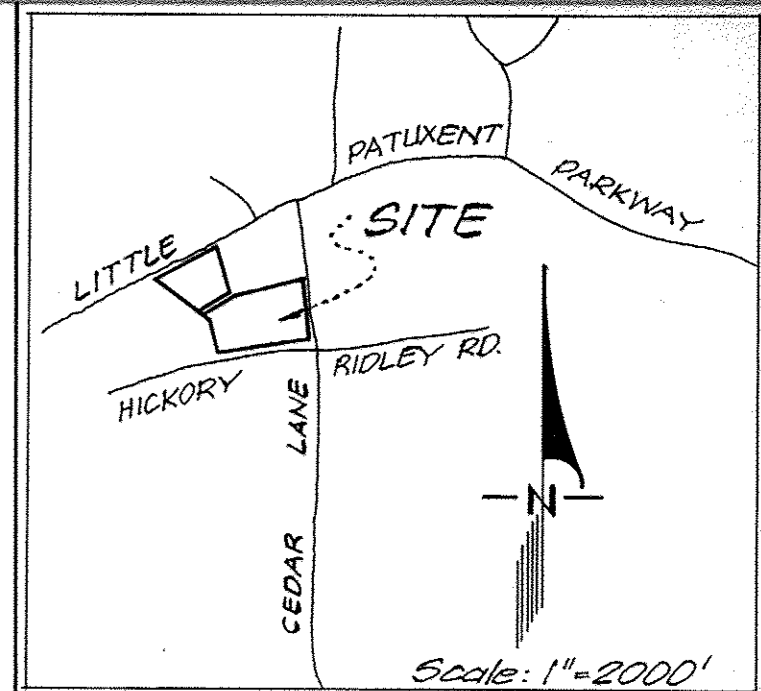
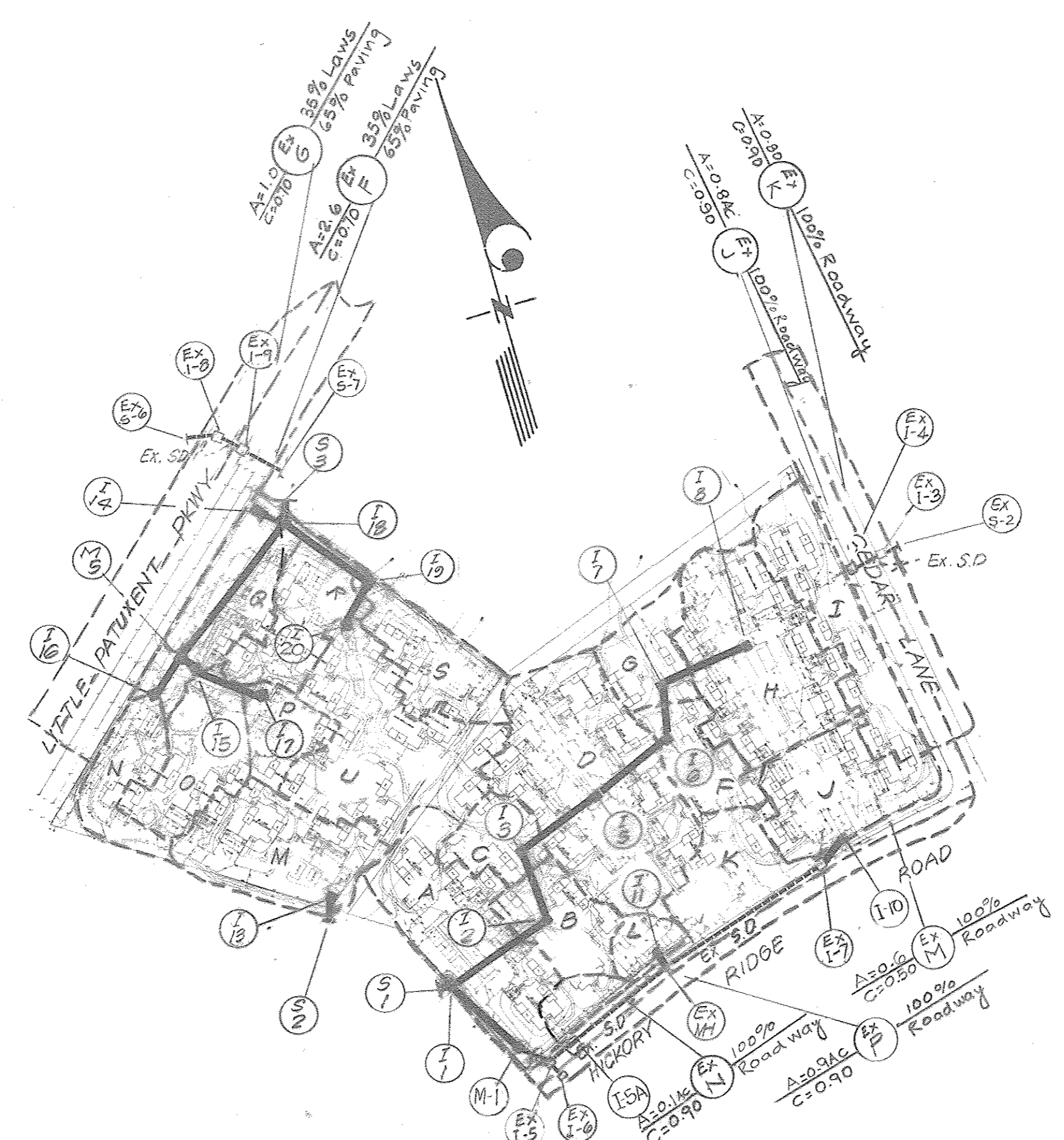


AREA	ACRES	COEFF. $\frac{1}{100}$	ZONING
A	1.8	0.72	100% ALU
B	0.6	0.56	100% "
C	0.5	0.6	100% "
D	2.3	0.90	100% "
F	0.8	0.6	100% "
G	0.7	0.41	100% "
H	1.7	0.71	100% "
I	1.1	0.6	100% "
J	1.1	0.77	100% "
K	0.7	0.54	100% "
L	0.4	0.78	100% "
M	1.3	0.66	100% "
N	0.5	0.76	100% "
O	0.7	0.64	100% "
P	0.4	0.83	100% "
Q	0.7	0.64	100% "
R	0.9	0.74	100% "
S	0.9	0.66	100% "
U	1.0	0.52	100% ALU



VICINITY MAP



DRAINAGE AREA MAP
Scale: 1" = 200'

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 1/23/74
Thomas J. Hammett

Charles Johnson
REGISTERED PROFESSIONAL ENGINEER
1-28-74

APPROVED For Public Water and Public Sewerage Storm Drainage Systems and Public Roads Howard County Department of Public Works
William A. Quinn - 2/2/74
Director
G. M. McIsland - 2/5/74
Chief Bureau of Highways

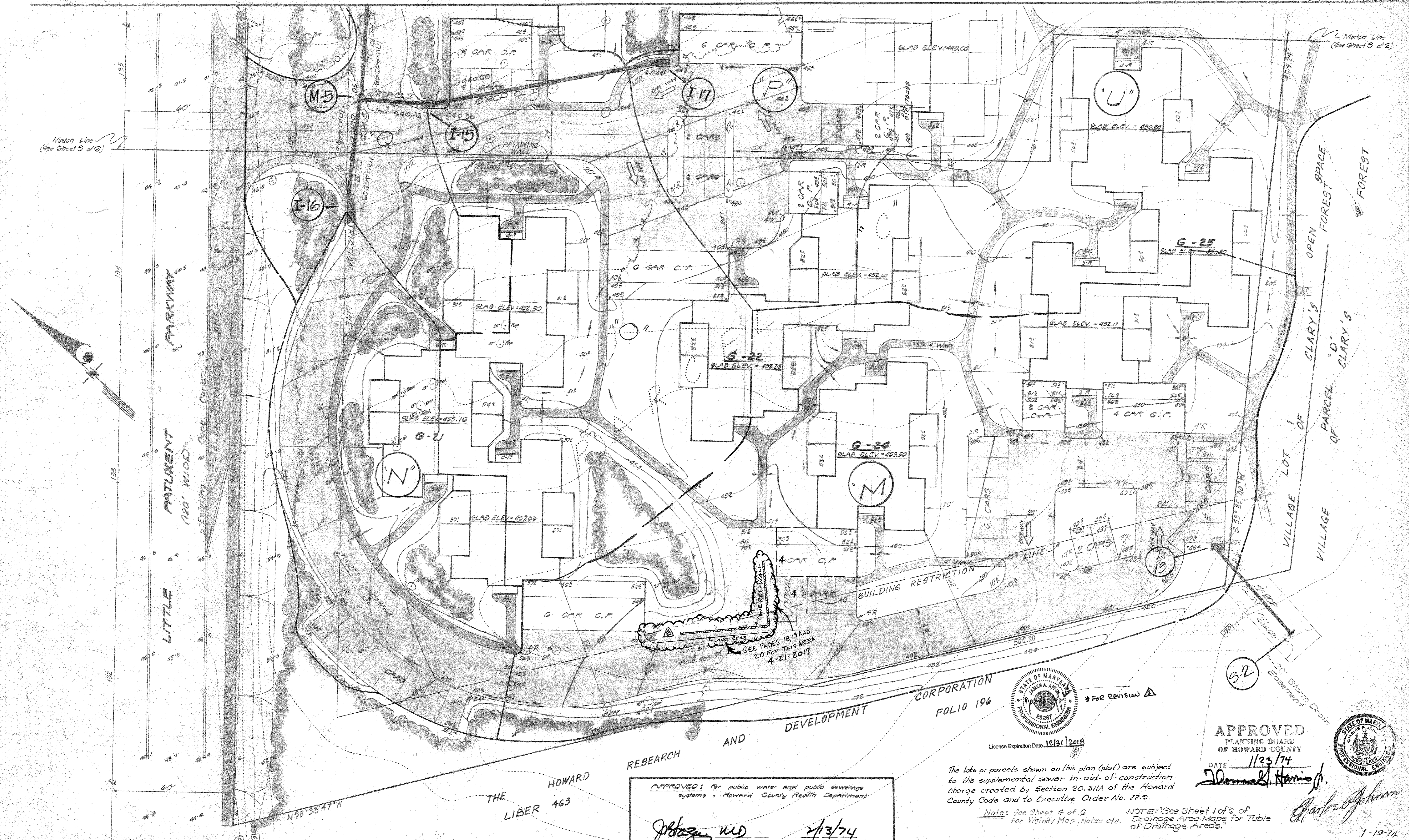
Approved: Howard County Office of Planning & Zoning
Thomas J. Hammett - 2-14-74
Planning Director
W. Clawson - 2/14/74
Chief, Division of Land Development & Transportation Planning

Approved: For Public Water and Public Sewerage System Howard County Health Department
J. Bodeza MD - 2/13/74
County Health Officer

JOHNSON - McCORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
1620 ELTON ROAD SILVER SPRING, MD. 20903
434-7000

DRAINAGE AREA MAP
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER: Mathew - Phillip
10750 Columbia Pike
Silver Spring, Maryland
Phone: 681-6200
DESIGN H.G.D. SHEET 1 OF 20
DRAFT T.B.A. DATE May, 1973 JOB NO. 2-113-40
APPROVED SCALE: As Noted FILE NO. 2-113-40-B



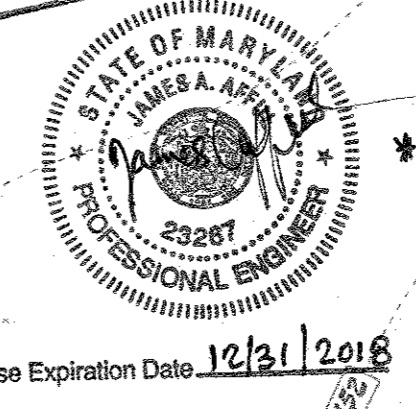
Match Line
(See Sheet 3 of 6)

Match Line
(See Sheet 3 of 6)

PARKWAY
PATUENT
(120' WIDE)
PEDESTRIAN CONC. CURBS
& CONC. CURBS
& CONC. CURBS
& CONC. CURBS

CLARY'S FOREST
OPEN FOREST SPACE
CLARY'S FOREST
VILLAGE LOT 1 OF PARCEL "D" OF CLARY'S FOREST

RESEARCH AND DEVELOPMENT CORPORATION
FOLIO 196



APPROVED
PLANNING BOARD
OF HOWARD COUNTY



The lots or parcels shown on this plan (plat) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.311A of the Howard County Code and to Executive Order No. 72-9.

DATE 11/23/74
James L. Harris Jr.
Planning Director

Charles Johnson
Professional Engineer

APPROVED: For public water and public sewerage systems - Howard County Health Department.
J. P. Hagen, M.D.
County Health Officer
2/13/74
Date

APPROVED: For public water and public sewerage storm drainage systems and public roads
Howard County Department of Public Works
With - R. Acton - 2/12/74
Director
S. M. McLeod - 2/15/74
Chief Bureau of Highways

APPROVED: Howard County office of Planning & Zoning
James L. Harris Jr. - 2-14-74
Planning Director
M. J. Clavin - 2/14/74
Chief, Div. of Land Develop. & Transporta. Planning

REVISIONS
1. Revised As Per Howard Co. D.P.W. 10-10-73 R.G.B.
2. REVISED TO SHOW REDLINE ADDITION CONC. RETAINING WALL TO REPLACE WOODEN RETAINING WALL - 4-21-17 - AKM.

JOHNSON - MCCORDIC - THOMPSON
ENGINEERS - PLANNERS - SURVEYORS
1620 ELTON ROAD - SILVER SPRING, MD.
434-7000 20903

DRAINAGE AREA MAP
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
PARCEL "G" & "D"
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER Matthews - Phillips Inc.
BUILDER 10750 Columbia Pike Suite 403
SILVER SPRING, MD. 20901
DEVELOPER Silver Springs, a.k.a. 20001
301 681-2320
DESIGN M.W.M. SHEET 2 OF 20
DATE 07-1973 JOB NO. 2-18-C
SCALE 1" = 20' FILE NO. 2-18-74
APPROVED M.W.M.

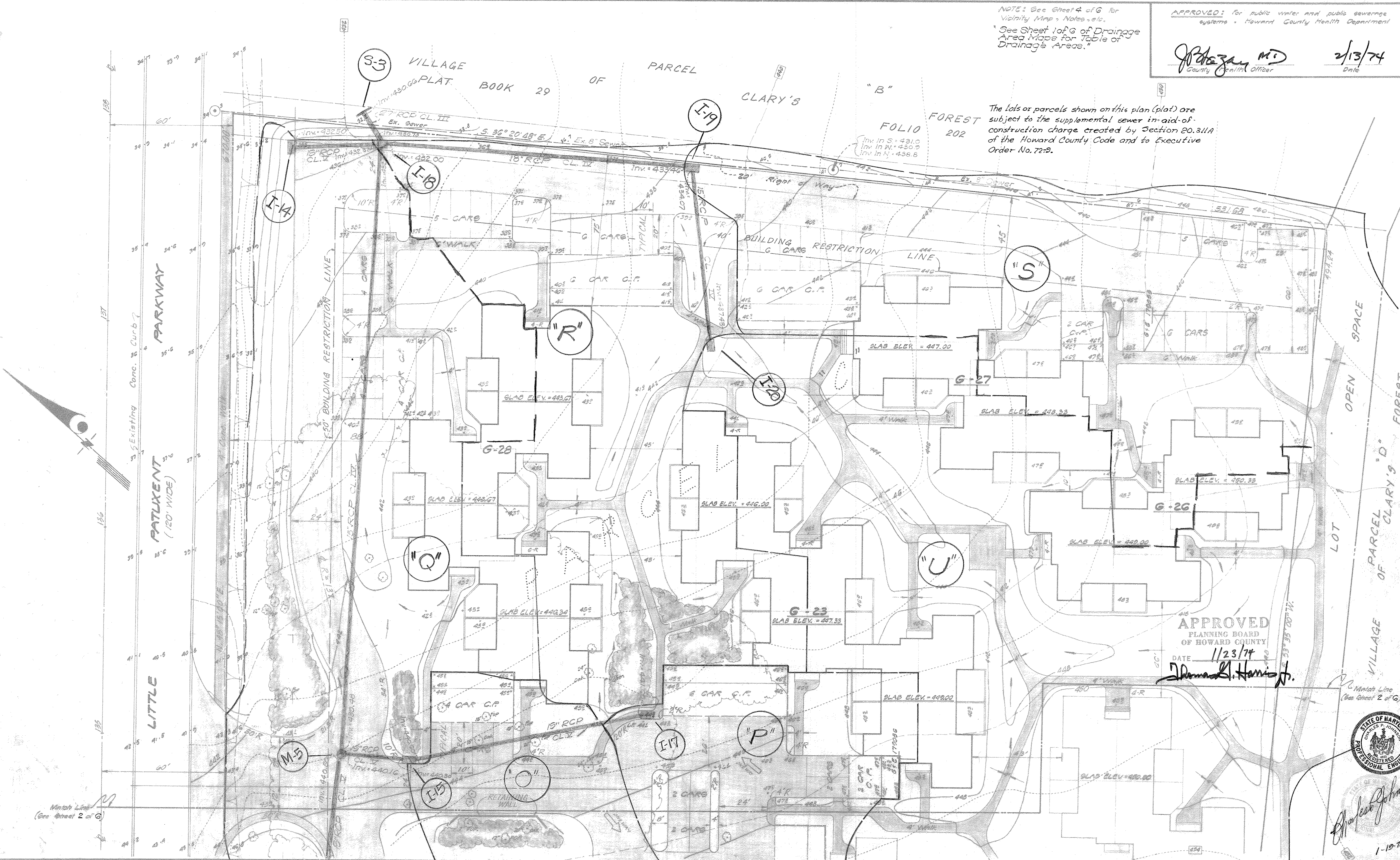
NOTE: See Sheet 4 of 6 for
Vicinity Map, Notes, etc.
See Sheet 1 of 6 of Drainage
Area Maps for Table of
Drainage Areas.

APPROVED: for public water and public sewerage
systems - Howard County Health Department

Thomas M. D.
County Health Officer

2/13/74
Date

The lots or parcels shown on this plan (plot) are
subject to the supplemental sewer in-aid-of-
construction charge created by Section 20.311A
of the Howard County Code and to Executive
Order No. 72-2.



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 1/23/74
Thomas M. D.



Charles Johnson
1-19-74

APPROVED: For public water and public sewerage
storm drainage systems and public roads
Howard County Department of Public Works.
William A. Oltz
Director
J. M. McKeand
Chief Bureau of Highways
2/2/74
Date
2/5/74
Date

APPROVED: Howard County office of Planning &
Zoning
Thomas M. D.
Planning Director
J. H. Clawson
Chief, Div. of Land Develop. & Transporta. Planning
2-14-74
Date
2/14/74
Date

REVISIONS
1. Revised As Per Howard Co. D.P.W. - 10-10-73 - R.G.B.

JOHNSON - MCCORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
1620 ELTON ROAD • SILVER SPRING, MD.
434-7800 20905

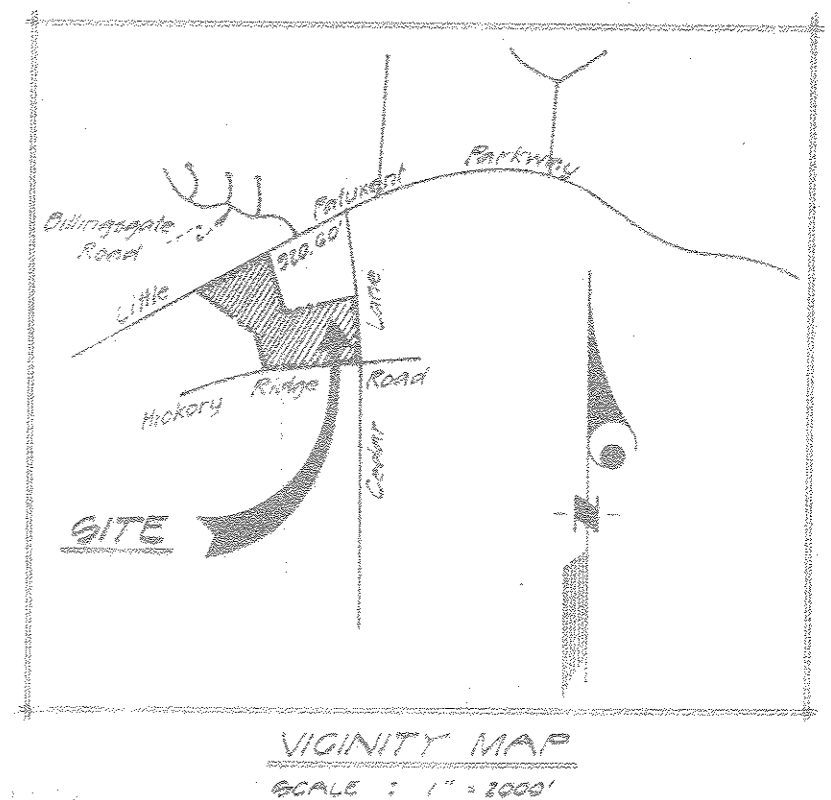
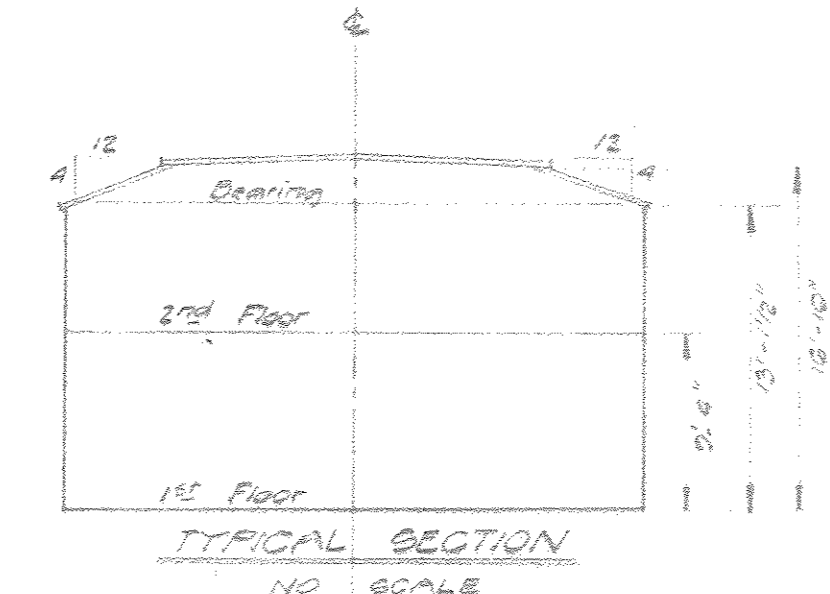
DRAINAGE AREA MAP
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
PARCEL "C" & "D"
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY - MARYLAND

OWNER Matthews - Phillips Inc.
BUILDER 12720 Columbia Pl. Suite 408
Silver Spring, Md. 20901
DEVELOPER 301 221-8100
DESIGN M. D. D. SHEET 3 OF 6
DRAFT B.T.U. DATE 1-12-74 JOB NO. 74-416
APPROVED SCALE 1" = 20' FILE NO. 2-15-74
REVISED 2-15-74

SDP 74-416

NOTES:

1. Zone : New Town (Apartment Land Use).
2. Total Area = 17,7607 SQ (Parcel 'C' & 'D').
3. Total No Units Allowed = 200; Shown = 208
4. Total No Parking Spaces Required = 312; Shown = 384
5. Property Located on Tax Map N9 35 (Block 'B' Parcel '281-C' & '281-D')
6. Plat Reference: Plat Book 20, Folios 202 & 203.
7. Final Development Plan Map Reference 108 A.
8. Minimum Square Foot Floor Area: Unit W/A Type Bedroom = 1,085 #; Unit W/B Type Bedroom = 1,385 #.



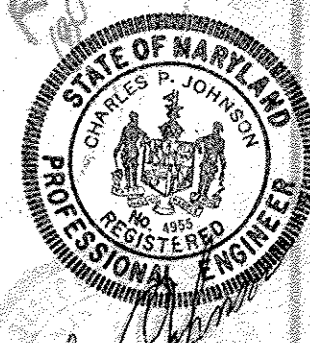
NOTE:
See Sheet 1 of 6 of Drainage Area Maps for Table of Drainage Areas.

The lots or parcels shown on this plan (plat) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.311A of the Howard County Code and to Executive Order No. 72-2



APPROVED: For public water and public sewerage storm drainage systems and public roads Howard County Department of Public Works.
 William L. Alt - 2/3/74
 Director
 S. M. McLeod - 2/5/74
 Chief Bureau of Highway

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 1/23/74
 Thomas D. Harney



APPROVED: For public water and public sewerage systems - Howard County Health Department
 [Signature] 1/3/74
 County Health Officer

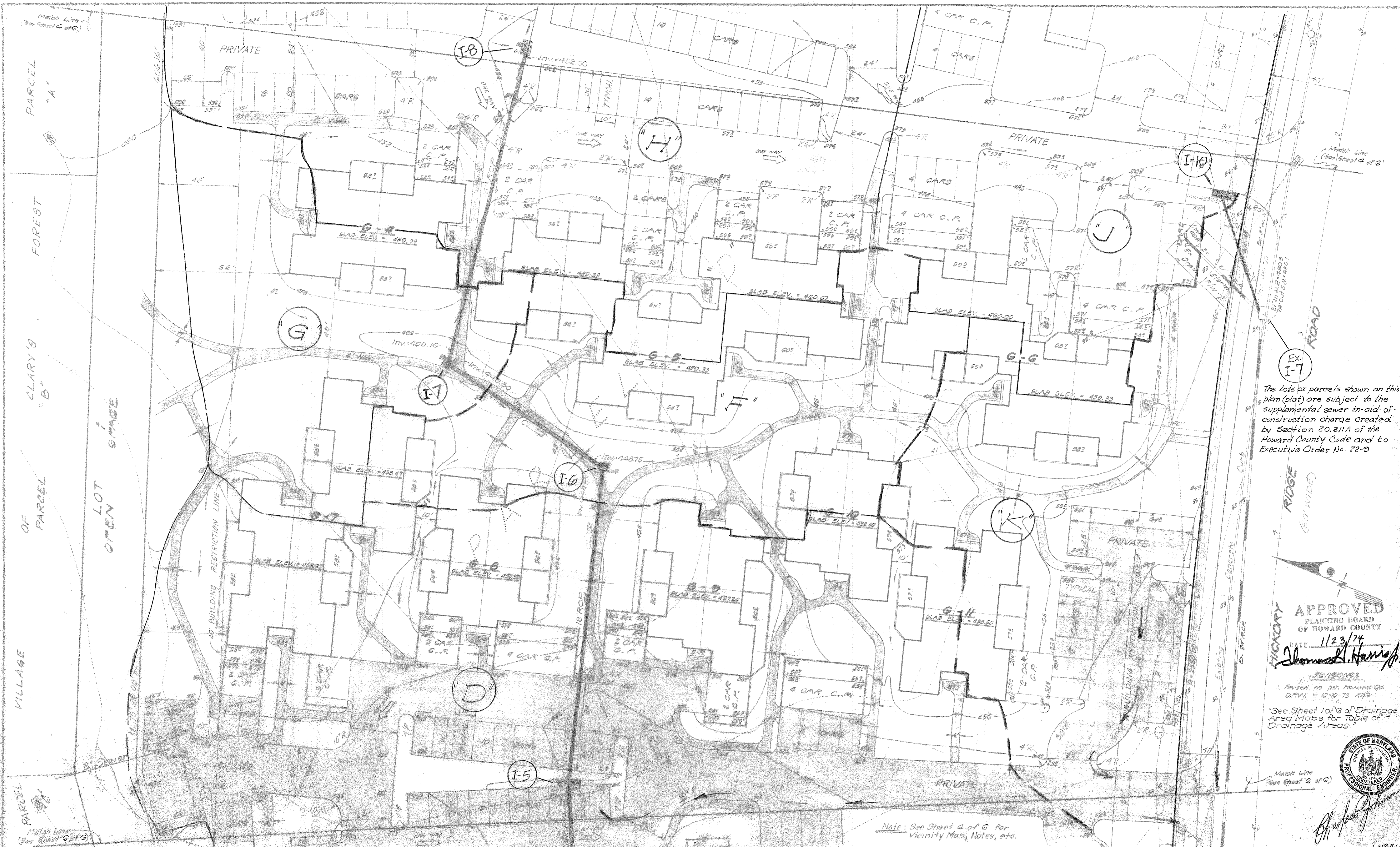
APPROVED: Howard County Office of Planning & Zoning
 [Signature] 2-14-74
 Planning Director
 [Signature] 2/14/74
 Chief, Div. of Land Develop. & Transport. Planning

REVISIONS
 1. Revised As Per Howard Co. D.P.W.-10-10-73 - R.B.B.

JOHNSON + MCCORDIC + THOMPSON
 ENGINEERS • PLANNERS • SURVEYORS
 1620 ELTON ROAD • SILVER SPRING, MD.
 434-7000 20903

DRAINAGE AREA MAP
 VILLAGE OF CLARY'S FOREST
 SECTION ONE - AREA I
 PARCEL 'C' & 'D'
COLUMBIA
 ELECTION DISTRICT
 HOWARD COUNTY • MARYLAND

OWNER	Matthews - Phillips Inc.
BUILDER	10780 Columbia Plaza, Suite 408 Silver Spring, Md. 20901
DEVELOPER	501 661 6800
DESIGN	M.W.M. SHEET 4 OF 20
DRAWN	P.T.B. DATE OCT. 1973
APPROVED	SCALE 1" = 20'



The lots or parcels shown on this plan (plat) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.311A of the Howard County Code and to Executive Order No. 72-9

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 1/23/74
Thomas L. Harrier

REVISIONS:
 1. Revised as per Memorandum
 D.R.W. - 10-10-73 RBB
 'See Sheet 10 of 6 of Drainage Area Maps for Table of Drainage Areas.'



Note: See Sheet 4 of 6 for Vicinity Map, Notes, etc.

