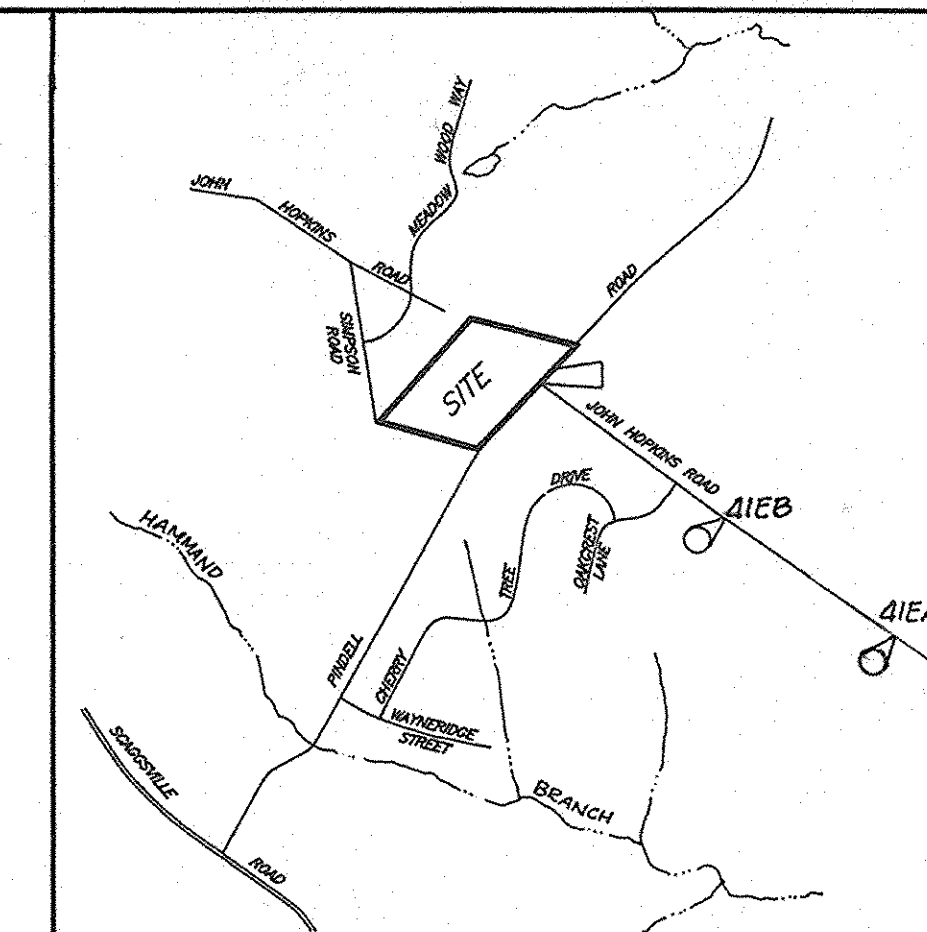
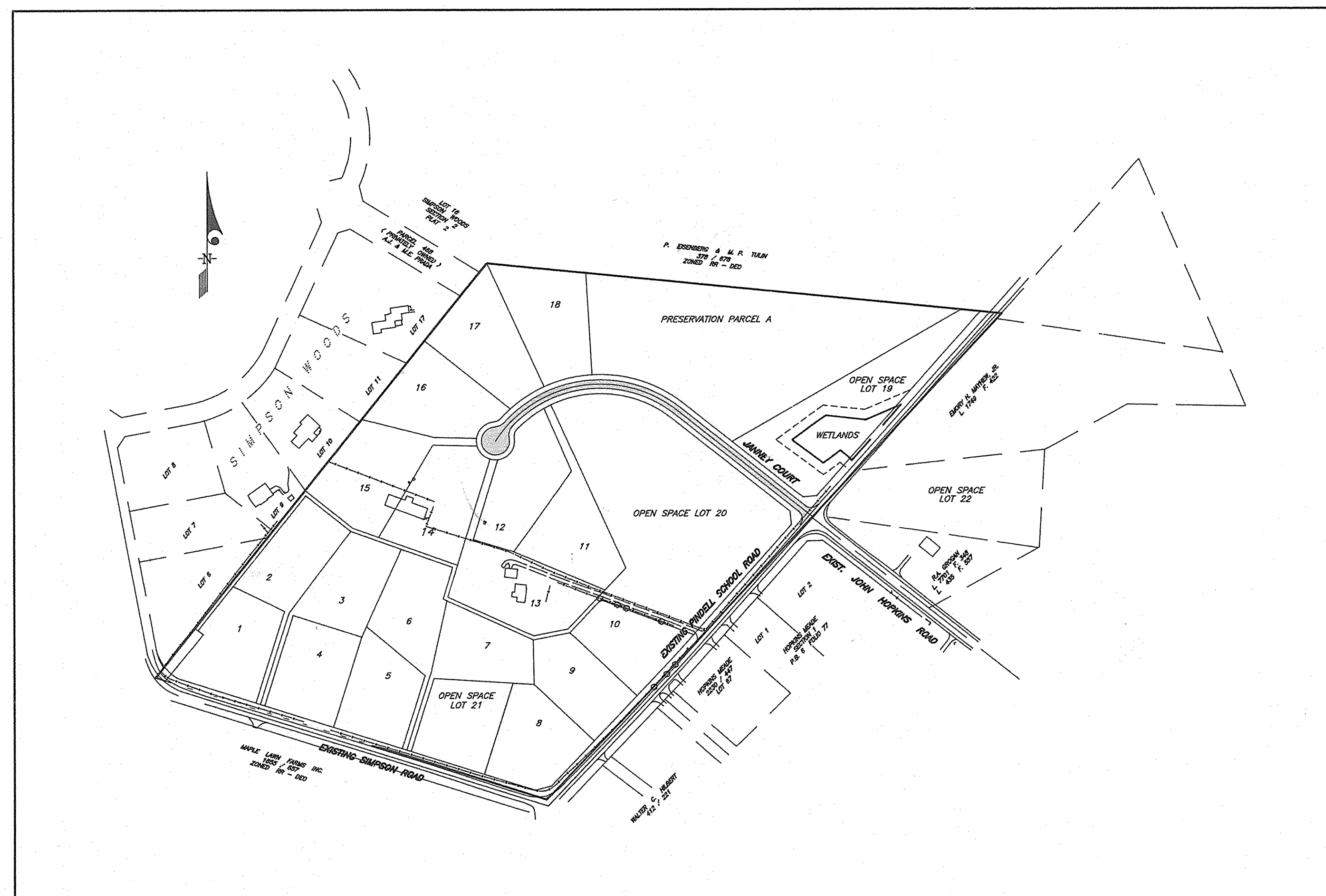


# ROAD CONSTRUCTION PLAN EASTERN VIEW FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP  
SCALE: 1"=2000'

SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	GRADE ESTABLISHMENT & SWM PLAN - SIMPSON ROAD
3	GRADE ESTABLISHMENT PLAN - PINDELL SCHOOL ROAD
4	GRADE ESTABLISHMENT PLAN - PINDELL SCHOOL ROAD
5	GRADE ESTABLISHMENT & SWM PLAN - JANNEY COURT
6	STORM DRAIN PROFILES
7	STORMWATER MANAGEMENT DETAILS
8	STORM DRAIN, PAVING, S.W.M. AND TRAFFIC MAINTENANCE DETAILS
9	STORMWATER MANAGEMENT DETAILS
10	DRAINAGE AREA MAP
11	SEDIMENT EROSION CONTROL, GRADING & LANDSCAPE PLAN
12	SEDIMENT EROSION CONTROL, GRADING & LANDSCAPE PLAN
13	SEDIMENT EROSION CONTROL DETAILS
14	FOREST CONSERVATION PLAN
15	FOREST CONSERVATION DETAILS



**GENERAL NOTES:**

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering, Construction Inspection Division at (410) 313-1870 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: RR-DEO  
Total Tract Area: 39.6 ac.  
Number of Proposed lots 19  
Design Speed: 30 MPH Janney Court  
Date Preliminary Plan approved and DPZ Reference file#: 10-12-95, P-25-90
- Topography, at 2' intervals, was derived from plans prepared by Air Survey Corporation, Sterling, VA, dated 9-13-94. and supplemented with field run Topography by Clark, Finetrock & Sackett, Inc.
- Private on-site water and sewer to be utilized (well and septic).
- All utilities shown were compiled from available records and field survey.
- Street trees in accordance with Subdivision and Land Development Regulations, Section 16.124.
- Wetlands shown per report by M.A. Dirks & Co., Inc., Sept. 30, 1993. Updated for wetlands 12-23-94 and Forest Stand 5-1-95.
- 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.
- Proposed Stormwater Management  
a. Quantity Control: 2 & 10 Year Retention and Extended Detention shallow Marsh.  
b. Quality Control: Sediment Forebay, Wet Pond, Shallow Marsh.  
c. Hazard Class: A  
d. Ownership: Homeowners Association  
e. Maintenance: Structural by Howard County Dept. of Public Works, Landscape By Homeowners Association.
- See previous county files S-94-13, WP 95-130 P-25-90
- APFO study as previously submitted and approved under S-94-13. Prepared by Street Traffic Studies, LTD. Sept. 22, 1993. See revised report dated 12-30-94.
- Geotechnical report by Hillis Carnes, Inc. dated 11-15-94: Addendum dated 5-26-95. Approved 6-23-95.
- Coordinates based on NAD 83, MD Coordinate System as projected by Howard County Geodetic Control Stations 41EB Elev. 464.58 and 41EA Elev. 407.73.
- Boundary survey by Clark, Finetrock & Sackett, Inc. on 6-24-94
- WP 95-130 approved 10-26-95 to waive Sec. 16.132 a.2. i&ii and not require full width widening of Pindell School Road between sta. 11+25 & 17+37.33.
- Waiver to Howard County Design Manual Vol. 1, Section 7.1A approved on 7-14-95 exempting the Developer from improving the existing culvert under Pindell School Road.
- The Forest Conservation Easement(s) has been established to fulfill the requirements of Section 16.120D of the Howard County Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easement, except as shown on an approved road construction drawing or site development plan. However, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Quinn Nimmamaji* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

*John J. ...* 5/16/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

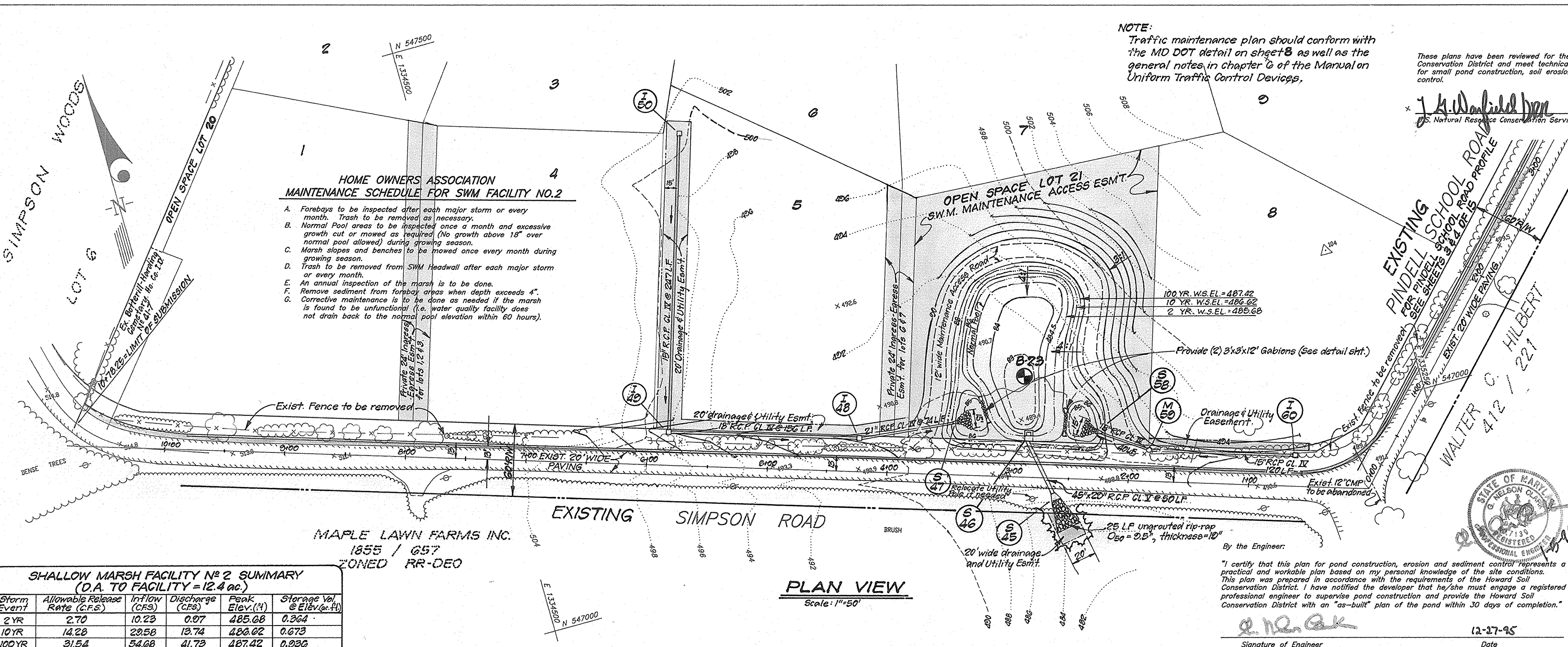
OWNER:  
 JOHN M. JANNEY et. al.  
 7346 PINDELL SCHOOL ROAD  
 CLARKSVILLE, MD 21029

DEVELOPER:  
 CARMAN ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT CITY, MD 21043

<b>CLARK • FINEFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS		COVER SHEET <b>EASTERN VIEW</b> TAX MAP 41 PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=200'
DESIGNED ZAL	DRAWN ZAH		DRAWING 1 of 15
CHECKED JJS	DATE 4-23-96	JOB NO. 04-100	FILE NO. 04-100-D
7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.		FOR: CARMAN ASSOCIATES P.O. BOX 122 ELLICOTT CITY, MD 21043	

F-96-94  
F 96-094

1811



**SHALLOW MARSH FACILITY No 2 SUMMARY (D.A. TO FACILITY = 12.4 ac.)**

Storm Event	Allowable Release Rate (C.F.S.)	Inflow (CFS)	Discharge (CFS)	Peak Elev. (ft)	Storage Vol. @ Elev. (ac-ft)
2YR	2.70	10.23	0.97	485.08	0.364
10YR	14.28	29.58	13.74	488.02	0.673
100YR	31.54	54.08	41.73	487.42	0.936

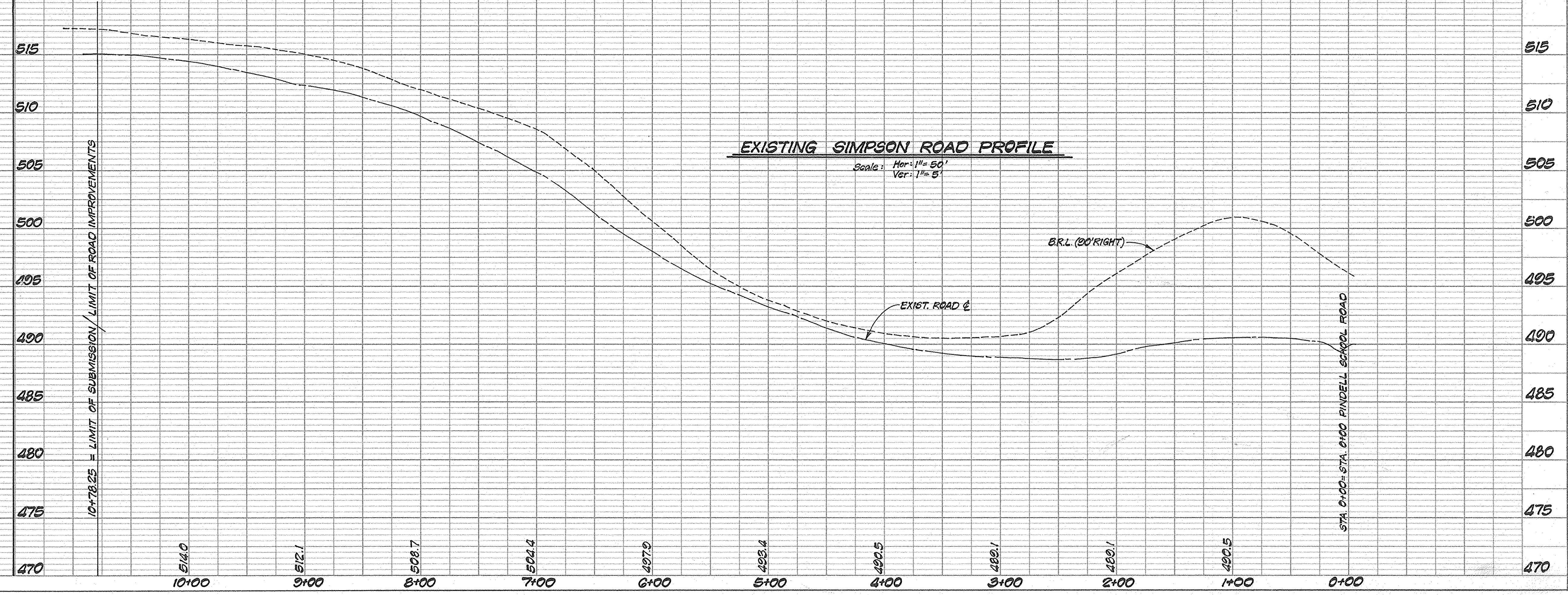
MAPLE LAWN FARMS INC.  
1855 / G57  
ZONED RR-DEO

**PLAN VIEW**  
Scale: 1"=50'

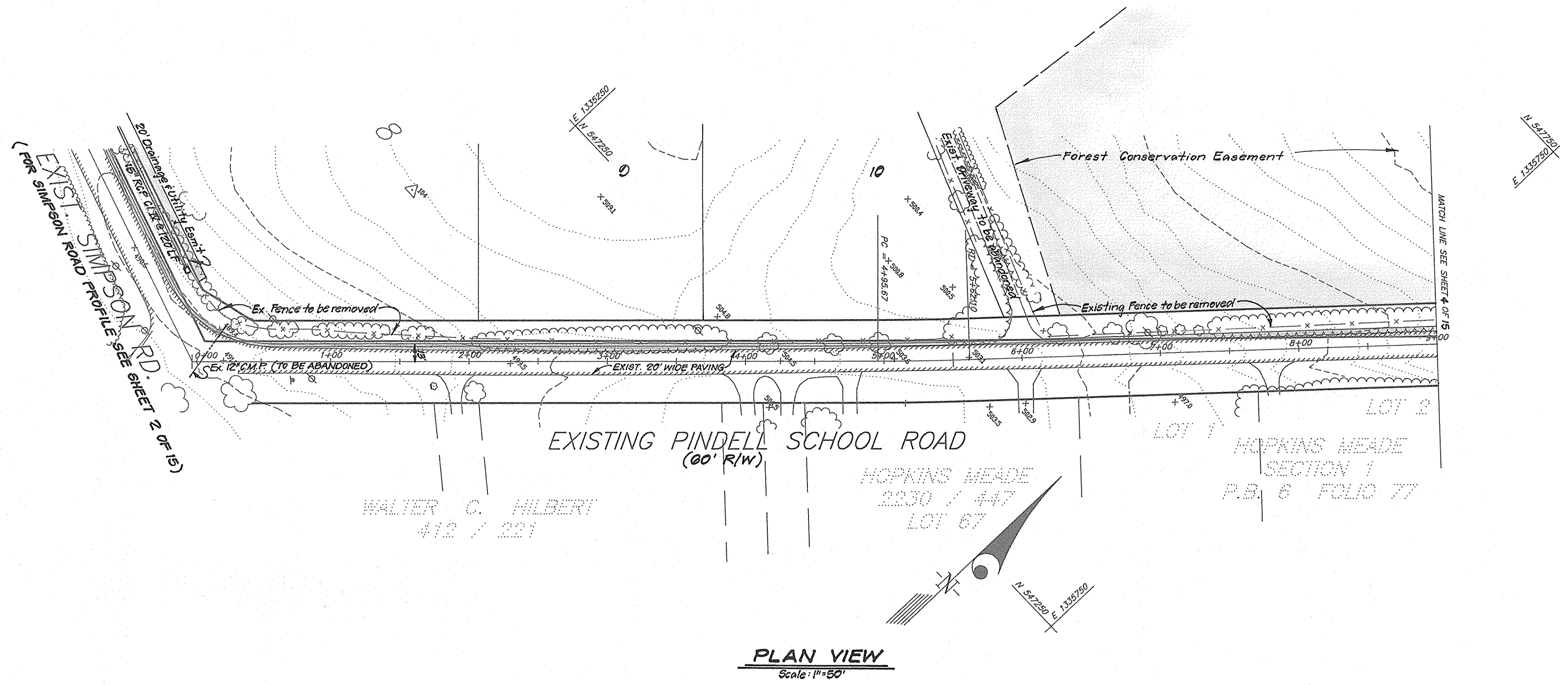
By the Engineer:  
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer: *E. H. G. G.* 12-27-95 Date

Note: The facility is to be privately maintained by the Home Owner Association.

