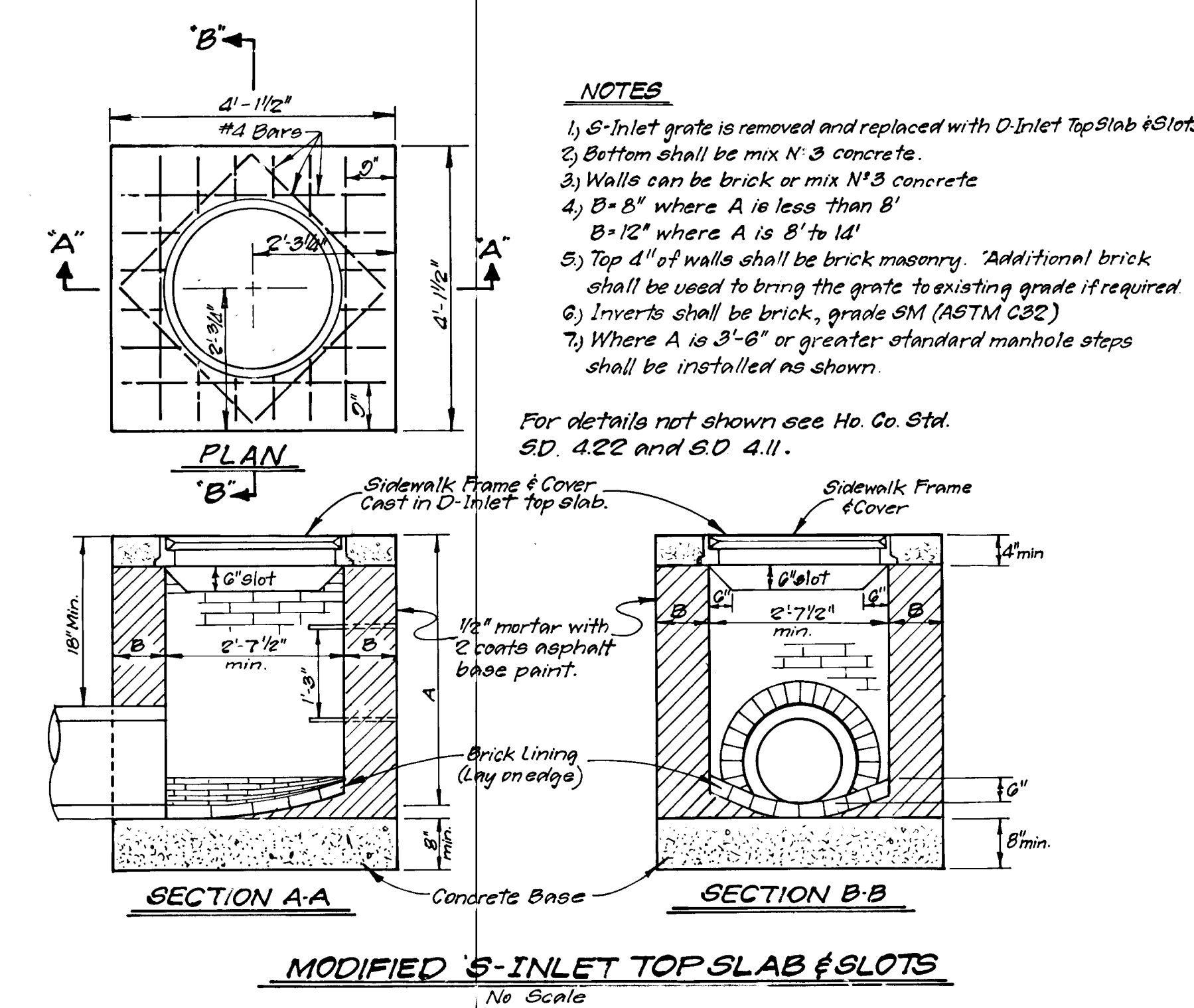
5/27/95



N#	TYPE	INVERT #		TOP ELEVATION		REMARKS	LOCATION
		IN	OUT	UPPER	LOWER		
I-29	Exist. A-10 Inlet	361.75	360.20	367.70	367.70	Exist. structure to remain	See Plan
M-52	Standard Brick Manhole 5' dia	364.18	363.13	377.3	377.3	Ho. Co. Std. G 5.02	
I-31	A-10 Inlet with deflectors	365.5	365.0	370.58	370.10	Ho. Co. Std. 60 4.02	Upper Inside 0+06.14 12' Rt.
I-32	A-10 Inlet	365.5	365.15	370.58	370.10	Ho. Co. Std. 60 4.02	Upper Inside 0+06.14 12' Lt.
I-33	Type 'D' Inlet (Modified)	367.23	367.83	373.0	371.3	Ho. Co. Std. 60 4.11	See Plan
I-34	A-10 Inlet with deflectors	372.25	372.0	376.43	376.01	Ho. Co. Std. 60 4.02	Lower Inside 1+04.50 12' Rt.
I-35	A-10 Inlet with deflectors	372.25	372.0	376.43	376.43	Ho. Co. Std. 60 4.02	Lower Inside 2+04.50 12' Lt.
F-70	Modified type 'S' Inlet with Slots MANHOLE	366.41	366.41	370.53	369.7	Ho. Co. Std. 60 4.11	See Plan