APPROVED: For public water and public sewerage storm drainage systems and public road
 Howard County Department of Public Works
William A. Altman Director 2/3/74
P. M. Weiland Chief Bureau of Highways 2/5/74

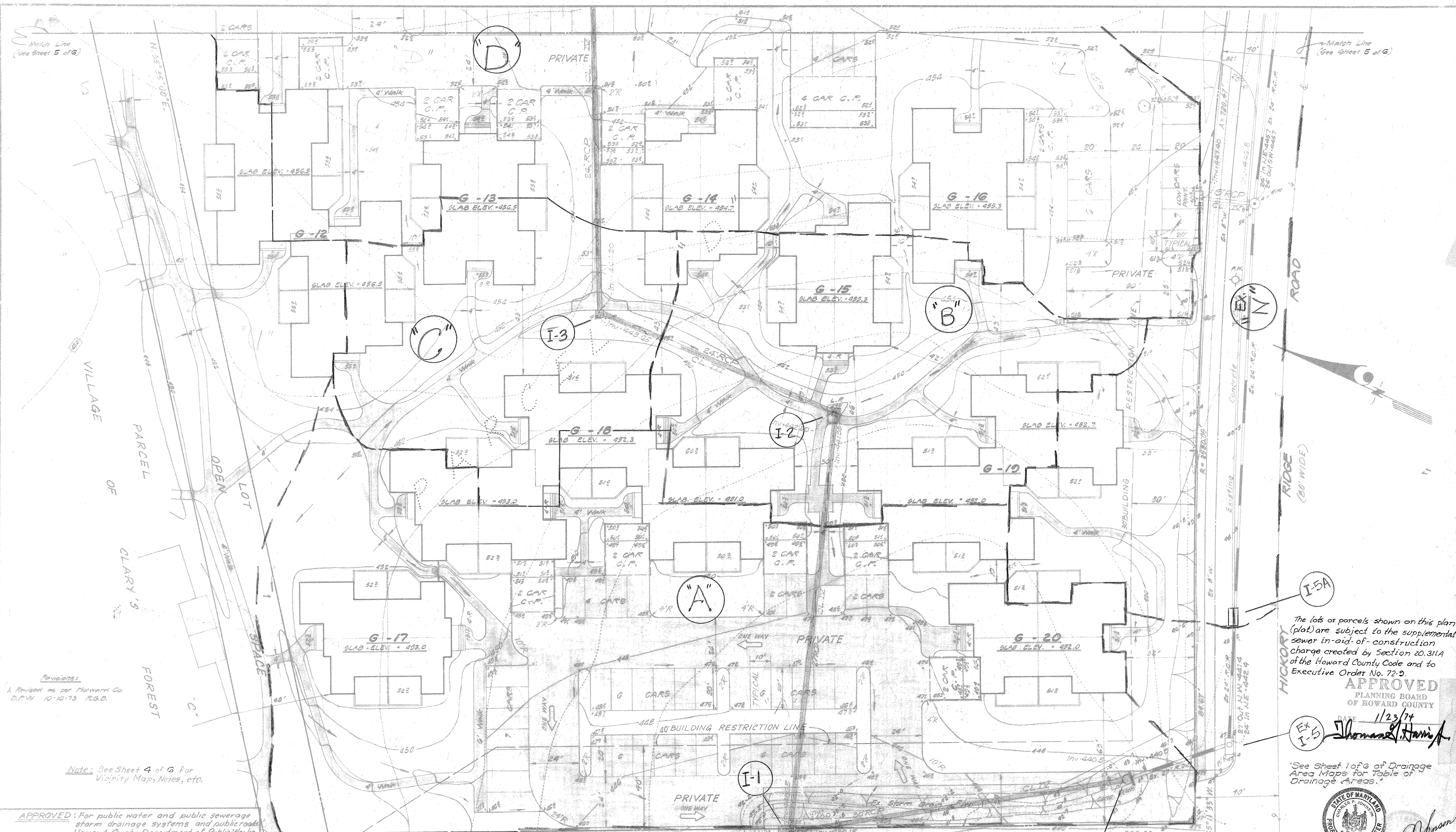
APPROVED: Howard County Office of Planning & Zoning
Thomas L. Harrier Planning Director 2-14-74
J. P. Clawson Chief, Div. of Land Develop. & Transport. Planning 2/14/74

APPROVED: For public water and public sewerage systems, Howard County Health Department
J. Phazey MD County Health Officer 2/13/74

JOHNSON - MCCORDIC - THOMPSON
 ENGINEERS • PLANNERS • SURVEYORS
 1620 ELTON ROAD • SILVER SPRING, MD.
 434-7000 20903

DRAINAGE AREA MAP
 VILLAGE OF CLARY'S FOREST
 SECTION ONE - AREA I
 PARCEL "C" & "D"
COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY • MARYLAND

OWNER Matthews - Phillips Inc.
 BUILDER 10780 Columbia Pike, Suite 400
 Silver Spring, Md. 20901
 DEVELOPERS 301-881-0200
 DESIGN M.W.M. SHEET 5 OF 20
 DRAFT B.T.O. DATE OCT 1973 JOB NO. 2-113-73
 APPROVED M.W.M. SCALE 1"=20' FILE NO. 2-113-73



Revisions:
 1. Revised as per Howard Co. D.P.W. 10-10-73 R.G.B.

Note: See Sheet 4 of G for
 Vicinity Map, Notes, etc.

APPROVED: For public water and public sewerage
 storm drainage systems and public roads
 Howard County Department of Public Works.

Wilkin & Altman 2/2/74
 Director
 J. M. McCreedy 2/5/74
 Chief Bureau of Highways

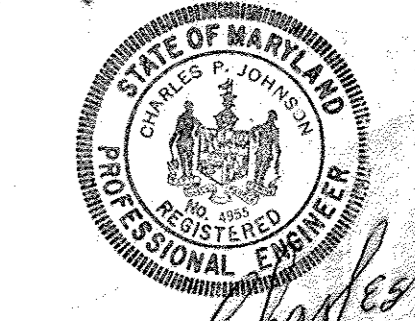
APPROVED: Howard County office of Planning &
 Zoning.
 Thomas J. Harris 2-14-74
 Planning Director
 J. H. Clawson 2/14/74
 Chief, Div. of Land Develop. & Transportation Planning

APPROVED: For public water and public sewerage
 systems - Howard County Health Department

J. H. Clawson 2/13/74
 County Health Officer

JOHNSON - MCCORDIC - THOMPSON
 ENGINEERS - PLANNERS - SURVEYORS
 1520 ELTON ROAD - SILVER SPRING, MD.
 434-7000

DRAINAGE AREA MAP
 VILLAGE OF CLARY'S FOREST
 SECTION ONE AREA I
 PARCEL 'C' & 'D'
COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND



Charles B. Johnson
 1-122

The lots or parcels shown on this plan
 (plot) are subject to the supplemental
 sewer in-aid-of-construction
 charge created by Section 20.311A
 of the Howard County Code and to
 Executive Order No. 72-9.

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY

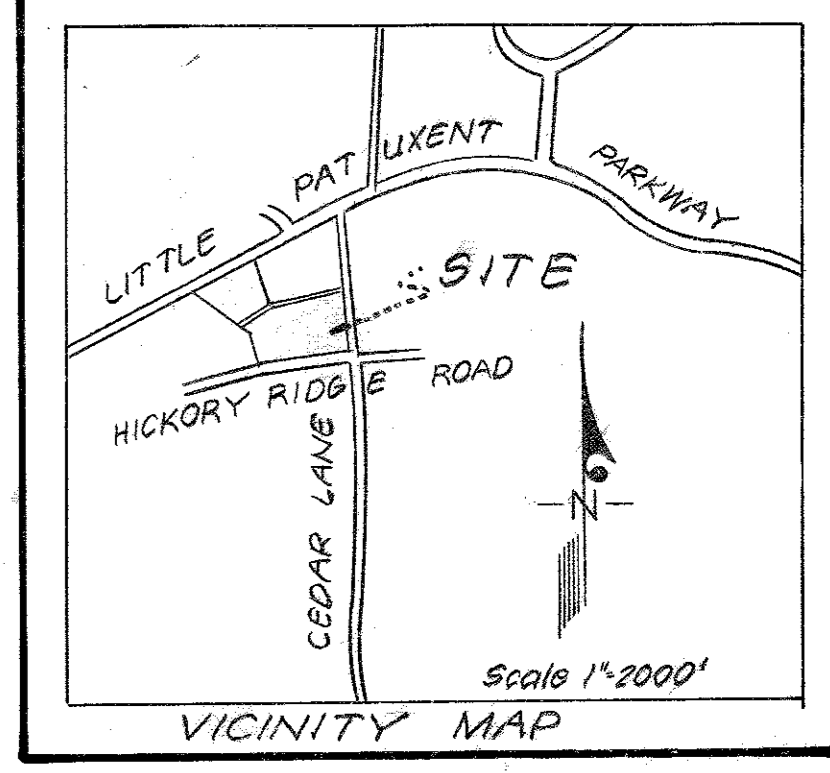
DATE 1/23/74
 Thomas J. Harris

See Sheet 1 of G of Drainage
 Area Maps for Table of
 Drainage Areas.

OWNER	Matthews & Phillips Inc.
ADDRESS	10780 Columbia Dr. Suite 603 Silver Spring, Md. 20901
DATE	2/2/74
DESIGNER	JOHNSON - MCCORDIC - THOMPSON
VISION	M.W.M. SHEET 6 OF 20
DRAFT	STG. 10/7/73
APPROVED	DATE
DATE	DATE

GENERAL NOTES

1. All storm drain and paving shall be constructed in accordance with the latest details and specifications of Howard County.
2. Types of storm drain structures refer to the standard details of Howard County.
3. Trench compaction for storm drains with road or street right-of-way limits shall be in accordance with the latest Howard County Road Code.
4. Information concerning underground utilities was obtained from available records, but the Contractor must determine the exact location and elevation of the mains by digging test pits by hand at all utility crossings, well in advance of trenching.
5. All utility companies shall be notified 48 hours in advance of construction.
6. See previously approved plans for "Village Of Hickory Ridge - Section 1, Area 3" by MARCOS-FOWLER for information on Cedar Lane - Little Patuxent Parkway and Hickory Ridge Road.
7. All building elevations given are slab elevations.
8. If sidewalks are existing at time of storm drain construction, in Hickory Ridge Road or Cedar Lane, it is to be removed as necessary to construct proposed storm drain and replaced in kind.



THE HOWARD RESEARCH DEVELOPMENT CORP.
Liber 463 Folio 196

Provide 23 LF Ungrouted Rip-Pap @ 0.30% 3'-0" Bottom W/2:1 Side Slopes Dry Stone Min. Wt 200#, Wt On 50% to Meet Or Exceed 300#. Place Stones To Provide Rough Surface.

20' Storm Drain Esmt With 15' Constr. Strips On Each Side

Remove Ex. Endwall & Outlet Paving & Construct Howard Co. Std 48" MH At End Of Exist. 27" RCP

Future 30" Road To Be Constructed When Hickory Ridge Rd. Is Extended

Remove Ex. 24" R.C.P. as necessary to construct Str. I-5A as shown.

Remove Ex. Slab & Necessary Courses Of Brick From Exist. "A-5" Inlet (Str. # Ex. I-5) & replace w/ Modified Ho. Co. Std. B Manhole Slab, Frame & Cover. Slab Dimension: 6'-4" x 3'-10" See Ho. Co. Std. Detail SDD/9 for Reinforcement detail.



APPROVED: For Public Water & Public Sewage, Storm Drainage Systems & Public Roads Howard County Dept. Of Public Works.
 William A. Quinn
 Director
 Date 2/5/74

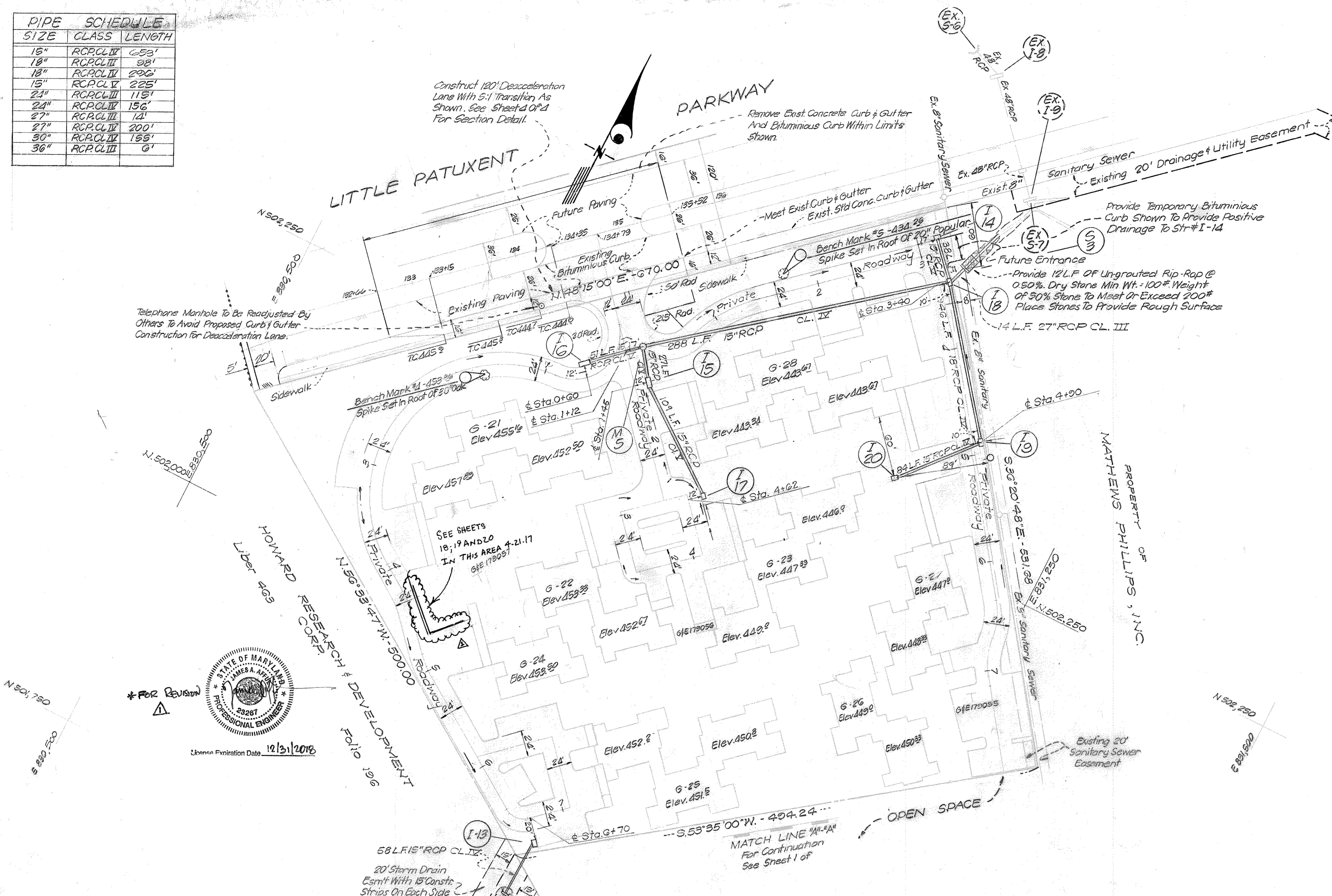
JOHNSON - MCCORDIC - THOMPSON
 ENGINEERS • PLANNERS • SURVEYORS
 10750 COLUMBIA PIKE • SILVER SPRING, MD.
 593-2990 20901

STORM DRAIN AND PAVING PLAN
 VILLAGE OF CLARYS FOREST
 SECTION ONE - AREA I
COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER: Matthew Phillips, Inc.
 12780 Columbia Pike
 Silver Spring, Md 20901
 Phone: 681-6200
 DESIGN: H.G.D. SHEET 7 OF 20
 DRAFT: T.B.A. DATE: May 1978 JOB NO. 2-119-40
 APPROVED: SCALE: 1" = 30' FILE NO. 2-119-40-B

SDP 74-41c

PIPE SIZE	CLASS	LENGTH
15"	RCPCL IV	253'
18"	RCPCL III	98'
18"	RCPCL IV	206'
24"	RCPCL V	225'
24"	RCPCL III	115'
27"	RCPCL III	156'
27"	RCPCL IV	12'
30"	RCPCL IV	185'
36"	RCPCL III	0'



STRUCTURE		SCHEDULE			REMARKS
Nº	TYPE	INV. IN	INV. OUT	TOP OF CURB	
I-1	STD "A-10" Inlet	440.00	439.15	445.80	Howard Co Std - w-28
I-2	STD "E" Inlet	443.13	442.55	447.90	
I-3	STD "E" Inlet	444.47	444.07	449.10	
I-5	STD "A-10" Inlet	447.30	445.64	450.90	w-28
I-6	STD "E" Inlet	449.91	449.38	454.20	
I-7	STD "E" Inlet	451.87	450.89	455.10	
I-8	Double "S" Comb.		452.43	456.10	
I-10	STD "A-10" Inlet		453.25	457.50	w-28
I-11	Double "S" Comb.		447.50		
I-15A	STD "A-10" Inlet	442.74	442.66	448.20	w-28
I-18	STD "A-5" Inlet		445.00	448.20	w-28
I-14	STD "A-5" Inlet		445.50	448.00	w-28
I-15	STD "A-10" Inlet	440.60	440.30	445.20	w-28
I-16	STD "A-10" Inlet		442.03	444.60	w-28
I-17	STD "A-5" Inlet		441.69	444.60	w-28
I-19	Double "S" Comb.	432.31	430.73	436.40	
I-20	Double "S" Comb.	434.07	433.46	440.50	
Ex-I-5	Modified Manhole	442.40	441.40	445.80	TOP 315" EX-30 106" Frame & Cover 47145
M-1	S-Manhole	440.90	440.50	447.00	
M-5	S-Manhole	439.31	439.00	443.25	
S-1	STD "F" Endwall		439.11		
S-2	STD Sup. Wall		444.62		
S-3	STD Sup. Wall		430.66		Howard Co Std F

With Ungrouted Rip-Rap
 (A) Add Note: Remove Ex. Frame & Grates
 (1) Elevations are Top of Curb.
 (2) Elevations to Top of Grate.

The lots or parcels shown on this plan (plat) are subject to the supplemental sewer in-aid-of construction charge created by Section 2031A of the Howard County Code and to Executive Order No. 72.9.

- Notes:
- All Bldg. Elevations Given Are Slab Elevs.
 - The Base For The Paving Will Be Primed In According With C-30-3 As Provided In The Howard Co. Road Codes And Standard Specs.
 - For Typical Paving Detail See Sheet 1 of 4

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 11/23/74
 Thomas H. Harris

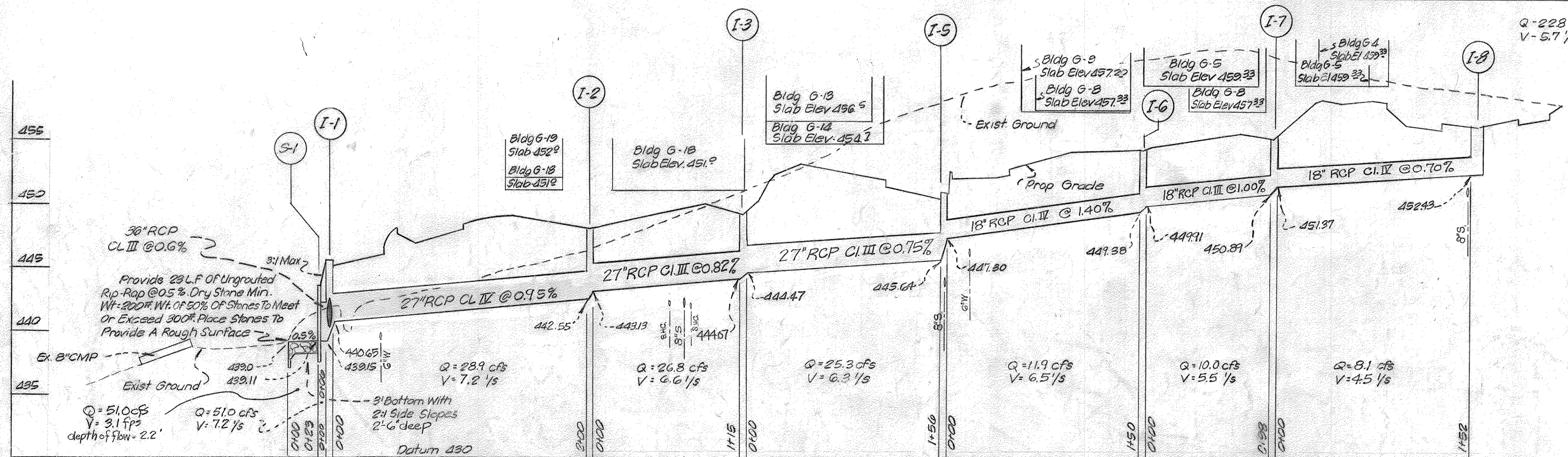
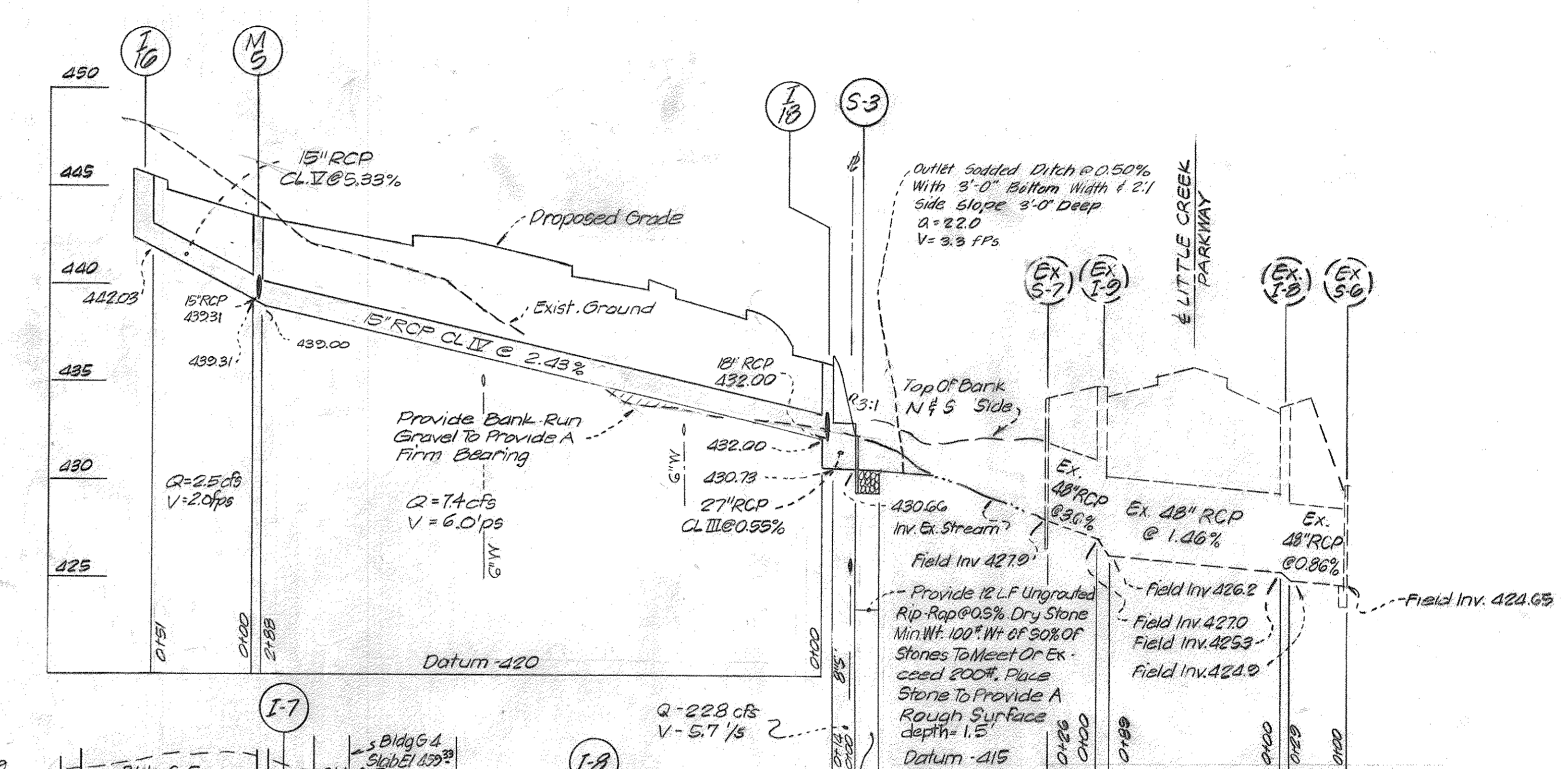
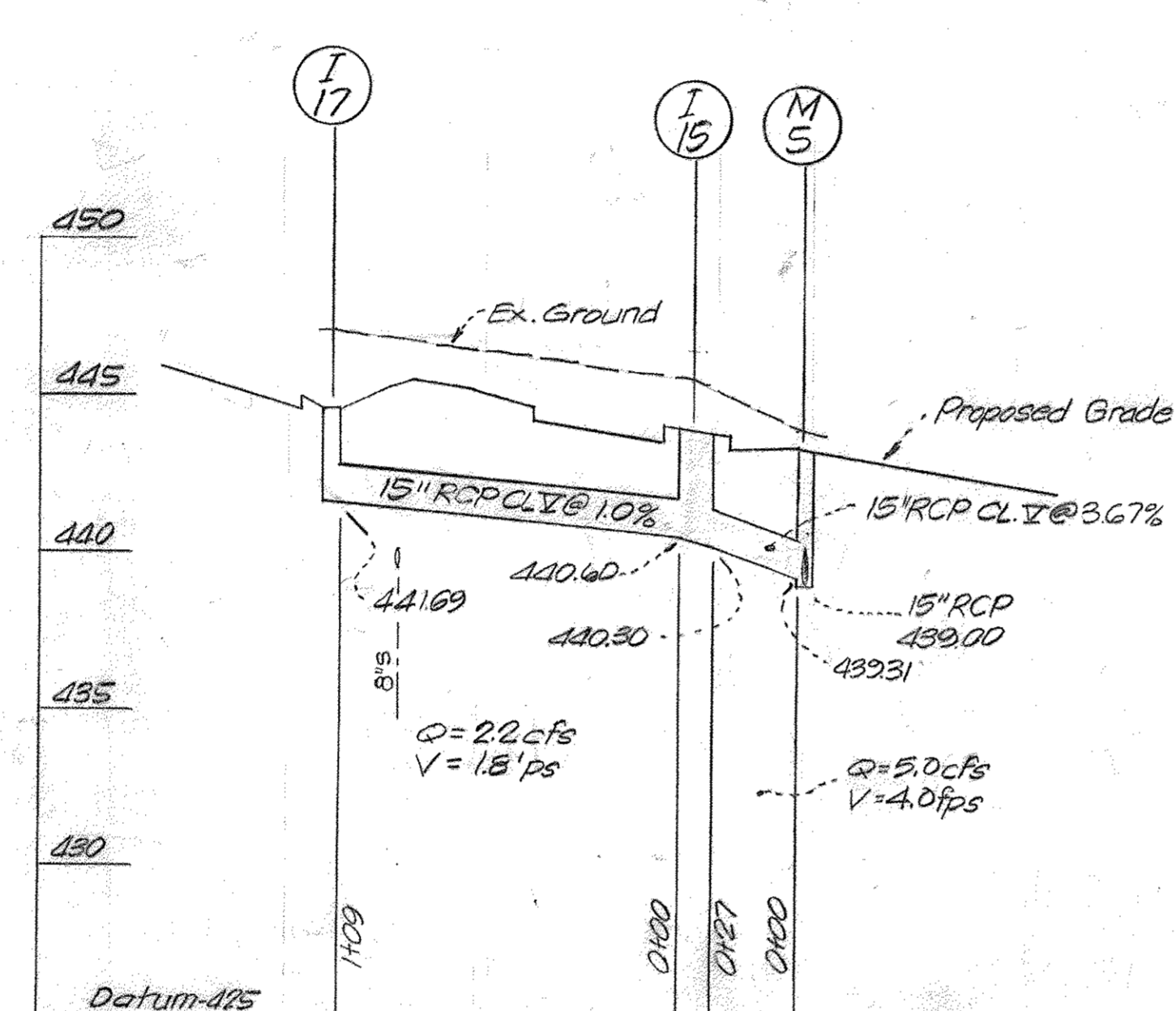
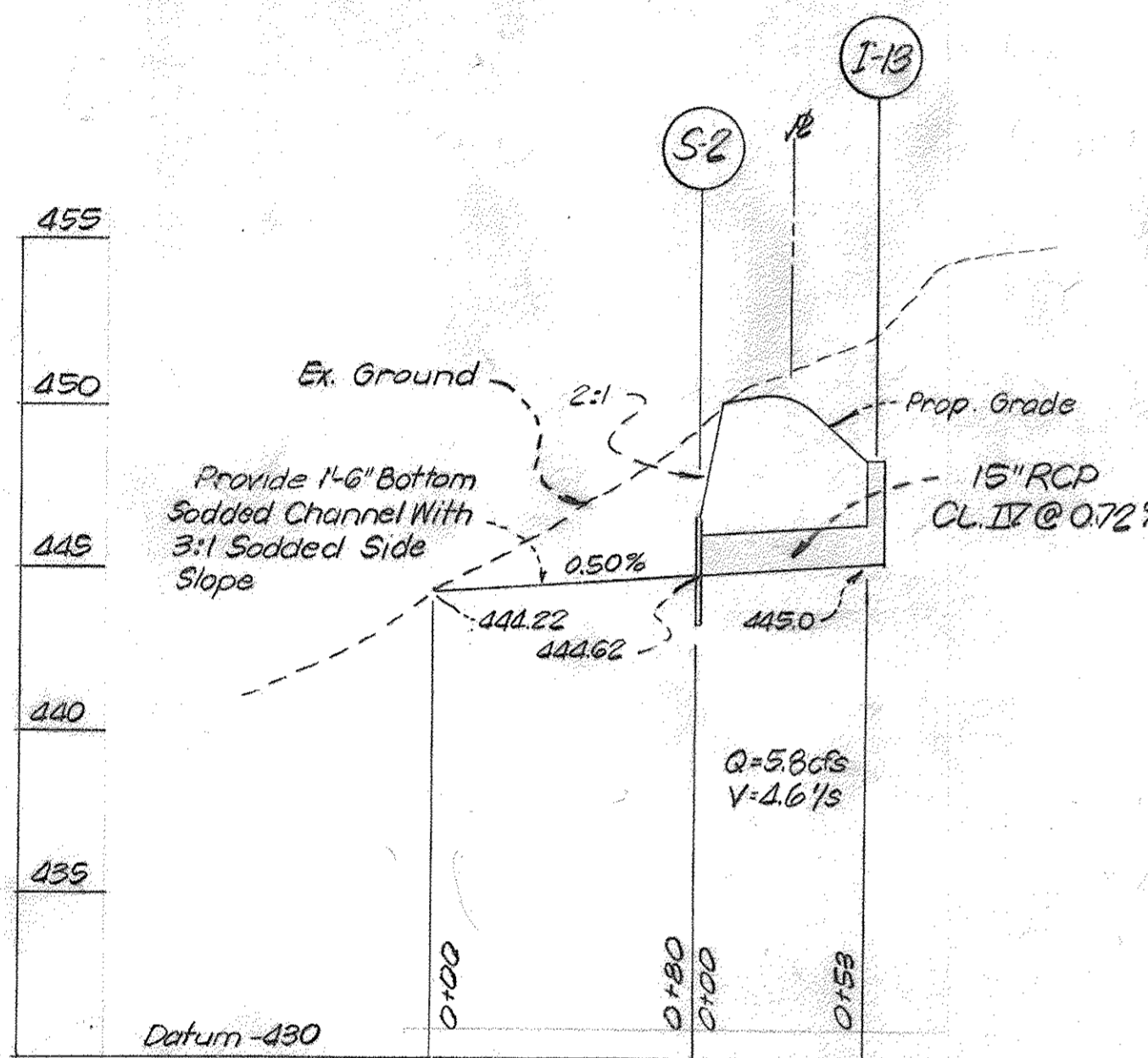
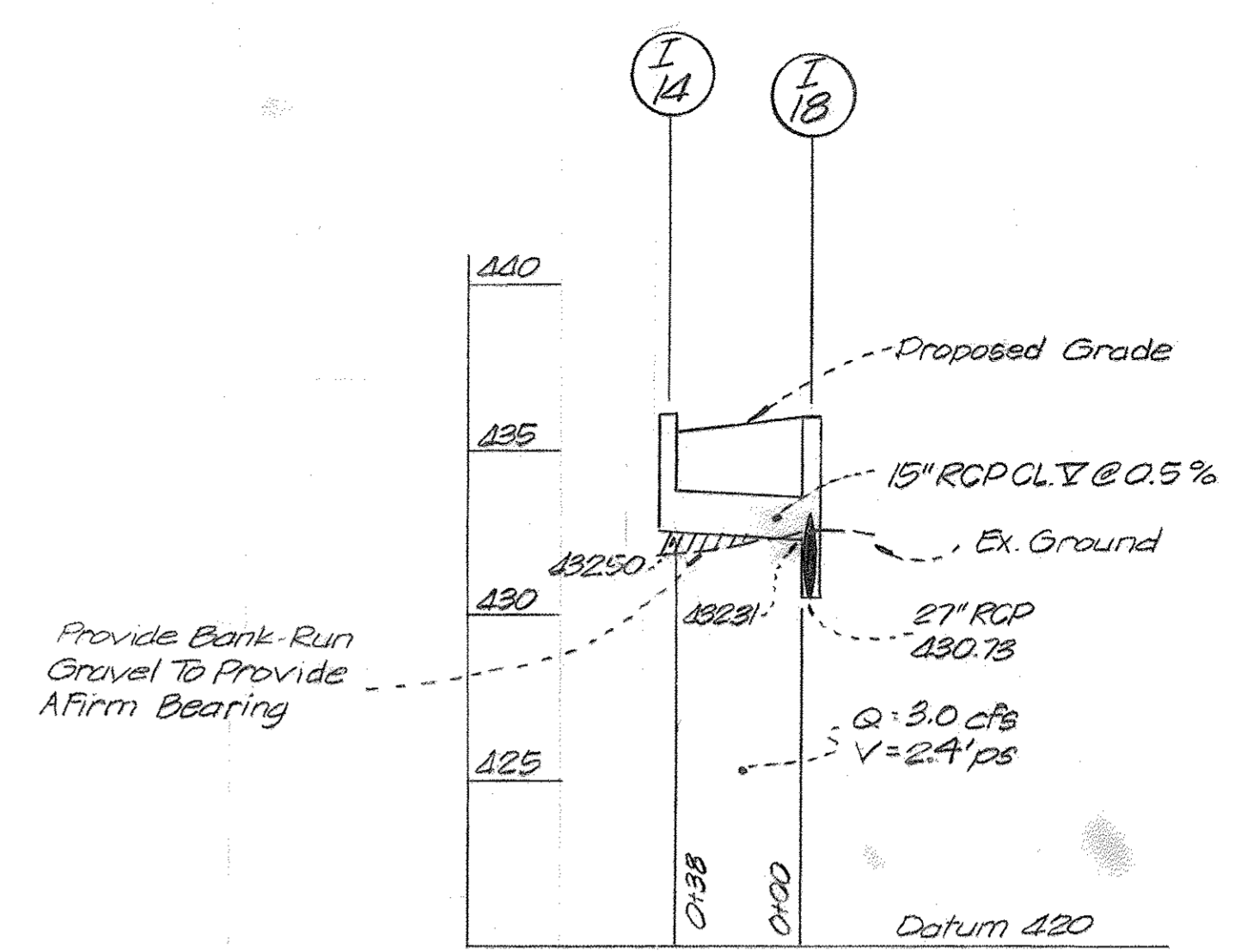
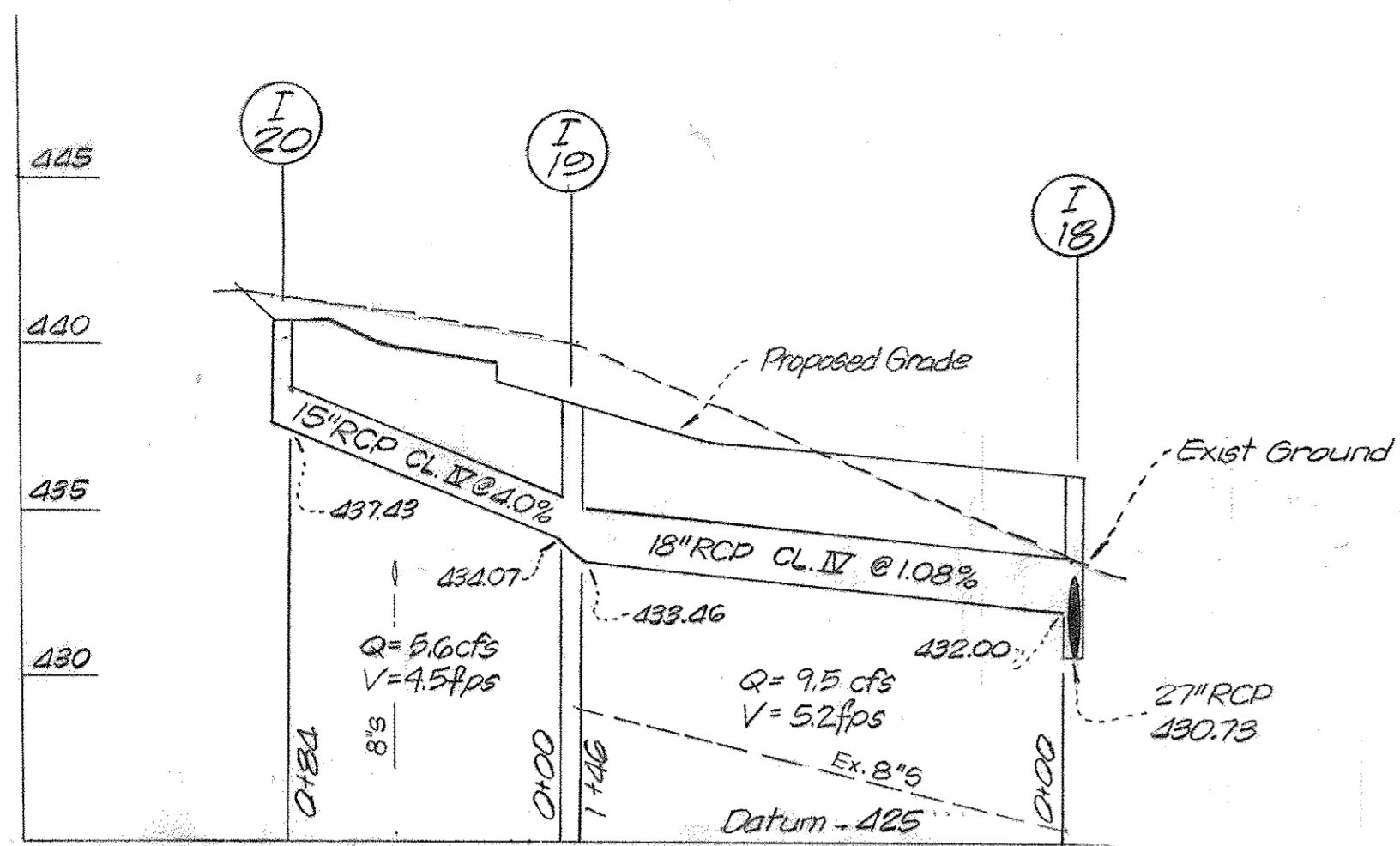
APPROVED: For Public Water & Public Sewage, Storm Drain Systems & Public Roads Howard County Dept of Public Works.
 William A. Altman, Director, 2/17/74
 J. M. Meland, Chief Bureau of Highway, 2/15/74