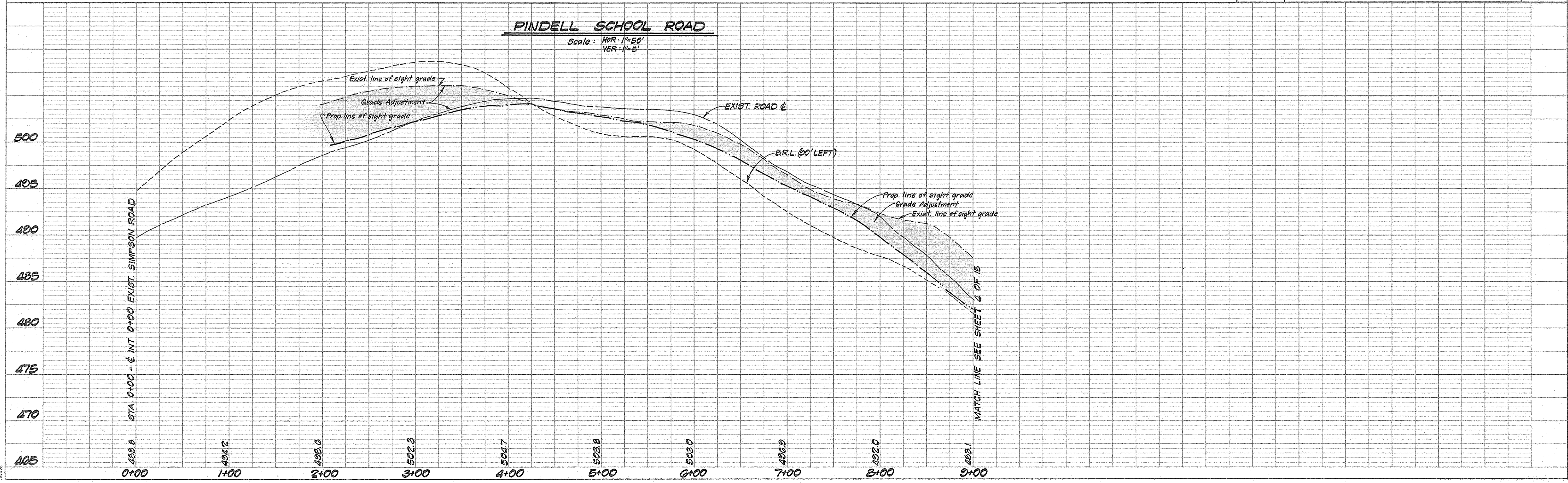
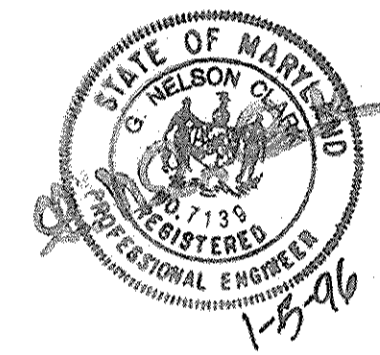


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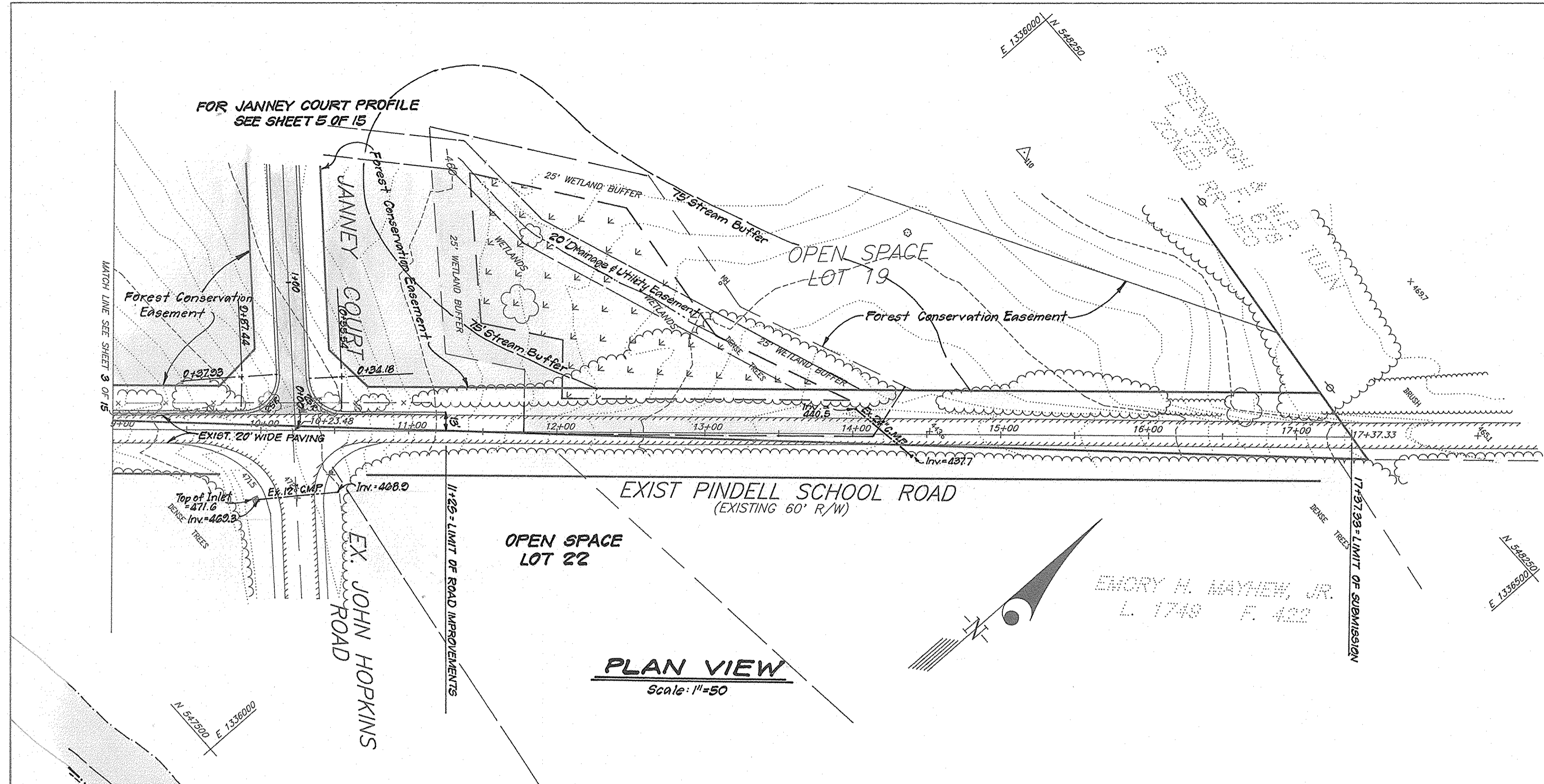
**PLAN VIEW**  
Scale: 1"=50'

APPROVED:	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	5-7-96
	CHIEF, BUREAU OF HIGHWAYS	DATE
APPROVED:	HOWARD COUNTY DEPT. OF PLANNING & ZONING	5/14/96
	CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	DATE
	CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<b>CLARK • FINEFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED	ZAL	SCALE AS SHOWN
DRAWN	ZAH	DRAWING 3 of 15
CHECKED	JRS	JOB NO. 94-100
DATE	4-23-96	FILE NO. 94-100-D
GRADE ESTABLISHMENT STORM DRAINAGE AND PAVING PLANS EXISTING PINDELL SCHOOL ROAD <b>EASTERN VIEW</b> TAX MAP 41 PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: CARMAN ASSOCIATES P.O. BOX 122 ELLICOTT CITY, MARYLAND 21043		




**PINDELL SCHOOL ROAD**  
Scale: HOR: 1"=50'  
VER: 1"=5'

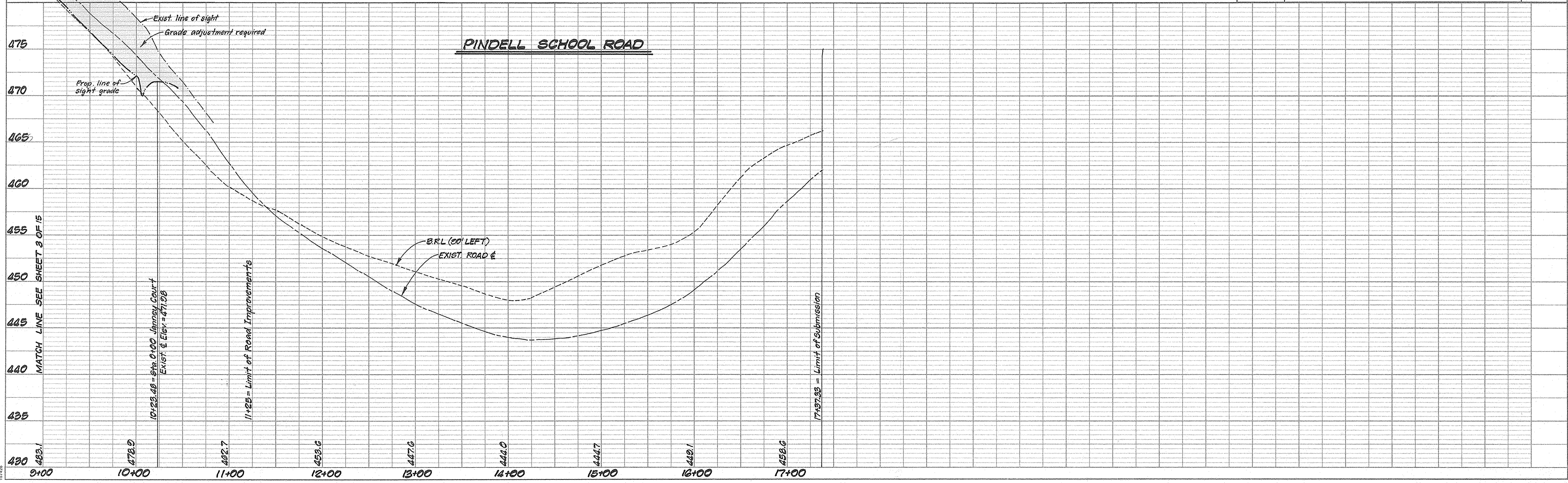
1811



**PLAN VIEW**  
Scale: 1"=50'

EMORY H. MAYHEW, JR.  
L. 1748 F. 422

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>Robert M. Savelle</i> CHIEF, BUREAU OF HIGHWAYS		5-7-96 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING <i>Uma Strunovic</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH		5/14/96 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Mr. Dammann</i>		5/21/96 DATE
 <b>CLARK • FINEFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED ZAL	GRADE ESTABLISHMENT STORM DRAINAGE AND PAVING PLANS EXISTING PINDELL SCHOOL ROAD <b>EASTERN VIEW</b> TAX MAP 41 PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
DRAWN ZAH		DRAWING 4 of 15
CHECKED J.B.		JOB NO. 94-100
DATE 4-23-96		FILE NO. 94-100-D
FOR: CARMAN ASSOCIATES P.O. BOX 122 ELLCOTT CITY, MARYLAND 21043		



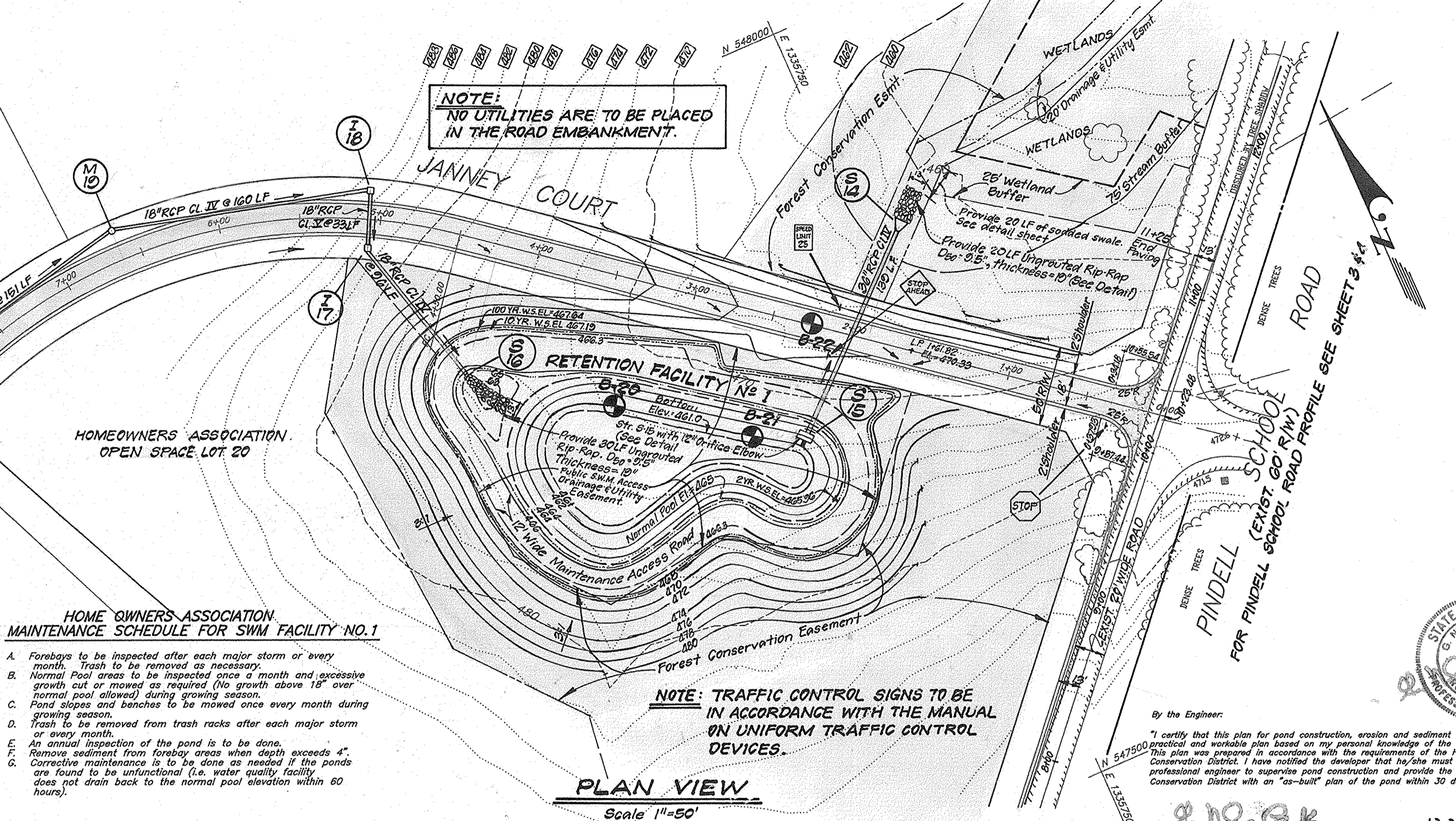
1811

CUL-DE-SAC CURVE DATA						
N <sup>o</sup>	RADIUS	Δ	ARC	TAN	CHORD	BEARING
2	25'	60° 13' 10"	26.78'	14.50'	25.08'	S 12° 02' 13" W
3	35'	200° 44' 08"	177.60'	0.00'	39.78'	N 82° 42' 21" W
4	25'	51° 26' 07"	22.44'	12.04'	21.70'	N 66° 56' 36" E

CENTERLINE CURVE DATA FOR JANNEY COURT						
N <sup>o</sup>	RADIUS	Δ	ARC	TAN	CHORD	BEARING
1	325.0'	98° 30' 00"	521.71'	857.80'	481.14'	S 80° 30' 34" W

RETENTION FACILITY NO. 1 POND SUMMARY (D.A. to facility = 14.8 ac.)					
Storm Event	Allowable Release Rate (C.F.S.)	Inflow (C.F.S.)	Discharge (C.F.S.)	Peak Elev.	Storage Vol. @ Elev.
2 YR	9.40	14.4	8.02	425.06	397 ac-ft.
10 YR	45.00	37.75	43.60	427.19	1.231 ac-ft.
100 YR	-	67.57	72.54	427.04	1.572 ac-ft.

\* Release rates and discharges analyzed at study point N<sup>o</sup> 1.  
**POND NOTES:**  
 1) The Facility is classified as Hazard Class "A"  
 2) The Facility is to be privately maintained by the Home Owners Association.



- HOME OWNERS ASSOCIATION MAINTENANCE SCHEDULE FOR SWM FACILITY NO. 1**
- Forebays to be inspected after each major storm or every month. Trash to be removed as necessary.
  - Normal Pool areas to be inspected once a month and excessive growth cut or mowed as required (no growth above 18" over normal pool allowed) during growing season.
  - Pond slopes and benches to be mowed once every month during growing season.
  - Trash to be removed from trash racks after each major storm or every month.
  - An annual inspection of the pond is to be done.
  - Remove sediment from forebay areas when depth exceeds 4".
  - Corrective maintenance is to be done as needed if the ponds are found to be unfunctional (i.e. water quality facility does not drain back to the normal pool elevation within 60 hours).

These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.  
*J. H. Weyfield* 4/28/96  
 J.S. Natural Resources Conservation Service Date  
 Approved: *Robert V. Zieher* 4/29/96  
 Howard S.C.D. Date

By The Developer:  
 "We certify that all development and/or construction will be done according to these plans, and that any 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."  
*Ronald B. Oates* 12-27-95  
 Signature of Developer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Sander* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS AS DATE

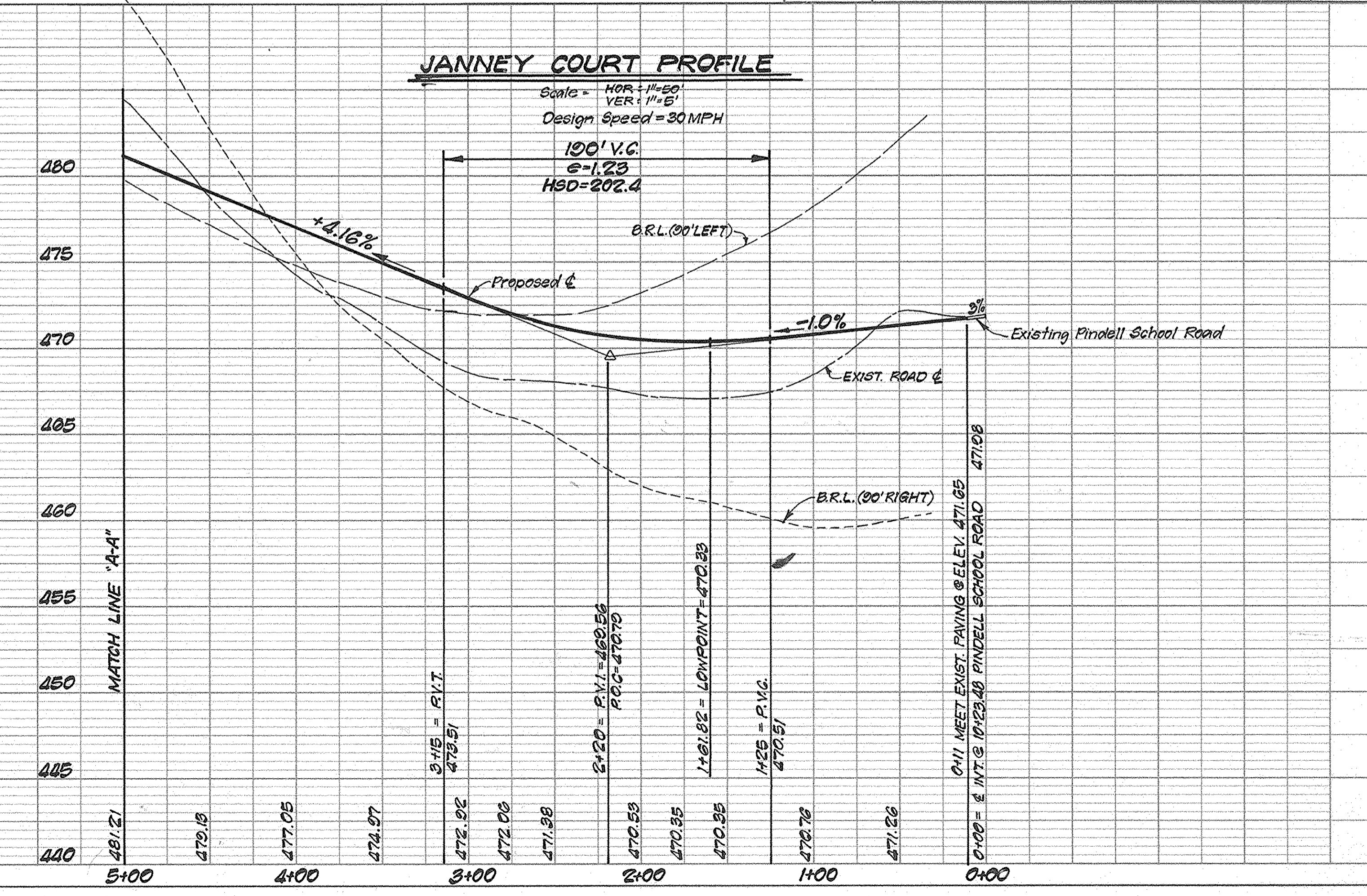
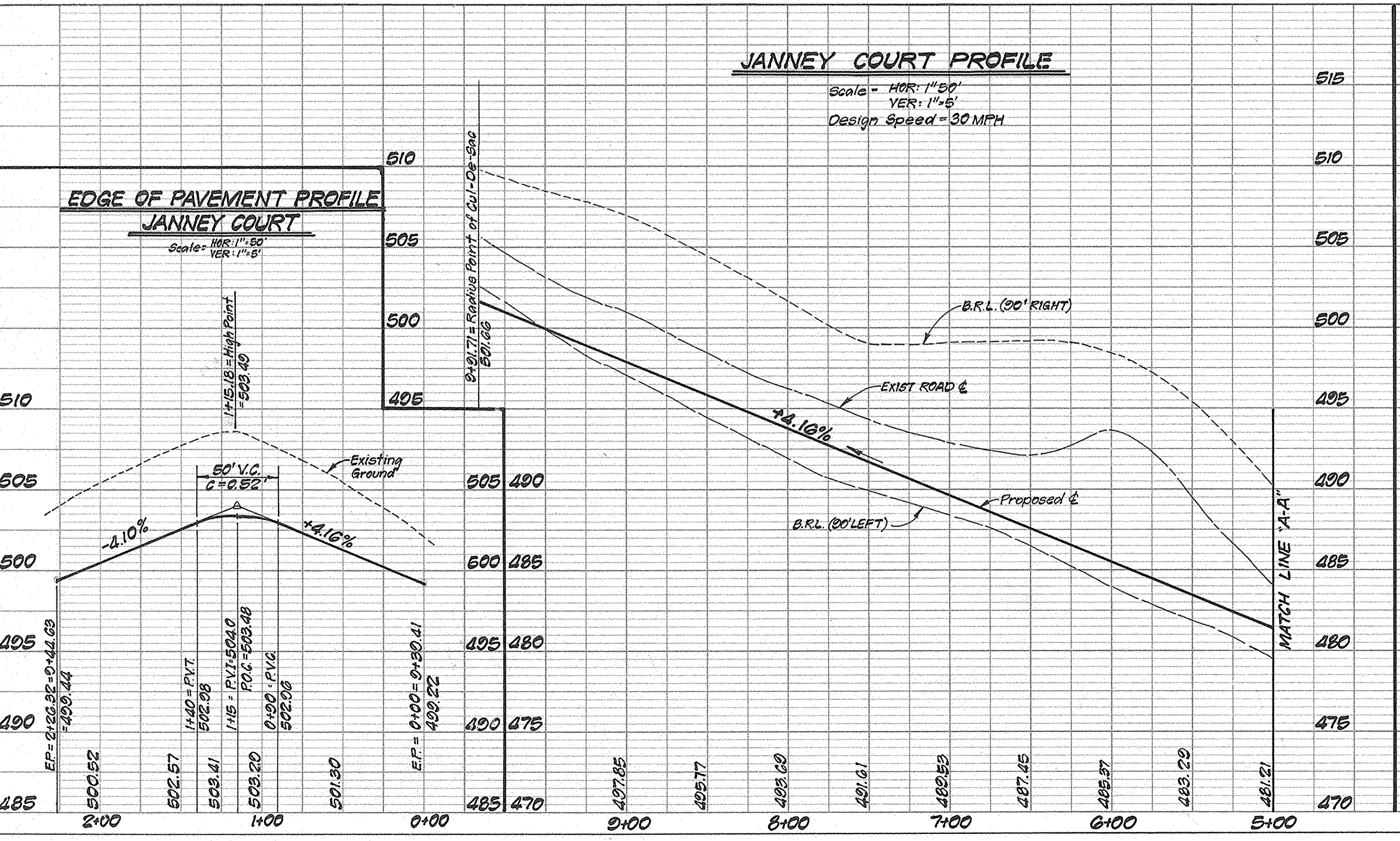
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Anna Drummond* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH CSH DATE

