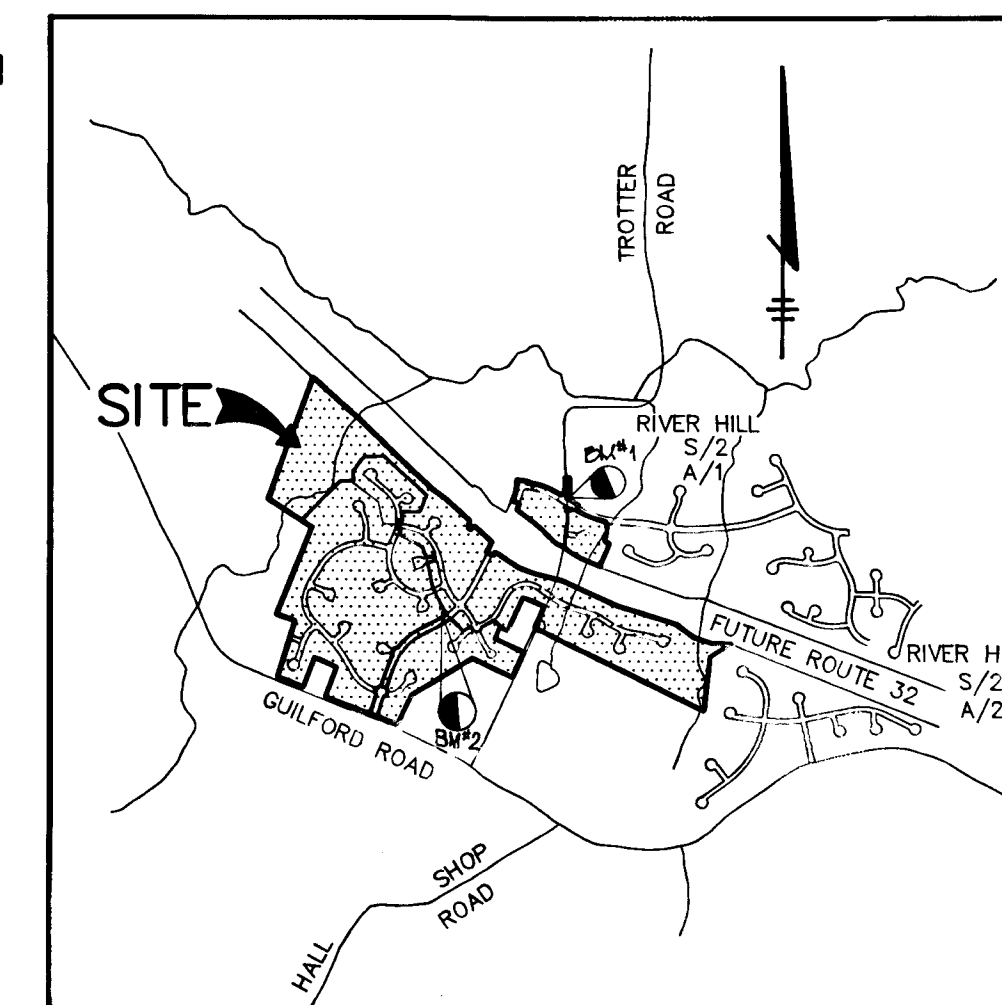


ROADWAYS, STORM DRAINS AND STORMWATER MANAGEMENT

VILLAGE OF RIVER HILL SECTION 2 AREA 3

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1" = 2000'

BENCHMARKS
 BM#1 RAILROAD SPIKE IN POLE #525680
 TROTTER ROAD ELEV. 393.27
 N 496697.02 E 822026.81
 BM#2 SPIKE IN POPLAR
 ELEV. 438.92
 N.495551.90 E.820727.80

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE GUILFORD ROAD
3	PLAN AND PROFILE GREAT STAR DRIVE FROM STA 0+00.00 TO 13+00.00
4	PLAN AND PROFILE GREAT STAR DRIVE FROM STA 13+00.00 TO 26+50.00
5	PLAN AND PROFILE GREAT STAR DRIVE FROM STA 26+50.00 TO 36+00.00
6	PLAN AND PROFILE SUMMER SUNRISE DRIVE AND TROTTER ROAD IMPROVEMENTS
7	PLAN AND PROFILE AUTUMN WIND CIRCLE AND VICTORIOUS SONG LANE AND TROTTER ROAD
8	PLAN AND PROFILE WESTERN STAR RUN
9	PLAN AND PROFILE ONWARD TRAIL FROM STA 0+00.00 TO 8+00.00
10	PLAN AND PROFILE ONWARD TRAIL FROM STA 8+00.00 TO 16+50.00
11	PLAN AND PROFILE EASTERN STAR WAY AND REDDY SONG KNOLL
12	PLAN AND PROFILE WARM SUNSHINE PATH AND MELLOW TWILIGHT COURT AND MORNING TIME LANE FROM STA 0+00.00 TO 3+50.00
13	PLAN AND PROFILE MORNING TIME LANE FROM STA 3+50.00 TO 15+00.00
14	PLAN AND PROFILE MORNING TIME LANE FROM STA 15+00.00 TO END AND LAST SUNBEAM PLACE
15	DETAIL SHEET
16	DRAINAGE AREA MAP
17	DRAINAGE AREA MAP
18	DRAINAGE AREA MAP
19	GRADING AND SEDIMENT CONTROL PLAN
20	GRADING AND SEDIMENT CONTROL PLAN
21	GRADING AND SEDIMENT CONTROL PLAN
22	GRADING AND SEDIMENT CONTROL PLAN
23	GRADING AND SEDIMENT CONTROL PLAN
24	STORM DRAIN PROFILES
25	STORM DRAIN PROFILES
26	STORM DRAIN PROFILES
27	STRUCTURE SCHEDULE & TROTTER RD. PHASING PLANS
28	TROTTER RD. CONSTRUCTION SEQUENCE & GRADING PLANS

GENERAL NOTES

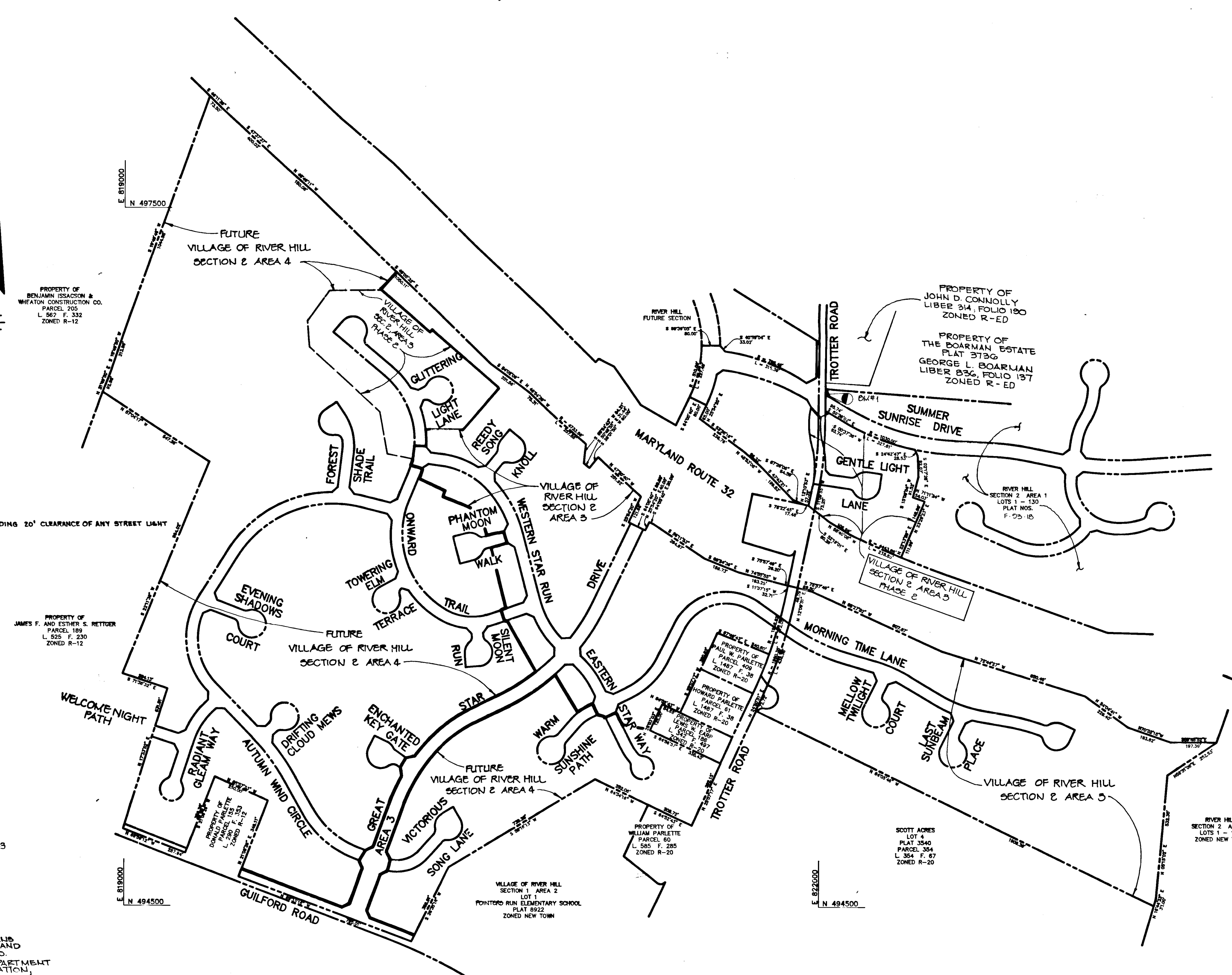
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 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.

BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	392-3553 OR 3554
BALTIMORE GAS AND ELECTRIC CO.	539-8000
HOWARD COUNTY BUREAU OF UTILITIES	313-4900
COLONIAL PIPELINE	795-1390
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURBS SHALL HAVE 2" RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, 1.4, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARD.

ALL 90' RIGHT OF WAYS	25 AND 30 M.P.H.
ALL 50' RIGHT OF WAYS	35 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION AS DETERMINED BY A.G.C. 17-100.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED NEW TOWN PER 10-16-00 COMPREHENSIVE ZONING PLAN.
- NO PIPE SHALL BE LAID UNLESS LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NOS. 5-91-01, P-94-01, FDP PHASE 209 PART 3.
- LIGHT POLES, ARMS AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME III AND GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS, JUNE 1999.
- THE STORMWATER MANAGEMENT FACILITIES PROPOSED FOR THIS SITE ARE CLASS "A" HAZARD FACILITIES. IN THE EVENT OF A FAILURE OF THE ENHANCEMENT, DAMAGE WILL BE LIMITED TO FLOODPLAINS AND OPEN SPACE. WATER QUALITY IS PROVIDED BY OVERSIZED RIP-RAP PADS SIZED TO STORE 1/2 INCH FROM THE ROADWAYS.

GENERAL NOTES

- STREET TREES (361 TOTAL) THE LOCATION, TYPE AND NUMBER OF TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS INCLUDING 10' CLEARANCE OF ANY STREET LIGHT AND BUILDERS LANDSCAPE PROGRAM. BOND RELEASE IS CONTINGENT UPON SECTION 115.3 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.
- TOPOGRAPHY SHOWN HEREON IS FROM AERIAL MAPS FROM 1989 BY MAPPING ASSOCIATES, INC.
- PUBLIC WATER AND SEWER SYSTEMS AS PER CONTRACT L.O. 34-3729-D ARE TO BE UTILIZED FOR THIS SITE. SEWER SERVICE CHARGE/AREA - LUDOLFS PRESENT.
- THE 100-YEAR FLOODPLAIN STUDY WAS PREPARED BY WETLAND REQUIRANT AND ASSOCIATES AND WAS APPROVED UNDER 5-21-00 ON 10-11-01.
- WETLANDS DELINEATION IS PROVIDED BY GEO-TECHNOLOGY ASSOC. INC. AND WAS APPROVED BY ARMY CORPS OF ENGINEERS ON 4-20-03.
- TRAFFIC STUDY WAS PREPARED BY GEORGE BLANK ASSOCIATES AND WAS APPROVED UNDER 5-21-00 ON 10-11-01.
- NOISE STUDY WAS PREPARED BY STANLEY ENGINEERING, INC. AND APPROVED UNDER P-92-01 & P-92-02 ON 6-29-02 & 1-10-03, RESPECTIVELY. GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT FOR THIS PROJECT IS PROVIDED BY THE RECORD ENGINEER, CAVALRY.
- BOUNDARY SURVEY WAS PREPARED BY KOL, INC. AUGUST 05, 2001.
- ALL STREET LIGHTS SHALL BE LOCATED BETWEEN 8'-0" AND 4'-0" BEHIND FACE OF CURB. THE ONLY EXCEPTION IS A BREAKAWAY BASE POLE LOCATED ALONG GUILFORD ROAD AT GREAT STAR DRIVE WHICH IS TO BE LOCATED A MINIMUM OF 6'-0" BEHIND THE CURB FACING GUILFORD ROAD.
- THE COORDINATES SHOWN HEREON ARE BASED ON NAD 87, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY EQUIPMENT L.O. 2007001, 2007002 AND 2007020.
- ON NOVEMBER 10, 1993 THE PLANNING BOARD APPROVED 63 LOTS LESS THAN 8000 S.F. SUBJECT TO COMPLIANCE WITH THE DEPARTMENT OF PLANNING AND ZONING LETTER OF NOVEMBER 10, 1993 FOR P-94-01.
- ALL PROPOSED EASEMENTS SHOWN ON SECTION 2 AREA 4 WILL BE RECORDED AS PART OF THE RECORD PLATS FOR THAT SUBDIVISION.
- WETLANDS DISTURBANCE AS SHOWN ON THESE PLANS TO BE PERFORMED IN ACCORDANCE WITH MARYLAND DEPARTMENT OF NATURAL RESOURCES PERMIT NO. WHICH EXPIRES ON AND MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER QUALITY CERTIFICATION, WHICH EXPIRES ON
- SIDEWALKS AND SIDEWALK RAMPS SHALL MEET CURRENT ADA REQUIREMENTS.



PLAN
SCALE: 1" = 300'

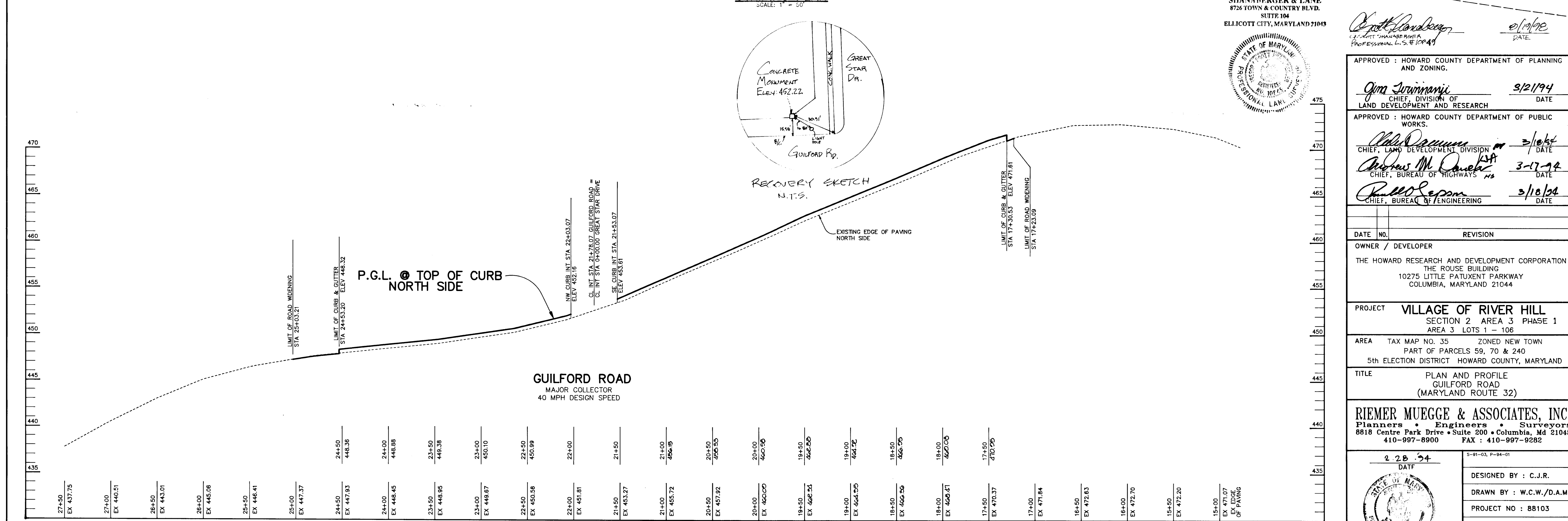
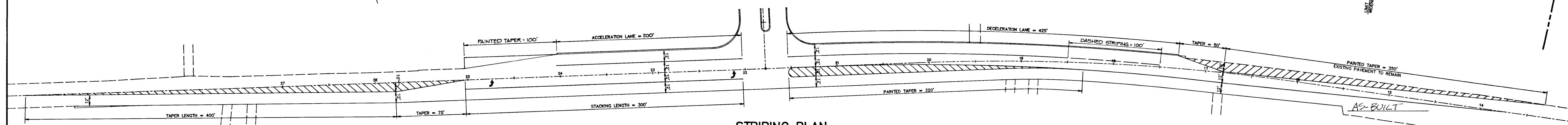
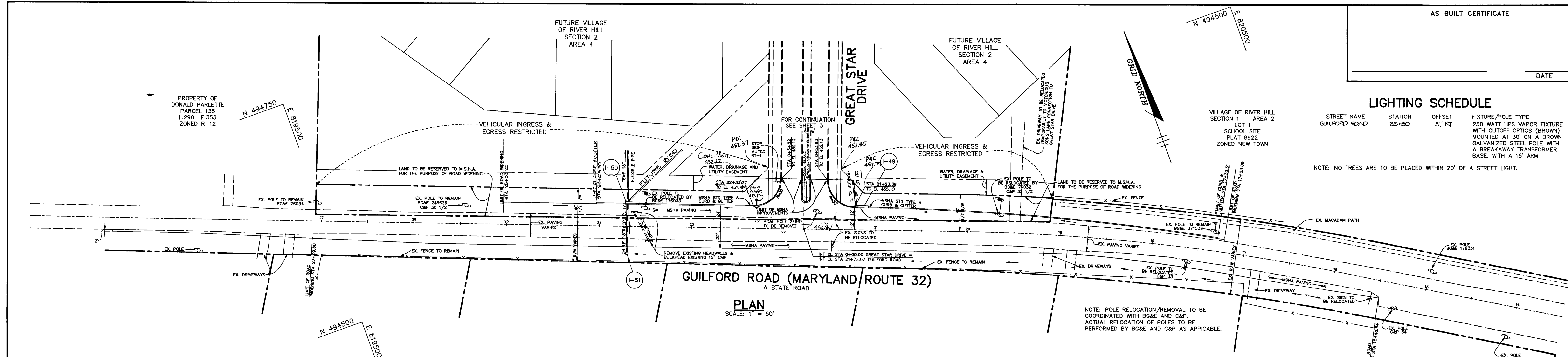
AS BUILT CERTIFICATE	
DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Jiro Jurnani</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	3/21/94 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>Alan Danner</i> CHIEF, LAND DEVELOPMENT DIVISION	3/16/94 DATE
<i>Andrew M. Cawker</i> CHIEF, BUREAU OF HIGHWAYS	3-17-94 DATE
<i>Paul Degan</i> CHIEF, BUREAU OF ENGINEERING	3/18/94 DATE
DATE NO.	REVISION
OWNER / DEVELOPER	
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
PROJECT	VILLAGE OF RIVER HILL SECTION 2 AREA 3, PHASE 1 LOTS 1 THRU 106
AREA	TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE	TITLE SHEET
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
2-28-94 DATE	S-91-03, P-94-01
DESIGNED BY: C.J.R.	
DRAWN BY: DAM	
PROJECT NO: 88103	
DATE: FEBRUARY 28, 1994	
SCALE: AS SHOWN	
DRAWING NO. 1 OF 28	

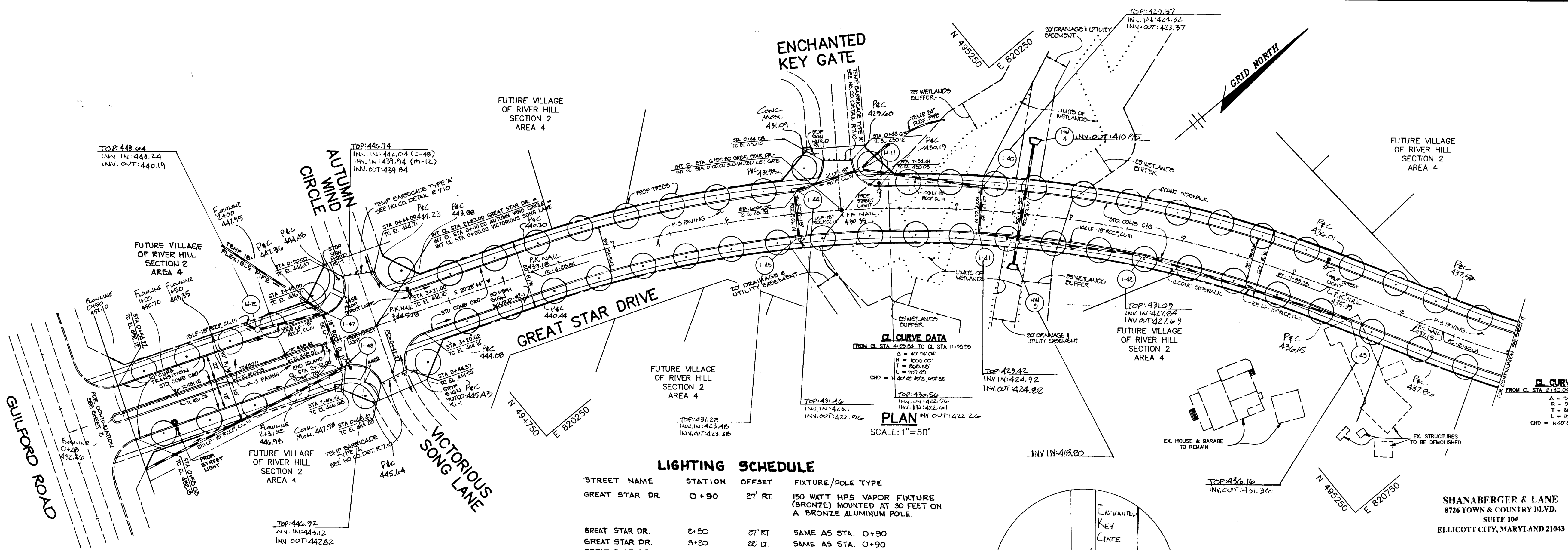
1487

LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
GUILFORD ROAD	22+30	51' RT	250 WATT HPS VAPOR FIXTURE WITH CUTOFF OPTICS (BROWN) MOUNTED AT 30' ON A BROWN GALVANIZED STEEL POLE WITH A BREAKAWAY TRANSFORMER BASE, WITH A 15' ARM

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT.

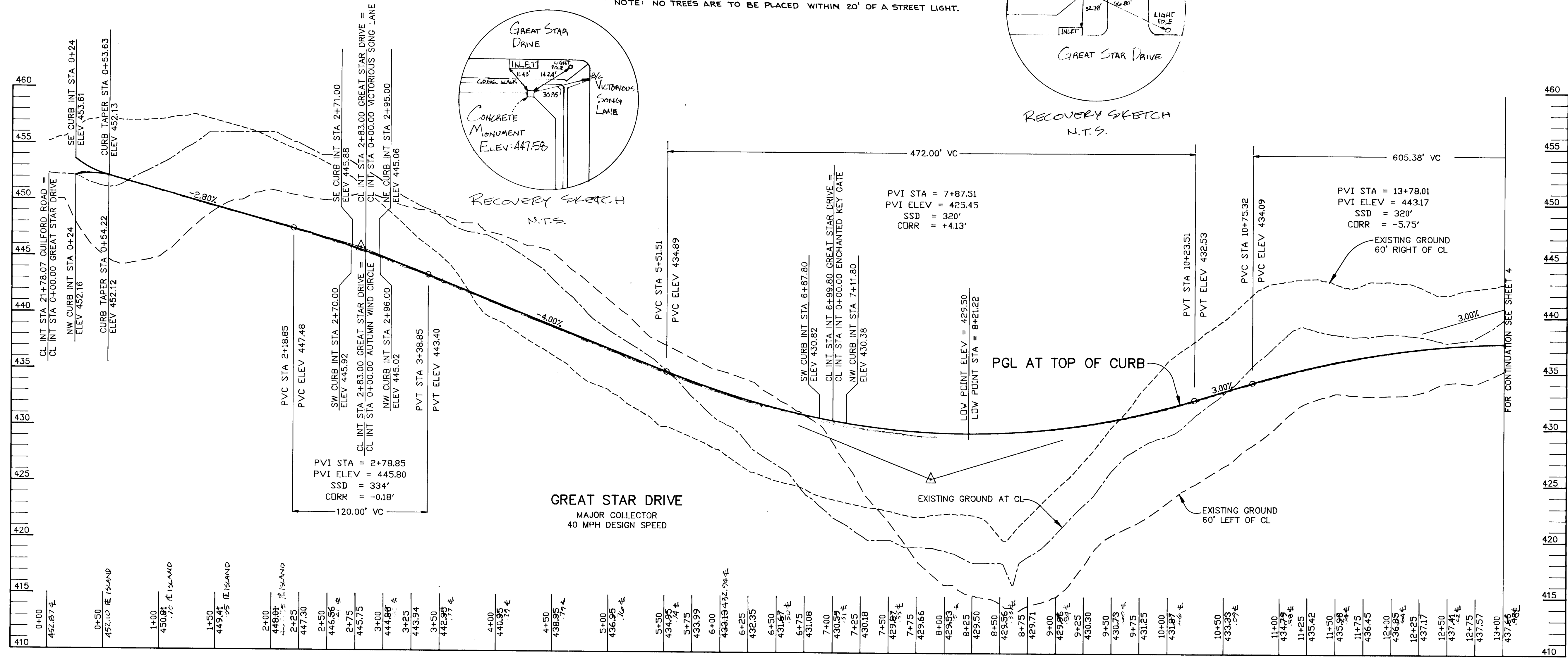
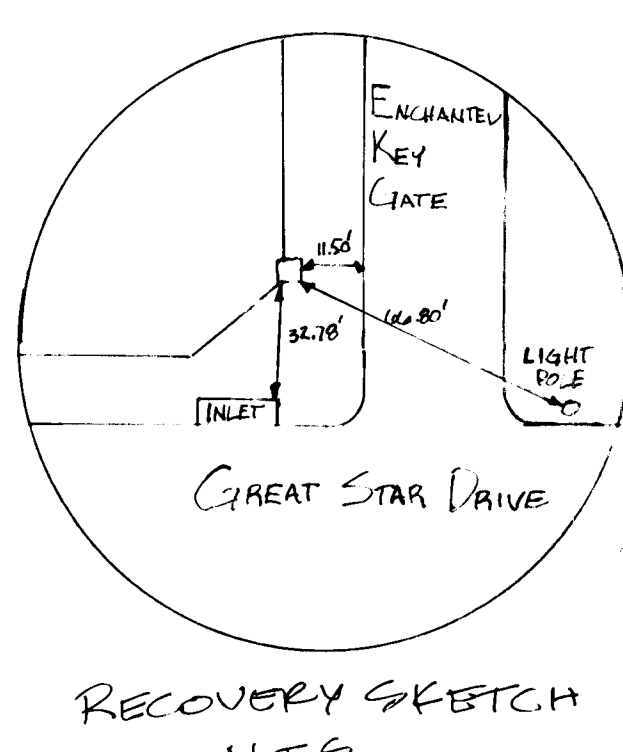




LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
GREAT STAR DR.	0+90	27' RT.	150 WATT HPS VAPOR FIXTURE (BRONZE) MOUNTED AT 30 FEET ON A BRONZE ALUMINUM POLE.
GREAT STAR DR.	2+50	27' RT.	SAME AS STA. 0+90
GREAT STAR DR.	3+20	22' LT.	SAME AS STA. 0+90
GREAT STAR DR.	7+24	22' LT.	SAME AS STA. 0+90
GREAT STAR DR.	11+24	22' LT.	SAME AS STA. 0+90

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT.



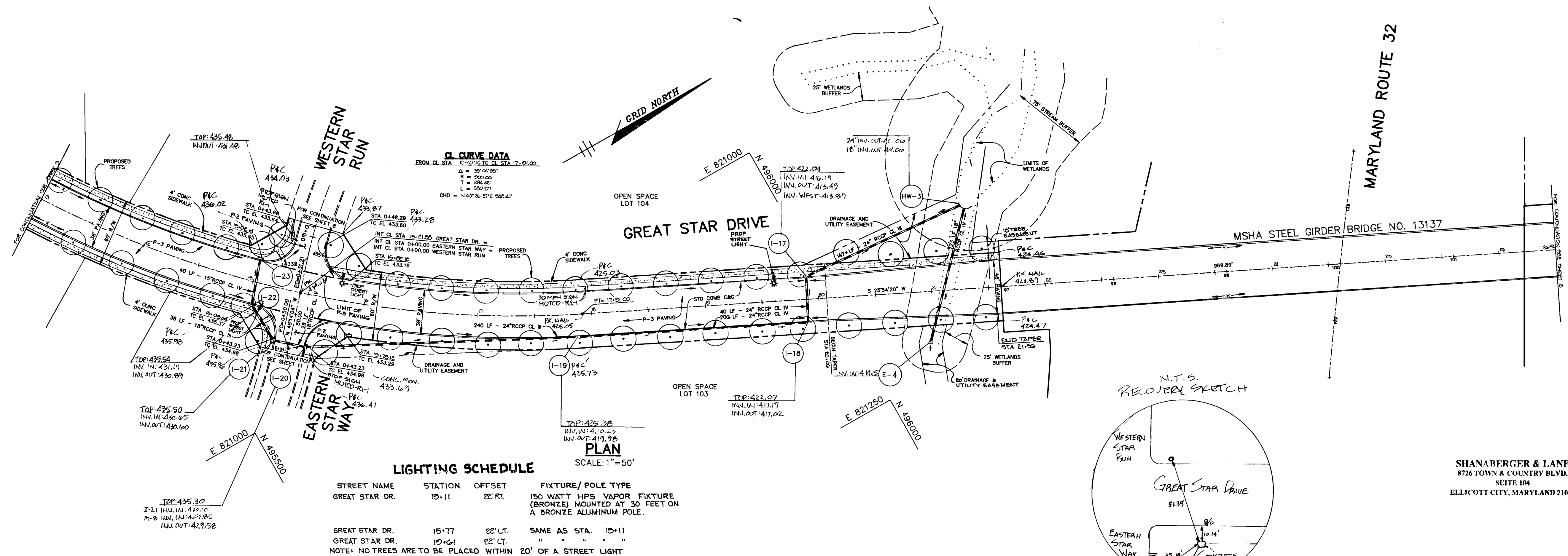
PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

AS BUILT

SHANBERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

Shan Berger
Professional L.S. # 10249

AS BUILT CERTIFICATE	
APPROVED :	HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
<i>Jim Summari</i>	2/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	DATE
APPROVED :	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
<i>John Dennis</i>	2/10/94
CHIEF, LAND DEVELOPMENT DIVISION	DATE
<i>Richard M. Owen</i>	3-17-94
CHIEF, BUREAU OF HIGHWAYS	DATE
<i>Paul S. Spon</i>	3/18/94
CHIEF, BUREAU OF ENGINEERING	DATE
G-3-04	1 REMOVED CONSTRUCTION RESTRICTION AREAS
DATE NO.	REVISION
OWNER / DEVELOPER	
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
PROJECT VILLAGE OF RIVER HILL SECTION 2 AREA 3 PHASE 1 AREA 3 LOTS 1 - 106	
AREA	TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE PLAN AND PROFILE OF GREAT STAR DRIVE FROM STA 0+00.00 TO 13+00.00	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
2-28-94	S-91-03, P-04-01
DATE	DESIGNED BY : C.J.R.
	DRAWN BY : J.T.D./D.A.M.
	PROJECT NO : 88103
	DATE : FEBRUARY 28, 1994
	SCALE : AS SHOWN
<i>J. T. D.</i>	DRAWING NO. 3 OF 28
JAYKANT D. PAREKH #10140	



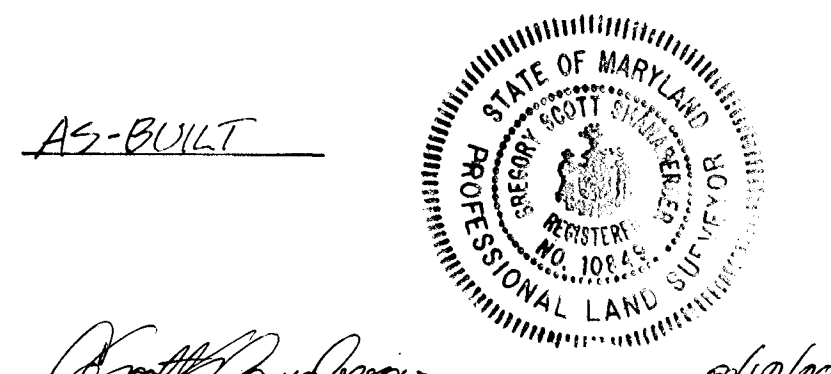
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FROM CL STA 12+50.00 TO CL STA 17+00.00

Δ = 30° 00' 00"
R = 900.00'
T = 286.62'
L = 950.00'
CHD = 1.43750 STS 202.41'

LIGHTING SCHEDULE
SCALE: 1"=50'

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
GREAT STAR DR.	15+11	22' RT.	150 WATT HPS VAPOR FIXTURE (BRONZE) MOUNTED AT 30 FEET ON A BRONZE ALUMINUM POLE.
GREAT STAR DR.	15+77	22' LT.	SAME AS STA. 15+11
GREAT STAR DR.	15+61	22' LT.	SAME AS STA. 15+11

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT



SHANABARGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Jim Durvian 3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
John Durvian 3/10/94
CHIEF, LAND DEVELOPMENT DIVISION

Andrew M. Danek 3-17-94
CHIEF, BUREAU OF HIGHWAYS

Robert Sapon 3/18/94
CHIEF, BUREAU OF ENGINEERING

OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

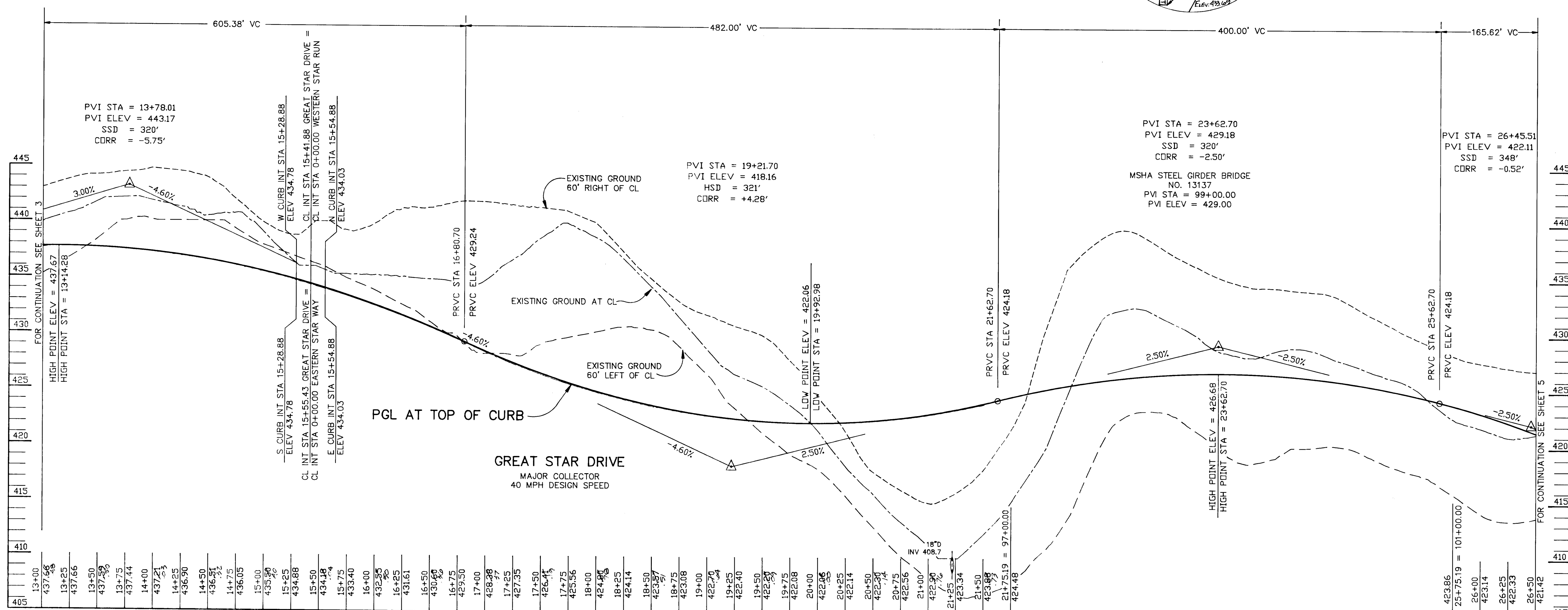
PROJECT **VILLAGE OF RIVER HILL**
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 106

AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE **PLAN AND PROFILE OF GREAT STAR DRIVE**
FROM STA 13+00.00 TO 26+50.00

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE 2.28.94
DESIGNED BY: C.J.R.
DRAWN BY: J.T.D./D.A.M.
PROJECT NO: 88103
DATE: FEBRUARY 23, 1994
SCALE: AS SHOWN
DRAWING NO. 4 OF 28



PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

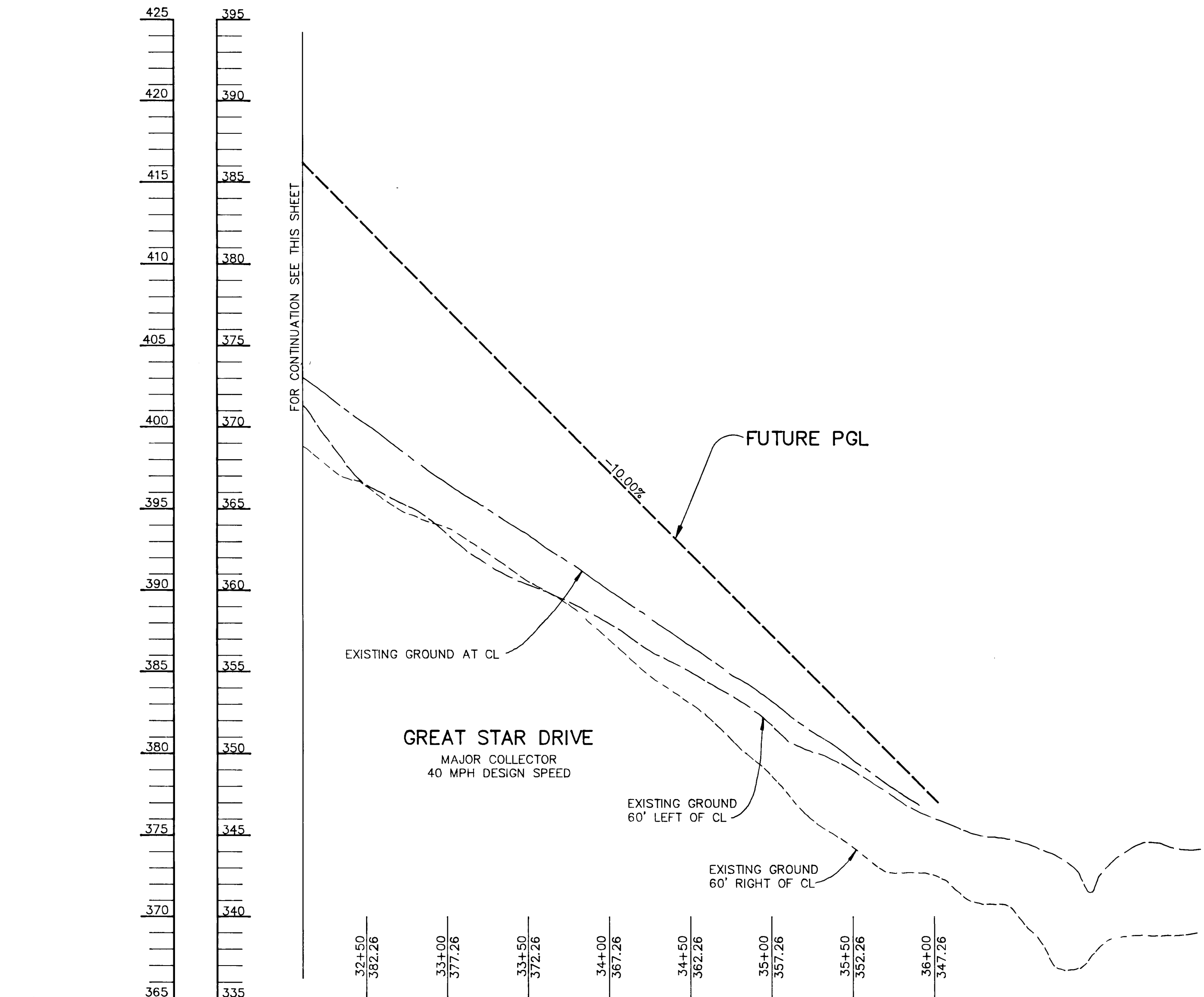
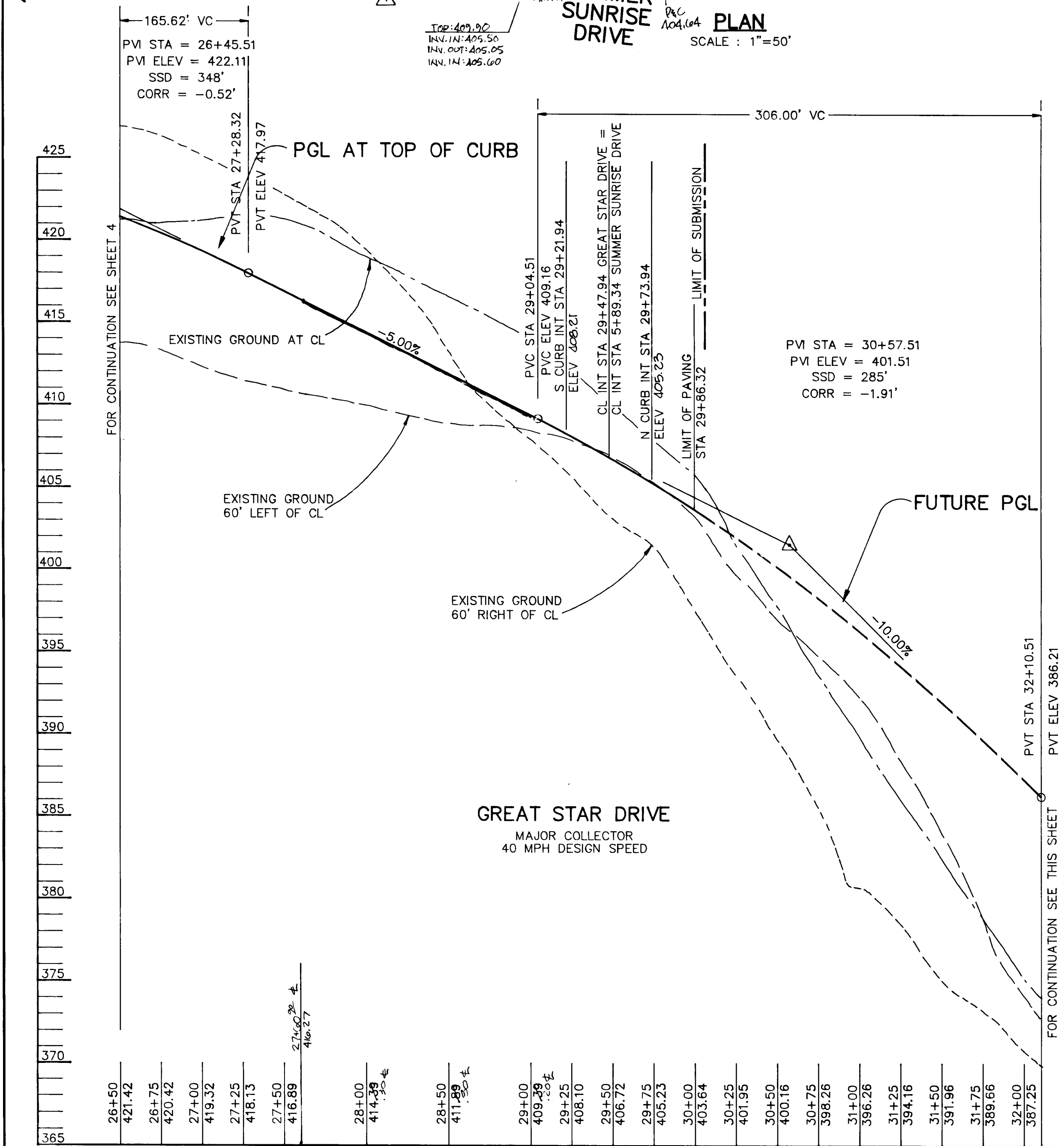
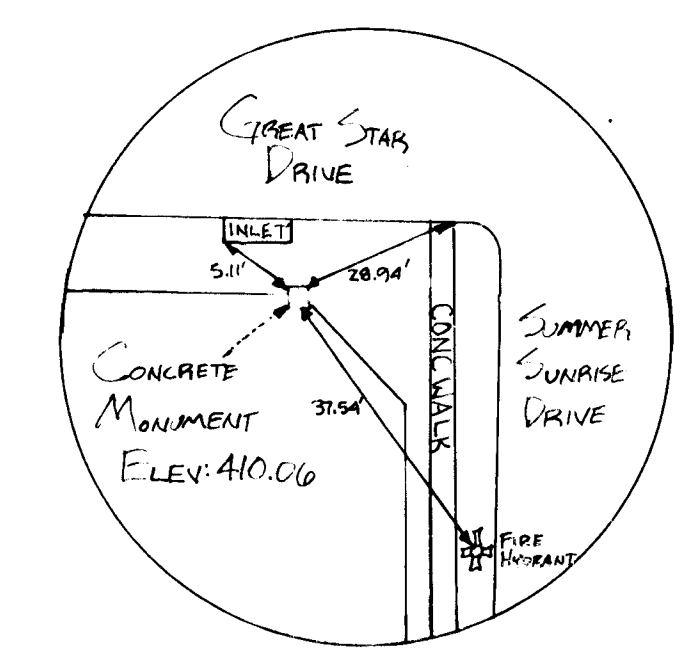
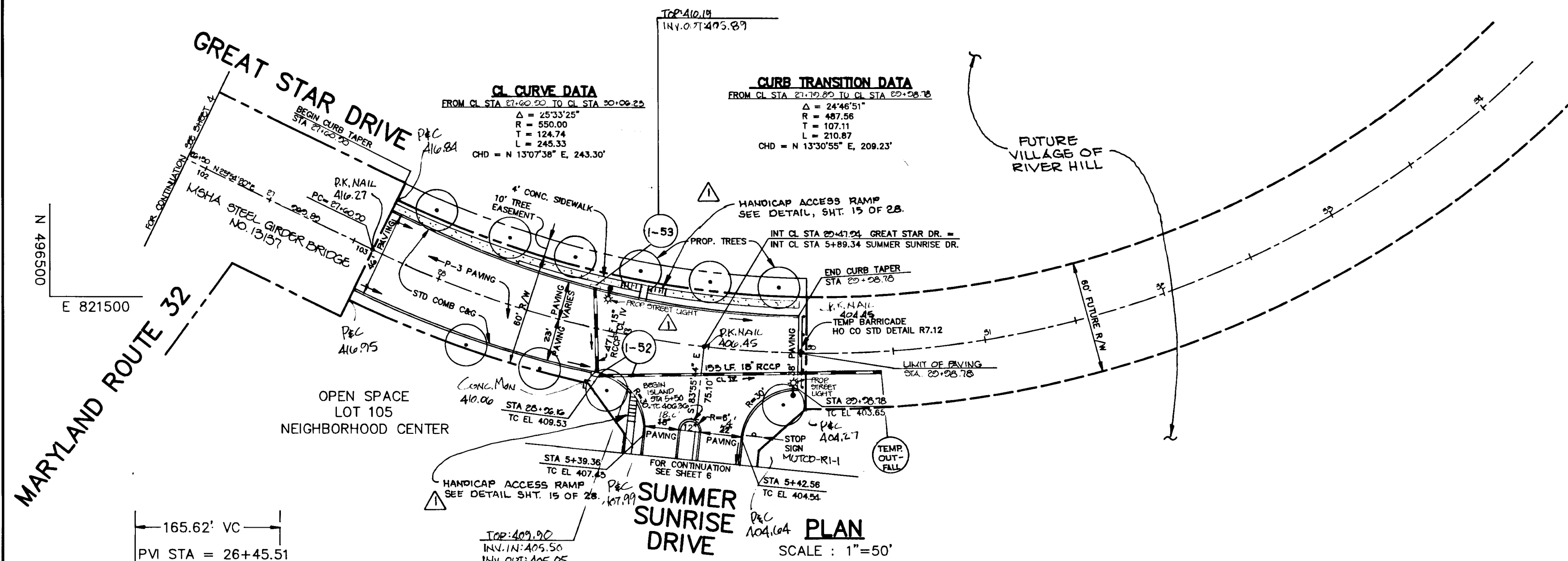
1487

E 821250 N 496500 GRID NORTH E 821250 N 497250

LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
GREAT STAR DR.	26+51	20' LT.	150 WATT HPS VAPOR FIXTURE (BRONZE) MOUNTED AT 30 FEET ON A BRONZE ALUMINUM POLE.
GREAT STAR DRIVE	29+56	20' RT.	SAME AS STA. 26+51

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET TREE.



SHANBERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

AS-BUILT
Professional Engineer
Professional Land Surveyor

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Gina Swaminani 3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Paulo Sison 3/18/94
CHIEF, BUREAU OF ENGINEERING

10/21/97 Δ ADDED HANDICAP ACCESS RAMPS BOTH SIDES OF GREAT STAR DRIVE @ SUMMER SUNRISE DRIVE.

OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT **VILLAGE OF RIVER HILL**
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 106.

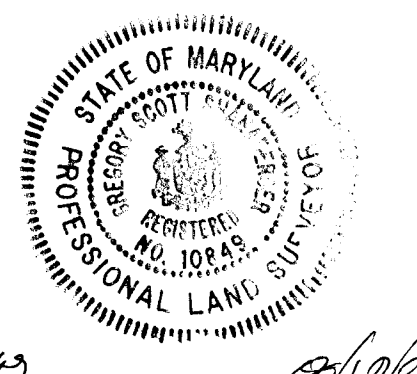
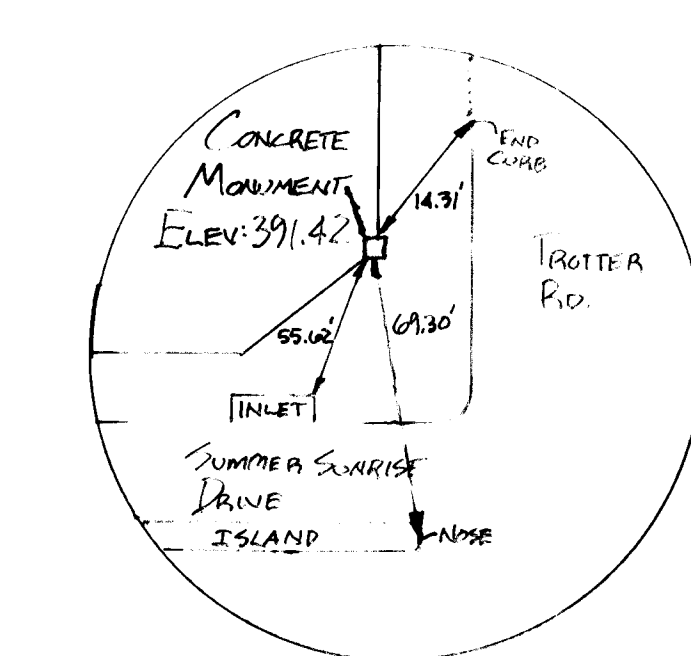
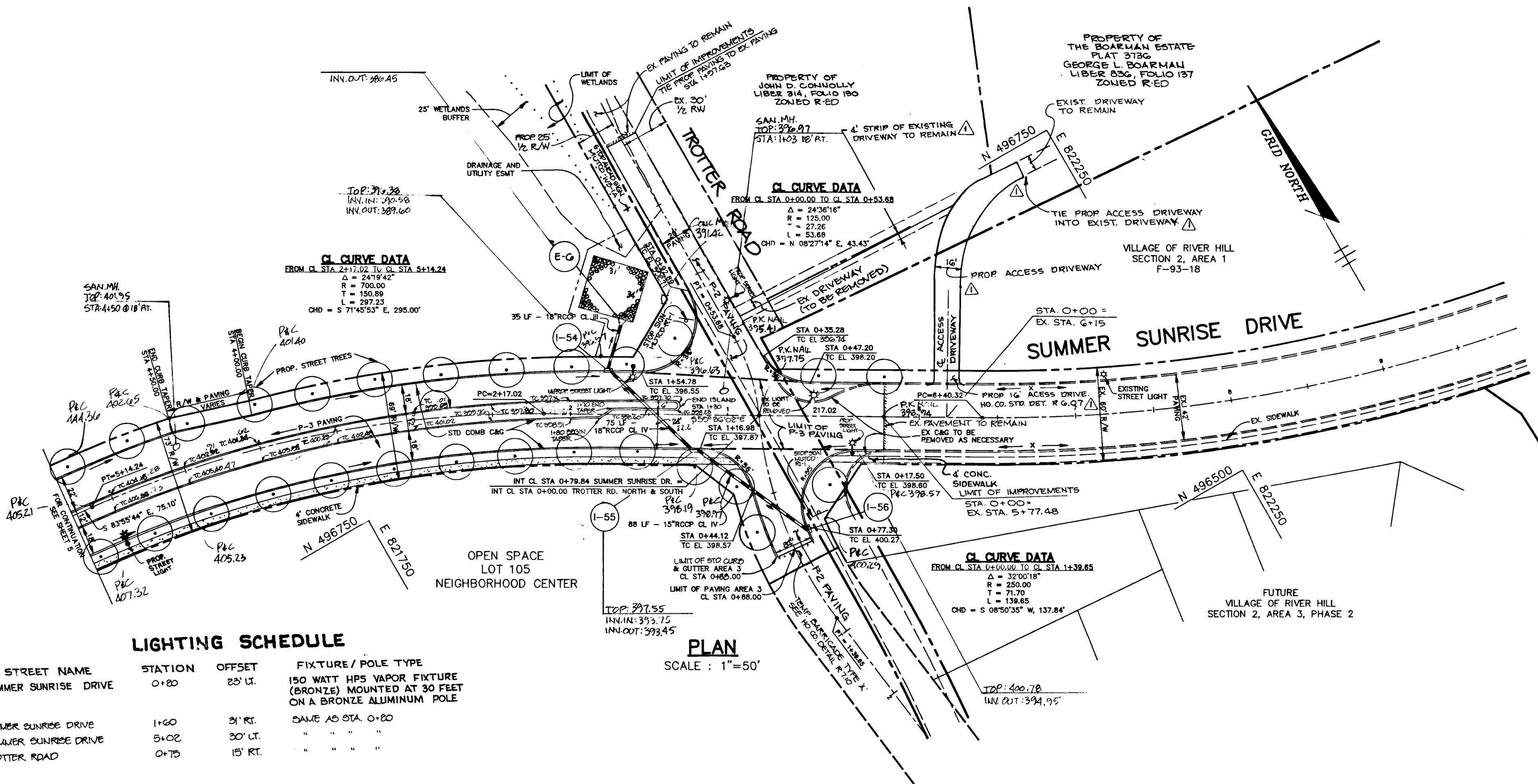
AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE **PLAN AND PROFILE OF GREAT STAR DRIVE**
FROM STA 26+50.00 TO 30+14.16

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE 2.28.94
DESIGNED BY: C.J.R.
DRAWN BY: J.T.D./D.A.M.
PROJECT NO: 88103
DATE: FEBRUARY 28, 1994
SCALE: AS SHOWN
DRAWING NO. 5 OF 28

1487



AS-BUILT

RECOVER CURET.H
N.T.S.

SHANABERGER & LANE
SURVEYORS & ENGINEERS
SUITE 104
ELLCOTT CITY, MARYLAND 21143

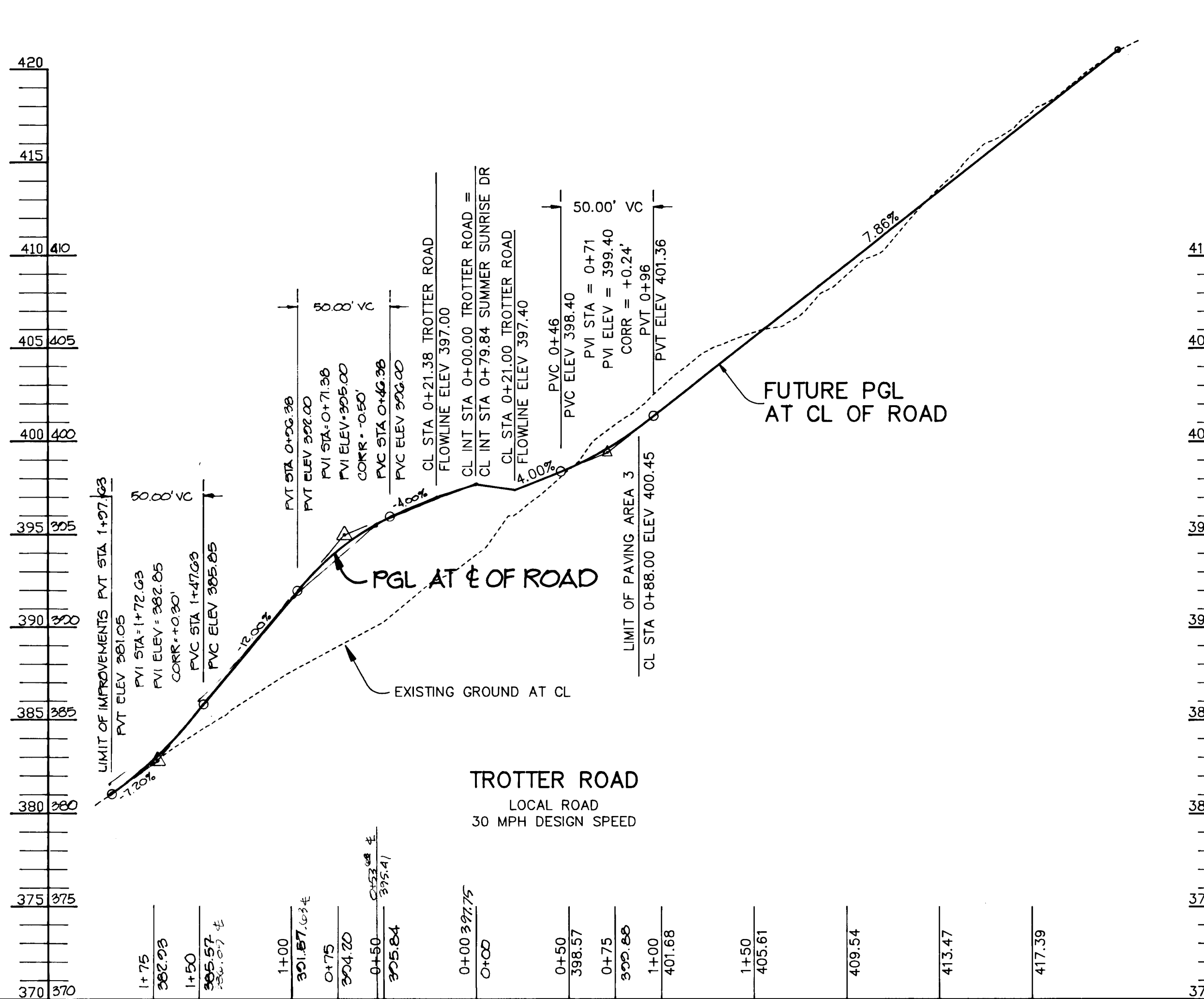
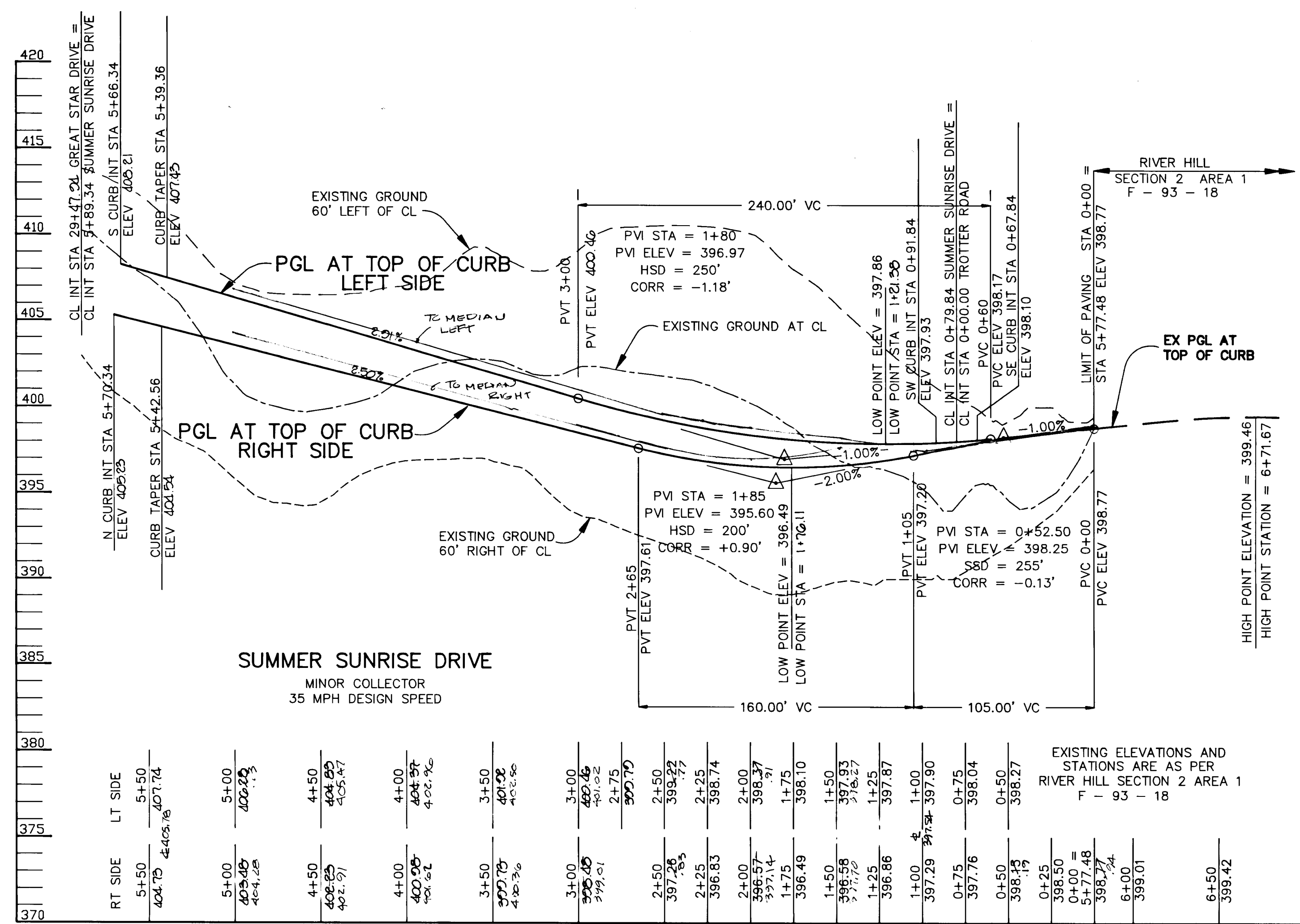
DATE: 2/10/94
V.P.

LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE
SUMMER SUNRISE DRIVE	0+20	25' LT.	150 WATT HPS VAPOR FIXTURE (BRONZE) MOUNTED AT 30 FEET ON A BRONZE ALUMINUM POLE
SUMMER SUNRISE DRIVE	1+60	31' RT.	SAME AS STA. 0+20
SUMMER SUNRISE DRIVE	5+02	30' LT.	
TROTTER ROAD	0+75	15' RT.	

PLAN
SCALE: 1"=50'

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT.



PROFILE

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

PROFILE

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

AS BUILT CERTIFICATE

DATE: 3/21/94
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Gina Surinany
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE: 3/17/94
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Chad Deussen
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 3/18/94
Richard M. Danks
CHIEF, BUREAU OF HIGHWAYS
DATE: 3/18/94
Paul S. Sepp
CHIEF, BUREAU OF ENGINEERING

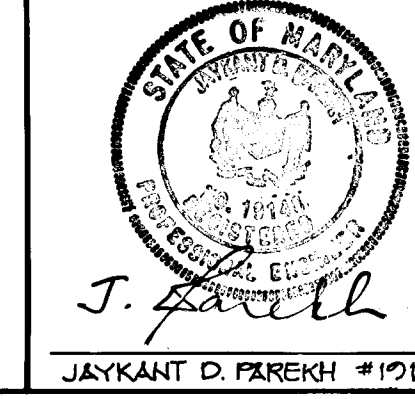
10-21-97
DATE NO. REVISION
OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT: VILLAGE OF RIVER HILL
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 106
AREA: TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

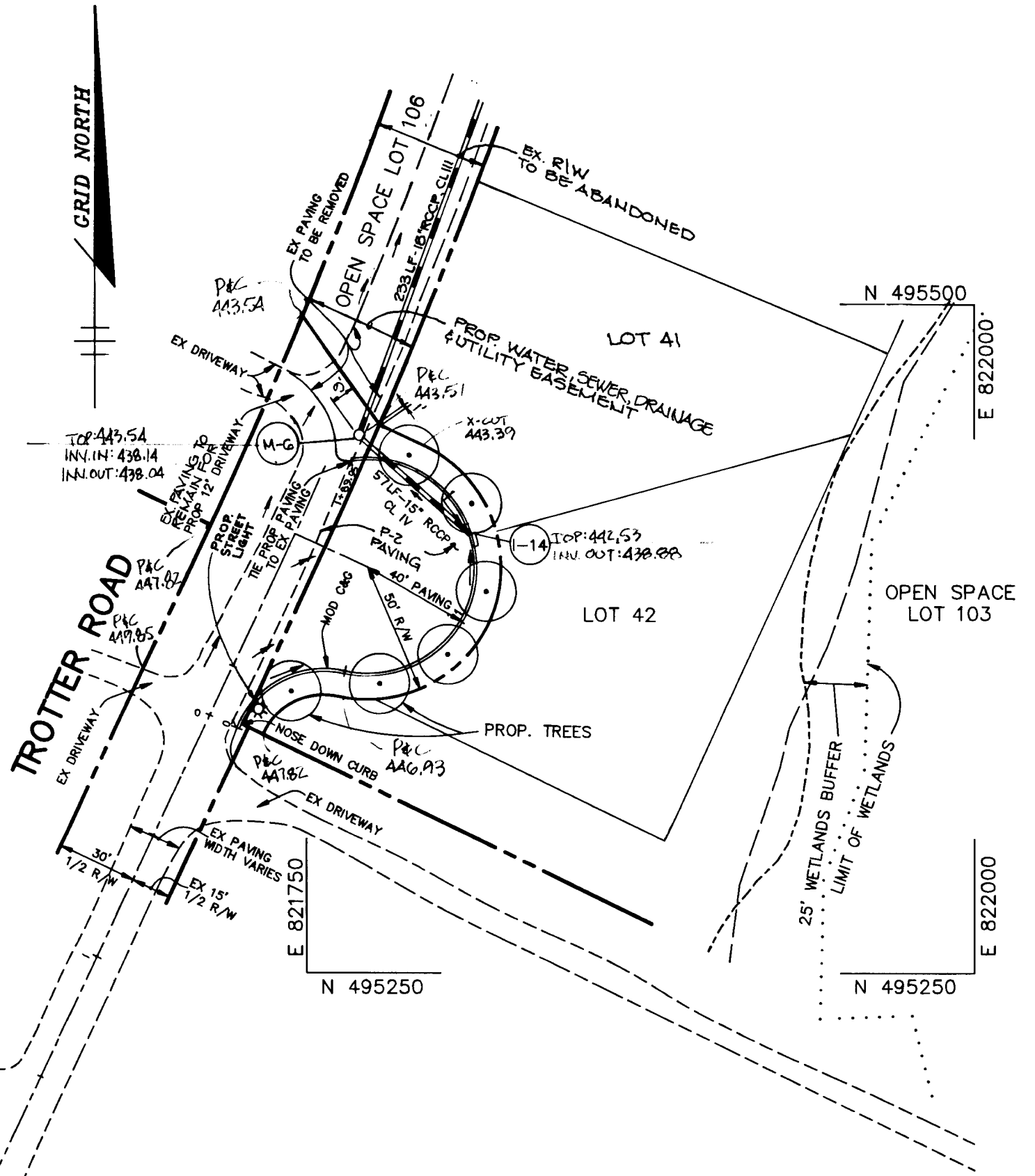
TITLE: PLAN AND PROFILE OF SUMMER SUNRISE DRIVE AND TROTTER ROAD IMPROVEMENTS

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE: 2.26.94
DESIGNED BY: C.J.R.
DRAWN BY: W.C.W./D.A.M.
PROJECT NO.: 88103
DATE: FEBRUARY 23, 1994
SCALE: AS SHOWN
DRAWING NO. 6 OF 28



1487

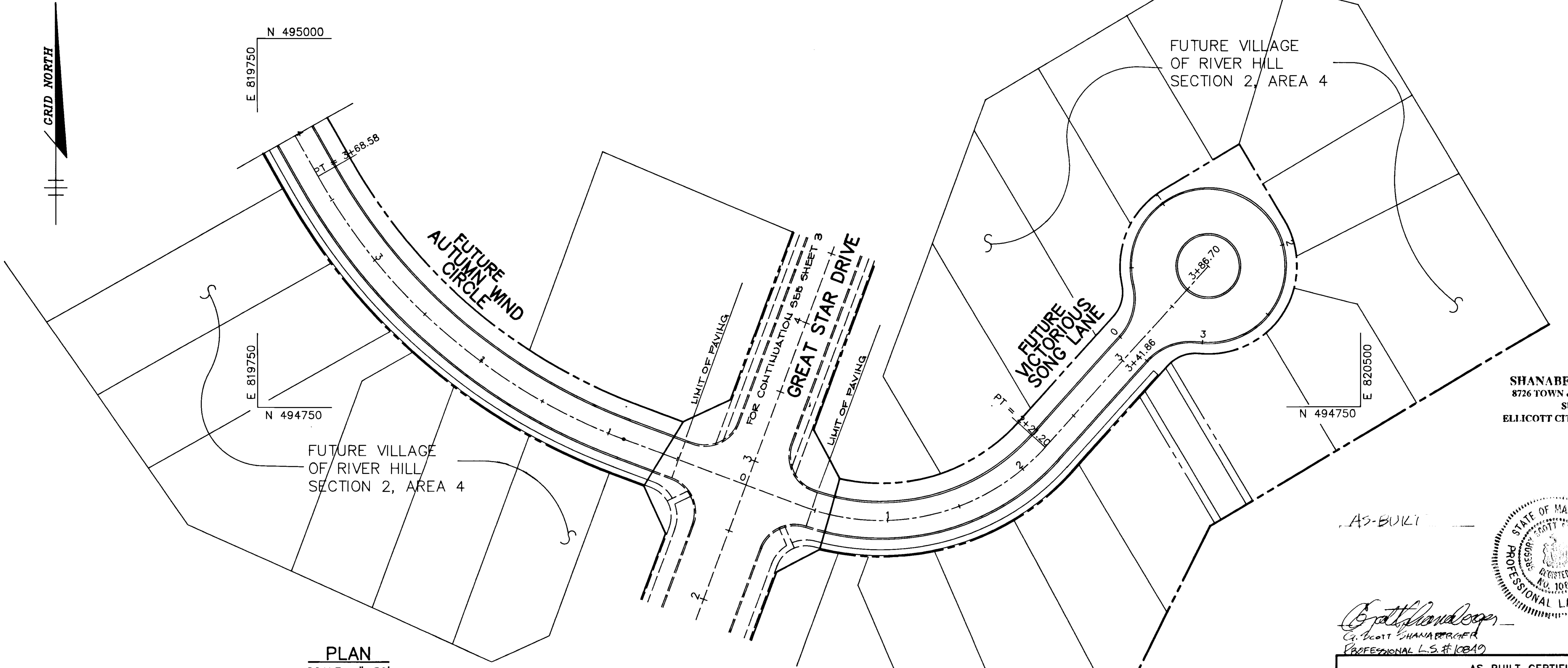


PLAN
SCALE: 1"=50'

LIGHTING SCHEDULE

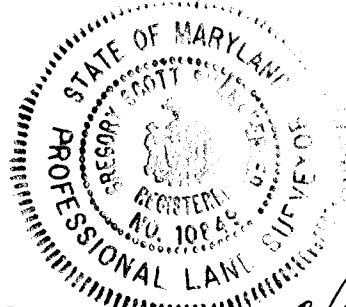
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
TROTTER RD.	16+40	15' RT.	100 WATT HP5 VAPOR MODERN POST, TOP FIXTURE (BRONZE) MOUNTED ON A 18 FOOT BRONZE FIBERGLASS POLE.

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT



PLAN
SCALE: 1"=50'

SHANBERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELICOTT CITY, MARYLAND 21043



Gratland
Professional L.S. # 10849

AS BUILT CERTIFICATE

APPROVED	DATE
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. <i>Gina Zimmara</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	3/21/94
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. <i>Mark Dammann</i> CHIEF, LAND DEVELOPMENT DIVISION	3/18/94
<i>Richard M. Danek</i> CHIEF, BUREAU OF HIGHWAYS	3-17-94
<i>Paul D. Jenson</i> CHIEF, BUREAU OF ENGINEERING	3/18/94

OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

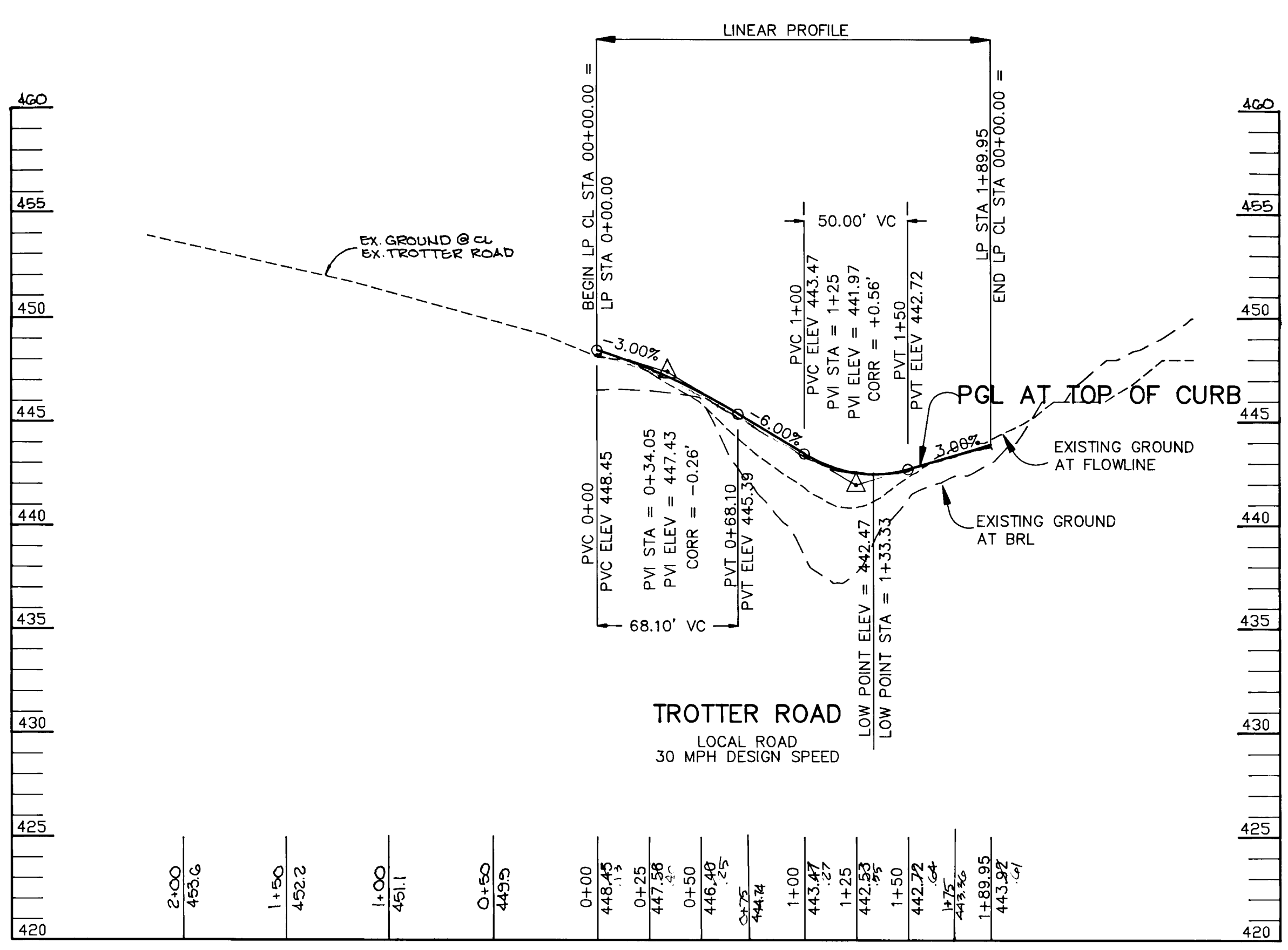
PROJECT **VILLAGE OF RIVER HILL**
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 106

AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

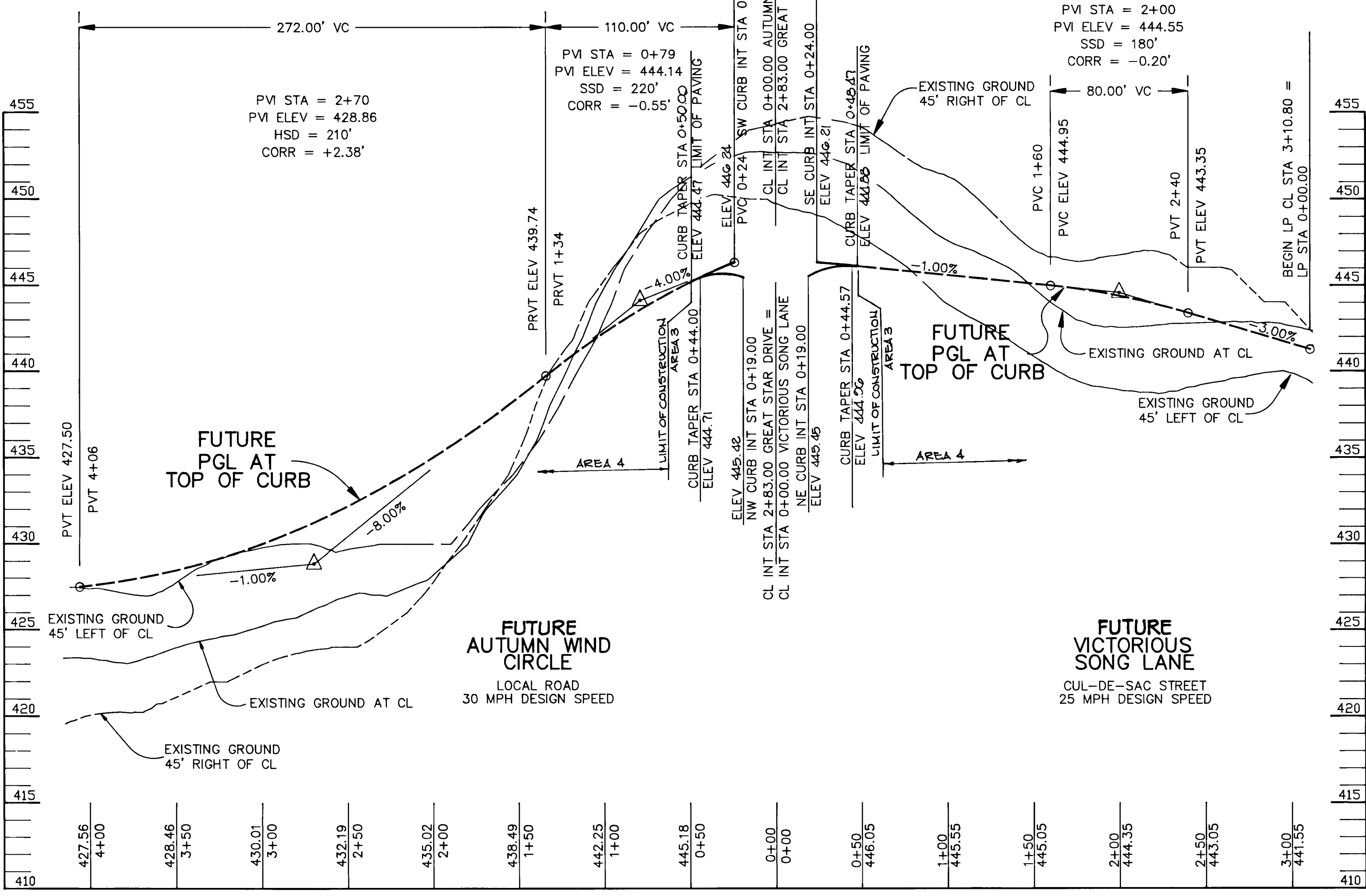
TITLE PLAN AND PROFILE OF
AUTUMN WIND CIRCLE AND VICTORIOUS SONG LANE
AND TROTTER ROAD

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE 2-28-94	DESIGNED BY : C.J.R.
 <i>J. Park</i> JAYKANT D. PAREKH #10146	DRAWN BY : J.T.D./D.A.M.
	PROJECT NO : 88103
	DATE : FEBRUARY 20, 1994
	SCALE : AS SHOWN
	DRAWING NO. 7 OF 28

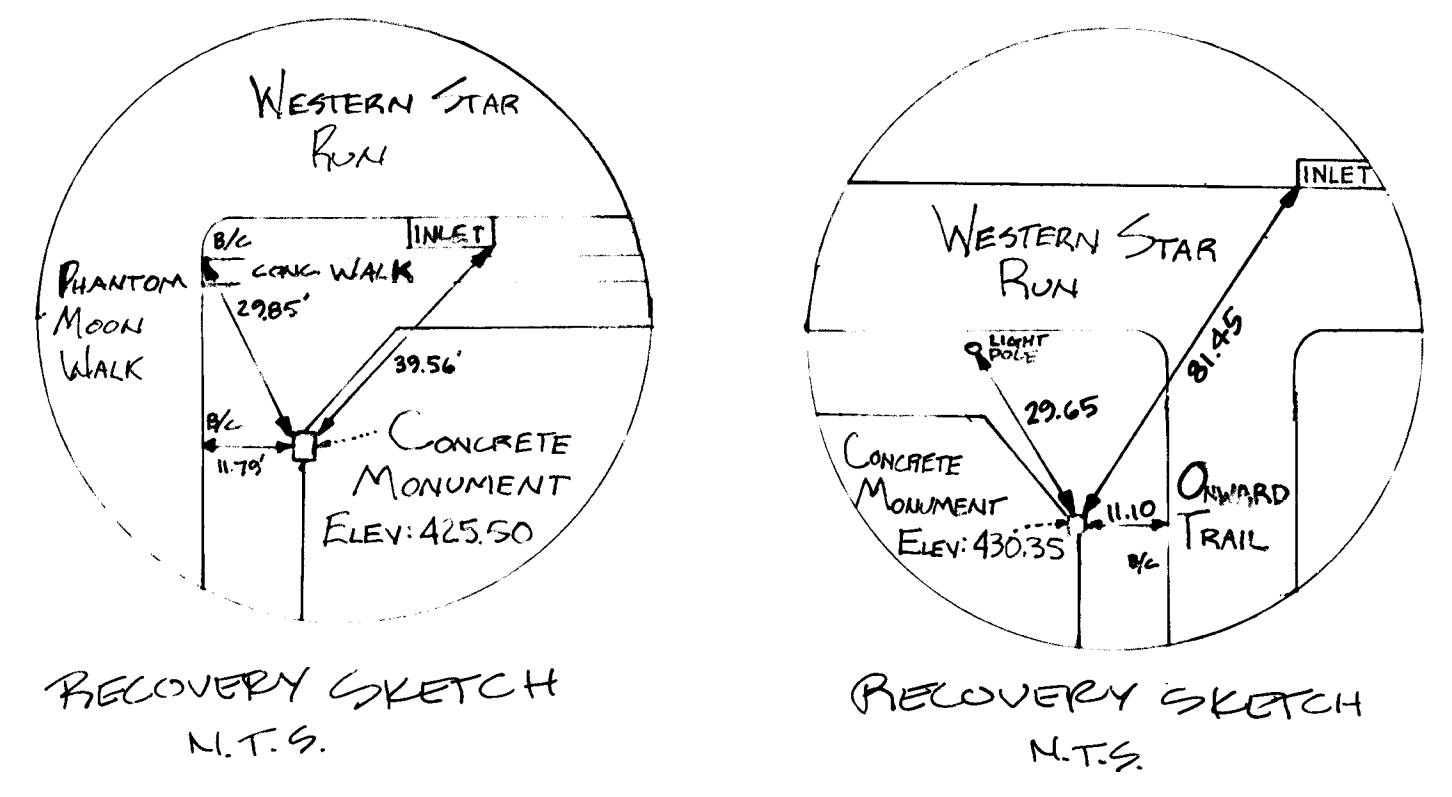
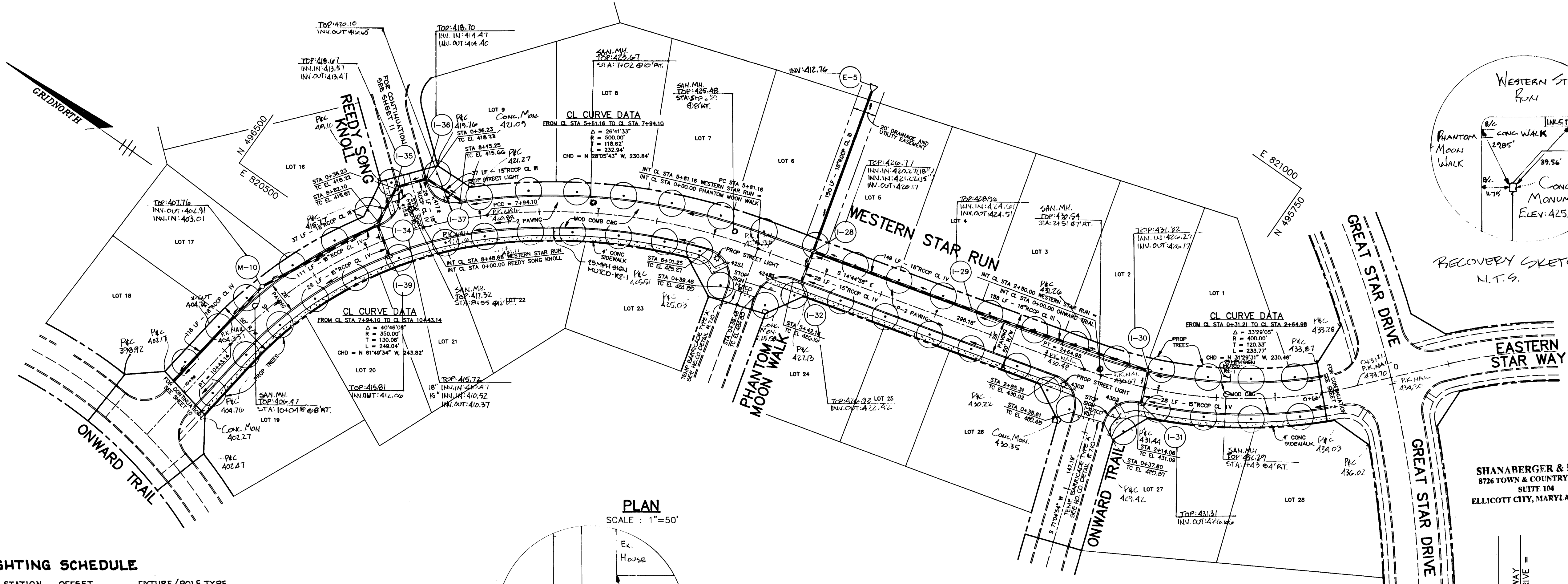


PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

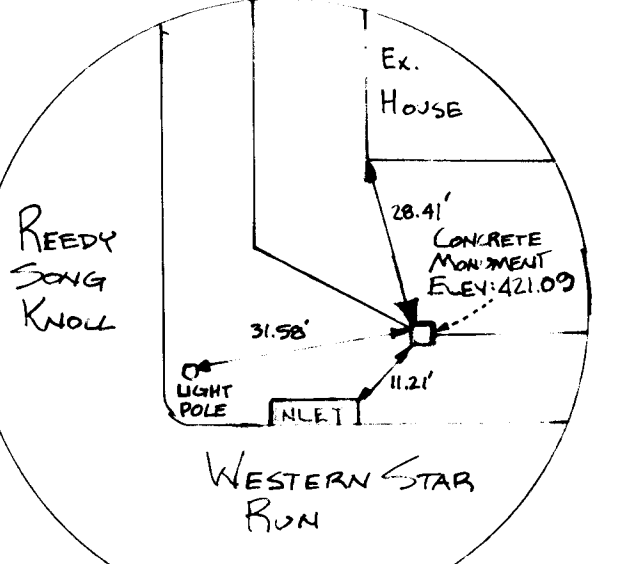


PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

1987



PLAN
 SCALE: 1"=50'



LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
WESTERN STAR RUN	2+77	10' LT.	100 WATT HPS VAPOR MODERN POST TOP FIXTURE (BRONZE) MOUNTED ON A 14 FOOT BRONZE FIBERGLASS POLE.
WESTERN STAR RUN	0+02	10' LT.	SAME AS STA. 2+77
WESTERN STAR RUN	0+25	10' RT.	SAME AS STA. 2+77

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT

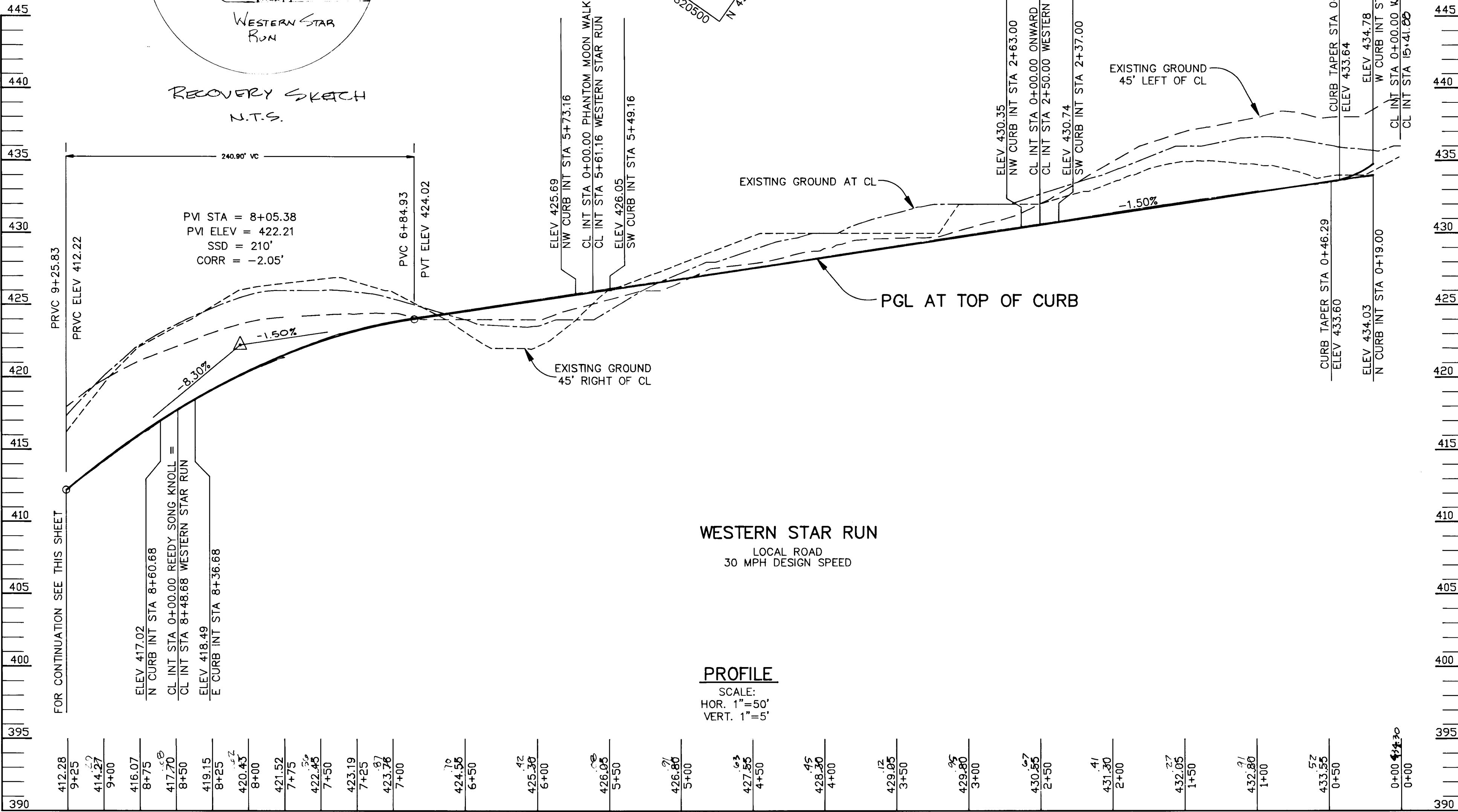
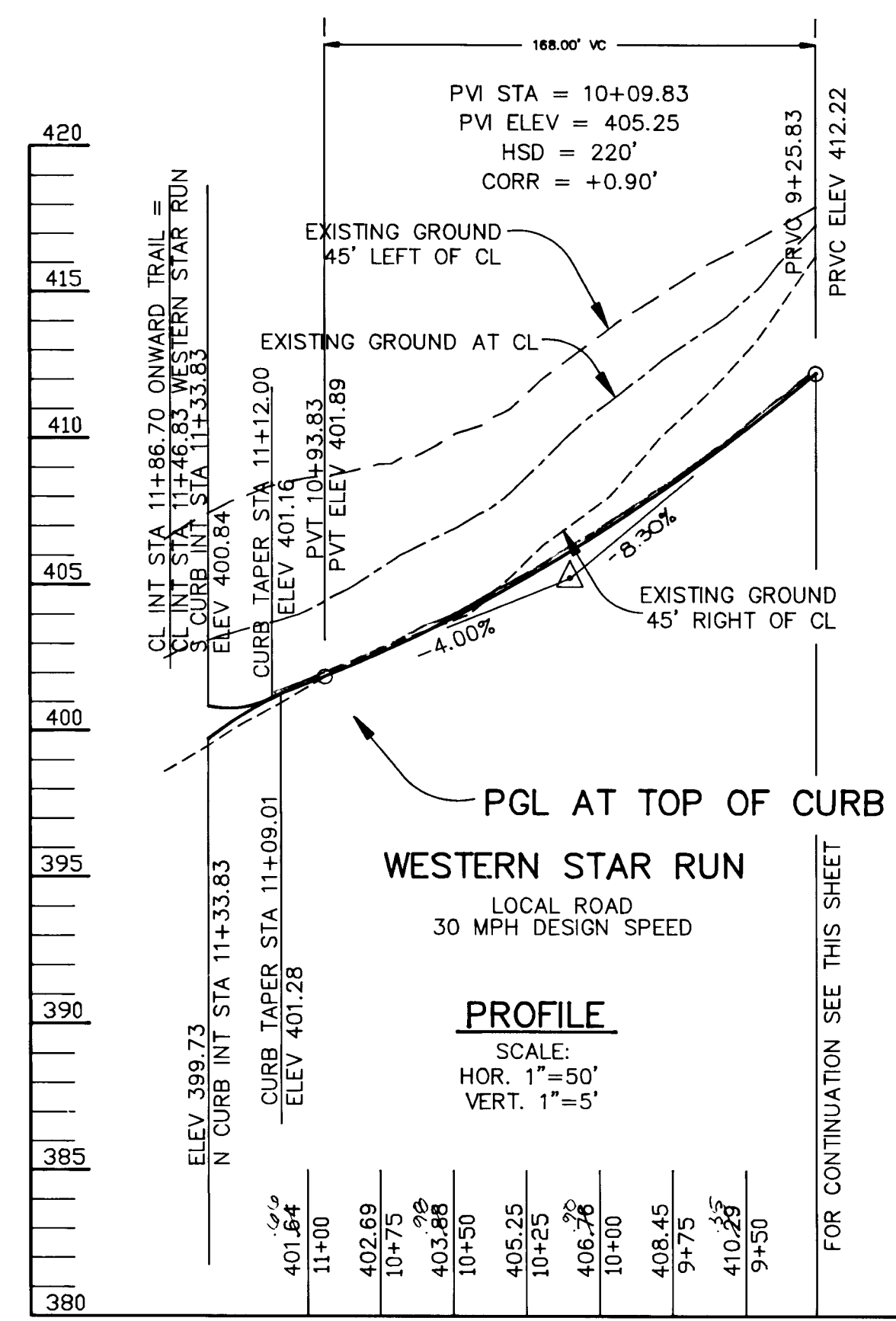
AS-BUILT

SHANBERGER & LANE
 8726 TOWN & COUNTY BLVD.
 SUITE 104
 ELLICOTT CITY, MARYLAND 21103

Jaykant D. Parekh
 PROFESSIONAL L.S. #110843

AS BUILT CERTIFICATE

DATE	REVISION
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	DATE
<i>Aino Simons</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	3/2/94 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	DATE
<i>John Dammann</i> CHIEF, LAND DEVELOPMENT DIVISION	3/10/94 DATE
<i>Andrew M. Conner</i> CHIEF, BUREAU OF HIGHWAYS	3-17-94 DATE
<i>Paul D. Seaman</i> CHIEF, BUREAU OF ENGINEERING	3/18/94 DATE



OWNER / DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

PROJECT: **VILLAGE OF RIVER HILL**
 SECTION 2 AREA 3 PHASE 1
 AREA 3 LOTS 1 - 106

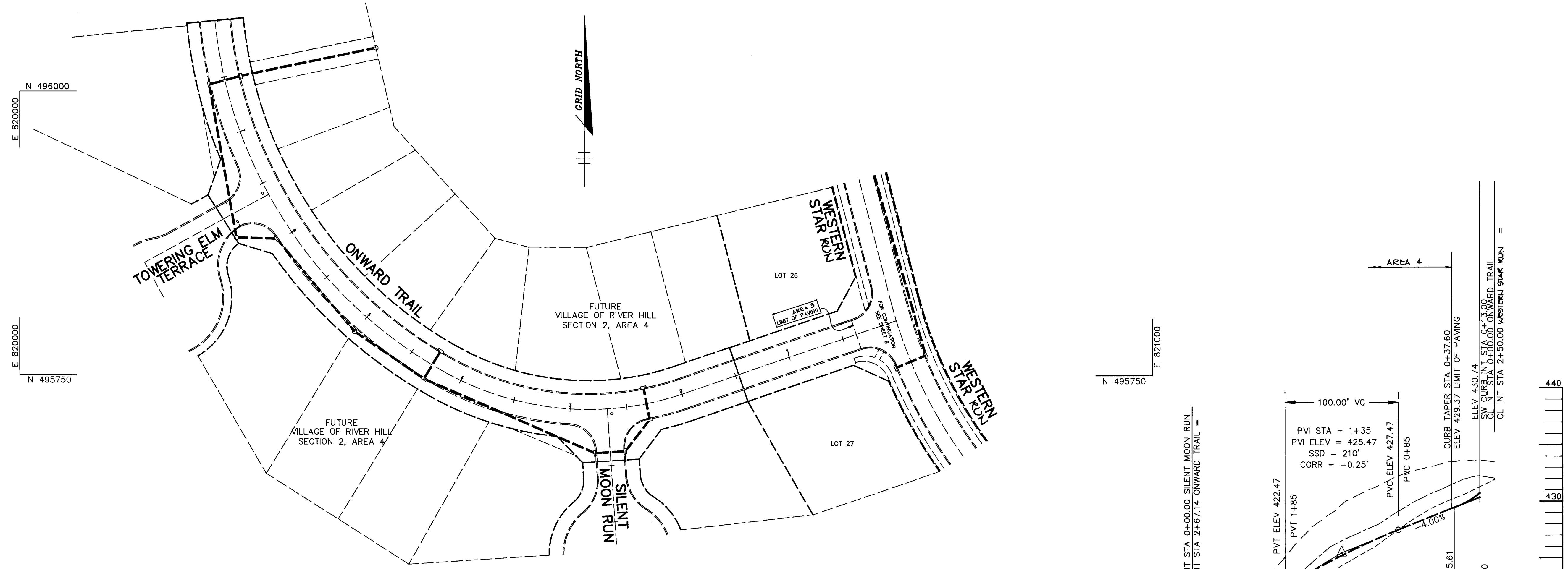
AREA: TAX MAP NO. 35 ZONED NEW TOWN
 PART OF PARCELS 70 & 240
 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: **PLAN AND PROFILE OF WESTERN STAR RUN**

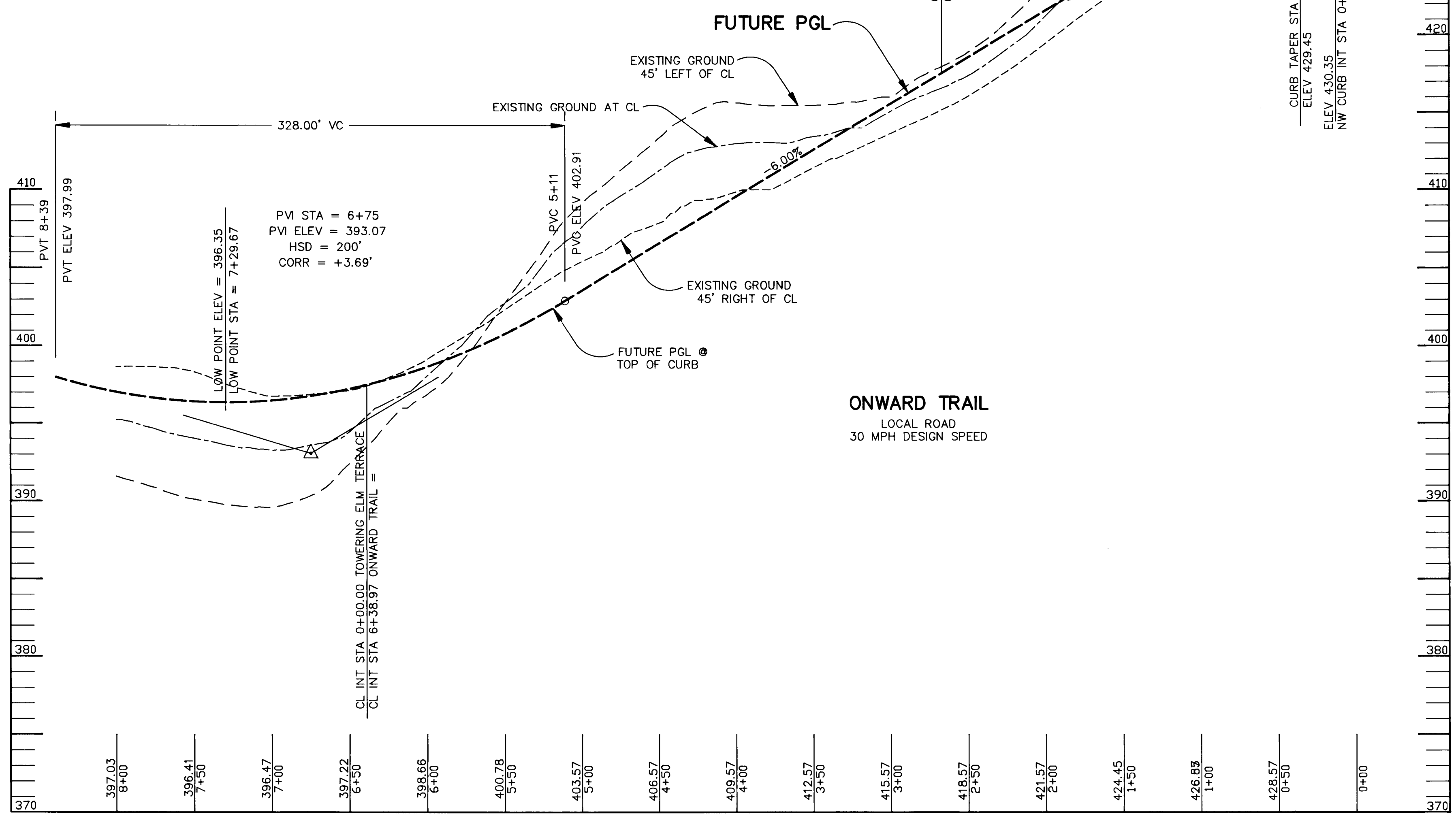
RIEMER MUEGGE & ASSOCIATES, INC.
 Planners • Engineers • Surveyors
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
 410-997-8900 FAX: 410-997-9282

DATE: 2-28-94
 DESIGNED BY: C.J.R.
 DRAWN BY: J.T.D./D.A.M.
 PROJECT NO: 88103
 DATE: FEBRUARY 28, 1994
 SCALE: AS SHOWN
 DRAWING NO. 8 OF 28

1187



PLAN
SCALE: 1"=50'



PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

AS BUILT CERTIFICATE	
APPROVED :	DATE
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Jim Srinivasan</i>	3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	
APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>John P. ...</i>	3/10/94
CHIEF, LAND DEVELOPMENT DIVISION	
<i>Richard M. ...</i>	3-17-94
CHIEF, BUREAU OF HIGHWAYS	
<i>Ronald ...</i>	3/18/94
CHIEF, BUREAU OF ENGINEERING	
DATE NO.	REVISION
OWNER / DEVELOPER	
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
PROJECT VILLAGE OF RIVER HILL SECTION 2 AREA 3 PHASE 1 AREA 3 LOTS 1 - 106	
AREA TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PLAN AND PROFILE OF ONWARD TRAIL FROM STA 0+00.00 TO 0+37.60	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX : 410-997-9282	
2.28.94 DATE	S-91-03, P-94-01
DESIGNED BY : C.J.R.	
DRAWN BY : J.T.D./D.A.M.	
PROJECT NO : 88103	
DATE : FEBRUARY 23, 1994	
SCALE : AS SHOWN	
DRAWING NO. 9 OF 28	

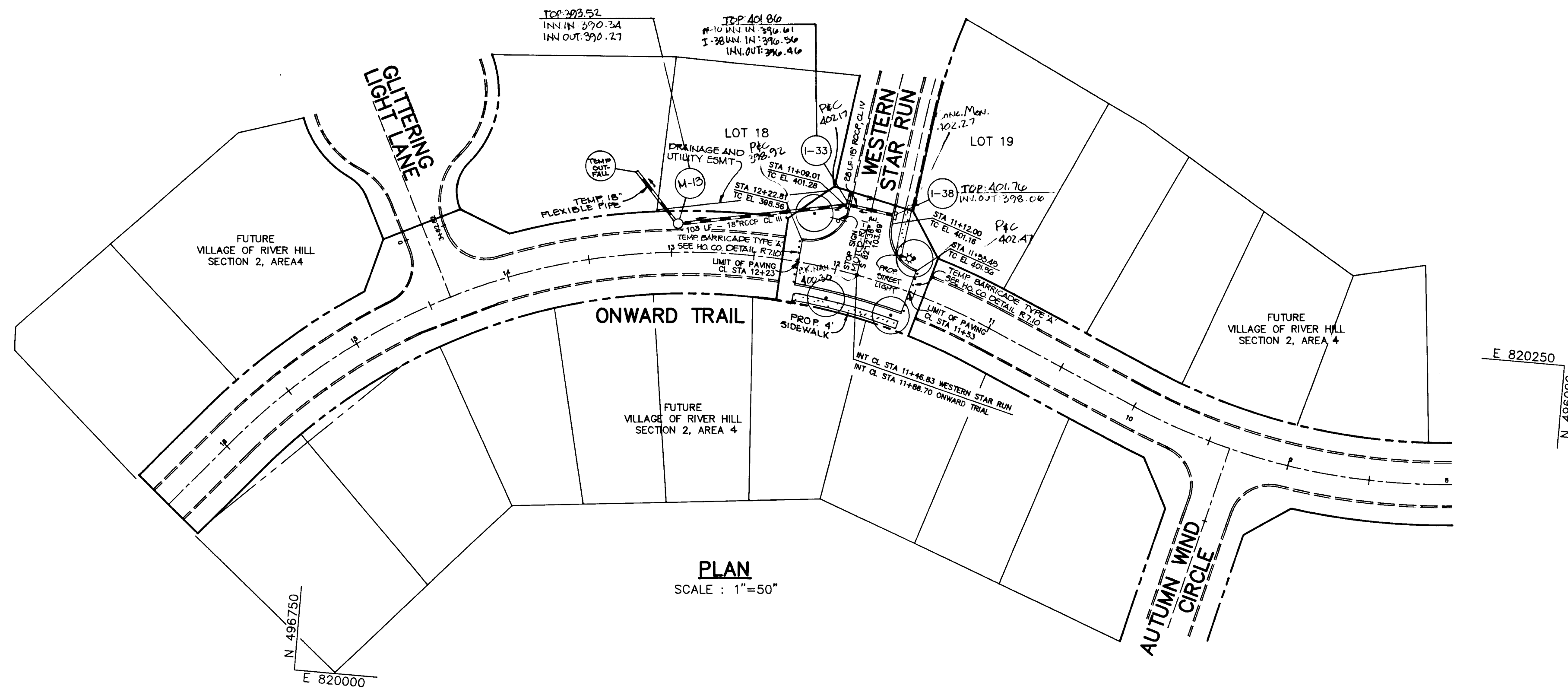
1487



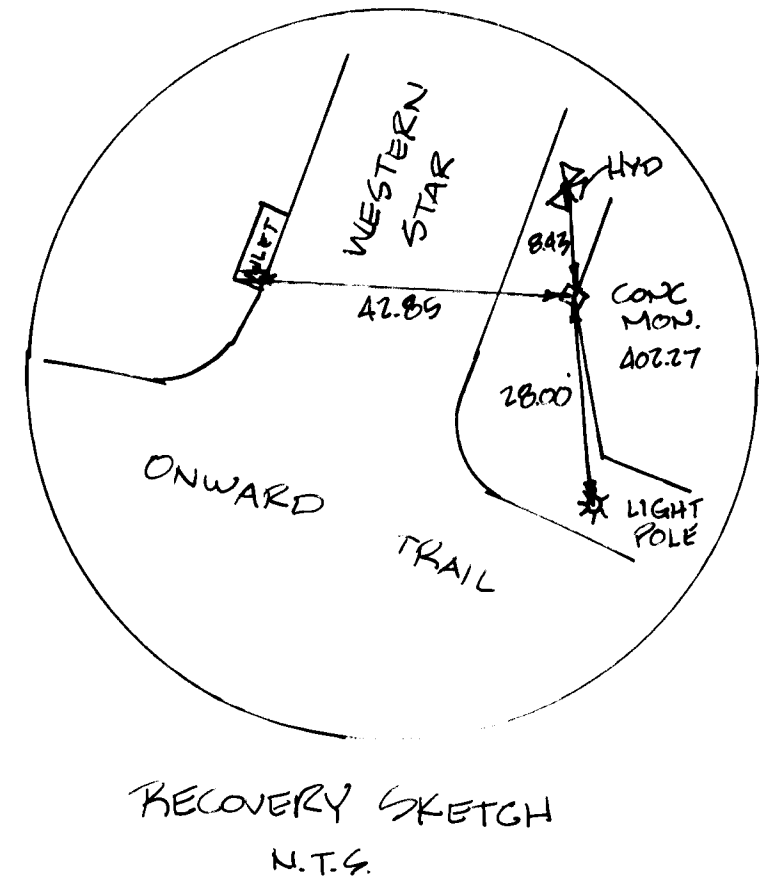
LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE
ONWARD TRAIL	11+60	10' RT.	100 WATT HP5 VAPOR MODERN POST TOP FIXTURE (BRONZE) MOUNTED ON 14 FOOT BRONZE FIBERGLASS POLE.

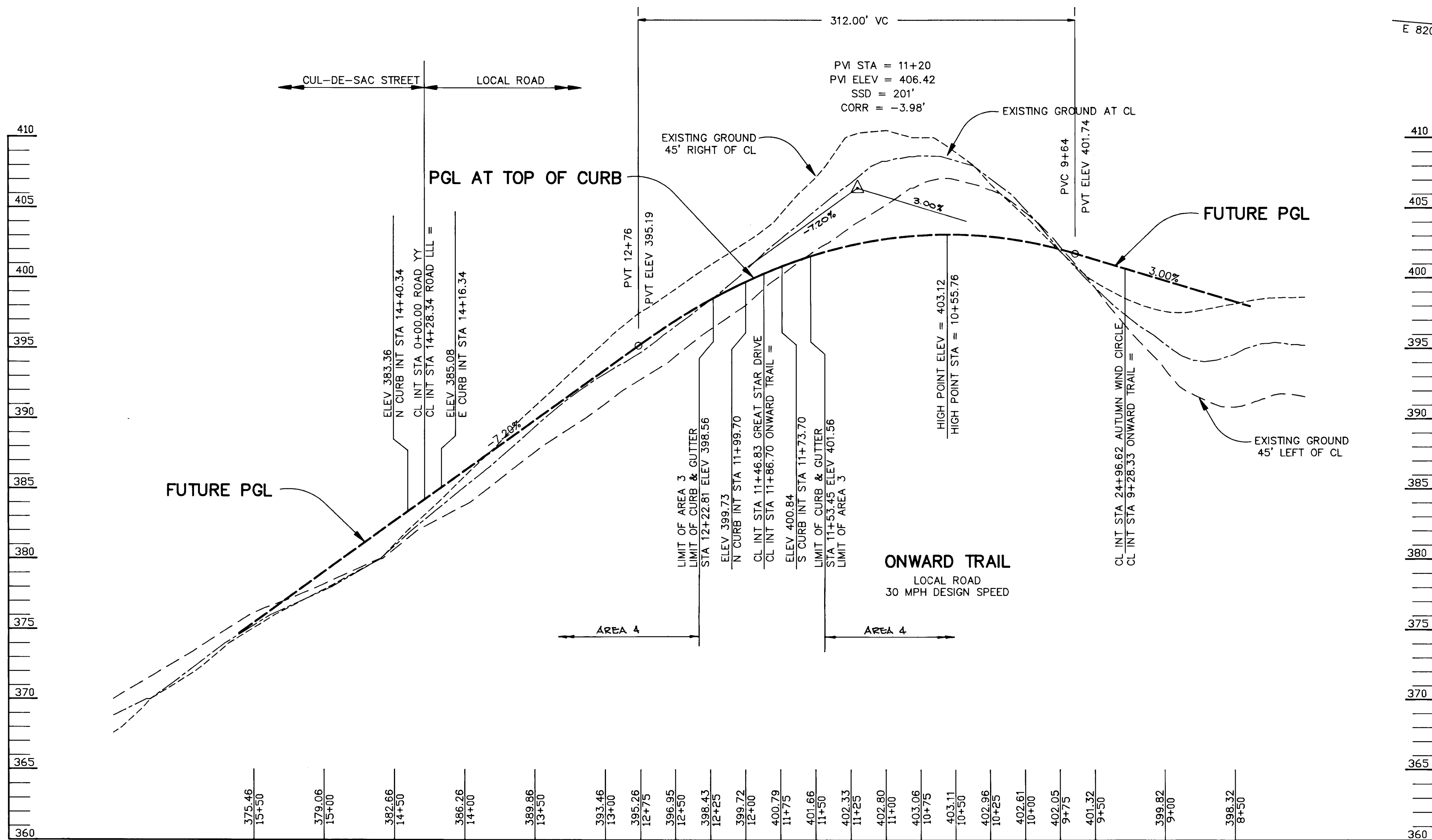
NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT.



PLAN
SCALE: 1"=50'



RECOVERY SKETCH
N.T.S.



PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

AS-BUILT



SHANABERG & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

Shanaberg
PROFESSIONAL LAND SURVEYOR
DATE: 3/10/94

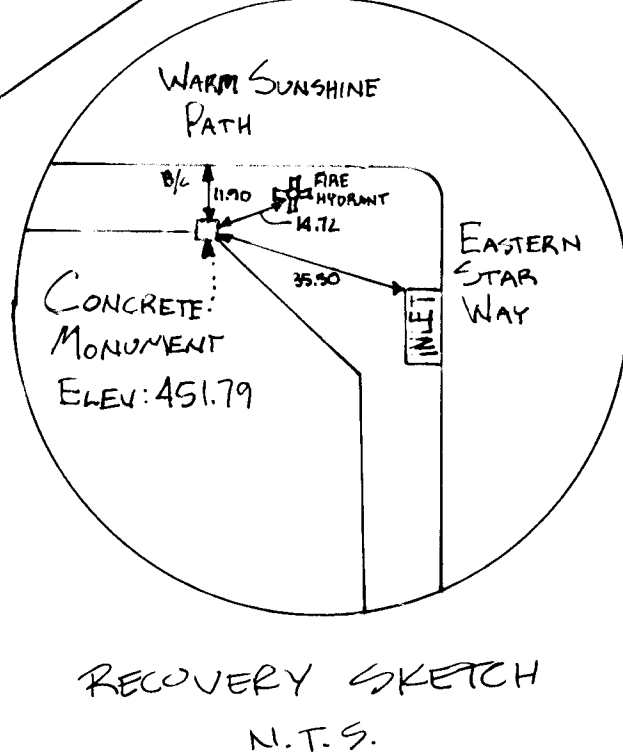
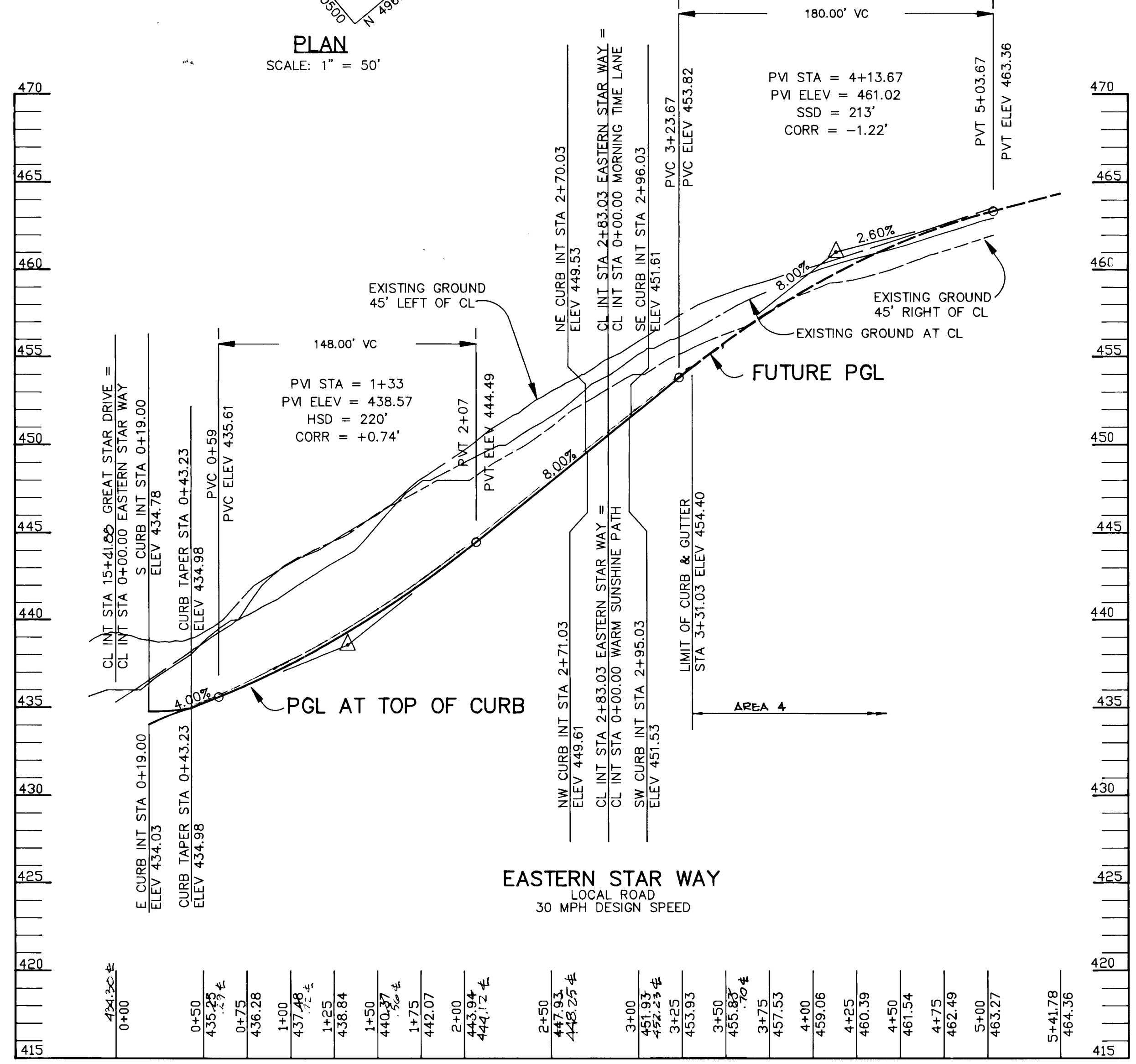
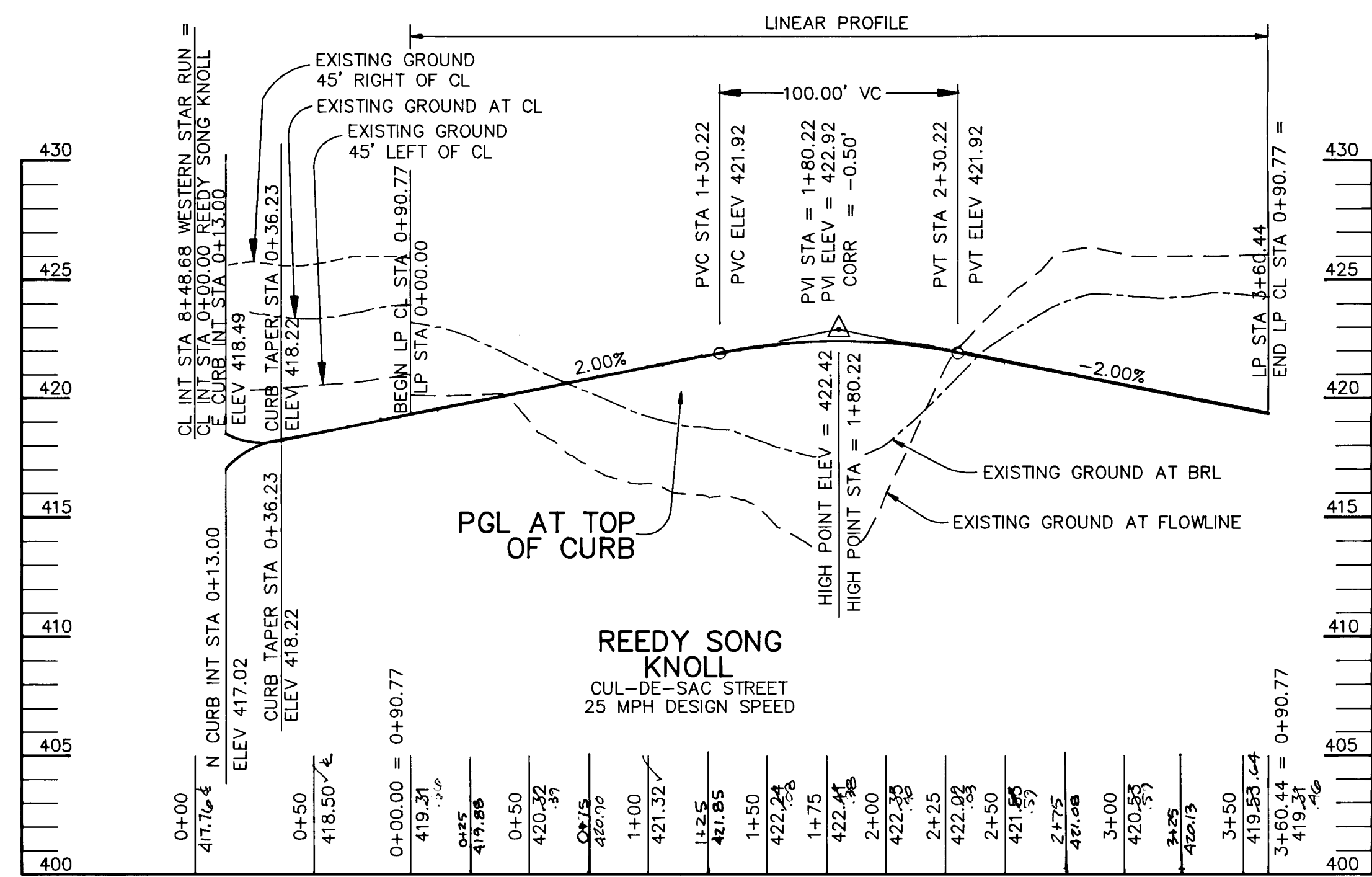
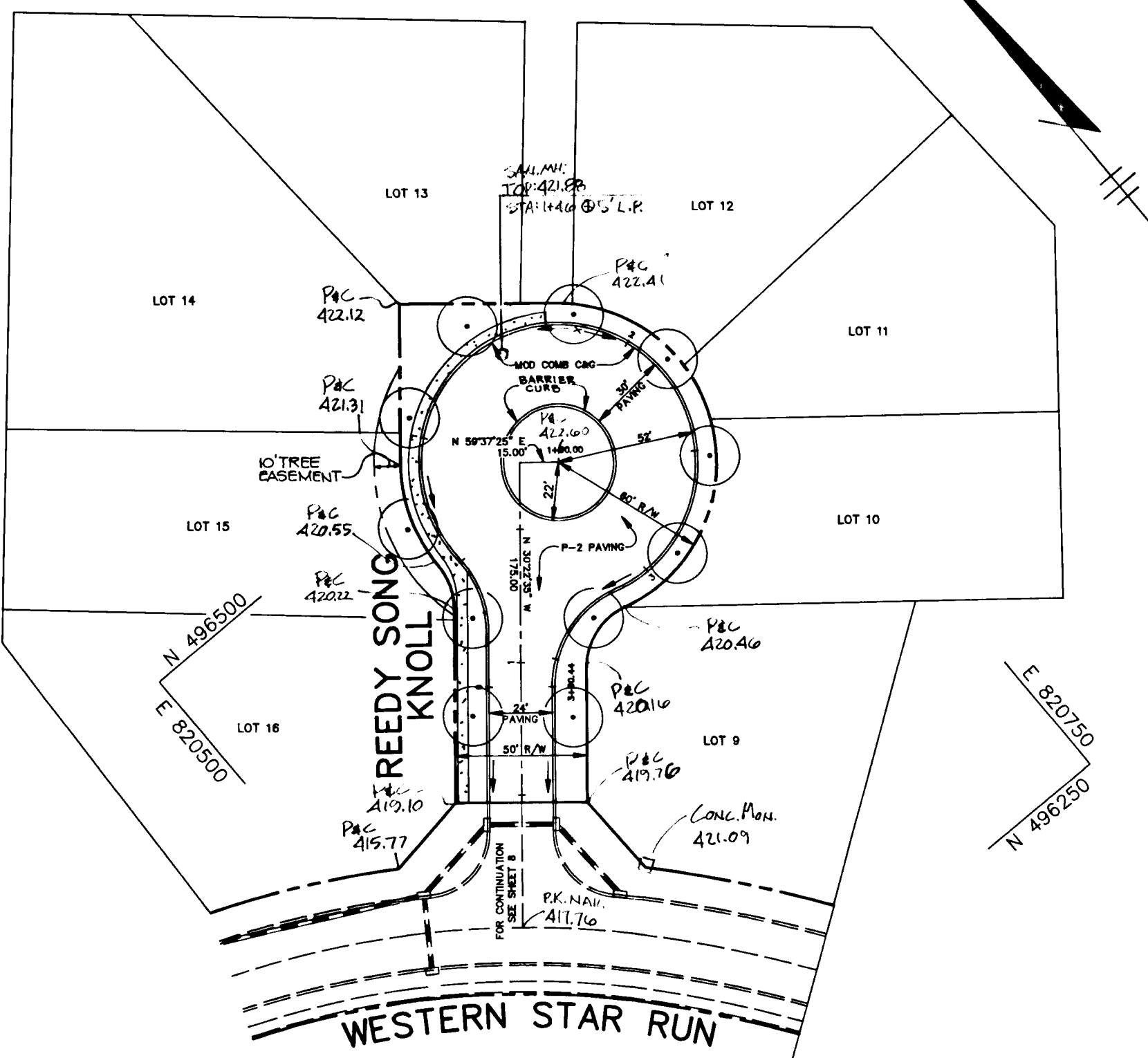
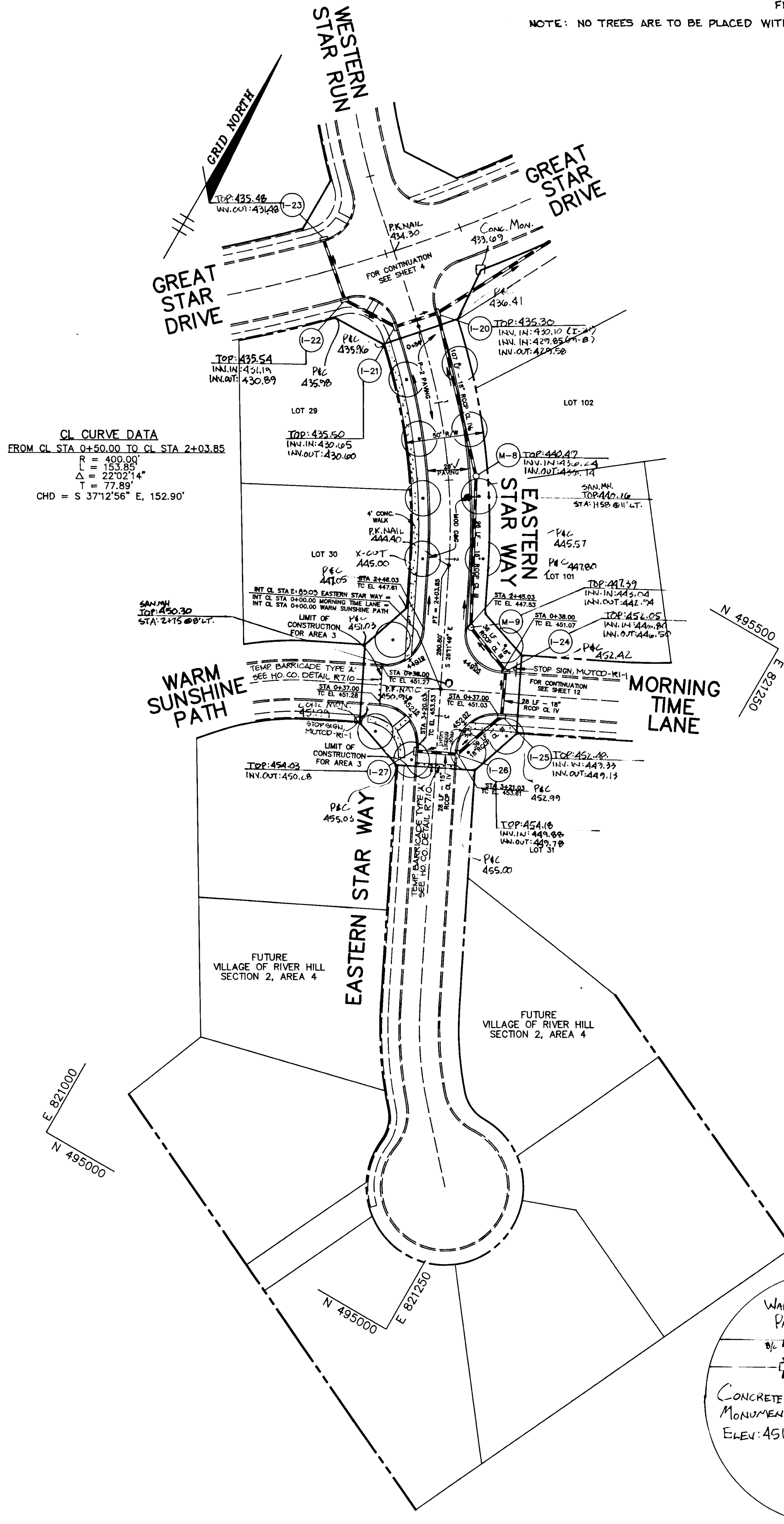
AS BUILT CERTIFICATE	
DATE	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Gym Summary</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	3/21/94 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>Charles M. Duncanson</i> CHIEF, LAND DEVELOPMENT DIVISION	3/10/94 DATE
<i>Andrew M. Duncanson</i> CHIEF, BUREAU OF HIGHWAYS	3-17-94 DATE
<i>Paul M. Seppon</i> CHIEF, BUREAU OF ENGINEERING	3/18/94 DATE
DATE NO.	REVISION
OWNER / DEVELOPER	
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
PROJECT: VILLAGE OF RIVER HILL SECTION 2 AREA 3 PHASE 1 AREA 3 LOTS 1 - 106	
AREA: TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: PLAN AND PROFILE OF ONWARD TRAIL FROM STA 11+53.45 TO 12+22.81	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
2.28.94 DATE	DESIGNED BY: C.J.R.
	DRAWN BY: J.T.D./D.A.M.
	PROJECT NO: 88103
	DATE: FEBRUARY 23, 1994
	SCALE: AS SHOWN
	DRAWING NO. 10 OF 28

1487

LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
EASTERN STAR WAY	5+10	10' LT.	100 WATT HPS VAPOR MODERN POST TOP FIXTURE (BRONZES) MOUNTED ON A 14 FOOT BRONZE FIBERGLASS POLE.