1. REVISED TO SHOW REDLINE ADDITION CONC RET WALL TO REPLACE WOODEN RET WALL - 4-21-17 - A.K.M.

JOHNSON - McCORDIC - THOMPSON
 ENGINEERS • PLANNERS • SURVEYORS
 10750 COLUMBIA PIKE • SILVER SPRING, MD.
 593-2990 20901

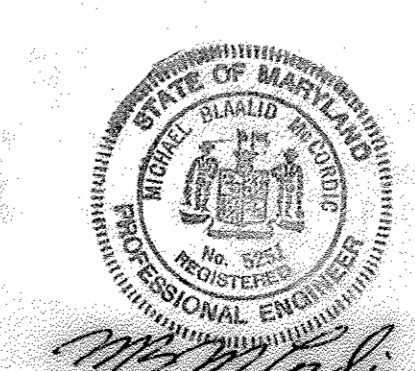
STORM DRAIN AND PAVING PLAN
 VILLAGE OF CLARYS FOREST
 SECTION ONE - AREA I
COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER: Matthew - Phillips Inc.
 10750 Columbia Pike
 Silver Spring, Md 20901
 Phone 681-6200
 DESIGN HGD SHEET 8 of 20
 DRAFT TBA DATE: May 1963 JOB NO: 2-19-40
 APPROVED SCALE: 1"=50' FILE NO: 2-19-40-B



STORM DRAIN PROFILES
Scale: Hor 1"=50'
Ver 1"=5'

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 1/23/74
Donald St. Amis

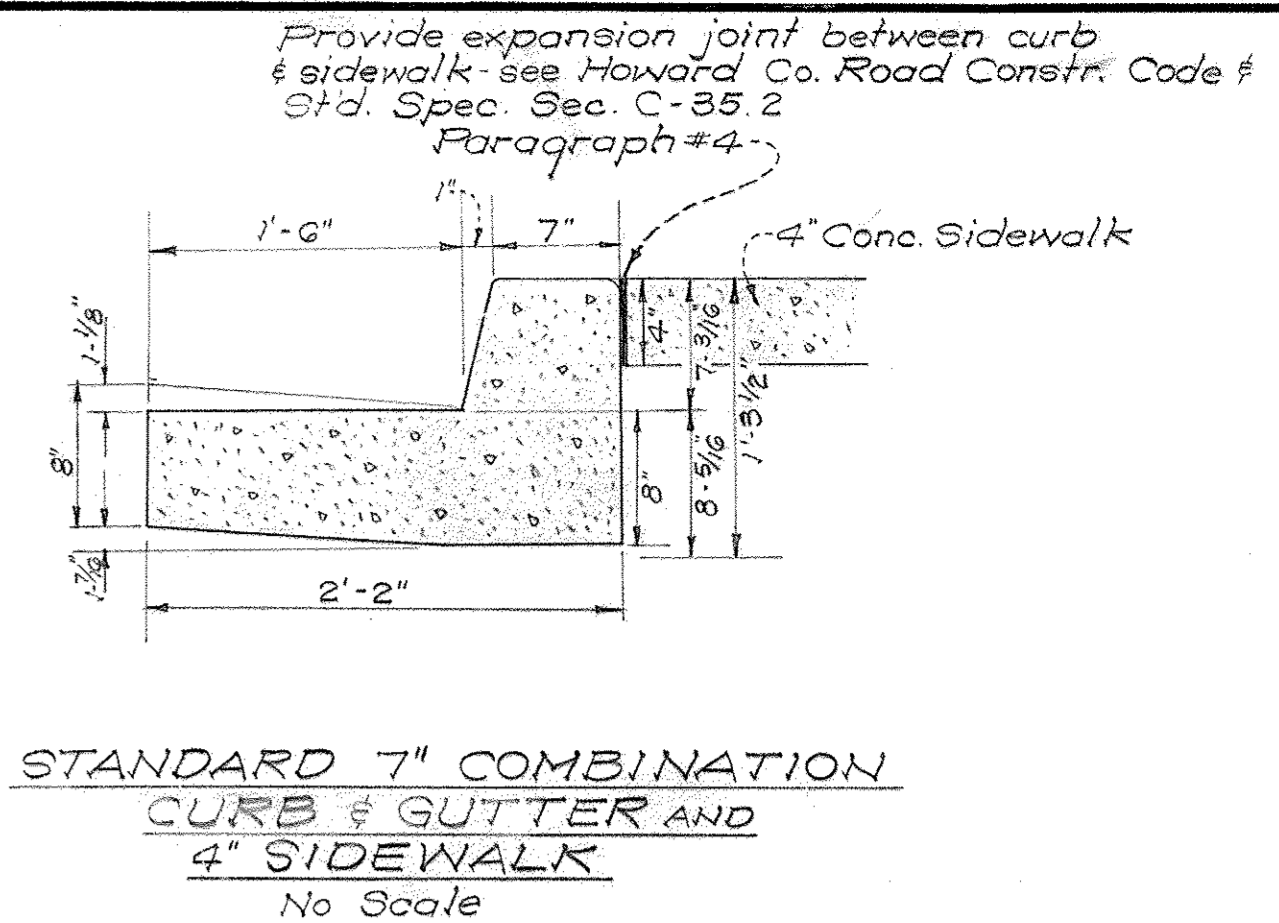
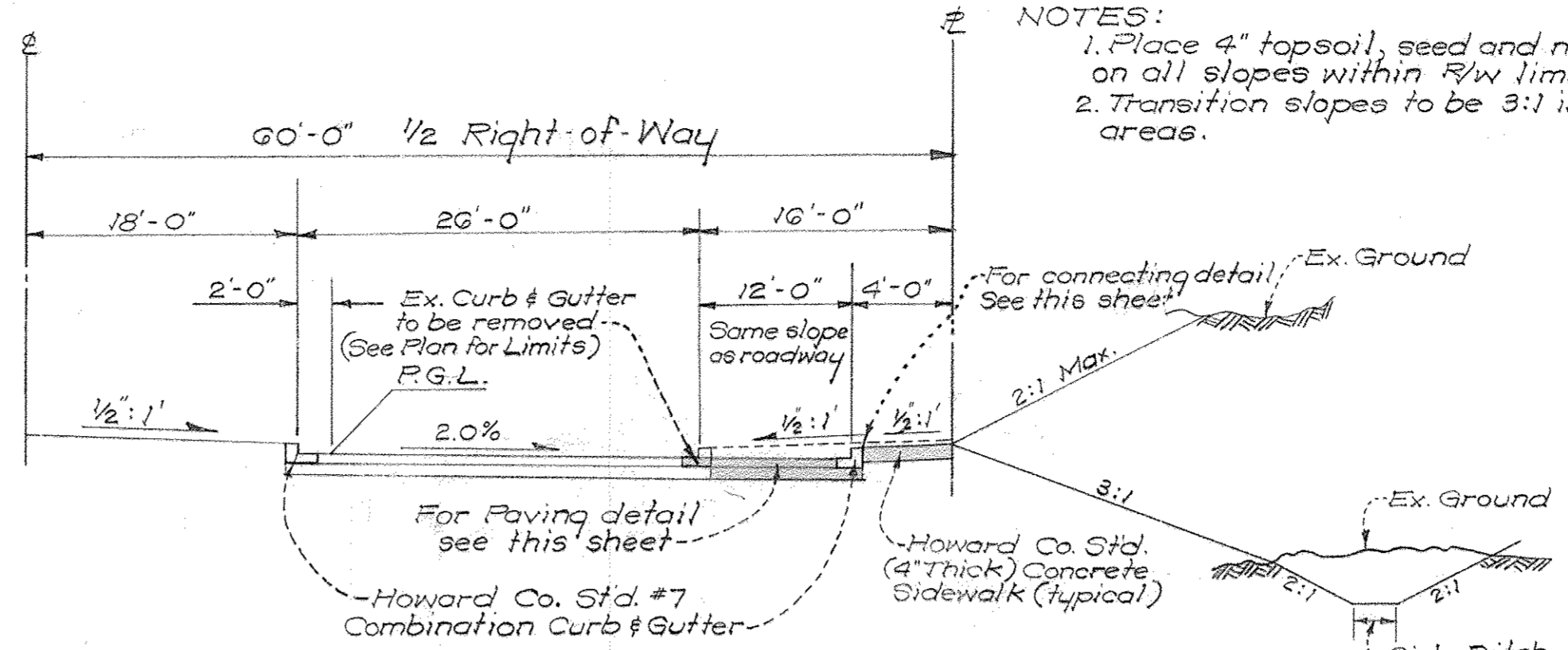
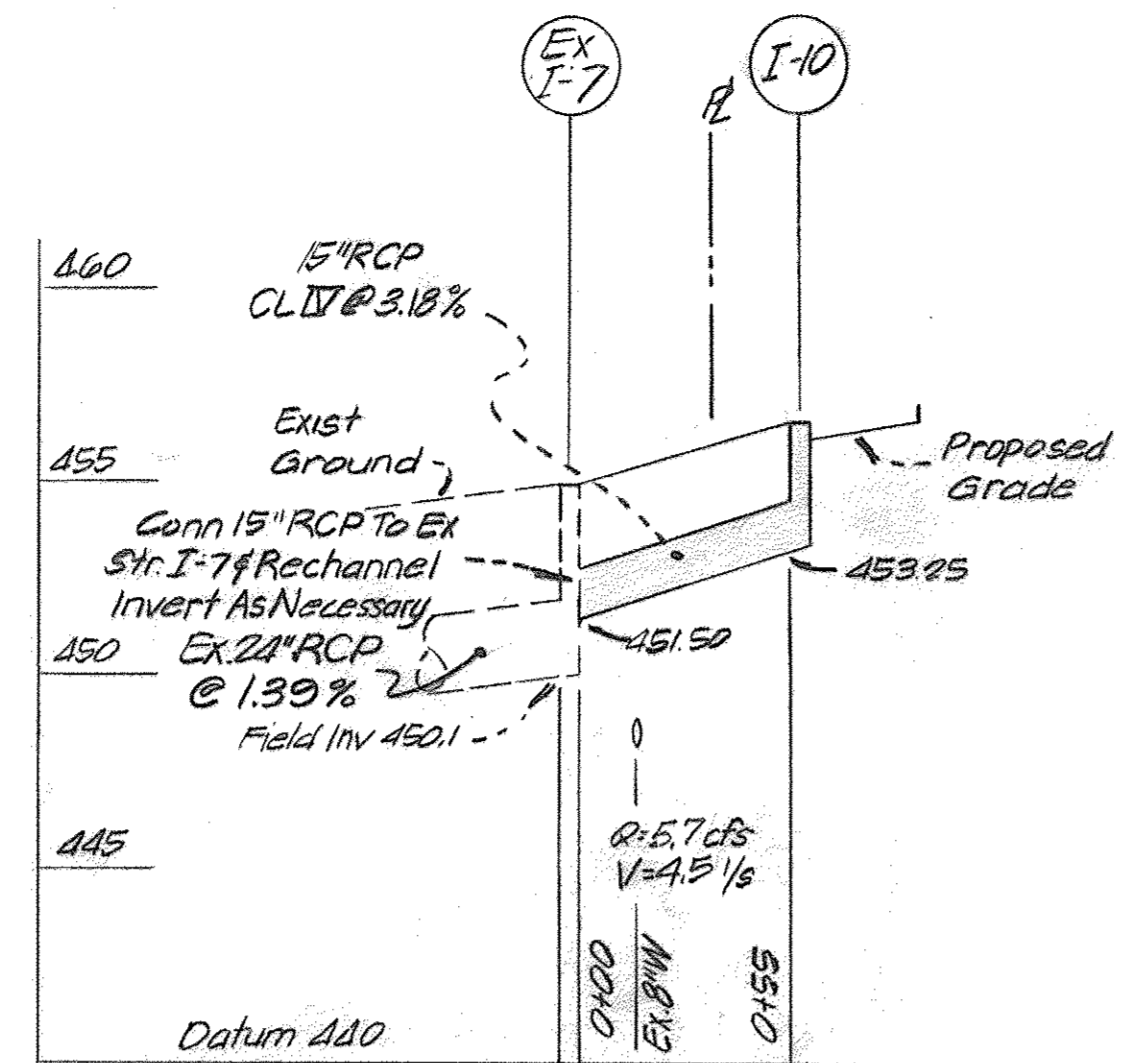


APPROVED: For Public Water & Public Sewage, Storm Drainage Systems & Public Roads Howard County Dept. Of Public Works.
William A. Altman 2/1/74
Director
B. P. McKeen
Chief Bureau of Highways
Date 2/5/74

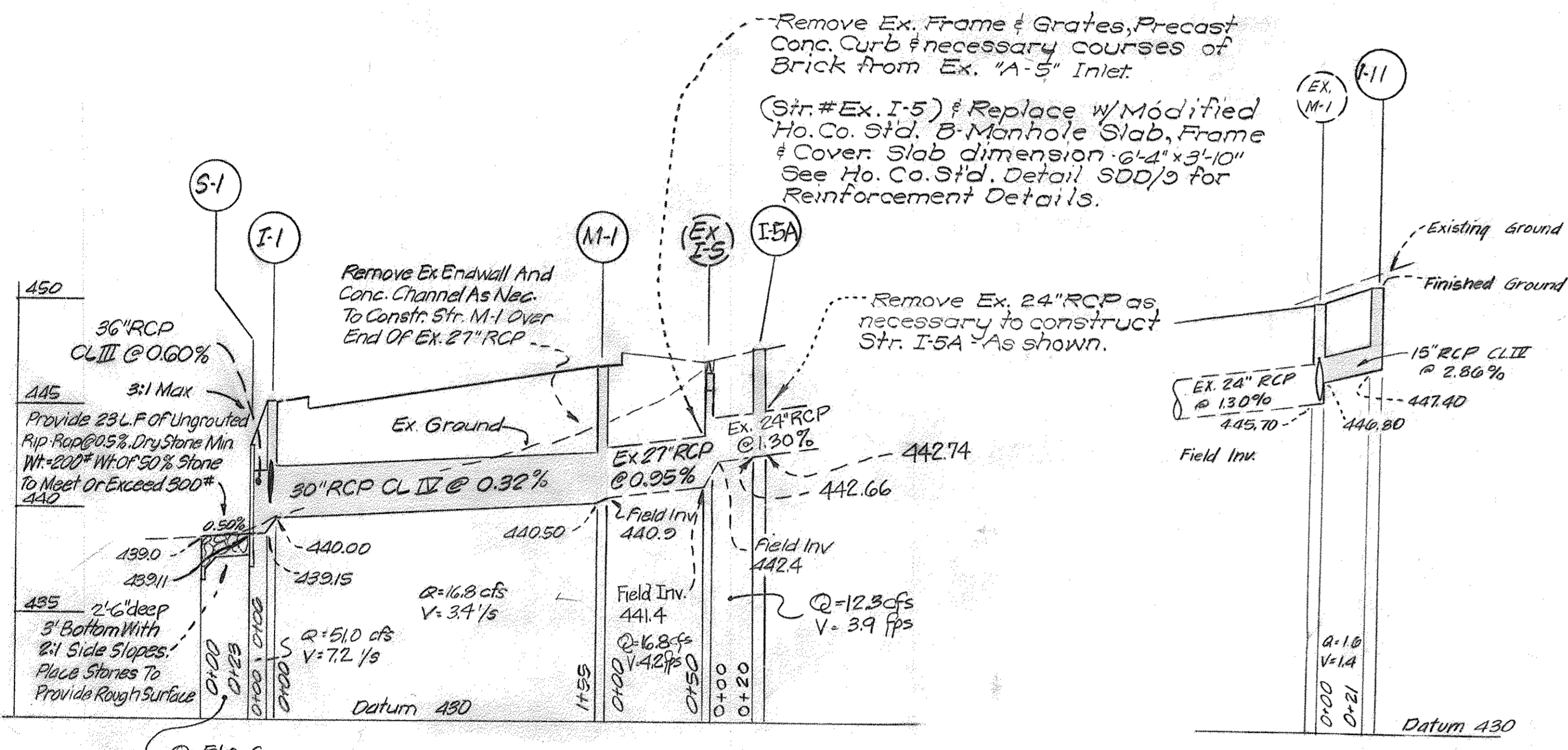
JOHNSON - MCGORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
10750 COLUMBIA PIKE • SILVER SPRING, MD.
593-2990 20901

STORM DRAIN AND PAVING PLAN
VILLAGE OF CLARYS FOREST
SECTION ONE - AREA I
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

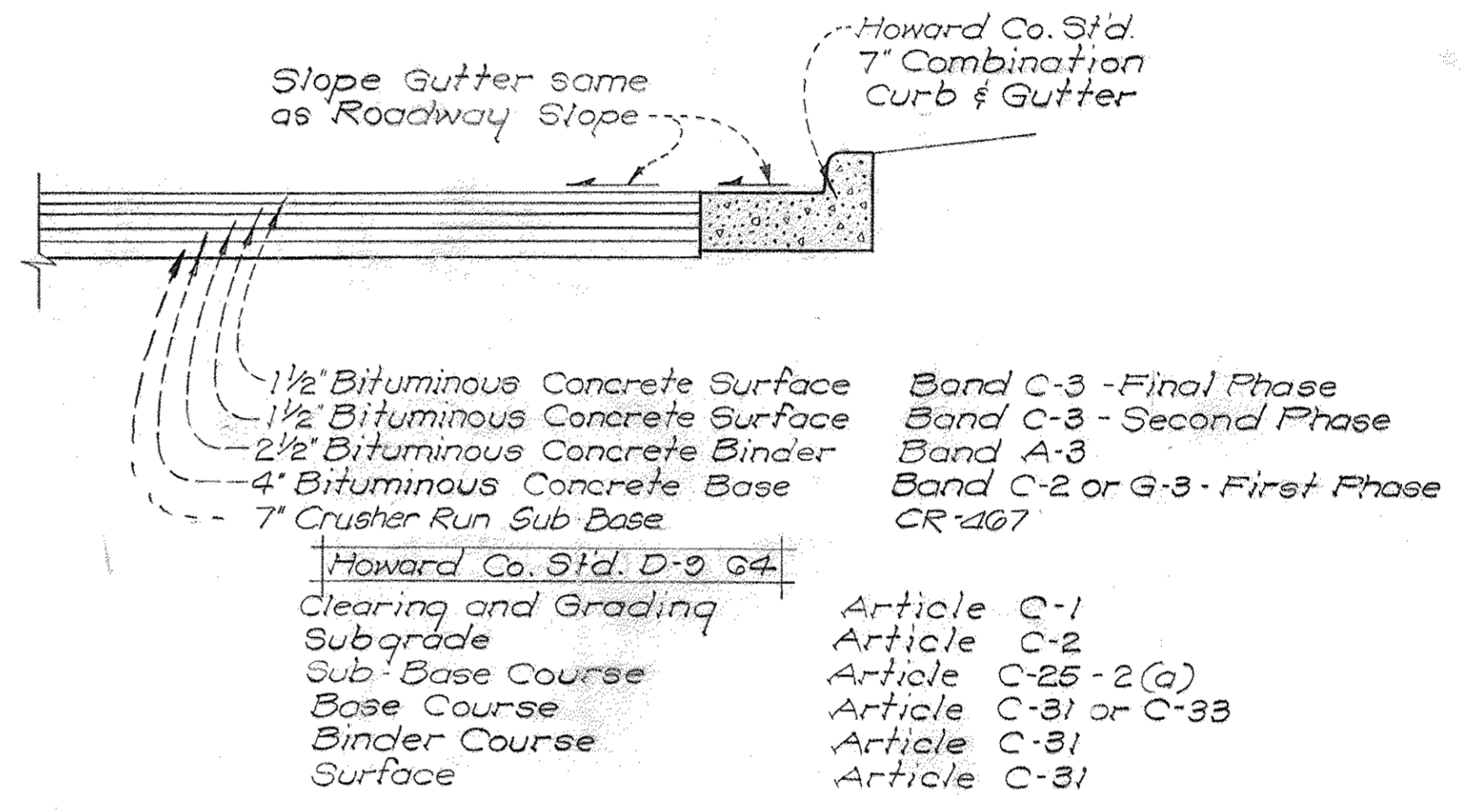
OWNER: Matthew - Phillips, Inc.
10750 Columbia Pike
Silver Spring, Maryland
Phone: 681-6200
DESIGN H.B.D. SHEET 9 of 20
DRAFT T.B.A. DATE May-1973 JOB NO. 2-113-40
APPROVED SCALE: 1"=50' FILE NO. 2-113-40-B



PARTIAL SECTION - DECELERATION LANE
LITTLE PATUXENT PARKWAY
Scale: 1"=10'