*John Deamons* 5/16/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JJC DATE

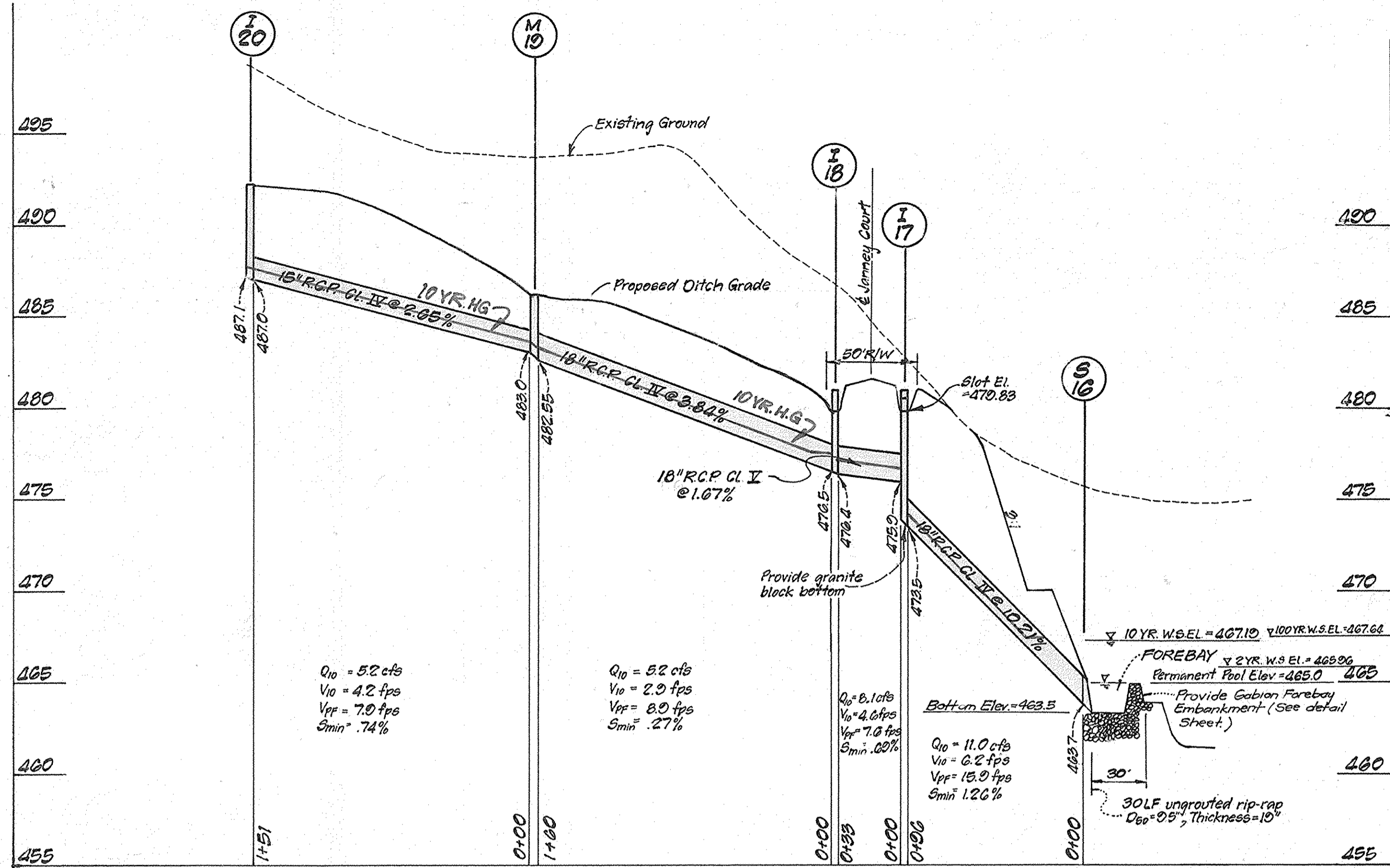
**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED ZAL	GRADE ESTABLISHMENT, STORM DRAINAGE AND PAVING PLANS JANNEY COURT EASTERN VIEW	SCALE AS SHOWN
DRAWN ZAH		DRAWING 5 OF 15
CHECKED JDS	TAX MAP 41 PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 94-100
DATE 4-23-96		FILE NO. 94-100D

FOR: CARMAN ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT CITY, MARYLAND 21043

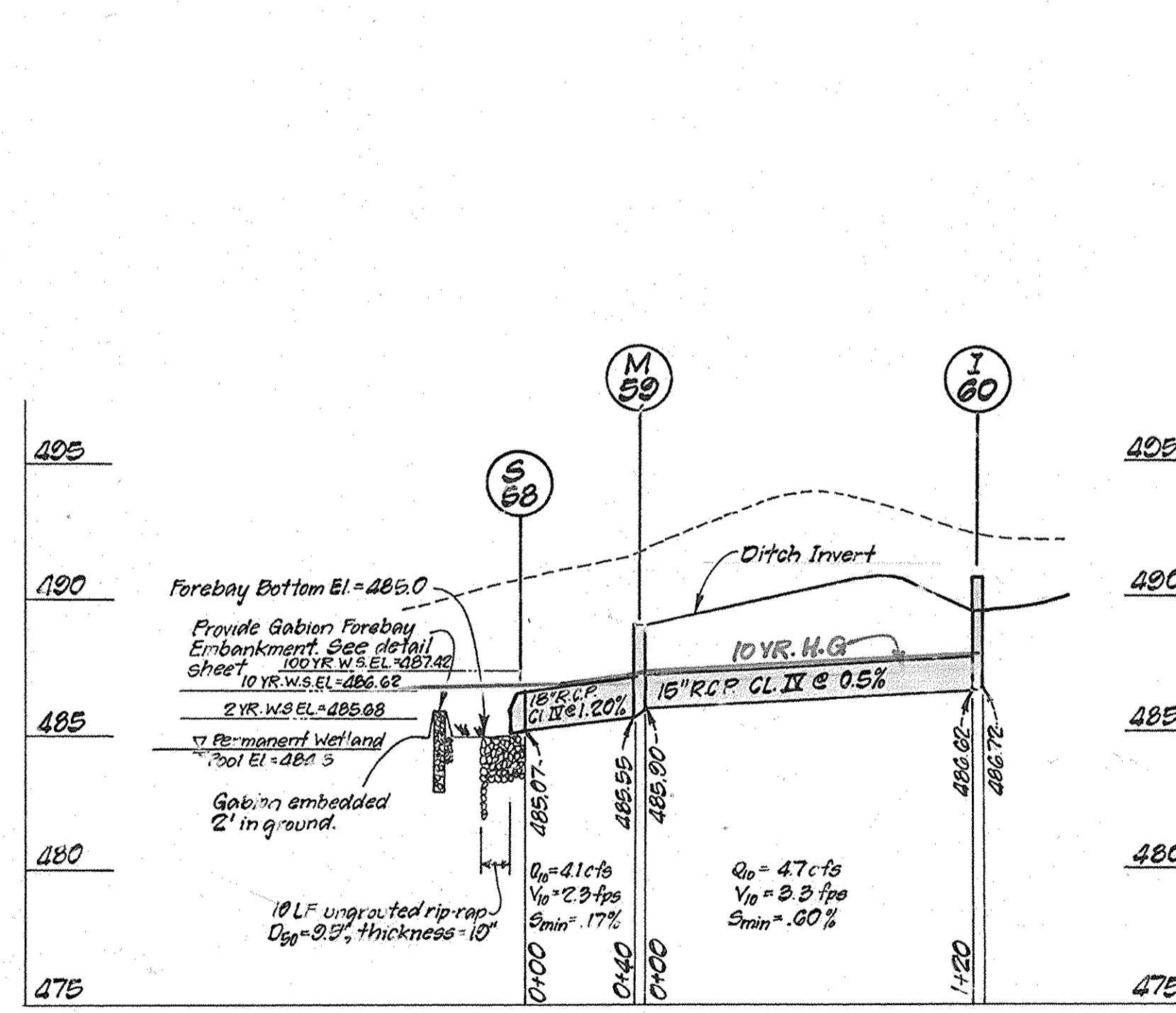
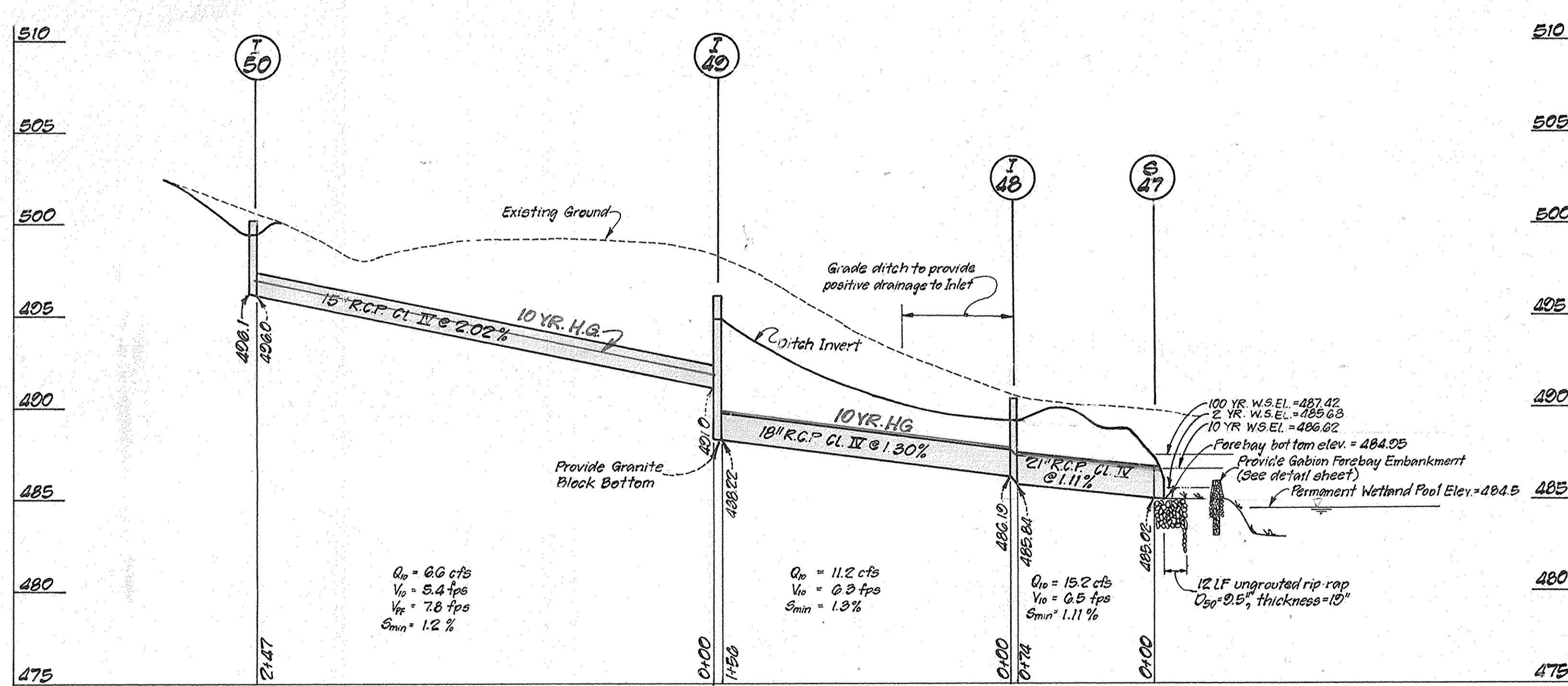


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NO.	TYPE	INVERT		TOP ELEVATION		REMARKS	LOCATION
		IN	OUT	UPPER	LOWER		
S-16	Concrete End Section 18" Dia	463.7	463.10	465.43	-	Ho. Co. Std. SD. 5.51	See Plan
I-17	Type "K" Inlet 3' Sq.	475.0	473.5	481.05	479.83	Ho. Co. Std. SD. 4.12	Sta. 5+08 17' Lt. Janney Court
I-18	Type "K" Inlet 3' Sq.	476.5	476.4	481.08	479.83	Ho. Co. Std. SD. 4.12	Sta. 5+08 17' Rt. Janney Court
M-19	Shallow Precast Manhole 4'-0"	483.0	482.55	486.24	-	Ho. Co. Std. G. 5.12	Sta. 5+02 17' Rt. Janney Court
I-20	Type "K" Inlet 3' Sq.	487.1	487.0	492.31	492.31	Ho. Co. Std. SD. 4.12	Sta. 5+08 17' Rt. Janney Court
S-47	Concrete End Section 18" Dia	485.02	484.95	487.0	-	Ho. Co. Std. SD. 5.51	See Plan
I-48	Type "K" Inlet 3' Sq.	486.19	485.84	490.55	489.30	Ho. Co. Std. SD. 4.12	Sta. 4+21 26' Rt. Simpson Road
I-49	Type "K" Inlet 3' Sq.	491.0	489.22	494.05	494.80	Ho. Co. Std. SD. 4.12	Sta. 5+00 26' Rt. Simpson Road
I-50	Type "D" Inlet 2'-0" Sq.	496.1	496.0	500.13	500.13	Ho. Co. Std. SD. 4.11	See Plan
S-58	Concrete End Section 18" Dia	485.07	485.0	486.80	-	Ho. Co. Std. SD. 5.51	See Plan
M-60	Shallow Precast Manhole 4'-0"	485.00	485.55	489.0	-	Ho. Co. Std. G. 5.12	Sta. 1+81 26' Rt. Simpson Road
I-60	Type "K" Inlet 3' Sq.	486.0	486.5	490.1	489.2	Ho. Co. Std. SD. 4.12	Sta. 0+48 26' Rt. Simpson Road
S-14	Concrete End Section 36" Dia	459.75	459.70	462.00	-	Ho. Co. Std. SD. 5.51	Sta. 1+80 70' Rt. Janney Court
S-45	Concrete End Section	484.22	484.20	-	-	Ho. Co. Std. SD. 5.51	Sta. 2+03 19' Lt. Fendell School Rd.
S-46	Modified Headwall	-	-	-	-	See Detail	Sta. 2+85 30' Rt. Fendell School Rd.
S-15	Riser Structure	-	-	-	-	See Detail	Sta. 2+11 65' Lt. Janney Court

SIZE	TYPE	LENGTH
15"	R.C.P. CL. II	518 LF
18"	R.C.P. CL. II	425 LF
18"	R.C.P. CL. I	33 LF
21"	R.C.P. CL. II	74 LF
36"	R.C.P. ASTM C-301 CL. B-25	130 LF
20" x 45"	R.C.P. CL. I	50 LF



**STORM DRAIN PROFILES**

SCALE: HOR. = 1"=50'  
VER. = 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 5-7-96  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Chris Janninopoli* 5/14/96  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

*Allen Damman* 5/9/96  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

By The Developer:  
*J. H. Warfield* 4/29/96  
U.S. National Resources Conservation Service Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Approved: *Robert W. Fisher* 4/29/96  
Howard S.C.D. Date