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT



PROFILE
SCALE:
HOR. 1" = 50'
VERT. 1" = 5'

AS-BUILT
STATE OF MARYLAND
PROFESSIONAL ENGINEER
JAYKANT D. PAREKH #10148

AS BUILT CERTIFICATE

DATE	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. <i>Gina Summary</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH 3/21/94	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. <i>William M. Daniels</i> CHIEF, LAND DEVELOPMENT DIVISION 2/18/94	DATE
<i>Richard M. Daniels</i> CHIEF, BUREAU OF HIGHWAYS 3-17-94	DATE
<i>Richard M. Daniels</i> CHIEF, BUREAU OF ENGINEERING 3/18/94	DATE

DATE NO.	REVISION
OWNER / DEVELOPER	THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044
PROJECT	VILLAGE OF RIVER HILL SECTION 2, AREA 3 PHASE 1 AREA 3 LOTS 1 - 106
AREA	TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE	PLAN AND PROFILE OF EASTERN STAR WAY AND REEDY SONG KNOLL

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE: 2.28.94

DESIGNED BY: C.J.R.
DRAWN BY: J.T.D./D.A.M.
PROJECT NO: 88103
DATE: FEBRUARY 28, 1994
SCALE: AS SHOWN
DRAWING NO. 11 OF 28

1487

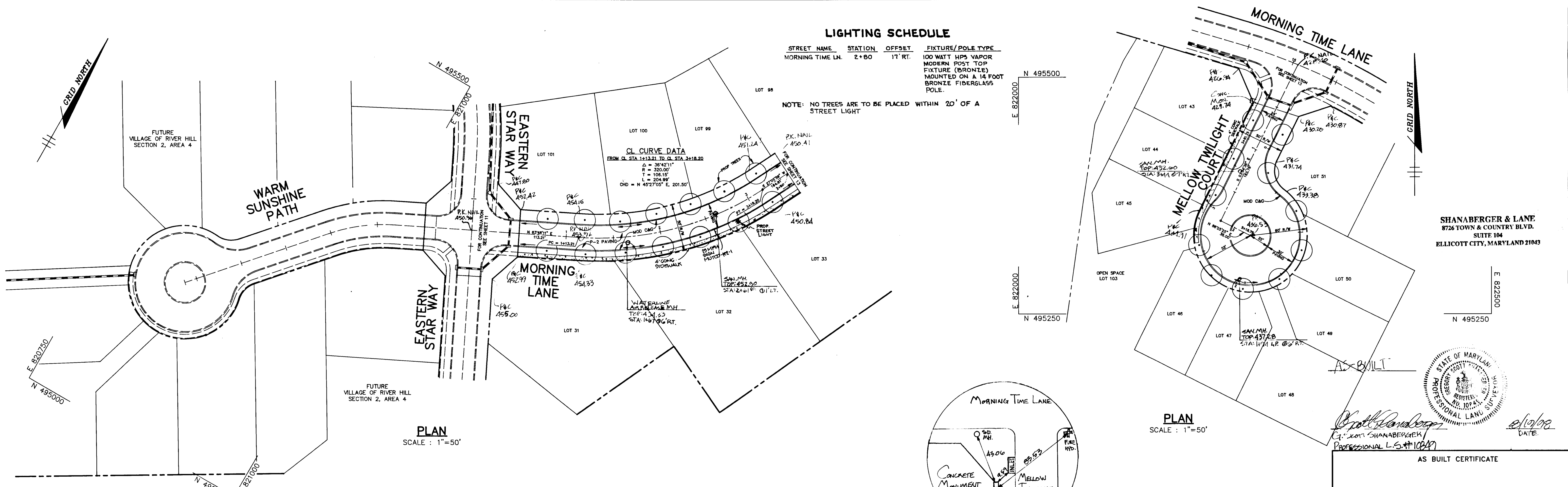
LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MORNING TIME LN.	2+80	17 RT.	100 WATT HPS VAPOR MODERN POST TOP FIXTURE (BRONZE) MOUNTED ON A 14 FOOT BRONZE FIBERGLASS POLE.

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT

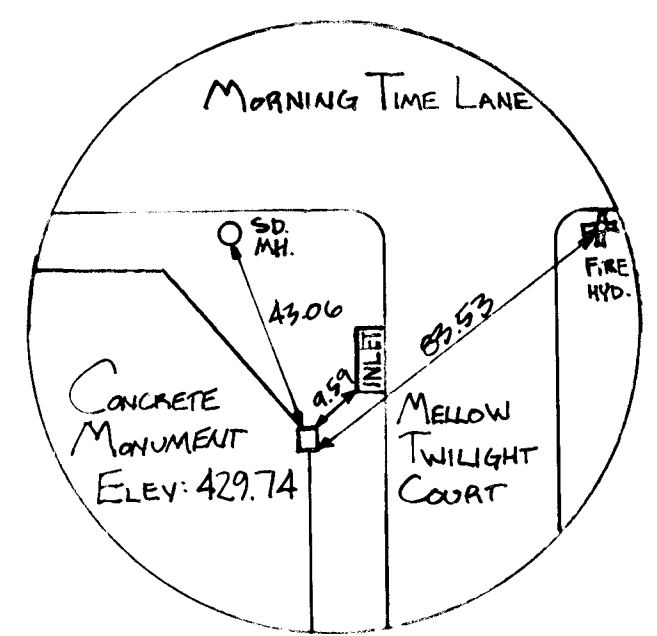
CL CURVE DATA

FROM G. STA. 1+13.21 TO G. STA. 3+18.20
 $\Delta = 36.4211^\circ$
 $R = 320.00'$
 $T = 108.15'$
 $L = 204.99'$
 $CHD = N 45.2703^\circ E. 201.50'$



PLAN
SCALE: 1"=50'

PLAN
SCALE: 1"=50'



RECOVERY SKETCH
N.T.S.



SHANABARGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLCOTT CITY, MARYLAND 21043

DATE: 2/10/94

PROFESSIONAL L.S.# 10947

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

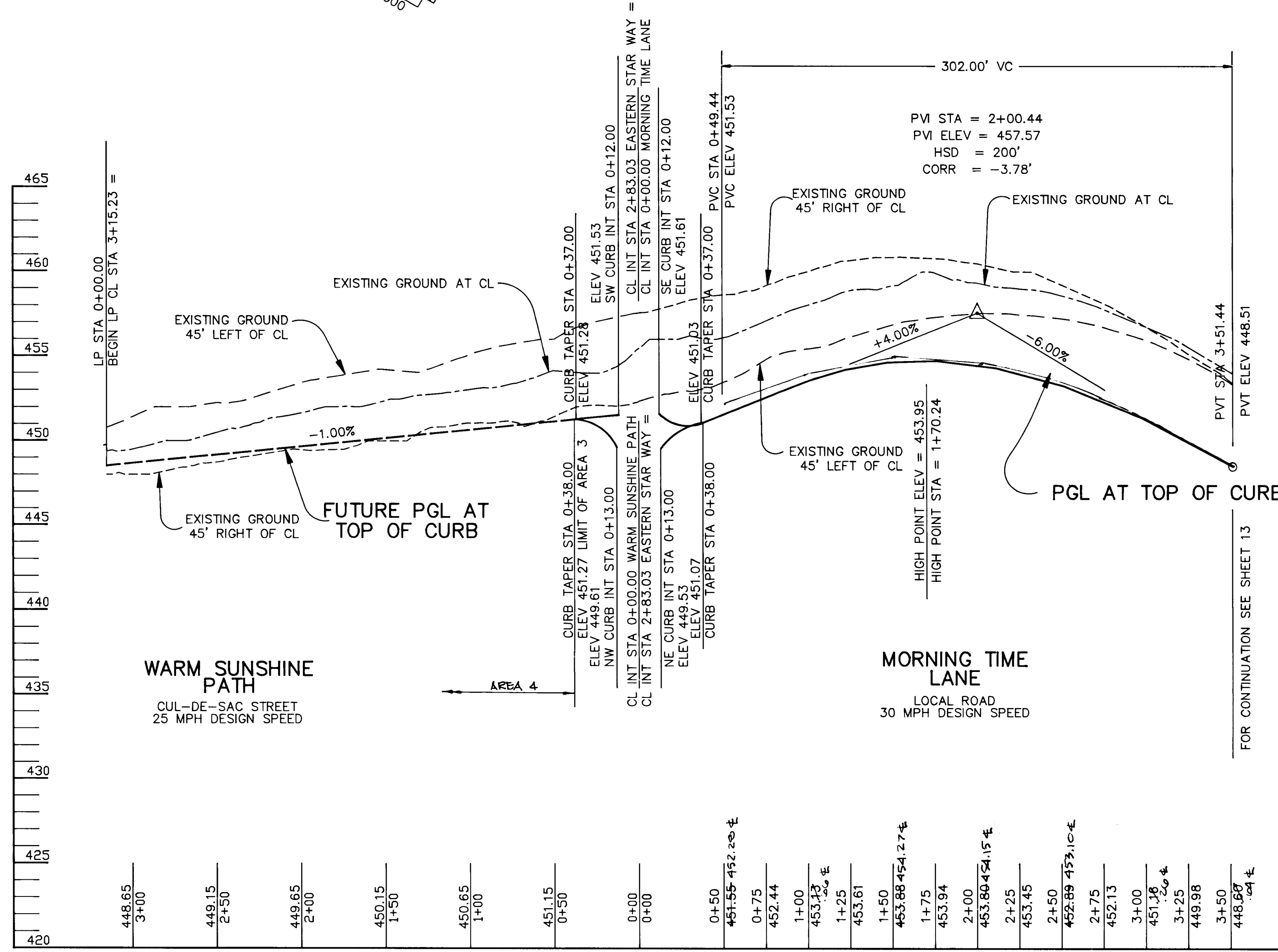
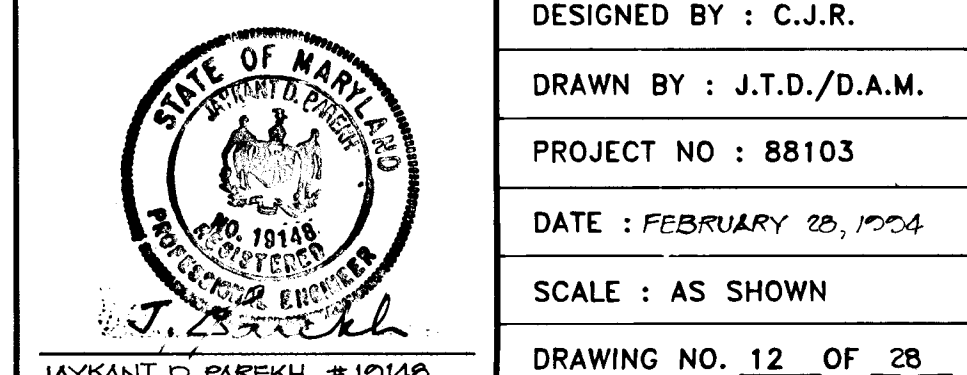
OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT: VILLAGE OF RIVER HILL
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 106
TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

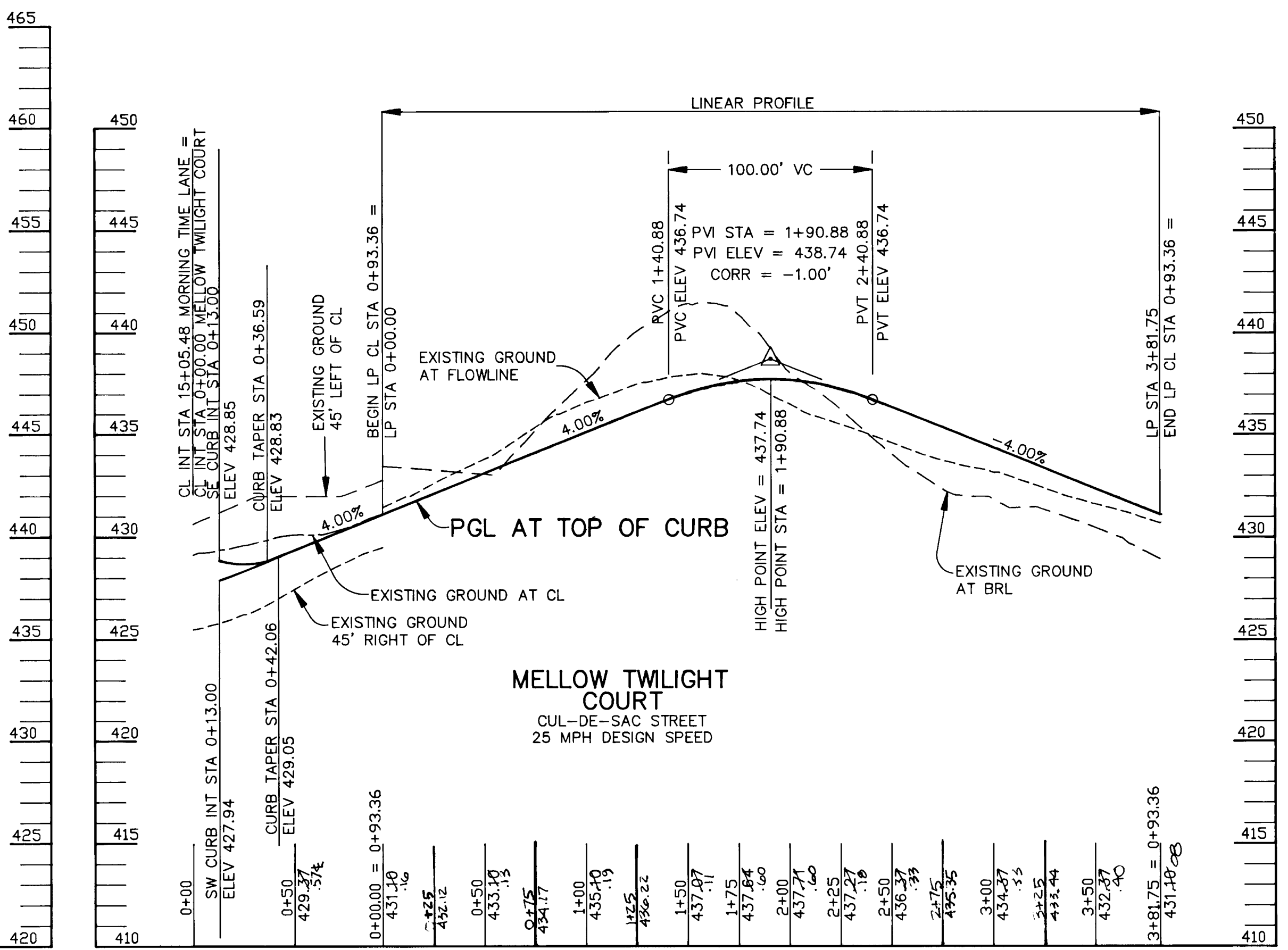
TITLE: PLAN AND PROFILE OF WARM SUNSHINE PATH, MELLOW TWILIGHT COURT & MORNING TIME LANE FROM STA 0+00.00 TO 3+50.00

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE: 2.28.94
DESIGNED BY: C.J.R.
DRAWN BY: J.T.D./D.A.M.
PROJECT NO: 88103
DATE: FEBRUARY 28, 1994
SCALE: AS SHOWN
DRAWING NO. 12 OF 28

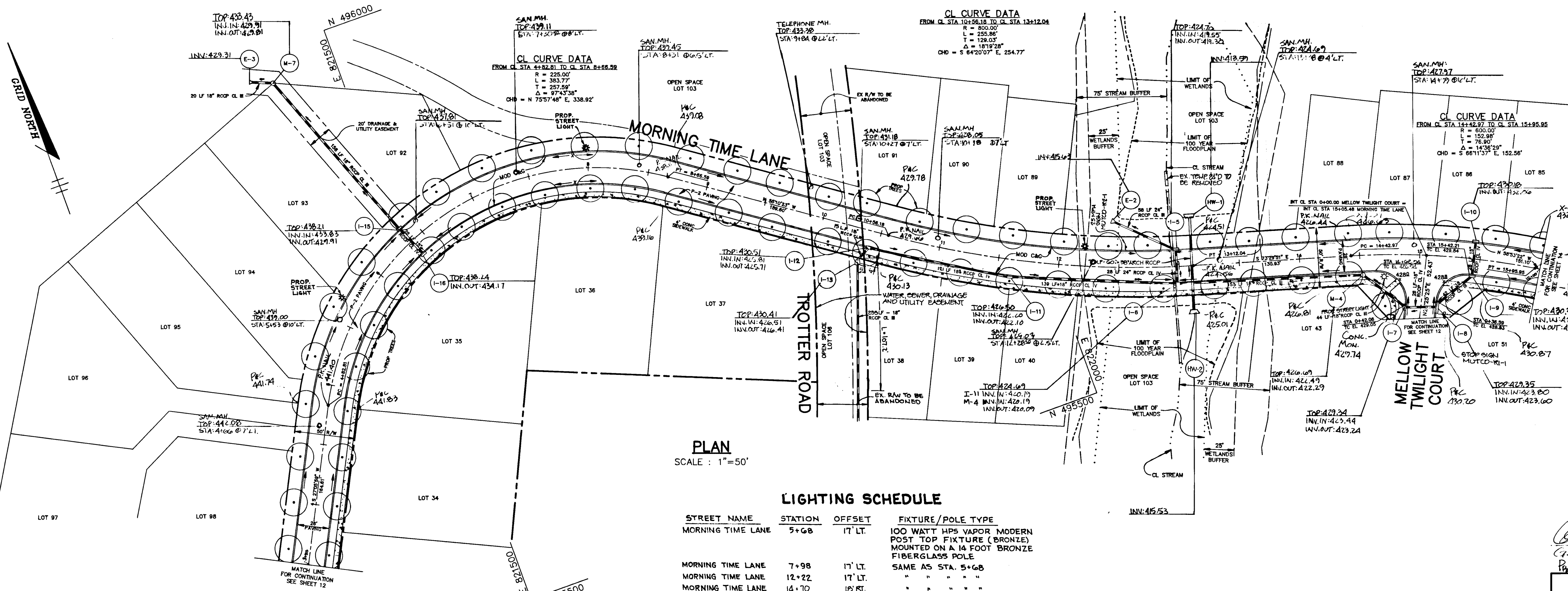


PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'



PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

1487



PLAN
SCALE: 1"=50'

LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MORNING TIME LANE	5+68	17' LT.	100 WATT HPS VAPOR MODERN POST TOP FIXTURE (BRONZE) MOUNTED ON A 14 FOOT BRONZE FIBERGLASS POLE
MORNING TIME LANE	7+98	17' LT.	SAME AS STA. 5+68
MORNING TIME LANE	12+22	17' LT.	" " " "
MORNING TIME LANE	14+70	18' RT.	" " " "

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT

AS-BUILT

SHAN BERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 101
ELLCOTT CITY, MARYLAND 21043

Shan Berger
Professional L.S. #10819

John Lane
Professional L.S. #10819

AS BUILT CERTIFICATE

DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Gina Surinani 3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Michael J. Danvers 3/18/94
CHIEF, LAND DEVELOPMENT DIVISION

Robert M. Danvers 3-17-94
CHIEF, BUREAU OF HIGHWAYS

Paul D. Sepp 3/18/94
CHIEF, BUREAU OF ENGINEERING

G-3-24 | REMOVED CONSTRUCTION RESTRICTION AREAS

DATE NO. _____ REVISION _____

OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT **VILLAGE OF RIVER HILL**
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 106

AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE PLAN AND PROFILE OF MORNING TIME LANE FROM STA 3+50.00 TO 16+00.00

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

2.25.94
DATE

DESIGNED BY: C.J.R.

DRAWN BY: J.T.D./D.A.M.

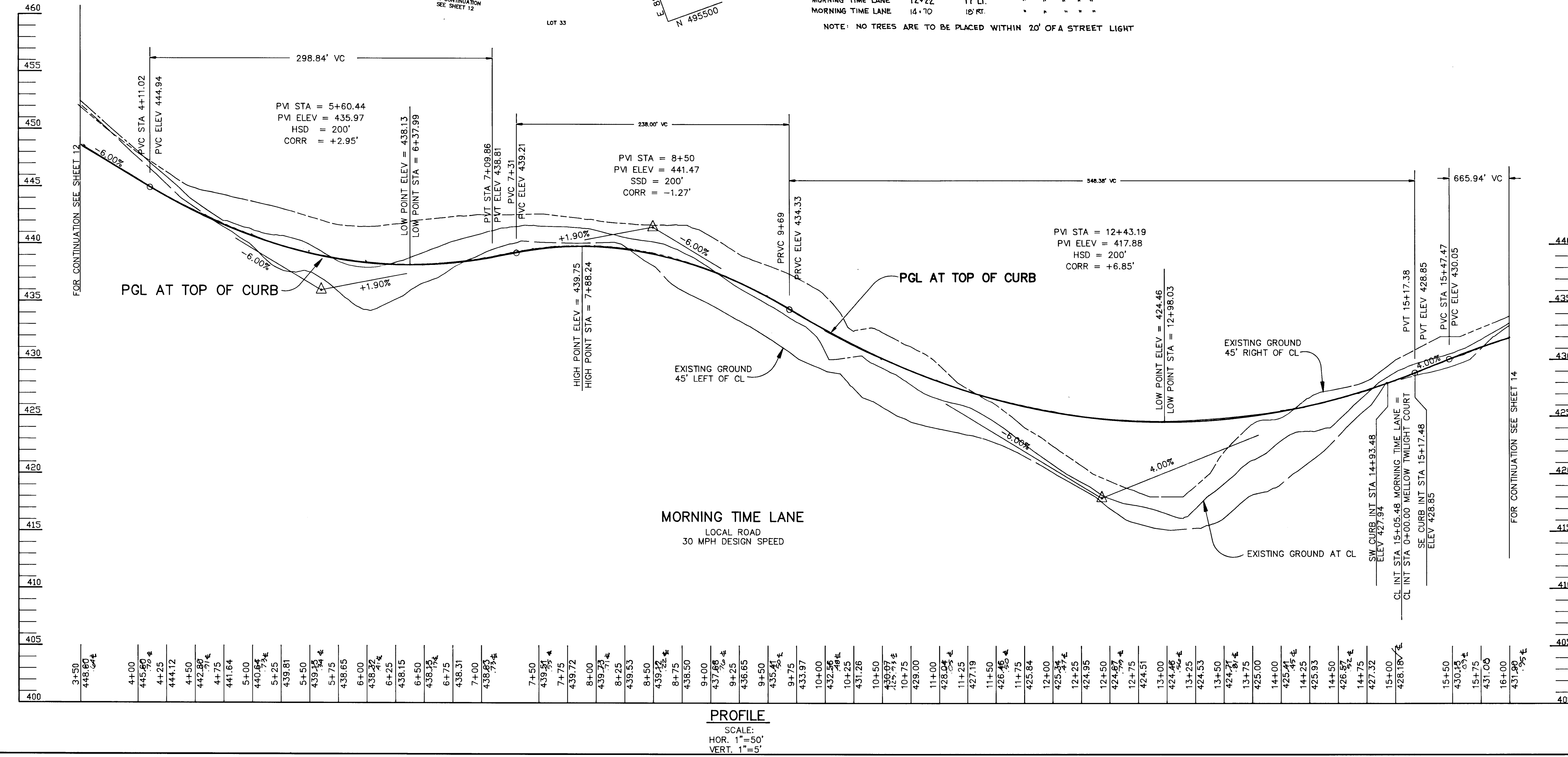
PROJECT NO: 88103

DATE: FEBRUARY 28, 1994

SCALE: AS SHOWN

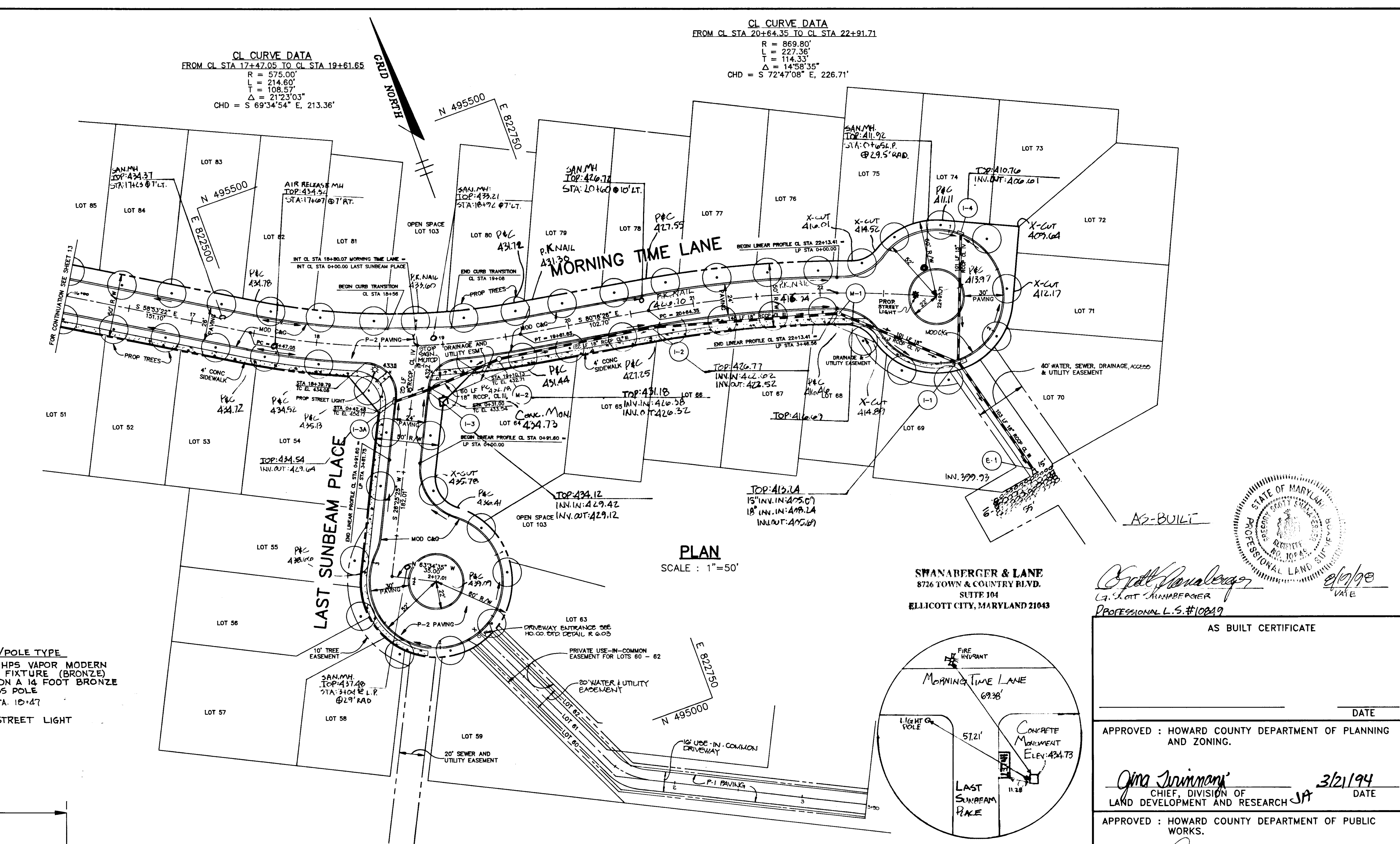
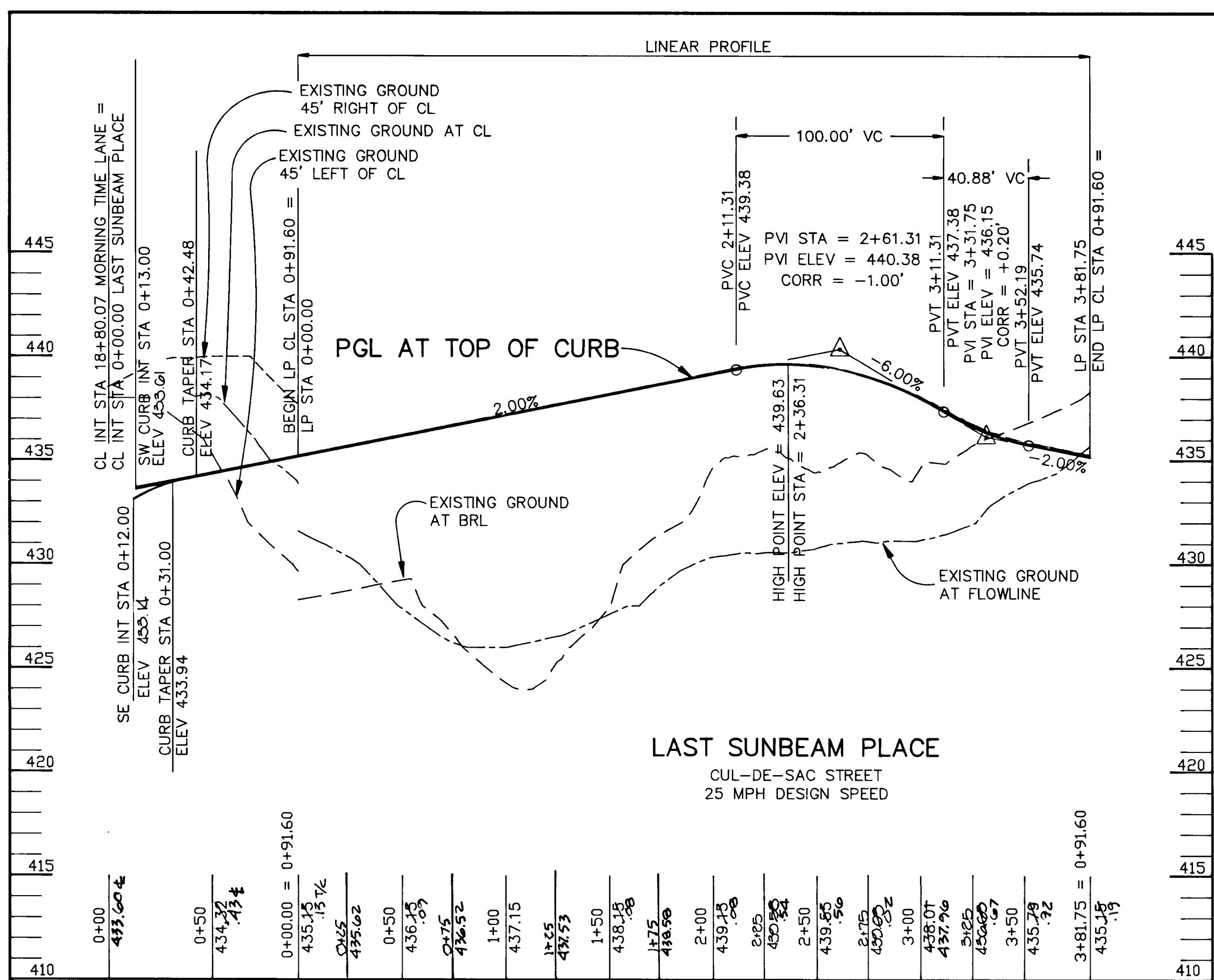
DRAWING NO. 13 OF 28

J. Schnell
JAYKANT D. PAREKH #10146



PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

1487



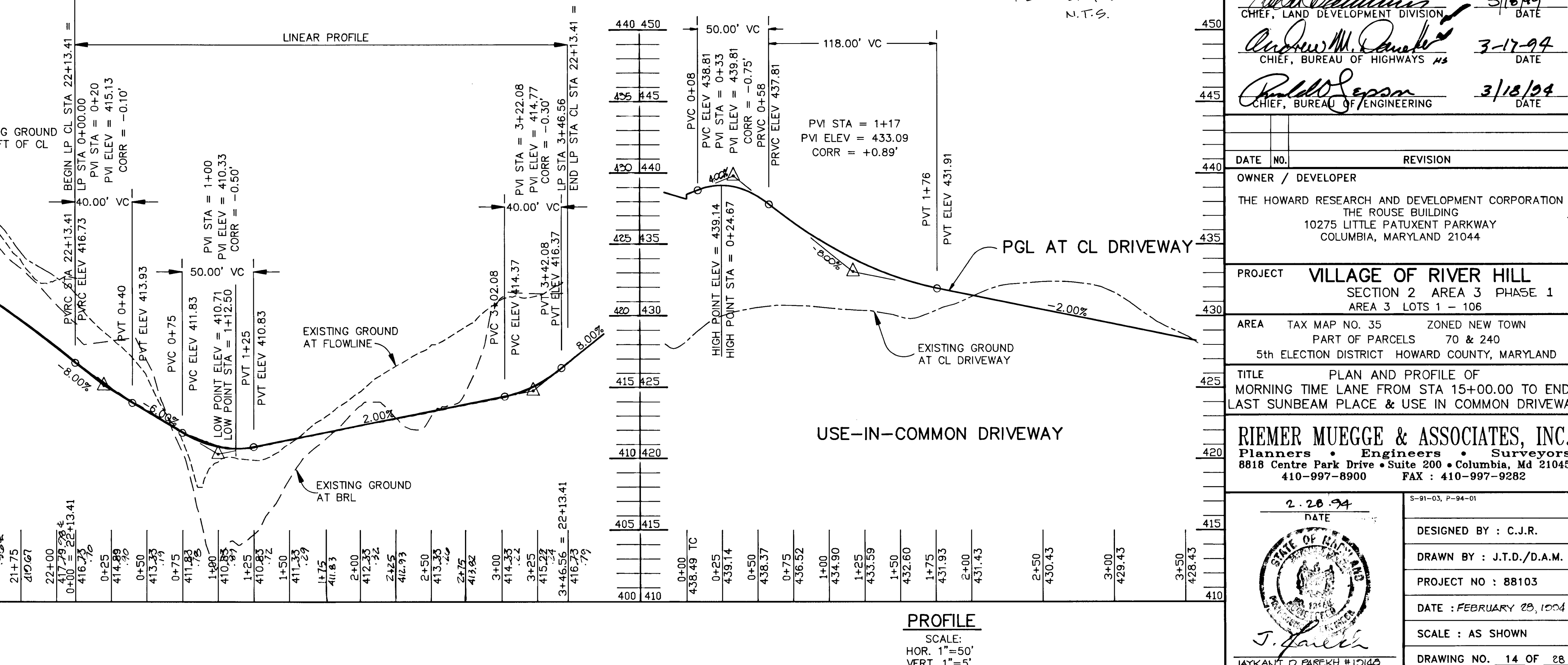
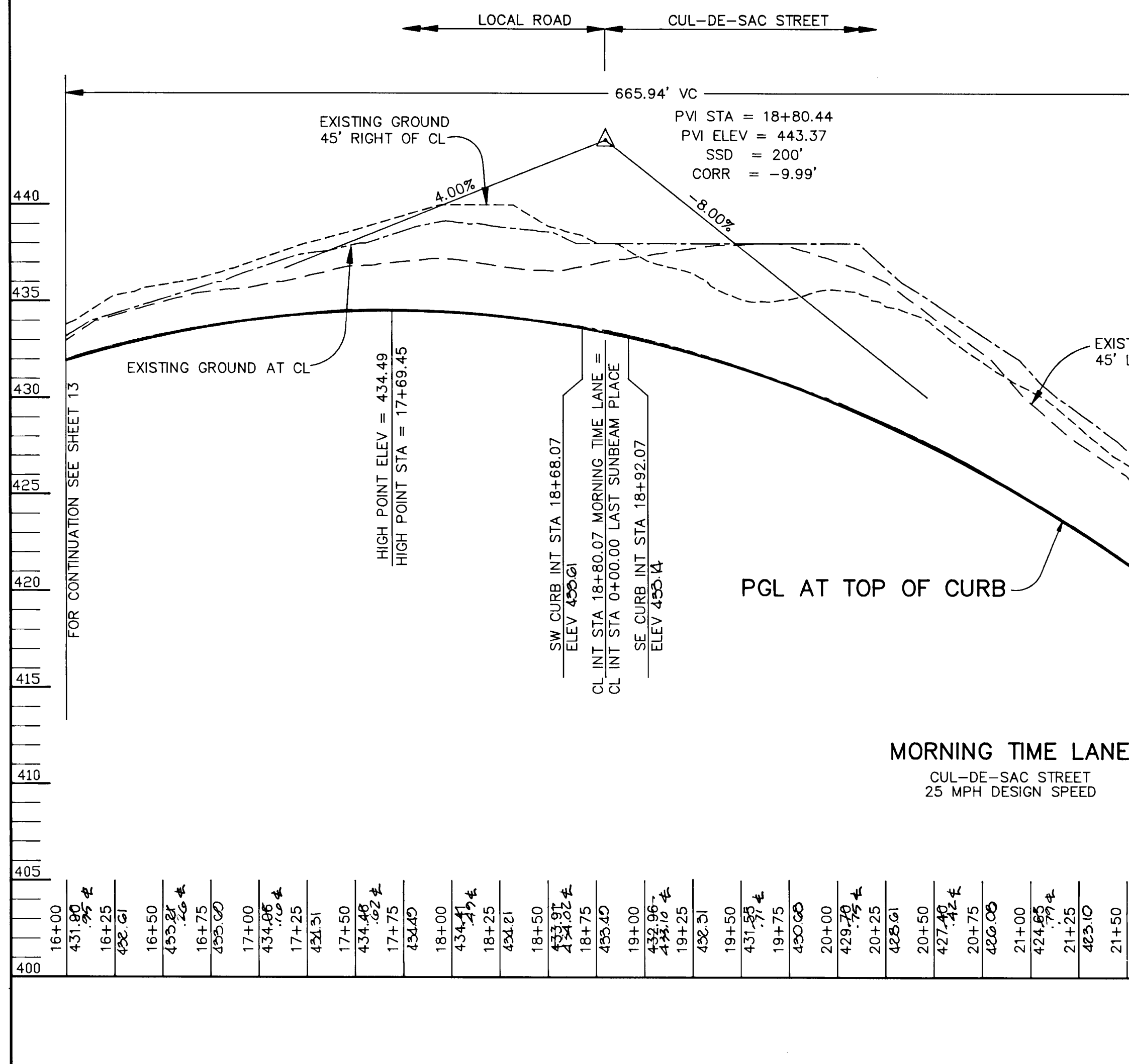
PROFILE
SCALE: HOR. 1"=50', VERT. 1"=5'

STATION	ELEVATION
0+00	433.64
0+50	434.32
0+91.60	435.15
1+50	437.15
2+00	439.15
2+50	439.80
3+00	435.29
3+81.75	435.15

LIGHTING SCHEDULE

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MORNING TIME LANE	10+47	10' R	100 WATT HPS VAPOR MODERN POST TOP FIXTURE (BRONZE) MOUNTED ON A 14 FOOT BRONZE FIBERGLASS POLE SAME AS STA. 10+47
MORNING TIME LANE	22+75	0'	

NOTE: NO TREES ARE TO BE PLACED WITHIN 20' OF A STREET LIGHT



AS-BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. DATE: 3/21/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. DATE: 3/17/94

DATE NO. REVISION

OWNER / DEVELOPER: THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION, THE ROUSE BUILDING, 10275 LITTLE PATUXENT PARKWAY, COLUMBIA, MARYLAND 21044

PROJECT: VILLAGE OF RIVER HILL, SECTION 2 AREA 3 PHASE 1, AREA 3 LOTS 1 - 106

AREA: TAX MAP NO. 35, ZONED NEW TOWN, PART OF PARCELS 70 & 240, 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: PLAN AND PROFILE OF MORNING TIME LANE FROM STA 15+00.00 TO END, LAST SUNBEAM PLACE & USE IN COMMON DRIVEWAY

RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors, 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045, 410-997-8900, FAX: 410-997-9282

DATE: 2.28.94

DESIGNED BY: C.J.R.

DRAWN BY: J.T.D./D.A.M.