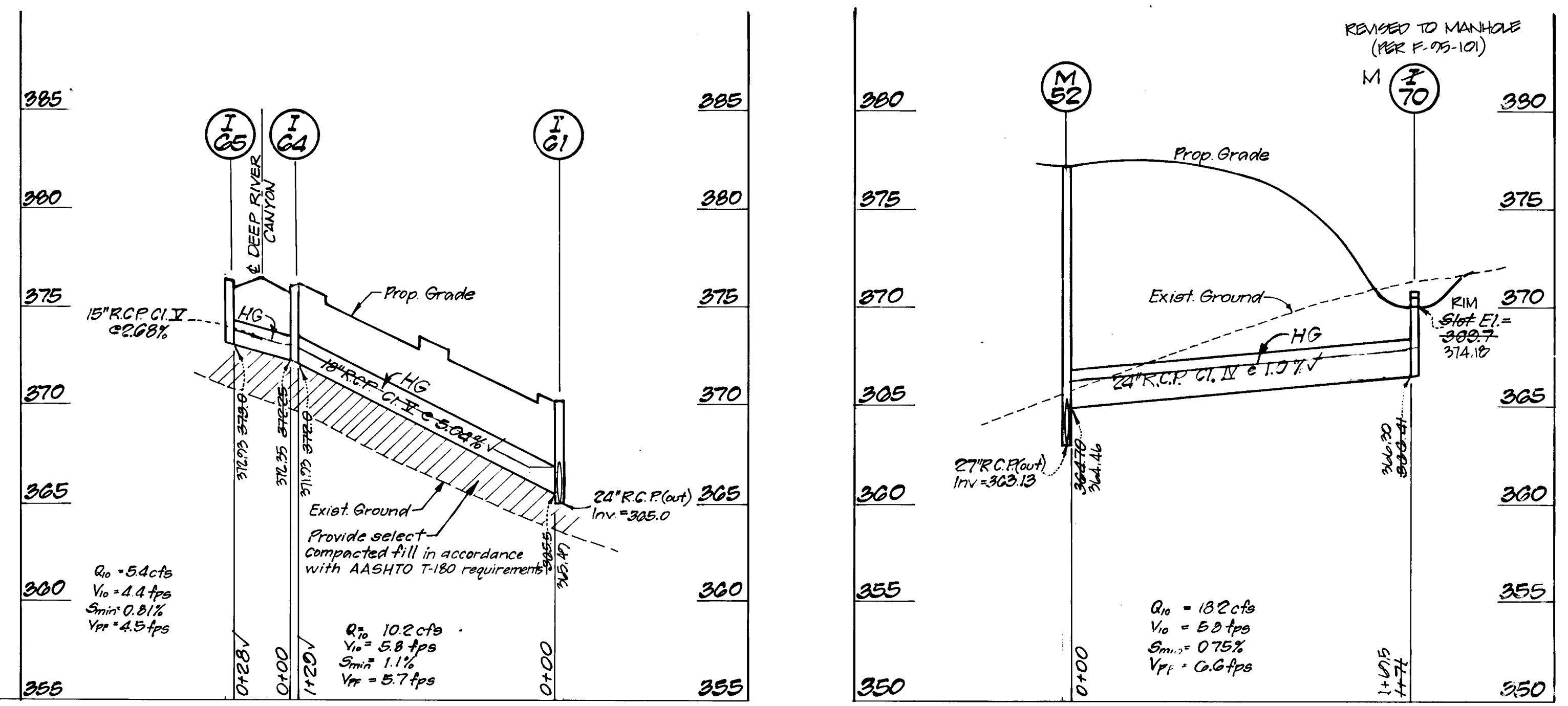
All inverts to be fully developed. * SEE PROFILES FOR INVERTS (AS BUILT)

SIZE	TYPE	LENGTH
15"	RCP CL IV	79 LF
18"	RCP CL V	129 LF
24"	RCP CL II	258 LF
27"	RCP CL IV	21 LF
15"	RCP CL V	28 LF
18"	RCP CL V	26 LF



- NOTES**
- S-Inlet grate is removed and replaced with D-Inlet Top Slab & Slots
 - Bottom shall be mix N-3 concrete.
 - Walls can be brick or mix N-3 concrete
 - B = 8" where A is less than 8"
 - B = 12" where A is 8" to 14"
 - Top 4" of walls shall be brick masonry. Additional brick shall be used to bring the grate to existing grade if required
 - Inverts shall be brick, grade SM (ASTM C92)
 - Where A is 3'-0" or greater standard manhole steps shall be installed as shown.

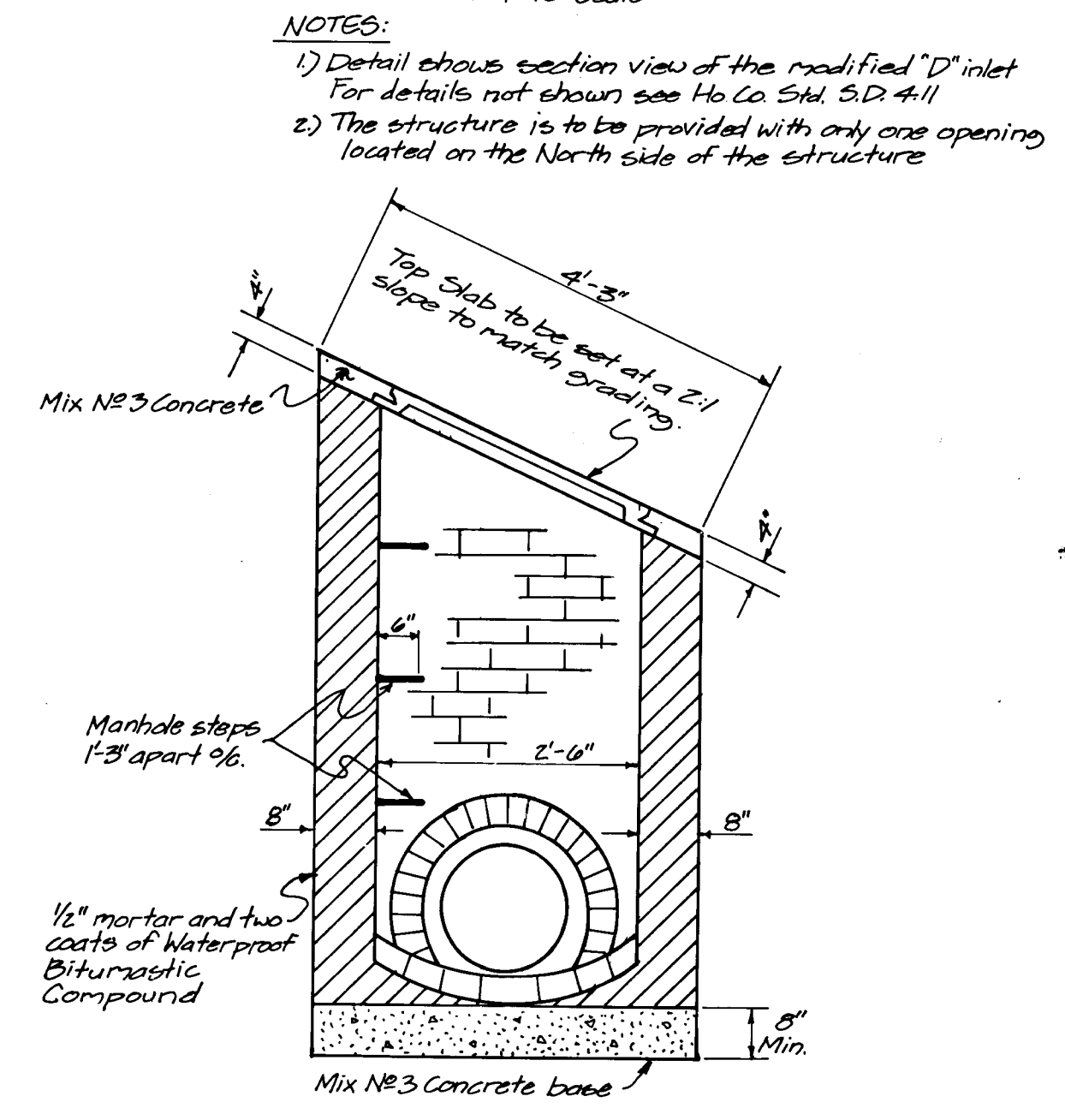
For details not shown see Ho. Co. Std. SD. 4.22 and SD 4.11.