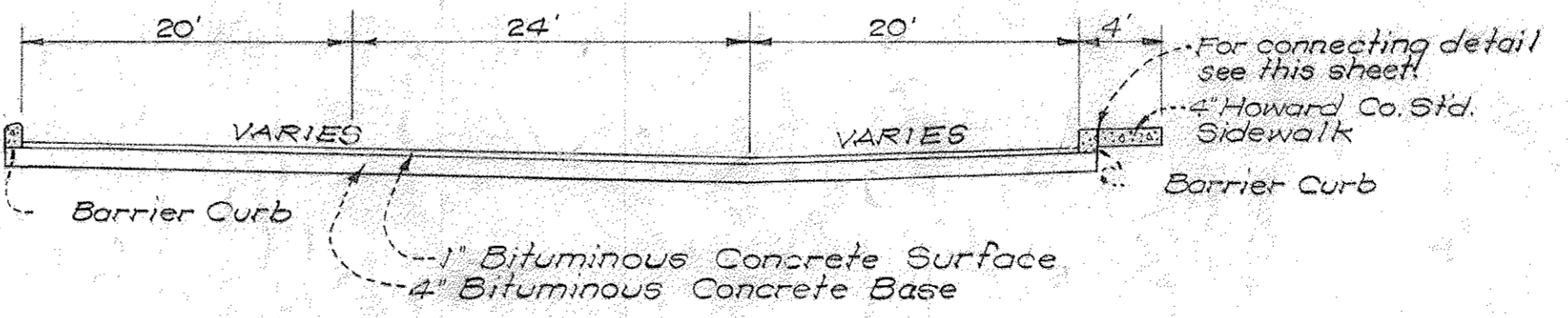


STORM DRAIN PROFILES
SCALE: HORZ 1"=50'
VERT 1"=5'

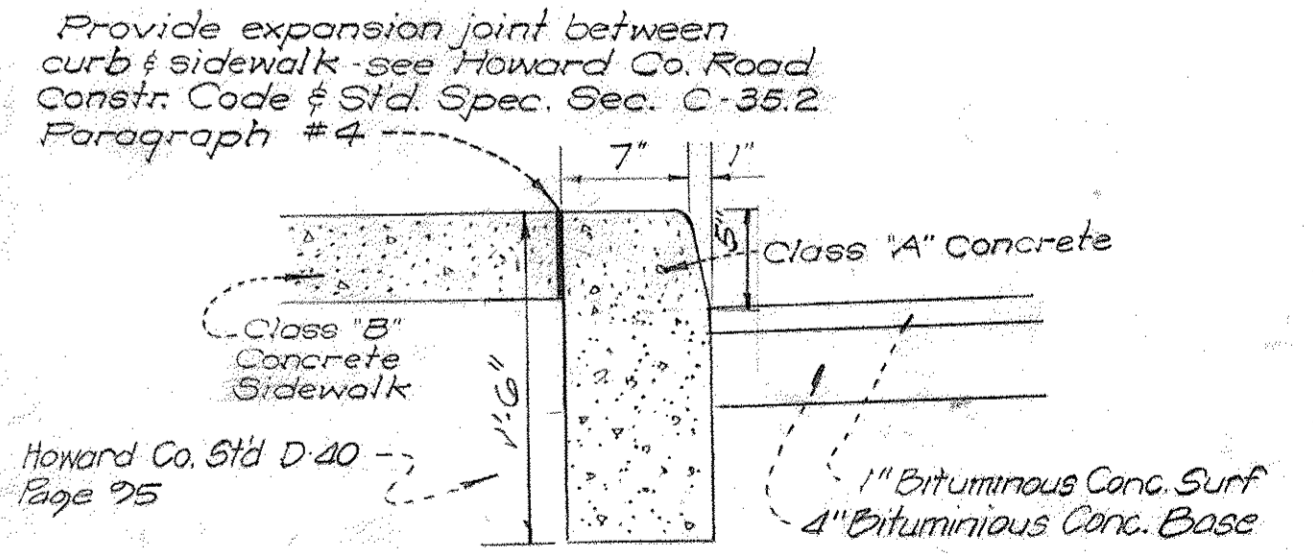


PAVING SECTION
LITTLE PATUXENT PARKWAY
No Scale

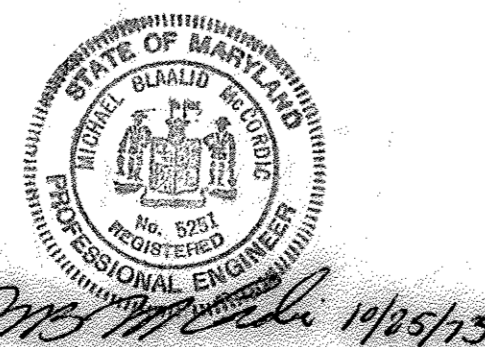
NOTES: 1. To be constructed in accordance with The Howard Co. Road Constr. Code and Specifications.
2. Placing of tack coat shall be installed immediately in advance of the placing of the Bituminous Concrete. See Howard Co. Constr. Code and Specifications #C-31-4-M.
3. Base will be primed in accordance with C-30-3 as provided in Howard Co. Road Constr. Code & Std. Specs.



TYPICAL PAVING SECTION THRU PARKING LOT
No Scale



STANDARD BARRIER CURB
IN ALL PARKING BAYS
No Scale



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 11/23/74
Thomas D. Harris

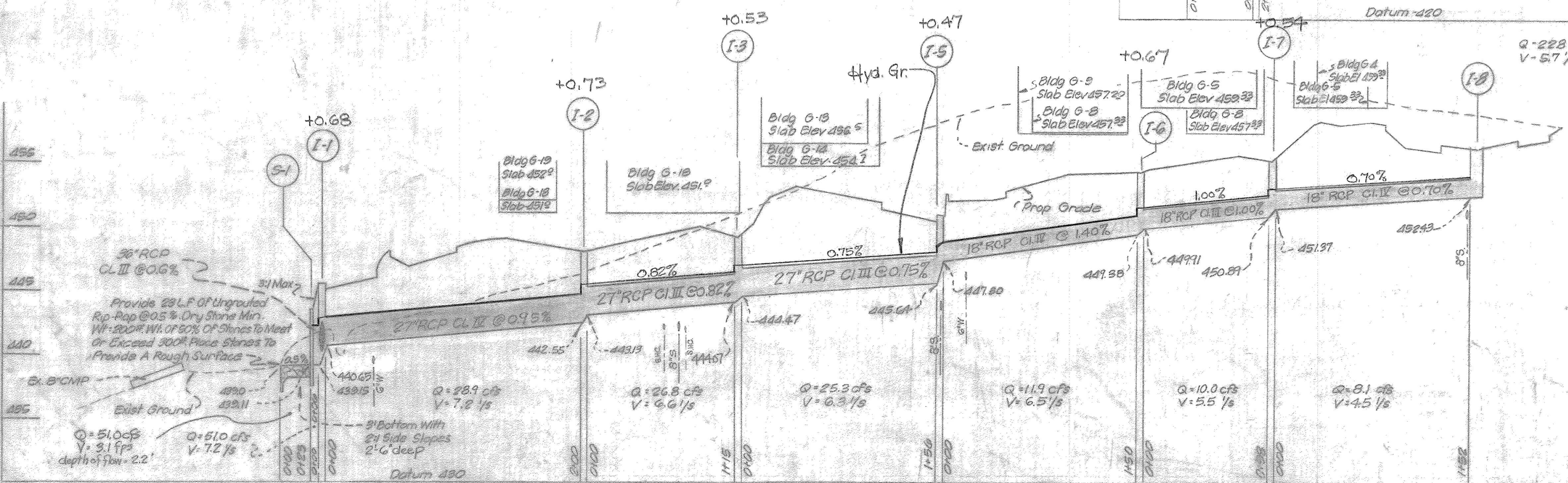
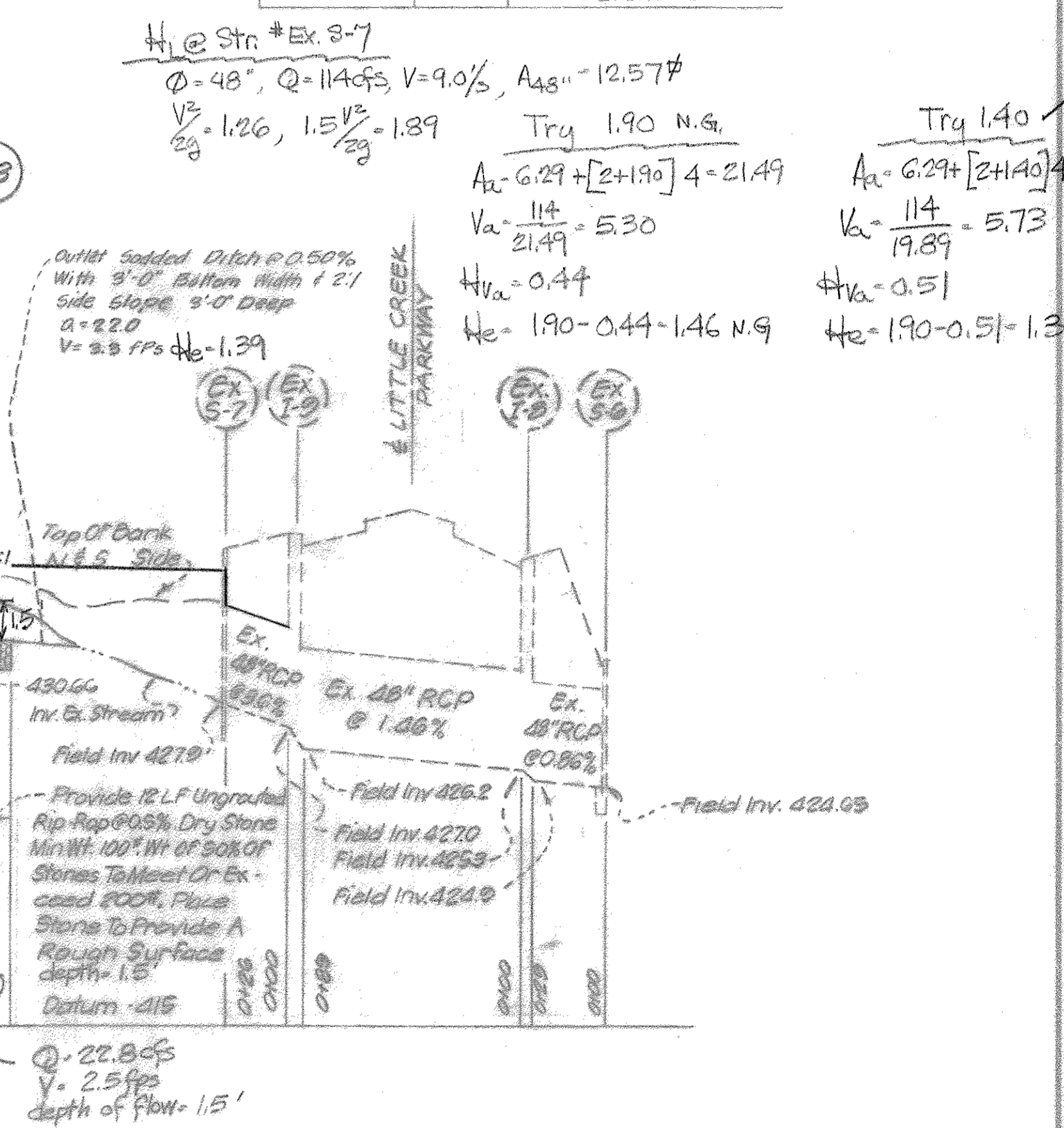
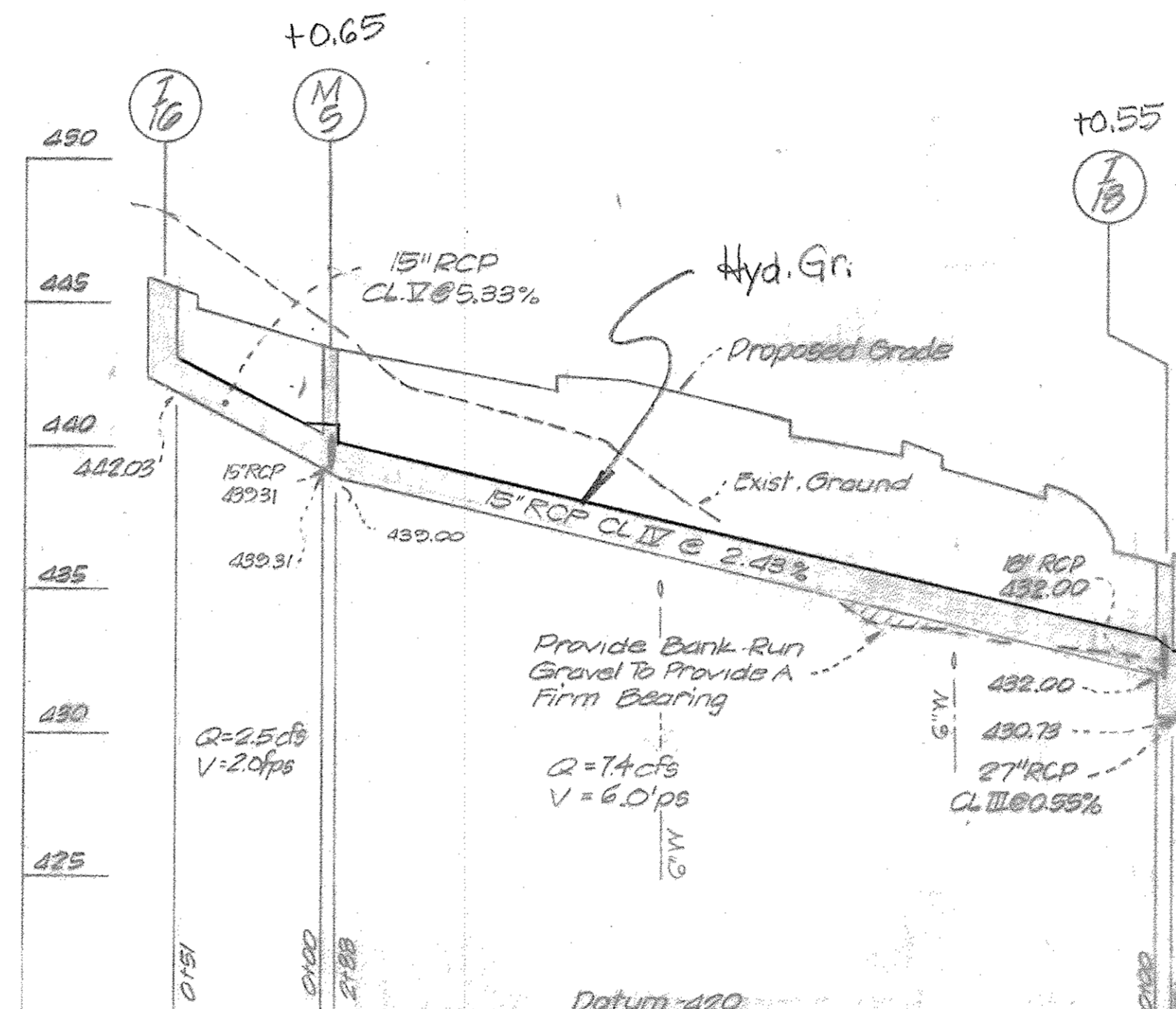
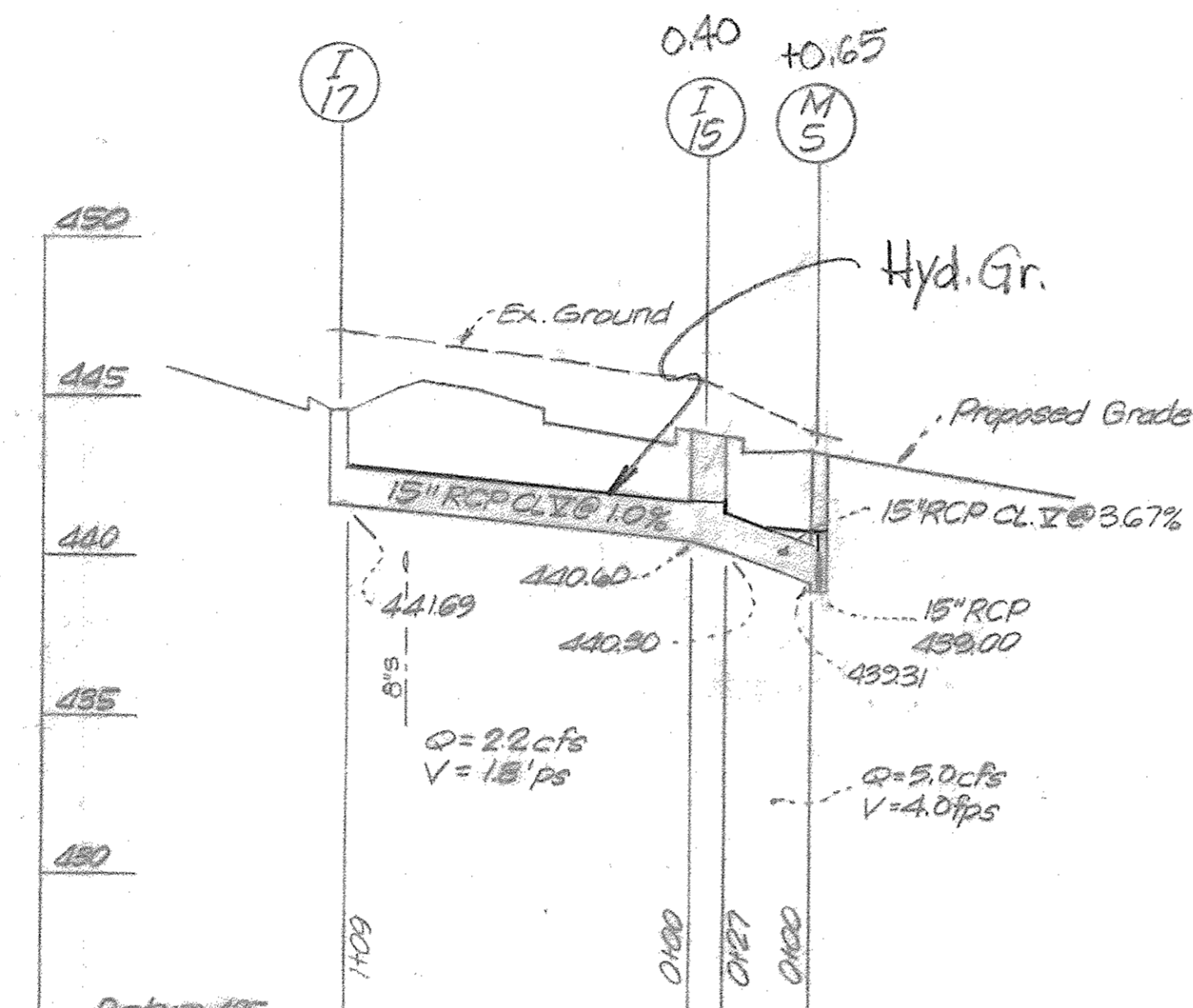
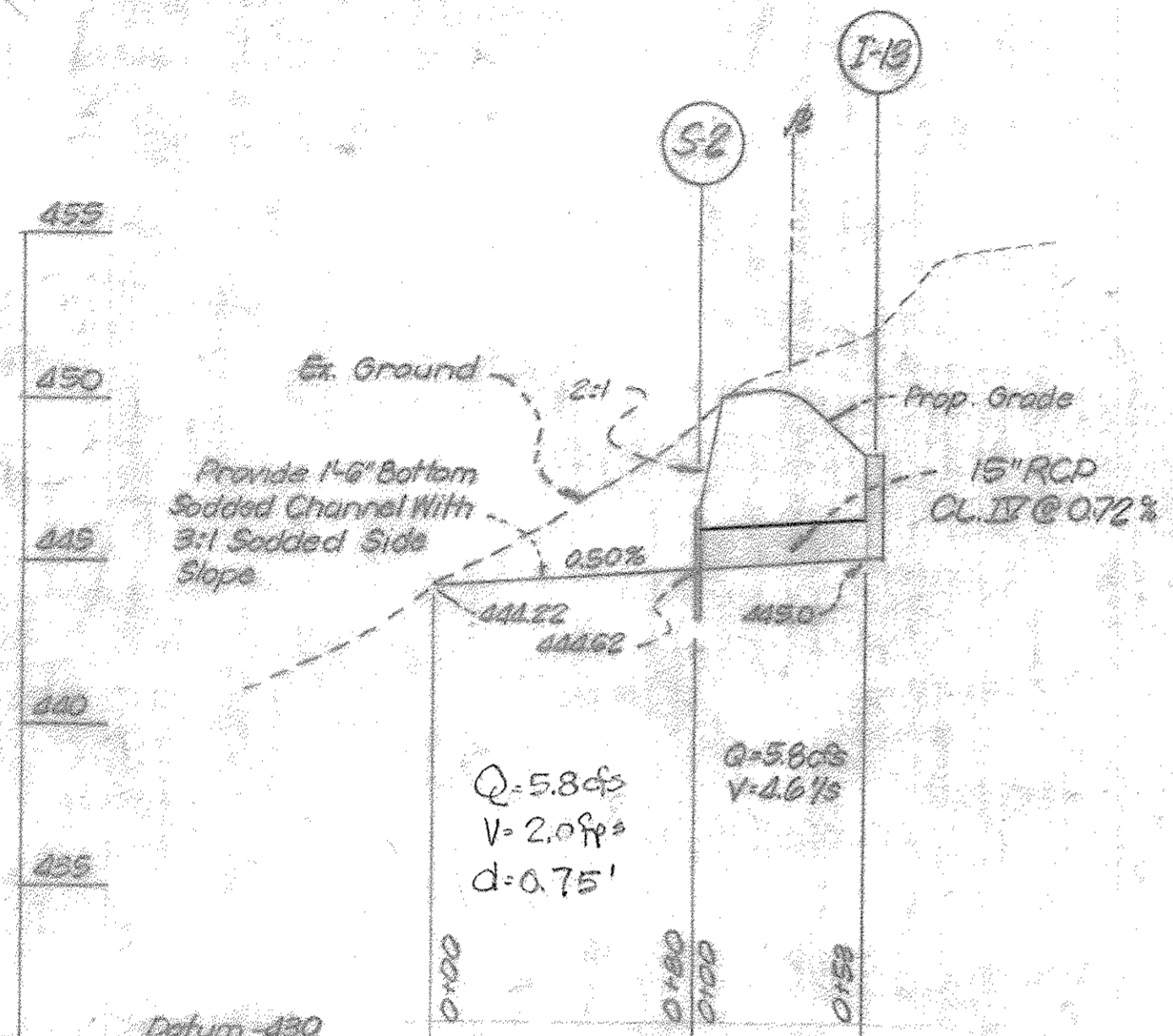
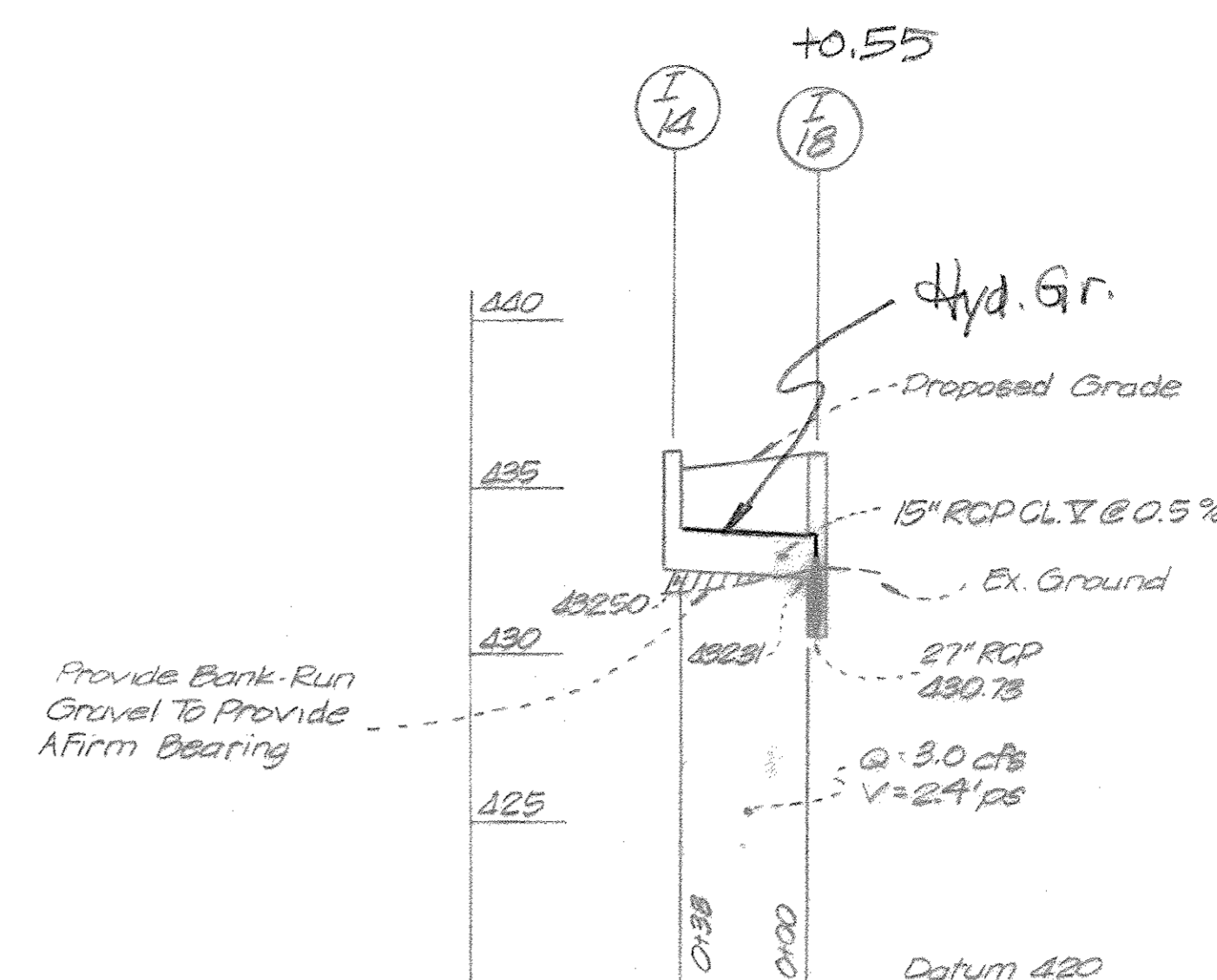
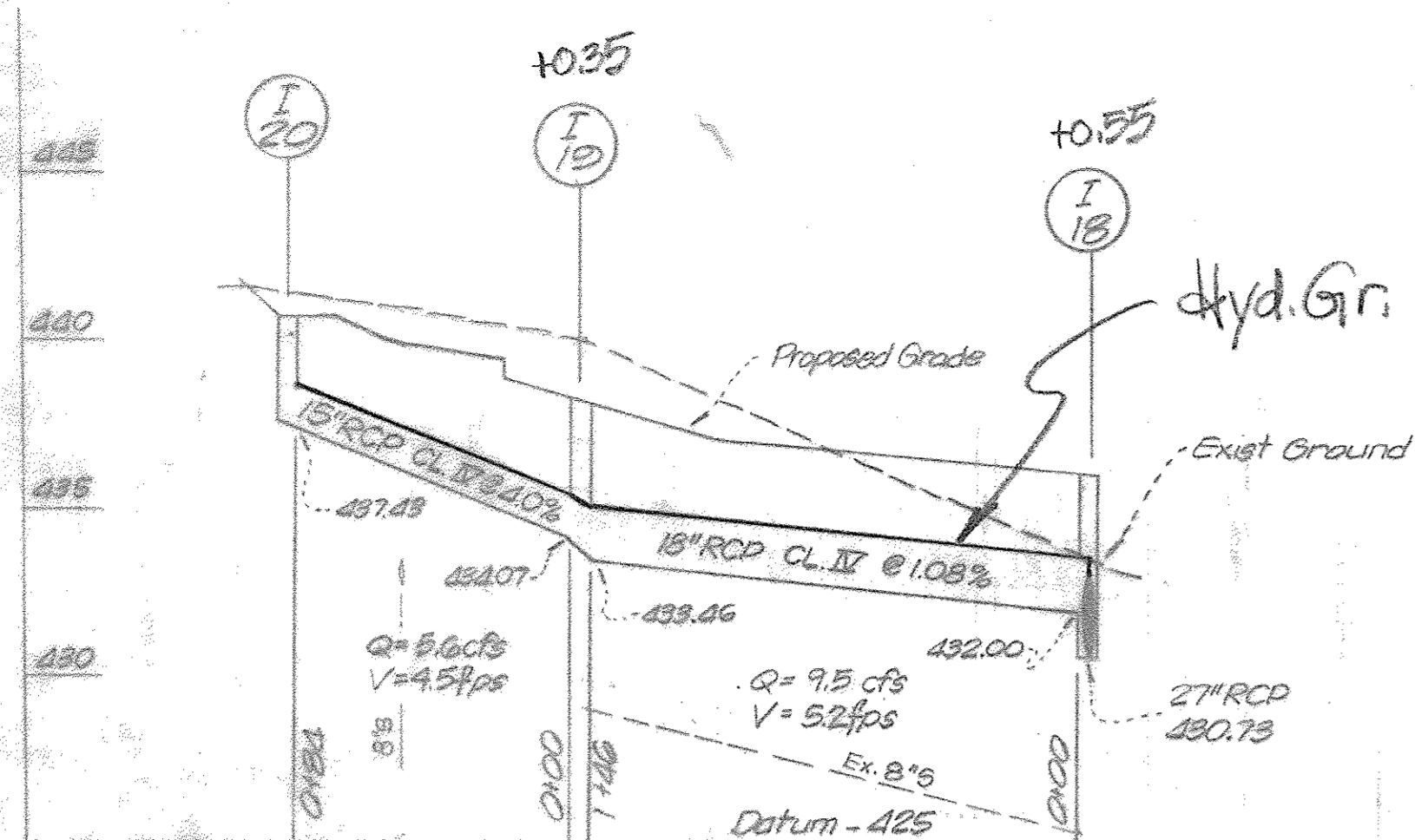
APPROVED: For Public Water & Public Sewage, Storm Drainage Systems & Public Roads Howard County Dept. of Public Works.
William A. Altman, Director
D. M. P. [Signature]
Chief Bureau of Highways
DATE 2/1/74
DATE 2/15/74