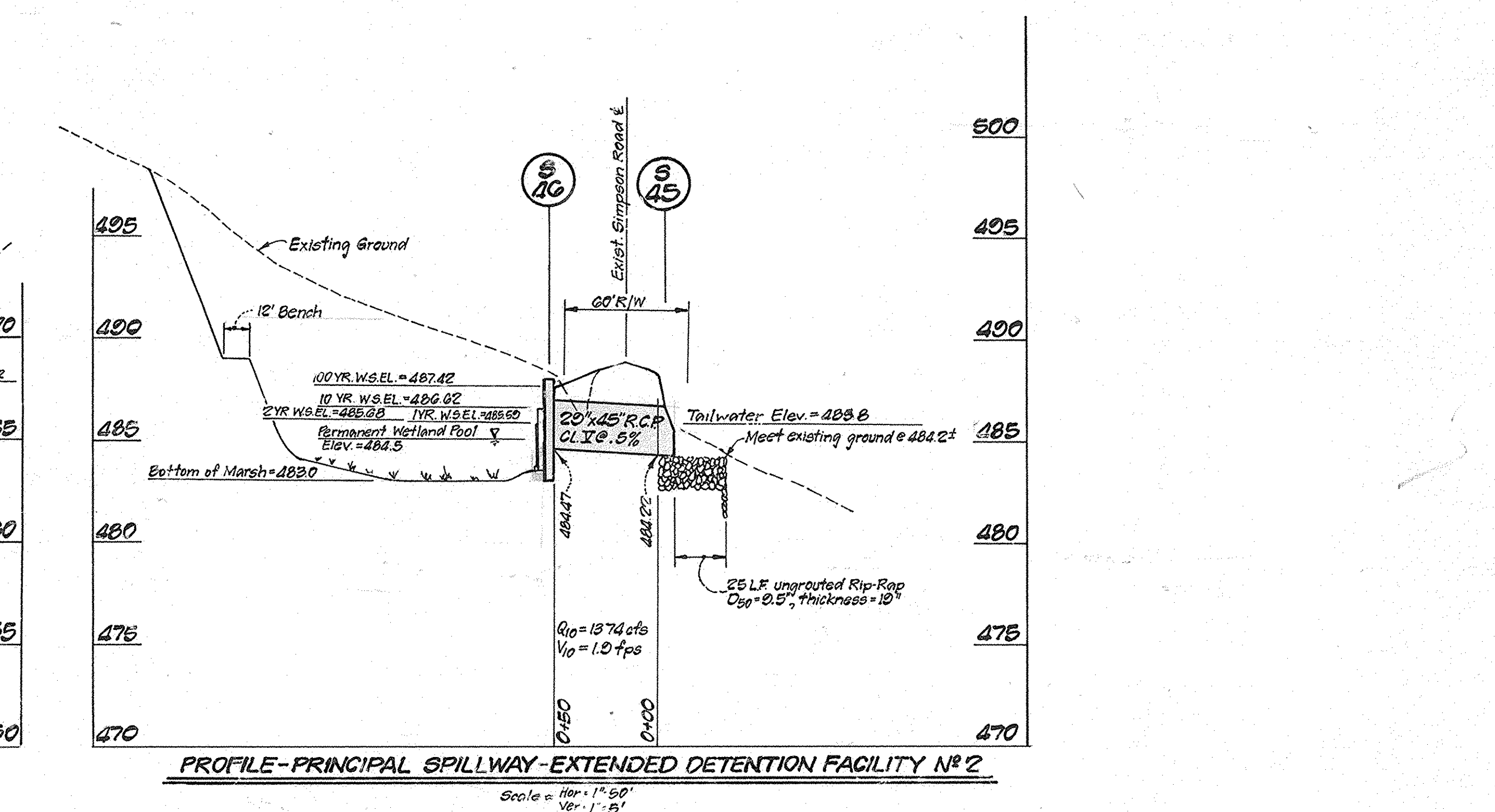
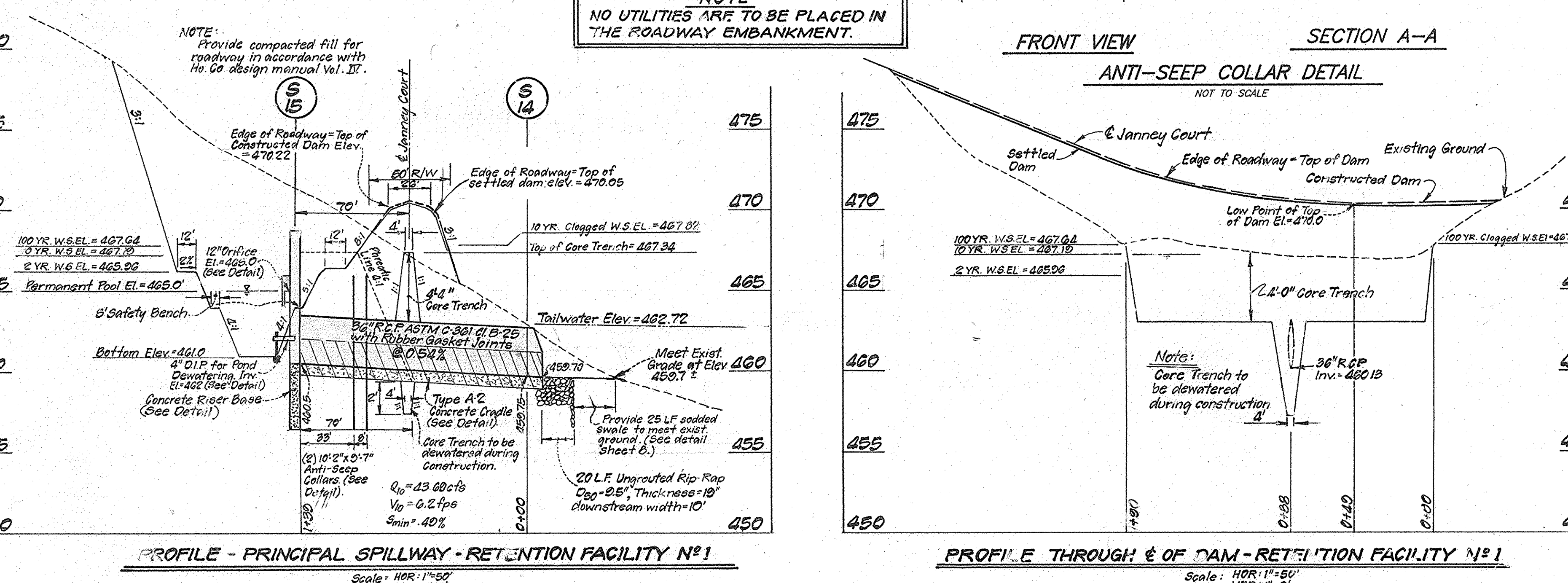
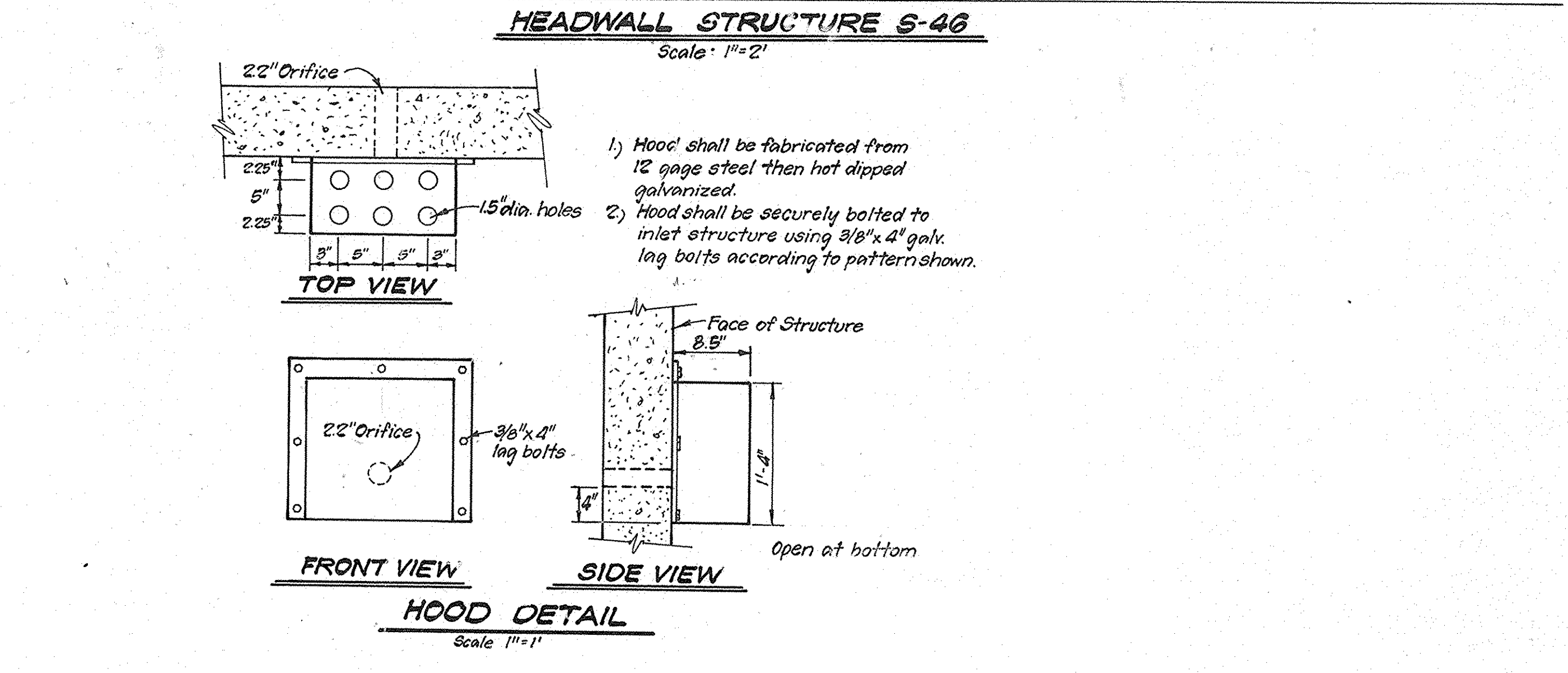
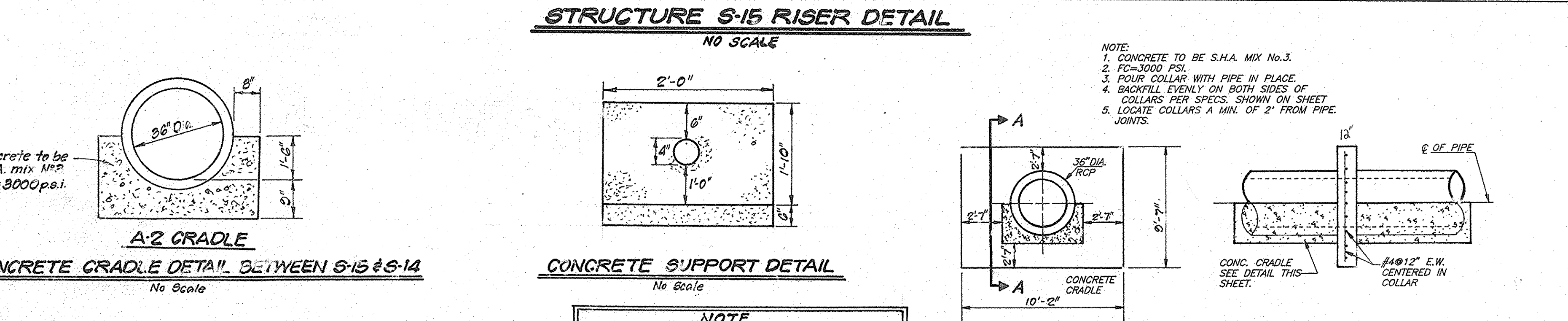
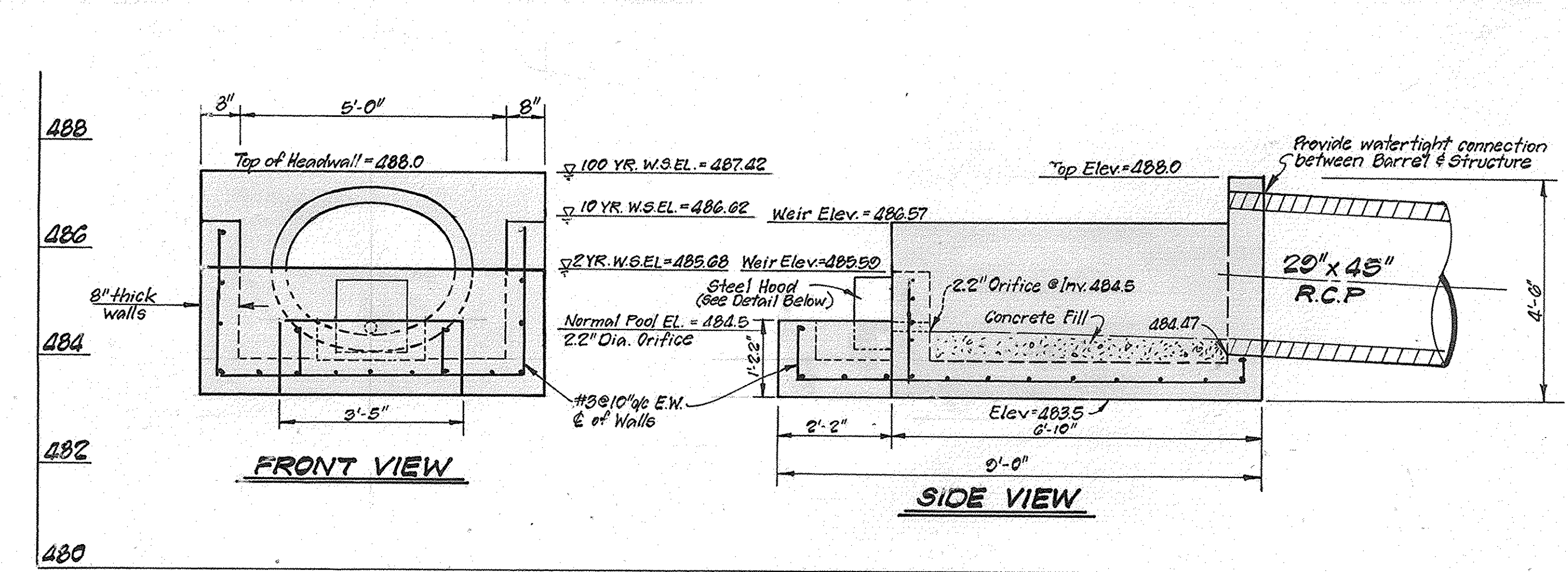
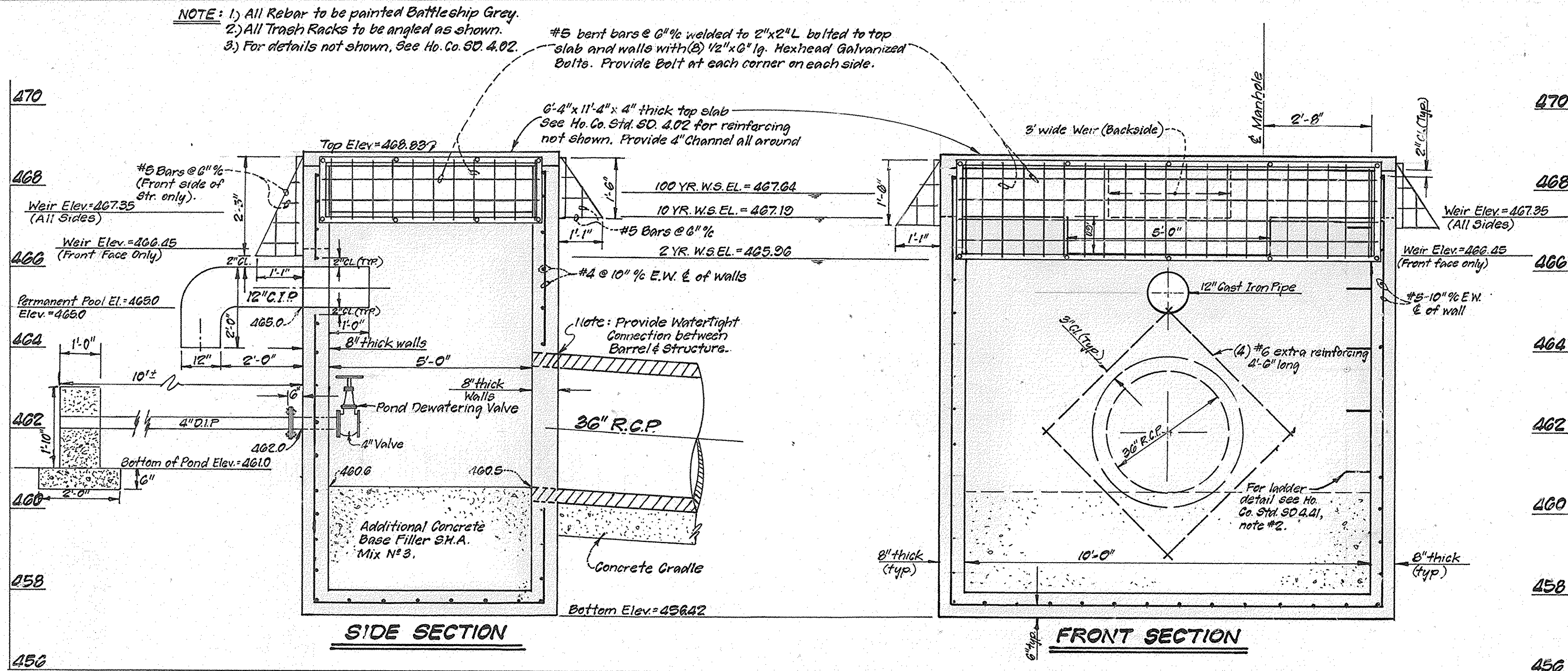
By The Engineer:  
*James B. Oates* 4-27-95  
Signature of Developer Date

"I certify that all development and/or construction will be done according to these plans, and that any 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

By The Engineer:  
*James B. Oates* 4/27/95  
Signature of Engineer Date

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

REVISION	REVISED STRUCTURE SCHEDULE STR-I-60	12/9/97
NO.	REVISION	DATE
<b>CLARK • FINEFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.		
DESIGNED	Z.A.L.	SCALE AS SHOWN
DRAWN	Z.A.H.	DRAWING G of 15
CHECKED	J.P.S.	JOB NO. 94-100
DATE	4-23-96	FILE NO. 94-100-D
STORM DRAIN PROFILES <b>EASTERN VIEW</b> TAX MAP 41, PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
FOR-GRANM ASSOCIATES P.O. BOX 122 ELLICOTT CITY, MARYLAND 21043		



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. [Signature]* 5-7-96  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Uma [Signature]* 5/14/96  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

*[Signature]* 5/18/96  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

By The Developer:

*J.H. [Signature]* 4/27/96  
J.S. Natural Resources Conservation District

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Approved: *[Signature]* 4/27/96  
Howard S.C.D.

By The Engineer:

"I/We certify that all development and/or construction will be done according to these plans, and that any 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

*[Signature]* 12-27-95  
Signature of Developer

By The Engineer:

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

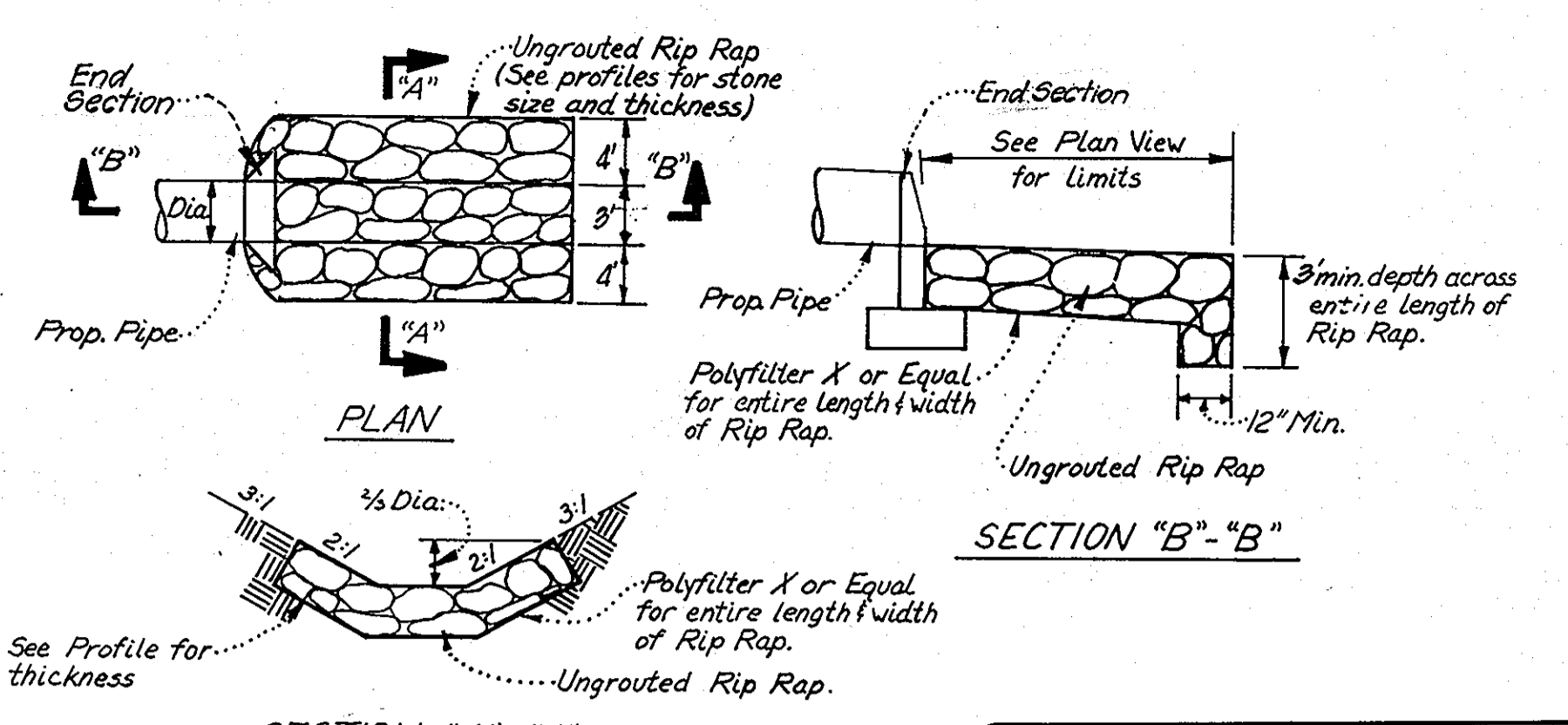
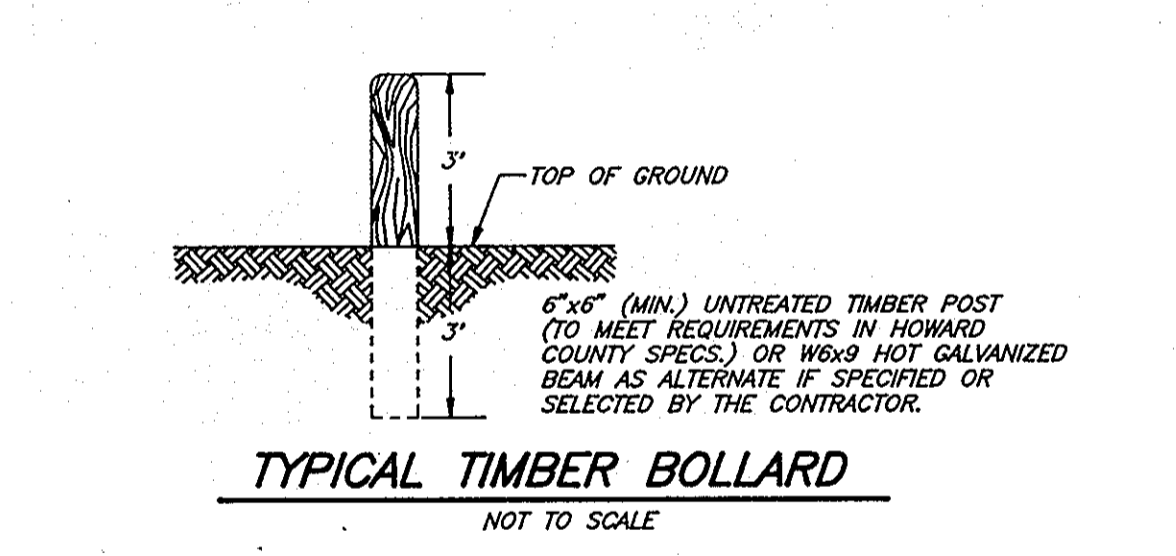
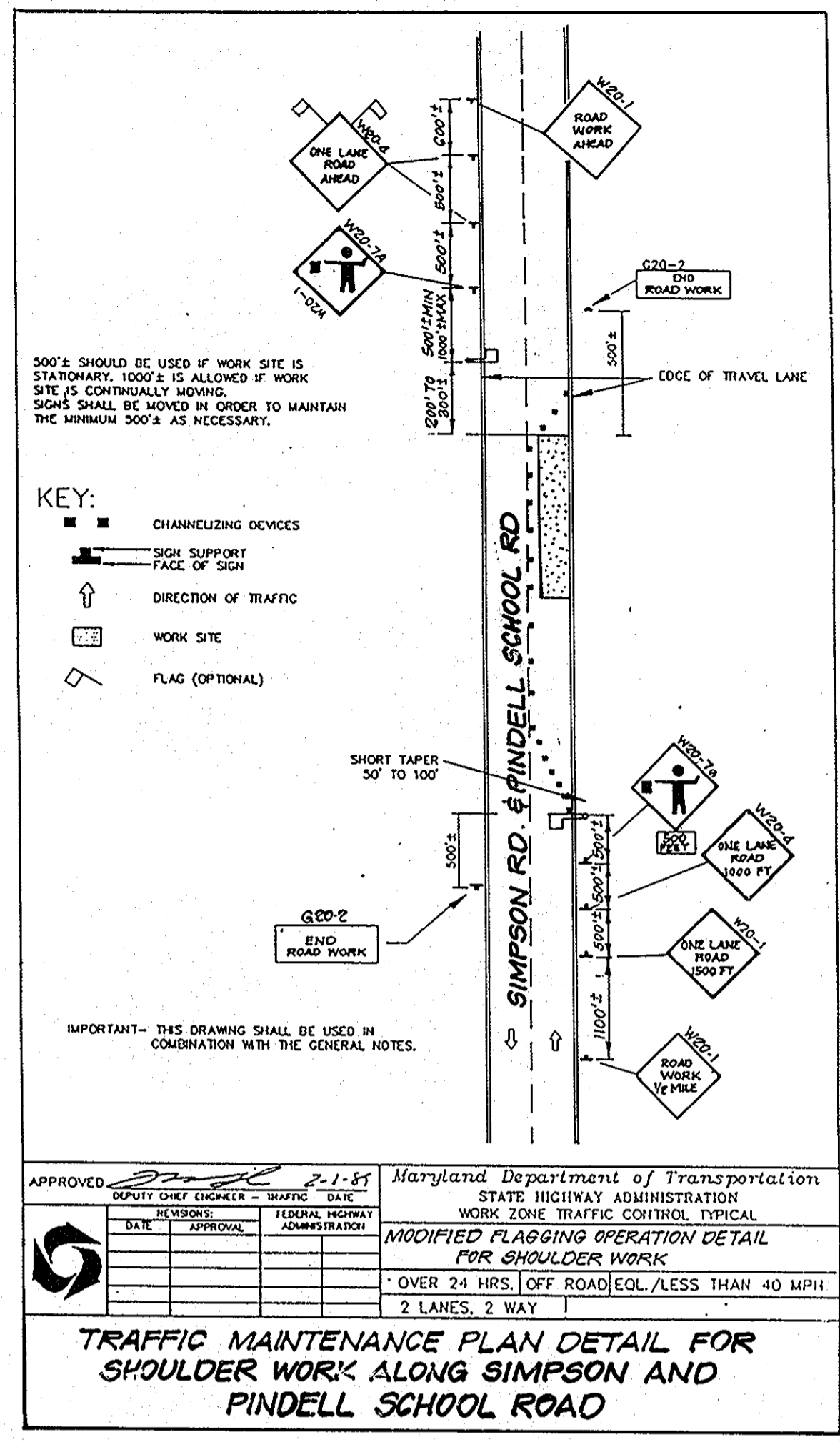
*[Signature]* 12-27-95  
Signature of Engineer