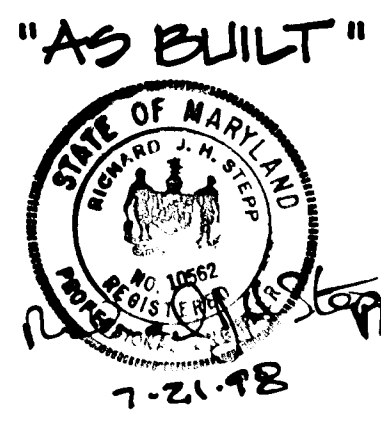
STORM DRAIN PROFILES

Scale: Horiz. 1"=50'
Vert. 1"=5'

MODIFIED 'D' INLET (SECTION VIEW)



- NOTES:**
- Detail shows section view of the modified 'D' inlet. For details not shown see Ho. Co. Std. SD 4.11
 - The structure is to be provided with only one opening located on the North side of the structure



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 3/23/95
 CHIEF, LAND DEVELOPMENT DIVISION
 [Signature] 3-20-95
 CHIEF, BUREAU OF HIGHWAYS
 [Signature] 3/24/95
 CHIEF, BUREAU OF ENGINEERING M.A.K.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 3/28/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH J.P.

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED: Z.A.L. KIWM
 DRAWN: Z.A.H.
 CHECKED: K.M.
 DATE: 3-7-95

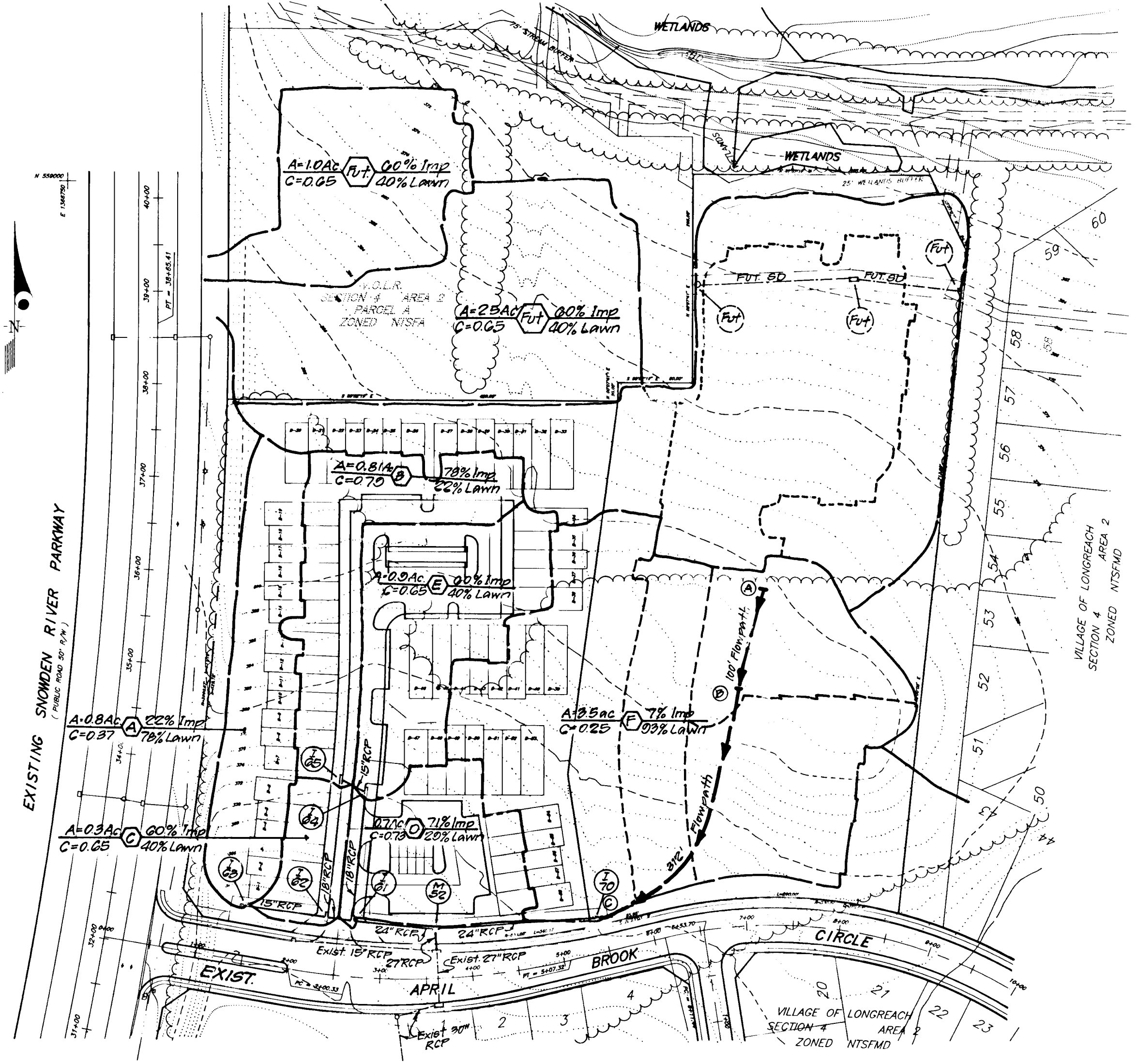
STORM DRAIN PROFILES & DETAILS
COLUMBIA
VILLAGE OF LONGREACH
PARCEL B
 SECTION 4 AREA 2
 SIXTH (6th) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE: Hor. 1"=50'
Ver. 1"=5'
DRAWING: 3 of 6
JOB NO.: 04095
FILE NO.: 04095