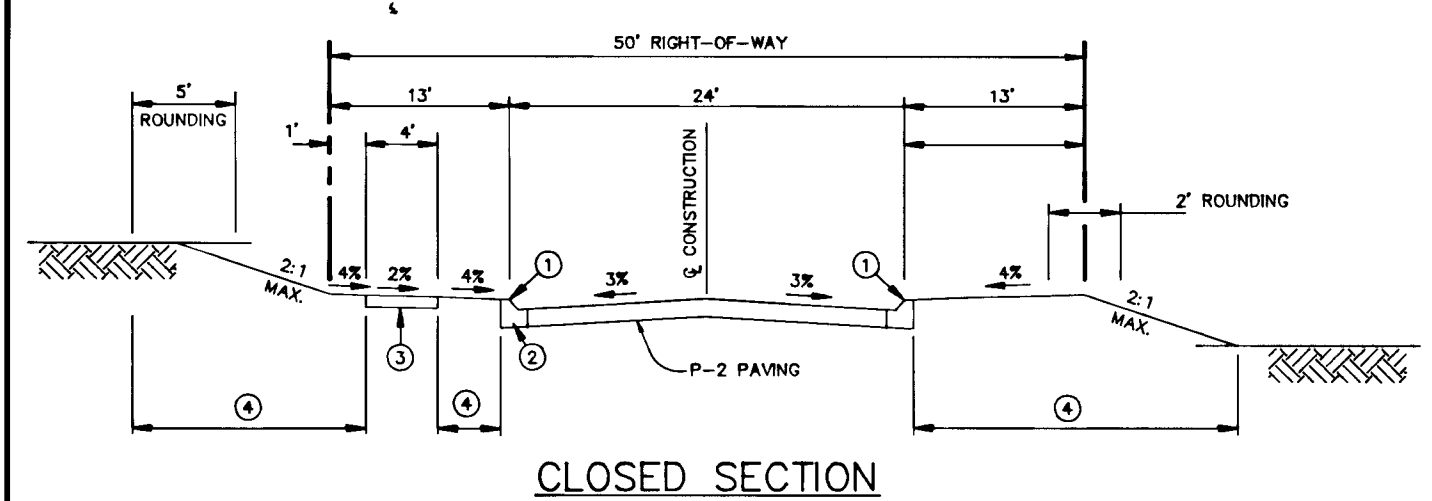
PROJECT NO.: 88103

DATE: FEBRUARY 29, 1994

SCALE: AS SHOWN

DRAWING NO. 14 OF 28

1487

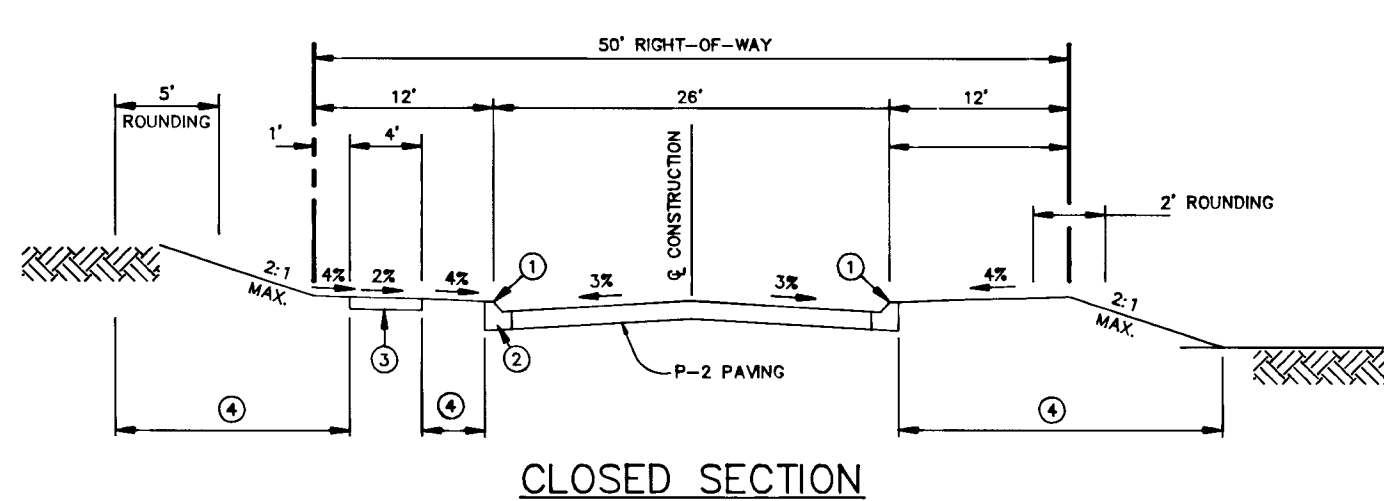


CLOSED SECTION

- ① PROFILE GRADE LINE (P.G.L.), SEE DESIGN MANUAL.
- ② TYPE OF CURB VARIES (MOD. COMB. CURB & GUTTER OR STANDARD COMB. CURB & GUTTER - SEE ROAD PLAN).
- ③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
- ④ INDICATES 2" TOPSOIL, SEED AND MULCH.
- ⑤ DESIGN SPEED = 25 M.P.H.

TYPICAL SECTION CUL-DE-SAC STREET

NO SCALE
 MORNING TIME LANE FROM CL STA 19+05.07 TO CL STA 22+15.41
 MELLOW TWILIGHT COURT FROM CL STA 0+42.06 TO CL STA 0+93.36
 LAST SUNBEAM PLACE FROM CL STA 0+42.48 TO CL STA 0+91.60
 REEDY SONG KNOLL FROM CL STA 0+36.29 TO CL STA 0+90.77

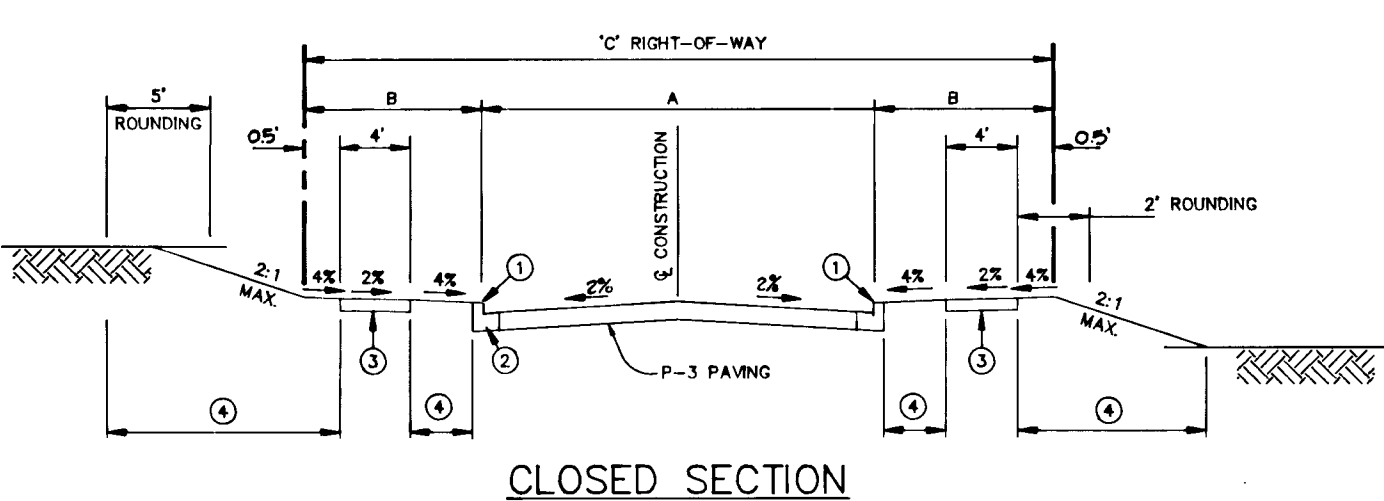


CLOSED SECTION

- ① PROFILE GRADE LINE (P.G.L.), SEE DESIGN MANUAL.
- ② TYPE OF CURB VARIES (MOD. COMB. CURB & GUTTER OR STANDARD COMB. CURB & GUTTER - SEE DESIGN MANUAL).
- ③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS (ONE SIDE ONLY)
- ④ INDICATES 2" TOPSOIL, SEED AND MULCH.
- ⑤ DESIGN SPEED = 30 M.P.H.

TYPICAL SECTION LOCAL ROAD

NO SCALE
 MORNING TIME LANE FROM CL STA 0+38.00 TO CL STA 18+55.07
 WESTERN STAR RUN FROM CL STA 0+46.29 TO CL STA 11+09.01
 EASTERN STAR WAY FROM CL STA 0+43.23 TO CL STA 2+45.03

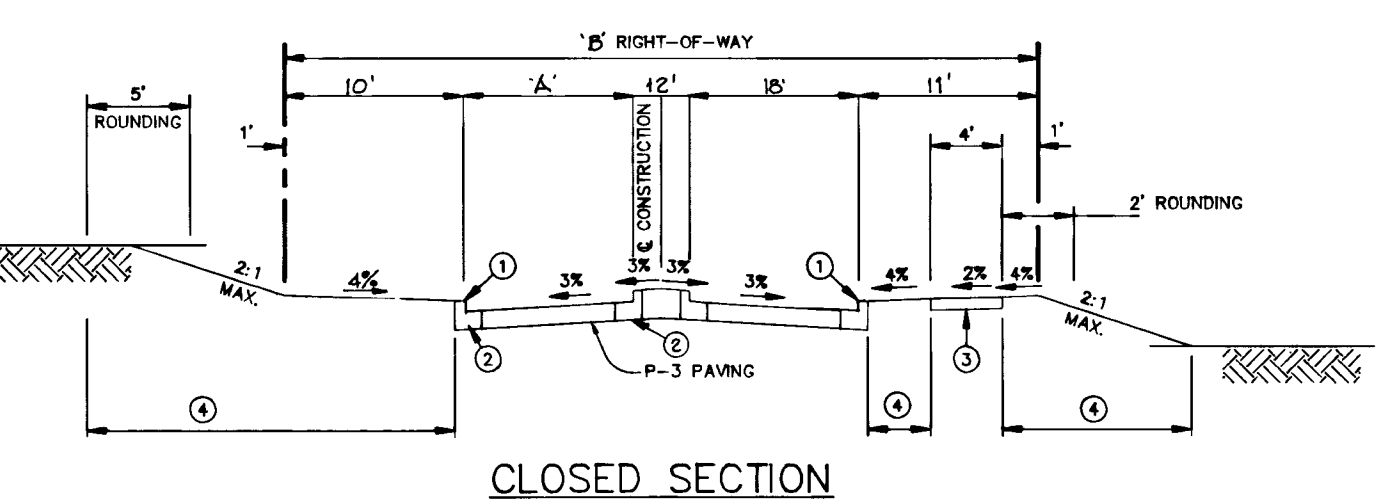


CLOSED SECTION

- ① PROFILE GRADE LINE (P.G.L.), SEE DESIGN MANUAL.
- ② STANDARD COMBINATION CURB & GUTTER.
- ③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
- ④ INDICATES 2" TOPSOIL, SEED AND MULCH.
- ⑤ DESIGN SPEED = 40 M.P.H.

TYPICAL SECTION MAJOR COLLECTOR

NO SCALE
 GREAT STAR DRIVE FROM CL STA 3+21.00 TO CL STA 20+10.6
 GREAT STAR DRIVE FROM CL STA 15+41.06 TO CL STA 20+08.76

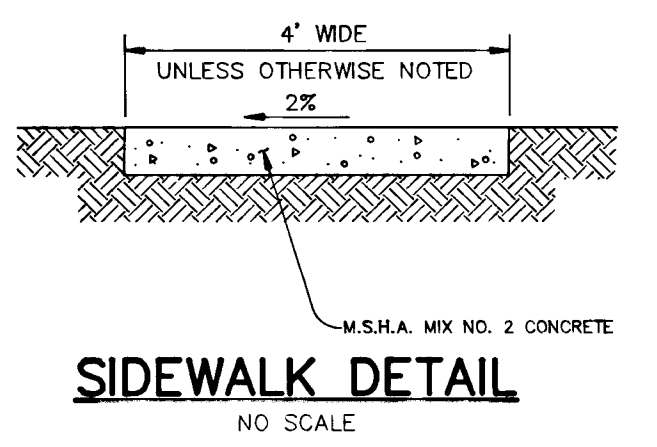


CLOSED SECTION

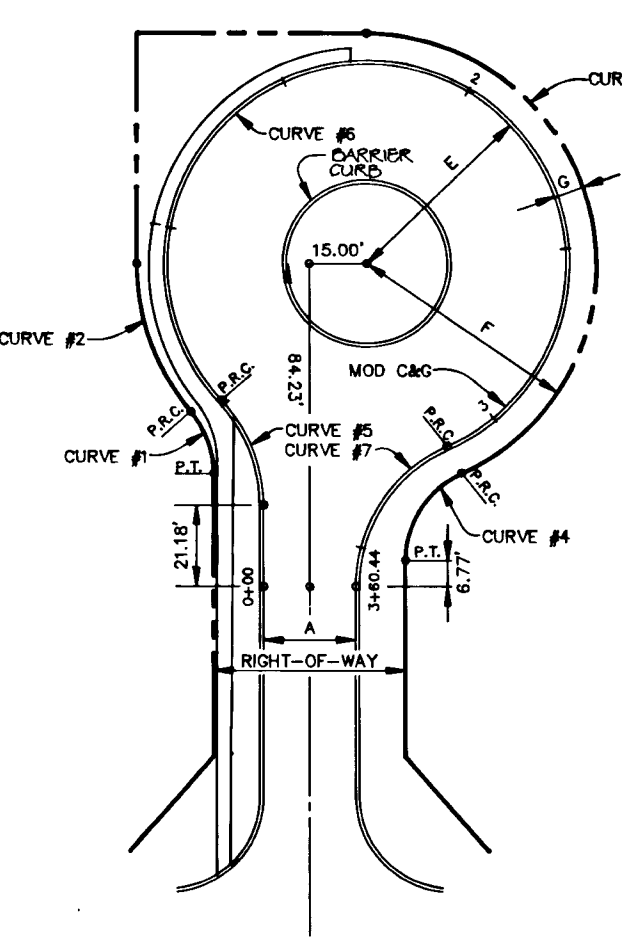
- ① PROFILE GRADE LINE (P.G.L.), SEE DESIGN MANUAL.
- ② STANDARD COMBINATION CURB & GUTTER.
- ③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
- ④ INDICATES 2" TOPSOIL, SEED AND MULCH.
- ⑤ DESIGN SPEED = 35 M.P.H.

TYPICAL SECTION MINOR COLLECTOR WITH MEDIAN

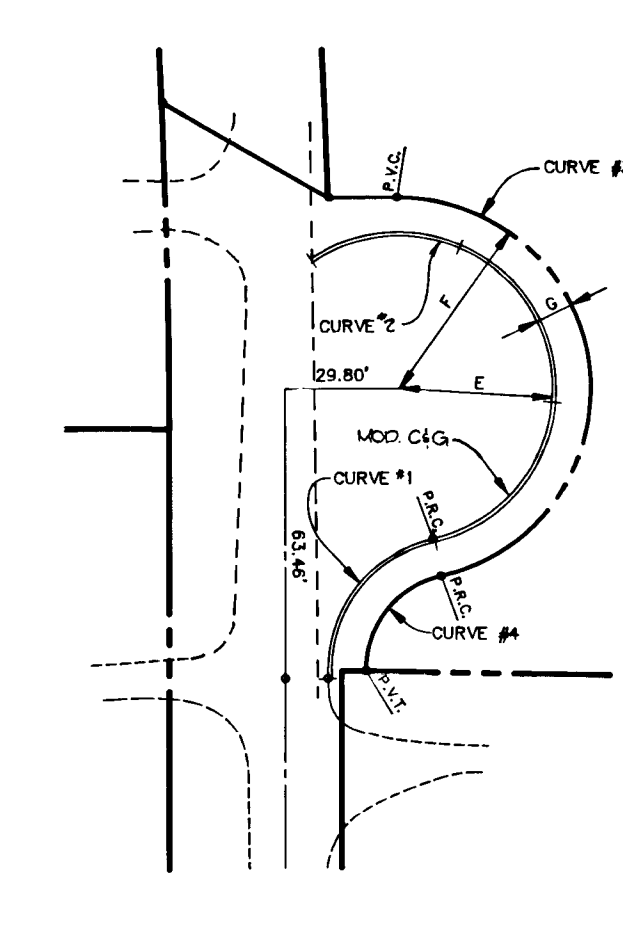
NO SCALE
 SUMMER SUNRISE DRIVE FROM CL STA 5+50.00 TO CL STA 4+50.00 A:22' B:73'
 FROM CL STA 4+00.00 TO CL STA 1+00.00 A:18' B:60'



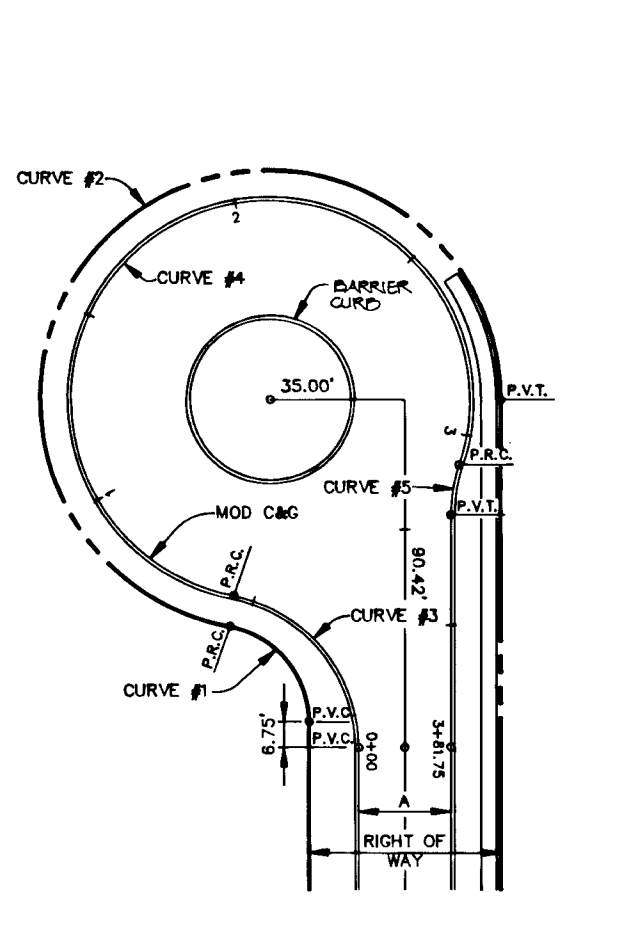
SIDEWALK DETAIL



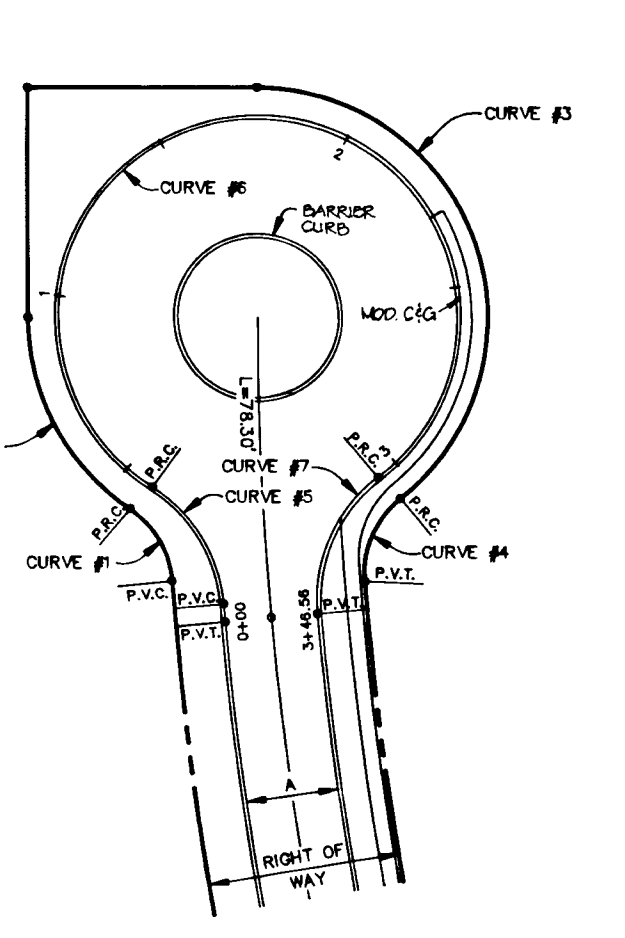
ZONING DISTRICTS	E	F	G	H	R/W	A
RESIDENTIAL	50'	60'	8'	---	50'	24'



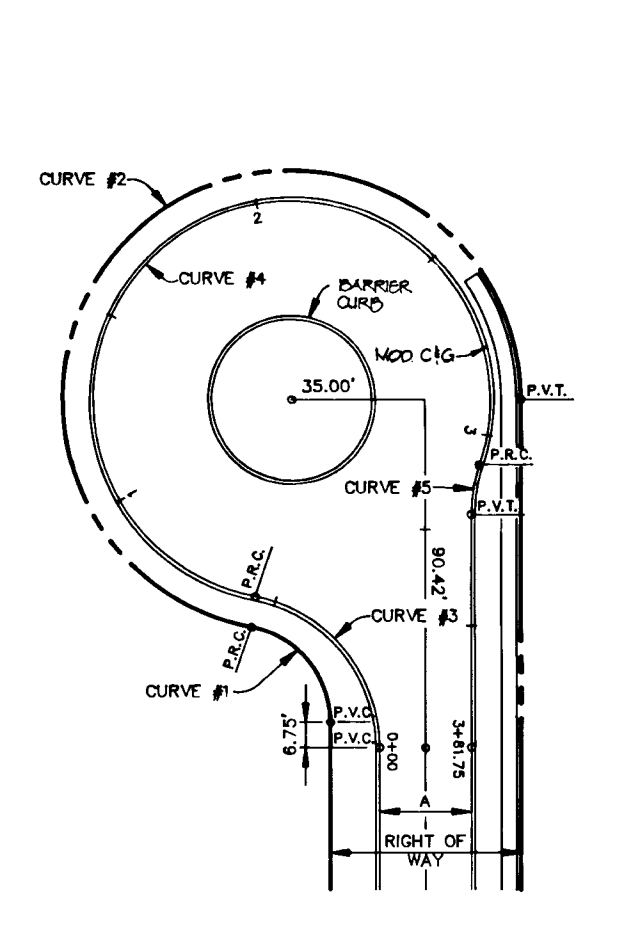
ZONING DISTRICTS	E	F	G	H	R/W	A
RESIDENTIAL	40'	50'	10'	---	50'	24'



ZONING DISTRICTS	E	F	G	H	R/W	A
RESIDENTIAL	50'	60'	8'	---	50'	24'



ZONING DISTRICTS	E	F	G	H	R/W	A
RESIDENTIAL	50'	60'	8'	---	50'	24'



ZONING DISTRICTS	E	F	G	H	R/W	A
RESIDENTIAL	50'	60'	8'	---	50'	24'

CURVE DATA
 RESIDENTIAL (24' APPROACH)
 L.P. = 380.44'

1	2	3	4	5	6	7
A	4007.09'	4007.09'	150' 41.53'	65' 41.02'	43' 15.33'	28' 32.42'
R	25.00'	60.00'	60.00'	25.00'	40.00'	40.00'
L	17.51'	42.01'	163.03'	28.66'	30.20'	262.78'
T	8.13'	21.81'	278.50'	16.14'	15.88'	N/A
L.C.I.	17.12'	41.58'	117.31'	21.12'	28.49'	43.74'

CURVE DATA
 RESIDENTIAL (24' APPROACH)
 L.P. = 1090.55'

1	2	3	4	5	6
A	181' 12.48'	50' 01.50'	168' 00.33'	77' 48.51'	---
R	30.00'	40.00'	40.00'	40.00'	---
L	40.00'	150.04'	146.81'	33.25'	---
T	30.00'	215.55'	475.98'	20.18'	---
L.C.I.	45.56'	76.55'	29.45'	31.40'	---

CURVE DATA
 RESIDENTIAL (24' APPROACH)
 L.P. = 381.75'

1	2	3	4	5	6
A	78' 50.09'	258' 50.09'	79' 21.08'	278' 19.41'	18' 58' 35"
R	25.00'	60.00'	60.00'	40.00'	40.00'
L	34.83'	272.10'	55.40'	252.60'	13.25'
T	20.92'	N/A	33.18'	N/A	6.69'
L.C.I.	32.08'	N/A	51.08'	N/A	13.19'

CURVE DATA
 RESIDENTIAL (24' APPROACH)
 L.P. = 345.56'

1	2	3	4	5	6	7
A	51' 47.48'	58' 27.04'	141' 40.12'	56' 20.07'	53' 11.70'	291' 10.25'
R	25.00'	60.00'	60.00'	25.00'	40.00'	40.00'
L	22.80'	58.85'	148.36'	24.58'	37.13'	284.19'
T	12.14'	35.04'	172.64'	13.39'	20.03'	N/A
L.C.I.	21.84'	56.52'	113.32'	23.60'	35.61'	38.91'

CURVE DATA
 RESIDENTIAL (24' APPROACH)
 L.P. = 331.75'

1	2	3	4	5	6
A	78' 50.09'	258' 50.09'	79' 21.08'	278' 19.41'	18' 58' 35"
R	25.00'	60.00'	60.00'	40.00'	40.00'
L	34.83'	272.10'	55.40'	252.60'	13.25'
T	20.92'	N/A	33.18'	N/A	6.69'
L.C.I.	32.08'	N/A	51.08'	N/A	13.19'

REEDY SONG KNOLL CUL-DE-SAC DETAIL

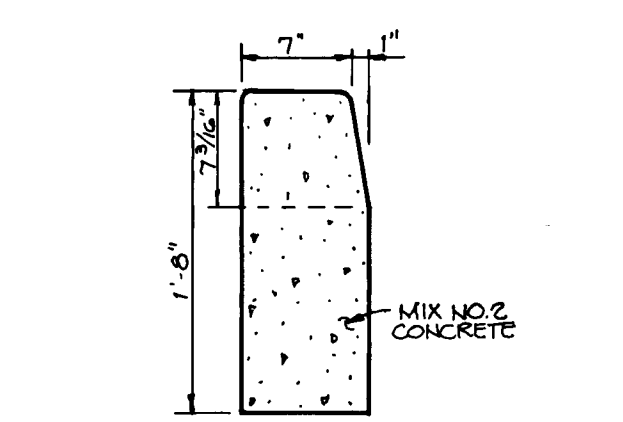
TROTTER ROAD CUL-DE-SAC DETAIL

MELLOW TWILIGHT COURT CUL-DE-SAC DETAIL

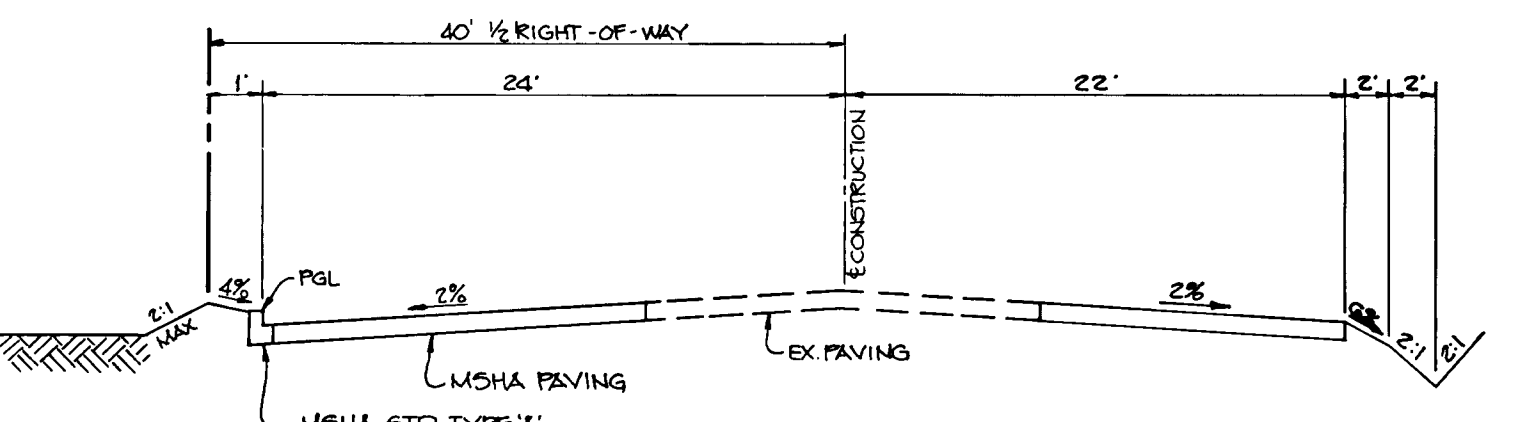
MORNING TIME LANE CUL-DE-SAC DETAIL

LAST SUNBEAM PLACE CUL-DE-SAC DETAIL

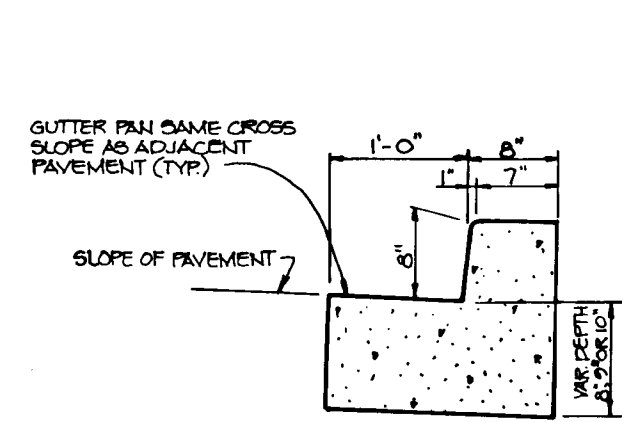
TREE PLANTING DETAIL



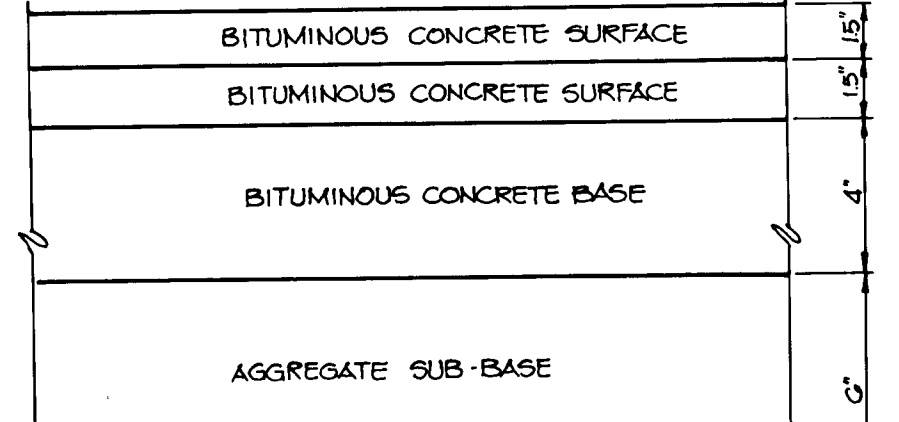
STANDARD BARRIER CURB



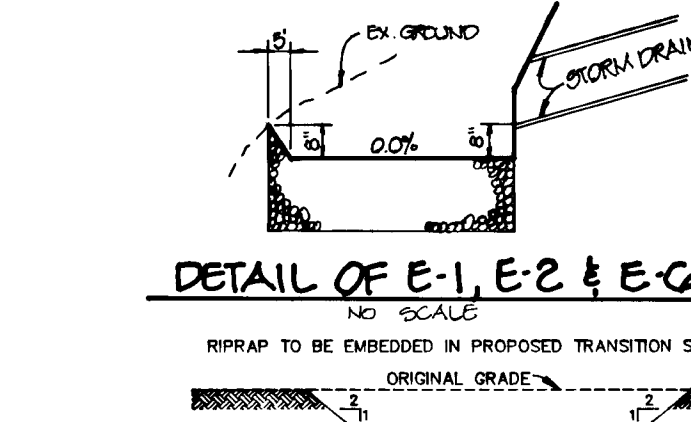
TYPICAL SECTION w/ CURB & GUTTER



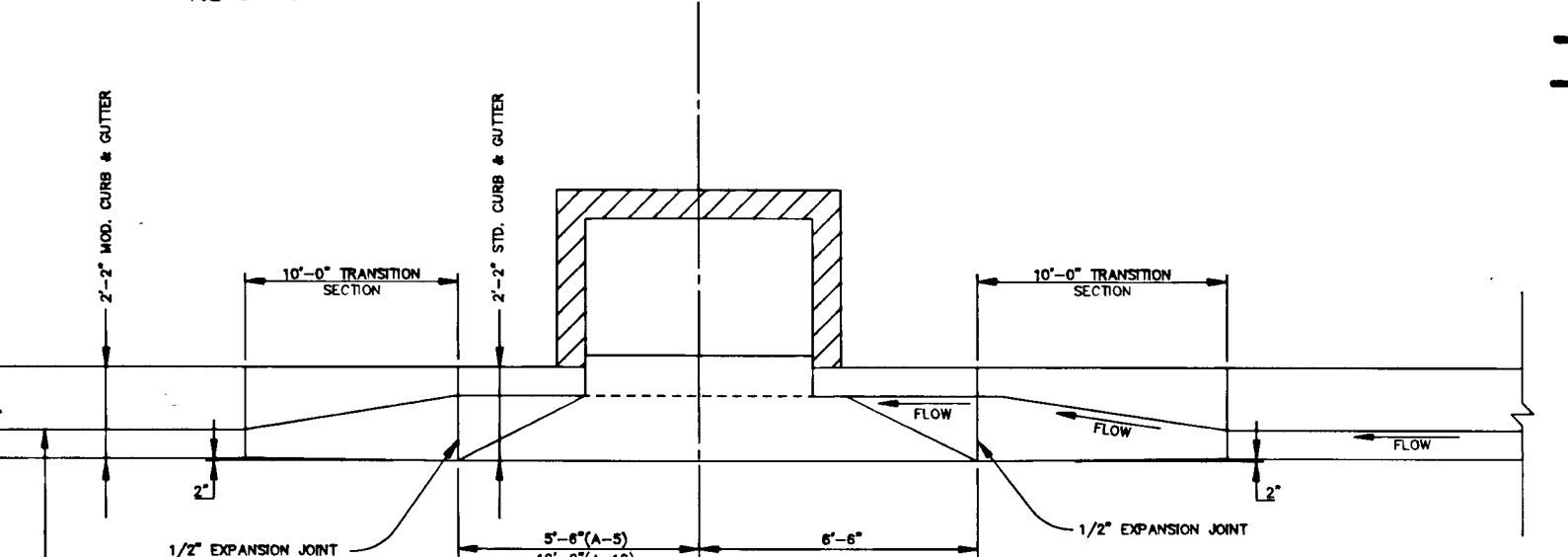
MSHA TYPE A' CURB & GUTTER



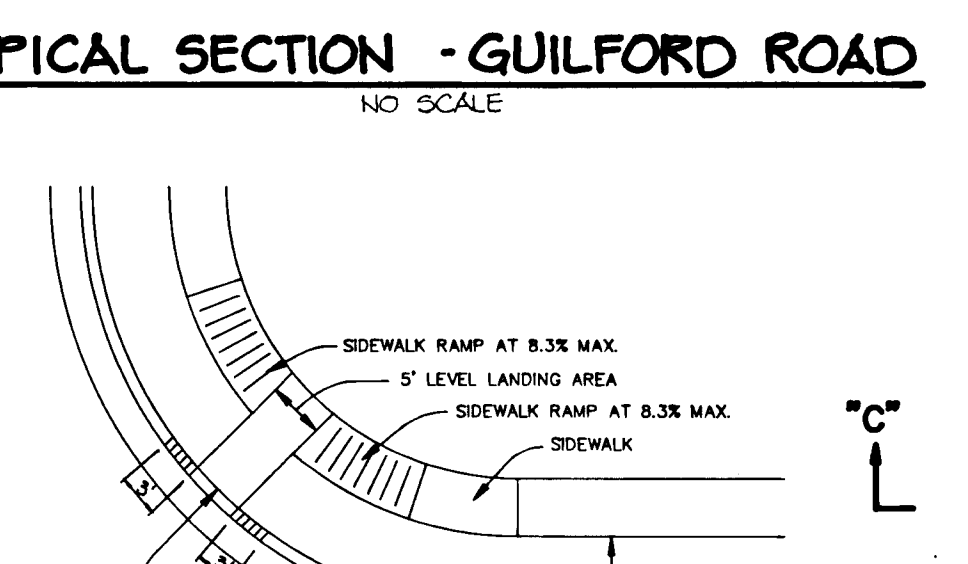
MSHA PAVING SECTION



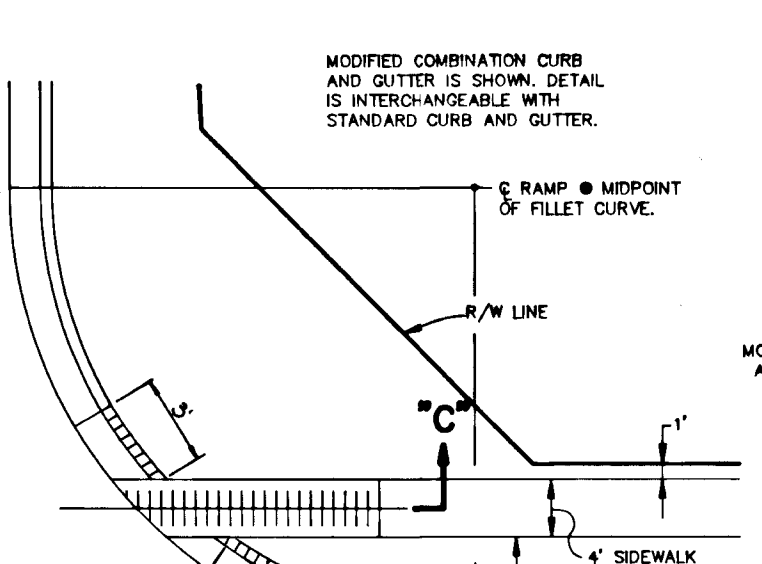
DETAIL OF E-1, E-2 & E-3



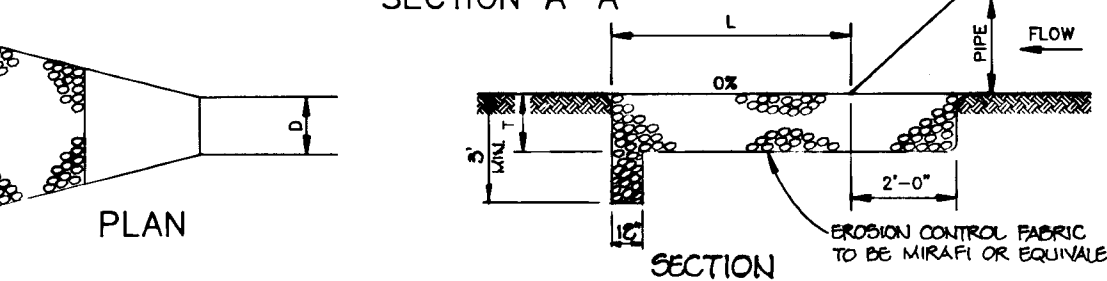
MODIFIED COMBINATION CURB AND GUTTER TRANSITION CURB SECTION AT "A" TYPE INLETS



HANDICAP RAMP DETAIL



HANDICAP RAMP DETAIL



RIPRAP OUTLET PROTECTION DETAIL

STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	6"	55'	16"	4"
E-2	6"	77'	20"	4"
E-3	6"	10'	12"	14"
E-5	6"	10'	12"	14"
E-6	6"	33'	37"	3.5"
HW-1	12"	25'	40"	27"
HW-2	6"	25'	40"	14"
HW-3	14"	22'	27"	20"
HW-4	18"	25'	26"	22"

AS BUILT CERTIFICATE

DATE: _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Turinani 3/21/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Mark Drummond 3/10/94
 CHIEF, BUREAU OF ENGINEERING

Richard M. Decker 3-17-94
 CHIEF, BUREAU OF HIGHWAYS

Paul D. Egan 3/18/94
 CHIEF, BUREAU OF ENGINEERING

OWNER / DEVELOPER: THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION, THE ROUSE BUILDING, 10275 LITTLE PATUXENT PARKWAY, COLUMBIA, MARYLAND 21044

PROJECT: VILLAGE OF RIVER HILL, SECTION 2 AREA 3 PHASE 1, LOTS 1 THRU 10G

AREA: TAX MAP NO. 35, ZONED NEW TOWN, PART OF PARCELS 70 & 240, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
 410-997-8900 FAX: 410-997-9282

DATE: 2.28.94

DESIGNED BY: C.J.R.
 DRAWN BY: D.A.M.
 PROJECT NO: 88103
 DATE: FEBRUARY 28, 1994
 SCALE: AS SHOWN
 DRAWING NO. 15 OF 28

1487

1487



PROPERTY OF
JAMES F. AND ESTHER S. RETTGER
PARCEL 189
L. 525 F. 230
ZONED R-12

PROPERTY OF
DONALD PARLETTE
PARCEL 155
L. 290 R. 353
ZONED R-12

MATCH LINE SEE SHEET 17

MATCH LINE SEE SHEET 16

FUTURE
VILLAGE OF
RIVER HILL
SECTION 2, AREA 3

FUTURE
VILLAGE OF
RIVER HILL
SECTION 2, AREA 4

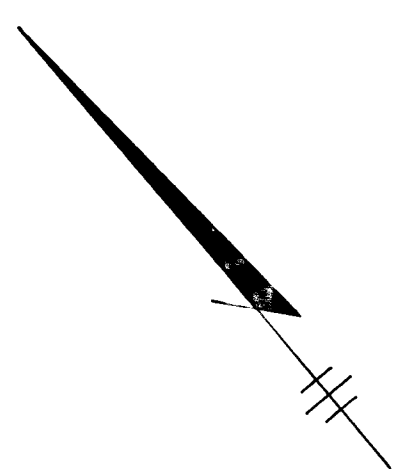
VILLAGE OF RIVER HILL
SECTION 1, AREA 2
LOT 1
SCHOOL SITE
PLAT 8922
ZONED NEW TOWN

PLAN
SCALE= 1"=100'

AS BUILT CERTIFICATE	
APPROVED :	DATE
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Jim Swinnain</i>	3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	DATE
APPROVED :	DATE
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>John Decker</i>	3/18/94
CHIEF, LAND DEVELOPMENT DIVISION	DATE
<i>Andrew M. Quirk</i>	3-17-99
CHIEF, BUREAU OF HIGHWAYS	DATE
<i>Donald Seppan</i>	3/18/94
CHIEF, BUREAU OF ENGINEERING	DATE
DATE NO.	REVISION
OWNER / DEVELOPER	
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
PROJECT VILLAGE OF RIVER HILL SECTION 2 AREA 3 PHASE 1 AREA 3 LOTS 1 - 100	
AREA TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE DRAINAGE AREA MAP	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX : 410-997-9282	
2-26-94 DATE	DESIGNED BY : C.J.R.
	DRAWN BY : DAM
	PROJECT NO : 88103
	DATE : FEBRUARY 28, 1994
	SCALE : AS SHOWN
DRAWING NO. 16 OF 28	



PLAN
SCALE: 1"=100'



AS BUILT CERTIFICATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	DATE
<i>Gina Surranji</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	3/21/94 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	DATE
<i>John D...</i> CHIEF, LAND DEVELOPMENT DIVISION	3/18/94 DATE
<i>Andrew M. D...</i> CHIEF, BUREAU OF HIGHWAYS	3-17-94 DATE
<i>Paul J. S...</i> SEAL OF ENGINEERING	3/18/94 DATE
DATE NO.	REVISION
OWNER / DEVELOPER	
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
PROJECT VILLAGE OF RIVER HILL SECTION 2 AREA 3 PHASE 1 AREA 3 LOTS 1 - 100.	
AREA TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE DRAINAGE AREA MAP	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
DATE 2-28-94	DESIGNED BY: C.J.R.
	DRAWN BY: DAM
	PROJECT NO: 88103
	DATE: FEBRUARY 28, 1994
SCALE: AS SHOWN	DRAWING NO. 17 OF 28

1487



N. 89250
L. 56250

PROPERTY OF
BENJAMIN ISSACSON &
WHEATON CONSTRUCTION CO.
PARCEL 205
L. 562 F. 332
ZONED R-1E

PROPERTY OF
JAMES F. AND ESTHER RETTGER
PARCEL 189
L. 525 F. 230
ZONED R-1E

N. 89250
L. 56250

PLAN
SCALE: 1"=100'

DRAINAGE DATA							
NO.	AREA	CC	S. IMP.	NO.	AREA	CC	S. IMP.
1-1	0.31	0.61	61	1-28	0.195	0.54	53
1-2	0.253	0.55	52	1-29	0.287	0.49	44
1-3	0.455	0.58	51	1-30	0.230	0.58	57
1-3A	0.455	0.41	50	1-31	0.390	0.55	53
1-4	1.067	0.51	45	1-32	0.344	0.56	54
1-5	0.700	0.52	48	1-33	0.425	0.50	44
1-6	0.689	0.61	61	1-34	0.092	0.70	73
1-7	0.448	0.51	46	1-35	0.574	0.49	43
1-8	1.286	0.45	36	1-36	0.505	0.50	44
1-9	0.781	0.47	39	1-37	0.402	0.54	50
1-10	0.537	0.50	44	1-38	0.436	0.49	44
1-11	0.515	0.44	35	1-39	0.964	0.53	49
1-12	1.402	0.46	36	1-40	0.551	0.69	70
1-13	0.000	0.45	35	1-41	0.270	0.67	73
1-14	0.500	0.60	60	1-42	0.174	0.67	70
1-15	1.060	0.51	46	1-43	0.900	0.45	36
1-16	2.130	0.46	36	1-44	0.409	0.64	66
1-17	0.712	0.60	59	1-45	0.333	0.70	74
1-18	1.171	0.51	45	1-46	0.217	0.52	51
1-19	0.849	0.47	39	1-48	0.466	0.52	47
1-20	0.735	0.49	43	1-49	0.51	0.41	45
1-21	0.459	0.51	45	1-50	0.142	0.87	85
1-22	0.551	0.49	43	1-51	2.25	0.45	39
1-23	0.230	0.60	60	1-52	0.356	0.73	78
1-24	0.147	0.56	54	1-53	0.400	0.67	70
1-25	0.310	0.48	42	1-54	0.551	0.69	74
1-26	0.712	0.50	44	1-55	3.294	0.30	13
1-27	0.608	0.52	47	1-56	0.230	0.52	47

AS BUILT CERTIFICATE

DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Ojma Swimmink 3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
John D. ... 3/18/94
CHIEF, LAND DEVELOPMENT DIVISION
Andrew M. ... 3-17-94
CHIEF, BUREAU OF HIGHWAYS HS
Donald ... 3/18/94
CHIEF, BUREAU OF ENGINEERING

DATE NO. REVISION

OWNER / DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
11275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT VILLAGE OF RIVER HILL
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 10G

AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
DRAINAGE AREA MAP

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

2.26.94
DATE

DESIGNED BY: C.J.R.