**CLARK • FINEFROCK & SACKETT, INC.**  
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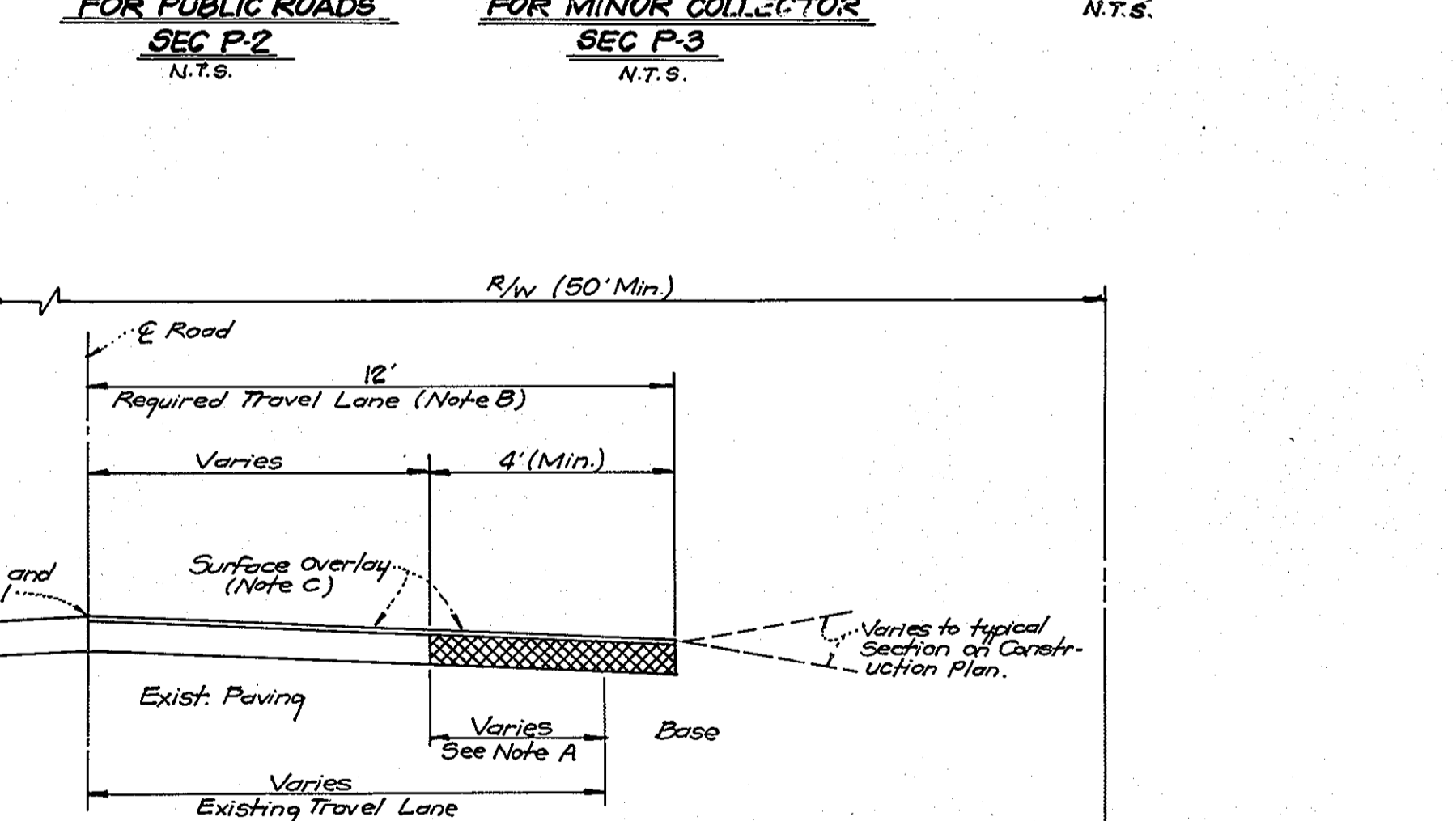
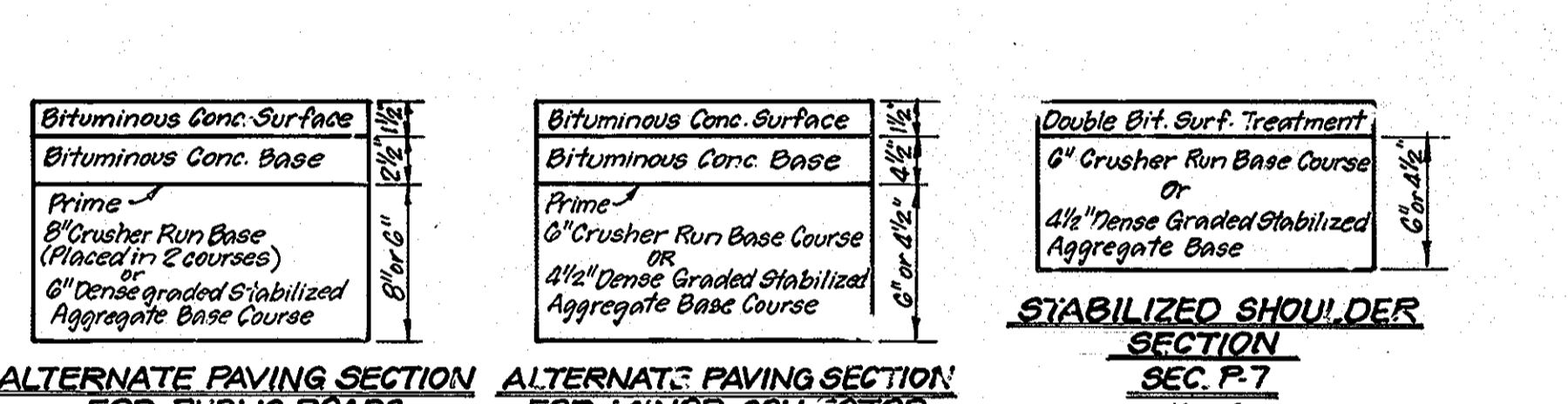
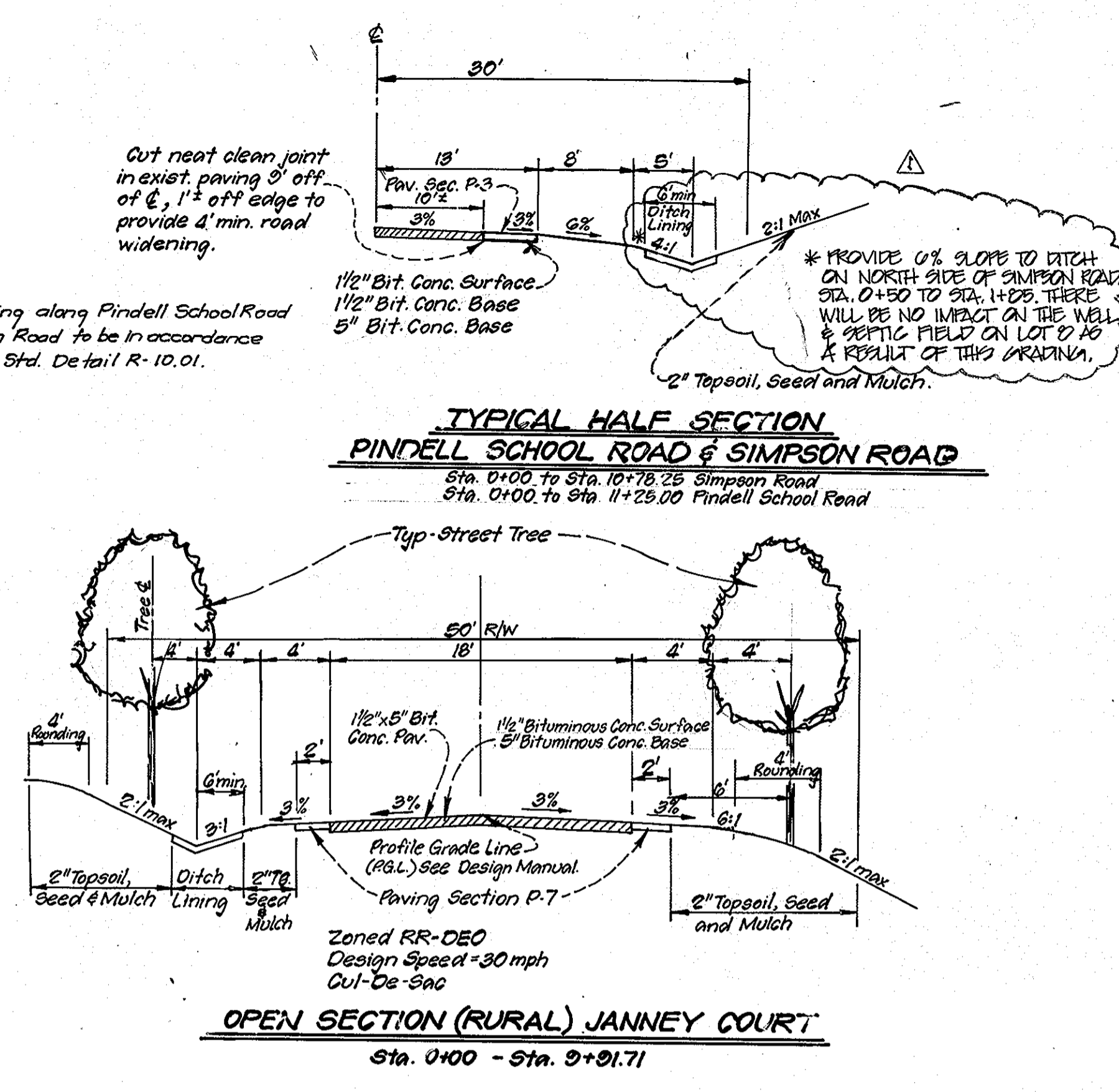
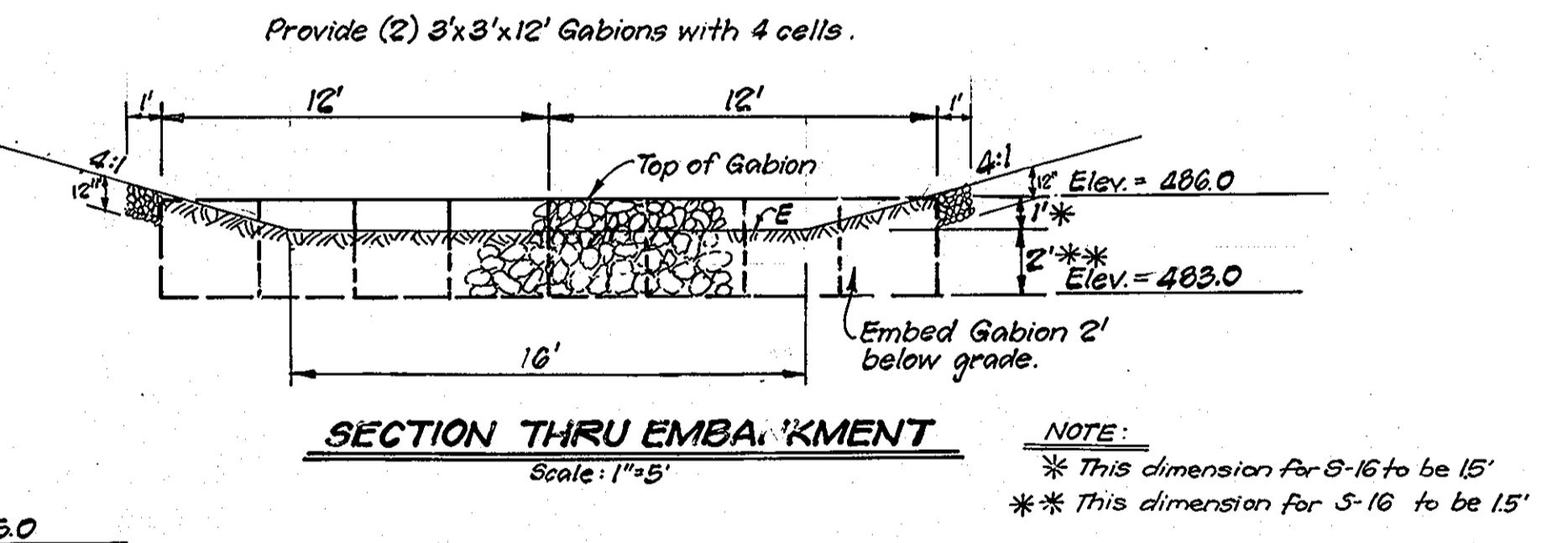
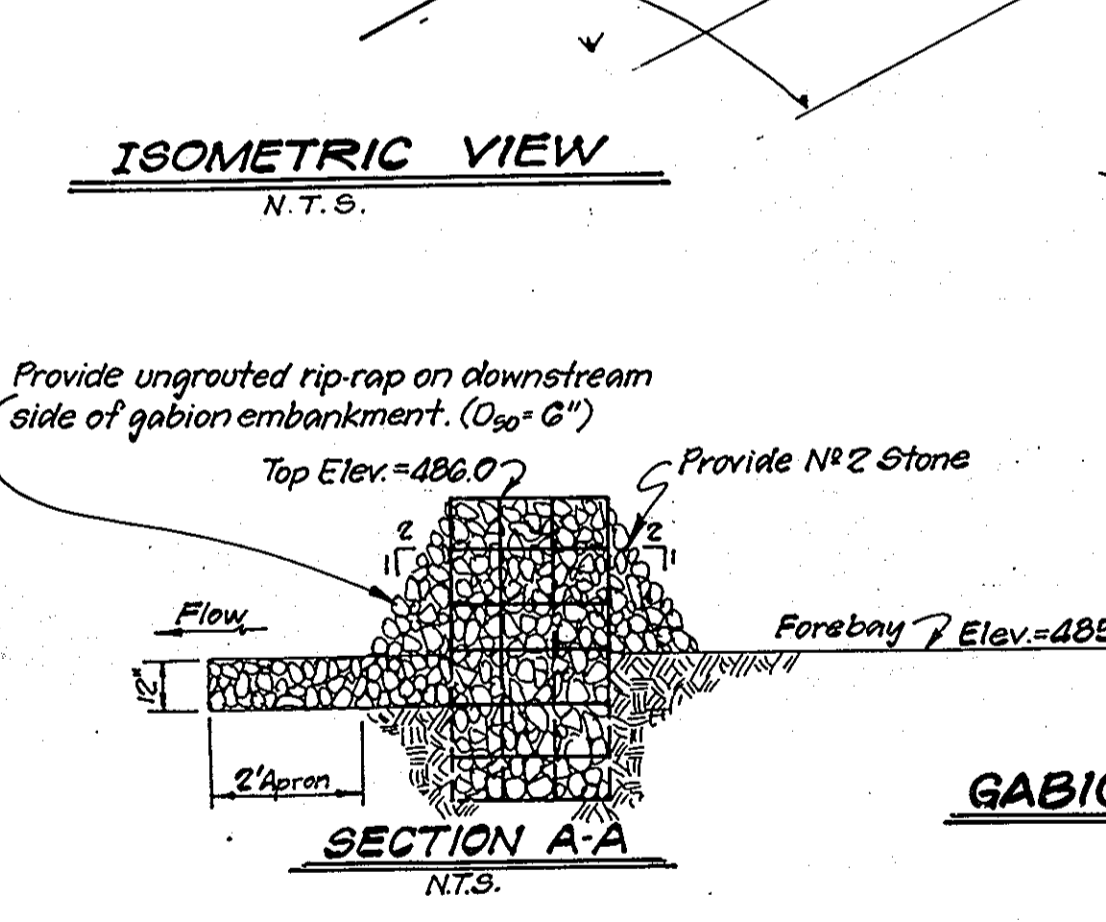
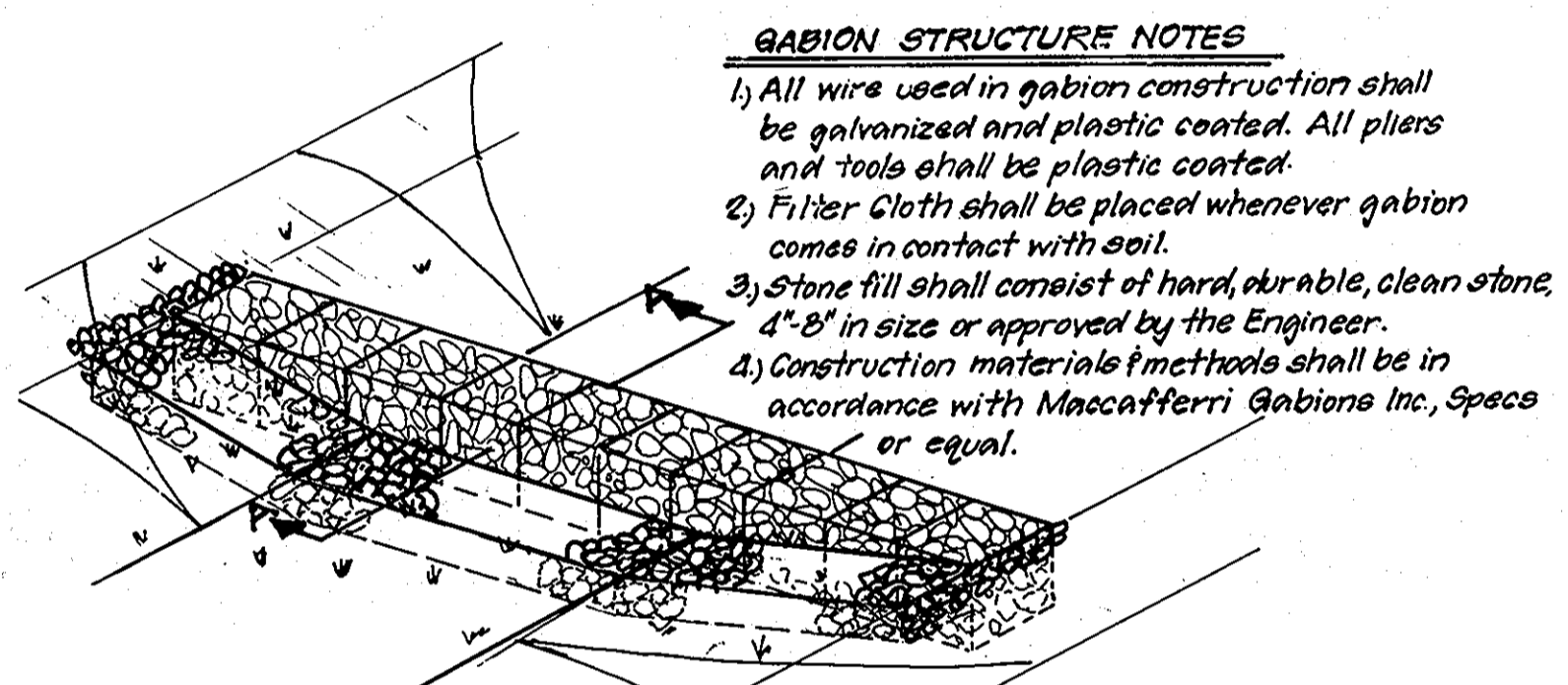
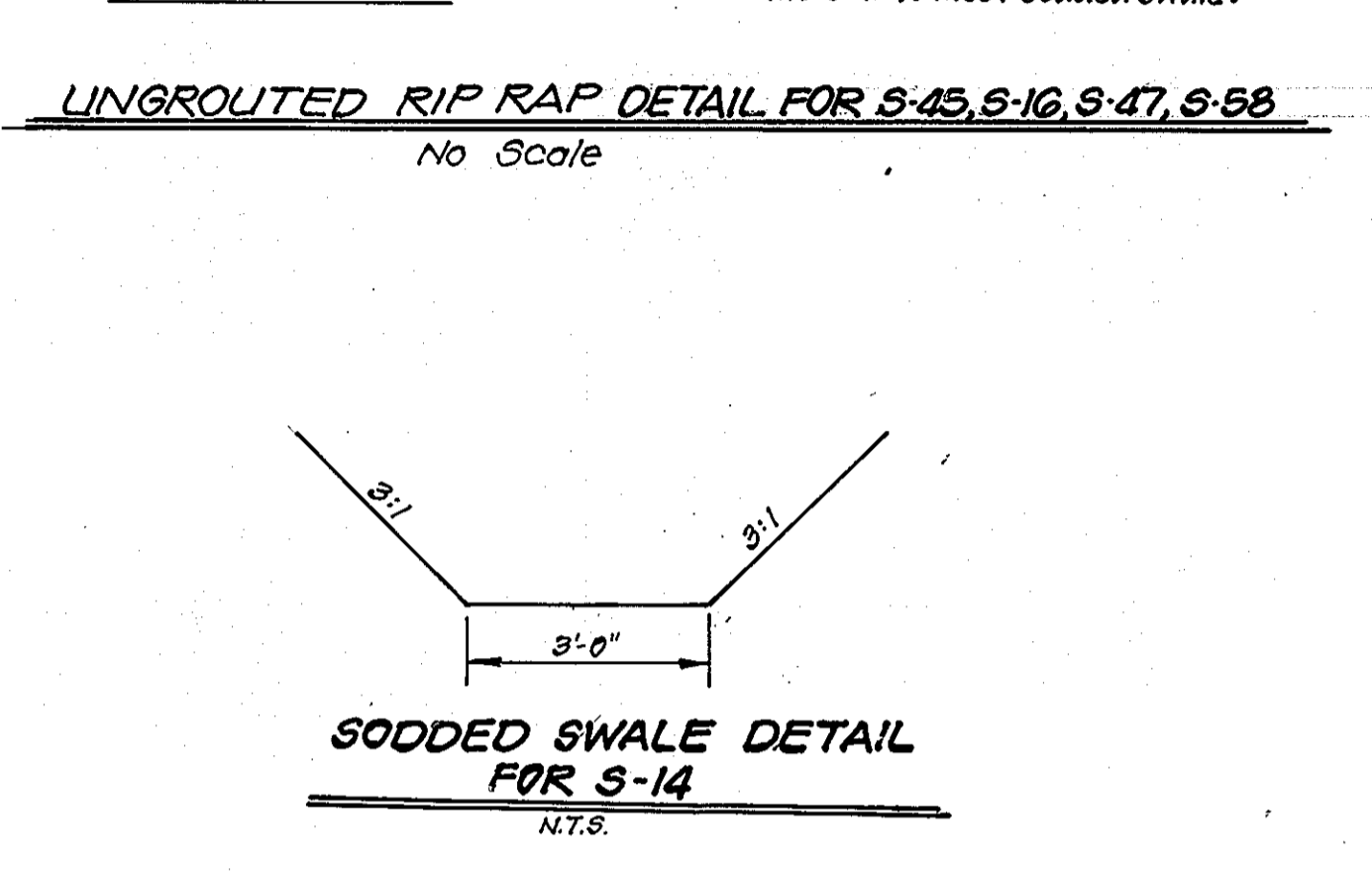
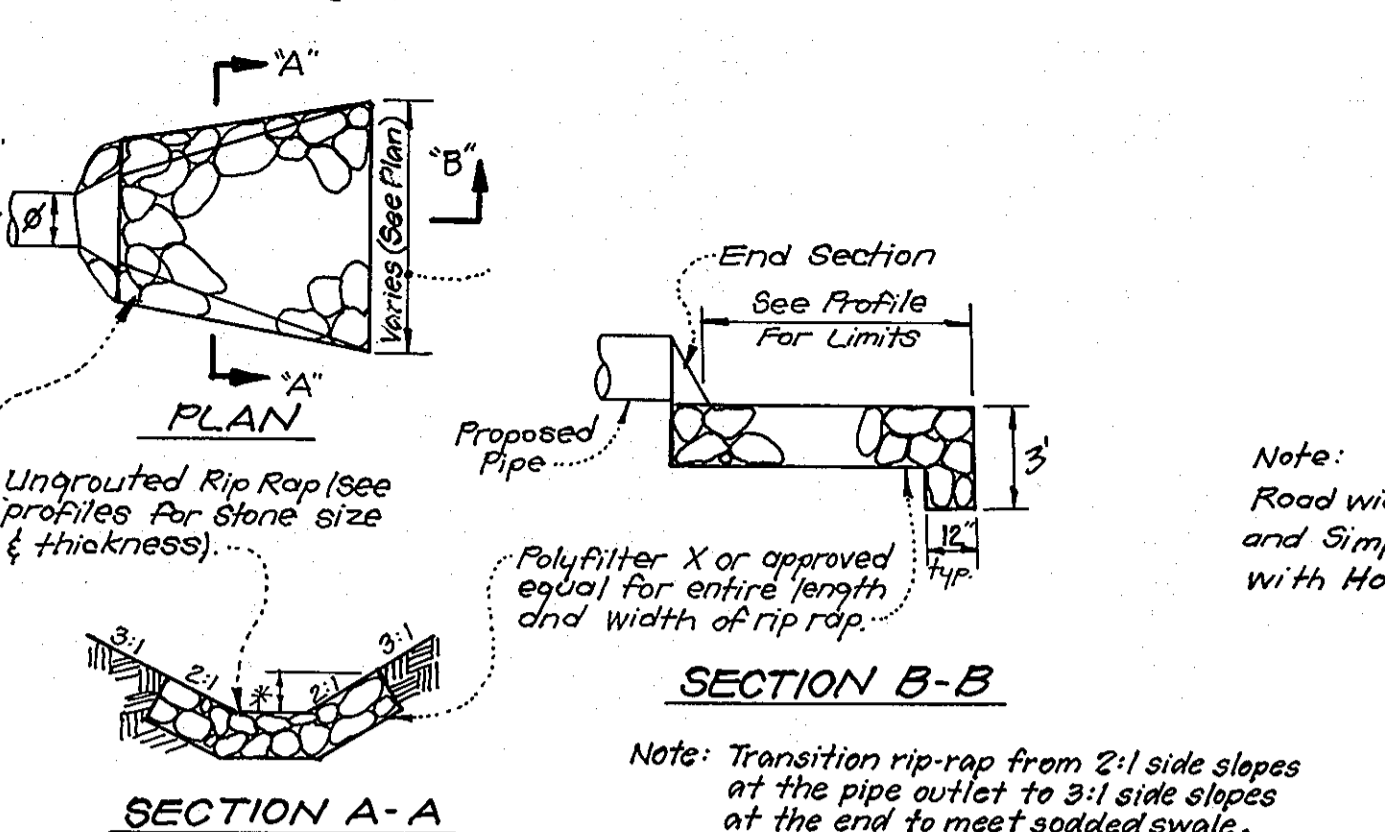
DESIGNED: ZAL  
DRAWN: ZAH  
CHECKED: [Signature]  
DATE: 4-23-96