FOR: HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

1 Rev. Profile, Pipe and Structure schedule; Add detail
 DATE: 8-20-95

100

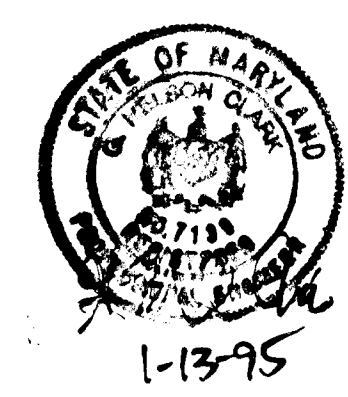


DRAINAGE AREA MAP PLAN VIEW
Scale: 1"=100'

"AS BUILT"

 1-21-98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CHIEF, LAND DEVELOPMENT DIVISION DATE: 3/23/95		APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE: 3/20/95
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING CHIEF, BUREAU OF HIGHWAYS DATE: 3/24/95		APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE: 3/20/95
CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED: ZAL & TW DRAWN: ZAH CHECKED: KM DATE: 3-7-95	DRAINAGE AREA MAP COLUMBIA VILLAGE OF LONGREACH PARCEL B SECTION 4 AREA 2 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE: 1"=50' DRAWING: 4 of 6 JOB NO.: 04005 FILE NO.: 040050
FOR: COLUMBIA BUILDERS, INC. P.O. BOX 999 COLUMBIA, MARYLAND 21044		



Reviewed for HOWARD S.C.D.
 and meets Technical Requirements

 Signature Date
 US Soil Conservation Service

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

 Approved

DEVELOPER'S/BUILDER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary".

 NAME DATE: 3-7-95

ENGINEER'S CERTIFICATE
 I hereby 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.

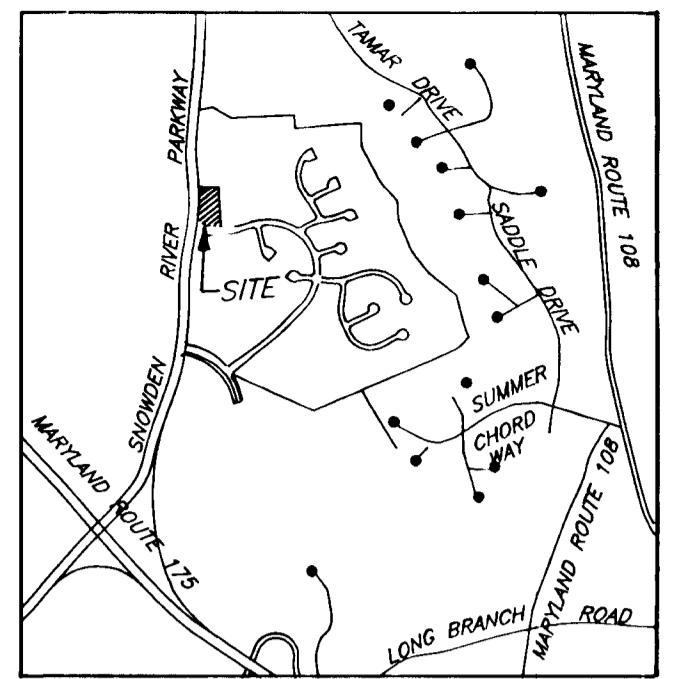
 G. NELSON CLARK DATE: 1-13-95

100

No.	REVISION	DATE
1.	Rev Grading, Sidewalks & Location of I-G3	8-20-95



TRAP #3 30 ST. (ST-I)
 D.A. = 4.2 ac (Existing)
 3.1 ac (Proposed)
 Storage Req'd = 4.2 x 1800 = 7560 cf
 Storage Provided = 7,800 cf
 Storage Depth = 4'
 Top of Stone Weir = 380.0
 Clean Out Elev. = 357.0
 Bottom Elev. = 355.0
 Bottom Dimensions = 87' x 12'
 L = 17'
 2:1 Side Slopes



N 558000
 E 1368000

LEGEND

- CONTOUR INTERVAL 2 feet 320
- PROPOSED CONTOUR 320
- EXISTING CONTOUR 320
- DIRECTION OF DRAINAGE
- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING TREES TO REMAIN
- GAS MAIN
- PROPOSED STORM DRAIN
- SILT FENCE
- TREE PROTECTION FENCE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE

Reviewed for: HOWARD S.C.D.
 and meets Technical Requirements
 Signature: *Howard S.C.D.*
 US 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: 1-13-95