DRAWN BY: DAM

PROJECT NO: 88103

DATE: FEBRUARY 20, 1994

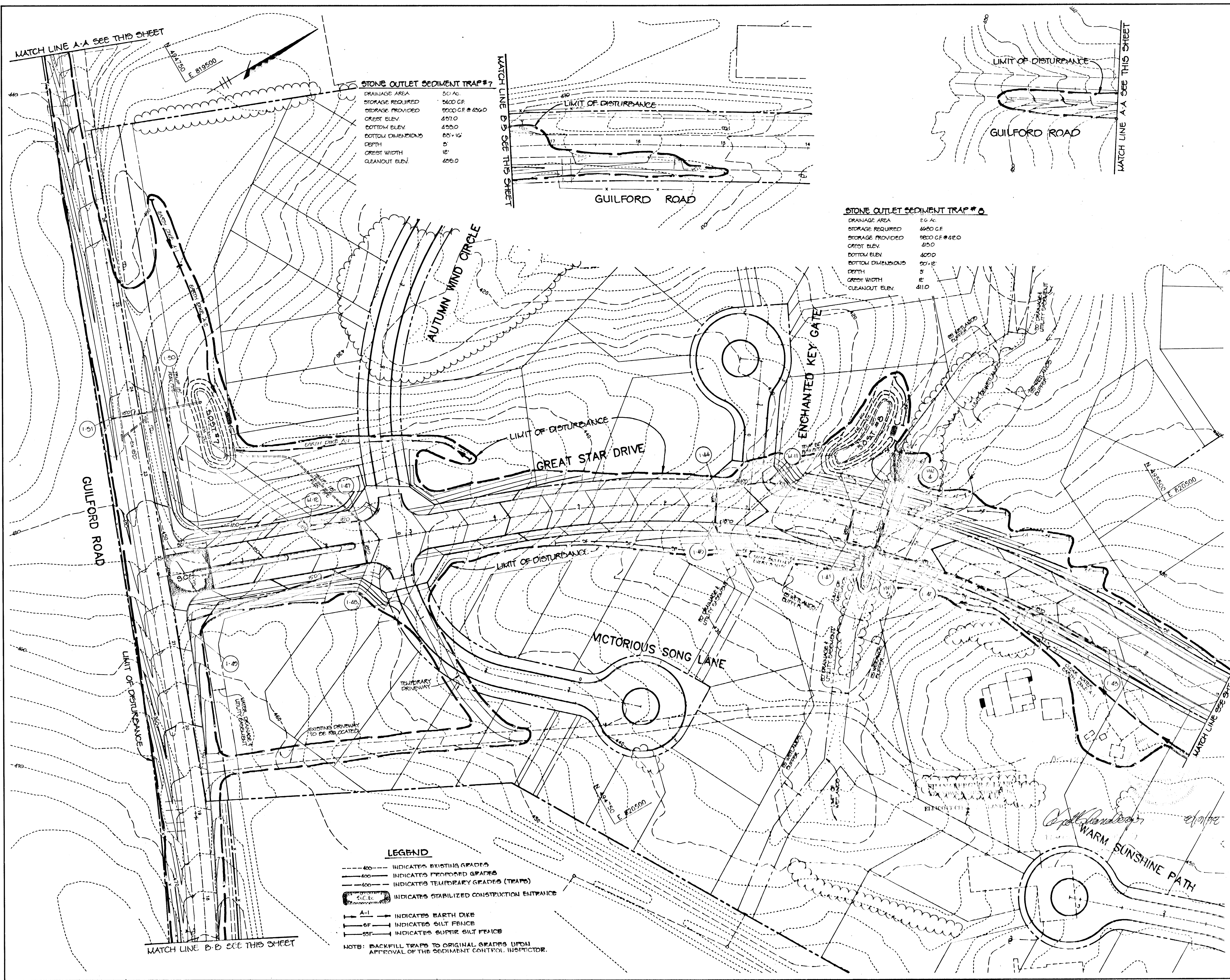
SCALE: AS SHOWN

DRAWING NO. 18 OF 28

J. ...
JAYKANT D PAREKH #10145

1487

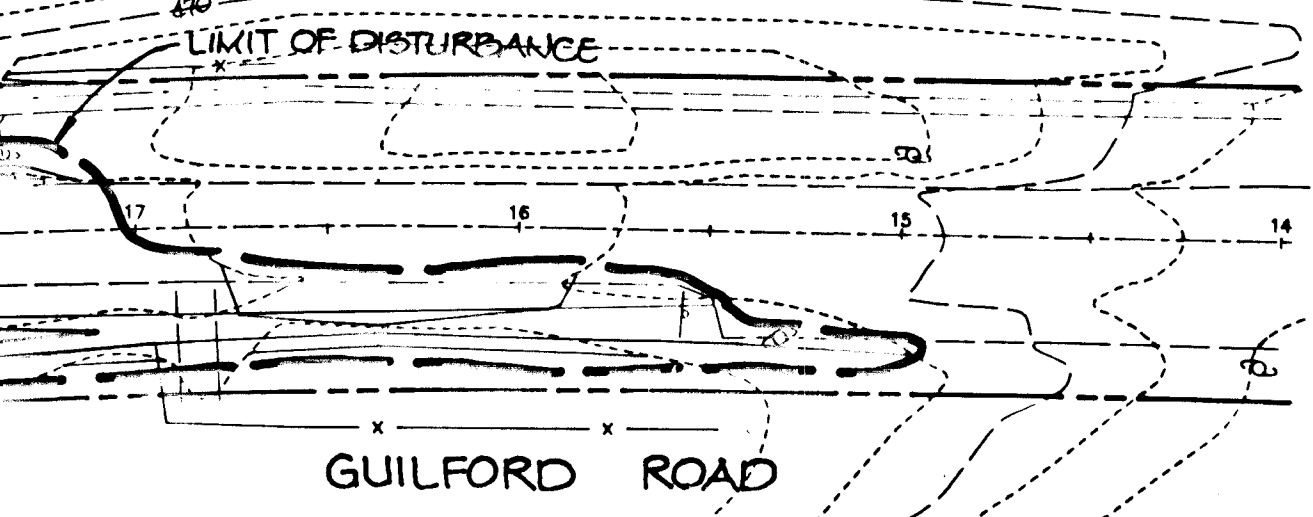
1487



STONE OUTLET SEDIMENT TRAP #7

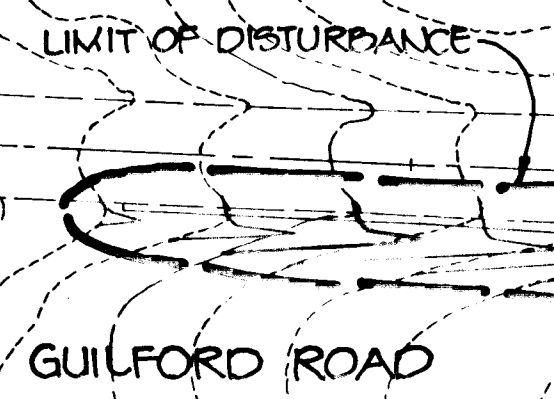
DRAINAGE AREA	50 AC
STORAGE REQUIRED	5400 CF
STORAGE PROVIDED	5000 CF @ 456.0
CREST ELEV.	487.0
BOTTOM ELEV.	480.0
BOTTOM DIMENSIONS	65' x 16'
DEPTH	8'
CREST WIDTH	18'
CLEANOUT ELEV.	486.0

MATCH LINE B-B SEE THIS SHEET



STONE OUTLET SEDIMENT TRAP #8

DRAINAGE AREA	26 AC
STORAGE REQUIRED	4680 CF
STORAGE PROVIDED	9800 CF @ 482.0
CREST ELEV.	415.0
BOTTOM ELEV.	400.0
BOTTOM DIMENSIONS	20' x 12'
DEPTH	5'
CREST WIDTH	18'
CLEANOUT ELEV.	411.0



- LEGEND**
- 400 --- INDICATES EXISTING GRADES
 - 400 --- INDICATES PROPOSED GRADES
 - 400 --- INDICATES TEMPORARY GRADES (TRAPS)
 - 400 --- INDICATES STABILIZED CONSTRUCTION ENTRANCE
 - A-1 --- INDICATES EARTH DIKE
 - SF --- INDICATES SILT FENCE
 - SSF --- INDICATES SUPER SILT FENCE
- NOTE: BACKFILL TRAPS TO ORIGINAL GRADES UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Gregory R. Han 2-28-94
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Gauch 2-28-94
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Patricia E. ... 3-7-94
U.S. SOIL CONSERVATION SERVICE DATE

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

John P. Robertson 3/7/94
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Gina Swainman 3/21/94
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chad Dammann 3/18/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Richard M. Dwyer 3-17-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul W. Sposon 3/18/94
CHIEF, BUREAU OF PLANNING DATE

DATE NO. REVISION

OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDWAY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT VILLAGE OF RIVER HILL
SECTION 2 AREAS 3, 4, 5, 6, 7, 8, 9, 10
AREA 3 LOTS 1 - 106

AREA TAX MAP NO. 35 20883 PLW 11689
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8800 FAX : 410-997-8282

2-28-94 DATE

DESIGNED BY : C.J.R.
DRAWN BY : DAM
PROJECT NO : RR103
DATE : FEBRUARY 28, 1994
SCALE : 1" = 50'
DRAWING NO. : 19 OF 25

JAYKARLE D. PAREKH #10428

STONE OUTLET SEDIMENT TRAP # 4

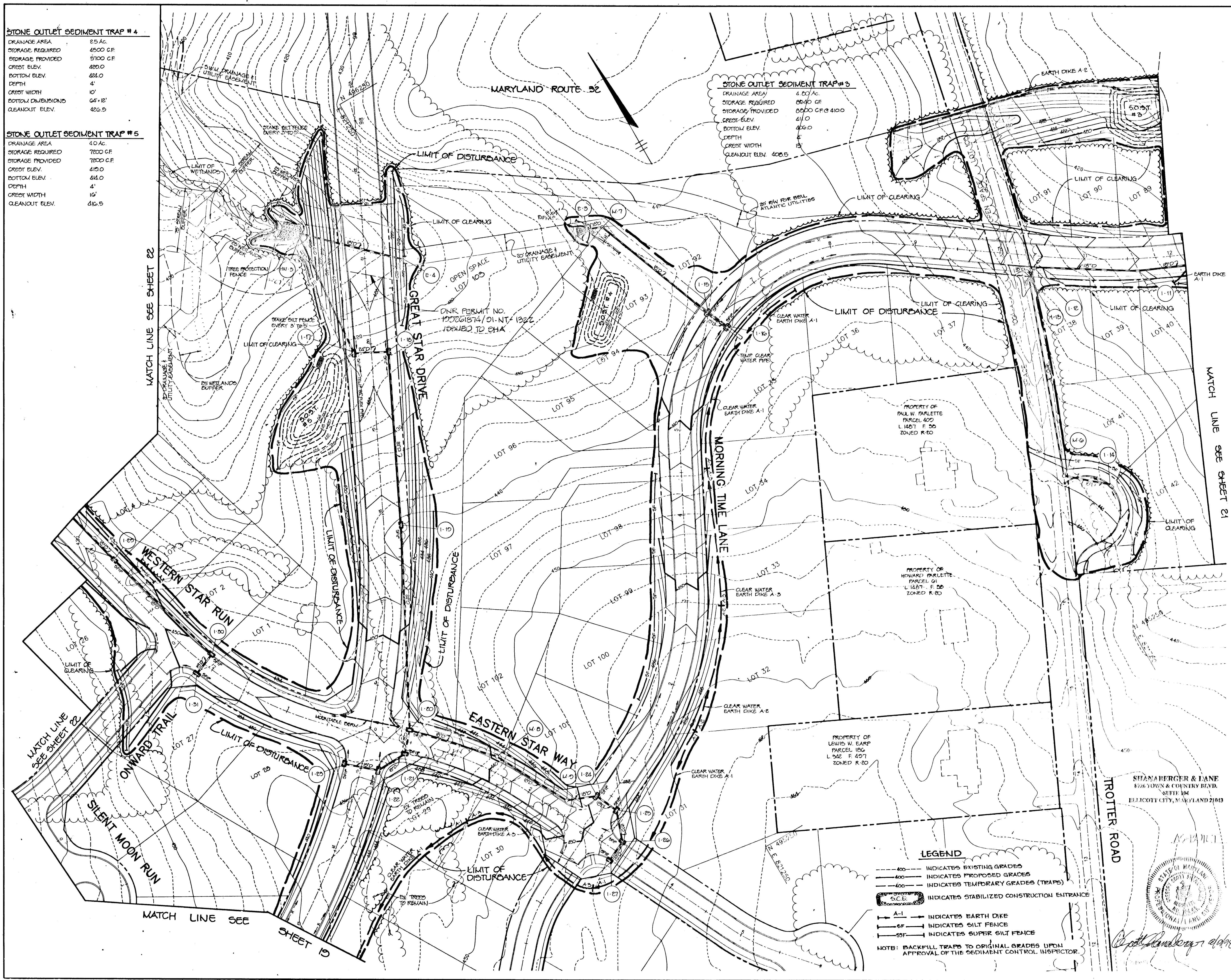
DRAINAGE AREA	2.5 AC.
STORAGE REQUIRED	4500 C.F.
STORAGE PROVIDED	5700 C.F.
CREST ELEV.	420.0
BOTTOM ELEV.	424.0
DEPTH	4'
CREST WIDTH	10'
BOTTOM DIMENSIONS	64'x12'
CLEANOUT ELEV.	426.5

STONE OUTLET SEDIMENT TRAP # 5

DRAINAGE AREA	4.0 AC.
STORAGE REQUIRED	7800 C.F.
STORAGE PROVIDED	7800 C.F.
CREST ELEV.	419.0
BOTTOM ELEV.	444.0
DEPTH	4'
CREST WIDTH	16'
CLEANOUT ELEV.	416.5

STONE OUTLET SEDIMENT TRAP # 3

DRAINAGE AREA	4.00 AC.
STORAGE REQUIRED	8500 C.F.
STORAGE PROVIDED	8500 C.F. @ 4100
CREST ELEV.	411.0
BOTTOM ELEV.	436.0
DEPTH	15'
CREST WIDTH	15'
CLEANOUT ELEV.	426.5



BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Gregory K. Kler 2-28-94
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Sauehl 2-28-94
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Patricia E. ... 2/1/94
U.S. SOIL CONSERVATION SERVICE DATE

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

John R. Robertson 3/17/94
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Jim Sammons 3/21/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chad ... 3/18/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. ... 3-17-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul ... 3/18/94
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE HOUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT **VILLAGE OF RIVER HILL**
SECTION 2, AREA 3, PHASE 1
AREA 3 LOTS 1 - 100

AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE **GRADING AND SEDIMENT CONTROL PLAN**

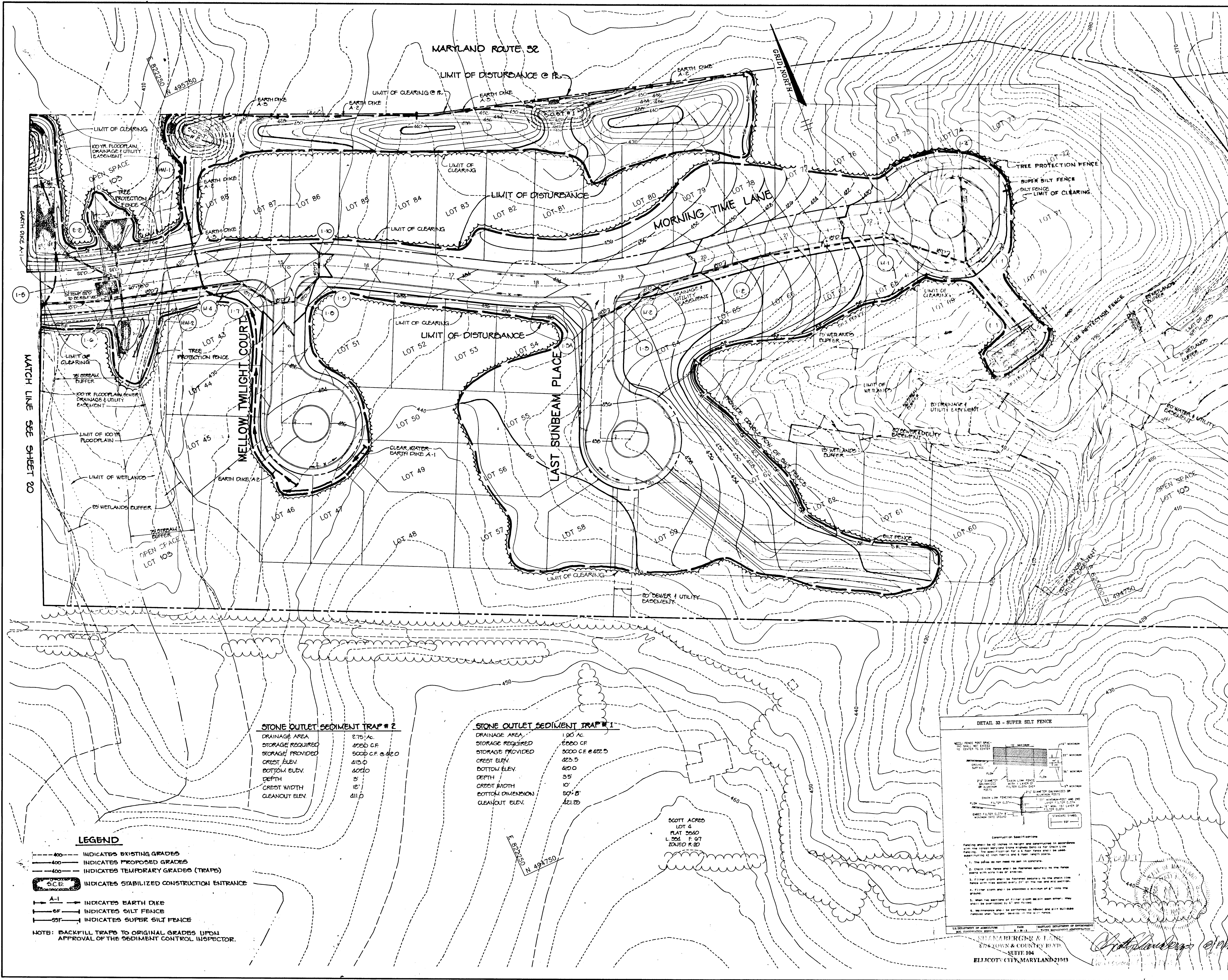
RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX : 410-997-9282

2-28-94
DATE

DESIGNED BY : C.J.R.
DRAWN BY : DAM
PROJECT NO : RR103
DATE : FEBRUARY 20, 1994
SCALE : 1"=50'
DRAWING NO. 20 OF 28

J. Sauehl
JANUARY 11 1994

1987

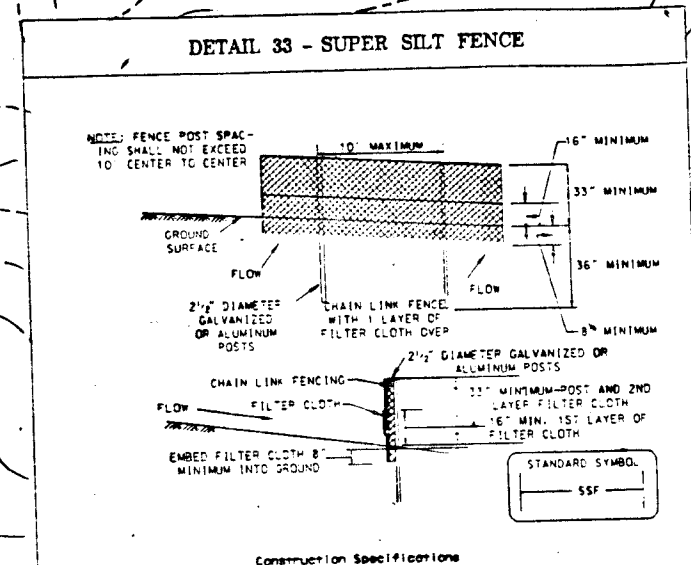


STONE OUTLET SEDIMENT TRAP # 2

DRAINAGE AREA	2.75 AC.
STORAGE REQUIRED	4050 C.F.
STORAGE PROVIDED	5000 C.F. @ 2.0
CREST ELEV.	415.0
BOTTOM ELEV.	402.0
DEPTH	13'
CREST WIDTH	12'
CLEANOUT ELEV.	411.0

STONE OUTLET SEDIMENT TRAP # 1

DRAINAGE AREA	1.90 AC.
STORAGE REQUIRED	2880 C.F.
STORAGE PROVIDED	5000 C.F. @ 2.25
CREST ELEV.	423.5
BOTTOM ELEV.	410.0
DEPTH	13.5'
CREST WIDTH	10'
BOTTOM DIMENSION	50' x 5'
CLEANOUT ELEV.	421.25



Construction Specifications:
 1. Fencing shall be 42 inches in height and constructed in accordance with the standard for heavy duty chain link fence. The spacing of the chain link fence shall be 24 inches and the section shall have 12 inch vertical and 4 inch horizontal spacing.
 2. Chain link fence shall be approved according to the state code with a minimum of 12 inch vertical and 4 inch horizontal spacing.
 3. Filter cloth shall be approved according to the state code with a minimum of 24 inch vertical and 4 inch horizontal spacing.
 4. Filter cloth shall be approved according to the state code with a minimum of 24 inch vertical and 4 inch horizontal spacing.
 5. When the sections of filter cloth are in contact, they shall be overlapped 6 inches and secured.
 6. Maintenance shall be performed as follows and all buildings fenced shall be inspected on the 15th day.

SHANBERGER & FINE
 ENGINEERS & SURVEYORS
 SUITE 104
 ELLICOTT CITY, MARYLAND 21113

- LEGEND**
- 400 --- INDICATES EXISTING GRADES
 - 400 --- INDICATES PROPOSED GRADES
 - - - - - INDICATES TEMPORARY GRADES (TRAPS)
 - 500 --- INDICATES STABILIZED CONSTRUCTION ENTRANCE
 - A-1 --- INDICATES EARTH DIKE
 - SF --- INDICATES SILT FENCE
 - SSF --- INDICATES SUPER SILT FENCE
- NOTES:** BACKFILL TRAPS TO ORIGINAL GRADES UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR.

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Gregory K. Man 2-28-94
 DEVELOPER DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
J. Farrell 2-28-94
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Paul 3-7-94
 U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Wm. R. Robertson 3/7/94
 HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Jim Shimmans 3/21/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Mr. Danvers 3/18/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Danesh 3-17-94
 CHIEF, BUREAU OF HIGHWAYS DATE

Richard S. Spon 3/18/94
 CHIEF, BUREAU OF ENGINEERING DATE

G-9-94	1	REMOVED CONSTRUCTION RESTRICTION AREAS
DATE	NO.	REVISION

OWNER / DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

PROJECT VILLAGE OF RIVER HILL
 SECTION 2, AREA 3 PHASE 1
 AREA 3 LOTS 1 - 100

AREA TAX MAP NO. 35 ZONED NEW TOWN
 PART OF PARCELS 70 & 240
 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

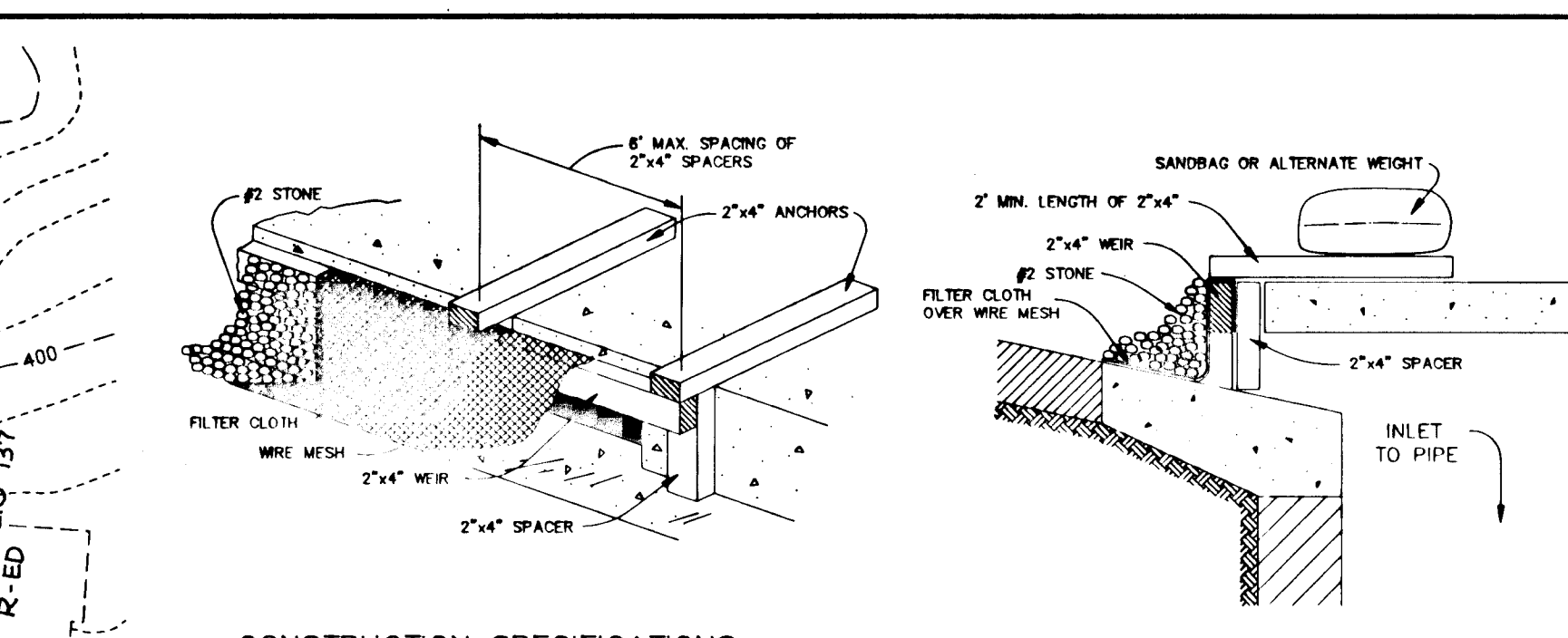
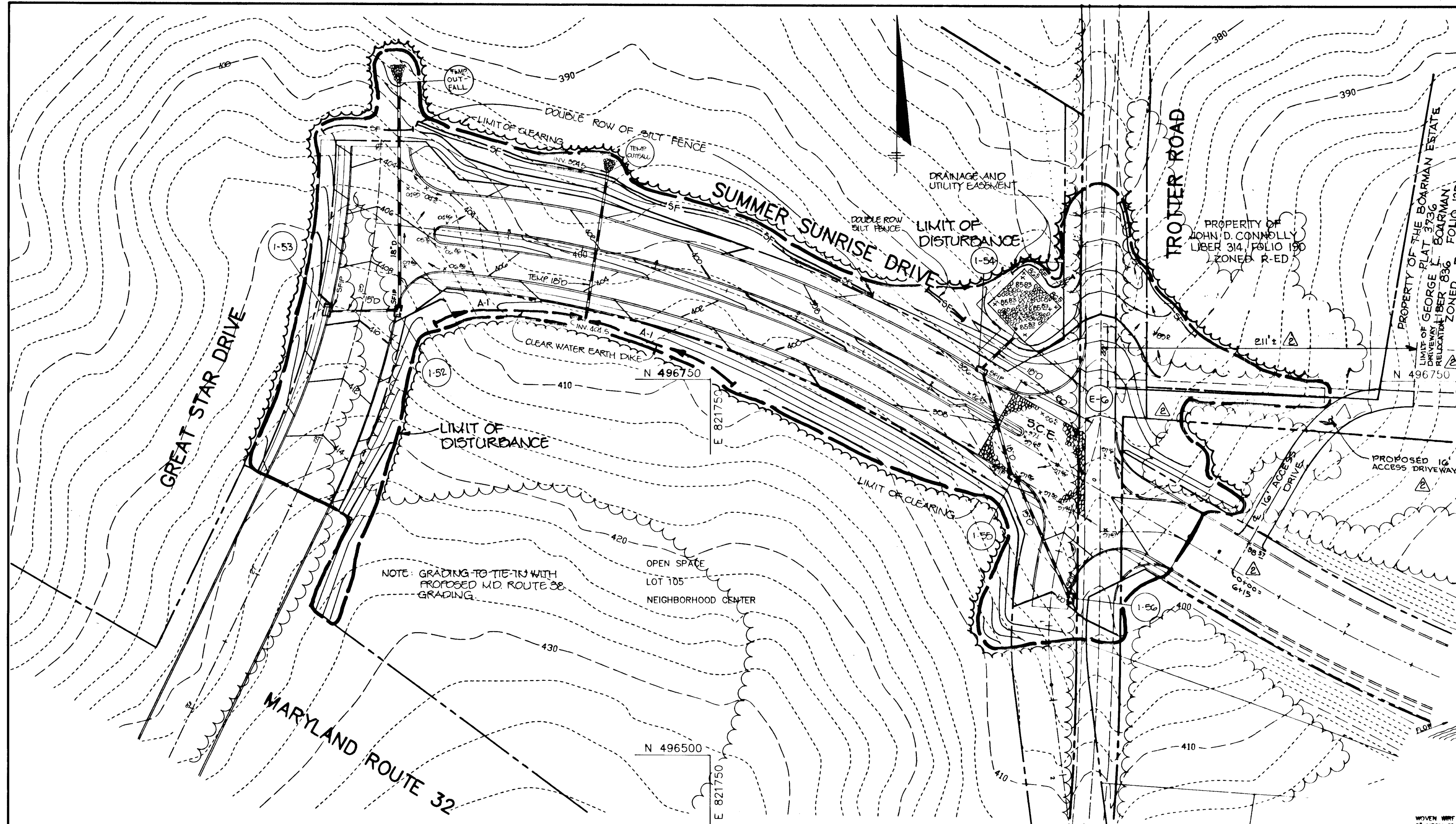
TITLE GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
 Planners • Engineers • Surveyors
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 410-997-8900 FAX: 410-997-9282

2-28-94 DATE
 DESIGNED BY: C.J.R.
 DRAWN BY: DAM
 PROJECT NO: 88103
 DATE: FEBRUARY 22, 1994
 SCALE: 1" = 50'
 DRAWING NO. 21 OF 28

STATE OF MARYLAND
 JAYKANT D. PAREKH, #10140

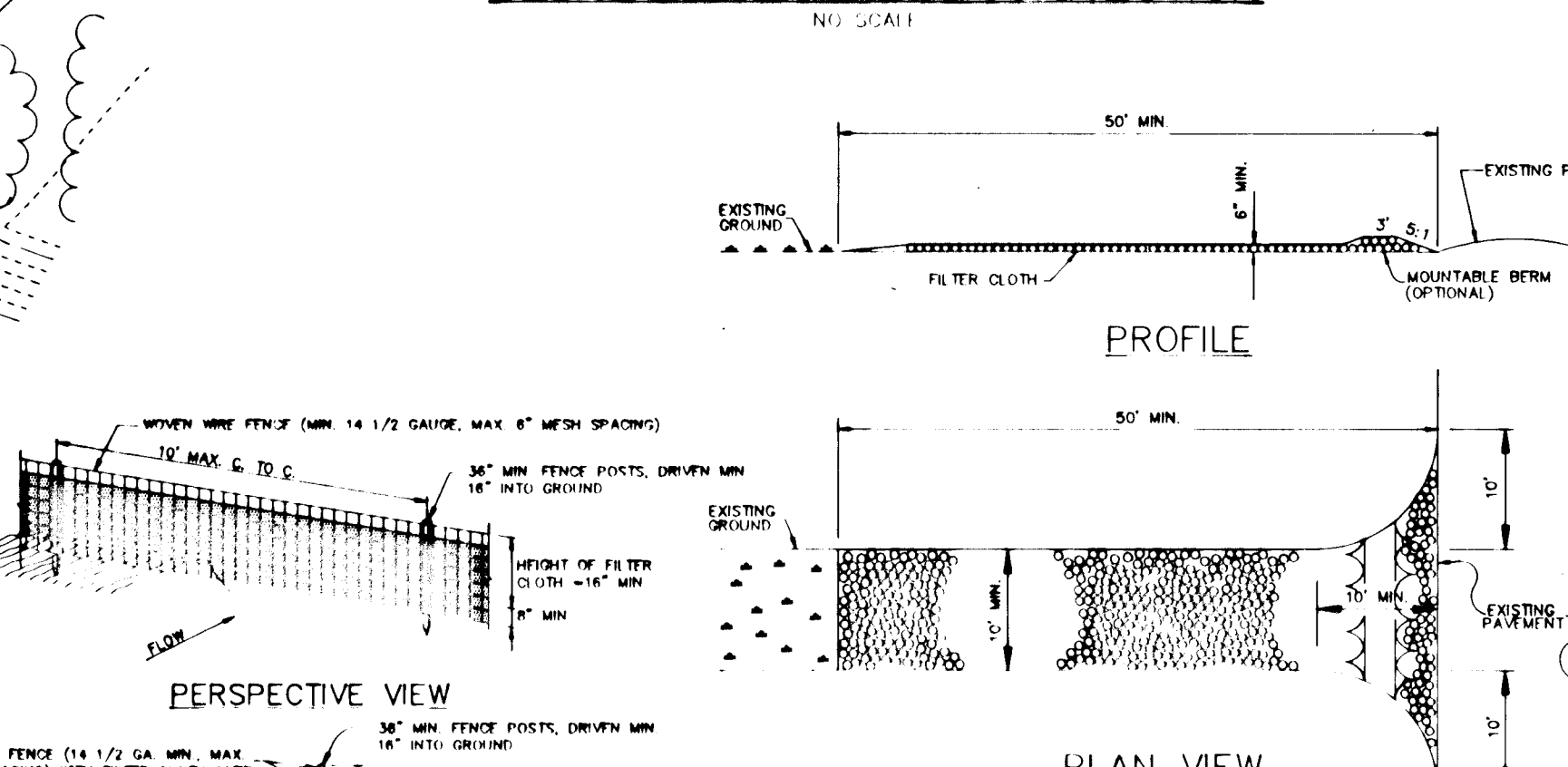
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CONSTRUCTION SPECIFICATIONS

- WOODEN FRAME IS TO BE CONSTRUCTED OF 2x4" CONSTRUCTION GRADE LUMBER.
- WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC AND STONE WITH WATER FULLY IMPONDED AGAINST IT.
- FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SUNLIGHT WITH A SEWE SIZE, EDS 40-85, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
- STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
- PROCEDURE FOR CURB INLET PROTECTION:
 - ATTACH CONTINUOUS PEEPS OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 6") TO THE 2x4" WIRE (WEAVING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
 - PLACE A PIECE OF APPROVED FILTER CLOTH (40-85 SEIVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2x4" WIRE.
- SECURELY NAIL THE 2x4" WIRE TO 9" LONG VERTICAL SPACERS TO BE LOCATED BETWEEN THE WIRE AND INLET FACE (MAX. 8" APART).
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2" LENGTH) OF 2x4" TO THE TOP OF THE WIRE AT SPACER LOCATIONS. THESE 2x4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDRAGS OR ALTERNATE WEIGHT.
- THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1" BEYOND BOTH ENDS OF THE THROAT.
- FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE CURB AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE FILTER CLOTH.
- THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
- ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

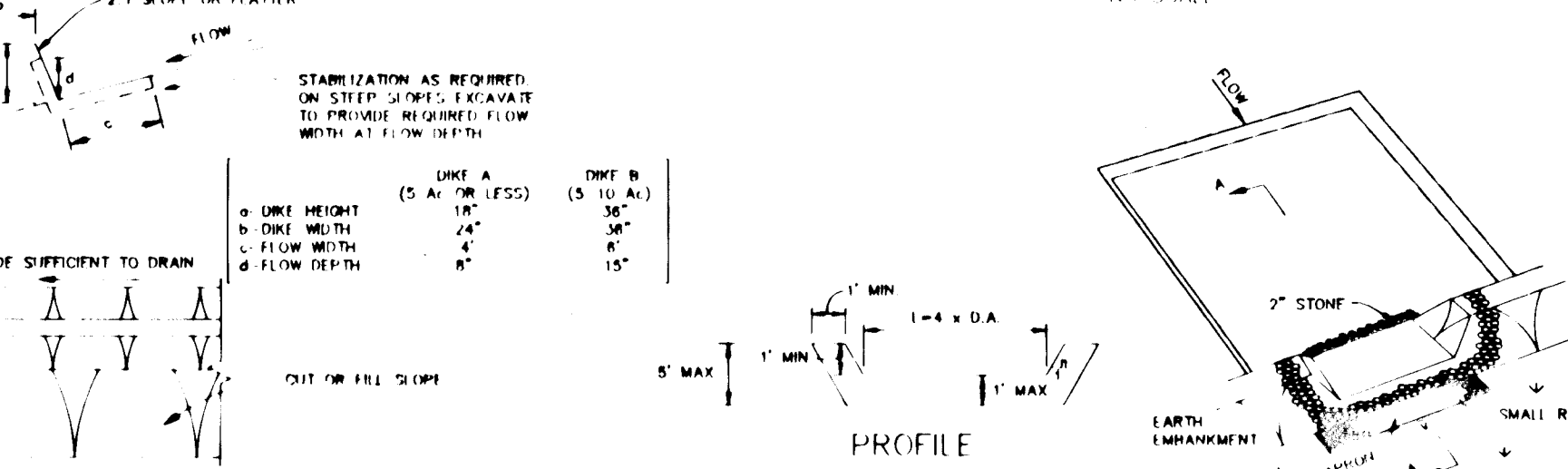
STONE FILTER INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

- STONE SIZE: USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH: AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 10 FOOT MINIMUM WILL APPLY).
- THROAT: NOT LESS THAN 18" (8" INCHES) FROM THE FILL WITH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
- WIDTH: 18" MINIMUM, WITH 12" MINIMUM FROM THE FILL WITH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
- INSTALLATION: THE ENTIRE AREA PRIOR TO PLACING OR STONE FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE RESIDENT LOT.
- MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY.
- REPAIRS: THIS MAY REQUIRE PERIODIC TOP-UPING WITH ADDITIONAL STONE AS CONSTRUCTION IS NEARLY COMPLETE. ALL SEDIMENT SPILLED, DISPERSED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- REMOVAL: WHENEVER THIS STRUCTURE IS TO BE REMOVED, THE PROVISION FOR EXCESSIVE WATER FLOWING OR INVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL THE STRUCTURE IS REMOVED.
- REMOVAL: THIS MAY REQUIRE PERIODIC TOP-UPING WITH ADDITIONAL STONE AS CONSTRUCTION IS NEARLY COMPLETE. ALL SEDIMENT SPILLED, DISPERSED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- REMOVAL: WHENEVER THIS STRUCTURE IS TO BE REMOVED, THE PROVISION FOR EXCESSIVE WATER FLOWING OR INVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL THE STRUCTURE IS REMOVED.

STABILIZED CONSTRUCTION ENTRANCE



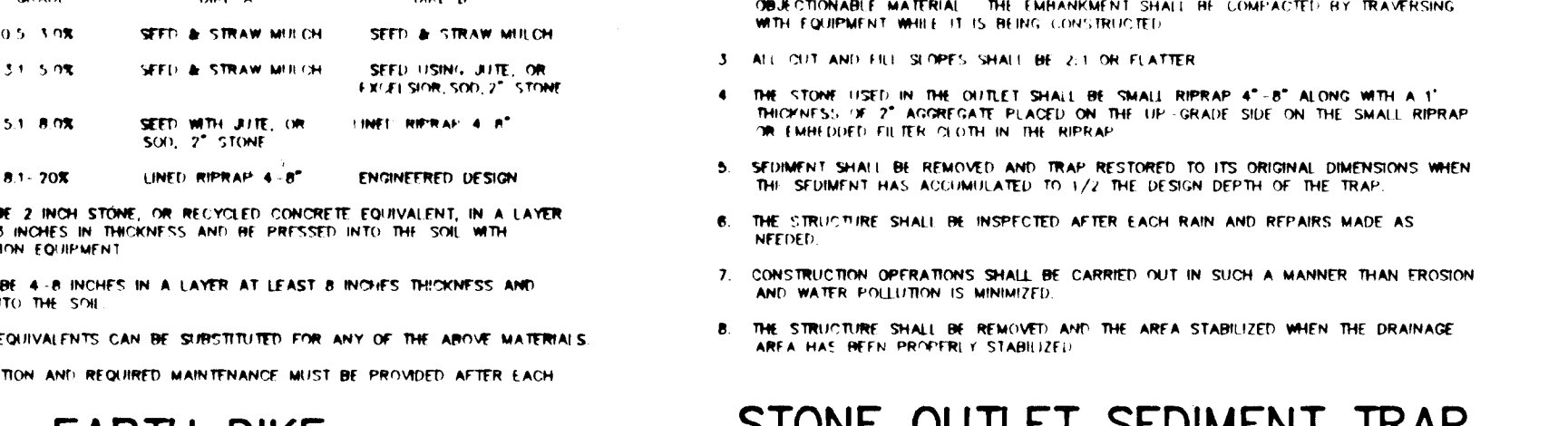
CONSTRUCTION SPECIFICATIONS

- ALL DIRT SHALL BE STABILIZED BY EARTH MATING EQUIPMENT.
- ALL DIRT SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- THE MATS SHALL BE WIDER AND THE STREPS MAY BE FLATTER IF DEEMED TO FACILITATE DRIVING ON THE MATS.
- WELL LIGHTING SHALL BE PROVIDED AS NECESSARY TO ILLUMINATE MATS.
- EARTH LINES SHALL HAVE AN INLET THAT FINISHES WITH A MINIMUM OF 18" FROM THE CURB TO THE CENTER OF THE MATS. THE MATS SHALL BE MAINTAINED IN THE LINE AND AN APPROPRIATE STABILIZER.
- STABILIZATION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MIXTURES OR STRAW MIXTURES IN SETTING GRADES. (B) THE STABILIZER SHALL BE APPLIED TO THE MATS.