SCALE: As Shown  
DRAWING: 7 of 15  
JOB NO.: 94-100  
FILE NO.: 94-100-D

FOR: CARVAL ASSOCIATES, INC.  
ELICOTT CITY, MARYLAND 21043



RIP-RAP SCHEDULE				
STR. NO.	S.H.A. CLASS	DOWNSTREAM WIDTH	THICKNESS	LENGTH
S-14	1	13'	10"	20'
S-16	1	13'	10"	30'
S-47	1	15'	10"	12'
S-58	1	15'	10"	10'
S-45	1	20'	10"	25'



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 5-7-96  
 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 5/14/96  
 DATE

Reviewed For: HOWARD S.C.D.  
 and meets Technical Requirements  
 Signature: [Signature]  
 U.S. Natural Resource Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: [Signature]  
 DATE: 4/29/96

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	
LOUISE J. CATER	12-27-95	
REVISION		
NO.	REVISION	DATE
1	REVISED HALF SECTION PINDELL ROAD & SIMPSON ROAD & ADDED IMPACT NOTE	10/5/97

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.  
 Signature: [Signature]  
 G. NELSON CLARK  
 DATE: 12/27/95

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DESIGNED: ZAL  
 DRAWN: ZAH  
 CHECKED: JJS  
 DATE: 4-23-96

SCALE AS SHOWN DRAWING B of 15  
 JOB NO. 94100  
 FILE NO. 94-100-D

STORM DRAINAGE, PAVING AND TRAFFIC MAINTENANCE DETAIL SHEET  
**EASTERN VIEW**  
 TAX MAP 41, PARCEL 143  
 FIFTH (5th) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND



**CONSTRUCTION SPECIFICATIONS FOR RETENTION FACILITY No. 1**

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

**Site Preparation**

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, rocks and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

**Earth Fill**

**Material:** The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

**Placement:** Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

**Compaction:** The movement of the hauling and spreading equipment over the fill shall be controlled

so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within  $\pm 2\%$  of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

**Cut Off Trench:** The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

**Structure Backfill**

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

**Pipe Conduits**

All pipes shall be circular in cross section.

**Reinforced Concrete Pipe:** All of the following criteria shall apply for reinforced concrete pipe:

- Materials - Reinforced concrete pipe shall have ball and spigot joints with rubber gaskets and shall equal or exceed ASTM designation C-361.
- Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
- Laying pipe - Ball and spigot pipe shall be placed with the ball end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
- Backfilling shall conform to "Structure Backfill."
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

**Concrete**

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3

**Rock Riprap**

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

**Care of Water during Construction**

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

**Stabilization**

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

**Erosion and Sediment Control**

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

**OPERATION, MAINTENANCE & INSPECTION**

Inspection of the SWM Facility No. 1 shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards and Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

**\* EMBANKMENT AND CUT-OFF TRENCH CONSTRUCTION**

The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be protected with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by profiling or penetrometer testing should be excavated to suitably firm soil, and then grades re-established by backfilling with suitable soil. Due to the previous use as pasture land, it should be anticipated that the more surficial soils may be soft or loose or may have been previously disturbed.

A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment and cut off trench. In accordance with Maryland Soil Conservation Specification 378 soils considered suitable for the center of embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH or CL. These soil materials were not identified in the soil borings. Per SCS 378 consideration may be given to the use of the other materials in the embankment if design and construction are supervised by a geotechnical engineer.

It is our professional opinion that in addition to the soil materials described above a fine grained soil including Silt (ML) with a plasticity index of 10 or more can be utilized for the center of the embankment and cut off trench. Exploration with test pits and additional laboratory testing can be conducted to provide a classification to identify and quantify potential borrow areas. All fill materials must be placed and compacted in accordance with MD SCS 378 specifications.

**BORING B-20**

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH SCALE	CON.	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES	
								NO.	REC.
Surf. Elev. 472.4	Hammer Vt. 140 Lbs. Hole Diameter 8"	Hammer Drop 30 Inches	Rock Core Dia. 2.0 Inches	OD	Boring Method	HSA	Date Completed 5-22-95		
<p>12" Topsoil</p> <p>Groundwater encountered at 8.0' while drilling</p> <p>*Caved at 8.3'</p> <p>**Caved at 7.7'</p> <p>Orange-brown and gray, very moist, loose, micaceous sandy silt (ML) (USDA: Loam)</p> <p>Orange-brown, moist, medium dense, very moist, fine sandy silt (ML) trace fine gravel</p> <p>Gray, moist, loose, micaceous sandy silt (ML)</p> <p>Brown, very moist, loose, micaceous sandy silt (ML)</p> <p>Bottom of Hole at 15.0'</p>									

**BORING B-21**

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH SCALE	CON.	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES	
								NO.	REC.
Surf. Elev. 472.0	Hammer Vt. 140 Lbs. Hole Diameter 8"	Hammer Drop 30 Inches	Rock Core Dia. 2.0 Inches	OD	Boring Method	HSA	Date Completed 5-22-95		
<p>12" Topsoil</p> <p>No groundwater encountered while drilling</p> <p>*Caved at 3.8'</p> <p>**Caved at 3.5'</p> <p>Orange-brown, moist, loose, very fine sandy silt (ML) (USDA: Sandy Clay Loam)</p> <p>Bottom of Hole at 5.2'</p>									

**BORING B-22**

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH SCALE	CON.	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES	
								NO.	REC.
Surf. Elev. 467.1	Hammer Vt. 140 Lbs. Hole Diameter 8"	Hammer Drop 30 Inches	Rock Core Dia. 2.0 Inches	OD	Boring Method	HSA	Date Completed 5-22-95		
<p>7" Topsoil</p> <p>Groundwater encountered at 9.0' while drilling</p> <p>*Caved at 8.6'</p> <p>**Caved at 6.0'</p> <p>Orange-brown, moist, loose, micaceous sandy silt (ML) (USDA: Loam)</p> <p>Brown, moist, medium dense, fine sandy silt (ML) (USDA: Loam)</p> <p>Brown, moist, very dense, silty sand (SM) decomposed rock</p> <p>Auger and spoon refusal at 11.0'</p>									

**BORING B-21A**

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH SCALE	CON.	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES	
								NO.	REC.
Surf. Elev. 472.5	Hammer Vt. 140 Lbs. Hole Diameter 8"	Hammer Drop 30 Inches	Rock Core Dia. 2.0 Inches	OD	Boring Method	HSA	Date Completed 5-22-95		
<p>6.0' Topsoil</p> <p>Groundwater encountered at 9.0' while drilling</p> <p>*Caved at 8.6'</p> <p>**Caved at 8.5'</p> <p>Orange-brown, very moist, loose, micaceous sandy silt (ML) (USDA: Loam)</p> <p>Brown, very moist to wet, medium dense, micaceous sandy silt (ML)</p> <p>Bottom of Hole at 11.5'</p>									

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. Daniels* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Dina Jaramila* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE  
*John Jaramila* 5/14/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Approved *J. J. Wainwright* 4/29/96  
 Howard S.C.D. Date

These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

Approved *Robert W. Ziehl* 4/29/96  
 U.S. National Resource Conservation Service Date

By The Developer:

"I/we certify that all development and/or construction will be done according to these plans, and that any 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

*Robert J. O'Neil* 12-27-96  
 Signature of Developer Date

By The Engineer:

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

*Robert J. O'Neil* 12/27/96  
 Signature of Engineer Date

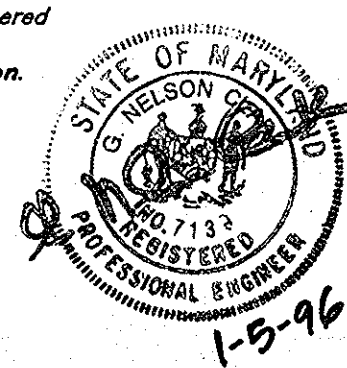


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 ENGINEERS • PLANNERS • SURVEYORS

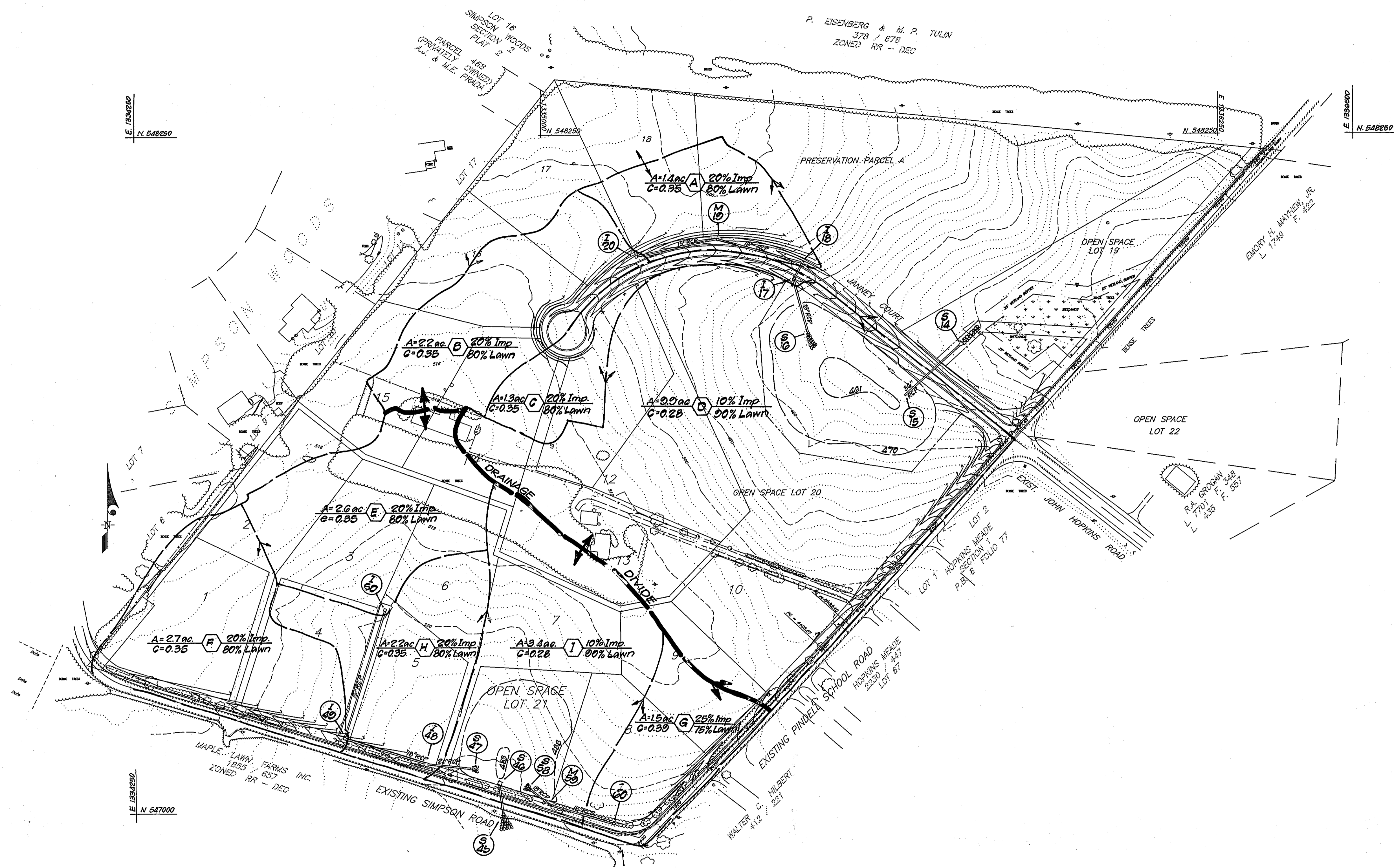
7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED Z.A.L.	SCALE -
DRAWN Z.A.H.	DRAWING D of 15
CHECKED J.P.S.	JOB NO. 9A-100
DATE 4-23-96	FILE NO. 9A-100-D

S.W.M. DETAIL SHEET  
**EASTERN VIEW**  
 TAX MAP 41, PARCEL 143  
 FIFTH (3+R) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND



FORCHAMAN ASSOCIATES  
 8122 ELLICOTT CITY, MARYLAND 21043



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Robert M. Daniels* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS H/S DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Gina Zimmerman* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH GH DATE  
*John Vanaman* 5/16/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JVC DATE

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



DESIGNED Z.A.L.	DRAINAGE AREA MAP <b>EASTERN VIEW</b> TAX MAP 41, PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=100'
DRAWN Z.A.H.		DRAWING 10 of 15
CHECKED J.P.S.		JOB NO. 94-100
DATE 4-23-96		FILE NO. 94-100-D
FOR-CARMAN ASSOCIATES P.O. BOX 123 ELICOTT CITY, MARYLAND 21043		



- NOTES:**
- ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE BALT./WASH. LANDSCAPE SPECIFICATIONS OF L.C.A.M.W.
  - CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
  - FINAL LOCATION OF PLANT MATERIAL MAY VARY PER FINAL FIELD CONDITIONS.
  - STREET TREES SHALL BE PLANTED 30' FROM ALL SIGNS AND INTERSECTIONS, 5' FROM AN INLET STRUCTURE, 5' FROM AN OPEN SPACE ACCESS STRIP AND 10' FROM A DRIVEWAY.

**BONDING NOTE**  
 THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 25 LANDSCAPE TREES MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$2500.00

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

**CATEGORY**

1. LANDSCAPE TYPE	A
2. LINEAR FEET OF PERIMETER	2620
3. CREDIT FOR EXISTING VEGETATION	300
4. LINEAR FEET OF PERIMETER MINUS CREDIT	2320
5. NUMBER OF PLANTS REQUIRED	39 SHADE TREES (1/60')
6. NUMBER OF PLANTS PROVIDED	39 SHADE TREES

**SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING**

1. LANDSCAPE TYPE	B
2. LINEAR FEET OF PERIMETER	1250'
3. NUMBER OF PLANTS REQUIRED	25 SHADE TREES (1/50')
4. NUMBER OF PLANTS PROVIDED	31 EVERGREEN TREES (1/40')
	25 SHADE TREES
	31 EVERGREEN TREES

**STREET TREE TABULATION (BONDED WITH THE DEVELOPER'S AGREEMENT)**

1. LINEAR FEET OF RIGHT OF WAY	4295'
2. TREES REQUIRED	102 (1/40')
3. TREES PROVIDED	88**

\*EXCLUDES FRONTAGE ALONG OPEN SPACE LOT 19 & 22 BECAUSE THEY WERE NOT WIDENED PER WP-95-130  
 \*\*EXCLUDES 14 TREES ALONG JANNEY COURT AT THE REQUEST OF THE COUNTY BECAUSE OF THEIR PROXIMITY TO THE SWM POND.

**PLANT SCHEDULE**

KEY	QNTY.	PLANT NAME	SIZE	REMARKS
<b>STREET TREES</b>				
A	52	ACER RUBRUM "October Glory" October Glory Red Maple	2 1/2"-3" 12'-14'HT	B & B
Z	36	ZELKOVA SERR. "Village Green" Village Green Zelkova	2 1/2"-3" 12'-14'HT	B & B
<b>STORMWATER MANAGEMENT BUFFER</b>				
Q	25	QUERCUS PALUSTRIS Pin Oak	2 1/2"-3" 12'-14'HT	B & B
P	31	PINUS STROBUS White Pine	6"-8'HT	B & B
<b>PERIMETER BUFFER</b>				
R	39	ACER RUBRUM Red Maple	2 1/2"-3" 12'-14'HT	B & B
<b>SHALLOW MARSH PLANTING</b>				
CO	30	CEPHALANTHUS OCCIDENTALIS Buttonbush	BARE ROOT	CLUMPS OF 5
SL	230	SAGGOTARIA LATIFOLIA Duck Potato	BARE ROOT	36"O.C.
SV	100	SCIRPUS VALIDUS Softstem Bulrush	BARE ROOT	36"O.C.