ENGINEER'S CERTIFICATE
 I hereby 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.
 G. NELSON CLARK
 DATE: 1-13-95

DEVELOPER'S/BUILDER'S CERTIFICATE
 We certify that all development and construction will be done according to this plan of development and 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 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 or their authorized agents, as are deemed necessary.
 Blaine Greenfield
 DATE: 3-0-95



TRAP #1 30 ST. (ST-I)
 D.A. (Prop.) = 3.8 ac
 D.A. (Exist.) = 3.0 ac
 Storage Req'd = 3.8 x 1800 = 6840 cf
 Storage Provided = 6012 cf
 Storage Depth = 4 ft
 Top of Stone Weir = 368.00
 Cleanout Elev. = 363.00
 Bottom Elev. = 363.00
 Bottom Dimensions = 88' x 10'
 L = 10'
 2:1 Side Slopes

TRAP #2 30 ST. (ST-I)
 D.A. (Prop.) = 3.0 Ac
 D.A. (Exist.) = 2.7 Ac
 Storage Req'd = 3.0 (1800) = 5400 cf
 Storage Provided = 5450 cf
 Storage Depth = 4'
 Top of Stone Weir = 372.0
 Cleanout Elev. = 369.0
 Bottom Elev. = 367.0
 Bottom Dimensions = 14' x 54'
 L = 12 ft
 2:1 Side Slopes