JOHNSON - McCORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
10750 COLUMBIA PIKE • SILVER SPRING, MD.
593-2990 20901

STORM DRAIN AND PAVING PLAN
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER: Matthew Phillips - Inc.
10750 Columbia Pike
Silver Spring, Md 20901
Phone 681-6200
DESIGN HSD SHEET 10 of 20
DATE June, 1979 JOB NO. 2-118-40
APPROVED SCALE: As Noted FILE NO. 2-118-40B

SDP 74-41C



STORM DRAIN PROFILES
 Scale: Hor 1"=50'
 Ver 1"=5'

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY

DATE 11/23/74
 [Signature]



M. M. Calo 4/15/73

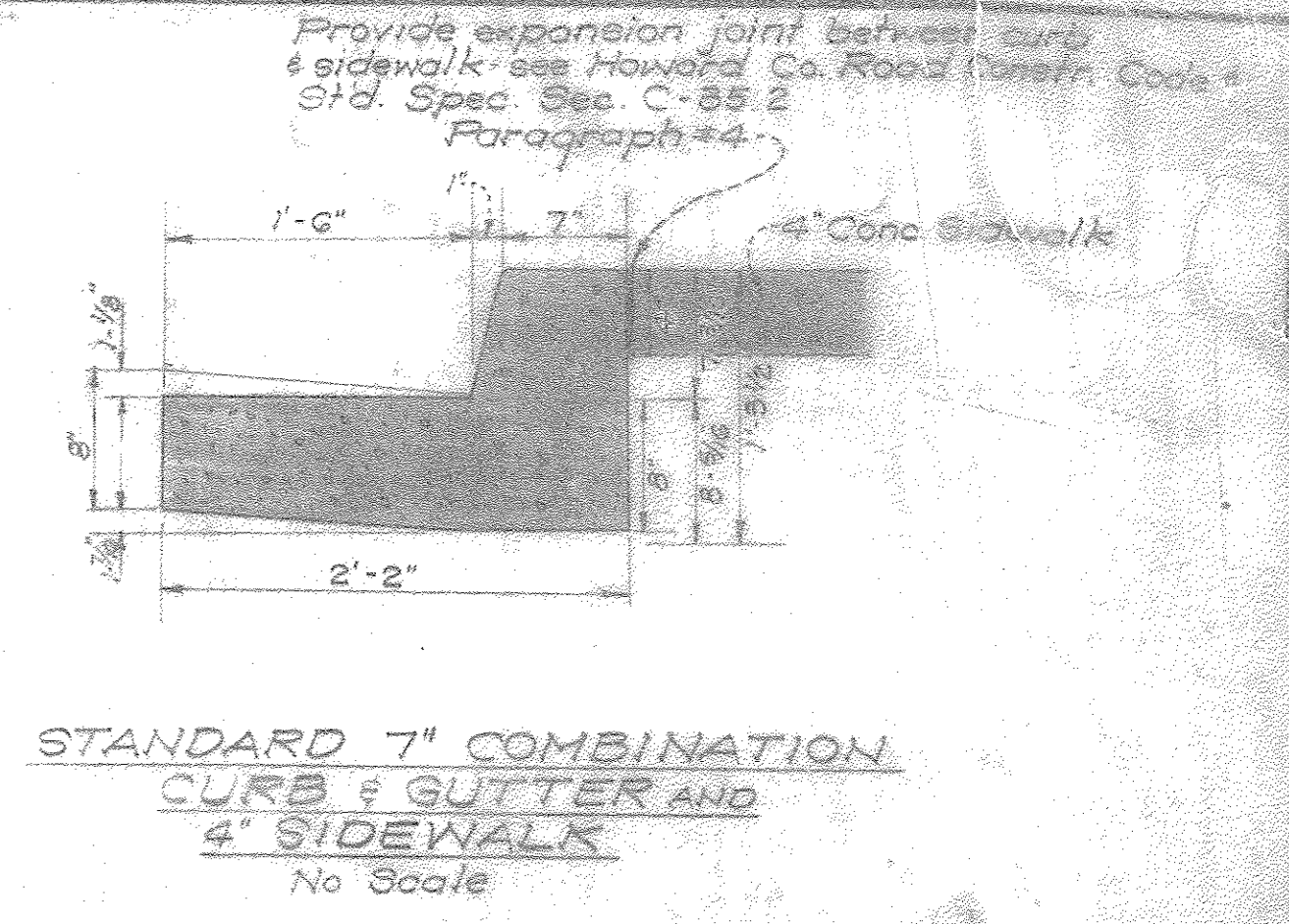
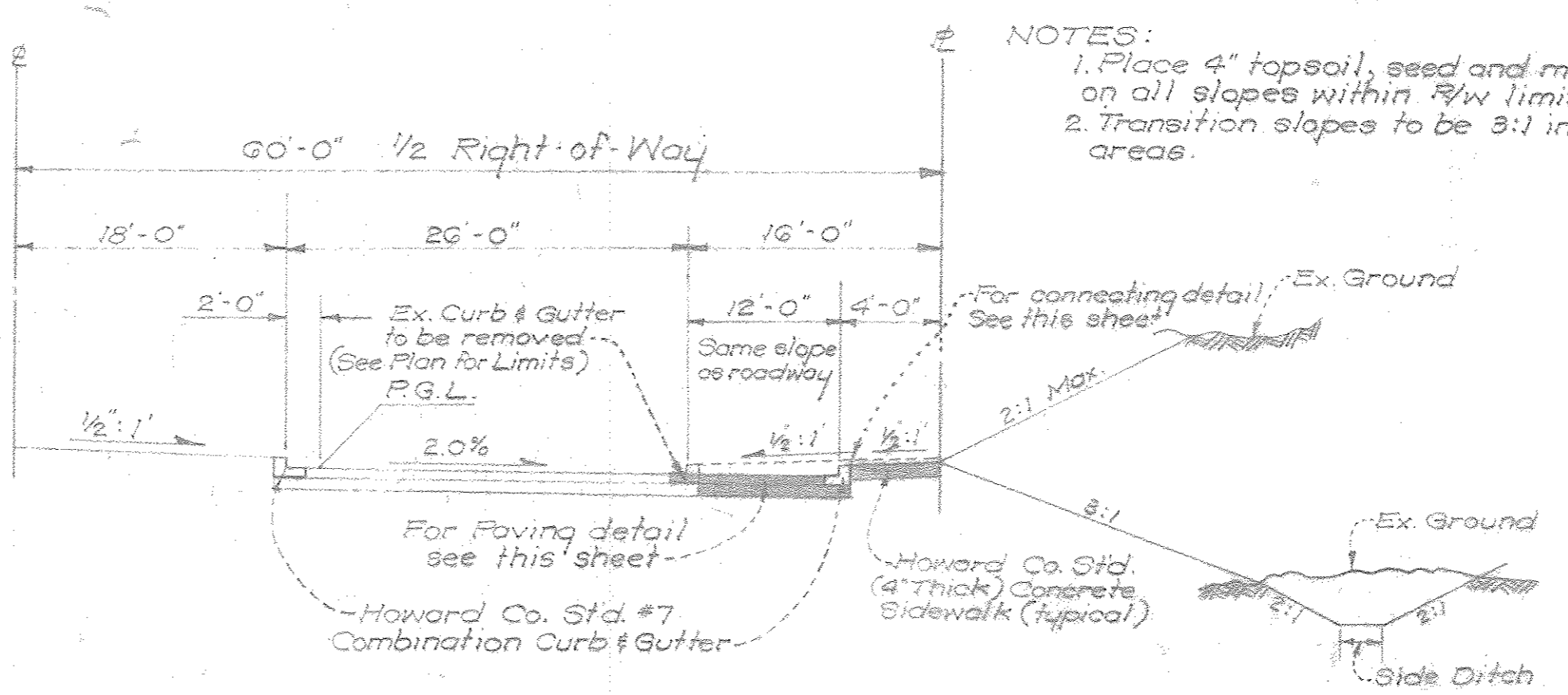
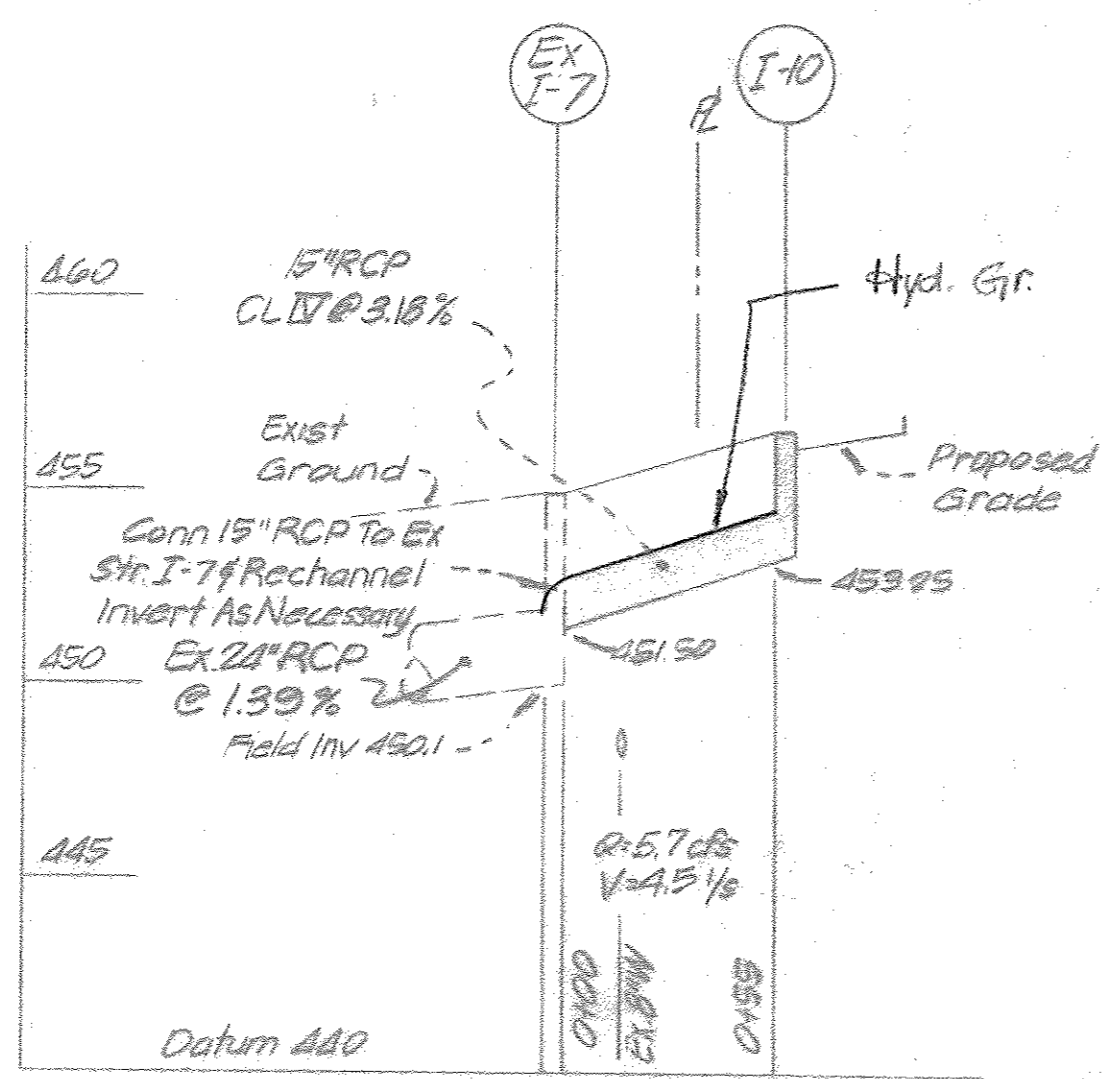
HYDRAULIC GRADIENT SHEET

APPROVED: For Public Water & Public Sewage, Storm Drainage Systems &
 Public Roads Howard County Dept. of Public Works.
 [Signature]
 Director
 Date 2/2/74
 [Signature]
 Chief Bureau of Highways
 Date 2/5/74

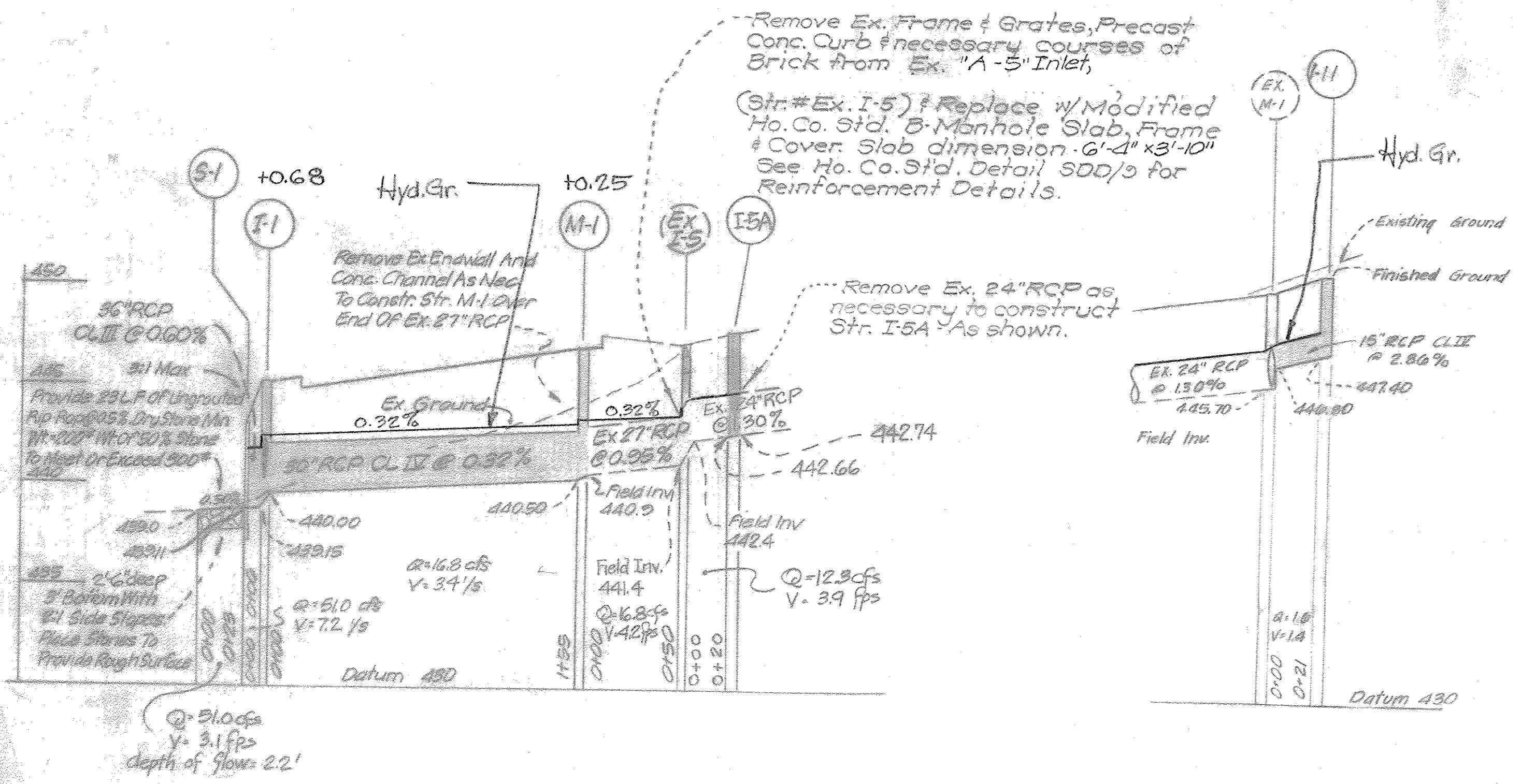
JOHNSON - MCCORDIC - THOMPSON
 ENGINEERS • PLANNERS • SURVEYORS
 10750 COLUMBIA PIKE • SILVER SPRING, MD.
 593-2990

STORM DRAIN AND PAVING PLAN
 VILLAGE OF CLARYS FOREST
 SECTION ONE - AREA I
COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

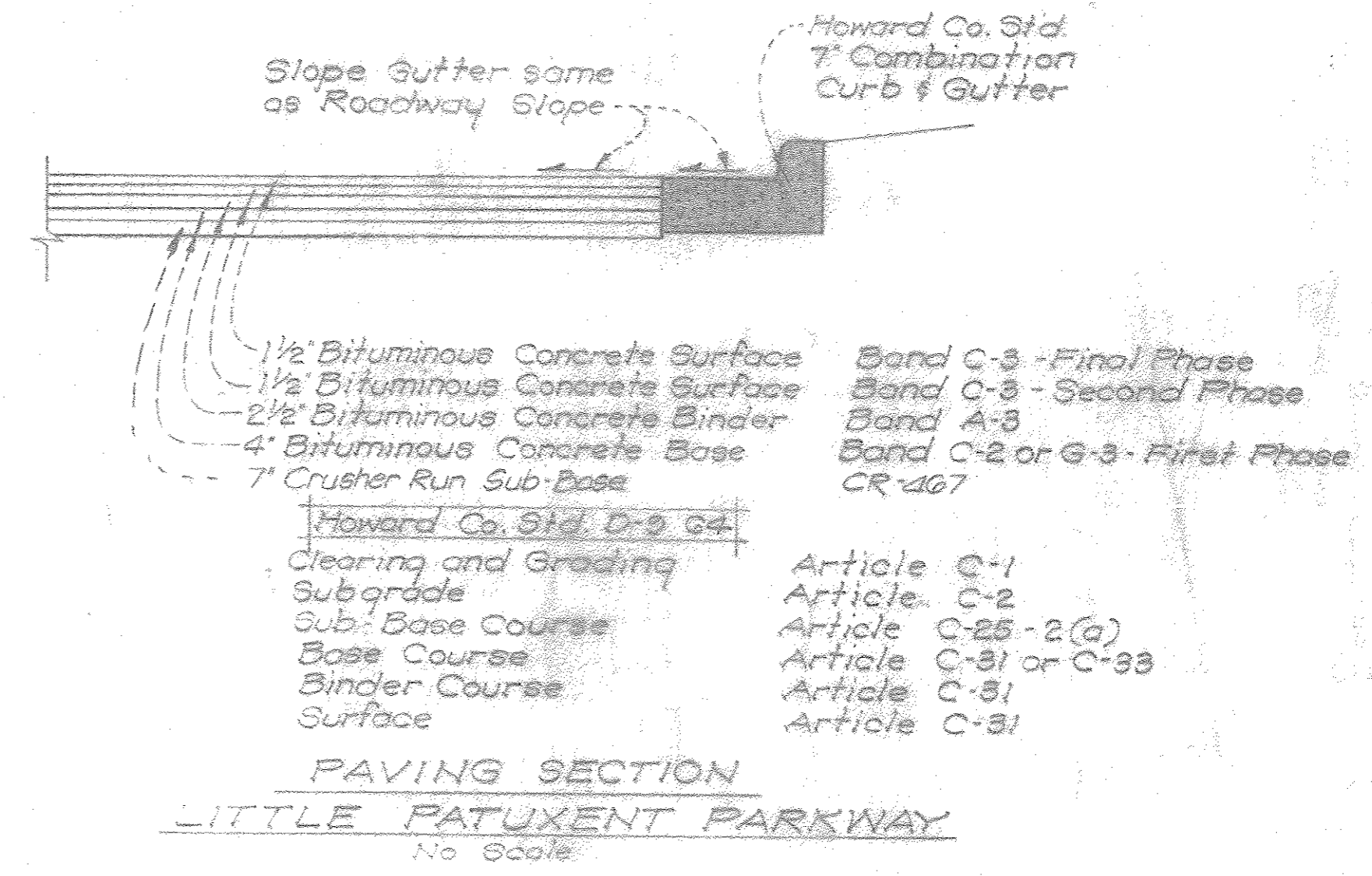
OWNER: Matthew - Phillips, Inc.
 10750 Columbia Pike
 Silver Spring, Maryland
 Phone: 681-6200
 DESIGN: H.B.D. SHEET 11 OF 20
 DRAFT: T.B.A. DATE: May 1973
 APPROVED: SCALE: 1"=50' FILE NO: 2-118-40-5



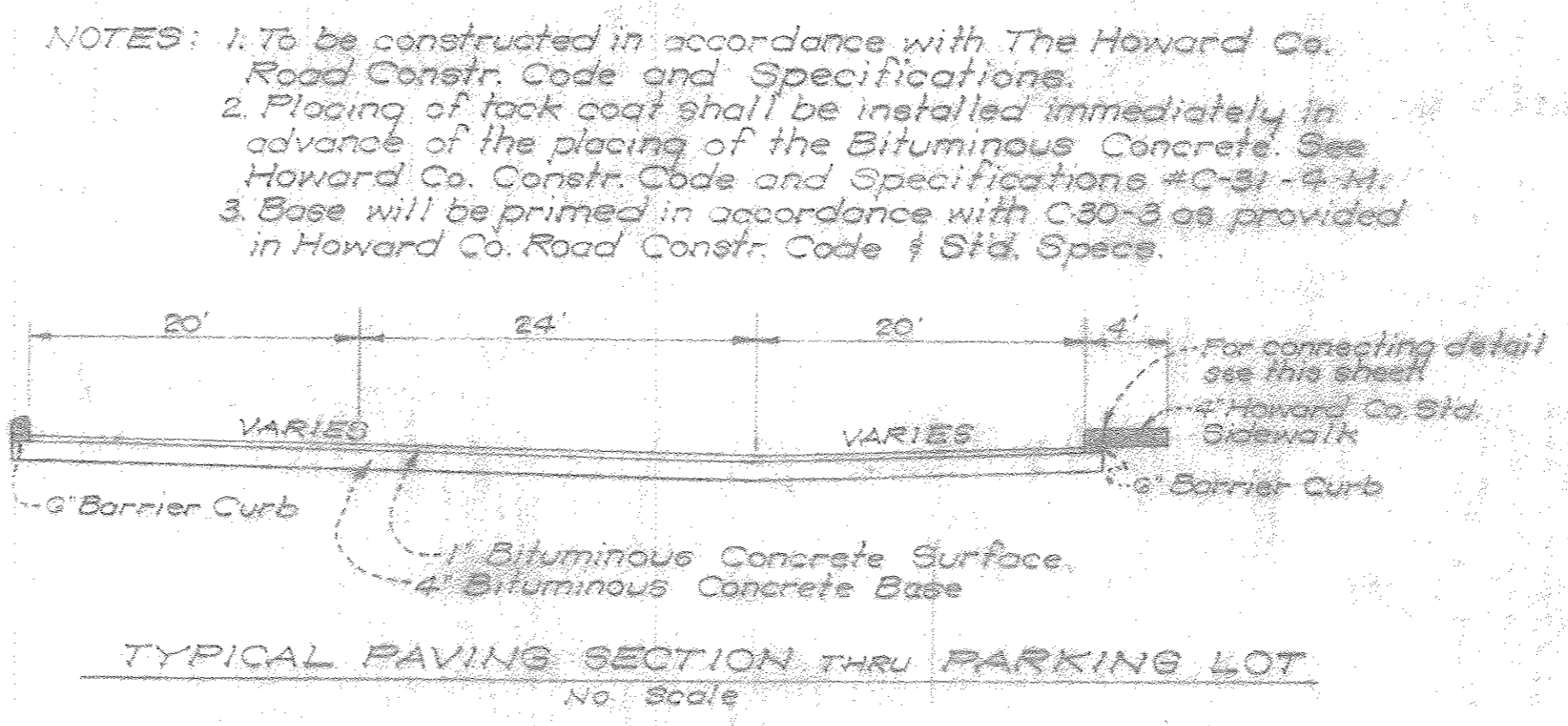
PARTIAL SECTION - DEACCELERATION LANE
LITTLE PATUXENT PARKWAY
Scale: 1"=10'



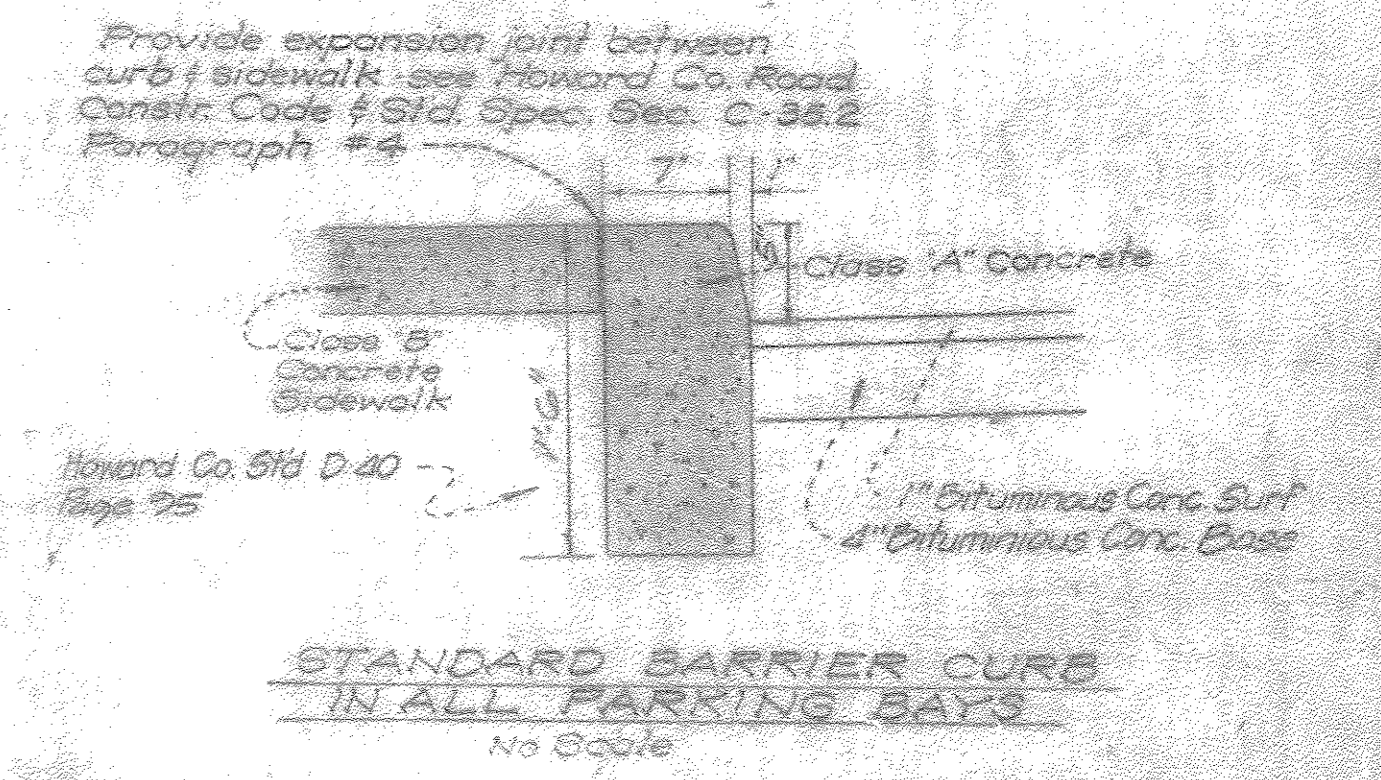
STORM DRAIN PROFILES
SCALE: HORIZ 1"=50'
VERT 1"=5'



PAVING SECTION
LITTLE PATUXENT PARKWAY
No Scale



TYPICAL PAVING SECTION THRU PARKING LOT
No Scale



STANDARD BARRIER CURB
IN ALL PARKING BAYS
No Scale

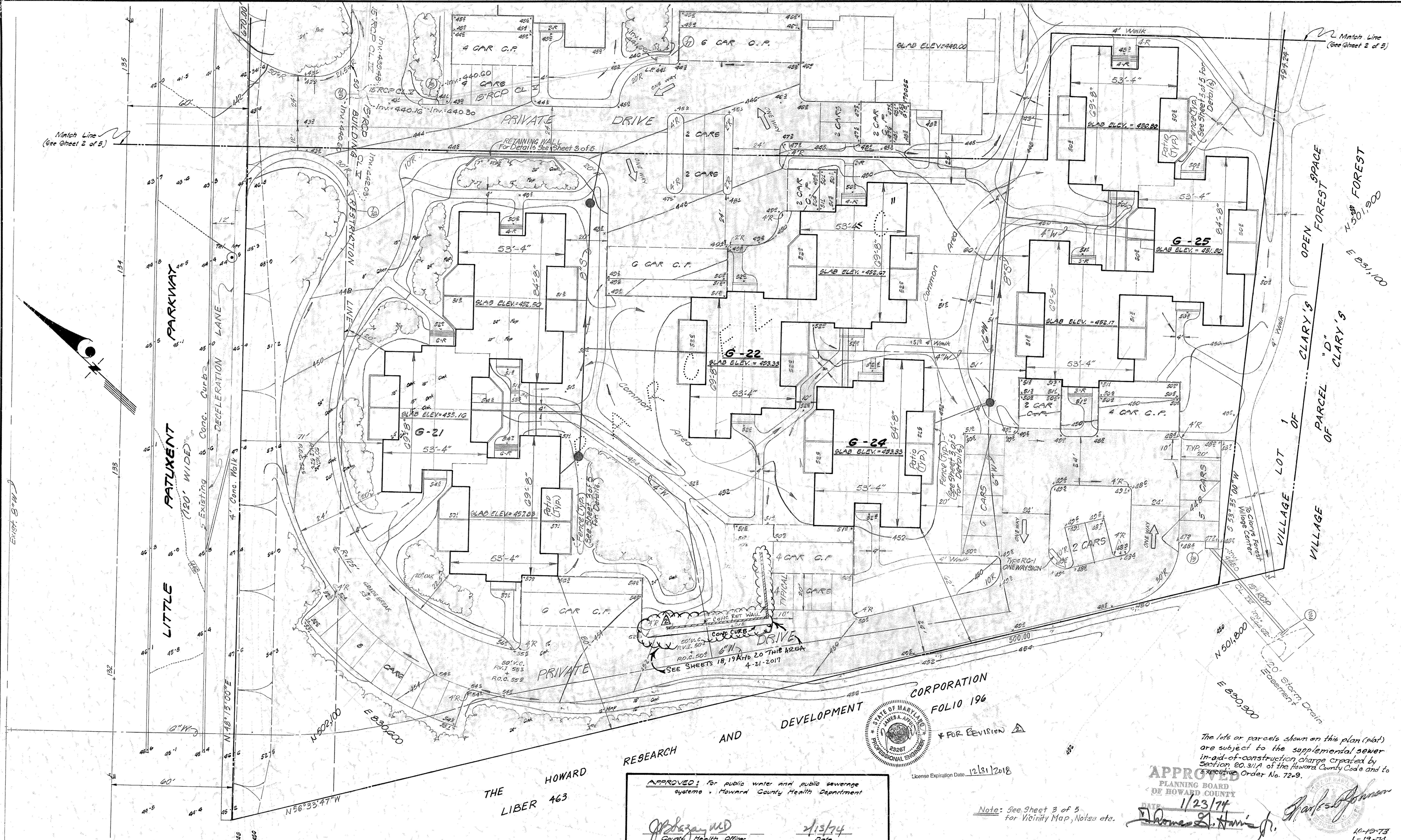
STATE OF MARYLAND
PROFESSIONAL ENGINEER
M.S. M... 1/25/73

APPROVED: For Public Water & Public Sewage, Storm Drainage
Systems & Public Roads Howard County Dept. of Public Works.
William J. Otton, Director
S. M. ... Chief Bureau of Highways
DATE: 2/3/74
DATE: 2/5/74

JOHNSON - MCCORDIC - THOMPSON
ENGINEERS PLANNERS SURVEYORS
10750 COLUMBIA PIKE SILVER SPRING, MD.
593-2990 20901

STORM DRAIN & PAVING PLAN
VILLAGE OF CLARYS FOREST
SECTION ONE - AREA I
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 1/23/74
THOMAS H. ...
HYDRAULIC GRADIENT SHEET
OWNER: Matthew Phillips, Inc.
10750 Columbia Pike
Silver Spring, Md. 20901
Phone 681-6200
DESIGN: HSD
SHEET: 12 OF 20
DATE: June, 1972
JOB NO: 2-118-70
SCALE: AS SHOWN
FILE NO: 107-100



APPROVED: For public water and public sewerage storm drainage systems and public roads
 Howard County Department of Public Works.
 Director: *William A. Alt* 2/17/74
 Chief Bureau of Highways: *D. P. McKeon* 2/15/74

APPROVED: Howard County office of Planning & Zoning
 Planning Director: *James L. Harris* 2-14-74
 Chief, Div. of Land Develop. & Transporta. Planning: *J. P. ...* 2/14/74

REVISIONS
 1. Revised As Per Howard Co. D.P.W. 10-10-73 R.6.3
 2. REVISED TO SHOW REDLINE ADDITION CONC RET WALL TO REPLACE WOODEN RET. WALL - 4-21-17 A.K.M.