Reviewed for HOWARD S.C.D. and meets Technical Requirements  
*J. Hubert [Signature]* 4/23/96  
 Signature Date  
 U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*Robert W. Zidon [Signature]* 4/22/96  
 Approved

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danaher [Signature]* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS H.S. DATE

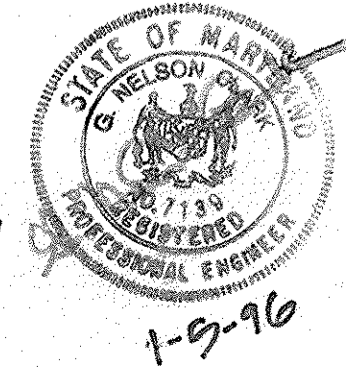
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Anna Jannarone [Signature]* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH SH DATE

*John Damman [Signature]* 5/22/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION VJC DATE

MAPLE LAWN FARMS INC.  
 1855 / 657  
 ZONED RR-DEO

**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."  
*Forrest J. [Signature]* 12-27-95  
 NAME DATE

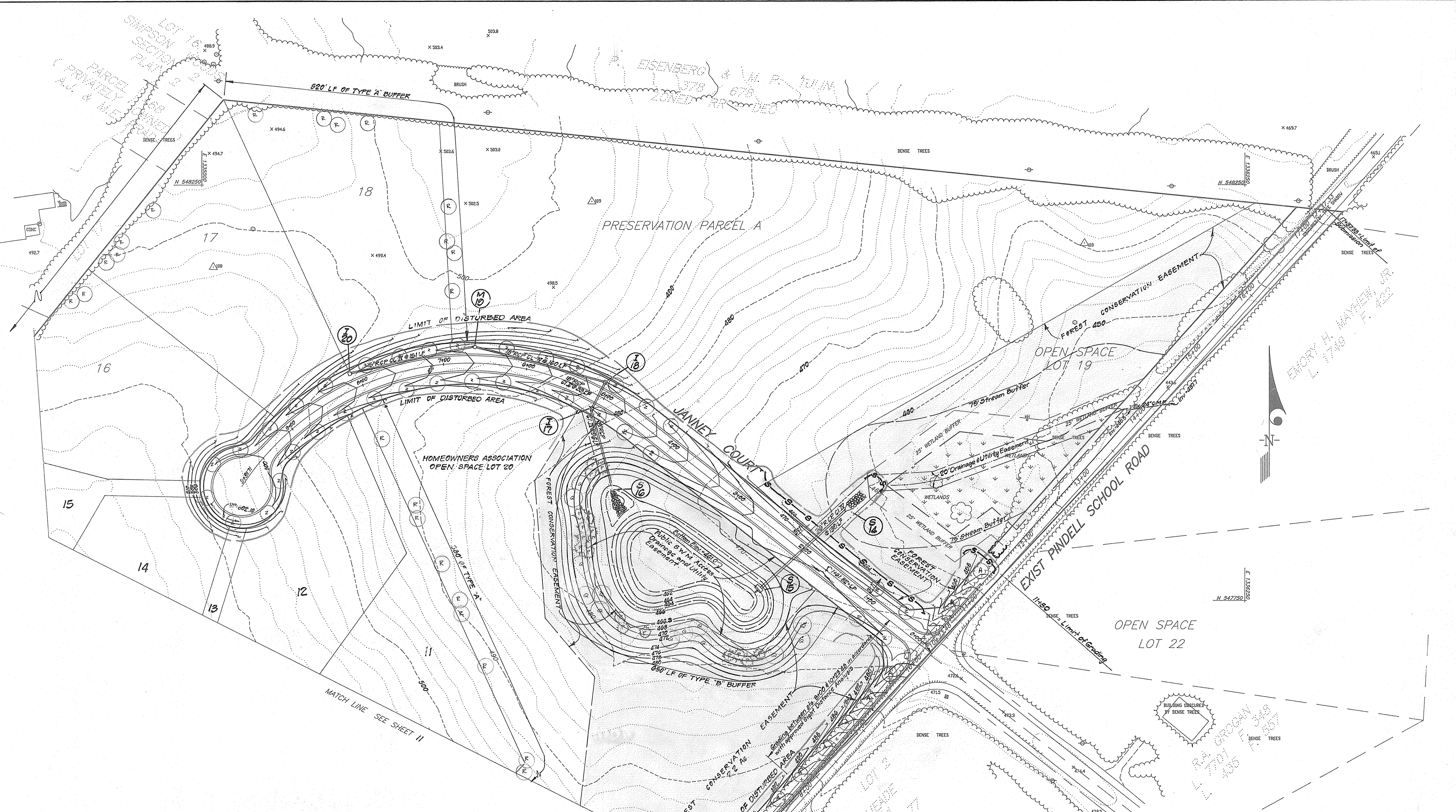
**ENGINEER'S CERTIFICATE**  
 I hereby certify that this plan for Sediment and Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*G. Nelson Clark [Signature]* 12-27-95  
 G. NELSON CLARK DATE



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

DESIGNED ZAL	SEDIMENT EROSION CONTROL, GRADING AND LANDSCAPE PLAN <b>EASTERN VIEW</b> TAX MAP 41, PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=50'
DRAWN ZAH		DRAWING 11 of 15
CHECKED JAS		JOB NO. 04-100
DATE 4-23-96		FILE NO. 04-100.0

FOR: CARMAN ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT, MARYLAND 21043



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. Decker*  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE: 5-7-96

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Dina Jaramoni*  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
 DATE: 5/14/96  
*John Decker*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 5/16/96

Reviewed for HOWARD S.C.D.  
 and meets Technical Requirements  
*J. K. Wolf*  
 Signature "Ester"  
 U.S. Natural Resources Conservation Service  
 DATE: 4/29/96

**DEVELOPER'S/BUILDER'S CERTIFICATE**

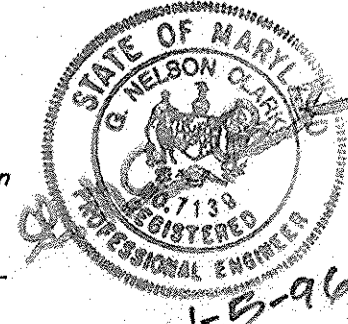
"I/We certify that all development and construction will be done according to this plan of development and plan for sediment and erosion control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training 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."

*Robert W. Zickler* 4/29/96  
 APPROVED: *James D. Carter*  
 NAME: DATE: 12-27-95

**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*  
 G. NELSON CLARK  
 DATE: 12-27-95



**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.	SEDIMENT EROSION CONTROL, GRADING AND LANDSCAPE PLAN <b>- EASTERN VIEW -</b> TAX MAP 41, PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=50'
DRAWN Z.A.H.		DRAWING 12 OF 15
CHECKED J.D.B.		JOB NO. 24-100
DATE 4-23-96		FILE NO. 24-100-0

FOR: CARMA ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT CITY, MARYLAND 21045

181

**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED 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./100 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 apply 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 (.05 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 unrotted 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 reseedsings.

**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 rye (3.2 lbs./1000 sq.ft.) For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 1 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 unrotted 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 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

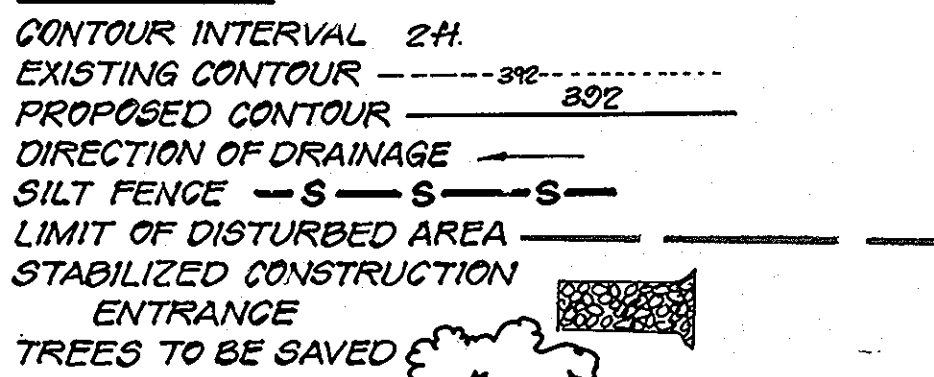
**SEDIMENT AND EROSION CONTROL NOTES**

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. (313-1895).
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), sod (Sec. 54), temporary seedings (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:	30.6 ac
Area Disturbed:	6.41 ac
Area to be roofed or paved:	0.75 ac
Area to be vegetatively stabilized:	5.66
Total Cut:	82,201 CY
Total Fill:	2086 CY
Offsite Waste/Borrow Area Location:	*
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. The total amount of silt fence = 430 LF

\* 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 it's grading permit number at the time of construction.

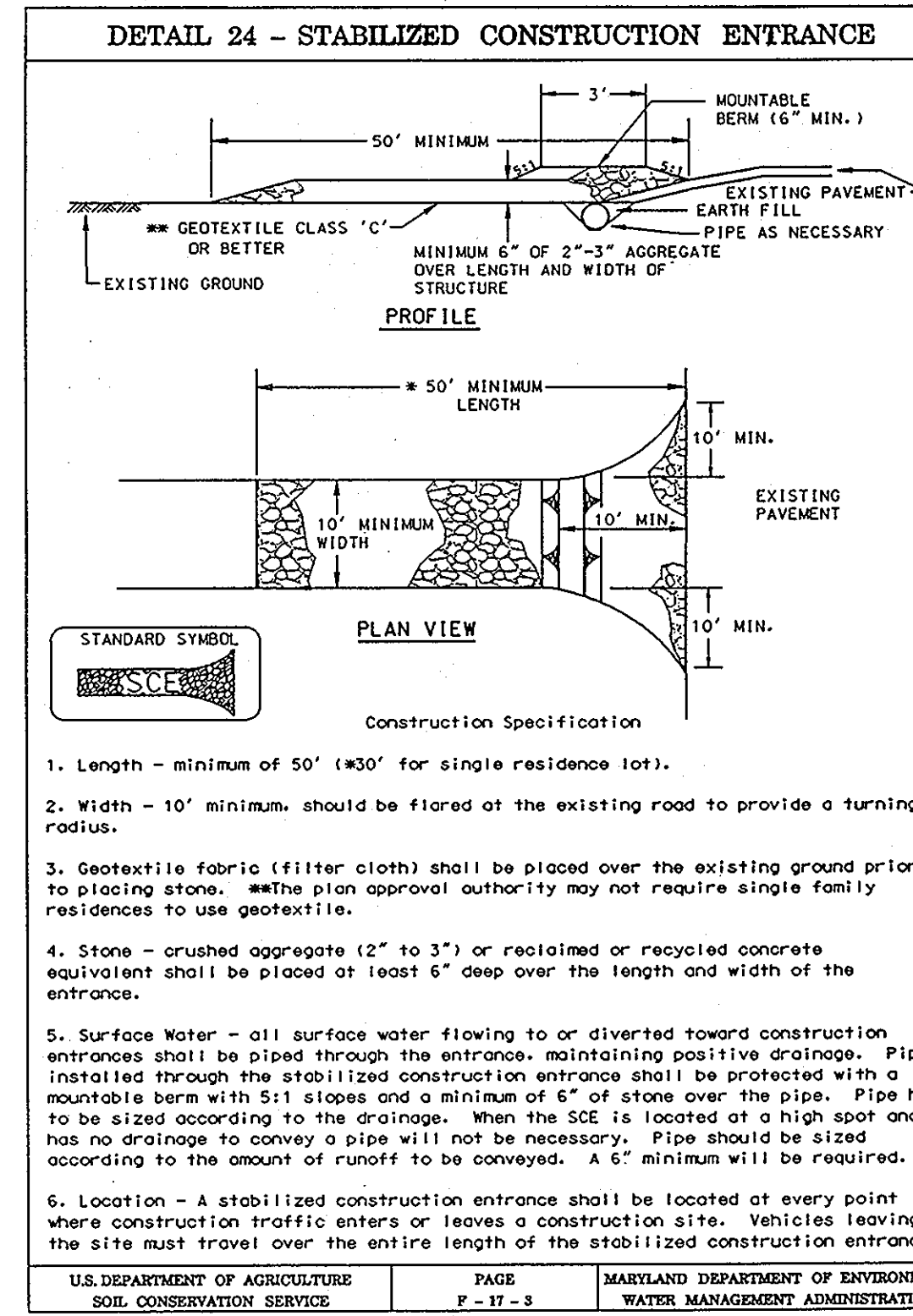
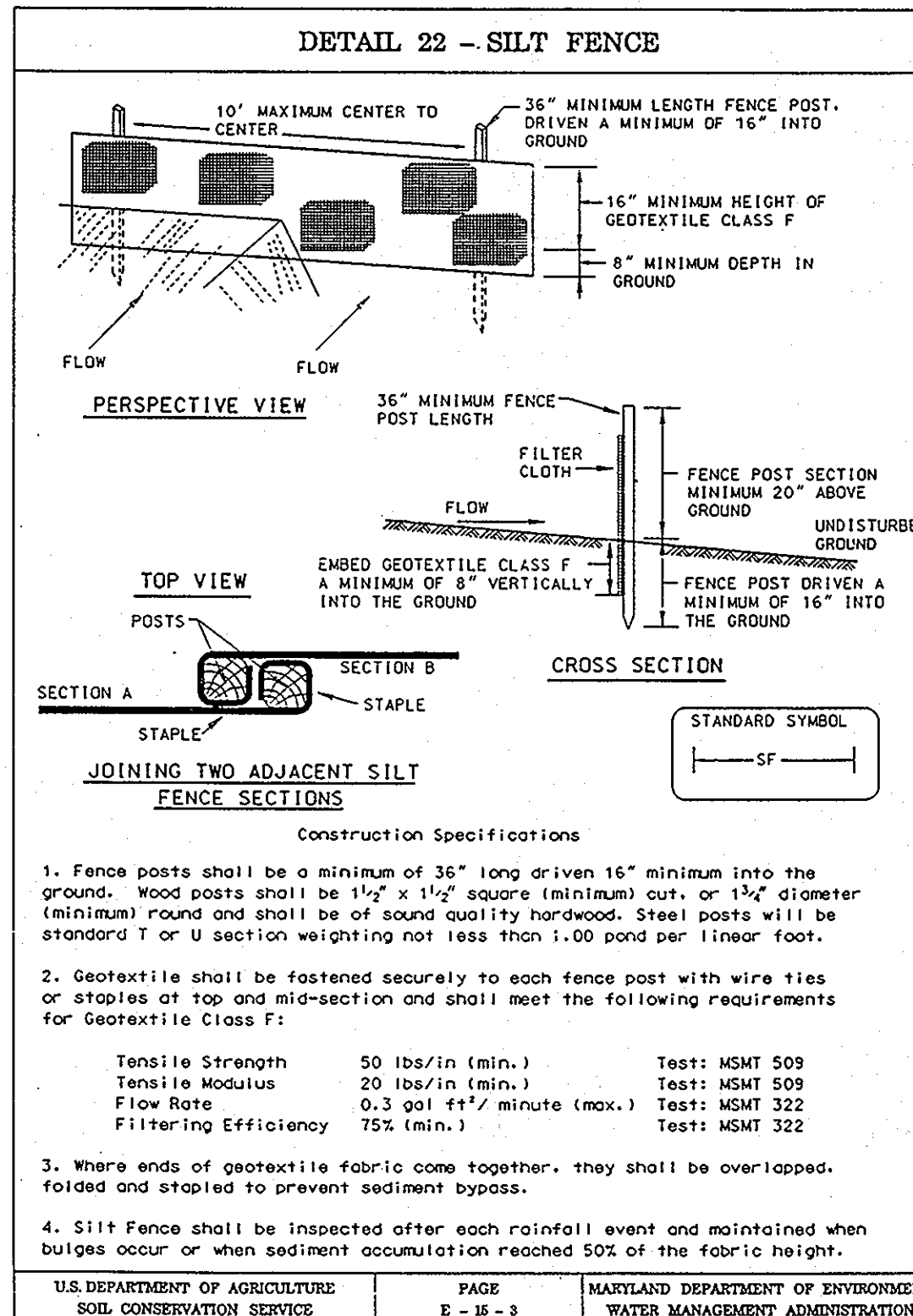
**LEGEND**



**CONSTRUCTION SEQUENCE**

	No. of Days
1. Obtain a grading permit.	7
2. Install all sediment and erosion control devices, tree protection fence and stabilize.	14
3. Rough grade Janney Court from sta. 0+00 to sta. 4+00.	30
4. Construct SWM Facilities number 1 and 2 and stabilize.**	30
5. Construct storm drainage.	20
6. Clear and grub and rough grade typical section along Simpson and Pindell school road and remaining Janney Court.	20
7. Construct utilities.	20
8. Fine grade and construct paving.	45
9. Stabilize all areas in accordance with standards and specifications.	14
10. Upon approval of the sediment and erosion control inspector remove erosion control measures and stabilize.	7
11. Provide street trees, shallow marsh plantings, and remaining landscaping.	7

\*\* Provide shallow marsh plantings in SWM Facility No. 2 at the end of the job as stated in the construction sequence above.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. Daniels* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Cara Zimmerman* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH Coll DATE

*Mike Zimmerman* 5/18/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JTC DATE

Reviewed for HOWARD S.C.D. and meets Technical Requirements  
*[Signature]* 4/29/96  
 U.S. Natural Resources Conservation Service

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

*Robert W. Zabin* 4/29/96  
 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."

*[Signature]* 12-27-95  
 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.

*[Signature]* 12-27-95  
 G. NELSON CLARK DATE

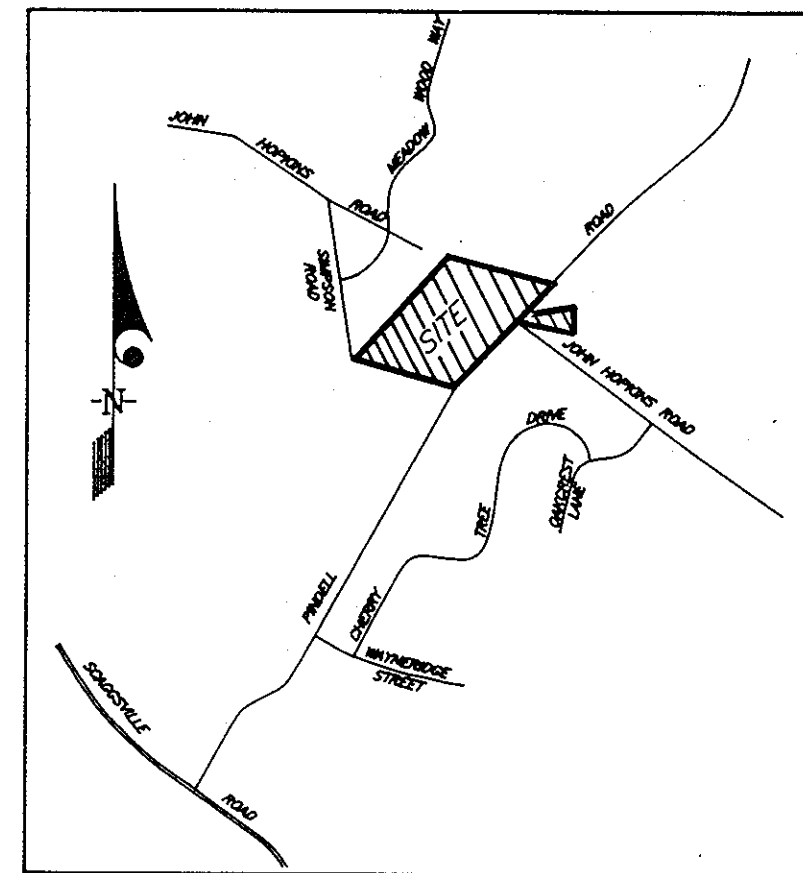


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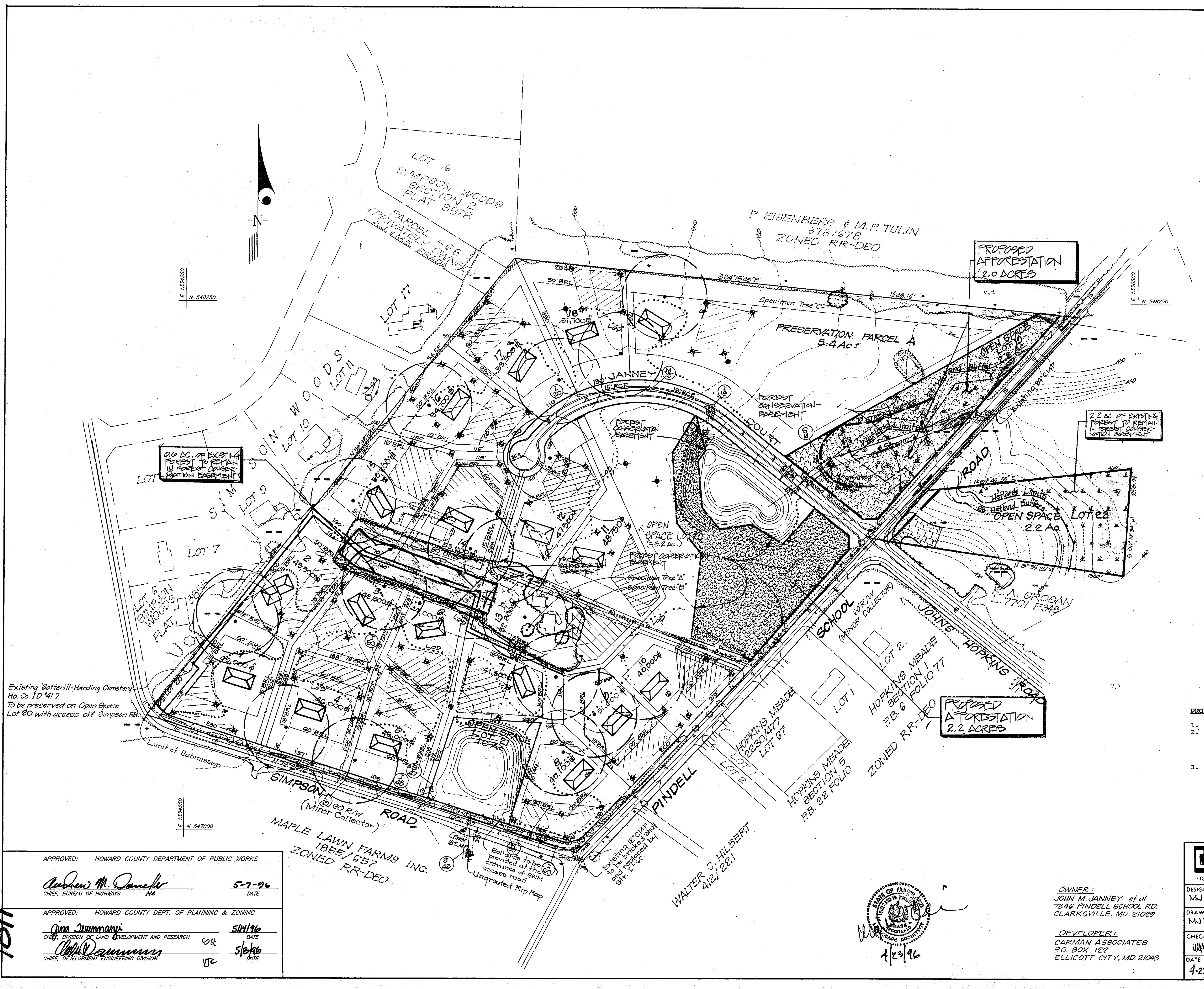
DESIGNED Z.A.L.	SCALE —
DRAWN Z.A.H.	DRAWING 13 of 15
CHECKED [Signature]	JOB NO. 94-100
DATE 4-23-96	FILE NO. 94-100-D