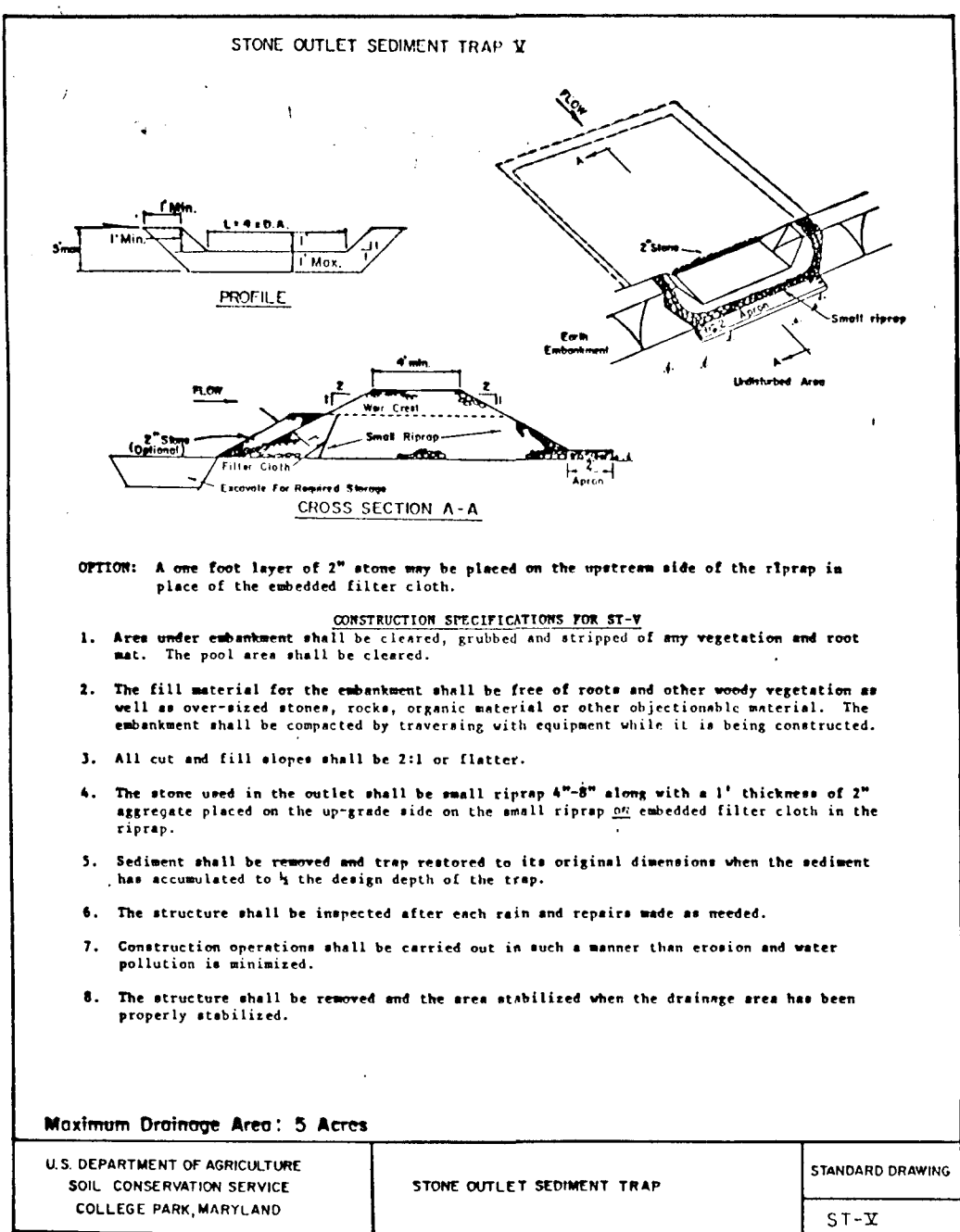
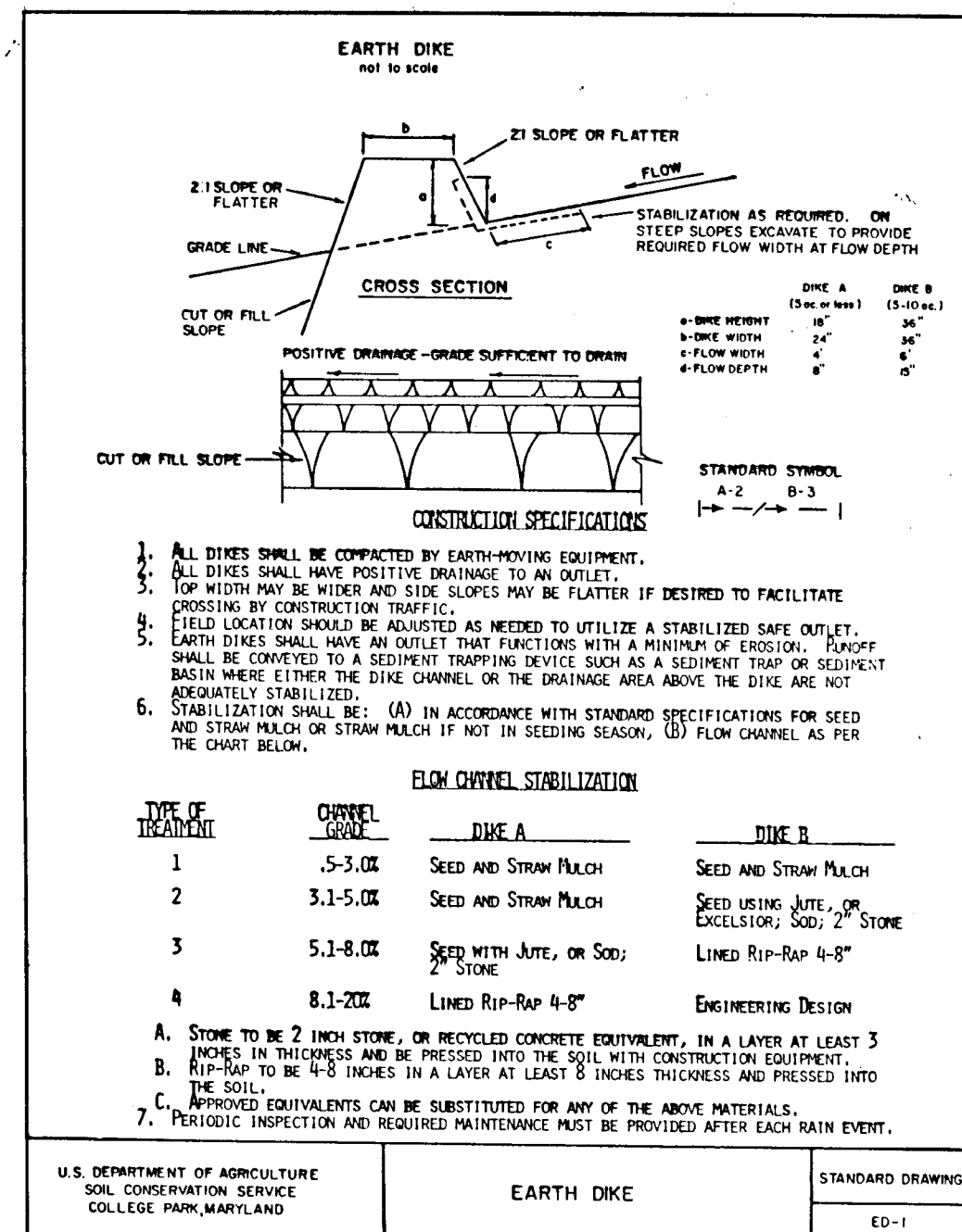
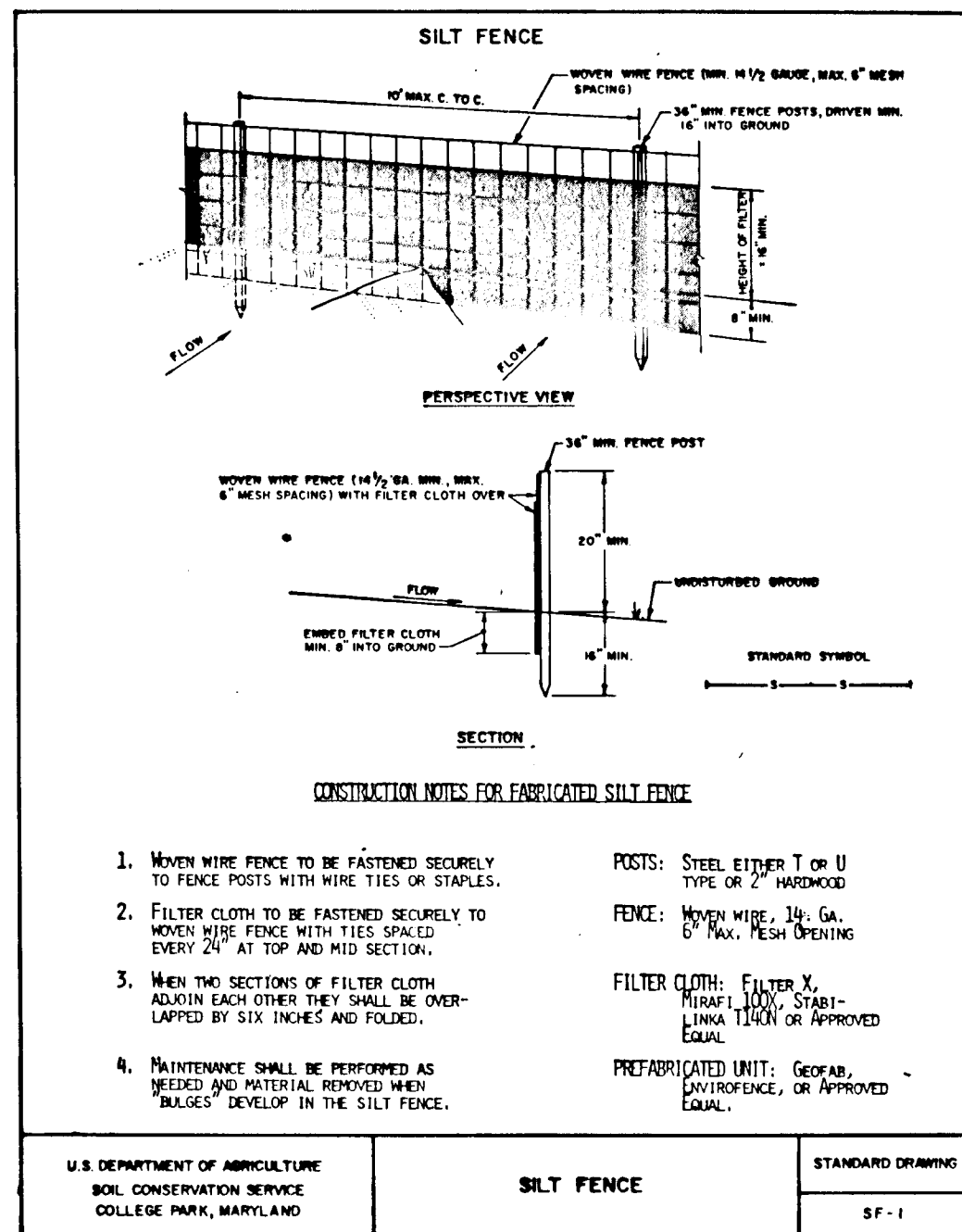
N 558250
 E 1368000