JOHNSON - MCCORDIC - THOMPSON
 ENGINEERS • PLANNERS • SURVEYORS
 1620 ELTON ROAD • SILVER SPRING, MD.
 434-7000 20903

DEVELOPMENT PLAN
 VILLAGE OF CLARY'S FOREST
 SECTION ONE - AREA I
 PARCEL "G" & "D"
COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER: Matthews - Phillips Inc.
 BUILDER: 10750 Columbia Pike Suite 408
 Silver Spring, Md. 20901
 DEVELOPER: 301 681-6200
 DESIGN: M.W.M. SHEET 13 OF 20
 DRAFT: G.T.D. DATE: 1973 JOB NO: 2-118-21
 APPROVED: M.W.M. SCALE: 1" = 20' FILE NO: 2-118-21-B

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 LIBER 463
 APPROVED: For public water and public sewerage systems, Howard County Health Department
 County Health Officer: *William A. Alt* 2/13/74
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 JAMES A. ...
 License Expiration Date: 12/31/2018
 * FOR REVISION *

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 1/23/74
 Note: See Sheet 3 of 5 for Vicinity Map, Notes etc.
 The lots or parcels shown on this plan (part) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.31A of the Howard County Code and to Executive Order No. 72-9.

NOTE: See Sheet 3 of 5 for
Vicinity Map, Notes, etc.

APPROVED: For public water and public sewerage
systems - Howard County Health Department

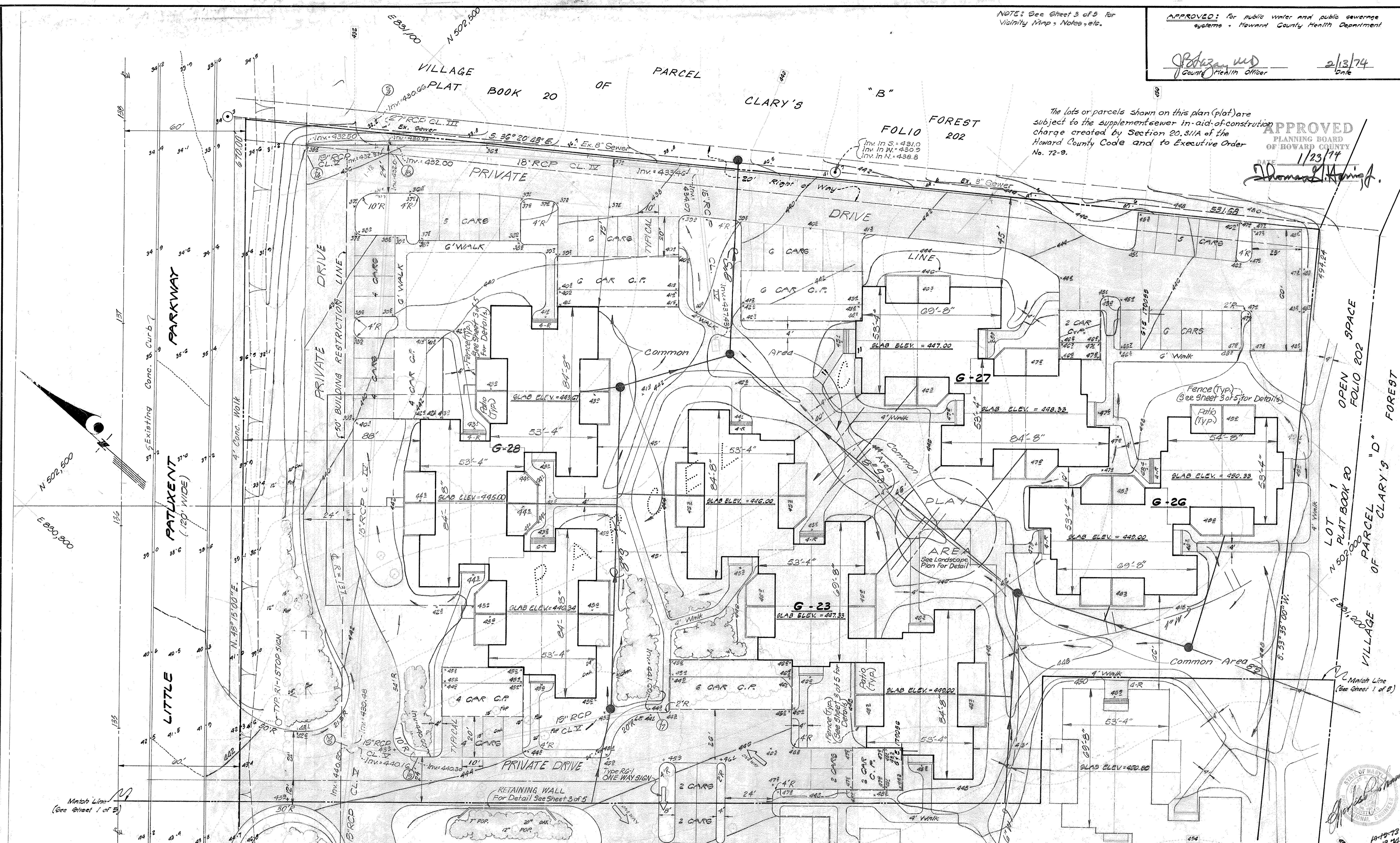
John D. ...
County Health Officer

2/13/74
Date

The lots or parcels shown on this plan (plot) are
subject to the supplement sewer in-aid-of-construction
charge created by Section 20.311A of the
Howard County Code and to Executive Order
No. 72-9.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 1/23/74

Thomas L. ...



APPROVED: For public water and public sewerage
storm drainage systems and public roads
Howard County Department of Public Works.
William A. Altman
Director
2/13/74
Date
G. M. ...
Chief Bureau of Highways
2/15/75
Date

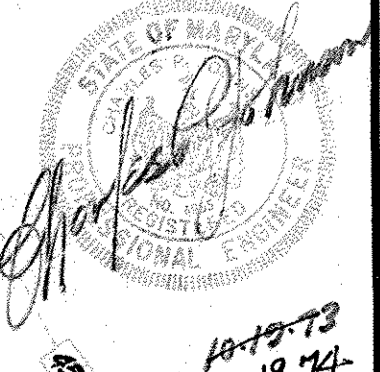
APPROVED: Howard County office of Planning &
Zoning
Thomas L. ...
Planning Director
2-14-74
Date
W. ...
Chief, Div. of Land Develop. & Transporta. Planning
2/14/74
Date

REVISIONS
1. Revised As Per Howard Co. D.P.W. - 10-10-73 - R.G.B.
2. Revised Elev. Center Bldg. Group G-28 12-20-73
M.W.M.

JOHNSON - MCCORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
1620 ELTON ROAD • SILVER SPRING, MD.
434-7000 20903

DEVELOPMENT PLAN
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
PARCEL 'C' & 'D'
COLUMBIA
5 TH ELECTION DISTRICT
HOWARD COUNTY - MARYLAND

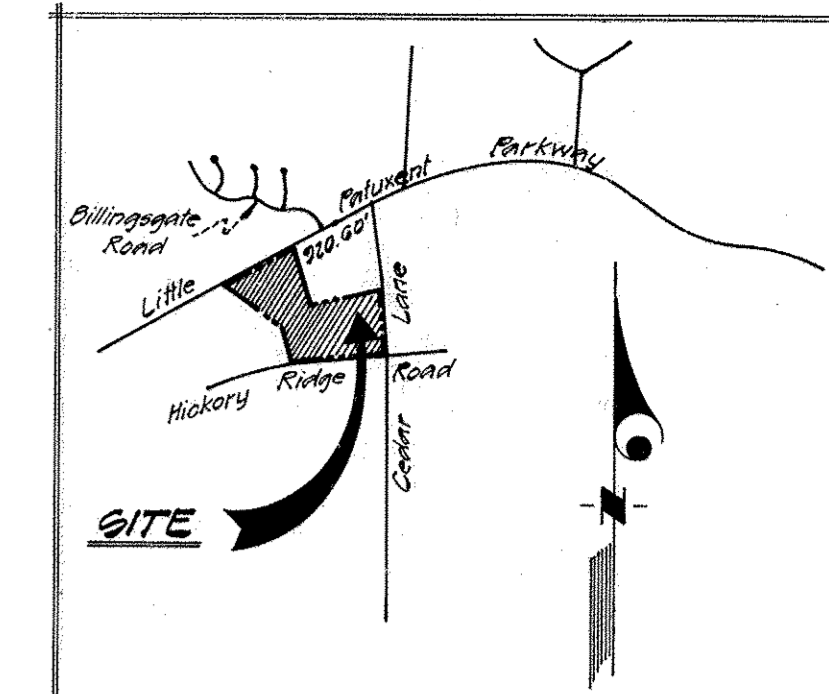
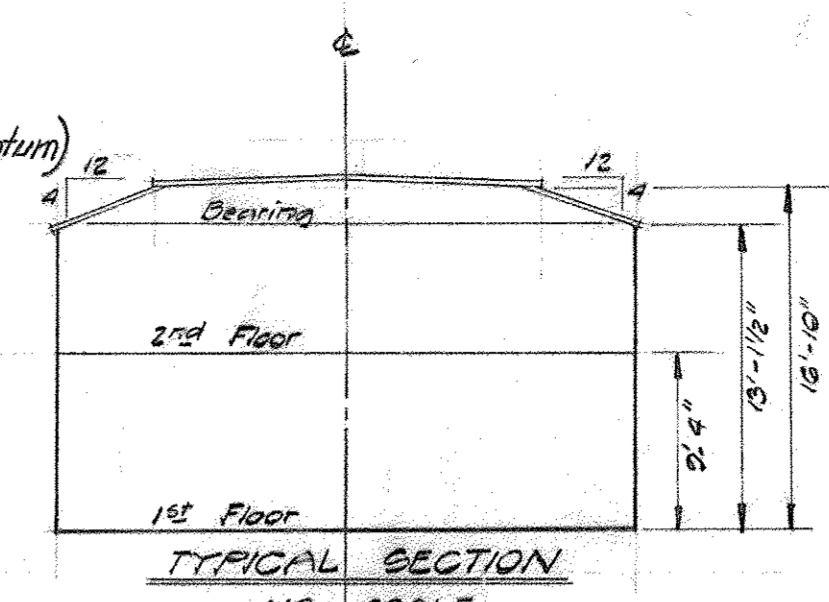
OWNER: Matthews - Phillips Inc.
BUILDER: 10750 Columbia Pike Suite 408
Silver Spring, Md. 20901
DEVELOPER: 301 681-6200
DESIGN: M.W.M. SHEET 14 OF 20
DRAFT: S.T.O. DATE: 1973 JOB NO: 2-113-21
APPROVED: M.W.M. SCALE: 1" = 20' FILE NO: 2-113-21-B



SDP 74-41c

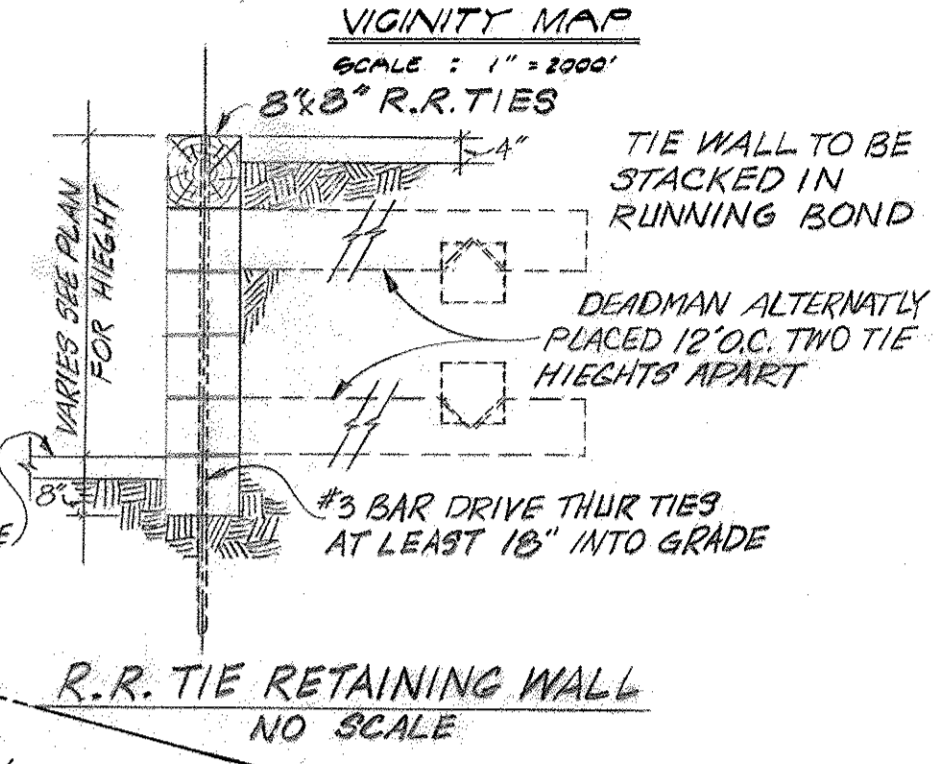
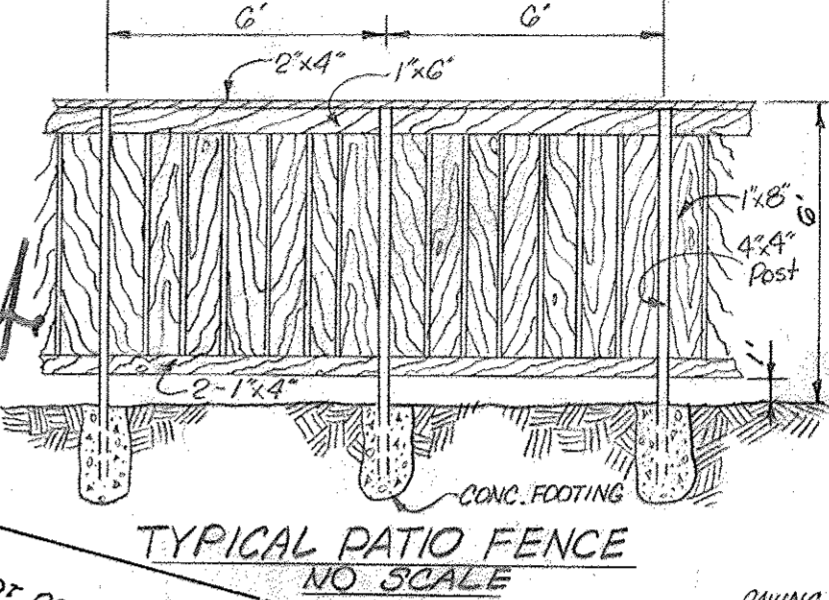
NOTES:

1. Zone : New Town (Apartment Land Use).
2. Total Area = 17,7607 ± (Parcel "C" ± 10').
3. Total No Units Allowed = 266 ; Shown = 208
4. Total No Parking Spaces Required = 312 ; Shown = 384 (178 Open, 142 Carports, 64 Tandem)
5. Property Located on Tric Map No 35 (Block "B" Parcels 281-C & 281-D)
6. Plat Reference: Plat Book 20, Folio 202 & 203.
7. Final Development Plan Map Reference 108 A.
8. Minimum Square Foot Floor Area : Unit W/A Type Bedroom = 1,085 ± ; Unit W/B Type Bedroom = 1,385 ±
9. Building Coverage; Permitted 30%, Shown 19.4% or 150,355 ±
10. Concept Plan approved by Howard Co. Planning Board Dec. 13, 1972
11. Signs as shown on plan to be installed in accordance with The Manual on Uniform Traffic Control Devices, 1971 Edition.

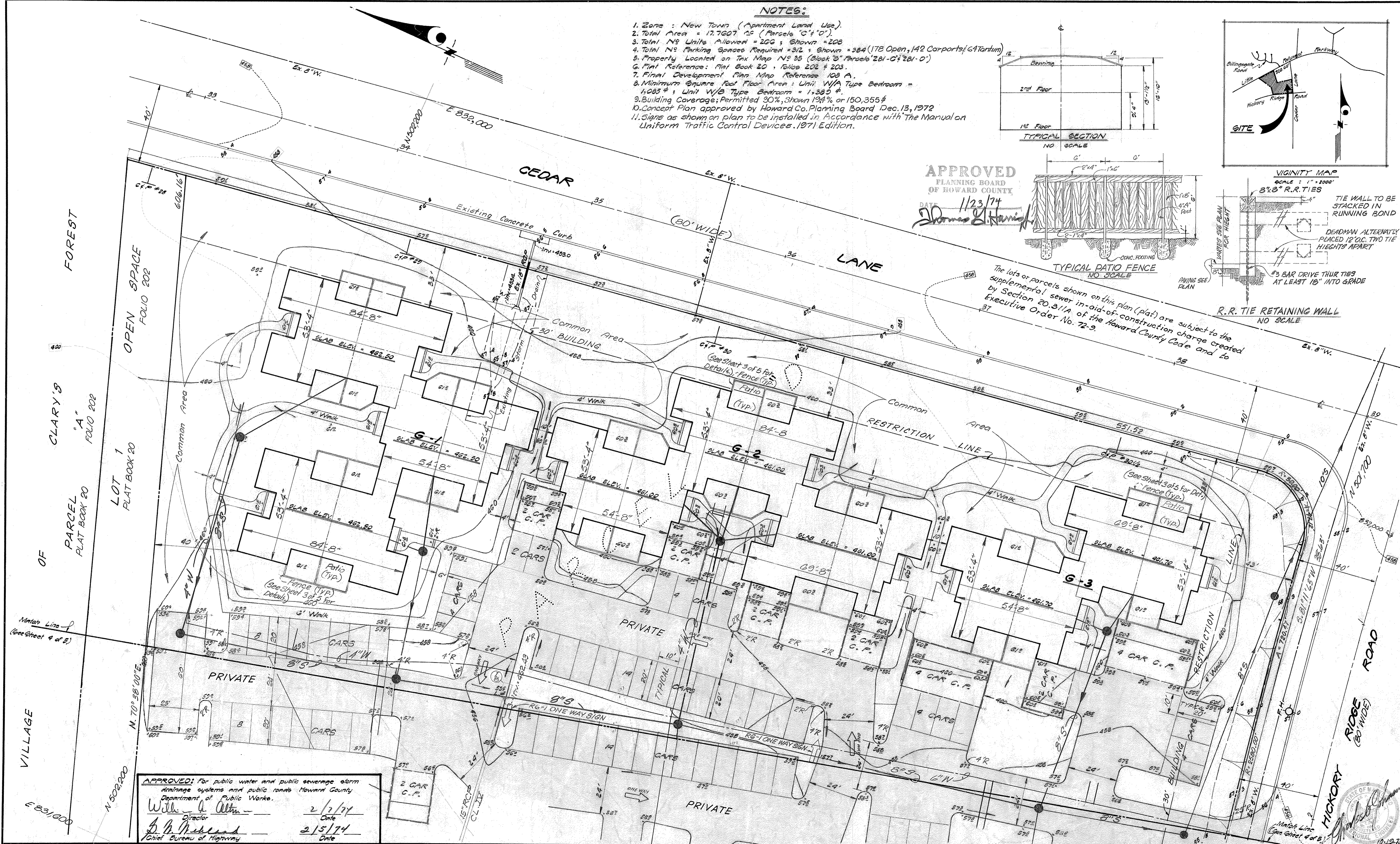


APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE: 1/23/74
James B. Harney



The lots or parcels shown on this plan (plat) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.311A of the Howard County Code and to Executive Order No. 72-9.



APPROVED: for public water and public sewerage storm drainage systems and public roads Howard County Department of Public Works.
W. A. Altman 2/2/74 Date
J. P. McKeel 2/5/74 Date
Chief Bureau of Highway

APPROVED: for public water and public sewerage systems, Howard County Health Department
[Signature] 2/13/74 Date
County Health Officer

APPROVED: Howard County office of Planning & Zoning
James B. Harney 2-14-74 Date
[Signature] 2/14/74 Date
Chief, Div. of Land Develop. & Transportation Planning

REVISIONS
1. Revised As Per Howard Co. D.P.W.-10-10-73 - R.B.B.

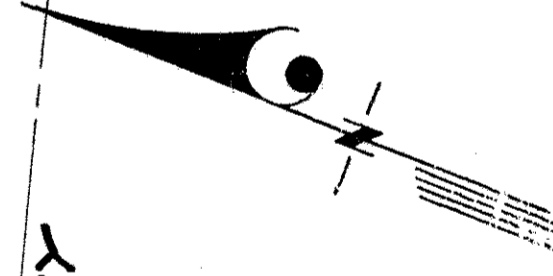
JOHNSON - MCCORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
1620 ELTON ROAD • SILVER SPRING, MD.
434-7000 20903

DEVELOPMENT PLAN
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
PARCEL "C" & "D"
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY - MARYLAND

OWNER: Matthews - Phillips Inc.
BUILDER: 10760 Columbia Pike Suite 408 Silver Spring - MD 20901
DEVELOPER: 301 601-6200
DESIGN: M.W.M. SHEET 15 OF 20
DRAFT: G.T.P. DATE: 1973 JOB NO. 2-13-21
APPROVED: M.W.M. SCALE: 1" = 20' FILE NO. 2-13-21-B



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 11/23/74
Thomas D. Hamrick



REVISIONS:
1. Revised as per Howard Co. D.P.W. - 10-10-78 RBS
The lots or parcels shown on this plan (plots) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.811A of the Howard County Code and to Executive Order No. 72-9.

Note: See Sheet 3 of 5 for Vicinity Map, Notes, etc.

APPROVED: For public water and public sewerage storm drainage systems and public roads
Howard County Department of Public Works
William A. Altman Director 2/2/74 Date
A. M. McKeand Chief Bureau of Highways 2/15/74 Date

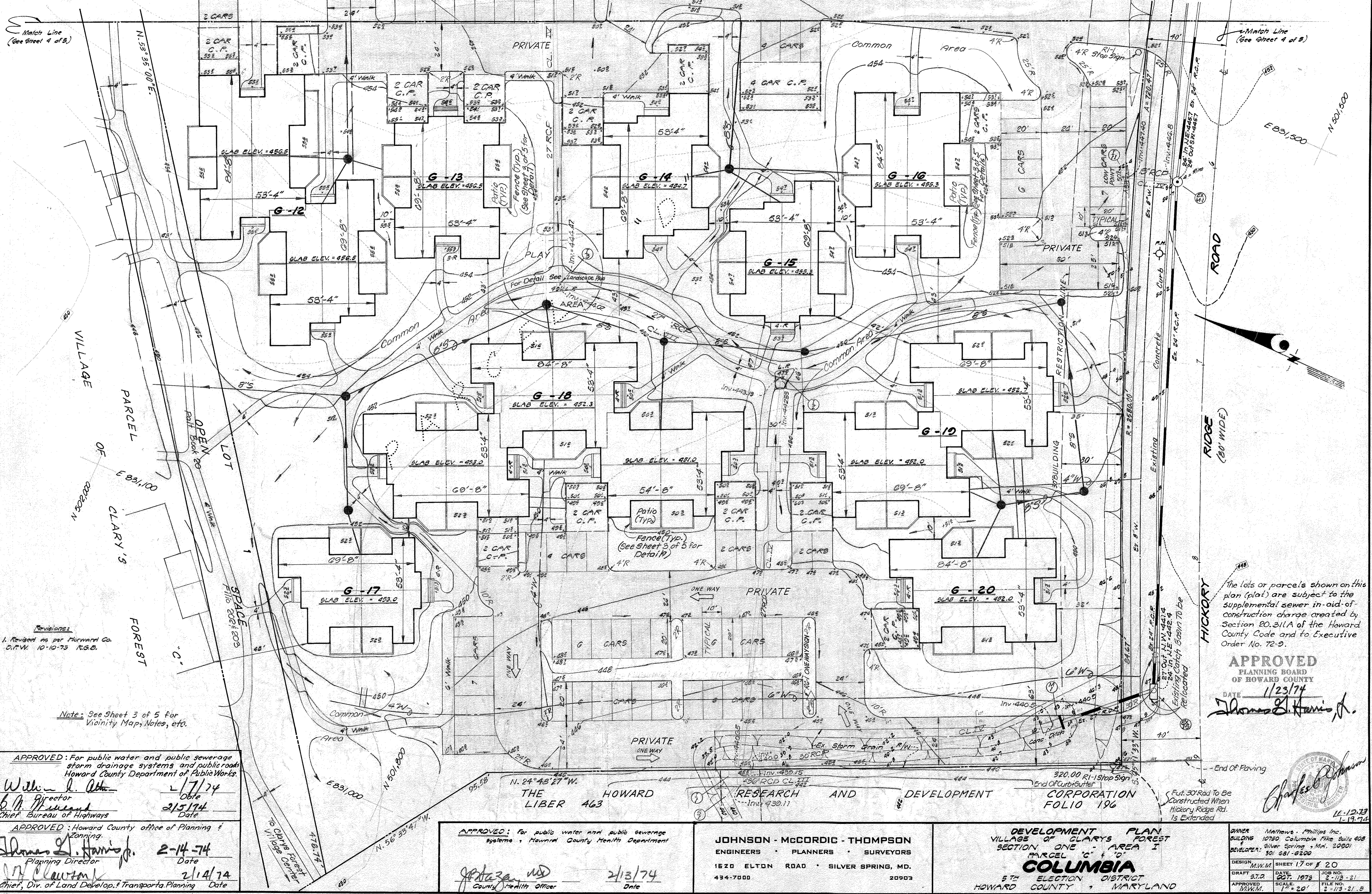
APPROVED: Howard County office of Planning & Zoning.
Thomas D. Hamrick Planning Director 2-14-74 Date
V.N. Clawson Chief, Div. of Land Develop. & Transport. Planning 2/14/74 Date

APPROVED: For public water and public sewerage systems, Howard County Health Department
J. [Signature] County Health Officer 2/13/74 Date

JOHNSON - MCCORDIC - THOMPSON
ENGINEERS • PLANNERS • SURVEYORS
1620 ELTON ROAD • SILVER SPRING, MD.
434-7000 20903

DEVELOPMENT PLAN
VILLAGE OF CLARY'S FOREST
SECTION ONE - AREA I
PARCEL "C" & "D"
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER Mathews - Phillips Inc.
BUILDER 10750 Columbia Pike Suite 408
SILVER SPRING, Md. 20901
DEVELOPER Silver Spring, Md. 20901
DESIGN M.W.M. SHEET 16 OF 20
DATE 2-13-74 JOB NO. 2-13-21
APPROVED S.T.D. 1973 FILE NO. 17-20
SCALE: 1" = 20' 2-13-21



Match Line (See Sheet 4 of 5)

Match Line (See Sheet 4 of 5)

Revisions
1. Revised as per Howard Co. D.P.W. 10-10-73 R.G.B.

Note: See Sheet 3 of 5 for Vicinity Map, Notes, etc.

The lots or parcels shown on this plan (plot) are subject to the supplemental sewer in-aid-of-construction charge created by Section 20.311A of the Howard County Code and to Executive Order No. 72-9.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE 1/23/74
James L. Harris, Jr.

APPROVED: For public water and public sewerage storm drainage systems and public roads
Howard County Department of Public Works.