LOW CHANNEL STABILIZATION

TYPE OF TREATMENT	(MINIMUM) CHANNEL WIDTH	TYPE A	TYPE B
1	0.5 - 1.0'	SEED & STRAW MIXTURE	SEED & STRAW MIXTURE
2	1.0 - 2.0'	SEED & STRAW MIXTURE	SEED & STRAW MIXTURE
3	2.0 - 3.0'	SEED WITH STONE OR STRAW MIXTURE	SEED WITH STONE OR STRAW MIXTURE
4	3.0 - 4.0'	SEED WITH STONE OR STRAW MIXTURE	SEED WITH STONE OR STRAW MIXTURE

- STONE TO BE 2" IN SIZE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 12" THICK AND TO BE PLACED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
- STRIP TO BE 4" INCHES IN A LAYER AT LEAST 8" THICKNESS AND PLACED INTO THE SOIL.
- APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



EARTH DIKE and **STONE OUTLET SEDIMENT TRAP**

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding. If not previously loosened.

Soil Amendments: Apply 500 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs. per 1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring, or use seed.

Mulches: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of untreated annual grain straw immediately after seeding. Annual mulch immediately after application using much anchoring tool or 2 lb. per acre (5 gal. per 1000 sq. ft.) of ensulfated seedcoat on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Dept. of Inspections and Permits prior to the start of any construction (S15-102D).
- All vegetative and structural practices are to be installed according to the provisions of this plan and one to be in compliance with the MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL AND PREVENTIVE TREATMENT.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within 92 calendar days for all perimeter sediment control structures, dikes, perimeter areas and all slopes greater than 3:1. 14 days or so after disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around the perimeter in accordance with 90.1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL for permanent seedings (Sec. 51), and (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with much areas can only be done when recommended seedings does not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and one to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	6000 acres
Area to be seeded or paved	750 acres
Area to be vegetatively stabilized	5250 acres
Total Cult. Area	6000 cu. yds.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided. If deemed necessary by the Howard County Sediment Control Inspector.
- Site grading will begin only after all perimeter sediment control measures have been installed and one in a functioning condition.
- Sediment will be removed from traps when its depth reaches clean soil elevation shown on the plans.
- Cut and fill quantities provided under site analysis do not represent bid quantities. These quantities do not distinguish between topsoil, structural fill or embankment material, nor do they reflect consideration of undercutting or removal of unstable material. The contractor shall familiarize himself with site conditions which may affect the work.
- On all slopes with disturbed areas in excess of 4:1, annual soil erosion inspection agency shall be requested with completion of installation of perimeter erosion and sediment controls but before proceeding with any other earth disturbance or grading. Other building or grading inspection agencies may be authorized until their final approval by the inspection agency to proceed.
- Trenches for the construction of utilities are limited to three feet length or that which can be backfilled and closed within one working day, whichever is shorter.

PLAN

SCALE: 1" = 50'

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT AND ENVIRONMENTAL PERMITS.
- INSTALL STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, EARTH DIKES, STONE OUTLET SEDIMENT TRAPS, TREE PROTECTION FENCE, TEMPORARY ACCESS CULVERT AND TEMPORARY PIPE UNDER SUMMER SUNRISE DR. SEE SHEET 27 & 28 FOR FINISHING PLANS OF TROTTER RD INTERSECTION.
- PERFORM CLEARING AND GRUBBING AS NECESSARY AND START ROUGH GRADING. TRAFFIC MUST BE MAINTAINED ON TROTTER ROAD UNTIL CONNECTION FROM RTE 32 BRIDGE AND GREAT STAR DRIVE TO GUILFORD ROAD IS OPERATIONAL. INSTALL CULVERT UNDER MORNING TIME LANE AND REMOVE TEMPORARY ACCESS CULVERT AS SOON AS FEASIBLE.
- AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM DRAINS, WATER AND SEWER UTILITIES. ADD STONE FILTER INLET PROTECTION ON INLETS AS NECESSARY. PROVIDE TEMPORARY FLEXIBLE PIPE OUTFALLS TO SEDIMENT TRAPS AS SHOWN ON THE GRADING PLANS.
- INSTALL CURB AND GUTTER AND PAVE ROADWAYS.
- UPON RECEIPT OF STATE HIGHWAY ACCESS PERMIT, PERFORM GUILFORD ROAD IMPROVEMENTS INCLUDING UTILITY POLE RELOCATIONS.
- STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.
- UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROLS THAT WILL NOT BE USED FOR HOUSE CONSTRUCTION. STABILIZE ALL REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.
- INSTALL STREET LIGHTS, STREET TREES AND SIGNS AS REQUIRED.

CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS AND BUFFERS*

- FOR UTILITY LINE INSTALLATION, STRIP, STOCKPILE AND MAINTAIN SEPARATELY THE TOP OF SOIL MATERIAL FROM THE NONTIDAL WETLANDS AND BUFFERS, TO BE REPLACED AS THE TOP LAYER OF THE BACKFILLED MATERIAL.
- REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA, OUTSIDE OF ANY FLOODPLAIN, WATERWAY, WETLAND OR BUFFER.
- PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLAND.
- USE PREVIOUSLY EXCAVATED MATERIAL AS UTILITY LINE BACKFILL, UNLESS IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DEleterious SUBSTANCE. USE CLEAN BORROW MATERIAL WHEN EXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL.
- RECTIFY ANY NONTIDAL WETLANDS AND BUFFERS TEMPORARILY IMPACTED BY ANY PROPOSED REPAIR AND MAINTENANCE ACTIVITY OR INSTALLATION OF THE UTILITY LINE. ALL STABILIZATION MATERIALS SHALL BE OF THE FOLLOWING RECOMMENDED SPECIES: ANNUAL PERGRASS (LOLUM MULTIFLORUM), MALET (SETARIA ITALICA), OATS (Avena sp.) AND/OR RYE (SECALE CEREALE). OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER. ALL TEMPORARY FILLS SHALL BE REMOVED IN THEIR ENTIRETY ON OR BEFORE THE COMPLETION OF CONSTRUCTION.
- AFTER UTILITY LINE INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NONTIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS.
- TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS: CLASS I WATERS; IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
- NO REMOVAL OF VEGETATION, GRADING, FILLING, OR ANY OTHER ALTERATION OF THE NONTIDAL WETLANDS OR BUFFER OUTSIDE THE APPROVED LIMITS OF DISTURBANCE SHALL OCCUR WITHOUT WRITTEN AUTHORIZATION FROM THE WATER RESOURCES ADMINISTRATION.

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, disking or other acceptable means before seeding. If not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.) before seeding. Horae or disc into upper three inches soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureform fertilizer (8 lbs. per 1000 sq. ft.).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq. ft.) before seeding. Horae or disc into upper three inches of soil.

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 50 lbs. per acre (14 lbs. per 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 (0.05 lbs. per 1000 sq. ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

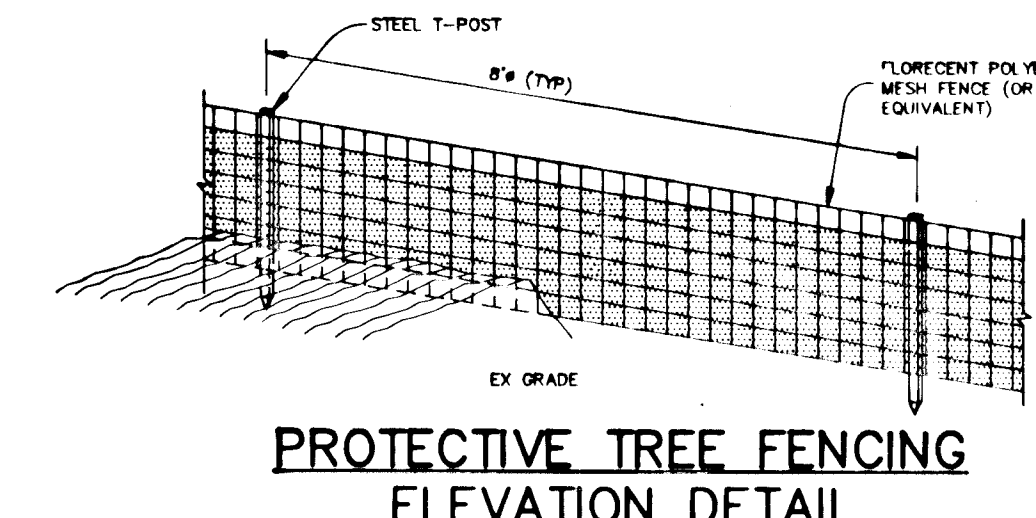
- 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring.
- Use seed.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well-anchored straw.

Mulches: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of untreated annual grain straw immediately after seeding. Annual mulch immediately after application using much anchoring tool or 2 lb. per acre (5 gal. per 1000 sq. ft.) of ensulfated seedcoat on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

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

LEGEND

- 400 --- INDICATES EXISTING GRADES
- 400 --- INDICATES PROPOSED GRADES
- 400 --- INDICATES TEMPORARY GRADES (TRAPS)
- 400 --- INDICATES STABILIZED CONSTRUCTION ENTRANCE
- A-1 INDICATES EARTH DIKE
- 6P INDICATES SILT FENCE
- 6SF INDICATES SUPER SILT FENCE



PROTECTIVE TREE FENCING ELEVATION DETAIL

NO SCALE

BY THE DEVELOPER: Gregory R. Nov 2-28-94 DATE

BY THE ENGINEER: J. Farrell 2-28-94 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL. Patricia E. 3-7-94 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. John R. P. 3/7/94 DATE

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Jim J. 3/21/94 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. John P. 3/18/94 DATE

10-21-97 RELOCATED CONNOLLY ACCESS DRIVE

6-25-94 ADDED WETLANDS NOTES

OWNER / DEVELOPER: THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION, THE ROUSE BUILDING, 10275 LITTLE PATUXENT PARKWAY, COLUMBIA, MARYLAND 21044

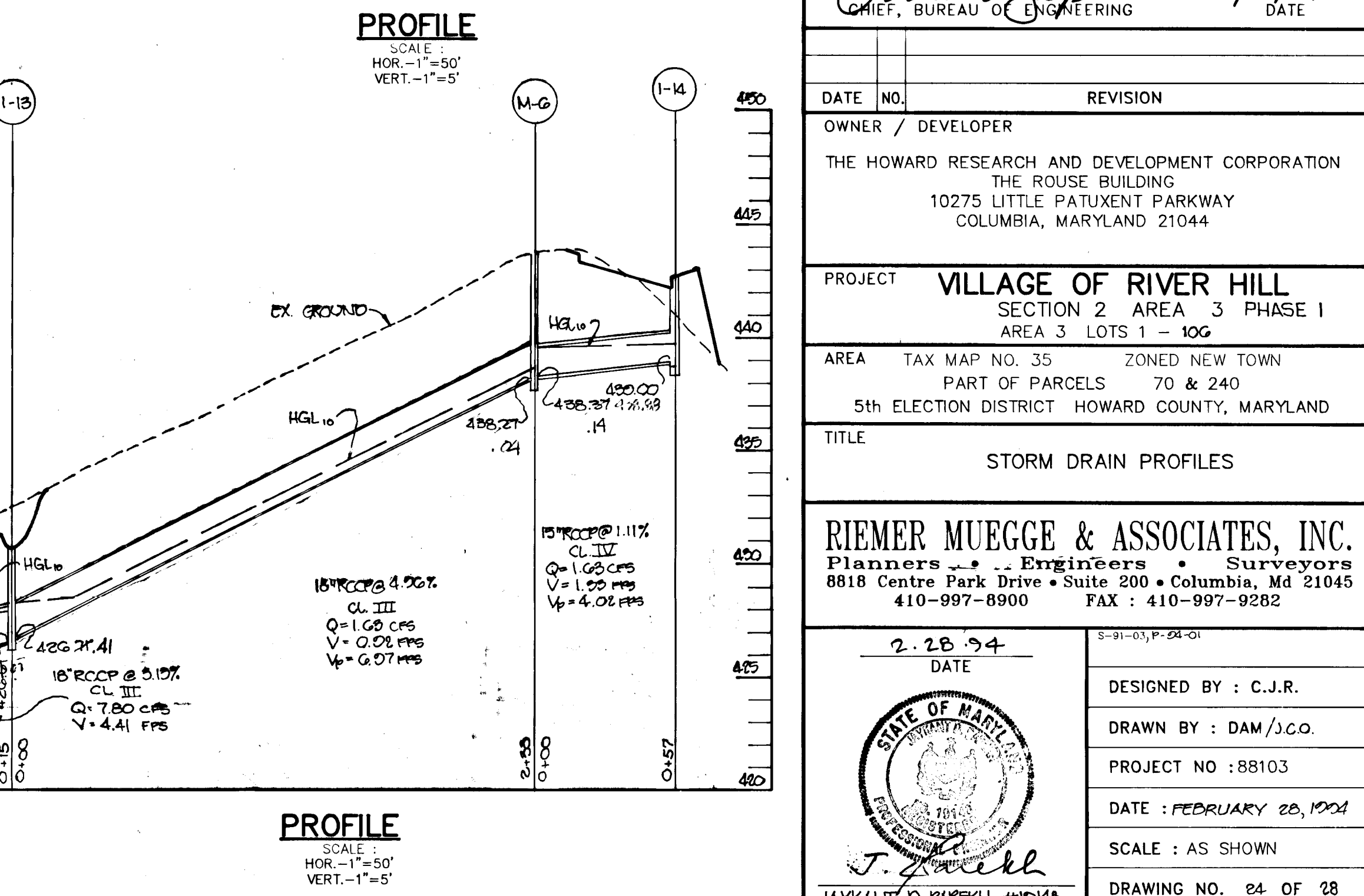
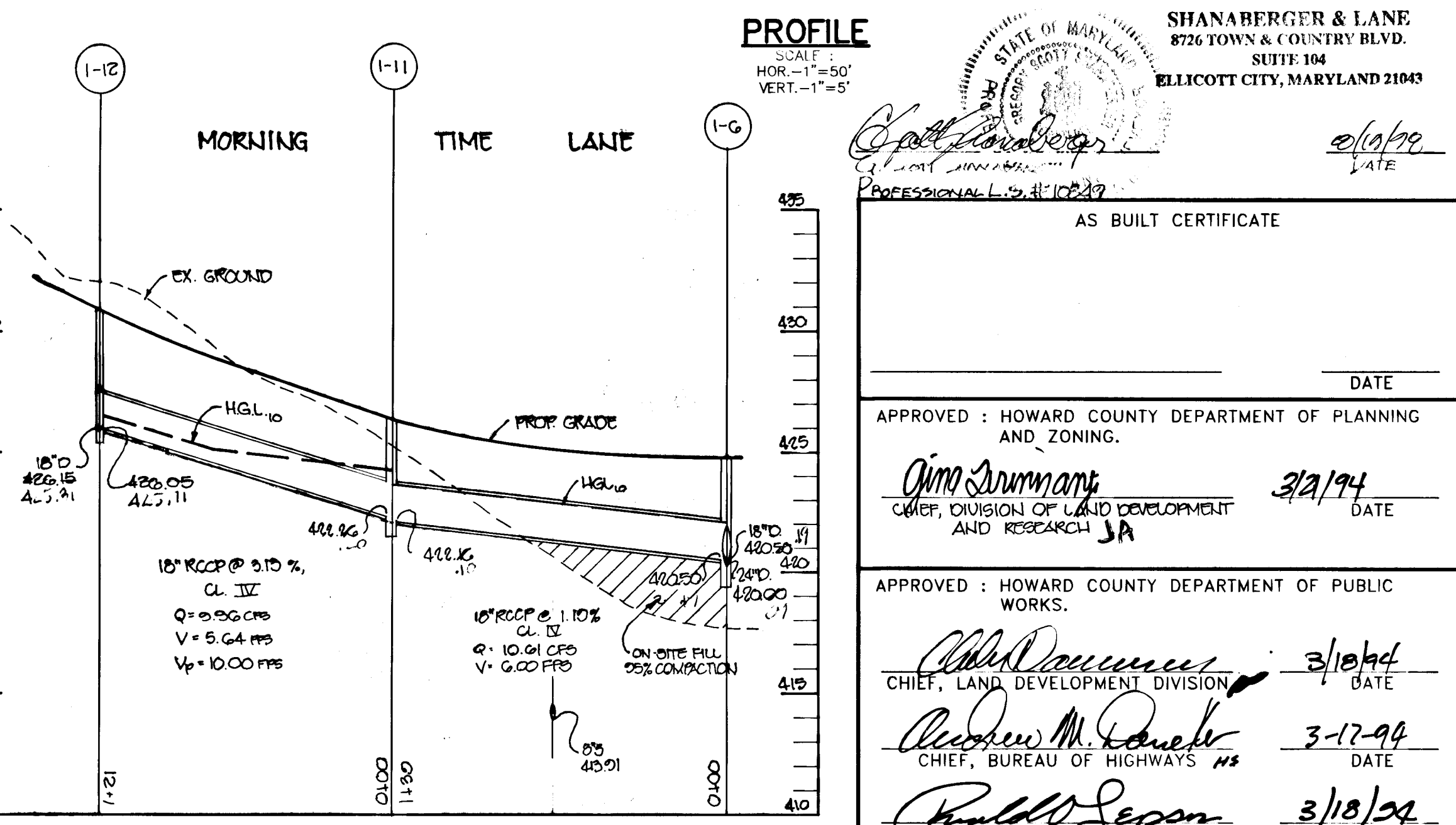
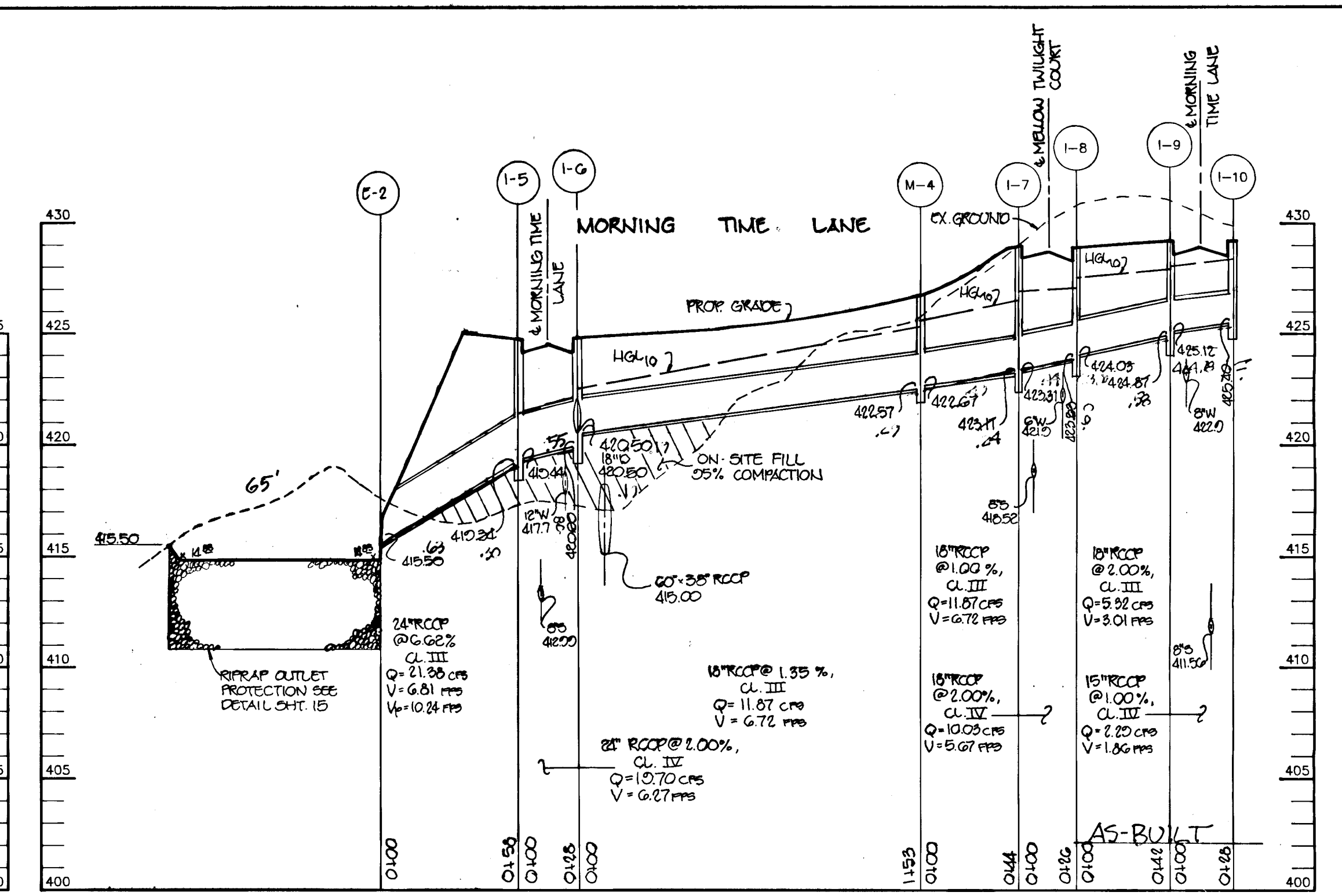
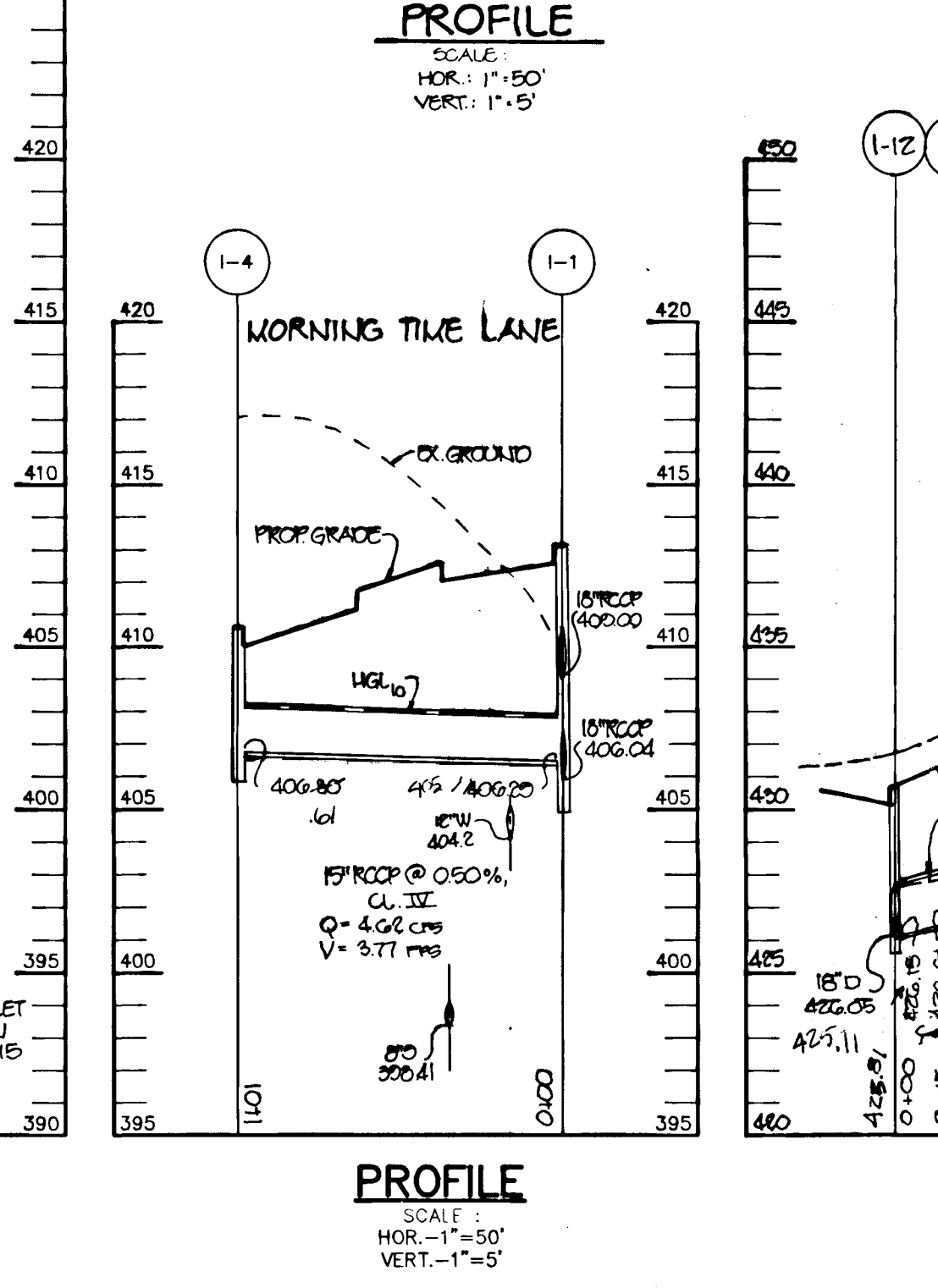
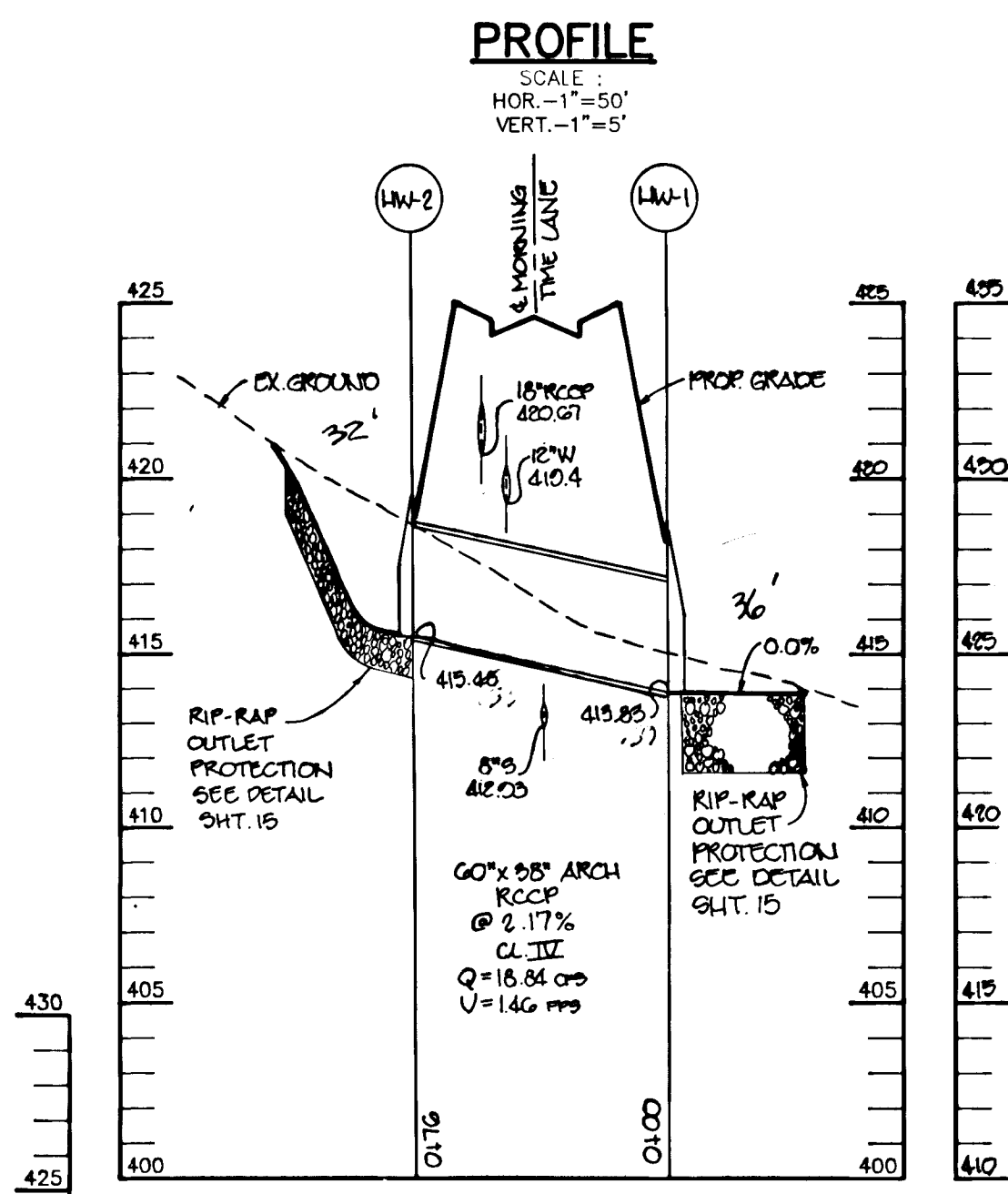
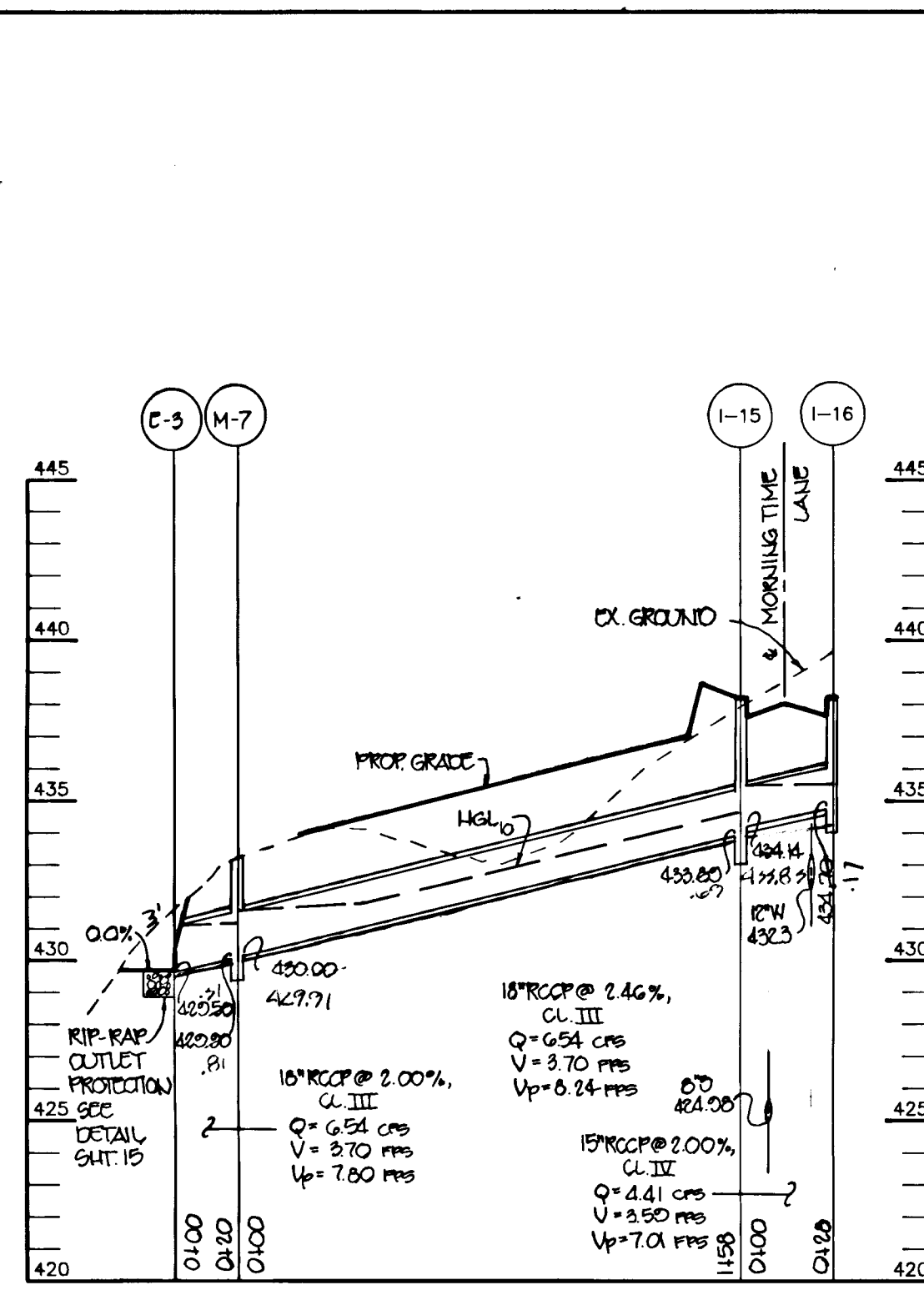
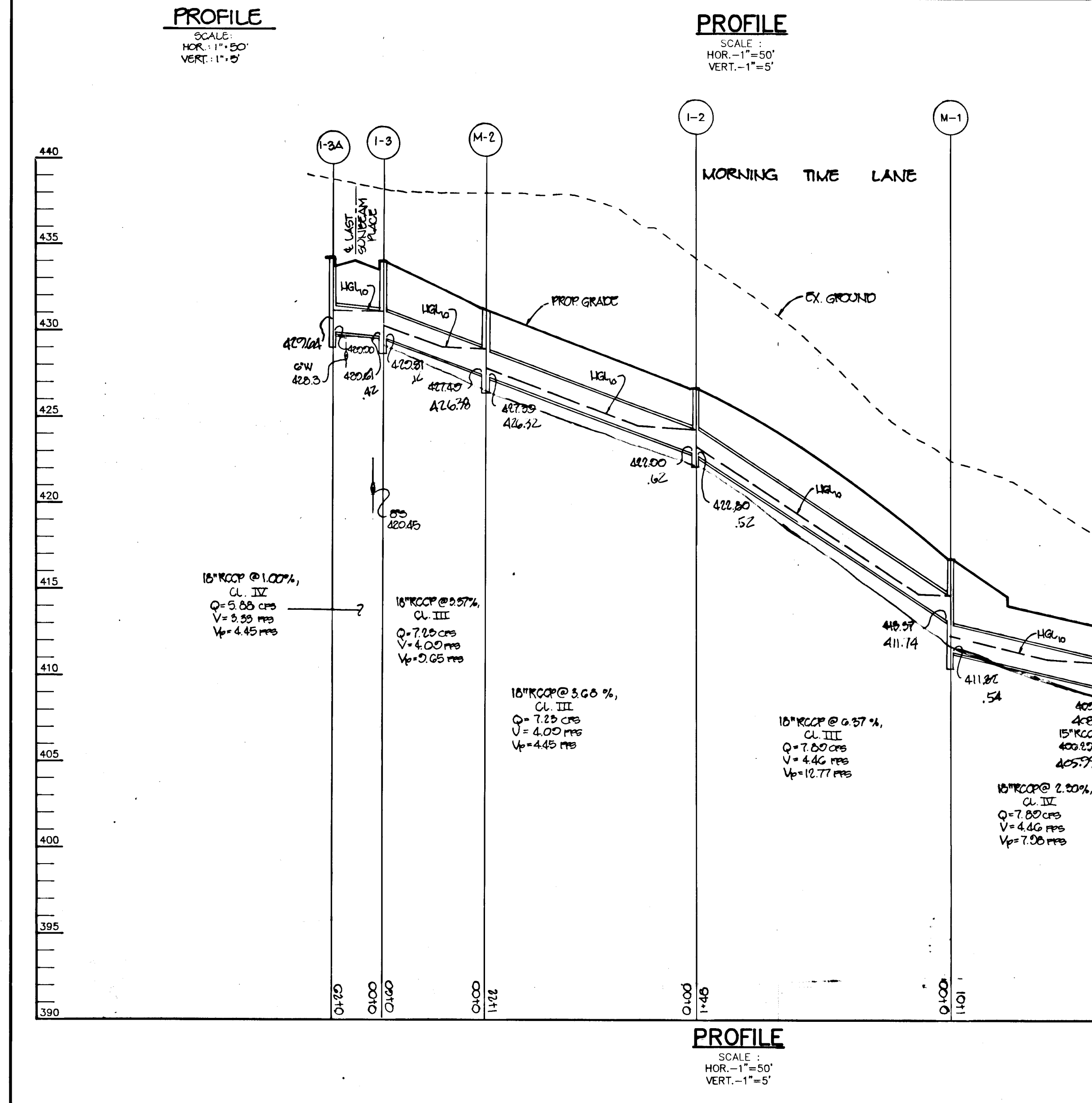
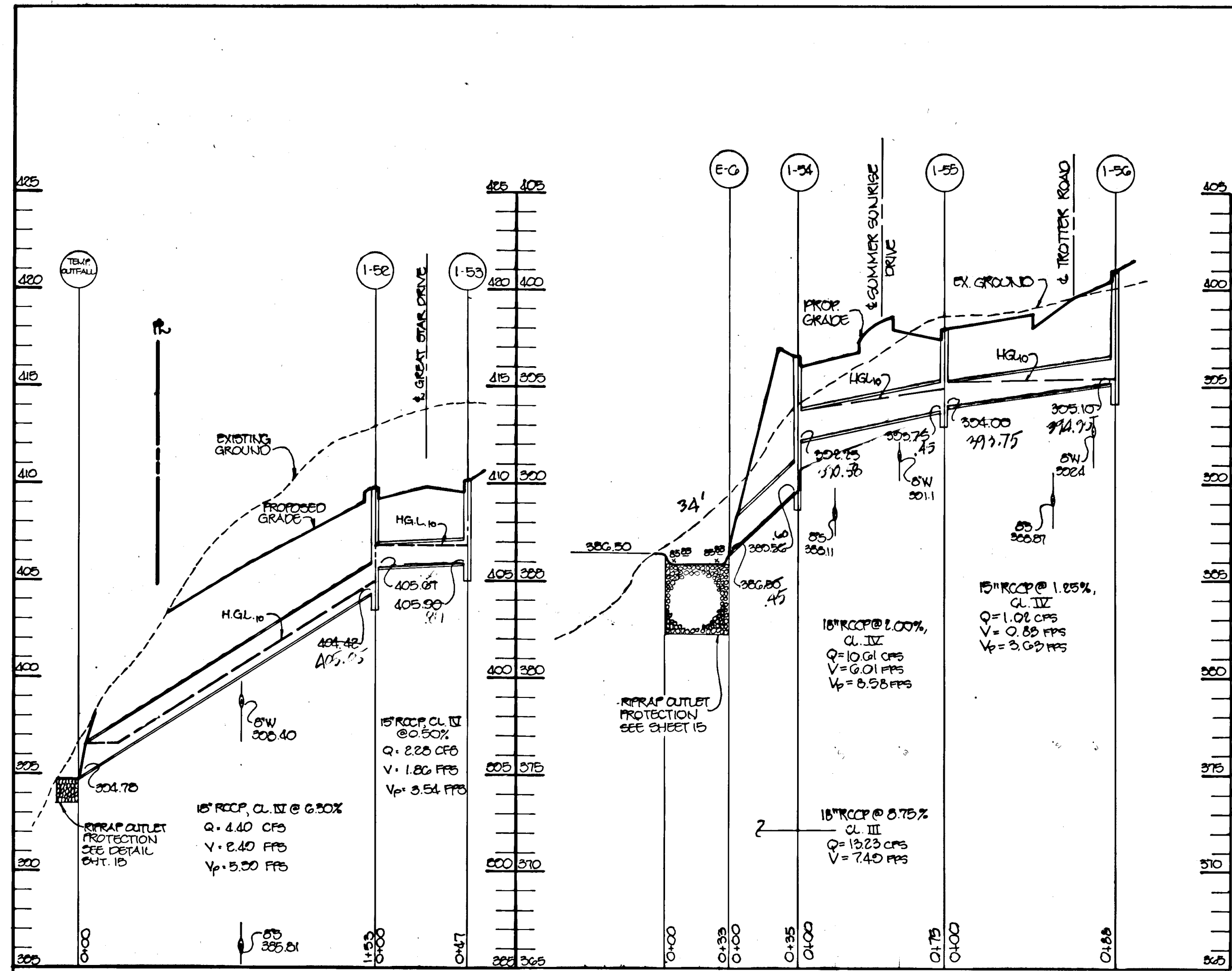
PROJECT: VILLAGE OF RIVER HILL, SECTION 2, AREAS 3, PHASE 1, AREA 3, LOTS 1 - 106, ZONED 70 & 240, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors, 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045, 410-997-8900, FAX: 410-997-9282

DATE: 2-28-94, DESIGNED BY: C.J.R., DRAWN BY: D.A.M., PROJECT NO: 88103, DATE: FEBRUARY 28, 1994, SCALE: AS SHOWN, DRAWING NO. 23 OF 28

1487



SHANBERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELICOTT CITY, MARYLAND 21043

Professional Seal: State of Maryland, Professional Engineer, License No. 110227, Date 3/18/94.