400

NOTE: Extreme care to be taken when grading in area of Existing Storm Drain.

NOTE: Delay Storm Drain Construction See Sheet 1 for Ultimate Storm Drain Construction and Grading.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>Howard S.C.D.</i> CHIEF, LAND DEVELOPMENT DIVISION DATE: 3/23/95	APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING <i>Blaine Greenfield</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE: 3/25/95
CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.	
DESIGNED: KJWM	SCALE: 1"=50'
DRAWN: ZAH	DRAWING: 15 of 6
CHECKED: KJM	JOB NO.: 01093
DATE: 3-7-95	FILE NO.: 24 005-D
ROAD CONSTRUCTION PLANS SEDIMENT AND EROSION CONTROL PLAN COLUMBIA VILLAGE OF LONGREACH SECTION 4 AREA 2 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: COLUMBIA BUILDERS, INC. P.O. BOX 989 COLUMBIA, MARYLAND 21044	



PERMANENT SEEDING NOTES

APPLY TO GRADED OR LOESED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing 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) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft.)
2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs/1000 sq ft.) before seeding. Harrow or disc 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 (1.4 lbs/1000 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 (.65 lbs/1000 sq ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 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 to 90 lbs/1000 sq ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft.)

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (0.7 lbs/1000 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 sod.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft.) for anchoring.