William L. Allen, Director, 2/7/74
B. A. McCreary, Chief, Bureau of Highways, 2/5/74

APPROVED: Howard County office of Planning & Zoning.
James L. Harris, Jr., Planning Director, 2-14-74
John Newton, Chief, Div. of Land Develop. & Transporta. Planning, 2/14/74

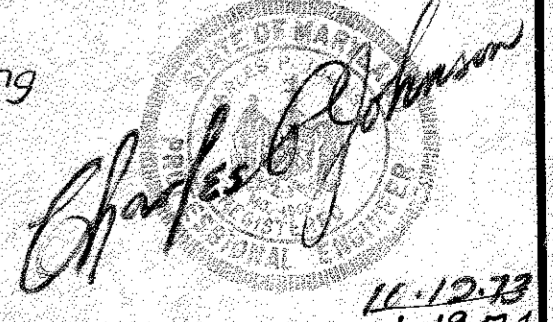
APPROVED: For public water and public sewerage systems, Howard County Health Department

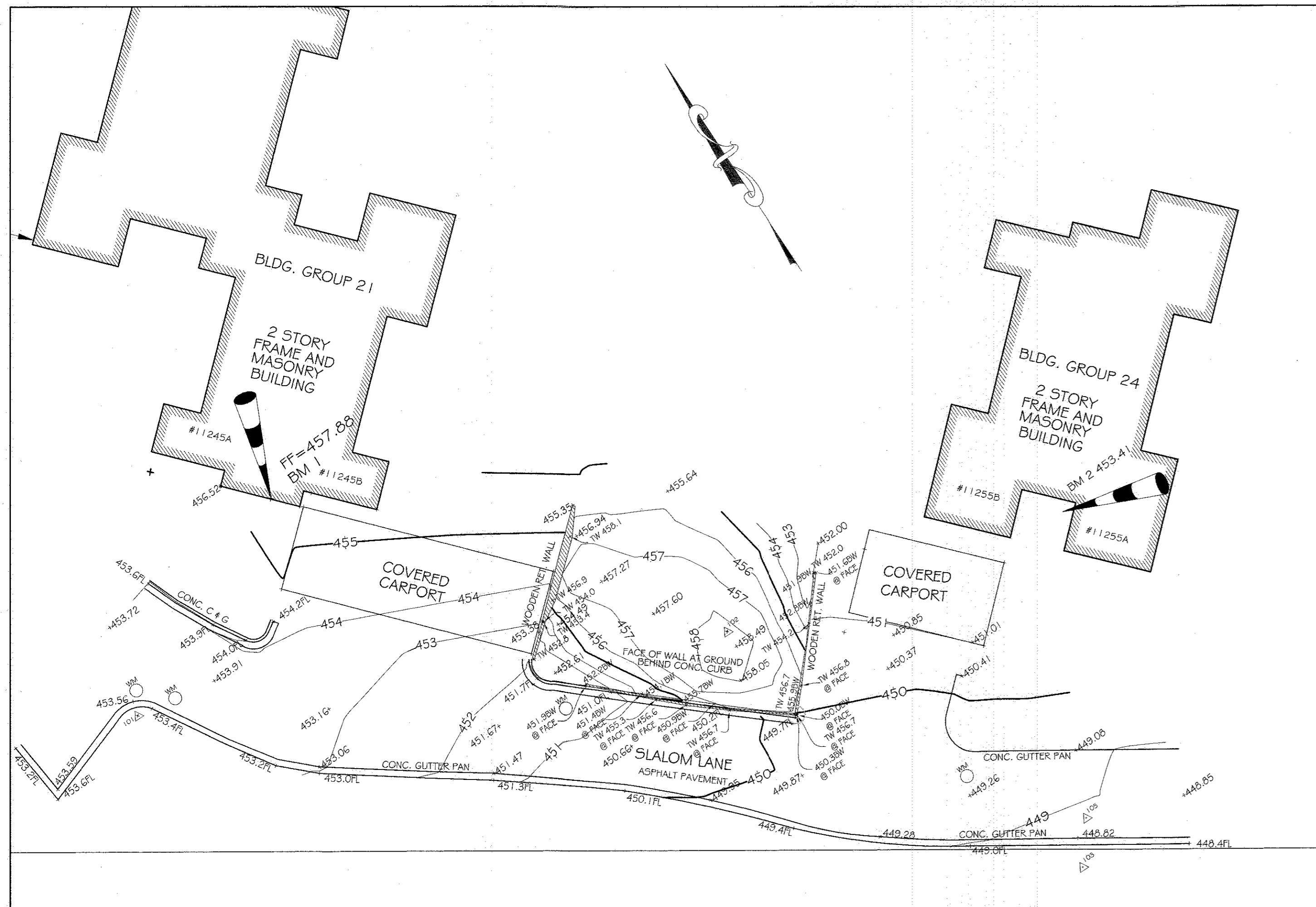
John A. ... County Health Officer, 2/13/74

JOHNSON - MCCORDIC - THOMPSON
ENGINEERS - PLANNERS - SURVEYORS
1620 ELTON ROAD • SILVER SPRING, MD.
434-7000 20903

DEVELOPMENT PLAN
OF CLARYS FOREST
SECTION ONE - AREA I
PARCEL 'C' & 'D'
COLUMBIA
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER: Matthews - Phillips Inc.
BUILDING: 10750 Columbia Pike, Suite 408
SILVER SPRING, Md. 20901
DEVELOPER: Silver Spring, Md. 20901
301 281-8200
DESIGN: M.V.M. SHEET 17 OF 20
DRAFT: S.T.D. DATE: 2-11-74 JOB NO.: 2-113-21
APPROVED: M.V.M. SCALE: 1" = 20' FILE NO.: 2-113-21-B



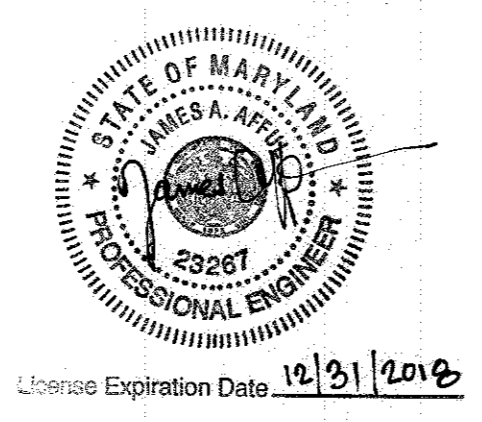


EXISTING CONDITIONS



DESIGN NOTES:

1. Contractor to brace and stabilize excavation to prevent undermining or damage to existing concrete curb and Slalom Lane while performing this work.
2. Refer to 2/R1.0 for further information.
3. Wall height varies with 8'-0" maximum.



GENERAL NOTES:

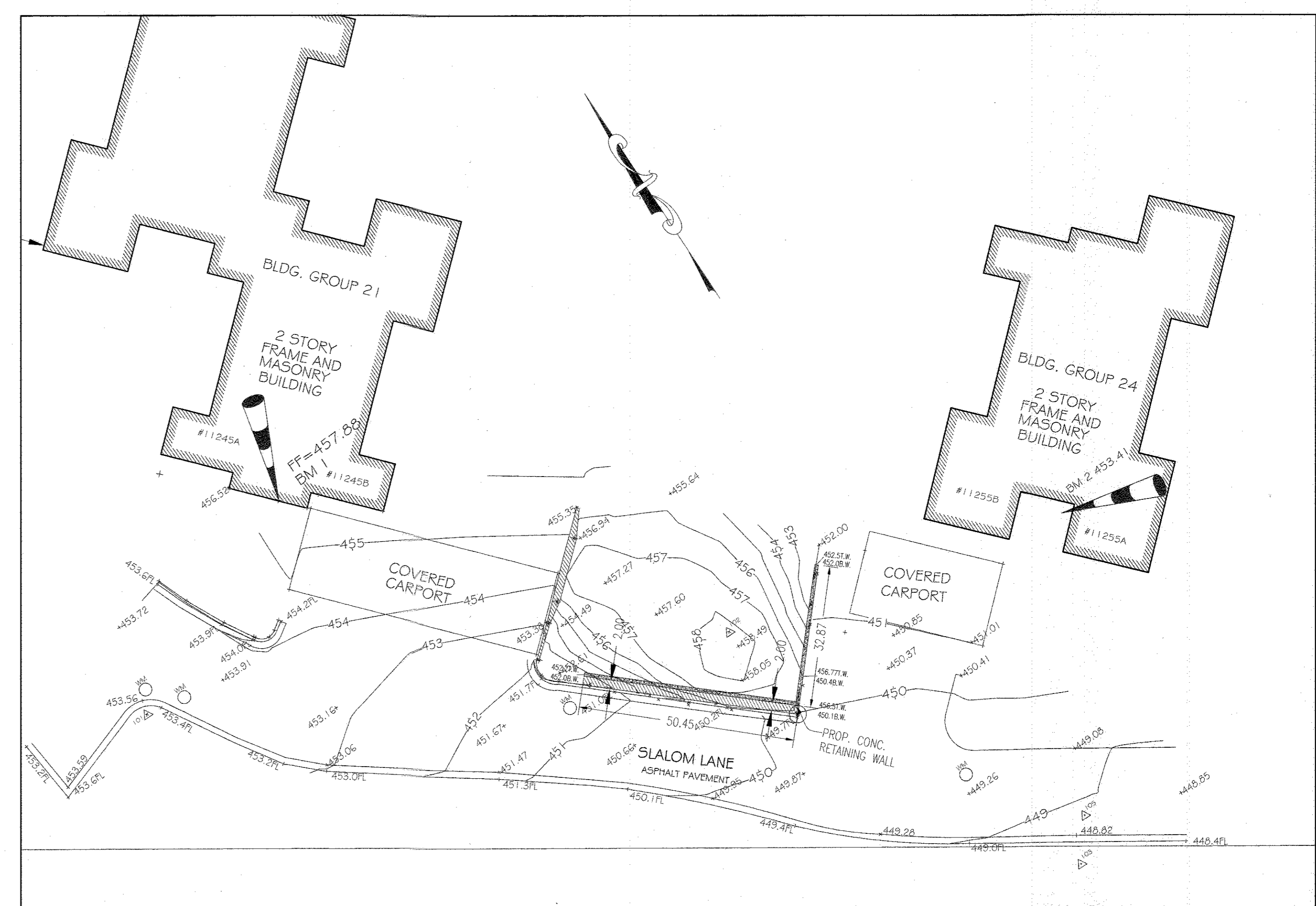
1. Horizontal Datum: Condominium Plat Datum
2. Vertical Datum: Howard County
3. Property shown hereon lies within Flood Zone "x" - Areas of 2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or within drainage areas less than 1 square mile, and areas protected by levees from 1% annual flood chance, as established by the U.S. Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map, Community Panel No. 24027C0135d, map revised date November 6, 2013.
4. This survey was prepared without the benefit of a Title Report and may not reflect easements, property lines and other restrictions of record.
5. Contour = 1 foot.



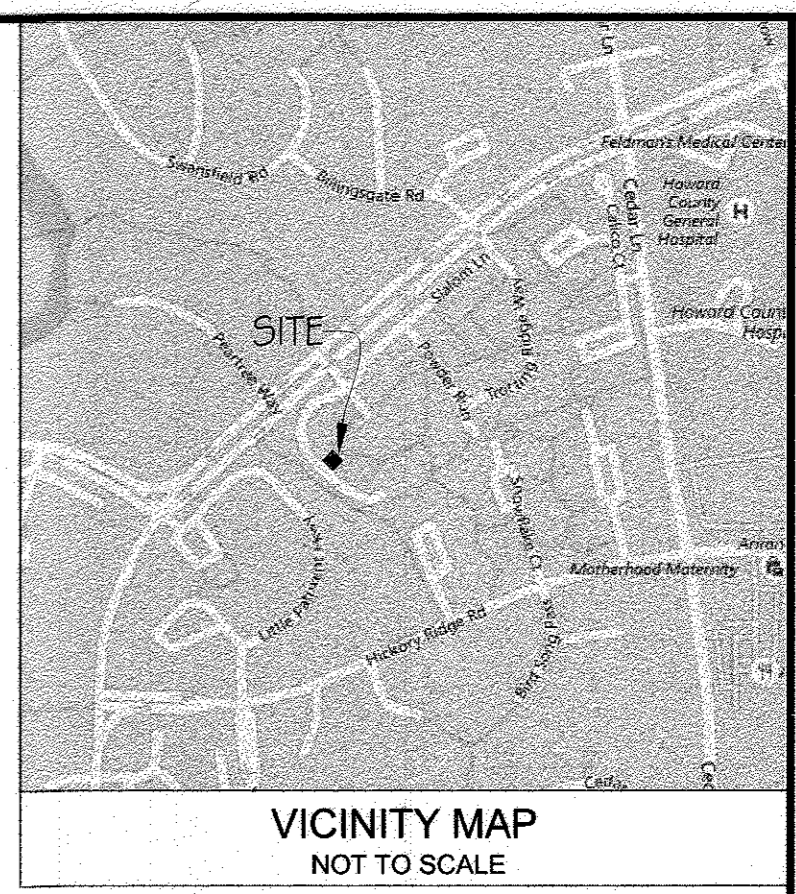
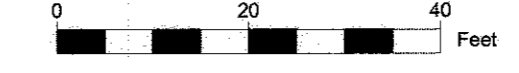
EXISTING CONDITIONS LOOKING SOUTH EAST



EXISTING CONDITIONS LOOKING NORTH WEST



PROPOSED CONDITIONS



VICINITY MAP
NOT TO SCALE

REDLINE PLAN FOR RETAINING WALL UPGRADE
SIERRA VILLAS CONDOMINIUM
SLALOM LANE
BETWEEN BUILDINGS 21 AND 24
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE:	
MISC. NOTES:	

AULtec, Inc.
 7895 Cessna Avenue, Suite D
 Gaithersburg, MD, 20879
 Tel. (301) 947-6685 Fax (301) 947-6911
 E-mail: aultec@aultecinc.com
 Engineers Surveyors Planners GIS Consultants GPS Consultants

DATE: April 21, 2017
SCALE: AS NOTED
CONTOUR INTERVAL: 1FOOT
DESIGN: JAA
DRAWN: AKM
CHECKED: JAA
PROJ. No. 2017-80
FILE No. TOPO

APPROVED: For public water and sewerage storm drainage systems and public roads.
 Howard County Department of Public Works

Director _____ Date _____

Bureau of Highways _____ Date _____

APPROVED: Howard County Office of Planning & Zoning

James Joffe 5-2-17
 Director, Department of Planning and Zoning Date

Robert Shuler 5-1-17
 Chief, Development Engineering Division Date

Robert Shuler 5-3-17
 Chief, Division of Land Development Date

REVISIONS

- BUILDING CODE**
- INTERNATIONAL BUILDING CODE 2015 (IBC)
LOCAL CODE AMENDMENTS (HOWARD COUNTY, MD)
- GUARDRAIL ASSEMBLY**
- NEW GUARDRAIL ASSEMBLY (LOCATED AT THE TOP OF THE RETAINED SIDE OF THE RETAINING WALL) TO BE COMPOSED OF WOOD MEMBERS.
 - BOTTOM RAIL TO MOUNTING SURFACE OPENING NOT TO EXCEED 2 INCHES MAXIMUM.
 - OPENINGS WITHIN GUARDRAILS NOT TO EXCEED 4 INCHES MAXIMUM.
 - GUARDRAILS SHALL BE DESIGNED TO RESIST A LOAD OF 50 PLF APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE.
 - GUARDRAIL ASSEMBLIES SHALL BE ABLE TO RESIST A SINGLE CONCENTRATED LOAD OF 200 LBS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP AND HAVE ATTACHMENT DEVICES AND SUPPORTING STRUCTURE TO TRANSFER THIS LOADING TO APPROPRIATE STRUCTURAL ELEMENTS OF THE BUILDING (THIS LOADING NEED NOT ACT CONCURRENTLY WITH THE LOADS SPECIFIED ABOVE).
 - INTERMEDIATE RAILS, BALUSTERS, AND PANEL FILLERS SHALL BE DESIGNED TO WITHSTAND A HORIZONTALLY APPLIED NORMAL LOAD OF 50 LBS.
 - CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR NEW GUARDRAIL ASSEMBLY AS WELL AS CALCULATIONS (INCLUDING SURFACE MOUNTED CONNECTIONS) THAT ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.

- GENERAL**
- PROVIDE TRAFFIC CONTROL (I.E. SIGNS, FLAG MEN, ETC.) FOR SLALOM LANE WHILE PERFORMING THE WORK. WHEN CONTRACTOR IS NOT WORKING ON-SITE WORK, THE ENTIRE WIDTH (BOTH LANES) OF SLALOM LANE ARE TO BE OPEN TO TRAFFIC.
 - WHERE REQUIRED, REMOVE ASPHALT (SLALOM LANE AND/OR ADJACENT CARPORTS) AND/OR CONCRETE CURB ONCE NEW RETAINING WALL IS COMPLETED. PROTECT OPEN AREAS ADJACENT TO PAVEMENT FROM COLLECTING WATER OR CAUSING DAMAGE TO SUBBASE/SOILS.
 - ALL WORK PERFORMED SHALL COMPLY WITH CURRENT ADOPTED BUILDING CODE, FIRE CODES AND APPLICABLE STATE LAWS AND ORDINANCES AS ADOPTED BY LOCAL AUTHORITIES HAVING JURISDICTION AT THE TIME OF PERMIT ISSUANCE.
 - THE NEW RETAINING WALL STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AFTER THE WORK IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO ENSURE STABILITY AND SAFETY DURING CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO, THE ADDITION OF SHEETING, SHORING, TEMPORARY BRACING, GUY'S, AND TIE-DOWNS. THE CONTRACTOR SHALL PROVIDE SHORING AND BRACING NECESSARY TO PROTECT EXISTING AND ADJACENT STRUCTURES.
 - SECTIONS AND DETAILS SHOWN ON THE DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS THAT DO NOT HAVE A SPECIFIC SECTION INDICATED.
 - TYPICAL DETAILS APPLY AT ALL APPROPRIATE LOCATIONS AND ARE NOT GENERALLY CUT ON PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TYPICAL DETAIL APPLICATIONS.
 - THE WORK REQUIRES THE CONTRACTOR TO IMPLEMENT REPAIRS ACCORDING TO THE FOLLOWING CATEGORIES OF REQUIREMENTS:
 - PRESCRIPTIVE BASED REQUIREMENTS:** ALL WORK WHERE APPLICABLE SHALL MEET THE REPAIR REQUIREMENTS WHERE SPECIFICALLY DEFINED AND PRESCRIBED BY THE DETAILS, NOTES, REFERENCES, ETC. FURNISHED IN THE REPAIR DETAILS AND SCOPE OF ORIGINAL DESIGN DOCUMENTS.
 - PERFORMANCE BASED REQUIREMENTS:** ALL WORK WHERE APPLICABLE SHALL BE CONVEYED THROUGH SHOP DRAWINGS OR OTHER MEANS AS REQUIRED TO MEET THE DESIGN INTENT. ELEMENTS OF THE WORK WILL REQUIRE INTRUSIVE SAMPLING AND FIELD OBSERVATION/FIELD VERIFICATION BY THE CONTRACTOR TO LOCATE AND CONFIRM CONDITIONS EXIST AND ARE LOCATED AS REQUIRED SUCH THAT IMPLEMENTATION OF THE REPAIR DETAILS AND SCOPE OF WORK SHALL BE CONSISTENT WITH THE DESIGN INTENT.
 - MEANS AND METHODS BASED REQUIREMENTS:** ALL WORK WHERE APPLICABLE SHALL BE OUTLINED, PROPOSED, AND COMMUNICATED IN WRITING BY THE GENERAL CONTRACTOR TO ADDRESS AND COMMUNICATE THE GENERAL CONTRACTOR'S PROCESS AND SEQUENCING OF THE WORK CRITICAL TO THE IMPLEMENTATION OF THE CORRECTIVE WORK.
 - FOR INCONSISTENCIES BETWEEN DRAWINGS AND SPECIFICATIONS, THE STRICTER REQUIREMENT SHALL APPLY. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
 - PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND MISCELLANEOUS ITEMS INCLUDING BUT NOT LIMITED TO CLIPS, INSERTS, TIES, ANCHOR STRAPS, HANGERS, BOLTS, AND OTHER FASTENERS REQUIRED TO COMPLETE THE WORK.
 - THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND THE DESIGNS ARE THE EXCLUSIVE PROPERTY OF STRUCTURAL REHABILITATION GROUP, LLC (SRG). ANY USE OR REPRODUCTION OF THESE DOCUMENTS, INCLUDING DESIGN CONCEPTS AND IDEAS, IS PROHIBITED EXCEPT BY PRIOR WRITTEN PERMISSION OF THE OWNER AND SRG.
 - THESE DOCUMENTS ARE NOT FINAL, VALID AND READY FOR CONSTRUCTION UNLESS SEALED, SIGNED AND DATED AND NOTED FOR CONSTRUCTION. ALL CONSTRUCTION COMPLETED AS A RESULT OF VALID DRAWINGS IS ALSO PROTECTED BY COPYRIGHT AND MAY NOT BE REPRODUCED WITHOUT THE PRIOR WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER (STRUCTURAL REHABILITATION GROUP, LLC), COPYRIGHT 2016.

- EXISTING CONDITIONS**
- THE DRAWINGS MAY REFLECT INFORMATION PROVIDED BY OTHERS AND/OR EXISTING CONDITIONS THAT HAVE BEEN SURVEYED AND/OR DOCUMENTED (I.E. NOT FIELD VERIFIED). IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FULLY COORDINATE THE WORK, INCLUDING, BUT NOT NECESSARILY LIMITED TO, THE VERIFICATION OF ALL EXISTING CONDITIONS (C.F.V.) SHOWN IN THE DRAWINGS, COORDINATION OF ALL NECESSARY BUILDING TRADES, ETC. AND ALL CONDITIONS THAT ARE NOT ACCURATELY REPRESENTED IN THESE DOCUMENTS, OR ANY CONDITIONS THAT ARE NOT SHOWN BUT WARRANT THE ATTENTION OF THE ENGINEER AND/OR ENGINEER, SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR FURTHER REVIEW, ANALYSIS, AND/OR REDESIGN AS APPROPRIATE.
 - MEANS AND METHODS OF CONSTRUCTION AND TEMPORARY SHORING AND BRACING OF THE EXCAVATION AND EXISTING SITE AND SITE FEATURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER MAY INCLUDE PHASING, SEQUENCING, SHORING REQUIREMENTS, ETC. IN THE CONSTRUCTION DOCUMENTS TO ALERT, ASSIST, OR OTHERWISE DICTATE PROCEDURAL REQUIREMENTS THAT MAY BE NECESSARY TO PROPERLY IMPLEMENT THE WORK OR THAT MAY BE REQUIRED TO ENSURE STABILITY; HOWEVER, THE CONTRACTOR SHALL PROPERLY COORDINATE THESE REQUIREMENTS AND SHALL REMAIN COMPLETELY AND SOLELY RESPONSIBLE FOR ERECTING THE RETAINING WALL IN A SAFE AND TIMELY MANNER AS WELL AS ESTABLISHING MEANS AND METHODS TO PERFORM THEIR WORK.
 - PRIOR TO THE START OF THE WORK, THE CONTRACTOR IS TO ESTABLISH THE EXISTING TOP OF THE WALL ELEVATIONS AT ALL STEPS, TRANSITIONS, AND END POINTS. NEW WALL HEIGHT TO EXCEED EXISTING GRADE ELEVATION 6 INCHES MINIMUM. CONTRACTOR TO FURNISH OWNER WITH AS BUILT ELEVATION DATA AND PROPOSED FUTURE ELEVATION DATA PRIOR TO THE START OF DEMOLITION FOR REVIEW AND ACCEPTANCE.

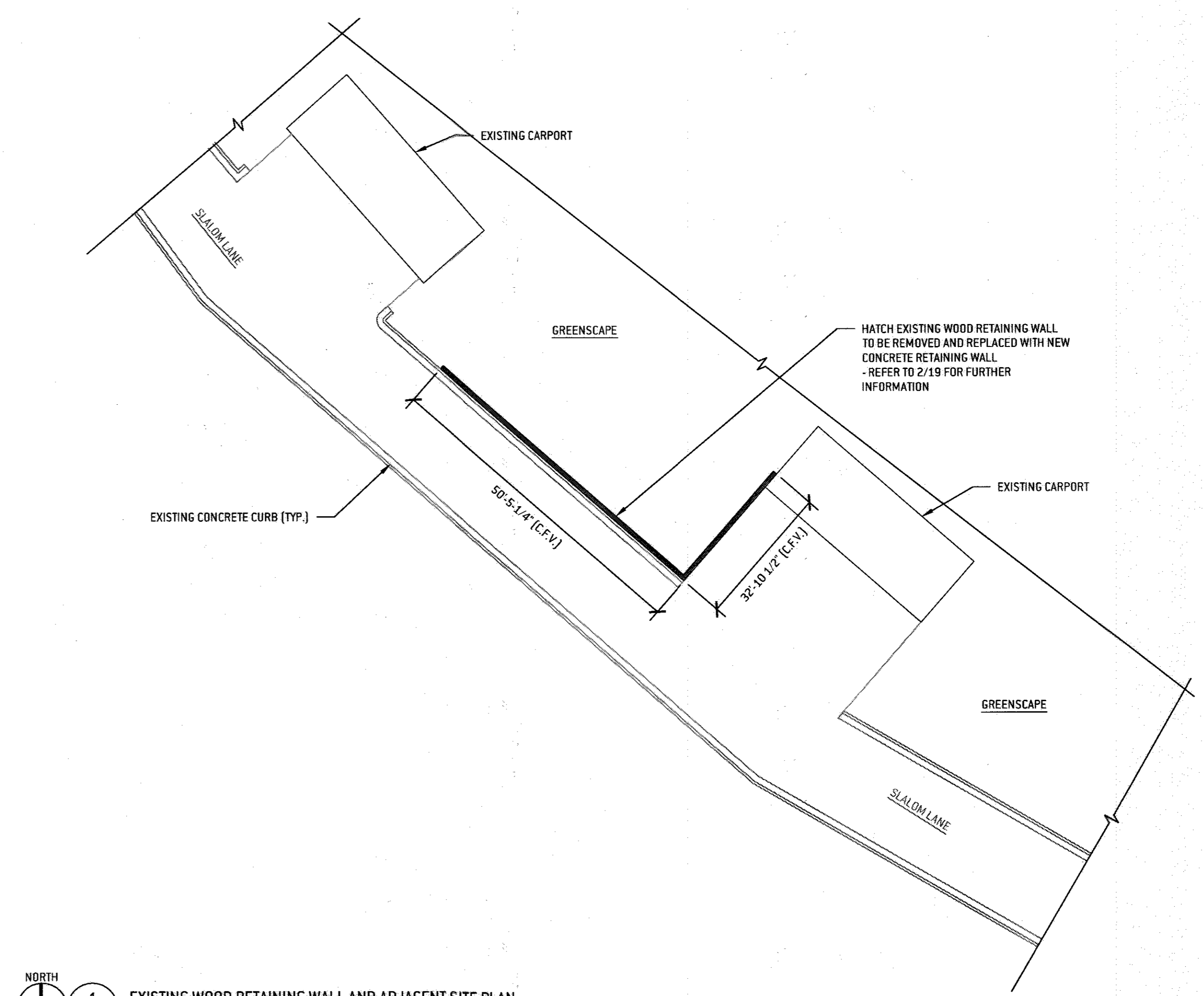
- FOUNDATION AND RETAINING WALL**
- FOUNDATION AND RETAINING WALL DESIGN IS BASED ON THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT PREPARED BY FROEHLING & ROBERTS, INC., DATED APRIL 6, 2016. THE ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT TO THOSE ASSUMED FOR THE DESIGN.
 - REFER TO THE GEOTECHNICAL REPORT FOR EARTHWORK PROCEDURES, COMPACTION, AND ADDITIONAL INFORMATION.
 - ALL FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO UNDISTURBED NATURAL SOIL OR COMPACTED CONTROLLED FILL HAVING A BEARING VALUE AT LEAST EQUAL TO THAT SPECIFIED WITHIN THE GEOTECHNICAL REPORT.
 - BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE AT LEAST 2'-6" BELOW FINISHED GRADE OR AS REQUIRED BY LOCAL CODE REQUIREMENTS. FOOTING ELEVATIONS INDICATED ON DRAWINGS HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION PROVIDED BY OTHERS AND MAY NOT VIOLATE CRITERIA ESTABLISHED ABOVE. FOOTING ELEVATIONS SHALL BE LOWERED AS SITE CONDITIONS WARRANT FOR POOR SOIL CONDITIONS OR AS REQUIRED TO FACILITATE SITE UTILITIES OR EXISTING CONDITIONS.
 - ALL DISTURBED EARTH UNDER FOOTINGS SHALL BE REPLACED WITH LEAN CONCRETE.
 - ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS PLACED.
 - NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 2:1 (2 HORIZONTAL TO ONE VERTICAL) TO AN EXISTING FOOTING OR STRUCTURE UNLESS NOTED OTHERWISE. CONTRACTOR SHALL FURNISH AND INSTALL BRACING AND SHORING OF EXCAVATION AREAS THAT DO NOT CONFORM TO THE ABOVE REQUIREMENTS.
 - DO NOT PLACE CONCRETE OVER FROZEN SOIL.