SEDIMENT EROSION CONTROL DETAILS  
**EASTERN VIEW**  
 TAX MAP 41, PARCEL 143  
 FIFTH (5th) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

FOR-CARANAM ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT CITY, MARYLAND 21043



VICINITY MAP  
SCALE: 1"=2000'



- LEGEND**
- Contour Interval 2ft
  - Existing Contour ————
  - Proposed Contour ————
  - Proposed Spot Elevation 141.8
  - Septic Fields
  - Proposed Well Sites Existing Well Site
  - Failed Septic Test Site
  - Possible House Site
  - LIMIT OF WETLANDS
  - TREE PROTECTION DEVICE
  - AFFORESTATION AREA
  - STEEP SLOPES (10%+)
  - EXIST. VEGETATION TO BE SAVED
  - LIMIT OF DISTURBANCE
  - TREE PROTECTION FENCE

**PROPOSED FOREST CONSERVATION TABULATION**

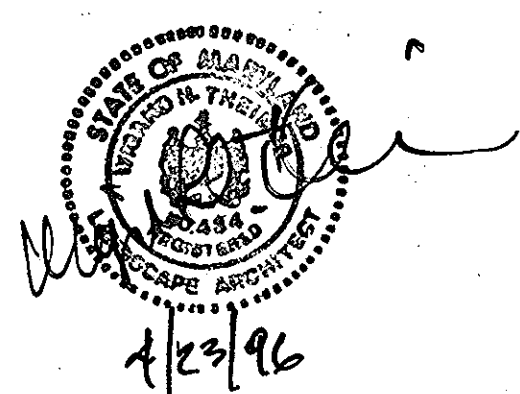
1. EXISTING FOREST TO BE PROTECTED	2.8 AC
2. PROPOSED AFFORESTATION	4.2 AC
ON OPEN SPACE LOT 19	2.0 AC
ON OPEN SPACE LOT 20	2.2 AC
3. TOTAL FOREST CONSERVATION EASEMENT	7.0 AC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 5-7-96  
 CHIEF, BUREAU OF HIGHWAYS H6 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Jim Summery* 5/14/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH OK DATE

*Chris Damman* 5/21/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JTC DATE

MAPLE LAWN FARMS INC.  
 1855/1657  
 ZONED RR-DEO



OWNER:  
 JOHN M. JANNEY et al  
 7346 PINDELL SCHOOL RD.  
 CLARKSVILLE, MD. 21029

DEVELOPER:  
 CARMAN ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT CITY, MD. 21043

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

DESIGNED MJP  
 DRAWN MJP  
 CHECKED WHT  
 DATE 4-23-96

**FOREST CONSERVATION PLAN  
 EASTERN VIEW**

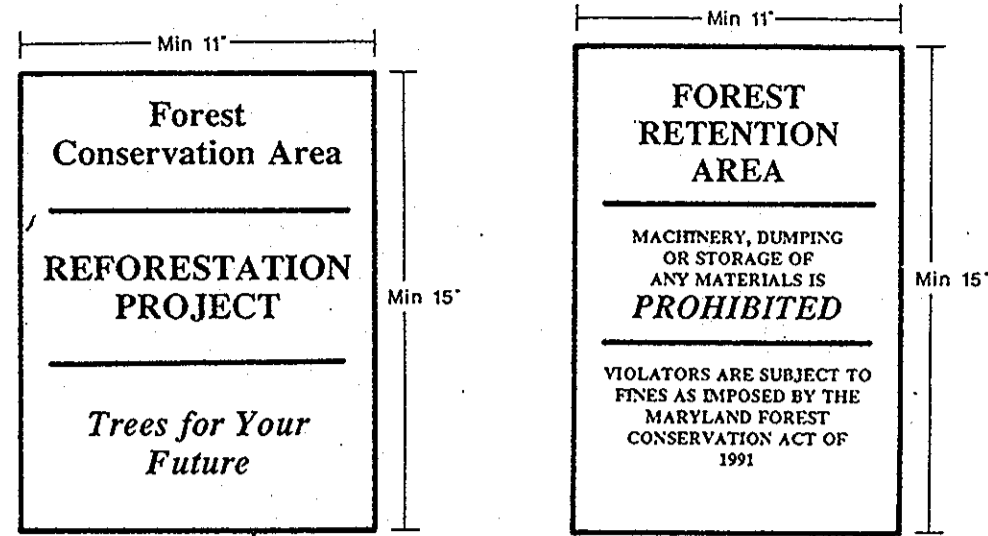
LOTS 1-18, PRESERVATION PARCEL A & O.S. LOTS 19-22

TAX MAP 41 PARCEL 143  
 FI 74 (6-1%) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

FOR: CARMAN ASSOCIATES  
 P.O. BOX 122  
 ELLICOTT CITY, MD 21043

SCALE 1"=100'  
 DRAWING 14 OF 15  
 JOB NO. 04-100  
 FILE NO. 04-100D

Reforestation and Afforestation Area Protection Signage



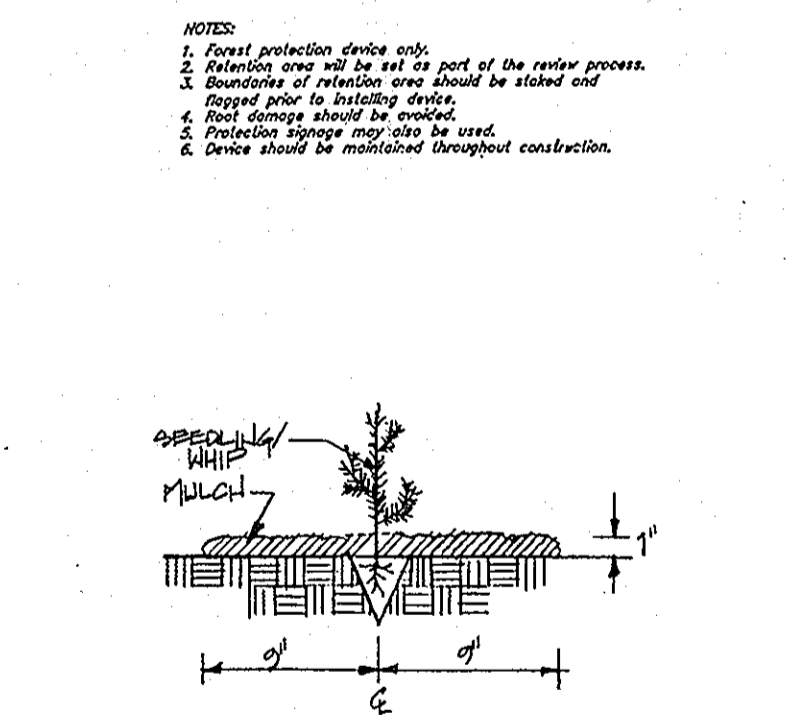
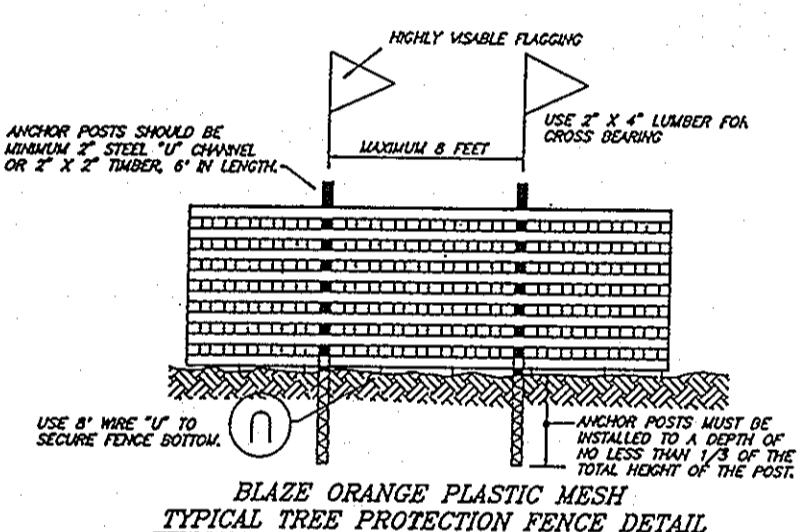
Tree Planting and Maintenance Calendar General Guidelines

	J	F	M	A	M	J	J	A	S	O	N	D
Transplant of 2" DBH or Greater	NOT RECOMMENDED											
Planting of Seedlings, Whips	NOT RECOMMENDED											
Inspection	X					X					X	
Fertilizer (if needed)	NOT RECOMMENDED											
Water *	[Symbol]											

Key:  
 [Symbol] - greatly recommended  
 [Symbol] - recommended with additional care  
 [Symbol] - dependent upon site conditions

Note: Activities during November through February are dependent upon ground conditions.

The planting and care of trees is most successful when coordinated with the local climatic conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.



SEEDLING & WHIP PLANTING DETAIL  
NOT TO SCALE

GENERAL NOTES:

- WORK RELATED TO THIS FOREST CONSERVATION PLAN SHALL BE PERFORMED ONLY BY A LANDSCAPE CONTRACTOR EXPERIENCED IN REFORESTATION/AFFORESTATION PRACTICES.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THE FOREST STAND DELINEATION WAS PREPARED BY M.A. DIRCKS & CO., INC. ON SEPT. 17, 1993 & MAY 1, 1995.

PLANT MATERIAL STANDARDS:

- PLANTS SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEMEN.
- ALL LISTED PLANTS SHALL BE CONTAINERIZED STOCK WITH MINIMUM CALIPER OR HEIGHTS AS INDICATED.
- NO ROOT PRUNING OR TOP PRUNING SHALL BE DONE AT THE JOB SITE.

PLANTING PROCEDURES:

- REFER TO PLANTING & MAINTENANCE CALENDAR FOR APPROPRIATE PLANTING AND MAINTENANCE SEASONS.
- THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING AND BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE CAUSED BY SAME.
- PLANTING SHOULD COMMENCE WITHIN 24 HOURS OF DELIVERY OF PLANT MATERIAL TO THE SITE AND BE COMPLETED WITHIN ONE WEEK OF SAME.
- UNPLANTED STOCK SHALL BE KEPT COOL, MOIST AND PROTECTED FROM SUN AND WIND AT ALL TIMES AND ONLY THAT WHICH CAN BE PLANTED IN ONE DAY SHALL BE BROUGHT TO THE FIELD.
- PLANTING CONTAINERIZED STOCK
  - ALL REFORESTATION/AFFORESTATION PLANTING SHALL BE IN A RANDOM PATTERN AVOIDING THE APPEARANCE OF STRAIGHT ROWS.
  - REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER.
  - USE A KNIFE OR SHARP BLADE TO MAKE 4 TO 5 1" CUTS THE LENGTH OF THE ROOT BALL, AND LOOSEN THE ROOTS FROM THE OUTSIDE OF THE ROOT BALL.
  - SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT.
  - BACKFILL THE SIDES OF THE PIT WITH LOCAL SOIL MIXTURE AND TAMP FIRMLY AS THE PIT IS BEING FILLED.
  - MAKE SURE THE PLANT REMAINS ERECT DURING THE BACKFILLING PROCEDURE. TREES SHALL NOT HAVE MORE THAN 10% LEAN FOLLOWING BACKFILLING.
  - LEFTOVER SOIL FROM THE PLANTING PIT EXCAVATION SHALL BE RAKED AROUND THE PLANT CAREFUL NOT TO ALTER THE EXISTING GRADE SIGNIFICANTLY. A SAUCER SHALL NOT BE FORMED AROUND THE PLANT.
  - WATER THE PLANT THOROUGHLY UNTIL SOIL IS SATURATED, EVEN IF IT IS RAINING.
  - REMOVE TAGS, LABELS, STRINGS, ETC. FROM THE PLANT.
  - MULCH 1" DEEP X 18" DIAMETER AROUND EACH PLANT WITH SHREDDED HARDWOOD BARK MULCH.
  - FERTILIZE ONLY IN ACCORDANCE WITH RECOMMENDATIONS BASED ON A STATE LABORATORY SOIL TEST.

GUARANTEE & REPLACEMENT:

- THE LANDSCAPE CONTRACTOR SHALL MAINTAIN AND GUARANTEE THAT THE PLANTINGS SHALL BE HEALTHY AND VIGOROUS FOR A PERIOD OF ONE YEAR.
- AT THE END OF THE WARRANTY PERIOD, THE OWNER'S REPRESENTATIVE SHALL MAKE AN INSPECTION OF THE PLANTINGS. ANY PLANTS THAT ARE NOT SUFFICIENTLY VIGOROUS OR THAT SHOW DIE-BACK OF MORE THAN 25% SHALL BE REMOVED FROM THE SITE AND REPLACED IN MANNER AND KIND AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION PERIOD PROTECTION & MANAGEMENT:

- THE CONSTRUCTION PERIOD EXTENDS FROM APPROVAL OF THE PROPOSAL UNTIL COMPLETION OF ALL SITE IMPROVEMENTS AND RELEASE OF DEVELOPERS AGREEMENTS & BONDS.
- ALL APPLICABLE CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE TERMS AND CONDITIONS OF THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- TREE PROTECTION FENCING AND TEMPORARY SIGNAGE SHALL BE INSTALLED ALONG TREE SAVED AREAS THAT ARE WITHIN 50' OF ANY CONSTRUCTION ACTIVITIES AND IN ACCORDANCE WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- PLACE PROTECTIVE FENCING & SIGNAGE AROUND SPECIMEN TREES AS SHOWN ON THE PLAN.
- VEHICLES, EQUIPMENT, MACHINERY, DEBRIS, TEMPORARY STRUCTURES AND/OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL NOT BE PERMITTED IN THE RETENTION AREAS.
- THE REFORESTATION/AFFORESTATION SHALL BE CLEARLY MARKED BY PERMANENT SIGNAGE AT +/-100' INTERVALS AS SHOWN ON THE PLAN. IF IT IS DETERMINED TO BE NECESSARY, CERTAIN SEGMENTS OF THE REFORESTATION/AFFORESTATION EDGES MAY BE ENCLOSED BY POSTS AND SMOOTH WIRE FENCE. THE FENCE SHALL BE OF SUFFICIENT CONSTRUCTION TO PREVENT ENTRY AND MARKED APPROPRIATELY WITH CONSPICUOUS MARKERS AND/OR SIGNAGE.
- ALL TEMPORARY FENCING SHALL BE REMOVED AT THE END OF CONSTRUCTION PERIOD WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- SUMMARY OF CONSTRUCTION PERIOD SEQUENCE:
  - OBTAIN GRADING PERMIT.
  - INSTALL TEMPORARY TREE PROTECTION FENCING AND SIGNAGE ALONG LIMITS OF DISTURBANCE AND AROUND SPECIMEN TREES.
  - PROCEED WITH CLEARING, GRADING, STABILIZATION OR CONSTRUCTION IN ACCORDANCE WITH APPROVED PLANS.
  - AFTER COMPLETED CONSTRUCTION, REMOVE TEMPORARY TREE PROTECTION DEVICES.
  - INSTALL PLANTINGS.
  - PLACE PERMANENT PROTECTIVE DEVICES, I.E. SIGNAGE AND FENCING AS DEMED NECESSARY.
  - INITIATE POST CONSTRUCTION PROTECTION AND MANAGEMENT PROGRAM.

POST CONSTRUCTION PROTECTION & MANAGEMENT:

- THE POST-CONSTRUCTION PERIOD FOR WHICH THE OWNER IS RESPONSIBLE IS A 2 YEAR PERIOD DURING WHICH INSPECTIONS AND FOREST MANAGEMENT PRACTICES GUARANTEE SHORT-TERM SURVIVAL OR REPLACEMENT OF FOREST RESOURCES RETAINED OR CREATED UNDER THIS PLAN. THE PERIOD ENDS WITH THE RELEASE OF MAINTENANCE AGREEMENTS AND BONDS.
- TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY.
- IF AFTER ONE YEAR THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING WILL NOT MEET SURVIVAL STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS. IF PLANT MORTALITY OR REFORESTATION/AFFORESTATION EXCEEDS 10% OF PLANTED MATERIALS AT THE END THE FIRST GROWING SEASON, SUCH MATERIAL SHOULD BE REPLACED TO BRING THE TOTAL NUMBER OF TREES TO 90% OF THE ORIGINAL TOTAL. SUCH MATERIAL SHALL BE INSTALLED BY THE BEGINNING OF THE SECOND GROWING SEASON. IF AT THE END OF THE SECOND GROWING SEASON, SURVIVAL RATE DROPS BELOW 75%, SUCH MATERIAL AS NEEDED TO GUARANTEE A 75% SURVIVAL RATE BY THE END OF THE SUBSEQUENT YEAR SHALL BE INSTALLED.
- AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE DESIGNATED RESPONSIBLE PROFESSIONAL SHALL CONVEY TO THE ADMINISTRATOR OF HOWARD COUNTY OF HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL FOREST CONSERVATION AREAS HAVE REMAINED INTACT OR HAVE BEEN RESTORED TO THE APPROPRIATE CONDITION, AND THAT THE STIPULATED SURVIVAL RATES ARE IN PLACE.

FOREST CONSERVATION WORKSHEET

	ACRES (1/10 acre)
I. BASIC SITE DATA	
GROSS SITE AREA	39.6
AREA WITHIN 100 YEAR FLOODPLAIN	-
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	5.4
NET TRACT AREA	34.2
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C/1/C, I) <i>RR-P20</i>	
II. INFORMATION FOR CALCULATIONS	
A. NET TRACT AREA	34.2
B. REFORESTATION THRESHOLD ( 20 % x A)	6.8
C. AFFORESTATION MINIMUM ( 20 % x A)	6.8
D. EXISTING FOREST ON NET TRACT AREA	3.0
E. FOREST AREAS TO BE CLEARED AND/OR REMAIN UNPROTECTED	0.2
F. FOREST AREAS TO BE RETAINED AND PROTECTED	2.8

V. AFFORESTATION CALCULATIONS	
A. NET TRACT AREA	34.2
C. AFFORESTATION MINIMUM ( 20 % x A)	6.8
D. EXISTING FOREST ON NET TRACT AREA	3.0
E. FOREST AREAS TO BE CLEARED AND/OR REMAIN UNPROTECTED	0.2
F. FOREST AREAS TO BE RETAINED AND PROTECTED	2.8

Clearing below the Minimum

If existing forests are less than the afforestation minimum (if D is less than C) and clearing is proposed, the following calculations apply:

AFFORESTATION FOR UNFORESTED AREAS BELOW MINIMUM C - D	3.8
AFFORESTATION FOR CLEARING BELOW MINIMUM E X 2	0.4
TOTAL AFFORESTATION REQUIRED (C - D) + (E x 2)	4.2

Afforestation requires the total forest area be equal to the minimum and it requires compensation for clearing.

PROPOSED FOREST CONSERVATION TABULATION

1. EXISTING FOREST TO BE PROTECTED	2.8 AC	= 1512 TREES @ 11'x11'
2. PROPOSED AFFORESTATION AREA	4.2 AC	
ON OPEN SPACE LOT 19	2.0 AC	
ON OPEN SPACE LOT 20	2.2 AC	
3. TOTAL FOREST CONSERVATION EASEMENT	7.0 AC	
4. a. CREDIT FOR SWM POND BUFFER PLANTING	0.28 AC. (31 TREES @ 20'x20')	
b. TOTAL AFFORESTATION PLANTING AREA	3.9 AC. (1404 @ 11'x11')	

AFFORESTATION PLANT SCHEDULE:

PLANT NAME	HT	QTY	REMARKS
ACER RUBRUM Red Maple	3-4'	385	CONT. WHIP (RANDOMLY PLANTED 4' - 11' O.C.)
FRAXINUS PENNSYLVANICA Green Ash	3-4'	385	
LIRIODENDRON TULIPIFERA Tulip Poplar	3-4'	126	
QUERCUS PALUSTRIS Pin Oak	3-4'	385	
CORNUS FLORIDA Flowering Dogwood	3-4'	123	
		1404	TOTAL

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. Daniels* 5-7-96  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Jim Wynn* 5/14/96  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
*Bob Danner* 5/8/96  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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

DESIGNED MJP	<b>FOREST CONSERVATION PLAN DETAILS</b> <b>EASTERN VIEW</b> LOTS 1-18, PRESERVATION PARCELS A & S, LOTS 10-22 TAX MAP 41 PARCEL 143 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE -
DRAWN -		DRAWING 15 of 15
CHECKED MJP		JOB NO. 04-100
DATE 4-23-96		FILE NO. 94-100-D

FOR: CARMAN ASSOCIATES  
P.O. BOX 122  
ELLCOTT CITY, MD 21043