AS BUILT CERTIFICATE

DATE: _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Jim Summery 3/2/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
John Summery 3/10/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Powell 3-12-94
 CHIEF, BUREAU OF HIGHWAYS MS DATE

Paul D. Sepon 3/18/94
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION
OWNER / DEVELOPER		
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044		
PROJECT VILLAGE OF RIVER HILL SECTION 2 AREA 3 PHASE 1 AREA 3 LOTS 1 - 10G		
AREA TAX MAP NO. 35 ZONED NEW TOWN PART OF PARCELS 70 & 240 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE STORM DRAIN PROFILES		

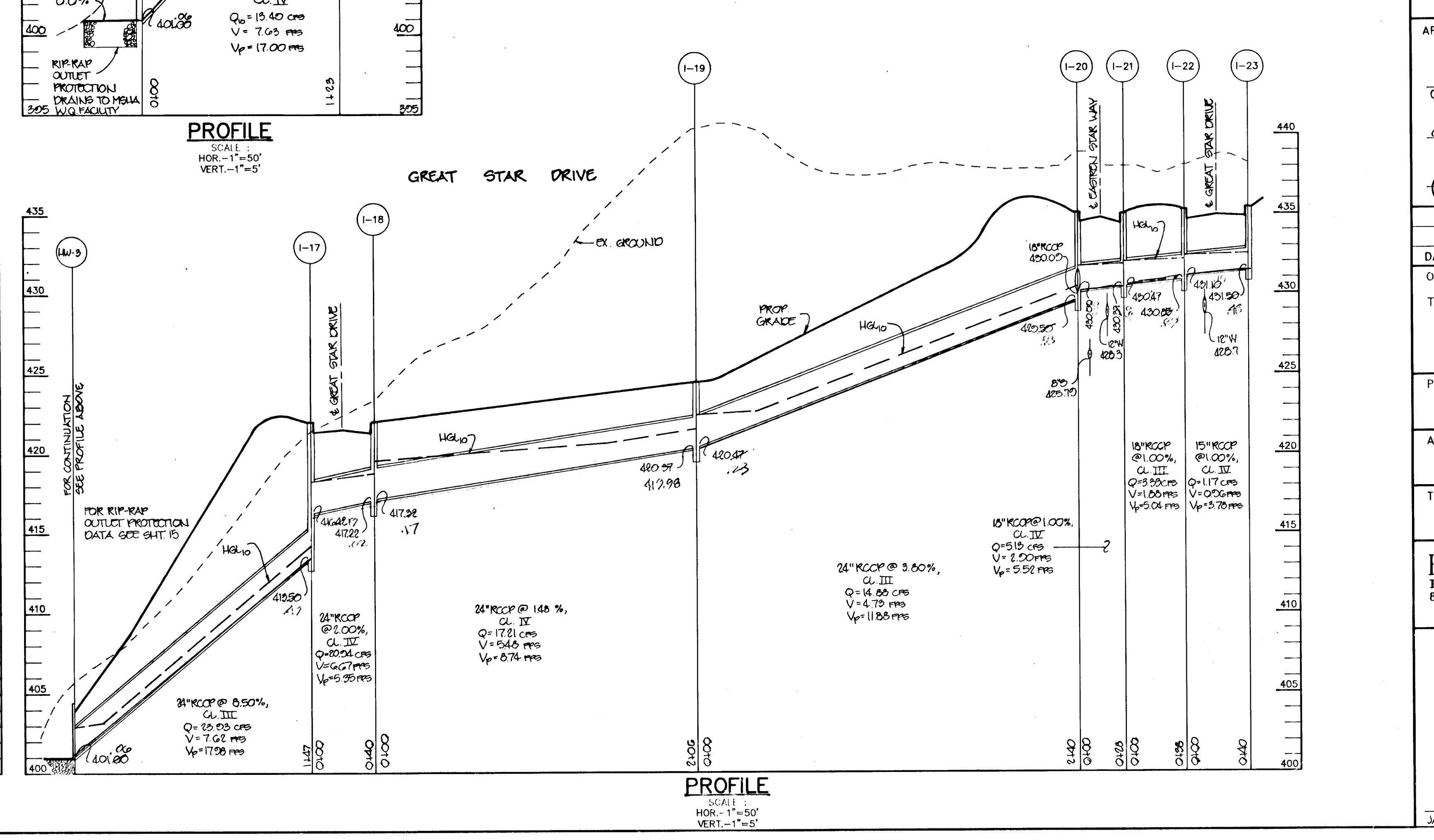
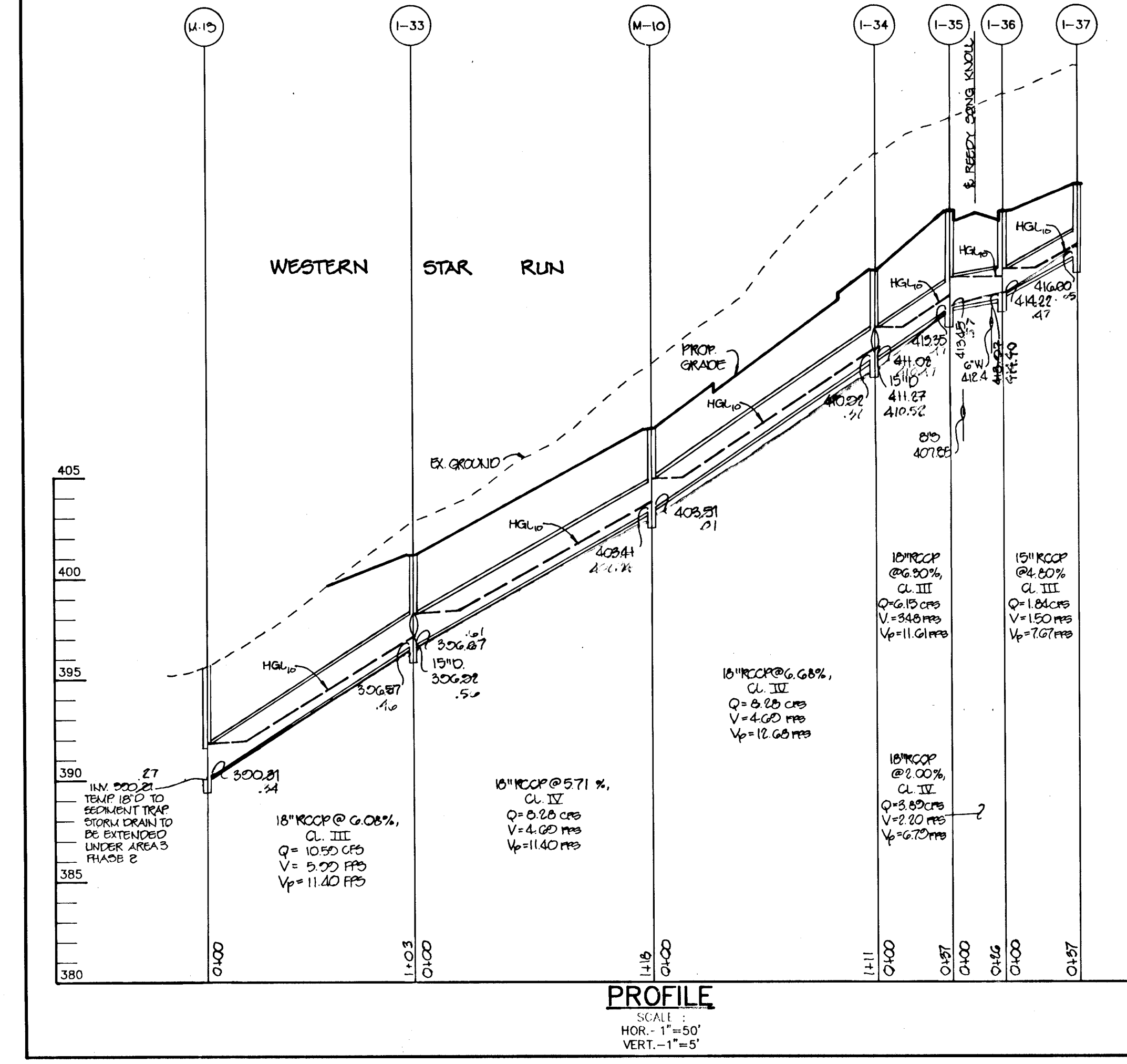
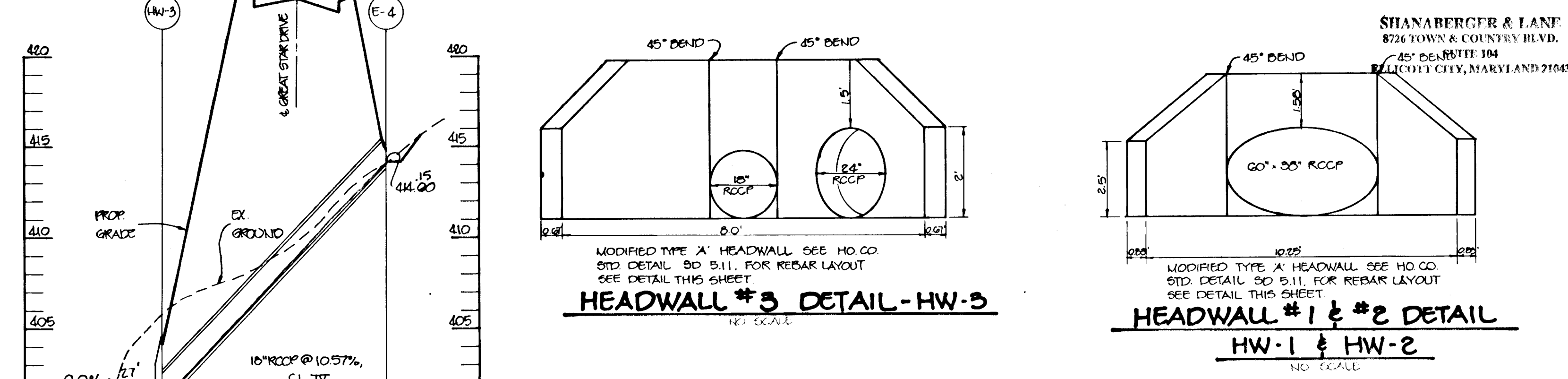
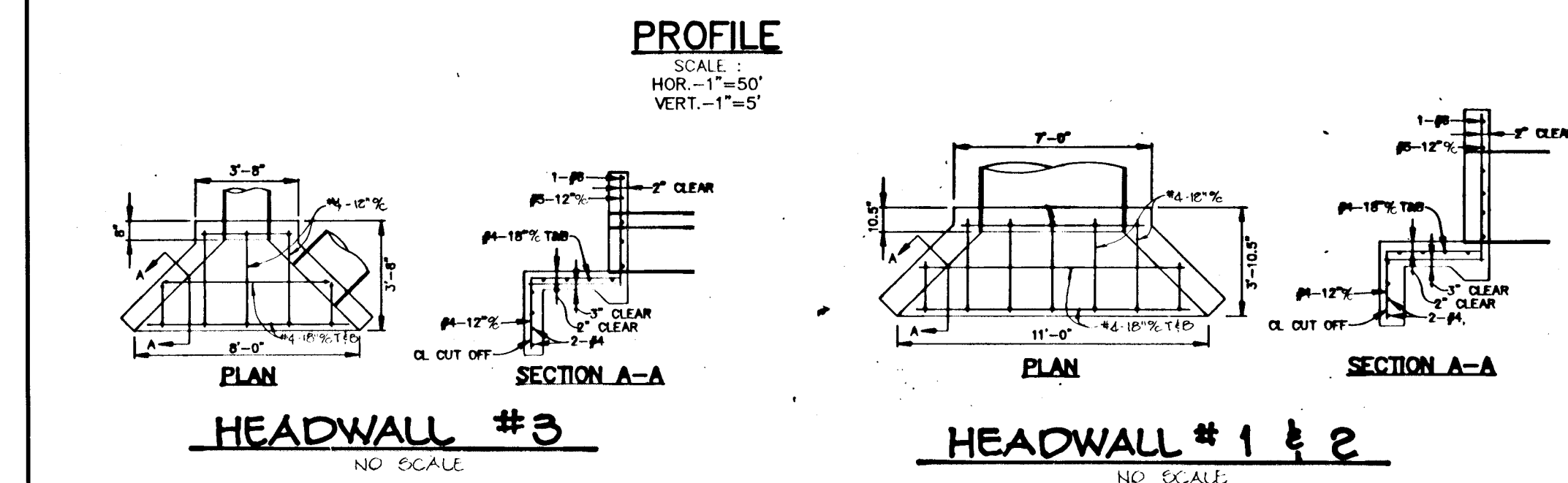
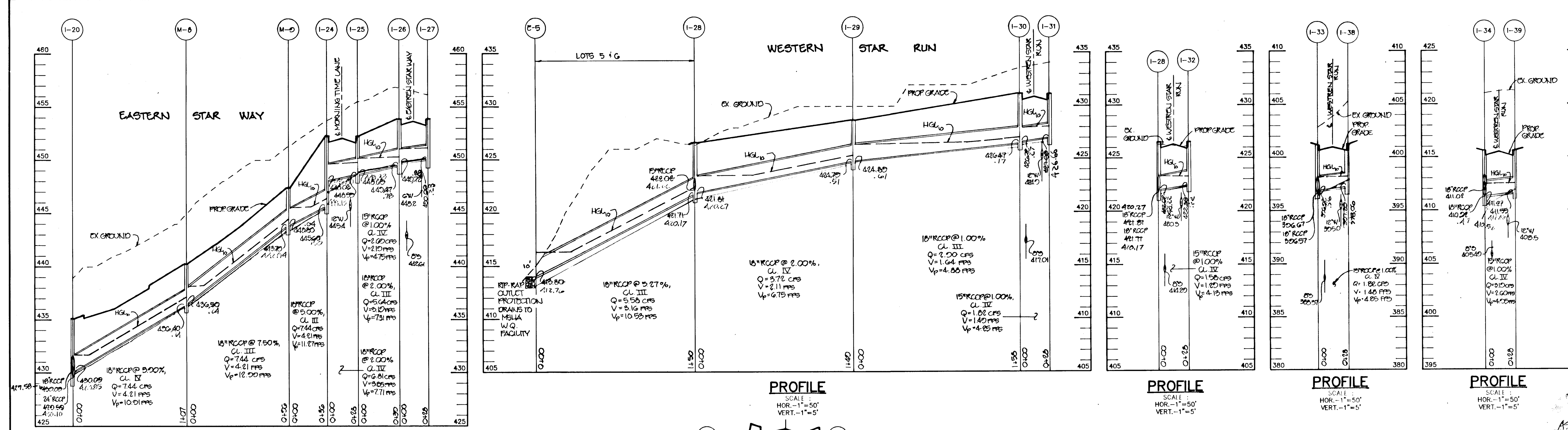
RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

2-28-94
DATE

DESIGNED BY: C.J.R.
DRAWN BY: DAM/S.C.O.
PROJECT NO: 88103
DATE: FEBRUARY 28, 1994
SCALE: AS SHOWN
DRAWING NO. 84 OF 28

Professional Seal: State of Maryland, Professional Engineer, License No. 110146, Date 3-18-94.

1487



STATE OF MARYLAND
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF LAND DEVELOPMENT AND RESEARCH
 AS-BUILT
 SHANBERGER & LANE
 8724 TOWN & COUNTRY BLVD.
 457 DEARBURTT 104
 LICOTT CITY, MARYLAND 21043

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 Date: 3/21/94
 Date: 3/10/94
 Date: 3-17-94
 Date: 3/18/94

DATE NO. REVISION

OWNER / DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

PROJECT: VILLAGE OF RIVER HILL
 SECTION 2 AREA 3 PHASE 1
 AREA 3 LOTS 1 - 10G

AREA: TAX MAP NO. 35 ZONING: NEW TOWN
 PART OF PARCELS 70 & 240
 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

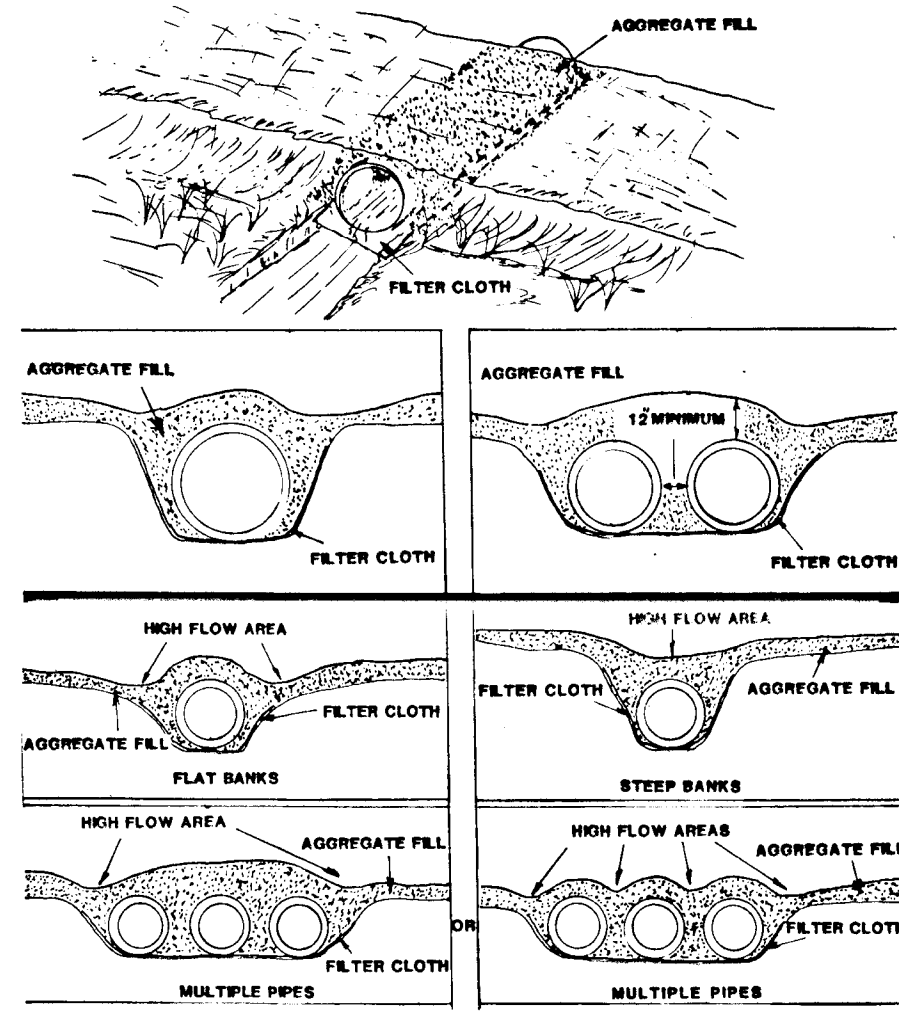
TITLE: STORM DRAIN PROFILES

RIEMER MUEGGE & ASSOCIATES, INC.
 Planners • Engineers • Surveyors
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
 410-997-8900 FAX: 410-997-0282

2.28.94
 DATE

DESIGNED BY: C.J.R.
 DRAWN BY: DAM/S.O.O.
 PROJECT NO: RR103
 DATE: FEBRUARY 20, 1994
 SCALE: AS SHOWN
 DRAWING NO. 25 OF 28

1487



Temporary Access Culvert - (STANDARD DRAWING TAC-1)

A temporary access culvert is a structure consisting of a section(s) of circular pipe, pipe arches, or oval pipes of reinforced concrete, corrugated metal, or structural plate, which is used to convey flowing water through the crossing.

Considerations

- Temporary culverts are used where (1) the channel is too wide for normal bridge construction, (2) anticipated loading may prove unsafe for single span bridges, or (3) access is not needed from bank to bank.
- This temporary waterway crossing method is normally preferred over a fixed type of crossing, since disturbance to the waterway is only during construction and removal of the culvert.
- Temporary culverts can be salvaged and reused.

Construction Specifications

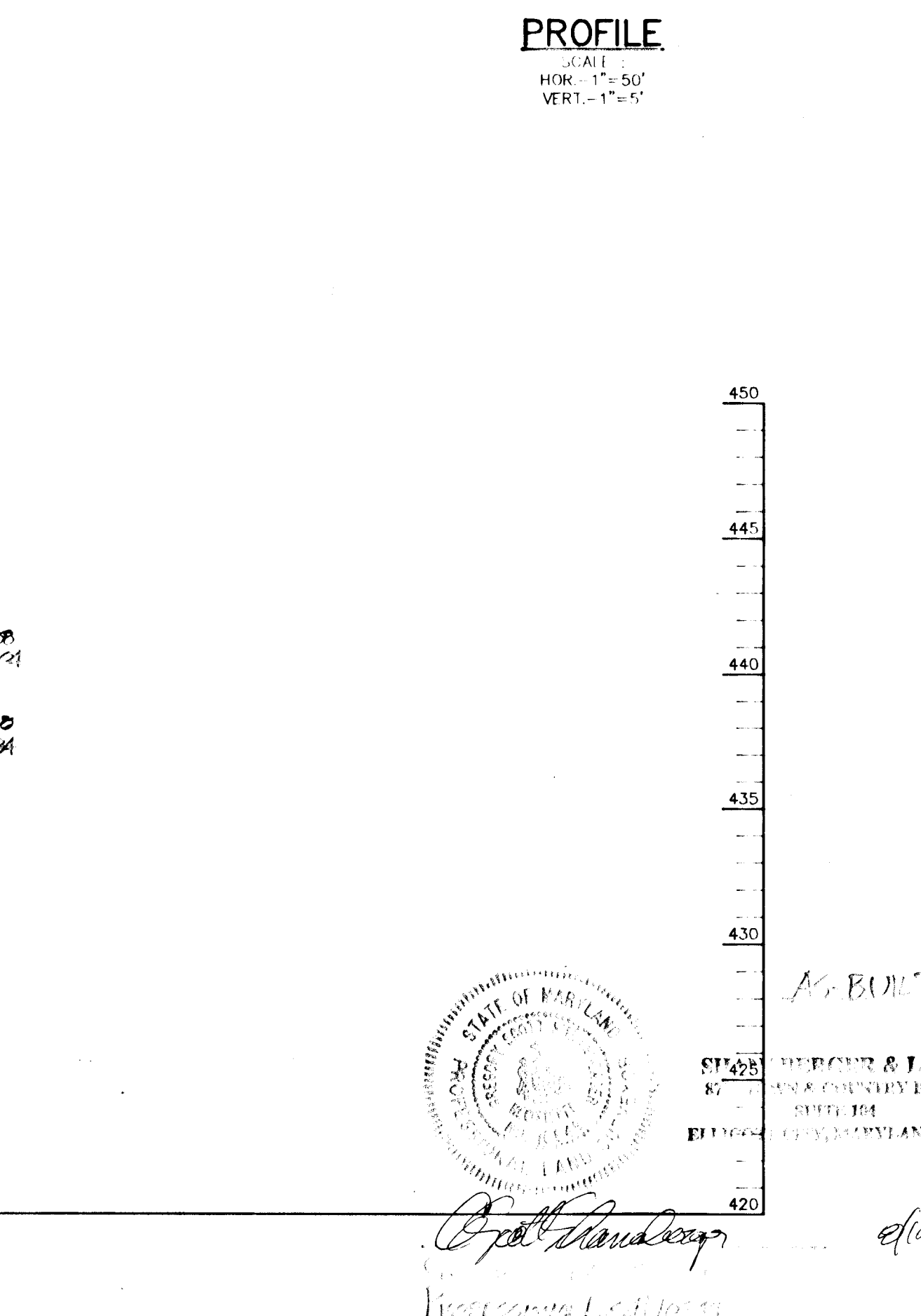
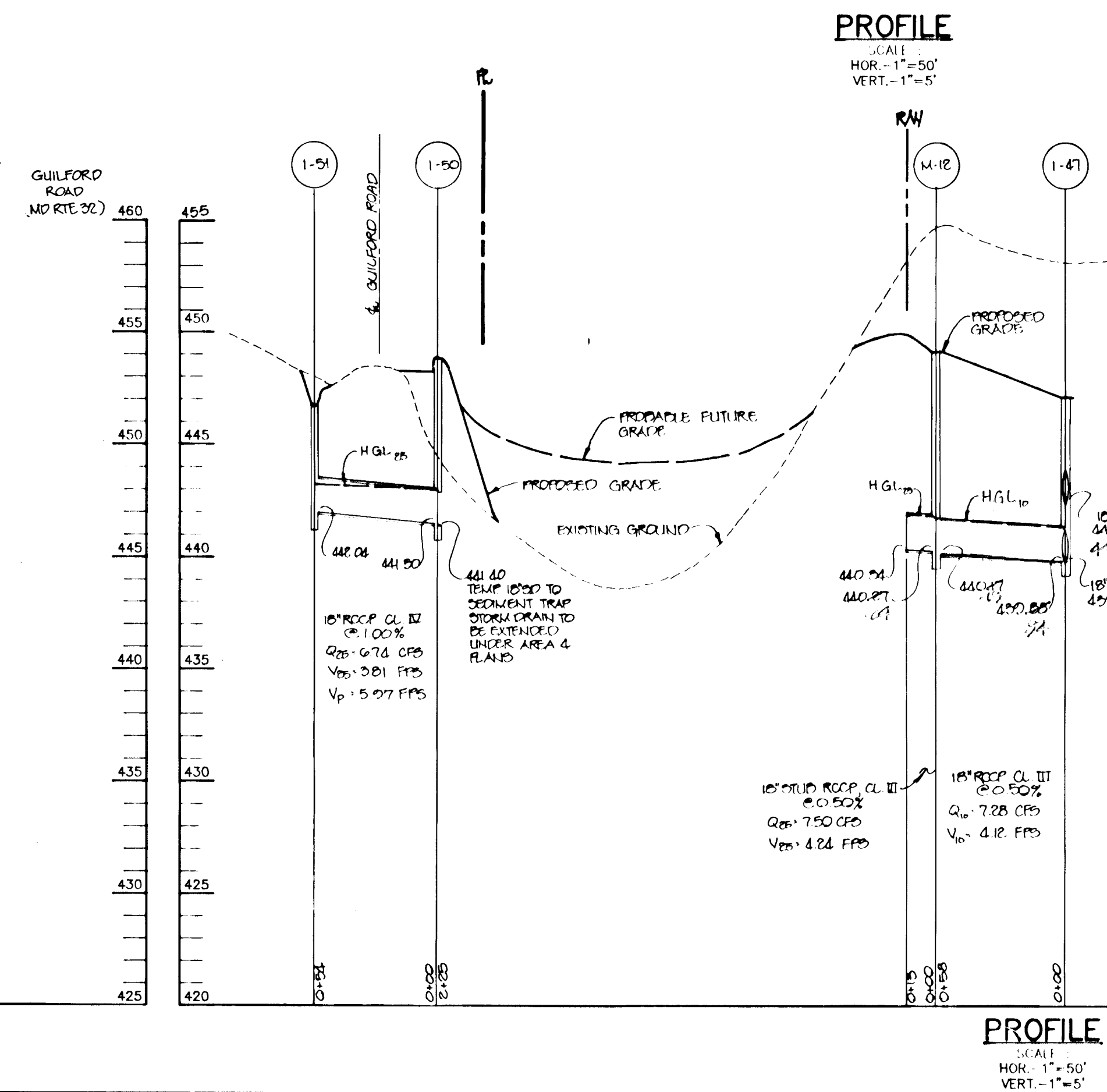
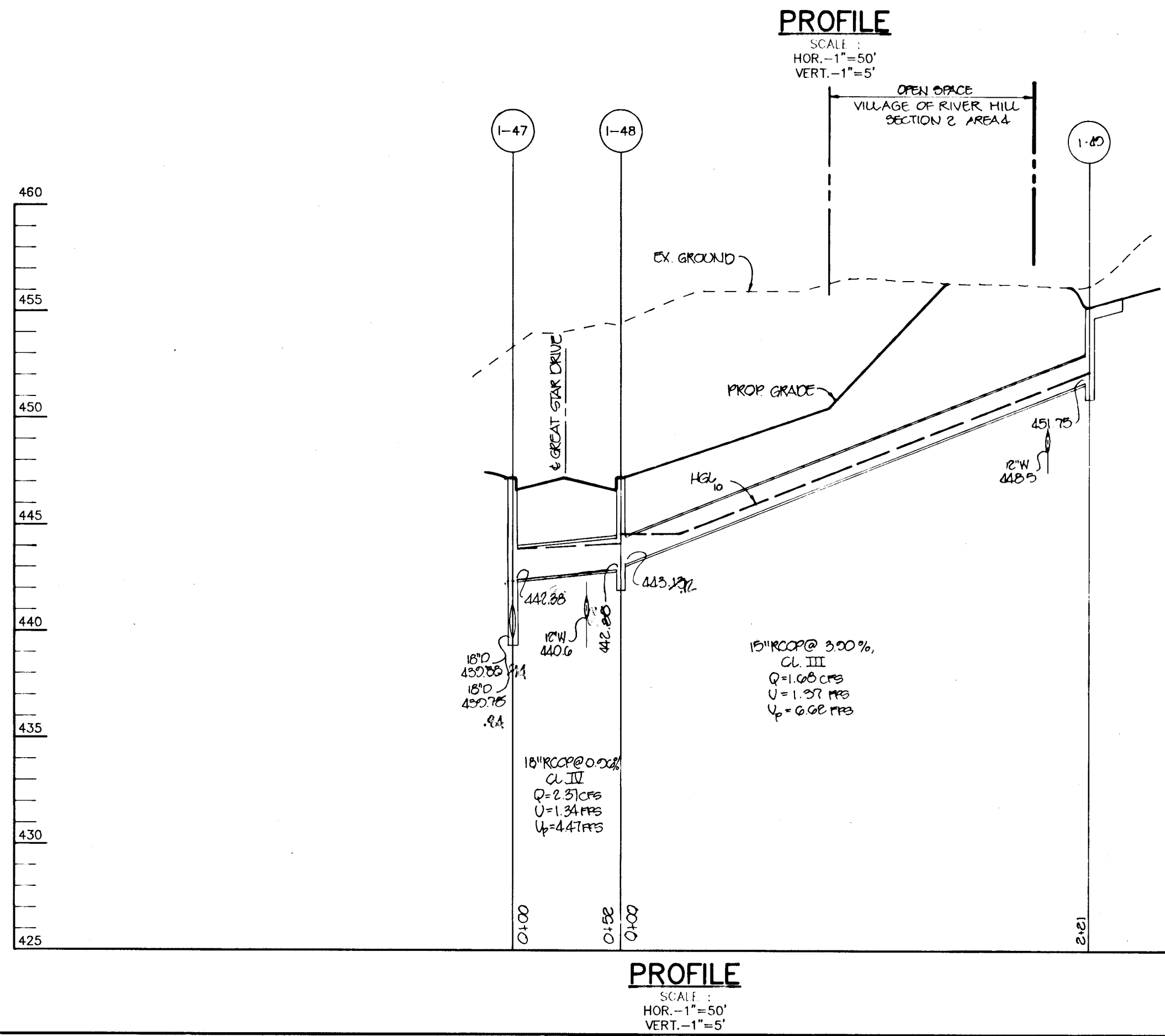
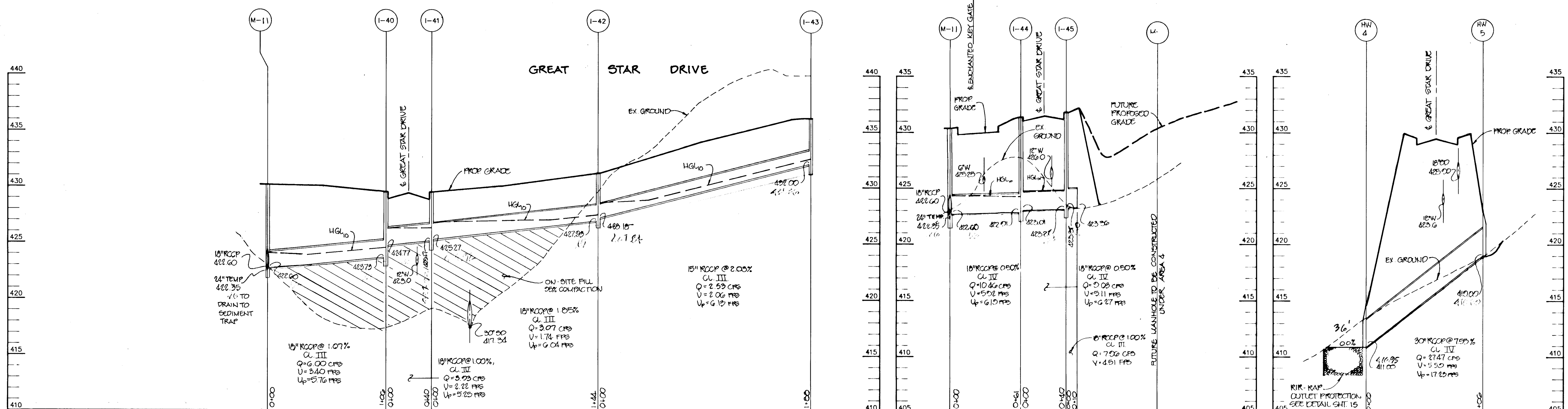
- Restrictions** - No construction or removal of a temporary access culvert will be permitted between October 1 through April 30 for all Class III and Class IV Trout Waters or between March 15 through June 15 for non-trout waterways.
- Culvert Strength** - All culverts shall be strong enough to support their cross sectional area under maximum expected loads.

- Culvert Size** - The size of the culvert pipe shall be the largest pipe diameter that will fit into the existing channel without major excavation of the waterway channel or without major approach fills. If a channel width exceeds 3 feet, additional pipes may be used until the cross sectional area of the pipes is greater than 50 percent of the cross sectional area of the existing channel. The minimum size culvert that may be used is a 12" diameter pipe.
- Culvert Length** - The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.
- Filter Cloth** - Filter cloth shall be placed on the streambed and streambanks prior to placement of the pipe culvert(s) and aggregate. The filter cloth shall cover the streambed and extend a minimum six inches and a maximum one foot beyond the end of the culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.
- Final Stabilization** - All areas disturbed during culvert removal shall be stabilized within 14 calendar days of the disturbance in accordance with the Standards for "Critical Area Stabilization With Permanent Seeding."

MONITORING METHODS, CONDITIONS AND MAINTENANCE PRACTICES

- Construct the road crossings with one culvert or one depressed to allow for passage of fish and aquatic organisms. Any other potential blockage must be constructed to allow fish passage during normal stream flow.
- For utility line installation, strip, stockpile and maintain separately the top 6" of soil material, to be replaced as the top layer of the backfilled material.
- Remove excess fill or construction material or debris to an upland disposal area, outside the buffer.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of the natural wetland.
- The previously suggested material on backfill, unless it contains toxic metal products, unsightly debris, toxic material or any other deleterious substance. Use clean borrow material when excavated material is not suitable for use as backfill.
- Notify any nontidal wetlands and buffers temporarily impacted by any proposed repair and maintenance activity or installation of the utility line. All stabilization in the wetland and buffer shall be of the following recommended species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria sp.*), Oats (*Avena sp.*), and/or Poa (*Poa sp.*). Other non-vascular vegetation may be acceptable, but must be approved by the Nontidal Wetlands Division. Mammals shall not be utilized in the wetland or buffer. All temporary fills shall be removed in their entirety on or before the completion of construction.
- After installation of the utility line has been completed, make post construction grades and elevations of nontidal wetlands the same as the original grades and elevations.
- Conduct the activity so as not to cause or contribute to a degradation of water quality, in accordance with the conditions of the Water Quality Certification issued by the Maryland Department of the Environment.
- Place heavy equipment on mats or suitably operate the equipment to prevent damage to the nontidal wetlands.
- To protect important aquatic species, in-stream work is prohibited as determined by the classification of the stream as follows:
 - The Little Patuxent River and its tributaries are Class I Waterways. In-stream work may not be conducted during the period March 1 through June 15, inclusive, during any year.

TEMPORARY ACCESS CULVERT
NOT TO SCALE



BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Gregory R. Allen 2-28-94
DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Farrell 2-28-94
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

John E. H. 3-7-94
U.S. SOIL CONSERVATION SERVICE DATE

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

John K. Robertson 3/7/94
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Gina Lammiman 3/2/94
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

John D. ... 3/18/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. ... 3-17-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. ... 3/18/94
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT VILLAGE OF RIVER HILL
SECTION 2 AREA 3 PHASE 1
AREA 3 LOTS 1 - 100

AREA TAX MAP NO. 35 ZONING NEW TOWN
PART OF PARCELS 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE STORM DRAIN PROFILES

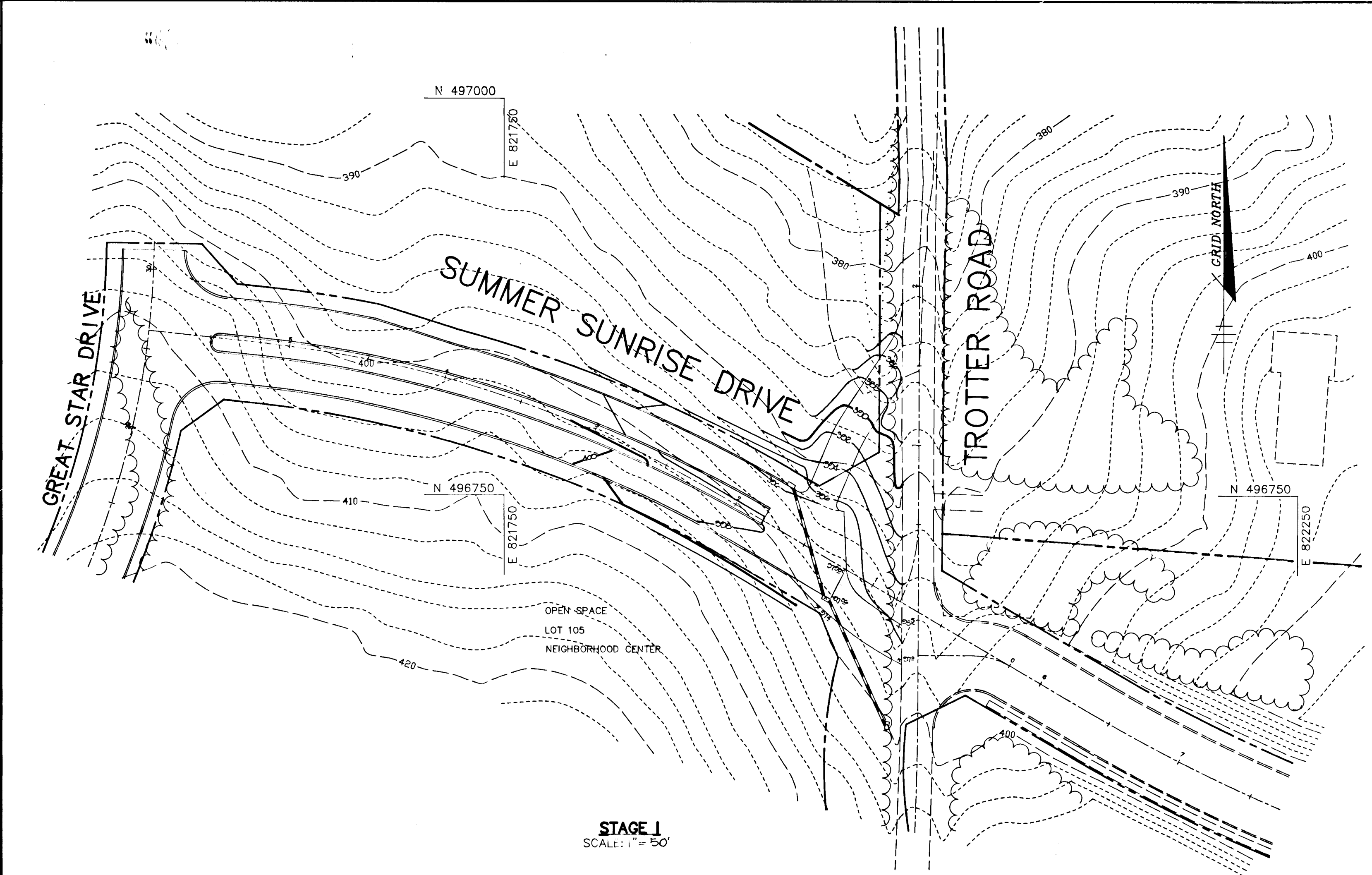
RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX : 410-997-9282

2-28-94 DATE

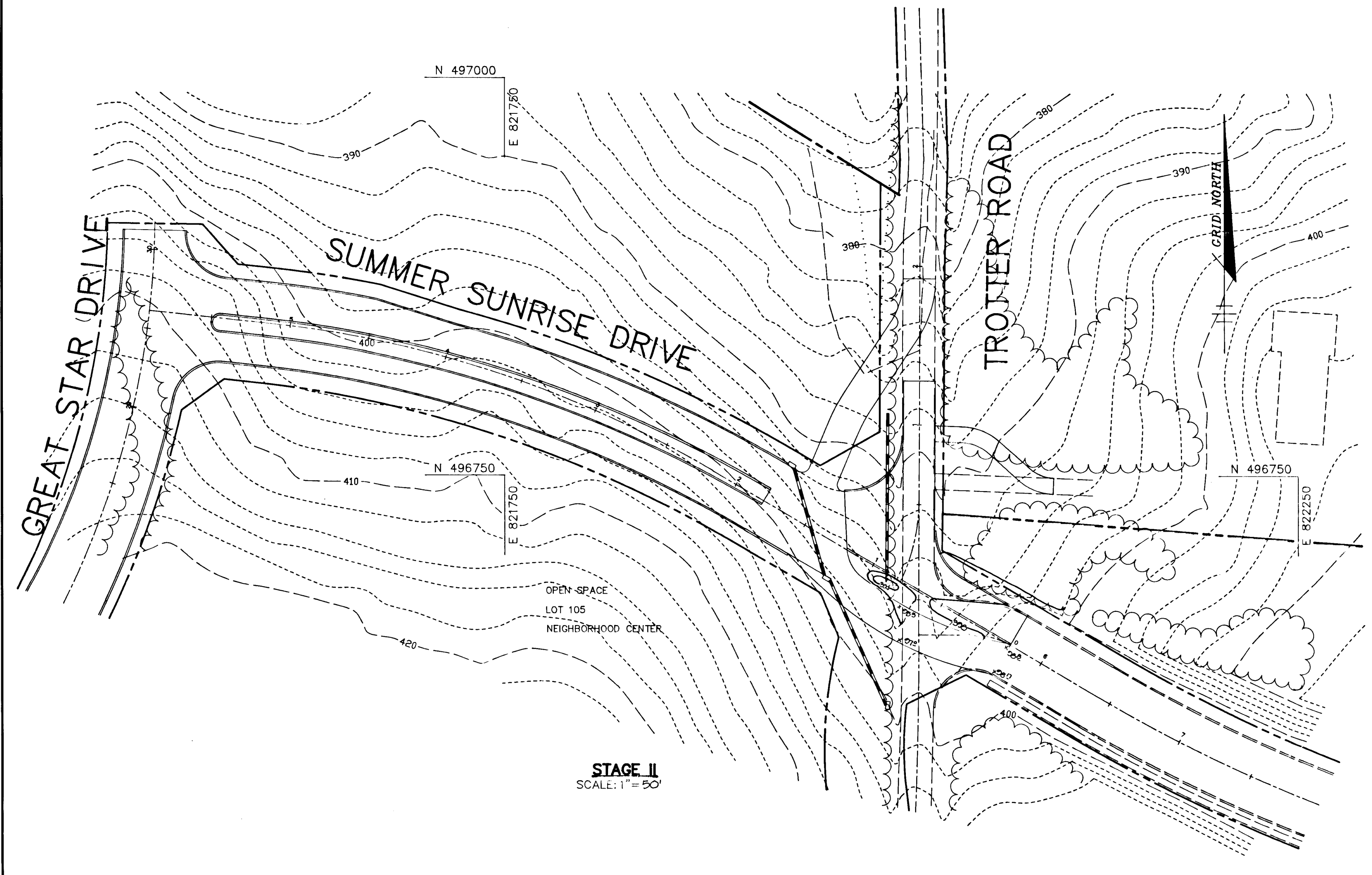
DESIGNED BY : C.J.R.
DRAWN BY : DAM/J.C.O.
PROJECT NO : 88103
DATE : FEBRUARY 28, 1994
SCALE : AS SHOWN
DRAWING NO. 28 OF 28

JAYKANT PAREKH #10148

1487



STAGE I
SCALE: 1" = 50'



STAGE II
SCALE: 1" = 50'

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Gregory R. Han 2-28-94
DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Farrell 2-28-94
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Pharis E. 3-7-94
HOWARD SOIL CONSERVATION SERVICE DATE

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

John R. Robertson 3/7/94
HOWARD SOIL CONSERVATION DISTRICT

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Jina Sammons 3/2/94
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

William D. ... 3/18/94
CHIEF, DIVISION OF PUBLIC WORKS DATE

Richard M. ... 3-17-94
CHIEF, DIVISION OF PUBLIC WORKS DATE

Paul D. ... 3/18/94
CHIEF, BUREAU OF PAVING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDWAY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

PROJECT VILLAGE OF RIVER HILL
SECTION 2 AREAS 3 PHASE 1
AREA 3 LOTS 1 - 106

AREA TAX MAP NO. 35 ZONED NEW TOWN
PART OF PARCELS 59, 70 & 240
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX : 410-997-9282

2-28-94
DATE

DESIGNED BY : C.J.R.

DRAWN BY : D.A.M.

PROJECT NO : 88103

DATE : FEBRUARY 28, 1994

SCALE : 1" = 50'

DRAWING NO. 28 OF 28

JAYKANT D. PAREKH #19148

1487