- CONCRETE**
- ALL CONCRETE CONSTRUCTION INCLUDING DETAILING, FABRICATION, PLACEMENT OF REINFORCING, MIXING, HANDLING, PLACING, FINISHING, AND CURING SHALL CONFORM TO ACI "STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301), ACI "DETAILING MANUAL" (SP-66), AND "ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI-318).
 - ALL CONCRETE SHALL CONFORM TO ASTM C94. MINIMUM COMPRESSIVE STRENGTH, MAXIMUM WATER/CEMENT RATIO, SLUMP, AIR CONTENT, AND MATERIALS USED IN CONCRETE MIXES SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 03300 (CAST-IN-PLACE CONCRETE) OF THE PROJECT MANUAL.
 - CONTRACTOR SHALL PROVIDE CONCRETE MIX DESIGN DATA CONFORMING TO ACI 318 FOR EACH TYPE AND STRENGTH OF CONCRETE SPECIFIED. MIX DESIGN DATA SHALL INCLUDE CONCRETE STRENGTH, SLUMP, AIR ENTRAINMENT, PROPOSED AGGREGATES, AD MIXTURES, POZZOLANS AND LABORATORY TEST DATA IN ACCORDANCE WITH SPECIFICATION SECTION 03300 (CAST-IN-PLACE CONCRETE) OF THE PROJECT MANUAL.
 - OWNER SHALL RETAIN (AT THEIR EXPENSE) THE SERVICES OF A QUALIFIED TESTING AGENCY TO PROVIDE TESTING OF CONCRETE TO INCLUDE COMPRESSIVE STRENGTH, TEMPERATURE, SLUMP AND AIR ENTRAINMENT. REFER TO SPECIFICATION SECTION 03300 (CAST-IN-PLACE CONCRETE) OF THE PROJECT MANUAL FOR REQUIRED INCREMENTS FOR TESTING SAMPLES. EACH SAMPLE SHALL INCLUDE THE FOLLOWING:
 - (2) 7 DAY LAB CURED CYLINDER BREAKS
 - (2) 28 DAY LAB CURED CYLINDER BREAKS
 - (2) 56 DAY LAB CURED CYLINDER BREAK (HELD IN RESERVE)
 - CONTRACTOR SHALL OBTAIN ADDITIONAL (AT THEIR EXPENSE) FIELD CURED CYLINDERS AS NECESSARY TO MEET FORMWORK AND SHORING REMOVAL REQUIREMENTS IN ADDITION TO THOSE SAMPLES DESCRIBED IN #4 ABOVE.
 - ALL STRUCTURAL MEMBERS SHALL BE POURED TO THEIR FULL DEPTHS IN ONE OPERATION. CONTRACTOR SHALL PROVIDE ENGINEER WITH THEIR PROPOSED LOCATIONS OF CONSTRUCTION AND EXPANSION JOINTS FOR ENGINEER'S REVIEW AND ACCEPTANCE.

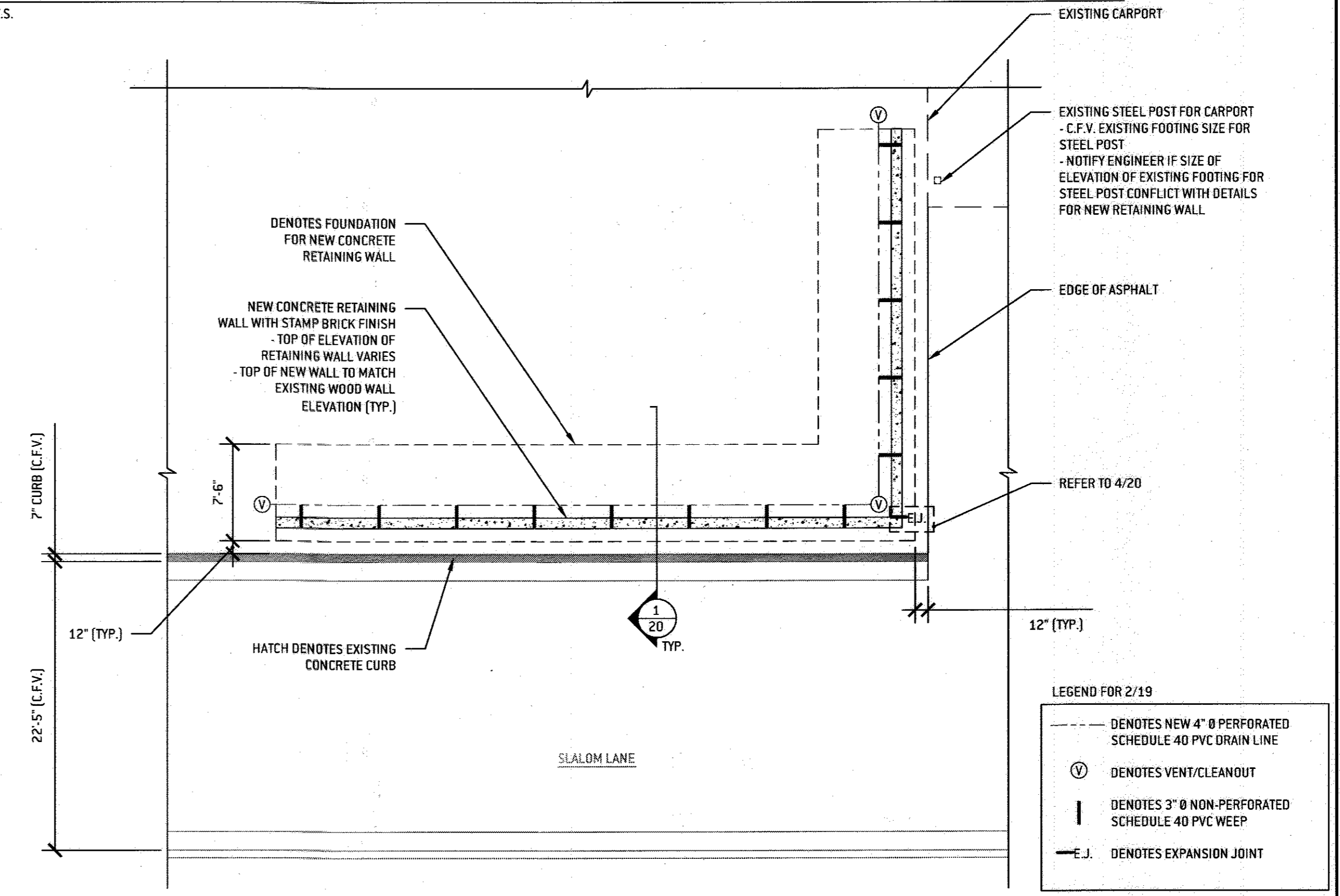
- REINFORCEMENT STEEL**
- CONCRETE REINFORCING SHALL CONFORM TO THE FOLLOWING DESIGNATIONS:
 - DEFORMED BARS ASTM A615, GRADE 60
 - FABRICATE AND PROVIDE STANDARD SUPPORTING ACCESSORIES IN ACCORDANCE WITH THE ACI DETAILING MANUAL (SP-66)
 - UNLESS NOTED OTHERWISE, REINFORCING SHALL BE CONTINUOUS WITH CLASS B LAP SPLICES, HOOKS SHALL BE STANDARD HOOKS, AND WALL INTERSECTIONS SHALL HAVE CORNER L-BARS.
 - CONCRETE PROTECTION FOR REINFORCEMENT:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3 IN.
 - CONCRETE EXPOSED TO EARTH NO. 6 AND LARGER 2 IN.
 - NO. 5 AND SMALLER 1-1/2 IN.

- JOINTS (FOR RETAINING WALL)**
- CONTRACTOR TO INSTALL A 1 INCH EXPANSION JOINT AS SHOWN ON THE DRAWINGS.
 - CONTRACTOR TO INSTALL 1/2" WIDE VERTICAL CONTRACTION JOINTS IN CONCRETE RETAINING WALL SPACED AS FOLLOWS:
 - EVERY 15 FEET ON CENTER
 - WHERE ELEVATION (HEIGHT) OF RETAINING WALL CHANGES
 - WITHIN 2 FEET OF CORNERS
 - CONSTRUCTION JOINTS SHALL BE LOCATED AT COLD JOINTS/POUR STOPS IN CONCRETE FOR RETAINING WALL.
 - JOINTS LISTED ABOVE ARE TO BE INSTALLED CONTINUOUS FOR FULL HEIGHT OF RETAINING WALL.

- SHOP DRAWINGS**
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR CALCULATIONS TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO CONSTRUCTION. THE LIST OF REQUIRED SHOP DRAWING SUBMITTALS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
 - CONCRETE MIX DESIGNS FOR EACH APPLICATION, SIGNED AND SEALED BY LICENSED ENGINEER REGISTERED IN THE STATE OF MARYLAND
 - CONCRETE REINFORCEMENT STEEL
 - GUARDRAIL ASSEMBLY
 - TECHNICAL PRODUCT DATA SHEET FOR ALL MAJOR MATERIALS LISTED IN THE SPECIFICATIONS
 - PROPOSED CONTRACTION/EXPANSION JOINT LAYOUT FOR CONCRETE RETAINING WALL
 - PROPOSED ELEVATION CHANGES (STEP DOWNS) OF RETAINING WALL AND PROPOSED STEP LOCATIONS
 - THE ENGINEER'S RESPONSIBILITIES RELATIVE TO SHOP DRAWING REVIEW ARE LIMITED TO REVIEW FOR DESIGN CONCEPT OF THE PROJECT AND INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS, SPECIFICALLY THE STRUCTURAL DRAWINGS AND THE STRUCTURAL PORTIONS OF THE PROJECT SPECIFICATIONS. THE ENGINEER WILL NOT REVIEW FOR DIMENSIONS, QUANTITIES, ETC.
 - SHOP DRAWING REVIEW NOTATIONS ARE DEFINED AS FOLLOWS:
 - "NO EXCEPTION": INDICATES THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION MAY PROCEED.
 - "EXCEPTIONS AS NOTED": INDICATES THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION MAY PROCEED PROVIDED THAT SUBMITTAL COMPLIES WITH ENGINEER'S NOTATIONS. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE ENGINEER'S NOTATIONS, THE SUBMITTAL SHALL BECOME "REJECTED" (REFER TO DEFINITION BELOW) AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
 - "RESUBMIT": INDICATES THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION MAY PROCEED PROVIDED THAT SUBMITTAL COMPLIES WITH ENGINEER'S NOTATIONS. THE CONTRACTOR SHALL RETURN REVISED VERSIONS OF THE SUBMITTAL TO THE ARCHITECT AND ENGINEER FOR RECORD. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE ENGINEER'S NOTATIONS, THE SUBMITTAL SHALL BECOME "REJECTED" OR "DISAPPROVED" (REFER TO DEFINITION BELOW) AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY BOTH THE ARCHITECT AND ENGINEER.
 - "REJECTED": INDICATES THAT THE SUBMITTAL DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS AND THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION SHALL NOT PROCEED. THE CONTRACTOR SHALL MAKE THE NECESSARY REVISIONS TO THE SUBMITTAL AND RESUBMIT IN A TIMELY FASHION SO AS TO NOT DELAY THE CONSTRUCTION SCHEDULE.
 - "FOR INFORMATION ONLY": INDICATES THAT THE SUBMITTAL HAS BEEN RECEIVED BY THE ENGINEER FOR FILE ONLY; NO ADDITIONAL ACTION WILL BE TAKEN BY THE ENGINEER



1
19
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2
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APPROVED: For public water and sewerage storm drainage systems and public roads.
Howard County Department of Public Works

Director _____ Date _____

Bureau of Highways _____ Date _____

APPROVED: Howard County Office of Planning & Zoning

Nalanda J. Lee 5-9-17
Director - Department of Planning and Zoning
Date 5-9-17

Veronica Deane 5-3-17
Chief, Development Engineering Division
Date 5-3-17

Chief, Division of Land Development

REVISIONS

No.	Date	Description

SRG STRUCTURAL REHABILITATION GROUP, LLC

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Montgomery Village, MD 20886

Phone: (301) 300-8700
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Project

Sierra Villas Condominium Retaining Wall Rehabilitation

Slalom Lane
Columbia, MD 20877

R15041.10

Title

General Notes, Existing Retaining Wall Plan, and New Retaining Wall Plan

Professional Certification

Professional Certification. I hereby Certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No.: 45494 Expiration Date: 06/03/2018

Revisions

No.	Date	Description	Initial

Date: 04/25/2017

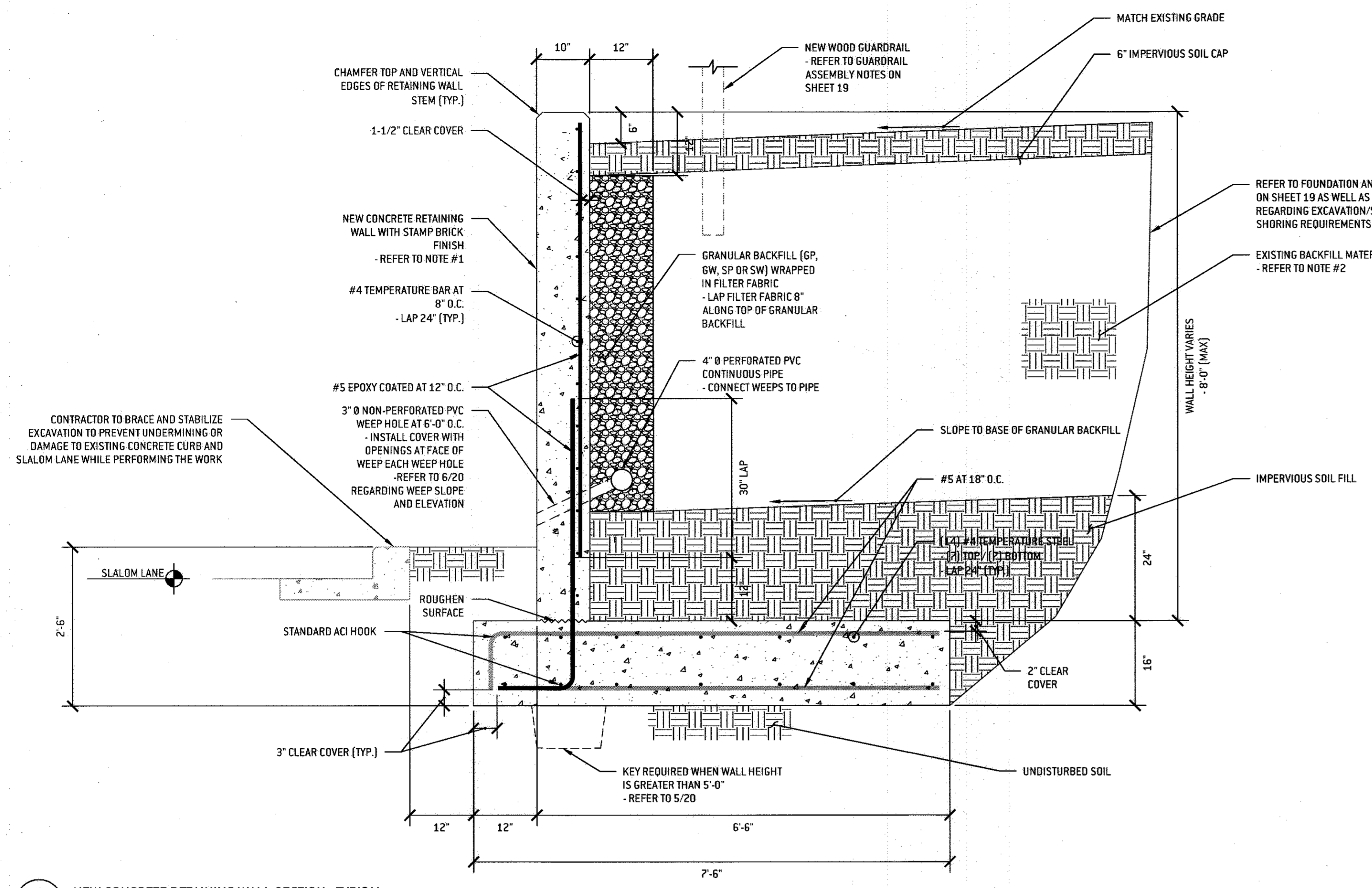
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Author(s): MH / JWW III

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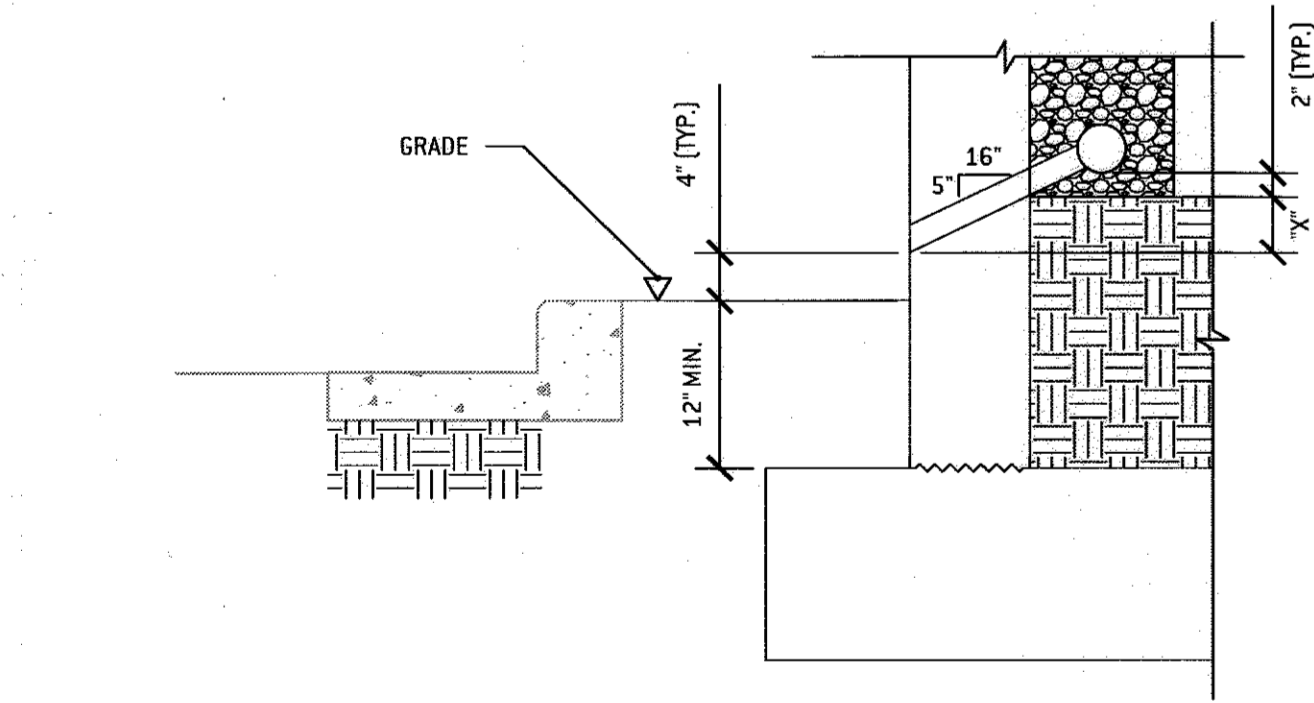
SDP-74-041C

Revisions			
No.	Date	Description	Initial



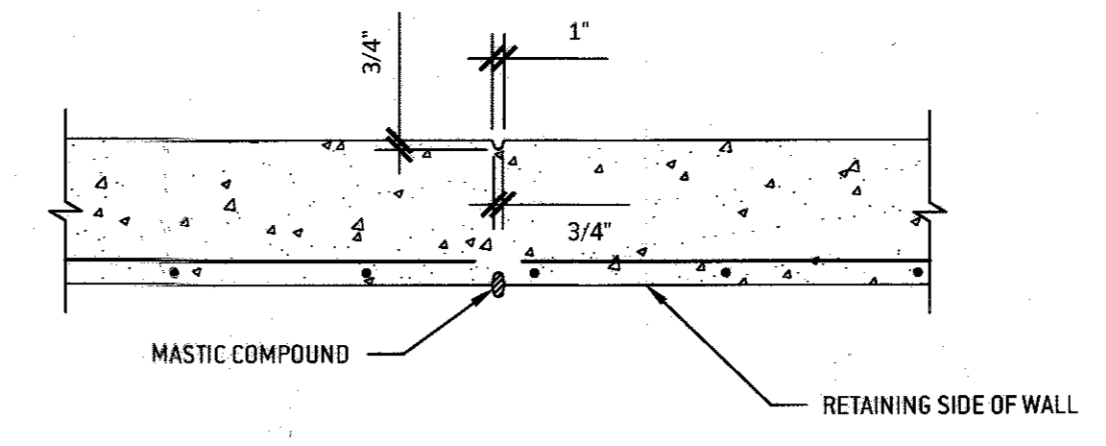
1 NEW CONCRETE RETAINING WALL SECTION - TYPICAL
 SCALE: N.T.S.

- NOTES:
- PROVIDE MOCK-UP OF BRICK STAMP FINISH TO OWNER FOR REVIEW AND APPROVAL PRIOR TO PERFORMING THE WORK.
 - REMOVE ALL ON-SITE EXCAVATION SPOILS THAT ARE NOT ACCEPTABLE MATERIAL. CONTRACTOR TO RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF MARYLAND TO EVALUATE THE FOLLOWING:
 - THE ON-SITE MATERIAL BEING PLACED IS ACCEPTABLE (I.E. SPOILS HAVE BEEN REMOVED).
 - EVALUATE BACKFILL FOR ADEQUATE COMPACTION (95% MODIFIED PROCTOR).
 - GEOTECHNICAL ENGINEER TO SUBMIT FINDINGS RESULTS TO ENGINEER FOR REVIEW. CONTRACTOR TO FILED VERIFY ESTABLISHED TOP OF WALL ELEVATIONS AND ELEVATION CHANGE LOCATION AND FURNISH TO ENGINEER FOR REVIEW.
 - NEW TOP OF WALL TO BE ABOVE EXISTING WALL HEIGHT AND GRAD ELEVATION (TYPICAL).
 - INSTALL CONTRACTION, CONSTRUCTION, AND EXPANSION JOINTS AS LISTED IN "JOINTS" NOTES ON SHEET 19. REFER TO DETAILS 2/20, 3/20 AND 4/20.



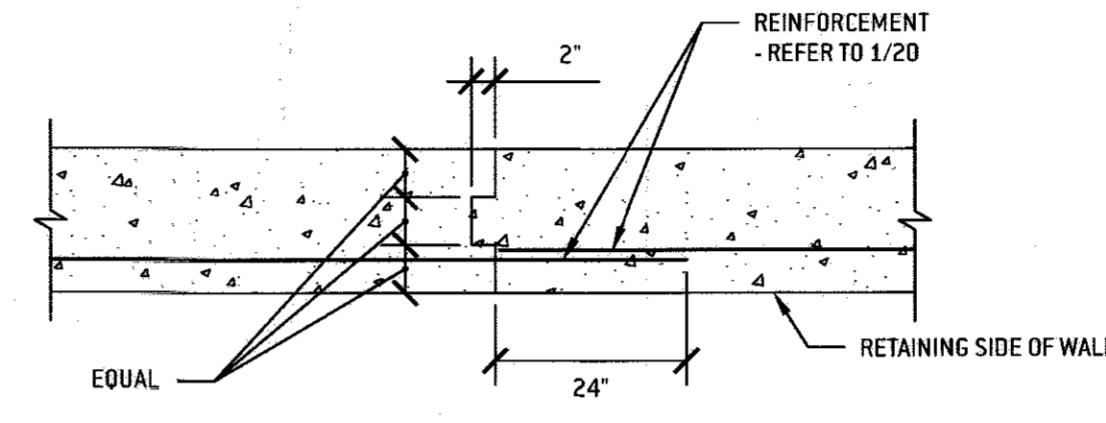
6 WEEP SLOPE AND ELEVATION DETAIL
 SCALE: N.T.S.

- NOTE:
- AS GRADE RISES OR FALLS, WEEPS, IMPERVIOUS FILL, AND GRAVEL MOVE UP OR DOWN PER "X" IN ORDER TO MEET SLOPE AND DISCHARGE ELEVATION HEIGHT FOR WEEPS. NOTIFY ENGINEER WHERE CONFLICTS EXIST REGARDING WEEP DRAINAGE PROVISIONS.

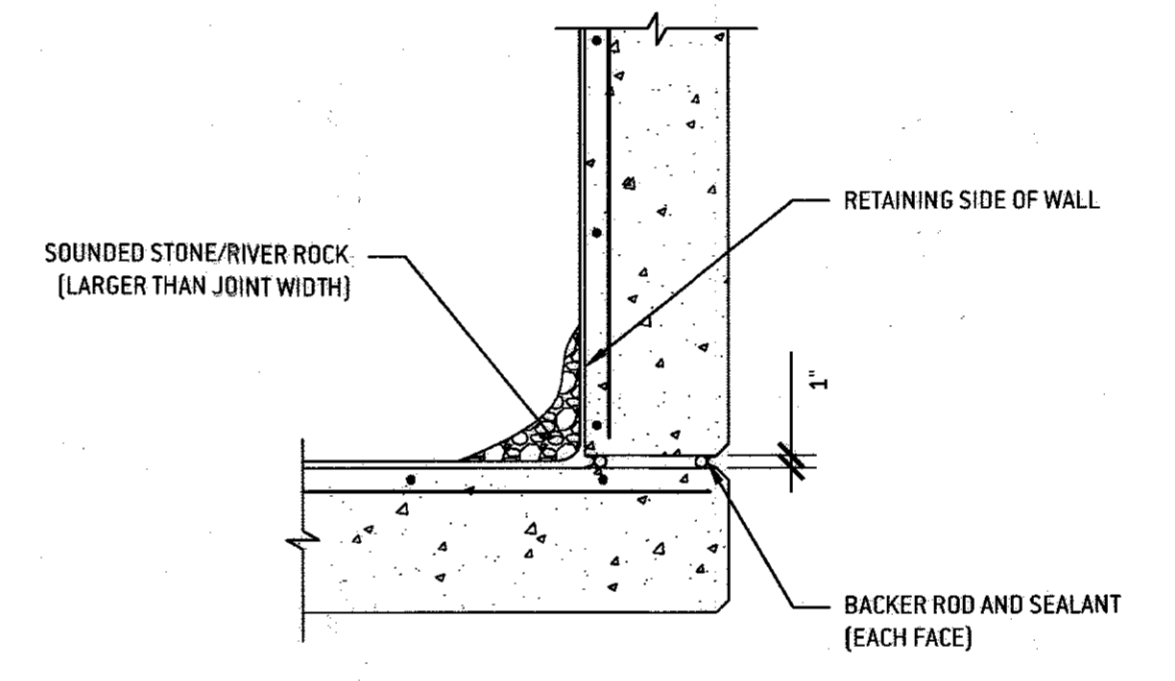


2 CONCRETE WALL CONTRACTION JOINT DETAIL - TYPICAL
 SCALE: N.T.S.

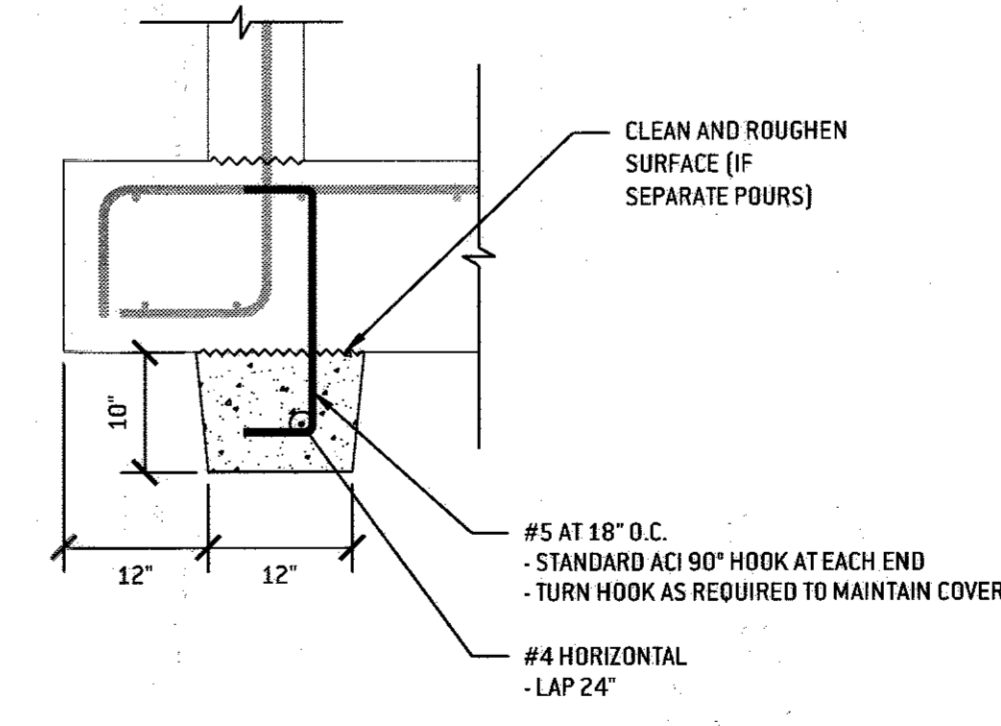
- NOTE:
- CUT ALTERNATE BARS IN BOTH FACES OF JOINT. DO NOT CUT HORIZONTAL BARS AT TOP AND BOTTOM.



3 CONCRETE WALL CONSTRUCTION JOINT DETAIL - TYPICAL
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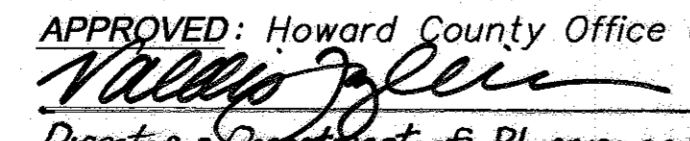
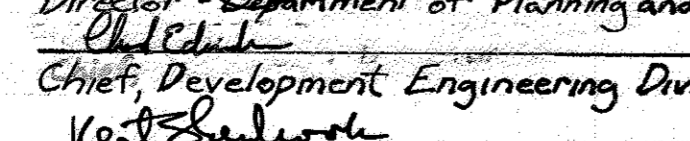
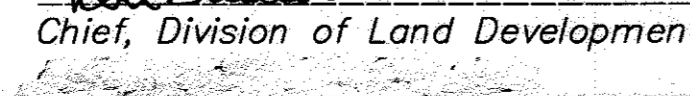


4 CONCRETE WALL EXPANSION JOINT DETAIL - TYPICAL
 SCALE: N.T.S.



5 RETAINING KEY DETAIL - TYPICAL
 SCALE: N.T.S.

~~APPROVED: For public water and sewerage storm drainage systems and public roads.
 Howard County Department of Public Works
 Director _____ Date _____
 Bureau of Highways _____ Date _____~~

APPROVED: Howard County Office of Planning & Zoning

 Director - Department of Planning and Zoning

 Chief, Development Engineering Division

 Chief, Division of Land Development
 Date: 5-3-17
 Date: 5-1-17
 Date: 5-3-17

REVISIONS

No.	Date	Description