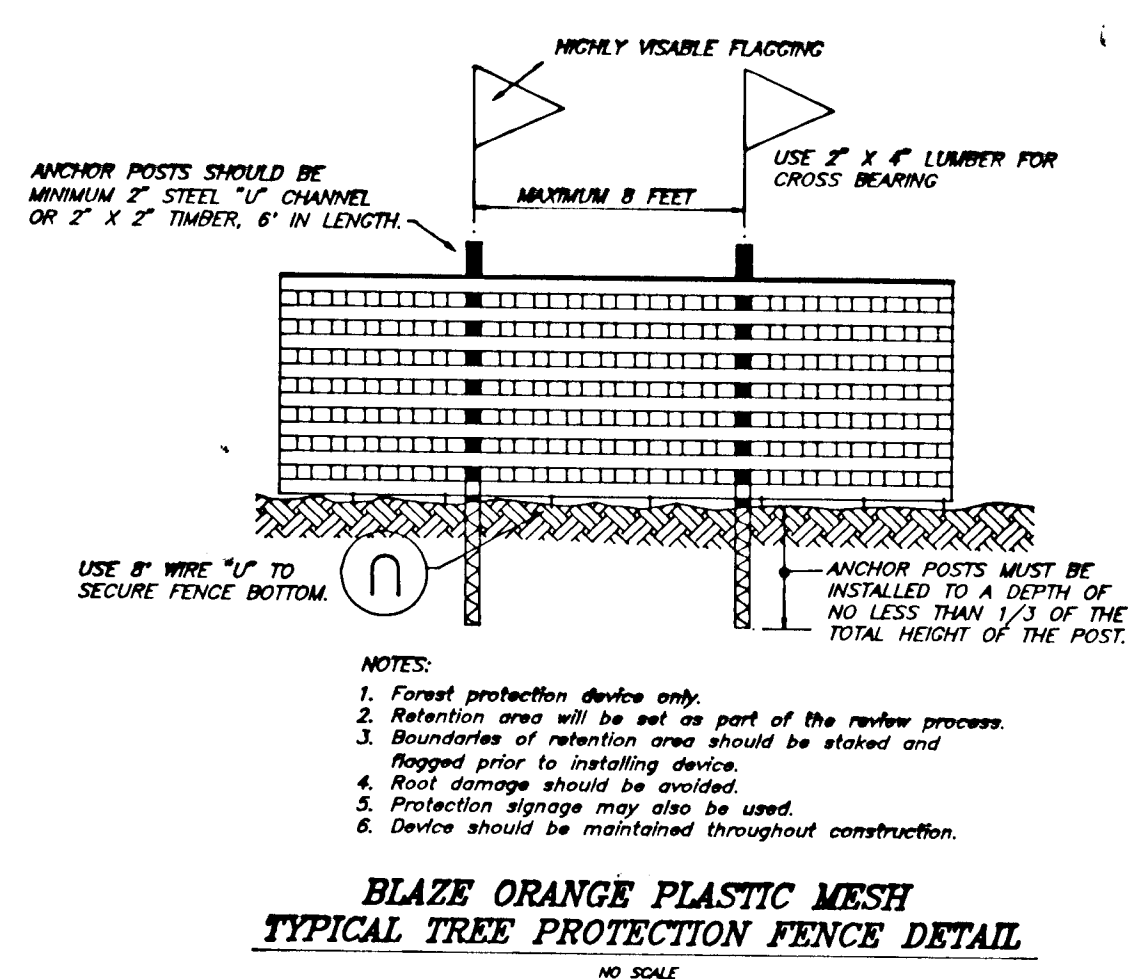
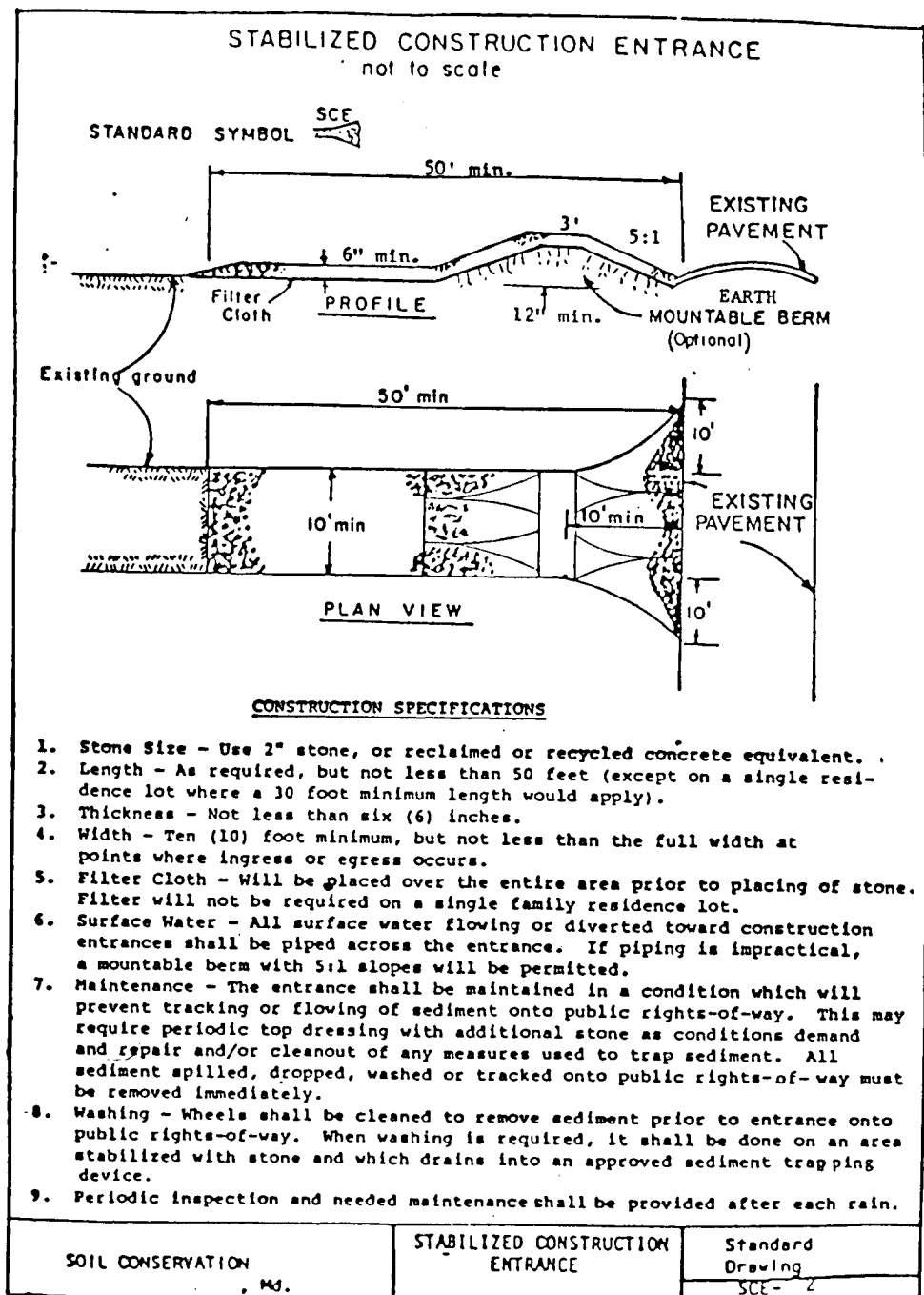
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT AND EROSION CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (818-885).
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 1983 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 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 perimeters in accordance with Vol. I, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). 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 of Site: 11.52 ac
Area Disturbed: 1.04 ac
Area to be roofed or paved: 1.04 ac
Area to be vegetatively stabilized: 9.38 ac
Total Cut: 10.24 ac
Total Fill: 36.112 cu yd

8. Offsite Waste/Borrow Area Location:
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 control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector. 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 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. All pipes to be blocked at the end of each day (see detail this sheet).
 12. The total amount of silt fence = 085LF
- It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and its grading permit number at the time of construction.



Reviewed for HOWARD S.C.D. and meets Technical Requirements
Patricia Engle/ps. 3/14/95
Signature Date
US Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
G. Nelson Clark 3/14/95
Approved DATE

DEVELOPER'S/BUILDER'S CERTIFICATE
I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary.
G. Nelson Clark 3-7-95
NAME DATE

ENGINEER'S CERTIFICATE
I hereby 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.
G. Nelson Clark 1-13-95
NAME DATE



CONSTRUCTION SEQUENCE	NO. OF DAYS
A. Obtain grading permit.	7
B. Install tree protection fence.	7
C. Install all sediment and erosion control devices and stabilize.	21
D. Clear and rough grade site.	21
E. Construct storm drains and install Temp. 24" CMP to Trap No. 1. Note: Delay construction of S.D. Str M-52 to I-70, M-52 to I-61 and M-52 ex. I-50 until Trap #1 is removed upon approval of the inspector.	21
F. Construct utilities.	60
G. Construct paving and sidewalk.	30
H. Final grade and stabilize in accordance with Std. and Specs.	14
I. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DATE: 3/23/95
 DATE: 3-20-95
 DATE: 3/24/95

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 DATE: 3/28/95

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.

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DRAWN ZAH		JOB NO. 04005
CHECKED KTM	FILE NO. 04005	
DATE 3-7-95	FOR: COLUMBIA BUILDERS, INC. P.O. BOX 999 COLUMBIA, MARYLAND 21044	